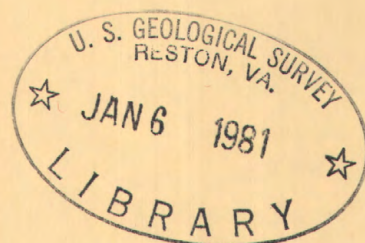


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Water Resources Data for Nebraska

Part 1. Surface Water Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

Prepared in cooperation with the Nebraska Department of
Water Resources and with other State and Federal agencies

CALENDAR FOR WATER YEAR 1971

OCTOBER 1970

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 1970

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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29	30					

DECEMBER 1970

S	M	T	W	T	F	S
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25	26	27	28	29	30	31

JANUARY 1971

S	M	T	W	T	F	S
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24	25	26	27	28	29	30
31						

FEBRUARY 1971

S	M	T	W	T	F	S
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MARCH 1971

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30	31					

APRIL 1971

S	M	T	W	T	F	S
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MAY 1971

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30	31					

JUNE 1971

S	M	T	W	T	F	S
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2	3	4	5	6	7	8
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JULY 1971

S	M	T	W	T	F	S
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24	25	26	27	28	29	30
31						

AUGUST 1971

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER 1971

S	M	T	W	T	F	S
						1
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

1971

Water Resources Data for Nebraska

Part 1. Surface Water Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

**Prepared in cooperation with the Nebraska Department of
Water Resources and with other State and Federal agencies**

Prepared in cooperation with
Nebraska Department of Water Resources
Nebraska Department of Roads
Corps of Engineers, U.S. Army
Bureau of Reclamation, U.S. Department of the Interior
Salt Valley Watershed District

Water resources records, 1971, for Nebraska are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for Nebraska
Part 1: Surface Water Records
2. Water Resources Data for Nebraska
Part 2: Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
Room 127 Nebraska Hall
901 North 17th Street
Lincoln, Nebraska 68508

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The survey was conducted in the 1930's, and the results are given in this report. For convenience, there are also included reports for a few gaging stations in the State of Nebraska. The records in Nebraska were collected by the Water Resources Division of the U.S. Geological Survey, under the direction of A. H. ...

Through the cooperation of the U.S. Geological Survey and the State of Nebraska, the records of discharge and stage for the Big Blue River at Barneston, Little Blue River near Deweese, Little Blue River near Gilead, and Little Blue River near Fairbury have been collected. The records for the Big Blue River at Barneston were collected by the U.S. Geological Survey, and the records for the other three stations were collected by the State of Nebraska.

Beginning with the 1930's, the records of discharge and stage have been collected by the U.S. Geological Survey. The discharge records for the Big Blue River at Barneston, Little Blue River near Deweese, and Little Blue River near Gilead were collected by the U.S. Geological Survey, and the records for the Little Blue River near Fairbury were collected by the State of Nebraska.

Cooperative agreements have been made with the State of Nebraska for the collection of records for the Big Blue River at Barneston, Little Blue River near Deweese, and Little Blue River near Gilead. The records for the Little Blue River near Fairbury were collected by the State of Nebraska.

The records for the Big Blue River at Barneston, Little Blue River near Deweese, and Little Blue River near Gilead were collected by the U.S. Geological Survey, and the records for the Little Blue River near Fairbury were collected by the State of Nebraska.

WATER RESOURCES DATA FOR NEBRASKA, 1971

PART 1. SURFACE-WATER RECORDS

By G. G. Jamison

INTRODUCTION

The surface-water records for the 1971 water year for gaging stations, partial-record stations, and miscellaneous sites within the State of Nebraska are given in this report. For convenience there are also included records for a few pertinent gaging stations in bordering States. The records in Nebraska were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of K. A. Mac Kichan, district chief.

Through September 30, 1960, the records of discharge and stage of streams and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Since 1951 there have been 20 volumes in the series; each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records in Nebraska were contained in Part 6 of that series.

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports is limited, primarily for local needs. The discharge and reservoir storage records for 1961-65 were published in a Geological Survey water-supply paper series entitled "Surface Water Supply of the United States 1961-65."

COOPERATION

Cooperative agreements between the U.S. Geological Survey and organizations of the State of Nebraska for the systematic collection of streamflow records began in 1931. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Nebraska Department of Water Resources, D. S. Jones, Jr., director.

Nebraska Department of Roads, T. D. Doyle, director-state engineer, and G. C. Strobel, deputy state engineer.

Salt Valley Watershed District, H. L. Schroeder, general manager.

Assistance in the form of funds and services was given by the Corps of Engineers, U.S. Army, in collecting records for 36 gaging stations and through the Missouri River Basin Program for 27 gaging stations.

The following organizations aided in collecting records:

Central Nebraska Public Power and Irrigation District, Consumers Public Power District, Loup River Public Power District.

DEFINITION OF TERMS

The terms of streamflow and other hydrologic data, as used in this report, are defined as follows:

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet or 325,851 gallons.

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, 1.9835 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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) 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.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

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.

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. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

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

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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

SPECIAL NETWORKS AND PROGRAMS

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 which have been developed and in which the physiography, climate,

and geology are similar to those in the undeveloped benchmark basin.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and of the general distribution of water in the principal river basins of the conterminous United States and Alaska.

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention show which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations, so that 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 numbers to allow for new stations that may be established; hence, the numbers are not consecutive.

The complete 8-digit number for each station, such as 06794500, includes the part number "06" plus a six-digit station number. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF SURFACE-WATER DATA

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. (See also SELECTED REFERENCES.) Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For a stream-gaging station rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table gives the daily mean discharge, from which the monthly and the yearly mean discharges are computed. 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 individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorder 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 on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the 1971 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. The maximum discharge (or contents), the maximum gage height, and the minimum daily discharge (or the minimum contents) are given under "EXTREMES." In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations 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 revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Skeleton capacity tables are published for all reservoirs for which records of contents are published on a daily basis.

The daily tables for stream-gaging stations give the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

The daily tables for reservoir stations give the contents corresponding to the water-surface elevation at a given time, usually at 2400 each day.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures; it is the total cubic feet per second per day for the month. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN.") or in acre-feet (line headed "AC-FT"). Figures of cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or division, if the drainage area includes large noncontributing areas, or if the average rainfall on the drainage basin is usually less than 20 inches.

For reservoir stations the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month. If elevation or gage height is given in the daily table, the monthly summary gives the contents at the end of the month, rather than the elevation or gage height.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges for the calendar and water years; likewise, the minimums in this summary are the minimum daily discharges.

For reservoir stations the yearly summary gives the change in contents for the calendar year and for the water year.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE" certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or in-

cludes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

Accuracy of Data

The accuracy of discharge data 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 observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures 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, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made for such effects. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Publications

Each volume of the 1960 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data were published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area. A new series of water-supply papers containing surface-water records for the 5-year period October 1, 1960, to September 30, 1965, also includes lists of annual and special reports published as water-supply papers.

Records through September 1950 for the area covered by this report have been compiled and published in Water-Supply Papers 1309(6A) and 1310(6B); records for October 1950 to September 1960 have been compiled and published in Water-Supply Papers 1729(6A) and 1730(6B). These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other Data Available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements at miscellaneous sites.

More detailed information than that published for most of the gaging stations, such as discharge measurements, gage-height records and rating tables, is on file in the district

office. Many gaging-station records in Nebraska through 1969 have been analyzed to give several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

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. Also published therein are discharge records for Nebraska streams and storage records for Nebraska reservoirs which are not published in reports of the U.S. Geological Survey. Copies of the Hydrographic Reports may be obtained by addressing the Nebraska Department of Water Resources, Capitol Building, P.O. Box No. 94607, Lincoln, Nebraska 68509.

Records of discharge not published by the Geological Survey were collected in Nebraska at nine sites by Corps of Engineers, U.S. Army. The Office of Water Data Coordination, Water Resources Division, U.S. Geological Survey, Washington, D. C. 20242, maintains an index of these sites. Information on records at specific sites can be obtained from that office upon request.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

SELECTED REFERENCES

- Carter, R. W., and Davidian, Jacob, 1968, General procedure for gaging streams: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. A6, 13 p.
- Corbett, D. M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geol. Survey Water-Supply Paper 888, 245 p.
- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

GAGING-STATION RECORDS

13

WHITE RIVER BASIN

06444000 White River at Crawford, Nebr.

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

DRAINAGE AREA.--313 sq mi.

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

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

AVERAGE DISCHARGE.--36 years, 20.2 cfs (14,630 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 504 cfs Mar. 27 (gage height, 5.02 ft, from floodmark); minimum daily, 9.4 cfs Aug. 24, Sept. 3.

Period of record: Maximum discharge, 1,580 cfs Mar. 15, 1948 (gage height, 6.88 ft); maximum gage height, 7.7 ft July 10, 1958 (from floodmarks); minimum daily discharge, 2.7 cfs Aug. 13, 31, Sept. 1, 1960.

REMARKS.--Records good. Some regulation at low flows by pumps for irrigation and diversion for water supply for town of Crawford.

REVISIONS (WATER YEARS).--WSP 1309: 1931(M), 1942(M). WSP 1729: 1958-59(M). WSP 1917: 1958-59.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	17	19	18	19	20	22	23	30	18	12	11
2	11	17	16	17	18	20	22	23	51	16	12	10
3	11	17	17	17	17	21	22	24	34	15	12	9.4
4	12	17	17	16	17	22	21	23	36	25	12	14
5	11	17	17	15	17	23	21	31	34	45	12	17
6	12	17	17	15	16	22	20	36	30	21	11	14
7	17	16	17	16	15	20	20	25	27	19	11	12
8	16	17	17	16	18	21	19	23	27	18	10	17
9	15	17	17	17	22	22	19	24	26	18	10	17
10	16	17	17	18	26	23	19	25	29	20	10	15
11	16	16	16	17	23	33	19	33	39	18	10	14
12	17	16	15	16	20	62	19	24	27	16	10	13
13	16	16	16	15	21	86	19	22	30	15	10	13
14	16	17	17	16	21	62	19	20	28	15	10	13
15	16	16	17	16	22	29	20	20	26	15	10	13
16	16	17	17	17	22	23	20	20	25	15	10	14
17	15	16	17	18	23	19	20	21	24	14	10	14
18	16	17	16	19	22	19	22	20	24	14	14	16
19	16	17	15	20	23	19	27	21	23	14	12	17
20	16	17	17	20	23	19	27	20	22	14	12	16
21	16	17	18	19	22	20	27	20	21	13	11	22
22	17	17	18	19	21	22	29	23	20	13	10	22
23	14	17	16	19	20	21	26	40	19	13	9.8	20
24	16	18	17	20	22	21	26	34	18	12	9.4	18
25	16	20	17	20	23	22	27	27	17	13	9.8	18
26	16	18	17	19	25	24	30	27	16	15	10	17
27	18	17	18	19	20	258	31	26	16	14	10	16
28	17	17	19	20	21	101	29	28	15	13	10	17
29	16	18	20	21	-----	28	25	30	18	13	10	17
30	16	17	21	21	-----	25	23	51	18	13	10	17
31	17	-----	18	20	-----	25	-----	44	-----	13	11	-----
TOTAL	471	510	533	556	579	1,152	690	828	770	510	331.0	463.4
MEAN	15.2	17.0	17.2	17.9	20.7	37.2	23.0	26.7	25.7	16.5	10.7	15.4
MAX	18	20	21	21	26	258	31	51	51	45	14	22
MIN	11	16	15	15	15	19	19	20	15	12	9.4	9.4
AC-FT	934	1,010	1,060	1,100	1,150	2,280	1,370	1,640	1,530	1,010	657	919

CAL YR 1970 TOTAL 6,291.9 MEAN 17.2 MAX 95 MIN 7.3 AC-FT 12,480

WTR YR 1971 TOTAL 7,393.4 MEAN 20.3 MAX 258 MIN 9.4 AC-FT 14,660

PEAK DISCHARGE (BASE, 100 CFS, REVISED).--Mar. 27 (2200) 504 cfs (5.02 ft); July 5 (0230) 121 cfs (2.52 ft).

WHITE RIVER BASIN

06445590 Big Bordeaux Creek near Chadron, Nebr.

LOCATION.--Lat 42°43'30", long 102°55'44", in NW¹ NW¹ sec.26, T.32 N., R.48 W., Dawes County, Nebraska National Forest-Pine Ridge Division, on right bank 4.2 miles northeast of Chadron State Park headquarters and 8 miles southeast of Chadron.

DRAINAGE AREA.--9.42 sq mi.

PERIOD OF RECORD.--June 1968 to current year. Prior to October 1969, published as Little Bordeaux Creek near Chadron.

GAGE.--Water-stage recorder.

EXTREMES.--Current year: Maximum discharge, 95 cfs July 4 (gage height, 3.60 ft); minimum daily, 0.01 cfs Sept. 1-3.

Period of record: Maximum discharge, 400 cfs July 20, 1969 (gage height, 4.89 ft), from rating curve extended above 13 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.01 cfs Aug. 24 to Sept. 6, 1970, Sept. 1-3, 1971.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.37	.30	.70	.40	.50	1.0	.69	.73	.30	.14	.01
2	.12	.50	.30	.60	.40	.50	.90	.69	.85	.30	.14	.01
3	.14	.69	.30	.60	.40	.60	.90	.69	.69	.12	.12	.01
4	.14	.55	.30	.50	.40	.60	.80	.69	.73	4.1	.12	.12
5	.12	.46	.40	.50	.40	.50	.80	1.1	.69	.60	.12	.12
6	.12	.30	.50	.50	.40	.50	.70	.78	.76	.41	.12	.05
7	.14	.32	.30	.60	.40	.50	.70	.73	.73	.37	.14	.05
8	.27	.37	.30	.80	.40	.60	.70	.73	.69	.37	.14	.12
9	.30	.32	.30	.70	.50	.60	.60	.78	.69	.37	.12	.07
10	.32	.47	.50	.70	.50	.70	.60	.85	.64	.37	.12	.07
11	.30	.41	.60	.60	.60	.70	.60	.92	.60	.37	.12	.07
12	.24	.41	.40	.60	.70	.80	.60	.78	.55	.37	.10	.07
13	.20	.41	.40	.60	.80	.90	.50	.78	.55	.37	.10	.10
14	.17	.41	.40	.50	1.0	1.0	.50	.73	.55	.37	.10	.12
15	.19	.46	.30	.60	.90	.90	.50	.73	.50	.37	.10	.12
16	.14	.37	.40	.60	.80	.80	.46	.73	.46	.37	.10	.14
17	.14	.37	.40	.60	.60	.70	.46	.73	.46	.37	.10	.14
18	.14	.37	.30	.50	.60	.60	.55	.69	.46	.37	.10	.14
19	.14	.37	.30	.60	.50	.50	.69	.69	.41	.37	.07	.14
20	.14	.37	.40	.60	.50	.60	.69	.69	.41	.32	.05	.14
21	.14	.37	.70	.50	.50	.70	.73	.64	.41	.32	.03	.14
22	.14	.41	.80	.50	.40	.80	.69	.73	.41	.27	.03	.10
23	.14	.78	.70	.60	.40	.70	.64	1.2	.41	.27	.02	.10
24	.17	.64	.60	.60	.50	.60	.73	.85	.37	.27	.02	.10
25	.17	.32	.70	.60	.50	.80	.73	.78	.37	.27	.02	.10
26	.17	.32	.70	.50	.60	1.0	.78	.73	.32	.27	.02	.07
27	.17	.32	.60	.50	.50	1.1	.85	.69	.30	.22	.03	.10
28	.17	.32	.80	.50	.50	1.2	.78	.69	.32	.20	.03	.14
29	.22	.30	.70	.50	-----	1.1	.73	.78	.32	.20	.02	.14
30	.41	.30	.80	.40	-----	1.0	.73	.78	.30	.14	.04	.14
31	.37	-----	.80	.40	-----	1.0	-----	.73	-----	.14	.03	-----
TOTAL	5.86	12.38	15.30	17.60	15.10	23.10	20.64	23.80	15.68	16.21	2.51	2.94
MEAN	.19	.41	.49	.57	.54	.75	.69	.77	.52	.52	.081	.098
MAX	.41	.78	.80	.80	1.0	1.2	1.0	1.2	.85	.41	.14	.14
MIN	.12	.30	.30	.40	.40	.50	.46	.64	.30	.14	.02	.01
AC-FT	12	25	30	35	30	46	41	47	31	32	5.0	5.8

CAL YR 1970 TOTAL 160.05 MEAN .44 MAX 1.3 MIN .01 AC-FT 317
WTR YR 1971 TOTAL 171.12 MEAN .47 MAX 4.1 MIN .01 AC-FT 339

NOTE.--No gage-height record Dec. 31 to Feb. 6, Feb. 16 to Apr. 13.

PONCA CREEK BASIN

15

06453400 Ponca Creek near Naper, Nebr.

LOCATION.--Lat 43°01'45", long 99°05'59", in SE1/4 sec.22, T.9S N., R.70 W., Gregory County, S. Dak., on right bank 70 ft upstream from highway bridge, 2.2 miles north of and 6.0 miles upstream from South Dakota-Nebraska State line, 4.2 miles south of St. Charles, S. Dak., and 5 miles north of Naper, Nebr.

DRAINAGE AREA.--373 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,800 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 29.8 cfs (21,590 acre-ft per year); median of yearly mean discharges, 18 cfs (13,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,550 cfs Mar. 14 (gage height, 8.82 ft); no flow for many days.
Period of record: Maximum discharge, 2,840 cfs July 2, 1962 (gage height, 12.24 ft); no flow for many days in 1961-62, 1964-71.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0		0	0	7.0	252	38	16	.48	0	3.5
2		0		0	0	6.2	137	29	15	.42	0	.76
3		0		0	0	5.4	97	24	13	.36	0	.54
4		0		0	0	4.8	72	21	13	.26	0	1.0
5		0		0	0	7.8	58	18	13	.31	0	.54
6		0		0	0	19	55	20	13	.26	0	.26
7		0		0	0	23	54	20	13	.21	0	.05
8		2.9		0	0	10	54	21	18	.16	0	.02
9		1.6		0	0	8.0	48	22	14	.12	0	.02
10		.36		0	0	14	41	24	13	.08	0	.02
11		.12		0	3.0	80	38	27	11	.08	0	0
12		.08		0	18	350	31	24	9.1	.05	0	0
13		.05		0	23	1,100	25	23	7.7	0	0	0
14		0		0	25	1,320	22	23	7.7	0	0	0
15		0		0	36	773	21	23	9.1	0	0	0
16		0		0	66	257	20	22	8.4	0	0	0
17		0		0	90	169	19	29	8.4	0	0	0
18		0		0	72	67	18	32	7.7	0	0	0
19		0		0	31	30	18	25	6.3	2.2	0	0
20		0		0	28	20	18	24	5.6	.54	0	0
21		0		0	14	16	20	23	4.2	.68	0	.10
22		0		0	17	14	43	22	2.5	.94	0	.10
23		0		0	14	12	43	49	1.3	1.5	0	.10
24		0		0	15	11	36	73	1.3	.94	0	.10
25		0		0	17	12	27	52	1.5	.68	0	.10
26		0		0	13	13	22	59	1.0	.42	0	.10
27		0		0	18	20	32	40	.85	.21	0	.12
28		0		0	6.4	595	46	30	.68	.05	0	.12
29		0		.90	-----	1,260	40	27	.54	.05	0	.12
30		0		.40	-----	707	40	24	.54	0	12	.12
31		-----		0	-----	401	-----	20	-----	0	31	-----
TOTAL	0	5.11	0	1.30	506.4	7,332.2	1,447	908	236.41	11.00	43	7.79
MEAN	0	.17	0	.042	18.1	237	48.2	29.3	7.88	1.35	1.39	.26
MAX	0	2.9	0	.90	90	1,320	252	73	18	2.2	31	3.5
MIN	0	0	0	0	0	4.8	18	18	.54	0	0	0
AC-FT	0	10	0	2.6	1,000	14,540	2,870	1,800	469	22	85	15
CAL YR 1970	TOTAL	3,325.43	MEAN	9.11	MAX	122	MIN	0	AC-FT	6,600		
WTR YR 1971	TOTAL	10,498.21	MEAN	28.8	MAX	1,320	MIN	0	AC-FT	20,820		

PEAK DISCHARGE (BASE, 300 CFS).--Mar. 14 (0400) 1,550 cfs (8.82 ft); Mar. 29 (0800) 1,480 cfs (8.49 ft).

PONCA CREEK BASIN

06453500 Ponca Creek at Anoka, Nebr.

LOCATION.--Lat 42°56'25", long 98°50'30", in NE $\frac{1}{4}$ sec.9, T.34 N., R.13 W., Boyd County, on downstream side of left pier of bridge on State Highway 11, 0.5 mile southwest of Anoka and 0.5 mile upstream from Dry Creek.

DRAINAGE AREA.--505 sq mi.

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

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

AVERAGE DISCHARGE.--22 years, 52.2 cfs (37,820 acre-ft per year); median of yearly mean discharges, 35 cfs (25,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,810 cfs Mar. 29 (gage height, 7.62 ft); no flow for many days. Period of record: Maximum discharge, 9,810 cfs Mar. 27, 1960 (gage height, 16.86 ft); no flow at times in 1949-50, 1955-62, 1965-71.

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

REVISIONS.--WRD Nebr. 1969: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.02	.90		0	18	312	77	28	2.0	.09	7.8
2	0	.18	.70		0	9.6	150	56	25	1.6	.05	1.4
3	0	.26	1.1		0	5.2	110	49	23	1.5	0	.45
4	0	.18	.75		0	5.7	86	43	21	1.2	0	1.1
5	0	.18	.75		0	44	70	40	26	2.0	0	4.4
6	0	.14	.75		0	59	64	39	24	1.6	0	.80
7	0	.10	1.4		0	76	69	40	21	1.4	0	.26
8	0	.55	.75		0	60	76	37	22	1.1	0	.10
9	0	1.2	.90		0	28	62	35	24	1.0	0	.10
10	0	2.0	1.3		0	49	52	38	20	.90	0	0
11	0	1.4	1.3		8.0	148	46	42	17	1.2	0	0
12	0	.90	1.0		11	352	43	39	15	1.0	0	0
13	0	.65	.50		7.8	1,030	38	34	14	.70	0	0
14	0	.55	.30		35	1,500	33	29	12	.65	0	0
15	0	.50	.35		48	1,100	31	28	11	.50	0	0
16	0	.50	.26		64	290	33	26	9.6	.40	0	0
17	0	.65	.22		108	102	32	38	8.4	.65	0	0
18	0	.70	.22		106	51	32	55	10	3.0	0	0
19	0	.70	.22		60	9.0	31	43	9.0	1.2	0	0
20	0	.70	.35		32	17	33	34	7.8	1.0	0	0
21	0	.60	.50		27	15	46	30	6.6	1.2	0	0
22	0	.55	.30		33	7.8	214	26	5.5	1.1	0	.40
23	0	.70	.14		20	4.6	98	45	4.9	1.2	0	.22
24	0	.80	.10		18	3.8	66	105	4.6	1.2	0	.02
25	.01	1.0	.06		17	4.6	52	69	4.4	1.2	0	.18
26	.02	1.1	0		60	5.7	46	68	3.6	.70	0	.14
27	.02	.90	0		56	13	121	56	2.7	.40	0	.10
28	.02	.40	0		35	443	118	42	2.6	.26	0	.10
29	.02	.45	0		-----	1,600	80	33	2.4	.14	0	.06
30	.02	.90	0		-----	1,010	74	30	2.1	.06	.55	.06
31	.02	-----	0		-----	508	-----	31	-----	.06	2.7	-----
TOTAL	.13	19.46	15.12	0	745.8	8,569.0	2,318	1,357	387.2	32.12	3.39	17.69
MEAN	.004	.65	.49	0	26.6	276	77.3	43.8	12.9	1.04	.11	.59
MAX	.02	2.0	1.4	0	108	1,600	312	105	28	3.0	2.7	7.8
MIN	0	.02	0	0	0	3.8	31	26	2.1	.06	0	0
AC-FT	.3	39	30	0	1,480	17,000	4,600	2,690	768	.64	6.7	.35

CAL YR 1970 TOTAL 4,864.43 MEAN 13.3 MAX 401 MIN 0 AC-FT 9,650
WTR YR 1971 TOTAL 13,464.91 MEAN 36.9 MAX 1,600 MIN 0 AC-FT 26,710

PEAK DISCHARGE (BASE, 500 CFS).--Mar. 14 (0430) 1,660 cfs (7.52 ft); Mar. 29 (1400) 1,810 cfs (7.62 ft).

PONCA CREEK BASIN

17

06453600 Ponca Creek at Verdel, Nebr.

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

DRAINAGE AREA.--812 sq mi.

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

GAGE.--Water-stage recorder and nonrecording gage read once daily. Datum of gage is 1,232.9 ft above mean sea level (Nebraska Department of Highways reference marks). See WSP 1917 for history of changes prior to Nov. 15, 1962.

AVERAGE DISCHARGE.--14 years, 80.1 cfs (58,030 acre-ft per year); median of yearly mean discharges, 54 cfs (39,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,730 cfs Mar. 30 (gage height, 4.91 ft); maximum gage height, 6.04 ft Mar. 12 (backwater from ice); no flow for many days.

Period of record: Maximum discharge, 15,700 cfs Mar. 27, 1960 (gage height, 15.10 ft, site and datum then in use); no flow for many days in 1957-60, 1965-71.

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

REVISIONS.--WRD Nebr. 1969: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	1.5			0	50	785	131	51	8.5	2.2	.07
2	0	2.2			0	45	463	128	45	6.4	1.6	.02
3	0	3.1			0	38	314	118	44	5.6	1.1	.01
4	0	3.2			0	40	269	109	40	8.2	1.1	.49
5	0	2.8			0	43	221	98	41	15	1.9	.50
6	0	2.8			0	42	181	100	42	39	1.4	.31
7	0	2.4			0	40	163	82	39	27	.71	1.6
8	0	3.2			.10	39	159	68	56	11	.49	1.6
9	0	13			.40	39	154	68	54	6.7	.30	.56
10	0	11			1.0	100	134	75	121	86	.20	.09
11	0	7.7			12	270	116	80	58	44	.16	.02
12	0	6.1			35	580	101	67	43	23	.15	0
13	0	6.3			120	1,000	89	62	37	9.3	.12	0
14	0	4.5			140	1,280	78	53	34	7.0	.13	0
15	0	2.0			210	1,230	66	44	28	6.6	.12	0
16	0	1.7			270	716	62	37	68	6.0	.12	0
17	0	1.8			260	364	57	38	87	5.6	.10	0
18	0	1.7			215	299	57	48	96	14	.12	0
19	0	1.2			620	205	64	66	52	48	.13	0
20	0	.37			380	130	74	67	32	20	.08	0
21	0	.23			200	136	79	54	25	9.6	.06	.17
22	0	.11			80	126	144	42	21	6.5	.05	.51
23	0	0			50	110	237	242	18	6.8	.03	.01
24	.03	0			40	90	167	105	18	9.6	.02	0
25	.23	0			60	86	128	113	14	6.2	.03	.29
26	.87	0			68	85	111	106	14	8.9	.02	0
27	.66	0			64	103	119	83	12	6.1	.03	.02
28	.41	0			60	201	173	85	11	4.5	.02	.21
29	.62	0			-----	1,120	176	70	11	3.6	.01	0
30	1.0	0			-----	1,550	148	59	11	2.7	.38	.15
31	1.2	-----			-----	1,040	-----	57	-----	2.6	.04	-----
TOTAL	5.02	78.91	0	0	2,885.50	11,197	5,089	2,555	1,223	464.0	12.92	6.63
MEAN	.16	2.63	0	0	103	361	170	82.4	40.8	15.0	.42	.22
MAX	1.2	13	0	0	620	1,550	785	242	121	86	2.2	1.6
MIN	0	0	0	0	0	38	57	37	11	2.6	.01	0
AC-FT	10.0	157	0	0	5,720	22,210	10,090	5,070	2,430	920	26	13

CAL YR 1970 TOTAL 11,927.03 MEAN 32.7 MAX 548 MIN 0 AC-FT 23,660
WTR YR 1971 TOTAL 23,516.98 MEAN 64.4 MAX 1,550 MIN 0 AC-FT 46,650

PEAK DISCHARGE (BASE, 800 CFS).--Mar. 14 (1430) 1,440 cfs (4.89 ft); Mar. 30 (0330) 1,730 cfs (4.91 ft).

NIOBRARA RIVER BASIN

06454000 Niobrara River at Wyoming-Nebraska State line

LOCATION.--Lat 42°39'33", long 104°03'54", in SW 1/4 sec.15, T.31 N., R.60 W., Niobrara County, Wyo., on left bank 0.2 mile downstream from Van Tassel Creek, 0.3 mile upstream from Wyoming-Nebraska State line, and 3 miles east of Van Tassel, Wyo.

DRAINAGE AREA.--450 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 4,687.70 ft above mean sea level, datum of 1956.

AVERAGE DISCHARGE.--16 years, 4.34 cfs (3,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 24 cfs June 1 (gage height, 1.98 ft); maximum gage height, 6.66 ft Mar. 26 (backwater from ice); minimum daily discharge, 1.7 cfs Aug. 29.

Period of record: Maximum discharge, 800 cfs July 17, 1969 (gage height, 6.92 ft in gage well, 6.75 ft, from floodmarks), from rating curve extended above 63 cfs on basis of computation of peak flow through culvert and over road; minimum daily, 1.4 cfs Sept. 12-16, 20, 1959, July 26, 27, 1961, Aug. 20, 1964, Aug. 20, 22, 24, 1968.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.7	3.2	2.8	3.8	4.4	6.7	6.8	11	3.6	2.4	1.9
2	2.2	2.5	2.9	2.8	4.1	4.0	7.9	6.7	9.2	3.6	2.4	2.0
3	2.1	2.5	2.8	2.8	3.9	4.0	7.4	6.3	8.1	3.8	2.4	1.9
4	2.4	2.7	3.4	2.9	3.9	4.2	6.8	5.6	14	4.8	2.4	3.7
5	2.3	2.8	4.9	2.7	3.8	4.2	6.3	7.9	12	4.2	2.5	4.3
6	2.4	2.7	4.0	2.7	3.6	4.2	6.0	8.8	9.9	4.2	2.4	3.5
7	2.8	2.7	2.8	2.4	3.6	4.0	5.9	7.8	8.3	4.0	2.6	3.4
8	2.8	2.7	2.8	2.4	3.5	4.0	5.4	6.9	7.4	4.0	2.5	4.7
9	2.8	2.8	3.0	2.4	3.6	4.0	4.6	6.8	7.2	4.0	2.4	3.4
10	2.9	3.0	2.9	2.5	4.2	4.2	4.4	7.2	7.0	3.8	2.4	3.0
11	3.2	3.1	2.8	2.4	3.9	5.0	3.5	6.7	6.7	3.8	2.4	2.9
12	3.1	3.1	2.8	2.4	6.5	6.0	3.2	6.6	7.0	3.6	2.3	2.8
13	2.9	3.1	2.8	2.4	6.0	8.0	3.0	6.3	12	3.2	2.2	2.8
14	2.7	3.2	2.7	2.4	8.0	10	3.2	6.0	11	3.2	2.2	2.9
15	2.5	3.0	2.8	2.4	8.0	7.0	3.1	5.6	10	3.0	1.9	3.0
16	2.5	3.1	2.8	2.4	8.9	5.8	3.0	5.2	9.0	3.0	1.9	3.0
17	2.4	3.1	2.8	2.5	6.8	6.0	3.0	4.0	8.0	3.0	1.9	3.3
18	2.5	3.1	3.0	2.5	5.9	7.0	3.6	3.8	6.0	2.7	2.0	3.6
19	2.5	3.2	2.9	2.6	4.6	7.5	4.9	3.6	7.2	2.7	2.0	3.6
20	2.3	3.3	2.8	3.6	4.4	4.7	4.9	3.5	7.0	2.7	2.1	3.8
21	2.2	3.3	2.8	3.3	4.5	5.7	5.4	3.4	6.4	2.7	2.1	4.4
22	2.4	2.8	2.8	3.1	6.7	5.6	5.6	4.2	6.2	2.7	2.1	3.9
23	2.4	2.5	2.6	3.1	6.0	5.7	4.7	14	6.0	2.6	2.2	3.2
24	2.4	2.7	2.7	3.3	5.0	5.3	4.9	18	5.4	2.7	2.1	2.9
25	2.5	2.9	2.5	3.3	4.8	5.3	6.6	9.9	5.2	3.0	2.1	3.4
26	2.5	2.8	2.5	2.9	4.8	6.0	7.6	7.8	4.8	3.0	2.0	3.3
27	2.6	2.8	2.4	2.9	4.5	9.0	8.8	7.4	4.6	2.6	1.9	3.4
28	2.8	2.8	2.5	3.2	4.5	9.7	8.6	7.7	4.2	2.7	1.8	3.7
29	2.8	2.8	2.7	3.4	-----	7.9	8.0	7.0	4.2	2.7	1.7	3.6
30	2.7	2.9	2.7	3.8	-----	7.8	7.0	8.0	3.8	2.7	2.1	3.3
31	2.6	-----	2.8	3.6	-----	8.2	-----	8.2	-----	2.5	2.0	-----
TOTAL	79.4	86.7	89.9	87.9	141.8	184.4	164.0	217.7	228.8	100.8	67.4	98.6
MEAN	2.56	2.89	2.90	2.84	5.06	5.95	5.47	7.02	7.63	3.25	2.17	3.29
MAX	3.2	3.3	4.9	3.8	8.9	10	8.8	18	14	4.8	2.6	4.7
MIN	2.1	2.5	2.4	2.4	3.5	4.0	3.0	3.4	3.8	2.5	1.7	1.9
AC-FT	157	172	178	174	281	366	325	432	454	200	134	196

CAL YR 1970 TOTAL 1,364.3 MEAN 3.74 MAX 16 MIN 1.5 AC-FT 2,710

WTR YR 1971 TOTAL 1,547.4 MEAN 4.24 MAX 18 MIN 1.7 AC-FT 3,070

PEAK DISCHARGE (BASE, 20 CFS).--May 24 (0130) 23 cfs (1.94 ft); June 1 (1900) 24 cfs (1.98 ft).

NIOBRARA RIVER BASIN

19

06454100 Niobrara River at Agate, Nebr.

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

DRAINAGE AREA.--840 sq mi, approximately.

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

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

AVERAGE DISCHARGE.--14 years, 14.9 cfs (10,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 141 cfs Mar. 14, 28; maximum gage height, 4.50 ft Mar. 14; minimum daily discharge, 5.5 cfs Oct. 5.

Period of record: Maximum discharge, 181 cfs June 23, 1959 (gage height, 5.00 ft, from floodmark); minimum daily, 1.8 cfs Apr. 4, 1968, result of freezeup.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	11	18	14	17	21	30	16	22	11	10	10
2	6.0	11	17	14	17	16	28	15	27	9.9	9.9	12
3	5.9	12	17	10	16	20	28	15	31	10	9.6	9.9
4	5.7	12	16	12	14	22	27	14	32	14	9.6	12
5	5.5	12	16	13	16	20	27	22	29	15	9.4	13
6	5.7	12	16	13	12	21	27	23	28	12	9.4	13
7	6.8	13	16	13	12	17	26	20	26	11	9.1	15
8	10	16	16	12	14	20	25	18	23	10	9.1	16
9	11	17	17	12	11	21	24	19	21	11	8.9	16
10	11	17	16	13	14	20	17	19	20	11	9.4	16
11	12	17	12	13	16	21	16	19	19	11	9.1	13
12	11	16	15	13	20	21	17	18	17	11	9.1	11
13	11	16	14	13	20	22	17	18	17	14	9.1	11
14	11	16	13	13	21	56	16	18	16	14	9.1	10
15	10	15	15	13	26	104	15	17	15	13	8.6	11
16	10	16	15	13	93	68	14	16	14	13	8.4	11
17	9.9	16	16	14	66	52	14	16	13	12	9.4	12
18	9.9	16	15	15	45	19	15	15	14	11	9.9	12
19	9.9	16	12	15	28	20	16	15	13	11	9.4	12
20	9.9	16	13	16	25	19	17	14	12	11	9.4	12
21	9.9	16	14	17	23	24	17	14	12	11	9.1	10
22	9.9	12	14	16	20	27	18	13	11	11	9.4	9.9
23	9.6	9.9	10	15	21	29	16	20	12	11	9.1	9.9
24	9.6	14	9.6	16	22	28	17	22	12	11	8.9	9.4
25	9.6	18	12	16	22	26	18	23	11	11	9.1	9.1
26	9.9	19	12	16	20	29	18	21	10	11	9.1	8.6
27	9.6	18	12	16	16	31	18	20	10	11	9.1	8.6
28	9.6	18	13	16	22	60	18	19	9.9	11	9.1	8.9
29	12	17	13	17	-----	102	18	19	9.9	11	9.1	8.2
30	12	17	13	17	-----	63	18	24	10	11	11	8.0
31	12	-----	14	17	-----	35	-----	28	-----	11	9.9	-----
TOTAL	291.9	451.9	441.6	443	669	1,054	592	570	516.8	356.9	288.8	338.5
MEAN	9.42	15.1	14.2	14.3	23.9	34.0	19.7	18.4	17.2	11.5	9.32	11.3
MAX	12	19	18	17	93	104	30	28	32	15	11	16
MIN	5.5	9.9	9.6	10	11	16	14	13	9.9	9.9	8.4	8.0
AC-FT	579	896	876	879	1,330	2,090	1,170	1,130	1,030	708	573	671

CAL YR 1970 TOTAL 5,019.2 MEAN 13.8 MAX 34 MIN 5.5 AC-FT 9,960
WTR YR 1971 TOTAL 6,014.4 MEAN 16.5 MAX 104 MIN 5.5 AC-FT 11,930

PEAK DISCHARGE (BASE, 35 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-16	1045	4.30	126	3-14	2200	4.50	141	3-28	2030	4.48	141

NIOBRARA RIVER BASIN

06454500 Niobrara River above Box Butte Reservoir, Nebr.

LOCATION.--Lat 42°27'35", long 103°10'15", in NE₄ sec.27, T.29 N., R.50 W., Dawes County, on right bank 1 mile upstream from high-water line of Box Butte Reservoir and 6 miles east of Marsland.

DRAINAGE AREA.--1,400 sq mi, approximately.

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

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

AVERAGE DISCHARGE.--25 years, 31.2 cfs (22,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 270 cfs about Mar. 28 (gage height, 5.20 ft, from floodmark); minimum daily, 5.7 cfs Sept. 2, 3.

Period of record: Maximum discharge, 4,950 cfs July 28, 1951 (gage height, 10.30 ft), from rating curve extended above 230 cfs on basis of step-backwater analysis and slope-area measurement at gage height 9.22 ft; minimum daily, 1.6 cfs Sept. 26, 1953.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions for irrigation of about 12,800 acres above station.

REVISIONS (WATER YEARS).--WSP 1917: 1951, 1952(P), 1957(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	29	39	29	32	35	56	46	50	20	17	6.2
2	9.3	29	39	26	34	42	55	43	57	19	16	5.7
3	9.3	30	39	28	32	40	60	40	55	19	16	5.7
4	9.3	30	27	28	31	40	60	39	57	19	16	15
5	9.9	30	25	29	30	47	75	61	56	19	14	16
6	9.9	34	27	30	28	41	70	70	55	18	14	14
7	13	33	35	33	26	41	70	71	55	18	14	8.1
8	13	33	43	33	26	36	60	78	52	16	13	13
9	13	33	39	32	30	42	55	83	48	17	13	14
10	14	33	39	28	33	45	50	69	44	17	13	13
11	15	33	27	30	35	50	40	67	41	16	12	12
12	16	33	25	30	39	51	40	60	37	15	11	12
13	16	33	30	35	40	56	40	57	40	15	11	12
14	18	34	35	35	40	51	41	52	38	15	9.3	11
15	19	34	36	29	40	51	40	49	34	15	9.3	11
16	29	34	34	30	47	50	40	46	32	15	8.7	12
17	22	34	35	31	43	50	39	44	31	15	8.1	12
18	19	34	35	32	48	55	40	41	29	14	6.6	12
19	18	34	34	31	48	60	42	40	27	15	6.6	13
20	19	34	35	36	45	50	44	39	28	15	6.2	14
21	18	34	30	29	48	40	46	36	29	15	6.2	15
22	17	25	26	28	40	40	48	38	29	15	6.2	16
23	17	35	30	38	38	40	47	48	29	15	6.2	15
24	18	45	34	30	38	45	45	50	28	15	6.2	15
25	18	38	28	30	36	50	43	50	26	16	6.2	20
26	18	38	28	30	36	60	47	48	26	17	6.2	23
27	18	40	28	34	35	80	50	43	25	19	6.2	21
28	19	39	30	30	35	100	52	40	23	18	6.2	20
29	20	39	30	35	-----	70	54	40	23	20	6.2	21
30	22	40	30	38	-----	60	51	42	21	20	6.6	26
31	22	-----	30	35	-----	52	-----	46	-----	18	6.6	-----
TOTAL	508.0	1,024	1,002	972	1,033	1,570	1,500	1,576	1,125	520	303.8	423.7
MEAN	16.4	34.1	32.3	31.4	36.9	50.6	50.0	50.8	37.5	16.8	9.80	14.1
MAX	29	45	43	38	48	100	75	83	57	20	17	26
MIN	9.3	25	25	26	26	35	39	36	21	14	6.2	5.7
AC-FT	1,010	2,030	1,990	1,930	2,050	3,110	2,980	3,130	2,230	1,030	603	840

CAL YR 1970 TOTAL 9,881.1 MEAN 27.1 MAX 109 MIN 2.2 AC-FT 19,600

WTR YR 1971 TOTAL 11,557.5 MEAN 31.7 MAX 100 MIN 5.7 AC-FT 22,920

PEAK DISCHARGE (BASE, 100 CFS).--Mar. 28 (time unknown) 270 cfs (5.20 ft).

NOTE.--No gage-height record Mar. 18-29.

NIORRARA RIVER BASIN

21

06455000 Box Butte Reservoir near Hemingford, Nebr.

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

DRAINAGE AREA.--1,460 sq mi, approximately.

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

GAGE.--Electric tape gage read three or more times a month. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents observed, 20,650 acre-ft June 27 (elevation, 3,999.72 ft); minimum observed, 868 acre-ft Sept. 4 (elevation, 3,970.42 ft).
Period of record: Maximum contents, 32,210 acre-ft Mar. 26, 1948 (elevation, 4,007.70 ft); minimum observed since operation of reservoir began, 868 acre-ft Sept. 4, 1971 (elevation, 3,970.42 ft).

REMARKS.--Reservoir is formed by earthfill dam; outlet gate first closed Oct. 3, 1945. Usable capacity, 30,400 acre-ft between elevations 3,969.00 (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.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,975.32	1,950	-
Oct. 31.....	3,979.65	3,550	+1,600
Nov. 30.....	3,983.76	5,740	+2,190
Dec. 31.....	3,987.27	8,050	+2,310
CAL YR 1970.....	-	-	-480
Jan. 31.....	3,989.59	9,920	+1,870
Feb. 28.....	3,992.08	12,180	+2,260
Mar. 31.....	3,994.50	14,590	+2,410
Apr. 30.....	3,996.84	17,150	+2,560
May 31.....	3,998.57	19,210	+2,060
June 30.....	3,999.42	20,270	+1,060
July 31.....	3,989.30	9,670	-10,600
Aug. 31.....	3,972.94	1,370	-8,300
Sept. 30.....	3,976.57	2,320	+950
WTR YR 1971.....	-	-	+370

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

NIOBRARA RIVER BASIN

06455500 Niobrara River below Box Butte Reservoir, Nebr.

LOCATION.--Lat 42°27'25", long 103°04'05", in SE $\frac{1}{4}$ sec.28, T.29 N., R.49 W., Dawes County, on left bank 0.2 mile downstream from Box Butte Reservoir and 9 miles north of Hemingford.

DRAINAGE AREA.--1,460 sq mi, approximately.

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

GAGE.--Water-stage recorder. Concrete control since Apr. 11, 1953. Datum of gage is 3,950.08 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 207 cfs July 15 (gage height, 4.34 ft); minimum daily, 0.52 cfs Nov. 29, Dec. 1-7, 16-20.

Period of record: Maximum discharge, 616 cfs July 2, 1968 (gage height, 5.04 ft); minimum daily, 0.10 cfs for many days in 1947, 1951.

REMARKS.--Records good except those below 2 cfs, which are fair. Flow completely regulated by Box Butte Reservoir. (See preceding page.)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.66	.52	.62	.72	.76	.76	.87	1.1	121	121	73
2	.55	.66	.52	.62	.72	.80	.80	.87	1.2	129	131	71
3	.58	.66	.52	.62	.72	.80	.76	.87	1.1	146	141	57
4	.55	.66	.52	.66	.72	.76	.76	.87	1.3	148	141	29
5	.55	.66	.52	.66	.69	.76	.80	1.6	1.0	156	148	33
6	.62	.66	.52	.66	.72	.76	.80	1.1	1.0	146	158	39
7	.72	.66	.52	.66	.72	.80	.76	1.0	1.0	146	156	39
8	.69	.66	.55	.66	.72	.76	.80	1.1	1.0	161	158	19
9	.69	.66	.55	.66	.72	.80	.80	1.1	1.0	183	172	1.1
10	.80	.58	.58	.66	.72	.76	.80	1.1	1.0	180	180	.96
11	.80	.58	.58	.66	.72	.76	.83	.96	1.0	177	180	.92
12	.76	.58	.58	.62	.72	.76	.80	.96	.96	175	177	.92
13	.72	.58	.58	.62	.72	.76	.87	.96	1.1	177	175	.92
14	.72	.58	.58	.58	.72	.76	.87	.96	1.0	192	172	.87
15	.72	.62	.55	.58	.72	.76	.87	.87	.96	204	169	.87
16	.69	.62	.52	.62	.72	.80	.83	.93	.96	201	166	.87
17	.69	.58	.52	.62	.76	.80	.87	1.0	.96	201	164	.87
18	.66	.58	.52	.66	.76	.83	.87	.96	.96	201	161	.87
19	.93	.58	.52	.66	.76	.83	.96	.96	.92	198	158	.87
20	.69	.58	.52	.69	.76	.87	.92	.92	.92	198	156	.92
21	.69	.58	.55	.69	.76	.87	1.0	.92	.92	198	151	1.1
22	.66	.56	.55	.66	.80	.83	.92	1.1	.92	198	146	.96
23	.66	.55	.55	.69	.76	.83	.92	1.1	.92	192	146	.87
24	.66	.62	.55	.66	.69	.80	.92	1.0	.87	180	151	.83
25	.66	.55	.55	.58	.69	.83	.92	1.0	.87	180	143	.80
26	.66	.55	.58	.66	.66	.87	1.0	1.0	.87	175	131	.80
27	.66	.55	.58	.66	.69	.83	1.0	1.0	27	158	121	.80
28	.66	.55	.58	.66	.72	.80	.96	1.0	69	148	104	.80
29	.66	.52	.58	.66	-----	.80	.92	1.0	69	143	97	.76
30	.66	.55	.58	.66	-----	.80	.87	1.1	89	129	88	.80
31	.66	-----	.66	.69	-----	.80	-----	1.1	-----	118	76	-----
TOTAL	20.97	17.98	17.10	20.06	20.30	24.75	25.96	31.28	279.81	5,259	4,538	379.48
MEAN	.68	.60	.55	.65	.73	.80	.87	1.01	9.33	170	146	12.6
MAX	.93	.66	.66	.69	.80	.87	1.0	1.6	89	204	180	73
MIN	.55	.52	.52	.58	.66	.76	.76	.87	.87	118	76	.76
AC-FT	42	36	34	40	40	49	51	62	555	10,430	9,000	753
CAL YR 1970	TOTAL	9,967.90	MEAN	27.3	MAX	217	MIN	.44	AC-FT	19,770		
WTR YR 1971	TOTAL	10,634.69	MEAN	29.1	MAX	204	MIN	.52	AC-FT	21,090		

NIOBRARA RIVER BASIN

23

06455900 Niobrara River near Dunlap, Nebr.

LOCATION.--Lat 42°27'45", long 102°55'25", on river and two diversion canals in SE 1/4 sec.26, T.29 N., R.48 W., Dawes County, at diversion dam 1,000 ft upstream from Cottonwood Creek and 2.5 miles east of Dunlap.

DRAINAGE AREA.--1,580 sq mi, approximately.

PERIOD OF RECORD.--October 1930 to September 1942 (published as "at Dunlap"), September 1961 to September 1971 (discontinued). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--River: Water-stage recorder. Altitude of gage is 3,870 ft (from topographic map). Prior to Nov. 17, 1936, nonrecording gage on downstream side of highway 0.3 mile upstream and Nov. 17, 1936, to Sept. 30, 1942, water-stage recorder 0.5 mile upstream, both at present datum.

Mirage Flats diversion canal: Water-stage recorder and Parshall flume 10 ft wide.

Potmesil diversion canal: Water-stage recorder and Parshall flume 3 ft wide.

EXTREMES.--Current year: Maximum daily discharge, 201 cfs July 16; minimum daily, 3.0 cfs June 9. Period of record: Maximum discharge, 3,230 cfs July 30, 1962; minimum daily, 0.6 cfs Aug. 2-4, 1936.

REMARKS.--Records poor. Flow regulated by Box Butte Reservoir since Oct. 3, 1945. (See sta 06455000.) Records include major part of release from reservoir for irrigation. Separate records are computed for the river and diversions; figures given herein represent combined discharge. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.5	7.9	9.4	10	14	14	13	10	115	120	88
2	12	11	9.0	9.2	9.0	13	13	13	20	116	129	86
3	13	10	9.2	9.0	9.0	13	13	13	14	144	141	85
4	13	7.7	9.2	8.8	9.0	13	13	13	14	148	142	59
5	10	7.7	6.9	8.0	8.0	13	13	20	13	155	149	57
6	11	7.9	7.1	8.4	7.0	12	13	17	12	148	158	59
7	12	7.9	7.1	9.0	6.0	9.0	13	17	13	145	155	68
8	10	8.7	6.9	9.2	6.0	10	12	15	13	152	154	41
9	12	9.0	6.4	9.2	8.0	10	12	17	3.0	188	170	20
10	11	9.0	5.0	9.2	12	10	12	17	9.0	188	178	19
11	12	9.2	5.0	9.0	14	12	12	16	9.0	186	183	18
12	10	11	5.0	8.8	14	11	12	15	9.0	183	180	16
13	13	11	5.0	8.6	14	11	12	16	9.0	184	180	14
14	13	11	6.0	8.6	14	10	13	16	9.0	195	177	15
15	10	12	7.0	8.8	14	9.7	14	15	9.0	196	173	14
16	9.7	11	7.0	9.0	13	8.7	15	15	9.0	201	173	16
17	14	11	10	9.0	13	9.7	14	8.0	9.0	199	169	16
18	15	12	10	9.0	14	7.0	14	15	9.0	195	170	14
19	12	12	10	8.6	17	8.0	16	16	20	193	169	16
20	10	11	10	8.8	14	9.0	15	18	10	192	165	16
21	9.2	9.7	11	9.0	12	9.7	15	12	9.0	191	160	16
22	10	8.0	10	8.8	13	8.0	14	13	9.0	191	157	16
23	11	7.0	9.0	9.0	12	14	13	14	9.0	190	157	15
24	10	10	9.0	9.2	14	14	13	15	9.0	182	167	13
25	10	11	9.0	9.4	15	15	13	10	9.0	171	166	13
26	10	9.7	9.0	9.4	14	16	14	9.0	9.0	182	154	14
27	11	10	9.0	10	13	17	14	10	12	164	137	15
28	11	9.7	9.0	11	14	14	13	10	63	154	122	13
29	10	8.7	9.2	12	-----	13	13	11	63	152	110	13
30	10	9.2	9.4	12	-----	13	13	13	70	145	105	13
31	10	-----	9.6	11	-----	13	-----	13	-----	128	89	-----
TOTAL	345.9	292.6	252.9	288.4	332.0	359.8	400	435.0	485.0	5,273	4,759	878
MEAN	11.2	9.75	8.16	9.30	11.9	11.6	13.3	14.0	16.2	170	154	29.3
MAX	15	12	11	12	17	17	16	20	70	201	183	88
MIN	9.2	7.0	5.0	8.0	6.0	7.0	12	8.0	3.0	115	89	13
AC-FT	686	580	502	572	659	714	793	863	962	10,460	9,440	1,740

CAL YR 1970 TOTAL 13,372.5 MEAN 36.6 MAX 223 MIN 5.0 AC-FT 26,520
WTR YR 1971 TOTAL 14,101.6 MEAN 38.6 MAX 201 MIN 3.0 AC-FT 27,970

NIOBRARA RIVER BASIN

06457500 Niobrara River near Gordon, Nebr.

LOCATION.--Lat 42°38'00", long 102°12'40", in NE $\frac{1}{4}$ sec.26, T.31 N., R.42 W., Sheridan County, on left bank 250 ft upstream from bridge on State Highway 27, 4 miles downstream from Rush Creek, and 11 miles south of Gordon.

DRAINAGE AREA.--4,290 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 3,433.49 ft above mean sea level. Aug. 24, 1928, to June 30, 1932, nonrecording gage at bridge 4 miles downstream at different datum. Dec. 3, 1945, to Mar. 24, 1970, water-stage recorder at datum 1.0 ft higher.

EXTREMES.--Current year: Maximum discharge, 420 cfs May 7 (gage height, 1.68 ft); maximum gage height, 2.37 ft Jan. 20 (backwater from ice); minimum daily discharge, 51 cfs Nov. 23.
Period of record: Maximum discharge, 9,130 cfs May 21, 1962 (gage height, 5.25 ft); minimum daily, 16 cfs Dec. 20, 1966.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow of stream affected by storage in Box Butte Reservoir (see sta 06455000), for irrigation of Mirage Flats project and return flow from irrigated land.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	110	86	100	100	123	99	158	144	99	66	68
2	84	115	102	100	90	102	94	154	227	89	65	65
3	86	119	94	90	90	94	86	158	250	86	65	66
4	84	119	97	80	80	136	92	144	227	131	63	79
5	81	119	106	75	70	140	99	182	182	123	63	127
6	81	115	106	70	70	123	99	238	154	99	62	110
7	106	119	110	65	80	115	110	278	136	86	62	97
8	119	115	115	65	90	99	97	192	140	79	62	99
9	115	119	115	65	120	110	102	187	136	81	62	102
10	115	115	110	75	110	123	102	154	127	81	60	110
11	115	110	89	75	130	127	102	168	110	76	63	94
12	102	110	75	75	120	144	99	187	115	73	65	89
13	97	106	70	85	150	163	97	163	115	70	62	86
14	94	102	75	100	140	173	94	149	131	70	62	86
15	94	106	80	110	180	140	99	149	127	70	65	89
16	99	110	100	140	170	144	99	154	119	68	62	92
17	99	102	105	150	160	144	102	163	110	73	60	92
18	99	102	95	140	150	140	94	149	102	71	59	97
19	102	102	75	150	140	119	140	136	99	71	62	97
20	99	106	70	180	150	154	178	131	99	71	62	97
21	99	102	95	200	130	154	198	123	97	68	62	99
22	97	76	100	200	130	149	158	127	94	66	62	110
23	97	51	100	200	100	144	163	154	94	65	60	106
24	97	110	100	180	136	149	149	158	92	65	60	102
25	97	79	105	180	140	158	163	158	86	65	62	97
26	99	71	100	170	123	154	163	140	84	76	62	94
27	106	66	95	130	89	154	178	127	76	84	66	94
28	110	66	95	120	97	158	192	119	74	76	68	94
29	110	81	90	100	-----	154	192	127	79	73	66	94
30	110	94	90	100	-----	149	168	168	89	74	68	99
31	119	-----	95	90	-----	131	-----	158	-----	70	70	-----
TOTAL	3,091	3,017	2,940	3,660	3,335	4,267	3,808	4,953	3,715	2,449	1,958	2,831
MEAN	99.7	101	94.8	118	119	138	127	160	124	79.0	63.2	94.4
MAX	119	119	115	200	180	173	198	278	250	131	70	127
MIN	79	51	70	65	70	94	86	119	74	65	59	65
AC-FT	6,130	5,980	5,830	7,260	6,610	8,460	7,550	9,820	7,370	4,860	3,880	5,620

CAL YR 1970 TOTAL 33,847 MEAN 92.7 MAX 246 MIN 37 AC-FT 67,140
WTR YR 1971 TOTAL 40,024 MEAN 110 MAX 278 MIN 51 AC-FT 79,390

NIOBRARA RIVER BASIN

25

06459200 Snake River above Merritt Reservoir, Nebr.

LOCATION.--Lat 42°35'40", long 101°02'20", in NE $\frac{1}{4}$ sec.11, T.30 N., R.32 W., Cherry County, on left bank 5 ft upstream from steel piling control, 1,200 ft upstream from Shelbourn Bridge, 0.7 mile northwest of Swanson Camp, 8.5 miles southeast of headquarters for Nebraska National Forest (Niobrara Division), 10 miles upstream from Boardman Creek, and 14.5 miles upstream from Merritt Dam.

DRAINAGE AREA.--430 sq mi, approximately.

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

GAGE.--Water-stage recorder and steel piling control. Datum of gage is 2,952.75 ft above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--9 years, 205 cfs (148,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 600 cfs Aug. 29 (gage height, 3.70 ft); maximum gage height, 5.56 ft Nov. 23 (backwater from ice); minimum daily discharge, 130 cfs Jan. 6.
Period of record: Maximum discharge, 637 cfs Aug. 12, 1966 (gage height, 2.43 ft); maximum gage height, 5.56 ft Nov. 23, 1970 (backwater from ice); minimum daily discharge, 89 cfs Dec. 13, 1968.
Maximum flood since October 1960, 820 cfs June 30, 1962 (gage height, 2,953.46 ft above mean sea level, from high-water profiles at reference point on downstream side of Shelbourn Bridge 1,200 ft downstream), result of slope-area measurement of peak flow.

REMARKS.--Records good except for winter period and period of no gage-height record, which are fair. Records of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	198	185	209	200	194	212	249	214	165	180	188
2	182	206	178	212	230	201	189	225	212	158	181	180
3	178	211	183	179	230	198	197	212	225	158	181	180
4	180	204	182	160	190	209	203	216	239	170	185	190
5	184	212	174	150	180	214	190	227	216	188	183	190
6	181	219	177	130	160	215	195	249	197	198	184	190
7	205	223	184	145	140	208	193	264	190	176	185	185
8	199	232	197	190	150	204	202	245	185	163	182	185
9	189	225	189	210	170	207	190	221	183	163	184	185
10	194	229	175	200	240	219	197	237	179	169	186	190
11	199	224	155	190	260	225	200	246	204	164	185	190
12	194	210	165	150	275	229	209	243	179	165	188	190
13	194	215	190	170	252	232	201	232	179	162	190	190
14	189	205	200	190	247	239	199	211	178	164	194	185
15	181	204	222	210	236	215	202	201	178	175	196	180
16	179	211	206	225	239	213	209	197	168	171	193	185
17	181	211	197	215	230	210	209	224	216	167	191	185
18	181	206	187	200	233	203	212	216	188	169	193	185
19	184	210	180	230	220	189	249	194	177	164	193	185
20	185	206	210	275	200	191	371	182	171	167	195	190
21	188	204	245	252	210	201	335	184	163	168	199	200
22	188	175	185	247	200	192	319	191	167	170	205	210
23	195	160	135	233	180	190	263	199	166	175	199	200
24	191	180	165	220	235	195	242	191	167	171	192	190
25	194	220	160	222	213	189	231	185	162	184	193	200
26	192	188	180	212	221	198	245	184	162	190	192	200
27	195	176	190	212	197	227	243	181	161	182	203	200
28	198	184	220	204	202	257	246	182	158	177	217	200
29	203	189	230	214	-----	271	289	184	165	179	289	190
30	204	190	250	209	-----	256	274	225	166	181	217	200
31	200	-----	241	200	-----	240	-----	212	-----	180	192	-----
TOTAL	5,891	6,127	5,937	6,265	5,940	6,631	6,916	6,609	5,515	5,333	6,047	5,718
MEAN	190	204	192	202	212	214	231	213	184	172	195	191
MAX	205	232	250	275	275	271	371	264	239	198	289	210
MIN	178	160	135	130	140	189	189	181	158	158	180	180
AC-FT	11,680	12,150	11,780	12,430	11,780	13,150	13,720	13,110	10,940	10,580	11,990	11,340

CAL YR 1970 TOTAL 70,470 MEAN 193 MAX 279 MIN 122 AC-FT 139,800
WTR YR 1971 TOTAL 72,929 MEAN 200 MAX 371 MIN 130 AC-FT 144,700

PEAK DISCHARGE (BASE, 350 CFS).--Apr. 20 (0545) 424 cfs (3.17 ft); Aug. 29 (1930) 600 cfs (3.70 ft).

NOTE.--No gage-height record Sept. 4-30.

NIOBRARA RIVER BASIN

06459300 Merritt Reservoir near Burge, Nebr.

LOCATION.--Lat 42°38'06", long 100°52'18", in SW¼NW¼ sec.29, T.31 N., R.30 W., Cherry County, in control house of outlet works of Merritt Dam, 10.4 miles southwest of Burge and 26 miles southwest of Valentine.

DRAINAGE AREA.--640 sq mi, approximately, of which about 90 sq mi contributes directly to surface runoff.

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

GAGE.--Direct reading, single vertical column, mercury-well type manometer read once daily. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents observed, 76,840 acre-ft May 4 (elevation, 2,946.8 ft); minimum observed, 41,100 acre-ft Aug. 29 (elevation, 2,931.8 ft).

Period of record: Maximum contents observed, 76,840 acre-ft May 4, 1971; minimum since appreciable storage was attained, 20,060 acre-ft Oct. 1, 1968 (elevation, 2,916.1 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 19, 1964. Usable capacity, 71,379 acre-ft between elevations 2,884.0 (minimum water surface) and 2,946.0 ft (crest of spillway). Dead and inactive storage, 3,107 acre-ft below elevation 2,884.0 ft. Figures given herein represent total contents. Water is used for irrigation of Ainsworth Unit of Bureau of Reclamation.

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

REVISIONS.--WRD Nebr. 1967: Drainage area.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,933.6	44,450	-
Oct. 31.....	2,939.9	58,180	+13,730
Nov. 30.....	2,941.4	61,940	+3,760
Dec. 31.....	2,941.0	60,910	-1,030
CAL YR 1970.....	-	-	+1,000
Jan. 31.....	2,941.0	60,910	0
Feb. 28.....	2,941.1	61,170	+260
Mar. 31.....	2,941.1	61,170	0
Apr. 30.....	2,946.2	75,080	+13,910
May 31.....	2,945.7	73,630	-1,450
June 30.....	2,945.8	73,910	+280
July 31.....	2,939.6	57,450	-16,460
Aug. 31.....	2,932.1	41,640	-15,810
Sept. 30.....	2,936.2	49,710	+8,070
WTR YR 1971.....	-	-	+5,260

NIOBRARA RIVER BASIN

27

06459500 Snake River near Burge, Nebr.

LOCATION.--Lat 42°39'20", long 100°51'00", in NE $\frac{1}{4}$ sec.20, T.31 N., R.30 W., Cherry County, on right bank 150 ft downstream from Nebraska National Forest boundary, 4 miles downstream from Merritt Dam, 6.5 miles southwest of Burge, and 22 miles southwest of Valentine.

DRAINAGE AREA.--660 sq mi, approximately, of which about 100 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 2,805.36 ft above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--8 years (1963-71), 164 cfs (118,800 acre-ft per year), since storage and diversion began.

EXTREMES.--Current year: Maximum discharge, 406 cfs May 3 (gage height, 2.53 ft); minimum daily, 11 cfs Nov. 11-17.

Period of record: Maximum discharge, 3,170 cfs Feb. 7, 1963 (gage height, 6.96 ft, release of storage behind temporary construction dike), from rating curve extended above 520 cfs on basis of slope-area measurement at gage height 5.39 ft; minimum daily, 5.8 cfs May 24-27, 1964.

REMARKS.--Records good. Natural flow affected by storage in Merritt Reservoir 4 miles upstream. (See sta 06459300.)

REVISIONS (WATER YEARS).--WSP 1279: 1950(M), 1951(P). WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	315	240	255	273	305	83	169	15	12	107
2	13	12	312	240	256	275	255	110	182	18	12	107
3	13	12	292	235	259	277	136	285	219	15	13	137
4	13	12	232	224	255	277	113	351	221	15	12	155
5	13	43	212	223	256	281	50	330	216	14	12	154
6	13	159	210	223	256	263	14	340	215	14	12	155
7	14	190	218	222	254	252	14	344	196	14	12	63
8	13	195	237	222	254	252	15	351	181	14	12	14
9	13	193	237	222	251	257	15	343	183	14	18	14
10	14	91	238	225	251	258	15	337	180	14	22	14
11	13	11	237	226	252	258	15	329	179	14	12	14
12	13	11	237	225	249	258	16	320	178	14	12	14
13	13	11	240	225	249	261	16	320	138	14	12	14
14	13	11	240	225	249	261	16	319	102	14	12	14
15	13	11	240	225	246	262	17	329	103	14	12	14
16	13	11	240	225	246	262	18	326	102	14	12	14
17	13	11	240	225	246	264	19	318	103	14	12	13
18	13	114	241	225	249	277	19	322	101	13	12	13
19	13	261	242	225	257	298	23	323	102	13	12	13
20	14	309	243	225	255	298	20	207	99	13	12	13
21	13	321	242	236	253	298	19	259	100	13	12	14
22	13	321	244	252	252	298	19	259	99	13	12	13
23	13	325	246	264	252	298	19	262	100	12	13	13
24	13	325	249	270	249	302	18	192	100	12	12	13
25	13	325	249	270	267	302	18	127	100	12	13	13
26	13	325	248	268	274	302	19	139	99	12	12	13
27	13	321	248	263	275	302	149	165	101	12	12	13
28	13	313	249	255	276	305	205	168	91	13	13	12
29	13	317	244	255	-----	302	123	169	57	13	38	13
30	13	316	240	255	-----	302	51	171	35	13	99	13
31	12	-----	240	255	-----	305	-----	169	-----	12	105	-----
TOTAL	405	4,889	7,602	7,370	7,143	8,680	1,751	8,067	4,051	421	598	1,186
MEAN	13.1	163	245	238	255	280	58.4	260	135	13.6	19.3	39.5
MAX	14	325	315	270	276	305	305	351	221	18	105	155
MIN	12	11	210	222	246	252	14	83	35	12	12	12
AC-FT	803	9,720	15,080	14,620	14,170	17,220	3,470	16,000	8,040	835	1,190	2,350

CAL YR 1970 TOTAL 48,396 MEAN 133 MAX 385 MIN 11 AC-FT 95,990
WTR YR 1971 TOTAL 52,163 MEAN 143 MAX 351 MIN 11 AC-FT 103,500

NIOBRARA RIVER BASIN

06460900 Minnechaduza Creek near Kilgore, Nebr.

LOCATION.--Lat 42°59'10", long 100°53'55", in NE1/4 sec.30, T.35 N., R.30 W., Cherry County, on right bank 800 ft northeast of Paul Zysset ranch buildings, 2.5 miles downstream from South Dakota-Nebraska State line, and 4.5 miles northeast of Kilgore.

DRAINAGE AREA.--85 sq mi, approximately.

PERIOD OF RECORD.--March 1958 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,770 ft (from topographic map).

AVERAGE DISCHARGE.--13 years, 7.66 cfs (5,550 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 78 cfs Apr. 20 (gage height, 4.37 ft, backwater from beaver dams); no flow for many days.

Period of record: Maximum discharge, 147 cfs June 8, 1968 (gage height, 4.19 ft); maximum gage height, 4.37 ft Apr. 20, 1971 (backwater from beaver dams); no flow at times in 1959, 1961, 1964, 1966, 1969-71.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1729: 1959(M). WSP 1917: 1958(M), 1960(P). WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	4.0	5.6	1.9	5.8	6.0	17	42	6.3	1.7		0
2	1.9	4.1	5.3	1.9	6.0	6.0	14	34	6.3	1.4		0
3	2.0	4.1	5.4	1.8	6.0	6.0	12	27	5.4	1.4		0
4	2.2	4.1	5.2	1.7	5.8	6.6	10	22	4.6	1.6		0
5	2.3	4.3	5.0	1.5	5.8	8.2	10	20	4.3	2.8		.04
6	2.4	4.5	4.8	1.2	5.8	10	10	20	4.3	3.0		.02
7	2.6	4.7	4.6	1.0	5.8	11	9.8	18	3.7	2.8		.01
8	2.7	4.9	4.8	1.1	5.8	10	9.5	17	3.1	2.6		.04
9	2.8	5.0	5.4	1.2	5.8	10	9.4	16	2.7	2.4		.06
10	3.0	4.7	5.4	1.3	5.8	14	9.0	15	2.2	2.2		.05
11	1.8	4.7	4.5	1.4	5.6	14	8.9	15	1.8	1.8		.03
12	2.3	4.6	3.9	1.5	5.6	21	9.1	14	1.4	1.5		.02
13	2.4	5.0	3.3	1.7	7.2	26	9.1	14	1.1	1.2		.03
14	2.5	5.1	2.8	1.8	13	28	9.1	13	.65	1.0		.03
15	2.4	4.9	2.2	2.0	16	28	9.1	12	.67	.82		.06
16	2.7	4.8	2.2	2.2	18	27	9.5	11	.79	.55		.08
17	2.8	4.8	2.3	2.3	13	21	10	9.9	1.1	.47		.13
18	2.9	4.9	2.3	2.4	17	20	12	8.8	1.2	.42		.17
19	3.0	4.9	2.1	2.4	12	10	21	8.0	1.2	.23		.19
20	2.9	4.9	2.0	2.6	9.0	12	70	7.2	1.1	.14		.17
21	2.6	5.0	1.8	3.0	9.2	14	56	6.3	1.1	.09		.15
22	2.9	4.6	1.8	2.5	7.8	14	59	5.5	1.2	.05		.22
23	3.1	3.8	1.7	2.3	6.8	12	48	4.9	1.2	.02		.23
24	3.3	3.7	1.5	2.4	6.4	11	37	4.6	1.0	0		.17
25	3.4	4.5	1.3	3.2	6.6	11	30	4.0	1.2	0		.17
26	3.5	4.7	1.2	3.2	6.6	13	28	3.2	1.1	.01		.14
27	3.5	4.7	1.2	3.7	6.4	21	36	2.8	1.2	0		.11
28	3.5	5.0	1.2	4.4	6.2	22	53	2.4	1.4	0		.12
29	3.7	5.2	1.2	5.8	-----	27	53	3.2	1.7	0		.15
30	4.0	5.4	1.2	5.4	-----	27	50	4.1	1.7	0		.25
31	4.0	-----	1.4	5.6	-----	23	-----	5.2	-----	0		-----
TOTAL	87.0	139.6	94.6	76.4	230.8	489.8	728.5	390.1	66.71	30.20	0	2.84
MEAN	2.81	4.65	3.05	2.46	8.24	15.8	24.3	12.6	2.22	.97	0	.095
MAX	4.0	5.4	5.6	5.8	18	28	70	42	6.3	3.0	0	.25
MIN	1.8	3.7	1.2	1.0	5.6	6.0	8.9	2.4	.65	0	0	0
AC-FT	173	277	188	152	458	972	1,440	774	132	60	0	5.6

CAL YR 1970 TOTAL 2,306.60 MEAN 6.32 MAX 66 MIN 0 AC-FT 4,580
WTR YR 1971 TOTAL 2,336.55 MEAN 6.40 MAX 70 MIN 0 AC-FT 4,630

PEAK DISCHARGE (BASE, 45 CFS).--Apr. 20 (0430) 78 cfs (4.37 ft, backwater from beaver dams); Apr. 28 (2100) 58 cfs (3.92 ft).

06461000 Minnechaduz Creek at Valentine, Nebr.

LOCATION.--Lat 42°53'10", long 100°33'10", in SW 1/4 sec.30, T.34 N., R.27 W., Cherry County, on right bank 500 ft downstream from powerplant in city park at north edge of Valentine and 4 miles upstream from mouth.

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

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

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

AVERAGE DISCHARGE.--23 years (1948-71), 35.1 cfs (25,430 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 394 cfs Apr. 21 (gage height, 4.09 ft); minimum daily, 5.8 cfs Oct. 24.

Period of record: Maximum discharge, 1,100 cfs Mar. 22, 1960 (gage height, 8.00 ft); minimum daily, 2.6 cfs Feb. 22, 1955.

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

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	28	33	27	21	42	73	153	12	30	13	21
2	14	24	28	25	24	39	67	129	45	23	16	16
3	13	30	32	25	30	29	51	111	35	27	14	11
4	12	26	30	22	34	40	50	102	40	9.8	6.7	21
5	16	30	26	15	27	44	44	83	40	31	17	19
6	15	7.4	23	20	20	43	38	78	46	24	15	26
7	19	38	31	19	25	31	44	69	34	27	7.1	25
8	19	33	35	17	32	44	38	49	41	28	16	18
9	23	35	26	17	24	38	39	60	46	19	10	24
10	18	22	23	14	22	42	32	59	33	23	16	16
11	22	31	16	20	25	39	33	52	27	21	10	20
12	28	26	24	19	31	51	31	40	41	18	12	13
13	23	25	30	20	26	62	29	55	34	20	16	21
14	25	29	35	18	43	85	39	45	34	18	7.0	12
15	24	27	28	19	81	97	25	50	29	18	16	26
16	17	29	32	18	78	79	32	35	24	19	17	8.3
17	22	30	32	23	75	51	33	49	31	15	16	16
18	21	28	28	15	77	44	38	43	28	11	12	22
19	25	30	25	20	22	49	37	49	24	12	12	23
20	23	34	24	20	26	28	100	44	28	22	11	11
21	21	31	29	24	25	64	271	35	24	17	19	20
22	19	20	29	22	51	50	248	44	25	15	10	21
23	37	9.3	22	27	38	53	163	46	27	12	16	15
24	5.8	20	30	20	33	53	159	49	25	13	11	24
25	29	29	24	29	47	52	139	40	18	16	12	21
26	16	38	19	25	43	43	124	40	20	14	11	15
27	23	26	28	31	42	56	109	41	24	16	11	16
28	25	33	18	25	25	60	108	35	25	17	14	19
29	30	31	23	31	-----	78	114	31	22	16	8.6	15
30	23	22	22	33	-----	78	140	39	16	16	45	14
31	26	-----	25	18	-----	72	-----	60	-----	17	21	-----
TOTAL	647.8	821.7	830	678	1,047	1,636	2,448	1,815	898	584.8	438.4	549.3
MEAN	20.9	27.4	26.8	21.9	37.4	52.8	81.6	58.5	29.9	18.9	14.1	18.3
MAX	37	38	35	33	81	97	271	153	46	31	45	26
MIN	5.8	7.4	16	14	20	28	25	31	12	9.8	6.7	8.3
AC-FT	1,280	1,630	1,650	1,340	2,080	3,250	4,860	3,600	1,780	1,160	870	1,090

CAL YR 1970 TOTAL 10,231.4 MEAN 28.0 MAX 131 MIN 4.8 AC-FT 20,290

WTR YR 1971 TOTAL 12,394.0 MEAN 34.0 MAX 271 MIN 5.8 AC-FT 24,580

LOCATION.--Lat 42°54'10", long 100°21'40", in SE 1/4 sec.22, T.34 N., R.26 W., Cherry County, on left bank 18 ft downstream from highway bridge, 2.2 miles downstream from Big Beaver Creek, 5.5 miles downstream from Minnechadua Creek, and 6.5 miles southwest of Sparks.

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

AVERAGE DISCHARGE.--26 years, 810 cfs (586,800 acre-ft per year), unadjusted.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by irrigation and power developments, storage in Box Butte Reservoir (see sta 06455000), and since May 1964 storage in Merritt Reservoir (see sta 06459300).

REVISIONS (WATER YEARS).--WSP 1209: 1947(M), 1948-50(P). WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	491	505	873	660	720	920	981	1,050	760	483	438	520
2	491	513	862	520	780	900	921	1,020	828	442	440	473
3	482	545	872	500	780	920	885	978	897	429	433	454
4	491	535	804	460	680	960	840	1,260	933	506	413	534
5	508	516	726	410	780	1,000	770	1,250	921	595	425	636
6	508	589	746	460	800	980	666	1,250	839	542	424	600
7	544	741	727	620	760	960	656	1,300	850	535	401	589
8	618	749	764	680	880	940	637	1,380	739	493	395	483
9	570	814	720	660	840	916	647	1,370	728	454	385	458
10	544	748	560	620	920	883	628	1,300	697	478	393	438
11	561	563	520	700	940	910	618	1,260	728	434	402	461
12	570	517	620	700	940	923	618	1,190	718	434	388	436
13	552	514	680	700	940	938	618	1,140	739	433	399	467
14	526	538	740	800	840	992	628	1,080	705	429	419	434
15	535	539	700	840	940	985	608	1,120	690	435	419	446
16	526	530	740	860	980	947	628	1,030	660	426	403	420
17	526	541	740	800	960	874	628	1,170	712	436	410	428
18	535	572	700	840	860	981	628	1,120	677	409	400	460
19	544	766	540	860	800	919	708	1,120	664	408	410	456
20	535	914	580	740	740	839	1,410	1,030	615	433	405	451
21	553	880	640	700	700	900	1,330	806	631	425	409	457
22	522	800	660	680	680	926	1,220	897	614	428	416	512
23	577	600	700	740	800	953	1,000	1,070	603	425	448	479
24	513	820	720	720	880	926	945	957	600	427	398	475
25	542	826	700	720	1,160	933	921	782	590	449	394	469
26	499	875	680	720	1,120	933	957	728	596	460	388	484
27	525	896	660	700	920	945	1,080	782	561	458	397	486
28	516	916	640	680	900	969	1,240	739	557	445	414	488
29	525	889	680	680	-----	969	1,310	749	558	463	441	486
30	538	868	700	640	-----	969	1,130	874	491	466	751	508
31	528	-----	700	500	-----	957	-----	921	-----	451	581	-----
TOTAL	16,495	20,619	21,694	20,910	24,040	29,067	25,856	32,723	20,901	14,131	13,239	14,488
MEAN	532	687	700	675	859	938	862	1,056	697	456	427	483
MAX	618	916	873	860	1,160	1,000	1,410	1,380	933	595	751	636
MIN	482	505	520	410	680	839	608	728	491	408	385	420
AC-FT	32,720	40,900	43,030	41,470	47,680	57,650	51,290	64,910	41,460	28,030	26,260	28,740
CAL YR 1970	TOTAL 246,760		MEAN 676	MAX 1,580	MIN 378	AC-FT 489,400						
WTR YR 1971	TOTAL 254,163		MEAN 696	MAX 1,410	MIN 385	AC-FT 504,100						

NIOBRARA RIVER BASIN

31

06462000 Niobrara River near Norden, Nebr.

LOCATION.--Lat 42°47'13", long 100°02'06", in N₁SW₄ sec.33, T.33 N., R.23 W., Keya Paha County, on left bank 60 ft downstream from county road bridge, 1.5 miles downstream from Fairfield Creek, and 6 miles south of Norden.

DRAINAGE AREA.--8,390 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,109.93 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 896 cfs (649,200 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 1,990 cfs Apr. 20 (gage height, 2.64 ft); maximum gage height, 5.18 ft Feb. 27 (backwater from ice); minimum daily discharge, 400 cfs Aug. 27.

Period of record: Maximum discharge, 7,380 cfs July 1, 1962 (gage height, 7.10 ft, backwater from bridge in channel); maximum gage height, 10.24 ft Mar. 11, 1966 (ice jam and backwater from bridge in channel); minimum daily discharge, 130 cfs Jan. 10, 1957.

REMARKS.--Records good except those for winter period, which are fair. Flow affected by regulation at powerplants, diversions for irrigation, return flow from irrigated areas, storage in Box Butte Reservoir (see sta 06455000), and since May 1964 storage in Merritt Reservoir (see sta 06459300).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	522	568	880	720	720	1,000	1,160	1,240	886	571	496	590
2	523	573	916	600	880	880	1,110	1,150	800	559	490	572
3	492	589	889	540	900	880	1,020	1,090	827	531	486	559
4	512	574	891	500	860	920	879	1,260	942	567	502	620
5	510	559	764	480	800	980	863	1,330	993	679	435	760
6	512	590	739	580	880	1,020	781	1,360	958	684	482	721
7	562	729	792	660	880	1,000	724	1,340	977	664	485	668
8	679	758	758	740	920	980	728	1,330	868	648	471	657
9	621	841	774	700	960	960	738	1,420	864	600	472	573
10	615	827	692	700	1,020	940	665	1,350	814	584	452	503
11	621	653	554	720	1,040	1,000	681	1,320	824	588	467	505
12	625	548	640	720	1,060	1,020	659	1,260	804	536	460	507
13	590	556	720	740	980	1,020	684	1,160	879	534	474	496
14	582	559	740	740	1,020	1,080	653	1,090	831	531	491	496
15	614	588	720	800	1,100	1,090	655	1,080	712	526	491	492
16	592	529	780	820	1,160	987	655	1,030	680	513	475	520
17	593	554	780	820	1,100	951	648	1,180	700	499	479	497
18	581	560	760	860	1,040	920	645	1,150	762	486	467	508
19	596	712	580	840	900	940	745	1,140	716	460	471	519
20	607	914	600	840	840	904	1,430	1,020	661	480	464	516
21	591	917	620	860	800	904	1,440	733	693	470	453	526
22	607	841	640	820	760	936	1,440	898	680	470	464	577
23	594	580	640	820	720	953	1,190	1,120	687	470	474	509
24	597	1,100	660	800	760	962	1,030	1,030	642	470	496	513
25	574	875	660	820	780	948	1,080	800	649	480	406	523
26	582	842	660	840	1,020	952	1,140	748	641	490	408	535
27	583	872	640	800	1,250	1,030	1,280	757	657	480	400	540
28	576	875	660	820	1,140	1,180	1,390	778	651	482	415	532
29	587	849	700	840	-----	1,230	1,470	746	657	490	431	514
30	585	878	720	840	-----	1,200	1,380	790	622	516	940	546
31	593	-----	740	700	-----	1,170	-----	983	-----	504	653	-----
TOTAL	18,018	21,410	22,309	23,080	26,290	30,937	28,963	33,683	23,077	16,562	15,050	16,594
MEAN	581	714	720	745	939	998	965	1,087	769	534	485	553
MAX	679	1,100	916	860	1,250	1,230	1,470	1,420	993	684	940	760
MIN	492	529	554	480	720	880	645	733	622	460	400	492
AC-FT	35,740	42,470	44,250	45,780	52,150	61,360	57,450	66,810	45,770	32,850	29,850	32,910
CAL YR 1970	TOTAL 263,569		MEAN 722	MAX 1,600	MIN 400	AC-FT 522,800						
WTR YR 1971	TOTAL 275,973		MEAN 756	MAX 1,470	MIN 400	AC-FT 547,400						

NIOBRARA RIVER BASIN

06462500 Plum Creek at Meadville, Nebr.

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 2,035 ft (from topographic map). Prior to Nov. 25, 1962, at site 6.5 miles upstream at different datum. Nov. 25, 1962, to Nov. 14, 1966, at present site at datum 1.0 ft higher.

AVERAGE DISCHARGE.--23 years (1948-71), 107 cfs (77,520 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 291 cfs Apr. 29 (gage height, 3.58 ft); maximum gage height, 5.68 ft Jan. 14 (backwater from ice); minimum daily discharge, 64 cfs Dec. 11, 19. Period of record: Maximum discharge, 2,070 cfs Sept. 18, 1967 (gage height, 4.98 ft); maximum gage height observed, 7.54 ft Dec. 6, 1964 (backwater from ice), present datum (revised); minimum daily discharge, 15 cfs Feb. 19, 1955.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1729: 1953. WSP 1917: 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	88	86	92	74	94	146	223	129	84	90	122
2	83	84	92	86	84	88	117	187	122	85	90	98
3	82	85	90	84	74	89	110	175	117	85	86	90
4	89	85	91	80	70	92	109	175	116	92	82	90
5	90	86	89	76	74	93	105	169	114	125	84	94
6	87	86	89	66	80	95	101	175	110	121	88	94
7	88	86	88	72	82	90	105	178	107	117	86	88
8	86	92	87	72	86	91	108	184	104	102	82	94
9	89	94	85	70	102	94	108	172	102	86	82	105
10	89	94	72	68	125	99	110	169	101	86	80	107
11	92	94	64	68	110	106	110	169	99	89	78	102
12	92	91	74	72	112	117	110	171	98	87	78	99
13	89	89	74	82	114	122	122	181	97	89	78	96
14	88	86	70	86	118	119	120	181	97	88	103	98
15	88	84	76	86	122	125	130	163	95	86	103	96
16	85	83	74	84	120	123	142	150	92	84	98	90
17	86	84	78	80	116	115	151	157	95	82	94	90
18	86	88	72	74	116	119	148	148	110	85	92	97
19	86	89	64	72	116	110	166	133	107	88	94	101
20	87	87	74	76	111	110	214	129	95	85	92	94
21	84	90	72	82	124	113	223	129	93	85	86	94
22	82	84	78	90	123	111	219	128	92	85	84	107
23	80	80	66	90	121	109	214	151	93	87	82	108
24	80	108	72	96	116	110	223	143	91	94	80	98
25	83	90	68	106	112	111	223	137	86	101	73	99
26	80	82	72	96	106	114	214	151	87	103	71	102
27	83	81	76	106	100	125	211	142	85	95	78	93
28	81	79	80	110	96	127	223	121	82	88	86	94
29	85	84	82	96	-----	153	274	120	88	89	96	90
30	90	87	90	80	-----	173	256	127	85	92	194	99
31	90	-----	92	70	-----	162	-----	131	-----	94	187	-----
TOTAL	2,663	2,620	2,437	2,568	2,904	3,499	4,812	4,869	2,989	2,859	2,877	2,929
MEAN	85.9	87.3	78.6	82.8	104	113	160	157	99.6	92.2	92.8	97.6
MAX	92	108	92	110	125	173	274	223	129	125	194	122
MIN	80	79	64	66	70	88	101	120	82	82	71	88
AC-FT	5,280	5,200	4,830	5,090	5,760	6,940	9,540	9,660	5,930	5,670	5,710	5,810

CAL YR 1970 TOTAL 33,586 MEAN 92.0 MAX 298 MIN 64 AC-FT 66,620
 WTR YR 1971 TOTAL 38,026 MEAN 104 MAX 274 MIN 64 AC-FT 75,420

PEAK DISCHARGE (BASE, 300 CFS).--No peak above base.

NIOBRARA RIVER BASIN

33

06463500 Long Pine Creek near Riverview, Nebr.

LOCATION.--Lat 42°41'20", long 99°41'20", in N½ sec.5, T.31 N., R.20 W., Brown County, on right bank 7 ft downstream from county road bridge, 1 mile downstream from Bone Creek, and 5.5 miles southwest of Riverview.

DRAINAGE AREA.--390 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,983.34 ft above mean sea level (levels by Bureau of Reclamation). Prior to Dec. 7, 1962, at site 100 ft upstream at present datum.

AVERAGE DISCHARGE.--22 years (1948-53, 1954-71), 132 cfs (95,630 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 800 cfs Aug. 30 (gage height, 5.50 ft); minimum daily, 84 cfs Nov. 23.

Period of record: Maximum discharge, 9,650 cfs July 1, 1962 (gage height, 15.68 ft, backwater from fallen bridge), from rating curve extended above 3,600 cfs on basis of slope-area measurement of peak flow; minimum daily, 44 cfs Jan. 10, 1963.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1729: 1952(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	111	114	131	119	126	138	125	138	103	147	210
2	112	117	108	125	120	122	126	120	127	104	143	170
3	109	122	110	119	117	122	120	120	139	106	150	155
4	119	122	107	102	112	128	115	122	135	133	142	140
5	120	120	104	98	116	134	118	130	124	241	142	123
6	119	128	101	100	117	125	116	130	143	171	136	129
7	108	123	107	104	112	116	119	124	147	161	142	129
8	114	140	113	116	104	118	124	124	139	144	137	123
9	115	135	107	104	116	119	128	125	130	144	137	123
10	113	127	92	95	130	123	124	131	127	142	129	126
11	116	121	92	101	173	133	128	134	129	125	124	126
12	116	119	107	99	168	142	120	131	124	121	124	123
13	113	122	98	108	135	206	120	132	121	114	135	121
14	109	120	98	109	148	207	117	128	124	120	147	127
15	108	116	110	113	167	160	122	127	130	133	141	127
16	111	122	107	117	179	147	128	126	121	124	131	132
17	112	123	113	119	160	141	119	144	153	112	135	130
18	110	121	107	117	196	128	121	125	252	139	120	127
19	108	120	98	114	174	131	129	126	132	125	132	127
20	111	114	106	124	146	134	149	127	113	128	122	128
21	111	110	116	119	148	142	169	128	110	127	126	130
22	110	91	116	119	140	146	164	123	111	144	118	152
23	117	84	108	118	136	162	132	215	121	146	114	139
24	118	91	113	122	130	158	129	152	124	137	108	136
25	118	109	113	122	127	158	121	130	116	141	104	142
26	113	105	122	112	124	174	125	128	103	130	108	136
27	117	104	116	121	119	199	146	148	104	134	113	137
28	113	103	122	124	125	408	238	147	107	125	126	136
29	115	108	119	127	-----	269	207	138	111	132	125	132
30	117	113	131	111	-----	191	135	144	115	142	444	137
31	116	-----	128	110	-----	168	-----	139	-----	151	280	-----
TOTAL	3,527	3,461	3,403	3,520	3,858	4,937	4,047	4,143	3,870	4,199	4,482	4,073
MEAN	114	115	110	114	138	159	135	134	129	135	145	136
MAX	120	140	131	131	196	408	238	215	252	241	444	210
MIN	108	84	92	95	104	116	115	120	103	103	104	121
AC-FT	7,000	6,860	6,750	6,980	7,650	9,790	8,030	8,220	7,680	8,330	8,890	8,080

CAL YR 1970 TOTAL 46,197 MEAN 127 MAX 533 MIN 84 AC-FT 91,630
WTR YR 1971 TOTAL 47,520 MEAN 130 MAX 444 MIN 84 AC-FT 94,260

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
3-28	1830	4.52	752	7-5	0330	4.54	456
6-18	0200	4.66	652	8-30	1730	5.50	800

NIOBRARA RIVER BASIN

06464500 Keya Paha River at Wewela, S. Dak.

LOCATION.--Lat 43°01'42", long 99°46'45", in SE $\frac{1}{4}$ sec.24, T.95 N., R.76 W., Tripp County, on left bank 13 ft downstream from bridge on U.S. Highway 183, 1.0 mile north of Wewela, 4.5 miles upstream from Holt Creek, and 11.5 miles downstream from Lost Creek.

DRAINAGE AREA.--1,070 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,049.78 ft above mean sea level. Prior to June 21, 1957, nonrecording gage at site 13 ft upstream at same datum.

AVERAGE DISCHARGE.--26 years (1938-40, 1947-71), 71.9 cfs (52,090 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 600 cfs Mar. 14; maximum gage height, 7.76 ft Mar. 14 (backwater from ice); minimum daily discharge, 2.5 cfs Feb. 6-8.

Period of record: Maximum discharge, 5,430 cfs 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.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 22 to Mar. 29)

Oct. 1 to Mar. 29

Mar. 30 to Sept. 30

1.1	8.0	1.1	6.0	2.0	89
1.2	13	1.2	9.8	2.5	174
1.4	29	1.3	15	3.0	284
1.7	68	1.5	30	3.5	420
		1.7	50		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	25	38	11	3.5	24	233	215	71	28	15	23
2	13	28	35	10	3.5	23	180	182	70	27	14	22
3	12	30	30	7.0	3.0	23	161	150	67	25	12	15
4	13	31	25	4.0	3.0	24	141	135	62	24	11	13
5	13	29	20	3.0	3.0	24	127	127	60	24	10	16
6	13	29	15	3.0	2.5	24	117	134	59	25	10	19
7	15	31	17	3.0	2.5	25	107	125	60	25	9.8	19
8	18	35	20	3.0	2.5	25	98	112	61	25	10	18
9	20	37	15	3.5	3.5	50	91	103	57	23	9.4	19
10	21	35	9.0	3.0	5.0	80	85	103	53	22	9.0	19
11	23	33	8.0	3.0	8.5	200	82	106	49	22	8.7	17
12	23	31	7.0	3.0	15	300	76	104	47	22	9.8	16
13	22	30	6.0	3.0	20	400	72	95	47	19	8.3	15
14	23	28	6.0	3.0	40	500	67	88	47	18	9.0	14
15	22	29	6.0	3.0	75	450	66	83	45	18	8.3	14
16	21	35	6.0	3.0	100	350	67	78	43	17	7.5	14
17	21	34	5.5	3.5	120	270	66	88	42	16	7.5	15
18	22	33	5.5	3.5	100	230	63	89	41	17	7.9	17
19	22	33	5.0	3.5	80	200	67	86	40	16	7.9	18
20	22	31	5.0	3.5	50	180	85	78	46	15	8.3	18
21	22	29	5.0	3.5	30	160	134	71	46	14	7.9	18
22	22	22	5.0	3.5	28	160	251	69	40	14	8.3	21
23	23	20	5.5	3.5	25	160	253	134	36	14	7.1	21
24	23	20	5.5	4.0	25	180	209	127	34	13	7.1	20
25	24	25	5.5	4.0	26	180	170	101	34	14	7.1	19
26	25	30	6.0	4.0	28	200	144	89	32	16	6.4	20
27	25	32	6.0	4.0	28	240	151	81	30	15	7.1	19
28	25	35	7.0	4.0	26	300	198	74	30	13	7.1	19
29	26	40	8.0	4.0	-----	400	228	70	31	14	7.1	18
30	25	40	10	3.5	-----	332	262	70	30	16	19	19
31	25	-----	10	3.5	-----	292	-----	70	-----	16	22	-----
TOTAL	637	920	357.5	124.0	856.5	6,006	4,051	3,237	1,410	587	299.6	535
MEAN	20.5	30.7	11.5	4.00	30.6	194	135	104	47.0	18.9	9.66	17.8
MAX	26	40	38	11	120	500	262	215	71	28	22	23
MIN	12	20	5.0	3.0	2.5	23	63	69	30	13	6.4	13
AC-FT	1,260	1,820	709	246	1,700	11,910	8,040	6,420	2,800	1,160	594	1,060

CAL YR 1970 TOTAL 14,517.1 MEAN 39.8 MAX 363 MIN 5.0 AC-FT 28,790
WTR YR 1971 TOTAL 19,020.6 MEAN 52.1 MAX 500 MIN 2.5 AC-FT 37,730

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
3-14	-	-	600	4-22	2230	3.09	294
3-29	-	-	450	4-30	0530	3.09	302

NIOBRARA RIVER BASIN

35

06464900 Keya Paha River near Naper, Nebr.

LOCATION.--Lat 42°55'00", long 99°05'50", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.34 N., R.15 W., Boyd County, on left bank 8 ft downstream from highway bridge, 3.3 miles south of Naper, and 8.6 miles upstream from mouth.

DRAINAGE AREA.--1,630 sq mi, approximately.

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

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.

AVERAGE DISCHARGE.--14 years, 141 cfs (102,200 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 1,950 cfs Mar. 14 (gage height, 9.47 ft, backwater from ice); maximum gage height, 10.03 ft Mar. 14 (ice jam); minimum daily discharge, 0.75 cfs Aug. 24.

Period of record: Maximum discharge, 9,280 cfs July 1, 1962 (gage height, 10.91 ft); maximum gage height, 13.34 ft Mar. 23, 1960 (backwater from ice); minimum daily discharge, 0.70 cfs Sept. 9, 12, 1970.

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

REVISIONS (WATER YEARS).--WSP 1709: 1959(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	44	72	25	23	340	412	245	131	30	4.6	36
2	16	45	50	22	24	350	257	170	133	22	3.4	24
3	16	51	46	17	21	360	193	229	134	18	3.2	23
4	18	56	33	14	20	420	192	250	132	18	2.9	37
5	17	54	30	18	17	580	163	216	133	22	2.6	42
6	17	53	24	15	15	620	154	205	122	22	2.5	27
7	21	51	28	15	14	580	170	201	125	19	2.2	24
8	37	65	37	18	17	540	206	181	126	16	1.9	25
9	37	91	28	17	21	560	200	172	117	12	2.0	31
10	37	71	18	18	25	640	186	197	114	12	1.7	33
11	37	62	25	16	25	840	162	194	104	13	1.7	29
12	42	60	24	17	30	960	140	182	94	13	3.9	26
13	44	58	22	21	60	1,200	133	184	83	10	2.5	21
14	42	53	26	21	94	1,700	133	164	83	8.2	13	20
15	42	49	27	21	160	1,080	123	137	77	7.7	5.4	19
16	40	47	29	16	270	700	136	121	68	5.4	3.0	19
17	38	60	35	18	390	400	125	172	60	4.4	1.5	19
18	37	60	35	17	300	300	108	170	123	31	1.3	21
19	39	60	34	16	185	204	125	150	80	21	1.8	23
20	39	54	30	19	135	250	159	147	64	12	1.7	26
21	39	54	30	19	124	260	302	137	56	12	4.2	30
22	39	24	30	19	150	223	535	123	60	25	4.4	50
23	45	22	31	20	135	204	364	249	57	33	1.9	47
24	50	22	31	14	210	215	254	354	53	21	.75	40
25	45	25	24	14	235	197	181	211	54	20	1.2	43
26	45	33	28	13	310	214	163	255	49	17	1.1	39
27	45	39	27	16	300	323	262	190	38	14	1.7	37
28	45	50	29	16	320	830	316	147	35	8.2	2.8	36
29	45	62	28	18	-----	828	340	130	34	6.6	2.0	34
30	45	66	26	23	-----	749	282	132	38	5.8	49	35
31	44	-----	26	21	-----	556	-----	148	-----	7.1	33	-----
TOTAL	1,120	1,541	963	554	3,630	17,223	6,476	5,763	2,577	486.4	164.85	916
MEAN	36.1	51.4	31.1	17.9	130	556	216	186	85.9	15.7	5.32	30.5
MAX	50	91	72	25	390	1,700	535	354	134	33	49	50
MIN	16	22	18	13	14	197	108	121	34	4.4	.75	19
AC-FT	2,220	3,060	1,910	1,100	7,200	34,160	12,850	11,430	5,110	965	327	1,820

CAL YR 1970 TOTAL 31,460.48 MEAN 86.2 MAX 1,070 MIN .70 AC-FT 62,400
WTR YR 1971 TOTAL 41,414.25 MEAN 113 MAX 1,700 MIN .75 AC-FT 82,150

PEAK DISCHARGE (BASE, 900 CFS).--Mar. 14 (0300) about 1,950 cfs (9.47 ft), backwater from ice; Mar. 29 (2230) 1,380 cfs (6.75 ft).

NIOBRARA RIVER BASIN

06465000 Niobrara River near Spencer, Nebr.

LOCATION.--Lat 42°48'33", long 98°30'19", in SE1/4 sec.30, T.33 N., R.11 W., Boyd County, at Spencer powerplant dam 5 miles southeast of Spencer.

DRAINAGE AREA.--12,100 sq mi, 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.

GAGE.--Water-stage recorder and hourly log of powerplant operation. Datum of gage is 1,473.67 ft above mean sea level. Elevation of taintor gate sill, 1,491.12 ft above mean sea level. Prior to December 1908, non-recording gage on former highway bridge 275 ft downstream and Aug. 1, 1913, to Sept. 30, 1915, nonrecording gage at highway bridge 10 miles downstream at different datums. Aug. 1, 1927, 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 225 ft downstream at datum 4.98 ft higher, and Nov. 11, 1954, to Sept. 30, 1957, at site 0.3 mile 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, to Sept. 30, 1971, discharge computed as flow through powerhouse and over dam.

AVERAGE DISCHARGE.--41 years (1913-14, 1927-36, 1940-71), 1,403 cfs (1,016,000 acre-ft per year)

EXTREMES.--Current year: Maximum daily discharge, 4,960 cfs Mar. 15; minimum daily, 181 cfs Dec. 13, result of freezeup.

