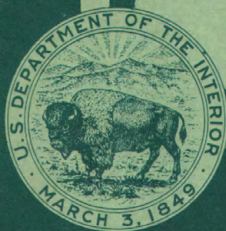
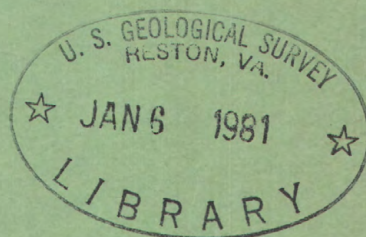


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Water Resources Data for Nebraska

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 1972

OCTOBER 1971

S	M	T	W	T	F	S
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31						

NOVEMBER 1971

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JANUARY 1972

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30	31					

FEBRUARY 1972

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MARCH 1972

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APRIL 1972

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MAY 1972

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JUNE 1972

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JULY 1972

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AUGUST 1972

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SEPTEMBER 1972

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23	24	25	26	27	28	29
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1972

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
Nebraska Game and Parks Commission
Salt Valley Watershed District
Lower Platte South Natural Resources District
Corps of Engineers, U.S. Army
Bureau of Reclamation, U.S. Department of the Interior

Water resources records, 1972, 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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WATER RESOURCES DATA FOR NEBRASKA, 1972

PART 1. SURFACE-WATER RECORDS

By G. G. Jamison

INTRODUCTION

The surface-water records for the 1972 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." The discharge and reservoir storage records for 1966-70 also will be published in a Geological Survey water-supply paper series entitled "Surface Water Supply of the United States 1966-70."

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.

Nebraska Game and Parks Commission, W. R. Barbee, director.

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

Lower Platte South Natural Resources 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 26 gaging stations.

The following organizations aided in collecting records:

Central Nebraska Public Power and Irrigation District, Nebraska 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 bench-mark 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 6-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 1972 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 includes 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 periods October 1, 1960, to September 30, 1965, and October 1, 1965, to September 30, 1970, 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.

Nebraska streamflow records for October 1960 to September 1965 have been published in Water-Supply Papers 1917, 1918, and 1919. Records for October 1965 to September 1970 will be published in Water-Supply Papers 2117, 2118, and 2119. These reports contain values of daily discharge, summaries of monthly and annual discharge, and monthend storage for all records previously published in the annual series of State reports. All records were re-examined and revised where warranted.

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, Reston, Va., 22092, 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

WHITE RIVER BASIN

06444000 White River at Crawford, Nebr.

LOCATION.--Lat 42°41'33", long 103°25'03", in W $\frac{1}{2}$ 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.--37 years, 20.2 cfs (14,630 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 283 cfs July 17 (gage height, 3.75 ft, from graph); minimum daily, 8.4 cfs Aug. 14.

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 except those for winter period, which are poor. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	22	18	21	16	29	21	20	16	16	16	12
2	18	22	18	19	15	25	22	23	15	19	15	14
3	19	21	19	18	17	24	24	22	14	21	16	14
4	20	21	18	16	21	23	23	21	16	20	16	19
5	19	21	19	16	22	23	23	21	19	19	15	16
6	18	20	19	17	24	22	21	21	18	17	13	15
7	18	21	18	18	30	21	20	21	16	16	12	14
8	18	21	18	20	36	21	19	21	14	17	11	13
9	14	21	22	24	35	22	20	27	12	15	11	12
10	16	21	19	25	36	21	19	27	15	14	11	12
11	16	21	13	26	38	20	19	42	14	13	10	12
12	17	21	14	24	20	20	19	27	14	14	9.7	12
13	17	21	15	20	19	20	18	27	35	13	9.1	12
14	17	21	16	19	22	21	24	26	25	12	8.4	12
15	17	20	17	22	23	21	23	24	26	11	8.5	12
16	18	22	14	22	22	21	21	23	24	12	9.5	11
17	19	22	15	25	29	21	20	22	22	76	9.7	11
18	22	21	14	25	36	20	19	20	19	27	9.7	10
19	20	20	14	20	27	20	19	20	17	17	9.4	10
20	19	20	18	21	47	22	19	28	18	16	11	10
21	18	20	16	27	130	22	19	22	19	18	9.8	10
22	18	20	15	22	40	22	17	21	18	16	9.5	11
23	18	21	16	25	54	22	17	18	17	14	9.9	11
24	18	20	17	20	41	23	16	20	16	12	9.9	11
25	18	20	17	18	32	23	16	19	15	11	10	11
26	18	20	16	16	28	23	22	18	14	12	9.9	11
27	19	20	16	15	26	23	35	71	13	13	9.9	12
28	22	20	16	15	45	23	26	24	13	12	9.3	11
29	21	20	17	16	42	24	21	16	13	12	9.1	12
30	22	19	18	17	-----	23	21	17	14	12	9.0	12
31	25	-----	20	16	-----	23	-----	17	-----	12	8.8	-----
TOTAL	575	620	522	625	973	688	623	746	521	529	336.1	365
MEAN	18.5	20.7	16.8	20.2	33.6	22.2	20.8	24.1	17.4	17.1	10.8	12.2
MAX	25	22	22	27	130	29	35	71	35	76	16	19
MIN	14	19	13	15	15	20	16	16	12	11	8.4	10
AC-FT	1,140	1,230	1,040	1,240	1,930	1,360	1,240	1,480	1,030	1,050	667	724

CAL YR 1971 TOTAL 7,596.4 MEAN 20.8 MAX 258 MIN 9.4 AC-FT 15,070
WTR YR 1972 TOTAL 7,123.1 MEAN 19.5 MAX 130 MIN 8.4 AC-FT 14,130

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-21	0615	3.52	251	7-17	1215	3.75	283
5-27	0845	3.35	214				

WHITE RIVER BASIN

15

06445590 Big Bordeaux Creek near Chadron, Nebr.

LOCATION.--Lat 42°43'30", long 102°55'44", in NW1/4 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, 6.5 cfs Feb. 19 (gage height, 1.98 ft); maximum gage height, 2.50 ft Jan. 28 (backwater from ice); minimum daily discharge, 0.04 cfs Aug. 30.
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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.41	.50	.60	