Period of record: Maximum discharge, 27,400 cfs Mar. 12, 1955 (gage height, 12.16 ft, site and datum then in use); minimum daily, 5 cfs Nov. 14, Dec. 18, 19, 1940.

REMARKS.--Records good. Natural flow of stream affected by irrigation and power developments. Daily discharge determined from flow through turbines and taintor gates, computed from relation between discharge, head, and gate openings.

COOPERATION.--Powerplant log furnished by Consumers Public Power and Irrigation District.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	SEP
1	794	1,050	3,090	945	1,440	1,840	2,790	2,550	1,570	813	1,450
2	787	1,110	1,950	1,040	1,300	1,710	2,300	2,250	1,560	712	913
3	1,140	1,260	1,450	1,170	1,100	1,650	2,070	2,000	1,390	691	785
4	1,130	1,260	1,070	1,170	1,240	1,690	1,970	1,860	1,400	646	1,020
5	1,130	1,090	1,140	1,060	1,330	1,830	1,780	2,020	1,640	837	1,250
6	999	1,080	770	913	1,280	1,950	1,630	2,590	1,500	915	1,100
7	952	1,070	1,120	737	1,120	1,910	1,520	2,300	1,570	1,060	978
8	1,410	1,320	1,590	668	1,080	1,870	1,470	2,090	1,500	969	956
9	1,110	2,060	1,420	690	1,040	1,830	1,430	2,150	1,500	870	1,170
10	1,060	1,600	465	770	1,020	1,840	1,320	2,550	1,460	848	895
11	1,050	1,510	243	916	1,150	2,030	1,260	2,420	1,320	787	831
12	1,050	1,400	232	945	1,310	2,370	1,340	2,150	1,250	721	750
13	973	1,130	181	924	1,490	2,880	1,370	1,950	1,320	687	754
14	980	1,220	340	955	1,600	3,500	1,260	1,860	1,270	648	725
15	973	1,350	666	918	1,770	4,960	1,080	1,790	1,360	662	786
16	965	1,670	994	893	2,160	4,270	1,210	1,700	1,020	668	813
17	960	1,110	1,060	954	2,410	3,160	1,190	2,140	1,090	663	861
18	941	1,100	1,120	1,000	2,890	2,390	1,130	2,140	1,200	921	874
19	955	1,140	1,170	1,030	2,490	1,820	1,240	2,000	1,410	713	857
20	949	1,120	1,120	1,050	2,200	1,810	1,540	1,800	1,050	658	881
21	963	1,410	985	1,070	1,810	2,590	2,460	1,600	1,100	619	903
22	921	419	784	1,040	1,590	1,980	3,100	1,460	915	714	1,420
23	1,110	234	713	1,130	1,490	1,850	2,800	2,210	983	728	1,250
24	1,100	327	762	1,200	1,600	1,720	2,200	2,680	1,100	699	986
25	1,080	441	839	1,280	1,630	1,840	1,970	2,060	901	794	1,010
26	1,090	1,320	894	1,330	1,720	1,990	2,110	1,590	913	782	944
27	1,210	1,660	896	1,330	1,800	2,860	2,800	1,550	804	737	909
28	1,060	1,590	881	1,380	1,800	4,190	2,620	1,380	790	703	933
29	1,080	1,660	920	1,460	-----	3,220	2,610	1,420	862	697	904
30	1,060	2,160	955	1,480	-----	3,140	2,730	1,410	882	698	892
31	1,070	-----	891	1,470	-----	2,760	-----	1,540	-----	649	-----
TOTAL	32,052	36,871	30,711	32,918	44,860	75,450	56,300	61,210	36,630	23,309	28,800
MEAN	1,034	1,229	991	1,062	1,602	2,434	1,877	1,975	1,221	752	960
MAX	1,410	2,160	3,090	1,480	2,890	4,960	3,100	2,680	1,640	1,060	1,450
MIN	787	234	181	668	1,020	1,650	1,080	1,380	790	619	725
AC-FT	63,580	73,130	60,920	65,290	88,980	149,700	111,700	121,400	72,660	46,230	57,120

CAL YR 1970 TOTAL 441,862 MEAN 1,211 MAX 3,870 MIN 181 AC-FT 876,400
WTR YR 1971 TOTAL 478,717 MEAN 1,312 MAX 4,960 MIN 181 AC-FT 949,500

37

06465500 Niobrara River near Verdel, Nebr.

LOCATION.--Lat 42°44'25", long 98°12'45", near center of N½ sec.23, T.32 N., R.8 W., Knox County, on left bank 4 ft downstream from Pishelville Bridge, 6 miles south of Verdel, and 7 miles upstream from Verdigre Creek.

DRAINAGE AREA.--12,600 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,308.12 ft above mean sea level. 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.

AVERAGE DISCHARGE.--14 years, 1,534 cfs (1,111,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 6,600 cfs Mar. 15 (gage height, 6.56 ft, backwater from ice); maximum gage height, 7.93 ft Feb. 18 (backwater from ice); minimum daily discharge, 280 cfs Dec. 13.
Period of record: Maximum discharge, 39,000 cfs Mar. 27, 1960 (gage height, 10.10 ft); maximum gage height, 10.62 ft Mar. 12, 1966 (backwater from ice); minimum daily discharge, 104 cfs Nov. 30, 1960.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow of stream affected by irrigation and power developments. Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	926	1,160	2,610	1,080	1,500	2,100	3,150	2,600	1,800	1,080	599	1,890
2	954	1,150	1,740	1,120	1,450	2,000	2,740	2,080	1,860	899	614	1,030
3	924	1,250	1,270	1,200	1,350	1,900	2,620	1,990	1,340	739	635	780
4	918	1,350	1,250	1,300	1,300	2,000	2,710	2,030	1,300	841	589	890
5	807	1,160	1,270	1,220	1,450	2,100	2,660	2,080	1,670	1,050	607	1,350
6	873	1,110	712	1,080	1,500	2,200	2,100	2,510	1,710	1,340	624	1,140
7	848	1,040	1,110	980	1,450	2,100	1,800	2,220	1,730	1,410	686	1,030
8	1,180	998	1,800	840	1,400	2,100	1,700	2,010	1,660	1,350	589	1,040
9	890	1,850	1,880	920	1,350	2,000	1,650	2,100	1,450	1,040	605	1,270
10	762	1,290	1,080	940	1,300	2,000	1,550	2,200	1,550	1,030	524	943
11	855	1,290	360	1,020	1,450	2,300	1,450	2,390	1,250	1,210	409	596
12	1,030	1,250	330	1,060	1,600	2,700	1,550	2,120	1,330	953	485	608
13	975	1,110	280	1,100	1,750	3,300	1,600	2,170	1,460	648	626	600
14	1,050	1,160	460	1,080	2,000	4,000	1,500	2,160	1,260	663	632	636
15	1,130	1,410	800	1,100	2,200	5,400	1,300	2,010	1,430	672	691	433
16	1,080	1,170	1,100	1,080	2,500	4,900	1,450	1,820	1,280	715	694	801
17	1,050	882	1,180	1,250	2,800	4,300	1,400	1,880	1,280	809	638	720
18	902	958	1,250	1,300	3,200	3,200	1,350	2,040	1,590	1,710	588	909
19	1,030	1,060	1,300	1,400	3,000	2,400	1,620	1,820	1,740	1,070	561	940
20	1,020	1,040	1,250	1,450	2,600	2,400	1,650	1,610	1,280	779	536	1,030
21	1,130	1,350	1,180	1,450	2,300	3,400	2,140	1,600	1,320	640	562	1,030
22	1,260	500	1,000	1,400	2,000	2,800	2,620	1,530	1,090	609	586	1,330
23	1,270	300	900	1,350	1,800	2,500	2,310	2,680	1,090	894	565	1,020
24	1,350	380	920	1,400	1,900	2,200	2,030	2,020	1,290	771	520	1,180
25	1,170	560	960	1,450	1,900	2,400	1,680	1,850	1,050	860	529	1,150
26	1,190	1,080	1,020	1,450	2,000	2,900	1,950	1,550	910	921	597	935
27	1,110	2,250	1,020	1,450	2,100	3,890	2,670	1,460	988	883	669	1,020
28	1,120	2,000	1,020	1,450	2,100	4,220	2,470	1,350	937	719	566	972
29	1,100	1,790	1,060	1,500	-----	3,650	2,050	1,410	1,020	579	623	1,060
30	1,150	2,330	1,100	1,500	-----	3,820	2,220	1,460	1,150	594	1,110	1,080
31	1,140	-----	1,060	1,500	-----	3,160	-----	1,660	-----	661	1,710	-----
TOTAL	32,194	36,228	34,272	38,420	53,250	90,340	59,690	60,410	40,815	28,139	19,969	29,413

BAZILE CREEK BASIN

06466500 Bazile Creek near Niobrara, Nebr.

LOCATION.--Lat 42°45'00", long 97°56'10", in NE 1/4 sec.18, T.32 N., R.5 W., Knox County, on downstream side of left pier of bridge on State Highway 12, 2.5 miles upstream from mouth and 4.5 miles east of Niobrara.

DRAINAGE AREA.--440 sq mi, 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.

GAGE.--Water-stage recorder for stages above 4.3 ft and nonrecording gage read once daily. Datum of gage is 1,210.81 ft above mean sea level. Prior to Dec. 16, 1952, nonrecording gage only, and Dec. 16, 1952, to June 16, 1957, water-stage recorder, 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.

AVERAGE DISCHARGE.--19 years, 90.2 cfs (65,350 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,310 cfs June 10 (gage height, 15.64 ft); maximum gage height, 20.25 ft Feb. 19 (backwater from ice); minimum daily discharge, 9.4 cfs Aug. 28.

Period of record: Maximum discharge, 68,600 cfs June 16, 1957 (gage height, 19.96 ft, present datum, from high point on surge), from rating curve extended above 6,500 cfs on basis of contracted-opening measurements at gage heights 15.36 and 19.96 ft, present datum; maximum gage height, 20.25 ft Feb. 19, 1971 (backwater from ice); minimum daily discharge, 0.60 cfs Aug. 14, 1970.

Flood of June 19, 1951, reached a stage of 15.36 ft, present datum, from floodmarks (discharge, 24,400 cfs on basis of contracted-opening measurement of peak flow).

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

REVISIONS.--WSP 1279: 1952. WSP 1729: 1958(M). See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	43	83	30	35	150	128	56	38	41	26	13
2	22	49	83	32	35	120	93	56	37	40	22	12
3	24	51	51	28	36	100	97	62	41	38	20	12
4	24	49	35	27	36	150	97	65	267	38	20	13
5	33	43	15	25	36	200	89	62	130	114	17	12
6	30	35	18	23	36	150	85	65	89	239	22	12
7	45	32	21	24	36	120	81	58	723	120	20	12
8	83	43	30	24	46	120	75	58	192	51	18	12
9	72	78	28	24	54	120	75	56	142	48	18	16
10	72	68	27	30	64	140	69	69	3,030	529	15	16
11	65	68	24	32	74	180	63	67	371	154	12	16
12	51	51	23	29	100	240	63	62	300	101	17	14
13	35	43	26	27	110	300	60	58	491	65	14	13
14	33	53	33	29	120	244	58	53	330	53	14	12
15	29	47	30	29	130	153	58	50	271	45	14	13
16	37	55	29	32	175	131	62	50	110	42	14	15
17	39	62	27	33	180	101	60	48	118	40	13	18
18	43	60	32	34	170	95	60	47	406	48	12	19
19	45	55	30	34	1,500	92	60	47	178	45	13	19
20	43	46	22	37	880	94	60	42	99	38	14	19
21	43	32	20	36	500	145	75	38	77	33	12	20
22	37	25	31	29	300	128	93	38	63	32	12	33
23	47	10	32	29	200	149	89	110	56	33	12	28
24	45	13	26	30	150	134	81	69	53	31	14	24
25	53	21	31	34	200	124	69	51	53	28	12	27
26	47	24	30	35	400	124	71	45	50	27	12	30
27	43	27	34	34	200	310	75	41	41	26	10	32
28	39	30	35	30	150	654	71	37	131	26	9.4	32
29	41	36	32	30	-----	248	67	34	65	26	9.7	31
30	45	50	33	34	-----	177	60	35	62	26	12	32
31	45	-----	31	35	-----	160	-----	44	-----	26	15	-----
TOTAL	1,335	1,299	1,002	939	5,953	5,353	2,244	1,673	8,014	2,203	465.1	577
MEAN	43.1	43.3	32.3	30.3	213	173	74.8	54.0	267	71.1	15.0	19.2
MAX	83	78	83	37	1,500	654	128	110	3,030	529	26	33
MIN	22	10	15	23	35	92	58	34	37	26	9.4	12
AC-FT	2,650	2,580	1,990	1,860	11,810	10,620	4,450	3,320	15,900	4,370	923	1,140

CAL YR 1970 TOTAL 20,304.60 MEAN 55.6 MAX 1,250 MIN .60 AC-FT 40,270
WTR YR 1971 TOTAL 31,057.10 MEAN 85.1 MAX 3,030 MIN 9.4 AC-FT 61,600

PEAK DISCHARGE (BASE, 2,000 CFS).--Feb. 19 (1330) about 2,500 cfs (20.25 ft); June 10 (0800) 6,310 cfs (15.64 ft).

MISSOURI RIVER MAIN STEM

39

06467000 Lewis and Clark Lake near Yankton, S. Dak.

LOCATION.--Lat 42°50'56", long 97°28'54", in SW $\frac{1}{4}$ sec.7, T.33 N., R.1 W., Cedar County, Nebr., in powerhouse of Gavins Point Dam on Missouri River, 3.75 miles southwest of Yankton, 13.6 miles upstream from James River, 32.5 miles downstream from Niobrara River, and at mile 811.0.

DRAINAGE AREA.--279,500 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Dec. 9, 1955, at temporary location on wall of intake structure unit 3.

EXTREMES.--Current year: Maximum contents, 485,000 acre-ft Dec. 1 (elevation, 1,208.4 ft, affected by wind); minimum, 364,000 acre-ft Apr. 4 (elevation, 1,204.6 ft, affected by wind).

Period of record: Maximum contents, 565,000 acre-ft Apr. 1, 1960 (elevation, 1,210.7 ft, affected by wind); minimum since initial filling, 61,950 acre-ft Apr. 23, 1956 (elevation, 1,188.1 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began in July 1955. Maximum capacity, 541,000 acre-ft below elevation 1,210.0 ft (top of spillway gates). Normal maximum, 477,000 acre-ft below elevation 1,208.0 ft. Inactive storage, 156,000 acre-ft below elevation 1,195.0 ft. Dead storage, 18,000 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 tainter gates, each 40 ft wide by 30 ft high; spillway capacity, 280,000 cfs at pool elevation 1,210 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 cfs at pool elevation 1,210 ft. Water is used for flood control, navigation, power, and incidental uses.

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

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,207.9	471,000	-
Oct. 31.....	1,208.3	482,000	+11,000
Nov. 30.....	1,208.3	485,000	+3,000
Dec. 31.....	1,207.6	460,000	-25,000
CAL YR 1970.....	-	-	+47,000
Jan. 31.....	1,207.4	456,000	-4,000
Feb. 28.....	1,205.6	402,000	-54,000
Mar. 31.....	1,205.8	390,000	a+1,000
Apr. 30.....	1,205.0	374,000	-16,000
May 31.....	1,205.1	375,000	+1,000
June 30.....	1,206.2	407,000	+32,000
July 31.....	1,207.5	446,000	+39,000
Aug. 31.....	1,208.2	464,000	+18,000
Sept. 30.....	1,208.5	472,000	+8,000
WTR YR 1971.....	-	-	a+1,000

a Area-capacity table revised Mar. 1, 1971.

MISSOURI RIVER MAIN STEM

06467500 Missouri River at Yankton, S. Dak.

LOCATION.--Lat 42°51'58", long 97°23'37", in SW1/4 sec.18, T.93 N., R.55 W., Yankton County, near left bank in downstream end of left pier of Meridian Highway Bridge on U.S. Highway 81, 5.0 miles downstream from Gavins Point Dam, 6.0 miles upstream from James River, and at mile 805.8.

DRAINAGE AREA.--279,500 sq mi, 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 U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,139.68 ft above mean sea level. 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 ft higher.

AVERAGE DISCHARGE.--41 years, 25,110 cfs (18,190,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 57,200 cfs June 17 (gage height, 23.62 ft); minimum daily, 14,700 cfs Dec. 26-27.

Period of record: Maximum discharge, 480,000 cfs Apr. 13, 1952; maximum gage height, 35.5 ft Apr. 13, 14, 1952; minimum daily discharge, 2,700 cfs Nov. 15, 16, 1940.

Maximum stage known, 50.5 ft Apr. 5, 1881 (ice jam), present datum.

REMARKS.--Records good. Flow regulated by Lewis and Clark Lake. (See sta 06467000.) Many diversions for irrigation and water supply above station.

REVISIONS.--WSP 761: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
001	40,400	42,000	35,800	14,900	17,300	17,900	35,300	34,600	47,400	46,000	48,400	48,400
2	40,200	42,000	36,100	15,000	17,100	18,000	35,300	34,600	47,500	46,300	48,400	48,800
003	40,100	42,000	34,100	15,100	17,100	18,200	35,600	34,800	47,500	46,700	48,300	48,900
004	40,100	41,600	31,000	16,700	17,400	18,200	35,200	35,100	47,500	46,700	48,300	49,000
005	40,200	41,400	28,100	16,500	17,500	18,200	35,200	35,300	47,400	47,200	48,200	49,100
006	40,600	41,400	25,200	16,000	17,400	18,100	35,200	35,200	47,600	47,000	48,200	49,300
7	40,500	41,900	22,100	15,400	17,300	18,200	35,300	35,100	47,300	48,800	48,300	49,400
008	41,000	42,400	19,700	15,500	17,400	18,300	35,100	36,500	51,500	49,200	48,200	49,300
009	41,900	42,600	17,500	15,200	17,400	18,200	35,200	40,800	52,100	49,600	48,400	49,300
010	42,700	43,100	18,100	15,300	17,100	18,100	35,100	45,000	52,400	49,900	48,500	49,200
011	42,800	42,800	18,000	15,400	17,000	18,400	35,000	47,700	52,300	49,200	48,600	49,200
12	42,900	42,800	17,900	15,700	17,000	18,200	35,100	48,200	52,200	49,200	48,700	49,200
013	43,100	42,500	17,800	15,600	17,200	18,100	35,500	48,200	52,500	49,500	48,600	49,100
014	43,500	42,200	17,800	15,700	16,900	17,700	35,100	48,200	52,500	49,400	48,900	49,100
015	43,700	42,000	17,800	15,700	17,000	17,500	34,800	48,400	51,200	49,400	48,700	49,900
016	43,500	41,100	17,900	15,800	16,900	18,700	35,200	48,600	48,600	48,900	48,600	48,700
17	43,300	40,000	17,900	15,600	17,500	22,300	35,300	47,400	37,000	48,900	48,800	48,400
018	43,200	39,800	17,900	15,700	17,900	26,200	35,200	46,200	48,900	48,400	48,700	48,300
019	43,000	39,800	17,900	16,000	19,600	28,800	35,000	46,000	47,700	48,300	48,800	48,100
020	42,600	39,600	17,400	16,000	17,600	31,400	34,200	46,100	47,600	48,500	48,800	47,900
021	42,600	39,500	17,400	16,000	17,500	34,100	35,700	46,300	47,600	48,300	48,700	48,000
22	42,000	39,500	15,700	16,000	17,400	34,400	35,500	47,400	47,600	48,300	48,600	48,000
023	41,900	39,800	15,300	16,100	17,400	35,800	35,100	47,500	47,700	48,400	48,600	47,900
024	41,800	39,900	15,100	16,000	17,300	35,600	35,200	49,200	47,900	48,400	48,500	48,100
025	41,800	38,600	15,200	16,000	17,500	34,900	34,900	51,700	48,200	48,400	49,100	48,400
026	41,900	37,900	14,700	16,200	17,300	35,200	35,100	52,100	48,200	48,200	49,100	48,500
27	41,800	37,100	14,700	16,100	17,100	35,400	34,900	51,700	48,300	48,100	48,900	48,700
028	41,800	36,200	15,000	16,000	17,800	35,400	34,700	50,300	48,500	48,100	48,800	49,000
029	41,800	36,000	14,900	16,000	-----	35,500	34,700	47,800	48,500	48,100	48,800	49,200
030	42,000	36,100	14,900	15,900	-----	35,600	34,600	47,800	47,900	48,300	48,600	49,200
031	41,900	-----	15,000	15,800	-----	35,500	-----	47,700	-----	48,800	48,400	-----
TOTAL	1,300.6M	1,213.4M	613.9M	488.900	486.900	786.100	1,053.1M	1,381.5M	1,459.1M	1,498.5M	1,506.5M	1,462.6M
MEAN	41,950	40,450	19,800	15,770	17,390	25,360	35,100	44,560	48,640	48,340	48,600	48,750
MAX	43,700	43,100	36,100	16,700	19,600	35,800	35,700	52,100	52,500	49,900	49,100	49,400
MIN	40,100	36,000	14,700	14,900	16,900	17,500	34,200	34,600	37,000	46,000	48,200	47,900
AC-FT	2,580M	2,407M	1,218M	969,700	965,800	1,559M	2,089M	2,740M	2,894M	2,972M	2,988M	2,901M
CAL YR 1970	TOTAL 11,613,500	MEAN 31,820	MAX 46,100	MIN 14,700	AC-FT 23,040,000							
WTR YR 1971	TOTAL 13,251,100	MEAN 36,300	MAX 52,500	MIN 14,700	AC-FT 26,280,000							

M Expressed in thousands.

MISSOURI RIVER MAIN STEM

41

06486000 Missouri River at Sioux City, Iowa

LOCATION.--Lat 42°29'10", long 96°24'47", in NW 1/4 sec. 16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebr., on right bank on upstream side of bridge on U.S. Highway 77 at South Sioux City, Nebr., 2.0 miles downstream from Big Sioux River, and at mile 732.3.

DRAINAGE AREA.--314,600 sq mi, 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 discharge only, published in WSP 1310. January 1879 to December 1890 (monthly discharge only) in House Document 238, 73rd Congress, 2d session, Missouri River. Gage-height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,056.98 ft above mean sea level. Sept. 2, 1878, to Dec. 31, 1905, nonrecording gages at various locations within 1.7 miles 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 present site at datum 19.98 ft higher, and Oct. 1, 1969, to Sept. 30, 1970, at datum 20.00 ft higher.

AVERAGE DISCHARGE.--74 years, 31,780 cfs (23,020,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 80,000 cfs Feb. 19 (gage height, 30.65 ft, backwater from ice); minimum daily, 13,500 cfs Jan. 16-19; minimum gage height, 15.48 ft Dec. 24.
Period of record: Maximum discharge, 441,000 cfs Apr. 14, 1952 (gage height, 24.28 ft); minimum, 2,500 cfs Dec. 29, 1941; minimum gage height, -6.60 ft Dec. 14, 1968, result of freezeup.

REMARKS.--Records good except those for winter period, which are poor. Flow partly regulated by upstream main-stem reservoirs.

REVISIONS (WATER YEARS).--WSP 716: 1929-30. WSP 876: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40,000	42,700	38,500	18,500	14,000	24,000	42,700	36,400	48,200	48,600	49,500	47,900
2	40,000	42,700	38,200	18,400	14,000	24,600	40,900	37,000	47,900	46,600	49,200	47,900
3	40,000	42,400	38,500	18,100	16,000	24,000	39,400	36,700	47,900	46,900	49,200	48,600
4	39,700	42,400	35,800	17,500	18,000	22,800	39,700	36,400	49,200	46,900	48,900	49,500
5	41,200	42,100	33,100	17,200	18,000	23,000	39,400	36,100	56,700	47,600	48,600	49,800
6	40,900	41,800	29,800	17,000	17,000	24,000	38,500	36,700	56,000	48,200	48,600	49,800
7	42,400	42,400	26,000	14,500	16,500	21,400	37,600	36,400	58,600	47,600	48,600	49,800
8	44,600	43,400	23,700	14,000	16,000	20,600	37,600	36,400	56,000	48,600	48,200	49,800
9	43,700	44,300	21,400	14,500	15,500	23,500	37,000	37,300	61,700	49,500	48,200	49,800
10	42,400	43,400	19,800	15,000	16,000	24,000	37,000	42,100	69,800	51,800	48,900	49,500
11	42,400	43,400	19,000	15,000	17,000	24,400	37,000	47,900	67,600	53,400	48,900	48,900
12	43,000	43,400	19,500	15,000	17,500	22,600	36,700	50,200	64,800	53,100	49,200	48,600
13	43,000	43,400	19,800	15,000	17,000	23,300	36,700	50,200	66,200	51,800	48,900	48,200
14	43,000	43,400	20,000	14,500	17,000	23,500	36,400	48,900	63,800	51,500	48,200	48,900
15	43,000	42,700	19,500	14,000	17,000	23,000	36,400	48,200	59,000	49,800	48,600	48,900
16	42,400	42,400	19,700	13,500	18,000	23,300	36,100	48,200	56,400	50,200	48,600	49,200
17	42,700	41,500	19,800	13,500	18,000	26,300	36,400	48,600	51,200	49,200	48,600	49,500
18	42,700	40,900	20,200	13,500	40,000	30,100	36,400	48,200	45,400	49,500	48,600	49,200
19	43,000	41,200	19,500	13,500	60,000	34,300	36,100	46,600	49,600	49,200	49,200	48,900
20	43,400	40,600	18,900	14,500	48,600	36,400	36,400	46,000	51,800	48,600	48,900	48,900
21	43,000	41,200	18,700	15,000	44,000	38,200	36,400	46,600	49,500	48,900	48,600	48,900
22	42,400	41,500	18,900	15,500	30,100	38,800	36,700	47,600	49,500	49,200	48,900	48,600
23	42,400	40,300	19,500	15,500	27,800	39,700	37,000	49,200	49,800	49,200	48,600	48,600
24	42,100	39,700	16,600	15,500	29,800	40,300	36,700	49,500	50,500	49,200	48,600	47,900
25	42,100	39,700	17,200	16,000	29,800	40,300	36,400	48,900	50,200	49,500	48,600	48,900
26	42,100	38,500	17,300	16,000	28,400	40,300	36,700	50,800	49,800	49,200	48,900	49,500
27	42,100	38,200	17,900	16,000	26,800	40,300	37,300	51,200	49,500	48,900	49,500	49,800
28	41,800	37,600	17,300	16,000	23,700	40,300	36,700	50,500	49,200	49,200	49,200	49,200
29	41,800	37,300	16,700	16,000	-----	40,000	36,100	49,800	49,500	48,900	48,600	48,200
30	42,400	37,600	17,800	15,500	-----	40,300	36,100	48,200	50,500	48,900	48,200	47,900
31	42,700	-----	18,400	15,000	-----	41,800	-----	48,200	-----	48,200	48,200	-----
TOTAL	1,308.4M	1,242.1M	697.000	478.700	671.500	939.400	1,120.5M	1,395.0M	1,625.8M	1,527.9M	1,511.5M	1,469.1M
MEAN	42,210	41,400	22,480	15,440	23,980	30,300	37,350	45,000	54,190	49,290	48,760	48,970
MAX	44,600	44,300	38,500	18,500	60,000	41,800	42,700	51,200	69,800	53,400	49,500	49,800
MIN	39,700	37,300	16,600	13,500	14,000	20,600	36,100	36,100	45,400	46,600	48,200	47,900
AC-FT	2,595M	2,464M	1,382M	949,500	1,332M	1,863M	2,223M	3,225M	3,031M	2,998M	2,914M	2,914M

CAL YR 1970 TOTAL 12,169,600 MEAN 33,340 MAX 45,600 MIN 9,000 AC-FT 24,140,000
WTR YR 1971 TOTAL 13,986,900 MEAN 38,320 MAX 69,800 MIN 13,500 AC-FT 27,740,000

M Expressed in thousands.

OMAHA CREEK BASIN

06601000 Omaha Creek at Homer, Nebr.

LOCATION.--Lat 42°19'29", long 96°29'43", in SW 1/4 sec.11, T.27 N., R.8 E., Dakota County, on left bank 80 ft downstream from bridge on main street of Homer.

DRAINAGE AREA.--170 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,082.45 ft above mean sea level. Prior to Aug. 4, 1952, at bridge 0.5 mile downstream at datum 8.03 ft lower. Aug. 4, 1952, to Nov. 3, 1966, at site 80 ft upstream at present datum.

AVERAGE DISCHARGE.--26 years, 35.9 cfs (26,010 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,100 cfs Feb. 19 (gage height, 26.47 ft, from floodmark); minimum daily, 4.5 cfs Sept. 3.

Period of record: Maximum discharge, 18,100 cfs Feb. 19, 1971 (gage height, 26.47 ft, from floodmark), from rating curve extended above 3,700 cfs on basis of slope-area measurements at gage heights 16.38 and 23.62 ft; minimum daily, 0.1 cfs Sept. 16, 18, 19, 1948, Sept. 9, 13, 14, 1955, Oct. 7, 8, 1957.

Greatest flood known occurred June 4, 1940 (stage, about 32.5 ft, present site and datum), discharge estimated as 51,000 cfs at site 2.5 miles upstream from present site.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	14	27	17	13	122	36	18	25	21	10	6.7
2	6.6	18	25	16	13	128	25	18	23	18	10	6.2
3	5.8	25	22	14	14	86	24	18	21	16	9.7	4.5
4	6.0	21	13	13	15	74	25	19	259	19	17	5.3
5	6.8	19	13	12	16	102	24	26	1,180	44	16	6.1
6	6.1	19	14	11	13	330	23	25	45	28	10	5.8
7	84	18	15	11	12	410	23	29	68	20	7.9	5.4
8	225	23	18	12	15	370	23	27	57	21	8.8	5.4
9	85	40	21	12	18	640	23	21	43	21	8.7	5.5
10	46	22	8.8	12	22	814	21	45	39	381	9.5	5.1
11	49	20	10	13	32	922	20	143	37	49	9.0	5.4
12	57	20	12	13	110	453	20	45	30	42	8.0	5.4
13	26	20	17	13	130	214	20	33	266	24	7.4	5.5
14	21	18	19	14	150	97	19	30	762	21	8.6	5.5
15	16	13	18	13	210	45	19	26	35	18	6.8	5.0
16	15	19	18	13	520	32	19	24	28	16	6.9	5.1
17	16	19	18	14	450	31	19	22	25	15	7.2	5.4
18	16	19	18	15	6,840	35	23	32	30	15	6.1	5.4
19	16	41	15	15	2,000	19	23	35	29	15	18	5.7
20	16	26	14	15	1,000	32	24	27	23	12	9.9	5.8
21	14	20	16	16	540	50	42	24	21	12	6.6	5.9
22	15	13	17	16	250	37	27	22	20	12	6.5	6.4
23	14	13	18	16	130	27	22	37	19	18	6.4	7.4
24	16	15	18	17	65	24	20	38	19	12	5.8	7.1
25	15	18	18	17	102	28	18	25	18	12	5.1	8.6
26	17	21	18	15	198	28	19	22	18	12	5.3	11
27	21	22	18	14	262	35	30	22	16	19	5.9	8.3
28	18	23	18	17	150	177	25	19	14	33	6.2	7.5
29	16	24	18	18	-----	45	21	18	14	15	6.6	6.1
30	17	25	18	19	-----	37	20	19	33	13	5.5	5.6
31	16	-----	18	14	-----	38	-----	28	-----	12	6.0	-----
TOTAL	905.8	628	530.8	447	13,290	5,482	697	937	3,217	986	261.4	184.1
MEAN	29.2	20.9	17.1	14.4	475	177	23.2	30.2	107	31.8	8.43	6.14
MAX	225	41	27	19	6,840	922	42	143	1,180	381	18	11
MIN	5.8	13	8.8	11	12	19	18	18	14	12	5.1	4.5
AC-FT	1,800	1,250	1,050	887	26,360	10,870	1,380	1,860	6,380	1,960	518	365
CAL YR 1970	TOTAL 9,090.4	MEAN 24.9	MAX 286	MIN 3.0	AC-FT 18,030							
WTR YR 1971	TOTAL 27,566.1	MEAN 75.5	MAX 6,840	MIN 4.5	AC-FT 54,680							

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-19	Unknown	26.47	18,100	6-14	0045	11.73	4,560
3-11	2115	8.02	2,710	7-10	1215	5.35	1,410
6-5	0145	11.11	4,260				

TEKAMAH CREEK BASIN

43

06608000 Tekamah Creek at Tekamah, Nebr.

LOCATION.--Lat 41°46'30", long 96°13'10", in SE $\frac{1}{4}$ sec.19, T.21 N., R.11 E., Burt County, on left bank 30 ft upstream from bridge 1 block east of U.S. Highway 73 in Tekamah.

DRAINAGE AREA.--23.0 sq mi.

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

GAGE.--Water-stage recorder and crest-stage indicator. Datum of gage is 1,032.26 ft above mean sea level. Prior to Sept. 15, 1949, nonrecording gage at site 30 ft downstream at present datum.

AVERAGE DISCHARGE.--22 years, 6.29 cfs (4,560 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,080 cfs Mar. 27 (gage height, 13.62 ft, from floodmark); minimum daily, 0.03 cfs Aug. 27-29.

Period of record: Maximum discharge, 6,180 cfs June 5, 1963 (gage height, 16.62 ft); no flow at times in some years.

REMARKS.--Records poor.

REVISIONS.--WSP 1630: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.38	2.2	1.0	.30	6.0	4.5	2.2	2.3	.91	.56	.21
2	.11	.44	1.4	.90	.20	6.0	3.5	2.3	1.9	.57	.47	.16
3	.12	.64	.99	.60	.20	6.0	3.0	2.0	1.7	.55	.43	.08
4	.13	.75	.67	.50	.20	5.0	2.8	2.0	1.5	.73	.46	6.4
5	.16	.60	.60	.50	.20	5.0	2.7	2.0	1.5	4.9	.50	.52
6	.17	.47	.50	.50	.20	5.0	2.6	2.0	1.9	.93	.47	.33
7	.27	.50	.50	.50	.20	5.0	2.6	25	8.8	.59	.43	.28
8	4.1	.64	.50	.60	.10	5.0	2.5	4.2	5.7	46	.40	.22
9	8.1	.61	.60	.60	.10	6.0	2.5	3.2	4.4	2.9	.35	.20
10	4.3	.67	.50	.60	.10	7.0	2.3	4.4	3.5	3.1	.31	.20
11	1.5	.44	.40	.60	.10	8.0	2.0	9.2	2.9	4.8	.24	.17
12	.96	.26	.40	.60	.20	9.0	1.7	5.0	2.3	3.9	.25	.16
13	.75	.25	.40	.60	.30	10	1.7	4.0	1.8	3.0	.26	.15
14	.50	.15	.40	.60	.40	11	1.7	3.0	1.6	2.4	.26	.12
15	.32	.10	.50	.60	1.8	10	1.8	2.6	1.4	2.1	.26	.12
16	.24	.18	.50	.60	7.6	8.0	1.8	2.3	1.2	1.7	.26	.12
17	.23	.30	.60	.60	94	6.0	1.9	2.0	1.1	1.4	.26	.09
18	.26	.40	.50	.60	860	5.0	2.0	2.2	1.1	1.1	.22	.11
19	.28	.70	.50	.60	370	4.5	2.0	2.6	1.1	.96	.56	.14
20	.28	1.0	.40	.70	35	3.0	2.2	2.6	1.0	.87	.40	.13
21	.29	.90	.30	.70	21	3.5	2.8	2.3	.96	.86	.24	.12
22	.26	.80	.30	.80	9.0	2.8	2.6	2.2	.85	.81	.26	.23
23	.33	.60	.20	.80	5.4	6.8	2.5	2.0	.77	.88	.23	.25
24	.35	.50	.20	.90	4.0	7.7	2.4	2.5	.75	.77	.16	.23
25	.36	.50	.20	.80	3.0	3.8	2.3	2.3	.68	.74	.08	.40
26	.68	.60	.30	.60	3.0	1.9	2.5	2.0	.62	.67	.04	.31
27	.69	.50	.40	.50	4.0	330	2.6	1.8	.50	.81	.03	.26
28	.87	.60	.50	.50	5.0	25	2.6	1.6	.35	1.3	.03	.22
29	.47	.80	.70	.60	-----	10	2.4	1.4	1.1	.71	.03	.20
30	.41	1.1	.80	.40	-----	7.0	2.3	1.4	20	.61	.13	.18
31	.44	-----	1.0	.30	-----	5.0	-----	2.1	-----	.57	.29	-----
TOTAL	28.03	16.38	17.96	19.30	1,425.60	534.0	72.8	106.4	75.28	92.14	8.87	12.31
MEAN	.90	.55	.58	.62	50.9	17.2	2.43	3.43	2.51	2.97	.29	.41
MAX	8.1	1.1	2.2	1.0	860	330	4.5	25	20	46	.56	6.4
MIN	.10	.10	.20	.30	.10	1.9	1.7	1.4	.35	.55	.03	.08
AC-FT	56	32	36	38	2,830	1,060	144	211	149	183	18	24

CAL YR 1970 TOTAL 493.91 MEAN 1.35 MAX 50 MIN .01 AC-FT 980
WTR YR 1971 TOTAL 2,409.07 MEAN 6.60 MAX 860 MIN .03 AC-FT 4,780

PEAK DISCHARGE (BASE, 400 CFS).--Feb. 18, about 2,600 cfs; Mar. 27 (time unknown) 4,080 cfs (13.62 ft).

MISSOURI RIVER MAIN STEM

06610000 Missouri River at Omaha, Nebr.

LOCATION.--Lat 41°15'32", long 95°55'20", in SE¼NW¼ sec. 23, T.15 N., R.13 E., Douglas County, on right bank on left side of concrete floodwall at foot of Douglas Street, 275 ft downstream from Interstate 480 Highway bridge in Omaha and at mile 615.9.

DRAINAGE AREA.--322,800 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 958.24 ft above mean sea level. See WSP 1730 for history of changes prior to Sept. 30, 1936.

AVERAGE DISCHARGE.--43 years, 28,390 cfs (20,570,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 91,900 cfs Mar. 14 (gage height, 13.94 ft); maximum gage height, 14.08 ft June 11; minimum daily discharge, 9,000 cfs Jan. 8, 9.
Period of record: Maximum discharge, 396,000 cfs Apr. 18, 1952 (gage height, 30.20 ft); minimum, about 2,200 cfs Jan. 6, 1937; minimum gage height observed, -2.77 ft Jan. 10, 1957, result of freezeup.

REMARKS.--Records good except those for winter period, which are poor. Flow partly regulated by upstream main-stem reservoirs. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 761: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42,300	42,700	39,300	18,100	15,700	30,300	47,900	36,400	48,300	53,300	48,500	48,300
2	40,100	43,800	38,900	18,500	16,000	27,800	48,200	36,500	48,900	51,300	48,700	47,600
3	40,400	44,000	38,200	18,500	15,800	26,900	45,600	36,200	48,600	49,600	49,300	48,300
4	39,900	43,700	37,500	17,300	14,500	26,800	43,300	36,200	48,200	48,900	49,600	49,600
5	39,300	43,700	34,900	16,200	14,500	26,600	43,300	36,200	50,800	48,600	50,000	50,500
6	39,700	42,800	31,700	14,000	16,500	26,500	42,900	37,100	60,600	49,200	49,200	50,200
7	41,700	42,300	29,400	12,000	18,500	26,400	41,500	37,700	71,000	50,100	48,300	48,800
8	44,500	42,700	26,600	9,000	18,700	25,600	41,200	37,000	77,800	50,900	47,800	49,600
9	47,200	44,400	24,200	9,000	17,700	24,300	41,000	36,700	73,600	51,200	48,400	50,100
10	45,300	44,300	22,400	9,500	17,500	25,000	38,800	39,500	74,900	52,900	48,600	50,000
11	45,000	43,700	20,800	12,000	17,700	29,600	38,100	48,900	79,700	54,700	48,900	49,000
12	44,600	43,700	19,600	14,000	17,500	43,400	37,900	51,400	77,600	55,200	48,700	48,600
13	44,400	44,000	19,800	14,000	18,400	60,900	38,300	52,600	72,300	55,200	49,200	48,800
14	44,300	44,500	20,200	13,500	19,700	76,800	38,200	50,400	71,400	53,900	49,400	49,000
15	43,500	45,000	20,300	13,000	20,200	46,100	38,100	48,800	69,600	53,400	49,000	49,000
16	42,900	44,600	20,100	13,000	19,900	32,100	37,600	47,700	63,200	51,800	48,500	48,700
17	42,100	43,500	20,000	12,600	20,400	31,700	37,000	47,700	61,300	51,600	48,200	48,900
18	42,300	42,600	20,400	12,400	23,800	35,000	37,100	49,300	58,900	51,300	48,300	49,500
19	42,800	42,300	20,800	11,500	52,000	38,500	37,600	49,200	51,800	50,000	48,400	49,500
20	42,800	43,000	19,900	14,000	57,100	40,700	38,000	47,900	50,500	49,200	49,700	49,600
21	43,400	42,100	19,400	14,500	68,400	41,500	38,100	46,200	54,000	48,600	49,300	49,800
22	42,400	42,600	18,900	15,000	61,500	43,800	37,700	45,100	52,900	49,300	48,300	49,900
23	42,400	42,400	18,900	15,500	52,100	45,600	37,600	47,100	51,400	49,600	48,300	50,600
24	42,300	40,400	19,300	16,000	40,900	44,700	37,300	49,400	51,100	50,000	48,800	49,900
25	42,000	40,700	17,400	16,500	34,400	44,700	37,200	52,400	51,500	50,300	49,100	49,100
26	42,500	40,500	16,700	16,500	33,600	44,100	37,600	51,200	50,700	50,400	48,500	49,400
27	43,200	39,700	16,900	17,000	33,200	42,800	38,300	52,700	51,000	49,600	48,500	48,900
28	42,300	39,200	17,400	17,000	32,300	45,900	38,700	52,100	50,700	50,300	49,000	49,000
29	41,300	38,800	17,200	17,000	-----	47,800	38,000	50,900	50,700	49,900	49,000	49,000
30	41,400	38,900	16,500	15,700	-----	47,500	36,500	49,400	54,800	49,700	49,300	48,000
31	42,100	-----	16,700	15,300	-----	46,000	-----	48,000	-----	49,200	48,800	-----
TOTAL	1,320.4M	1,276.6M	720,300	448,100	788,500	1,195.4M	1,188.6M	1,407.9M	1,777.8M	1,579.2M	1,513.6M	1,477.2M
MEAN	42,590	42,550	23,240	14,450	28,160	38,560	39,620	45,420	59,260	50,940	48,830	49,240
MAX	47,200	45,000	39,300	18,500	68,400	76,800	48,200	52,700	79,700	55,200	50,000	50,600
MIN	39,300	38,800	16,500	9,000	14,500	24,300	36,500	36,200	48,200	48,600	47,800	47,600
AC-FT	2,619M	2,532M	1,429M	888,800	1,564M	2,371M	2,358M	2,793M	3,526M	3,132M	3,002M	2,930M

CAL YR 1970 TOTAL 12,472,100 MEAN 34,170 MAX 47,200 MIN 10,000 AC-FT 24,740,000
WTR YR 1971 TOTAL 14,693,600 MEAN 40,260 MAX 79,700 MIN 9,000 AC-FT 29,140,000

M Expressed in thousands.

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LOCATION.--Lat 41°59'14", long 104°03'25", in SW¹SE¹ sec.3, T.23 N., R.60 W., Goshen County, Wyo., on left bank 0.3 mile downstream from Gering-Mitchell Canal, 0.3 mile upstream from Wyoming-Nebraska State line, and 1.0 mile southwest of Henry, Nebr.

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

EXTREMES.--Current year: Maximum discharge, 9,860 cfs June 6 (gage height, 6.32 ft); minimum daily, 250 cfs Feb. 7.

Period of record: Maximum discharge observed, 17,900 cfs June 2, 1929 (gage height, 7.04 ft, present datum, site then in use); minimum daily, 13 cfs May 12, 1961.

REMARKS.--Records fair. Natural flow of stream affected by transbasin diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.3 mile upstream. Records of chemical analyses and water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1918: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	614	488	380	330	320	265	558	3,940	8,940	4,720	1,940	1,100
2	572	482	386	335	310	255	558	3,920	9,580	4,720	1,570	1,070
3	551	470	374	315	315	255	530	3,900	9,300	4,680	1,450	1,010
4	530	476	374	280	305	255	482	3,900	9,340	4,460	1,390	1,020
5	518	476	374	270	305	270	458	4,600	9,220	4,420	1,290	968
6	506	482	374	270	285	280	518	4,700	9,700	4,340	1,200	866
7	544	482	368	290	250	280	1,350	5,390	9,300	4,180	1,170	838
8	558	470	368	356	260	275	1,720	5,000	9,220	4,060	1,170	936
9	551	464	368	315	265	275	1,870	4,900	8,660	4,040	1,150	888
10	572	458	368	320	255	285	1,980	4,960	7,950	3,920	1,190	831
11	586	458	356	320	315	290	2,040	5,450	7,780	3,920	1,210	796
12	677	458	356	290	325	285	2,140	6,700	7,700	3,880	1,200	747
13	747	446	345	325	335	290	2,220	6,920	7,700	2,990	1,170	726
14	677	440	335	310	330	290	2,290	7,670	7,570	2,010	1,170	691
15	642	434	340	305	325	285	2,330	8,620	7,570	1,750	1,190	663
16	621	428	350	315	320	290	2,360	9,100	7,470	1,510	1,190	656
17	607	422	362	330	315	305	2,400	9,420	7,340	1,520	1,180	684
18	593	422	362	330	315	305	2,470	9,380	7,220	1,400	1,160	670
19	572	416	350	330	315	305	2,600	9,300	7,100	1,390	1,120	670
20	558	410	340	345	315	300	2,620	9,140	6,920	1,430	1,110	663
21	544	404	325	356	310	295	2,780	9,060	6,780	1,560	1,120	719
22	537	392	325	356	300	295	3,300	8,740	6,490	1,810	1,110	768
23	530	380	300	345	295	295	3,520	8,620	5,940	1,900	1,110	775
24	524	380	280	330	290	310	3,630	8,780	5,020	1,980	1,100	761
25	530	386	305	325	285	315	3,790	9,140	4,820	2,040	1,090	740
26	524	392	305	320	280	320	4,020	9,260	4,720	2,110	1,090	719
27	518	392	310	325	280	325	4,220	8,940	4,940	2,140	1,090	712
28	512	392	320	335	275	320	4,180	8,740	5,140	2,190	1,090	691
29	506	392	325	340	-----	452	4,060	8,660	5,140	2,250	1,100	796
30	500	392	330	335	-----	726	3,980	8,620	4,760	2,220	1,110	796
31	494	-----	335	325	-----	663	-----	8,540	-----	2,240	1,100	-----
TOTAL	17,515	12,984	10,690	9,973	8,435	9,956	70,974	224,010	219,330	87,780	37,330	23,970
MEAN	565	433	345	322	301	321	2,366	7,226	7,311	2,832	1,204	799
MAX	747	488	386	356	335	726	4,220	9,420	9,700	4,720	1,940	1,100
MIN	494	380	280	270</								

LOCATION (revised).--Lat 41°56'21", long 103°59'13", in SE 1/4 sec.25, T.23 N., R.58 W., Scotts Bluff County, on right bank 10 ft upstream from county highway bridge, 1.8 miles upstream from mouth, 2.2 miles downstream from Owl Creek, and 3.2 miles northeast of Lyman.

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

AVERAGE DISCHARGE.--40 years. 61.9 cfs (44.850 acre-ft per year).

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 926: 1940(M). WRD Nebr. 1967: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	50	33	27	25	24	21	40	122	206	85	101
2	193	48	33	27	25	21	21	40	211	245	86	103
3	138	48	33	24	25	23	22	43	313	255	87	112
4	117	46	34	20	25	25	21	54	432	266	83	149
5	106	47	35	20	25	24	22	576	456	247	83	193
6	97	46	35	19	24	22	21	478	415	215	78	186
7	104	46	34	18	25	19	18	236	399	179	77	203
8	101	47	33	19	25	22	17	161	434	176	76	270
9	96	45	32	20	25	25	17	128	539	371	72	302
10	100	45	25	21	26	25	17	103	489	272	69	327
11	98	45	25	22	30	27	16	104	423	259	72	313
12	91	45	25	23	27	25	17	100	389	240	73	304
13	83	45	23	24	27	23	18	95	371	213	73	304
14	80	45	23	24	28	22	18	88	376	191	76	293
15	78	43	30	23	27	20	18	82	354	170	75	295
16	75	43	28	19	26	20	18	77	359	132	75	309
17	74	42	29	21	25	20	19	74	359	96	72	313
18	71	42	29	23	25	18	21	70	364	82	67	351
19	70	41	29	27	25	18	22	66	364	80	69	359
20	68	39	29	35	25	20	24	64	356	79	71	386
21	66	39	29	36	24	19	25	63	356	77	75	475
22	64	36	26	27	23	19	48	64	344	76	76	568
23	62	36	29	27	24	19	39	81	341	75	75	581
24	61	40	29	27	27	19	30	82	341	76	77	556
25	59	42	30	27	27	24	33	141	320	78	77	498
26	59	38	26	28	21	27	43	131	282	82	78	484
27	57	39	26	31	25	30	46	68	253	82	80	481
28	54	37	27	33	25	23	36	98	259	82	80	459
29	53	36	25	34	-----	22	36	112	285	85	89	415
30	52	35	26	33	-----	22	42	121	243	88	116	320
31	51	-----	27	27	-----	21	-----	120	-----	88	97	-----
TOTAL	2,758	1,276	897	786	711	688	766	3,760	10,549	4,863	2,439	10,010
MEAN	89.0	42.5	28.9	25.4	25.4	22.2	25.5	121	352	157	78.7	334
MAX	280	50	35	36	30	30	48	576	539	371	116	581
MIN	51	35	23	18	21	18	16	40	122	75	67	101
AC-FT	5,470	2,530	1,780	1,560	1,410	1,360	1,520	7,460	20,920	9,650	4,840	19,850
CAL YR 1970	TOTAL 32,570	MEAN 89.2	MAX 1,030	MIN 10	AC-FT 64,600							
WTR YR 1971	TOTAL 39,503	MEAN 108	MAX 581	MIN 16	AC-FT 78,350							

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LOCATION.---Lat 41°57'50", long 103°56'20", in NW¼SW¼ sec.16, T.23 N., R.57 W., Scotts Bluff County, on right bank 40 ft upstream from Burlington Northern Inc. bridge, 50 ft downstream from bridge on U.S. Highway 26, 1 mile west of Morrill, and 1.5 miles upstream from mouth.

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

AVERAGE DISCHARGE.--40 years, 53.7 cfs (38,910 acre-ft per year).

Period of record: Maximum discharge, 413 cfs June 27, 1955 (gage height, 6.52 ft, from floodmark); 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 cfs Dec. 16, 23, 1956, Jan. 18, Mar. 12, 1957 (result of diversion for construction upstream).

REVISIONS (WATER YEARS).--WRD Nebr. 1967: Drainage area. WRD Nebr. 1969: 1936(M), 1946(M).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	109	96	87	78	82	74	75	69	3.1	6.2	6.0
2	130	106	96	86	78	82	74	75	91	3.1	6.0	6.0
3	130	105	96	86	77	82	76	75	74	3.1	6.5	6.0
4	130	106	95	86	77	83	77	76	71	3.1	6.5	6.0
5	128	106	95	86	75	85	76	111	71	3.1	6.5	6.0
6	130	106	97	86	76	85	76	101	71	2.9	6.5	6.0
7	146	106	97	85	75	85	76	88	74	2.7	6.5	6.0
8	170	107	97	85	75	85	76	86	74	3.6	6.5	6.5
9	170	107	96	85	76	83	76	88	74	2.2	6.5	6.2
10	182	108	97	84	78	85	76	85	79	2.2	6.5	5.8
11	170	105	96	82	77	83	76	85	75	2.0	6.5	5.8
12	146	99	97	82	78	82	76	84	128	5.7	6.5	5.8
13	136	97	95	82	78	82	75	82	92	3.3	6.5	5.8
14	134	98	94	81	78	81	75	82	80	3.1	6.5	5.5
15	131	98	94	81	79	81	75	81	77	3.3	6.5	5.8
16	130	99	94	81	80	81	76	80	78	5.0	6.5	6.0
17	126	100	94	82	80	80	77	79	74	6.5	6.2	5.5
18	123	102	93	81	80	81	78	79	74	6.2	6.2	5.5
19	122	103	91	81	81	81	80	80	72	6.5	6.2	5.2
20	122	103	91	82	82	81	80	79	70	6.5	6.2	5.0
21	120	105	91	80	83	81	79	79	70	6.5	6.2	5.2
22	118	102	90	78	84	81	84	80	70	6.8	6.2	4.5
23	110	100	87	78	84	81	80	81	70	7.1	6.2	91
24	108	100	88	78	83	82	79	78	70	7.5	6.0	143
25	107	100	88	78	83	80	80	74	70	7.5	6.0	143
26	107	98	88	80	82	80	83	74	70	7.1	6.2	138
27	106	98	88	81	81	78	82	73	29	7.1	6.5	135
28	106	97	89	80	82	77	80	71	2.4	6.8	6.5	135
29	106	97	89	78	-----	74	79	73	2.6	6.8	6.2	135
30	109	97	88	78	-----	73	77	74	2.7	6.8	6.2	136
31	110	-----	88	78	-----	74	-----	70	-----	6.5	6.0	-----
TOTAL	3,994	3,064	2,875	2,538	2,220	2,511	2,328	2,498	2,024.7	153.7	196.2	1,182.1
MEAN	129	102	92.7	81.9	79.3	81.0	77.6	80.6	67.5	4.96	6.33	39.4
MAX	182	109	97	87	84	85	84	111	128	7.5	6.5	143
MIN	106	97	87	78	75	73	74	70	2.4	2.0	6.0	4.5
AC-FT	7,920	6,080	5,700	5,030	4,400	4,980	4,620	4,950	4,020	305	389	2,340
CAL YR 1970	TOTAL 23,596.3			MEAN 64.6	MAX 182	MIN 1.8	AC-FT 46,800					
WTR YR 1971	TOTAL 25,584.7			MEAN 70.1	MAX 182	MIN 2.0	AC-FT 50,750					

Scotts Bluff County,
0.8 mile upstream from

(VINTO) YAM TSEI
YINCO TSEI SHON

Oct. 1, 1958, at datum

WITNESSES: - - - - -

daily, 13 cfs

present datum); min-

from May through July,
lions for irrigation

R 1971		
JUL	AUG	SEP
101	101	101
66	73	92
60	72	72
51	71	78
60	77	107
64	78	100
61	72	96
62	58	86
79	45	108
140	48	93
116	52	86
115	49	88
90	50	92
79	51	85
70	55	88
66	57	95
57	61	102
66	71	93
65	88	86
66	85	84
59	85	78
64	82	93
64	83	97
66	89	99
67	88	87
82	86	98
84	78	113
78	77	116
76	69	109
94	78	105
86	89	83
79	91	-----
2,332	2,208	2,809
75.2	71.2	93.6
140	91	116
51	45	72
4,630	4,380	5,570

PLATTE RIVER BASIN

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06679500 North Platte River at Mitchell, Nebr.

LOCATION.--Lat 41°55'55", long 103°48'10", in SW $\frac{1}{4}$ sec.27, T.23 N., R.56 W., Scotts Bluff County, near center of main channel on downstream side of pier of bridge on State Highway 29, 0.5 mile south of Mitchell.

DRAINAGE AREA.--28,300 sq mi, approximately, of which about 5,960 sq mi is noncontributing.

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.

GAGE.--Water-stage recorder. Datum of gage is 3,929.3 ft above mean sea level. 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.

EXTREMES.--Current year: Maximum discharge, 12,200 cfs June 2 (gage height, 8.28 ft); minimum daily, 282 cfs Aug. 27-29.

Period of record: Maximum discharge, 27,500 cfs 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 cfs; minimum daily observed, 25 cfs Sept. 25-29, 1908.

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.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,250	770	600	544	541	544	855	4,480	9,100	3,550	1,170	381
2	1,110	761	593	544	537	534	810	4,480	11,400	3,590	855	369
3	1,010	756	590	527	537	534	805	4,430	11,000	3,550	714	378
4	954	761	586	516	530	541	750	4,220	9,930	3,570	662	427
5	914	765	586	480	520	551	701	4,730	9,890	3,430	595	494
6	882	761	586	470	506	544	670	6,160	9,890	3,360	518	487
7	954	761	590	460	502	541	1,300	5,040	9,480	3,240	462	480
8	963	756	593	430	492	541	1,910	5,840	9,480	3,180	405	571
9	968	738	586	425	485	548	2,270	5,060	8,580	3,470	363	662
10	977	734	593	432	513	555	2,470	4,970	7,780	3,220	342	658
11	1,010	720	579	432	534	562	2,590	5,030	7,750	3,150	327	670
12	1,020	720	583	460	541	558	2,680	6,600	7,590	3,100	351	642
13	1,090	704	579	453	555	558	2,780	7,350	7,940	2,750	342	634
14	1,060	696	576	467	562	551	2,910	7,810	7,380	1,740	327	623
15	995	692	576	455	562	544	3,000	8,580	7,430	1,420	339	616
16	972	684	586	492	565	544	2,980	9,580	7,200	1,180	357	634
17	945	672	579	506	565	555	3,000	10,000	7,000	968	366	670
18	918	664	579	513	572	555	3,150	9,780	6,800	915	366	706
19	905	652	569	513	576	558	3,260	9,480	6,620	825	345	726
20	882	640	569	530	583	565	3,400	9,060	6,320	726	332	730
21	873	636	562	544	590	558	3,420	8,790	6,100	718	320	820
22	860	620	558	541	583	551	4,040	8,790	5,700	855	319	940
23	855	600	523	544	579	555	4,310	7,880	5,230	935	315	1,030
24	842	616	527	541	576	569	4,380	8,420	4,450	962	312	1,110
25	833	628	516	541	572	579	4,510	8,930	3,880	1,020	298	1,110
26	824	620	527	541	558	586	4,750	9,490	3,770	1,060	288	1,120
27	819	624	534	544	548	604	4,930	8,780	3,820	1,100	282	1,140
28	810	616	537	555	555	590	4,800	8,630	3,920	1,110	282	1,140
29	797	612	544	562	-----	620	4,670	8,750	3,910	1,190	282	1,240
30	783	612	544	562	-----	860	4,480	8,920	3,650	1,200	342	1,420
31	779	-----	548	544	-----	976	-----	8,970	-----	1,200	384	-----
TOTAL	28,854	20,591	17,598	15,668	15,339	18,031	86,581	229,030	212,990	62,284	12,962	22,628
MEAN	931	686	568	505	548	582	2,886	7,388	7,100	2,009	418	754
MAX	1,250	770	600	562	590	976	4,930	10,000	11,400	3,590	1,170	1,420
MIN	779	600	516	425	485	534	670	4,220	3,650	718	282	369
AC-FT	57,230	40,840	34,910	31,080	30,420	35,760	171,700	454,300	422,500	123,500	25,710	44,880

CAL YR 1970 TOTAL 250,590 MEAN 687 MAX 4,530 MIN 201 AC-FT 497,000
WTR YR 1971 TOTAL 742,556 MEAN 2,034 MAX 11,400 MIN 282 AC-FT 1,473,000

PLATTE RIVER BASIN

06680000 Tub Springs near Scottsbluff, Nebr.

LOCATION.--Lat 41°54'55", long 103°42'55", in SW1/4 sec.33, T.23 N., R.55 W., Scotts Bluff County, 50 ft upstream from bridge, 0.2 mile downstream from headgates of Enterprise Canal, 1.5 miles upstream from mouth, and 3.5 miles northwest of Scottsbluff.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,926.54 ft above mean sea level. See WSP 1918 for history of changes prior to Sept. 9, 1952.

AVERAGE DISCHARGE.--23 years, 36.0 cfs (26,080 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 837 cfs June 2 (gage height, 5.30 ft); minimum daily, 24 cfs Apr. 30 to May 2.

Period of record: Maximum discharge, 1,610 cfs June 21, 1952 (gage height not determined), on basis of slope-area measurement of peak flow caused by break in Interstate Canal; minimum daily, 0.70 cfs May 7, 1965.

REMARKS.--Records good. Natural flow of stream affected by diversions for irrigation, spill from Enterprise Canal, and return flow from irrigated areas.

REVISIONS (WATER YEARS).--WSP 1310: 1949(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	56	41	39	34	32	30	24	85	45	34	40
2	64	55	39	39	34	31	30	24	194	43	32	39
3	67	55	38	37	34	32	30	46	50	44	31	40
4	67	54	38	36	34	32	30	63	67	43	31	49
5	68	53	39	35	34	32	30	86	44	49	31	44
6	69	53	38	35	34	32	29	71	43	44	30	41
7	76	53	38	35	33	31	30	64	43	37	31	41
8	73	52	39	34	32	32	29	57	63	108	33	58
9	73	52	40	34	32	31	29	53	48	103	32	53
10	75	52	42	34	33	31	29	57	49	67	32	50
11	73	51	41	34	33	31	31	70	45	57	32	49
12	69	51	41	33	32	32	29	74	48	50	32	48
13	68	50	42	33	33	31	27	75	43	49	32	47
14	68	49	42	33	32	29	28	69	42	37	35	45
15	65	49	42	34	32	29	27	69	39	27	34	49
16	65	49	42	34	32	30	27	72	40	29	37	54
17	64	48	42	35	32	30	26	69	47	30	35	53
18	63	48	42	34	32	30	26	69	51	32	36	48
19	61	47	42	35	32	30	28	70	50	36	36	47
20	61	47	41	36	32	31	27	70	50	35	33	48
21	60	45	42	35	32	30	27	71	51	36	32	58
22	60	47	41	35	32	30	29	145	44	42	30	72
23	60	46	40	35	32	30	27	87	42	43	31	84
24	59	47	41	35	32	31	26	61	42	41	33	83
25	58	46	40	35	32	32	27	57	43	41	33	78
26	57	45	41	35	31	33	28	56	46	40	30	80
27	57	44	41	36	32	32	27	67	48	39	31	104
28	57	43	40	36	32	31	26	78	39	37	34	112
29	57	43	40	35	-----	31	25	79	29	37	39	112
30	56	42	39	35	-----	30	24	91	40	35	44	86
31	56	-----	39	34	-----	30	-----	81	-----	35	41	-----
TOTAL	1,992	1,472	1,253	1,085	911	959	838	2,125	1,565	1,391	1,037	1,812
MEAN	64.3	49.1	40.4	35.0	32.5	30.9	27.9	68.5	52.2	44.9	33.5	60.4
MAX	76	56	42	39	34	33	31	145	194	108	44	112
MIN	56	42	38	33	31	29	24	24	29	27	30	39
AC-FT	3,950	2,920	2,490	2,150	1,810	1,900	1,660	4,210	3,100	2,760	2,060	3,590

CAL YR 1970 TOTAL 14,431 MEAN 39.5 MAX 112 MIN 16 AC-FT 28,620
WTR YR 1971 TOTAL 16,440 MEAN 45.0 MAX 194 MIN 24 AC-FT 32,610

51

06681000 Winter Creek near Scottsbluff, Nebr.

LOCATION.--Lat 41°51'08", long 103°37'35", in NW 1/4 sec.30, T.22 N., R.54 W., Scotts Bluff County, on right bank 700 ft downstream from bridge on U.S. Highway 26, 1 mile upstream from mouth, and 1.5 miles east of Scottsbluff.

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

GAGE.--Water-stage recorder. Datum of gage is 3,860.8 ft above mean sea level. Prior to Nov. 19, 1938, non-recording gage at site 700 ft upstream at different datum. Nov. 19, 1938, to Sept. 30, 1958, water-stage recorder at present site at datum 1.00 ft higher.

AVERAGE DISCHARGE.--40 years, 53.3 cfs (38,620 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 888 cfs June 2 (gage height, 8.00 ft); minimum daily, 21 cfs July 18.

Period of record: Maximum discharge, 1,090 cfs June 10, 1957 (gage height, 8.95 ft, present datum); maximum gage height, 9.34 ft, present datum, Jan. 7, 1949 (backwater from snowdrifts); minimum daily discharge, 0.9 cfs July 5, 1961.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	67	53	43	50	48	44	47	44	68	58	94
2	109	67	53	43	48	48	45	46	352	67	48	89
3	117	67	52	42	46	48	44	44	151	49	33	91
4	114	67	52	42	45	52	44	47	153	50	30	108
5	107	67	51	41	46	54	40	72	143	47	29	117
6	105	67	51	41	47	55	43	57	139	39	28	115
7	99	66	51	41	47	57	43	71	129	28	35	101
8	91	68	51	40	47	58	49	112	94	32	38	130
9	89	66	51	42	47	60	55	111	62	197	69	137
10	88	66	52	43	46	60	51	106	56	78	73	131
11	86	65	52	43	47	54	45	100	56	62	56	129
12	84	65	52	43	47	46	46	102	87	51	54	127
13	82	63	51	41	47	47	46	101	111	51	53	103
14	79	62	51	41	48	46	46	106	49	45	47	192
15	76	61	51	41	47	46	45	113	55	39	44	180
16	74	61	50	42	45	46	46	114	60	31	46	185
17	73	59	49	43	47	47	46	113	70	25	46	193
18	72	60	49	42	48	46	46	110	63	21	37	187
19	72	58	48	42	47	46	47	109	59	24	38	189
20	72	57	47	43	48	46	47	105	61	22	45	192
21	71	58	47	43	48	47	47	72	61	23	46	199
22	72	57	46	43	48	46	49	56	55	24	49	191
23	71	56	46	42	47	46	47	56	57	30	47	183
24	71	54	45	43	47	47	47	47	44	44	37	181
25	71	52	45	43	48	47	47	46	33	49	43	191
26	71	52	44	43	47	48	49	44	34	51	50	102
27	71	52	44	46	47	47	48	42	30	47	55	120
28	69	52	44	49	48	46	47	43	28	45	59	148
29	67	52	43	48	-----	46	47	43	32	48	89	166
30	68	52	42	48	-----	45	47	53	57	49	108	134
31	68	-----	42	47	-----	45	-----	45	-----	51	99	-----
TOTAL	2,560	1,816	1,505	1,334	1,320	1,520	1,393	2,333	2,425	1,487	1,589	3,205
MEAN	82.6	60.5	48.5	43.0	47.1	49.0	46.4	75.3	80.8	48.0	51.3	107
MAX	117	68	53	49	50	60	55	114	352	197	108	166
MIN	67	52	42	40	45	45	40	42	28	21	28	180
AC-FT	5,080	3,600	2,990	2,650	2,620	3,010	2,760	4,630	4,810	2,950	3,150	6,360
CAL YR 1970	TOTAL	19,845.7	MEAN	54.4	MAX	128	MIN	8.8	AC-FT	39,360		
WTR YR 1971	TOTAL	22,487.0	MEAN	61.6	MAX	352	MIN	21	AC-FT	44,600		

PLATTE RIVER BASIN

06681500 Gering drain near Gering, Nebr.

LOCATION.--Lat 41°49'20", long 103°37'02", in SE 1/4 sec. 6, T.21 N., R.54 W., Scotts Bluff County, near left bank on downstream side of bridge piling on county road, 0.2 mile downstream from bridge on State Highway 92, 1 mile upstream from mouth, and 2 miles east of Gering.

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

GAGE.--Water-stage recorder. Datum of gage is 3,854.62 ft above mean sea level (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 2.0 ft higher.

AVERAGE DISCHARGE.--37 years, 41.8 cfs (30,280 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,560 cfs July 8 (gage height, 8.92 ft, top of surge); minimum daily, 24 cfs Apr. 30, May 1, 28, June 1.

Period of record: Maximum discharge, 9,560 cfs June 8, 1958 (gage height, 14.0 ft, present datum, from floodmarks), from rating curve extended above 2,200 cfs on basis of slope-area measurements at gage heights 12.67 and 14.0 ft (present datum); minimum daily, 5 cfs Aug. 13, 16, 19, 1940.

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

REVISIONS (WATER YEARS).--WSP 896: 1935(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	37	32	29	26	29	28	24	24	329	123	146
2	60	38	31	30	27	29	28	25	753	476	113	140
3	59	38	30	29	27	29	28	26	33	136	104	141
4	57	38	30	25	27	30	28	26	92	141	104	154
5	56	38	30	25	26	31	28	66	123	143	105	156
6	55	37	30	25	26	30	28	38	135	135	105	158
7	54	36	30	26	25	29	28	32	154	135	97	165
8	52	38	30	27	26	29	28	40	163	515	94	192
9	51	37	30	27	25	30	28	35	165	868	94	184
10	50	36	30	28	27	30	28	33	171	199	93	184
11	49	34	30	28	27	30	28	32	173	222	93	177
12	48	33	30	28	26	30	30	32	212	212	94	177
13	47	33	30	28	26	29	29	32	216	182	94	209
14	47	33	30	28	26	29	29	34	202	171	94	209
15	44	34	30	28	26	28	29	34	202	153	97	219
16	43	34	30	29	26	28	29	36	202	136	97	214
17	42	35	30	30	26	29	29	34	209	134	102	235
18	42	35	30	30	26	29	28	32	137	136	102	232
19	42	36	30	29	26	28	29	30	107	120	98	235
20	42	36	30	30	26	29	27	30	124	112	100	235
21	41	37	30	29	26	28	27	30	121	110	102	253
22	39	37	30	28	26	28	31	37	121	110	100	209
23	39	37	31	28	27	30	27	32	119	111	96	194
24	39	37	29	28	27	30	26	26	121	144	98	182
25	38	37	29	27	28	30	28	25	122	127	99	182
26	38	36	29	27	28	30	30	25	124	128	101	212
27	37	35	29	28	27	30	28	25	136	122	101	232
28	37	35	29	28	28	28	26	24	131	127	103	235
29	37	34	29	28	-----	28	26	25	107	130	112	176
30	37	33	28	26	-----	28	24	25	89	126	136	73
31	37	-----	29	26	-----	28	-----	25	-----	123	137	-----
TOTAL	1,420	1,074	925	862	740	903	840	970	4,788	6,013	3,188	5,710
MEAN	45.8	35.8	29.8	27.8	26.4	29.1	28.0	31.3	160	194	103	190
MAX	61	38	32	30	28	31	31	66	753	868	137	253
MIN	37	33	28	25	25	28	24	24	24	110	93	73
AC-FT	2,820	2,130	1,830	1,710	1,470	1,790	1,670	1,920	9,500	11,930	6,320	11,330

CAL YR 1970 TOTAL 19,447 MEAN 53.3 MAX 291 MIN 16 AC-FT 38,570
WTR YR 1971 TOTAL 27,433 MEAN 75.2 MAX 868 MIN 24 AC-FT 54,410

PLATTE RIVER BASIN

53

06682000 North Platte River near Minatare, Nebr.

LOCATION.--Main channel gage: Lat 41°47'26", long 103°31'11", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.13, T.21 N., R.54 W., Scotts Bluff County, on left bank 350 ft upstream from highway bridge and 1.8 miles southwest of Minatare. Nine Mile channel gage: Lat 41°47'32", long 103°31'08", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.21 N., R.54 W., Scotts Bluff County, on left bank 50 ft upstream from highway bridge and 750 ft north of main channel.

DRAINAGE AREA.--28,700 sq mi, approximately.

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.

GAGE.--Main channel: Water-stage recorder. Datum of gage is 3,811.0 ft above mean sea level. See WSP 1918 for history of changes prior to Mar. 22, 1956. Mar. 22, 1956, to Nov. 1, 1966, at site 400 ft downstream at various datums.

Nine Mile channel: Water-stage recorder. Datum of gage is 3,812.3 ft above mean sea level. See WSP 1918 for history of changes prior to June 29, 1961.

EXTREMES.--Current year: Maximum discharge, 14,900 cfs June 2; minimum daily, 438 cfs Aug. 26.

Period of record: Maximum discharge, 19,500 cfs July 2, 1917 (from graph based on mean daily discharge and discharge measurement published by State engineer of Nebraska); minimum daily, 11 cfs Aug. 16-18, 1940.

Flood of June 18, 1921, may have been greater than flood of July 2, 1917.

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 channels for which separate records are computed; figures given herein represent combined discharge.

REVISIONS.--WSP 1710: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,410	1,120	958	749	772	737	1,030	4,510	9,870	4,030	1,470	643
2	1,330	1,110	943	746	776	729	974	4,410	11,800	4,430	1,300	617
3	1,230	1,110	937	735	769	728	979	4,380	10,700	4,250	1,050	620
4	1,170	1,100	928	716	751	728	951	4,370	10,700	4,140	927	754
5	1,130	1,100	925	715	745	748	923	4,850	10,700	4,120	863	850
6	1,130	1,110	921	700	735	750	886	6,200	10,500	3,820	792	866
7	1,260	1,100	923	670	739	742	989	5,990	11,000	3,720	748	834
8	1,280	1,120	923	688	724	749	1,650	6,050	10,600	3,570	706	992
9	1,310	1,100	911	704	718	758	2,100	6,000	10,700	5,310	662	1,100
10	1,320	1,090	921	718	728	767	2,260	5,600	9,990	4,260	624	1,120
11	1,330	1,080	913	715	735	776	2,370	5,430	9,500	3,800	567	1,120
12	1,310	1,070	898	702	741	788	2,420	5,670	9,000	3,650	549	1,090
13	1,370	1,070	880	706	751	788	2,460	6,930	9,210	3,440	561	1,070
14	1,390	1,050	863	705	753	772	2,590	7,320	8,640	2,640	519	1,040
15	1,350	1,050	848	715	757	761	2,700	8,140	8,320	2,100	515	994
16	1,320	1,050	848	734	753	756	2,720	9,040	8,030	1,720	515	1,020
17	1,280	1,040	836	759	746	759	2,720	9,930	7,870	1,390	507	1,130
18	1,260	1,040	832	774	751	758	2,790	10,500	7,670	1,150	489	1,170
19	1,250	1,040	815	768	753	758	2,920	10,300	7,420	999	473	1,240
20	1,240	1,030	794	777	754	757	3,010	10,200	7,060	898	454	1,300
21	1,220	1,020	781	796	757	754	3,020	9,840	6,820	824	450	1,460
22	1,210	997	767	788	754	748	3,220	9,570	6,570	877	447	1,600
23	1,210	969	744	783	743	752	3,840	9,890	6,180	1,020	452	1,680
24	1,200	988	744	786	745	770	3,980	9,100	5,600	982	440	1,740
25	1,190	1,010	744	774	750	784	4,270	9,020	4,730	1,170	449	1,770
26	1,190	992	735	770	738	798	4,520	9,530	4,280	1,210	438	1,850
27	1,180	990	737	779	722	811	4,800	9,940	4,270	1,270	443	1,890
28	1,170	981	740	788	732	795	4,900	9,790	4,330	1,290	454	2,000
29	1,160	979	737	797	-----	781	4,770	9,770	4,400	1,380	492	1,980
30	1,140	979	740	793	-----	872	4,610	9,930	4,330	1,430	603	2,090
31	1,130	-----	746	776	-----	1,050	-----	9,990	-----	1,450	624	-----
TOTAL	38,670	31,485	26,032	23,126	20,892	24,024	81,372	242,190	240,790	76,340	19,583	37,630
MEAN	1,247	1,050	840	746	746	775	2,712	7,813	8,026	2,463	632	1,254
MAX	1,410	1,120	958	797	776	1,050	4,900	10,500	11,800	5,310	1,470	2,090
MIN	1,130	969	735	670	718	728	886	4,370	4,270	824	438	617
AC-FT	76,700	62,450	51,630	45,870	41,440	47,650	161,400	480,400	477,600	151,400	38,840	74,640

CAL YR 1970 TOTAL 335,538 MEAN 919 MAX 4,240 MIN 277 AC-FT 665,500
WTR YR 1971 TOTAL 862,134 MEAN 2,362 MAX 11,800 MIN 438 AC-FT 1,710,000

66-31045, Bayard Street, Liberty Bell near Bayard, Sept. 1966

00002000 Ninemile grain near McGrew, Neb.

PERIOD OF REVIEW - 12 MONTHS

1. Period of Record:—January 1982 to current year.

and 0.10 g/L, respectively, and the mean values of the two groups were 0.08 g/L and 0.09 g/L, respectively. The difference between the two groups was not significant ($P > 0.05$).

WES --Current year: Maximum discharge 908 cfs June 2 (gage height 5.31 ft); minimum daily 62 cfs May 1.

for withdrawals and diversions for irrigation and return flow

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	140	111	94	76	79	75	62	175	154	193	264
2	205	139	113	94	75	79	75	64	574	156	202	298
3	198	137	111	92	75	80	74	67	220	130	200	293
4	192	135	111	90	72	80	76	73	175	140	202	327
5	188	133	111	89	70	84	73	97	158	142	201	358
6	187	133	111	89	72	81	74	148	148	135	205	334
7	196	131	111	88	73	80	73	159	146	135	202	289
8	192	146	111	89	74	80	69	154	128	148	210	310
9	189	132	110	87	75	80	69	178	113	238	211	298
10	189	130	112	88	76	79	68	161	103	236	197	294
11	187	126	112	87	76	79	66	152	100	225	207	272
12	182	123	111	86	77	81	66	161	104	206	215	233
13	179	122	111	85	79	81	69	180	143	159	209	230
14	182	122	109	85	79	82	69	179	103	149	195	228
15	169	121	106	84	79	84	68	182	113	146	193	228
16	146	119	105	83	78	84	67	182	112	148	198	229
17	140	117	103	83	80	83	67	183	107	149	180	230
18	137	115	100	81	80	83	66	179	108	155	181	222
19	136	112	98	81	80	82	70	172	110	164	184	220
20	131	112	97	81	80	82	69	162	109	157	186	210
21	137	111	98	81	80	82	72	150	107	163	191	200
22	145	111	97	81	79	81	72	157	104	172	193	205
23	143	107	96	80	80	81	79	174	103	185	212	242
24	141	112	96	80	80	81	76	166	101	180	198	239
25	143	115	94	77	80	80	77	170	97	190	212	236
26	143	113	94	79	80	80	81	178	100	197	216	231
27	140	112	92	78	81	80	84	180	94	193	216	226
28	141	112	94	78	81	80	76	179	97	195	219	217
29	148	112	94	76	-----	77	73	179	113	205	268	215
30	146	112	94	75	-----	77	66	187	116	205	309	209
31	143	-----	94	75	-----	76	-----	182	-----	201	279	-----
TOTAL	5,109	3,662	3,207	2,596	2,167	2,498	2,159	4,797	4,081	5,358	6,484	7,587
MEAN	165	122	103	83.7	77.4	80.6	72.0	155	136	173	209	253
MAX	214	146	113	94	81	84	84	187	574	238	309	358
MIN	131	107	92	75	70	76	66	62	94	130	180	200
AC-FIT	10,130	7,260	6,360	5,150	4,300	4,950	4,280	9,510	8,090	10,630	12,860	15,050

CAL YR 1970	TOTAL 48,326	MEAN 132	MAX 269	MIN 68	AC-FT 95,850	Q15 RASH	00-20007 JAY01	01
WTR YR 1971	TOTAL 49,705	MEAN 136	MAX 574	MIN 62	AC-FT 98,590	Q15 RASH	00-20007 JAY01	17

PLATTE RIVER BASIN

55

06683000 Bayard Sugar Factory drain near Bayard, Nebr.

LOCATION.--Lat 41°44'10", long 103°19'53", in SE 1/4 sec.5, T.20 N., R.52 W., Morrill County, on right bank 600 ft upstream from mouth and 1.2 miles south of Bayard.

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

GAGE.--Water-stage recorder and concrete flume. Altitude of gage is 3,760 ft (from topographic map). Prior to Jan. 7, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--40 years, 28.9 cfs (20,940 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 332 cfs June 2 (gage height, 4.08 ft); minimum daily, 0.10 cfs May 13, 14.

Period of record: Maximum discharge, 391 cfs July 3, 1956 (gage height, 4.32 ft); no flow June 1, 2, July 4-8, 1934, May 16, 17, 1936, Aug. 8, 9, 1960, Apr. 29, 30, May 4, 5, 1962.

REMARKS.--Records good except those for period of no gage-height record and those for period of backwater from the North Platte River during May and June, which are poor. Flow affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

REVISIONS (WATER YEARS).--WSP 1310: 1937(M), 1941.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	33	30	21	24	25	19	1.0	18	6.3	37	119
2	46	32	30	22	24	25	19	1.0	157	9.6	38	220
3	43	31	28	22	25	23	19	1.1	81	7.3	34	223
4	40	31	28	21	24	24	19	1.0	63	8.1	31	240
5	37	30	27	22	23	23	18	2.5	51	18	25	239
6	35	32	27	21	23	23	2.1	13	46	20	23	236
7	33	30	27	21	22	24	1.2	25	46	21	23	230
8	33	41	25	22	21	22	1.1	8.8	41	23	23	232
9	35	33	27	22	21	22	.96	7.0	37	44	24	228
10	36	31	27	23	23	22	.87	6.5	30	32	24	227
11	37	30	27	24	22	22	.77	1.0	24	22	23	227
12	36	30	27	25	21	22	.66	.50	23	20	24	224
13	36	29	26	25	22	21	.66	.10	26	17	24	222
14	37	29	26	26	22	21	.66	.10	25	15	23	222
15	39	31	25	26	21	20	.66	5.0	24	14	23	221
16	36	30	25	26	21	20	.76	10	24	12	23	222
17	34	27	25	27	21	20	.87	15	24	11	22	229
18	32	25	25	28	21	19	.87	26	23	13	17	240
19	31	25	23	30	21	19	.76	33	22	14	19	247
20	30	26	22	35	22	20	.76	31	20	14	23	251
21	30	27	23	36	22	20	.76	27	17	16	21	251
22	31	25	21	33	23	20	.76	25	14	22	20	253
23	30	25	22	33	23	20	.76	29	13	26	19	247
24	30	27	21	32	24	20	.76	20	9.9	23	18	247
25	31	28	20	35	24	21	.76	18	10	25	19	243
26	31	26	20	33	24	24	.87	20	9.9	29	18	240
27	31	27	20	30	24	23	.87	22	9.5	32	18	237
28	32	28	20	28	25	21	.87	19	8.8	35	18	236
29	32	28	21	29	-----	21	.97	18	8.8	40	19	240
30	35	30	21	27	-----	20	1.0	18	8.8	39	25	243
31	35	-----	22	25	-----	20	-----	19	-----	37	18	-----
TOTAL	1,088	877	758	830	633	667	116.04	423.60	914.7	665.3	716	1,036
MEAN	35.1	29.2	24.5	26.8	22.6	21.5	3.87	13.7	30.5	21.5	23.1	34.5
MAX	54	41	30	36	25	25	19	33	157	44	38	253
MIN	30	25	20	21	21	19	.66	.10	8.8	6.3	17	219
AC-FT	2,160	1,740	1,500	1,650	1,260	1,320	230	840	1,810	1,320	1,420	2,050

CAL YR 1970 TOTAL 7,665.60 MEAN 21.0 MAX 59 MIN 1.3 AC-FT 15,200
WTR YR 1971 TOTAL 8,724.64 MEAN 23.9 MAX 157 MIN .10 AC-FT 17,310

NOTE.--No gage-height record Oct. 1-30.

PLATTE RIVER BASIN

06684000 Red Willow Creek near Bayard, Nebr.

LOCATION.--Lat 41°42'50", long 103°15'10", in NE¹/₄ sec.13, T.20 N., R.52 W., Morrill County, on left bank 75 ft downstream from timber bridge, 0.2 mile downstream from Wild Horse drain, 0.8 mile upstream from mouth, and 4.5 miles southeast of Bayard.

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

GAGE.--Water-stage recorder. Datum of gage is 3,716.29 ft above mean sea level. Prior to Nov. 18, 1938, nonrecording gage and Nov. 18, 1938, to Apr. 15, 1946, water-stage recorder at site 65 ft upstream at datum 1.00 ft higher, and Apr. 16, 1946, to June 12, 1957, at present datum.

AVERAGE DISCHARGE.--40 years, 84.6 cfs (61,290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,440 cfs June 2 (gage height, 6.49 ft, from floodmark); minimum daily, 45 cfs Apr. 14, 15.

Period of record: Maximum discharge, 2,320 cfs July 3, 1956 (gage height, 7.33 ft); maximum gage height, 7.8 ft May 10, 1942, from floodmark, present datum; minimum daily discharge, 15 cfs Apr. 23, 1935, Apr. 26, 1962.

REMARKS.--Records good except those for period of backwater from the North Platte River from May through July, which are poor. Natural flow of stream affected by diversions and ground-water withdrawals for irrigation, return flow from irrigated areas, and occasional waste into creek from Tri-State canal.

REVISIONS (WATER YEARS).--WSP 1310: 1937(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	104	100	80	75	67	63	59	170	102	94	145
2	120	104	121	80	77	67	63	49	943	148	94	138
3	107	105	117	80	77	67	62	53	868	160	81	141
4	107	104	118	79	76	67	62	60	604	185	80	204
5	107	104	116	78	77	68	61	96	250	197	79	238
6	108	105	114	79	76	66	71	98	259	205	82	238
7	145	105	112	80	75	66	60	261	228	188	82	234
8	158	110	111	78	75	67	61	245	221	182	81	265
9	158	106	108	77	73	67	65	276	228	221	83	307
10	155	105	104	76	72	67	68	229	285	231	85	314
11	156	104	100	80	72	66	59	175	207	206	83	331
12	150	104	93	76	72	66	57	150	176	190	79	314
13	148	102	92	76	73	66	50	149	198	159	74	306
14	153	104	90	75	73	65	45	126	196	120	75	295
15	126	104	89	75	73	65	45	120	162	94	74	271
16	125	101	89	76	72	65	48	134	158	76	81	241
17	123	99	89	77	72	65	48	147	152	69	77	233
18	122	96	87	77	72	64	52	146	139	59	75	244
19	121	95	86	76	71	64	51	205	107	61	77	238
20	120	93	85	77	72	65	52	234	99	59	73	230
21	118	93	85	77	71	65	57	183	163	60	81	259
22	116	92	86	76	70	64	50	183	199	70	93	352
23	116	89	84	76	70	65	52	264	182	73	99	364
24	116	92	83	75	70	66	57	224	119	65	94	314
25	113	93	83	75	70	65	61	155	91	79	89	273
26	113	92	82	75	68	68	67	167	81	86	85	250
27	111	92	81	75	68	70	72	204	56	78	79	227
28	108	92	81	76	68	66	67	186	52	81	94	207
29	107	92	81	76	-----	66	67	153	89	99	106	187
30	104	92	80	76	-----	65	66	143	93	108	135	190
31	105	-----	81	76	-----	64	-----	168	-----	95	133	-----
TOTAL	3,880	2,973	2,928	2,385	2,030	2,044	1,759	5,042	6,775	3,806	2,697	7,550
MEAN	125	99.1	94.5	76.9	72.5	65.9	58.6	163	226	123	87.0	252
MAX	158	110	121	80	77	70	72	276	943	231	135	364
MIN	104	89	80	75	68	64	45	49	52	59	73	138
AC-FT	7,700	5,900	5,810	4,730	4,030	4,050	3,490	10,000	13,440	7,550	5,350	14,980

CAL YR 1970 TOTAL 36,667 MEAN 100 MAX 292 MIN 40 AC-FT 72,730
WTR YR 1971 TOTAL 43,869 MEAN 120 MAX 943 MIN 45 AC-FT 87,010

PLATTE RIVER BASIN

57

06684500 North Platte River at Bridgeport, Nebr.

LOCATION.--Main channel gage: Lat 41°40'39", long 103°05'45", in NW¼SW¼ sec.28, T.20 N., R.50 W., Morrill County, on downstream side of pier near center of bridge on U.S. Highway 26, 0.5 mile north of Bridgeport. Browns Creek channel gage: Lat 41°40'55", long 103°05'53", in NW¼NW¼ sec.28, T.20 N., R.50 W., Morrill County, on left bank 0.2 mile upstream from culvert on U.S. Highway 26 and 0.8 mile north of Bridgeport.

DRAINAGE AREA.--29,300 sq mi, approximately.

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.

GAGE.--Main channel: Water-stage recorder. Datum of gage is 3,656.14 ft above mean sea level. See WSP 1918 for history of changes prior to Oct. 7, 1927.

Browns Creek channel: Water-stage recorder. Datum of gage is 3,663.51 ft above mean sea level. See WSP 1918 for history of changes prior to June 1, 1943.

EXTREMES.--Current year: Maximum discharge, 16,400 cfs June 3; minimum daily, 574 cfs Aug. 19.

Period of record: Maximum discharge, 24,900 cfs June 26, 1899 (gage height, 5.39 ft, site and datum then in use, from graph based on gage readings); minimum daily, 55 cfs May 28, 1934, Aug. 15, 1940, but may have been less during periods of no record for Browns Creek channel.

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

REVISIONS (WATER YEARS).--WSP 1390: 1897, 1915. WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,040	1,610	1,350	1,310	1,200	1,150	1,450	4,370	10,300	4,710	1,580	1,010
2	2,030	1,600	1,350	1,280	1,180	1,110	1,420	4,260	12,400	5,110	1,580	1,020
3	1,970	1,580	1,340	1,230	1,140	1,110	1,400	4,260	14,500	5,000	1,290	1,050
4	1,910	1,560	1,340	1,000	1,090	1,100	1,350	4,320	13,000	4,870	1,100	1,220
5	1,880	1,580	1,340	1,000	1,100	1,110	1,320	4,900	12,400	5,240	1,020	1,430
6	1,870	1,580	1,340	950	1,110	1,090	1,170	5,420	12,400	4,760	964	1,480
7	1,990	1,570	1,380	900	1,140	1,080	1,160	7,360	12,400	4,430	863	1,400
8	2,100	1,680	1,390	1,000	1,180	1,050	1,540	6,480	12,500	4,230	795	1,500
9	2,080	1,660	1,390	1,000	1,160	1,060	2,170	6,860	12,100	5,230	794	1,720
10	2,090	1,660	1,430	1,050	1,180	1,090	2,530	6,620	12,200	6,250	784	1,890
11	2,060	1,620	1,400	1,100	1,230	1,090	2,780	5,960	11,100	4,890	756	1,930
12	1,990	1,610	1,400	1,000	1,230	1,080	2,950	5,790	10,700	4,470	732	1,880
13	2,000	1,570	1,400	820	1,270	1,100	3,100	6,400	10,700	3,970	730	1,870
14	2,150	1,530	1,400	1,000	1,310	1,080	3,070	8,190	10,700	3,260	730	1,840
15	2,290	1,530	1,400	1,050	1,310	1,050	2,940	9,050	10,000	2,230	681	1,750
16	2,150	1,560	1,400	1,100	1,300	1,030	2,870	9,620	9,600	1,790	692	1,740
17	2,060	1,560	1,400	1,150	1,210	1,030	2,810	10,500	9,420	1,440	649	1,830
18	2,020	1,530	1,400	1,200	1,150	1,030	2,810	11,200	9,310	1,270	647	1,880
19	1,980	1,520	1,400	1,180	1,150	1,040	2,980	11,100	9,030	1,240	574	1,930
20	1,980	1,530	1,350	1,200	1,170	1,040	3,000	11,000	8,690	1,160	633	2,000
21	1,940	1,570	1,350	1,180	1,150	1,060	3,540	10,600	8,330	1,050	632	2,080
22	1,940	1,560	1,300	1,140	1,110	1,110	3,570	10,500	7,990	1,040	638	2,180
23	1,940	1,580	1,300	1,120	1,110	1,130	3,760	11,000	7,700	1,140	652	2,530
24	1,900	1,620	1,250	1,100	1,140	1,160	4,130	10,800	7,010	1,200	640	2,510
25	1,830	1,610	1,250	1,090	1,160	1,130	4,140	10,200	6,050	1,280	636	2,500
26	1,790	1,570	1,250	1,090	1,170	1,230	4,290	10,300	5,140	1,390	635	2,590
27	1,770	1,510	1,250	1,100	1,140	1,270	4,420	10,700	4,740	1,450	649	2,590
28	1,710	1,430	1,300	1,120	1,140	1,200	4,560	10,700	4,630	1,470	690	2,820
29	1,660	1,400	1,300	1,150	-----	1,140	4,740	10,600	4,880	1,540	729	2,810
30	1,620	1,400	1,300	1,160	-----	1,160	4,650	10,500	5,010	1,590	928	2,910
31	1,610	-----	1,310	1,170	-----	1,300	-----	10,800	-----	1,590	961	-----
TOTAL	60,350	46,890	41,760	33,940	32,930	34,410	86,620	260,360	284,930	90,290	25,384	57,890
MEAN	1,947	1,563	1,347	1,095	1,176	1,110	2,887	8,399	9,498	2,913	819	1,930
MAX	2,290	1,680	1,430	1,310	1,310	1,300	4,740	11,200	14,500	6,250	1,580	2,910
MIN	1,610	1,400	1,250	820	1,090	1,030	1,160	4,260	4,630	1,040	574	1,010
AC-FT	119,700	93,010	82,830	67,320	65,320	68,250	171,800	516,400	565,200	179,100	50,350	114,800

CAL YR 1970 TOTAL 491,313 MEAN 1,346 MAX 5,250 MIN 293 AC-FT 974,500
WTR YR 1971 TOTAL 1,055,754 MEAN 2,892 MAX 14,500 MIN 574 AC-FT 2,094,000

PLATTE RIVER BASIN

06685000 Pumpkin Creek near Bridgeport, Nebr.

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

DRAINAGE AREA.--1,020 sq mi, approximately.

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

GAGE.--Water-stage recorder. Sheet piling control since December 1964. Datum of gage is 3,635.99 ft above mean sea level. 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.

AVERAGE DISCHARGE.--40 years, 31.8 cfs (23,040 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 69 cfs May 23 (gage height, 2.33 ft); maximum gage height, 2.54 ft Jan. 4 (backwater from ice); minimum daily discharge, 2.1 cfs Aug. 28, 29.

Period of record: Maximum discharge, 7,880 cfs June 9, 1965 (gage height, 9.98 ft, from floodmark), from rating curve extended above 3,500 cfs on basis of rating extension for main channel and determination of flow over road; minimum daily, 0.4 cfs Aug. 6, 1936, May 11, 1955.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 1932, 1934(M), 1935, 1936(M), 1938-39. WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	20	22	22	18	23	20	18	23	4.9	3.0	20
2	20	21	21	22	17	23	19	18	21	19	2.8	19
3	12	22	24	22	18	21	19	18	16	27	2.8	18
4	12	22	22	21	20	22	21	18	20	35	2.8	19
5	12	22	23	20	21	24	20	21	22	34	3.2	27
6	12	24	23	20	22	23	21	22	12	35	3.2	27
7	14	24	23	19	20	23	21	21	9.8	35	3.2	28
8	15	27	24	19	22	22	22	21	12	34	2.9	30
9	15	26	24	20	21	24	21	21	13	40	2.9	33
10	15	24	25	19	20	26	20	21	12	45	3.0	35
11	15	24	20	19	22	24	19	22	11	38	3.1	37
12	15	23	17	19	23	23	18	23	35	33	3.1	36
13	15	23	18	19	23	23	19	28	35	21	3.1	38
14	15	22	20	20	23	22	18	32	36	16	2.7	38
15	15	22	20	20	24	21	18	35	29	3.5	2.7	39
16	16	21	20	20	25	21	18	36	31	3.1	2.7	40
17	16	21	20	20	24	21	18	38	30	2.9	2.8	39
18	17	22	20	20	24	22	17	38	15	3.1	2.8	39
19	17	21	20	20	24	21	18	39	11	3.0	2.7	38
20	17	21	21	20	25	21	19	44	8.6	2.8	2.6	37
21	17	22	20	20	25	22	18	38	6.7	3.0	2.5	36
22	17	24	20	20	26	22	19	43	5.8	3.0	2.5	36
23	17	24	22	19	23	21	19	65	6.1	3.2	2.6	35
24	18	22	21	19	24	22	19	59	5.0	3.5	2.6	35
25	17	21	21	19	24	21	19	55	5.0	3.9	2.5	35
26	17	19	20	19	24	21	19	33	4.9	4.0	2.2	35
27	17	19	22	18	24	22	19	26	4.0	3.7	2.2	35
28	17	19	22	17	24	20	18	26	3.7	4.5	2.1	35
29	17	19	21	17	-----	19	18	26	5.1	3.0	2.1	35
30	19	20	21	17	-----	19	18	25	13	3.0	5.9	34
31	19	-----	22	18	-----	19	-----	25	-----	3.0	14	-----
TOTAL	505	661	659	604	630	678	572	955	461.7	473.1	99.3	988
MEAN	16.3	22.0	21.3	19.5	22.5	21.9	19.1	30.8	15.4	15.3	3.20	32.9
MAX	28	27	25	22	26	26	22	65	36	45	14	40
MIN	12	19	17	17	17	19	17	18	3.7	2.8	2.1	18
AC-FT	1,000	1,310	1,310	1,200	1,250	1,340	1,130	1,890	916	938	197	1,960

CAL YR 1970 TOTAL 8,299.60 MEAN 22.7 MAX 90 MIN .90 AC-FT 16,460

WTR YR 1971 TOTAL 7,286.10 MEAN 20.0 MAX 65 MIN 2.1 AC-FT 14,450

PLATTE RIVER BASIN

59

06686000 North Platte River at Lisco, Nebr.

LOCATION.--Lat 41°29'18", long 102°37'25", in NW¹SE¹ sec.33, T.18 N., R.46 W., Garden County, near right bank on downstream side of pier of highway bridge, 0.5 mile south of Lisco.

DRAINAGE AREA.--30,700 sq mi, approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 3,475.5 ft above mean sea level. Prior to Sept. 8, 1931, nonrecording gage at present site at different datum and Sept. 8, 1931, to May 3, 1932, at present site and datum.

EXTREMES.--Current year: Maximum discharge, 13,200 cfs June 3 (gage height, 4.05 ft); maximum gage height, 4.17 ft Dec. 27 (backwater from ice); minimum daily discharge, 500 cfs Aug. 28.

Period of record: Maximum discharge, 20,100 cfs June 27, 29, 1917, from graph based on daily gage readings, from rating curve extended above 15,000 cfs; minimum daily, 8 cfs Aug. 4, 1934.

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. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,070	1,770	1,510	1,000	1,140	1,080	1,350	4,950	9,890	4,430	1,550	981
2	2,000	1,810	1,480	1,050	1,080	1,020	1,420	4,770	9,770	4,620	1,570	1,010
3	2,020	1,830	1,480	1,000	1,100	1,020	1,300	4,550	11,700	4,560	1,480	1,040
4	1,880	1,830	1,460	900	1,060	1,100	1,350	4,470	11,300	4,370	1,260	1,090
5	1,830	1,770	1,490	850	1,120	1,080	1,350	4,820	10,700	4,490	1,110	1,300
6	1,880	1,690	1,490	650	1,010	1,080	1,320	5,130	10,000	4,520	1,010	1,460
7	1,900	1,730	1,510	580	995	1,040	1,280	5,170	9,970	4,310	910	1,500
8	2,110	1,830	1,510	650	950	1,040	1,290	6,300	10,100	4,170	850	1,520
9	2,170	1,830	1,480	700	960	1,070	1,650	6,300	10,100	4,170	820	1,660
10	2,190	1,750	1,540	900	1,000	1,130	2,030	6,490	9,900	4,840	800	1,760
11	2,210	1,690	1,490	1,000	1,150	1,190	2,220	6,180	9,620	5,390	720	1,780
12	2,190	1,660	1,510	1,250	1,220	1,180	2,220	5,860	8,990	4,590	700	1,760
13	2,170	1,710	1,370	1,250	1,190	1,180	2,350	5,040	9,130	4,170	700	1,730
14	2,300	1,710	1,360	1,300	1,200	1,100	2,510	5,280	8,600	3,790	680	1,700
15	2,460	1,730	1,420	1,350	1,270	995	2,640	7,110	8,340	3,090	630	1,670
16	2,380	1,690	1,410	1,500	1,290	950	2,690	8,110	7,980	2,310	620	1,730
17	2,230	1,620	1,390	1,500	1,250	995	2,690	9,210	7,860	1,920	620	1,760
18	2,040	1,580	1,410	1,400	1,240	1,080	2,640	10,300	7,980	1,690	580	1,840
19	1,880	1,580	1,370	1,350	1,240	1,040	2,810	10,500	7,920	1,430	570	1,850
20	1,960	1,600	1,410	1,550	1,270	1,070	2,960	10,400	7,740	1,310	570	1,860
21	1,960	1,620	1,510	1,800	1,320	1,080	3,130	10,000	7,580	1,070	570	1,940
22	1,960	1,540	1,540	1,750	1,300	1,060	3,210	9,890	7,460	1,060	570	2,110
23	1,920	1,290	1,370	1,700	1,220	1,060	3,420	9,890	7,410	1,060	570	2,240
24	1,860	1,390	1,410	1,650	1,270	1,080	3,660	10,700	6,840	1,120	580	2,300
25	1,830	1,600	1,200	1,300	1,270	1,070	3,980	10,000	6,240	1,230	550	2,300
26	1,840	1,620	1,100	1,250	1,220	1,130	4,080	9,430	5,430	1,360	550	2,300
27	1,840	1,580	1,000	1,350	1,070	1,290	4,290	9,430	4,680	1,420	510	2,370
28	1,860	1,530	990	1,410	1,070	1,240	4,470	10,300	4,200	1,460	500	2,400
29	1,810	1,460	1,000	1,420	-----	1,180	4,770	10,000	4,200	1,470	570	2,470
30	1,790	1,560	1,100	1,360	-----	1,140	5,040	10,000	4,460	1,570	860	2,510
31	1,790	-----	1,100	1,130	-----	1,160	-----	9,890	-----	1,570	950	-----
TOTAL	62,330	49,600	42,410	37,850	32,475	33,930	80,120	240,470	246,090	88,560	24,530	53,941
MEAN	2,011	1,653	1,368	1,221	1,160	1,095	2,671	7,757	8,203	2,857	791	1,798
MAX	2,460	1,830	1,540	1,800	1,320	1,290	5,040	10,700	11,700	5,390	1,570	2,510
MIN	1,790	1,290	990	580	950	950	1,280	4,470	4,200	1,060	500	981
AC-FT	123,600	98,380	84,120	75,080	64,410	67,300	158,900	477,000	488,100	175,700	48,660	107,000
CAL YR 1970	TOTAL 499,583		MEAN 1,369	MAX 4,520	MIN 205	AC-FT 990,900						
WTR YR 1971	TOTAL 992,306		MEAN 2,719	MAX 11,700	MIN 500	AC-FT 1,968,600						

LOCATION.--Lat 41°20'07", long 102°10'21", in NE 1/4 sec.30, T.16 N., R.42 W., Garden County, on right bank 130 ft downstream from county highway bridge, 0.5 mile downstream from bridge on U.S. Highway 26, 0.8 mile upstream from mouth, and 1.5 miles west of Lewellen.

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

AVERAGE DISCHARGE.--41 years, 70.1 cfs (50,790 acre-ft per year).

Period of record: Maximum discharge, 720 cfs May 20, 1938 (gage height, 6.46 ft, present datum), from rating curve extended above 500 cfs; 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.

REVISIONS (WATER YEARS).--WSP 1310: 1941(M). WRD Nebr. 1967: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	83	95	108	109	103	91	84	89	61	2.3	.68
2	1.4	90	94	105	108	103	91	86	96	58	2.0	.40
3	1.2	91	92	96	109	102	94	97	101	41	2.0	.29
4	1.3	97	92	75	100	106	94	105	91	20	1.8	.46
5	1.0	100	93	70	95	110	94	96	84	19	1.8	.90
6	.92	101	93	65	90	103	94	94	83	18	3.2	3.2
7	2.1	104	93	70	90	98	94	101	81	10	6.8	4.9
8	21	104	94	80	95	100	94	115	81	8.6	2.7	6.1
9	36	105	95	90	100	101	94	126	89	7.4	1.5	13
10	43	105	90	95	110	105	91	109	85	6.7	.85	16
11	50	104	90	90	110	102	90	99	84	6.4	.31	16
12	59	105	95	80	106	101	90	95	92	4.0	.15	18
13	59	107	90	60	104	102	86	92	95	2.0	.15	17
14	70	104	90	70	106	98	83	91	92	.75	.18	15
15	75	103	93	80	104	94	78	90	87	.60	1.1	15
16	69	106	91	90	102	94	76	92	86	0	1.1	17
17	69	106	95	100	101	94	98	89	86	.15	1.1	30
18	69	107	90	120	98	90	115	89	104	.15	.80	30
19	67	107	90	115	93	95	95	89	81	.45	1.3	30
20	69	104	90	120	99	104	86	90	103	.45	1.0	30
21	70	106	95	124	96	103	87	94	73	.60	1.0	35
22	70	90	105	119	100	95	87	91	53	.60	.79	36
23	70	80	90	114	105	93	88	90	53	.84	.60	42
24	71	95	80	114	110	92	97	90	38	1.5	.60	51
25	70	96	70	115	113	95	106	87	39	1.7	.60	56
26	70	95	75	114	111	104	102	86	25	1.9	.75	49
27	69	92	85	114	99	110	90	89	20	2.3	.77	41
28	75	92	100	116	102	104	88	85	9.1	2.3	2.7	36
29	84	92	110	116	-----	98	86	86	17	2.9	.88	40
30	82	94	105	114	-----	98	83	93	80	2.6	1.2	46
31	82	-----	109	108	-----	98	-----	98	-----	2.3	.76	-----
TOTAL	1,578.52	2,965	2,869	3,047	2,865	3,095	2,742	2,918	2,197.1	284.19	42.79	695.93
MEAN	50.9	98.8	92.5	98.3	102	99.8	91.4	94.1	73.2	9.17	1.38	23.2
MAX	84	107	110	124	113	110	115	126	104	61	6.8	56
MIN	.92	80	70	60	90	90	76	84	9.1	0	.15	.29
AC-FT	3,130	5,880	5,690	6,040	5,680	6,140	5,440	5,790	4,360	564	85	1,380
CAL YR 1970	TOTAL	25,028.87	MEAN	68.6	MAX	130	MIN	.08	AC-FT	49,640		
WTR YR 1971	TOTAL	25,299.53	MEAN	69.3	MAX	126	MIN	0	AC-FT	50,180		

PLATTE RIVER BASIN

61

06687500 North Platte River at Lewellen, Nebr.

LOCATION.--Lat 41°19'01", long 102°07'30" (north channel), and lat 41°18'47", long 102°07'25" (south channel), in W¹/₄ sec.34, T.16 N., R.42 W., Garden County, near left bank on downstream side of bridges on U.S. Highway 26, 0.5 mile upstream from high-water line of Lake McConaughy and approximately 1 mile southeast of Lewellen.

DRAINAGE AREA.--32,600 sq mi, approximately.

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

GAGE.--Two water-stage recorders. Datum of gages on north and south channels are 3,284.6 and 3,283.7 ft, respectively, above mean sea level. July to September 1931 nonrecording gage at site 1 mile upstream at different datum.

EXTREMES.--Current year: Maximum discharge, 13,500 cfs June 4; minimum daily, 530 cfs Jan. 6.
Period of record: Maximum discharge, 13,500 cfs June 4, 1971; minimum daily, 44 cfs July 13, 1954.

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.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,940	2,050	1,720	1,470	1,190	1,270	1,390	4,640	9,520	4,970	1,430	905
2	2,000	2,040	1,620	1,440	1,100	1,290	1,480	4,700	9,510	4,900	1,410	977
3	1,980	2,040	1,610	1,220	1,230	1,300	1,460	4,610	9,210	5,140	1,440	997
4	1,920	2,020	1,600	690	930	1,340	1,460	4,560	12,400	4,780	1,310	1,000
5	1,820	2,010	1,540	540	930	1,390	1,440	4,660	12,000	4,530	1,160	1,080
6	1,800	2,020	1,520	530	880	1,380	1,380	4,730	11,600	4,600	1,060	1,270
7	1,820	2,040	1,500	550	790	1,330	1,360	4,750	11,300	4,540	1,020	1,420
8	1,950	2,150	1,500	620	910	1,310	1,340	4,810	11,000	4,380	923	1,450
9	2,060	2,120	1,470	790	950	1,350	1,360	5,980	11,300	4,210	861	1,540
10	2,160	2,090	1,480	930	1,000	1,440	1,810	6,710	11,100	4,260	838	1,690
11	2,300	2,040	1,410	1,230	1,320	1,500	2,210	6,540	10,900	4,670	792	1,780
12	2,320	1,970	1,160	1,300	1,600	1,490	2,440	6,370	10,500	5,150	748	1,790
13	2,260	1,990	1,090	1,350	1,740	1,470	2,650	5,840	10,100	4,510	747	1,790
14	2,290	1,950	1,160	1,270	1,900	1,480	2,720	5,560	9,850	4,130	762	1,690
15	2,380	1,920	1,360	1,120	1,850	1,400	2,860	5,610	9,510	3,830	766	1,700
16	2,410	1,890	1,470	1,310	1,610	1,340	2,970	6,960	9,190	2,970	734	1,760
17	2,320	1,900	1,340	1,580	1,520	1,340	2,980	7,620	8,760	2,240	690	1,800
18	2,280	1,910	1,200	1,760	1,480	1,410	2,990	8,340	8,490	1,870	651	1,850
19	2,210	1,890	920	1,760	1,540	1,400	3,440	9,410	8,290	1,620	624	1,940
20	2,160	1,870	810	1,740	1,490	1,390	3,600	9,790	7,990	1,480	617	1,910
21	2,140	1,870	810	1,680	1,490	1,390	3,390	9,870	7,750	1,360	641	2,040
22	2,130	1,810	1,430	1,620	1,440	1,340	3,450	9,750	7,550	1,220	585	2,260
23	2,090	1,100	1,450	1,620	1,320	1,300	3,280	9,800	7,240	1,170	611	2,430
24	2,030	990	980	1,590	1,340	1,290	3,390	9,810	7,040	1,170	611	2,530
25	2,050	1,820	690	1,640	1,400	1,500	3,610	10,100	6,740	1,200	630	2,570
26	2,080	1,570	840	1,680	1,440	1,420	4,120	9,410	6,150	1,300	610	2,540
27	2,140	1,820	1,080	1,460	1,280	1,450	4,370	9,050	5,430	1,350	587	2,520
28	2,100	1,740	1,380	1,380	1,210	1,440	4,390	9,210	4,580	1,340	584	2,430
29	2,050	1,710	1,480	1,450	-----	1,420	4,390	9,470	4,540	1,510	575	2,460
30	2,010	1,710	1,430	1,450	-----	1,410	4,510	9,470	4,720	1,440	768	2,470
31	2,040	-----	1,570	1,250	-----	1,400	-----	9,510	-----	1,480	808	-----
TOTAL	65,240	56,050	40,620	40,020	36,880	42,980	82,240	227,640	264,260	93,320	25,593	54,589
MEAN	2,105	1,868	1,310	1,291	1,317	1,386	2,741	7,343	8,809	3,010	826	1,820
MAX	2,410	2,150	1,720	1,760	1,900	1,500	4,510	10,100	12,400	5,150	1,440	2,570
MIN	1,800	990	690	530	790	1,270	1,340	4,560	4,540	1,170	575	905
AC-FT	129,400	111,200	80,570	79,380	73,150	85,250	163,100	451,500	524,200	185,100	50,760	108,300
CAL YR 1970	TOTAL	522,480	MEAN	1,431	MAX	4,630	MIN	285	AC-FT	1,036,000		
WTR YR 1971	TOTAL	1,029,432	MEAN	2,820	MAX	12,400	MIN	530	AC-FT	2,042,000		

PLATTE RIVER BASIN

06690000 Lake McConaughy near Keystone, Nebr.

LOCATION.--Lat 41°12'45", long 101°40'03", in NW 1/4 sec. 3, T.14 N., R.38 W., Keith County, near right bank at outlet tower of Kingsley Dam on North Platte River, 4.5 miles west of Keystone.

DRAINAGE AREA.--33,300 sq mi, approximately.

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

GAGE.--Electric tape gage read once daily. Gage is referred to mean sea level.

EXTREMES.--Current year: Maximum contents observed, 1,920,000 acre-ft July 12-16 (elevation, 3,269.1 ft);

minimum observed, 1,573,000 acre-ft Oct. 1, 2 (elevation, 3,257.5 ft).

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).

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 9, 1941. Capacity, 1,948,000 acre-ft between elevations 3,130.0 (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.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,257.4	1,570,000	-
Oct. 31.....	3,260.1	1,647,000	+77,000
Nov. 30.....	3,260.7	1,664,000	+17,000
Dec. 31.....	3,259.9	1,642,000	-22,000
CAL YR 1970.....	-	-	-69,000
Jan. 31.....	3,261.1	1,676,000	+34,000
Feb. 28.....	3,262.6	1,720,000	+44,000
Mar. 31.....	3,264.3	1,771,000	+51,000
Apr. 30.....	3,266.8	1,848,000	+77,000
May 31.....	3,268.0	1,885,000	+37,000
June 30.....	3,267.9	1,882,000	-3,000
July 31.....	3,266.9	1,851,000	-31,000
Aug. 31.....	3,262.1	1,705,000	-146,000
Sept. 30.....	3,261.1	1,676,000	-29,000
WTR YR 1971.....	-	-	+106,000

63

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

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.

EXTREMES.--Current year: Maximum discharge, 8,850 cfs June 10 (gage height, 7.25 ft); minimum daily, 0.99 cfs Feb. 22, 23.
Period of record: Maximum discharge, 20,300 cfs June 30, 1917, from graph based on daily gage readings; an observation of no flow was made Mar. 21, 1945.

REMARKS.--Records good except those below 10 cfs, 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. Flow completely regulated by Lake McConaughy since Feb. 9, 1941. (See preceding page.) Supply canal for Nebraska Public Power District diverts 0.2 mile upstream from station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	578	34	6.2	3.3	2.3	2.6	2,200	6,840	1,800	1,780	662
2	391	618	23	3.6	3.3	2.3	3.3	2,080	7,120	1,100	1,680	728
3	384	564	60	3.6	3.3	2.3	2.6	2,020	7,430	423	1,500	722
4	384	564	4.5	32	3.3	3.0	1.7	2,050	7,650	568	1,550	739
5	63	578	4.0	137	3.0	3.0	1.1	2,070	7,870	579	1,640	673
6	30	586	4.5	4.5	3.0	2.6	1.4	2,290	8,250	805	1,660	601
7	346	666	4.5	3.6	2.6	2.3	1.7	2,570	8,470	1,620	1,680	541
8	346	674	25	3.6	2.6	1.9	1.4	2,590	8,440	1,870	1,660	459
9	333	578	4.5	3.3	2.6	1.9	1.9	2,640	8,440	1,900	1,650	400
10	346	500	6.7	3.6	2.1	3.0	4.5	2,830	8,420	1,890	1,620	306
11	346	365	8.9	3.3	2.1	2.6	3.6	3,440	8,420	1,880	1,690	293
12	340	259	26	3.0	2.3	2.3	2.6	3,670	8,470	2,000	1,920	288
13	340	130	5.4	3.0	2.3	1.9	3.6	3,630	8,470	2,400	1,940	285
14	333	51	4.5	3.3	3.0	2.1	3.0	3,600	8,490	2,430	1,930	285
15	333	27	11	3.0	2.6	4.0	3.3	3,580	8,440	2,440	1,910	299
16	333	13	5.8	3.0	2.6	4.9	3.6	3,850	8,250	2,440	1,800	341
17	340	22	4.5	3.3	3.0	4.5	2.6	4,370	7,870	2,430	1,590	323
18	333	4.5	4.5	3.3	2.6	4.9	2.6	5,000	7,550	2,390	1,560	320
19	333	7.1	4.0	3.3	2.3	4.5	4.9	5,320	7,190	2,310	1,440	316
20	333	4.9	4.0	3.3	1.9	4.5	4.0	5,890	6,880	2,030	1,240	302
21	333	6.2	3.6	3.6	1.4	4.0	3.3	6,140	6,590	1,990	1,160	285
22	327	22	3.6	3.6	.99	3.6	36	6,670	6,350	2,020	1,130	226
23	359	22	11	3.6	.99	3.0	564	6,800	6,100	2,100	1,060	244
24	538	5.4	4.0	3.6	2.1	2.3	890	6,820	5,760	2,100	936	299
25	570	9.7	4.0	3.3	2.6	1.9	1,200	6,800	5,190	2,130	739	463
26	570	4.9	6.7	3.6	3.3	1.7	1,490	6,780	4,520	2,120	750	517
27	557	4.0	4.0	3.6	4.5	1.7	1,810	6,780	3,660	2,140	711	517
28	532	3.3	3.6	3.6	3.0	2.6	2,190	6,800	2,790	2,110	695	552
29	480	3.0	3.3	3.6	-----	2.1	2,420	6,800	2,240	2,010	755	526
30	429	36	9.7	3.6	-----	1.7	2,360	6,840	2,030	1,830	777	531
31	468	-----	5.4	3.3	-----	1.7	-----	6,820	-----	1,810	678	-----
TOTAL	11,528	6,906.0	308.2	271.8	72.68	87.1	13,019.3	139,740	204,190	57,665	42,831	13,043
MEAN	372	230	9.94	8.77	2.60	2.81	434	4,508	6,806	1,860	1,382	435
MAX	570	674	60	137	4.5	4.9	2,420	6,840	8,490	2,440	1,940	739
MIN	30	3.0	3.3	3.0	.99	1.7	1.1	2,020	2,030	423	678	226
AC-FT	22,870	13,700	611	539	144	173	25,820	277,200	405,000	114,400	84,960	25,870
CAL YR 1970	TOTAL 155,749.20		MEAN 427		MAX 2,920		MIN 1.4		AC-FT 308,900			
WTR YR 1971	TOTAL 489,662.08		MEAN 1,342		MAX 8,490		MIN .99		AC-FT 971,200			

LOCATION.--Lat 41°12'37", long 101°06'54", in sec.4, T.14 N., R.33 W., Lincoln County, near left bank on downstream side of pier of highway bridge, 2.5 miles upstream from Birdwood Creek and 3.5 miles north of Sutherland.

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.

EXTREMES.--Current year: Maximum discharge, 9,090 cfs June 8 (gage height, 5.98 ft); minimum daily, 36 cfs Apr. 15-18.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by trans-mountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, IN CUBIC FEET PER SECOND. WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	612	195	240	120	148	160	2,470	6,900	1,930	1,330	420
2	440	728	219	190	115	144	152	2,290	6,840	1,610	1,290	415
3	434	755	165	150	125	136	148	2,160	7,530	1,070	1,150	441
4	429	710	214	120	140	156	140	2,060	7,800	737	997	458
5	429	702	160	110	160	195	140	2,090	7,800	772	1,020	518
6	297	702	130	120	110	173	136	2,140	7,800	695	1,090	458
7	219	737	130	100	110	140	136	2,150	8,280	695	1,140	405
8	390	818	119	100	120	133	79	2,500	8,980	1,110	1,160	360
9	429	818	126	130	155	144	54	2,660	8,900	1,340	1,100	303
10	424	688	99	145	200	186	46	2,900	8,940	1,380	1,060	294
11	429	598	78	140	260	214	42	2,900	8,940	1,450	1,020	244
12	418	462	170	100	220	214	40	3,230	8,740	1,340	1,170	228
13	412	380	130	100	175	228	44	3,840	8,900	1,340	1,340	196
14	412	297	130	125	186	228	38	3,680	8,740	1,820	1,430	188
15	407	242	145	140	169	173	36	3,470	8,420	1,900	1,440	184
16	424	214	150	150	160	156	36	3,320	8,300	1,970	1,380	204
17	440	200	150	160	148	160	36	3,440	8,100	1,860	1,340	254
18	462	181	100	170	140	119	36	4,240	7,770	1,790	1,100	267
19	468	160	105	180	140	126	167	4,920	7,280	1,700	1,060	272
20	473	144	110	190	130	181	446	5,480	6,810	1,590	907	340
21	440	130	135	200	120	237	252	6,050	6,660	1,330	793	446
22	456	130	160	200	110	219	133	6,660	6,270	1,310	716	518
23	451	60	110	170	140	155	195	7,200	5,880	1,350	660	405
24	468	150	140	150	160	105	502	7,000	5,670	1,460	600	345
25	598	200	190	155	173	195	863	6,720	5,310	1,550	524	446
26	672	204	180	150	173	214	1,140	6,720	5,010	1,580	365	564
27	710	181	220	150	152	280	1,430	6,300	4,260	1,570	345	606
28	710	177	230	160	144	261	1,640	6,200	3,550	1,580	321	612
29	642	177	240	170	-----	214	2,010	6,150	2,770	1,640	303	618
30	598	165	250	140	-----	200	2,360	6,300	2,260	1,570	496	624
31	547	-----	250	150	-----	181	-----	7,350	-----	1,370	474	-----
TOTAL	14,568	11,722	4,930	4,655	4,255	5,615	12,637	134,590	209,410	44,409	29,121	11,633
MEAN	470	391	159	150	152	181	421	4,342	6,980	1,433	939	388
MAX	710	818	250	240	260	280	2,360	7,350	8,980	1,970	1,440	624
MIN	219	60	78	100	110	105	36	2,060	2,260	695	303	184
AC-FT	28,900	23,250	9,780	9,230	8,440	11,140	25,070	267,000	415,400	88,090	57,760	23,070
CAL YR 1970	TOTAL 150,258		MEAN 412	MAX 2,780		MIN 29	AC-FT 298,000					
WTR YR 1971	TOTAL 487,545		MEAN 1,336	MAX 8,980		MIN 36	AC-FT 967,000					

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LOCATION.--Lat 41°13'20", long 101°04'12", in NE¼NW¼ sec.2, T.14 N., R.33 W., Lincoln County, on left bank 60 ft downstream from bridge on county road, 1 mile upstream from mouth, and 5 miles northwest of Hershey.

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

AVERAGE DISCHARGE.--40 years, 153 cfs (110,800 acre-ft per year).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	147	163	166	160	163	160	169	164	180	122	138
2	145	147	158	164	163	163	158	166	198	154	122	135
3	145	150	161	140	163	164	161	167	215	160	120	132
4	146	154	160	120	150	169	164	167	174	245	119	134
5	142	157	160	110	130	178	163	169	183	193	117	135
6	141	161	161	110	120	169	163	176	161	158	117	131
7	139	160	164	110	110	166	163	167	157	147	118	131
8	140	164	167	120	110	169	163	169	157	138	120	129
9	139	161	164	120	120	171	157	174	158	138	125	130
10	141	160	160	130	140	180	160	215	174	141	124	131
11	141	166	154	130	150	176	161	188	193	138	124	130
12	140	167	163	130	170	176	161	169	163	132	126	130
13	139	169	164	130	180	176	166	171	178	121	124	130
14	139	164	167	150	180	176	164	169	163	118	125	130
15	139	160	171	150	180	169	164	164	155	118	126	129
16	139	163	171	160	180	167	166	161	154	118	122	137
17	139	163	171	170	174	166	164	167	152	119	121	138
18	139	163	169	172	160	160	166	171	188	121	118	135
19	139	163	150	164	160	174	210	161	157	120	117	136
20	139	161	150	171	160	169	356	160	150	121	117	135
21	139	161	140	171	150	178	203	161	148	122	117	158
22	139	158	140	167	150	172	190	166	141	131	116	208
23	139	157	130	164	150	164	190	208	141	129	115	167
24	138	158	150	164	163	158	178	166	140	125	115	164
25	139	157	160	167	169	163	176	163	137	125	115	161
26	151	160	150	163	169	172	176	172	137	124	115	160
27	161	155	167	163	154	195	172	164	134	124	116	157
28	157	155	169	167	161	190	174	160	132	123	118	151
29	154	157	167	169	-----	174	174	161	134	127	119	140
30	151	160	167	167	-----	171	178	169	137	125	147	141
31	147	-----	164	161	-----	172	-----	172	-----	123	140	-----
TOTAL	4,432	4,778	4,952	4,640	4,326	5,310	5,301	5,282	4,775	4,258	3,757	4,263
MEAN	143	159	160	150	155	171	177	170	159	137	121	142
MAX	161	169	171	172	180	195	356	215	215	245	147	208
MIN	138	147	130	110	110	158	157	160	132	118	115	129
AC-FT	8,790	9,480	9,820	9,200	8,580	10,530	10,510	10,480	9,470	8,450	7,450	8,460
CAL YR 1970	TOTAL	53,691	MEAN	147	MAX	235	MIN	100	AC-FT	106,500		
WTR YR 1971	TOTAL	56,074	MEAN	154	MAX	356	MIN	110	AC-FT	111,200		

PLATTE RIVER BASIN

06692500 Lincoln County drain No. 1 near North Platte, Nebr.

LOCATION.--Lat 41°09'40", long 100°47'25", in NE 1/4 sec. 30, T.14 N., R.30 W., Lincoln County, on left bank 25 ft upstream from highway bridge, 0.8 mile upstream from mouth, and 1.5 miles northwest of city of North Platte.

PERIOD OF RECORD.--March 1931 to September 1932 (published as Lincoln County drain at North Platte), April 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,805 ft (from topographic map). Prior to Apr. 29, 1955, nonrecording gage at datum 1.0 ft higher.

AVERAGE DISCHARGE.--17 years, 62.2 cfs (45,060 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 164 cfs June 9 (gage height, 2.02 ft); maximum gage height, 2.02 ft June 9, July 5; minimum daily discharge, 20 cfs Feb. 6, 7, 9, Mar. 18, 19.

Period of record: Maximum discharge, 588 cfs June 22, 1965 (gage height, 4.05 ft); minimum daily, 20 cfs Dec. 30, 31, 1968, Feb. 6, 7, 9, Mar. 18, 19, 1971.

REMARKS.--Records good. Discharge is chiefly return flow from irrigated area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	46	31	28	25	28	25	58	79	106	129	132
2	68	45	31	28	25	28	25	52	79	107	130	135
3	66	45	31	25	25	27	25	51	68	119	137	133
4	64	44	31	26	25	26	25	60	73	142	128	140
5	63	43	31	27	25	27	25	65	79	149	119	139
6	65	43	31	27	20	26	25	80	82	112	109	137
7	64	42	33	28	20	26	25	78	81	115	126	136
8	64	43	32	28	25	26	31	71	92	143	129	137
9	64	42	31	27	20	26	54	65	106	126	130	139
10	63	41	30	27	23	26	56	78	122	129	125	144
11	62	41	30	27	23	26	55	74	111	126	116	140
12	61	41	31	26	23	26	54	70	102	125	126	133
13	60	40	31	26	24	26	50	69	106	112	123	130
14	58	40	32	26	24	26	46	65	109	104	122	125
15	57	39	31	26	23	25	47	64	107	92	139	118
16	56	39	31	25	23	25	46	70	103	96	142	136
17	55	38	29	25	23	25	44	70	103	106	143	136
18	54	38	31	26	24	20	42	73	103	102	146	137
19	52	37	29	26	25	20	50	73	103	94	143	142
20	51	37	29	26	25	25	72	56	97	90	135	139
21	50	37	29	26	25	25	32	54	90	98	130	95
22	49	36	29	25	25	26	31	65	88	107	122	89
23	52	35	29	25	25	25	62	92	101	111	132	86
24	52	35	29	25	26	25	64	90	95	123	121	85
25	53	34	28	25	26	26	64	89	103	136	126	83
26	56	34	28	25	27	26	60	72	101	129	112	80
27	52	34	27	25	27	27	62	76	98	121	102	78
28	50	34	27	25	27	26	50	79	107	118	98	76
29	48	34	28	25	-----	26	54	79	89	128	97	74
30	47	33	28	25	-----	26	58	81	98	129	121	73
31	47	-----	28	25	-----	25	-----	81	-----	135	136	-----
TOTAL	1,769	1,170	926	806	678	793	1,359	2,200	2,875	3,630	3,894	3,527
MEAN	57.1	39.0	29.9	26.0	24.2	25.6	45.3	71.0	95.8	117	126	118
MAX	68	46	33	28	27	28	72	92	122	149	146	144
MIN	47	33	27	25	20	20	25	51	68	90	97	73
AC-FT	3,510	2,320	1,840	1,600	1,340	1,570	2,700	4,360	5,700	7,200	7,720	7,000

CAL YR 1970 TOTAL 22,408 MEAN 61.4 MAX 168 MIN 21 AC-FT 44,450
WTR YR 1971 TOTAL 23,627 MEAN 64.7 MAX 149 MIN 20 AC-FT 46,860

PLATTE RIVER BASIN

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06693000 North Platte River at North Platte, Nebr.

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

DRAINAGE AREA.--34,900 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,792.14 ft above mean sea level (Nebraska Department of Roads bench mark). See WRD Nebr. 1969 for history of changes prior to June 3, 1968.

EXTREMES.--Current year: Maximum discharge, 9,580 cfs June 10 (gage height, 6.71 ft); minimum daily, 200 cfs Jan. 7, 8.
Period of record: Maximum discharge observed, 29,600 cfs June 11, 1909 (discharge measurement); minimum daily, 20 cfs Sept. 20, 1904.

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.

REVISIONS.--WRD Nebr. 1967: Drainage area. WRD Nebr. 1970: 1915.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	620	794	386	340	320	426	442	2,640	6,590	2,620	1,530	763
2	620	830	426	320	400	418	418	2,850	6,630	2,250	1,490	680
3	610	938	410	300	400	402	418	2,780	6,690	1,900	1,400	700
4	610	926	410	250	370	394	410	2,590	7,110	1,500	1,210	710
5	600	914	426	240	350	434	402	2,500	7,550	1,410	1,110	785
6	590	926	394	230	340	410	394	2,500	7,720	1,290	1,160	774
7	490	950	378	200	330	386	354	2,500	7,810	1,060	1,210	700
8	498	1,020	362	200	380	362	333	2,410	8,220	1,250	1,290	650
9	590	1,130	362	300	420	362	317	2,640	8,610	1,660	1,320	630
10	610	1,050	426	320	500	378	311	3,010	9,100	1,850	1,270	612
11	620	926	400	350	650	418	298	3,290	8,650	1,850	1,220	549
12	630	830	360	290	640	442	298	3,210	8,370	1,770	1,270	484
13	620	700	330	280	580	450	317	3,450	9,320	1,560	1,460	468
14	620	620	350	250	562	466	317	3,910	8,650	1,680	1,640	460
15	630	522	400	350	530	466	291	3,860	8,220	1,850	1,800	436
16	610	458	410	350	458	434	311	3,800	8,040	1,940	1,770	516
17	630	434	410	390	386	426	304	3,720	7,930	2,050	1,700	576
18	650	426	390	380	402	386	298	3,970	7,750	2,030	1,460	532
19	650	418	370	380	490	346	418	4,530	7,470	1,940	1,320	516
20	640	394	350	380	426	418	1,090	4,960	7,120	1,880	1,280	500
21	650	394	340	400	450	474	938	5,520	6,800	1,740	1,120	576
22	650	370	330	380	370	506	670	6,070	6,520	1,640	996	818
23	640	350	340	350	450	498	680	7,020	6,240	1,590	960	710
24	620	300	350	350	590	530	740	7,150	5,970	1,640	876	540
25	680	320	360	350	590	554	1,090	6,840	5,760	1,640	807	594
26	842	350	370	340	490	490	1,380	6,840	5,370	1,740	680	670
27	950	386	370	320	442	570	1,630	6,750	4,910	1,700	576	752
28	938	370	370	320	418	650	1,860	6,590	4,440	1,700	524	774
29	902	362	370	320	-----	554	2,020	6,590	3,810	1,790	500	807
30	866	378	380	310	-----	490	2,250	6,630	3,180	1,830	752	818
31	830	-----	380	300	-----	466	-----	6,710	-----	1,670	829	-----
TOTAL	20,706	18,786	11,710	9,840	12,734	14,006	21,004	137,830	209,750	54,040	36,530	12,100
MEAN	668	626	378	317	455	452	700	4,446	6,992	1,743	1,178	637
MAX	950	1,130	426	400	650	650	2,250	7,150	9,100	2,620	1,800	818
MIN	490	300	330	200	320	346	291	2,410	3,180	1,060	500	436
AC-FT	41,070	37,260	23,230	19,520	25,260	27,780	41,660	273,400	416,000	107,200	72,460	37,880
CAL YR 1970	TOTAL	227,548	MEAN	623	MAX	2,910	MIN	151	AC-FT	451,300		
WTR YR 1971	TOTAL	566,036	MEAN	1,551	MAX	9,100	MIN	200	AC-FT	1,123,030		

PLATTE RIVER BASIN

06762500 Lodgepole Creek at Bushnell, Nebr.

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

DRAINAGE AREA.--1,361 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 4,812.3 ft above mean sea level. Prior to Mar. 26, 1938, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--40 years, 12.2 cfs (8,840 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 301 cfs June 3 (gage height, 4.67 ft); minimum daily, 2.7 cfs Aug. 6, 7.

Period of record: Maximum discharge, 16,500 cfs Sept. 15, 1950 (gage height, 9.98 ft), from rating curve extended above 2,700 cfs on basis of slope-area measurement of peak flow; minimum daily, 1.2 cfs Dec. 14, 1935.

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.

REVISIONS (WATER YEARS).--WSP 1390: 1933, 1935, 1937-38, 1941, 1948-49. WSP 1730: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.3	6.5	5.9	9.2	7.5	7.9	8.0	11	4.8	3.7	3.7
2	5.9	6.1	5.7	6.1	9.5	6.7	7.7	7.4	11	5.7	3.6	3.3
3	6.1	5.8	5.4	5.2	9.6	7.0	8.1	7.4	60	5.4	3.6	3.1
4	6.1	5.9	6.3	5.4	9.0	7.2	8.0	7.6	80	5.5	3.1	3.5
5	5.9	6.3	6.1	5.4	10	8.6	7.9	11	26	5.4	2.9	3.7
6	5.9	7.1	6.8	4.9	10	6.8	8.0	14	20	5.5	2.7	3.6
7	6.2	6.6	6.6	4.7	9.8	6.5	7.9	12	17	5.2	2.7	3.3
8	6.2	6.6	6.8	4.5	9.8	7.1	8.0	10	16	5.0	2.9	4.4
9	6.3	6.4	6.9	4.0	8.7	7.4	7.9	10	14	5.0	2.9	4.5
10	6.3	6.5	6.2	4.5	7.5	7.9	8.3	10	13	4.7	2.9	4.1
11	6.3	6.5	5.9	4.7	7.6	8.3	8.0	11	12	4.6	3.1	4.0
12	6.2	6.7	5.5	4.9	8.7	8.1	8.2	10	12	4.1	3.3	4.0
13	6.2	6.9	5.5	5.2	8.6	8.0	8.3	10	11	4.0	3.3	4.2
14	6.2	6.8	6.0	4.9	9.4	8.4	8.2	9.6	10	3.9	3.6	4.0
15	6.1	6.6	6.6	5.2	9.0	7.0	8.2	9.5	9.6	3.8	3.6	4.1
16	6.1	6.6	6.1	5.2	8.1	7.6	8.1	9.3	8.9	3.8	3.7	5.1
17	6.0	6.8	6.9	6.1	7.9	7.9	8.2	9.0	9.0	3.3	4.0	5.9
18	5.9	6.5	6.9	6.4	7.9	13	8.2	9.1	8.8	3.3	4.4	6.2
19	6.2	6.4	6.3	6.6	7.5	6.4	8.8	8.9	8.7	3.3	5.0	6.2
20	6.2	6.1	6.2	7.3	7.3	6.5	9.1	8.8	8.6	3.6	5.0	6.3
21	6.3	6.1	6.8	7.8	6.8	9.6	8.9	8.7	8.9	3.3	5.0	6.2
22	6.4	5.2	6.0	7.1	6.4	11	10	12	8.3	3.1	5.1	6.4
23	6.5	4.7	6.1	6.8	7.5	9.2	11	13	7.9	3.3	5.0	6.4
24	6.4	8.0	6.3	7.1	7.1	9.1	10	12	7.2	3.1	4.9	6.6
25	6.5	8.5	5.7	7.1	7.5	9.0	9.7	11	7.0	3.1	4.8	6.5
26	6.5	11	5.4	7.1	5.4	10	10	9.8	6.2	4.0	4.7	6.3
27	6.4	12	5.1	7.6	7.3	10	10	9.6	5.8	3.3	4.2	6.3
28	6.2	9.0	4.9	8.6	6.1	9.8	9.5	9.6	5.2	3.8	4.2	6.5
29	6.1	6.9	4.9	9.3	-----	9.3	8.7	9.6	5.1	5.1	7.2	6.5
30	6.2	6.9	5.0	9.0	-----	9.1	8.3	12	5.1	3.9	5.0	6.8
31	6.3	-----	5.4	9.3	-----	8.6	-----	11	-----	3.8	4.0	-----
TOTAL	191.9	207.8	186.8	193.9	229.2	258.6	259.1	310.9	433.3	129.7	124.1	151.7
MEAN	6.19	6.93	6.03	6.25	8.19	8.34	8.64	10.0	14.4	4.18	4.00	5.06
MAX	6.5	12	6.9	9.3	10	13	11	14	80	5.7	7.2	6.8
MIN	5.8	4.7	4.9	4.0	5.4	6.4	7.7	7.4	5.1	3.1	2.7	3.1
AC-FT	381	412	371	385	455	513	514	617	859	257	246	301

CAL YR 1970 TOTAL 2,772.6 MEAN 7.60 MAX 18 MIN 3.1 AC-FT 5,500
WTR YR 1971 TOTAL 2,677.0 MEAN 7.33 MAX 80 MIN 2.7 AC-FT 5,310

PLATTE RIVER BASIN

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06763500 Lodgepole Creek at Ralton, Nebr.

LOCATION.--Lat 41°02'00", long 102°24'00", in NE¼NW¼ sec.12, T.12 N., R.45 W., Deuel County, on right bank 20 ft downstream from county road bridge at Ralton, 2.1 miles north of Colorado-Nebraska State line, and 5.5 miles southeast of Chappell.

DRAINAGE AREA.--3,307 sq mi.

PERIOD OF RECORD.--March to September 1931, June 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,590 ft (from topographic map). March to September 1931, nonrecording gage at site 0.2 mile downstream at different datum.

AVERAGE DISCHARGE.--20 years (1951-71), 11.2 cfs (8,110 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 59 cfs June 16 (gage height, 2.87 ft); maximum gage height, 3.12 ft Jan. 29 (backwater from ice); minimum daily discharge, 0.10 cfs Jan. 15.

Period of record: Maximum discharge, 4,560 cfs Aug. 15, 1968 (gage height, 6.49 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of peak flow; no flow at times in 1931, 1955, 1957, 1960, 1963-65, 1968.

REMARKS.--Records fair 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. Diversion for irrigation of about 24,300 acres above station.

REVISIONS.--WSP 1730: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.7	8.2	1.5	1.1	2.0	12	16	16	8.1	.60	1.0
2	2.4	3.7	8.4	1.0	1.2	2.0	11	15	17	6.5	.62	.98
3	2.4	3.7	7.8	1.0	1.3	2.0	14	14	16	6.5	.75	1.4
4	2.3	3.5	7.6	.50	1.2	4.0	14	14	15	8.5	1.1	2.4
5	2.3	3.5	8.1	.50	1.1	8.0	14	18	15	15	2.6	2.1
6	2.3	3.7	8.0	.40	1.0	7.0	14	17	14	16	6.3	1.6
7	2.6	3.7	7.7	.30	.80	7.0	14	16	14	21	5.4	1.1
8	2.3	4.5	8.7	.40	.60	7.0	15	17	15	24	3.6	.56
9	2.9	4.5	9.2	.50	1.0	6.8	15	17	15	23	2.6	1.3
10	3.0	4.2	9.8	.60	1.2	7.4	15	23	15	22	3.3	.90
11	2.9	3.2	7.0	.70	2.0	8.5	15	27	14	17	5.1	.95
12	3.0	2.9	6.5	.60	2.5	8.9	15	29	14	16	5.3	1.2
13	2.9	3.4	6.5	.50	3.5	9.4	16	29	14	15	5.0	1.1
14	2.9	3.0	6.0	.20	4.0	8.7	17	27	15	14	5.7	1.1
15	3.0	3.5	4.5	.10	5.0	8.9	18	25	29	13	4.2	1.3
16	3.4	3.4	4.5	.20	8.5	9.4	17	25	46	12	3.2	2.1
17	3.4	3.8	5.0	.20	8.5	10	17	24	50	12	2.9	2.2
18	3.5	3.4	4.5	.50	8.0	6.0	16	23	35	11	3.5	2.3
19	3.4	4.2	4.0	.60	7.5	10	21	21	29	10	3.2	2.2
20	3.2	4.0	4.0	.90	7.0	11	20	19	25	9.7	3.3	2.1
21	3.2	4.2	3.5	.60	5.0	12	19	17	23	9.4	3.2	2.2
22	2.9	4.5	3.0	1.2	4.0	11	18	18	12	9.4	2.1	2.4
23	2.4	5.8	3.0	.50	3.0	12	17	18	9.8	9.8	1.4	2.2
24	2.6	9.3	2.5	.60	3.0	12	17	18	9.5	8.6	1.7	2.2
25	2.3	6.4	3.0	.70	2.5	18	19	18	8.3	8.3	2.0	2.2
26	2.9	4.3	2.5	.50	2.5	16	20	18	9.8	8.2	1.6	1.9
27	3.0	3.8	2.0	.80	2.5	15	20	17	7.8	6.8	1.7	1.8
28	3.0	4.2	1.5	.60	2.0	14	18	17	7.4	5.5	1.5	1.8
29	2.6	4.3	1.5	1.1	-----	14	17	14	8.3	6.9	1.1	1.8
30	2.7	4.6	1.0	1.0	-----	14	17	16	8.6	6.6	1.8	1.9
31	3.2	-----	1.5	1.0	-----	13	-----	17	-----	2.8	1.8	-----
TOTAL	87.3	124.9	161.0	19.80	91.50	295.0	492	604	527.5	362.6	88.17	50.29
MEAN	2.82	4.16	5.19	.64	3.27	9.52	16.4	19.5	17.6	11.7	2.84	1.68
MAX	3.5	9.3	9.8	1.5	8.5	18	21	29	50	24	6.3	2.4
MIN	2.3	2.9	1.0	.10	.60	2.0	11	14	7.4	2.8	.60	.56
AC-FT	173	248	319	39	181	585	976	1,200	1,050	719	175	100

CAL YR 1970 TOTAL 3,041.93 MEAN 8.33 MAX 75 MIN .66 AC-FT 6,030
WTR YR 1971 TOTAL 2,904.06 MEAN 7.96 MAX 50 MIN .10 AC-FT 5,760

LOCATION.--Lat 40°58'46", long 102°15'15", in NW¼NE¼ and SE¼NE¼ (two channels) sec.33, T.12 N., R.44 W., Sedgwick County, 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 mile southeast of Julesburg, 3 miles upstream from Colorado-Nebraska State line, and 8 miles downstream from Lodgepole Creek.

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310.
Published as "near Julesburg" 1903-8, 1915-16 and as "at Ovid" 1922-24.

AVERAGE DISCHARGE.--69 years, 473 cfs (342,700 acre-ft per year).

REMARKS.--Records poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 1,220,000 acres above station, and return flow from irrigated areas. Records of chemical analyses and water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	722	398	591	624	1,020	849	831	3,370	1,270	180	31	17
2	625	390	590	637	996	830	795	3,990	1,320	174	31	18
3	537	390	583	560	978	820	822	4,020	1,410	172	30	21
4	501	394	551	497	931	847	860	3,530	1,360	166	29	26
5	455	397	563	353	888	864	851	3,540	1,190	169	28	27
6	418	406	562	301	890	846	851	3,620	1,040	154	29	27
7	395	436	556	280	959	837	851	3,560	890	119	27	27
8	359	575	557	295	989	836	825	3,550	772	98	29	35
9	327	635	544	315	1,020	828	772	3,660	876	82	29	37
10	332	634	551	351	1,060	845	722	3,920	827	108	27	37
11	377	630	568	392	1,170	854	698	4,170	748	75	25	40
12	382	608	554	426	1,160	862	687	3,620	661	55	23	44
13	382	594	585	479	1,190	887	750	3,270	668	50	23	49
14	382	609	590	542	1,220	896	750	3,280	772	49	26	69
15	392	594	593	563	1,250	887	685	3,420	851	50	25	128
16	405	609	602	713	1,270	875	692	3,410	868	54	24	176
17	419	623	596	806	1,220	870	700	3,380	870	51	23	215
18	424	701	603	838	1,190	840	650	3,430	772	50	27	260
19	429	747	672	883	1,130	847	654	3,420	737	49	29	349
20	434	716	692	936	1,080	926	557	3,540	843	48	28	439
21	433	715	688	986	1,060	964	507	3,660	1,120	47	28	569
22	427	714	709	1,070	1,030	975	486	3,690	1,470	42	26	804
23	422	676	688	1,120	995	975	540	3,570	1,480	41	25	853
24	412	620	655	1,200	948	1,010	553	3,240	1,350	41	22	809
25	402	634	681	1,250	930	1,020	581	2,920	1,090	43	19	798
26	409	605	688	1,250	939	1,030	764	2,600	794	45	17	785
27	409	585	704	1,250	917	1,080	1,440	2,310	495	45	18	721
28	404	585	705	1,200	879	998	1,610	2,040	302	38	18	635
29	398	591	685	1,240	-----	883	1,950	1,700	222	37	18	567
30	398	599	625	1,080	-----	999	2,690	1,460	213	34	24	572
31	398	-----	636	1,040	-----	897	-----	1,320	-----	32	18	-----
TOTAL	13,209	17,410	19,167	23,477	29,309	27,977	26,124	100,210	27,281	2,398	776	9,154
MEAN	426	580	618	757	1,047	902	871	3,233	909	77.4	25.0	305
MAX	722	747	709	1,250	1,270	1,080	2,690	4,170	1,480	180	31	853
MIN	327	390	544	280	879	820	486	1,320	213	32	17	17
AC-FT	26,200	34,530	38,020	46,570	58,130	55,490	51,820	198,800	54,110	4,760	1,540	18,160
CAL YR 1970	TOTAL	401,798	MEAN	1,101	MAX	9,410	MIN	34	AC-FT	797,000		
WTR YR 1971	TOTAL	296,492	MEAN	812	MAX	4,170	MIN	17	AC-FT	588,100		

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LOCATION.--Lat 41°07'10", long 100°45'18", in sec.9, T.13 N., R.30 W., Lincoln County, near left bank on downstream side of bridge on U.S. Highway 83, 0.8 mile south of city of North Platte and 4 miles upstream from confluence with North Platte River.

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.

Period of record: Maximum discharge observed, 37,100 cfs June 3, 1935 (gage height, 14.02 ft, present datum); no flow at times in summers of most years prior to 1938.

REVISIONS (WATER YEARS).--WSP 1390: 1932-33, 1935.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	530	163	163	152	620	248	215	1,900	1,690	420	170	200
2	701	163	158	140	548	239	215	2,490	1,620	380	150	194
3	730	158	158	130	550	208	215	3,200	1,500	316	155	188
4	674	158	158	120	400	201	212	3,640	1,450	324	150	188
5	584	158	160	100	370	222	197	3,480	1,590	316	155	200
6	490	155	163	90	310	197	204	3,180	1,400	300	165	182
7	482	158	152	90	300	212	208	3,180	1,240	265	182	176
8	522	160	150	120	289	226	197	3,280	1,090	286	165	170
9	522	169	152	140	260	248	194	3,320	992	300	155	194
10	498	155	178	150	269	235	194	3,560	968	300	170	200
11	450	155	190	150	256	219	187	3,820	920	316	165	194
12	408	160	184	130	401	222	181	4,070	860	300	165	170
13	422	163	158	120	593	243	184	3,820	812	251	170	160
14	466	160	152	140	740	226	194	3,380	884	218	188	160
15	490	158	142	150	770	226	204	3,200	836	218	200	170
16	514	163	145	160	821	226	197	3,280	812	218	200	182
17	506	169	140	160	810	235	201	3,280	860	200	200	218
18	522	169	130	160	629	230	197	3,320	920	206	206	206
19	474	163	135	150	429	269	235	3,200	920	206	182	176
20	450	166	130	160	325	265	394	3,070	788	194	176	188
21	422	169	120	290	300	279	606	3,000	720	176	155	206
22	387	165	120	330	350	260	429	3,070	700	182	145	218
23	310	165	130	490	380	256	429	3,320	788	188	150	224
24	269	170	140	650	310	260	482	3,220	992	200	135	272
25	235	172	140	800	300	260	539	3,100	1,110	200	155	412
26	222	172	150	800	290	315	575	2,910	1,060	212	150	364
27	222	190	155	821	284	332	638	2,620	848	230	140	316
28	208	187	160	810	256	310	752	2,380	670	206	155	265
29	208	169	150	865	-----	274	1,200	2,200	541	200	160	218
30	187	175	166	909	-----	243	1,580	2,010	469	212	188	212
31	172	-----	160	770	-----	230	-----	1,820	-----	200	200	-----
TOTAL	13,277	4,957	4,689	10,247	12,160	7,616	11,455	95,320	30,050	7,740	5,202	6,423
MEAN	428	165	151	331	434	246	382	3,075	1,002	250	168	214
MAX	730	190	190	909	821	332	1,580	4,070	1,690	420	206	412
MIN	172	155	120	90	256	197	181	1,820	469	176	135	160
AC-FT	26,330	9,830	9,300	20,320	24,120	15,110	22,720	189,100	59,600	15,350	10,320	12,740
CAL YR 1970	TOTAL											

PLATTE RIVER BASIN

06766000 Platte River at Brady, Nebr.

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, on downstream side of highway bridges 0.5 mile and 2.5 miles, respectively, south of Brady and 18 miles downstream from confluence of North Platte and South Platte Rivers.

DRAINAGE AREA.--60,200 sq mi, approximately.

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

GAGE.--Two water-stage recorders. Datum of gage on north channel is 2,639.19 ft and on south channel, 2,641.66 ft above mean sea level. 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.

EXTREMES.--Current year: Maximum discharge, 12,700 cfs June 10; minimum daily, 92 cfs Dec. 23.
Period of record: Maximum discharge, 16,800 cfs June 23, 1965; no flow Aug. 22-24, 1941.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Tri-County main supply canal (capacity, about 2,000 cfs) diverts 18 miles (corrected) above station; diversion started Nov. 26, 1940. River flows in two channels for which separate records are computed; figures given herein represent combined discharge. Records of chemical analyses and water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 1941(M). WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	125	148	309	250	292	258	4,320	9,820	3,520	1,320	1,190
2	93	115	149	290	210	243	208	5,860	9,680	2,840	1,230	1,120
3	97	120	154	255	210	302	180	7,170	9,730	2,450	1,180	1,080
4	137	116	167	250	260	272	228	7,990	9,700	1,970	1,160	1,050
5	166	112	162	225	260	302	242	8,100	9,940	1,870	1,180	1,010
6	111	113	172	240	235	312	240	7,860	10,500	1,640	1,150	912
7	107	122	176	340	270	236	239	7,790	10,500	963	1,200	839
8	105	138	172	340	350	225	238	7,600	10,600	693	1,260	997
9	102	169	167	365	430	243	202	7,610	10,900	1,060	1,300	855
10	107	170	154	355	495	258	211	7,880	12,200	1,640	1,230	771
11	107	173	140	340	370	285	219	8,380	12,300	1,730	1,130	700
12	103	157	135	320	369	322	178	8,610	11,600	1,670	1,180	647
13	103	147	118	370	437	335	143	8,690	10,900	1,490	1,170	594
14	111	142	116	405	468	322	196	8,690	10,900	1,390	1,290	465
15	111	153	132	435	569	296	251	8,650	11,000	1,580	1,440	428
16	111	135	132	450	520	244	450	8,440	10,500	1,700	1,380	448
17	111	133	143	465	520	207	888	8,290	10,200	1,780	1,260	459
18	116	136	128	435	483	159	991	7,760	9,990	1,840	1,140	323
19	120	132	100	396	438	223	1,140	8,100	9,610	1,700	1,110	252
20	111	128	100	363	369	226	2,310	8,580	9,100	1,770	1,030	221
21	111	128	110	412	302	266	3,130	9,130	8,570	1,710	873	224
22	117	113	105	432	388	331	2,750	9,780	8,070	1,780	690	354
23	116	120	92	431	458	309	2,030	10,700	7,740	1,750	870	572
24	116	120	100	411	467	231	1,620	11,600	7,600	1,770	958	459
25	117	142	140	431	438	281	1,290	11,500	7,490	1,820	1,130	344
26	126	153	188	431	392	323	1,420	11,100	7,250	1,880	1,040	465
27	137	142	245	440	340	400	1,840	10,800	6,520	1,880	881	463
28	130	141	350	462	330	558	2,320	10,500	5,660	1,830	876	523
29	133	151	405	453	-----	529	2,440	10,300	5,140	1,800	895	511
30	132	165	515	434	-----	415	3,130	10,200	4,300	1,640	1,170	423
31	126	-----	359	363	-----	335	-----	10,000	-----	1,510	1,290	-----
TOTAL	3,588	4,111	5,474	11,648	10,628	9,282	30,982	271,980	278,010	54,666	35,013	18,699
MEAN	116	137	177	376	380	299	1,033	8,774	9,267	1,763	1,129	623
MAX	166	173	515	465	569	558	3,130	11,600	12,300	3,520	1,440	1,190
MIN	93	112	92	225	210	159	143	4,320	4,300	693	690	221
AC-FT	7,120	8,150	10,860	23,100	21,080	18,410	61,450	539,500	551,400	108,400	69,450	37,090

CAL YR 1970 TOTAL 246,243 MEAN 675 MAX 7,830 MIN 73 AC-FT 488,400
WTR YR 1971 TOTAL 734,081 MEAN 2,011 MAX 12,300 MIN 92 AC-FT 1,456,000

PLATTE RIVER BASIN

73

06766500 Platte River near Cozad, Nebr.

LOCATION.--Lat 40°50'08", long 99°59'13" (north channel) and lat 40°49'47", long 99°59'18" (south channel), in S½ sec.18, T.10 N., R.23 W., Dawson County, on downstream side of highway bridges, 1.5 miles south of Cozad.

DRAINAGE AREA.--60,500 sq mi, approximately.

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.

GAGE.--Two water-stage recorders. Datum of gage on south channel is 2,473.07 ft and on north channel, 2,476.72 ft above mean sea level (Nebraska Department of Roads bench mark). See WRD Nebr. 1969 for history of changes prior to May 10, 1966.

EXTREMES.--Current year: Maximum discharge, 12,600 cfs June 11; minimum daily, 37 cfs Aug. 30.
Period of record: Maximum discharge, 16,600 cfs May 10, 1942; no flow at times in 1937-40.

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

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	172	222	330	450	411	472	2,910	9,800	3,710	286	327
2	120	174	209	310	420	378	412	4,120	9,480	2,620	171	305
3	135	179	207	320	400	357	372	5,400	9,400	2,300	129	296
4	140	184	216	320	400	342	358	6,550	9,610	1,730	130	329
5	160	184	218	360	395	356	370	7,610	9,680	1,490	128	325
6	193	186	208	370	350	391	361	7,750	9,820	1,250	130	321
7	159	186	213	341	340	387	310	7,360	9,920	1,200	135	306
8	158	203	221	351	420	342	313	7,080	10,200	1,110	147	311
9	172	229	220	341	490	331	293	6,870	10,200	1,000	166	352
10	164	234	215	335	525	354	259	7,100	10,300	1,040	106	301
11	167	233	176	337	500	368	276	7,880	12,100	962	39	244
12	179	229	196	327	471	390	281	8,650	11,300	925	55	220
13	172	223	202	335	429	428	258	9,030	10,300	748	102	199
14	149	218	202	370	478	456	253	9,100	9,790	539	107	195
15	151	213	212	365	565	445	274	8,940	9,920	410	251	204
16	176	213	220	395	635	418	300	8,780	10,400	304	273	161
17	160	213	220	410	621	373	505	8,180	9,750	330	258	250
18	165	208	205	400	640	332	753	8,370	9,570	586	224	295
19	182	210	169	400	645	244	915	7,410	9,370	486	270	212
20	173	210	169	390	567	287	1,480	7,740	9,020	321	242	149
21	175	210	179	370	492	326	2,230	8,210	8,400	277	162	124
22	180	194	189	350	390	363	2,810	8,580	7,950	255	111	188
23	185	159	143	400	440	396	2,560	9,560	7,640	296	143	298
24	182	164	153	480	495	358	2,160	10,100	7,410	290	236	412
25	177	236	139	540	570	409	1,830	11,400	7,100	309	185	330
26	177	253	239	530	575	392	1,480	11,500	6,820	324	198	279
27	195	238	388	660	489	476	1,730	11,000	6,670	376	83	356
28	205	228	388	610	470	503	1,830	10,600	5,910	386	65	373
29	189	220	329	530	-----	527	1,920	10,100	5,210	430	46	423
30	191	227	389	530	-----	575	2,280	10,300	4,890	443	37	444
31	186	-----	309	490	-----	561	-----	10,000	-----	356	77	-----
TOTAL	5,254	6,230	6,965	12,597	13,662	12,276	29,645	258,180	267,930	26,803	4,692	8,529
MEAN	169	208	225	406	488	396	988	8,328	8,931	865	151	284
MAX	205	253	389	660	645	575	2,810	11,500	12,100	3,710	286	444
MIN	120	159	139	310	340	244	253	2,910	4,890	255	37	124
AC-FT	10,420	12,360	13,820	24,990	27,100	24,350	58,800	512,100	531,400	53,160	9,310	16,920
CAL YR 1970	TOTAL 194,164		MEAN 532	MAX 7,690	MIN 12	AC-FT 385,100						
WTR YR 1971	TOTAL 652,763		MEAN 1,788	MAX 12,100	MIN 37	AC-FT 1,295,000						

PLATTE RIVER BASIN

06767500 Plum Creek near Smithfield, Nebr.

LOCATION.--Lat 40°39'40", long 99°42'00", in NW 1/4 sec.15, T.8 N., R.21 W., Gosper County, on left bank just downstream from county highway bridge, 6.5 miles northeast of Smithfield.

DRAINAGE AREA.--229 sq mi.

PERIOD OF RECORD.--June 1946 to September 1953, and annual maximum, water years 1954-68, October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,385 ft (from topographic map). Prior to July 5, 1955, at site 100 ft downstream at datum 4.78 ft higher. Sept. 26, 1955, to June 13, 1958, crest-stage gage at present site at datum 0.39 ft lower, and June 13, 1958, to Sept. 30, 1968, at present site and datum.

AVERAGE DISCHARGE.--10 years (1946-53, 1968-71), 8.57 cfs (6,210 acre-ft per year); median of yearly mean discharges, 4.6 cfs (3,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17 cfs Mar. 25 (gage height, 9.83 ft); no flow for many days. Period of record: Maximum discharge, 2,800 cfs June 23, 1947 (gage height, 23.41 ft, present datum); no flow for long periods most years.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.26	.30		0	.80	.94	.46	.33	.50	.04	.01
2	0	.14	.34		0	.40	.46	.56	.47	.39	.20	0
3	0	.06	.46		0	.10	.22	.62	.42	.48	.03	0
4	.12	.04	.50		0	.18	.41	.41	1.5	6.9	0	0
5	.42	.06	.34		0	.26	.13	.25	1.7	3.0	0	0
6	.10	.08	.30		0	.20	0	.10	.58	1.5	0	0
7	0	.06	.14		0	.25	0	.08	.41	.71	0	0
8	0	.10	.22		0	.35	0	.14	.31	.46	0	0
9	0	.10	.34		0	.50	0	.28	.40	.52	0	0
10	0	.18	.30		0	.80	0	.41	.45	.37	0	0
11	0	.30	.25		0	1.0	0	3.7	.36	.42	.16	0
12	0	.50	.20		0	1.4	0	3.4	.27	.36	.22	0
13	0	.34	.15		0	.91	0	.98	.44	.10	.44	0
14	0	.18	.12		0	2.0	0	.55	.27	.02	.16	0
15	0	.10	.10		0	1.3	0	.33	.14	.03	0	0
16	0	.14	.10		0	1.3	0	.12	.37	0	0	0
17	0	.14	.10		0	.99	0	.06	.14	.21	.04	0
18	0	.14	.08		0	1.8	0	.26	0	.01	.05	0
19	.10	.18	.07		0	.80	0	.71	.11	0	.04	0
20	.10	.22	.06		0	.68	0	.86	.05	0	.25	0
21	.06	.22	.04		.08	.86	.80	1.4	0	0	.19	0
22	0	.10	.02		.10	.30	1.9	1.1	0	0	.02	0
23	0	.10	.01		.28	.06	1.7	.55	0	0	.19	0
24	0	.08	0		.35	.50	.74	.57	0	.11	.16	0
25	0	.06	0		.42	10	.46	.53	0	.02	.06	0
26	.18	.06	0		.80	1.5	.56	.50	0	0	0	0
27	.18	.04	0		1.0	1.3	.34	.48	.11	0	0	0
28	.10	.08	0		1.0	2.0	.26	.26	.22	.11	0	0
29	.02	.18	0		-----	4.3	.62	.15	.95	.05	0	0
30	.04	.26	0		-----	2.8	.68	.14	.30	0	.01	.01
31	.08	-----	0		-----	2.2	-----	.18	-----	.07	.13	-----
TOTAL	1.50	4.50	4.54	0	4.03	41.84	10.22	20.14	10.30	16.34	2.39	.02
MEAN	.048	.15	.15	0	.14	1.35	.34	.65	.34	.53	.077	.0007
MAX	.42	.50	.50	0	1.0	10	1.9	3.7	1.7	6.9	.44	.01
MIN	0	.04	0	0	0	.06	0	.06	0	0	0	0
AC-FT	3.0	8.9	9.0	0	8.0	83	20	40	20	32	4.7	.04

CAL YR 1970 TOTAL 761.57 MEAN 2.09 MAX 219 MIN 0 AC-FT 1,510
WTR YR 1971 TOTAL 115.82 MEAN .32 MAX 10 MIN 0 AC-FT 230

PEAK DISCHARGE (BASE, 120 CFS).--No peak above base.

PLATTE RIVER BASIN

75

06768000 Platte River near Overton, Nebr.

LOCATION.--Lat 40°40'57", long 99°32'24" (north channel), and lat 40°40'48", long 99°32'23" (south channel), in sec.12, T.8 N., R.20 W., Dawson-Phelps County line, on left and right banks, respectively, just downstream from highway bridges, 4 miles south of Overton and 4 miles downstream from Plum Creek.

DRAINAGE AREA.--61,700 sq mi, approximately.

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.

GAGE.--Two water-stage recorders. Datum of both gages is 2,299.83 ft above mean sea level. July 1914 to October 1917 nonrecording gages at site 8 miles downstream at different datum. June 1918 to Sept. 12, 1928, nonrecording gage at present site (south channel only) at datum 2 ft higher. Sept. 13, 1928, to Sept. 30, 1930, nonrecording gage, and Oct. 1, 1930, to Sept. 30, 1968, water-stage recorder at present site (south channel only) and datum.

EXTREMES.--Current year: Maximum discharge, 15,700 cfs June 13 (gage height, 4.94 ft, north channel); minimum daily, 177 cfs Aug. 30.

Period of record: Maximum discharge, 37,600 cfs June 5, 1935 (gage height, 6.25 ft, south channel); no flow at times in 1919, 1922, 1925, 1927-28, 1930-41.

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. Records of chemical analyses and water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,470	1,610	2,060	2,370	2,400	2,420	2,480	3,790	11,300	6,120	664	265
2	1,480	1,770	2,030	2,210	2,450	2,380	2,490	4,240	11,300	4,560	594	536
3	1,570	1,730	2,100	2,050	2,170	2,360	2,460	5,230	11,300	3,890	530	533
4	1,640	1,600	2,120	2,090	2,090	2,410	2,380	6,040	10,700	3,090	455	524
5	2,020	1,750	1,920	2,120	2,200	2,200	2,420	7,430	10,800	2,760	421	635
6	2,150	1,630	1,690	1,900	1,950	2,360	2,270	7,740	10,500	2,230	352	685
7	2,140	1,490	1,960	2,020	1,700	2,420	2,230	7,830	10,700	1,820	318	713
8	2,080	1,480	2,090	2,150	1,850	2,370	2,160	7,580	10,900	1,470	319	672
9	2,050	1,380	2,150	2,090	1,770	2,390	2,120	7,380	11,100	1,170	372	748
10	1,840	1,380	2,090	1,970	1,710	2,410	2,070	7,450	11,200	915	475	800
11	1,820	1,400	2,070	2,160	1,700	2,480	2,000	7,940	12,700	1,190	408	804
12	1,850	1,470	1,980	2,250	1,950	2,470	1,930	8,470	14,600	1,380	370	765
13	1,790	1,460	1,820	2,280	2,410	2,480	1,790	9,330	14,000	1,290	346	750
14	1,690	1,160	2,010	2,300	2,370	2,500	1,490	9,480	13,900	1,170	496	775
15	1,720	1,190	2,110	2,240	2,560	2,460	1,280	9,530	13,200	962	596	786
16	1,410	1,280	2,050	2,160	2,580	2,440	1,440	9,480	13,600	861	745	820
17	1,970	1,410	2,150	1,990	2,590	2,470	1,510	9,390	13,700	836	611	845
18	1,880	1,450	2,150	2,010	2,650	2,390	1,610	9,260	13,300	835	598	909
19	1,970	1,460	2,180	2,200	2,690	2,320	1,970	9,900	12,700	823	540	954
20	2,060	1,470	1,890	2,090	2,540	2,320	2,220	9,270	11,800	777	552	933
21	2,040	1,660	2,070	2,070	2,420	2,300	2,600	9,640	10,900	656	646	972
22	1,980	1,490	1,990	2,220	2,300	2,380	3,390	10,100	10,300	570	579	1,120
23	1,880	1,790	2,120	2,340	2,410	2,460	3,900	10,500	9,330	527	460	1,320
24	2,010	1,850	2,090	2,350	2,110	2,540	3,870	11,200	8,470	532	391	1,350
25	2,010	1,810	2,030	2,540	2,420	2,480	3,330	11,200	7,750	510	419	1,510
26	2,020	1,850	1,940	2,600	2,760	2,640	2,970	11,900	7,420	524	370	1,420
27	1,980	1,930	1,830	2,550	2,520	2,590	2,760	11,600	7,300	541	360	1,430
28	1,890	1,990	2,080	2,470	2,420	2,590	2,950	11,300	7,290	602	255	1,460
29	1,840	1,980	2,060	2,350	-----	2,600	3,380	11,200	6,790	644	185	1,520
30	1,810	2,060	2,150	2,400	-----	2,570	3,540	11,400	6,890	706	177	1,570
31	1,720	-----	2,250	2,400	-----	2,560	-----	11,800	-----	724	187	-----
TOTAL	57,780	47,980	63,230	68,940	63,690	75,760	73,010	278,600	325,740	44,685	13,791	28,124
MEAN	1,864	1,599	2,040	2,224	2,275	2,444	2,434	8,987	10,860	1,441	445	937
MAX	2,150	2,060	2,250	2,600	2,760	2,640	3,900	11,900	14,600	6,120	745	1,570
MIN	1,410	1,160	1,690	1,900	1,700	2,200	1,280	3,790	6,790	510	177	265
AC-FT	114,600	95,170	125,400	136,700	126,300	150,300	144,800	552,600	646,100	88,630	27,350	55,780

CAL YR 1970 TOTAL 662,624 MEAN 1,815 MAX 7,910 MIN 227 AC-FT 1,314,000
WTR YR 1971 TOTAL 1,141,330 MEAN 3,127 MAX 14,600 MIN 177 AC-FT 2,264,000

PLATTE RIVER BASIN

06770000 Platte River near Odessa, Nebr.

LOCATION.--Lat 40°39'55", long 99°15'20", in E½ sec.16, T.8 N., R.17 W., Buffalo-Phelps County line, near right bank on downstream side of pier of highway bridge, 2.5 miles south of Odessa and 5 miles downstream from Elm Creek.

DRAINAGE AREA.--62,100 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,197.07 ft above mean sea level. Prior to Oct. 7, 1938, non-recording gage and Oct. 7, 1938, to Sept. 30, 1942, water-stage recorder, at present site at datum 1.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 13,600 cfs June 13 (gage height, 4.81 ft); maximum gage height, 5.57 ft Feb. 1 (backwater from ice); minimum daily discharge, 243 cfs Aug. 30 to Sept. 1.
Period of record: Maximum discharge, 22,700 cfs June 24, 1947 (gage height, 5.52 ft); maximum gage height, 5.89 ft Mar. 5, 1952 (backwater from ice); no flow for periods in each year prior to 1947 and in 1953-57, 1963.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by trans-mountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,420	1,220	2,140	2,300	1,900	2,920	2,800	3,660	11,000	5,190	486	243
2	1,420	1,240	2,090	2,300	2,000	2,780	2,720	3,910	10,700	4,360	497	271
3	1,420	1,460	2,060	2,200	1,950	2,690	2,660	4,500	10,400	3,780	508	341
4	1,510	1,380	2,060	2,000	1,950	2,750	2,580	5,280	10,700	3,120	455	349
5	1,780	1,360	2,040	1,600	2,200	2,780	2,640	6,180	9,780	2,770	455	383
6	1,990	1,420	1,850	1,450	2,000	2,550	2,640	7,550	9,620	2,260	437	518
7	1,990	1,240	1,800	1,250	1,900	2,640	2,660	8,230	9,780	1,860	401	560
8	1,990	1,320	2,020	1,400	1,800	2,720	2,660	8,160	10,300	1,540	374	560
9	1,970	1,120	2,220	1,500	2,000	2,780	2,520	7,880	10,700	1,280	365	664
10	1,820	1,120	2,240	1,600	2,200	2,800	2,410	8,160	11,100	1,090	341	612
11	1,700	1,140	2,090	1,700	2,500	2,750	2,380	8,360	11,300	998	333	651
12	1,580	1,240	2,090	1,600	2,400	2,750	2,160	8,360	12,400	1,240	325	664
13	1,630	1,240	1,940	1,500	2,500	2,750	1,940	8,880	13,000	1,240	293	638
14	1,460	1,020	1,870	1,600	2,600	2,860	1,560	9,270	11,600	1,190	285	664
15	1,490	896	2,110	1,600	2,800	2,800	1,320	9,400	11,000	1,060	317	690
16	1,610	928	2,090	1,600	2,900	2,690	1,360	9,140	10,100	898	486	703
17	1,300	1,020	2,270	1,800	3,070	2,580	1,490	8,940	10,300	781	528	729
18	1,580	1,120	2,330	1,900	3,280	2,580	1,680	9,140	10,200	820	466	755
19	1,560	1,120	2,140	2,000	3,420	2,440	2,060	8,940	10,000	677	466	820
20	1,700	1,120	2,040	1,900	2,890	2,500	2,550	8,680	9,780	625	419	820
21	1,780	1,280	2,110	1,900	2,890	2,550	2,640	8,490	9,270	586	437	833
22	1,780	1,380	2,240	1,900	2,690	2,550	3,280	9,140	8,820	528	466	898
23	1,700	1,420	2,040	2,000	2,920	2,690	3,840	9,550	8,230	466	374	982
24	1,750	1,820	2,300	2,100	2,580	2,720	3,980	10,200	7,660	455	317	1,060
25	1,850	1,800	2,240	2,200	2,520	2,820	3,740	10,900	7,330	455	293	1,190
26	1,850	1,820	2,300	2,300	3,170	2,860	3,350	11,500	6,620	455	278	1,220
27	1,900	1,870	2,040	2,500	2,920	2,920	3,000	11,900	6,360	455	293	1,240
28	1,750	1,900	1,970	2,600	2,920	2,920	2,800	11,700	6,180	476	285	1,300
29	1,660	1,900	2,220	2,600	-----	2,890	3,170	11,300	5,860	476	257	1,320
30	1,440	2,090	2,160	2,000	-----	2,780	3,490	11,300	5,730	508	243	1,340
31	1,320	-----	2,160	1,900	-----	2,860	-----	11,300	-----	508	243	-----
TOTAL	51,700	41,004	65,270	58,800	70,870	84,670	78,080	269,900	285,820	42,147	11,723	23,018
MEAN	1,668	1,367	2,105	1,897	2,531	2,731	2,603	8,706	9,527	1,360	378	767
MAX	1,990	2,090	2,330	2,600	3,420	2,920	3,980	11,900	13,000	5,190	528	1,340
MIN	1,300	896	1,800	1,250	1,800	2,440	1,320	3,660	5,730	455	243	243
AC-FT	102,500	81,330	129,500	116,600	140,600	167,900	154,900	535,300	566,900	83,600	23,250	45,660

CAL YR 1970 TOTAL 645,906 MEAN 1,770 MAX 7,800 MIN 122 AC-FT 1,281,000
WTR YR 1971 TOTAL 1,083,002 MEAN 2,967 MAX 13,000 MIN 243 AC-FT 2,148,000

PLATTE RIVER BASIN

77

06770190 North Dry Creek near Kearney, Nebr.

LOCATION.--Lat 40°36'00", long 99°08'30", in SE $\frac{1}{4}$ sec.5, T.7 N., R.16 W., Kearney County, on right bank about 1,000 ft north of east-west county road, 5.3 miles upstream from mouth, 8 miles southwest of Kearney, and 8.2 miles north of Axtell.

PERIOD OF RECORD.--October 1968 to September 1971 (discontinued).

GAGE.--Water-stage recorder.

EXTREMES.--Current year: Maximum discharge, 153 cfs July 23 (gage height, 4.57 ft); minimum daily, 5.0 cfs Jan. 6, 7.

Period of record: Maximum discharge, 395 cfs Sept. 19, 1969 (gage height, 7.30 ft); maximum gage height, 9.05 ft Mar. 18, 1969 (backwater from ice); minimum daily discharge, 1.0 cfs Dec. 31, 1968.

REMARKS.--Records good except those for winter period, which are poor. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	6.9	8.9	8.3	8.4	10	10	8.5	10	11	19	29
2	8.0	7.2	8.6	8.6	9.0	10	8.9	8.0	8.8	6.0	17	26
3	7.4	7.2	8.3	7.0	8.8	9.8	8.3	8.2	8.3	9.1	16	15
4	7.2	7.1	8.0	5.6	8.0	9.8	8.6	8.3	11	11	22	12
5	7.4	6.9	7.7	5.6	6.6	9.8	8.4	8.4	11	17	19	17
6	7.4	7.6	7.7	5.0	6.0	9.6	7.9	8.5	9.2	19	26	16
7	7.0	8.2	8.0	5.0	6.0	9.6	8.5	8.6	10	14	21	17
8	7.7	8.0	8.6	5.6	6.3	9.6	8.7	8.0	9.7	11	19	17
9	8.3	9.5	8.3	8.2	6.6	9.9	7.7	8.2	8.7	38	21	14
10	8.0	7.9	7.4	7.4	7.8	11	7.8	9.4	8.6	32	22	11
11	8.9	7.4	7.6	6.3	10.5	10	10	22	8.2	31	20	7.9
12	9.9	7.2	7.7	5.8	10	10	13	17	9.2	25	35	8.7
13	8.7	7.2	7.4	6.6	11	11	7.2	11	9.0	18	26	7.3
14	7.7	7.2	7.2	7.0	11	11	7.1	10	8.6	16	22	8.3
15	7.2	7.2	7.2	6.4	12	9.2	7.2	8.9	8.2	16	18	8.4
16	6.9	7.7	7.2	7.2	13	8.4	7.3	8.3	7.5	16	18	9.1
17	7.2	8.0	7.4	9.4	13	8.3	6.8	8.1	8.8	20	15	8.9
18	7.2	8.0	7.7	9.0	12	5.8	7.4	8.9	8.1	41	14	9.4
19	7.4	8.4	6.6	7.2	11	6.4	7.8	11	7.2	21	20	9.2
20	7.4	8.2	6.9	9.0	9.8	8.8	11	9.8	7.4	18	19	8.0
21	8.0	8.1	6.9	11	8.4	9.6	10	9.7	9.4	19	20	6.1
22	8.6	7.0	6.2	11	7.6	11	8.7	9.6	10	18	21	6.5
23	8.6	5.2	6.6	10	7.8	13	9.9	9.6	9.2	77	18	6.0
24	8.3	5.7	7.2	9.4	8.4	9.9	9.3	9.6	8.3	28	14	5.8
25	8.3	7.2	5.8	8.2	12	11	9.6	9.5	5.3	20	16	7.4
26	8.0	7.7	7.4	9.8	15	12	9.4	9.6	7.0	17	17	7.6
27	9.2	6.9	7.4	12	13	14	10	9.2	7.1	24	12	6.7
28	8.3	6.0	7.8	12	13	21	9.2	8.6	6.7	22	11	7.3
29	8.2	6.3	7.6	15	-----	13	9.1	8.7	8.3	19	17	6.9
30	8.0	7.2	7.7	14	-----	11	9.1	20	12	18	20	7.5
31	7.2	-----	7.7	10	-----	11	-----	25	-----	21	22	-----
TOTAL	245.6	220.3	232.7	262.6	271.5	324.5	263.9	328.2	260.8	673.1	597	327.0
MEAN	7.92	7.34	7.51	8.47	9.70	10.5	8.80	10.6	8.69	21.7	19.3	10.9
MAX	9.9	9.5	8.9	15	15	21	13	25	12	77	35	29
MIN	6.9	5.2	5.8	5.0	6.0	5.8	6.8	8.0	5.3	6.0	11	5.8
AC-FT	487	437	462	521	539	644	523	651	517	1,340	1,180	649
CAL YR 1970	TOTAL 4,255.4	MEAN 11.7	MAX 159	MIN 3.7	AC-FT 8,440							
WTR YR 1971	TOTAL 4,007.2	MEAN 11.0	MAX 77	MIN 5.0	AC-FT 7,950							

PLATTE RIVER BASIN

06770500 Platte River near Grand Island, Nebr.

LOCATION.--Lat 40°52'28", long 98°16'54", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.11 N., R.8 W., Merrick County, on left bank 30 ft downstream from bridge on U.S. Highway 34, 2 miles upstream from Burlington Northern Inc. bridge, and 5 miles southeast of Grand Island.

DRAINAGE AREA.--62,800 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,831.89 ft above mean sea level (Nebraska Department of Highways bench mark). Prior to Oct. 23, 1933, nonrecording gage at bridge 30 ft upstream at present datum.

EXTREMES.--Current year: Maximum discharge, 11,800 cfs June 14 (gage height, 4.56 ft); maximum gage height, 4.78 ft Feb. 28 (backwater from ice); minimum daily discharge, 135 cfs Aug. 31.

Period of record: Maximum discharge, 30,000 cfs June 6, 1935 (gage height, 5.99 ft), from rating curve extended above 18,000 cfs; maximum gage height, 6.16 ft Mar. 27, 1960 (backwater from ice); no flow at times in many years.

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

REVISIONS (WATER YEARS).--WSP 956: 1935. WSP 1390: 1942. WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,390	1,590	2,320	1,100	2,300	2,600	2,450	3,020	10,900	6,140	383	170
2	1,300	1,480	1,900	1,060	2,150	2,450	2,430	3,040	10,600	5,440	427	167
3	1,250	1,310	1,710	1,100	2,100	2,400	2,390	3,140	10,300	4,550	433	157
4	1,250	1,620	1,640	1,020	2,150	2,400	2,390	3,370	10,100	3,550	401	184
5	1,300	1,850	1,610	720	2,000	2,500	2,300	4,220	10,200	3,120	396	220
6	1,320	1,720	1,630	620	1,750	2,500	2,260	4,750	9,820	2,740	355	214
7	1,450	1,630	1,620	580	1,700	2,400	2,280	5,790	9,510	2,410	317	221
8	2,080	1,680	1,640	800	1,600	2,300	2,210	6,570	9,280	2,110	317	252
9	2,050	1,710	1,660	880	1,550	3,100	2,190	6,990	9,280	2,450	300	289
10	1,780	1,740	1,740	960	1,500	3,400	2,240	7,770	9,540	2,490	264	311
11	1,780	1,560	1,720	1,100	1,650	2,800	2,150	7,750	9,690	2,030	245	329
12	1,630	1,470	1,600	1,300	1,800	3,100	2,130	7,620	9,900	1,710	224	360
13	1,500	1,390	1,400	1,450	2,050	2,990	2,000	7,350	10,400	1,560	201	368
14	1,360	1,370	1,600	1,550	2,050	2,770	1,960	7,330	11,500	1,510	182	361
15	1,240	1,330	1,750	1,650	2,050	2,610	1,720	7,720	10,800	1,410	173	368
16	1,110	1,230	1,750	1,800	2,250	2,560	1,270	8,040	10,200	1,230	167	417
17	1,160	1,090	1,800	1,900	2,350	2,590	1,130	8,230	9,730	1,030	175	488
18	819	1,000	2,100	2,100	2,500	2,560	1,160	8,250	9,390	907	203	530
19	1,250	975	1,950	2,100	2,700	2,620	1,260	8,280	9,350	886	221	573
20	1,310	950	1,550	2,200	2,700	2,520	1,480	8,090	9,020	868	214	581
21	1,450	975	1,450	2,100	2,600	2,340	1,890	8,150	8,720	821	222	652
22	1,550	975	1,350	2,200	2,150	2,380	2,100	8,370	8,320	778	206	672
23	1,630	906	1,500	2,250	1,800	2,400	2,570	8,130	7,950	989	206	704
24	1,620	1,100	1,220	2,200	1,700	2,470	3,210	8,560	7,700	1,140	206	774
25	1,450	1,300	1,000	2,350	2,200	2,850	3,500	8,730	7,380	857	176	893
26	1,680	1,990	820	2,400	2,700	2,800	3,490	9,780	7,060	623	153	975
27	1,800	2,530	900	2,600	3,000	2,610	2,930	9,840	6,460	455	146	1,050
28	1,720	2,290	1,160	2,500	2,900	2,980	2,710	10,800	5,920	463	142	1,020
29	1,570	2,020	1,250	2,500	-----	3,000	2,580	10,800	5,920	454	143	1,030
30	1,560	2,020	1,120	2,500	-----	2,860	2,740	10,800	6,560	402	139	1,060
31	1,500	-----	1,120	2,500	-----	2,730	-----	10,900	-----	375	135	-----
TOTAL	45,859	44,801	47,580	52,090	59,950	82,590	67,120	232,180	271,500	55,498	7,472	15,390
MEAN	1,479	1,493	1,535	1,680	2,141	2,664	2,237	7,490	9,050	1,790	241	513
MAX	2,080	2,530	2,320	2,600	3,000	3,400	3,500	10,900	11,500	6,140	433	1,060
MIN	819	906	820	580	1,500	2,300	1,130	3,020	5,920	375	135	157
AC-FT	90,960	88,860	94,370	103,300	118,900	163,800	133,100	460,500	538,500	110,100	14,820	30,530
CAL YR 1970	TOTAL 600,849.1			MEAN 1,646			MAX 6,820	MIN 6.7	AC-FT 1,192,000			
WTR YR 1971	TOTAL 982,030.0			MEAN 2,690			MAX 11,500	MIN 135	AC-FT 1,948,000			

PLATTE RIVER BASIN

79

06771000 Wood River near Riverdale, Nebr.

LOCATION.--Lat 40°47'56", long 99°11'48", in NW¹ sec.31, T.10 N., R.16 W., Buffalo County, near right bank on downstream side of bridge on State Highway 40, 1.5 miles northwest of Riverdale.

DRAINAGE AREA.--379 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,163.8 ft above mean sea level, unadjusted.

AVERAGE DISCHARGE.--25 years, 13.3 cfs (9,640 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 66 cfs July 7 (gage height, 4.21 ft); no flow for many days.

Period of record: Maximum discharge, 20,000 cfs June 22, 1947 (gage height, 19.75 ft), from rating curve extended above 3,000 cfs on basis of contracted opening measurement of peak flow; no flow at times in 1946, 1953-61, 1963-71.

REMARKS.--Records poor. A few small diversions above station for irrigation. Pump located in gage pool occasionally diverts flow during dry periods.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	0	.45	.34	.60	3.5	2.2	2.4	2.6	1.8	3.2	.34
2	0	0	.13	.38	.60	3.5	1.9	3.1	2.6	1.8	3.3	0
3	0	0	0	.39	.54	4.5	2.0	2.9	2.6	4.7	2.9	0
4	0	0	.47	.46	.54	5.0	3.0	2.7	2.8	30	2.1	0
5	0	0	.95	.48	.48	5.5	2.7	2.5	4.1	18	1.8	0
6	0	0	.93	.42	.48	4.5	2.4	2.9	3.8	8.9	.68	.07
7	0	0	.96	.30	.42	3.0	2.1	2.9	3.4	40	1.2	.32
8	0	0	.99	.18	.42	1.9	1.9	3.0	3.9	50	1.0	.42
9	0	0	1.1	.18	.42	1.4	1.9	2.9	2.9	19	.57	.54
10	0	0	.95	.24	.42	1.2	1.9	3.2	3.6	10	1.1	.42
11	0	.06	.76	.28	.42	1.1	1.9	4.3	4.5	7.3	.49	.34
12	0	.04	.57	.29	.36	1.1	1.9	4.8	3.5	5.5	.03	.13
13	0	.02	.38	.25	.36	1.4	2.0	3.9	2.7	3.9	0	.07
14	0	.05	.30	.30	.36	2.1	1.7	3.8	2.3	3.7	.27	.99
15	0	0	.20	.30	.36	2.2	1.8	4.2	2.0	1.8	.26	1.6
16	0	.03	.22	.31	.41	1.1	1.9	3.9	1.7	1.8	0	2.0
17	0	.09	.21	.37	.47	.56	1.9	3.5	1.7	4.1	0	1.6
18	0	.12	.19	.28	2.0	1.3	2.0	3.5	1.8	4.0	.56	.71
19	0	.12	.12	.44	6.5	.96	2.1	3.2	1.8	4.2	2.4	.44
20	0	.12	.11	.48	5.0	.51	2.6	3.0	1.8	3.8	1.0	.38
21	0	.18	.16	.48	4.0	4.4	2.6	3.1	1.8	3.5	.36	.19
22	0	.21	.21	.56	2.5	5.3	2.5	3.0	1.6	4.0	.59	0
23	0	.08	.25	.56	1.4	4.3	2.4	3.0	1.4	4.5	.68	0
24	0	0	.27	.54	1.2	3.2	2.4	3.3	1.2	4.1	.10	0
25	0	.04	.28	.67	1.5	2.2	2.5	2.7	1.2	4.6	0	0
26	0	.11	.26	.68	3.0	2.5	2.3	2.4	1.2	5.3	0	0
27	0	.14	.33	.60	4.0	3.0	2.5	2.3	1.2	5.7	0	0
28	0	.06	.27	.66	4.0	3.7	2.4	2.3	.59	4.3	0	0
29	0	.28	.14	.62	-----	3.2	2.5	2.1	.15	5.2	0	0
30	0	.31	.21	.61	-----	2.7	2.5	2.1	1.2	4.9	0	0
31	0	-----	.29	.60	-----	2.5	-----	2.6	-----	3.6	.13	-----
TOTAL	.06	2.06	12.66	13.25	42.76	83.33	66.4	95.5	67.64	274.0	24.72	10.56
MEAN	.002	.069	.41	.43	1.53	2.69	2.21	3.08	2.25	8.84	.80	.35
MAX	.06	.31	1.1	.68	6.5	5.5	3.0	4.8	4.5	50	3.3	2.0
MIN	0	0	0	.18	.36	.51	1.7	2.1	.15	1.8	0	0
AC-FT	.1	4.1	25	26	85	165	132	189	134	543	49	21

CAL YR 1970 TOTAL 1,150.21 MEAN 3.15 MAX 157 MIN 0 AC-FT 2,280
WTR YR 1971 TOTAL 692.94 MEAN 1.90 MAX 50 MIN 0 AC-FT 1,370

PEAK DISCHARGE (BASE, 200 CFS).--No peak above base.

PLATTE RIVER BASIN

06771500 Wood River near Gibbon, Nebr.

LOCATION.--Lat 40°46'17", long 98°47'51", in NW1/4 sec.9, T.9 N., R.13 W., Buffalo County, on left bank 10 ft downstream from bridge on county highway and 2.5 miles northeast of Gibbon.

DRAINAGE AREA.--572 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,024.88 ft above mean sea level. Prior to July 26, 1949, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--22 years, 15.1 cfs (10,940 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 280 cfs Feb. 28 (gage height, 10.63 ft, backwater from ice); no flow for many days.

Period of record: Maximum discharge, 4,050 cfs June 15, 1967 (gage height, 16.79 ft); no flow for many days in 1952-62, 1964-71.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.24	.01		0	100	7.5	.35	6.3	.45	7.5	1.8
2	.10	.21	0		0	60	6.2	.07	11	.94	6.0	.69
3	.10	.14	0		0	24	5.0	.03	4.6	8.1	8.9	.36
4	.04	0	0		0	19	4.0	0	1.6	6.8	8.4	.57
5	.07	.12	0		0	16	2.5	0	1.2	3.9	8.3	.16
6	.14	.35	0		0	15	1.8	0	.38	2.0	6.1	0
7	0	.44	0		0	14	1.3	0	.07	8.3	17	0
8	.04	.71	0		0	13	.96	.01	0	30	10	0
9	.44	.86	0		0	10	.74	1.0	.43	23	4.1	0
10	.44	.66	0		0	9.4	.48	1.7	.61	36	4.8	0
11	.35	.48	0		0	8.2	.50	3.1	2.4	53	4.2	0
12	.44	.48	0		0	7.4	.64	11	2.1	31	4.2	0
13	.28	.58	0		0	8.0	.55	8.0	1.6	17	7.9	0
14	.18	.58	0		0	9.5	.43	2.8	1.9	12	8.5	0
15	.24	.58	0		0	9.0	.17	1.4	1.4	11	9.6	0
16	.28	.40	0		0	7.0	.09	1.3	2.1	7.5	7.3	0
17	.24	.24	0		0	4.8	.03	3.6	2.6	6.3	4.2	.19
18	.21	.04	0		.01	2.6	0	2.7	1.6	5.7	3.4	.27
19	.24	.24	0		.15	.70	.05	2.4	1.0	6.1	3.1	.38
20	.21	.44	0		180	1.0	.09	1.7	.53	4.6	2.9	.20
21	.10	.53	0		94	1.4	0	4.7	.07	3.4	3.3	.06
22	.18	.35	0		35	2.0	0	3.6	0	4.8	4.5	.02
23	.58	.32	0		10	6.0	.02	1.9	0	7.0	4.0	.24
24	.76	.07	0		7.5	5.0	0	1.4	0	6.1	6.1	.27
25	.48	.32	0		6.2	4.2	.01	1.3	0	4.4	3.7	.50
26	.40	.66	0		6.2	2.6	.64	1.0	0	4.0	1.8	.67
27	.28	.48	0		15	4.4	1.5	.61	.02	3.6	2.1	.44
28	.14	.14	0		230	10	1.2	.22	.24	3.5	3.0	.19
29	.14	.07	0		-----	10	.92	.09	.41	4.5	3.3	.04
30	.14	.04	0		-----	10	.74	.17	3.4	8.0	3.2	.09
31	.21	-----	0		-----	8.8	-----	2.1	-----	9.3	2.2	-----
TOTAL	7.93	10.77	.01	0	584.06	403.00	38.06	58.25	47.56	332.29	173.6	7.14
MEAN	.26	.36	.0003	0	20.9	13.0	1.27	1.88	1.59	10.7	5.60	.24
MAX	.76	.86	.01	0	230	100	7.5	11	11	53	17	1.8
MIN	0	0	0	0	0	.70	0	0	0	.45	1.8	0
AC-FT	16	21	.02	0	1,160	799	75	116	94	659	344	14

CAL YR 1970 TOTAL 1,112.37 MEAN 3.05 MAX 144 MIN 0 AC-FT 2,210
WTR YR 1971 TOTAL 1,662.67 MEAN 4.56 MAX 230 MIN 0 AC-FT 3,300

PEAK DISCHARGE (BASE, 300 CFS).--No peak above base.

PLATTE RIVER BASIN

81

06772000 Wood River near Alda, Nebr.

LOCATION.--Lat 40°51'10", long 98°28'20", in NE $\frac{1}{4}$ sec.7, T.10 N., R.10 W., Hall County, on right bank 1.2 miles 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 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,897.66 ft above mean sea level (Bureau of Reclamation bench mark).

AVERAGE DISCHARGE.--18 years, 12.3 cfs (8,910 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 238 cfs Mar. 2 (gage height, 8.60 ft); no flow for most of year. Period of record: Maximum discharge, 1,630 cfs June 16, 1967 (gage height, 12.22 ft); no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	9.8	2.8	0	0	80	4.6	3.3
2					0	188	2.4	0	0	35	5.2	3.2
3					0	124	1.3	0	7.3	10	6.4	2.3
4					0	71	1.1	0	6.6	3.6	6.4	1.5
5					0	28	.72	0	9.2	2.5	5.9	1.2
6					0	37	.61	0	4.3	3.3	6.1	.20
7					0	9.5	.27	0	1.5	5.0	7.9	0
8					0	1.5	0	0	.85	2.3	11	0
9					0	.51	0	0	.92	5.7	6.8	0
10					0	9.5	0	0	.12	21	13	0
11					0	11	0	1.9	0	33	12	0
12					0	9.2	0	2.5	0	30	5.9	0
13					0	12	0	.25	0	55	5.7	0
14					0	18	0	0	.36	46	6.8	0
15					0	14	0	1.7	1.6	31	5.9	0
16					0	6.0	0	2.2	.17	16	5.5	0
17					0	3.2	0	.92	0	12	5.7	0
18					.69	.90	0	.34	0	8.9	5.7	0
19					4.1	0	0	0	0	6.1	4.6	0
20					.58	0	0	0	0	7.9	3.2	0
21					0	0	0	0	0	8.9	2.2	0
22					0	0	0	.46	0	8.2	2.8	0
23					24	0	0	1.4	0	8.2	2.5	0
24					36	0	0	1.3	0	5.3	2.9	0
25					10	0	0	1.3	0	8.2	3.3	0
26					9.2	0	0	.92	0	13	2.4	0
27					10	0	0	.41	0	10	3.1	0
28					32	0	0	0	0	9.2	5.5	0
29					-----	0	0	0	1.7	6.8	4.8	0
30					-----	5.9	0	0	11	4.3	3.5	0
31		-----			-----	5.0	-----	0	-----	6.6	2.9	-----
TOTAL	0	0	0	0	126.57	564.01	9.20	15.60	45.62	503.0	170.2	11.70
MEAN	0	0	0	0	4.52	18.2	.31	.50	1.52	16.2	5.49	.39
MAX	0	0	0	0	36	188	2.8	2.5	11	80	13	3.3
MIN	0	0	0	0	0	0	0	0	0	2.3	2.2	0
AC-FT	0	0	0	0	251	1,120	18	31	90	998	338	23

CAL YR 1970 TOTAL 663.56 MEAN 1.82 MAX 110 MIN 0 AC-FT 1,320
WTR YR 1971 TOTAL 1,445.90 MEAN 3.96 MAX 188 MIN 0 AC-FT 2,870

PEAK DISCHARGE (BASE, 300 CFS).--No peak above base.

LOCATION.--Lat 41°22'04", long 97°29'40", in SE1/4SW1/4 sec.12, T.16 N., R.2 W., Platte County, on left bank 25 ft downstream from highway bridge, 1.5 miles south of Duncan, and 12 miles upstream from Loup River.

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.

EXTREMES.--Current year: Maximum discharge, about 11,400 cfs, probably occurred June 15; maximum gage height recorded, 4.62 ft Feb. 20 (backwater from ice); minimum daily discharge, 77 cfs Sept. 7, 8.
Period of record: Maximum discharge observed, 44,100 cfs June 23, 1905 (gage height, 6.50 ft, site and datum then in use); no flow at times in 1931, 1933-42, 1944, 1952-57, 1959, 1963.

REVISONS (WATER YEARS).--WSP 956: 1935. WSP 1390: 1897, 1899-1901, 1903-5, 1929-32, 1935(M), 1936.
WRD Nebr. 1967: Drainage area.

CAL YR 1970	TOTAL	612,364	MEAN	1,678	MAX	5,370	MIN	10	AC-FT	1,215,000
WTR YR 1971	TOTAL	1,004,855	MEAN	2,753	MAX	11,000	MIN	77	AC-FT	1,993,000

PLATTE RIVER BASIN

83

06775500 Middle Loup River at Dunning, Nebr.

LOCATION.--Lat 41°49'50", long 100°06'00", in NW¹SE¹ sec.33, T.22 N., R.24 W., Blaine County, on left bank just upstream from bridge on State Highway 2 at northeast corner of Dunning, 1 mile upstream from Dismal River.

DRAINAGE AREA.--1,760 sq mi, approximately, of which about 80 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,607.14 ft above mean sea level. Prior to Sept. 12, 1946, nonrecording gage, and Sept. 12, 1946, to Sept. 30, 1962, water-stage recorder at site 0.2 mile upstream at datum 0.03 ft higher.

AVERAGE DISCHARGE.--26 years, 396 cfs (286,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,020 cfs Apr. 20 (gage height, 2.50 ft); maximum gage height, 4.65 ft Jan. 4 (backwater from ice); minimum daily discharge, 270 cfs Jan. 6.
Period of record: Maximum discharge, 1,020 cfs 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 cfs Dec. 5, 6, 1950.

REMARKS.--Records good except those for winter period, which are fair. Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	388	406	328	430	368	604	513	410	378	352	368
2	364	410	397	343	450	369	501	517	418	366	360	348
3	352	408	409	320	400	392	469	488	412	381	367	342
4	351	385	377	300	360	363	462	458	421	397	368	363
5	359	398	390	280	330	359	437	473	440	429	357	379
6	377	381	393	270	310	374	396	482	436	407	352	353
7	406	403	378	300	280	369	383	395	413	384	355	347
8	407	459	392	340	300	345	394	410	384	378	354	354
9	373	415	383	360	320	370	373	450	399	357	351	360
10	365	399	388	360	400	367	383	512	397	369	358	359
11	373	396	380	370	420	388	402	488	430	362	361	345
12	364	372	390	350	410	401	394	433	405	362	388	342
13	387	375	390	380	380	415	393	462	429	353	378	339
14	380	373	380	400	400	433	384	500	413	368	370	337
15	376	373	370	420	450	453	383	490	387	358	366	339
16	362	366	390	450	465	440	399	452	376	352	353	355
17	361	385	380	460	399	411	400	485	367	354	352	351
18	371	395	370	430	448	504	404	486	385	393	358	357
19	375	413	380	410	518	416	460	450	381	357	374	354
20	385	413	390	430	431	392	778	409	354	358	381	357
21	396	415	410	450	407	428	579	402	347	356	376	399
22	394	472	420	430	382	425	612	430	348	359	364	483
23	409	398	390	400	432	400	627	513	349	377	351	375
24	409	401	390	420	384	401	591	422	341	355	365	363
25	425	346	400	490	338	394	557	369	340	352	361	378
26	455	384	410	470	388	395	604	381	337	378	345	379
27	434	390	420	420	374	427	558	376	337	363	377	381
28	411	381	410	410	362	485	487	388	344	348	424	385
29	407	379	368	430	-----	506	544	399	354	364	359	366
30	402	373	328	488	-----	513	529	401	382	354	390	385
31	381	-----	316	400	-----	615	-----	442	-----	342	389	-----
TOTAL	11,971	11,846	11,995	12,109	10,968	12,918	14,487	13,876	11,536	11,411	11,356	10,943
MEAN	386	395	387	391	392	417	483	448	385	368	366	365
MAX	455	472	420	490	518	615	778	517	440	429	424	483
MIN	351	346	316	270	280	345	373	369	337	342	345	337
AC-FT	23,740	23,500	23,790	24,020	21,760	25,620	28,730	27,520	22,880	22,630	22,520	21,710
CAL YR 1970	TOTAL 140,378			MEAN 385	MAX 619	MIN 270	AC-FT 278,400					
WTR YR 1971	TOTAL 145,416			MEAN 398	MAX 778	MIN 270	AC-FT 288,400					

PLATTE RIVER BASIN

06775900 Dismal River near Thedford, Nebr.
(Hydrologic bench-mark station)

LOCATION.--Lat 41°46'45", long 100°31'30", in SE1/4 sec.23, T.21 N., R.28 W., Thomas County, on right bank 25 ft upstream from bridge on State Highway 83, 2 miles upstream from boundary of Nebraska National Forest (Bessey Division), and 14 miles south of Thedford.

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

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

GAGE.--Water-stage recorder. Datum of gage is 2,800.13 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 191 cfs (138,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 313 cfs Apr. 19 (gage height, 2.47 ft); minimum daily, 165 cfs Mar. 8.

Period of record: Maximum discharge, 335 cfs July 28, 1967 (gage height, 2.73 ft); maximum gage height, 2.94 ft Dec. 31, 1968 (backwater from ice); minimum daily discharge, 160 cfs Dec. 31, 1968.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	200	199	186	185	180	194	226	193	193	179	189
2	187	205	194	184	188	175	191	222	195	190	178	185
3	187	205	196	182	189	175	190	223	193	189	177	183
4	189	195	195	174	187	174	182	230	191	188	176	185
5	190	195	192	170	185	180	179	234	192	198	176	185
6	192	195	190	170	185	178	176	235	196	188	175	182
7	190	200	195	180	185	168	176	230	192	186	173	181
8	186	200	198	185	185	165	175	235	188	183	173	181
9	184	210	196	185	186	170	171	241	189	182	172	182
10	187	205	194	185	190	175	170	256	189	190	172	183
11	192	205	191	185	195	180	172	253	193	188	179	181
12	190	200	192	180	195	180	171	241	190	187	177	182
13	195	195	191	180	195	180	172	242	206	185	176	179
14	194	195	189	185	200	185	174	245	188	187	176	179
15	192	190	191	190	210	190	174	243	187	191	175	178
16	194	191	189	195	205	190	183	238	189	188	175	179
17	190	192	189	195	200	195	184	248	190	189	174	178
18	195	195	188	190	195	205	182	236	190	190	174	177
19	195	196	182	190	195	200	207	211	186	187	178	176
20	195	192	182	193	195	190	249	209	183	190	181	179
21	200	194	188	192	190	200	208	209	181	189	184	182
22	200	188	187	189	190	200	222	207	183	191	182	198
23	200	179	183	187	180	200	213	211	183	192	179	184
24	205	183	178	189	185	196	208	188	181	188	179	182
25	210	197	179	189	195	198	208	187	181	187	177	183
26	220	199	181	189	185	200	213	189	179	187	178	184
27	215	197	181	188	185	209	214	190	176	184	184	186
28	205	199	184	192	180	206	223	189	178	182	187	184
29	200	200	183	194	-----	196	223	189	179	185	182	184
30	200	198	182	195	-----	193	224	196	216	180	193	190
31	200	-----	183	187	-----	198	-----	197	-----	180	197	-----
TOTAL	6,065	5,895	5,842	5,775	5,340	5,831	5,828	6,850	5,657	5,814	5,538	5,481
MEAN	196	197	188	186	191	188	194	221	189	188	179	183
MAX	220	210	199	195	210	209	249	256	216	198	197	198
MIN	184	179	178	170	180	165	170	187	176	180	172	176
AC-FT	12,030	11,690	11,590	11,450	10,590	11,570	11,560	13,590	11,220	11,530	10,980	10,870
CAL YR 1970	TOTAL 69,254 MEAN 190 MAX 230 MIN 169 AC-FT 137,400											
WTR YR 1971	TOTAL 69,916 MEAN 192 MAX 256 MIN 165 AC-FT 138,700											

NOTE.--No gage-height record Oct. 17 to Nov. 15, Jan. 5-19, Feb. 6-8, Feb. 10 to Mar. 3, Mar. 8-22.

PLATTE RIVER BASIN

85

06776500 Dismal River at Dunning, Nebr.

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

DRAINAGE AREA.--2,040 sq mi, approximately, of which about 45 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 2,606.3 ft above mean sea level. Mar. 1 to June 30, 1932, non-recording gage at site 0.2 mile 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.--26 years (1945-71), 322 cfs (233,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 514 cfs Apr. 20 (gage height, 1.89 ft); maximum gage height, 4.01 ft Feb. 4 (ice jam); minimum daily discharge, 220 cfs Jan. 6.

Period of record: Maximum discharge, 996 cfs May 26, 1952 (gage height, 3.18 ft); maximum gage height observed, 5.21 ft Jan. 19, 1947 (backwater from ice); minimum daily discharge, 100 cfs Jan. 25, 1950, Jan. 9, 1962.

REMARKS.--Records good.

REVISIONS.--WRD Nebr. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337	310	338	329	350	308	322	342	358	338	279	274
2	330	320	330	322	370	303	306	330	356	290	279	270
3	326	309	331	300	330	310	317	335	359	298	280	267
4	332	305	324	260	310	318	307	331	372	325	280	270
5	337	310	321	240	280	327	300	354	391	318	277	265
6	339	332	324	220	270	314	311	346	381	304	278	269
7	332	333	323	240	300	308	314	329	371	287	281	273
8	315	357	327	270	320	303	320	329	360	277	282	270
9	305	362	324	310	350	314	306	334	365	276	282	275
10	318	347	312	310	380	326	306	353	369	286	279	283
11	310	336	316	310	390	330	302	349	379	294	279	285
12	310	322	336	300	370	333	306	339	358	281	313	287
13	320	319	328	300	361	341	310	342	355	274	290	283
14	310	307	325	340	336	339	304	351	357	275	285	287
15	310	299	320	330	335	320	309	342	338	285	282	287
16	290	314	323	330	335	311	323	336	330	281	278	300
17	290	322	324	350	328	320	317	345	327	279	274	295
18	300	321	315	340	354	337	318	338	353	291	274	296
19	300	320	312	320	362	341	341	314	326	272	276	304
20	300	325	310	330	302	308	442	319	314	275	275	308
21	310	334	320	350	304	327	373	329	306	278	280	332
22	310	334	330	340	308	328	342	330	306	280	278	349
23	320	278	310	340	346	317	330	376	304	296	268	326
24	320	302	310	350	324	308	342	334	301	283	265	322
25	330	303	310	380	326	319	330	330	295	275	258	322
26	360	307	300	370	334	323	336	334	289	276	257	332
27	340	310	300	360	313	347	331	331	282	276	275	333
28	330	319	310	360	313	356	316	332	274	272	280	331
29	330	323	300	370	-----	332	339	338	278	279	266	322
30	320	338	327	390	-----	339	348	352	290	273	303	340
31	310	-----	315	320	-----	343	-----	361	-----	276	283	-----
TOTAL	9,891	9,618	9,895	9,981	9,301	10,050	9,768	10,505	10,044	8,870	8,636	8,957
MEAN	319	321	319	322	332	324	326	339	335	286	279	299
MAX	360	362	338	390	390	356	442	376	391	338	313	349
MIN	290	278	300	220	270	303	300	314	274	272	257	265
AC-FT	19,620	19,080	19,630	19,800	18,450	19,930	19,370	20,840	19,920	17,590	17,130	17,770
CAL YR 1970	TOTAL 116,664		MEAN 320		MAX 421		MIN 230		AC-FT 231,400			
WTR YR 1971	TOTAL 115,516		MEAN 316		MAX 442		MIN 220		AC-FT 229,100			

PLATTE RIVER BASIN

06779000 Middle Loup River at Arcadia, Nebr.

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

DRAINAGE AREA.--4,730 sq mi, approximately, of which about 820 sq mi contributes directly to surface runoff.

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

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

AVERAGE DISCHARGE.--9 years (1962-71), 668 cfs (484,000 acre-ft per year) since diversion to Farwell Irrigation District canal.

EXTREMES.--Current year: Maximum discharge, 1,850 cfs Mar. 10, Apr. 21; maximum gage height, 4.81 ft Jan. 11 (backwater from ice); minimum daily discharge, 62 cfs Aug. 18.

Period of record: Maximum discharge estimated, about 18,500 cfs June 22, 1947 (gage height, 6.24 ft); maximum discharge computed, 9,700 cfs May 27, 1945 (gage height, 5.12 ft); maximum gage height, 6.41 ft Mar. 27, 1960 (backwater from ice); minimum daily discharge, 23 cfs July 24-26, 1966.

CORRECTIONS.--Maximum discharge estimated, 18,500 cfs June 22, 1947, correcting date published in WSP 1918.

REMARKS.--Records fair. 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 miles above station.

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	832	1,040	896	520	880	960	830	723	606	285	65	130
2	730	1,100	710	540	860	900	767	694	571	274	73	88
3	777	1,080	832	520	860	980	654	664	638	285	70	86
4	826	1,160	797	420	820	1,060	631	572	613	232	70	83
5	885	1,200	690	400	780	1,200	550	572	603	479	73	79
6	919	1,120	807	380	740	1,040	428	915	648	366	68	86
7	963	1,190	1,010	390	720	980	381	779	622	261	70	83
8	897	1,170	935	450	760	980	407	653	602	225	69	73
9	800	1,370	900	520	860	1,200	371	688	604	140	73	77
10	710	1,240	600	580	960	1,560	416	953	690	136	67	74
11	692	1,110	300	660	1,060	1,350	478	868	622	114	71	74
12	770	1,160	500	760	1,250	1,260	543	672	749	86	71	71
13	720	1,190	560	820	1,350	915	584	709	737	75	69	72
14	750	1,050	660	800	1,450	809	578	697	694	70	70	70
15	780	1,040	700	820	1,450	767	484	754	517	69	69	73
16	864	1,020	620	840	1,500	693	600	736	418	73	67	79
17	952	1,030	640	860	1,500	636	677	724	367	71	65	126
18	985	963	540	820	1,450	782	646	791	401	71	62	128
19	1,020	1,050	380	860	1,450	815	823	716	397	69	64	118
20	963	1,090	280	880	1,300	933	1,120	699	286	73	63	109
21	974	1,000	210	900	860	877	1,220	619	248	70	66	113
22	1,050	580	300	920	760	826	904	664	246	72	70	383
23	1,160	250	330	980	840	841	837	787	210	70	70	385
24	1,100	220	350	1,000	940	834	776	744	238	71	68	226
25	1,040	600	350	980	1,140	939	853	594	319	85	68	249
26	985	800	400	980	1,300	959	840	510	311	92	69	271
27	1,200	1,020	440	1,000	1,300	947	952	532	241	86	75	201
28	1,050	1,100	460	1,000	1,100	897	681	534	195	73	101	194
29	952	1,060	490	1,020	-----	766	566	562	156	75	144	199
30	1,020	1,110	480	1,000	-----	793	760	491	277	70	106	200
31	1,010	-----	500	980	-----	733	-----	636	-----	74	161	-----
TOTAL	28,376	30,113	17,667	23,600	30,240	29,232	20,357	21,252	13,826	4,292	2,367	4,200
MEAN	915	1,004	570	761	1,080	943	679	686	461	138	76.4	140
MAX	1,200	1,370	1,010	1,020	1,500	1,560	1,220	953	749	479	161	385
MIN	692	220	210	380	720	636	371	491	156	69	62	70
AC-FT	56,280	59,730	35,040	46,810	59,980	57,980	40,380	42,150	27,420	8,510	4,690	8,330

CAL YR 1970 TOTAL 205,918 MEAN 564 MAX 1,720 MIN 42 AC-FT 408,400
WTR YR 1971 TOTAL 225,522 MEAN 618 MAX 1,560 MIN 62 AC-FT 447,300

87

LOCATION.--Lat 41°06'39", long 98°50'19", in NE¹/₄SW¹/₄ sec.8, T.13 N., R.13 W., Sherman County, on right bank just downstream from bridge on State Highway 68, 0.6 mile southwest of Rockville.

PERIOD OF RECORD.--October 1955 to September 1964, October 1967 to current year.

AVERAGE DISCHARGE.--13 years, 782 cfs (566,600 acre-ft per year) unadjusted.

EXTREMES.--Current year: Maximum discharge, about 2,500 cfs Mar. 11 (gage height, 4.93 ft, backwater from ice); maximum gage height, 6.27 ft Jan. 22 (backwater from ice); minimum daily discharge, 54 cfs Aug. 19.
Period of record: Maximum discharge, 10,400 cfs June 16, 1957 (gage height, 4.62 ft); maximum gage height, 7.16 ft Mar. 20, 1969 (backwater from ice); minimum daily discharge, 33 cfs Aug. 15, 1970.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	698	1,030	1,430	600	1,080	1,250	1,010	1,130	711	329	74	210
2	954	1,050	744	580	920	1,040	1,390	928	707	256	81	161
3	878	1,120	879	560	900	1,000	1,130	1,110	801	280	95	96
4	1,020	1,040	854	500	940	1,040	945	979	730	269	86	95
5	960	971	897	400	960	1,140	1,040	904	802	341	84	85
6	1,000	920	870	330	920	1,250	930	1,080	756	460	112	85
7	1,180	827	920	370	820	1,350	668	963	747	300	79	88
8	1,260	948	931	400	780	1,500	657	802	725	267	72	81
9	890	1,170	860	500	740	1,700	668	1,010	657	250	69	80
10	600	1,110	680	600	740	1,800	600	1,110	705	217	68	87
11	657	764	200	620	860	1,900	475	1,340	755	156	63	76
12	676	1,040	160	720	960	1,900	473	825	625	143	63	69
13	706	1,010	460	740	1,080	1,600	465	772	861	112	61	72
14	758	828	680	700	1,300	1,240	464	710	903	93	56	74
15	827	760	740	760	1,350	1,170	497	847	680	81	61	80
16	942	914	720	780	1,350	1,060	411	940	560	68	60	105
17	954	924	780	840	1,300	929	530	871	475	73	56	110
18	949	893	760	840	1,500	825	546	843	459	82	55	157
19	957	1,060	700	800	1,550	745	572	827	467	76	54	154
20	1,020	1,050	520	800	1,650	1,390	777	606	467	69	60	134
21	1,130	966	310	1,000	1,550	1,170	1,150	705	380	68	67	135
22	1,100	740	320	960	1,200	969	997	738	343	74	70	174
23	1,250	350	430	1,020	1,060	959	877	750	336	87	68	537
24	1,220	300	480	1,080	920	703	952	934	273	75	63	372
25	1,480	500	520	1,120	860	755	1,130	766	314	78	59	270
26	1,270	800	540	1,020	1,400	989	1,230	607	376	111	61	301
27	1,220	1,060	560	1,000	1,450	912	1,150	561	302	93	72	285
28	986	940	540	1,120	1,400	1,030	1,030	589	228	87	98	212
29	949	1,410	540	1,100	-----	979	832	562	217	87	113	201
30	843	1,550	560	1,100	-----	1,010	894	631	471	82	188	208
31	853	-----	580	1,120	-----	1,150	-----	560	-----	76	150	-----
TOTAL	30,187	28,045	20,165	24,080	31,540	36,455	24,490	26,000	16,833	4,840	2,418	4,794
MEAN	974	935	650	777	1,126	1,176	816	839	561	156	78.0	160
MAX	1,480	1,550	1,430	1,120	1,650	1,900	1,390	1,340	903	460	188	537
MIN	600	300	160	330	740	703	411	560	217	68	54	69
AC-FT	59,880	55,630	40,000	47,760	62,560	72,310	48,580	51,570	33,390	9,600	4,800	9,510
CAL YR 1970	TOTAL 221,077		MEAN 606	MAX 1,640	MIN 33	AC-FT 438,500						
WTR YR 1971	TOTAL 249,847		MEAN 685	MAX 1,900	MIN 54	AC-FT 495,600						

PLATTE RIVER BASIN

06782500 South Loup River at Ravenna, Nebr.

LOCATION.--Lat 41°00'42", long 98°54'44", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.12 N., R.14 W., Buffalo County, 16 ft downstream and 38 ft left of left downstream corner of county highway bridge, 0.5 mile south of Ravenna city limits, and 1.4 miles upstream from Mud Creek.

DRAINAGE AREA.--1,660 sq mi, approximately, of which about 890 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to September 1958, October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,983.73 ft above mean sea level, adjusted. Oct. 14, 1940, to Mar. 9, 1958, nonrecording gage and crest-stage gage at same site and datum, and Mar. 10, 1958, to Sept. 30, 1958, at same site at datum 0.48 ft higher.

AVERAGE DISCHARGE.--22 years, 195 cfs (141,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 960 cfs June 30 (gage height, 4.31 ft); maximum gage height, 5.31 ft Feb. 19 (backwater from ice); minimum daily discharge, 33 cfs Aug. 26.

Period of record: Maximum discharge estimated, about 41,000 cfs June 22, 1947 (gage height, 12.6 ft, from floodmark); maximum discharge computed, 17,100 cfs June 24, 1968 (gage height, 10.32 ft); minimum daily, 8.6 cfs Aug. 28, 1955.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	148	160	130	180	230	231	194	180	405	78	114
2	101	143	150	135	155	190	235	208	187	160	82	98
3	112	142	140	124	160	180	211	233	168	125	88	92
4	112	138	140	120	175	220	193	213	225	168	97	81
5	105	119	150	116	175	270	181	204	303	240	103	75
6	103	105	145	92	155	270	171	214	285	312	95	74
7	97	106	135	94	145	260	167	204	228	255	96	72
8	116	137	112	112	140	240	151	182	190	199	84	67
9	120	170	110	130	135	260	150	192	205	196	76	76
10	131	165	94	135	145	270	158	236	240	178	62	81
11	142	139	114	135	160	249	155	276	231	184	54	83
12	146	116	122	135	185	237	161	228	264	172	59	79
13	140	112	120	140	195	253	163	213	326	152	55	79
14	129	104	140	135	230	241	169	223	246	134	50	76
15	131	110	130	135	230	225	166	196	323	123	59	74
16	128	112	124	140	250	232	161	195	218	115	70	89
17	132	130	150	135	270	227	168	181	194	98	54	106
18	134	127	104	135	330	200	171	195	174	111	63	108
19	145	104	92	140	460	160	187	217	166	115	56	107
20	132	96	114	145	280	140	239	203	149	106	51	101
21	129	89	120	150	210	165	307	185	159	93	44	96
22	135	82	114	160	205	184	300	182	162	83	41	107
23	188	40	122	165	215	182	273	175	180	79	38	124
24	223	50	130	170	205	159	272	181	208	74	35	145
25	146	70	135	170	260	192	317	171	146	76	37	152
26	139	90	124	180	430	207	322	170	131	86	33	149
27	148	108	124	180	400	193	343	168	112	81	35	145
28	142	120	122	175	270	248	286	157	99	77	58	124
29	149	114	135	175	-----	292	230	159	118	81	84	119
30	159	145	130	190	-----	293	206	156	435	87	79	115
31	159	-----	130	190	-----	251	-----	158	-----	88	97	-----
TOTAL	4,183	3,431	3,932	4,468	6,350	6,920	6,444	6,069	6,252	4,453	2,013	3,008
MEAN	135	114	127	144	227	223	215	196	208	144	64.9	100
MAX	223	170	160	190	460	293	343	276	435	405	103	152
MIN	97	40	92	92	135	140	150	156	99	74	33	67
AC-FT	8,300	6,810	7,800	8,860	12,600	13,730	12,780	12,040	12,400	8,830	3,990	5,970

CAL YR 1970 TOTAL 50,594 MEAN 139 MAX 415 MIN 35 AC-FT 100,400
WTR YR 1971 TOTAL 57,523 MEAN 158 MAX 460 MIN 33 AC-FT 114,100

PLATTE RIVER BASIN

89

06783500 Mud Creek near Sweetwater, Nebr.

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

DRAINAGE AREA.--1,020 sq mi, of which 655 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 2,013.69 ft above mean sea level.

AVERAGE DISCHARGE.--25 years, 43.5 cfs (31,520 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 471 cfs June 6 (gage height, 10.38 ft); minimum daily, 1.1 cfs Aug. 25-27.

Period of record: Maximum discharge estimated, about 27,000 cfs June 22, 1947 (gage height, 23.20 ft); maximum discharge computed, 5,600 cfs June 24, 1968 (gage height, 20.07 ft); no flow at times in 1955-56. Maximum stage known since at least 1929, that of June 22, 1947, from information by local resident.

REMARKS.--Records fair. Minor irrigation developments above station.

REVISIONS.--WSP 1710: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	20	17	22	44	33	27	22	150	3.3	5.7
2	13	18	22	16	23	30	30	25	25	66	2.9	7.4
3	10	18	17	18	16	24	29	24	30	28	2.4	6.6
4	12	19	18	16	20	27	28	24	28	26	2.0	5.5
5	11	18	18	16	23	30	27	24	52	80	2.7	4.2
6	12	18	18	17	23	32	26	25	106	42	3.7	4.3
7	13	18	17	18	22	31	26	26	148	28	2.4	3.5
8	14	18	20	19	19	28	26	25	44	23	3.3	1.6
9	14	20	22	19	23	30	25	25	51	24	2.9	2.4
10	14	18	23	18	24	34	24	29	49	25	1.6	5.2
11	15	18	23	19	24	36	24	34	31	31	1.5	4.3
12	16	18	18	19	24	40	24	34	34	30	1.3	6.8
13	16	18	20	20	24	43	24	32	26	24	1.2	6.8
14	17	17	20	20	24	40	23	29	35	23	3.2	6.4
15	14	15	18	19	24	38	23	26	91	19	2.2	6.2
16	14	14	18	19	25	35	23	24	75	16	1.4	8.0
17	14	16	17	18	25	27	23	23	80	10	1.4	8.4
18	14	18	18	18	30	26	23	23	44	11	1.5	9.0
19	14	16	16	18	78	23	24	25	34	5.7	2.1	9.8
20	14	16	17	19	70	28	26	25	30	6.2	2.9	9.6
21	14	16	15	19	56	30	27	24	33	6.2	1.7	9.2
22	13	13	14	20	52	38	28	26	29	7.2	1.5	9.6
23	15	12	16	20	45	33	31	25	24	11	2.7	10
24	18	15	18	21	54	35	30	24	22	7.2	1.6	11
25	20	23	19	21	54	42	26	24	21	2.5	1.1	11
26	21	24	16	21	80	32	26	24	21	3.6	1.1	15
27	19	24	18	22	72	34	28	24	19	4.5	1.1	13
28	18	17	18	23	58	32	28	22	16	2.4	1.3	10
29	18	18	18	22	-----	34	27	21	15	1.5	1.5	8.4
30	18	20	17	22	-----	36	28	21	19	2.8	4.3	9.0
31	18	-----	17	23	-----	36	-----	22	-----	2.7	4.6	-----
TOTAL	465	531	566	597	1,034	1,028	790	786	1,254	719.5	68.4	227.9
MEAN	15.0	17.7	18.3	19.3	36.9	33.2	26.3	25.4	41.8	23.2	2.21	7.60
MAX	21	24	23	23	80	44	33	34	148	150	4.6	15
MIN	10	12	14	16	16	23	23	21	15	1.5	1.1	1.6
AC-FT	922	1,050	1,120	1,180	2,050	2,040	1,570	1,560	2,490	1,430	136	452

CAL YR 1970 TOTAL 7,777.56 MEAN 21.3 MAX 139 MIN .47 AC-FT 15,430
WTR YR 1971 TOTAL 8,066.80 MEAN 22.1 MAX 150 MIN 1.1 AC-FT 16,000

PEAK DISCHARGE (BASE, 550 CFS).--No peak above base.

PLATTE RIVER BASIN

06784000 South Loup River at St. Michael, Nebr.

LOCATION.--Lat 41°01'53", long 98°44'25", in NE 1/4 sec.11, T.12 N., R.13 W., Buffalo County, 15 ft upstream and 65 ft right from right upstream corner of county highway bridge, 0.6 mile northeast of St. Michael, and 3.4 miles upstream from Sweet Creek.

DRAINAGE AREA.--2,560 sq mi, approximately, of which about 1,650 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1943 to current year.

GAGE (revised).--Water-stage recorder and crest-stage gage. Datum of gage is 1,921.26 ft above mean sea level, adjusted. Prior to June 22, 1947, water-stage recorder, and June 25 to Sept. 30, 1947, nonrecording gage, at site 40 ft downstream at datum 2.00 ft higher. Oct. 1, 1947, to July 3, 1958, nonrecording gage at site 40 ft downstream at present datum. July 4, 1958, to Sept. 7, 1960, water-stage recorder at site 560 ft upstream at present datum. Sept. 8, 1960, to June 24, 1968, water-stage recorder at site 60 ft upstream at present datum. June 25 to Nov. 21, 1968, nonrecording gage at site 40 ft downstream at present datum.

AVERAGE DISCHARGE.--28 years, 247 cfs (179,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 940 cfs Feb. 19 (gage height, 6.49 ft, backwater from ice); maximum gage height, 6.80 ft Feb. 27 (backwater from ice); minimum daily discharge, 28 cfs Aug. 26, 27. Period of record: Maximum discharge estimated, about 50,000 cfs June 22, 1947 (gage height, 12.0 ft, present datum, from graph based on gage readings); maximum discharge computed, 27,500 cfs June 24, 1968 (gage height, 11.00 ft); minimum daily, 6.6 cfs Aug. 30, 1955.

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

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	157	277	160	230	450	313	268	218	422	75	109
2	114	160	218	170	210	330	290	261	247	333	74	93
3	114	159	176	160	190	270	277	262	257	204	82	97
4	114	157	160	155	205	300	263	252	268	187	81	92
5	114	156	163	155	215	310	251	242	330	270	88	88
6	117	161	155	145	225	310	250	246	365	304	92	82
7	112	158	161	140	210	290	238	249	441	277	80	76
8	124	162	169	145	205	270	226	230	298	221	73	70
9	130	190	171	145	200	280	219	219	295	215	69	65
10	137	192	160	145	210	289	209	274	338	213	64	67
11	145	187	61	145	235	299	199	402	290	209	56	72
12	153	187	76	150	280	311	197	340	294	206	56	72
13	153	201	127	155	320	312	198	291	331	188	53	70
14	147	182	162	160	350	304	196	264	288	171	43	70
15	146	179	155	160	360	283	198	244	354	155	50	63
16	140	176	145	155	400	268	199	228	347	139	56	70
17	141	168	170	155	440	272	203	213	296	123	58	84
18	144	166	125	155	460	260	205	213	262	117	52	90
19	146	160	106	150	580	240	213	243	235	114	63	93
20	151	150	120	165	680	210	233	244	224	108	58	102
21	154	147	108	175	480	266	267	230	215	97	53	105
22	153	127	102	175	350	278	314	227	210	96	43	111
23	180	50	110	185	300	298	301	235	204	94	37	123
24	205	54	120	195	320	307	287	232	221	83	35	136
25	173	86	130	195	400	306	313	228	198	78	35	142
26	164	112	135	195	600	304	337	219	187	78	28	140
27	169	150	135	195	660	274	344	214	174	79	28	136
28	166	174	135	205	560	290	312	203	163	74	47	129
29	163	168	150	210	-----	315	252	201	160	77	64	119
30	161	218	155	210	-----	344	246	209	337	83	74	116
31	157	-----	160	215	-----	340	-----	210	-----	85	84	-----
TOTAL	4,504	4,694	4,497	5,225	9,875	9,180	7,550	7,593	8,047	5,100	1,851	2,882
MEAN	145	156	145	169	353	296	252	245	268	165	59.7	96.1
MAX	205	218	277	215	680	450	344	402	441	422	92	142
MIN	112	50	61	140	190	210	196	201	160	74	28	63
AC-FT	8,930	9,310	8,920	10,360	19,590	18,210	14,980	15,060	15,960	10,120	3,670	5,720

CAL YR 1970 TOTAL 59,907 MEAN 164 MAX 354 MIN 26 AC-FT 118,800
WTR YR 1971 TOTAL 70,998 MEAN 195 MAX 680 MIN 28 AC-FT 140,800

PLATTE RIVER BASIN

91

06784200 Sherman Reservoir near Loup City, Nebr.

LOCATION.--Lat 41°18'10", long 98°52'45", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.15 N., R.14 W., Sherman County, in control house of outlet works of Sherman Dam, 5 miles northeast of Loup City.

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

GAGE.--Mercury-column pressure gage read once daily. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents observed, 66,530 acre-ft June 7-11 (elevation, 2,161.4 ft); minimum observed, 10,010 acre-ft Sept. 1 (elevation, 2,128.4 ft).

Period of record: Maximum contents observed, 66,530 acre-ft June 7-11, 1971 (elevation, 2,161.4 ft); minimum since appreciable storage was attained, 10,010 acre-ft Sept. 1, 1971 (elevation, 2,128.4 ft).

REMARKS.--Reservoir is formed by earthfill dam; closure date of dam, August 1960. First diversions from Middle Loup River, Nov. 8, 1962. Usable capacity, 60,030 acre-ft between elevations 2,126.0 (minimum water surface) and 2,162.0 ft (crest of spillway). Dead and inactive storage, 8,180 acre-ft below elevation 2,126.0 ft. Figures given herein represent total contents. Water used for irrigation of Farwell Unit of Bureau of Reclamation.

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

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,152.1	43,640	-
Oct. 31.....	2,151.3	41,960	-1,680
Nov. 30.....	2,150.7	40,720	-1,240
Dec. 31.....	2,149.8	38,910	-1,810
CAL YR 1970.....	-	-	-6,670
Jan. 31.....	2,149.3	37,940	-970
Feb. 28.....	2,149.0	37,350	-590
Mar. 31.....	2,148.6	36,590	-760
Apr. 30.....	2,156.4	43,450	+6,860
May 31.....	2,160.8	64,860	+21,410
June 30.....	2,161.0	65,400	+540
July 31.....	2,149.4	38,130	-27,270
Aug. 31.....	2,128.5	10,090	-28,040
Sept. 30.....	2,147.5	34,540	+24,450
WTR YR 1971.....	-	-	-9,100

PLATTE RIVER BASIN

06785000 Middle Loup River at St. Paul, Nebr.

LOCATION.--Lat 41°11'55", long 98°26'50", in sec.10, T.14 N., R.10 W., Howard County, on left bank at St. Paul, 450 ft upstream from bridge on U.S. Highway 281 and 6 miles upstream from confluence with North Loup River.

DRAINAGE AREA.--7,720 sq mi, approximately, of which about 3,200 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,776.61 ft above mean sea level. See WSP 1918 for history of changes prior to June 5, 1957.

AVERAGE DISCHARGE.--64 years, 1,218 cfs (882,400 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 5,000 cfs May 11 (gage height, 5.17 ft); maximum gage height, 7.00 ft Feb. 28 (backwater from ice); minimum daily discharge, 96 cfs Nov. 23.
Period of record: Maximum discharge, 72,000 cfs June 23, 1947 (gage height, 12.69 ft, site then in use, present datum), from rating curve extended above 55,000 cfs; minimum daily since 1929, 59 cfs July 10, 1970.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1036: 1943. WSP 1086: Drainage area. WSP 1390: 1896, 1903, 1928(M), 1944.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	578	1,120	1,840	800	1,180	1,700	1,750	990	628	1,890	190	390
2	1,030	1,100	1,240	740	1,220	1,500	1,490	990	752	827	201	414
3	1,080	966	982	680	1,000	1,300	1,190	1,010	865	635	230	270
4	799	850	922	600	920	1,500	1,090	848	1,020	484	227	204
5	870	778	966	540	960	1,700	1,230	798	1,220	673	284	180
6	875	884	1,140	520	1,020	1,800	990	1,120	1,310	776	320	174
7	995	870	935	600	980	2,000	664	1,810	1,190	935	321	170
8	1,540	1,080	1,130	580	920	2,200	594	1,330	1,060	633	251	154
9	1,360	1,360	906	620	960	2,600	622	1,190	908	655	213	158
10	791	1,400	721	640	980	2,800	501	2,160	906	657	186	161
11	913	1,410	320	740	1,060	2,800	749	4,130	1,150	515	167	169
12	1,150	1,390	110	860	1,100	3,000	633	2,300	1,080	448	163	167
13	1,150	1,350	500	900	1,160	2,800	739	831	913	407	153	152
14	1,080	1,240	780	940	1,300	2,570	777	865	1,220	335	160	149
15	1,110	1,310	920	980	1,350	2,300	773	970	1,270	349	142	146
16	1,090	1,210	860	1,000	1,450	1,810	802	1,210	1,010	312	166	181
17	935	1,120	980	980	1,450	1,460	647	1,010	780	292	187	214
18	929	947	960	1,040	1,600	1,350	660	1,030	696	296	188	218
19	933	818	900	1,040	1,800	1,160	633	1,250	668	296	178	265
20	852	1,010	840	1,100	1,900	1,480	697	933	616	285	189	263
21	937	1,210	480	1,220	1,800	1,670	1,240	848	592	261	186	231
22	899	800	360	1,120	1,600	1,350	1,790	970	520	235	198	256
23	1,170	96	250	1,300	1,400	1,100	1,230	916	470	304	201	331
24	1,210	114	430	1,350	1,300	830	1,170	1,430	466	356	181	699
25	969	330	580	1,350	1,300	1,030	1,130	1,200	441	310	172	573
26	900	900	640	1,220	1,700	1,430	1,410	682	468	295	174	417
27	896	1,350	680	1,200	2,000	1,230	1,650	616	497	281	178	455
28	974	793	680	1,250	1,900	1,350	1,510	654	398	257	174	433
29	834	906	700	1,350	-----	1,690	1,090	752	355	223	178	345
30	843	1,560	740	1,300	-----	1,550	831	848	1,000	232	246	360
31	1,110	-----	760	1,220	-----	1,550	-----	1,080	-----	203	336	-----
TOTAL	30,802	30,272	24,252	29,780	37,310	54,610	30,282	36,771	24,469	14,657	6,340	8,299
MEAN	994	1,009	782	961	1,333	1,762	1,009	1,186	816	473	205	277
MAX	1,540	1,560	1,840	1,350	2,000	3,000	1,790	4,130	1,310	1,890	336	699
MIN	578	96	110	520	920	830	501	616	355	203	142	146
AC-FT	61,100	60,040	48,100	59,070	74,000	108,300	60,060	72,940	48,530	29,070	12,580	16,460
CAL YR 1970	TOTAL 287,030		MEAN 786	MAX 2,110	MIN 59	AC-FT 569,300						
WTR YR 1971	TOTAL 327,844		MEAN 898	MAX 4,130	MIN 96	AC-FT 650,300						

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LOCATION.--Lat 41°46'37", long 99°22'45", in NE¹/₄SE¹/₄ sec.22, T.21 N., R.18 W., Loup County, on left bank 64 ft downstream from bridge on U.S. Highway 183 and 0.4 mile north of Taylor.

PERIOD OF RECORD.--November 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,248.21 ft above mean sea level. 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.

EXTREMES.--Current year: Maximum discharge, 2,180 cfs Apr. 21 (gage height, 5.57 ft); maximum gage height, 6.98 ft Feb. 22 (backwater from ice); minimum daily discharge, 118 cfs July 22.

Period of record: Maximum discharge, 2,770 cfs June 14, 1951 (gauge height, 6.50 ft), but may have been greater during ice breakup Mar. 10, 1955; maximum gauge height, 9.5 ft Feb. 25, 1957 (ice jam, from flood-marks); minimum daily discharge, 45 cfs July 26, 1941.

REMARKS.--Records good except those for winter period, which are fair. North Loup Public Power and Irrigation District canal began diversion from river in November 1937 at point 5 miles above station. Several smaller diversions above station for irrigation.

REVISIONS (WATER YEARS).--WSP 856: 1937. WSP 1086: Drainage area. WSP 1310: 1939(M). WSP 1730: 1956-57(M). WSP 1918: 1952.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	425	453	570	470	470	640	625	887	467	370	150	261
2	418	475	510	490	480	640	452	779	462	320	151	231
3	396	515	478	410	460	640	482	716	435	330	153	239
4	382	500	465	250	450	620	486	703	437	360	146	211
5	389	538	413	280	430	620	477	665	483	430	146	220
6	408	553	393	300	380	600	476	696	444	440	158	247
7	423	563	422	330	360	580	468	640	435	410	150	259
8	422	571	397	490	390	573	471	597	403	380	156	270
9	393	628	379	480	420	561	480	588	346	350	147	280
10	392	618	352	450	410	623	501	661	437	300	138	280
11	416	562	230	460	450	636	505	726	400	270	130	290
12	413	533	270	440	500	676	542	689	423	222	135	290
13	424	490	330	450	480	736	552	649	443	174	142	280
14	406	468	380	440	500	838	572	623	421	172	147	270
15	388	474	430	440	520	770	575	598	426	175	155	270
16	402	468	440	450	540	670	619	581	395	203	158	280
17	405	470	420	470	540	602	645	482	341	160	157	300
18	414	446	390	460	680	480	671	484	399	171	149	310
19	424	459	290	460	560	312	708	555	360	138	144	330
20	422	461	260	480	480	293	931	503	388	134	147	340
21	426	440	310	500	380	544	1,860	465	352	127	149	390
22	449	380	390	500	330	925	1,290	459	352	118	154	440
23	498	330	310	500	280	620	868	591	346	119	140	433
24	486	380	390	520	300	504	800	615	346	120	156	396
25	494	450	450	540	350	485	799	501	326	138	159	394
26	521	540	410	520	450	447	777	438	316	141	169	367
27	528	520	450	520	520	591	824	398	287	148	183	361
28	505	500	460	540	600	665	813	395	262	145	220	365
29	504	540	440	580	-----	715	856	392	282	158	199	361
30	479	570	420	520	-----	808	975	416	400	155	372	392
31	446	-----	420	450	-----	769	-----	457	-----	157	334	-----
TOTAL	13,498	14,895	12,269	14,190	12,710	19,183	21,100	17,949	11,614	7,035	5,194	9,357
MEAN	435	497	396	458	454	619	703	579	387	227	168	312
MAX	528	628	570	580	680	925	1,860	887	483	440	372	440
MIN	382	330	230	250	280	293	452	392	262	118	130	211
AC-FT	26,770	29,540	24,340	28,150	25,210	38,050	41,850	35,600	23,040	13,950	10,300	18,560
CAL YR 1970	TOTAL 154,762		MEAN 424	MAX 985	MIN 94	AC-FT 307,000						

PLATTE RIVER BASIN

06787500 Calamus River near Burwell, Nebr.

LOCATION.--Lat 41°48'35", long 99°10'56", in NW 1/4 sec. 9, T.21 N., R.16 W., Garfield County, on left bank 130 ft downstream from highway bridge, 1.5 miles upstream from mouth, and 3 miles northwest of Burwell.

DRAINAGE AREA.--1,260 sq mi, approximately, of which about 110 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,156.48 ft above mean sea level (levels by Bureau of Reclamation). Prior to Apr. 20, 1945, nonrecording gage at site 130 ft upstream at present datum. Apr. 21, 1945, to Jan. 28, 1964, water-stage recorder at site 170 ft downstream at present datum.

AVERAGE DISCHARGE.--31 years, 300 cfs (217,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 935 cfs Apr. 21 (gage height, 3.96 ft, from floodmark); maximum gage height, 4.85 ft Feb. 12 (backwater from ice); minimum daily discharge, 160 cfs Jan. 4.
Period of record: Maximum discharge, 1,790 cfs May 4, 1964 (gage height, 4.35 ft); maximum gage height, 5.90 ft Jan. 26, 1967 (backwater from ice); minimum daily discharge, 54 cfs Dec. 5, 1950.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are fair. Diversions for irrigation above station.

REVISIONS (WATER YEARS).--WSP 1086: Drainage area. WSP 1918: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	272	276	340	230	339	342	411	312	263	215	302
2	250	280	277	350	260	340	316	372	316	261	214	296
3	251	286	263	260	250	336	311	370	313	274	212	265
4	260	286	256	160	230	330	298	338	300	291	215	252
5	274	285	249	240	200	324	288	340	310	316	217	252
6	277	283	247	270	170	320	284	343	300	294	226	249
7	277	265	253	280	180	316	275	318	280	283	228	252
8	292	263	259	280	220	313	267	310	270	273	223	245
9	293	289	263	300	280	322	280	306	270	254	230	248
10	300	301	250	300	340	335	290	338	280	256	237	240
11	309	299	200	290	320	345	290	329	290	257	247	221
12	316	289	220	300	250	350	300	315	300	260	251	218
13	297	288	230	300	230	359	310	307	310	249	250	212
14	276	287	245	300	260	364	320	297	300	244	250	207
15	263	284	270	310	280	363	320	285	300	251	253	211
16	253	287	300	320	254	366	350	287	280	258	248	219
17	243	292	280	340	275	362	360	291	250	259	246	228
18	246	302	260	340	295	334	370	305	270	268	248	241
19	248	300	240	310	397	218	390	337	260	266	243	243
20	253	294	220	370	293	216	460	328	270	276	244	253
21	247	296	230	390	280	307	760	319	260	271	245	270
22	253	270	260	390	270	344	600	326	260	261	243	318
23	280	180	230	370	270	350	380	401	258	268	235	325
24	303	220	290	380	260	323	342	411	251	268	238	325
25	291	260	260	400	270	294	317	424	255	261	234	334
26	290	280	310	320	280	277	308	438	260	261	235	312
27	310	270	290	320	293	288	321	374	253	254	237	294
28	299	257	290	310	313	314	313	342	243	249	242	284
29	292	262	280	310	-----	393	334	338	251	240	239	274
30	266	275	310	260	-----	453	388	333	248	233	258	286
31	265	-----	300	220	-----	414	-----	322	-----	222	288	-----
TOTAL	8,533	8,302	8,108	9,630	7,450	10,309	10,484	10,555	8,320	8,141	7,391	7,876
MEAN	275	277	262	311	266	333	349	340	277	263	238	263
MAX	316	302	310	400	397	453	760	438	316	316	288	334
MIN	243	180	200	160	170	216	267	285	243	222	212	207
AC-FT	16,930	16,470	16,080	19,100	14,780	20,450	20,800	20,940	16,500	16,150	14,660	15,620

CAL YR 1970 TOTAL 101,531 MEAN 278 MAX 540 MIN 180 AC-FT 201,400
WTR YR 1971 TOTAL 105,099 MEAN 288 MAX 760 MIN 160 AC-FT 208,500

NOTE.--No gage-height record Apr. 10-22.

PLATTE RIVER BASIN

95

06788500 North Loup River at Ord, Nebr.

LOCATION.--Lat 41°36'27", long 98°55'17", in SW 1/4 sec.22, T.19 N., R.14 W., Valley County, on right bank 150 ft downstream from bridge on State Highway 70 at Ord.

DRAINAGE AREA.--3,960 sq mi, approximately, of which about 770 sq mi contributes directly to surface runoff.

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 above mean sea level. Nov. 25, 1936, to Sept. 30, 1938, nonrecording gage at site 2 miles downstream at different datum.

AVERAGE DISCHARGE.--20 years (1937-38, 1952-71), 869 cfs (629,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,260 cfs Apr. 21 (gage height, 3.52 ft); maximum gage height, 5.16 ft Feb. 19 (backwater from ice); minimum daily discharge, 240 cfs Nov. 23.

Period of record: Maximum discharge, 10,100 cfs June 7, 1962 (gage height, 5.52 ft); maximum gage height, 5.56 ft Feb. 9, 1966 (backwater from ice); minimum daily discharge, 150 cfs Jan. 10, 1957, Nov. 30, 1960.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation. Flow includes return water from North Loup irrigation project.

REVISIONS (WATER YEARS).--WSP 1730: 1957(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	753	843	891	780	840	1,080	1,260	1,320	841	742	368	553
2	786	851	850	780	780	1,080	1,150	1,230	869	662	378	486
3	764	869	902	580	860	1,100	1,130	1,120	898	667	387	501
4	760	857	878	450	920	1,160	1,110	1,030	879	694	393	487
5	763	881	869	400	840	1,160	1,060	902	881	795	418	457
6	754	865	853	540	740	1,140	1,040	964	906	821	410	465
7	783	852	806	700	660	1,100	987	974	854	775	404	482
8	825	866	777	820	720	1,080	935	907	899	748	384	495
9	784	971	740	900	780	1,040	975	844	831	665	375	517
10	787	994	600	920	820	1,130	987	994	875	665	350	516
11	824	951	340	920	900	1,080	953	1,040	928	573	315	533
12	810	910	460	880	860	1,090	969	1,010	850	521	298	560
13	796	910	560	920	840	1,140	977	943	995	500	293	553
14	816	873	740	900	880	1,190	971	858	956	445	293	537
15	822	823	800	900	980	1,260	977	846	855	416	292	547
16	815	789	880	880	1,060	1,200	987	837	849	432	291	570
17	828	749	920	900	1,000	1,170	1,010	809	804	433	298	619
18	831	794	860	880	1,160	1,140	1,010	750	839	402	310	638
19	839	860	720	840	1,400	821	1,060	910	853	401	323	646
20	839	850	620	860	1,100	569	1,260	896	802	387	317	649
21	838	830	660	860	860	853	1,780	801	805	357	312	666
22	840	664	820	840	640	1,210	1,620	785	779	344	316	872
23	953	240	740	840	740	1,080	1,430	924	779	337	325	956
24	924	540	660	880	880	1,060	1,260	1,000	758	331	323	885
25	902	760	740	940	1,140	1,070	1,150	961	745	329	318	898
26	876	700	720	960	1,300	1,030	1,160	890	709	333	324	862
27	938	800	780	960	1,140	1,110	1,200	849	664	359	336	811
28	923	870	760	1,040	1,100	1,200	1,150	790	628	358	378	786
29	907	902	760	1,060	-----	1,310	1,220	771	597	362	386	769
30	864	913	720	1,100	-----	1,400	1,290	805	823	369	402	807
31	825	-----	760	960	-----	1,420	-----	829	-----	368	580	-----
TOTAL	25,769	24,577	23,186	26,190	25,940	34,473	34,068	28,589	24,751	15,591	10,897	19,123
MEAN	831	819	748	845	926	1,112	1,136	922	825	503	352	637
MAX	953	994	920	1,100	1,400	1,420	1,780	1,320	995	821	580	956
MIN	753	240	340	400	640	569	935	750	597	329	291	457
AC-FT	51,110	48,750	45,990	51,950	51,450	68,380	67,570	56,710	49,090	30,920	21,610	37,930
CAL YR 1970	TOTAL 281,760		MEAN 772	MAX 1,420	MIN 240	AC-FT 558,900						
WTR YR 1971	TOTAL 293,154		MEAN 803	MAX 1,780	MIN 240	AC-FT 581,500						

LOCATION.--Lat 41°15'35", long 98°26'50", in sec.22, T.15 N., R.10 W., Howard County, on right bank 310 ft downstream from bridge on U.S. Highway 281, 3 miles north of St. Paul, and 4 miles upstream from confluence with Middle Loup River.

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

AVERAGE DISCHARGE.--64 years, 975 cfs (706,400 acre-ft per year).

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

REVISIONS (WATER YEARS).--WSP 976: 1942. WSP 1086: Drainage area. WSP 1390: 1896.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	770	876	933	680	940	1,350	1,470	1,350	833	756	218	511
2	798	941	777	720	800	1,160	1,160	1,270	855	562	214	514
3	842	934	845	700	780	1,080	996	1,160	1,050	521	210	415
4	822	901	916	600	880	1,080	1,020	1,090	898	557	205	424
5	828	841	893	370	940	1,160	987	1,040	1,200	656	224	443
6	794	862	916	370	820	1,250	959	1,110	1,050	665	234	433
7	813	883	918	490	740	1,250	916	1,110	1,260	695	242	447
8	1,040	916	877	620	760	1,120	934	1,040	1,040	668	229	509
9	1,090	1,010	756	700	800	1,120	879	957	1,010	633	217	549
10	954	1,060	811	720	860	1,300	827	1,090	1,190	582	210	578
11	1,050	1,080	603	740	960	1,200	855	2,720	1,030	534	208	562
12	1,080	950	291	720	1,020	1,250	823	1,770	881	458	194	565
13	1,050	893	343	700	1,020	1,300	799	1,420	801	392	197	568
14	1,010	882	543	700	1,120	1,350	809	1,240	944	372	200	553
15	953	887	601	740	1,220	1,440	810	1,070	871	319	205	540
16	883	857	642	740	1,280	1,210	828	989	759	268	211	580
17	855	892	589	780	1,300	1,100	844	934	730	269	218	612
18	832	855	623	780	1,450	1,180	869	894	722	282	222	648
19	820	970	585	800	2,100	1,110	907	865	741	275	229	659
20	801	957	496	820	2,350	735	1,060	1,060	749	269	243	678
21	806	958	477	820	1,800	688	1,320	1,000	697	284	245	709
22	783	954	521	880	1,400	983	2,130	896	695	257	251	789
23	1,030	820	589	860	1,040	1,240	1,730	862	658	288	257	937
24	956	500	599	920	860	1,080	1,470	967	638	260	261	967
25	871	280	568	900	1,080	1,020	1,290	1,010	601	247	251	961
26	827	680	560	940	1,450	925	1,290	917	586	246	259	877
27	887	660	660	940	2,050	928	1,330	822	536	240	274	860
28	907	820	700	980	1,750	1,050	1,170	783	503	256	303	817
29	896	960	700	980	-----	1,160	1,070	719	479	247	322	796
30	894	1,000	680	980	-----	1,390	1,210	774	806	241	343	758
31	894	-----	640	1,020	-----	1,490	-----	848	-----	233	381	-----
TOTAL	27,836	26,079	20,652	23,710	33,570	35,699	32,762	33,777	24,813	12,532	7,477	19,259
MEAN	898	869	666	765	1,199	1,152	1,092	1,090	827	404	241	642
MAX	1,090	1,080	933	1,020	2,350	1,490	2,130	2,720	1,260	756	381	967
MIN	770	280	291	370	740	688	799	719	479	233	194	415</

PLATTE RIVER BASIN

97

06791500 Cedar River near Spalding, Nebr.

LOCATION.--Lat 41°42'41", long 98°26'48", in NE¹/₄NE¹/₄NE¹/₄ sec.15, T.20 N., R.10 W., Greeley County, on left bank 15 ft downstream from bridge on county road, 0.4 mile upstream from small tributary, and 4.7 miles northwest of Spalding.

DRAINAGE AREA.--805 sq mi, approximately, of which about 50 sq mi 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.

GAGE.--Water-stage recorder. Datum of gage is 1,896.24 ft above mean sea level. Prior to Jan. 4, 1961, at two sites 6.5 miles upstream at different datum.

AVERAGE DISCHARGE.--23 years, 154 cfs (111,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 400 cfs June 5, may have been greater on June 10; maximum gage height, 5.44 ft Feb. 26 (backwater from ice); minimum daily discharge, 78 cfs Oct. 4, Aug. 18.
Period of record: Maximum discharge, 4,000 cfs June 23, 1947 (gage height, 7.50 ft, site and datum then in use), from rating curve extended above 640 cfs on basis of slope-area measurement of peak flow; minimum daily, 30 cfs Jan. 30, 1946.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are poor. Low and medium flow regulated by powerplant 20 miles above station.

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	129	151	160	100	181	250	179	171	126	95	106
2	163	131	137	150	135	216	210	150	217	131	118	113
3	147	149	132	125	135	159	170	127	192	136	102	104
4	78	141	142	112	140	198	203	165	180	138	115	122
5	137	141	134	135	124	204	154	136	260	130	138	107
6	112	137	140	160	108	203	162	157	200	132	101	104
7	134	148	149	170	120	152	158	167	175	144	113	106
8	150	160	131	145	100	155	158	157	170	128	95	115
9	158	137	146	165	98	188	169	142	200	148	113	140
10	159	154	125	145	135	176	122	183	270	103	88	123
11	111	126	90	145	130	196	161	190	210	144	108	117
12	135	190	120	180	125	189	119	141	180	143	97	103
13	157	122	180	180	120	195	129	186	160	122	91	104
14	141	142	165	155	130	200	149	120	145	81	122	113
15	126	127	175	170	130	190	150	156	145	130	90	110
16	120	141	165	180	150	185	130	155	145	126	100	104
17	117	149	165	170	160	177	150	147	150	103	90	130
18	119	134	145	170	180	184	155	187	139	114	78	112
19	134	128	110	175	230	193	155	98	170	120	92	122
20	129	129	155	180	220	138	160	186	175	106	86	123
21	117	121	150	190	180	212	176	169	160	125	94	129
22	120	127	170	195	160	164	188	121	130	100	80	141
23	139	100	155	185	140	171	195	171	150	108	82	108
24	165	116	180	190	125	158	170	129	140	112	86	188
25	162	150	150	180	140	148	155	171	135	115	90	113
26	156	135	130	155	170	155	165	180	130	119	84	145
27	124	130	170	165	180	165	180	158	121	105	100	134
28	148	140	160	135	201	175	180	213	130	120	104	141
29	127	149	135	175	-----	180	162	217	142	90	94	126
30	150	137	170	165	-----	200	152	150	157	88	101	105
31	126	-----	155	112	-----	220	-----	198	-----	90	142	-----
TOTAL	4,193	4,120	4,582	5,019	4,066	5,627	4,937	5,006	5,049	3,677	3,089	3,608
MEAN	135	137	148	162	145	182	165	161	168	119	99.6	120
MAX	165	190	180	195	230	220	250	217	270	148	142	188
MIN	78	100	90	112	98	138	119	98	121	81	78	103
AC-FT	8,320	8,170	9,090	9,960	8,060	11,160	9,790	9,930	10,010	7,290	6,130	7,160

CAL YR 1970 TOTAL 54,825 MEAN 150 MAX 453 MIN 78 AC-FT 108,700
WTR YR 1971 TOTAL 52,973 MEAN 145 MAX 270 MIN 78 AC-FT 105,100

NOTE.--No gage-height record June 4-16.

PLATTE RIVER BASIN

06792000 Cedar River near Fullerton, Nebr.

LOCATION.--Lat 41°23'45", long 98°00'15", in NE1/4 sec. 4, T.16 N., R.6 W., Nance County, near left bank on downstream side of pier of highway bridge, 3 miles northwest of Fullerton and 5.8 miles upstream from mouth.

DRAINAGE AREA.--1,220 sq mi, approximately, of which about 480 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--September 1931 to June 1932, October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,638.39 ft above mean sea level. Prior to Nov. 5, 1942, non-recording gage, Nov. 5, 1942, to June 23, 1947, water-stage recorder, June 24, 1947, to Apr. 6, 1948, non-recording gage, Apr. 7, 1948, to Apr. 15, 1971, water-stage recorder, all at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--31 years (1940-71), 245 cfs (177,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 3,500 cfs Feb. 19 (gage height, 9.07 ft, from floodmark, backwater from ice); minimum daily, 47 cfs Aug. 25.

Period of record: Maximum discharge, 64,700 cfs Aug. 13, 1966 (gage height, 16.90 ft, present datum, from high point on surge), from rating curve extended above 6,600 cfs on basis of flow-over-highway-embankment and contracted-opening measurement of peak flow; minimum daily, 33 cfs Dec. 11, 1941.

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.

REVISIONS (WATER YEARS).--WSP 1086: Drainage area. WSP 1390: 1932, 1941, 1943. WSP 1710: 1951(P), 1952(M), 1953, 1955(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	208	246	165	175	240	349	238	259	405	85	100
2	162	194	245	165	150	260	310	231	238	222	102	130
3	176	212	233	165	155	230	269	207	400	174	85	110
4	190	205	209	145	175	270	257	211	294	210	78	116
5	168	202	231	140	175	300	257	220	674	365	78	122
6	140	204	240	170	170	300	240	273	375	250	116	116
7	165	188	233	165	160	260	232	266	318	202	110	122
8	207	196	239	180	155	250	228	246	293	218	90	107
9	194	232	230	170	170	275	223	248	286	238	85	110
10	225	230	200	165	145	473	270	256	734	310	69	130
11	206	214	125	165	180	603	205	311	548	314	65	156
12	210	211	150	165	195	510	229	270	340	174	59	146
13	186	237	200	170	205	481	198	270	294	198	61	139
14	185	216	215	175	200	455	189	236	245	153	50	124
15	205	221	215	180	200	324	196	220	233	143	52	127
16	192	220	225	175	215	278	222	217	230	107	74	116
17	176	211	220	180	235	274	217	220	218	124	61	133
18	174	217	225	190	390	278	186	211	238	124	52	156
19	165	235	205	190	1,000	263	228	255	190	116	56	146
20	188	219	165	185	600	262	234	233	218	107	52	156
21	187	219	165	190	350	243	261	166	222	107	59	163
22	193	208	210	190	230	285	294	250	210	105	57	190
23	230	140	235	200	180	290	281	219	190	116	65	194
24	387	170	210	205	170	259	281	225	174	92	48	186
25	263	220	220	210	180	228	248	222	210	100	47	194
26	232	200	235	220	220	236	260	193	163	100	54	238
27	243	170	200	195	240	246	271	227	160	102	50	194
28	215	180	165	190	260	299	274	201	156	167	52	218
29	214	210	185	195	-----	289	271	207	124	127	69	198
30	213	240	165	200	-----	281	252	267	525	107	67	210
31	191	-----	170	205	-----	288	-----	266	-----	92	100	-----
TOTAL	6,230	6,229	6,411	5,605	6,880	9,530	7,432	7,282	8,759	5,369	2,148	4,547
MEAN	201	208	207	181	246	307	248	235	292	173	69.3	152
MAX	387	240	246	220	1,000	603	349	311	734	405	116	238
MIN	140	140	125	140	145	228	186	166	124	92	47	100
AC-FT	12,360	12,360	12,720	11,120	13,650	18,900	14,740	14,440	17,370	10,650	4,260	9,020

CAL YR 1970 TOTAL 73,345 MEAN 201 MAX 558 MIN 34 AC-FT 145,500
WTR YR 1971 TOTAL 76,422 MEAN 209 MAX 1,000 MIN 47 AC-FT 151,600

PEAK DISCHARGE (BASE 1,500 CFS).--Feb. 19, about 3,500 cfs.

NOTE.--No gage-height record Feb. 19-24.

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REMARKS.--Records excellent. Canal diverts from Loup River in sec.6, T.16 N., R.4 W.; water is used in power-plants near Monroe and Columbus and is returned to Platte River 1.5 miles downstream from Loup River. Diversion began Dec. 2, 1936.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,350	2,250	2,420	1,850	1,510	275	2,890	2,300	2,150	2,080	503	715
2	1,340	2,130	2,730	1,690	1,500	187	2,890	2,640	2,000	2,140	495	891
3	1,660	2,330	2,190	305	1,370	138	2,720	2,380	2,090	1,520	486	971
4	1,870	2,220	2,070	790	1,230	488	2,440	2,200	2,580	1,370	481	856
5	1,650	2,150	2,090	1,060	1,200	961	2,470	2,050	2,660	1,700	513	789
6	1,590	2,020	328	987	1,300	1,070	2,350	2,660	2,840	1,560	619	755
7	1,680	2,020	778	858	1,240	953	2,100	2,810	2,730	1,540	743	675
8	2,160	1,950	1,280	886	1,190	171	1,780	2,840	2,840	1,660	696	639
9	2,480	2,370	2,050	959	1,190	122	1,820	2,400	2,440	1,510	595	670
10	2,360	2,480	742	1,010	1,270	614	1,770	2,620	2,730	1,860	496	687
11	2,070	2,540	83	1,040	1,400	1,240	1,600	2,900	2,880	1,560	434	799
12	2,120	2,440	42	1,080	1,250	1,810	1,680	2,950	2,590	1,240	382	794
13	2,020	2,310	299	1,110	1,300	2,120	1,570	2,880	2,230	1,020	358	715
14	2,060	2,440	589	1,070	1,480	2,250	1,610	2,590	2,030	926	323	704
15	2,040	1,370	1,290	1,070	1,650	2,230	1,620	2,360	2,360	817	327	697
16	2,020	2,170	1,280	1,120	1,760	2,490	1,630	2,070	2,210	727	342	714
17	1,990	2,060	1,570	1,160	1,720	2,720	1,660	2,130	1,950	661	316	769
18	1,900	2,100	1,380	1,110	1,610	2,510	1,560	2,160	1,790	641	309	899
19	1,910	2,150	825	1,060	690	1,410	1,670	2,380	1,680	604	326	951
20	1,940	2,120	1,020	1,140	257	1,770	1,810	2,520	1,600	575	312	905
21	1,960	2,130	1,140	1,270	146	2,570	2,160	2,120	1,570	544	339	955
22	2,000	954	1,010	1,280	106	2,520	2,800	2,030	1,480	514	329	1,000
23	1,940	71	776	1,270	98	2,810	2,880	1,950	1,390	531	353	1,080
24	2,570	249	684	1,350	450	2,570	2,710	1,880	1,300	514	311	1,240
25	2,660	459	818	1,470	996	1,290	2,670	2,330	1,240	584	294	1,630
26	2,380	570	1,080	1,360	769	2,580	2,750	2,350	1,220	561	305	1,620
27	2,530	65	1,230	1,420	960	2,660	2,970	2,030	1,180	492	307	1,360
28	2,520	125	1,300	1,510	370	2,680	2,990	1,800	1,060	616	313	1,340
29	2,650	508	1,520	1,630	-----	2,780	2,740	1,730	982	614	377	1,250
30	2,370	1,500	1,600	1,670	-----	2,830	2,400	1,720	1,720	560	400	1,190
31	2,120	-----	1,660	1,590	-----	2,690	-----	1,910	-----	530	530	-----
TOTAL	63,910	50,251	37,874	37,175	30,012	53,509	66,710	71,690	59,522	31,771	12,914	28,260
MAX	2,062	1,675	1,222	1,199	1,072	1,726	2,224	2,313	1,984	1,025	417	942
MEAN	2,660	2,540	2,730	1,850	1,760	2,830	2,990	2,950	2,880	2,140	743	1,630
MIN	1,340	65	42	305	98	122	1,560	1,720	982	492	294	639
AC-FT	126,800	99,670	75,120	73,740	59,530	106,100	132,300	142,200	118,100	63,020	25,610	56,050
CAL YR 1970	TOTAL 548,926		MEAN 1,504		MAX 2,960		MIN 24		AC-FT 1,089,000			
WTR YR 1971	TOTAL 543,598		MEAN 1,489		MAX 2,990		MIN 42		AC-FT 1,078,000			

PLATTE RIVER BASIN

06793000 Loup River near Genoa, Nebr.

LOCATION.--Lat 41°25'05", long 97°43'25", in SW 1/4 sec. 25, T.17 N., R.4 W., Nance County, on right bank on downstream side of bridge on State Highway 39, 2 miles south of Genoa, 3 miles upstream from Beaver Creek, and 6 miles downstream from diversion dam of Loup River Public Power District.

DRAINAGE AREA.--14,400 sq mi, approximately, of which about 6,000 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--August 1928 to June 1932, October 1943 to current year (October 1953 to April 1955, monthly discharge only).

GAGE.--Water-stage recorder. Datum of gage is 1,540.13 ft above mean sea level, unadjusted. Aug. 17, 1928, to June 30, 1932, nonrecording gage at datum 1.49 ft higher and Apr. 26 to Dec. 22, 1949, at present datum.

EXTREMES.--Current year: Maximum discharge, about 18,900 cfs Feb. 20 (gage-height, 10.07 ft, backwater from ice); maximum gage height, 10.37 ft Feb. 19 (backwater from ice); minimum daily discharge, 0.30 cfs Aug. 29. Period of record: Maximum discharge, 129,000 cfs Aug. 13, 1966 (gage height, 13.93 ft), from rating curve extended above 42,000 cfs on basis of indirect measurement of peak flow; no flow at times during 1956, 1959, 1961, 1963, 1970.

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 which diverts at point 6 miles upstream and returns to Platte River below mouth of Loup River; diversion began Dec. 2, 1936. (See preceding page.)

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	2.8	611	62	320	6,950	1,020	45	32	89	6.5	3.8
2	45	3.6	346	92	220	5,200	608	40	69	67	5.4	1.9
3	12	4.4	130	1,500	280	4,200	515	30	47	58	8.5	5.4
4	4.8	62	108	1,000	360	3,400	208	26	250	35	7.1	4.6
5	19	48	29	700	300	2,980	205	28	463	60	5.8	1.2
6	56	32	1,650	760	200	2,950	166	99	353	49	6.5	.55
7	10	11	1,390	880	260	2,980	92	246	243	89	7.1	28
8	20	6.5	864	840	330	3,310	118	437	195	107	7.8	95
9	606	46	102	760	430	3,250	92	71	86	76	7.1	80
10	189	179	1,170	700	470	3,250	101	110	285	122	5.4	78
11	30	480	1,780	640	340	4,160	71	4,210	449	30	4.2	11
12	73	395	1,020	560	480	4,000	92	2,380	86	16	3.5	.46
13	18	110	445	500	490	3,340	101	551	136	12	3.5	65
14	10	11	261	480	470	2,350	101	89	30	13	3.5	78
15	9.0	1,020	962	500	470	1,300	92	47	33	14	3.5	101
16	43	151	370	560	580	926	71	28	35	13	3.1	49
17	14	60	308	450	1,240	252	71	26	35	12	1.9	54
18	9.0	26	264	430	2,250	453	62	49	54	14	1.0	13
19	8.0	36	1,120	460	11,000	1,450	92	110	49	9.2	1.2	2.7
20	7.0	22	390	380	12,500	932	60	110	38	9.2	1.4	56
21	6.5	15	156	260	7,600	182	83	107	67	7.1	1.6	73
22	6.5	1,000	62	210	4,840	300	1,390	78	60	7.8	1.6	62
23	8.0	1,300	220	240	4,200	404	740	86	51	10	1.6	62
24	94	639	250	270	2,950	390	224	95	65	7.1	.78	78
25	345	15	240	420	1,540	1,550	118	92	69	9.8	.40	67
26	16	800	240	510	2,250	186	98	80	65	10	.46	33
27	10	2,250	235	440	3,280	134	478	78	58	8.5	.35	69
28	7.0	3,300	200	340	6,160	142	258	65	28	9.2	.35	56
29	6.0	2,200	76	220	-----	324	73	40	83	9.8	.30	43
30	4.8	1,160	76	180	-----	436	60	60	126	8.5	.46	54
31	2.8	-----	65	250	-----	452	-----	32	-----	5.8	.46	-----
TOTAL	1,740.4	15,385.3	15,140	15,594	65,810	62,133	7,460	9,545	3,440	988.0	102.36	1,325.61
MEAN	56.1	513	488	503	2,350	2,004	249	308	115	31.9	3.30	44.2
MAX	606	3,300	1,780	1,500	12,500	6,950	1,390	4,210	463	122	8.5	101
MIN	2.8	2.8	29	62	200	134	60	26	28	5.8	.30	.46
AC-FT	3,450	30,520	30,030	30,930	130,500	123,200	14,800	18,930	6,820	1,960	203	2,630

CAL YR 1970 TOTAL 101,698.70 MEAN 279.83 MAX 3,300 MIN 0 AC-FT 201,700
WTR YR 1971 TOTAL 198,663.67 MEAN 544.07 MAX 12,500 MIN 1.30 AC-FT 394,000

PLATTE RIVER BASIN

101

06794000 Beaver Creek at Genoa, Nebr.

LOCATION.--Lat 41°26'32", long 97°44'11", in NESE¹ sec.14, T.17 N., R.4 W., Nance County, on left bank in city park at southwest corner at Genoa; 0.2 mile downstream from Union Pacific Railroad bridge, 0.2 mile upstream from bridge on State Highway 39, and 2.5 miles upstream from mouth.

DRAINAGE AREA.--627 sq mi, of which about 410 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,542.13 ft above mean sea level, unadjusted. October 1940 to Nov. 5, 1942, nonrecording gage, and Nov. 6, 1942, to Nov. 1, 1955, water-stage recorder at site 0.4 mile upstream at datum 4.62 ft higher.

AVERAGE DISCHARGE.--31 years, 128 cfs (92,740 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 6,000 cfs Feb. 20 (gage height, 15.56 ft, backwater from ice); minimum daily, 28 cfs Aug. 13, 21.

Period of record: Maximum discharge, 21,200 cfs July 19, 1950 (gage height, 18.70 ft, site and datum then in use), from rating curve extended above 8,500 cfs; minimum daily, 3.0 cfs July 29, 1956.

REMARKS.--Records good except those for winter period and periods of no gage-height record, which are poor. Natural flow affected slightly by ground-water and surface-water withdrawals for irrigation. At times diurnal fluctuation at low flow caused by powerplants above station.

REVISIONS (WATER YEARS).--WSP 1086: Drainage area. WSP 1310: 1942(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	72	93	82	78	264	204	114	94	400	49	33
2	58	72	85	78	82	182	186	112	105	200	50	33
3	56	72	82	72	84	158	162	110	105	120	48	31
4	56	72	80	60	78	146	147	110	294	110	53	31
5	57	72	77	66	72	292	141	110	582	200	50	33
6	59	76	77	70	68	317	131	108	295	110	46	33
7	60	80	75	76	68	244	128	110	619	130	42	32
8	88	76	71	80	66	210	128	116	250	250	42	32
9	85	80	70	84	66	184	126	118	300	120	41	34
10	73	90	68	78	70	281	123	120	790	90	36	36
11	72	96	66	76	72	498	118	150	996	84	33	40
12	72	100	72	74	74	542	113	138	286	80	29	33
13	72	96	72	76	80	490	113	134	209	76	28	39
14	71	90	72	74	92	419	114	119	142	74	30	42
15	67	90	70	74	110	346	109	110	131	72	30	42
16	67	96	74	78	150	220	100	103	116	74	29	43
17	67	94	70	76	300	200	100	98	102	80	34	44
18	67	90	68	74	600	230	110	98	100	260	36	43
19	68	81	68	68	4,400	180	116	98	94	200	34	45
20	70	80	70	72	3,230	140	120	95	90	130	29	47
21	70	82	72	82	846	142	118	104	86	100	28	49
22	71	80	72	80	635	152	116	100	84	90	31	50
23	76	76	70	80	618	151	112	98	82	82	36	56
24	78	76	70	80	579	144	118	97	80	76	29	58
25	96	80	72	78	482	141	120	101	80	72	29	64
26	91	76	74	76	1,090	131	112	100	80	68	29	62
27	82	80	74	78	615	133	110	97	80	66	29	63
28	76	84	74	80	344	174	110	94	80	71	29	64
29	73	86	74	82	-----	230	114	92	400	63	29	59
30	72	87	76	78	-----	234	116	91	560	57	29	59
31	72	-----	80	76	-----	228	-----	120	-----	50	30	-----
TOTAL	2,202	2,482	2,288	2,358	15,049	7,403	3,735	3,365	7,312	3,655	1,097	1,330
MEAN	71.0	82.7	73.8	76.1	537	239	125	109	244	118	35.4	44.3
MAX	96	100	93	84	4,400	542	204	150	996	400	53	64
MIN	56	72	66	60	66	131	100	91	80	50	28	31
AC-FT	4,370	4,920	4,540	4,680	29,850	14,680	7,410	6,670	14,500	7,250	2,180	2,640

CAL YR 1970 TOTAL 32,414 MEAN 88.8 MAX 800 MIN 10 AC-FT 64,290
WTR YR 1971 TOTAL 52,276 MEAN 143 MAX 4,400 MIN 28 AC-FT 103,700

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	0015	15.56	a6,000	6-7	0915	6.98	1,170
2-26	0545	7.17	1,230	6-11	0330	8.71	1,780
6-4	2115	7.62	1,380				

NOTE.--No gage-height record Nov. 5-17, Mar. 17-19, Apr. 15 to May 5, June 17 to July 7, July 9-26.

a About.

PLATTE RIVER BASIN

06794500 Loup River at Columbus, Nebr.

LOCATION.--Lat 41°25'05", long 97°21'45", in SE¼NW¼ sec.30, T.17 N., R.1 E., Nance County, on left bank 1,250 ft downstream from bridge on U.S. Highway 30 at Columbus, 3.5 miles upstream from mouth, and 14 miles downstream from Looking-glass Creek.

DRAINAGE AREA.--15,200 sq mi, approximately, of which about 6,530 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1915 (published as "near Columbus" 1900-1901), March to September 1931, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,428.29 ft above mean sea level, unadjusted. See WRD Nebr. 1969 for history of changes prior to June 15, 1967.

EXTREMES.--Current year: Maximum discharge, about 14,000 cfs Feb. 20 (gage height, 9.30 ft, backwater from ice); minimum daily, 46 cfs Aug. 14, 30.

Period of record: Maximum discharge, 119,000 cfs Aug. 14, 1966 (gage height, 14.42 ft, present site and datum), from rating curve extended above 52,100 cfs by logarithmic plotting and volumetric study; minimum daily, 11 cfs Aug. 28, 1955.

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 which diverts at point 25 miles upstream and returns to Platte River below mouth of Loup River; diversion began Dec. 2, 1936. (See sta 06792500.)

REVISIONS (WATER YEARS).--WSP 956: 1937-41. WSP 1086: Drainage area. WSP 1390: 1895, 1897, 1900-1901, 1915, 1941(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	102	1,350	150	430	6,800	1,200	294	222	1,350	93	77
2	166	106	690	180	460	5,650	1,760	222	226	560	76	68
3	150	106	380	560	480	5,400	901	213	240	316	72	65
4	130	102	278	1,600	430	4,760	816	200	253	264	81	77
5	120	142	220	1,200	470	4,000	550	195	2,160	218	90	74
6	120	154	842	1,000	440	3,410	500	252	1,240	917	88	66
7	194	142	1,930	1,000	410	3,100	428	550	1,890	208	85	65
8	210	146	1,160	1,100	390	3,300	364	677	939	388	86	74
9	250	150	394	900	400	3,380	364	638	802	282	86	92
10	571	174	692	800	540	3,380	340	580	796	308	79	95
11	290	284	2,320	760	700	5,000	324	3,730	3,200	300	76	98
12	190	498	1,570	720	780	4,880	288	3,870	1,290	226	76	79
13	190	387	936	680	880	4,460	294	1,510	590	154	74	65
14	138	284	245	660	970	3,340	332	550	396	140	46	88
15	134	550	1,080	680	1,040	1,640	282	316	288	140	66	95
16	120	393	272	740	1,080	1,370	276	213	246	126	66	105
17	130	230	532	800	1,180	774	240	200	222	115	51	112
18	112	170	332	720	2,200	640	236	218	218	213	53	108
19	112	158	800	640	10,400	2,290	226	258	222	420	62	95
20	98	142	720	760	11,800	1,320	258	252	195	324	64	86
21	98	126	450	780	9,000	590	252	252	190	195	49	102
22	102	254	350	680	5,400	620	958	270	186	143	55	105
23	116	1,580	250	600	4,700	858	1,600	252	172	143	64	115
24	109	593	300	580	5,400	996	996	270	168	122	64	115
25	231	326	300	720	2,450	1,750	516	276	159	118	62	146
26	266	240	350	820	2,700	620	404	270	164	115	61	132
27	162	1,340	360	700	4,300	500	548	258	150	110	58	112
28	138	3,260	370	600	5,800	484	774	240	136	105	53	112
29	120	2,850	370	500	-----	640	500	231	122	110	50	122
30	120	1,490	350	420	-----	1,030	364	204	1,650	103	46	118
31	112	-----	300	430	-----	1,130	-----	276	-----	100	62	-----
TOTAL	5,173	16,479	20,493	22,480	75,230	78,112	16,891	17,737	18,732	8,333	2,094	2,863
MEAN	167	549	661	725	2,687	2,520	563	572	624	269	67.5	95.4
MAX	571	3,260	2,320	1,600	11,800	6,800	1,760	3,870	3,200	1,350	93	146
MIN	98	102	220	150	390	484	226	195	122	100	46	65
AC-FT	10,260	32,690	40,650	44,590	149,200	154,900	33,500	35,180	37,150	16,530	4,150	5,680

CAL YR 1970 TOTAL 144,790 MEAN 397 MAX 3,260 MIN 21 AC-FT 287,200
WTR YR 1971 TOTAL 284,617 MEAN 780 MAX 11,800 MIN 46 AC-FT 564,500

PLATTE RIVER BASIN

103

06795500 Shell Creek near Columbus, Nebr.

LOCATION.--Lat 41°31'33", long 97°16'55", in NE¼NW¼ sec.23, T.18 N., R.1 E., Platte County, on right bank 80 ft upstream from county road bridge, 1 mile upstream from Loseke Creek, and 7 miles northeast of Columbus.

DRAINAGE AREA.--270 sq mi, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,435 ft (from topographic map).

AVERAGE DISCHARGE.--24 years, 43.9 cfs (31,810 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 3,600 cfs Feb. 20 (gage height, 22.15 ft, backwater from ice); minimum daily, 3.3 cfs Aug. 20.

Period of record: Maximum discharge, 5,970 cfs June 3, 1950 (gage height, 21.38 ft); minimum daily, 0.4 cfs July 27, 1954.

Flood of June 2, 1947, reached a stage of 21.7 ft, from floodmark (discharge, 4,600 cfs).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	10	8.8	8.8	9.8	300	57	15	17	1,150	8.5	7.4
2	6.4	10	8.9	8.6	10	210	41	14	35	315	9.3	6.4
3	6.0	9.7	8.7	8.4	9.8	200	28	14	19	65	15	6.5
4	6.0	11	8.3	8.0	9.6	220	23	14	36	43	9.8	6.2
5	6.0	10	7.2	8.0	9.4	240	21	14	589	43	26	5.4
6	6.5	11	7.0	7.6	9.2	230	19	14	1,280	85	13	4.9
7	11	10	8.8	7.8	9.0	220	18	41	252	105	9.1	5.4
8	15	11	7.8	8.4	9.0	210	18	70	468	231	9.9	5.2
9	27	12	6.8	9.4	9.4	230	17	44	313	158	8.8	5.1
10	39	12	6.8	9.0	9.8	300	17	33	110	114	7.9	5.0
11	31	14	7.0	8.8	10	865	15	136	764	164	7.0	5.4
12	25	13	7.4	8.4	10	872	15	312	1,020	148	6.7	5.1
13	30	12	9.0	8.6	10	711	15	98	280	49	7.0	5.2
14	24	12	8.6	8.8	12	370	14	50	74	27	8.1	4.4
15	16	13	8.4	9.2	15	195	14	33	49	20	7.5	3.9
16	13	13	8.0	9.2	18	110	13	27	30	17	8.5	4.8
17	9.7	11	8.4	9.2	39	56	14	21	25	16	6.6	4.5
18	8.7	11	8.0	9.0	120	41	14	21	22	15	4.2	4.3
19	8.6	11	8.6	8.8	2,200	36	14	20	20	16	3.7	5.0
20	8.2	11	9.0	9.0	3,300	30	14	20	19	42	3.3	4.8
21	8.3	11	8.8	10	1,000	29	15	20	16	40	9.4	4.9
22	8.4	10	9.0	9.6	450	36	15	20	15	21	4.2	4.8
23	8.8	10	8.6	9.8	190	35	17	18	14	16	4.3	4.8
24	8.7	10	9.0	10	210	34	17	17	14	14	3.5	4.9
25	9.0	12	8.8	10	240	51	22	17	14	12	5.6	5.3
26	9.1	14	9.4	9.6	340	28	16	18	13	11	5.2	5.3
27	9.5	13	8.6	9.4	370	30	15	19	13	9.7	5.7	5.9
28	10	13	8.4	9.6	400	43	15	15	12	9.6	5.9	6.1
29	12	13	9.0	10	-----	201	17	14	12	9.3	4.3	5.5
30	11	11	8.8	9.8	-----	191	17	15	665	8.5	6.0	5.3
31	10	-----	8.6	9.6	-----	107	-----	16	-----	9.4	6.9	-----
TOTAL	408.4	344.7	258.5	280.4	9,029.0	6,431	567	1,200	6,210	2,983.5	240.9	157.7
MEAN	13.2	11.5	8.34	9.05	322	207	18.9	38.7	207	96.2	7.77	5.26
MAX	39	14	9.4	10	3,300	872	57	312	1,280	1,150	26	7.4
MIN	6.0	9.7	6.8	7.6	9.0	28	13	14	12	8.5	3.3	3.9
AC-FT	810	684	513	556	17,910	12,760	1,120	2,380	12,320	5,920	478	313

CAL YR 1970 TOTAL 5,942.9 MEAN 16.3 MAX 470 MIN 1.1 AC-FT 11,790
WTR YR 1971 TOTAL 28,111.1 MEAN 77.0 MAX 3,300 MIN 3.3 AC-FT 55,760

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	-	-	a3,600	6-12	1400	12.82	1,190
3-11	1030	11.35	951	7-1	0030	13.71	1,330
6-6	0930	14.40	1,440				

a About.

PLATTE RIVER BASIN

06796000 Platte River at North Bend, Nebr.

LOCATION.--Lat 41°27'10", long 96°45'50", in SE¹ sec.7, T.17 N., R.6 E., Dodge County, on left bank 30 ft upstream from bridge on State Highway 79, 1 mile south of North Bend, and 5 miles downstream from Shell Creek.

DRAINAGE AREA.--81,100 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,262.32 ft above mean sea level. Prior to Sept. 12, 1951, nonrecording gage and Sept. 12, 1951, to Sept. 20, 1970, water-stage recorder at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--22 years, 3,883 cfs (2,813,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 28,000 cfs Mar. 11 (gage height, 8.27 ft, backwater from ice); maximum gage height, 12.24 ft Feb. 20 (ice jam); minimum daily discharge, 333 cfs Aug. 29.
Period of record: Maximum discharge, 112,000 cfs Mar. 29, 1960 (gage height, 10.04 ft, present datum); maximum gage height, 12.24 ft Feb. 20, 1971 (ice jam); minimum daily discharge, 126 cfs Aug. 29, 1955.

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. Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,500	3,660	5,480	3,300	4,900	9,400	6,000	5,590	13,600	12,400	1,120	742
2	2,350	3,590	5,980	3,100	5,000	9,000	6,200	5,450	14,100	10,000	1,180	907
3	2,380	3,380	5,320	2,500	4,900	8,600	5,900	5,480	14,200	8,110	940	852
4	2,480	3,970	4,010	2,100	4,600	8,400	6,120	5,590	13,800	7,370	1,300	1,060
5	2,990	3,520	4,220	1,600	4,400	7,400	5,090	5,240	16,500	7,100	1,070	1,200
6	2,600	3,590	3,870	1,300	4,200	6,000	5,200	6,570	16,800	6,630	999	841
7	2,870	3,730	2,990	1,400	4,200	6,200	4,860	9,160	16,400	5,550	1,170	764
8	3,760	3,520	4,040	1,600	4,100	6,500	4,470	9,270	15,100	4,980	1,370	832
9	4,460	3,450	4,320	1,800	4,300	9,000	4,320	9,330	13,900	5,570	1,190	534
10	4,680	4,010	3,970	1,600	4,800	14,000	4,590	11,000	12,400	4,660	968	743
11	4,920	4,290	1,740	1,500	4,600	24,000	4,710	14,700	14,000	5,910	1,300	840
12	4,010	4,180	4,530	1,400	4,400	23,000	4,740	14,900	15,000	4,710	845	912
13	5,280	4,250	3,690	1,600	4,200	17,800	4,590	13,100	12,900	3,570	560	746
14	4,360	4,180	3,020	1,700	4,500	13,500	4,510	12,500	11,500	3,040	493	818
15	3,760	3,520	2,810	1,900	5,000	10,400	4,510	11,900	11,500	2,400	542	821
16	3,760	3,340	2,600	2,200	6,000	8,120	4,570	10,900	12,700	2,540	576	721
17	2,630	3,730	3,000	2,300	7,600	7,700	4,480	10,600	11,700	2,010	594	892
18	3,620	3,730	2,500	2,700	8,400	6,860	3,990	12,100	11,100	2,090	489	923
19	3,620	3,830	2,200	2,900	9,000	6,000	3,540	11,600	10,500	2,060	460	1,030
20	3,380	3,870	1,800	3,300	16,000	6,690	3,410	11,800	9,350	2,210	468	1,370
21	3,310	3,590	1,850	4,000	20,000	6,860	4,140	12,000	9,680	1,710	426	1,180
22	3,760	3,830	1,850	3,700	15,000	6,570	4,040	11,600	9,760	1,460	472	1,310
23	3,870	1,230	1,900	4,300	11,000	6,480	6,820	12,000	9,510	1,500	463	1,430
24	4,110	3,080	2,000	5,000	10,500	7,160	6,650	12,400	9,020	1,710	363	1,500
25	4,600	2,450	2,200	5,500	10,000	6,140	6,140	11,300	8,610	1,440	420	1,820
26	4,840	2,130	2,400	5,200	11,500	6,990	6,030	12,100	8,700	1,510	420	2,400
27	4,150	2,400	2,500	4,900	11,000	6,250	6,990	11,900	7,830	1,410	372	2,180
28	3,870	3,900	2,600	5,200	10,000	6,860	6,690	11,600	7,470	1,160	380	1,980
29	4,360	6,340	2,800	6,000	-----	6,280	6,570	11,500	6,580	1,550	333	1,890
30	4,180	5,240	3,000	5,300	-----	6,800	5,920	11,600	8,700	1,300	396	2,090
31	3,970	-----	3,200	4,800	-----	6,520	-----	12,600	-----	1,220	447	-----
TOTAL	115,430	109,530	98,390	95,700	214,100	281,480	155,790	327,380	352,910	118,880	22,126	35,318
MEAN	3,724	3,651	3,174	3,087	7,646	9,080	5,193	10,560	11,760	3,835	714	1,177
MAX	5,280	6,340	5,980	6,000	20,000	24,000	6,990	14,900	16,800	12,400	1,370	2,400
MIN	2,350	1,230	1,740	1,300	4,100	6,000	3,410	5,240	6,580	1,160	333	534
AC-FT	229,000	217,300	195,200	189,800	424,700	558,300	309,000	649,400	700,000	235,800	43,890	70,050

CAL YR 1970 TOTAL 1,256,942 MEAN 3,444 MAX 8,890 MIN 269 AC-FT 2,493,000
WTR YR 1971 TOTAL 1,927,034 MEAN 5,280 MAX 24,000 MIN 333 AC-FT 3,822,000

PLATTE RIVER BASIN

105

06797500 Elkhorn River at Ewing, Nebr.

LOCATION.--Lat 42°16'03", long 98°20'11", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.27 N., R.9 W., Holt County, on right bank 350 ft downstream from bridge on State Highway 420, 0.8 mile north of Ewing, and 1.5 miles upstream from South Fork Elkhorn River.

DRAINAGE AREA.--1,400 sq mi, approximately, of which about 740 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,835 ft (from topographic map). Prior to Oct. 22, 1952, at site 300 ft upstream at same datum.

AVERAGE DISCHARGE.--24 years, 181 cfs (131,100 acre-ft per year); median of yearly mean discharges, 110 cfs (79,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,100 cfs May 24 (gage height, 5.91 ft); minimum daily, 10 cfs Sept. 14-16.

Period of record: Maximum discharge, 7,500 cfs June 10, 1962 (gage height, 10.60 ft); minimum daily, 5.7 cfs Aug. 25, 1968.

Maximum stage known, 11.32 ft June 23, 24, 1947, from floodmark at site 300 ft upstream (discharge, 6,600 cfs).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	43	73	43	38	135	970	497	337	99	40	19
2	24	46	72	45	38	125	850	488	295	87	39	18
3	22	49	62	45	38	125	675	409	265	78	37	17
4	21	51	56	40	37	130	453	344	250	81	35	15
5	22	51	55	33	32	130	355	300	271	92	38	14
6	21	51	66	23	27	145	307	313	295	88	36	14
7	26	51	68	22	27	145	270	296	560	79	34	13
8	30	52	62	24	25	150	241	260	346	71	33	12
9	31	60	67	26	26	155	206	237	286	65	32	12
10	33	62	52	25	26	160	179	259	800	125	30	12
11	36	68	49	24	28	170	161	285	750	168	28	14
12	38	66	45	24	30	170	147	285	435	161	28	13
13	38	65	47	25	29	190	135	252	486	123	27	11
14	37	64	44	24	30	310	127	229	442	101	26	10
15	36	57	50	24	31	350	120	206	314	88	26	10
16	35	59	50	25	31	280	116	183	241	78	25	10
17	28	63	52	26	31	240	113	162	208	69	23	11
18	33	63	48	28	50	210	111	154	271	69	21	13
19	33	63	37	29	225	116	110	154	291	64	20	14
20	33	62	39	30	145	120	122	149	236	60	19	14
21	34	60	38	31	120	161	136	138	191	55	18	16
22	35	60	40	33	110	141	159	130	163	54	17	25
23	40	47	37	33	110	134	156	575	145	56	16	28
24	43	71	35	37	110	139	151	1,010	133	53	15	32
25	43	75	38	37	100	139	171	1,000	120	48	14	42
26	44	77	40	36	106	130	205	1,030	110	48	13	36
27	43	81	39	38	135	159	254	928	100	49	12	36
28	43	85	36	38	150	289	277	720	97	46	11	37
29	44	81	39	39	-----	379	304	546	98	45	11	36
30	42	70	41	40	-----	555	385	435	105	43	17	36
31	42	-----	43	38	-----	850	-----	391	-----	42	19	-----
TOTAL	1,055	1,853	1,520	985	1,885	6,632	7,966	12,365	8,641	2,385	760	590
MEAN	34.0	61.8	49.0	31.8	67.3	214	266	399	288	76.9	24.5	19.7
MAX	44	85	73	45	225	850	970	1,030	800	168	40	42
MIN	21	43	35	22	25	116	110	130	97	42	11	10
AC-FT	2,090	3,680	3,010	1,950	3,740	13,150	15,800	24,530	17,140	4,730	1,510	1,170

CAL YR 1970 TOTAL 37,116.4 MEAN 102 MAX 1,460 MIN 7.9 AC-FT 73,620
WTR YR 1971 TOTAL 46,637.0 MEAN 128 MAX 1,030 MIN 10 AC-FT 92,500

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
4-1	0130	5.76	1,010	6-7	0330	5.19	695
5-1	1900	4.79	518	6-10	1930	5.81	1,040
5-24	2100	5.91	1,100				

PLATTE RIVER BASIN

06798000 South Fork Elkhorn River at Ewing, Nebr.

LOCATION.--Lat 42°15'04", long 98°20'18", in SW $\frac{1}{4}$ sec.2, T.26 N., R.9 W., Holt County, on right bank 20 ft up stream from bridge on U.S. Highway 275 at southeast limits of Ewing and 0.8 mile upstream from mouth.

DRAINAGE AREA.--320 sq mi, approximately, of which about 190 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--July 1947 to September 1953, August 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,845 ft (from topographic map). See WSP 1918 for history of changes prior to June 14, 1963.

AVERAGE DISCHARGE.--17 years, 67.3 cfs (48,760 acre-ft per year); median of yearly mean discharges, 52 cfs (37,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 276 cfs June 12 (gage height, 1.94 ft); maximum gage height, 3.59 ft Feb. 20 (backwater from ice); minimum daily discharge, 13 cfs Aug. 29.

Period of record: Maximum discharge, 1,760 cfs Apr. 5, 1949 (gage height, 5.02 ft); maximum gage height, 6.12 ft Mar. 7, 1949 (backwater from ice) site then in use; minimum daily discharge, 11 cfs Jan. 15, 1953.

Flood of June 21, 1947, reached a stage of 7.22 ft, from floodmarks 300 ft upstream (discharge, about 3,400 cfs).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	62	41	56	33	39	112	38	36	71	24	21
2	23	72	33	52	37	36	101	36	33	56	27	21
3	23	76	35	45	35	35	74	41	36	71	27	21
4	24	72	46	35	31	36	68	41	44	77	24	21
5	24	66	27	25	30	40	65	41	53	101	36	24
6	25	59	31	20	31	40	53	62	62	87	33	21
7	60	55	52	20	29	36	50	50	84	74	27	15
8	50	48	23	21	25	33	59	59	65	68	24	17
9	40	48	29	25	31	35	53	62	68	62	24	24
10	35	48	46	25	35	35	44	59	143	131	21	24
11	35	55	25	23	36	35	47	47	118	101	24	21
12	35	59	30	22	37	36	47	47	146	74	33	24
13	35	57	32	22	35	37	50	65	210	62	24	21
14	34	57	25	24	36	39	56	71	182	56	21	21
15	34	62	30	27	36	41	53	62	154	53	24	21
16	33	52	30	29	35	43	62	50	136	47	24	30
17	33	41	32	28	33	45	68	47	112	38	21	30
18	32	48	30	27	45	47	74	53	146	36	19	27
19	32	55	24	25	43	60	68	62	129	30	21	27
20	31	52	40	31	41	70	68	47	136	24	17	24
21	31	44	50	40	35	56	65	47	115	24	21	24
22	31	62	54	50	33	44	77	44	87	33	17	44
23	48	54	45	45	30	68	74	104	47	33	19	24
24	46	58	47	48	33	62	68	118	41	30	19	17
25	44	66	50	43	36	65	65	129	36	30	19	33
26	39	60	54	37	39	62	59	108	41	30	19	19
27	46	60	50	40	35	90	59	59	33	30	19	21
28	50	60	43	41	37	126	56	41	44	24	17	19
29	50	56	52	43	-----	157	68	27	71	27	13	24
30	55	50	54	38	-----	192	50	24	94	27	38	24
31	62	-----	56	31	-----	136	-----	36	-----	24	24	-----
TOTAL	1,163	1,714	1,216	1,038	972	1,876	1,913	1,777	2,702	1,631	720	704
MEAN	37.5	57.1	39.2	33.5	34.7	60.5	63.8	57.3	90.1	52.6	23.2	23.5
MAX	62	76	56	56	45	192	112	129	210	131	38	44
MIN	23	41	23	20	25	33	44	24	33	24	13	15
AC-FT	2,310	3,400	2,410	2,060	1,930	3,720	3,790	3,520	5,360	3,240	1,430	1,400

CAL YR 1970 TOTAL 16,460 MEAN 45.1 MAX 375 MIN 14 AC-FT 32,650
WTR YR 1971 TOTAL 17,426 MEAN 47.7 MAX 210 MIN 13 AC-FT 34,560

PEAK DISCHARGE (BASE, 200 CFS, REVISED).--Mar. 30 (0830) 206 cfs (1.76 ft); June 12 (2400) 276 cfs (1.94 ft).

PLATTE RIVER BASIN

107

06798500 Elkhorn River at Neligh, Nebr.

LOCATION.--Lat 42°07'20", long 98°01'40", in sec.20, T.25 N., R.6 W., Antelope County, on right bank 10 ft downstream from bridge on old State Highway 14 at Neligh.

DRAINAGE AREA.--2,200 sq mi, approximately, of which about 1,200 sq mi 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.

GAGE.--Water-stage recorder. Datum of gage is 1,713.88 ft above mean sea level. Prior to Apr. 16, 1933, nonrecording gage at site 30 ft downstream at present datum. Apr. 16, 1933, to Jan. 23, 1939, nonrecording gage at bridge 10 ft upstream at present datum.

AVERAGE DISCHARGE.--39 years, 284 cfs (205,800 acre-ft per year); median of yearly mean discharges, 230 cfs (167,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,910 cfs Feb. 18 (gage height, 6.03 ft); minimum daily, 44 cfs Aug. 25, 29, Sept. 15.

Period of record: Maximum discharge, about 12,000 cfs June 23, 1947 (gage height, 12.53 ft), from main channel rating curve extended above 4,900 cfs and field estimate of flow through break in highway fill; minimum daily, 12 cfs July 2, 1932.

Flood of Mar. 29, 1960, reached a stage of 12.24 ft, from floodmark (discharge, 12,300 cfs).

REMARKS.--Records fair except those for winter period and period of no-gage height record, which are poor.

REVISIONS (WATER YEARS).--WSP 1006: 1935, 1942. WSP 1390: 1931-32, 1937(M). WSP 1730: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	125	196	108	115	380	1,240	622	490	257	105	76
2	76	125	175	108	130	410	1,050	665	439	210	101	68
3	72	140	171	100	145	348	840	626	415	172	95	60
4	70	160	152	90	140	313	586	578	429	180	93	57
5	72	165	150	82	130	351	466	530	470	201	103	52
6	70	165	124	76	122	373	450	530	454	210	124	55
7	130	155	121	86	120	344	415	510	634	198	101	60
8	155	160	162	94	110	344	429	470	705	180	99	54
9	155	170	159	100	118	304	341	458	695	165	93	57
10	150	184	129	96	130	362	331	494	905	265	87	61
11	145	164	120	90	140	585	293	498	1,330	355	80	58
12	145	162	110	84	160	838	338	482	930	338	82	57
13	140	167	108	90	165	1,100	320	474	1,070	296	87	52
14	135	159	116	92	170	1,190	306	433	1,120	237	76	45
15	125	148	120	96	180	930	296	387	815	210	74	44
16	120	157	125	96	190	725	282	349	675	175	78	51
17	120	162	120	102	300	638	271	324	546	158	73	58
18	114	159	122	96	672	602	264	306	542	192	66	66
19	106	164	110	86	1,200	303	250	345	574	158	66	69
20	100	159	120	116	609	334	258	317	514	150	68	73
21	94	162	130	114	414	350	285	300	436	132	66	73
22	96	128	124	122	341	401	300	278	394	130	64	105
23	106	140	118	130	269	408	320	342	355	149	58	115
24	120	155	108	135	231	376	341	1,160	328	132	45	103
25	130	164	110	140	294	366	300	1,360	296	125	44	123
26	130	163	108	135	269	376	310	1,250	261	118	49	142
27	125	159	110	122	284	415	419	1,050	219	118	49	128
28	116	162	108	124	351	705	482	840	250	115	45	105
29	110	181	102	135	-----	845	518	685	213	112	44	115
30	118	202	102	140	-----	915	546	574	231	108	54	120
31	125	-----	102	110	-----	1,040	-----	542	-----	108	82	-----
TOTAL	3,550	4,766	3,932	3,295	7,499	16,971	12,847	17,779	16,735	5,654	2,351	2,302
MEAN	115	159	127	106	268	547	428	574	558	182	75.8	76.7
MAX	155	202	196	140	1,200	1,190	1,240	1,360	1,330	355	124	142
MIN	70	125	102	76	110	303	250	278	213	108	44	44
AC-FT	7,040	9,450	7,800	6,540	14,870	33,660	25,480	35,260	33,190	11,210	4,660	4,570

CAL YR 1970 TOTAL 76,126 MEAN 209 MAX 3,050 MIN 39 AC-FT 151,000
WTR YR 1971 TOTAL 97,681 MEAN 268 MAX 1,360 MIN 44 AC-FT 193,800

PEAK DISCHARGE (BASE, 1,000 CFS)

NOTE.--No gage-height record Oct. 1 to Nov. 9, Mar. 21.

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-18	2400	6.03	1,910	5-25	1200	5.54	1,430
3-13	1600	5.80	1,680	6-11	1000	5.63	1,510
4- 1	1500	5.40	1,350				

PLATTE RIVER BASIN

06799000 Elkhorn River near Norfolk, Nebr.

LOCATION.--Lat 42°00'20", long 97°28'40", in SW 1/4 sec.31, T.24 N., R.1 W., Madison County, on left bank 75 ft downstream from bridge on county road, 3.5 miles west-southwest of Norfolk, and 7 miles upstream from North Fork Elkhorn River.

DRAINAGE AREA.--2,790 sq mi, approximately, of which about 1,790 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--July 1896 to November 1903 (no winter records), October 1945 to current year. Gage height records collected at site 3.2 miles downstream since May 1941 are contained in reports of U.S. Weather Bureau. Published as "at Norfolk" prior to October 1957.

GAGE.--Water-stage recorder. Datum of gage is 1,522.83 ft above mean sea level. See WSP 1918 for history of changes prior to Aug. 30, 1958.

AVERAGE DISCHARGE.--26 years, 518 cfs (375,300 acre-ft per year); median of yearly mean discharges, 420 cfs (304,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 15,000 cfs Feb. 19 (gage height, 8.28 ft); minimum daily, 82 cfs Aug. 27, 29.

Period of record: Maximum discharge, 16,900 cfs June 14, 1967 (gage height, 8.52 ft); maximum gage height observed, 13.63 ft Mar. 11, 1949, site and datum then in use (backwater from ice); minimum daily discharge, 50 cfs Aug. 26, 1968.

Flood of May 13, 1944, reached a stage of 11.8 ft, previous site and datum (discharge, 14,300 cfs).

REMARKS.--Records good except those for winter period, which are poor. Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 1898-1900. WSP 1730: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	211	329	185	240	423	1,080	696	896	650	171	107
2	152	203	337	195	230	308	1,030	801	815	434	170	107
3	143	223	287	165	230	280	974	878	738	301	174	92
4	146	243	261	135	215	263	880	845	716	283	161	92
5	146	246	220	135	210	615	780	777	1,450	301	176	94
6	144	245	210	120	220	727	700	795	1,060	306	237	96
7	150	225	200	115	180	573	639	813	859	290	198	89
8	276	222	223	165	200	504	751	728	974	289	167	88
9	318	249	220	180	210	468	683	662	1,830	286	164	91
10	301	266	200	180	270	495	601	748	5,380	1,100	154	94
11	291	266	140	180	260	760	553	844	1,910	864	149	100
12	293	240	150	170	250	1,060	521	782	1,080	577	142	103
13	294	221	190	170	270	1,140	484	740	1,770	428	139	92
14	267	204	200	170	310	1,320	462	686	2,490	372	140	92
15	248	185	230	165	340	1,120	439	624	1,150	308	145	84
16	247	177	220	175	350	950	428	537	947	283	146	84
17	245	172	230	195	400	848	409	465	842	259	140	92
18	234	187	210	170	1,000	780	409	435	791	265	134	95
19	218	204	150	140	11,300	680	399	468	738	266	123	99
20	198	213	180	210	3,900	600	414	468	738	255	117	103
21	194	231	240	220	1,000	520	493	405	683	243	117	107
22	203	220	205	290	740	441	554	353	606	238	115	132
23	224	210	135	280	620	400	566	345	522	229	110	159
24	253	260	160	270	606	360	521	414	486	229	104	184
25	256	330	165	280	639	350	485	1,240	441	228	99	184
26	233	280	175	270	1,810	360	489	1,260	396	234	90	194
27	207	250	140	300	882	400	538	1,240	345	228	82	195
28	179	290	135	290	562	520	604	1,200	308	200	83	188
29	165	290	175	270	-----	780	618	1,140	387	187	82	186
30	187	340	190	280	-----	900	651	987	650	185	83	188
31	206	-----	185	270	-----	1,020	-----	948	-----	176	89	-----
TOTAL	6,777	7,103	6,292	6,340	27,444	19,965	18,155	23,324	31,998	10,494	4,201	3,611
MEAN	219	237	203	205	980	644	605	752	1,067	339	136	120
MAX	318	340	337	300	11,300	1,320	1,080	1,260	5,380	1,100	237	195
MIN	143	172	135	115	180	263	399	345	308	176	82	84
AC-FT	13,440	14,090	12,480	12,580	54,440	39,600	36,010	46,260	63,470	20,810	8,330	7,160
CAL YR 1970	TOTAL 129,357 MEAN 354 MAX 2,770 MIN 72 AC-FT 256,600											
WTR YR 1971	TOTAL 165,704 MEAN 454 MAX 11,300 MIN 82 AC-FT 328,700											

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-19	1500	8.28	15,000	6-13	2300	5.54	5,500
2-26	1300	3.51	2,150	7-10	1500	4.00	2,190
6-10	1230	6.40	7,970				

PLATTE RIVER BASIN

109

06799100 North Fork Elkhorn River near Pierce, Nebr.

LOCATION.--Lat 42°10'44", long 97°29'04", in SW $\frac{1}{4}$ sec.31, T.26 N., R.1 W., Pierce County, on left downstream wingwall of county road bridge, 2.5 miles southeast of Pierce.

DRAINAGE AREA.--520 sq mi, approximately.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,553.07 ft above mean sea level (U.S. Weather Bureau levels).

AVERAGE DISCHARGE.--11 years, 91.7 cfs (66,440 acre-ft per year); median of yearly mean discharges, 75 cfs (54,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 15,200 cfs Feb. 19 (gage height, 15.10 ft); minimum daily, 20 cfs Oct. 3, Sept. 14, 15.

Period of record: Maximum discharge, 15,200 cfs Feb. 19, 1971 (gage height, 15.10 ft); minimum daily, 13 cfs July 21, 22, 28, 1968, July 31, 1970.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	33	41	34	35	270	117	55	34	55	34	23
2	21	35	37	26	34	240	96	51	33	52	32	23
3	20	36	36	24	33	220	89	51	32	51	30	22
4	22	38	40	22	33	205	86	52	34	51	31	22
5	22	36	39	21	32	210	81	50	787	73	31	23
6	22	34	35	21	32	250	77	64	195	60	29	22
7	24	32	36	22	31	230	73	58	860	50	30	22
8	46	33	35	24	31	190	70	55	313	51	29	21
9	43	43	30	27	35	160	68	51	263	51	29	21
10	34	44	26	29	40	135	66	58	1,240	118	25	21
11	33	40	27	30	45	151	62	71	3,920	173	24	21
12	37	37	30	29	50	251	61	63	2,160	279	25	21
13	31	35	29	28	54	322	60	56	1,180	236	25	21
14	28	34	28	30	58	251	58	51	1,680	84	24	20
15	28	35	29	31	68	146	57	49	739	63	24	20
16	30	35	29	33	160	108	56	46	290	55	24	22
17	26	33	31	35	280	91	56	43	200	50	24	22
18	28	33	30	39	1,240	76	54	44	110	50	24	23
19	28	37	30	39	10,200	70	55	50	150	47	24	23
20	28	36	29	40	5,000	82	55	43	110	43	24	23
21	28	36	29	45	1,800	104	67	42	96	41	24	24
22	28	43	29	50	1,100	104	68	39	86	83	25	25
23	30	45	29	49	740	96	65	40	78	61	25	27
24	33	44	29	54	510	95	67	40	74	44	23	26
25	33	47	29	56	380	96	64	39	68	40	23	28
26	33	49	30	50	520	88	59	37	62	38	23	28
27	34	45	31	45	460	90	62	36	58	37	23	28
28	33	47	32	43	350	195	59	34	54	36	23	26
29	33	43	34	41	-----	242	57	32	58	36	23	26
30	33	40	36	38	-----	201	58	33	61	34	23	29
31	31	-----	36	37	-----	152	-----	40	-----	35	23	-----
TOTAL	922	1,158	991	1,092	23,351	5,121	2,023	1,473	15,025	2,177	800	703
MEAN	29.7	38.6	32.0	35.2	834	165	67.4	47.5	501	70.2	25.8	23.4
MAX	46	49	41	56	10,200	322	117	71	3,920	279	34	29
MIN	20	32	26	21	31	70	54	32	32	34	23	20
AC-FT	1,830	2,300	1,970	2,170	46,320	10,160	4,010	2,920	29,800	4,320	1,590	1,390

CAL YR 1970 TOTAL 18,080 MEAN 49.5 MAX 505 MIN 13 AC-FT 35,860
WTR YR 1971 TOTAL 54,836 MEAN 150 MAX 10,200 MIN 20 AC-FT 108,800

PEAK DISCHARGE (BASE, 870 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-19	1600	15.10	15,200	6-11	0800	14.41	5,400
6-5	1400	10.81	1,140	6-14	0500	12.91	1,890
6-7	1100	10.97	1,190				

PLATTE RIVER BASIN

06799450 Logan Creek at Pender, Nebr.

LOCATION.--Lat 42°06'40", long 96°42'00", in NW $\frac{1}{4}$ sec.26, T.25 N., R.6 E., Thurston County, on right bank 200 ft downstream from bridge on Nebraska State Highway 94 at Pender and 0.7 mile downstream from Rattlesnake Creek.

DRAINAGE AREA.--731 sq mi, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (from topographic map). Prior to Apr. 23, 1966, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--6 years, 166 cfs (120,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 36,900 cfs Feb. 19 (gage height, 23.11 ft); minimum daily, 36 cfs Feb. 9.

Period of record: Maximum discharge, 36,900 cfs Feb. 19, 1971 (gage height, 23.11 ft); minimum daily, 14 cfs July 28, 1968.

REMARKS.--Records fair except those for winter period, which are poor. Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WRD Nebr. 1967: 1966(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	48	67	56	54	421	141	69	73	163	74	61
2	45	52	54	52	54	366	145	62	75	125	72	62
3	45	58	52	48	54	313	115	64	74	127	69	62
4	45	59	52	43	48	235	113	73	105	115	70	62
5	45	55	48	40	45	268	100	73	2,340	261	73	62
6	43	54	47	38	43	211	89	73	2,560	249	73	62
7	49	50	46	38	40	195	111	76	4,820	131	73	62
8	84	52	50	40	38	240	94	74	933	115	68	62
9	105	65	54	42	36	375	87	82	1,020	111	65	62
10	88	71	56	44	38	189	106	117	9,030	493	62	57
11	84	62	54	44	42	174	87	263	2,200	562	59	57
12	100	58	52	44	44	147	76	216	625	867	59	53
13	87	56	50	44	47	149	80	129	1,190	189	60	56
14	70	53	50	46	120	133	94	113	1,560	133	57	56
15	60	52	52	46	150	123	102	96	285	118	55	57
16	56	53	52	45	300	113	89	91	183	109	58	53
17	52	51	52	45	460	100	98	80	165	102	58	55
18	49	49	54	44	8,300	127	89	88	163	101	56	56
19	49	62	54	43	30,400	202	92	90	180	96	60	57
20	48	64	54	45	6,400	117	101	90	153	90	64	55
21	45	57	54	50	800	109	151	89	135	88	60	56
22	45	52	56	54	680	96	107	97	131	87	55	58
23	46	50	54	58	720	102	98	91	129	87	55	62
24	45	50	54	58	520	115	76	104	131	93	53	59
25	45	80	52	58	720	119	71	86	135	84	53	63
26	49	70	54	56	3,140	111	69	84	131	81	54	65
27	54	68	54	54	1,400	117	82	78	131	78	55	60
28	54	80	54	52	593	290	82	78	127	88	55	57
29	51	86	54	52	-----	270	64	77	125	82	55	57
30	51	94	56	52	-----	227	73	85	284	74	57	60
31	51	-----	56	50	-----	174	-----	82	-----	73	58	-----
TOTAL	1,786	1,811	1,648	1,481	55,286	5,928	2,882	2,970	29,193	5,172	1,895	1,766
MEAN	57.6	60.4	53.2	47.8	1,975	191	96.1	95.8	973	167	61.1	58.9
MAX	105	94	67	58	30,400	421	151	263	9,030	867	74	65
MIN	43	48	46	38	36	96	64	62	73	73	53	53
AC-FT	3,540	3,590	3,270	2,940	109,700	11,760	5,720	5,890	57,900	10,260	3,760	3,500
CAL YR 1970	TOTAL	31,200	MEAN	85.5	MAX	500	MIN	32	AC-FT	61,890		
WTR YR 1971	TOTAL	111,818	MEAN	306	MAX	30,400	MIN	36	AC-FT	221,800		

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-19	0630	23.11	36,900	6-9	0430	8.21	2,570
2-26	0130	11.94	6,330	6-10	0900	20.09	19,200
6-5	1200	10.50	4,610	6-13	1030	7.11	1,780
6-7	0400	13.64	8,370	6-14	0200	9.17	3,350

PLATTE RIVER BASIN

111

06799500 Logan Creek near Uehling, Nebr.

LOCATION.--Lat 41°42'50", long 96°31'15", on south line of SE¹SE¹ sec.9, T.20 N., R.8 E., Dodge County, near right bank on downstream side of bridge on county road, 2 miles southwest of Uehling and 8 miles upstream from mouth.

DRAINAGE AREA.--1,030 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,208.73 ft above mean sea level. See WSP 1918 for history of changes prior to July 15, 1963.

AVERAGE DISCHARGE.--30 years, 185 cfs (134,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 25,200 cfs Feb. 20 (gage height, 20.15 ft, from floodmark); minimum daily, 39 cfs Jan. 7.

Period of record: Maximum discharge, 25,200 cfs 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, 14 cfs Dec. 28, 1941, Nov. 27, 1942.

Flood of June 5, 1940, reached a stage of 20.6 ft, present datum, from floodmarks (discharge, 22,200 cfs).

REMARKS.--Records good except those for winter period, which are poor. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	63	100	64	50	560	221	107	118	271	113	74
2	57	65	92	60	50	380	190	105	114	172	107	75
3	55	68	80	56	48	280	170	104	111	144	106	73
4	53	73	74	52	47	250	163	104	109	197	101	72
5	55	70	71	45	45	250	153	104	1,100	300	100	77
6	55	70	62	40	45	250	145	103	1,670	286	101	72
7	60	68	56	39	44	230	143	120	5,250	217	101	71
8	93	67	70	43	42	200	135	121	1,640	311	99	68
9	132	73	98	50	40	220	128	114	710	176	99	68
10	126	81	90	52	42	370	128	159	5,760	727	96	69
11	106	89	90	54	45	1,520	123	345	3,350	819	91	69
12	107	80	88	54	50	2,580	118	324	1,170	647	86	69
13	119	76	86	54	54	3,080	115	214	803	463	87	68
14	99	74	84	56	58	1,890	115	171	1,840	184	80	67
15	85	75	82	58	58	576	120	153	591	170	73	67
16	79	76	80	56	90	292	119	140	293	159	78	68
17	72	75	78	56	700	273	115	134	242	150	79	68
18	69	73	78	56	2,870	252	115	142	224	147	77	69
19	66	86	70	54	9,620	388	117	146	207	143	85	72
20	66	87	60	54	20,100	329	117	137	223	139	82	73
21	69	89	48	58	15,500	216	127	130	189	134	81	70
22	63	78	48	62	3,000	213	136	124	185	131	79	72
23	64	79	50	64	1,180	202	135	125	172	132	75	74
24	65	82	54	64	1,010	199	124	130	168	128	71	75
25	63	90	58	64	900	196	113	141	160	125	69	78
26	64	95	60	62	2,860	197	108	124	165	119	67	80
27	66	94	60	60	1,550	328	123	119	160	121	67	79
28	67	102	60	58	870	758	122	115	141	360	67	76
29	66	103	62	58	-----	499	117	114	147	176	69	72
30	65	106	66	56	-----	313	113	113	207	133	71	78
31	64	-----	68	52	-----	252	-----	123	-----	119	69	-----
TOTAL	2,330	2,407	2,223	1,711	60,968	17,543	3,968	4,405	27,219	7,500	2,626	2,163
MEAN	75.2	80.2	71.7	55.2	2,177	566	132	142	907	242	84.7	72.1
MAX	132	106	100	64	20,100	3,080	221	345	5,760	819	113	80
MIN	53	63	48	39	40	196	108	103	109	119	67	67
AC-FT	4,620	4,770	4,410	3,390	120,900	34,800	7,870	8,740	53,990	14,880	5,210	4,290
CAL YR 1970	TOTAL 37,063	MEAN 102	MAX 500	MIN 40	AC-FT 73,510							
WTR YR 1971	TOTAL 135,063	MEAN 370	MAX 20,100	MIN 39	AC-FT 267,900							

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	2000	20.15	25,200	6- 7	1200	13.65	7,220
2-26	-	-	45,400	6-10	1830	16.35	10,700
3-13	1845	11.52	5,170	6-14	1200	8.40	2,680
6- 5	2130	9.39	3,410				

a About.

PLATTE RIVER BASIN

06800000 Maple Creek near Nickerson, Nebr.

LOCATION.--Lat 41°32'44", long 96°30'09", in NE1/4 sec.10, T.18 N., R.8 E., Dodge County, on right bank 120 ft upstream from bridge on U.S. Highways 77 and 275, 1.5 miles northwest of Nickerson, and 4 miles upstream from mouth.

DRAINAGE AREA.--450 sq mi, approximately.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.56 ft above mean sea level. Prior to July 28, 1960, non-recording gage at site 120 ft downstream at present datum.

AVERAGE DISCHARGE.--20 years, 62.8 cfs (45,500 acre-ft per year); median of yearly mean discharges, 54 cfs (39,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 7,800 cfs Feb. 20 (gage height, 15.83 ft); maximum gage height, 16.10 ft (from floodmark) Feb. 19 (backwater from ice); minimum daily discharge, 1.1 cfs Jan. 12, 13.

Period of record: Maximum discharge, 10,800 cfs June 21, 1960 (gage height, 14.67 ft); maximum gage height, 16.10 cfs Feb. 19, 1971 (from floodmark, backwater from ice); minimum daily discharge, 0.1 cfs Jan. 15, 16, 1956.

Maximum stage known since 1944, 16.28 ft June 11, 1944, from floodmarks (discharge, 35,000 cfs, from indirect measurement of peak flow).

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

REVISIONS (WATER YEARS).--WSP 1630: 1957-58.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	6.4	15	2.6	2.0	74	87	14	38	382	13	4.0
2	1.8	7.3	14	2.4	1.8	66	58	14	35	118	12	4.0
3	1.8	7.3	15	2.2	2.0	58	39	13	41	80	13	6.6
4	1.6	6.8	11	2.0	2.0	50	36	12	37	100	17	6.6
5	1.6	6.4	11	1.8	1.6	50	34	11	181	110	19	5.6
6	1.6	6.8	5.5	1.6	1.6	46	31	12	207	86	14	3.3
7	1.9	6.4	7.3	1.6	1.6	46	31	40	129	68	13	3.0
8	277	6.8	12	1.6	1.6	50	30	60	72	50	12	3.0
9	251	8.2	13	1.4	1.6	80	30	37	38	38	12	2.4
10	59	9.6	13	1.4	1.8	370	22	68	92	50	12	2.4
11	54	9.6	12	1.3	1.8	2,160	21	341	200	60	12	2.4
12	90	9.1	12	1.1	2.0	3,260	19	232	100	48	12	2.2
13	64	8.6	12	1.1	4.0	2,540	18	95	186	40	11	1.9
14	16	8.2	10	1.2	8.2	1,250	17	71	89	37	10	2.2
15	15	6.0	9.2	1.4	52	200	14	52	60	35	9.4	1.9
16	11	7.3	7.4	1.4	52	100	16	37	33	32	9.4	1.7
17	9.1	8.2	6.4	1.4	122	63	17	37	27	30	8.8	1.7
18	8.2	7.8	6.0	1.4	260	56	18	48	29	28	7.6	1.7
19	7.8	18	4.0	1.6	4,300	77	18	58	30	29	6.6	1.9
20	7.3	35	3.0	1.6	5,600	95	21	62	23	30	6.6	2.2
21	7.3	15	2.2	1.6	960	55	23	42	20	24	7.6	2.2
22	7.3	8.6	2.2	1.8	230	55	32	38	16	21	7.6	2.7
23	7.3	8.0	2.0	2.0	225	63	28	37	14	22	7.1	3.7
24	7.8	7.4	2.0	2.0	200	60	22	37	14	23	6.6	3.3
25	6.8	7.6	2.0	2.0	150	68	18	39	13	22	6.6	3.3
26	6.4	7.6	2.0	2.0	110	66	16	37	12	21	6.6	4.0
27	8.2	7.8	2.0	2.2	100	58	19	37	9.4	20	6.1	4.4
28	11	7.8	2.1	2.4	84	597	21	36	9.4	18	5.6	4.4
29	11	8.0	2.2	2.4	-----	236	21	28	10	15	5.2	4.4
30	9.1	10	2.5	2.5	-----	131	17	28	318	15	4.8	3.3
31	7.8	-----	2.8	2.2	-----	122	-----	40	-----	14	4.4	-----
TOTAL	971.6	277.6	222.8	55.2	12,478.6	12,202	794	1,713	2,082.8	1,666	298.6	96.4
MEAN	31.3	9.25	7.19	1.78	446	394	26.5	55.3	69.4	53.7	9.63	3.21
MAX	277	35	15	2.6	5,600	3,260	87	341	318	382	19	6.6
MIN	1.6	6.0	2.0	1.1	1.6	46	14	11	9.4	14	4.4	1.7
AC-FT	1,930	551	442	109	24,750	24,200	1,570	3,400	4,130	3,300	592	191

CAL YR 1970 TOTAL 7,075.10 MEAN 19.4 MAX 684 MIN .90 AC-FT 14,030
WTR YR 1971 TOTAL 32,858.60 MEAN 90.0 MAX 5,600 MIN 1.1 AC-FT 65,180

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	1000	15.83	a7,800	3-28	0800	8.58	1,020
3-12	0500	15.20	4,020				

a About.

PLATTE RIVER BASIN

113

06800500 Elkhorn River at Waterloo, Nebr.

LOCATION.--Lat 41°17'25", long 96°17'05", in SW¹/₄ sec.3, T.15 N., R.10 E., Douglas County, on right bank 100 ft upstream from bridge at north edge of Waterloo and 3.5 miles downstream from Rawhide Creek.

DRAINAGE AREA.--6,900 sq mi, approximately, of which about 5,900 sq mi contributes directly to surface runoff.

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.

GAGE.--Water-stage recorder. Datum of gage is 1,106.73 ft above mean sea level. See WSP 1918 for history of changes prior to Oct. 1, 1960.

AVERAGE DISCHARGE.--51 years, 1,137 cfs (823,800 acre-ft per year); median of yearly mean discharges, 1,000 cfs (724,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 41,700 cfs Feb. 22 (gage height, 16.22 ft); minimum daily, 230 cfs Jan. 7.

Period of record: Maximum discharge, 100,000 cfs 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 cfs on basis of current-meter measurement of peak flow in main channel and velocity-area studies of overflow section; minimum observed, 50 cfs Nov. 12, 1940.

Stage and discharge of the flood of June 12, 1944, are the greatest known since at least 1880.

REMARKS.--Records good except those for winter period, which are poor. Some small diversions above station for irrigation. Records of chemical analyses, water temperatures, and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 1914(M), 1915, 1936, 1943(M). WSP 1730: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	540	839	420	360	5,350	2,200	1,240	1,430	2,270	774	334
2	354	546	979	410	350	3,890	2,250	1,290	1,300	2,420	670	374
3	359	564	732	370	320	3,170	2,140	1,240	1,290	1,910	694	414
4	298	570	624	360	310	3,090	1,950	1,250	1,190	1,670	710	438
5	282	576	606	300	300	2,550	1,790	1,370	1,160	2,670	678	382
6	282	570	558	250	280	2,320	1,650	1,420	4,520	2,910	710	334
7	293	576	528	230	260	2,670	1,490	2,110	6,850	2,070	686	326
8	415	576	510	260	250	2,220	1,330	1,530	5,060	2,010	590	318
9	1,060	594	558	300	290	2,170	1,300	1,440	4,210	2,310	598	318
10	1,050	606	594	320	350	2,540	1,270	1,810	6,060	2,120	566	310
11	839	636	408	340	370	6,180	1,190	2,490	15,000	6,410	542	326
12	804	660	260	340	390	14,000	1,170	3,030	8,370	3,250	510	310
13	818	630	232	350	390	18,300	1,070	2,180	5,860	2,630	502	302
14	770	642	282	350	390	16,600	1,120	1,770	7,660	2,050	510	302
15	660	618	436	350	400	5,800	1,090	1,550	6,180	1,830	510	286
16	588	582	516	350	1,000	3,310	1,120	1,470	3,370	1,500	446	286
17	540	594	564	360	1,800	2,780	1,050	1,270	2,600	1,330	438	286
18	492	606	582	350	4,000	2,490	1,040	1,220	2,210	1,190	438	294
19	480	624	498	360	19,200	2,220	1,010	1,290	2,040	1,090	454	278
20	474	718	430	390	27,700	2,170	1,010	1,250	1,850	1,010	510	270
21	486	764	447	400	35,700	2,050	1,070	1,140	1,750	950	470	310
22	492	686	498	410	37,300	1,830	1,130	1,100	1,730	910	470	294
23	516	400	350	390	10,900	1,810	1,220	1,110	1,630	886	462	326
24	522	290	350	400	7,880	1,790	1,180	1,170	1,530	998	446	326
25	522	300	350	400	6,770	1,720	1,170	1,130	1,460	862	430	350
26	558	390	340	390	7,480	1,690	1,170	1,110	1,430	782	406	358
27	594	420	350	370	8,490	1,630	1,180	1,540	1,350	726	382	414
28	594	580	350	380	7,060	3,370	1,250	1,770	1,250	801	350	438
29	582	673	340	390	-----	3,040	1,260	1,680	1,210	2,340	326	422
30	576	594	350	370	-----	2,500	1,320	1,530	1,600	1,410	310	446
31	552	-----	340	360	-----	2,370	-----	1,560	-----	990	342	-----
TOTAL	17,216	17,125	14,801	11,020	180,290	127,620	40,190	47,060	103,150	56,305	15,930	10,172
MEAN	555	571	477	355	6,439	4,117	1,340	1,518	3,438	1,816	514	339
MAX	1,060	764	979	420	37,300	18,300	2,250	3,030	15,000	6,410	774	446
MIN	282	290	232	230	250	1,630	1,010	1,100	1,160	726	310	270
AC-FT	34,150	33,970	29,360	21,860	357,600	253,100	79,720	93,340	204,600	111,700	31,600	20,180

CAL YR 1970 TOTAL 274,294 MEAN 751 MAX 3,180 MIN 190 AC-FT 544,100
WTR YR 1971 TOTAL 640,879 MEAN 1,756 MAX 37,300 MIN 230 AC-FT 1,271,000

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-22	0400	16.22	41,700	6-6	1100	7.18	8,300	6-11	0900	10.28	16,600
2-26	2000	8.33	10,800	6-7	1930	7.58	9,190	6-14	2300	7.90	9,960
3-14	0700	12.08	22,700	6-9	0200	6.12	6,220	7-11	0300	7.38	8,740

PLATTE RIVER BASIN

06803000 Salt Creek at Roca, Nebr.

LOCATION.--Lat 40°39'29", long 96°39'55", in NW¹SW¹ sec.17, T.8 N., R.7 E., Lancaster County, on left bank 15 ft downstream from highway bridge at west edge of Roca.

DRAINAGE AREA.--167 sq mi (revised).

PERIOD OF RECORD.--May 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,192.50 ft above mean sea level, Kansas City supplementary adjustment of 1943. Prior to May 16, 1956, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--20 years, 39.8 cfs (28,840 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 785 cfs Mar. 12 (gage height, 11.08 ft); minimum daily, 2.6 cfs Oct. 15, Aug. 25.

Period of record: Maximum discharge, 16,700 cfs July 10, 1958 (gage height, 22.70 ft); minimum daily, 0.2 cfs July 23, 1955.

Flood of May 8, 1950, reached a stage of 26.0 ft, from floodmark established by Corps of Engineers (discharge, 67,000 cfs), but may have been exceeded by flood of July 5, 1908.

REMARKS.--Records fair except those for winter period, which are poor. Flood flow affected by several detention dams.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	8.0	9.8	9.0	8.0	30	21	8.2	22	9.5	6.6	3.7
2	3.7	8.0	9.5	8.4	7.2	25	19	8.5	19	7.2	12	3.4
3	5.2	8.9	9.3	8.0	6.6	23	16	8.2	19	7.1	8.2	3.4
4	5.9	9.9	8.5	7.6	6.4	21	16	7.5	17	7.3	7.5	3.0
5	7.4	9.8	8.8	7.2	6.2	30	15	8.1	16	7.3	6.7	4.0
6	7.8	9.5	8.4	7.0	6.0	56	14	7.9	15	7.3	6.2	4.6
7	7.9	9.5	8.2	7.0	5.8	70	14	9.7	16	6.8	5.1	4.9
8	8.1	9.5	9.2	7.4	5.6	60	14	9.1	16	6.5	5.5	5.3
9	14	14	9.3	9.0	6.2	46	27	9.0	13	90	5.4	4.9
10	70	14	9.4	11	7.0	100	34	56	31	59	5.8	4.8
11	60	12	8.8	12	8.0	497	111	276	30	92	5.7	5.2
12	12	11	9.2	13	9.0	556	108	106	15	80	5.4	4.4
13	7.7	10	8.9	12	8.6	282	101	72	14	14	5.6	4.5
14	3.2	9.9	8.7	11	10	233	13	50	19	9.7	5.0	4.3
15	2.6	9.4	9.0	10	13	143	23	35	16	8.8	5.2	4.3
16	3.3	9.4	8.8	9.6	80	88	100	25	12	7.9	4.9	4.2
17	5.9	9.3	8.3	9.2	200	70	75	20	11	7.3	4.3	3.9
18	6.5	8.9	7.6	9.0	170	61	14	63	9.8	503	4.6	4.0
19	6.2	9.3	7.0	9.0	270	57	12	151	9.3	104	5.2	4.0
20	6.4	10	6.8	9.2	150	54	12	73	8.7	32	5.2	4.0
21	7.3	10	6.6	9.2	90	54	14	66	11	21	4.3	4.4
22	8.3	9.9	6.8	9.4	70	45	12	254	12	17	5.0	4.4
23	9.1	9.1	7.0	9.6	58	36	11	132	11	39	4.1	3.7
24	9.8	8.9	6.6	10	40	31	11	84	11	20	3.1	3.5
25	9.3	10	6.8	11	36	35	10	61	11	14	2.6	3.8
26	10	11	7.2	9.0	37	33	9.7	45	8.5	12	2.8	4.1
27	23	11	7.0	7.8	40	35	10	38	6.5	10	3.0	4.3
28	13	10	7.4	7.4	35	36	10	31	6.4	8.9	3.1	3.8
29	9.5	10	7.6	9.6	-----	28	8.9	28	6.4	8.0	3.2	3.9
30	8.4	9.7	8.0	9.4	-----	24	8.3	24	11	7.8	3.2	3.9
31	8.2	-----	8.6	8.8	-----	22	-----	23	-----	7.3	3.4	-----
TOTAL	363.1	299.9	253.1	286.8	1,389.6	2,881	863.9	1,789.2	423.6	1,231.7	157.9	124.6
MEAN	11.7	10.0	8.16	9.25	49.6	92.9	28.8	57.7	14.1	39.7	5.09	4.15
MAX	70	14	9.8	13	270	556	111	276	31	503	12	5.3
MIN	2.6	8.0	6.6	7.0	5.6	21	8.3	7.5	6.4	6.5	2.6	3.0
AC-FT	720	595	502	569	2,760	5,710	1,710	3,550	840	2,440	313	247

CAL YR 1970 TOTAL 4,471.0 MEAN 12.2 MAX 420 MIN 1.3 AC-FT 8,870
WTR YR 1971 TOTAL 10,064.4 MEAN 27.6 MAX 556 MIN 2.6 AC-FT 19,960

PEAK DISCHARGE (BASE, 850 CFS, REVISED).--No peak above base.

PLATTE RIVER BASIN

115

06803500 Salt Creek at Lincoln, Nebr.

LOCATION.--Lat 40°50'49", long 96°40'54", in NW1SW1 sec.7, T.10 N., R.7 E., Lancaster County, near center of channel on downstream side of pier of bridge on North 27th Street at north edge of Lincoln, 1 mile downstream from Oak Creek.

DRAINAGE AREA.--684 sq mi (revised).

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

GAGE.--Water-stage recorder for stages above 6.2 ft; nonrecording gage read twice daily. Datum of gage is 1,113.9 ft above mean sea level.

AVERAGE DISCHARGE.--22 years, 199 cfs (144,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,110 cfs May 11 (gage height, 11.3 ft, from floodmark); minimum daily, 42 cfs Oct. 4.

Period of record: Maximum discharge, 28,200 cfs June 2, 1951 (gage height, 26.15 ft); minimum daily, 22 cfs Mar. 15, 1957.

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.

REMARKS.--Records fair. Flood flow affected by several detention dams. Records of chemical analyses and water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	62	64	60	87	136	134	71	267	94	59	70
2	55	62	62	68	84	132	130	68	186	70	63	67
3	55	73	62	70	82	116	116	73	159	84	170	70
4	42	69	62	68	82	128	98	71	145	77	89	89
5	50	62	64	66	84	136	108	75	130	87	72	54
6	48	60	62	64	86	144	104	134	112	87	75	60
7	55	59	60	57	82	140	91	454	172	82	70	70
8	226	164	62	60	84	172	91	193	135	82	59	65
9	394	313	68	64	86	167	95	126	154	162	67	59
10	343	136	68	69	84	354	95	681	167	218	77	62
11	310	112	69	73	106	1,140	213	2,550	145	256	67	60
12	203	91	69	71	98	1,820	253	653	119	331	67	54
13	128	80	62	68	87	1,370	223	360	145	135	72	60
14	100	77	69	69	95	1,050	130	348	132	102	55	59
15	82	68	69	71	160	391	87	237	145	112	70	54
16	69	71	73	68	415	264	100	199	114	82	70	54
17	64	69	69	66	479	213	164	194	102	175	70	54
18	59	66	73	68	502	198	116	456	99	375	75	55
19	62	64	57	68	1,590	205	95	664	84	450	72	49
20	60	64	62	66	487	174	120	375	79	381	109	59
21	60	69	68	71	213	176	95	396	94	104	84	55
22	57	69	66	71	160	169	95	800	94	229	65	59
23	75	69	60	68	140	155	86	420	87	148	75	55
24	142	68	62	73	142	146	78	325	94	124	70	59
25	89	62	57	86	142	160	75	270	99	89	65	79
26	172	68	59	84	167	155	86	232	79	87	63	65
27	124	71	59	80	153	155	91	205	63	70	62	65
28	106	64	64	82	128	149	71	178	67	65	60	65
29	84	64	62	78	-----	155	75	151	70	57	57	60
30	73	68	64	91	-----	138	73	143	145	63	72	57
31	62	-----	64	82	-----	130	-----	471	-----	55	70	-----
TOTAL	3,508	2,494	1,991	2,200	6,105	10,138	3,388	11,573	3,683	4,533	2,271	1,843
MEAN	113	83.1	64.2	71.0	218	327	113	373	123	146	73.3	61.4
MAX	394	313	73	91	1,590	1,820	253	2,550	267	450	170	89
MIN	42	59	57	57	82	116	71	68	63	55	55	49
AC-FT	6,960	4,950	3,950	4,360	12,110	20,110	6,720	22,960	7,310	8,990	4,500	3,660

CAL YR 1970 TOTAL 31,395 MEAN 86.0 MAX 554 MIN 32 AC-FT 62,270
WTR YR 1971 TOTAL 53,727 MEAN 147 MAX 2,550 MIN 42 AC-FT 106,600

PEAK DISCHARGE (BASE, 3,000 CFS).--May 11 (about 0800) 4,110 cfs (11.3 ft).

PLATTE RIVER BASIN

06803510 Little Salt Creek near Lincoln, Nebr.

LOCATION.--Lat 40°53'36", long 96°40'52", in NW 1/4 sec.30, T.11 N., R.7 E., Lancaster County, on left bank 10 ft downstream from county road bridge and 1.6 miles north of intersection of Interstate Highway 80 and North 14th Street north of Lincoln.

DRAINAGE AREA.--43.6 sq mi.

PERIOD OF RECORD.--January 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,117.73 ft above mean sea level (Lancaster County Engineer bench mark).

EXTREMES.--Current year: Maximum discharge, 657 cfs Feb. 18 (gage height, 6.49 ft, from floodmark); minimum daily, 0.44 cfs Sept. 3.

Period of record: Maximum discharge, 657 cfs Feb. 18, 1971 (gage height, 6.49 ft, from floodmark); minimum daily, 0.20 cfs Sept. 29, 30, 1969.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	3.0	3.2	2.7	2.7	13	5.3	4.0	12	3.8	2.2	1.6
2	1.5	3.0	3.0	2.5	2.6	9.0	5.0	3.8	8.8	2.9	2.2	.47
3	1.5	3.0	3.0	2.3	2.8	8.0	4.6	3.4	7.6	2.8	2.9	.44
4	1.5	3.0	2.9	2.1	3.0	7.4	4.6	3.4	6.4	2.8	2.9	.65
5	1.6	3.0	2.9	1.9	2.4	9.0	4.6	3.8	5.7	2.9	2.4	.55
6	1.6	2.9	3.4	1.7	2.0	10	5.0	5.0	5.7	2.4	2.2	3.5
7	2.0	2.8	4.0	1.7	2.2	13	5.0	20	12	2.4	2.0	1.6
8	2.4	4.8	3.3	1.8	2.6	14	4.3	8.8	6.0	2.0	1.6	1.4
9	4.4	20	3.2	2.0	2.8	15	3.8	6.4	4.6	2.4	1.8	1.0
10	21	5.2	3.0	2.2	6.0	79	3.8	55	5.0	3.8	1.6	1.4
11	14	4.0	2.6	2.0	8.8	249	3.4	93	6.0	3.2	1.4	1.0
12	12	4.0	2.7	1.9	10	236	3.4	19	6.4	2.8	1.4	1.2
13	8.9	3.3	2.8	1.8	10	230	3.2	14	6.4	2.0	1.2	.65
14	6.2	3.3	2.8	1.9	12	80	3.2	12	5.0	1.8	1.2	.65
15	5.0	3.2	2.8	2.1	30	28	3.2	9.6	5.0	1.8	1.2	.65
16	4.0	3.2	2.7	2.3	175	18	3.8	9.2	4.0	1.8	1.4	.60
17	3.4	3.0	2.6	2.5	157	16	3.8	8.0	3.8	1.6	1.4	.65
18	3.2	3.2	2.5	2.8	173	15	3.8	54	3.8	1.6	1.4	.80
19	3.0	3.2	2.4	3.0	250	15	3.4	71	3.8	1.8	2.4	.80
20	3.0	3.2	2.4	3.4	26	15	3.8	20	3.8	1.6	2.9	.80
21	3.0	3.0	2.5	3.5	25	16	3.8	15	3.4	1.8	3.4	.65
22	3.0	2.8	2.6	3.6	34	11	3.8	14	3.2	2.0	2.4	.80
23	3.0	2.5	2.8	3.7	56	10	3.2	12	2.9	2.9	2.4	.80
24	3.0	2.6	2.9	3.9	60	9.2	2.9	12	3.4	2.0	1.8	.80
25	3.0	2.9	2.8	4.0	46	9.6	2.9	9.2	3.2	1.8	1.6	1.4
26	9.1	3.3	2.7	3.5	38	11	3.2	8.0	3.2	1.8	1.4	1.0
27	8.9	3.0	2.6	3.0	27	12	5.3	6.8	2.9	2.0	.90	.80
28	3.3	3.0	2.8	2.6	18	11	5.0	6.0	2.9	2.0	1.0	.60
29	3.2	3.0	2.9	2.7	-----	9.2	3.8	6.0	3.2	2.0	1.4	.65
30	3.2	3.2	2.9	2.6	-----	7.6	4.0	5.7	9.2	2.0	1.8	.90
31	3.2	-----	2.8	2.8	-----	6.4	-----	53	-----	2.4	1.8	-----
TOTAL	208.8	113.6	88.51	80.5	1,194.9	1,192.4	118.9	571.1	159.3	70.9	57.60	28.81
MEAN	6.74	3.79	2.85	2.60	42.3	38.5	3.96	18.4	5.31	2.29	1.86	.96
MAX	44	20	4.0	4.0	250	249	5.3	93	12	3.8	3.4	3.5
MIN	1.5	2.5	2.4	1.7	2.0	6.4	2.9	3.4	2.9	1.6	.90	.44
AC-FT	11414	2225	176	160	2350	2370	236	1130	316	141	114	57

CAL YR 1970 TOTAL 1,506.10 MEAN 4.1300 MAX 7.83 MIN .48 AC-FT 2,990
WTR YR 1971 TOTAL 3,875.31 MEAN 10.6000 MAX 250 MIN .44 AC-FT 7,690

PLATTE RIVER BASIN

117

06803520 Stevens Creek near Lincoln, Nebr.

LOCATION.--Lat 40°51'25", long 96°35'42", in NW 1/4 sec.11, T.10 N., R.7 E., Lancaster County, on left bank 20 ft upstream from county road bridge on Havelock Avenue and 1.6 miles east of 70th Street at east edge of Lincoln.

DRAINAGE AREA.--47.8 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,125.57 ft above mean sea level (Lancaster County Engineer bench mark).

EXTREMES.--Current year: Maximum discharge, 699 cfs May 11 (gage height, 10.11 ft); minimum daily, 0.21 cfs Sept. 15.

Period of record: Maximum discharge, 2,220 cfs Apr. 4, 1969 (gage height, 15.84 ft); minimum daily, 0.21 cfs Sept. 15, 1971.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	1.4	1.9	1.0	7.0	9.6	5.8	2.2	7.8	2.8	.87	.40
2	.48	1.4	1.7	1.0	4.6	9.2	4.7	2.0	5.8	1.5	2.0	.43
3	.48	1.5	1.4	.90	3.9	7.2	4.6	2.1	5.3	1.3	1.3	.35
4	.42	1.6	1.5	.90	3.5	6.4	4.4	2.0	5.0	1.2	3.7	.38
5	.45	1.6	1.4	.90	3.2	6.6	4.2	2.2	4.5	1.3	1.7	.41
6	.40	1.5	1.4	.90	2.7	7.8	4.1	3.0	4.2	1.2	1.2	.38
7	.48	1.7	1.4	.90	2.4	9.0	4.0	4.2	5.0	1.2	1.1	.35
8	.86	1.6	1.5	1.0	2.2	10	4.1	3.2	4.7	1.1	1.0	.27
9	5.6	27	1.8	1.3	2.1	11	3.8	2.7	4.4	1.7	.98	.32
10	11	7.4	2.1	1.7	2.1	33	3.4	26	5.4	6.9	.96	.33
11	12	3.8	1.2	1.8	2.4	250	3.0	191	4.8	2.4	.83	.28
12	8.8	3.8	1.1	1.7	3.7	303	3.3	23	4.5	2.0	.73	.28
13	4.3	3.2	1.1	1.6	3.0	194	3.0	14	3.9	2.4	.70	.50
14	2.2	2.4	1.1	1.6	3.3	85	3.0	11	5.7	1.5	.70	.30
15	1.2	2.1	1.2	1.5	29	30	3.3	8.1	4.7	1.2	.70	.21
16	1.1	1.9	1.4	1.5	129	19	2.5	6.7	4.0	1.1	.70	.22
17	1.1	1.9	1.4	1.5	128	16	3.5	5.7	3.0	1.0	.60	.30
18	.93	1.9	1.5	1.6	90	15	3.8	45	2.5	2.1	.50	.39
19	1.0	1.7	1.3	1.6	183	12	3.3	62	2.2	4.4	.51	.36
20	1.1	1.7	1.1	1.7	56	12	3.8	22	2.0	2.0	.56	.37
21	1.3	1.5	1.1	1.8	25	15	3.8	32	2.0	1.3	.77	.50
22	1.3	1.5	1.2	1.9	20	12	3.3	58	2.0	1.1	.77	.34
23	2.0	1.3	1.7	1.9	15	9.6	3.3	22	1.7	1.6	.59	.46
24	2.4	1.1	1.0	2.1	13	8.2	2.2	17	1.5	1.6	.58	.37
25	2.0	1.1	1.1	2.7	12	7.5	2.2	14	1.5	1.2	.44	.44
26	4.2	1.3	.99	5.0	11	9.6	2.2	12	1.9	1.1	.56	.59
27	17	1.4	1.0	4.6	13	11	2.3	11	1.3	1.1	.38	.36
28	4.6	1.4	.90	3.0	12	13	2.2	8.4	1.1	1.0	.86	.38
29	2.6	1.5	.90	4.4	-----	9.1	2.0	7.5	.95	1.1	.34	.31
30	1.8	1.7	.90	7.0	-----	7.4	2.1	7.0	4.0	1.0	.27	.81
31	1.5	-----	1.0	10	-----	7.1	-----	9.1	-----	1.0	.36	-----
TOTAL	95.07	84.9	40.29	71.00	782.1	1,155.3	101.2	636.1	107.35	53.4	38.96	11.39
MEAN	3.07	2.83	1.30	2.29	27.9	37.3	3.37	20.5	3.58	1.72	1.26	.38
MAX	17	27	2.1	10	183	303	5.8	191	7.8	6.9	1.3	.81
MIN	.40	1.1	.90	.90	2.1	6.4	2.0	2.0	.95	1.0	.27	.21
AC-FT	189	168	80	141	1,550	2,290	201	1,260	213	106	77	23

CAL YR 1970 TOTAL 1,009.48 MEAN 2.77 MAX 110 MIN .27 AC-FT 2,000
WTR YR 1971 TOTAL 3,177.06 MEAN 8.70 MAX 303 MIN .21 AC-FT 6,300

PEAK DISCHARGE (BASE, 500 CFS).--Mar. 11 (2300) 617 cfs (9.61 ft); May 11 (0530) 699 cfs (10.11 ft).

LOCATION.--Lat 41°00'56", long 96°32'39", in NE1/4 sec.17, T.12 N., R.8 E., Lancaster County, on right bank 10 ft downstream from bridge on east-west county road and 5.7 miles southeast of Ceresco.

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

GAGE.--Water-stage recorder.

EXTREMES.--Current year: Maximum discharge, 2,100 cfs Mar. 11 (gage height, 10.10 ft, from floodmark); minimum daily, 2.8 cfs Aug. 27-29.

Period of record: Maximum discharge, 2,100 cfs Mar. 11, 1971 (gage height, 10.10 ft, from floodmark); minimum daily, 0.8 cfs July 4, 5, 1970.

REMARKS.--Records poor. Records of chemical analyses, water temperatures, and fluvial sediments for the water year 1971 are published in Part 2 of this report.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.0	7.9	6.0	7.4	20	10	6.8	16	6.0	3.3	4.2
2	3.1	5.3	7.0	6.0	7.0	15	8.2	6.6	10	5.4	3.4	3.9
3	3.4	6.0	6.0	5.0	6.8	12	8.2	6.4	8.4	5.2	8.0	3.8
4	3.8	7.0	6.3	4.5	6.4	13	8.2	6.6	8.2	5.8	9.1	3.9
5	3.8	6.0	6.0	3.7	5.8	14	7.6	6.8	8.2	5.8	6.0	3.9
6	4.1	5.8	7.0	3.4	5.2	15	7.6	9.6	8.2	5.2	4.7	3.7
7	4.3	5.5	7.6	3.4	4.5	14	7.6	28	13	4.8	3.8	3.8
8	19	7.0	7.3	3.7	4.0	13	7.4	14	8.4	4.4	4.5	3.2
9	33	23	7.0	4.0	5.0	18	6.8	9.6	7.8	5.0	4.3	3.4
10	38	12	4.8	4.5	6.1	70	6.8	172	19	5.6	3.2	3.7
11	35	8.2	4.5	4.3	7.0	700	6.8	603	10	5.2	4.1	3.6
12	24	9.2	4.0	4.1	6.4	970	6.8	38	7.0	4.8	3.6	3.6
13	14	7.9	4.5	4.2	5.8	680	6.8	19	24	4.6	4.1	3.5
14	7.9	7.3	4.8	4.3	8.0	210	6.8	15	13	4.8	4.1	3.2
15	5.8	8.6	5.0	4.8	25	29	7.0	11	8.8	5.4	4.2	3.3
16	5.3	9.6	5.1	5.2	140	18	7.2	11	8.2	5.2	4.4	3.4
17	4.8	7.3	5.2	5.6	375	17	7.6	10	8.0	5.3	3.7	3.8
18	4.8	7.0	4.8	6.0	366	17	7.8	72	7.8	5.1	3.3	3.9
19	4.8	7.0	4.3	6.6	576	14	7.6	132	7.8	4.7	3.4	4.1
20	4.3	7.0	4.4	7.0	150	16	7.4	48	7.4	4.8	3.6	4.1
21	4.1	6.6	4.5	7.5	90	21	8.2	19	7.0	5.0	4.6	3.8
22	4.3	6.2	4.6	8.5	50	16	7.6	16	6.8	4.8	4.2	3.9
23	7.9	5.0	5.0	9.0	30	13	7.2	16	6.6	6.5	4.2	4.4
24	72	5.4	5.4	9.5	22	16	7.0	14	6.6	4.4	4.0	4.3
25	16	8.0	5.8	10	25	17	6.8	12	6.6	3.0	4.0	5.0
26	11	10	6.0	9.0	28	14	6.8	10	6.6	3.5	3.8	5.4
27	34	9.2	5.8	7.4	29	17	7.6	9.3	6.4	3.9	2.8	4.5
28	13	6.6	5.0	7.6	26	18	7.0	8.4	5.8	3.1	2.8	3.4
29	7.0	8.6	5.2	8.0	-----	15	6.8	8.4	5.6	3.1	2.8	3.0
30	6.0	8.9	5.6	7.4	-----	14	6.8	9.3	7.8	4.7	3.0	4.2
31	5.3	-----	5.7	7.0	-----	13	-----	194	-----	4.3	4.5	-----
TOTAL	407.0	236.2	172.1	187.2	2,017.4	3,049	222.0	1,541.8	275.0	149.4	129.5	115.9
MEAN	13.1	7.87	5.55	6.04	72.1	98.4	7.40	49.7	9.17	4.82	4.18	3.86
MAX	72	23	7.9	10	576	970	10	603	24	6.5	9.1	5.4
MIN	3.1	5.0	4.0	3.4	4.0	12	6.8	6.4	5.6	3.0	2.8	3.0
AC-FT	807	469	341	371	4,000	6,050	440	3,060	545	296	257	230
WTR YR 1971	TOTAL 8,502.5	MEAN 23.3	MAX 970	MIN 2.8	AC-FT 16,860							

PLATTE RIVER BASIN

119

06803555 Salt Creek at Greenwood, Nebr.

LOCATION.--Lat 40°57'56", long 96°27'01", at center of sec.31, T.12 N., R.9 E., Cass County, on right bank just downstream from county road bridge, 0.5 mile west of Greenwood.

DRAINAGE AREA.--1,051 sq mi (revised).

PERIOD OF RECORD.--November 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,068.14 ft above mean sea level, datum of 1954. Prior to Nov. 5, 1964, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--19 years (1952-71), 251 cfs (181,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,260 cfs May 11 (gage height, 13.26 ft); minimum daily, 63 cfs Oct. 5.

Period of record: Maximum discharge, 41,000 cfs June 24, 1963 (gage height, 23.46 ft); minimum daily, 14 cfs Jan. 10, 1957.

REMARKS.--Records good except those for winter period, which are fair. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Records furnished by Corps of Engineers.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	119	106	94	102	223	172	99	518	151	83	96
2	73	115	97	94	102	196	167	88	254	107	94	93
3	71	130	96	94	100	203	165	86	214	108	141	90
4	67	138	90	95	99	193	160	90	194	120	157	114
5	63	127	93	95	99	231	158	94	184	105	118	126
6	73	125	86	95	99	242	153	108	167	104	102	104
7	74	121	83	95	99	252	148	549	250	104	90	104
8	202	123	89	96	99	269	146	297	191	101	89	102
9	459	623	89	96	99	307	141	175	163	159	86	102
10	559	305	92	96	103	560	200	1,620	254	199	87	102
11	387	202	89	96	103	2,400	281	4,760	179	236	86	97
12	361	200	87	96	105	3,320	350	1,110	183	238	85	102
13	213	162	86	97	105	2,490	290	476	197	217	84	105
14	161	144	86	97	120	1,850	210	402	179	184	84	97
15	123	131	87	97	240	744	119	318	174	170	78	93
16	111	129	86	97	510	412	121	270	166	170	71	100
17	101	131	87	97	785	319	168	234	139	160	70	95
18	94	123	92	97	965	303	175	714	134	272	69	93
19	92	124	88	97	1,800	290	136	1,220	131	641	71	92
20	98	123	91	97	1,010	280	124	624	119	322	88	88
21	97	117	91	98	500	266	147	433	107	220	118	88
22	97	112	92	98	290	252	125	900	120	253	89	87
23	143	111	92	98	250	224	124	609	118	308	77	86
24	218	110	92	99	240	203	110	431	117	218	85	81
25	222	109	92	99	270	198	102	353	113	199	80	103
26	163	108	93	99	300	218	98	297	114	176	82	93
27	343	107	93	100	263	223	122	265	99	173	86	81
28	203	106	93	100	227	219	110	239	86	166	82	85
29	161	102	93	101	-----	204	105	207	92	114	84	88
30	139	101	94	101	-----	189	102	185	264	95	86	88
31	128	-----	94	102	-----	174	-----	563	-----	91	101	-----
TOTAL	5,370	4,478	2,819	3,013	9,084	17,454	4,729	17,816	5,220	5,881	2,803	2,875
MEAN	173	149	90.9	97.2	324	563	158	575	174	190	90.4	95.8
MAX	559	623	106	102	1,800	3,320	350	4,760	518	641	157	126
MIN	63	101	83	94	99	174	98	86	86	91	69	81
AC-FT	10,650	8,880	5,590	5,980	18,020	34,620	9,380	35,340	10,350	11,660	5,560	5,700

CAL YR 1970 TOTAL 47,014 MEAN 129 MAX 780 MIN 57 AC-FT 93,250
WTR YR 1971 TOTAL 81,542 MEAN 223 MAX 4,760 MIN 63 AC-FT 161,700

PEAK DISCHARGE (BASE, 2,200 CFS).--Mar. 12 (0045) 4,380 cfs (9.72 ft); May 11 (0145) 9,260 cfs (13.26 ft).

PLATTE RIVER BASIN

06804000 Wahoo Creek at Ithaca, Nebr.

LOCATION.--Lat 41°08'40", long 96°32'10", in NW¼NW¼ (corrected) sec.33, T.14 N., R.8 E., Saunders County, on right bank 16 ft downstream from bridge on State Highway 63 and 0.5 mile south of Ithaca.

DRAINAGE AREA.--271 sq mi (revised).

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

GAGE.--Water-stage recorder. Datum of gage is 1,110.48 ft above mean sea level. 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 miles upstream at datum 8.21 ft higher.

AVERAGE DISCHARGE.--22 years, 78.9 cfs (57,160 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,820 cfs Mar. 12 (gage height, 18.35 ft); minimum daily, 11 cfs Nov. 2.

Period of record: Maximum discharge, 77,400 cfs June 24, 1963 (gage height, 22.93 ft) from rating curve extended above 13,000 cfs on basis of indirect measurement of peak flow; minimum daily, 3.3 cfs June 11, 1955.

Maximum stage known since about 1910, 23.22 ft (from floodmark) Aug. 2, 1959 (discharge, 45,300 cfs, corrected).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	12	22	19	26	52	51	25	79	43	19	20
2	18	11	22	19	23	51	45	25	56	30	20	19
3	17	39	22	18	22	50	40	24	52	30	35	19
4	17	29	21	18	20	45	39	25	52	30	65	20
5	17	19	21	17	19	46	37	26	51	32	35	18
6	16	17	20	17	19	48	36	37	55	30	31	17
7	19	16	20	17	18	52	35	618	56	30	26	16
8	53	15	22	18	18	52	35	124	52	25	24	16
9	113	40	23	20	23	53	33	51	48	24	22	16
10	95	36	23	22	27	149	32	454	88	28	21	15
11	67	44	24	25	40	825	31	1,100	53	39	20	15
12	70	41	24	25	210	2,000	30	165	59	79	19	15
13	64	34	24	24	200	1,600	29	101	117	30	19	15
14	39	24	23	24	150	1,030	28	86	56	26	19	14
15	29	21	23	24	96	174	29	74	46	25	18	14
16	18	20	23	24	190	112	29	68	39	25	18	15
17	15	20	22	23	289	93	31	64	37	25	18	15
18	14	18	22	23	246	82	31	99	37	24	19	16
19	13	19	21	23	1,420	65	30	199	37	22	20	16
20	13	19	21	23	219	68	29	92	36	22	20	16
21	13	20	22	24	87	76	31	69	34	22	21	16
22	13	20	22	25	70	69	30	63	34	21	20	16
23	21	23	21	27	64	63	28	59	34	22	20	17
24	38	27	20	29	66	58	27	63	32	24	22	18
25	38	26	18	30	69	54	26	55	32	21	21	19
26	40	22	18	29	48	59	26	51	32	19	20	19
27	35	21	18	28	46	58	29	48	30	19	19	19
28	31	20	19	26	48	69	29	48	28	18	19	18
29	25	21	19	28	-----	63	27	47	28	19	18	17
30	16	21	19	28	-----	55	26	48	30	19	18	17
31	13	-----	19	26	-----	55	-----	363	-----	19	19	-----
TOTAL	1,009	715	658	723	3,773	7,326	959	4,371	1,420	842	705	503
MEAN	32.5	23.8	21.2	23.3	135	236	32.0	141	47.3	27.2	22.7	16.8
MAX	113	44	24	30	1,420	2,000	51	1,100	117	79	65	20
MIN	13	11	18	17	18	45	26	24	28	18	18	14
AC-FT	2,000	1,420	1,310	1,430	7,480	14,530	1,900	8,670	2,820	1,670	1,400	998

CAL YR 1970 TOTAL 12,583 MEAN 34.5 MAX 662 MIN 11 AC-FT 24,960
WTR YR 1971 TOTAL 23,004 MEAN 63.0 MAX 2,000 MIN 11 AC-FT 45,630

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-19	1400	17.67	2,480	5-7	0245	14.97	1,670
3-12	0830	18.35	2,820	5-11	1145	15.84	2,030

PLATTE RIVER BASIN

121

06805500 Platte River near South Bend, Nebr.

LOCATION.--Lat 41°01'30", long 96°17'50", in NE¼ sec.9, T.12 N., R.10 E., Cass County, at the right downstream side of bridge on Interstate Highway 80, 5 miles northwest of South Bend.

DRAINAGE AREA.--88,800 sq mi, approximately.

PERIOD OF RECORD.--May 1953 to current year. Prior to October 1961, published as Platte River at Louisville.

GAGE.--Water-stage recorder. Datum of gage is 1,038.53 ft above mean sea level. Prior to Dec. 5, 1961, at site 7 miles downstream at datum 31.43 ft lower.

AVERAGE DISCHARGE.--18 years, 5,521 cfs (4,000,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 58,300 cfs Feb. 21 (gage height, 9.75 ft); maximum gage height, 10.51 ft Feb. 19 (backwater from ice); minimum daily discharge, 785 cfs Aug. 31.

Period of record: Maximum discharge, 124,000 cfs Mar. 30, 1960 (gage height, 12.45 ft), site and datum then in use; minimum daily, 240 cfs Sept. 3, 1955.

Maximum discharge known since at least 1881, 124,000 cfs Mar. 30, 1960 (gage height, 12.45 ft), site and datum then in use.

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. Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,550	4,670	6,510	4,990	6,000	17,400	11,500	7,440	16,400	12,500	2,020	810
2	2,690	4,440	7,110	4,000	6,000	16,300	10,700	7,060	14,900	16,300	1,880	820
3	2,300	4,600	7,630	3,500	5,800	14,900	10,000	6,760	15,200	11,700	1,990	995
4	2,330	4,380	6,780	2,700	5,800	11,700	8,000	6,930	14,700	13,000	1,840	1,100
5	2,300	4,760	5,530	2,500	5,800	11,000	8,370	7,120	15,300	12,000	1,820	1,210
6	2,940	4,450	5,390	2,200	5,600	10,300	7,820	7,570	21,400	14,500	1,670	1,310
7	2,660	4,560	5,130	2,000	5,200	9,000	7,410	11,600	22,900	9,600	1,640	1,170
8	3,580	4,830	4,230	2,100	5,000	8,900	7,820	12,300	21,300	7,790	1,660	1,100
9	5,860	5,460	5,510	2,200	5,000	9,500	6,720	11,700	18,700	8,040	1,720	1,040
10	6,770	4,900	5,650	2,500	4,600	12,000	6,390	19,700	17,800	7,870	1,750	1,010
11	6,590	5,080	4,970	2,300	4,500	23,800	6,280	32,300	31,600	13,500	1,540	940
12	6,660	5,190	2,240	2,100	4,100	38,800	6,170	26,500	24,900	11,600	1,670	1,020
13	5,530	5,020	2,120	1,900	4,500	41,700	6,070	20,300	24,000	7,700	1,510	1,040
14	6,560	4,930	3,020	2,400	5,200	40,500	5,590	17,200	22,000	6,020	1,150	1,090
15	5,370	4,550	2,600	2,900	6,000	22,600	5,350	13,700	20,200	4,880	1,060	1,020
16	4,560	4,150	2,350	3,100	7,000	15,200	5,340	13,600	16,600	4,070	1,040	1,060
17	4,420	4,040	2,300	3,500	8,200	12,300	5,590	12,200	15,900	3,890	1,030	1,090
18	3,420	4,560	2,300	3,700	10,000	11,700	5,500	14,100	14,700	3,430	998	1,170
19	3,970	4,640	2,200	4,000	15,000	11,700	5,370	16,700	13,700	3,650	986	1,210
20	4,210	4,690	2,100	4,200	40,000	9,610	5,070	14,800	13,200	3,360	1,010	1,260
21	3,890	4,940	2,000	4,500	52,900	9,860	4,980	14,100	11,900	3,350	1,010	1,480
22	3,830	4,650	2,000	5,000	54,500	10,500	5,570	14,700	12,600	3,100	1,000	1,520
23	4,640	4,060	2,100	5,100	28,100	9,430	5,420	14,200	12,500	2,800	950	1,670
24	4,760	1,690	2,200	5,000	19,800	9,210	7,940	13,900	11,500	2,500	940	1,880
25	5,100	1,420	2,200	5,000	17,500	9,030	7,580	13,900	11,400	2,300	920	2,050
26	5,650	3,430	2,530	4,800	18,100	8,110	7,340	13,500	10,600	2,100	857	2,200
27	6,330	2,520	2,980	5,000	20,500	8,690	7,580	14,100	10,200	1,900	882	2,800
28	5,180	2,510	3,320	5,200	18,700	9,590	8,460	14,500	9,230	1,770	833	2,810
29	4,720	3,590	3,560	6,000	-----	11,500	8,050	14,600	8,860	3,100	815	2,570
30	4,900	7,000	3,530	6,600	-----	11,400	8,040	14,300	9,250	3,110	786	2,520
31	4,920	-----	4,060	6,400	-----	12,200	-----	16,200	-----	2,400	785	-----
TOTAL	139,190	129,710	116,150	117,390	389,400	458,430	212,020	437,580	483,440	203,830	39,762	42,965
MEAN	4,490	4,324	3,747	3,787	13,910	14,790	7,067	14,120	16,110	6,575	1,283	1,432
MAX	6,770	7,000	7,630	6,600	54,500	41,700	11,500	32,300	31,600	16,300	2,020	2,810
MIN	2,300	1,420	2,000	1,900	4,100	8,110	4,980	6,760	8,860	1,770	785	810
AC-FT	276,100	257,300	230,400	232,800	772,400	909,300	420,500	867,900	958,900	404,300	78,870	85,220

CAL YR 1970 TOTAL 1,592,963 MEAN 4,364 MAX 12,100 MIN 625 AC-FT 3,160,000
WTR YR 1971 TOTAL 2,769,867 MEAN 7,589 MAX 54,500 MIN 785 AC-FT 5,494,000

WEeping WATER CREEK BASIN

06806500 Weeping Water Creek at Union, Nebr.

LOCATION.--Lat 40°47'35", long 95°54'40", in NW 1/4 sec.36, T.10 N., R.13 E., Cass County, near left bank on downstream side of pier of bridge on U.S. Highways 73 and 75, 1.5 miles southeast of Union and 2.8 miles downstream from South Branch Weeping Water Creek.

DRAINAGE AREA.--241 sq mi.

PERIOD OF RECORD.--February 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 929.72 ft above mean sea level. Prior to May 14, 1951, non-recording gage at site 2 miles upstream at different datum. May 15, 1951, to Aug. 22, 1968, water-stage recorder for stages above 7.9 ft and nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--21 years, 78.5 cfs (56,870 acre-ft per year); median of yearly mean discharges, 69 cfs (50,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,400 cfs May 11 (gage height, 18.39 ft); minimum daily, 2.6 cfs Sept. 15.

Period of record: Maximum discharge, 60,300 cfs May 9, 1950 (gage height, 26.80 ft, from floodmark, present site and datum), from rating curve extended above 12,000 cfs on basis of measurement of peak flow through bridges and over highway embankment; minimum daily, 0.1 cfs Sept. 10-12, 14, 15, 17, 18, 1955.

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

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	23	27	18	34	84	49	31	72	74	18	4.9
2	12	27	24	19	34	72	46	31	55	33	20	4.9
3	10	25	23	17	33	62	43	30	47	25	20	4.6
4	9.2	26	21	15	31	56	43	30	47	24	27	5.0
5	7.6	25	21	14	29	80	42	31	45	22	26	4.4
6	6.4	25	22	12	27	90	42	31	44	21	25	4.9
7	6.7	24	31	11	25	90	41	36	89	20	21	4.9
8	13	24	28	11	24	100	41	58	47	19	18	4.8
9	105	55	23	11	23	270	40	36	44	66	18	4.7
10	128	252	23	12	23	343	38	45	45	152	16	4.4
11	62	40	23	12	25	764	38	1,710	43	132	15	3.8
12	39	31	22	12	30	940	38	221	45	72	15	3.5
13	30	28	22	12	36	355	38	99	40	29	15	3.2
14	25	27	22	12	50	187	36	79	36	27	13	2.7
15	21	26	21	13	1,270	113	36	66	39	26	12	2.6
16	19	26	19	14	930	83	37	58	38	25	13	2.9
17	18	26	19	15	782	73	38	53	34	23	12	3.5
18	19	26	19	16	867	70	38	1,120	32	23	10	4.0
19	18	26	19	17	1,270	66	36	499	30	22	10	3.5
20	20	27	19	19	930	63	38	129	29	20	12	3.3
21	22	26	19	22	392	68	40	92	26	19	17	3.3
22	20	23	19	25	279	70	36	124	25	20	16	4.2
23	31	25	18	26	278	58	35	96	25	19	14	4.7
24	42	24	18	26	287	53	34	123	23	20	13	6.8
25	31	22	18	26	269	53	33	79	22	20	11	8.6
26	34	23	18	26	190	55	33	66	21	19	7.7	8.7
27	101	24	18	26	150	59	34	61	20	19	6.6	7.6
28	64	24	18	25	110	63	32	57	18	18	5.7	7.5
29	34	24	17	30	-----	61	31	56	16	18	8.0	8.5
30	26	25	16	34	-----	56	31	54	38	18	6.3	12
31	24	-----	17	34	-----	52	-----	57	-----	17	5.4	-----
TOTAL	1,011.9	1,029	644	582	8,428	4,609	1,137	5,258	1,135	1,062	446.7	152.4
MEAN	32.6	34.3	20.8	18.8	301	149	37.9	170	37.8	34.3	14.4	5.08
MAX	128	252	31	34	1,270	940	49	1,710	89	152	27	12
MIN	6.4	22	16	11	23	52	31	30	16	17	5.4	2.6
AC-FT	2,010	2,040	1,280	1,150	16,720	9,140	2,260	10,430	2,250	2,110	886	302
CAL YR 1970	TOTAL 11,569.7		MEAN 31.7		MAX 350	MIN 6.4	AC-FT 22,950					
WTR YR 1971	TOTAL 25,495.0		MEAN 69.8		MAX 1,710	MIN 2.6	AC-FT 50,570					

PEAK DISCHARGE (BASE, 3,000 CFS).--May 11 (1830) 3,400 cfs (18.39 ft).

MISSOURI RIVER MAIN STEM

123

06807000 Missouri River at Nebraska City, Nebr.
(International Hydrological Decade River Station)

LOCATION.--Lat 40°40'55", long 95°50'48", in NW 1/4 sec. 9, T.8 N., R.14 E., Otoe County, on right bank 0.7 mile upstream from Waubonsie Highway Bridge at Nebraska City and at mile 562.6.

DRAINAGE AREA.--414,400 sq mi, approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 905.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

AVERAGE DISCHARGE.--42 years, 34,180 cfs (24,760,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 114,000 cfs Feb. 22 (gage height, 18.45 ft); maximum gage height, 18.98 ft June 12; minimum daily discharge, 9,500 cfs Jan. 10, 11; minimum gage height, 0.40 ft Jan. 7.
Period of record: Maximum discharge, 414,000 cfs Apr. 19, 1952; maximum gage height, 27.66 ft Apr. 18, 1952; minimum discharge, 1,600 cfs Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft Dec. 24, 1960, result of freezeup.

REMARKS.--Records good except those for winter period, which are poor. Flow partly regulated by upstream main-stem reservoirs. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 761: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42,400	50,300	44,200	18,800	20,500	50,000	58,000	44,800	65,800	63,800	51,000	49,600
2	42,400	50,600	45,400	19,600	21,000	46,800	58,000	44,500	66,200	64,600	51,000	49,200
3	42,400	50,300	45,400	20,000	21,300	43,600	56,200	43,900	65,800	63,800	52,000	47,800
4	42,100	50,000	45,400	19,400	19,000	41,500	54,000	43,900	64,200	60,600	52,000	48,200
5	41,200	49,200	42,400	17,600	21,000	40,000	52,000	44,200	63,800	59,400	51,700	50,000
6	40,600	48,200	38,500	16,000	23,000	40,000	51,000	43,600	72,200	59,800	50,300	50,600
7	42,100	47,200	35,600	10,300	21,500	39,400	49,600	48,900	84,000	59,800	50,300	51,400
8	47,200	47,800	32,800	10,000	20,500	39,400	48,600	51,400	93,400	58,700	49,600	50,600
9	55,200	51,000	30,600	10,000	20,000	37,400	47,800	49,600	93,000	60,600	50,000	50,600
10	57,300	53,400	30,200	9,500	20,000	36,600	46,100	53,100	90,700	61,400	50,300	51,400
11	53,100	51,400	29,000	9,500	20,500	43,000	44,800	82,600	93,000	64,200	50,000	51,000
12	52,000	50,600	27,000	10,000	21,500	70,200	46,100	75,800	100,000	69,000	50,300	50,000
13	51,400	50,300	25,000	12,000	22,500	87,100	45,400	73,800	97,500	66,200	51,000	48,900
14	51,000	50,000	24,500	14,000	23,500	99,500	45,400	67,400	92,500	61,400	50,000	48,900
15	52,000	50,300	24,800	16,000	24,500	85,300	44,800	64,600	92,000	59,000	49,200	49,600
16	51,400	49,600	24,300	16,000	26,500	56,600	44,500	63,000	87,100	57,000	49,200	49,600
17	49,200	48,600	23,600	15,000	30,000	48,200	44,200	62,600	79,900	54,800	49,600	48,900
18	48,200	47,800	23,800	15,000	38,800	46,400	43,600	68,200	76,300	54,200	49,200	48,900
19	46,100	47,500	24,800	16,000	48,900	47,800	43,900	69,800	70,600	53,400	49,200	49,600
20	45,400	48,600	23,800	17,000	96,600	49,600	43,300	67,000	60,600	54,200	50,300	49,200
21	45,400	48,900	23,000	19,000	106,000	51,700	43,900	65,000	65,800	52,400	50,600	48,600
22	45,800	48,900	21,800	20,000	112,000	53,800	43,600	62,600	66,600	50,600	50,300	48,900
23	47,500	48,600	21,200	20,500	106,000	56,600	43,900	60,600	65,000	50,000	49,200	50,000
24	47,800	45,400	21,200	20,500	78,100	56,000	43,900	62,600	63,400	50,300	49,200	51,700
25	47,800	43,000	20,400	21,000	58,000	54,500	44,800	66,600	62,400	50,600	50,300	51,500
26	47,800	43,600	18,600	21,500	53,100	53,800	44,500	65,400	61,400	51,700	50,300	51,500
27	50,000	43,000	18,400	21,000	53,400	52,000	44,800	66,200	60,200	52,000	50,300	51,400
28	50,300	42,400	18,400	21,000	53,400	53,800	45,800	67,400	59,400	53,100	49,600	51,000
29	48,200	41,200	18,600	22,000	-----	58,700	46,400	66,600	58,400	53,400	49,200	51,500
30	47,800	42,100	18,400	23,000	-----	59,000	45,400	65,800	63,800	53,400	48,900	52,000
31	49,600	-----	18,400	23,000	-----	57,300	-----	64,200	-----	52,400	48,900	-----
TOTAL	1,480.7M	1,439.8M	859,500	524,200	1,181.1M	1,655.6M	1,414.3M	1,875.7M	2,235.0M	1,775.8M	1,553.0M	1,501.1M
MEAN	47,760	47,990	27,730	16,910	42,180	53,410	47,140	60,510	74,500	57,280	50,100	50,040
MAX	57,300	53,400	45,400	23,000	112,000	99,500	58,000	82,600	100,000	69,000	52,000	52,000
MIN	40,600	41,200	18,400	9,500	19,000	36,600	43,300	43,600	58,400	50,000	48,900	47,800
AC-FT	2,937M	2,856M	1,705M	1,040M	2,343M	3,284M	2,805M	3,720M	4,433M	3,522M	3,080M	2,977M

CAL YR 1970 TOTAL 14,191,700 MEAN 38,880 MAX 57,300 MIN 10,500 AC-FT 28,150,000
WTR YR 1971 TOTAL 17,495,800 MEAN 47,930 MAX 112,000 MIN 9,500 AC-FT 34,700,000

M Expressed in thousands.

LITTLE NEMAHA RIVER BASIN

06811500 Little Nemaha River at Auburn, Nebr.

LOCATION.--Lat 40°23'33", long 95°48'46", in NE 1/4 sec. 23, T.5 N., R.14 E., Nemaha County, on left bank at downstream side of bridge on U.S. Highway 136, 1 mile downstream from Longs Creek and Willow Creek, and 1 mile east of Auburn.

DRAINAGE AREA.--793 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 889.87 ft above mean sea level. See WRD Nebr. 1969 for history of changes prior to July 24, 1967.

AVERAGE DISCHARGE.--22 years, 271 cfs (196,300 acre-ft per year); median of yearly mean discharges, 190 cfs (138,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,020 cfs Feb. 18 (gage height, 13.21 ft); minimum daily, 19 cfs Sept. 12-14.

Period of record: Maximum discharge, 164,000 cfs May 9, 1950 (gage height, 27.65 ft, from floodmark), from rating curve extended above 49,000 cfs on basis of computations of peak flow through bridge and culvert openings and over highway and railway embankments at gage heights 24.96 and 27.65 ft; minimum daily, 4.2 cfs Aug. 7, 1956.

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

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	66	62	45	72	490	113	75	143	60	44	25
2	35	62	57	45	76	292	110	71	131	46	41	24
3	33	65	56	42	76	219	105	68	116	43	48	23
4	33	70	50	42	74	202	103	68	110	64	68	23
5	35	69	50	40	70	300	103	68	108	48	66	25
6	33	66	47	40	60	654	99	68	104	43	52	23
7	34	62	50	38	50	527	98	69	103	42	46	22
8	87	61	53	38	40	375	96	112	105	42	46	20
9	479	216	55	36	60	318	92	85	102	300	45	21
10	1,220	171	58	35	80	278	90	769	106	500	42	21
11	392	110	57	34	80	765	88	2,580	108	150	39	20
12	190	78	54	33	80	1,320	85	572	102	130	38	19
13	140	68	58	32	86	826	83	222	108	110	37	19
14	94	63	51	31	100	629	81	163	121	100	35	19
15	73	58	60	30	200	412	81	133	153	68	33	22
16	59	58	64	30	385	246	82	109	100	73	31	22
17	47	58	60	29	3,270	195	89	97	90	65	32	22
18	44	58	60	29	4,930	182	85	1,090	80	442	33	21
19	42	63	50	28	1,970	174	83	1,940	76	412	32	22
20	41	75	51	28	980	166	82	638	66	135	32	24
21	40	65	60	28	325	165	86	305	60	105	33	23
22	39	57	65	28	305	169	83	1,110	56	75	42	22
23	432	53	56	28	358	153	80	564	54	63	37	23
24	400	45	84	28	457	141	75	543	53	65	30	23
25	107	55	88	50	343	140	74	272	51	61	30	27
26	89	67	68	45	278	143	74	192	51	56	28	32
27	457	61	60	40	343	151	86	176	47	51	25	30
28	352	61	56	70	535	146	78	158	41	46	26	28
29	134	67	52	80	-----	143	73	148	37	45	26	25
30	90	63	50	84	-----	136	71	141	50	48	26	147
31	73	-----	45	70	-----	125	-----	145	-----	45	25	-----
TOTAL	5,360	2,191	1,787	1,256	15,683	10,182	2,628	12,751	2,632	3,533	1,168	817
MEAN	173	73.0	57.6	40.5	560	328	87.6	411	87.7	114	37.7	27.2
MAX	1,220	216	88	84	4,930	1,320	113	2,580	153	500	68	147
MIN	33	45	45	28	40	125	71	68	37	42	25	19
AC-FT	10,630	4,350	3,540	2,490	31,110	20,200	5,210	25,290	5,220	7,010	2,320	1,620

CAL YR 1970 TOTAL 34,519 MEAN 94.6 MAX 2,700 MIN 16 AC-FT 68,470
WTR YR 1971 TOTAL 59,988 MEAN 164 MAX 4,930 MIN 19 AC-FT 119,000

PEAK DISCHARGE (BASE, 5,000 CFS).--Feb. 18 (0130) 7,020 cfs (13.21 ft); May 11 (1300) 5,030 cfs (11.87 ft).

MISSOURI RIVER MAIN STEM

125

06813500 Missouri River at Rulo, Nebr.

LOCATION.--Lat 40°03'14", long 95°25'12", in NW¼NW¼ sec.17, T.1 N., R.18 E., Richardson County, on downstream end of middle pier of bridge on U.S. Highway 159 at Rulo, 3.2 miles upstream from Nemaha River and at mile 498.0.

DRAINAGE AREA.--418,900 sq mi, approximately.

PERIOD OF RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission; September 1929 to September 1950 in files of Kansas City Office of Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft above mean sea level. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft upstream at same datum.

AVERAGE DISCHARGE.--22 years, 37,350 cfs (27,060,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 131,000 cfs Mar. 15 (gage height, 16.28 ft); maximum gage height, 18.05 ft June 13; minimum daily discharge, 10,000 cfs Jan. 8-13; minimum gage height, 0.65 ft Jan. 7.
Period of record: Maximum discharge, 358,000 cfs Apr. 22, 1952 (gage height, 25.60 ft); minimum daily, 4,420 cfs Jan. 13, 1957; minimum gage height, 0.65 ft Jan. 7, 1971 (result of freezeup).
Flood in 1881 reached a stage of 22.9 ft, from floodmark (discharge not determined).

REMARKS.--Records good except those for winter period, which are poor. Flow partly regulated by upstream main-stem reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42,800	49,100	46,000	19,500	20,500	59,500	58,500	45,200	65,500	66,000	51,800	49,500
2	42,200	48,700	46,700	20,500	20,500	53,600	60,000	44,200	65,500	64,500	50,800	49,500
3	42,500	50,000	46,700	21,700	21,000	47,100	58,500	44,200	64,000	65,000	51,300	48,300
4	42,800	50,400	46,300	20,900	23,000	44,200	55,800	44,600	64,500	62,000	52,200	48,300
5	42,200	50,000	45,200	19,000	23,000	43,500	53,100	44,600	64,000	60,500	53,100	49,500
6	41,300	48,700	41,300	17,000	22,500	44,900	52,600	44,200	66,500	59,500	51,800	50,800
7	41,300	47,900	38,200	12,000	22,000	44,200	50,800	49,500	84,000	60,000	51,300	51,300
8	43,800	47,900	35,600	10,000	21,000	42,200	48,700	53,600	92,600	59,500	50,800	51,300
9	52,600	48,700	32,900	10,000	20,500	40,700	49,100	52,200	93,900	61,000	50,400	50,400
10	62,000	52,200	32,000	10,000	20,000	39,900	48,700	50,800	93,200	63,500	50,400	50,800
11	55,800	52,200	30,700	10,000	20,000	42,500	46,300	75,200	91,300	66,000	50,000	51,300
12	52,600	52,600	29,100	10,000	21,000	62,000	46,300	81,800	95,200	71,500	50,400	50,400
13	53,100	53,100	26,500	10,000	22,000	95,200	46,000	74,000	99,100	70,000	50,400	49,100
14	52,200	52,600	25,100	11,000	23,000	118,000	45,200	71,000	97,200	60,000	50,400	49,100
15	52,600	51,800	25,800	13,000	24,000	125,000	44,900	67,500	95,800	61,000	50,000	49,500
16	52,600	51,300	26,100	16,000	24,500	76,800	44,600	64,500	95,200	57,600	50,800	50,400
17	50,400	50,400	25,700	15,500	27,000	53,600	44,200	64,500	85,600	55,400	50,400	50,400
18	48,700	50,000	25,500	15,500	35,000	50,000	44,200	68,000	79,000	57,600	50,000	50,000
19	47,500	50,000	26,500	16,000	50,000	51,300	44,600	82,300	76,800	55,800	50,000	50,400
20	46,300	50,000	26,700	17,000	90,000	51,800	44,900	75,200	67,000	54,900	50,400	51,300
21	47,100	50,400	25,900	18,400	118,000	51,300	44,900	68,000	65,500	54,000	51,800	50,000
22	47,100	49,500	24,300	20,500	119,000	54,000	45,200	66,000	67,500	51,300	50,800	50,400
23	47,500	48,700	22,900	21,100	116,000	56,700	44,200	67,000	67,000	50,400	49,500	50,800
24	49,100	47,500	23,100	21,100	92,600	57,200	44,900	66,500	65,500	50,800	49,500	52,600
25	48,300	43,500	22,900	21,700	70,500	55,800	46,000	68,000	64,000	50,800	49,500	52,600
26	47,500	44,600	21,100	22,500	61,000	55,800	45,600	69,500	63,000	51,800	50,000	51,800
27	50,800	44,900	19,500	22,100	62,500	54,000	46,300	66,500	61,000	52,200	50,000	52,200
28	53,600	44,200	19,500	20,900	63,000	54,000	46,700	67,500	60,000	51,800	49,500	51,800
29	51,300	43,500	19,500	21,700	-----	58,500	47,900	67,500	58,500	52,600	50,000	50,800
30	49,500	43,500	19,500	23,100	-----	62,500	47,100	66,500	60,500	53,100	49,500	52,600
31	49,500	-----	19,500	22,700	-----	59,500	-----	66,000	-----	53,600	49,100	-----
TOTAL	1,506.6M	1,467.9M	916.300	530,400	1,253.1M	1,805.3M	1,445.8M	1,936.1M	2,268.4M	1,807.7M	1,565.9M	1,517.2M
MEAN	48,600	48,930	29,560	17,110	44,750	58,240	48,190	62,450	75,610	58,310	50,510	50,570
MAX	62,000	53,100	46,700	23,100	119,000	125,000	60,000	82,300	99,100	71,500	53,100	52,600
MIN	41,300	43,500	19,500	10,000	20,000	39,900	44,200	44,200	58,500	50,400	49,100	48,300
AC-FT	2,988M	2,912M	1,817M	1,052M	2,486M	3,581M	2,868M	3,840M	4,499M	3,586M	3,106M	3,009M

CAL YR 1970 TOTAL 14,590,700 MEAN 39,970 MAX 62,000 MIN 11,000 AC-FT 28,940,000
WTR YR 1971 TOTAL 18,020,700 MEAN 49,370 MAX 125,000 MIN 10,000 AC-FT 35,740,000

M Expressed in thousands.

BIG NEMAHA RIVER BASIN

06814000 Turkey Creek near Seneca, Kans.

LOCATION.--Lat 39°56'52", long 96°06'30", in SW1/4NW1/4 sec.20, T.1 S., R.12 E., Nemaha County, at downstream side of highway bridge 2 miles downstream from Clear Creek, 5 miles upstream from Big Nemaha River, and 8 miles northwest of Seneca.

DRAINAGE AREA.--276 sq mi.

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

Gage.--Water-stage recorder. Altitude of gage is 1,160 ft (from topographic map). 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 miles upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--23 years, 120 cfs (86,940 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,750 cfs May 22 (gage height, 16.44 ft); minimum, 0.12 cfs

Sept. 17.

Period of record: Maximum discharge, 20,400 cfs June 29, 1965 (gage height, 24.70 ft); no flow at times in 1956-57.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	21	19	18	18	500	38	21	224	27	5.2	.70
2	14	20	18	19	18	300	35	20	98	23	4.5	.70
3	14	21	18	22	18	200	33	20	78	22	4.1	.70
4	15	24	16	15	18	150	32	20	68	69	12	1.1
5	16	25	16	12	16	150	32	20	57	38	7.8	.70
6	16	25	15	10	14	200	30	20	50	28	18	.64
7	19	22	15	10	12	150	30	19	143	24	7.2	.57
8	57	22	16	11	10	120	30	19	79	22	5.4	.44
9	361	209	15	13	14	120	29	19	90	25	4.6	.50
10	197	111	15	12	25	120	27	28	59	260	3.9	.44
11	65	48	14	11	30	150	26	1,340	48	128	3.4	.50
12	27	34	14	10	35	150	26	303	43	159	3.3	.38
13	17	29	14	10	35	150	27	131	123	52	3.0	.31
14	13	25	14	10	46	140	25	85	201	26	2.6	.24
15	11	23	17	10	90	120	25	62	97	20	2.7	.24
16	12	24	17	12	400	106	24	48	48	17	3.9	.18
17	13	23	15	14	600	76	25	42	40	14	2.4	.12
18	16	22	16	12	750	69	26	42	36	13	2.0	.50
19	18	23	17	11	800	65	26	510	34	14	1.8	.45
20	19	24	17	12	300	62	26	227	31	14	1.5	.40
21	22	25	16	14	150	55	28	99	28	9.5	1.2	.36
22	25	22	16	15	90	46	26	2,110	26	7.9	1.4	.32
23	109	20	16	15	70	50	24	823	25	7.5	1.4	.30
24	544	20	16	18	70	46	23	254	24	8.3	1.2	.28
25	71	23	16	15	80	43	23	169	23	7.9	1.0	.50
26	37	22	16	25	100	50	23	129	22	6.8	.80	.45
27	72	20	16	22	500	61	27	123	21	5.9	.80	.40
28	117	19	16	20	700	72	24	108	21	5.8	.80	.36
29	37	20	16	20	-----	60	23	90	20	5.6	.80	.32
30	26	19	17	20	-----	45	22	82	24	5.6	.80	.30
31	23	-----	18	18	-----	42	-----	435	-----	5.3	.70	-----
TOTAL	2,016	985	497	466	5,009	3,668	815	7,418	1,881	1,071.1	110.20	13.40
MEAN	65.0	32.8	16.0	15.0	179	118	27.2	239	62.7	34.6	3.55	.45
MAX	544	209	19	25	800	500	38	2,110	224	260	18	1.1
MIN	11	19	14	10	10	42	22	19	20	5.3	.70	.12
AC-FT	4,000	1,950	986	924	9,940	7,280	1,620	14,710	3,730	2,120	219	27

CAL YR 1970 TOTAL 14,743.17 MEAN 40.4 MAX 2,800 MIN .87 AC-FT 29,240
WTR YR 1971 TOTAL 23,949.70 MEAN 65.6 MAX 2,110 MIN .12 AC-FT 47,500

PEAK DISCHARGE (BASE, 3,100 CFS).--NO PEAK ABOVE BASE.

BIG NEMAHA RIVER BASIN

127

06814500 North Fork Big Nemaha River at Humboldt, Nebr.

LOCATION.--Lat 40°09'25", long 95°56'40", in N¹/₄ sec.10, T.2 N., R.13 E., Richardson County, on right pile bent under bridge on State Highway 105 (corrected) at south edge of Humboldt, 800 ft downstream from Long Branch Creek.

DRAINAGE AREA.--548 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1967 published as North Fork Nemaha River at Humboldt.

GAGE.--Water-stage recorder. Datum of gage is 944.44 ft above mean sea level. Prior to Apr. 5, 1968, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--19 years, 180 cfs (130,400 acre-ft per year); median of yearly mean discharges, 110 cfs (80,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,780 cfs Feb. 17 (gage height, 10.75 ft, from graph based on gage readings); minimum daily, 7.7 cfs Sept. 16.

Period of record: Maximum discharge, 51,000 cfs July 10, 1958 (gage height, 31.70 ft); minimum daily, 6.2 cfs Aug. 8, 9, 1957, July 12, 1966.

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

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	40	46	30	45	178	48	43	117	27	27	16
2	16	37	37	28	45	107	44	42	73	23	25	18
3	12	39	37	26	45	86	43	42	67	20	89	17
4	13	48	31	25	43	95	43	41	60	43	77	19
5	16	43	30	24	40	205	42	40	58	31	50	22
6	16	43	21	22	35	313	43	39	57	24	40	20
7	16	42	31	22	35	170	47	39	92	20	31	19
8	23	44	38	22	33	140	49	40	56	18	33	17
9	680	197	34	20	33	138	48	50	72	193	34	13
10	598	72	32	20	32	123	47	1,970	57	247	27	14
11	184	48	24	20	32	413	46	867	61	102	19	13
12	120	38	27	18	32	873	48	274	60	291	20	14
13	73	34	34	18	32	459	50	125	126	107	23	13
14	44	31	37	18	40	359	49	89	75	55	21	11
15	34	25	42	17	60	196	48	73	58	41	19	8.6
16	27	32	40	17	300	109	48	63	54	31	19	7.7
17	25	34	36	16	3,370	88	54	58	43	25	19	8.0
18	24	32	32	16	1,860	85	50	1,170	42	1,440	20	9.8
19	24	37	32	16	1,660	75	47	1,150	39	583	19	13
20	24	44	32	16	424	72	48	349	32	142	19	14
21	26	38	32	17	165	72	51	148	27	76	24	15
22	29	22	31	20	144	68	48	2,050	26	52	26	12
23	935	25	31	27	168	60	48	552	26	44	24	13
24	333	27	32	35	247	56	41	196	27	40	19	12
25	78	25	33	45	225	56	42	132	23	34	14	18
26	78	51	32	40	178	62	42	96	23	29	13	29
27	832	51	32	37	327	73	51	89	21	27	12	29
28	189	40	31	42	341	71	47	81	21	23	13	22
29	85	47	31	45	-----	63	44	75	19	22	14	20
30	60	48	30	50	-----	65	46	70	25	26	14	19
31	46	-----	30	45	-----	67	-----	313	-----	26	14	-----
TOTAL	4,678	1,334	1,018	814	9,991	4,997	1,402	10,366	1,537	3,862	818	476.1
MEAN	151	44.5	32.8	26.3	357	161	46.7	334	51.2	125	26.4	15.9
MAX	935	197	46	50	3,370	873	54	2,050	126	1,440	89	29
MIN	12	22	21	16	32	56	41	39	19	18	12	7.7
AC-FT	9,280	2,650	2,020	1,610	19,820	9,910	2,780	20,560	3,050	7,660	1,620	944

CAL YR 1970 TOTAL 24,877.0 MEAN 68.2 MAX 4,260 MIN 12 AC-FT 49,340
WTR YR 1971 TOTAL 41,293.1 MEAN 113 MAX 3,370 MIN 7.7 AC-FT 81,900

PEAK DISCHARGE (BASE, 5,000 CFS).--Feb. 17 (2130) 6,780 cfs (10.75 ft).

BIG NEMAHA RIVER BASIN

06815000 Big Nemaha River at Falls City, Nebr.

LOCATION.--Lat 40°02'00", long 95°35'30", on line between secs.22 and 23, T.1 N., R.16 E., Richardson County, near right bank on downstream side of pier of bridge on U.S. Highway 73, 1 mile south of Falls City and 13 miles upstream from mouth.

DRAINAGE AREA.--1,340 sq mi.

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Nemaha River at Falls City.

GAGE.--Water-stage recorder for stages above 6.1 ft; nonrecording gage read twice daily. Datum of gage is 861.24 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 16, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 563 cfs (407,900 acre-ft per year); median of yearly mean discharges, 400 cfs (290,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,720 cfs Feb. 19 (gage height, 8.59 ft); maximum gage height, 9.80 ft Feb. 17 (backwater from ice); minimum daily discharge, 18 cfs Sept. 14-16.

Period of record: Maximum discharge, 51,400 cfs June 17, 1954 (gage height, 27.44 ft); maximum gage height, 28.90 ft June 29, 1965; minimum daily discharge, 4.3 cfs Dec. 15, 16, 1953.

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

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	132	120	70	120	1,200	205	168	881	77	69	26
2	54	122	115	70	110	740	185	160	408	71	66	25
3	50	126	106	65	100	508	175	156	289	75	70	25
4	49	132	100	65	90	460	166	148	253	310	142	34
5	49	136	98	60	86	696	162	140	223	426	86	33
6	46	130	90	60	80	1,000	148	128	205	156	79	28
7	47	124	92	60	70	880	154	122	369	106	70	26
8	73	124	100	65	70	660	152	126	238	84	82	23
9	407	130	106	70	74	600	144	124	198	130	69	24
10	2,030	364	114	75	76	572	140	1,020	154	504	57	21
11	754	232	90	70	80	608	136	1,300	238	516	50	19
12	392	162	110	60	90	1,480	134	1,960	182	471	48	19
13	256	136	90	60	100	1,230	134	680	244	460	48	19
14	178	126	91	60	140	1,010	132	424	265	192	43	18
15	134	116	110	60	170	836	132	325	384	124	41	18
16	114	116	130	65	630	600	128	274	238	103	42	18
17	102	120	124	65	2,200	472	140	235	162	86	40	19
18	96	118	121	70	3,010	396	140	472	128	731	40	23
19	94	124	85	70	4,220	372	140	1,560	114	976	39	24
20	90	134	90	80	2,440	337	140	1,190	100	310	47	23
21	86	156	80	85	880	316	144	608	92	164	40	22
22	84	126	80	85	608	310	148	2,080	85	121	38	21
23	335	88	80	90	592	271	140	3,130	81	104	36	23
24	659	80	80	100	424	262	130	1,010	77	92	32	22
25	523	100	75	110	608	256	128	628	72	82	31	26
26	229	130	70	120	644	256	130	484	67	79	29	28
27	560	132	70	140	1,350	298	168	400	61	77	29	27
28	482	128	70	130	1,740	313	304	352	55	71	29	24
29	301	126	65	130	-----	292	192	301	52	71	28	22
30	188	126	70	140	-----	256	172	262	109	75	29	22
31	148	-----	75	120	-----	226	-----	495	-----	72	26	-----
TOTAL	8,668	4,096	2,897	2,570	20,802	17,713	4,643	20,462	6,024	6,916	1,575	702
MEAN	280	137	93.5	82.9	743	571	155	660	201	223	50.8	23.4
MAX	2,030	364	130	140	4,220	1,480	304	3,130	881	976	142	34
MIN	46	80	65	60	70	226	128	122	52	71	26	18
AC-FT	17,190	8,120	5,750	5,100	41,260	35,130	9,210	40,590	11,950	13,720	3,120	1,390

CAL YR 1970 TOTAL 87,077 MEAN 239 MAX 8,790 MIN 40 AC-FT 172,700
WTR YR 1971 TOTAL 97,068 MEAN 266 MAX 4,220 MIN 18 AC-FT 192,500

PEAK DISCHARGE (BASE, 15,000 CFS).--No peak above base.

BIG NEMAH RIVER BASIN

129

06815500 Muddy Creek at Verdon, Nebr.

LOCATION.--Lat 40°08'40", long 95°43'10", in NE $\frac{1}{4}$ sec.15, T.2 N., R.15 E., Richardson County, on downstream end of right pier of bridge on U.S. Highway 73, 0.4 mile west of Verdon and 1 mile downstream from Sardine Creek.

DRAINAGE AREA.--186 sq mi.

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

GAGE.--Water-stage recorder for stages above 7.3 ft; nonrecording gage read once daily. Datum of gage is 896.74 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 68.4 cfs (49,560 acre-ft per year); median of yearly mean discharges, 54 cfs (39,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,700 cfs Oct. 23 (gage height, 12.65 ft); minimum daily, 5.1 cfs Sept. 19.

Period of record: Maximum discharge, 31,900 cfs July 10, 1958 (gage height, 31.50 ft), from rating curve extended above 6,400 cfs on basis of slope-area measurement of peak flow; minimum daily, 1.0 cfs Dec. 1, 1956.

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

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	26	22	16	34	126	30	21	40	27	16	6.7
2	13	25	20	14	32	97	30	21	34	15	15	6.1
3	13	31	20	13	30	86	30	21	24	18	14	6.1
4	14	31	20	13	28	74	30	21	23	35	39	7.0
5	14	27	20	14	26	126	30	20	18	18	15	6.4
6	14	27	20	14	26	133	30	20	163	13	16	6.1
7	14	28	20	15	26	108	29	24	409	12	16	5.8
8	43	35	20	16	26	84	30	20	59	12	15	5.8
9	606	163	19	16	25	64	29	20	33	152	14	5.4
10	299	41	20	16	25	49	25	19	32	74	14	6.1
11	119	35	19	15	25	112	22	23	30	33	13	6.1
12	92	31	20	15	25	131	20	24	25	28	12	5.8
13	33	29	25	14	25	97	22	20	81	24	11	5.8
14	20	27	23	14	30	85	20	18	50	19	10	5.8
15	20	24	22	13	100	68	20	16	24	15	10	6.4
16	19	22	22	13	260	59	30	15	19	14	9.6	5.8
17	18	22	22	12	820	47	28	16	17	14	9.6	5.4
18	17	22	20	12	800	38	28	25	16	527	8.8	5.8
19	18	25	18	12	674	34	27	78	14	81	42	5.1
20	18	49	17	13	185	32	24	65	13	29	9.6	5.8
21	17	26	17	16	130	31	23	181	11	19	8.4	6.7
22	17	20	18	17	110	29	22	161	11	17	8.0	6.7
23	776	17	17	20	100	28	21	67	11	17	8.0	7.7
24	237	17	17	21	114	29	21	43	10	16	7.7	7.7
25	40	18	17	24	120	32	21	41	11	16	8.4	8.0
26	46	24	17	25	155	32	21	46	11	16	7.4	8.0
27	225	30	17	28	291	39	25	30	11	15	7.4	7.7
28	46	25	17	30	240	34	24	25	11	15	6.7	7.4
29	25	24	16	35	-----	31	22	20	12	16	7.0	7.4
30	30	23	16	30	-----	29	23	20	53	15	7.0	7.4
31	26	-----	16	38	-----	30	-----	78	-----	16	6.7	-----
TOTAL	2,902	944	594	564	4,482	1,994	757	1,219	1,276	1,338	392.3	194.0
MEAN	93.6	31.5	19.2	18.2	160	64.3	25.2	39.3	42.5	43.2	12.7	6.47
MAX	776	163	25	38	820	133	30	181	409	527	42	8.0
MIN	13	17	16	12	25	28	20	15	10	12	6.7	5.1
AC-FT	5,760	1,870	1,180	1,120	8,890	3,960	1,500	2,420	2,530	2,650	778	385

CAL YR 1970 TOTAL 13,344.9 MEAN 36.6 MAX 1,840 MIN 8.0 AC-FT 26,470
WTR YR 1971 TOTAL 16,656.3 MEAN 45.6 MAX 820 MIN 5.1 AC-FT 33,040

PEAK DISCHARGE (BASE, 4,000 CFS).--No peak above base.

KANSAS RIVER BASIN

06821500 Arikaree River at Haigler, Nebr.

LOCATION.--Lat 40°01'45", long 101°58'10", in NE 1/4 sec. 29, T.1 N., R.41 W., Dundy County, on left bank 57 ft downstream from bridge on U.S. Highway 34, 1.3 miles upstream from Burlington Northern Inc. bridge, 1.8 miles upstream from confluence with North Fork Republican River, 2 miles northwest of Haigler, and 3.2 miles downstream from Kansas-Nebraska State line.

DRAINAGE AREA.--1,640 sq mi, approximately, of which about 980 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 3,250.98 ft above mean sea level. See WSP 1919 for history of changes prior to Sept. 29, 1964.

AVERAGE DISCHARGE.--40 years, 25.8 cfs (18,690 acre-ft per year); median of yearly mean discharges, 21 cfs (15,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 120 cfs May 10 (gage height, 4.16 ft); maximum gage height, 4.20 ft Feb. 25; no flow July 14, Sept. 2, 9, 13, 14.

Period of record: Maximum discharge, 50,000 cfs May 31, 1935 (gage height, 11.2 ft, site and datum then in use, from floodmarks), from rating curve extended above 3,800 cfs on basis of slope-area measurement of peak flow; no flow for some periods in most years.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by ground-water withdrawals and diversions for irrigation of about 1,500 acres in Colorado and by return flow from Pioneer Canal.

REVISIONS (WATER YEARS).--WSP 1919: 1951, 1954, 1956, 1960. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	13	1.5	.96	3.4	11	9.6	30	37	.36	1.3	1.7
2	8.4	8.4	1.3	.72	.80	12	6.9	20	35	.40	.96	0
3	9.2	3.0	1.4	.08	3.2	12	9.6	18	29	.80	.36	.20
4	8.8	2.6	1.4	.38	3.4	25	11	17	30	.64	.32	.64
5	3.2	2.3	1.3	.06	3.0	39	9.9	29	24	.48	.28	.96
6	2.2	2.3	1.3	.04	.64	15	9.9	41	22	.36	.24	1.6
7	2.2	2.3	1.4	.04	.88	19	10	29	21	2.5	.24	.72
8	6.1	2.8	1.4	.02	1.0	23	12	24	17	1.1	1.0	.36
9	12	3.6	1.4	.46	1.0	36	9.9	60	14	2.1	.64	0
10	5.9	2.8	1.3	.58	.96	24	8.4	77	29	1.5	.36	2.5
11	5.1	2.8	1.5	.70	1.5	22	8.0	105	6.4	.72	.20	3.4
12	5.1	2.6	1.3	.46	11	26	7.3	75	3.7	.40	.20	.72
13	3.0	2.5	1.3	.40	12	28	8.0	54	3.6	.24	.16	0
14	2.6	2.3	1.3	1.2	8.0	21	9.2	39	2.2	0	.64	0
15	3.7	2.3	1.2	1.2	3.4	16	9.6	33	2.0	.32	.88	.28
16	5.3	2.3	1.2	1.2	3.4	16	9.9	29	1.2	.64	.72	.48
17	10	2.2	1.2	1.3	1.8	19	9.2	24	1.1	.72	.32	6.4
18	13	2.1	1.0	1.7	8.8	12	8.8	61	.88	.08	.16	10
19	14	2.1	1.0	2.2	48	6.9	40	49	.80	.24	.20	11
20	13	1.8	1.1	2.5	19	41	53	35	.88	.24	.16	9.9
21	8.8	1.8	1.1	2.6	6.5	37	32	35	1.5	.20	.20	9.6
22	7.7	1.7	.96	2.2	3.8	17	23	39	1.6	.16	.40	15
23	7.3	1.8	1.2	2.0	1.0	13	42	34	.96	.20	.48	9.2
24	12	2.0	1.2	1.8	5.6	12	28	31	.56	.24	.20	6.6
25	12	2.0	1.1	1.8	51	18	20	15	.32	.56	.16	16
26	16	1.8	1.0	1.5	50	18	28	17	.36	1.2	.12	17
27	23	1.6	1.1	1.3	19	10	39	20	.32	.48	.12	17
28	22	1.6	.96	1.2	9.2	11	26	23	.24	.72	.96	12
29	19	1.6	.96	1.6	-----	14	22	27	.20	.36	1.2	6.1
30	16	1.6	.96	2.6	-----	13	51	39	.24	.36	1.5	12
31	14	-----	.88	4.1	-----	14	-----	43	-----	1.2	6.9	-----
TOTAL	296.7	83.6	37.22	38.60	281.28	600.9	571.2	1,172	287.06	19.52	21.58	171.36
MEAN	9.57	2.79	1.20	1.25	10.0	19.4	19.0	37.8	9.57	.63	.70	5.71
MAX	23	13	1.5	4.1	51	41	53	105	37	2.5	6.9	17
MIN	2.2	1.6	.88	.02	.64	6.9	6.9	15	.20	0	.12	0
AC-FT	589	166	74	77	558	1,190	1,130	2,320	569	39	43	340

CAL YR 1970 TOTAL 3,408.99 MEAN 9.34 MAX 36 MIN 0 AC-FT 6,760
WTR YR 1971 TOTAL 3,581.02 MEAN 9.81 MAX 105 MIN 0 AC-FT 7,100

PEAK DISCHARGE (BASE, 800 CFS, REVISED).--No peak above base.

KANSAS RIVER BASIN

131

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, on right bank 100 ft east of Colorado-Nebraska State line and 9.5 miles upstream from confluence with Arikaree River.

DRAINAGE AREA.--1,360 sq mi, approximately, of which about 100 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1932, published as North Fork of Arikaree River. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Steel piling control since January 1965. Datum of gage is 3,336.09 ft above mean sea level. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--41 years, 49.2 cfs (35,650 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 116 cfs Apr. 19 (gage height, 1.76 ft); maximum gage height, 3.31 ft Feb. 23 (backwater from ice); minimum daily discharge, 4.5 cfs July 25, Aug. 11.
Period of record: Maximum discharge, 2,110 cfs Apr. 28, 1947 (gage height, 5.92 ft), from rating curve extended above 800 cfs on basis of slope-area measurement of peak flow; no flow Aug. 25, 26, 1932.

REMARKS.--Records good. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres in Colorado and Nebraska.

REVISIONS (WATER YEARS).--WSP 1240: 1947(M). WSP 1390: 1934. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	47	61	62	65	68	57	65	38	7.3	8.4	9.2
2	17	67	60	64	65	67	57	58	38	7.8	8.3	11
3	17	68	61	60	65	67	59	57	35	7.9	9.0	9.1
4	16	69	59	58	65	70	58	59	31	8.5	9.3	10
5	15	69	61	58	64	78	59	67	30	9.6	9.5	6.4
6	15	69	62	56	60	75	63	72	31	6.6	9.5	6.9
7	14	69	62	56	58	70	66	64	31	9.0	7.8	9.2
8	19	73	63	64	58	72	62	31	33	12	6.8	11
9	25	77	63	78	60	75	59	36	40	10	8.5	11
10	26	73	64	76	65	77	59	56	39	10	6.5	10
11	27	73	64	75	69	76	58	66	37	8.1	4.5	6.9
12	26	71	62	72	69	74	59	59	33	7.5	5.9	7.9
13	23	70	64	72	69	73	60	59	27	8.9	6.9	8.2
14	24	69	64	74	68	70	61	54	16	8.4	6.7	10
15	28	68	64	70	67	65	60	53	12	6.2	7.6	12
16	24	68	64	78	66	63	60	52	15	6.8	5.0	14
17	22	68	64	90	65	63	60	53	13	6.3	7.7	16
18	21	67	64	87	73	66	60	58	12	6.3	6.7	17
19	20	66	64	78	68	66	87	54	10	6.7	8.0	16
20	28	65	65	77	82	65	87	50	8.9	7.4	9.8	15
21	30	64	62	76	75	69	73	44	8.8	6.1	9.1	25
22	30	64	62	72	70	66	69	40	7.3	6.5	9.7	35
23	30	63	64	69	72	63	80	40	6.6	6.7	9.0	34
24	30	62	68	67	84	66	74	42	8.0	5.4	9.7	31
25	29	66	64	68	76	63	69	43	5.2	4.5	11	23
26	34	65	63	67	76	64	78	33	6.2	5.4	8.6	21
27	41	64	60	68	71	63	78	24	7.0	6.0	8.7	24
28	40	64	61	69	68	62	73	28	6.6	6.7	10	32
29	40	64	62	68	-----	60	68	29	5.5	10	11	28
30	41	63	61	68	-----	60	67	34	5.6	8.8	9.0	18
31	39	-----	60	66	-----	60	-----	38	-----	7.4	11	-----
TOTAL	806	2,005	1,942	2,163	1,913	2,096	1,980	1,518	596.7	234.8	259.2	487.8
MEAN	26.0	66.8	62.6	69.8	68.3	67.6	66.0	49.0	19.9	7.57	8.36	16.3
MAX	41	77	68	90	84	78	87	72	40	12	11	35
MIN	14	47	59	56	58	60	57	24	5.2	4.5	4.5	6.4
AC-FT	1,600	3,980	3,850	4,290	3,790	4,160	3,930	3,010	1,180	466	514	968

CAL YR 1970 TOTAL 14,867.9 MEAN 40.7 MAX 77 MIN 4.5 AC-FT 29,490
WTR YR 1971 TOTAL 16,001.5 MEAN 43.8 MAX 90 MIN 4.5 AC-FT 31,740

PEAK DISCHARGE (BASE, 130 CFS).--No peak above base.

KANSAS RIVER BASIN

06823500 Buffalo Creek near Haigler, Nebr.

LOCATION.--Lat 40°02'45", long 101°52'15", in NW1/4 sec.20, T.1 N., R.40 W., Dundy County, on right bank 90 ft downstream from county highway bridge, 0.8 mile upstream from mouth, and 4 miles northeast of Haigler.

DRAINAGE AREA.--260 sq mi, approximately, of which about 13 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Concrete control since June 1954. Datum of gage is 3,204.57 ft above mean sea level.

AVERAGE DISCHARGE.--31 years, 8.12 cfs (5,880 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 30 cfs Feb. 20 (backwater from ice); maximum gage height, 5.38 ft Jan. 5 (backwater from ice); minimum daily discharge, 0.03 cfs Aug. 13.

Period of record: Maximum discharge, about 140 cfs June 27, 1948 (gage height, 4.37 ft); maximum gage height recorded, 5.78 ft Mar. 7, 1960 (backwater from ice); no flow Aug. 3-5, 1955, Aug. 23, 1968.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by diversion about 0.5 mile upstream for irrigation of 880 acres.

REVISIONS (WATER YEARS).--WRD Nebr. 1969: 1948-50, 1957(M). WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	9.5	9.5	7.8	9.1	13	8.6	8.4	9.0	.26	.05	.18
2	4.3	9.2	9.5	6.6	11	12	8.9	9.3	8.7	.22	.05	.17
3	4.3	9.1	9.4	4.0	9.3	12	9.1	8.4	9.3	.22	.08	.14
4	4.0	9.0	9.4	.50	10	11	9.0	8.4	9.0	.26	.06	.16
5	4.1	9.4	9.4	2.5	9.4	12	9.0	8.4	8.1	.22	.05	.16
6	4.2	10	9.4	3.0	9.0	11	9.0	10	8.4	.18	.04	.34
7	3.2	10	9.2	6.0	9.0	11	8.7	9.3	9.3	.16	.06	.38
8	3.3	11	9.2	9.0	9.5	11	8.1	9.0	9.3	.18	.07	.35
9	3.1	12	9.2	12	11	11	7.8	10	9.0	.14	.05	.33
10	3.1	12	9.0	11	13	11	7.3	12	9.3	.12	.05	.28
11	3.0	11	8.6	10	11	11	7.8	13	9.3	.12	.05	.27
12	3.0	11	8.8	8.5	9.9	11	9.0	12	9.0	.10	.05	.24
13	3.0	11	9.4	9.0	10	11	8.4	11	8.7	.10	.03	.28
14	3.1	9.8	10	9.0	9.8	10	9.0	10	8.7	.10	.05	.26
15	3.1	9.9	8.3	8.6	9.6	9.6	7.8	11	8.7	.09	.05	.24
16	2.8	10	8.3	9.2	9.5	9.2	8.7	9.8	9.6	.08	.04	.23
17	2.7	9.9	8.8	10	9.3	9.2	8.4	10	10	.08	.28	.74
18	2.7	9.9	8.8	10	9.9	6.8	8.1	12	8.1	.07	.32	1.1
19	6.2	9.8	8.5	9.4	.21	11	12	12	6.1	.07	.26	1.2
20	8.4	9.9	8.8	12	23	10	12	11	5.1	.08	.21	1.1
21	8.2	9.9	7.5	12	18	9.7	10	10	5.1	.09	.19	1.4
22	8.1	9.7	7.5	10	13	9.3	11	10	5.1	.09	.22	3.3
23	8.4	9.0	7.5	9.9	14	9.3	12	9.8	4.7	.08	.22	3.1
24	8.1	9.4	7.6	9.8	15	9.4	12	9.6	4.5	.07	.22	3.0
25	7.9	9.9	7.6	10	17	9.3	10	9.8	4.5	.06	.24	3.0
26	10	9.6	7.8	9.9	15	9.1	10	9.8	2.5	.06	.26	2.8
27	11	9.7	8.0	10	14	9.1	10	9.3	.30	.06	.27	2.7
28	11	9.6	8.0	10	14	9.0	9.6	9.3	.30	.06	.24	2.5
29	10	9.5	8.5	10	-----	9.1	9.0	9.3	.30	.06	.21	4.2
30	10	9.5	9.0	9.6	-----	9.3	9.0	10	.30	.05	.19	5.6
31	9.3	-----	9.0	9.3	-----	9.2	-----	11	-----	.05	.19	-----
TOTAL	178.1	299.2	269.5	268.60	322.51	315.6	279.3	312.9	200.30	3.58	4.35	39.75
MEAN	5.75	9.97	8.69	8.66	11.5	10.2	9.31	10.1	6.68	.12	.14	1.33
MAX	11	12	10	12	23	13	12	13	10	.26	.32	5.6
MIN	2.7	9.0	7.5	.50	.21	6.8	7.3	8.4	.30	.05	.03	.14
AC-FT	353	593	535	533	640	626	554	621	397	7.1	8.6	79

CAL YR 1970 TOTAL 2,343.03 MEAN 6.42 MAX 12 MIN .07 AC-FT 4,650
WTR YR 1971 TOTAL 2,493.69 MEAN 6.83 MAX 23 MIN .03 AC-FT 4,950

PEAK DISCHARGE (BASE, 20 CFS, REVISED).--Feb. 20, about 30 cfs.

06824000 Rock Creek at Parks, Nebr.

LOCATION.--Lat 40°02'30", long 101°43'40", in SW 1/4 sec. 21, T.1 N., R.39 W., Dundey County, on right bank at west edge of Parks, 100 ft downstream from county road bridge and 0.5 mile upstream from mouth.

DRAINAGE AREA.--20 sq mi, approximately, of which about 17 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,093.35 ft above mean sea level.

AVERAGE DISCHARGE.--31 years, 14.3 cfs (10,360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 44 cfs Nov. 17 (gage height, 2.15 ft); maximum gage height, 3.01 ft Feb. 22 (backwater from ice); minimum daily discharge, 7.2 cfs Mar. 13.

Period of record: Maximum discharge, 493 cfs July 5, 1965 (gage height, 6.00 ft), from rating curve extended above 40 cfs on basis of slope-conveyance study; minimum daily, 3.1 cfs Feb. 19-23, 1943, Oct. 3, 1959.

REMARKS.--Records good except those for winter period, which are poor. One diversion about 2 miles above station for irrigation of 215 acres; flow regulated at times by reservoir at State fish hatchery 7 miles upstream.

REVISIONS (WATER YEARS).--WSP 1630: 1951(M). WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	18	16	11	15	14	15	15	11	11	12
2	14	13	17	15	14	15	13	14	14	11	11	12
3	14	13	18	14	14	16	14	14	14	10	10	12
4	14	13	15	13	13	16	14	13	14	11	9.9	11
5	14	14	15	13	11	16	14	14	13	12	10	11
6	14	14	15	11	10	17	14	14	14	12	10	11
7	13	19	15	10	10	17	14	14	13	12	10	11
8	16	22	15	12	11	16	14	14	14	12	11	10
9	21	29	15	15	15	16	14	15	14	13	11	11
10	19	24	16	14	16	15	14	19	14	12	10	11
11	18	21	15	14	14	8.7	14	20	14	12	10	12
12	17	20	16	13	10	11	15	19	13	12	10	11
13	17	21	16	13	7.3	7.2	15	17	13	12	10	11
14	20	18	16	14	10	9.3	15	16	14	12	9.9	11
15	17	16	16	14	13	11	15	15	13	12	11	11
16	15	16	16	15	13	8.7	16	15	13	12	11	12
17	15	22	16	16	8.2	11	16	15	12	11	10	15
18	14	29	16	16	13	15	16	18	12	12	10	17
19	14	19	15	16	15	16	21	17	12	11	11	16
20	14	16	15	17	12	16	21	16	11	11	11	15
21	14	15	15	17	11	16	19	15	11	11	10	15
22	13	14	16	17	11	15	18	15	12	11	9.9	15
23	13	16	16	17	13	14	21	14	11	11	9.5	15
24	13	15	17	16	14	14	19	14	11	10	9.5	15
25	12	14	16	14	14	14	18	14	10	9.9	9.5	15
26	14	15	16	16	13	14	18	14	11	11	9.9	15
27	15	14	16	16	15	14	19	14	11	11	10	14
28	14	14	15	15	15	14	17	14	9.6	11	11	14
29	14	14	15	11	-----	14	17	14	11	11	11	14
30	13	17	16	12	-----	14	16	15	11	11	11	14
31	14	-----	15	10	-----	14	-----	15	-----	11	12	-----
TOTAL	463	521	489	442	346.5	429.9	485	472	374.6	351.9	321.1	389
MEAN	14.9	17.4	15.8	14.3	12.4	13.9	16.2	15.2	12.5	11.4	10.4	13.0
MAX	21	29	18	17	16	17	21	20	15	13	12	17
MIN	12	13	15	10	7.3	7.2	13	13	9.6	9.9	9.5	10
AC-FT	918	1,030	970	877	687	853	962	936	743	698	637	772

CAL YR 1970 TOTAL 5,128.3 MEAN 14.1 MAX 29 MIN 7.1 AC-FT 10,170
WTR YR 1971 TOTAL 5,085.0 MEAN 13.9 MAX 29 MIN 7.2 AC-FT 10,090

PEAK DISCHARGE (BASE, 25 CFS).--Nov. 8 (2330) 33 cfs (1.91 ft); Nov. 17 (2330) 44 cfs (2.15 ft).

KANSAS RIVER BASIN

06824500 Republican River at Benkelman, Nebr.

LOCATION.--Lat 40°01'55", long 101°32'30", in SE¹/₄SW¹/₄ sec.19, T.1 N., R.37 W., Dundy County, on downstream end of left pier of bridge on U.S. Highway 34, 0.6 mile south of Burlington Northern Inc. track, 1 mile southwest of Benkelman, 2 miles upstream from South Fork Republican River, and 11 miles downstream from Rock Creek.

DRAINAGE AREA.--4,830 sq mi, approximately, of which about 1,230 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1895, October 1902 to November 1906, October 1946 to current year. Published as North Fork Republican River at Benkelman 1894-95. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,975.34 ft above mean sea level. Prior to Dec. 17, 1946, non-recording gages at several sites within 1.5 miles of present site at various datums.

AVERAGE DISCHARGE.--30 years, 93.4 cfs (67,670 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 824 cfs Apr. 19 (gage height, 4.02 ft); maximum gage height recorded, 4.16 ft Jan. 23 (backwater from ice) but may have been greater during period of no gage-height record Jan. 17-23; no flow for many days.

Period of record: Maximum discharge, 6,040 cfs Sept. 7, 1951 (gage height, 7.58 ft); maximum gage height, 7.80 ft Aug. 9, 1950; no flow at times in most years.

Maximum stage since at least 1826, 13.1 ft May 31, 1935 (from elevations furnished by State Highway Department).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation developments above station. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1310: 1895. WSP 1919: 1952, 1956. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	77	97	100	100	63	92	173	103	10	.73	0
2	23	77	94	95	110	48	88	149	97	7.1	.88	0
3	21	79	103	70	105	45	92	128	95	5.7	.01	0
4	22	83	111	50	100	70	97	118	82	2.5	0	0
5	26	81	107	42	90	84	93	111	70	9.9	0	0
6	26	85	101	48	85	121	97	111	66	8.3	.02	0
7	22	89	93	55	85	110	103	134	71	5.2	1.3	0
8	25	98	89	60	90	114	115	131	79	5.9	1.2	0
9	33	122	86	70	100	143	108	121	76	20	1.6	0
10	44	124	84	65	114	172	100	118	75	14	.65	0
11	50	116	81	65	120	159	100	118	72	10	.11	0
12	46	106	98	70	130	148	105	157	58	8.2	0	0
13	41	103	103	80	140	136	103	161	49	5.4	0	0
14	40	108	84	80	150	112	105	141	46	5.0	.02	0
15	44	108	89	76	157	97	108	128	40	5.0	.89	0
16	42	102	91	80	128	82	105	115	33	5.0	1.4	0
17	41	97	87	95	115	77	103	105	38	4.5	2.4	8.7
18	42	102	90	90	118	74	94	134	31	4.5	.08	17
19	42	97	60	98	138	79	262	149	24	4.5	.33	14
20	44	92	66	100	50	96	250	134	20	4.0	1.3	9.3
21	44	88	60	110	30	130	240	124	20	4.0	.70	11
22	44	91	64	110	26	120	230	111	20	3.5	.10	16
23	45	91	64	115	70	117	223	108	18	3.5	0	25
24	42	85	66	120	100	115	214	105	17	3.5	0	31
25	43	87	66	120	125	110	200	105	14	4.0	0	33
26	49	90	70	120	120	106	181	105	13	6.2	0	37
27	54	90	75	125	90	112	181	86	12	7.5	0	37
28	60	88	80	130	65	108	173	79	12	8.5	.25	35
29	69	106	88	130	-----	109	157	81	8.1	10	.37	37
30	72	98	95	125	-----	112	149	81	7.6	5.4	0	37
31	73	-----	100	105	-----	111	-----	97	-----	2.7	0	-----
TOTAL	1,296	2,860	2,642	2,799	2,851	3,280	4,268	3,718	1,366.7	203.5	14.34	348.0
MEAN	41.8	95.3	85.2	90.3	102	106	142	120	45.6	6.56	.46	11.6
MAX	73	124	111	130	157	172	262	173	103	20	2.4	37
MIN	21	77	60	42	26	45	88	79	7.6	2.5	0	0
AC-FT	2,570	5,670	5,240	5,550	5,650	6,510	8,470	7,370	2,710	404	28	690

CAL YR 1970 TOTAL 23,957.21 MEAN 65.6 MAX 153 MIN 0 AC-FT 47,520
WTR YR 1971 TOTAL 25,646.54 MEAN 70.3 MAX 262 MIN 0 AC-FT 50,870

PEAK DISCHARGE (BASE, 550 CFS, REVISED).--Apr. 19 (1400) 824 cfs (4.02 ft).

KANSAS RIVER BASIN

135

06827500 South Fork Republican River near Benkelman, Nebr.

LOCATION.--Lat 40°00'34", long 101°32'32", in NE 1/4 sec.31, T.1 N., R.37 W., Dundy County, on right bank 100 ft upstream from bridge on State Highway 61, 1 mile downstream from Kansas-Nebraska State line, 2.5 miles southwest of Benkelman, and 4 miles upstream from mouth.

DRAINAGE AREA.--2,740 sq mi, approximately, of which about 2,190 sq mi 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.

GAGE.--Water-stage recorder. Datum of gage is 2,990.91 ft above mean sea level. Prior to Dec. 10, 1947, non-recording gages at several sites within 3.5 miles 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.

AVERAGE DISCHARGE.--41 years, 57.1 cfs (41,370 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,330 cfs Apr. 19 (gage height, 5.30 ft, from floodmark); no flow for many days.

Period of record: Maximum discharge determined, 19,600 cfs 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.

Maximum stage known since at least 1923, 10.1 ft May 31, 1935, from floodmarks at site 0.2 mile downstream, at datum 2.00 ft higher (discharge, 150,000 cfs, by slope-area measurement).

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.

REVISIONS (WATER YEARS).--WSP 1310: 1904-6, 1931. WSP 1390: 1940, 1945, 1947. WSP 1919: 1951-52, 1954-56. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	22	7.0	15	50	38	36	136	26		
2		0	21	6.0	18	55	37	35	142	30		
3		0	20	3.6	14	62	37	38	125	12		
4		0	19	2.0	10	62	37	35	129	1.1		
5		0	18	1.4	7.4	63	36	43	127	15		
6		0	18	1.0	5.2	63	37	94	123	42		
7		0	17	.70	5.2	69	37	55	110	54		
8		0	20	.70	6.0	93	36	47	78	82		
9		0	22	.85	7.0	96	34	58	57	129		
10		8.0	20	.20	9.5	92	33	78	73	14		
11		19	15	0	12	87	31	73	58	4.7		
12		21	8.8	0	15	82	30	44	31	.94		
13		22	5.3	0	20	81	30	49	27	.10		
14		23	2.9	0	20	73	29	45	24	.62		
15		25	2.8	0	24	69	25	36	16	0		
16		26	3.5	0	24	64	22	43	13	.02		
17		23	5.0	0	22	60	20	87	31	0		
18		22	4.6	.75	20	58	18	140	16	0		
19		21	3.0	1.2	18	60	253	144	52	0		
20		22	3.8	5.0	15	64	279	122	18	0		
21		22	2.8	10	11	58	180	117	5.0	0		
22		21	3.0	18	12	48	112	159	6.5	0		
23		13	3.0	26	13	43	94	143	.90	0		
24		3.3	3.5	33	20	38	59	137	.37	0		
25		1.8	3.5	38	28	39	46	122	.04	0		
26		5.4	4.0	43	35	39	57	121	0	0		
27		8.8	4.6	45	43	38	52	123	2.0	0		
28		12	5.8	50	50	38	50	133	5.3	0		
29		16	6.6	55	-----	40	39	176	0	0		
30		21	7.0	50	-----	42	43	194	.13	0		
31		-----	7.4	25	-----	42	-----	154	-----	0		
TOTAL	0	356.3	302.9	423.40	499.3	1,868	1,831	2,881	1,406.24	411.48	0	0
MEAN	0	11.9	9.77	13.7	17.8	60.3	61.0	92.9	46.9	13.3	0	0
MAX	0	26	22	55	50	96	279	194	142	129	0	0
MIN	0	0	2.8	0	5.2	38	18	35	0	0	0	0
AC-FT	0	707	601	840	990	3,710	3,630	5,710	2,790	816	0	0

CAL YR 1970 TOTAL 4,525.51 MEAN 12.4 MAX 58 MIN 0 AC-FT 8,980
WTR YR 1971 TOTAL 9,979.62 MEAN 27.3 MAX 279 MIN 0 AC-FT 19,790

LOCATION.--Lat 40°08'28", long 101°13'42", in SW¼NW¼ sec.13, T.2 N., R.35 W., Hitchcock County, on right bank at downstream side of county bridge, 0.5 mile south of Stratton, 0.2 mile downstream from Muddy Creek, 10 miles upstream from Trenton Dam, and 19 miles downstream from South Fork Republican River.

PERIOD OF RECORD.--July 1950 to current year.

AVERAGE DISCHARGE.--21 years, 145 cfs (105,100 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir. (See sta 06826000.)

REVISIONS.--WRD Nebr. 1970: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	54	91	90	90	158	153	239	227	1.3	0	
2	0	52	86	90	80	170	139	229	233	1.9	0	
3	0	52	88	86	75	128	125	195	232	28	0	
4	0	59	87	50	70	182	126	172	223	2.2	0	
5	0	62	83	35	70	244	128	177	200	52	0	
6	0	60	88	40	72	240	139	216	183	4.8	0	
7	0	57	92	45	74	175	140	274	174	5.5	0	
8	0	74	96	48	80	272	140	208	203	38	0	
9	0	105	92	56	85	265	139	199	263	176	0	
10	0	103	89	60	92	270	127	208	157	141	0	
11	0	94	75	60	110	262	117	265	147	49	0	
12	0	87	87	60	115	256	115	273	111	27	0	
13	0	80	80	62	115	249	117	245	82	11	0	
14	0	76	80	64	120	230	120	207	90	5.0	0	
15	.32	73	76	64	125	207	118	174	68	2.4	50	
16	1.1	75	76	66	130	186	108	174	52	1.6	5.8	
17	1.5	78	76	82	132	171	104	160	64	.96	.03	
18	3.8	75	70	100	147	160	109	291	63	.74	0	
19	7.3	83	60	110	175	170	406	332	49	.64	0	
20	11	84	60	120	180	206	656	300	44	.52	0	
21	14	81	56	130	140	229	428	269	22	.15	0	
22	17	81	60	140	80	224	401	263	14	.15	0	
23	21	75	60	160	100	196	461	252	12	.08	0	
24	21	130	60	170	115	191	421	228	8.6	.06	0	
25	20	145	62	180	130	187	361	222	4.2	.11	0	
26	29	141	68	200	140	185	331	224	2.4	.11	0	
27	45	118	72	210	150	181	325	213	1.6	.12	0	
28	50	101	84	220	150	173	315	210	10	.05	0	
29	51	94	88	220	-----	182	289	216	14	.08	0	
30	54	94	88	170	-----	183	261	232	15	.04	0	
31	54	-----	92	115	-----	173	-----	236	-----	.02	0	-----
TOTAL	461.02	2,543	2,422	3,303	3,142	6,305	6,919	7,103	2,968.8	550.53	55.83	0
MEAN	12.9	84.8	78.1	107	112	203	231	229	99.0	17.8	1.80	0
MAX	54	145	96	220	180	272	656	332	263	176	50	0
MIN	0	52	56	35	70	128	104	160	1.6	.02	0	0
AC-FT	795	5,040	4,800	6,550	6,230	12,510	13,720	14,090	5,890	1,090	111	0
CAL YR 1970	TOTAL	26,883.95	MEAN	73.7	MAX	547	MIN	0	AC-FT	53,320		
WTR YR 1971	TOTAL	35,713.18	MEAN	97.8	MAX	656	MIN	0	AC-FT	70,840		

KANSAS RIVER BASIN

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06829000 Swanson Lake near Trenton, Nebr.

LOCATION.--Lat 40°10'10", long 101°03'35", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.2 N., R.33 W., Hitchcock County, in gate-control house at right end of spillway on downstream side of Trenton Dam on Republican River, 2.5 miles west of Trenton.

DRAINAGE AREA.--8,620 sq mi, approximately, of which about 3,940 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Gage is referred to mean sea level. Prior to Nov. 13, 1953, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 117,700 acre-ft June 16-22; maximum elevation, 2,751.51 ft June 20-22; minimum contents, 57,370 acre-ft Oct. 27-28 (elevation, 2,737.14 ft).
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).

REMARKS.--Reservoir is formed by earthfill dam; storage began May 4, 1953. Capacity, 116,100 acre-ft between elevations 2,710.0 (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.

REVISIONS.--WRD Nebr. 1970: Drainage area.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

2,735	50,280	2,750	110,500
2,740	67,730	2,755	135,600
2,745	87,930		

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57,920	57,440	61,450	65,100	70,070	78,380	91,160	103,400	113,400	113,600	92,380	66,970
2	57,680	57,510	61,560	65,250	70,410	78,750	91,420	103,600	113,700	112,900	91,420	66,330
3	57,650	57,540	61,770	65,430	70,760	79,190	91,690	103,900	113,800	112,900	90,470	65,890
4	57,650	57,580	61,850	65,550	70,920	79,850	91,910	104,200	114,100	112,600	89,560	65,400
5	57,650	57,610	61,990	65,700	71,230	80,380	92,120	104,800	114,100	112,500	88,700	64,880
6	57,580	57,650	62,170	65,810	71,460	81,000	92,340	104,800	114,400	111,900	87,890	64,510
7	57,580	57,720	62,280	65,850	71,580	81,620	92,560	105,300	114,800	111,500	87,120	63,950
8	57,610	57,820	62,490	65,920	71,780	82,320	92,690	105,700	115,600	111,500	86,310	63,730
9	57,580	57,960	62,570	65,960	71,970	82,860	92,870	106,000	116,200	111,500	85,550	63,440
10	57,580	58,130	62,750	66,000	72,090	83,570	93,090	106,600	116,600	111,500	84,790	63,190
11	57,610	58,300	62,890	66,070	72,240	84,120	93,170	107,000	116,900	111,500	83,660	62,960
12	57,580	58,520	63,000	66,110	72,440	84,540	93,390	107,400	117,200	111,300	82,740	62,710
13	57,580	58,690	63,150	66,150	72,630	85,000	93,570	107,600	117,300	110,600	81,700	62,530
14	57,580	58,940	63,260	66,220	72,910	85,460	93,750	107,900	117,400	110,000	80,790	62,170
15	57,580	59,080	63,300	66,260	73,260	85,880	93,970	108,100	117,500	109,200	79,850	61,850
16	57,580	59,320	63,440	66,370	73,770	86,140	94,010	108,500	117,700	108,500	79,110	61,770
17	57,580	59,420	63,580	66,520	74,170	86,610	94,230	109,000	117,700	107,400	78,220	61,630
18	57,580	59,600	63,660	66,600	74,600	86,990	94,410	109,400	117,700	106,600	77,370	61,630
19	57,540	59,740	63,800	66,670	75,080	87,250	95,780	110,000	117,700	105,300	76,560	61,560
20	57,480	59,920	63,920	66,900	75,520	87,500	97,210	110,300	117,700	104,400	75,840	61,380
21	57,480	60,060	63,990	67,010	75,880	87,760	97,920	110,500	117,700	103,400	75,040	61,160
22	57,440	60,200	64,060	67,200	76,160	88,140	98,910	111,400	117,500	102,200	74,330	61,200
23	57,440	60,310	64,210	67,390	76,440	88,490	99,760	111,500	117,400	101,200	73,540	61,200
24	57,440	60,420	64,320	67,650	76,600	88,960	100,300	111,700	117,200	100,200	72,670	61,130
25	57,440	60,480	64,360	67,880	76,880	89,220	100,800	111,800	116,900	99,090	71,970	61,130
26	57,400	60,620	64,430	68,150	77,250	89,480	101,500	112,000	116,400	98,100	71,110	61,200
27	57,370	60,770	64,540	68,450	77,650	89,860	101,900	112,200	116,100	97,120	70,300	61,200
28	57,370	60,950	64,690	68,790	78,010	90,250	102,300	112,500	115,800	96,130	69,870	61,160
29	57,400	61,090	64,730	69,100	-----	90,600	102,600	112,800	115,000	95,250	69,170	61,090
30	57,440	61,340	64,840	69,410	-----	90,860	103,000	113,000	114,300	94,270	68,470	61,130
31	57,440	-----	64,990	69,720	-----	91,120	-----	113,200	-----	93,390	67,580	-----
MAX	57,920	61,340	64,990	69,720	78,010	91,120	103,000	113,200	117,700	113,600	92,380	66,970
MIN	57,370	57,440	61,450	65,100	70,070	78,380	91,160	103,400	113,400	93,390	67,580	61,090
(†)	-660	+3,900	+3,650	+4,730	+8,290	+13,110	+11,880	+10,200	+1,100	-20,910	-25,810	-6,450
(‡)	2,737.16	2,738.27	2,739.27	2,740.52	2,742.62	2,745.74	2,748.41	2,750.58	2,750.80	2,746.26	2,739.96	2,738.21
CAL YR 1970	MAX 126,700	MIN 57,370	† -48,710									
WTR YR 1971	MAX 117,700	MIN 57,370	† +3,030									

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

LOCATION.--Lat 40°10'00", long 101°02'40", in SE¹ sec.4, T.2 N., R.33 W., Hitchcock County, on left bank 300 ft upstream from Elm Creek, 0.9 mile downstream from centerline of spillway of Trenton Dam, and 1.5 miles south-west of Trenton.

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

AVERAGE DISCHARGE.--25 years, 108 cfs (78,250 acre-ft per year), unadjusted.

Period of record: Maximum discharge, 16,800 cfs June 16, 1948 (gage height, 5.64 ft), former site and datum; no flow at times in 1947-50, 1952-54.

Maximum flood known since about 1826 occurred May 31, 1935 (discharge, about 200,000 cfs). Discharge of 21,100 cfs was measured July 3, 1946 (gage height, 6.0 ft), former site and datum.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.0	1.2	1.0	1.1	1.1	.76	.91	1.1	120	114	43
2	1.2	1.9	1.3	1.1	1.1	.85	.72	.91	1.1	107	114	43
3	1.2	1.9	1.3	1.0	1.3	.85	.75	1.4	1.1	63	115	42
4	1.2	1.9	1.1	.96	1.1	.91	.82	1.1	1.1	39	113	42
5	1.2	1.7	1.1	.96	1.2	.89	.82	1.1	.97	40	113	42
6	1.6	1.8	1.1	1.0	1.1	.83	.82	1.1	1.0	39	113	42
7	1.6	1.8	1.1	1.0	1.1	.83	.87	1.1	.98	38	113	33
8	1.7	2.6	1.1	1.0	1.1	.84	.82	1.2	1.5	38	113	27
9	1.3	1.9	1.1	1.1	.99	.82	.72	1.3	2.0	20	112	27
10	1.3	1.7	1.1	1.1	.91	.82	.78	1.6	2.6	6.0	112	10
11	1.5	1.6	1.1	1.0	.91	.82	.82	1.4	1.8	5.8	134	1.2
12	1.3	1.6	1.0	1.0	.92	.86	.82	1.4	1.4	5.7	146	1.2
13	1.3	1.6	.98	1.0	.91	.91	.82	1.3	1.4	5.5	144	1.2
14	1.6	1.7	1.0	1.1	1.0	.91	.87	1.2	1.3	40	144	1.1
15	1.6	1.5	1.0	1.1	1.0	.85	.82	1.5	1.1	66	142	1.1
16	1.6	1.6	.94	.99	1.0	.86	.82	1.6	1.2	66	116	1.1
17	1.9	1.6	.95	1.1	1.0	1.0	.87	1.9	1.2	67	101	1.1
18	2.0	1.7	.94	1.0	1.6	.96	.88	2.2	1.0	67	102	1.1
19	2.0	1.8	.95	1.0	2.3	.94	1.5	3.1	.99	92	101	1.1
20	2.0	1.8	.87	1.1	1.0	.87	1.1	2.7	.98	100	102	1.1
21	2.0	2.0	.89	1.1	1.2	.91	.88	2.4	.97	99	101	1.1
22	1.9	1.8	.90	1.1	2.1	.91	1.5	2.0	.95	119	102	1.1
23	2.1	1.9	.89	.97	1.2	.91	1.1	1.5	.97	114	102	1.1
24	1.9	2.0	.88	.98	1.1	1.2	1.0	1.4	.94	114	100	1.1
25	2.1	2.1	.89	.95	1.0	1.1	.94	1.4	1.1	114	100	1.2
26	2.5	2.0	.82	.91	.87	1.0	1.3	1.2	.94	114	99	1.2
27	2.2	2.2	.85	1.0	.90	.88	1.1	1.2	.90	112	98	1.2
28	2.1	2.2	.86	1.0	.95	.85	1.0	1.2	.93	113	86	1.2
29	2.0	2.2	.99	1.1	-----	.84	2.9	1.2	6.3	112	82	1.2
30	2.1	2.0	.93	1.1	-----	.82	.97	1.9	114	112	81	1.2
31	1.9	-----	.95	1.1	-----	.84	-----	1.1	-----	113	58	-----
TOTAL	53.2	56.1	31.08	31.92	31.96	27.98	29.89	46.52	153.82	2,261.0	3,373	373.9
MEAN	1.72	1.87	1.00	1.03	1.14	.90	1.00	1.50	5.13	72.9	109	12.5
MAX	2.5	2.6	1.3	1.1	2.3	1.2	2.9	3.1	114	120	146	43
MIN	1.2	1.5	.82	.91	.87	.82	.72	.91	.90	5.5	58	14
AC-FT	106	111	62	63	63	56	59	92	305	4,480	6,690	741

CAL YR 1970	TOTAL	23,182.08	MEAN	63.5	MAX	285	MIN	.56	AC-FT	45,980
WTR YR 1971	TOTAL	6,470.37	MEAN	17.7	MAX	146	MIN	.72	AC-FT	12,830

06831500 Frenchman River near Imperial, Nebr.
(Formerly published as Frenchman Creek near Imperial)

LOCATION.--Lat 40°25'45", long 101°37'25", in SW1/4NW1/4 sec.3, T.5 N., R.38 W., Chase County, on right bank 0.2 mile downstream from bridge on county highway, 5.8 miles upstream from Enders Dam, and 6.1 miles south of Imperial.

DRAINAGE AREA.--880 sq mi, approximately, of which about 720 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1970, published as Frenchman Creek near Imperial.

GAGE.--Water-stage recorder. Prior to Mar. 7, 1941, nonrecording gage at bridge 0.2 mile upstream at different datum. Mar. 7, 1941, to Sept. 30, 1958, water-stage recorder at site 0.2 mile downstream at datum 4.35 ft lower.

AVERAGE DISCHARGE.--31 years, 71.3 cfs (51,660 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 269 cfs Apr. 19 (gage height, 2.35 ft); minimum daily, 27 cfs June 25.

Period of record: Maximum discharge, 2,340 cfs Mar. 22, 1960 (gage height, 8.43 ft); minimum daily, 22 cfs Oct. 4, 1964.

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).

REMARKS.--Records good. Natural flow affected by irrigation development and regulation at low flow from powerplants above station.

REVISIONS (WATER YEARS).--WSP 976: 1942(M). WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	34	53	66	62	71	57	69	72	47	39	96
2	56	54	66	61	67	74	45	68	57	40	48	64
3	32	53	72	73	70	70	46	62	56	42	49	51
4	55	37	47	70	62	67	70	57	55	49	55	61
5	42	53	76	76	66	78	61	60	67	62	45	54
6	51	53	64	74	68	76	51	67	77	60	46	57
7	43	35	64	70	64	70	52	68	68	53	44	55
8	46	53	53	63	68	68	59	66	62	49	47	42
9	49	50	57	71	62	76	66	62	53	50	47	50
10	48	55	69	69	61	76	54	71	52	52	47	49
11	41	52	52	65	71	74	73	83	51	52	37	37
12	59	38	75	65	71	74	71	79	60	61	37	41
13	39	52	65	64	65	74	67	65	55	55	46	38
14	39	52	68	68	64	76	67	67	78	53	59	40
15	46	42	73	62	73	78	69	67	81	51	46	46
16	33	40	55	69	73	78	69	67	64	49	55	46
17	45	61	63	61	70	73	66	58	51	48	55	44
18	50	48	70	73	64	50	62	72	50	48	44	58
19	69	47	59	67	40	44	116	60	45	47	46	57
20	41	47	66	66	78	97	114	74	44	46	49	49
21	45	47	70	72	76	70	82	56	44	45	51	49
22	53	47	64	67	64	81	65	65	34	45	40	60
23	40	31	68	71	84	78	69	64	45	45	55	57
24	55	54	69	65	79	67	71	57	46	46	43	54
25	34	62	65	72	78	76	60	53	27	50	51	41
26	55	67	64	65	78	79	62	63	29	49	46	57
27	54	66	65	65	52	76	64	60	37	48	58	42
28	50	49	66	70	82	62	63	51	37	59	48	50
29	37	55	69	70	-----	60	61	55	42	58	44	40
30	54	66	72	66	-----	54	69	66	57	53	95	50
31	54	-----	72	62	-----	58	-----	114	-----	42	110	-----
TOTAL	1,459	1,500	2,011	2,098	1,912	2,205	2,001	2,046	1,596	1,554	1,582	1,535
MEAN	47.1	50.0	64.9	67.7	68.3	71.1	66.7	66.0	53.2	50.1	51.0	51.2
MAX	69	67	76	76	84	97	116	114	81	62	110	96
MIN	32	31	47	61	40	44	45	51	27	40	37	37
AC-FT	2,890	2,980	3,990	4,160	3,790	4,370	3,970	4,060	3,170	3,080	3,140	3,040
CAL YR 1970	TOTAL 20,471	MEAN 56.1	MAX 181	MIN 29	AC-FT 40,600							
WTR YR 1971	TOTAL 21,499	MEAN 58.9	MAX 116	MIN 27	AC-FT 42,640							

PEAK DISCHARGE (BASE 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
4-19	1315	2.35	269	7-4	2030	1.80	152
6-13	1915	1.94	176				

KANSAS RIVER BASIN

06832000 Enders Reservoir near Enders, Nebr.

LOCATION.--Lat 40°25'05", long 101°30'55", in NE $\frac{1}{4}$ sec.9, T.5 N., R.37 W., Chase County, near right bank in control house at outlet tube of Enders Dam on Frenchman River, 2.2 miles southeast of Enders.

DRAINAGE AREA.--950 sq mi, approximately, of which about 790 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Sept. 3, 1960, mercury-column pressure gage at same datum.

EXTREMES.--Current year: Maximum contents, 40,800 acre-ft June 23, 24 (elevation, 3,110.08 ft); minimum, 8,940 acre-ft Sept. 6 (elevation, 3,080.79 ft).

Period of record: Maximum contents observed, 55,330 acre-ft Mar. 25, 1960 (elevation, 3,118.20 ft); minimum since operation of reservoir began, 8,940 acre-ft Sept. 6, 1971 (elevation, 3,080.79 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 23, 1950. Capacity, 36,010 acre-ft between elevations 3,080.0 (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.

REVISIONS.--WRD Nebr. 1970: Drainage area.

Capacity table (elevation, in feet, and
usable contents, in acre-feet)

3,080	8,470	3,100	26,540
3,085	11,770	3,110	40,660
3,090	15,830	3,120	58,960

CONTENTS, IN ACRE-Feet, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12,770	16,140	19,430	23,130	26,750	29,920	33,180	36,110	38,710	38,730	24,460	9,290
2	12,910	16,250	19,570	23,280	26,870	30,040	33,240	36,170	38,820	38,250	23,990	9,130
3	12,970	16,360	19,700	23,350	26,980	30,160	33,260	36,240	38,870	37,780	23,510	9,050
4	13,110	16,440	19,800	23,420	27,080	30,280	33,320	36,330	38,960	37,610	22,980	8,990
5	13,200	16,570	19,950	23,530	27,180	30,410	33,390	36,400	39,040	37,360	22,480	8,970
6	13,320	16,700	20,060	23,640	27,310	30,520	33,460	36,440	39,180	37,060	22,000	8,950
7	13,370	16,780	20,200	23,830	27,410	30,600	33,560	36,530	39,300	36,780	21,510	9,030
8	13,480	16,980	20,330	23,970	27,520	30,720	33,590	36,620	39,600	36,540	21,010	9,130
9	13,600	17,080	20,370	24,100	27,640	30,830	33,640	36,780	39,680	36,160	20,520	9,270
10	13,730	17,230	20,550	24,230	27,690	30,950	33,710	37,000	39,810	36,020	20,010	9,410
11	13,810	17,320	20,640	24,300	27,860	31,070	33,740	37,070	39,890	35,770	19,470	9,520
12	13,970	17,410	20,760	24,420	27,970	31,190	33,790	37,200	39,950	35,490	18,890	9,630
13	14,050	17,510	20,890	24,550	28,100	31,330	33,850	37,310	40,110	35,120	18,340	9,730
14	14,130	17,610	21,020	24,680	28,210	31,410	33,920	37,420	40,240	34,760	17,870	9,820
15	14,260	17,720	21,170	24,800	28,320	31,520	33,990	37,500	40,380	34,310	17,330	9,920
16	14,340	17,800	21,290	24,910	28,420	31,630	34,020	37,600	40,470	33,760	16,800	10,090
17	14,430	17,930	21,370	25,030	28,530	31,780	34,050	37,660	40,550	33,150	16,260	10,230
18	14,540	18,040	21,490	25,140	28,750	31,830	34,110	37,710	40,630	32,500	15,700	10,380
19	14,710	18,130	21,600	25,290	28,820	31,850	34,740	37,770	40,700	31,810	15,190	10,550
20	14,810	18,240	21,720	25,420	28,940	32,010	34,980	37,890	40,710	31,140	14,680	10,700
21	14,930	18,320	21,860	25,530	29,050	32,110	35,080	37,910	40,760	30,450	14,180	10,880
22	15,060	18,390	21,960	25,630	29,130	32,210	35,210	38,030	40,780	29,790	13,680	11,020
23	15,140	18,430	22,090	25,780	29,280	32,300	35,330	38,060	40,800	29,120	13,160	11,180
24	15,290	18,570	22,200	25,890	29,420	32,470	35,430	38,060	40,780	28,490	12,590	11,330
25	15,340	18,710	22,330	26,000	29,570	32,590	35,460	38,080	40,680	27,870	12,110	11,430
26	15,530	18,820	22,430	26,100	29,660	32,760	35,580	38,120	40,490	27,210	11,560	11,620
27	15,660	18,970	22,530	26,220	29,720	32,900	35,680	38,190	40,270	26,700	11,070	11,730
28	15,800	19,090	22,680	26,340	29,830	32,940	35,790	38,250	39,930	26,240	10,580	11,840
29	15,860	19,200	22,780	26,470	-----	33,040	35,890	38,340	39,600	25,840	10,120	11,950
30	15,960	19,390	22,910	26,550	-----	33,120	36,010	38,430	39,150	25,420	9,760	12,080
31	16,060	-----	23,030	26,650	-----	33,160	-----	38,600	-----	24,940	9,480	-----
MAX	16,060	19,390	23,030	26,650	29,830	33,160	36,010	38,600	40,800	38,730	24,460	12,080
MIN	12,770	16,140	19,430	23,130	26,750	29,920	33,180	36,110	38,710	38,250	9,480	8,950
(†)	+3,380	+3,330	+3,640	+3,620	+3,180	+3,330	+2,850	+2,590	+550	-14,210	-15,460	+2,600
(‡)	3,090.25	3,093.70	3,097.06	3,100.09	3,102.57	3,105.02	3,106.98	3,108.69	3,109.04	3,098.69	3,081.64	3,085.41
CAL YR 1970	MAX 40,660	MIN 9,870	† -2,870									
WTR YR 1971	MAX 40,800	MIN 8,950	† -600									

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

KANSAS RIVER BASIN

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06832500 Frenchman River near Enders, Nebr.
(Formerly published as Frenchman Creek near Enders)

LOCATION.--Lat 40°25'05", long 101°30'35", in NW¹ sec.10, T.5 N., R.37 W., Chase County, on left bank 0.2 mile downstream from Enders Dam and 2.5 miles southeast of Enders.

DRAINAGE AREA.--950 sq mi, approximately, of which about 790 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--February 1946 to current year. Prior to October 1970, published as Frenchman Creek near Enders.

GAGE.--Water-stage recorder. Datum of gage is 3,031.22 ft above mean sea level (Bureau of Reclamation bench mark). Prior to June 14, 1948, at site 800 ft upstream at datum 1.03 ft higher.

AVERAGE DISCHARGE.--25 years, 70.6 cfs (51,150 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 407 cfs July 20-22 (gage height, 3.96 ft); minimum daily, 4.5 cfs Nov. 11, 12, Dec. 25.

Period of record: Maximum discharge, 763 cfs Aug. 20, 1953 (gage height, 6.31 ft); maximum gage height, 6.65 ft July 18, 1958 (backwater from downstream tributary); minimum daily discharge, 1.6 cfs Nov. 3, 1950.

REMARKS.--Records good. Flow regulated by Enders Reservoir. (See preceding page.)

REVISIONS (WATER YEARS).--WRD Nebr. 1969: 1956. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	4.7	5.2	4.8	6.4	7.1	7.4	6.9	7.4	270	316	227
2	5.7	4.8	5.3	5.0	6.4	7.2	7.5	7.2	7.4	284	308	166
3	5.6	4.8	5.4	5.4	6.6	7.3	7.3	7.1	7.4	261	323	126
4	5.4	4.8	5.1	5.1	6.7	7.0	7.4	7.3	7.1	241	326	109
5	5.4	4.8	5.1	5.1	6.8	7.4	7.4	7.5	7.3	234	325	96
6	5.4	4.8	5.1	5.1	7.2	7.4	7.6	7.4	7.4	203	322	88
7	5.6	4.8	5.1	5.1	7.6	7.5	7.3	7.2	7.4	189	321	41
8	5.8	5.7	5.0	5.1	7.3	7.2	7.3	7.1	8.5	187	324	5.7
9	5.4	5.2	5.0	5.1	7.2	7.0	7.4	7.7	7.3	181	325	5.7
10	5.4	4.9	5.1	5.1	7.1	7.1	7.2	8.3	7.3	193	328	5.7
11	5.4	4.5	5.1	5.1	7.1	7.1	7.4	7.6	7.2	194	336	5.7
12	5.6	4.5	5.1	5.1	7.1	7.0	7.5	7.7	7.1	213	340	5.7
13	5.4	4.8	5.1	5.4	7.1	7.0	7.7	7.4	7.3	230	341	5.7
14	5.6	4.8	4.8	5.4	6.9	7.2	7.4	7.3	6.9	251	351	5.7
15	5.4	5.0	4.8	5.4	6.9	6.2	8.0	7.2	6.7	294	351	5.7
16	5.5	5.1	4.9	5.4	7.0	6.0	7.5	7.2	6.6	339	347	5.7
17	5.7	5.1	5.1	5.6	7.0	6.3	7.3	7.7	6.7	369	339	5.7
18	5.7	5.1	5.1	5.6	7.9	7.0	7.3	8.2	6.7	386	340	5.7
19	5.4	4.9	4.8	5.7	7.7	6.5	11	7.9	6.7	395	337	5.7
20	5.4	4.8	4.9	5.9	7.1	6.4	8.0	7.7	6.7	405	323	5.4
21	5.2	5.1	5.1	6.2	7.4	6.6	7.7	7.9	6.5	396	320	5.7
22	4.8	5.2	5.1	6.4	7.2	6.7	8.3	8.2	6.6	395	322	5.1
23	4.8	5.2	4.9	6.4	7.4	6.7	7.7	8.1	18	393	330	5.1
24	4.8	5.2	4.7	6.4	7.1	7.1	7.1	7.9	43	381	346	5.1
25	4.8	5.1	4.5	6.4	7.3	7.1	7.2	7.8	81	378	341	5.1
26	5.3	5.1	4.8	6.0	7.5	9.0	7.8	7.7	115	358	326	5.1
27	4.9	5.1	4.8	6.0	7.0	7.4	7.3	7.9	140	326	324	5.0
28	4.8	4.8	4.8	6.0	7.1	7.8	7.1	7.4	177	302	326	4.8
29	4.8	4.8	4.8	6.0	-----	7.7	7.2	7.3	223	292	321	4.8
30	4.8	5.0	4.8	6.4	-----	7.3	7.0	7.5	252	290	297	4.8
31	4.8	-----	4.8	6.4	-----	7.4	-----	7.5	-----	306	288	-----
TOTAL	164.2	148.5	154.2	174.1	199.1	219.7	227.3	234.8	1,205.2	9,136	10,164	977.4
MEAN	5.30	4.95	4.97	5.62	7.11	7.09	7.58	7.57	40.2	295	328	32.6
MAX	5.8	5.7	5.4	6.4	7.9	9.0	11	8.3	252	405	351	227
MIN	4.8	4.5	4.5	4.8	6.4	6.0	7.0	6.9	6.5	181	288	4.8
AC-FT	326	295	306	345	395	436	451	466	2,390	18,120	20,160	1,940

CAL YR 1970 TOTAL 22,671.1 MEAN 62.1 MAX 467 MIN 4.5 AC-FT 44,970
WTR YR 1971 TOTAL 23,004.5 MEAN 63.0 MAX 405 MIN 4.5 AC-FT 45,630

LOCATION.--Lat 40°20'50", long 101°07'40", in SE1/4 sec.36, T.5 N., R.34 W., Hayes County, on right bank at downstream side of bridge on U.S. Highway 6, 0.4 mile upstream from Burlington Northern Inc. bridge, 1 mile west of Palisade. and 2 miles upstream from Stinking Water Creek.

PERIOD OF RECORD.--October 1894 to October 1896, June 1950 to current year. Published as Frenchman Creek at Palisade, June 1950 to September 1970.

AVERAGE DISCHARGE.--23 years, 93.2 cfs (67,520 acre-ft per year).

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. (See sta 06832000.) Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	32	32	47	41	44	42	47	30	199	274	273
2	22	32	33	49	38	44	41	45	28	219	289	233
3	22	31	34	38	35	42	41	44	28	243	278	182
4	21	31	35	30	33	46	41	44	28	237	286	146
5	21	31	35	29	32	44	41	44	27	276	286	127
6	20	31	36	28	32	43	41	43	26	234	286	114
7	21	30	36	27	32	42	41	43	26	205	283	106
8	24	33	35	27	32	43	40	42	29	187	282	94
9	24	37	36	28	35	43	40	43	113	186	284	67
10	23	34	36	28	40	42	39	47	79	173	282	59
11	23	33	30	28	45	43	39	47	60	182	281	52
12	23	31	30	28	47	43	39	44	46	179	284	48
13	24	30	30	30	44	42	39	44	41	188	287	45
14	24	27	29	33	42	42	38	43	56	202	309	41
15	25	27	29	36	42	41	36	42	44	218	322	40
16	27	27	29	39	42	41	37	41	40	248	313	40
17	27	26	28	40	41	40	38	39	38	286	314	42
18	27	26	28	41	44	55	41	45	37	309	307	42
19	27	26	27	42	44	50	49	44	34	326	309	43
20	28	25	27	43	40	46	59	42	33	338	308	42
21	28	25	27	45	35	43	54	41	31	346	299	43
22	28	25	27	47	25	42	51	42	30	343	293	47
23	28	16	28	48	40	42	56	43	25	343	294	44
24	28	24	29	49	46	46	53	43	19	338	293	41
25	29	34	30	49	50	47	49	40	27	334	307	41
26	31	29	32	49	52	44	49	33	46	334	305	40
27	35	31	34	49	46	45	49	28	74	323	296	39
28	34	33	36	48	45	45	49	29	92	297	295	37
29	33	33	40	45	-----	43	48	29	128	279	296	36
30	32	33	43	41	-----	43	48	31	170	270	296	35
31	32	-----	45	41	-----	43	-----	30	-----	268	281	-----
TOTAL	814	883	1,006	1,202	1,120	1,359	1,328	1,262	1,485	8,110	9,119	2,239
MEAN	26.3	29.4	32.5	38.8	40.0	43.8	44.3	40.7	49.5	262	294	74.6
MAX	35	37	45	49	52	55	59	47	170	346	322	273
MIN	20	16	27	27	25	40	36	28	19	173	274	35
AC-FT	1,610	1,750	2,000	2,380	2,220	2,700	2,630	2,500	2,950	16,090	18,090	4,440
CAL YR 1970	TOTAL 29,299		MEAN 80.3	MAX 396	MIN 16	AC-FT 58,110						
WTR YR 1971	TOTAL 29,927		MEAN 82.0	MAX 346	MIN 16	AC-FT 59,360						

KANSAS RIVER BASIN

143

06835000 Stinking Water Creek near Palisade, Nebr.

LOCATION.--Lat 40°22'10", long 101°06'50", at southwest corner of NW $\frac{1}{4}$ sec.30, T.5 N., R.33 W., Hayes County, on right bank 25 ft downstream from county bridge, 1.2 miles upstream from mouth, and 1.8 miles northwest of Palisade.

DRAINAGE AREA.--1,500 sq mi, approximately, of which about 380 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 2,740.99 ft above mean sea level.

AVERAGE DISCHARGE.--22 years, 44.0 cfs (31,880 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 154 cfs Apr. 22 (gage height, 4.52 ft); minimum daily, 15 cfs Aug. 23.

Period of record: Maximum discharge, 3,030 cfs June 17, 1956 (gage height, 11.30 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of peak flow; minimum daily, 6.0 cfs Aug. 4, 1955.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by irrigation development above station.

REVISIONS (WATER YEARS).--WSP 1730: 1952(M). WSP 1919: 1951(P), 1955. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	34	40	39	41	58	48	80	66	30	23	25
2	23	34	39	41	40	56	46	72	51	28	22	29
3	24	33	39	28	38	49	44	59	47	37	21	25
4	24	33	38	28	35	51	43	53	46	32	20	24
5	25	33	38	28	35	57	43	51	45	51	20	20
6	23	35	37	26	35	64	43	52	43	52	20	20
7	23	36	37	26	35	57	44	55	41	42	19	20
8	25	39	37	26	35	54	44	54	41	39	21	20
9	28	44	38	28	43	51	43	52	91	32	20	20
10	32	50	36	31	50	58	43	55	122	33	20	20
11	31	52	36	31	56	63	42	91	101	34	17	20
12	30	47	35	31	62	69	42	104	82	40	17	19
13	28	43	34	34	54	72	42	84	57	31	16	19
14	28	41	32	37	54	73	43	72	81	30	18	18
15	29	40	32	42	54	70	43	59	62	32	22	18
16	30	40	32	46	53	63	42	51	64	31	27	19
17	30	40	32	42	52	56	41	47	58	30	22	24
18	30	40	32	44	52	59	40	48	44	29	19	29
19	29	41	26	47	61	51	47	57	41	26	18	31
20	29	42	28	49	41	46	75	56	37	25	18	31
21	29	41	30	52	36	46	126	51	33	25	18	32
22	29	41	30	52	19	59	139	46	31	23	18	37
23	29	30	31	50	38	65	140	47	30	21	15	43
24	29	22	32	51	50	59	100	51	28	22	17	42
25	32	36	33	53	60	44	77	47	28	21	17	38
26	32	44	35	63	59	50	69	47	26	21	18	34
27	37	43	37	57	58	67	66	51	25	22	18	32
28	42	41	39	54	54	82	71	54	23	22	17	29
29	40	40	39	55	-----	70	71	53	25	22	18	29
30	37	38	39	58	-----	57	76	50	24	22	18	29
31	36	-----	43	56	-----	51	-----	52	-----	23	20	-----
TOTAL	917	1,173	1,086	1,305	1,300	1,827	1,833	1,801	1,493	928	594	796
MEAN	29.6	39.1	35.0	42.1	46.4	58.9	61.1	58.1	49.8	29.9	19.2	26.5
MAX	42	52	43	63	62	82	140	104	122	52	27	43
MIN	23	22	26	26	19	44	40	46	23	21	15	18
AC-FT	1,820	2,330	2,150	2,590	2,580	3,620	3,640	3,570	2,960	1,840	1,180	1,580

CAL YR 1970 TOTAL 13,040 MEAN 35.7 MAX 105 MIN 14 AC-FT 25,860

WTR YR 1971 TOTAL 15,053 MEAN 41.2 MAX 140 MIN 15 AC-FT 29,860

PEAK DISCHARGE (BASE, 150 CFS).--Apr. 22 (2300) 154 cfs (4.52 ft); June 9 (1330) 150 cfs (4.22 ft).

LOCATION.--Lat 40°14'05", long 100°52'40", in SW¹/₄SE¹/₄ sec.12, T.3 N., R.32 W., Hitchcock County, on right bank 19 ft upstream from bridge on U.S. Highways 6 and 34, 2 miles west of Culbertson, and 4.5 miles upstream from mouth.

PERIOD OF RECORD.--June 1913 to September 1915 (gage heights and discharge measurements only), October 1930 to current year. Prior to October 1970, published as Frenchman Creek at Culbertson. Monthly discharge only for some periods, published in WSP 1310.

AVERAGE DISCHARGE.--41 years, 115 cfs (83,320 acre-ft per year).

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. (See sta 06832000.) Principal diversion is by Culbertson Canal (20,800 acres). Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 1931, 1933, 1934(M), 1938(M). WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

CAL YR 1970	TOTAL	23,962.0	MEAN	65.6	MAX	573	MIN	13	AC-FT	47,530
WTR YR 1971	TOTAL	24,861.8	MEAN	68.1	MAX	160	MIN	7.5	AC-FT	49,310

KANSAS RIVER BASIN

145

06836000 Blackwood Creek near Culbertson, Nebr.

LOCATION.--Lat 40°14'10", long 100°48'39", in SE 1/4 sec. 10, T.3 N., R.31 W., Hitchcock County, on right bank 500 ft upstream from bridge on U.S. Highways 6 and 34, 0.2 mile north of Burlington Northern Inc. bridge, 1 mile east of Culbertson, and 1.8 miles upstream from mouth.

DRAINAGE AREA.--320 sq mi, approximately, of which about 270 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 2,555.25 ft above mean sea level. 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 mile downstream at datum 8.96 ft lower.

AVERAGE DISCHARGE.--25 years, 6.54 cfs (4,740 acre-ft per year); median of yearly mean discharges, 5.7 cfs (4,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 166 cfs June 12 (gage height, 4.14 ft); minimum daily, 1.5 cfs June 24.

Period of record: Maximum discharge, 1,650 cfs June 17, 1955 (gage height, 14.64 ft, site then in use); no flow Jan. 4-6, 1950.

Flood of May 31, 1935, reached a stage of 24.0 ft, at site 0.2 mile downstream at present datum, from floodmarks (discharge, about 5,300 cfs), from information by Nebraska Department of Roads.

REMARKS.--Records fair. Natural flow affected by irrigation development above station, return flow from irrigated areas, and waste from Culbertson Canal.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.2	2.0	2.2	2.4	2.4	1.8	13	3.8	2.3	4.1	7.3
2	2.2	2.3	2.1	2.0	2.4	2.3	1.7	9.0	2.4	7.3	5.2	6.3
3	2.1	2.4	2.1	1.8	2.4	1.9	1.8	10	3.6	40	5.2	8.9
4	2.0	2.5	2.1	2.0	2.3	2.0	2.0	15	5.3	5.3	6.1	13
5	2.0	2.4	2.2	2.0	2.3	2.2	1.9	12	6.3	15	5.4	14
6	2.2	2.4	2.1	1.9	2.1	2.2	1.9	11	7.6	16	7.5	15
7	2.2	2.2	2.1	1.8	2.3	2.1	1.8	4.6	7.2	17	8.4	19
8	2.7	3.0	2.1	1.7	2.3	2.2	4.1	6.2	9.4	19	5.6	17
9	2.9	3.0	2.2	1.6	2.3	1.9	13	3.6	44	17	6.3	13
10	2.9	2.5	2.2	1.7	2.3	2.1	8.0	5.8	41	11	6.1	18
11	3.2	2.4	2.2	1.8	2.4	2.1	11	9.0	101	13	4.9	17
12	2.9	2.3	2.3	1.8	2.4	2.0	10	4.5	95	4.7	5.8	11
13	2.7	2.0	2.2	1.8	2.3	1.9	6.6	5.8	24	3.3	4.3	3.0
14	2.7	2.0	2.2	1.8	2.3	1.8	5.1	6.5	13	4.1	3.8	2.4
15	2.9	2.1	2.4	1.9	2.3	1.8	2.8	7.6	14	5.1	3.3	2.7
16	2.6	2.2	2.2	1.9	2.2	1.7	2.0	7.3	12	5.1	7.1	2.7
17	2.6	2.1	2.2	2.0	2.1	1.6	2.5	7.2	9.4	6.1	5.2	2.9
18	2.6	2.2	2.2	2.2	7.8	1.7	2.7	8.0	8.4	6.6	4.9	2.9
19	2.5	2.1	2.2	2.2	8.3	2.3	5.9	9.6	8.5	6.1	4.5	3.0
20	2.5	2.1	2.3	2.3	3.2	1.9	3.9	8.3	8.9	3.7	2.6	2.7
21	2.6	2.1	2.3	2.2	2.8	1.9	6.1	7.2	6.8	3.7	6.4	2.9
22	2.4	2.1	2.5	2.2	2.1	1.8	5.7	7.2	4.8	6.9	4.6	2.9
23	2.1	2.0	2.3	2.3	3.0	1.9	11	6.3	2.9	6.4	3.9	2.6
24	2.1	2.2	2.2	2.3	3.0	1.9	14	6.3	1.5	7.7	3.7	2.4
25	2.1	2.2	2.2	2.3	2.9	2.2	13	6.7	1.7	11	4.5	2.6
26	2.1	2.1	2.2	2.3	2.8	2.0	13	6.2	1.6	8.2	5.8	2.5
27	2.2	2.0	2.2	2.3	2.6	2.0	15	4.6	1.7	7.4	5.6	2.2
28	2.0	1.9	2.2	2.2	2.5	1.9	15	4.3	2.4	5.5	4.5	2.4
29	2.0	2.0	2.1	2.3	-----	1.7	11	4.4	1.8	5.4	6.1	2.4
30	2.0	2.0	2.1	2.3	-----	1.8	10	5.0	4.3	4.0	6.6	2.0
31	2.0	-----	2.2	2.3	-----	1.8	-----	4.8	-----	3.1	8.5	-----
TOTAL	74.1	67.0	68.1	63.4	80.1	61.0	204.3	227.0	454.3	277.0	166.5	206.7
MEAN	2.39	2.23	2.20	2.05	2.86	1.97	6.81	7.32	15.1	8.94	5.37	6.89
MAX	3.2	3.0	2.5	2.3	8.3	2.4	15	15	101	40	8.5	19
MIN	2.0	1.9	2.0	1.6	2.1	1.6	1.7	3.6	1.5	2.3	2.6	2.0
AC-FT	147	133	135	126	159	121	405	450	901	549	330	410

CAL YR 1970 TOTAL 1,502.0 MEAN 4.12 MAX 111 MIN 1.4 AC-FT 2,980
WTR YR 1971 TOTAL 1,949.5 MEAN 5.34 MAX 101 MIN 1.5 AC-FT 3,870

PEAK DISCHARGE (BASE, 150 CFS, REVISED).--June 12 (0030) 166 cfs (4.14 ft).

KANSAS RIVER BASIN

06836500 Driftwood Creek near McCook, Nebr.

LOCATION.--Lat 40°08'50", long 100°39'55", in SW¹/₄ sec.12, T.2 N., R.30 W., Red Willow County, on right bank 50 ft downstream from privately owned bridge, 600 ft downstream from siphon and wasteway on Meeker-Driftwood Canal, 4.5 miles southwest of McCook, and 4.5 miles upstream from mouth.

DRAINAGE AREA.--360 sq mi, approximately, of which about 350 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 2,493.78 ft above mean sea level. Prior to Oct. 12, 1962, at site 0.2 mile downstream in old channel at present datum, and Oct. 12, 1962, to Apr. 11, 1963, at site 0.5 mile downstream at datum 3.75 ft lower.

AVERAGE DISCHARGE.--25 years, 10.6 cfs (7,680 acre-ft per year); median of yearly mean discharges, 7.6 cfs (5,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 461 cfs July 5 (gage height, 13.78 ft); minimum daily, 2.9 cfs June 27, 28.

Period of record: Maximum discharge, 4,740 cfs Aug. 7, 1950 (gage height, 25.43 ft, at site then in use, from floodmark), from rating curve extended above 3,000 cfs; no flow at times each year 1946-50, 1952-56.

REMARKS.--Records fair. Natural flow affected by waste from Meeker-Driftwood Canal and by irrigation development above station.

REVISIONS (WATER YEARS).--WSP 1210: 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.8	4.2	3.3	4.1	4.7	5.2	4.0	5.2	11	12	9.6
2	18	4.1	4.1	3.1	4.1	4.7	5.0	3.9	4.8	26	13	10
3	24	4.0	4.2	3.4	4.1	4.7	5.0	3.9	4.9	20	13	12
4	5.9	4.1	4.3	3.1	4.3	4.7	4.0	4.2	5.3	15	10	14
5	4.0	4.0	4.1	3.0	4.1	4.7	4.0	4.0	4.6	241	7.5	14
6	3.9	4.0	4.1	3.0	4.1	4.7	4.0	5.1	4.3	40	10	14
7	3.7	4.3	4.1	3.0	4.1	4.7	3.8	4.6	4.3	19	11	13
8	3.9	4.5	4.3	3.1	4.1	4.7	3.8	5.5	6.1	13	16	12
9	4.5	5.1	4.3	3.1	4.1	4.7	3.8	4.2	25	13	13	11
10	4.2	4.2	4.3	3.3	4.2	4.5	3.6	4.4	21	12	7.9	8.9
11	4.0	4.0	4.1	3.3	4.6	4.5	3.6	5.9	20	23	7.8	8.9
12	4.1	4.1	3.9	3.4	4.7	4.5	3.6	6.0	8.6	34	9.2	9.3
13	3.9	4.0	3.9	3.4	4.5	4.5	3.4	14	7.8	15	8.8	9.5
14	3.7	4.1	3.9	3.6	4.5	4.5	3.4	11	6.6	14	11	10
15	3.7	4.1	3.9	3.6	4.5	4.5	3.3	6.3	5.1	12	15	11
16	3.8	4.3	3.9	3.7	4.5	4.5	3.3	4.1	6.2	10	13	10
17	3.9	4.3	3.9	3.7	4.4	4.4	3.3	3.8	9.2	14	12	11
18	3.7	4.2	3.9	3.9	4.9	4.2	3.9	11	6.0	12	13	11
19	3.7	4.3	3.7	3.9	5.4	4.0	6.0	23	4.5	12	10	10
20	3.7	4.1	3.8	4.2	4.2	4.1	8.0	27	3.9	13	12	11
21	3.7	4.1	3.9	4.3	4.1	4.1	6.0	12	4.2	10	10	9.3
22	3.6	4.3	3.9	4.3	3.7	3.9	7.5	9.8	3.9	9.1	9.9	8.3
23	3.4	4.3	3.9	4.3	3.7	4.1	56	8.3	4.2	9.2	7.7	7.7
24	3.4	4.1	3.7	4.3	4.1	4.1	141	7.1	6.5	9.9	7.8	7.6
25	3.6	4.4	3.6	4.3	4.1	4.3	22	6.9	32	10	9.0	5.5
26	3.6	4.5	3.6	4.3	4.3	4.3	10	6.0	3.1	13	11	4.6
27	3.7	4.3	3.4	4.3	4.5	4.3	7.0	5.9	2.9	15	13	4.4
28	3.7	4.3	3.4	4.3	4.7	4.3	5.2	6.1	2.9	10	11	4.6
29	3.7	4.3	3.4	4.3	-----	4.3	4.5	6.2	5.9	10	10	4.2
30	3.4	4.4	3.3	4.3	-----	5.1	5.6	5.8	8.8	11	10	53
31	3.8	-----	3.3	4.3	-----	5.4	-----	5.6	-----	11	10	-----
TOTAL	155.9	126.6	120.3	115.4	120.7	138.7	348.8	235.6	237.8	687.2	334.6	329.4
MEAN	5.03	4.22	3.88	3.72	4.31	4.47	11.6	7.60	7.93	22.2	10.8	11.0
MAX	24	5.1	4.3	4.3	5.4	5.4	141	27	32	241	16	53
MIN	3.4	3.8	3.3	3.0	3.7	3.9	3.3	3.8	2.9	9.1	7.5	4.2
AC-FT	309	251	239	229	239	275	692	467	472	1,360	664	653

CAL YR 1970 TOTAL 2,749.9 MEAN 7.53 MAX 490 MIN 2.8 AC-FT 5,450
WTR YR 1971 TOTAL 2,951.0 MEAN 8.08 MAX 241 MIN 2.9 AC-FT 5,850

PEAK DISCHARGE (BASE, 300 CFS, REVISED).--July 5 (1015) 461 cfs (13.78 ft).

NOTE.--No gage-height record Feb. 22 to Mar. 28, Apr. 5-14.

KANSAS RIVER BASIN

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06837000 Republican River at McCook, Nebr.

LOCATION.--Lat 40°11'15", long 100°37'05", in SW 1/4 sec. 32, T.3 N., R.29 W., Red Willow County, on left bank 25 ft downstream from bridge on U.S. Highway 83 at south edge of McCook, 2.5 miles downstream from Driftwood Creek, and 10.5 miles upstream from Red Willow Creek.

DRAINAGE AREA.--12,310 sq mi, approximately, of which about 6,260 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to June 1932, October 1954 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,456.37 ft above mean sea level. 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.

AVERAGE DISCHARGE.--18 years, 217 cfs (157,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,040 cfs June 9 (gage height, 5.40 ft); minimum daily, 46 cfs Apr. 13.

Period of record: Maximum discharge, 5,890 cfs Mar. 21, 1960 (gage height, 9.14 ft); no flow for several days in July and August 1931.

Maximum flood since at least 1826 occurred May 31, 1935 (discharge, about 245,000 cfs).

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 (see sta 06832000), and Swanson Lake (see sta 06829000). Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	105	115	115	128	153	125	137	90	227	148	109
2	88	102	115	110	130	148	119	135	91	242	145	86
3	121	104	116	90	125	150	117	128	90	411	155	89
4	83	106	118	75	120	141	113	123	86	219	143	106
5	70	94	117	65	110	151	108	112	80	503	135	103
6	66	96	116	60	100	154	87	119	73	326	141	106
7	65	97	115	60	95	149	67	97	66	228	155	126
8	81	108	113	70	95	150	65	93	66	191	150	132
9	89	133	111	85	100	146	62	99	616	217	153	122
10	88	122	112	80	120	141	56	119	291	247	136	121
11	96	125	96	80	140	140	53	145	370	159	125	195
12	94	125	96	75	140	147	54	135	372	175	144	138
13	85	123	98	80	135	154	46	163	198	124	149	94
14	88	116	98	85	135	154	50	146	141	117	145	85
15	94	114	100	85	140	149	54	114	122	129	172	84
16	93	114	105	95	145	140	55	108	150	140	197	98
17	94	113	110	110	155	136	55	95	166	128	160	115
18	98	112	100	105	150	140	57	132	155	130	143	121
19	101	111	88	95	145	132	105	134	108	128	138	111
20	101	112	92	105	135	143	166	147	94	156	141	117
21	99	114	85	120	120	132	133	118	82	142	143	119
22	99	105	88	125	100	127	168	104	74	139	137	134
23	100	96	92	130	110	133	310	99	72	149	132	117
24	92	117	92	140	130	143	446	94	65	148	134	121
25	85	116	92	145	145	169	242	97	101	163	130	127
26	91	120	96	145	150	149	172	92	74	178	126	123
27	104	117	100	150	155	153	161	82	72	188	131	118
28	103	114	100	150	157	160	153	82	66	172	131	114
29	111	118	110	150	-----	165	150	89	70	156	119	109
30	109	119	115	140	-----	155	157	102	123	151	112	105
31	107	-----	120	125	-----	143	-----	98	-----	154	125	-----
TOTAL	2,879	3,368	3,221	3,245	3,610	4,547	3,706	3,538	4,224	5,937	4,395	3,445
MEAN	92.9	112	104	105	129	147	124	114	141	192	142	115
MAX	121	133	120	150	157	169	446	163	616	503	197	195
MIN	65	94	85	60	95	127	46	82	65	117	112	84
AC-FT	5,710	6,680	6,390	6,440	7,160	9,020	7,350	7,020	8,380	11,780	8,720	6,830

CAL YR 1970 TOTAL 57,142 MEAN 157 MAX 1,230 MIN 39 AC-FT 113,300

WTR YR 1971 TOTAL 46,115 MEAN 126 MAX 616 MIN 46 AC-FT 91,470

KANSAS RIVER BASIN

06837300 Red Willow Creek above Hugh Butler Lake, Nebr.

LOCATION.--Lat 40°24'05", long 100°46'45", in NE 1/4 sec.13, T.5 N., R.31 W., Hayes County, on right bank 1,000 ft above county road bridge, 7.2 miles upstream from Red Willow Dam, and 12 miles northeast of Culbertson.

DRAINAGE AREA.--600 sq mi, approximately, of which about 200 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Artificial control since March 1961. Datum of gage is 2,594.80 ft above mean sea level. Prior to Mar. 23, 1961, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--11 years, 29.8 cfs (21,590 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 172 cfs June 10 (gage height, 2.48 ft); minimum daily, 9.7 cfs Sept. 10.

Period of record: Maximum discharge, 2,950 cfs June 16, 1962 (gage height, 8.97 ft); minimum daily, 4.0 cfs July 4, 5, 1963.

REMARKS.--Records good. Natural flow affected by pump irrigation development above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	32	28	34	34	38	39	58	25	18	12	11
2	16	30	29	31	33	38	33	67	31	19	13	12
3	15	28	30	20	32	36	30	54	28	25	12	13
4	16	27	31	19	20	34	30	44	26	25	12	13
5	16	26	29	19	20	36	29	39	25	43	14	12
6	17	26	28	19	21	38	29	37	26	38	12	11
7	15	26	28	18	21	40	28	36	24	26	11	11
8	18	27	27	18	22	39	27	36	23	25	10	10
9	19	32	27	19	33	38	27	37	30	24	13	11
10	20	36	26	19	33	39	25	41	100	24	13	9.7
11	20	40	22	14	38	42	25	43	100	22	13	9.9
12	21	44	27	18	38	44	24	61	88	23	12	11
13	21	43	26	25	41	43	23	86	51	31	12	11
14	21	39	27	20	43	36	23	72	42	25	9.9	11
15	22	36	35	18	43	50	24	55	38	21	12	10
16	22	32	31	26	43	47	23	41	34	19	12	11
17	22	30	34	35	43	42	25	33	29	18	12	13
18	23	29	28	32	47	39	25	27	27	17	12	15
19	22	28	21	28	54	36	34	26	27	17	20	16
20	22	28	24	31	48	29	52	25	23	16	13	17
21	23	28	33	34	38	32	76	26	22	13	13	18
22	24	25	30	33	36	44	100	31	21	14	12	19
23	24	20	19	34	38	47	89	31	20	14	10	21
24	24	25	23	37	43	44	75	30	19	12	12	25
25	23	33	20	36	46	39	64	32	18	11	11	28
26	23	25	31	36	41	34	55	33	18	12	11	28
27	24	25	32	35	41	42	49	34	17	13	11	25
28	27	28	31	37	38	53	46	32	16	14	11	23
29	30	29	26	36	-----	70	50	28	16	16	10	20
30	34	28	30	35	-----	61	53	27	16	15	11	19
31	34	-----	33	30	-----	47	-----	24	-----	13	11	-----
TOTAL	675	905	866	848	1,028	1,297	1,232	1,246	980	623	372.9	464.6
MEAN	21.8	30.2	27.9	27.4	36.7	41.8	41.1	40.2	32.7	20.1	12.0	15.5
MAX	34	44	35	38	54	70	100	86	100	43	20	28
MIN	15	20	19	14	20	29	23	24	16	11	9.9	9.7
AC-FT	1,340	1,800	1,720	1,680	2,040	2,570	2,440	2,470	1,940	1,240	740	922

CAL YR 1970 TOTAL 9,130.6 MEAN 25.0 MAX 102 MIN 6.4 AC-FT 18,110

WTR YR 1971 TOTAL 10,537.5 MEAN 28.9 MAX 100 MIN 9.7 AC-FT 20,900

PEAK DISCHARGE (BASE, 150 CFS, REVISED).--June 10 (0345) 172 cfs (2.48 ft); June 12 (0115) 164 cfs (2.54 ft).

06837390 Hugh Butler Lake near McCook, Nebr.

LOCATION.--Lat 40°21'35", long 100°39'55", in SW1/4 sec.31, T.5 N., R.29 W., Frontier County, in gate-control house at outlet tube of Red Willow Dam on Red Willow Creek, 12 miles north of McCook.

DRAINAGE AREA.--730 sq mi, approximately, of which about 310 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--September 1961 to current year.

GAGE.--Water-stage recorder. Gage is referred to mean sea level. Prior to July 10, 1962, nonrecording gages at present datum.

EXTREMES.--Current year: Maximum contents, 38,760 acre-ft June 15 (elevation, 2,582.40 ft); minimum, 27,240 acre-ft Sept. 16 (elevation, 2,574.56 ft).

Period of record: Maximum contents, 41,680 acre-ft July 15, 16, 1967 (elevation, 2,584.14 ft); minimum since operation of reservoir began, 21,620 acre-ft Nov. 8, 9, 1962 (elevation, 2,569.84 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began Sept. 5, 1961. Capacity, 31,470 acre-ft between elevations 2,522.0 (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, 86,630 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.

REVISIONS.--WRD Nebr. 1970: Drainage area.

Capacity table (elevation, in feet, and
usable contents, in acre-feet)

2,570	21,800	2,580	34,910
2,575	27,800	2,585	43,170

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29,020	29,610	30,830	31,740	32,940	34,560	36,340	38,150	38,020	36,040	31,740	27,930
2	29,000	29,660	30,850	31,810	32,940	34,620	36,340	38,230	38,000	35,880	31,590	27,800
3	28,960	29,660	30,900	31,850	32,980	34,660	36,390	38,280	37,990	35,740	31,420	27,740
4	28,950	29,660	30,940	31,850	33,000	34,710	36,390	38,310	38,000	35,550	31,220	27,670
5	28,920	29,700	30,950	31,860	33,020	34,770	36,400	38,400	38,000	35,460	31,050	27,640
6	28,920	29,750	30,980	31,890	33,040	34,840	36,420	38,400	37,950	35,330	30,900	27,610
7	28,910	29,790	31,040	31,920	33,050	34,860	36,450	38,400	37,940	35,250	30,700	27,570
8	28,910	29,960	31,080	31,960	33,050	34,940	36,470	38,430	38,100	35,200	30,540	27,530
9	28,880	29,960	31,080	31,980	33,080	34,980	36,450	38,460	38,250	35,190	30,380	27,500
10	28,910	30,080	31,120	32,010	33,160	35,060	36,420	38,580	38,350	35,170	30,210	27,470
11	28,970	30,080	31,100	32,020	33,240	35,110	36,450	38,600	38,500	35,140	30,050	27,420
12	28,980	30,140	31,140	32,070	33,320	35,170	36,470	38,600	38,700	35,100	29,880	27,380
13	29,010	30,200	31,140	32,100	33,390	35,250	36,480	38,600	38,730	35,050	29,730	27,340
14	29,040	30,270	31,150	32,130	33,440	35,320	36,470	38,580	38,740	34,980	29,660	27,290
15	29,050	30,290	31,210	32,140	33,480	35,380	36,500	38,510	38,610	34,840	29,540	27,270
16	29,080	30,350	31,320	32,180	33,550	35,410	36,530	38,430	38,450	34,690	29,430	27,270
17	29,100	30,390	31,350	32,210	33,620	35,550	36,550	38,460	38,300	34,520	29,310	27,290
18	29,130	30,420	31,380	32,260	33,910	35,580	36,600	38,460	38,120	34,320	29,200	27,300
19	29,170	30,460	31,390	32,290	34,000	35,580	36,890	38,380	37,920	34,110	29,130	27,320
20	29,200	30,470	31,410	32,350	34,070	35,610	36,950	38,310	37,820	33,900	29,050	27,340
21	29,240	30,560	31,440	32,390	34,200	35,610	37,030	38,200	37,790	33,650	28,960	27,430
22	29,280	30,560	31,480	32,440	34,170	35,660	37,340	38,200	37,700	33,390	28,910	27,460
23	29,320	30,560	31,490	32,490	34,190	35,730	37,480	38,130	37,600	33,170	28,790	27,470
24	29,320	30,570	31,540	32,520	34,260	35,880	37,610	38,070	37,500	32,970	28,680	27,550
25	29,350	30,610	31,540	32,580	34,400	35,930	37,700	38,030	37,390	32,740	28,600	27,580
26	29,400	30,640	31,550	32,610	34,460	35,990	37,820	38,000	37,240	32,570	28,510	27,640
27	29,440	30,680	31,590	32,690	34,480	36,060	37,860	37,990	37,110	32,410	28,390	27,670
28	29,490	30,730	31,620	32,730	34,490	36,100	37,950	37,950	36,980	32,230	28,260	27,720
29	29,490	30,740	31,640	32,800	-----	36,180	38,020	37,950	36,680	32,080	28,170	27,720
30	29,530	30,830	31,660	32,850	-----	36,280	38,080	38,020	36,370	31,960	28,050	27,750
31	29,560	-----	31,690	32,890	-----	36,340	-----	38,020	-----	31,850	28,000	-----
MAX	29,560	30,830	31,690	32,890	34,490	36,340	38,080	38,600	38,740	36,040	31,740	27,930
MIN	28,880	29,610	30,830	31,740	32,940	34,560	36,340	37,950	36,370	31,850	28,000	27,270
(†)	+510	+1,270	+860	+1,200	+1,600	+1,850	+1,740	-60	-1,650	-4,520	-3,850	-250
(*)	2,576.32	2,577.24	2,577.85	2,578.67	2,579.73	2,580.91	2,581.99	2,581.95	2,580.93	2,577.96	2,575.15	2,574.96

CAL YR 1970 MAX 38,350 MIN 28,840 † -5,130
WTR YR 1971 MAX 38,740 MIN 27,270 † -1,300

† Change in contents, in acre-feet.

* Elevation, in feet, at end of month.

KANSAS RIVER BASIN

06837500 Red Willow Creek near McCook, Nebr.

LOCATION.--Lat 40°20'50", long 100°38'35", in SW 1/4 sec. 6, T.4 N., R.29 W., Red Willow County, on left bank at downstream side of bridge on U.S. Highway 83, 3 miles downstream from Red Willow Dam and 10 miles north of McCook.

DRAINAGE AREA.--740 sq mi, approximately, of which about 320 sq mi 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.

GAGE.--Water-stage recorder, concrete control since Dec. 23, 1965. Datum of gage is 2,485.97 ft above mean sea level. October 1940 to September 1947, water-stage recorder at present site at datum 9.55 ft higher. Nov. 22, 1957, to Sept. 30, 1960, crest-stage gage, and Oct. 1, 1960, to Apr. 5, 1961, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--18 years, 24.8 cfs (17,970 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 341 cfs June 15 (gage height, 12.77 ft); minimum daily, 3.8 cfs Sept. 30.

Period of record: Maximum discharge, 30,000 cfs June 22, 1947 (gage height, 31.95 ft, present datum), from rating curve extended above 2,500 cfs on basis of contracted-opening measurement of peak flow; minimum daily, 0.60 cfs Sept. 22, 1961.

Flood of June 1, 1935, reached a stage of 33.45 ft, from floodmarks (45,000 cfs).

REMARKS.--Records good. Natural flow affected by irrigation development above station and since Sept. 5, 1961, by storage in Hugh Butler Lake. (See preceding page.)

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	4.4	4.7	4.0	4.4	4.7	4.8	4.6	15	169	66	55
2	25	4.4	4.4	4.0	4.4	4.7	4.6	4.9	15	140	77	52
3	24	4.4	4.6	3.9	4.4	4.7	4.9	4.8	18	132	97	32
4	24	4.4	4.7	4.2	4.4	4.7	4.9	4.9	21	124	98	21
5	18	4.4	4.7	4.1	4.4	4.7	5.1	4.9	21	115	98	22
6	10	4.4	4.7	3.9	4.7	4.7	4.9	4.9	21	92	96	23
7	10	4.4	4.7	3.9	4.9	4.7	5.2	4.9	21	76	94	23
8	7.8	5.0	4.8	3.9	4.4	4.7	5.5	5.2	14	60	94	22
9	4.2	4.8	4.9	4.0	4.6	4.7	5.5	5.2	9.4	46	94	25
10	4.1	4.7	4.9	4.2	4.4	4.7	5.5	5.5	5.8	39	93	21
11	4.5	4.7	4.7	4.2	4.7	4.8	5.5	5.6	5.2	35	94	21
12	4.7	4.7	4.7	4.2	4.7	4.9	5.5	30	5.2	34	91	20
13	4.9	4.7	4.7	4.2	4.7	4.9	5.5	49	5.2	36	81	20
14	7.8	4.7	4.7	4.2	4.7	5.0	5.5	51	5.5	52	75	20
15	10	4.7	4.4	4.2	4.7	5.1	5.5	51	96	75	74	20
16	16	4.7	4.2	4.4	4.7	5.0	5.5	51	102	94	72	13
17	18	4.7	4.4	4.4	4.7	4.9	5.5	51	102	94	63	4.2
18	17	4.7	4.4	4.4	5.7	5.5	5.1	53	102	98	61	4.0
19	10	4.6	4.6	4.4	5.4	5.5	6.3	52	101	118	56	4.0
20	4.4	4.2	4.7	4.4	4.9	5.5	6.1	51	58	117	51	4.0
21	4.4	4.2	4.7	4.4	5.1	5.5	5.1	50	29	117	49	4.4
22	4.0	4.2	4.7	4.4	5.3	5.5	5.8	50	34	118	51	4.3
23	4.1	4.4	4.8	4.7	5.0	5.8	5.8	50	58	105	55	4.2
24	4.2	4.9	4.7	4.7	4.9	4.9	5.2	40	58	105	55	4.0
25	4.2	4.9	4.5	4.6	4.9	4.9	4.9	28	57	104	56	4.0
26	4.4	4.9	4.4	4.1	4.9	4.9	5.1	27	55	100	56	3.9
27	4.8	4.9	4.4	4.3	4.7	4.9	5.1	23	56	88	57	3.9
28	4.4	4.7	4.4	4.4	4.7	4.9	5.1	19	73	88	56	3.9
29	4.4	4.7	4.4	4.7	-----	5.7	5.0	15	143	82	56	3.9
30	4.4	4.7	4.2	4.7	-----	5.4	4.6	15	192	72	55	3.8
31	4.4	-----	4.2	4.4	-----	5.0	-----	14	-----	64	55	-----
TOTAL	301.1	138.2	142.0	132.5	133.4	155.5	158.6	825.4	1,498.3	2,789	2,226	466.5
MEAN	9.71	4.61	4.58	4.27	4.76	5.02	5.29	26.6	49.9	90.0	71.8	15.6
MAX	29	5.0	4.9	4.7	5.7	5.8	6.3	53	192	169	98	55
MIN	4.0	4.2	4.2	3.9	4.4	4.7	4.6	4.6	5.2	34	49	3.8
AC-FT	597	274	282	263	265	308	315	1,640	2,970	5,530	4,420	925

CAL YR 1970 TOTAL 9,244.1 MEAN 25.3 MAX 134 MIN 3.9 AC-FT 18,340
WTR YR 1971 TOTAL 8,966.5 MEAN 24.6 MAX 192 MIN 3.8 AC-FT 17,790

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LOCATION.--Lat 40°14'10", long 100°30'00", in NE1/4 sec.17, T.3 N., R.28 W., Red Willow County, on left bank at downstream side of bridge on U.S. Highways 6 and 34, 0.8 mile north of Red Willow and 2.5 miles upstream from mouth.

PERIOD OF RECORD.--September 1939 to current year.

AVERAGE DISCHARGE.--32 years, 34.0 cfs (24,630 acre-ft per year), unadjusted.

Period of record: Maximum discharge, 30,000 cfs June 22, 1947 (gage height, 18.36 ft), from rating curve extended above 6,800 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.33 cfs Sept. 8, 1971.

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 (see sta 06837390), and since June 1963 by Red Willow Canal which diverts 4.5 miles above station for irrigation of about 4,150 acres.

REVISIONS (WATER YEARS).--WSP 1510: 1945(M). WRD Nebr. 1970: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	10	8.2	10	9.4	11	10	12	9.6	75	17	11
2	9.5	9.8	8.1	9.2	9.4	10	11	12	9.5	48	17	24
3	8.7	10	9.0	6.0	9.5	11	11	12	9.6	64	19	12
4	12	9.8	11	6.4	9.0	11	11	11	10	36	23	4.2
5	14	9.6	11	6.8	8.4	11	11	12	10	39	23	2.6
6	10	9.9	9.0	7.2	7.8	11	11	12	9.7	42	21	1.8
7	12	9.7	8.5	7.5	7.8	11	11	12	9.6	32	19	1.2
8	7.2	10	11	7.5	8.0	11	11	12	27	29	19	.33
9	12	11	10	8.5	8.8	11	11	12	211	23	15	3.8
10	12	10	10	8.2	10	11	11	12	26	23	13	6.0
11	11	10	10	7.6	12	11	11	12	21	18	14	2.9
12	9.9	9.8	10	7.6	11	11	11	11	18	17	18	3.9
13	9.0	9.9	11	8.0	11	11	11	22	19	14	16	4.4
14	8.6	9.4	11	8.0	12	11	10	39	24	13	16	5.4
15	9.9	9.1	11	8.0	12	11	10	33	33	15	17	7.8
16	9.1	9.1	10	8.4	11	10	10	49	94	16	16	14
17	9.6	9.1	10	9.0	11	11	10	51	88	16	15	20
18	9.4	9.0	9.5	11	13	7.5	10	54	89	14	11	13
19	9.0	8.5	8.6	9.6	14	17	11	54	89	15	12	8.3
20	9.2	8.2	9.0	12	12	12	12	54	81	17	12	8.3
21	9.0	8.5	8.6	13	10	12	12	53	38	18	10	8.7
22	9.0	8.0	12	13	9.4	11	12	54	25	18	11	8.5
23	9.1	7.5	9.0	12	9.4	12	14	55	18	19	12	8.2
24	9.1	11	9.0	12	10	11	14	29	22	20	12	8.1
25	9.4	10	9.0	11	11	12	13	11	22	21	14	8.3
26	10	8.0	9.6	11	12	13	12	12	19	21	13	8.3
27	10	7.5	10	10	11	13	12	9.6	17	19	13	7.6
28	9.9	7.0	10	10	11	12	12	12	18	18	11	7.8
29	10	7.5	11	9.8	-----	11	12	11	25	18	7.5	8.3
30	10	7.8	11	9.4	-----	11	13	11	74	18	7.6	8.3
31	10	-----	11	9.3	-----	11	-----	10	-----	17	6.1	-----
TOTAL	310.6	274.7	306.1	287.0	290.9	350.5	341	765.6	1,166.0	773	450.2	237.03
MEAN	10.0	9.16	9.87	9.26	10.4	11.3	11.4	24.7	38.9	24.9	14.5	7.90
MAX	14	11	12	13	14	17	14	55	211	75	23	24
MIN	7.2	7.0	8.1	6.0	7.8	7.5	10	9.6	9.5	13	6.1	.33
AC-FT	616	545	607	569	577	695	676	1,520	2,310	1,530	893	470

CAL YR 1970	TOTAL	5,977.70	MEAN	16.4	MAX	72	MIN	4.2	AC-FT	11,860
WTR YR 1971	TOTAL	5,552.63	MEAN	15.2	MAX	211	MIN	.33	AC-FT	11,010

KANSAS RIVER BASIN

06841000 Medicine Creek above Harry Strunk Lake, Nebr.

LOCATION.--Lat 40°30'10", long 100°19'20", in SW $\frac{1}{4}$ sec.7, T.6 N., R.26 W., Frontier County, on right bank 0.3 mile downstream from top of Harry Strunk Lake flood-control pool, 2.5 miles upstream from top of irrigation pool, 3.8 miles southeast of Stockville, and 13.5 miles upstream from Medicine Creek Dam.

DRAINAGE AREA.--770 sq mi, approximately, of which about 530 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--January 1950 to current year. Prior to October 1950, published as "above Medicine Creek Reservoir."

GAGE.--Water-stage recorder. Concrete control since November 1950. Datum of gage is 2,380.94 ft above mean sea level (Bureau of Reclamation bench mark).

AVERAGE DISCHARGE.--21 years, 71.7 cfs (51,950 acre-ft per year); median of yearly mean discharges, 61 cfs (44,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 812 cfs June 13 (gage height, 8.26 ft); minimum daily, 23 cfs July 24, 25.

Period of record: Maximum discharge, 11,600 cfs June 21, 1967 (gage height, 20.05 ft); minimum daily, 14 cfs Aug. 4, 5, 1955, Aug. 21, 1959, Aug. 8, 10, 1964.

Maximum stage known since at least 1874, 24.4 ft June 22, 1947, from floodmark (discharge not determined).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	53	58	70	70	67	66	85	64	49	33	34
2	37	52	59	70	68	66	62	80	62	50	34	34
3	37	53	58	58	62	66	60	70	59	84	34	33
4	37	54	57	50	62	65	59	67	57	73	29	31
5	37	54	56	42	58	69	58	65	57	190	30	29
6	37	54	57	42	55	74	57	65	55	73	31	29
7	37	55	57	43	52	71	57	64	53	57	31	29
8	39	57	56	43	52	68	56	64	53	49	31	29
9	42	60	57	44	55	67	56	66	55	46	31	30
10	44	68	57	44	65	69	54	112	70	47	31	32
11	48	69	56	45	70	63	53	109	87	96	31	31
12	46	66	55	45	75	66	52	75	79	76	30	29
13	45	63	54	48	71	73	52	72	201	47	37	29
14	46	60	54	50	68	69	52	74	147	41	127	29
15	46	58	54	50	67	69	53	66	88	38	54	34
16	48	58	56	52	67	70	53	62	61	37	43	36
17	48	58	56	54	67	68	54	61	54	38	48	37
18	48	58	57	54	78	70	54	68	50	34	41	42
19	48	58	55	54	110	69	63	70	48	32	130	42
20	48	58	54	57	90	67	107	71	46	31	52	41
21	49	58	54	60	83	67	109	67	45	29	51	42
22	49	54	52	63	78	71	90	66	43	27	46	45
23	108	49	52	65	74	72	85	66	43	25	41	54
24	56	63	52	70	76	70	86	67	43	23	38	54
25	52	60	52	73	79	67	75	67	41	23	36	48
26	51	57	53	78	80	66	71	66	40	26	36	45
27	51	57	55	82	75	66	73	61	39	29	35	45
28	57	58	58	85	70	72	75	60	37	28	33	43
29	57	58	61	85	-----	76	74	60	37	30	33	40
30	55	58	64	73	-----	73	82	62	45	31	33	40
31	54	-----	67	71	-----	69	-----	61	-----	33	35	-----
TOTAL	1,495	1,738	1,743	1,820	1,977	2,135	1,998	2,169	1,859	1,492	1,325	1,116
MEAN	48.2	57.9	56.2	58.7	70.6	68.9	66.6	70.0	62.0	48.1	42.7	37.2
MAX	108	69	67	85	110	76	109	112	201	190	130	54
MIN	37	49	52	42	52	63	52	60	37	23	29	29
AC-FT	2,970	3,450	3,460	3,610	3,920	4,230	3,960	4,300	3,690	2,960	2,630	2,210

CAL YR 1970 TOTAL 19,303 MEAN 52.9 MAX 270 MIN 16 AC-FT 38,290
WTR YR 1971 TOTAL 20,867 MEAN 57.2 MAX 201 MIN 23 AC-FT 41,390

PEAK DISCHARGE (BASE, 1,200 CFS, REVISED).--No peak above base.

KANSAS RIVER BASIN

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06841500 Mitchell Creek above Harry Strunk Lake, Nebr.

LOCATION.--Lat 40°28'20", long 100°15'25", in NW1/4 sec.22, T.6 N., R.26 W., Frontier County, on left bank at top of Harry Strunk Lake flood-control pool, 2.2 miles southwest of Orafino, 9.5 miles upstream from Medicine Creek Dam, and 14 miles northwest of Cambridge.

DRAINAGE AREA.--52 sq mi, approximately.

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1950, published as "above Medicine Creek Reservoir."

GAGE.--Water-stage recorder. Concrete control since February 1953. Datum of gage is 2,376.95 ft above mean sea level (Bureau of Reclamation bench mark).

AVERAGE DISCHARGE.--21 years, 2.54 cfs (1,840 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 248 cfs Aug. 19 (gage height, 6.21 ft); no flow for many days. Period of record: Maximum discharge, 5,230 cfs May 20, 1951 (gage height, 17.35 ft); maximum gage height, 19.94 ft June 16, 1962; no flow for most of each year. Flood of June 21, 1948, reached a stage of about 28 ft, from floodmarks (discharge not determined).

REMARKS.--Records poor.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	1.1	0	0	0	1.8	0	
2					0	.27	0	0	0	.06	0	
3					0	0	0	0	0	6.6	0	
4					0	0	0	0	0	1.5	0	
5					0	0	0	0	0	12	0	
6					0	0	0	0	0	2.4	0	
7					0	0	0	0	0	.34	0	
8					0	0	0	0	0	.01	0	
9					0	0	0	0	0	0	0	
10					0	0	0	0	0	0	0	
11					0	0	0	1.7	12	14	3.3	
12					0	0	0	1.1	1.3	1.7	.71	
13					0	0	0	.01	.03	.03	0	
14					0	0	0	0	0	0	0	
15					0	0	0	0	0	0	5.0	
16					0	0	0	0	0	0	.14	
17					0	0	0	0	0	0	0	
18					0	0	0	.03	0	0	0	
19					0	0	.10	.12	0	0	51	
20					0	0	23	0	0	0	1.1	
21					0	0	1.1	0	0	0	.03	
22					0	0	.06	0	0	0	0	
23					0	0	.01	0	0	0	0	
24					0	0	0	0	0	0	0	
25					0	0	0	0	0	0	0	
26					7.4	0	0	0	0	0	0	
27					6.3	0	0	0	0	0	0	
28					2.3	0	.01	0	0	0	0	
29					-----	0	.01	0	0	0	0	
30					-----	0	0	0	0	0	0	
31		-----			-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	16.0	1.37	24.29	2.96	13.53	40.44	61.28	0
MEAN	0	0	0	0	.57	.044	.81	.096	.45	1.30	1.98	0
MAX	0	0	0	0	7.4	1.1	23	1.7	12	14	51	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	32	2.7	48	5.9	27	80	122	0

CAL YR 1970 TOTAL 222.76 MEAN .61 MAX 164 MIN 0 AC-FT 442
WTR YR 1971 TOTAL 159.87 MEAN .44 MAX 51 MIN 0 AC-FT 317

PEAK DISCHARGE (BASE, 300 CFS).--No peak above base.

KANSAS RIVER BASIN

06842000 Harry Strunk Lake near Cambridge, Nebr.

LOCATION.--Lat 40°22'40", long 100°13'00", in NE¼ sec.25, T.5 N., R.26 W., Frontier County, near right bank in control house at outlet tube of Medicine Creek Dam on Medicine Creek, 7 miles northwest of Cambridge.

DRAINAGE AREA.--880 sq mi, approximately, of which about 640 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Aug. 18, 1960, nonrecording gage at present datum.

EXTREMES.--Current year: Maximum contents, 39,280 acre-ft May 11 (elevation, 2,367.23 ft); minimum, 16,730 acre-ft Oct. 1 (elevation, 2,351.50 ft).

Period of record: Maximum contents observed, 55,750 acre-ft Mar. 23, 1960 (elevation, 2,374.10 ft); minimum observed since operation of reservoir began, 14,400 acre-ft Sept. 20, 21, 1955 (elevation, 2,347.45 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began Aug. 8, 1949. Capacity, 32,230 acre-ft between elevation 2,335.0 (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.

REVISIONS.--WRD Nebr. 1970: Drainage area.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

2,345	11,000	2,360	27,100
2,350	15,250	2,365	35,140
2,355	20,550	2,370	44,890

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16,810	19,390	22,380	25,120	28,210	31,760	35,520	38,660	37,330	35,780	26,560	18,650
2	16,840	19,460	22,500	25,280	28,300	31,860	35,580	38,660	37,380	35,420	26,190	18,580
3	16,880	19,580	22,590	25,380	28,420	32,000	35,670	38,660	37,400	35,320	25,750	18,580
4	16,950	19,600	22,690	25,420	28,480	32,130	35,740	38,660	37,500	35,250	25,320	18,530
5	17,020	19,720	22,800	25,430	28,550	32,250	35,810	38,720	37,480	35,360	24,860	18,490
6	17,100	19,810	22,900	25,540	28,640	32,330	35,890	38,660	37,550	35,400	24,440	18,470
7	17,130	19,920	23,000	25,620	28,670	32,450	35,980	38,640	37,540	35,380	24,060	18,520
8	17,190	20,140	23,080	25,720	28,730	32,580	36,120	39,030	37,570	35,340	23,670	18,490
9	17,210	20,180	23,160	25,820	28,840	32,700	36,140	39,100	37,670	35,380	23,270	18,490
10	17,300	20,370	23,280	25,900	28,950	32,840	36,210	39,220	37,700	35,420	22,820	18,530
11	17,390	20,440	23,320	25,980	29,100	33,000	36,300	39,160	37,780	35,540	22,430	18,580
12	17,490	20,550	23,400	26,080	29,200	33,050	36,430	38,990	37,860	35,650	22,180	18,640
13	17,560	20,680	23,480	26,200	29,340	33,220	36,410	38,780	38,160	35,650	21,820	18,680
14	17,640	20,750	23,540	26,280	29,460	33,350	36,460	38,550	38,360	35,610	21,620	18,700
15	17,710	20,850	23,660	26,350	29,600	33,390	36,560	38,290	38,400	35,430	21,470	18,740
16	17,800	20,970	23,760	26,440	29,740	33,440	36,650	38,120	38,190	35,250	21,240	18,790
17	17,890	21,080	23,870	26,540	29,860	33,660	36,720	37,970	38,080	35,090	21,080	18,860
18	17,970	21,170	23,950	26,630	30,060	33,800	36,790	37,740	37,840	34,800	20,960	18,930
19	18,060	21,260	24,000	26,730	30,360	33,890	37,270	37,630	37,740	34,290	20,970	19,000
20	18,140	21,380	24,060	26,890	30,590	34,000	37,480	37,610	37,650	33,740	20,900	19,080
21	18,240	21,510	24,130	26,960	30,800	34,080	37,690	37,420	37,570	32,970	20,790	19,220
22	18,330	21,530	24,280	27,100	30,830	34,140	37,950	37,420	37,550	32,250	20,670	19,270
23	18,520	21,580	24,330	27,170	30,910	34,240	38,080	37,420	37,520	31,510	20,370	19,380
24	18,620	21,690	24,400	27,320	31,070	34,480	38,210	37,350	37,520	30,820	20,090	19,520
25	18,710	21,820	24,490	27,400	31,310	34,600	38,230	36,950	37,420	30,060	19,810	19,640
26	18,800	21,910	24,560	27,500	31,410	34,730	38,420	36,950	37,270	29,410	19,560	19,730
27	18,880	22,000	24,640	27,630	31,510	34,880	38,460	36,970	37,160	28,780	19,340	19,840
28	18,990	22,100	24,740	27,740	31,650	35,000	38,610	36,990	36,880	28,210	19,180	19,880
29	19,100	22,190	24,850	27,880	-----	35,130	38,620	37,100	36,520	27,770	19,020	19,920
30	19,180	22,320	24,930	27,990	-----	35,250	38,620	37,240	36,140	27,370	18,820	20,060
31	19,260	-----	25,010	28,110	-----	35,510	-----	37,330	-----	26,960	18,700	-----
MAX	19,260	22,320	25,010	28,110	31,650	35,510	38,620	39,220	38,400	35,780	26,560	20,060
MIN	16,810	19,390	22,380	25,120	28,210	31,760	35,520	36,950	36,140	26,960	18,700	18,470
(†)	+2,530	+3,060	+2,690	+3,100	+3,540	+3,860	+3,110	-1,290	-1,190	-9,180	-8,260	+1,360
(*)	2,353.88	2,356.45	2,358.51	2,360.68	2,362.95	2,365.20	2,366.89	2,366.20	2,365.55	2,359.90	2,353.37	2,354.58
CAL YR 1970	MAX 38,760	MIN 15,240	† -12,900									
WTR YR 1971	MAX 39,220	MIN 16,810	† +3,330									

† Change in contents, in acre-feet.

* Elevation, in feet, at end of month.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.18	3.1	3.5	3.2	3.5	3.3	61	26	253	220	74
2	1.8	.18	3.2	3.5	3.2	3.5	3.5	61	26	245	228	48
3	1.8	.18	3.2	3.5	4.5	3.5	3.4	61	27	193	234	38
4	2.0	.18	3.2	3.5	3.2	3.5	3.4	61	28	155	227	43
5	2.1	.18	3.2	3.3	3.2	3.5	3.3	61	29	130	234	42
6	2.1	.20	3.2	3.2	3.1	3.4	3.2	65	29	73	224	30
7	2.3	.22	3.2	3.2	3.0	3.4	3.2	63	30	51	216	21
8	2.3	.40	3.2	3.2	3.0	3.5	3.3	61	30	51	216	17
9	2.3	.33	3.2	3.2	3.0	3.5	4.1	62	32	51	229	14
10	2.3	.30	3.3	3.2	3.0	3.5	2.6	65	33	35	242	6.8
11	2.5	.28	3.2	3.2	3.3	3.5	2.6	160	34	24	274	.50
12	2.4	.25	3.2	3.2	3.2	3.5	2.7	203	36	23	244	.30
13	2.4	.25	3.2	3.2	3.2	3.5	2.6	195	39	23	204	.20
14	2.4	.23	3.3	3.2	3.2	3.6	2.6	189	48	71	180	.17
15	2.6	.21	3.3	3.2	3.2	3.8	2.6	183	104	95	176	.12
16	2.6	.25	3.3	3.2	3.2	3.5	2.6	149	129	80	158	.25
17	2.6	.26	3.4	3.3	3.2	3.6	2.6	129	125	76	129	.30
18	2.6	.25	3.3	3.2	3.6	3.7	2.6	129	121	140	122	.35
19	2.7	.27	3.3	3.2	3.3	3.5	3.7	119	103	207	137	.40
20	2.8	.25	3.3	3.2	3.2	3.6	4.5	102	80	290	113	.45
21	2.8	.26	3.4	3.3	3.3	3.6	6.5	102	61	341	108	.50
22	2.8	.23	3.4	3.4	3.2	3.5	13	87	32	352	112	.55
23	1.7	.20	3.3	3.3	3.2	3.7	19	79	18	345	145	.60
24	.37	.22	3.4	3.4	3.2	3.8	21	69	39	345	175	.65
25	.24	.27	3.4	3.4	3.5	3.5	24	49	69	342	177	.70
26	.26	.30	3.4	3.1	3.5	3.6	27	30	60	335	160	.75
27	.21	3.2	3.4	3.2	3.4	3.5	28	25	63	333	128	.80
28	.17	3.5	3.4	3.2	3.5	3.5	40	25	154	294	112	.85
29	.18	3.4	3.4	3.2	-----	3.4	59	26	216	235	108	.90
30	.19	3.4	3.4	3.2	-----	3.5	59	27	266	209	149	.90
31	.17	-----	3.4	3.2	-----	3.7	-----	27	-----	222	119	-----
TOTAL	55.49	19.83	102.1	101.3	91.8	109.9	358.9	2,725	2,087	5,619	5,500	344.04
MEAN	1.79	.66	3.29	3.27	3.28	3.55	12.0	87.9	69.6	181	177	11.5
MAX	2.8	3.5	3.4	3.5	4.5	3.8	59	203	266	352	274	74
MIN	.17	.18	3.1	3.1	3.0	3.4	2.6	25	18	23	108	.12
AC-FT	110	39	203	201	182	218	712	5,410	4,140	11,150	10,910	682
CAL YR 1970	TOTAL	24,962.72	MEAN	68.4	MAX	416	MIN	.17	AC-FT	49,510		
WTR YR 1971	TOTAL	17,114.36	MEAN	46.9	MAX	352	MIN	.12	AC-FT	33,950		

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DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	117	149	85	155	188	193	287	152	322	269	173
2	81	118	143	75	155	181	178	266	140	344	267	141
3	77	116	144	60	155	182	166	253	133	399	282	105
4	100	117	142	55	150	188	157	242	128	419	277	138
5	82	122	143	55	130	191	152	236	121	282	277	110
6	67	127	140	55	120	195	156	233	113	388	282	107
7	64	129	140	55	115	190	152	223	109	239	287	90
8	70	137	143	60	110	190	138	209	115	201	296	99
9	80	160	148	65	110	187	128	205	704	225	303	113
10	87	164	143	68	110	183	128	217	575	242	309	117
11	94	159	151	70	130	182	121	382	337	213	302	103
12	97	155	156	72	165	185	111	437	379	152	624	127
13	97	149	150	73	185	186	104	402	374	150	329	109
14	97	144	145	72	220	190	104	436	477	130	285	86
15	104	145	140	75	245	193	101	405	279	199	295	74
16	107	141	135	80	265	194	97	372	362	203	263	76
17	102	137	130	85	210	189	96	328	402	187	260	97
18	101	133	120	90	205	187	97	362	401	208	221	116
19	105	132	110	93	205	175	137	372	376	268	246	116
20	104	133	100	97	200	179	221	320	313	325	233	114
21	104	135	95	105	190	188	202	322	244	350	223	119
22	104	133	90	115	190	179	192	303	150	349	215	136
23	107	90	80	120	195	183	316	283	97	342	228	130
24	105	105	80	130	200	197	359	257	86	347	250	122
25	105	155	80	140	210	247	427	203	115	353	262	121
26	106	165	85	150	205	241	306	168	114	361	236	115
27	115	150	90	160	200	217	284	165	96	384	222	109
28	116	154	95	165	195	206	266	153	135	353	201	103
29	115	159	100	170	-----	199	307	156	199	311	182	97
30	118	157	95	175	-----	205	296	183	288	264	196	105
31	117	-----	85	160	-----	209	-----	165	-----	278	230	-----
TOTAL	3,021	4,138	3,747	3,030	4,925	6,006	5,692	8,545	7,514	8,788	8,352	3,368
MEAN	97.5	138	121	97.7	176	194	190	276	250	283	269	112
MAX	118	165	156	175	265	247	427	437	704	419	624	173
MIN	64	90	80	55	110	175	96	153	86	130	182	74
AC-FT	5,990	8,210	7,430	6,010	9,770	11,910	11,290	16,950	14,900	17,430	16,570	6,680
CAL YR 1970	TOTAL	82,205	MEAN	225	MAX	853	MIN	35	AC-FT	163,100		
WTR YR 1971	TOTAL	67,126	MEAN	184	MAX	704	MIN	55	AC-FT	133,100		

KANSAS RIVER BASIN

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06844000 Muddy Creek at Arapahoe, Nebr.

LOCATION.--Lat 40°18'20", long 99°54'40", in NW1/4 sec.22, T.4 N., R.23 W., Furnas County, on left bank 20 ft downstream from bridge on U.S. Highways 6 and 34, 0.2 mile west of Arapahoe, and 1.5 miles upstream from mouth.

DRAINAGE AREA.--246 sq mi, approximately.

PERIOD OF RECORD.--December 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,143.92 ft above mean sea level. Prior to Jan. 11, 1951, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--20 years (1951-71), 15.9 cfs (11,520 acre-ft per year); median of yearly mean discharges, 11 cfs (8,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 251 cfs Aug. 13 (gage height, 8.01 ft); minimum daily, 2.6 cfs Jan. 8-12.

Period of record: Maximum discharge, 7,280 cfs June 16, 1957 (gage height, 24.62 ft); no flow Aug. 26 to Sept. 2, 1953, July 23, 29, Aug. 4, 1955.

A stage of about 31 ft occurred June 22, 1947 (discharge not determined).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and return flow from irrigated areas.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	7.0	8.3	11	7.5	14	8.0	11	20	9.2	7.2	8.3
2	4.8	6.9	7.5	9.4	7.5	14	7.8	9.1	11	12	7.0	6.9
3	4.8	7.2	8.0	7.5	7.0	13	7.8	8.5	8.9	35	6.2	6.0
4	4.7	7.3	7.6	6.0	6.5	10	7.9	8.3	8.6	57	6.2	5.0
5	5.0	7.1	8.1	4.5	6.0	10	7.9	8.3	8.4	35	6.6	4.6
6	5.0	7.4	7.8	3.5	6.0	9.2	8.0	8.6	8.2	64	6.9	4.4
7	5.0	7.3	8.0	3.0	6.0	9.7	7.8	8.7	7.9	23	6.6	4.4
8	5.7	7.8	8.0	2.6	6.0	10	7.8	8.5	7.6	6.5	7.6	4.4
9	6.0	8.3	8.7	2.6	6.0	9.7	7.6	8.4	16	21	7.5	4.4
10	6.3	8.2	8.2	2.6	6.0	9.3	7.5	9.5	20	8.0	7.6	4.4
11	6.9	8.1	7.0	2.6	10	9.3	7.3	13	25	19	7.9	4.4
12	7.0	7.8	7.5	2.6	13	9.3	7.3	11	10	90	8.5	4.4
13	6.9	7.7	8.5	3.0	13	9.2	7.3	17	10	19	117	4.4
14	6.6	7.8	9.6	4.0	9.2	9.0	7.1	18	9.5	10	32	4.6
15	6.6	7.3	9.7	5.0	10	8.6	7.0	8.9	8.2	9.4	13	4.2
16	6.8	8.0	9.2	7.5	9.3	8.2	7.1	8.6	7.6	8.6	32	4.4
17	7.0	8.4	8.2	10	9.2	7.9	7.3	8.5	7.4	8.1	11	5.0
18	6.8	8.2	7.2	11	10	8.4	7.5	11	7.2	7.8	8.5	5.4
19	6.5	8.2	7.0	10	11	8.2	9.1	12	6.7	8.1	8.0	5.5
20	6.6	8.2	7.0	12	10	9.7	20	10	6.7	9.5	8.0	5.3
21	6.5	8.2	6.9	13	9.0	9.4	54	9.4	6.5	10	8.0	5.6
22	7.4	6.8	6.9	12	9.5	8.5	23	9.2	7.7	10	9.0	7.0
23	7.4	7.5	6.9	11	11	8.2	16	9.2	8.6	9.1	7.8	6.8
24	7.2	8.0	6.8	11	12	10	11	8.9	9.0	9.2	7.1	6.1
25	7.0	8.3	6.8	10	14	13	9.9	8.5	8.1	9.2	7.0	6.9
26	7.4	8.5	6.8	10	11	11	9.7	8.4	7.8	10	6.8	6.5
27	8.0	8.0	6.7	11	10	9.5	9.7	8.2	7.1	9.4	6.8	5.9
28	7.8	6.5	6.7	8.9	12	9.7	9.4	8.3	7.0	8.4	3.4	5.2
29	7.6	7.3	7.4	8.9	-----	9.3	10	8.4	6.8	7.9	9.9	5.0
30	7.6	7.8	8.0	9.2	-----	8.7	13	9.4	10	7.5	4.6	6.2
31	8.4	-----	9.5	8.5	-----	8.4	-----	9.2	-----	7.5	7.6	-----
TOTAL	202.4	231.1	240.5	233.9	257.7	302.4	330.8	304.0	293.5	558.4	393.3	161.6
MEAN	6.53	7.70	7.76	7.55	9.20	9.75	11.0	9.81	9.78	18.0	12.7	5.39
MAX	8.4	8.5	9.7	13	14	14	54	18	25	90	117	8.3
MIN	4.7	6.5	6.7	2.6	6.0	7.9	7.0	8.2	6.5	6.5	3.4	4.2
AC-FT	401	458	477	464	511	600	656	603	582	1,110	780	321

CAL YR 1970 TOTAL 3,624.5 MEAN 9.93 MAX 424 MIN 4.2 AC-FT 7,190

WTR YR 1971 TOTAL 3,509.6 MEAN 9.62 MAX 117 MIN 2.6 AC-FT 6,960

PEAK DISCHARGE (BASE, 750 CFS).--No peak above base.

LOCATION.--Lat 40°07'53", long 99°30'08", in NE1/4 sec.19, T.2 N., R.19 W., Harlan County, on right bank 18 ft downstream from bridge on State Highway 89, 200 ft downstream from Burlington Northern Inc. bridge, 2 miles west of Orleans. 2.8 miles upstream from Sappa Creek, and 23 miles upstream from Harlan County Dam.

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

AVERAGE DISCHARGE.--24 years. 351 cfs (254,300 acre-ft per year).

Period of record: Maximum discharge, 40,600 cfs June 22, 1948 (gage height, 11.25 ft), from rating curve extended above 29,000 cfs; maximum gage height, 12.60 ft Mar. 22, 1960 (backwater from ice); no flow at times in 1952-57, 1963.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and regulation by upstream reservoirs. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	133	203	95	210	210	246	330	186	76	62	132
2	87	135	170	85	195	205	235	326	178	74	60	88
3	86	134	160	70	180	225	227	311	164	104	60	71
4	80	137	153	60	165	275	220	304	165	113	50	63
5	77	131	151	60	150	322	215	297	157	180	68	49
6	88	134	148	60	135	297	211	293	150	195	78	53
7	78	136	147	55	120	280	203	290	146	187	65	48
8	77	138	145	55	105	272	197	285	141	232	68	37
9	80	138	151	55	105	267	187	277	152	238	64	33
10	81	151	153	60	110	263	177	282	300	302	65	34
11	97	158	163	60	120	253	167	873	657	253	60	41
12	108	158	160	60	140	247	164	492	403	273	69	44
13	107	162	160	60	170	243	158	513	376	235	132	37
14	108	154	155	60	225	240	153	436	385	167	255	50
15	109	153	150	60	260	237	152	419	429	137	154	52
16	109	162	145	65	290	234	150	456	332	110	123	44
17	112	160	145	70	320	233	150	395	325	103	112	45
18	114	162	140	75	320	236	150	364	379	87	92	65
19	115	160	125	80	295	238	157	396	363	75	88	79
20	117	158	110	85	280	238	249	377	364	71	72	90
21	120	155	100	90	245	240	308	339	318	74	73	89
22	122	154	90	95	210	239	331	344	276	65	64	96
23	126	115	85	100	195	236	324	337	204	69	54	109
24	126	135	75	110	185	228	344	305	156	64	40	116
25	128	150	75	120	190	217	409	280	123	62	31	126
26	128	157	75	140	220	252	448	243	100	63	30	121
27	134	186	80	160	225	296	392	207	91	66	27	123
28	135	158	90	180	220	263	344	187	83	70	31	117
29	138	143	100	210	-----	254	323	182	78	87	26	112
30	138	176	110	220	-----	249	332	186	73	86	27	104
31	137	-----	110	220	-----	250	-----	184	-----	73	71	-----
TOTAL	3,352	4,483	4,024	2,975	5,585	7,739	7,323	10,510	7,254	3,991	2,271	2,268
MEAN	108	149	130	96.0	199	250	244	339	242	129	73.3	75.6
MAX	138	186	203	220	320	322	448	873	657	302	255	132
MIN	77	115	75	55	105	205	150	182	73	62	26	33
AC-FT	6,650	8,890	7,980	5,900	11,080	15,350	14,530	20,850	14,390	7,920	4,500	4,500
CAL YR 1970	TOTAL 78,713	MEAN 216	MAX 1,440	MIN 13	AC-FT 156,100							
WTR YR 1971	TOTAL 61,775	MEAN 169	MAX 873	MIN 26	AC-FT 122,500							

KANSAS RIVER BASIN

159

06845000 Sappa Creek near Oberlin, Kans.

LOCATION.--Lat 39°47'07", long 100°34'28", in NW 1/4 sec. 21, T.3 S., R.29 W., Decatur County, on right bank 0.3 mile downstream from confluence of North and South Forks, 3.5 miles southwest of Oberlin, and at mile 137.6.

DRAINAGE AREA.--1,063 sq mi, of which 163 sq mi is noncontributing.

PERIOD OF RECORD.--October 1928 to September 1932, October 1943 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Altitude of gage is 2,570 ft (from topographic map). See WSP 1919 for history of changes prior to May 20, 1959.

AVERAGE DISCHARGE.--32 years, 18.3 cfs (13,260 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 320 cfs Apr. 23 (gage height, 6.60 ft); no flow at times.

Period of record: Maximum discharge, 10,600 cfs July 16, 1944 (gage height, 15.28 ft, site and datum then in use, from floodmark), from rating curve extended above 4,200 cfs on basis of peak flow over dam; no flow at times.

REMARKS.--Records good. Some diversions above station for irrigation. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of WRD Kans.

REVISIONS (WATER YEARS).--WSP 1340: 1929(M), 1931, 1944(M), 1947(M), 1949, 1951(M), 1953(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.11	.12	.13	.14	.16	.25	6.9	7.5	1.4		0
2	0	.11	.12	.13	.14	.16	.25	5.0	4.4	5.5		0
3	0	.11	.14	.14	.14	.18	.22	3.7	2.3	.66		0
4	0	.11	.14	.14	.14	.16	.20	2.7	5.7	.23		.02
5	.01	.12	.15	.14	.13	.15	.18	2.2	4.0	.19		0
6	.01	.12	.15	.16	.12	.17	.19	2.1	3.3	.17		0
7	.03	.11	.15	.18	.11	.22	.19	1.8	3.1	.17		0
8	.05	.12	.14	.15	.11	.22	.20	1.6	1.7	1.5		0
9	.03	.13	.14	.13	.11	.21	.18	1.2	1.3	36		0
10	.02	.13	.14	.12	.11	.21	.17	1.3	1.0	170		0
11	.03	.13	.14	.12	.11	.20	.23	2.0	1.4	59		0
12	.04	.13	.14	.12	.12	.17	.24	1.6	20	12		0
13	.04	.13	.14	.12	.20	.18	.24	.99	19	4.4		0
14	.03	.13	.14	.12	.17	.18	.21	.81	10	1.5		0
15	.05	.14	.14	.12	.16	.19	.20	1.1	6.0	.55		0
16	.06	.14	.14	.12	.20	.19	.19	1.2	3.8	.24		0
17	.07	.13	.14	.12	.19	.18	.20	1.0	3.2	.16		0
18	.07	.13	.14	.12	.22	.86	.18	5.3	1.7	.12		0
19	.07	.12	.14	.12	.22	.15	.62	6.5	.97	.08		0
20	.08	.13	.14	.12	.18	.13	4.6	29	.52	.07		0
21	.08	.12	.14	.12	.19	.13	1.6	17	.32	.06		0
22	.09	.13	.14	.11	3.0	.13	31	9.2	.26	.06		0
23	.10	.13	.13	.10	6.8	.13	250	6.2	.35	.04		0
24	.10	.13	.13	.10	7.2	.13	254	4.5	.30	.04		0
25	.10	.13	.13	.11	.18	.14	142	3.4	.24	.04		0
26	.12	.13	.13	.14	.17	.16	59	2.6	.21	.03		0
27	.12	.13	.13	.13	.17	.16	27	1.9	.24	.03		0
28	.11	.13	.13	.14	.16	.19	17	1.4	.27	.02		0
29	.11	.12	.13	.15	-----	.18	12	1.1	.23	.01		0
30	.11	.12	.13	.15	-----	.18	9.2	3.8	.36	0		0
31	.11	-----	.13	.14	-----	.20	-----	11	-----	0		0
TOTAL	1.84	3.75	4.24	4.01	20.89	6.00	811.74	140.10	103.67	294.27	0	.02
MEAN	.059	.13	.14	.13	.75	.19	27.1	4.52	3.46	9.49	0	.0007
MAX	.12	.14	.15	.18	7.2	.86	254	29	20	170	0	.02
MIN	0	.11	.12	.10	.11	.13	.17	.81	.21	0	0	0
AC-FT	3.7	7.4	8.4	8.0	41	12	1,610	278	206	584	0	.04

CAL YR 1970 TOTAL 1,188.51 MEAN 3.26 MAX 325 MIN 0 AC-FT 2,360
WTR YR 1971 TOTAL 1,390.53 MEAN 3.81 MAX 254 MIN 0 AC-FT 2,760

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
04-23	1400	6.60	320	07-10	1700	5.78	238

KANSAS RIVER BASIN

06845200 Sappa Creek near Beaver City, Nebr.

LOCATION.--Lat 40°02'45", long 99°53'24", in SW¹/₄SW¹/₄ sec.14, T.1 N., R.23 W., Furnas County, on right bank 200 ft downstream from bridge on U.S. Highway 283, 7 miles southwest of Beaver City, and at mile 42.6.

DRAINAGE AREA.--1,510 sq mi, approximately, of which about 1,350 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,154.63 ft above mean sea level. Prior to Sept. 11, 1945, non-recording gage at site 200 ft upstream at datum 2.56 ft higher.

AVERAGE DISCHARGE.--35 years, 39.2 cfs (28,400 acre-ft per year); median of yearly mean discharges, 26 cfs (18,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 192 cfs Apr. 27 (gage height, 7.75 ft); minimum daily, 0.03 cfs Sept. 14, 15.

Period of record: Maximum discharge, 9,500 cfs June 23, 1966 (gage height, 20.85 ft), from rating curve extended above 4,900 cfs; no flow at times in many years.

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

REVISIONS (WATER YEARS).--WSP 1310: 1937(M), 1939-42(M), 1947(M), 1949(M). WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.3	1.7	.85	2.6	4.8	3.4	16	48	2.4	.17	.29
2	1.1	1.6	1.8	.80	2.6	4.0	2.5	12	85	1.9	.16	.12
3	.97	2.0	1.8	.80	2.6	4.0	3.4	9.0	30	2.0	.16	.10
4	.76	2.0	1.7	.80	2.5	4.5	3.7	8.0	20	1.9	.15	.33
5	.64	1.8	1.2	.80	2.5	5.1	3.1	7.0	14	2.0	.19	.18
6	.35	1.8	.75	.80	2.5	5.7	1.9	6.0	11	1.9	.28	.08
7	.47	1.7	.54	.80	2.6	6.8	1.9	5.0	12	11	.19	9.2
8	.60	1.5	.63	.82	2.6	7.5	1.6	5.8	10	5.6	.16	7.2
9	.59	1.2	.74	.84	2.8	5.7	1.6	7.6	10	46	.16	2.0
10	.53	1.0	.80	.86	3.0	7.4	1.8	9.9	8.0	75	.16	.91
11	.75	.60	.80	.88	3.2	6.1	1.8	12	8.0	52	.14	.22
12	.68	.61	.78	.90	3.4	6.6	1.6	13	11	60	.13	.12
13	.53	1.0	.78	.93	3.6	8.1	1.2	11	45	25	.11	.05
14	.65	.83	.76	.95	3.8	8.6	1.1	7.0	43	8.1	.10	.03
15	.95	.78	.76	.98	3.7	6.5	1.0	5.0	46	35	.11	.03
16	.83	.91	.75	1.0	3.5	4.9	1.4	4.0	11	43	.10	.08
17	.55	1.6	.75	1.0	4.0	4.4	1.8	5.2	7.8	31	.09	.09
18	.33	1.6	.70	1.1	5.0	4.3	1.8	6.4	13	13	.11	.12
19	.25	1.1	.65	1.2	6.6	4.6	2.4	9.0	20	5.3	.13	.12
20	.26	.85	.50	1.3	8.0	5.0	8.0	10	13	2.5	2.2	.13
21	.25	.88	.75	1.5	7.0	5.4	3.8	35	9.6	1.4	2.4	.25
22	.21	.91	.75	1.7	5.8	5.9	6.5	40	8.6	.80	.48	.27
23	.19	1.1	.75	2.0	4.0	5.9	15	15	6.7	.54	.21	.19
24	.16	1.1	.73	2.5	4.0	6.2	32	5.0	4.9	.37	.13	.18
25	.35	.90	.72	3.0	4.2	5.2	100	12	3.7	.30	.11	1.0
26	.76	1.1	.70	3.5	5.2	5.0	149	27	3.7	.30	.09	.49
27	.95	1.2	.70	4.0	6.5	4.9	184	27	3.4	.30	.08	.75
28	.81	1.5	.73	4.0	6.5	6.1	150	16	3.4	.27	.10	.97
29	.95	1.5	.75	3.4	-----	6.6	50	11	3.2	.18	.10	.32
30	.88	1.8	.78	3.0	-----	4.8	20	11	3.4	.17	.41	.16
31	1.0	-----	.82	2.6	-----	3.5	-----	9.4	-----	.18	1.6	-----
TOTAL	19.70	37.77	27.07	49.61	114.3	174.1	757.3	377.3	516.4	429.41	10.71	25.98
MEAN	.64	1.26	.87	1.60	4.08	5.62	25.2	12.2	17.2	13.9	.35	.87
MAX	1.4	2.0	1.8	4.0	8.0	8.6	184	40	85	75	2.4	9.2
MIN	.16	.60	.50	.80	2.5	3.5	1.0	4.0	3.2	.17	.08	.03
AC-FT	39	75	54	98	227	345	1,500	748	1,020	852	21	52

CAL YR 1970 TOTAL 3,893.49 MEAN 10.7 MAX 549 MIN 0 AC-FT 7,720
WTR YR 1971 TOTAL 2,539.65 MEAN 6.96 MAX 184 MIN .03 AC-FT 5,040

PEAK DISCHARGE (BASE, 700 CFS, REVISED).--No peak above base.

KANSAS RIVER BASIN

161

06846500 Beaver Creek at Cedar Bluffs, Kans.

LOCATION.--Lat 39°59'14", long 100°33'13", in NE1/4 sec.10, T.1 S., R.29 W., Decatur County, on right bank 15 ft downstream from bridge on county road 0.4 mile east of U.S. Highway 83 and county road intersection, 0.6 mile north of Cedar Bluffs, 0.9 mile south of Kansas-Nebraska State line, and at mile 106.6. Prior to Aug. 19, 1971, at site 0.9 mile upstream.

DRAINAGE AREA.--1,619 sq mi, of which 294 sq mi is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 2,515.33 ft above mean sea level. Prior to Aug. 19, 1971, at site 0.9 mile upstream at datum 5.00 ft higher.

AVERAGE DISCHARGE.--26 years, 24.1 cfs (17,460 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 434 cfs July 9 (gage height, 9.64 ft); no flow at times.

Period of record: Maximum discharge, 7,940 cfs June 11, 1960 (gage height, 18.71 ft); no flow at times in most years.

Flood in July 1944 reached a stage of 18.16 ft, from floodmark.

REMARKS.--Records good except those for winter period, which are poor. Records of suspended sediment loads for the water year 1971 are published in Part 2 of WRD Kans.

REVISIONS (WATER YEARS).--WSP 1510: 1947, 1950-51.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	4.3	.16	.06	0	
2							0	2.1	.09	.07	0	
3							0	1.4	.08	0	0	
4							0	.94	.04	0	0	
5							0	.54	0	0	0	
6							0	.41	0	0	0	
7							0	.51	0	0	0	
8							0	.48	0	0	0	
9							0	.53	22	254	0	
10							0	.27	93	89	0	
11							0	3.2	14	9.1	0	
12							0	1.6	3.4	2.7	0	
13							0	.86	10	1.6	.17	
14							0	.60	7.5	.41	.13	
15							0	.62	.70	.18	.06	
16							0	.56	.18	.10	.03	
17							0	.96	.10	.07	.01	
18							0	11	.21	.04	0	
19							0	5.9	.23	.03	0	
20							0	6.8	.11	.03	0	
21							0	6.0	.08	.01	0	
22							3.6	6.4	.07	0	0	
23							63	3.8	.06	0	0	
24							128	2.1	.02	0	0	
25							22	1.3	0	0	0	
26							25	.91	0	0	0	
27							13	.71	0	0	0	
28							24	.59	0	0	0	
29							9.3	.33	0	0	0	
30							6.1	.36	0	0	0	
31								.27		0	0	
TOTAL	0	0	0	0	0	0	294.0	66.35	152.03	357.40	.40	0
MEAN	0	0	0	0	0	0	9.80	2.14	5.07	11.5	.013	0
MAX	0	0	0	0	0	0	128	11	93	254	.17	0
MIN	0	0	0	0	0	0	0	.27	0	0	0	0
AC-FT	0	0	0	0	0	0	583	132	302	709	.8	0
CAL YR 1970	TOTAL 943.54 MEAN 2.59 MAX 301 MIN 0 AC-FT 1,870											
WTR YR 1971	TOTAL 870.18 MEAN 2.38 MAX 254 MIN 0 AC-FT 1,730											

PEAK DISCHARGE (BASE, 300 CFS)
 DATE TIME G.H.T. DISCHARGE
 07-09 0300 9.64 434

KANSAS RIVER BASIN

06847000 Beaver Creek near Beaver City, Nebr.

LOCATION.--Lat 40°07'12", long 99°53'35", in SW1/4 sec.23, T.2 N., R.23 W., Furnas County, on left bank 400 ft downstream from bridge on U.S. Highway 283, 3.5 miles west of Beaver City, and at mile 24.7.

DRAINAGE AREA.--1,950 sq mi, approximately, of which about 1,650 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,162.96 ft above mean sea level. Prior to Aug. 13, 1947, non-recording 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 miles upstream at different datum.

AVERAGE DISCHARGE.--35 years, 30.6 cfs (22,170 acre-ft per year); median of yearly mean discharges, 22 cfs (15,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 200 cfs June 9 (gage height, 5.21 ft); no flow Oct. 5, 23, 24. Period of record: Maximum discharge, 3,800 cfs July 19, 1944 (gage height, 13.8 ft, from floodmark, site and datum then in use); no flow at times during 1937-40, 1946, 1953-57, 1959, 1969-71.

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

REVISIONS (WATER YEARS).--WSP 1340: 1937-38(M), 1939, 1940-41(M), 1943(M). WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.35	.55	.46	.68	1.0	.87	13	3.1	1.3	.46	2.5
2	.10	.31	.54	.40	.70	1.4	.87	11	2.8	1.3	.43	.36
3	.05	.33	.47	.30	.69	1.5	.85	7.7	3.2	4.3	.43	.21
4	.04	.29	.44	.20	.67	1.4	.89	8.8	4.8	1.6	.40	.67
5	0	.31	.44	.18	.72	1.2	.90	6.2	4.9	1.2	.40	.61
6	.01	.28	.42	.17	.62	1.0	.92	3.4	3.4	1.0	.38	.23
7	.14	.28	.42	.16	.58	1.3	.97	2.4	2.6	.88	.34	.13
8	.34	.32	.45	.13	.58	1.1	.88	1.8	2.4	.75	.34	.11
9	.30	.38	.48	.10	.60	1.1	.92	1.4	83	3.7	.31	.16
10	.32	.38	.48	.08	.63	1.4	.86	2.5	7.6	6.3	.26	.15
11	.37	.37	.41	.10	.70	1.3	.87	3.3	3.6	34	.22	.15
12	.22	.43	.40	.12	.90	1.4	.78	3.2	13	145	.21	.13
13	.17	.36	.41	.17	1.0	1.3	.78	2.5	36	131	.14	.11
14	.22	.36	.41	.20	1.0	1.4	.83	3.4	39	47	.10	.07
15	.22	.36	.51	.25	1.0	1.2	.95	2.8	65	16	.14	.11
16	.30	.42	.54	.39	1.0	1.1	.96	2.1	19	6.0	.09	.22
17	.27	.43	.57	.43	.83	1.1	1.1	2.0	10	3.5	.11	.26
18	.27	.43	.54	.52	1.4	.95	1.1	4.7	16	2.7	.09	.25
19	.15	.46	.47	.48	1.3	1.0	4.0	7.7	16	2.0	.22	.21
20	.14	.43	.41	.53	.91	1.4	3.3	4.4	8.4	1.6	.15	.16
21	.08	.47	.44	.64	.80	1.4	2.0	2.9	5.4	1.2	.11	.21
22	.05	.44	.52	.64	.80	1.3	2.3	2.4	4.0	1.0	.07	.26
23	0	.37	.49	.60	.98	1.1	2.6	2.4	3.2	1.1	.05	.22
24	0	.38	.43	.65	1.1	1.1	2.2	2.4	2.9	.88	.02	.17
25	.06	.46	.44	.75	1.2	1.2	1.5	2.7	2.5	.75	.05	.20
26	.17	.54	.38	.76	1.3	1.3	1.4	3.4	2.2	.70	.02	.16
27	.24	.49	.39	.73	1.3	1.3	6.6	2.8	1.9	.71	.02	.12
28	.15	.44	.41	.80	1.0	1.3	57	2.7	1.7	.58	.04	.09
29	.23	.43	.44	.92	-----	1.1	25	2.9	1.6	.57	.02	.08
30	.21	.49	.49	.80	-----	1.1	14	2.9	1.5	.57	.19	.04
31	.27	-----	.48	.76	-----	1.0	-----	3.4	-----	.53	33	-----
TOTAL	5.16	11.79	14.27	13.42	24.99	37.75	138.20	125.2	370.7	419.72	38.81	8.35
MEAN	.17	.39	.46	.43	.89	1.22	4.61	4.04	12.4	13.5	1.25	.28
MAX	.37	.54	.57	.92	1.4	1.5	57	13	83	145	33	2.5
MIN	0	.28	.38	.08	.58	.95	.78	1.4	1.5	.53	.02	.04
AC-FT	10	23	28	27	50	75	274	248	735	833	77	17

CAL YR 1970 TOTAL 1,166.01 MEAN 3.19 MAX 105 MIN 0 AC-FT 2,310
WTR YR 1971 TOTAL 1,208.36 MEAN 3.31 MAX 145 MIN 0 AC-FT 2,400

PEAK DISCHARGE (BASE, 400 CFS).--No peak above base.

06847500 Sappa Creek near Stamford, Nebr.

LOCATION.--Lat 40°07'53", long 99°33'15", in NW1/4 sec.23, T.2 N., R.20 W., Harlan County, on left bank 40 ft south of Burlington Northern Inc. track, 500 ft downstream from bridge on county highway, 2 miles east of Stamford, and 5.5 miles upstream from mouth.

DRAINAGE AREA.--3,740 sq mi, approximately, of which about 3,280 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 1,981.31 ft above mean sea level.

AVERAGE DISCHARGE.--26 years, 79.1 cfs (57,310 acre-ft per year); median of yearly mean discharges, 57 cfs (41,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 223 cfs Apr. 29 (gage height, 6.06 ft); no flow for many days.

Period of record: Maximum discharge, 43,400 cfs June 24, 1966 (gage height, 22.13 ft, from high-water mark) from contracted opening and road overflow measurement; no flow at times in many years.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station.

REVISIONS (WATER YEARS).--WSP 1919: 1960. WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	0	.56	.50	.50	8.0	7.9	126	17	6.4	0	93
2	.84	0	.60	.35	.54	8.0	6.6	89	15	1.5	0	27
3	.10	0	.62	.10	.58	8.5	5.0	74	28	4.2	0	2.1
4	0	0	.60	.02	.62	9.0	4.1	56	78	16	0	2.4
5	0	0	.50	0	1.1	9.5	3.6	40	54	3.4	0	4.2
6	0	0	.40	0	1.4	9.5	4.4	33	34	.84	0	1.9
7	0	0	.45	0	1.6	10	4.7	27	23	.20	0	.05
8	0	0	.74	0	1.8	11	4.7	24	17	.01	0	.01
9	0	0	.76	0	2.6	12	4.5	22	18	2.0	0	.01
10	0	0	.76	0	2.6	13	4.7	22	128	24	0	0
11	0	0	.70	0	2.8	15	4.6	26	52	84	0	1.2
12	0	0	.65	0	3.0	17	4.0	22	26	88	16	.15
13	0	0	.60	0	3.3	19	3.8	21	32	103	.96	.01
14	0	0	.55	0	3.4	21	4.0	20	77	136	.14	0
15	0	0	.50	0	3.6	23	3.3	18	77	77	.04	0
16	0	0	.50	0	3.6	15	3.4	15	81	25	.01	0
17	0	0	.45	0	3.8	13	3.6	19	93	14	0	0
18	0	0	.45	0	4.0	12	3.2	21	45	33	0	0
19	0	.06	.42	0	4.9	17	3.3	21	24	20	0	0
20	0	.09	.42	0	4.6	17	21	21	24	6.4	0	0
21	0	.15	.42	.04	4.0	19	16	24	29	0	0	0
22	0	.20	.42	.09	4.0	14	16	25	26	0	0	0
23	0	.24	.42	.12	4.6	14	29	20	17	0	0	0
24	0	.28	.40	.16	5.5	14	24	39	11	0	0	0
25	0	.32	.40	.25	6.0	13	27	42	7.8	0	0	0
26	0	.36	.40	.42	6.5	12	39	29	5.5	0	0	0
27	0	.40	.40	.62	7.0	14	107	18	4.0	0	0	0
28	0	.44	.40	.84	7.5	11	154	17	2.4	0	0	0
29	0	.48	.45	.95	-----	9.9	205	29	1.8	0	0	0
30	0	.52	.50	1.0	-----	8.8	191	26	2.4	0	0	0
31	0	-----	.50	.45	-----	8.1	-----	20	-----	0	90	-----
TOTAL	2.44	3.54	15.94	5.91	95.44	405.3	912.4	1,006	1,049.9	644.95	107.15	132.03
MEAN	.079	.12	.51	.19	3.41	13.1	30.4	32.5	35.0	20.8	3.46	4.40
MAX	1.5	.52	.76	1.0	7.5	23	205	126	128	136	90	93
MIN	0	0	.40	0	.50	8.0	3.2	15	1.8	0	0	0
AC-FT	4.8	7.0	32	12	189	804	1,810	2,000	2,080	1,280	213	262

CAL YR 1970 TOTAL 15,796.71 MEAN 43.3 MAX 373 MIN 0 AC-FT 31,330
WTR YR 1971 TOTAL 4,381.00 MEAN 12.0 MAX 205 MIN 0 AC-FT 8,690

PEAK DISCHARGE (BASE, 1,000 CFS).-- No peak above base.

KANSAS RIVER BASIN

06848500 Prairie Dog Creek near Woodruff, Kans.

LOCATION.--Lat 39°59'09", long 99°28'39", in NW1/4 sec.9, T.1 S., R.19 W., Phillips County, on left bank at downstream side of bridge on U.S. Highway 383, 1 mile south of Kansas-Nebraska State line, 2.5 miles west of Woodruff, and at mile 26.5.

DRAINAGE AREA.--1,007 sq mi.

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft above mean sea level. See WSP 1919 for history of changes prior to Oct. 7, 1955.

AVERAGE DISCHARGE.--31 years, 45.6 cfs (33,040 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 118 cfs Sept. 2 (gage height, 4.28 ft); no flow for part of June 24.

Period of record: Maximum discharge, 15,000 cfs June 23, 1947 (gage height, 21.04 ft, site and datum then in use), from rating curve extended above 6,500 cfs on basis of contracted-opening measurement of 11,300 cfs; no flow at times in 1945, 1948, 1950, 1954-61, 1963-66, 1971.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated to some extent since 1964 by Norton Reservoir 48.4 miles upstream (see sta 06847950) and by irrigation development above station. Records of chemical analyses for the water year 1971 are published in Part 2 of WRD Kans.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.7	5.2	5.3	4.0	8.0	4.9	1.9	4.4	3.1	2.5	38
2	2.4	3.3	4.5	5.1	4.0	8.0	4.4	3.3	4.2	2.4	2.3	92
3	2.2	3.2	4.0	4.5	4.5	8.0	4.1	3.3	3.3	5.4	2.9	33
4	2.0	3.3	4.0	3.5	4.5	9.0	4.0	3.4	3.6	6.0	1.3	10
5	2.2	3.3	4.0	3.0	4.0	10	4.2	3.4	4.0	6.7	.79	4.3
6	2.1	3.3	4.5	3.0	3.5	10	4.0	3.6	3.5	2.0	.81	33
7	2.0	3.5	4.5	3.0	3.5	10	4.0	3.7	3.3	.43	1.3	13
8	2.1	3.5	4.5	3.5	3.5	11	4.1	3.7	3.1	1.6	2.7	2.3
9	1.5	3.6	4.5	3.5	4.0	11	4.2	3.7	3.2	7.7	2.5	1.0
10	3.9	4.2	4.9	4.0	5.0	12	5.0	3.8	4.2	8.7	.65	.56
11	2.5	4.0	3.8	3.5	7.0	12	5.0	5.1	3.6	8.9	2.0	.38
12	2.5	3.9	4.4	3.0	9.0	14	4.9	6.3	3.9	13	2.8	.36
13	2.5	4.1	4.0	3.0	9.0	15	5.1	6.9	3.7	14	2.0	.39
14	3.0	4.1	3.4	3.0	10	13	5.1	5.7	5.8	10	1.1	.40
15	3.0	3.9	3.7	3.5	11	9.1	4.4	4.6	13	4.5	1.8	.35
16	3.1	4.0	3.9	3.5	11	9.4	4.6	4.0	6.2	1.2	2.1	.39
17	3.1	4.2	4.1	4.0	11	8.0	3.8	3.6	7.5	1.6	3.0	.46
18	3.1	4.3	4.3	4.5	10	7.7	3.1	4.3	4.0	2.6	2.4	.65
19	3.4	4.6	3.8	3.5	10	7.4	3.3	5.6	2.6	3.0	1.4	.79
20	3.4	4.6	3.5	3.5	9.0	7.7	6.7	5.8	1.9	2.0	1.2	.77
21	3.4	4.6	4.2	4.0	8.0	9.4	7.8	5.2	1.8	.75	.44	.81
22	3.2	4.6	4.3	4.0	7.0	8.4	7.7	4.3	1.6	1.4	.28	17
23	3.2	3.8	4.2	4.0	7.0	8.4	5.3	3.6	.34	2.4	.20	11
24	3.2	4.1	3.5	4.5	8.0	9.1	3.6	3.3	2.0	2.8	.20	3.0
25	3.0	4.5	3.3	5.0	9.0	8.0	6.7	3.5	.60	3.4	.22	2.3
26	3.1	4.9	3.2	5.0	10	7.0	6.1	3.4	1.8	2.3	.22	2.0
27	3.1	4.6	5.3	5.0	10	5.4	4.5	3.3	.47	1.9	.24	1.8
28	3.0	4.4	5.6	6.0	9.0	4.7	2.6	3.2	.96	2.3	.26	1.7
29	3.1	4.7	5.2	6.0	-----	5.5	1.5	3.3	4.9	2.1	.34	1.6
30	3.1	5.0	5.4	5.0	-----	5.1	1.4	3.6	3.4	1.4	.39	1.2
31	3.2	-----	5.7	4.5	-----	5.1	-----	3.9	-----	.83	8.1	-----
TOTAL	87.1	121.8	133.4	126.4	205.5	276.4	136.1	126.3	106.87	126.41	48.44	274.51
MEAN	2.81	4.06	4.30	4.08	7.34	8.92	4.54	4.07	3.56	4.08	1.56	9.15
MAX	3.9	5.0	5.7	6.0	11	15	7.8	6.9	13	14	8.1	92
MIN	1.5	3.2	3.2	3.0	3.5	4.7	1.4	1.9	.34	.43	.20	.35
AC-FT	173	242	265	251	408	548	270	251	212	251	96	544

CAL YR 1970 TOTAL 2,229.56 MEAN 6.11 MAX 116 MIN .21 AC-FT 4,420
WTR YR 1971 TOTAL 1,769.23 MEAN 4.85 MAX 92 MIN .20 AC-FT 3,510

06849000 Harlan County Lake near Republican City, Nebr.
(Formerly published as Harlan County Reservoir near Republican City)

LOCATION.--Lat 40°04'10", long 99°12'30", in sec.11, T.1 N., R.17 W., Harlan County, at left end of spillway on upstream side of Harlan County Dam on Republican River, 2 miles southeast of Republican City and 8 miles southeast of Alma.

DRAINAGE AREA.--20,750 sq mi, approximately, of which about 13,530 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1970 published as Harlan County Reservoir near Republican City.

GAGE.--Water-stage recorder. Gage is referred to mean sea level.

EXTREMES.--Current year: Maximum contents, 317,700 acre-ft June 24 (elevation, 1,944.06 ft); minimum, 214,300 acre-ft Aug. 30 (elevation, 1,934.67 ft).

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).

REMARKS.--Reservoir is formed by earthfill dam with gravity-type concrete spillway section; storage began Nov. 14, 1952. Capacity, 342,600 acre-ft between elevations 1,885.0 (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, 840,600 acre-ft). Top of superstorage flood-control pool at elevation 1,975.5 ft (capacity, 887,400 acre-ft). Dead storage, 929 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.

Capacity table (elevation, in feet,
and usable contents, in acre-feet)

1,930	170,500	1,940	270,200
1,935	217,600	1,945	329,600

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216,400	221,500	227,500	233,800	240,200	254,300	269,100	282,900	304,800	307,500	257,600	216,600
2	216,500	221,600	227,900	234,400	240,700	254,800	269,100	283,600	305,200	305,500	256,000	216,400
3	216,500	221,700	228,100	234,900	241,200	255,300	269,800	285,400	305,400	304,500	254,500	216,200
4	216,600	221,700	228,300	234,800	241,700	256,000	270,200	286,000	306,400	303,100	252,700	216,300
5	216,600	221,800	228,400	234,800	242,000	256,500	270,200	286,800	306,600	301,600	251,400	216,200
6	216,600	222,000	228,700	234,900	242,200	257,500	270,000	287,400	307,000	300,200	249,700	216,100
7	216,800	222,000	229,100	235,000	242,500	257,500	270,200	287,700	307,300	298,600	248,200	215,800
8	217,100	223,000	229,500	235,100	242,800	258,100	270,400	288,200	307,900	297,100	246,600	215,700
9	216,800	222,800	229,600	235,300	243,000	258,400	270,600	288,800	308,400	296,600	245,000	215,700
10	216,500	223,200	230,000	235,300	243,200	259,000	271,000	290,800	308,800	296,000	243,500	215,600
11	217,000	223,300	230,000	235,500	243,500	259,500	271,200	293,000	310,000	295,100	242,000	215,500
12	217,100	223,400	230,300	235,700	243,800	259,900	271,300	294,200	311,200	294,300	240,700	215,400
13	217,100	223,700	230,400	235,900	244,100	260,500	271,400	295,000	312,200	293,300	239,400	215,200
14	217,200	223,900	230,600	236,100	244,400	261,300	271,500	295,600	312,900	292,200	238,100	215,000
15	217,300	224,200	231,100	236,200	244,900	261,300	271,400	296,400	313,500	291,100	237,000	214,900
16	217,400	224,400	231,200	236,400	245,400	261,600	271,400	297,200	314,000	289,400	235,500	214,900
17	217,500	224,700	231,300	236,500	246,000	261,600	271,400	298,300	314,900	287,400	234,000	214,900
18	217,600	224,800	231,600	236,600	248,200	263,400	271,400	299,700	315,400	285,700	232,100	215,100
19	217,900	225,300	231,600	236,600	249,100	263,400	271,400	300,000	316,100	283,700	230,700	215,300
20	218,100	225,300	231,700	236,900	249,700	263,700	272,800	300,400	316,500	281,700	229,300	215,700
21	218,500	225,800	231,900	237,000	250,300	264,000	274,600	300,900	317,000	279,400	227,600	215,900
22	218,600	225,900	232,100	237,000	250,600	264,200	274,600	301,200	317,500	277,200	226,200	216,200
23	219,700	225,600	232,300	237,300	250,700	264,600	276,000	302,500	317,500	275,200	224,400	216,600
24	219,700	225,800	232,400	237,700	250,800	265,600	277,300	302,700	317,200	273,100	222,700	216,900
25	220,000	225,900	232,400	237,800	251,900	266,000	278,000	302,800	316,500	270,800	221,200	217,200
26	220,800	226,100	232,500	238,100	252,500	266,400	279,400	303,000	315,500	268,500	219,300	217,500
27	220,800	226,300	232,800	238,400	252,800	267,100	279,900	303,100	313,500	266,300	218,100	217,700
28	220,900	226,600	233,100	238,800	253,700	267,600	280,300	303,100	312,300	264,500	217,000	218,000
29	221,000	226,700	233,300	239,400	-----	268,300	281,200	303,400	310,900	262,600	215,500	218,000
30	221,100	227,200	233,500	239,700	-----	268,500	282,100	304,600	309,300	260,900	214,300	218,100
31	221,200	-----	233,800	239,800	-----	269,000	-----	304,800	-----	259,200	215,600	-----
MAX	221,200	227,200	233,800	239,800	253,700	269,000	282,100	304,800	317,500	307,500	257,600	218,100
MIN	216,400	221,500	227,500	233,800	240,200	254,300	269,100	282,900	304,800	259,200	214,300	214,900
(†)	+ 5,000	+ 6,000	+ 6,600	+ 6,800	+ 13,900	+ 15,300	+ 13,100	+ 22,700	+ 4,500	- 50,100	- 43,600	+ 2,500
(*)	1,935.35	1,935.94	1,936.58	1,937.16	1,938.48	1,939.89	1,941.06	1,943.00	1,943.37	1,938.99	1,934.80	1,935.05
CAL YR 1970	MAX 357,000	MIN 208,200	† -108,500									
WTR YR 1971	MAX 317,500	MIN 214,300	† +1,900									

† Change in contents, in acre-feet.

* Elevation, in feet, at end of month.

KANSAS RIVER BASIN

06849500 Republican River below Harlan County Dam, Nebr.

LOCATION.--Lat 40°04'45", long 99°10'05", in SW $\frac{1}{4}$ sec.6, T.1 N., R.16 W., Franklin County, on left bank 1.4 miles west of Naponee, 1.4 miles upstream from Turkey Creek, and 2.8 miles downstream from Harlan County Dam.

DRAINAGE AREA.--20,760 sq mi, approximately, of which about 13,550 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 1,863.38 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--18 years (1953-71), 338 cfs (244,900 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 815 cfs July 3 (gage height, 3.72 ft); minimum daily, 5.2 cfs Sept. 15.

Period of record: Maximum discharge, 4,320 cfs June 25, 1957 (gage height, 8.65 ft); minimum daily, 1.5 cfs Apr. 28, 29, 1957.

Maximum flood known occurred June 1, 1935 (discharge, about 260,000 cfs, from slope-area measurement near Bloomington).

REMARKS.--Records fair. Flow completely regulated by Harlan County Lake (see preceding page) and partially regulated by 6 upstream reservoirs. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.0	13	12	12	9.5	8.7	7.8	6.2	641	552	230
2	12	8.0	14	11	14	10	8.4	7.8	6.2	637	525	185
3	12	8.0	13	10	11	10	8.4	8.1	6.5	679	537	123
4	11	8.0	14	9.0	10	8.7	8.4	8.4	8.8	667	547	98
5	12	8.0	14	7.8	9.4	8.0	8.4	8.7	7.8	680	554	68
6	13	8.7	15	7.8	9.4	8.0	8.4	8.9	7.7	693	557	59
7	12	9.5	14	8.1	9.0	9.5	7.8	8.9	7.8	648	546	59
8	12	10	14	8.1	9.0	8.7	7.8	8.9	8.4	598	542	32
9	13	9.5	13	8.5	11	8.0	7.8	9.1	32	601	540	7.3
10	13	9.5	13	8.5	14	8.7	8.1	14	23	618	526	6.2
11	13	9.5	12	8.5	16	9.5	8.8	45	10	610	494	5.7
12	10	9.5	11	8.0	14	10	8.9	19	7.9	568	496	6.2
13	9.5	9.5	11	8.0	10	10	9.1	12	14	540	495	5.7
14	9.5	9.5	11	8.5	9.5	10	9.4	9.2	14	553	494	5.4
15	9.5	10	11	8.5	9.5	8.7	9.4	8.0	8.9	571	494	5.2
16	9.5	12	11	9.0	8.7	9.5	9.4	8.1	8.3	623	546	5.4
17	9.5	13	11	10	8.7	9.5	9.4	8.1	9.3	670	592	5.4
18	9.5	12	10	10	16	9.5	9.4	11	9.9	707	590	5.7
19	10	12	9.0	9.2	14	11	9.4	9.9	10	704	580	5.4
20	12	13	9.5	10	12	13	9.4	8.9	9.5	695	543	6.2
21	10	12	9.5	11	10	12	9.4	8.2	10	744	527	6.2
22	9.5	11	10	12	10	13	9.4	9.1	9.7	793	513	7.4
23	16	12	10	13	10	10	9.4	10	69	791	500	7.4
24	22	14	10	13	11	12	9.4	7.7	237	772	488	7.7
25	12	13	10	13	15	9.5	9.4	6.2	290	770	478	6.8
26	13	12	10	13	14	10	9.4	6.2	380	741	429	7.0
27	12	10	11	12	11	9.5	8.5	6.2	430	710	390	7.0
28	9.5	12	11	12	10	8.7	7.8	6.2	472	707	350	7.8
29	8.7	10	12	12	-----	8.0	7.8	6.2	604	634	300	8.0
30	8.0	13	13	12	-----	8.4	7.8	6.2	663	588	270	8.8
31	8.0	-----	13	10	-----	8.1	-----	6.2	-----	586	270	-----
TOTAL	352.7	316.2	363.0	313.5	318.2	299.0	263.1	308.2	3,380.9	20,539	15,265	997.9
MEAN	11.4	10.5	11.7	10.1	11.4	9.65	8.77	9.94	113	663	492	33.3
MAX	22	14	15	13	16	13	9.4	45	663	793	592	230
MIN	8.0	8.0	9.0	7.8	8.7	8.0	7.8	6.2	6.2	540	270	5.2
AC-FT	700	627	720	622	631	593	522	611	6,710	40,740	30,280	1,980

CAL YR 1970 TOTAL 115,440.7 MEAN 316 MAX 2,080 MIN 8.0 AC-FT 229,000
WTR YR 1971 TOTAL 42,716.7 MEAN 117 MAX 793 MIN 5.2 AC-FT 84,730

KANSAS RIVER BASIN

167

06851000 Center Creek at Franklin, Nebr.

LOCATION.--Lat 40°06'12", long 98°58'45", in NW 1/4 sec. 35, T.2 N., R.15 W., Franklin County, on right bank at downstream side of bridge on State Highway 136, 1 mile northwest of Franklin and 3 miles upstream from mouth.

DRAINAGE AREA.--74 sq mi, approximately, of which about 56 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956, and annual maximums, water years 1961-68, October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,858.34 ft above mean sea level (Bureau of Reclamation bench mark). Prior to Dec. 19, 1952, nonrecording gage at site 1.5 miles 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 at present site and datum.

AVERAGE DISCHARGE.--11 years (1948-56, 1968-71), 6.87 cfs (4,980 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 35 cfs Sept. 4 (gage height, 3.09 ft); maximum gage height, 3.19 ft occurred during period Jan. 13-23 (backwater from ice, from recorded range in stage); minimum daily discharge, 3.1 cfs Aug. 14-17, 24.

Period of record: Maximum discharge, 3,150 cfs Sept. 20, 1950 (gage height, 6.8 ft, from floodmark, site and datum then in use), from rating curve extended above 420 cfs on basis of slope-area measurement of peak flow; no flow at times during 1948-50.

REMARKS.--Records poor. Two small diversions above station for irrigation.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.8	6.0	7.0	5.9	8.0	6.5	6.2	6.3	4.0	3.9	3.6
2	5.7	5.8	6.7	7.0	5.3	7.6	6.2	6.2	6.2	3.8	3.8	3.2
3	5.7	5.8	6.6	6.0	4.8	7.6	6.5	6.2	6.6	4.4	3.7	3.2
4	6.0	5.8	6.5	5.0	4.8	7.8	6.5	6.2	7.1	4.5	3.8	13
5	5.8	5.7	6.3	4.4	4.5	7.6	6.5	6.1	7.1	4.5	3.6	11
6	5.6	5.8	6.5	4.4	4.5	7.5	6.5	6.2	7.0	4.3	3.4	5.7
7	5.5	6.1	6.2	4.4	4.5	7.5	5.8	5.4	7.0	4.1	3.5	5.2
8	6.3	6.1	6.0	4.4	4.5	7.2	6.1	5.5	7.0	4.3	3.5	5.2
9	6.2	6.2	6.2	4.4	5.3	7.5	6.2	6.1	7.2	4.8	3.7	5.4
10	6.2	6.2	6.5	4.4	6.0	7.4	6.0	6.5	7.2	4.8	3.5	5.2
11	6.2	6.1	7.5	4.4	7.0	7.1	6.0	6.5	7.2	4.8	3.2	5.2
12	6.2	6.5	7.0	4.4	7.6	7.2	6.8	6.0	7.0	4.8	3.2	5.1
13	6.1	6.2	7.0	4.5	8.2	7.2	6.8	6.2	7.2	4.8	3.3	5.0
14	6.5	6.2	7.0	4.6	7.4	7.8	7.0	6.0	6.7	5.0	3.1	4.9
15	6.3	6.2	6.2	5.0	7.8	8.0	7.0	5.7	6.5	4.8	3.1	5.0
16	6.6	6.3	6.7	5.5	7.5	8.6	7.0	5.7	6.0	4.7	3.1	4.8
17	6.8	6.7	6.5	6.0	7.6	8.7	7.1	6.0	6.0	4.5	3.1	4.9
18	7.0	6.6	6.0	6.5	8.4	8.6	7.0	5.6	5.5	4.3	3.3	5.0
19	7.1	6.5	5.3	7.0	7.2	8.6	6.8	6.2	5.2	4.4	3.3	4.8
20	7.0	6.6	5.0	7.0	7.5	8.8	7.1	6.2	5.1	3.9	3.4	4.8
21	6.6	6.3	5.0	7.0	7.0	8.6	6.7	6.0	4.9	3.9	3.6	4.9
22	6.1	6.0	5.0	7.0	6.5	8.4	7.0	6.6	4.7	4.2	3.5	5.0
23	6.6	5.8	5.0	7.0	6.5	8.6	7.0	5.8	4.5	4.2	3.4	5.0
24	6.7	6.3	5.3	7.0	6.5	8.2	6.6	6.2	4.2	3.9	3.1	5.0
25	6.8	6.7	5.6	6.9	7.5	8.1	6.8	5.7	3.9	4.0	3.3	5.0
26	6.8	6.0	6.0	7.4	8.0	8.0	6.8	6.0	3.6	4.0	3.4	5.1
27	6.7	6.1	6.5	7.0	8.0	6.7	6.7	6.5	3.8	3.7	3.5	5.1
28	6.5	6.5	7.5	7.4	8.0	7.2	6.6	6.5	3.6	3.7	3.8	5.1
29	6.8	6.3	8.0	7.4	-----	7.0	6.2	6.3	3.4	3.7	3.6	5.1
30	6.7	6.0	7.0	7.1	-----	6.6	6.1	6.6	3.6	3.9	3.2	5.1
31	6.5	-----	8.0	6.4	-----	6.2	-----	6.7	-----	4.0	4.2	-----
TOTAL	197.2	185.2	196.6	183.9	184.3	239.9	197.9	189.6	171.3	132.7	107.1	160.6
MEAN	6.36	6.17	6.34	5.93	6.58	7.74	6.60	6.12	5.71	4.28	3.45	5.35
MAX	7.1	6.7	8.0	7.4	8.4	8.8	7.1	6.7	7.2	5.0	4.2	13
MIN	5.5	5.7	5.0	4.4	4.5	6.2	5.8	5.4	3.4	3.7	3.1	3.2
AC-FT	391	367	390	365	366	476	393	376	340	263	212	319

CAL YR 1970 TOTAL 2,319.7 MEAN 6.36 MAX 15 MIN 2.6 AC-FT 4,600

WTR YR 1971 TOTAL 2,146.3 MEAN 5.88 MAX 13 MIN 3.1 AC-FT 4,260

PEAK DISCHARGE (BASE, 35 CFS).--Sept. 4 (2030) 35 cfs (3.09 ft).

KANSAS RIVER BASIN

06851500 Thompson Creek at Riverton, Nebr.

LOCATION.--Lat 40°05'21", long 98°45'38", in NW1/4 sec.2, T.1 N., R.13 W., Franklin County, 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 mile upstream from mouth.

DRAINAGE AREA.--410 sq mi, approximately, of which about 150 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956, and annual maximums, water years 1962-68, October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,753.38 ft above mean sea level. Apr. 1, 1948, to Oct. 1, 1948, nonrecording gage 240 ft downstream at datum 2.32 ft higher, and Oct. 1, 1948, to July 11, 1950, water-stage recorder at present site at datum 1.32 ft higher, and July 12, 1950, to Sept. 30, 1956, at present site and datum. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage at present site and datum.

AVERAGE DISCHARGE.--11 years (1948-56, 1968-71), 31.2 cfs (22,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,070 cfs June 13 (gage height, 8.47 ft), from rating curve extended above 1,600 cfs on basis of slope-area measurement of peak flow; minimum daily, 16 cfs Aug. 24, 25.

Period of record: Maximum discharge, 12,200 cfs July 9, 1950 (gage height, 13.22 ft, present datum), by slope-area measurement; minimum daily, 8.1 cfs Dec. 19, 1951.

REMARKS.--Records good. Natural flow affected by irrigation development above station.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	23	21	23	40	20	24	25	21	33	33
2	19	23	22	20	23	31	21	24	25	20	32	29
3	19	23	22	19	23	28	22	23	25	22	33	19
4	19	23	22	18	23	26	21	23	29	21	25	21
5	19	23	22	20	22	26	21	23	35	21	27	19
6	19	23	21	20	20	25	21	23	37	19	36	18
7	19	23	21	21	20	25	22	23	29	18	34	19
8	21	24	21	21	21	25	22	22	26	18	34	18
9	20	23	21	21	22	26	22	24	26	21	33	19
10	20	22	22	22	23	26	23	30	26	21	31	18
11	20	23	21	22	23	27	23	164	26	21	27	18
12	20	23	21	22	22	26	22	31	110	34	25	17
13	20	22	22	22	22	27	22	26	565	42	24	17
14	20	22	21	22	22	27	22	24	55	42	24	17
15	22	22	21	22	22	26	21	24	35	39	25	18
16	22	22	21	22	22	26	21	31	32	29	27	18
17	22	22	21	22	22	26	22	22	32	22	26	19
18	22	22	21	21	35	27	22	25	30	22	21	20
19	22	22	21	23	22	28	22	24	29	21	18	20
20	22	22	21	21	20	27	23	23	28	21	18	19
21	23	22	21	22	19	27	22	23	27	21	18	19
22	23	21	21	22	18	26	23	25	26	20	17	20
23	44	25	21	23	21	25	23	25	25	24	17	19
24	24	22	20	23	27	24	22	25	24	21	16	19
25	23	23	21	24	24	23	24	24	24	22	16	20
26	24	22	21	23	26	23	23	25	23	21	17	19
27	24	22	22	23	60	26	22	24	23	22	18	19
28	23	22	21	23	50	24	23	24	22	27	19	19
29	23	22	21	24	-----	23	23	25	21	33	23	19
30	23	23	21	23	-----	22	23	112	21	31	27	19
31	23	-----	21	23	-----	21	-----	78	-----	33	29	-----
TOTAL	684	676	659	675	697	809	663	1,043	1,461	770	770	588
MEAN	22.1	22.5	21.3	21.8	24.9	26.1	22.1	33.6	48.7	24.8	24.8	19.6
MAX	44	25	23	24	60	40	24	164	565	42	36	33
MIN	19	21	20	18	18	21	20	22	21	18	16	17
AC-FT	1,360	1,340	1,310	1,340	1,380	1,600	1,320	2,070	2,900	1,530	1,530	1,170

CAL YR 1970 TOTAL 9,443 MEAN 25.9 MAX 807 MIN 16 AC-FT 18,730
WTR YR 1971 TOTAL 9,495 MEAN 26.0 MAX 565 MIN 16 AC-FT 18,830

PEAK DISCHARGE (BASE, 280 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-11	0215	5.58	810	6-13	0030	8.47	3,070
5-30	2145	5.30	649				

KANSAS RIVER BASIN

169

06852500 Courtland Canal at Nebraska-Kansas State line

LOCATION.--Lat 40°00'15", long 98°07'55", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.1 N., R.7 W., Nuckolls County, on left bank
0.2 mile upstream from Nebraska-Kansas State line and 3.5 miles southwest of Superior, Nebr.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,612.46 ft above mean sea level.

AVERAGE DISCHARGE.--17 years, 72.7 cfs (52,670 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 544 cfs July 28, 29 (gage height, 3.99 ft); no flow for many days.
Period of record: Maximum discharge, 761 cfs Aug. 17, 1964 (gage height, 4.96 ft); no flow for many days
in each year.

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37							0	43	394	468	326
2	30							0	55	428	422	312
3	1.5							0	56	430	386	283
4	0							0	53	436	386	226
5	0							0	57	440	386	195
6	0							0	50	440	392	200
7	0							0	59	444	420	192
8	0							0	62	440	426	161
9	0							0	62	430	426	116
10	0							0	65	430	428	120
11	0							0	66	432	402	106
12	0							0	66	468	378	88
13	0							0	76	494	374	82
14	0							0	95	460	366	73
15	0							0	71	432	366	65
16	0							0	66	406	366	64
17	0							0	65	392	364	65
18	0							0	63	406	416	71
19	0							0	62	446	432	75
20	0							0	62	490	404	74
21	0							0	60	484	398	70
22	0							0	63	472	406	67
23	0							0	62	506	402	69
24	0							0	64	524	398	71
25	0							0	61	530	396	76
26	0							0	71	534	406	76
27	0							0	109	542	380	73
28	0							0	160	542	360	66
29	0				-----			26	220	542	362	60
30	0				-----			43	280	502	368	58
31	0	-----			-----		-----	43	-----	466	344	-----
TOTAL	68.5	0	0	0	0	0	0	112	2,404	14,382	12,228	3,580
MEAN	2.21	0	0	0	0	0	0	3.61	80.1	464	394	119
MAX	37	0	0	0	0	0	0	43	280	542	468	326
MIN	0	0	0	0	0	0	0	0	43	392	344	58
AC-FT	136	0	0	0	0	0	0	222	4,770	28,530	24,250	7,100
CAL YR 1970	TOTAL 50,195.20		MEAN 138		MAX 675		MIN 0		AC-FT 99,560			
WTR YR 1971	TOTAL 32,774.50		MEAN 89.8		MAX 542		MIN 0		AC-FT 65,010			

KANSAS RIVER BASIN

06853000 Republican River near Guide Rock, Nebr.

LOCATION.--Lat 40°04'05", long 98°22'25", in SW 1/4 sec.7, T.1 N., R.9 W., Webster County, on left bank 300 ft upstream from Willow Creek, 0.2 mile downstream from Courtland diversion dam, and 2 miles southwest of Guide Rock.

DRAINAGE AREA.--22,040 sq mi, approximately, of which about 14,550 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--August 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,624.13 ft above mean sea level. Prior to Oct. 1, 1959, at datum 5.00 ft higher.

AVERAGE DISCHARGE.--21 years, 426 cfs (308,600 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 4,980 cfs June 13 (gage height, 14.06 ft); minimum daily, 2.2 cfs Sept. 23.

Period of record: Maximum discharge, 29,200 cfs June 16, 1957 (gage height, 20.73 ft, present datum); minimum daily, 0.1 cfs May 26, 1964.

Maximum flood known occurred June 1 or 2, 1935 (discharge, about 250,000 cfs, from slope-area measurements near Bloomington and Hardy).

REMARKS.--Records poor. Natural flow affected by irrigation development above station, by regulation of upstream reservoirs, and since Nov. 14, 1952, by storage in Harlan County Reservoir. (See sta 06849000.) Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	103	119	70	94	120	142	107	189	33	45	217
2	93	101	113	70	94	125	128	103	78	17	77	582
3	90	102	120	60	90	147	128	105	68	33	39	59
4	87	109	119	56	75	158	130	104	65	93	31	54
5	87	111	117	50	60	163	125	108	79	136	47	32
6	87	116	112	50	56	150	128	102	89	123	66	85
7	87	120	121	50	56	150	128	109	198	105	57	7.1
8	117	162	119	54	60	147	132	103	91	64	27	3.5
9	157	256	127	60	64	156	122	93	51	46	32	4.3
10	134	153	118	60	67	170	128	153	73	68	25	6.4
11	128	133	113	60	85	194	125	399	84	110	35	4.1
12	124	122	123	63	96	204	125	392	68	97	21	3.9
13	125	126	122	65	100	170	122	152	2,890	59	14	3.5
14	112	124	97	68	110	188	122	114	780	32	10	3.3
15	108	119	100	68	115	179	120	107	282	24	11	3.2
16	104	127	105	70	125	168	119	103	130	24	12	3.2
17	103	126	110	80	140	165	121	107	93	29	12	3.5
18	102	120	100	80	160	155	123	120	77	80	24	3.4
19	107	117	75	75	220	145	125	135	58	61	9.9	2.7
20	106	126	60	80	160	168	128	148	48	43	41	2.5
21	99	114	54	84	100	176	127	155	43	30	48	2.5
22	108	120	56	86	65	173	118	168	34	34	52	2.4
23	107	95	56	90	68	158	124	148	33	99	38	2.4
24	125	110	58	92	70	152	126	145	22	87	27	2.4
25	116	125	60	94	90	158	129	87	17	79	15	2.9
26	110	141	60	96	115	160	123	34	39	84	23	3.0
27	114	132	62	100	120	148	119	29	47	84	42	2.7
28	120	126	62	110	120	158	112	37	51	76	29	2.7
29	108	111	63	120	-----	158	107	47	26	64	43	2.8
30	103	114	65	120	-----	150	107	56	40	88	36	2.5
31	99	-----	68	100	-----	155	-----	198	-----	52	60	-----
TOTAL	3,366	3,761	2,854	2,381	2,775	4,968	3,713	3,968	5,843	2,054	1,048.9	1,109.7
MEAN	109	125	92.1	76.8	99.1	160	124	128	195	66.3	33.8	37.0
MAX	157	256	127	120	220	204	142	399	2,890	136	77	582
MIN	87	95	54	50	56	120	107	29	17	17	9.9	2.2
AC-FT	6,680	7,460	5,660	4,720	5,500	9,850	7,360	7,870	11,590	4,070	2,080	2,200
CAL YR 1970	TOTAL	88,497.90	MEAN	242	MAX	2,240	MIN	.40	AC-FT	175,500		
WTR YR 1971	TOTAL	37,841.60	MEAN	104	MAX	2,890	MIN	2.2	AC-FT	75,060		

KANSAS RIVER BASIN

171

06853500 Republican River near Hardy, Nebr.

LOCATION.--Lat 40°00'01", long 97°54'55", in NE1/4 sec. 6, T.1 S., R.5 W., in Kansas, Republic County, at downstream side of highway bridge 1.2 miles southwest of Hardy and at mile 141.2.

DRAINAGE AREA.--22,401 sq mi, of which about 7,500 sq mi 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.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft above mean sea level. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 miles upstream at different datum.

AVERAGE DISCHARGE.--40 years (1913-14, 1932-71), 658 cfs (476,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,990 cfs June 14 (gage height, 10.36 ft); minimum, 22 cfs Sept. 30.

Period of record: Maximum discharge, about 225,000 cfs June 2, 1935 (gage height, 19.4 ft), based on records for stations upstream; no flow Aug. 9-19, 1934.

Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft June 24, 1947 (discharge, 100,000 cfs, based on records for upstream stations).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and by storage in six reservoirs in Colorado and Nebraska. Considerable regulation since 1952 by Harlan County Reservoir. (See sta 06849000.)

REVISIONS (WATER YEARS).--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-9, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	140	164	130	130	260	210	158	303	90	127	124
2	115	140	163	130	130	240	200	155	219	91	109	206
3	115	142	160	120	130	230	197	153	140	85	108	526
4	115	142	157	120	130	230	192	148	120	95	94	227
5	118	141	156	110	130	220	191	150	132	146	81	160
6	115	140	154	100	130	220	187	145	141	194	102	127
7	115	140	156	100	120	219	184	145	131	181	126	133
8	135	144	158	95	120	214	180	148	183	184	138	89
9	178	283	158	90	110	215	180	148	165	142	121	68
10	213	343	158	90	110	241	179	142	121	117	119	61
11	171	214	150	85	100	391	175	193	124	142	119	57
12	169	187	140	85	100	580	175	400	126	209	106	51
13	157	175	130	80	110	415	172	373	1,190	214	104	47
14	148	169	120	80	110	389	170	246	4,160	154	74	43
15	144	165	110	80	120	309	168	176	1,150	109	72	40
16	140	165	110	80	130	262	165	166	528	83	72	38
17	140	164	110	85	140	243	163	156	356	68	60	39
18	140	162	110	85	160	237	163	164	282	82	53	42
19	140	163	100	90	1,000	228	165	167	208	131	59	43
20	140	162	100	95	818	221	170	168	175	147	58	41
21	140	161	100	100	416	243	173	185	148	116	78	37
22	140	158	110	100	150	244	172	221	125	85	120	33
23	143	131	110	100	160	233	173	206	114	95	126	34
24	141	150	120	110	170	228	168	180	103	162	119	33
25	143	170	130	110	180	220	171	170	89	176	109	39
26	149	183	130	110	220	225	175	143	74	171	94	38
27	150	198	130	120	260	234	171	101	74	147	85	31
28	148	188	140	120	280	248	168	88	94	149	86	27
29	147	178	140	130	-----	246	165	88	98	137	94	26
30	144	167	140	130	-----	233	164	126	89	130	97	25
31	141	-----	140	130	-----	223	-----	161	-----	144	96	-----
TOTAL	4,408	5,165	4,154	3,190	5,864	8,141	5,286	5,370	10,962	4,176	3,006	2,485
MEAN	142	172	134	103	209	263	176	173	365	135	97.0	82.8
MAX	213	343	164	130	1,000	580	210	400	4,160	214	138	526
MIN	114	131	100	80	100	214	163	88	74	68	53	25
AC-FT	8,740	10,240	8,240	6,330	11,630	16,150	10,480	10,650	21,740	8,280	5,960	4,930
CAL YR 1970	TOTAL	101,630	MEAN	278	MAX	1,960	MIN	38	AC-FT	201,600		
WTR YR 1971	TOTAL	62,207	MEAN	170	MAX	4,160	MIN	25	AC-FT	123,400		

KANSAS RIVER BASIN

06879900 Big Blue River at Surprise, Nebr.

LOCATION.--Lat 41°06'05", long 97°18'35", in NW1/4 sec.15, T.13 N., R.1 E., Butler County, on left bank 50 ft downstream from bridge on county road at south edge of Surprise.

DRAINAGE AREA.--345 sq mi.

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1966, 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).

AVERAGE DISCHARGE.--7 years, 34.5 cfs (25,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,930 cfs Mar. 13 (gage height, 9.14 ft); no flow for many days.
Period of record: Maximum discharge, 10,700 cfs July 19, 1965 (gage height, 11.52 ft); no flow for many days most years.

REMARKS.--Records good above 5 cfs and fair below.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.68			0	56	9.3	.10	3.0	5.3	3.8	.06
2	.46	.42			0	52	6.2	.10	15	3.1	3.6	0
3	.23	.54			0	54	4.9	.06	21	133	4.0	0
4	.13	.42			0	44	3.4	.03	7.1	126	3.6	0
5	.03	.54			0	42	2.4	.03	4.4	51	2.6	0
6	0	.42			0	44	1.8	4.3	17	37	3.2	0
7	.13	.54			0	32	1.4	2.3	21	21	2.3	0
8	11	.68			0	26	1.2	.89	20	7.4	1.9	0
9	7.2	1.2			.02	28	1.1	3.0	26	5.7	1.6	0
10	5.7	.83			.10	41	1.1	169	31	23	1.4	0
11	27	.99			.73	223	1.4	114	17	30	1.3	0
12	34	1.2			1.2	1,120	1.4	80	6.5	38	1.1	0
13	20	.99			.58	2,460	1.2	66	3.4	25	1.1	0
14	11	.83			1.1	1,930	1.1	36	3.1	8.5	1.5	0
15	6.8	.99			1.8	912	.89	16	126	20	2.2	0
16	4.4	.99			3.4	293	.73	8.2	198	21	3.2	0
17	2.4	.99			4.2	86	.73	5.7	132	11	2.5	0
18	1.7	.68			80	49	.44	5.4	58	6.6	2.0	0
19	.99	.54			1,110	25	.22	3.9	31	5.4	2.0	0
20	.53	.42			1,280	23	.22	3.4	19	6.0	1.6	0
21	.25	.42			760	19	.15	3.4	7.9	7.9	1.2	0
22	.20	.32			802	12	.22	2.4	4.2	5.8	1.6	0
23	.20	.16			380	7.8	.32	2.2	2.8	3.6	2.0	0
24	.25	.13			100	6.8	.22	1.8	2.0	3.9	1.4	0
25	.16	.10			63	5.4	.22	1.4	1.6	6.1	.89	0
26	.16	.10			56	5.2	.15	1.4	1.4	7.4	.44	0
27	.20	.03			135	12	.10	1.1	1.6	6.5	.73	0
28	.16	0			56	38	.06	.73	.89	4.6	.44	0
29	.16	0			-----	23	.03	.73	1.2	4.5	.10	0
30	.32	0			-----	20	.06	.89	11	4.5	.06	0
31	.83	-----			-----	17	-----	1.8	-----	4.2	.03	-----
TOTAL	137.28	16.15	0	0	4,835.13	7,706.2	42.66	536.26	794.09	643.0	55.39	.06
MEAN	4.43	.54	0	0	173	249	1.42	17.3	26.5	20.7	1.79	.002
MAX	34	1.2	0	0	1,280	2,460	9.3	169	198	133	4.0	.06
MIN	0	0	0	0	0	5.2	.03	.03	.89	3.1	.03	0
AC-FT	272	32	0	0	9,590	15,290	85	1,060	1,580	1,280	110	.1

CAL YR 1970 TOTAL 796.02 MEAN 2.18 MAX 76 MIN 0 AC-FT 1,580
WTR YR 1971 TOTAL 14,766.22 MEAN 40.5 MAX 2,460 MIN 0 AC-FT 29,290

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	0930	6.50	1,420	3-13	1830	9.14	2,930
2-27	0915	3.28	293	5-10	2045	4.32	629

KANSAS RIVER BASIN

173

06880000 Lincoln Creek near Seward, Nebr.

LOCATION.--Lat 40°54'57", long 97°08'43", in NW 1/4 sec. 24, T.11 N., R.2 E., Seward County, on left bank 20 ft downstream from county road bridge, 2 miles west of Seward, and 2.5 miles upstream from mouth.

DRAINAGE AREA.--446 sq mi.

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for some periods, published in WSP 1730.

GAGE.--Water-stage recorder. Datum of gage is 1,429.27 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 47.8 cfs (34,630 acre-ft per year); median of yearly mean discharges, 44 cfs (31,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,650 cfs Mar. 13 (gage height, 16.6 ft, from floodmark); minimum daily, 2.8 cfs Sept. 12.

Period of record: Maximum discharge, 10,100 cfs June 17, 1957 (gage height, 20.53 ft); minimum daily, 1.3 cfs July 31, 1955.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are poor. Small diversions for irrigation above station. Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	6.9	7.9	8.8	8.2	140	28	11	30	13	19	8.9
2	4.5	7.1	7.7	8.0	9.0	120	24	10	18	9.8	18	9.7
3	4.1	7.3	7.9	7.0	8.2	110	21	10	30	10	14	9.4
4	4.1	7.5	7.3	6.0	7.6	130	20	10	120	11	16	12
5	4.1	7.4	7.5	5.4	7.0	150	20	9.9	61	13	21	13
6	4.3	7.5	9.2	4.5	6.4	140	19	9.9	37	20	19	11
7	4.6	7.4	8.8	5.0	5.6	130	18	11	43	18	15	10
8	6.2	7.6	8.5	5.6	5.0	120	17	11	23	14	16	9.1
9	15	9.9	7.7	7.0	6.6	140	16	11	65	15	15	8.1
10	23	11	7.8	6.6	7.2	200	15	52	109	17	14	6.2
11	28	8.8	8.0	6.0	8.0	350	14	124	78	18	16	4.8
12	116	8.4	8.6	6.4	9.0	700	14	134	43	18	17	2.8
13	83	8.0	8.8	6.2	8.0	1,400	13	77	38	21	16	3.4
14	43	7.7	8.4	5.8	10	1,100	13	19	185	30	11	2.9
15	31	8.2	8.6	6.6	15	600	12	20	155	61	9.2	3.5
16	25	8.0	8.2	6.4	25	350	12	56	71	41	7.4	3.4
17	22	7.7	7.6	6.4	60	200	12	173	23	27	5.4	4.0
18	18	7.9	7.0	6.2	144	100	12	113	17	24	3.7	4.3
19	14	7.8	5.2	7.2	840	70	12	107	16	25	5.0	3.9
20	12	7.8	6.0	8.0	1,200	54	12	38	13	26	7.4	4.0
21	10	7.7	7.0	8.6	873	40	12	26	11	20	8.6	3.8
22	8.7	8.4	8.0	9.4	538	34	12	23	10	12	8.9	3.9
23	9.1	9.6	7.4	10	334	31	12	21	10	11	6.7	4.4
24	11	9.8	8.2	11	160	28	12	19	10	15	10	4.2
25	8.5	10	9.0	10	180	26	11	17	9.2	14	10	4.8
26	8.9	9.8	8.6	9.4	200	26	11	16	7.0	15	12	5.3
27	8.8	9.0	8.0	8.6	170	27	11	14	6.7	19	12	4.2
28	8.1	8.7	7.6	9.2	160	33	11	14	6.2	21	10	3.9
29	7.3	8.5	8.0	10	-----	45	11	15	6.2	22	9.0	3.7
30	7.1	8.1	8.2	8.6	-----	45	11	16	9.6	24	8.1	5.5
31	7.0	-----	8.6	7.6	-----	36	-----	27	-----	20	8.5	-----
TOTAL	561.1	249.5	245.3	231.5	5,004.8	6,675	438	1,214.8	1,260.9	624.8	368.9	178.1
MEAN	18.1	8.32	7.91	7.47	179	215	14.6	39.2	42.0	20.2	11.9	5.94
MAX	116	11	9.2	11	1,200	1,400	28	173	185	61	21	13
MIN	4.1	6.9	5.2	4.5	5.0	26	11	9.9	6.2	9.8	3.7	2.8
AC-FT	1,110	495	487	459	9,930	13,240	869	2,410	2,500	1,240	732	353

CAL YR 1970 TOTAL 5,298.2 MEAN 14.5 MAX 249 MIN 2.4 AC-FT 10,510
 MTR YR 1971 TOTAL 17,052.7 MEAN 46.7 MAX 1,400 MIN 2.8 AC-FT 33,820

PEAK DISCHARGE (BASE, 350 CFS).--Feb. 20 (1700) 1,270 cfs (15.47 ft); Mar. 13 (time unknown) 1,650 cfs (16.6 ft).

NOTE.--No gage-height record Mar. 7-23.

KANSAS RIVER BASIN

06880500 Big Blue River at Seward, Nebr.

LOCATION.--Lat 40°54'05", long 97°05'55", in NW1/4 sec.28, T.11 N., R.3 E., Seward County, at downstream end of left abutment of bridge on State Highway 15 at south edge of Seward, 0.5 mile upstream from Plum Creek and 1.4 miles downstream from Lincoln Creek.

DRAINAGE AREA.--1,101 sq mi.

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for some periods, published in WSP 1730.

GAGE.--Water-stage recorder. Datum of gage is 1,415.16 ft above mean sea level. Prior to Dec. 19, 1969, at site 1.2 miles upstream at datum 6.33 ft higher.

AVERAGE DISCHARGE.--18 years, 115 cfs (83,320 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,500 cfs Mar. 15 (gage height, 23.07 ft); minimum daily, 5.5 cfs June 28.

Period of record: Maximum discharge, 15,300 cfs June 18, 1957; maximum gage height, 22.83 ft June 16, 1967, site and datum then in use; no flow July 30, 31, 1955 (result of irrigation pumping).

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

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	11	15	15	250	176	23	81	9.9	25	12
2	10	11	15	13	17	230	130	23	71	8.4	25	13
3	9.9	11	15	12	16	210	96	26	71	9.5	19	13
4	9.7	11	13	10	15	270	80	27	139	12	19	17
5	9.9	12	12	9.0	14	300	68	27	102	49	28	17
6	9.9	11	12	8.2	13	260	60	26	84	173	43	16
7	12	11	13	9.0	12	240	53	28	105	106	43	14
8	12	13	13	11	10	200	48	325	60	57	31	14
9	18	19	14	12	15	240	45	382	70	46	22	13
10	34	17	15	11	17	370	41	244	142	39	15	12
11	44	15	16	10	23	1,140	39	642	133	37	15	11
12	133	14	17	11	21	2,240	37	2,230	94	53	16	9.3
13	167	13	16	12	18	3,150	32	2,440	79	60	14	9.3
14	112	13	15	13	20	4,690	32	980	175	46	10	9.2
15	111	13	14	13	25	6,240	33	351	178	79	10	8.4
16	85	14	14	14	45	4,290	33	189	118	64	7.7	8.8
17	58	15	14	13	90	2,460	32	258	81	40	6.5	9.2
18	40	23	13	12	250	1,340	27	197	248	34	6.0	9.5
19	29	19	12	13	1,270	459	31	582	203	44	6.2	9.2
20	21	14	13	15	2,130	239	32	508	126	52	7.2	9.2
21	17	13	14	16	2,000	167	33	225	73	39	7.6	8.8
22	15	12	15	17	1,200	142	33	125	44	19	8.4	8.8
23	15	14	13	18	600	114	32	90	22	15	8.1	8.6
24	18	15	14	19	300	104	31	76	23	15	8.8	8.6
25	17	15	15	20	340	89	28	64	15	18	11	9.2
26	13	14	16	18	400	75	25	56	8.6	17	13	10
27	14	13	15	16	350	75	28	52	6.0	16	14	8.8
28	13	12	14	17	300	93	27	47	5.5	24	13	7.9
29	12	12	13	18	-----	146	26	44	5.7	23	12	7.9
30	11	12	13	16	-----	306	25	41	8.1	28	10	7.7
31	11	-----	14	14	-----	252	-----	186	-----	27	10	-----
TOTAL	1,092.4	412	433	425.2	9,526	30,381	1,413	10,514	2,570.9	1,259.8	484.5	320.4
MEAN	35.2	13.7	14.0	13.7	340	980	47.1	339	85.7	40.6	15.6	10.7
MAX	167	23	17	20	2,130	6,240	176	2,440	248	173	43	17
MIN	9.7	11	11	8.2	10	75	25	23	5.5	8.4	6.0	7.7
AC-FT	2,170	817	859	843	18,890	60,260	2,800	20,850	5,100	2,500	961	636

CAL YR 1970 TOTAL 8,824.4 MEAN 24.2 MAX 249 MIN 2.3 AC-FT 17,500
MTR YR 1971 TOTAL 58,832.2 MEAN 161 MAX 6,240 MIN 5.5 AC-FT 116,700

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	1200	16.63	2,260	5-12	2300	18.34	2,840
3-15	0700	23.07	6,500				

KANSAS RIVER BASIN

175

06880800 West Fork Big Blue River near Dorchester, Nebr.

LOCATION.--Lat 40°43'52", long 97°10'38", in SW¹/₄ sec. 23, T.9 N., R.2 E., Seward County, on right bank 60 ft downstream from bridge on county road, 6.2 miles northwest of Dorchester and 19 miles upstream from mouth.

DRAINAGE AREA.--1,206 sq mi.

PERIOD OF RECORD.--August 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,403.48 ft above mean sea level. Prior to Apr. 14, 1970, at site 60 ft upstream at same datum.

AVERAGE DISCHARGE.--13 years, 182 cfs (131,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,570 cfs Mar. 14 (gage height, 15.10 ft); minimum daily, 33 cfs Oct. 6.

Period of record: Maximum discharge, 11,400 cfs Mar. 20, 1969 (gage height, 20.34 ft); minimum daily, 20 cfs July 7, 1970.

Flood of July 10, 1950, reached a stage of 24.8 ft, present datum, from floodmarks (discharge, 49,400 cfs, from contracted-opening and flow-over-road measurement of peak flow).

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.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	72	59	64	64	260	129	75	260	49	123	98
2	43	74	58	62	74	251	120	74	165	54	135	92
3	38	71	57	50	72	277	113	75	311	64	107	98
4	36	68	56	45	64	387	107	74	352	75	103	103
5	36	68	57	43	54	491	106	76	219	90	102	92
6	33	67	57	42	47	438	103	76	165	90	102	82
7	35	65	57	45	43	278	99	86	184	123	111	73
8	44	64	58	50	41	214	92	85	157	85	132	74
9	82	140	58	58	56	208	88	84	253	167	134	71
10	157	78	59	56	82	252	86	357	404	485	119	66
11	175	65	57	54	90	712	83	275	349	630	103	57
12	309	63	57	52	86	1,840	81	197	215	806	86	53
13	407	62	58	54	84	2,990	79	130	149	596	84	47
14	276	60	58	54	100	3,230	77	114	120	415	84	44
15	199	58	57	54	140	2,270	76	132	107	340	77	41
16	142	58	59	56	170	1,160	75	171	100	272	86	41
17	106	58	59	54	220	508	76	135	93	208	85	42
18	88	57	58	52	360	335	75	132	104	164	88	44
19	74	57	54	50	1,330	257	75	173	121	130	88	44
20	67	57	54	54	2,030	215	74	126	102	112	97	43
21	62	56	58	62	1,330	200	76	118	88	107	97	42
22	57	55	56	68	1,000	178	76	182	81	113	104	41
23	57	58	54	70	700	169	77	179	78	134	108	43
24	52	60	54	70	800	158	76	131	75	152	98	44
25	52	63	54	63	500	149	74	108	68	150	100	45
26	48	63	58	58	330	148	74	106	62	161	98	47
27	69	59	56	56	290	144	75	108	62	180	96	44
28	70	57	56	62	270	154	74	105	54	228	99	43
29	73	57	58	76	-----	160	74	110	48	220	106	43
30	74	59	62	64	-----	154	75	104	56	151	104	42
31	72	-----	63	64	-----	143	-----	386	-----	123	102	-----
TOTAL	3,083	1,949	1,776	1,762	10,427	18,330	2,565	4,284	4,602	6,674	3,158	1,739
MEAN	99.5	65.0	57.3	56.8	372	591	85.5	138	153	215	102	58.0
MAX	407	140	63	76	2,030	3,230	129	386	404	806	135	103
MIN	33	55	54	42	41	143	74	74	48	49	77	41
AC-FT	6,120	3,870	3,520	3,490	20,680	36,360	5,090	8,500	9,130	13,240	6,260	3,450

CAL YR 1970 TOTAL 28,714 MEAN 78.7 MAX 874 MIN 20 AC-FT 56,950
WTR YR 1971 TOTAL 60,349 MEAN 165 MAX 3,230 MIN 33 AC-FT 119,700

PEAK DISCHARGE (BASE, 1,500 CFS).--Feb. 20 (0630) 2,230 cfs (12.53 ft); Mar. 14 (0130) 3,570 cfs (15.10 ft).

KANSAS RIVER BASIN

06881000 Big Blue River near Crete, Nebr.

LOCATION.--Lat 40°35'47", long 96°57'36", in SW 1/4 sec. 3, T.7 N., R.4 E., Saline County, on downstream side of right pier of highway bridge, 1.8 miles south of Missouri Pacific Railroad station in Crete, 3.3 miles downstream from Walnut Creek, and 3.6 miles upstream from Squaw Creek.

DRAINAGE AREA.--2,716 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 1,311.7 ft above mean sea level. Prior to Jan. 20, 1954, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--18 years (1953-71), 355 cfs (257,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,000 cfs Mar. 16 (gage height, 22.61 ft); minimum daily, 65 cfs Nov. 23.

Period of record: Maximum discharge, 27,600 cfs July 10, 1950 (gage height, 28.74 ft); maximum gage height, 29.80 ft June 16, 1967; minimum daily discharge, 13 cfs Oct. 28, 1956.

REMARKS.--Records good. Natural flow of stream affected by ground-water and surface-water withdrawals for irrigation and return flow from irrigated areas. Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	106	92	91	100	960	423	139	828	69	160	120
2	92	106	90	92	102	860	351	137	482	79	163	115
3	89	105	91	90	106	800	299	133	327	83	142	107
4	85	101	90	88	100	740	265	132	432	90	137	113
5	84	101	91	84	100	820	241	130	439	93	135	120
6	83	101	89	84	95	900	229	130	355	101	133	118
7	100	100	91	86	97	700	218	145	299	164	136	109
8	139	101	91	86	94	560	205	216	336	187	154	101
9	254	159	91	88	92	491	195	379	287	169	179	97
10	276	230	93	89	92	527	185	822	365	213	173	95
11	331	173	78	87	88	1,280	178	1,820	492	541	144	91
12	433	124	88	90	91	3,600	173	1,410	452	665	123	84
13	519	109	93	89	102	5,660	167	2,130	342	811	108	79
14	383	102	91	88	109	6,740	163	2,440	276	732	100	73
15	305	98	103	88	137	7,450	160	1,310	261	500	95	70
16	281	96	99	84	518	7,870	160	782	287	418	100	67
17	247	94	99	83	715	5,970	157	568	247	361	98	66
18	202	93	98	84	774	2,920	155	476	207	384	96	67
19	168	93	71	84	1,150	1,370	153	571	286	285	92	69
20	143	93	78	84	2,990	889	153	749	318	217	104	69
21	126	96	96	85	3,200	579	156	769	255	188	113	68
22	117	93	97	86	2,600	489	156	824	202	186	115	67
23	116	65	101	89	2,100	430	152	749	172	184	122	68
24	128	75	88	89	1,900	393	151	685	145	187	116	68
25	136	86	86	91	2,100	371	150	623	129	195	105	73
26	115	95	90	98	1,880	333	147	562	119	203	98	71
27	123	92	91	97	1,200	315	146	498	101	204	100	71
28	119	93	91	93	1,100	306	144	363	87	233	108	69
29	112	93	88	96	-----	307	142	285	72	272	110	68
30	109	94	88	102	-----	352	139	282	70	237	121	67
31	107	-----	90	100	-----	445	-----	519	-----	184	124	-----
TOTAL	5,616	3,167	2,813	2,765	23,732	55,427	5,713	20,778	8,670	8,435	3,804	2,520
MEAN	181	106	90.7	89.2	848	1,788	190	670	289	272	123	84.0
MAX	519	230	103	102	3,200	7,870	423	2,440	828	811	179	120
MIN	83	65	71	83	88	306	139	130	70	69	92	66
AC-FT	11,140	6,280	5,580	5,480	47,070	109,900	11,330	41,210	17,200	16,730	7,550	5,000

CAL YR 1970 TOTAL 47,731 MEAN 131 MAX 1,090 MIN 16 AC-FT 94,670
WTR YR 1971 TOTAL 143,440 MEAN 393 MAX 7,870 MIN 65 AC-FT 284,500

PEAK DISCHARGE (BASE, 3,000 CFS).--Feb. 20 (1800) 3,840 cfs (17.43 ft); Mar. 16 (0800) 8,000 cfs (22.61 ft).

KANSAS RIVER BASIN

177

06881200 Turkey Creek near Wilber, Nebr.

LOCATION.--Lat 40°28'48", long 97°00'43", in NE 1/4 sec. 19, T. 6 N., R. 4 E., Saline County, on left bank near downstream side of bridge on State Highway 41, 2.8 miles west of Wilber.

DRAINAGE AREA.--460 sq mi.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,322.00 ft above mean sea level (Nebraska Department of Highways bench mark). Prior to July 10, 1970, at site 0.2 mile downstream at same datum.

AVERAGE DISCHARGE.--12 years, 81.6 cfs (59,120 acre-ft per year); median of yearly mean discharges, 56 cfs (40,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,420 cfs May 11 (gage height, 13.98 ft); maximum gage height, 14.30 ft Feb. 21 (from floodmark, backwater from ice); minimum daily discharge, 1.0 cfs Jan. 7, 8, Sept. 22.

Period of record: Maximum discharge, 7,300 cfs Mar. 28, 1960 (gage height, 14.92 ft); minimum daily, 0.10 cfs July 13-16, 1966.

REMARKS.--Records fair except those for winter period, which are poor. Many diversions above station for irrigation. Records of water temperatures and fluvial sediments for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	27	9.0	6.0	8.0	170	71	18	377	11	12	18
2	6.0	20	7.8	5.2	7.0	130	55	17	327	22	12	18
3	5.3	17	7.7	4.5	7.0	120	44	17	285	15	12	10
4	5.1	14	7.0	3.0	7.0	130	38	17	223	15	12	8.9
5	5.1	12	6.5	2.0	6.0	120	34	17	136	15	12	8.2
6	5.1	12	6.0	1.5	6.0	110	31	17	83	15	29	7.7
7	5.1	12	9.6	1.0	5.0	90	29	44	62	18	16	7.2
8	5.1	12	8.8	1.0	5.0	70	28	219	59	16	15	6.4
9	24	23	8.0	1.1	6.0	55	27	64	55	23	15	5.3
10	116	32	7.8	1.1	7.0	215	26	964	52	25	15	6.5
11	85	24	8.4	1.1	8.0	503	25	2,150	49	103	16	7.0
12	162	28	7.2	1.1	10	1,440	25	1,560	45	278	15	5.9
13	228	34	14	1.2	15	2,000	24	434	42	248	8.4	4.4
14	252	30	15	1.5	20	2,100	23	265	36	154	8.1	3.8
15	200	22	10	2.0	50	2,050	23	171	28	93	8.7	2.3
16	116	18	9.1	2.5	200	1,160	23	111	26	50	14	1.9
17	68	16	9.6	3.0	220	290	22	79	24	32	15	1.6
18	46	13	9.2	3.5	200	143	22	84	22	24	30	1.4
19	32	12	8.6	4.0	100	84	22	239	25	19	20	1.4
20	25	11	8.0	4.5	100	74	21	248	24	15	16	1.3
21	21	11	7.8	5.0	200	64	21	216	23	14	14	1.2
22	18	9.6	7.8	6.0	250	58	21	272	23	18	12	1.0
23	16	8.4	7.6	7.0	260	56	21	211	22	21	11	1.1
24	14	7.4	7.8	7.5	270	54	20	240	17	20	8.2	1.1
25	18	8.2	8.0	8.0	270	54	20	253	13	18	8.0	1.2
26	64	8.8	7.0	8.0	260	52	19	173	10	21	7.6	1.4
27	120	9.0	7.0	8.0	230	52	20	104	12	23	6.6	1.7
28	96	8.6	6.0	8.0	200	54	19	73	8.8	19	8.0	1.9
29	71	8.6	6.0	8.0	-----	57	19	59	6.7	17	6.6	1.6
30	53	9.0	6.0	8.0	-----	70	18	49	8.0	16	7.1	1.4
31	38	-----	6.0	8.0	-----	85	-----	121	-----	14	8.4	-----
TOTAL	1,926.9	477.6	254.3	132.3	2,927.0	11,710	811	8,506	2,123.5	1,392	398.7	140.8
MEAN	62.2	15.9	8.20	4.27	105	378	27.0	274	70.8	44.9	12.9	4.69
MAX	252	34	15	8.0	270	2,100	71	2,150	377	278	30	18
MIN	5.1	7.4	6.0	1.0	5.0	52	18	17	6.7	11	6.6	1.0
AC-FT	3,820	947	504	262	5,810	23,230	1,610	16,870	4,210	2,760	791	279

CAL YR 1970 TOTAL 8,832.0 MEAN 24.2 MAX 576 MIN 1.7 AC-FT 17,520
WTR YR 1971 TOTAL 30,800.1 MEAN 84.4 MAX 2,150 MIN 1.0 AC-FT 61,090

PEAK DISCHARGE (BASE, 1,000 CFS).--Mar. 14 or 15 (time unknown) about 2,200 cfs; May 11 (1800) 2,420 cfs (13.98 ft).

KANSAS RIVER BASIN

06882000 Big Blue River at Barneston, Nebr.

LOCATION.--Lat 40°03'11", long 96°35'16", in SE1/4 sec.13, T.1 N., R.7 E., Gage County, near left bank in tailrace of powerplant, 0.8 mile northwest of Barneston, 2 miles upstream from Plum Creek, and 5 miles upstream from Nebraska-Kansas State line.

DRAINAGE AREA.--4,444 sq mi.

PERIOD OF RECORD.--May 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,164.2 ft above mean sea level. Prior to June 9, 1941, water-stage recorder at site 1 mile downstream at datum 0.44 ft lower. June 9 to Nov. 17, 1941, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--39 years, 766 cfs (555,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,900 cfs May 22 (gage height, 15.89 ft); minimum daily, 34 cfs Dec. 24.

Period of record: Maximum discharge, 57,700 cfs June 9, 1941 (gage height, 34.3 ft); minimum daily, 1 cfs Nov. 30, 1945.

REMARKS.--Records fair. Low flow regulated by powerplant at Barneston, which has pondage of about 1,500 acre-ft. 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.

REVISIONS (WATER YEARS).--WSP 896: 1932, 1935. WSP 1919: Drainage area. WRD Nebr. 1969: 1968.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	326	206	170	259	1,880	411	295	836	277	82	253
2	176	163	39	132	166	1,450	630	52	1,490	150	333	97
3	84	271	281	38	206	1,240	653	324	1,260	82	236	102
4	84	235	171	48	188	1,040	549	244	985	82	378	260
5	195	60	37	254	237	1,110	385	217	787	332	191	100
6	176	314	133	40	202	1,690	540	228	843	228	234	102
7	84	58	232	198	178	2,050	266	64	1,020	82	222	122
8	195	201	157	156	204	1,880	400	387	773	298	186	130
9	278	302	41	41	243	1,580	391	669	736	112	97	289
10	444	384	204	225	56	1,390	321	5,010	733	1,090	348	94
11	1,280	616	166	172	199	2,350	241	4,670	1,150	759	93	96
12	887	530	40	140	276	4,020	350	7,170	1,020	746	221	92
13	694	369	173	43	41	5,620	296	5,020	1,310	956	304	91
14	751	221	151	277	224	6,850	276	2,950	1,210	1,050	83	226
15	729	225	42	220	310	7,770	250	3,100	839	969	87	97
16	679	191	267	39	455	8,540	257	2,300	590	799	92	95
17	594	66	38	194	2,860	8,850	286	1,270	570	673	293	229
18	488	240	315	171	5,770	8,130	241	3,590	517	391	91	92
19	365	68	36	41	6,210	5,080	272	3,830	374	460	95	90
20	371	382	106	233	4,080	2,340	301	2,410	390	490	271	89
21	265	53	158	229	3,370	1,410	274	2,610	448	390	98	89
22	85	54	131	203	3,450	1,020	307	9,420	387	82	204	89
23	2,230	227	139	41	3,870	839	256	5,450	384	367	210	90
24	733	183	34	222	2,920	740	247	2,640	214	328	92	93
25	79	176	119	206	2,250	689	67	1,520	228	269	90	94
26	833	39	127	222	2,190	646	374	1,150	251	295	85	92
27	1,910	255	122	126	2,260	597	274	940	233	203	85	90
28	918	174	180	195	2,000	614	207	780	190	211	87	88
29	659	40	145	234	-----	612	243	613	208	221	88	86
30	250	271	131	43	-----	584	221	616	190	318	89	87
31	360	-----	128	203	-----	576	-----	940	-----	267	95	-----
TOTAL	17,049	6,694	4,249	4,756	44,674	83,187	9,786	70,479	20,166	12,977	5,160	3,644
MEAN	550	223	137	153	1,596	2,683	326	2,274	672	419	166	121
MAX	2,230	616	315	277	6,210	8,850	653	9,420	1,490	1,090	378	289
MIN	79	39	34	38	41	576	67	52	190	82	82	86
AC-FT	33,820	13,280	8,430	9,430	88,610	165,000	19,410	139,800	40,000	25,740	10,230	7,230

CAL YR 1970 TOTAL 103,707 MEAN 284 MAX 3,990 MIN 34 AC-FT 205,700
WTR YR 1971 TOTAL 282,821 MEAN 775 MAX 9,420 MIN 34 AC-FT 561,000

PEAK DISCHARGE (BASE, 10,000 CFS).--May 22 (1345) 10,900 cfs (15.89 ft).

KANSAS RIVER BASIN

179

06883000 Little Blue River near Deweese, Nebr.

LOCATION.--Lat 40°19'58", long 98°04'20", in SW 1/4 sec.11, T.4 N., R.7 W., Nuckolls County, on right bank about 1,500 ft upstream from bridge on State Highway 14, 1 mile upstream from Walnut Creek, 3.2 miles southeast of Deweese, and 6 miles northwest of Angus.

DRAINAGE AREA.--979 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,632.67 ft above mean sea level. Prior to May 16, 1957, non-recording gage at site 1,500 ft downstream at present datum.

AVERAGE DISCHARGE.--18 years, 151 cfs (109,400 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,260 cfs Feb. 19 (gage height, 7.29 ft); minimum daily, 24 cfs Aug. 25.

Period of record: Maximum discharge, 25,100 cfs Aug. 31, 1969 (gage height, 18.57 ft); minimum daily, 6.4 cfs Aug. 9, 1970.

Flood of June 26, 1951, reached a stage of 14.9 ft at previous site, from information by local residents (discharge, 16,000 cfs, based on records for former station at Angus).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	56	59	58	54	110	90	65	595	47	48	28
2	52	56	58	58	58	106	80	65	462	44	48	30
3	51	57	59	56	60	104	78	67	301	43	47	30
4	51	57	58	54	60	108	77	67	193	43	46	47
5	51	57	59	56	58	112	74	67	439	47	46	70
6	51	58	58	61	54	108	73	67	462	46	51	70
7	57	58	61	58	52	108	73	67	429	44	48	56
8	109	59	62	54	58	110	73	64	303	43	47	53
9	149	59	61	50	64	123	71	68	226	45	46	46
10	100	73	62	48	72	152	71	80	162	57	45	37
11	75	71	67	52	72	195	71	151	124	96	44	32
12	61	62	73	52	62	209	71	209	104	639	43	31
13	56	59	61	52	61	186	67	201	104	357	43	31
14	54	58	61	52	62	167	68	177	222	193	40	30
15	52	57	62	54	68	137	68	124	212	113	40	30
16	51	58	61	66	80	107	70	100	137	87	38	30
17	52	57	61	76	80	96	71	97	107	67	37	29
18	52	57	61	76	159	96	73	90	102	118	35	32
19	52	58	62	80	960	88	71	84	99	398	33	35
20	52	57	62	86	781	83	77	78	91	211	31	36
21	53	57	60	82	353	84	75	207	84	133	30	38
22	54	57	59	78	150	84	74	270	75	100	29	40
23	56	60	64	72	140	86	73	274	73	123	27	40
24	54	64	66	78	110	83	70	180	75	245	26	41
25	55	62	70	80	120	84	74	116	73	110	24	41
26	58	59	70	64	120	81	70	97	71	87	27	41
27	55	57	66	61	120	83	68	84	70	68	28	41
28	55	57	66	62	115	88	67	77	58	57	30	40
29	55	57	66	64	-----	100	65	75	53	56	28	40
30	55	58	58	64	-----	97	65	144	51	54	27	41
31	56	-----	62	60	-----	100	-----	468	-----	49	27	-----
TOTAL	1,887	1,772	1,935	1,964	4,203	3,475	2,168	3,980	5,557	3,820	1,159	1,186
MEAN	60.9	59.1	62.4	63.4	150	112	72.3	128	185	123	37.4	39.5
MAX	149	73	73	86	960	209	90	468	595	639	51	70
MIN	51	56	58	48	52	81	65	64	51	43	24	28
AC-FT	3,740	3,510	3,840	3,900	8,340	6,890	4,300	7,890	11,020	7,580	2,300	2,350

CAL YR 1970 TOTAL 24,414.7 MEAN 66.9 MAX 621 MIN 6.4 AC-FT 48,430
WTR YR 1971 TOTAL 33,106.0 MEAN 90.7 MAX 960 MIN 24 AC-FT 65,670

PEAK DISCHARGE (BASE, 1,500 CFS).--No peak above base.

KANSAS RIVER BASIN

06883570 Little Blue River near Gilead, Nebr.

LOCATION.--Lat 40°11'23", long 97°24'26", in NE1/4 sec.34, T.3 N., R.1 W., Thayer County, on right bank 20 ft upstream from highway bridge, 3 miles north of Gilead, 7.5 miles downstream from Dry Creek, and 8 miles upstream from Big Sandy Creek.

DRAINAGE AREA.--1,552 sq mi.

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,371.29 ft above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--12 years, 244 cfs (176,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,560 cfs May 22 (gage height, 11.63 ft); minimum daily, 30 cfs Aug. 29, Sept. 15, 16.
Period of record: Maximum discharge, 25,600 cfs Mar. 28, 1960 (gage height, 17.30 ft); minimum daily, 13 cfs Aug. 5, 1964.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	73	115	90	88	210	145	105	755	111	90	34
2	78	72	106	88	90	180	138	102	611	105	86	31
3	72	73	102	84	92	150	132	101	556	107	80	32
4	68	73	98	78	84	160	127	100	366	109	76	37
5	66	79	97	60	80	180	124	100	436	104	73	37
6	62	80	91	43	70	200	123	98	518	101	80	59
7	61	80	91	44	60	180	120	114	1,490	99	77	52
8	67	80	91	45	52	170	118	104	869	89	71	44
9	90	263	90	47	66	200	117	137	522	85	68	44
10	145	367	90	50	80	243	116	1,310	813	84	65	36
11	179	246	84	52	96	441	114	768	498	84	60	34
12	175	186	81	50	110	893	114	428	287	92	57	33
13	159	158	79	52	84	877	114	315	803	385	51	33
14	133	135	84	52	70	714	112	237	2,690	373	51	32
15	109	121	84	54	110	568	112	205	3,060	238	48	30
16	93	112	85	56	230	422	112	159	1,030	164	49	30
17	83	112	84	66	330	330	112	125	408	129	53	31
18	77	109	85	74	350	277	113	151	293	136	48	34
19	73	106	62	68	980	237	112	173	234	114	39	39
20	71	103	64	70	1,710	208	117	138	201	253	47	39
21	69	104	66	78	765	195	119	2,330	181	267	47	39
22	70	100	68	80	375	177	115	5,320	163	207	44	40
23	70	98	74	86	225	173	115	1,780	156	155	44	41
24	96	94	72	88	170	164	114	751	156	202	42	44
25	120	100	74	90	200	163	112	528	156	246	40	48
26	96	120	78	86	220	160	110	343	155	213	35	51
27	89	108	80	84	230	155	111	251	147	146	36	54
28	82	104	84	88	225	147	109	201	136	138	33	50
29	81	110	84	90	-----	145	107	164	125	93	30	48
30	77	122	90	92	-----	148	105	152	119	98	32	47
31	73	-----	88	86	-----	152	-----	231	-----	98	33	-----
TOTAL	2,869	3,688	2,621	2,171	7,242	8,619	3,509	17,021	17,934	4,825	1,685	1,203
MEAN	92.5	123	84.5	70.0	259	278	117	549	598	156	54.4	40.1
MAX	179	367	115	92	1,710	893	145	5,320	3,060	385	90	59
MIN	61	72	62	43	52	145	105	98	119	84	30	30
AC-FT	5,690	7,320	5,200	4,310	14,360	17,100	6,960	33,760	35,570	9,570	3,340	2,390

CAL YR 1970 TOTAL 39,723 MEAN 109 MAX 1,030 MIN 15 AC-FT 78,790
WTR YR 1971 TOTAL 73,387 MEAN 201 MAX 5,320 MIN 30 AC-FT 145,600

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-19	2330	6.85	2,200	5-22	0600	11.63	6,560
5-10	Unknown	7.24	2,490	6-14	2400	9.98	4,820

KANSAS RIVER BASIN

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06884000 Little Blue River near Fairbury, Nebr.

LOCATION.--Lat 40°06'54", long 97°10'13", in NW1/4 sec.26, T.2 N., R.2 E., Jefferson County, on right bank 20 ft downstream from bridge on State Highway 15, 0.8 mile south of Fairbury, and 5.2 miles upstream from Rose Creek.

DRAINAGE AREA.--2,350 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 1,282.19 ft above mean sea level. 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 miles downstream at various datums.

AVERAGE DISCHARGE.--50 years, 364 cfs (263,700 acre-ft per year); median of yearly mean discharges, 340 cfs (246,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,900 cfs May 22 (gage height, 10.93 ft); minimum daily, 57 cfs Nov. 23, Dec. 20, Sept. 16.

Period of record: Maximum discharge, 36,800 cfs June 27, 1951 (site and datum then in use), from rating curve extended above 26,000 cfs; maximum gage height, 16.82 ft June 27, 1951; minimum daily discharge, 14 cfs Nov. 22, 1929 (discharge measurement).

REMARKS.--Records fair except those for winter period, which are poor. Some regulation at low stage by power-plants above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

REVISIONS (WATER YEARS).--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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	142	137	112	92	290	199	150	1,100	184	179	99
2	131	133	123	121	102	250	202	148	1,340	180	176	94
3	121	128	121	85	112	220	217	144	1,170	200	292	88
4	113	124	116	98	118	220	182	144	818	214	194	88
5	108	120	112	74	96	290	167	145	715	208	167	86
6	108	119	106	68	88	386	159	144	690	200	170	85
7	109	117	111	66	92	337	165	224	2,200	193	180	102
8	148	125	112	72	92	329	169	183	1,700	180	170	88
9	227	311	112	76	87	350	167	161	1,100	196	155	85
10	344	994	113	98	94	477	164	2,720	1,200	210	157	76
11	481	497	80	104	112	1,410	166	2,540	900	221	137	69
12	606	302	102	100	120	2,930	155	1,020	800	241	121	66
13	436	236	110	100	118	2,900	156	806	700	295	114	63
14	318	192	116	100	116	2,140	156	545	1,300	557	112	62
15	246	166	128	94	164	1,380	153	414	4,300	401	111	58
16	199	157	122	92	491	817	154	355	2,100	309	109	57
17	172	149	118	90	838	504	155	293	890	259	109	59
18	155	142	111	92	862	381	156	320	442	241	113	61
19	146	136	59	89	2,180	323	155	545	349	251	107	64
20	138	131	57	93	4,000	323	162	397	302	242	104	65
21	132	129	81	97	2,180	304	174	1,200	277	369	106	65
22	130	122	103	98	680	289	166	7,610	233	304	104	68
23	177	57	78	101	330	267	160	4,410	234	268	101	69
24	701	72	69	103	235	270	156	1,790	231	282	106	68
25	478	104	81	113	205	256	157	1,090	212	353	101	74
26	282	115	89	114	300	245	157	800	207	375	97	76
27	269	126	104	106	370	245	167	615	189	284	98	78
28	276	139	112	102	345	238	155	508	201	248	99	77
29	214	153	109	114	-----	233	151	457	187	231	98	77
30	175	137	107	123	-----	222	150	435	187	213	95	76
31	156	-----	115	116	-----	231	-----	600	-----	184	98	-----
TOTAL	7,440	5,575	3,214	3,011	14,619	19,057	4,952	30,913	26,274	8,093	4,080	2,243
MEAN	240	186	104	97.1	522	615	165	997	876	261	132	74.8
MAX	701	994	137	123	4,000	2,930	217	7,610	4,300	557	292	102
MIN	108	57	57	66	87	220	150	144	187	180	95	57
AC-FT	14,760	11,060	6,370	5,970	29,000	37,800	9,820	61,320	52,110	16,050	8,090	4,450

CAL YR 1970 TOTAL 66,486 MEAN 182 MAX 1,360 MIN 56 AC-FT 131,900
WTR YR 1971 TOTAL 129,471 MEAN 355 MAX 7,610 MIN 57 AC-FT 256,800

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	0600	7.80	4,700	5-22	1800	10.93	8,900
3-12	2300	6.31	3,240	6-15	Unknown	-	Unknown
5-10	0630	7.27	4,170				

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1971

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Niobrara River basin						
06460800	Minnechaduza Creek near S. Dak.-Nebr. State line.	Lat 43°01'14", long 100°57'49" (revised), in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.35 N., R.31 W., Todd County, S. Dak., 2 miles upstream from S. Dak.-Nebr. State line and 6 miles north of Kilgore, Nebr.	-	1958a, 1959-71	5-17-71 7-26-71 8-16-71 9-13-71	6.6 .40 .01 .07
06462450	Plum Creek at Johnstown, Nebr. <u>b/</u>	Lat 42°34'08", long 100°06'22", in SW $\frac{1}{4}$ sec.14, T.30 N., R.24 W., Brown County, at bridge on U.S. Highway 20, 2 miles west of Johnstown.	-	1969-71	11- 4-70 5- 4-71	20 41
06462470	Plum Creek near Johnstown, Nebr. <u>b/</u>	Lat 42°40'01", long 100°03'26", in SE $\frac{1}{4}$ 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.	-	1969-71	11- 4-70 5- 4-71	64 117
06463090	Bone Creek at Ainsworth, Nebr. <u>b/</u>	Lat 42°32'51", long 99°52'33", in NE $\frac{1}{4}$ 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.	-	1969-71	11- 4-70 5- 4-71	1.8 3.2
06463350	Bone Creek near Long Pine, Nebr. <u>b/</u>	Lat 42°40'16", long 99°46'06", in SW $\frac{1}{4}$ sec.10, T.31 N., R.21 W., Brown County, at bridge on U.S. Highway 183, 8.4 miles north from junction of Highways 20 and 183 and 2.8 miles west of Long Pine.	-	1969-71	11- 4-70 5- 4-71	30 33
06465050	Eagle Creek near Midway, Nebr.	Lat 42°38'01", long 98°46'21", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.31 N., R.12 W., Holt County, at county road bridge 4.3 miles south and 6 miles west of Midway.	-	1969-71	11-16-70 5- 3-71	20 22
06465100	East Branch Eagle Creek near Midway, Nebr.	Lat 42°37'35", long 98°45'49", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.31 N., R.12 W., Holt County, at county road bridge 5 miles south and 5.4 miles west of Midway.	-	1969-71	11-17-70 5- 3-71	8.0 9.6
06465202	Honey Creek near Midway, Nebr.	Lat 42°37'22", long 98°41'26", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.31 N., R.12 W., Holt County, at county road bridge 5 miles south and 1.6 miles west of Midway.	-	1969-71	11-17-70 5- 3-71	b.01 .15

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Niobrara River basin--Continued						
06465305	Camp Creek at Meek, Nebr.	Lat 42°41'44", long 98°37'00", in NE¼NE¼ sec.5, T.31 N., R.11 W., Holt County, at county road bridge 0.4 mile east of Meek.	-	1969-71	11-16-70 5- 3-71	0.20 .51
06465398	Redbird Creek near Meek, Nebr.	Lat 42°39'33", long 98°33'31", in NE¼SE¼ sec.14, T.31 N., R.11 W., Holt County, at site 3.2 miles east and 2.7 miles south of Meek.	-	1969-71	11-16-70 5- 3-71	15 17
06465420	Blackbird Creek near Meek, Nebr.	Lat 42°39'46", long 98°34'24", in SW¼NW¼ 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.	-	1969-71	11-16-70 5- 3-71	6.3 8.3
Platte River basin						
06767995	Platte River tributary near Overton, Nebr.	Lat 40°40'17", long 99°34'23", in SE¼SW¼SE¼ sec.10, T.8 N., R.20 W., Phelps County, 1.8 miles southwest of Platte River bridge, south of Overton.	-	1968-71	3-31-71	0
06767996	Larson drain south of Overton, Nebr.	Lat 40°40'17", long 99°34'40", in SE¼SE¼SW¼ sec.10, T.8 N., R.20 W., Phelps County, 2 miles southwest of Platte River bridge, south of Overton.	-	1968-71	3-31-71	1.9
06768030	Platte River tributary near Westmark, Nebr.	Lat 40°39'25", long 99°31'33", in SE¼SW¼SW¼ sec.18, T.8 N., R.19 W., Phelps County, 1.8 miles southeast of Platte River bridge, south of Overton.	-	1968-71	3-31-71	0
06769940	South channel tributary no. 1 near Westmark, Nebr.	Lat 40°39'18", long 99°26'53", in NW¼NE¼NW¼ sec.23, T.8 N., R.19 W., Phelps County, 4.1 miles southwest of Platte River bridge, south of Elm Creek.	-	1968-71	3-31-71	0
06769950	South channel near Elm Creek, Nebr.	Lat 40°40'04", long 99°25'02", in SE¼NE¼NE¼ sec.13, T.8 N., R.19 W., Phelps County, 2.2 miles southwest of Platte River bridge, south of Elm Creek.	-	1968-71	3-31-71	2.2
06769958	South channel tributary no. 2 near Elm Creek, Nebr.	Lat 40°39'25", long 99°24'11", in SE¼SW¼SE¼ sec.18, T.8 N., R.18 W., Phelps County, 2.1 miles southwest of Platte River bridge, south of Elm Creek.	-	1968-71	3-31-71	0
06769994	South channel tributary no. 4 near Holdrege, Nebr.	Lat 40°34'18", long 99°22'46", in NE¼SE¼SE¼ sec.17, T.7 N., R.18 W., Phelps County, 8.2 miles north of Holdrege.	-	1968-71	3-31-71	1.8
06769996	South channel tributary no. 4 near Elm Creek, Nebr.	Lat 40°36'41", long 99°20'20", in NW¼NW¼NW¼ sec.2, T.7 N., R.18 W., Phelps County, 5.2 miles southeast of Platte River bridge, south of Elm Creek.	-	1968-71	3-31-71	3.4
06769998	South channel tributary no. 4 near Odessa, Nebr.	Lat 40°39'24", long 99°17'49", in SE¼SW¼SW¼ sec.18, T.8 N., R.17 W., Phelps County, 2.3 miles southwest of Platte River bridge, south of Odessa.	-	1968-71	3-31-71	0
06770001	Platte River tributary near Odessa, Nebr.	Lat 40°39'18", long 99°15'13", in NW¼NW¼NW¼ sec.21, T.8 N., R.17 W., Phelps County, 0.6 mile south of Platte River bridge, south of Odessa.	-	1968-71	3-31-71	.19

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Discharge measurements made at low-flow partial-stations during water year 1971						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
06770002	Platte River tributary no. 2 near Odessa, Nebr.	Lat 40°39'24", long 99°12'48", in SE½SW½SW¼ sec.14, T.8 N., R.17 W., Phelps County, 2.3 miles southeast of Platte River bridge, south of Odessa.	-	1968-71	3-31-71	4.0
06770195	North Dry Creek south of Kearney, Nebr.	Lat 40°38'32", long 99°06'52", in SE½SE½SW¼ sec.22, T.8 N., R.16 W., Kearney County, 2.0 miles southwest of Platte River bridge, south of Kearney.	-	1968-71	3-31-71	14
06770198	Whiskey Slough near Kearney, Nebr.	Lat 40°38'45", long 99°08'26", in SW½NW½SW¼ sec.21, T.8 N., R.16 W., Kearney County, 3.2 miles southwest of Platte River bridge, south of Kearney.	-	1968-71	3-31-71	5.1
06770250	Crooked Creek drain at Newark, Nebr.	Lat 40°39'05", long 98°58'16", in NE½SE½NE¼ sec.23, T.8 N., R.15 W., Kearney County, 0.8 mile northwest of Newark.	-	1968-71	3-31-71	15
06770330	Dry Creek near Axtell, Nebr.	Lat 40°32'33", long 99°05'10", in NE½SE½SE¼ sec.26, T.7 N., R.16 W., Kearney County, 4.8 miles northeast of Axtell.	-	1968-71	3-31-71	0
06770335	Dry Creek near Minden, Nebr.	Lat 40°34'44", long 98°57'07", in NE½SE½NE¼ sec.13, T.7 N., R.15 W., Kearney County, 5.8 miles north of Minden.	-	1968-71	3-31-71	0
06770340	Lost Creek near Axtell, Nebr.	Lat 40°35'23", long 99°05'01", in NW½NW½SW¼ sec.12, T.7 N., R.16 W., Kearney County, 7.7 miles northeast of Axtell.	-	1968-71	3-31-71	3.4
06770345	Lost Creek near Minden, Nebr.	Lat 40°35'43", long 98°57'07", in SE½NE½NE¼ sec.12, T.7 N., R.15 W., Kearney County, 7.0 miles north of Minden.	-	1968-71	3-31-71	0
06772500	Wood River near Chapman, Nebr. <u>b/</u>	Lat 40°57'56", long 98°12'22", at center of west line of sec.35, T.12 N., R.8 W., Merrick County, at timber bridge 3.2 miles southwest of Chapman.	-	1957-60a, 1961-71	10- 5-70 10-19-70 11-18-70 12- 2-70 12-15-70 12-28-70 1-11-71 1-25-71 2- 9-71 2-24-71 3-11-71 3-24-71 4- 5-71 4-19-71 5- 3-71 5-24-71 6-16-71 6-30-71 7-15-71 7-28-71 8-11-71 8-26-71 9- 7-71	13 18 15 14 12 15 16 12 16 23 45 26 19 23 16 27 26 125 42 24 17 11 12
06799300	Elkhorn River at Stanton, Nebr. <u>b/</u>	Lat 41°56'25", long 97°13'06", in SE½NE½ sec.29, T.23 N., R.2 E., Stanton County, at bridge on State Highway 57, south edge of Stanton.	-	1968-69, 1971	11- 5-70	351
Kansas River basin						
06824200	Horse Creek near Parks, Nebr.	Lat 40°02'23", long 101°41'09", in SE½NE½ sec.23, T.1 N., R.39 W., Dundy County, at county road bridge 0.5 mile upstream from mouth and 2 miles east of Parks.	-	1949, 1951-60a, 1961-71	11-17-70 3-23-71 5- 4-71 6-15-71 7-13-71 9- 3-71	1.9 2.6 1.7 1.7 .05 .14

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Discharge measurements made at low-flow partial-record stations during water year 1971					Measurements	
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Date	Discharge (cfs)
Kansas River basin--Continued						
06828200	Indian Creek near Max, Nebr.	Lat 40°07'48", long 101°21'44", on line between secs.22 and 23, T.2 N., R.36 W., Dund County, at county road bridge 0.2 mile north of U.S. Highway 34 and 2.5 miles east of Max.	-	1949, 1951-60a, 1961-71	11-17-70 3-23-71 5- 4-71 6-15-71 7-13-71 9- 8-71	3.9 5.0 4.5 3.8 3.1 .97
06844150	East Branch Turkey Creek near Smithfield, Nebr.	Lat 40°28'59", long 99°44'52", in SE corner SW $\frac{1}{4}$ sec.18, T.6 N., R.21 W., Gosper County, at county road bridge 6 miles south of Smithfield.	-	1968-71	10- 1-70 11- 6-70 4- 8-71	1.5 1.6 2.3
06844160	Unnamed tributary to East Branch Turkey Creek near Smithfield, Nebr.	Lat 40°28'59", long 99°44'52", in SE corner SW $\frac{1}{4}$ sec.18, T.6 N., R.21 W., Gosper County, downstream from culvert on county road, 6 miles south of Smithfield.	-	1968-71	10- 1-70 11- 6-70 4- 8-71	.04 .05 .15
06844170	East Branch Turkey Creek near Bertrand, Nebr.	Lat 40°26'22", long 99°45'55", in SE corner SW $\frac{1}{4}$ sec.36, T.6 N., R.22 W., Gosper County, at county road bridge 9 miles southwest of Bertrand.	-	1968-71	10- 1-70 11- 6-70 4- 8-71	2.0 2.4 3.6
06844180	West Branch Turkey Creek near Bertrand, Nebr.	Lat 40°26'09", long 99°46'29", in NE $\frac{1}{4}$ sec.2, T.5 N., R.22 W., Gosper County, upstream from county road bridge 10 miles southwest of Bertrand.	-	1968-71	10- 1-70 11- 6-70 4- 8-71	.04 .11 .21
06844200	Turkey Creek near Edison, Nebr.	Lat 40°18'18", long 99°44'19", in NW $\frac{1}{4}$ sec.19, T.4 N., R.21 W., Furnas County, at bridge on U.S. Highways 6 and 34, 2.7 miles northeast of Edison.	-	1968-71	10- 1-70 11- 6-70 4- 8-71	4.6 6.3 8.1
06847550	Flag Creek at Orleans, Nebr.	Lat 40°08'04", long 99°27'49", in SE $\frac{1}{4}$ sec.16, T.2 N., R.19 W., Harlan County, at bridge on U.S. Highway 136 at west edge of Orleans.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	1.0 1.1 2.3 1.4 1.5 5.2 1.5 .68 1.2 .60
06847560	Rope Creek near Orleans, Nebr.	Lat 40°07'51", long 99°24'44", on line between secs.13 and 24, T.2 N., R.19 W., Harlan County, at bridge on U.S. Highway 136, 2.5 miles east of Orleans and 3.5 miles northwest of Alma.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	.69 .93 1.3 1.2 1.1 .89 .79 .33 .29
06849400	Eureka Creek near Naponee, Nebr.	Lat 40°04'37", long 99°11'25", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.1 N., R.17 W., Franklin County, at county road bridge 0.3 mile upstream from mouth and 2.5 miles west of Naponee.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	.87 .93 .72 .64 .54 1.2 1.9 2.1 1.5 1.1
*06850000	Turkey Creek at Naponee, Nebr.	Lat 40°04'36", long 99°08'19", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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.	138	1948-53 $\frac{1}{2}$, 1954-60a, 1961-71	4- 7-71 5-17-71 6-29-71 7-27-71 8-19-71	13 13 7.0 7.7 5.9

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Discharge measurements made at low-flow record stations during water year 1971--Continued						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Kansas River basin--Continued						
*06850200	Cottonwood Creek near Bloomington, Nebr.	Lat 40°05'02", long 99°04'22", in NE¼ sec.1, T.1 N., R.16 W., Franklin County, at county road bridge 1 mile upstream from mouth and 1.5 miles west of Bloomington.	15.6	1948-56, 1957-60a, 1961-71	4- 7-71 5-17-71 6-29-71 7-27-71 8-19-71	5.9 4.3 4.0 3.8 3.4
06850400	Little Cottonwood Creek near Bloomington, Nebr.	Lat 40°05'14", long 99°03'31", in NE¼NW¼ sec.6, T.1 N., R.15 W., Franklin County, at county road bridge 1.2 miles southwest of Bloomington and 1.5 miles upstream from mouth.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	2.2 2.2 2.1 2.1 2.2 3.2 1.4 1.6 1.5 1.7
06851020	Walnut Run near Franklin, Nebr.	Lat 40°05'51", long 98°55'00", in SE¼NE¼ sec.32, T.2 N., R.14 W., Franklin County, at bridge on U.S. Highway 136, 1.2 miles upstream from mouth and 1.8 miles east of Franklin.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	.93 .97 1.3 .85 .88 1.2 .68 .66 .62 .55
06851600	Farmers Creek near Inavale, Nebr.	Lat 40°05'24", long 98°41'43", in SW¼SE¼ sec.32, T.2 N., R.12 W., Webster County, at bridge on U.S. Highway 136, 0.6 mile upstream from mouth and 2.5 miles west of Inavale.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	2.9 3.4 5.4 3.9 3.3 5.1 2.4 2.2 1.2 1.6
06851700	Indian Creek near Red Cloud, Nebr.	Lat 40°05'25", long 98°34'06", in SE¼SW¼ sec.33, T.2 N., R.11 W., Webster County, at bridge on U.S. Highway 136, 2.5 miles upstream from mouth and 2.8 miles west of Red Cloud.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 5-71 9- 3-71 9-29-71	1.6 1.9 3.3 2.4 2.0 2.9 3.8 7.8 26 .70
06851800	Crooked Creek near Red Cloud, Nebr.	Lat 40°05'25", long 98°30'42", in SE¼SW¼ sec.36, T.2 N., R.11 W., Webster County, at bridge on U.S. Highway 136 at east edge of Red Cloud.	-	1949, 1951-60a, 1961-71	10-29-70 12- 4-70 3- 5-71 4- 7-71 5- 6-71 6- 4-71 7- 7-71 8- 6-71 9- 3-71 9-29-71	1.3 1.4 2.5 1.9 2.0 1.9 .99 1.3 .56 .72
*06852000	Elm Creek at Amboy, Nebr.	Lat 40°05'13", long 98°26'15", in NE¼NW¼ sec.3, T.1 N., R.10 W., Webster County, at bridge on U.S. Highway 136 at east edge of Amboy, 2.5 miles upstream from mouth.	39.2	1948-53, 1954-60a, 1961-71	10- 6-70 4- 7-71 5-17-71 6-29-71 7-26-71 8-19-71	14 18 15 16 12 11

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Kansas River basin--Continued						
06852200	Willow Creek near Guide Rock, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
					12- 4-70	1.8
					3- 5-71	2.2
					4- 7-71	1.3
					5- 6-71	1.1
					6- 4-71	1.2
					7- 7-71	.85
					8- 6-71	1.3
					9- 3-71	1.1
					9-29-71	.67

* Also a crest-stage gage.

† Operated as a continuous-record gaging station.

a Published as a miscellaneous site.

b Also published with additional data in Part 2 of this report.

c Estimated.

06433300	Deep Creek near Glen, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
0643700	Soldiers Creek near Crawford, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek tributary at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7
06438300	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 40°05'26", long 98°23'45", in SW 1/4 sec. 36, T.2 N., R.10 W., Webster County, at bridge on U.S. Highway 136, 2 miles upstream from mouth and 3.8 miles northwest of Guide Rock.	-	1949, 1951-60a, 1961-71	10-29-70	1.7

See footnote at end of table.

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 1971

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Cheyenne River basin							
06396490	Warbonnet Creek near Harrison, Nebr.	Lat 42°50'43", long 103°54'41", in SW $\frac{1}{4}$ sec.10, T.33 N., R.56 W., Sioux County, at culvert on all weather road, 11.5 miles north of Harrison.	24.5	1969-71	7-18-69 6-12-70 5-23-71	a15.37 a11.02 15.19	(†) (†) (†)
White River basin							
06443300	Deep Creek near Glen, Nebr.	Lat 42°36'37", long 103°33'22", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.31 N., R.53 W., Sioux County, at bridge 1.4 miles east of Glen.	10.9	1953-71	3-28-71	a9.41	80
06443700	Soldiers Creek near Crawford, Nebr.	Lat 42°41'18", long 103°32'09", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.31 N., R.53 W., Sioux County, on right bank 6 miles west of Crawford.	52.6	1955-71	3-28-71	a13.72	277
06445530	Chadron Creek tributary at Chadron State Park near Chadron, Nebr.	Lat 42°41'49", long 103°00'09", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.31 N., R.48 W., Dawes County, on left downstream side of concrete box culvert on U.S. Highway 385, 9 miles south of Chadron.	3.35	1953-71	7- 4-71	a9.50	.50
06445560	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 42°42'27", long 103°00'33", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.32 N., R.49 W., Dawes County, on left downstream wingwall of concrete culvert, 8 miles south of Chadron.	14.9	1953-71	7- 4-71	11.00	207
Niobrara River basin							
06454400	Niobrara River tributary near Belmont, Nebr.	Lat 42°36'16", long 103°22'31", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.30 N., R.52 W., Dawes County, on tree upstream from a concrete box culvert under State Highway 2, 1.2 miles southwest of Belmont, 7.5 miles northwest of Marsland, and 10 miles south of Crawford.	2.59	1971	6- 1-71	11.83	(†)
06456200	Pebble Creek near Esther, Nebr.	Lat 42°35'38", long 103°03'55", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.10, T.30 N., R.49 W., Dawes County, on post in creek channel, 300 ft below bridge on county road 5 miles west of Esther (former post office) and U.S. Highway 385.	3.07	1953-71	3-27-71	11.37	31
06456400	Cottonwood Creek near Dunlap, Nebr.	Lat 42°29'29", long 102°58'08", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.29 N., R.48 W., Dawes County, on downstream side of bridge on U.S. Highway 385, 2 miles northwest of Dunlap and 3 miles north of Niobrara River bridge.	82.2	1951-71	3-27-71	10.60	1.2

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Niobrara River basin--Continued							
06457100	Point of Rocks Creek near Marsland, Nebr.	Lat 42°16'57", long 103°18'23", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.27 N., R.51 W., Box Butte County, at upstream end of box culvert under graveled secondary road 10.8 miles south of Marsland and 2.8 miles south of consolidated school at the intersection of State Highways 2 and 71.	7.10	1970-71	1970 1971	- -	e0 0
06457200	Berea Creek near Alliance, Nebr.	Lat 42°08'20", long 102°52'41", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.25 N., R.48 W., Box Butte County, at upstream side of county road, 2.9 miles north of the junction of Emerson and third street in Alliance (formerly at site 1.2 miles downstream).	32.3	1953-70b, 1971	6- 2-71	11.07	46
06457800	Antelope Creek tributary near Gordon, Nebr.	Lat 42°49'57", long 102°12'09", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.33 N., R.41 W., Sheridan County, at bridge on State Highway 27, 2 miles north of Gordon and 2.5 miles north of U.S. Highway 20.	26.6	1953-71	1971	-	0
06461300	Big Beaver Creek near Valentine, Nebr.	Lat 42°56'24", long 100°27'25", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.34 N., R.27 W., Cherry County, at box culvert under State Highway 12, 7.6 miles northeast of Valentine and 10.2 miles west of Sparks.	24.9	1971	5-22-71	11.46	(†)
06463300	Sand Draw tributary near Ainsworth, Nebr.	Lat 42°36'03", long 99°56'59", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.30 N., R.22 W., Brown County, on north-south abandoned road right-of-way, 5.5 miles northwest of Ainsworth.	1.07	1956-71	8-30-71	a13.62	512
06465300	Camp Creek near O'Neill, Nebr.	Lat 42°39'08", long 98°39'26", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.31 N., R.11 W., Holt County, on U.S. Highway 281, 13 miles north of O'Neill.	1.65	1958-71	5-23-71	a9.24	c1.5
06465850	Bingham Creek near Niobrara, Nebr.	Lat 42°42'12", long 98°02'54", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.32 N., R.6 W., Knox County, at culvert on State Highway 14, 4.7 miles south of Niobrara.	d6.5	1968-71	7- 5-71	11.71	(†)
Weigand Creek basin							
06466950	Weigand Creek near Crofton, Nebr.	Lat 42°43'36", long 97°37'55" (revised), in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.26, T.32 N., R.3 W., Knox County, at culvert on State Highway 12, 5.5 miles east of Lindy and 6.5 miles west of Crofton.	d3.5	1968-71	6-24-68 6-28-69 5-11-70 2-19-71	10.20 10.80 a15.09 11.46	e77 e169 e928 270
Bow Creek basin (formerly Bow Valley Creek)							
06478520	West Bow Creek near Fordyce, Nebr.	Lat 42°41'40", long 97°25'06", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.3, T.31 N., R.1 W., Cedar County, at bridge on U.S. Highway 81, 1.2 miles southeast of Constance and 2.9 miles west of Fordyce.	52.8	1964-65, 1967g, 1967-71	6-10-71	15.98	1,600
Omaha Creek basin							
06600800	South Omaha Creek tributary No. 2 near Walthill, Nebr.	Lat 42°08'18", long 96°28'37", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13, T.25 N., R.8 E., Thurston County, at culvert on U.S. Highway 77, 0.6 mile south of State Highway 94 and 0.8 mile southeast of Walthill.	f1.65	1950-71	2-18-71	12.16	580
06600900	South Omaha Creek at Walthill, Nebr.	Lat 42°08'54", long 96°28'58", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.25 N., R.8 E., Thurston County, at bridge on State Highway 94 at east edge of Walthill.	f51.2	1951-71	2-18-71	21.67	5,940

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1972—Continued							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Tekamah Creek basin							
06607800	South Branch Tekamah Creek tributary near Tekamah, Nebr.	Lat 41°45'15", long 96°17'11", in NW¼NW¼ sec.34, T.21 N., R.10 E., Burt County, at bridge on east-west county road, 4 miles southwest of Tekamah.	4.08	1950-71	2-18-71	11.03	370
New York Creek basin							
06608700	New York Creek tributary near Spiker, Nebr.	Lat 41°38'24", long 96°18'27", in SW¼SW¼ sec.4, T.19 N., R.10 E., Washington County, at box culvert on east-west county road, 300 ft east of north-south county road and 2.2 miles north of Spiker.	1.55	1951-71	6- 6-71	27.57	396
06608800	New York Creek north of Spiker, Nebr.	Lat 41°37'32", long 96°18'34", in NE¼NE¼ sec.17, T.19 N., R.10 E., Washington County, at bridge 100 ft west of present crossing of north-south county road and 1.1 miles north of Spiker.	6.50	1951-71	6- 6-71	18.70	1,630
06608900	New York Creek east of Spiker, Nebr.	Lat 41°36'53", long 96°16'14", in SE¼SE¼ sec.15, T.19 N., R.10 E., Washington County, on north-south dirt road, 200 ft south of county road and 2.6 miles east of Spiker.	13.9	1950-71	6- 6-71	15.41	1,180
Papillion Creek basin							
06610700	Big Papillion Creek near Orum, Nebr.	Lat 41°32'44", long 96°13'10", in NW¼SE¼ sec.7, T.18 N., R.11 E., Washington County, at bridge on State Highway 91, 2.7 miles east of Orum and 4.3 miles west of Blair.	8.52	1968-71	3- 6-71	15.46	(†)
Platte River basin							
06678750	Dry Spottedtail Creek tributary near Mitchell, Nebr.	Lat 42°07'00", long 103°49'22", in NW¼NE¼ sec.26, T.25 N., R.56 W., Sioux County, at upstream end of box culvert under State Highway 29, 3.6 miles north of Interstate Canal and 12 miles north of Mitchell.	15.0	1971	6- 2-71	11.58	(†)
06684900	Hackberry Creek near Redington, Nebr.	Lat 41°35'00", long 103°25'17", in NW¼NW¼ sec.34, T.19 N., R.53 W., Banner County, at upstream side of box culvert under State Highway 88, 8 miles west of Redington.	16.6	1970-71	1970 1971	- -	e0 0
06687600	Ash Hollow near Oshkosh, Nebr.	Lat 41°15'05", long 102°20'28", in SE¼SE¼ sec.22, T.15 N., R.44 W., Garden County, at upstream side of box culvert under State Highway 27, 11 miles south of Oshkosh.	54.9	1968g, 1968, 1970-71	8-15-68 1970 7- 2-71	a21.46 - 11.49	e3,440 e0 c5.0
06762650	Lodgepole Creek tributary near Kimball, Nebr.	Lat 41°17'57", long 103°36'32", in SE¼SE¼ sec.30, T.16 N., R.55 W., Kimball County, at upstream side of box culvert under State Highway 71, 6.5 miles north of Kimball.	8.68	1970-71	1970 1971	- -	e0 0
06763200	Lodgepole Creek tributary near Sunol, Nebr.	Lat 41°10'00", long 102°43'25", in SE¼SE¼ sec.20, T.14 N., R.47 W., Cheyenne County, at upstream side of box culvert under graveled county road, 2 miles east and 0.6 mile north of Sunol.	15.6	1968g, 1968-71	8-15-68 1969 1970 6-12-71	a13.15 - - 11.39	e820 e0 e0 160
06767200	North Fork Plum Creek tributary near Farnam, Nebr.	Lat 40°42'18", long 100°14'24", in NW¼SW¼ sec.36, T.9 N., R.26 W., Lincoln County, at box culvert on State Highway 23, 0.1 mile east of north-south dirt road and 1.3 miles west of main street in Farnam.	1.83	1952-71	6-13-71	9.89	c5.0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Platte River basin--Continued							
06767410	Plum Creek near Farnam, Nebr.	Lat 40°41'13", long 100°08'42", in NE¼NW¼ sec.10, T.8 N., R.25 W., Frontier County, on east-west road 0.4 mile west of State Highway 23 and 4 miles southeast of Farnam.	79.8	1947, 1951-71	6-13-71	-	c10
06768050	Buffalo Creek tributary No. 1 near Buffalo, Nebr.	Lat 41°00'44", long 99°48'48", in SW¼NE¼ sec.15, T.12 N., R.22 W., Dawson County, at bridge east of Lutheran Church and School, 2 miles northeast of Buffalo.	2.08	1965-71	6- 2-71	11.45	22
06768100	East Buffalo Creek near Buffalo, Nebr.	Lat 41°00'17", long 99°50'14", in SE¼SW¼ sec.16, T.12 N., R.22 W., Dawson County, on bridge 100 ft south of fork in road and 1.2 miles north of road intersection at Buffalo.	5.21	1951-71	4-20-71	-	c5.0
06768400	West Buffalo Creek near Buffalo, Nebr.	Lat 40°59'22", long 99°52'21", in NW¼NE¼ sec.30, T.12 N., R.22 W., Dawson County, on bridge on dirt road, 2.0 miles west of crossroads at Buffalo.	17.1	1951-71	6- 2-71	10.50	23
06769100	Elm Creek tributary near Overton, Nebr.	Lat 40°53'14", long 99°33'48", in SW¼SE¼ sec.26, T.11 N., R.20 W., Dawson County, at bridge on dirt road, 1.3 miles west and 10 miles north of Overton.	.58	1951-71	4-26-51 7-14-52 5- 9-53 8-18-54 6-16-57 3-21-60 8-10-61 7-16-62 7- 8-64 7- 3-65 6- 8-66 6- 4-67 6-24-68 7-18-69 6-11-70 6-30-71	h11.3 h9.67 h10.20 h11.50 h12.68 h12.02 h12.47 h12.50 h12.33 h13.74 h11.79 h12.97 h12.89 h13.17 h13.27 h12.80	f126 f22 f340 f98 f141 f65 f81 f81 f58 f148 f25 f78 f65 f770 f73 48
06769200	Elm Creek near Sumner, Nebr.	Lat 40°51'24", long 99°32'21", in NW¼NW¼ sec.7, T.10 N., R.19 W., Dawson County, at concrete culvert on gravel road, 1.4 miles west and 6 miles south of Sumner.	14.9	1951-71	6-30-71	10.75	3.0
06769300	Elm Creek tributary No. 2 near Overton, Nebr.	Lat 40°51'02", long 99°32'21", in NW¼SW¼ sec.7, T.10 N., R.19 W., Dawson County, at culvert on gravel road, 7.5 miles north of Overton.	5.62	1951-71	8-31-71	10.82	29
06770600	Wood River tributary near Lodi, Nebr.	Lat 41°11'58", long 99°50'21", in SE¼NE¼ sec.9, T.14 N., R.22 W., Custer County, at culvert on State Highway 40, 1.3 miles southeast of Lodi and 6.1 miles northwest of Oconto.	2.02	1952-71	1971	-	0
06770700	Wood River near Lodi, Nebr.	Lat 41°10'15", long 99°48'17", in SW¼NE¼ sec.23, T.14 N., R.22 W., Custer County, at culvert on State Highway 40, 2.9 miles northwest of Oconto, 4 miles southeast of Lodi, and 10 miles southeast of Callaway.	12.9	1952-71	6-30-71	10.95	29
06770800	Wood River near Oconto, Nebr.	Lat 41°09'46", long 99°47'38", in SW¼SW¼ sec.24, T.14 N., R.22 W., Custer County, on State Highway 40, 2.6 miles northwest of Oconto.	26.4	1950, 1952-71	6-30-71	11.95	120
06770900	Wood River at Oconto, Nebr.	Lat 41°08'50", long 99°45'26", in NW corner sec.32, T.14 N., R.21 W., Custer County, at bridge on State Highway 21 just north of Oconto, 0.8 mile north of junction with State Highway 40.	44.8	1950, 1952-71	6-30-71	12.61	170

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Platte River basin--Continued							
06770910	Wood River near Lomax, Nebr.	Lat 41°03'40", long 99°40'50", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.13 N., R.21 W., Custer County, at bridge No. 7091 on State Highway 40, 50 ft downstream from Union Pacific Railroad bridge and 0.5 mile southeast of crossroads at Lomax.	79.6	1952-71	6-30-71	13.36	285
06775700	North Fork Dismal River near Mullen, Nebr.	Lat 41°51'08", long 101°02'14", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.22 N., R.32 W., Hooker County, at upstream end of culvert under State Highway 97, 13 miles south of Mullen.	670	1971	8-30-71	16.41	130
06777600	Lillian Creek tributary near Broken Bow, Nebr.	Lat 41°30'12", long 99°39'31", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.18 N., R.20 W., Custer County, at bridge on north-south gravel road, 7.5 miles north of State Highway 2 in Broken Bow.	2.02	1952-71	6-10-71	11.04	7.0
06777700	Lillian Creek near Broken Bow, Nebr.	Lat 41°30'36", long 99°39'26", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.18 N., R.20 W., Custer County, at bridge on north-south gravel road, 8 miles north of State Highway 2 in Broken Bow.	4.77	1947, 1951-71	6-10-71	11.17	720
06777800	Lillian Creek tributary near Walworth, Nebr.	Lat 41°37'33", long 99°34'13", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.19 N., R.20 W., Custer County, on east-west dirt road, 2 miles south of Walworth.	2.04	1951-71	6-10-71	10.79	5.0
06782600	South Branch Mud Creek tributary near Broken Bow, Nebr.	Lat 41°25'57", long 99°42'09", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.23, T.17 N., R.21 W., Custer County, at box culvert on State Highway 2, 4 miles northwest of Broken Bow.	.43	1951-71	6-10-71	12.46	86
06782700	South Branch Mud Creek at Broken Bow, Nebr.	Lat 41°24'07", long 99°38'51", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.32, T.17 N., R.20 W., Custer County, at bridge on State Highway 2, 0.2 mile upstream from confluence with North Branch of Mud Creek and 0.3 mile west of Arrow Hotel at town square in Broken Bow.	400	1945, 1951-71	6-10-71	10.89	19
06782900	Mud Creek tributary near Broken Bow, Nebr.	Lat 41°22'32", long 99°38'17", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.16 N., R.20 W., Custer County, at double concrete box culvert on State Highway 21, 1.8 miles south of State Highway 2 in Broken Bow.	5.98	1945, 1951-71	6-10-71	(j)	c1.0
06784700	Turkey Creek near Farwell, Nebr.	Lat 41°13'14", long 98°40'45", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.14 N., R.12 W., Howard County, at bridge on State Highway 92, 0.2 mile west of School No. 78 and 2.7 miles west of Farwell.	27.2	1950, 1953-71	5-10-71	16.92	1,220
06789400	Davis Creek southwest of North Loup, Nebr.	Lat 41°24'32", long 98°48'32", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.17 N., R.13 W., Valley County, at timber bridge 6.5 miles southwest of North Loup.	31.2	1951-71	6- 2-71	14.02	125
06790600	East Branch Spring Creek tributary near Wolbach, Nebr.	Lat 41°27'28", long 98°25'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.17 N., R.10 W., Greeley County, at box culvert on county road, 0.6 mile south of east-west dirt road, 1.1 miles north of gravel road to Brayton, and 4.5 miles northwest of Wolbach.	1.52	1952-71	6-10-71	12.16	60
06790700	West Branch Spring Creek at Brayton, Nebr.	Lat 41°27'27", long 98°28'38", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.17 N., R.10 W., Greeley County, at steel truss bridge on north-south dirt road, 200 ft north of T in road and 0.4 mile south of Brayton.	19.5	1945, 1952-71	6-10-71	14.18	560

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Platte River basin--Continued							
06791100	Spring Creek near Cushing, Nebr.	Lat 41°17'08", long 98°22'42", in SW¼ sec. 8, T.15 N., R.9 W., Howard County, at bridge 0.9 mile southwest of Cushing and 1.9 miles upstream from Loup River (prior to July 2, 1971, at site 0.1 mile downstream).	184	1948k, 1949-53+k, 1953-71	6-10-71	m12.38	232.80
06793995	Skeedee Creek tributary near Genoa, Nebr.	Lat 41°29'46", long 97°52'23", in NE¼ sec. 34, T.18 N., R.5 W., Nance County, at bridge on county road, 5 miles south of St. Edward and 7.5 miles northwest of Genoa.	.59	1964g, 1964, 1968-71	6-4-71	m13.54	(+)
06794710	Bone Creek near David City, Nebr.	Lat 41°16'42", long 97°02'51", in SW¼ sec. 11, T.15 N., R.3 E., Butler County, at bridge on State Highway Spur 12B, 1 mile north and 4.3 miles east of David City.	8.75	1963g, 1963, 1968-71	6-24-68, 3-18-69, 5-10-71	m12.04, 13.08, 14.73	e215.80, e368, e100, 754
06799190	South Fork Union Creek tributary near Cornlea, Nebr.	Lat 41°42'00", long 97°34'22", in SE¼ sec. 17, T.20 N., R.2 W., Platte County, at culvert on State Highway 91, 0.5 mile west and 1.2 miles north of Cornlea.	6.54	1967-71	2-18-71	13.52	(+)
06799423 (formerly 799403)	North Logan Creek near Laurel, Nebr. (formerly Logan Creek).	Lat 42°28'00", long 97°02'55", in NW¼ sec. 26, T.29 N., R.3 E., Cedar County, at bridge on U.S. Highway 20, 2.2 miles east and 3 miles north of Laurel.	d25.3	1965g, 1965, 1967g, 1967-71	4-1-69, 2-19-71	15.00, a15.02	f2,880, 3,020.00
06799850	Pond Creek near Schuyler, Nebr.	Lat 41°31'15", long 97°03'33", in SE¼ sec. 22, T.18 N., R.3 E., Colfax County, at culvert on State Highway 15, 4.7 miles north of Schuyler.	.54	1968-71	5-10-71	a8.02	(+)
06800350	Elkhorn River tributary near Nickerson, Nebr. (formerly Rawhide Creek tributary).	Lat 41°30'34", long 96°33'06", in NE¼ sec. 29, T.18 N., R.8 E., Dodge County, at bridge on county road, 4.5 miles southwest of Nickerson.	6.53	1968-71	2-18-71	14.08	(+)
06803200	Antelope Creek at 48th Street, Lincoln, Nebr.	Lat 40°47'16", long 96°39'13", in SE¼ sec. 32, T.10 N., R.7 E., Lancaster County, on left downstream wingwall of culvert at 48th Street in Lincoln.	f7.14	1951, 1958-71	7-22-71	a8.20	300
06803300	Antelope Creek at 27th Street, Lincoln, Nebr.	Lat 40°48'10", long 96°40'56", in NE¼ sec. 25, T.10 N., R.6 E., Lancaster County, on downstream side of bridge at 27th and Alpha Streets in Lincoln.	10.6	1957-71	5-10-71	5.82	630
06803400	Antelope Creek at 17th Street, Lincoln, Nebr.	Lat 40°49'26", long 96°41'47", in SW¼ sec. 24, T.10 N., R.6 E., Lancaster County, on right bank 40 ft downstream from 17th Street bridge in Lincoln and 3,600 ft upstream from mouth.	f12.1	1958-62f, 1963-71	5-10-71	a5.78	885
06803540	Dee Creek near Alvo, Nebr.	Lat 40°54'52", long 96°25'04", in SE¼ sec. 17, T.11 N., R.9 E., Cass County, at bridge on county road, 2 miles west and 3 miles north of Alvo.	f7.88	1961f, 1962-71	5-10-71	18.35	2,315
06803570	Dunlap Creek tributary near Weston, Nebr. (formerly Wahoo Creek tributary).	Lat 41°12'25", long 96°48'46", in SE¼ sec. 2, T.14 N., R.5 E., Saunders County, on tree just upstream from box culvert on State Highway 79, 200 ft north of U.S. Highway 30A and State Highway 92 and 3.5 miles northwest of Weston.	f.43	1950-71	5-6-71	a14.02	195

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Platte River basin--Continued							
06803600	North Fork Wahoo Creek near Prague, Nebr.	Lat 41°15'37", long 96°48'47", in NW¼NW¼ sec.24, T.15 N., R.5 E., Saunders County, at bridge on State Highway 79, 0.2 mile south of road intersection and 3.5 miles south of Prague.	115.4	1951-71	5-10-71	28.45	268
06803900	North Fork Wahoo Creek at Weston, Nebr.	Lat 41°12'19", long 96°43'40", in NE¼NW¼ sec.10, T.14 N., R.6 E., Saunders County, at bridge on State Highway 92, 1 mile northeast of Weston.	143.3	1951-71	5- 6-71	16.36	1,290
06804100	Silver Creek near Cedar Bluffs, Nebr.	Lat 41°22'48", long 96°35'15", in NW¼NE¼ sec.11, T.16 N., R.7 E., Saunders County, at bridge on county road, 0.8 mile east of State Highway 109 and 1.5 miles southeast of Cedar Bluffs.	17.00	1950-71	3-12-71	10.91	260
06804200	Silver Creek near Colon, Nebr.	Lat 41°18'26", long 96°33'47", in NW¼NW¼ sec.6, T.15 N., R.8 E., Saunders County, at bridge on county road, 2.1 miles east of State Highway 109 and 2.5 miles east of Colon.	130.3	1950-71	3-12-71	11.25	380
06804300	Silver Creek tributary near Colon, Nebr.	Lat 41°21'03", long 96°38'45", in NW¼NE¼ sec.20, T.16 N., R.7 E., Saunders County, at culvert on county road, 2.3 miles west of State Highway 109 and 4 miles northwest of Colon.	110.3	1951-71	3-12-71	12.19	88
06804400	Silver Creek tributary at Colon, Nebr.	Lat 41°17'55", long 96°36'18", in NW¼SW¼ sec.2, T.15 N., R.7 E., Saunders County, at culvert on State Highway 109, 0.2 mile east of Colon.	17.6	1951-71	3-12-71	12.78	90
06804500	Silver Creek at Ithaca, Nebr.	Lat 41°09'44", long 96°31'38", in NW¼NE¼ sec.28, T.14 N., R.8 E., Saunders County, at bridge on county road, 0.5 mile east of Ithaca.	80.0	1950-58†, 1959-71	3-12-71	10.52	950
06805510	Buffalo Creek near Gretna, Nebr.	Lat 41°06'12", long 96°13'30", in NE¼NW¼ sec.18, T.13 N., R.11 E., Sarpy County, at bridge on county road, 1,100 ft downstream from junction of Buffalo Creek and left-bank tributary, 1,700 ft downstream from Interstate Highway 80, and 1 mile east and 2.5 miles south of Gretna.	4.29	1968-71	5-10-71	10.41	(†)
Weeping Water Creek basin							
06806400	Weeping Water Creek at Elmwood, Nebr. (discontinued).	Lat 40°51'05", long 96°17'36", in SW¼NW¼ sec.10, T.10 N., R.10 E., Cass County, on State Highway 1 bridge, 0.6 mile north of Elmwood.	120.8	1950-67, 1971	5-10-71	21.63	7,600
06806420	Stove Creek near Elmwood, Nebr. (discontinued).	Lat 40°48'45", long 96°19'26", in SE¼SW¼ sec.21, T.10 N., R.10 E., Cass County, at culvert on U.S. Highway 34, 0.6 mile west of State Highway 1 and 2 miles south of Elmwood.	15.23	1950-67, 1971	5-10-71	18.14	3,390
06806440	Stove Creek at Elmwood, Nebr.	Lat 40°50'32", long 96°17'37", in SW¼NW¼ sec.15, T.10 N., R.10 E., Cass County, at bridge on State Highway 1 at south side of Elmwood.	110.3	1950-71	5-28-62 7- 1-65 6- 9-67 5-10-71	19.03 20.75 18.93 20.99	12,810 14,020 12,740 4,190
06806460	Weeping Water Creek at Weeping Water, Nebr.	Lat 40°51'18", long 96°07'10", in NW¼NW¼ sec.7, T.10 N., R.12 E., Cass County, at bridge of Missouri Pacific Railroad just south of north-south road, 1 mile southeast of Weeping Water.	180.1	1947, 1950-71	5-10-71	14.47	5,700

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Weeping Water Creek basin--Continued							
06806470	Weeping Water Creek tributary near Weeping Water, Nebr.	Lat 40°51'46", long 96°06'43", in NE 1/4 sec. 6, T.10 N., R.12 E., Cass County, at culvert of Missouri Pacific Railroad, 1,400 ft west of north-south road and 1.5 miles southeast of Weeping Water.	f0.73	1950-71	5-18-71	12.4	178.80
Honey Creek basin							
06810060	Honey Creek near Peru, Nebr.	Lat 40°26'38", long 95°45'12", in SW 1/4 sec. 32, T.6 N., R.15 E., Nemaha County, at bridge on county road, 1 mile west and 2 miles south of Peru.	f3.43	1968-71	2-27-71	10.64	137
Little Nemaha River basin							
06810100	Hooper Creek tributary near Palmyra, Nebr.	Lat 40°46'10", long 96°25'23", in NW 1/4 sec. 9, T.9 N., R.9 E., Otoe County, at bridge on east-west portion of State Highway 43, 300 ft east of turn in highway and 4.5 miles north of Palmyra.	f8.00	1950-71	5-10-71	15.16	1,285
06810400	Little Nemaha River tributary near Syracuse, Nebr.	Lat 40°40'05", long 96°11'54", in SE 1/4 sec. 8, T.8 N., R.11 E., Otoe County, at multiple box culvert on county road, 50 ft west of crossroad, about 1.0 mile south of State Highway 2, and 1.5 miles northwest of Syracuse.	f.71	1950-71	5-18-71	-	c25
Big Nemaha River basin							
06815510	Temple Creek near Falls City, Nebr.	Lat 40°08'36", long 95°36'27", in NE 1/4 sec. 15, T.2 N., R.16 E., Richardson County, at culvert on U.S. Highway 73, 6 miles north of Falls City.	f2.99	1968-71	7-18-71	-	c20
Kansas River basin							
06828100	North Branch Indian Creek near Max, Nebr.	Lat 40°09'52", long 100°23'51", in SW 1/4 sec. 4, T.2 N., R.36 W., Dundy County, at bridge on county road, 1.8 miles above the mouth and 3.5 miles north of Max.	d4.76	1962g, 1962, 1970-71	7-31-62, 6-19-70, 1971	a21.8, a12.34, -	e12,900 (†) 0
06829700	Thompson Canyon near Trenton, Nebr.	Lat 40°09'44", long 100°57'31", in SE 1/4 sec. 5, T.2 N., R.32 W., Hitchcock County, on downstream side of bridge on county road, 0.5 mile south and 2.8 miles east of Trenton.	d10	1966g, 1968g, 1966-71	6- 9-71	7.65	(†)
06834100	Spring Creek tributary near Grant, Nebr.	Lat 40°49'52", long 101°48'57", in SW 1/4 sec. 18, T.10 N., R.29 W., Perkins County, on downstream side of Burlington Northern Inc. railroad bridge, 57 ft upstream from culvert under State Highway 23 and 5.2 miles southwest of Grant.	17.9	1970-71	1970, 6- 9-71	- 13.20	e0 c9.0
06835100	Bobtail Creek near Palisade, Nebr.	Lat 40°18'17", long 101°06'40", in SE 1/4 sec. 13, T.4 N., R.34 W., Hitchcock County, on downstream side of bridge on county road, 2.2 miles south of Palisade and 3.5 miles upstream from Frenchman Creek.	fd30.2	1966-67g, 1966-71	6-10-71	4.09	81
06837100	Ash Creek near Red Willow, Nebr.	Lat 40°11'28", long 100°29'19", in SE 1/4 sec. 28, T.3 N., R.28 W., Red Willow County, 4 ft downstream from bridge on county road, 3 miles south and 1 mile east of Red Willow school, and 1.8 miles upstream from Republican River.	d22	1966g, 1966-71	6- 9-71	4.81	57

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Kansas River basin--Continued							
06838200	Coon Creek at Indianola, Nebr.	Lat 40°14'03", long 100°25'37", in NW¼NE¼ 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.	fd69	1961-71	7-26-70 5-11-71	f5.99 -	f310 c75
06838550	Dry Creek at Bartley, Nebr.	Lat 40°15'02", long 100°19'02", in SW¼SE¼ sec.1, T.3 N., R.27 W., Red Willow County, at bridge on U.S. Highways 6 and 34, 0.5 mile west of Bartley.	fd45	1961-71	7-26-70 5-11-71	f10.38 a9.46	f245 204
06839000	Medicine Creek at Maywood, Nebr.	Lat 40°39'23", long 100°36'41", in NE¼NE¼ sec.21, T.8 N., R.29 W., Frontier County, 150 ft downstream from bridge on county road and 0.2 mile east of Maywood.	fd259	1951-58†, 1960-71	5-11-71	a2.6	90
06839200	Elkhorn Canyon near Maywood, Nebr.	Lat 40°36'10", long 100°42'02", in NE¼SW¼ sec.2, T.7 N., R.30 W., Frontier County, on tree on left bank, 10 ft downstream from bridge, 4.5 miles upstream from Brushy Creek, and 6 miles southwest of Maywood.	6.74	1952-71	6-13-71	a9.0	16
06839500	Brushy Creek near Maywood, Nebr.	Lat 40°37'51", long 100°37'47", in SE¼SE¼ sec.29, T.8 N., R.29 W., Frontier County, on right bank 420 ft downstream from bridge on U.S. Highway 83 and 2 miles south of Maywood.	fd95	1935, 1947, 1951-58†, 1960-71	6-13-71	a7.2	300
06839700	Frazier Creek tributary near Maywood, Nebr.	Lat 40°35'32", long 100°37'46", in SE¼NE¼ sec.8, T.7 N., R.29 W., Frontier County, at box culvert on U.S. Highway 83, 4.5 miles south of Maywood.	.72	1952-71	6-13-71	14(j)	c15
06839900	Fox Creek upstream from Cut Canyon near Curtis, Nebr.	Lat 40°44'40", long 100°31'52", in SE¼SE¼ sec.17, T.9 N., R.28 W., Lincoln County, at timber bridge 7.5 miles north of Curtis.	31.8	1951-71	7- 5-71	11.83	210
06839950	Cut Canyon near Curtis, Nebr.	Lat 40°43'39", long 100°32'10", in NE¼NW¼ sec.29, T.9 N., R.28 W., Lincoln County, at timber bridge 6.5 miles north of Curtis.	25.6	1951-71	7- 5-71	13.63	330
06849600	Turkey Creek near Holdrege, Nebr.	Lat 40°19'33", long 99°22'04", in NW¼SW¼ sec.9, T.4 N., R.18 W., Harlan County, at bridge on U.S. Highway 183, 7.8 miles south of Holdrege.	27.8	1941, 1960, 1967g, 1967-71	8-31-71	15.20	690
*06850000	Turkey Creek at Naponee, Nebr.	Lat 40°04'34", long 99°08'17", in SW¼SW¼ sec.4, T.1 N., R.16 W., Franklin County, on downstream side of county bridge at east side of Naponee.	f133	1948-53†, 1954-61g, 1962-71	9- 1-71	4.88	270
*06850200	Cottonwood Creek near Bloomington, Nebr.	Lat 40°05'08", long 99°03'56", in SE¼NE¼ sec.1, T.1 N., R.16 W., Franklin County, on downstream side of county bridge, 1 mile upstream from mouth and 1.5 miles west of Bloomington.	15.6	1948-56†, 1957-61g, 1962-71	4-20-71	n4.79	97
06850500	Republican River near Bloomington, Nebr.	Lat 40°03'58", long 99°02'14", in NW¼SE¼ sec.8, T.1 N., R.15 W., Franklin County, 2 miles south of Bloomington.	f21,000	1929-57†, 1960-67g, 1970-71	8-25-71	2.96	p493
06851090	Republican River at Riverton, Nebr.	Lat 40°05'26", long 98°46'03", in SE¼SE¼ sec.34, T.2 N., R.13 W., Franklin County, at bridge on county road 0.5 mile west of Riverton (revised).	e21,300	1963-67g, 1970-71	8-25-71	3.88	p477

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Kansas River basin--Continued							
06851300	West Branch Thompson Creek tributary near Hildreth, Nebr.	Lat 40°19'10", long 99°00'33" (revised), in NW¼NW¼ sec.15, T.4 N., R.15 W., Franklin County, on north-south county road, 2 miles southeast of Hildreth and 3 miles west of State Highway 10.	111.6	1953-71	4-20-71	12.97	145
06851400	West Branch Thompson Creek near Upland, Nebr.	Lat 40°17'32", long 98°56'10", in NE¼NE¼ sec.30, T.4 N., R.14 W., Franklin County, on State Highway 4, 3 miles southwest of Upland.	1143	1953-71	4-20-71	10.69	220
*06852000	Elm Creek at Amboy, Nebr.	Lat 40°05'20", long 98°26'07", in NE¼NW¼ sec.3, T.1 N., R.10 W., Webster County, on downstream side of bridge on U.S. Highway 136 at east edge of Amboy.	39.2	1948-53+, 1954-60g, 1959, 1961-71	6-13-71	13.33	1,020
06853100	Beaver Creek near Rosemont, Nebr.	Lat 40°15'47", long 98°22'31", in NW¼NE¼ sec.6, T.3 N., R.9 W., Webster County, at county road bridge, 1.8 miles southwest of Rosemont.	.752	1938-70+, 1971	7-23-71	1.54	27
06853400	Republican River at Superior, Nebr.	Lat 40°01'22", long 98°06'17", in NE corner SE¼ 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.	22,300	1961-65g, 1967g, 1971	6-14-71	8.76	p1,670
06879850	Big Blue River tributary near Hordville, Nebr.	Lat 41°02'47", long 97°56'27", in SW¼SW¼ sec.31, T.13 N., R.5 W., Hamilton County, at bridge on east-west county road, 2.2 miles south and 2.8 miles west of Hordville.	4.07	1968-71	6-24-68 3-17-69 5-18-71	12.72 12.25 15.51	e232 e163 440
06880508	Plum Creek near Seward, Nebr.	Lat 40°55'49", long 97°04'32", in NE¼NW¼ sec.15, T.11 N., R.3 E., Seward County, at bridge on county road, 0.6 mile north and 1.3 miles east of Seward.	85.5	1963g, 1963, 1968-71	6-24-63 3- 6-71	e21.16 a15.58	e20,200 770
06880590	Flessner Creek tributary at Giltner, Nebr.	Lat 40°47'04", long 98°08'57", in NE¼NE¼ sec.6, T.9 N., R.7 W., Hamilton County, at culvert on State Highway Spur 502, 0.7 mile north of Giltner.	7.52	1968-71	2-18-71	11.20	(†)
06880720	School Creek near Harvard, Nebr.	Lat 40°35'49", long 98°03'04", in NW¼NW¼ sec.7, T.7 N., R.6 W., Clay County, at bridge on black-top county road, 0.9 mile north of junction of U.S. Highway 6 and State Highway 14 and 3 miles southeast of Harvard.	55.1	1953-71	2-18-71	14.07	179
06880730	School Creek tributary No. 2 near Harvard, Nebr.	Lat 40°36'42", long 98°02'36", in SE¼SW¼ sec.31, T.8 N., R.6 W., Clay County, at culvert on east-west portion of black-top county road, 100 ft north of Burlington Northern Inc. underpass and 3 miles east of Harvard.	14.0	1953-71	2-18-71	11.75	52
06880775	Beaver Creek tributary near Henderson, Nebr.	Lat 40°48'52", long 97°48'43", in NW¼NE¼ sec.30, T.10 N., R.4 W., York County, at culvert on east-west county road, 0.3 mile west and 2 miles north of Henderson.	1.16	1968-71	2-18-71	10.36	(†)
06881250	South Fork Swan Creek tributary near Western, Nebr.	Lat 40°18'18", long 97°10'46", in NE¼NE¼ sec.22, T.4 N., R.2 E., Jefferson County, at culvert on State Highway 15, 7 miles southeast of Western and 1 mile south and 6 miles east of Dakin.	.07	1968-71	3- 2-71	a9.8	(†)

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1971--Continued							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Kansas River basin--Continued							
06881450	Indian Creek at Beatrice, Nebr.	Lat 40°17'08", long 96°44'47", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.4 N., R.6 E., Gage County, at bridge on U.S. Highway 77 at north edge of Beatrice.	774.7	1960-71	5-18-71	a6.33	49
06881500	Big Blue River at Beatrice, Nebr.	Lat 40°15'22", long 96°44'47", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.3 N., R.6 E., Gage County, at upstream side of 6th Street bridge which is U.S. Highway 77 in Beatrice.	13,900	1910-15 $\frac{1}{2}$, 1954g, 1960-65g, 1967g, 1968-69q, 1969, 1971	10-15-70, 5-22-71	5.51, 8.74	p899, p2,760
06881530	Big Blue River tributary near Beatrice, Nebr.	Lat 40°15'46", long 96°39'09", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.4 N., R.7 E., Gage County, at upstream end of box culvert of U.S. Highway 136, 4.6 miles east of highway intersection in Beatrice.	1.86	1971	5-18-71	15.51	440
06883540	Spring Creek tributary near Ruskin, Nebr.	Lat 40°06'50", long 97°49'13", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.2 N., R.5 W., Nuckolls County, at culvert on north-south county road, 2.3 miles south and 2.5 miles east of Ruskin.	2.11	1967-71	6-12-67, 8-10-68, 7- 9-69, f6-16-70, 5- 9-71	a12.72, 11.53, 13.02, f12.95, 14.42	e79, e45, e87, e85, 340
06883700	South Fork Big Sandy Creek near Davenport, Nebr.	Lat 40°18'27", long 97°52'39", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.4 N., R.5 W., Nuckolls County, at wood bridge on dirt road, 50 ft north of State Highway 4 and 3.5 miles west of Davenport.	28.1	1950, 1952-71	5-22-71	13.74	293
06883955	Little Sandy Creek near Ohioa, Nebr.	Lat 40°25'37", long 95°23'38", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.5 N., R.1 W., Fillmore County, at bridge on east-west county road 1 mile south and 1.5 miles east of Ohioa.	11.6	1968-71	5- 9-71	13.48	(†)
06884005	Dry Branch tributary near Fairbury, Nebr.	Lat 40°02'43", long 97°10'14", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.1 N., R.2 E., Jefferson County, at bridge on State Highway 15, 3 miles north of Nebraska-Kansas State line and 6.4 miles south of Fairbury.	4.51	1968-71	5-18-71	10.81	(†)

* Also a low-flow partial-record station.

† Discharge not determined.

* Operated as a continuous-record gaging station.

a Outside flood mark.

b At site 1.2 mile downstream, drainage area 34.0 sq mi.

c Estimate.

d Approximate.

e Not previously published.

f Revised.

g Discharge measurements published in table for miscellaneous sites.

h Datum of 8-12-64 which is 0.70 ft higher than original datum of 2-7-52.

j Stage below bottom of gage which is 10.0 ft.

k At site 1 mile north, record considered equivalent.

m Stage 11.35 ft at old gage site 0.1 mile downstream.

n Consider maximum for 1971 but may have been higher between July 1 and Sept. 30 while gage was removed for channel straightening.

p Discharge measurement only.

q Discharge measurements published in low-flow partial-record table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1971

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
White River basin						
White River (06445000)a/	Missouri River	Lat 42°48'42", long 103°09'59", in SE¼NE¼NE¼ sec.26, T.33 N., R.50 W., Dawes County, at bridge on county road, 1.7 miles north and 4.5 miles east of Whitney, Nebr.	676	1948-61†, 1969-70	10-21-70 12-17-70 3-16-71 4-13-71 5-18-71 6-15-71 7-20-71 8-10-71 9-15-71	23 *2.8 22 *5.0 *13 45 *10 *3.2 *2.5
Niobrara River basin						
Niobrara River (06457000)a/	do.....	Lat 42°32'38", long 102°29'58", in NW¼SE¼SE¼ sec.29, T.30 N., R.44 W., Sheridan County, at bridge 1 mile west of Mill School, 2 miles upstream from Pine Creek, and 2.2 miles southwest of bridge on State Highway 250 near Colclesser, Nebr.	-	1947-48†, 1963-64, 1969-70	11-12-70 7-13-71 8- 9-71 9-13-71	*42 *24 *18 *41
Fishberry Creek	Minnechaduza Creek	Lat 42°53'52", long 100°32'04", in SE¼SE¼ sec.19, T.33 N., R.27 W., Cherry County, 0.6 mile upstream from mouth and 1.2 miles northeast of north edge of Valentine, Nebr.	-	-	3- 2-71	*1.2
Platte River basin						
Platte River (06770490)a/	Missouri River	Lat 40°50'57", long 98°20'23", in NW¼SW¼ sec.10, T.10 N., R.9 W. (channel no. 1, north channel only), Hall County, at bridge on county road 5.2 miles south of courthouse in Grand Island, Nebr.	-	-	1-28-71 4-23-71 6-23-71	*b2,510 *b2,790 b7,820
Middle Loup River (06777000)a/	Loup River	Lat 41°49'02", long 99°58'15", in NE¼SW¼ sec.3, T.21 N., R.23 W., Blaine County, on right bank at upstream side of Laughran bridge, 9 miles upstream from Rifle Creek and 15 miles northwest of Milburn, Nebr.	-	1952-56†, 1958†, 1960-64†, 1969-70	10- 9-70 10-16-70 10-28-70 11- 3-70 11-17-70 11-24-70 12- 3-70 12- 8-70 12-17-70 12-29-70 1-19-71 2- 8-71 3-22-71 4-12-71 5-18-71 6- 7-71 7- 8-71 7-14-71 7-22-71 7-29-71 8- 4-71 8-11-71 8-18-71 8-26-71 9- 1-71 9- 9-71 9-14-71 9-20-71 9-30-71	*787 *760 *801 *782 *832 *763 *893 *766 *818 *788 *738 *692 *943 *817 *885 *814 *707 *752 *693 *734 *686 *716 *686 *663 *725 *769 *751 *720 *699
Middle Loup River (06778500)a/	do.....	Lat 41°28'49", long 99°12'43", in NW¼ sec.6, T.17 N., R.16 W., Custer County, on county line highway bridge, 0.8 mile below part of river known as "Narrows" and 5.5 miles southeast of Comstock, Nebr.	-	1937†, 1969-70	10- 8-70 10-14-70 10-27-70 11- 2-70 11-18-70 12- 3-70 12- 8-70 1-20-71	*1,020 *993 *1,290 *961 *989 *998 *932 *876

See footnotes at end of table.

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Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Middle Loup River (06778500)a/	Loup River	See preceding page.			2-10-71 2-25-71 3-25-71 4-14-71 5-20-71 6- 7-71 7- 8-71 7-13-71 7-20-71 7-30-71 8- 4-71 8-10-71 8-18-71 8-24-71 8-31-71 9- 7-71 9-14-71 9-21-71 9-30-71	*982 *1,220 *832 451 637 721 175 82 76 69 64 68 67 73 260 87 82 84 195
Lost Creek (06794800)	Platte River	Lat 41°24'53", long 97°15'08", in NE¼SE¼ sec.25, T.17 N., R.1 E., Platte County, at bridge on north-south county road, 2.5 miles southwest of Richland, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	17 *4.1 9.6
Lost Creek (06794805)	do.....	Lat 41°24'31", long 97°11'05", in NE¼NW¼ sec.34, T.17 N., R.2 E., Colfax County, at bridge on north-south county road, 2.6 miles south-east of Richland, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	13 *5.1 8.7
Lost Creek (06794810)	do.....	Lat 41°25'12", long 97°05'53", in NE¼NE¼ sec.29, T.17 N., R.3 E., Colfax County, at bridge on north-south county road, 2.7 miles south-west of Schuyler, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	14 *7.9 7.4
Barnholdt Ditch (06794820)	Lost Creek	Lat 41°26'32", long 97°13'59", in SW¼SW¼ sec.17, T.17 N., R.2 E., Colfax County, at culvert on north-south road, 0.25 mile north of U.S. Highway 30 and 1.0 mile northwest of Richland, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	0 0 0
Barnholdt Ditch (06794824)	do.....	Lat 41°26'18", long 97°10'30", in SE¼SE¼ sec.15, T.17 N., R.2 E., Colfax County, at culvert at county road intersection, 2.0 miles east of Richland, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	.31 0 0
Barnholdt Ditch (06794828)	do.....	Lat 41°26'17", long 97°05'53", in SE¼SE¼ sec.17, T.17 N., R.3 E., Colfax County, at culvert at county road intersection, 1 mile south of U.S. Highway 30 and 2.1 miles south-west of Schuyler, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	.57 0 0
Shonka Ditch (06794830)	Barnholdt Ditch	Lat 41°26'57", long 97°10'30", in SW¼NW¼ sec.14, T.17 N., R.2 E., Colfax County, at culvert on north-south road, 0.25 mile south of U.S. Highway 30 and 2.1 miles northeast of Richland, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	0 0 0
Shonka Ditch (06794835)	do.....	Lat 41°26'42", long 97°05'53", in NE¼SE¼ sec.17, T.17 N., R.3 E., Colfax County, at bridge on north-south county road, 0.5 mile south of U.S. Highway 30 and 2.0 miles west of Schuyler, Nebr.	-	-	7- 2-71 8-17-71 9- 8-71	3.0 2.0 *3.5

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1971--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Platte River	Missouri River	Lat 41°14'02", long 96°21'44", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.15 N., R.9 E., Douglas County, at bridge on State Highway 92, at Venice, Nebr.	-	-	6-17-71	14,100
Salt Creek (06801330)a/	Platte River	Lat 40°38'41", long 96°41'11", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.8 N., R.7 E., Lancaster County, at bridge on county road, 1 mile south and 1.3 miles west of Roca, Nebr.	97.7	-	8-12-71	*4.2
Hickman Branch (06802600)a/	Salt Creek	Lat 40°39'02", long 96°40'02", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.8 N., R.7 E., Lancaster County, at bridge on county road, 0.3 mile west and 0.5 mile south of Roca, Nebr.	67.9	-	8-12-71	*.86
Salt Creek (06803080)a/	Platte River	Lat 40°46'13", long 96°43'05", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 of northeast corner of State Penitentiary, Lincoln, Nebr.	221	-	3-16-71 3-31-71 4-13-71 4-27-71 5-12-71 6-15-71 7-1-71 7-27-71 8-12-71 8-26-71 9-10-71 9-22-71	90 *30 86 *14 226 *22 *14 *16 *5.6 *3.8 *5.1 *6.1
Beal Slough (06803085)a/	Salt Creek	Lat 40°46'13", long 96°42'47", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.9 N., R.6 E., Lancaster County, at bridge on Pioneers Blvd., 0.4 mile upstream from mouth and 0.5 mile west of State Penitentiary, Lincoln, Nebr.	13.2	-	9-10-71	*.15
Haines Branch (06803098)a/	do.....	Lat 40°47'14", long 96°43'47", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.10 N., R.6 E., Lancaster County, at bridge on Folsom Street, 0.2 mile north of intersection of Folsom and Van Dorn Streets and 0.3 mile upstream from confluence with Salt Creek, Lincoln, Nebr.	67.8	-	9-8-71	*2.8
Middle Creek (06803180)a/	do.....	Lat 40°48'17", long 96°45'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.10 N., R.6 E., Lancaster County, at bridge on Coddington Street, 0.7 mile south of U.S. Highway 34 on west edge of Lincoln, Nebr.	98.0	-	7-29-71 8-24-71 9-22-71	*2.2 *1.8 *1.9
Salt Creek (06803190)a/	Platte River	Lat 40°50'03", long 96°42'03", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.10 N., R.6 E., Lancaster County, at bridge at 14th Street at Lincoln, Nebr., 0.3 mile upstream from confluence with Oak Creek and 2.1 miles downstream from Middle Creek.	411	-	3-15-71 4-13-71 5-12-71 7-28-71 8-24-71 9-23-71	247 216 399 *37 *22 *18
Antelope Creek (06803300)a/	Salt Creek	Lat 40°48'10", long 96°40'56", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.25, T.10 N., R.6 E., Lancaster County, at bridge at 27th and Alpha Streets at Lincoln, Nebr.	10.6	(c)	7-29-71 8-24-71 9-22-71	*.06 *1.3 *d.01
Antelope Creek (06803405)a/	do.....	Lat 40°49'44", long 96°41'58", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13, T.10 N., R.6 E., Lancaster County, at bridge on Court Street, 0.1 mile upstream from confluence with Salt Creek at Lincoln, Nebr.	12.4	-	3-16-71 4-14-71 5-12-71 7-29-71 8-24-71 9-23-71	*1.8 *1.5 *2.4 *2.4 *3.2 *1.8

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1971--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
North Oak Creek (06803470) <u>a</u> /	Oak Creek	Lat 41°03'39", long 96°50'05", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.13 N., R.5 E., Saunders County, at bridge on State Highway 79, 1.0 mile south of Valparaiso, Nebr.	68.0	-	9- 8-71	*0.80
Oak Creek (06803480) <u>a</u> /	Salt Creek	Lat 40°52'47", long 96°46'35", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.32, T.11 N., R.6 E., Lancaster County, at bridge on U.S. Highway 34, 4 miles northwest of corporate boundary of Lincoln, Nebr.	208	-	7-29-71 8-24-71 9-22-71	*7.5 *4.7 *4.2
Elk Creek (06803485) <u>a</u> /	Oak Creek	Lat 40°52'41", long 96°47'10", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.11 N., R.6 E., Lancaster County, at bridge on county road, 0.2 mile west of Woodlawn elevator and 1.1 miles north of Arnold Heights (Huskerville) area near north edge of Lincoln Air Force Base, Lincoln, Nebr.	26.6	-	9- 8-71	*.12
Oak Creek (06803493) <u>a</u> /	Salt Creek	Lat 40°50'10", long 96°42'03", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.10 N., R.6 E., Lancaster County, at bridge on 14th Street, 0.2 mile upstream from confluence with Salt Creek, Lincoln, Nebr.	258	-	3-15-71 4-13-71 5-12-71 7-28-71 8-24-71 9-23-71	*15 *18 148 *7.5 *7.7 *6.6
Dead Mans Run (06803503) <u>a</u> /	do.....	Lat 40°50'33", long 96°40'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.10 N., R.7 E., Lancaster County, at bridge on Cornhusker Highway (U.S. Highway 6), 0.23 mile east of 27th Street at Lincoln, Nebr.	9.46	-	7-30-71 8-26-71 9-24-71	*1.1 *.97 *.99
Stevens Creek (06803515) <u>a</u> /	do.....	Lat 40°48'47", long 96°33'31", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.10 N., R.8 E., Lancaster County, at bridge on U.S. Highway 34, 1.0 mile north of Walton, Nebr.	36.0	-	9-10-71	*.18
Salt Creek (06803525) <u>a</u> /	Platte River	Lat 40°54'18", long 96°35'09", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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, Nebr.	815	-	3-18-71 3-31-71 4-15-71 4-27-71 5-13-71 6-15-71 7- 1-71 7-28-71 8-11-71 8-25-71 9- 9-71 9-21-71	240 130 *101 *107 395 145 *96 *78 *68 *60 *58 *55
Rock Creek (06803534) <u>a</u> /	Salt Creek	Lat 40°57'55", long 96°29'52", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.12 N., R.8 E., Lancaster County, at bridge on county road, 3.0 miles west of Greenwood, Nebr.	137	-	9-30-71	*3.6
Camp Creek (06803537) <u>a</u> /	do.....	Lat 40°56'20", long 96°28'57", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.11 N., R.8 E., Lancaster County, at bridge on U.S. Highway 6, about 2.5 miles southwest of Greenwood, Nebr.	32.6	-	9-14-71	*.80
Dee Creek (06803550) <u>a</u> /	do.....	Lat 40°56'58", long 96°27'20", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.6, T.11 N., R.9 E., Cass County, 0.2 mile upstream from bridge on U.S. Highway 6 and 0.5 mile southwest of Greenwood, Nebr.	13.2	1960+, 1961-63	9-14-71	*.52

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1971--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Greenwood Creek (06803558)a/	Salt Creek	Lat 40°59'08", long 96°25'04", in NE¼ sec.28, T.12 N., R.9 E., Cass County, at bridge on U.S. Highway 6, 2 miles northeast of Greenwood, Nebr.	11.4	-	9-14-71	*0.22
Callahan Creek (06803563)a/	do.....	Lat 40°59'59", long 96°24'13", in NW¼ sec.22, T.12 N., R.9 E., Cass County, at bridge on U.S. Highway 6, 3 miles northeast of Greenwood, Nebr.	28.5	-	9-30-71	*1.2
Salt Creek (06803565)a/	Platte River	Lat 41°01'34", long 96°24'22", in NW¼ sec.10, T.12 N., R.9 E., Saunders County, at bridge on county road, 2 miles southwest of Ashland, Nebr.	1,118	-	3-18-71 3-31-71 4-15-71 4-27-71 5-13-71 6-15-71 7- 1-71 7-27-71 8-11-71 8-25-71 9- 9-71 9-21-71	336 192 *152 *133 626 192 *160 *124 *100 *90 *90 *82
Salt Creek (06805000)a/	do.....	Lat 41°02'50", long 96°20'30", in SW¼ sec.31, T.13 N., R.10 E., Saunders County, at bridge on U.S. Highway 6, 1 mile east of Ashland, Nebr., and 2.5 miles upstream from mouth.	11,617	1947-67*	9-30-71	*90
Platte River (06805550)	Missouri River	Lat 41°03'29", long 95°55'40", in SE¼NE¼ sec.34, T.13 N., R.13 E., Cass County, at bridge on U.S. Highways 73 and 75, 3 miles north and 2 miles west of Plattsmouth, Nebr.	-	-	6-17-71	17,200

* Operated as a continuous-record gaging station.

a Also published with additional data in Part 2 of this report.

b Total flow.

c At crest-stage partial-record station.

d Estimated.

e Published as a crest-stage partial-record station.

f Revised.

A series of discharge measurements was made Nov. 5, 1970, on the Republican River and all tributaries in a 45.2-mile reach, between State Highways 17, south of Culbertson, and 47, south of Cambridge. The measurements were made during periods of fairly constant stage of the river and no surface runoff from rain or irrigation water.

Miles below Culbertson	Location	Measured discharge, in cubic feet per second Nov. 5, 1970
0	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.3 N., R.31 W., at Republican River bridge on State Highway 17, 0.5 mile south of Culbertson.	8.96
.6	NW corner of NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.3 N., R.31 W., at Frenchman River bridge on State Highway 17, 0.1 mile south of Culbertson.	80.2
1.1	Culbertson sewer outlet in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.3 N., R.31 W.	.17
2.0	Blackwood Creek in center NE $\frac{1}{4}$ sec.15, T.3 N., R.31 W.	2.49
2.7	Drain in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.3 N., R.31 W.	.27
4.0	Slough drain in SW corner NE $\frac{1}{4}$ sec.24, T.3 N., R.31 W.	.08
5.1	Slough drain in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.3 N., R.30 W.	.12
7.1	Drain in center of SE $\frac{1}{4}$ sec.29, T.3 N., R.30 W.	.20
9.1	Drain in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.3 N., R.30 W., at bridge on U.S. Highways 6 and 34.	.79
11.4	Driftwood Creek on N. line of NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.2 N., R.30 W.	7.01
14.6	McCook sewer outlet in SE corner NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.33, T.3 N., R.29 W.	1.42
17.4	Drain in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.35, T.3 N., R.29 W.	.61
18.6	Drain in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.3 N., R.29 W.	.31
23.8	Ash Creek on N. line of NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.3 N., R.28 W.	.08
24.5	Red Willow Creek in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.3 N., R.28 W.	9.38
29.4	Indianola sewer outlet in SE corner NW $\frac{1}{4}$ sec.18, T.3 N., R.27 W.	.01
34.4	Artificial ground water drain in NE corner SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.3 N., R.27 W.	1.46
35.0	Dry Creek in SE corner NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.12, T.3 N., R.27 W.	.12
42.0	Silver Creek in NW corner NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.3 N., R.26 W.	.02
43.1	Slough drain in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.4 N., R.26 W.	.80
45.2	Republican River in NW corner of SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.4 N., R.25 W., 0.3 mile south of Cambridge.	117

NOTE.--Miles measured on Geological Survey Republican River Nebraska-Kansas strip maps, scale 1:24,000, and represent distance to mouth of tributary.

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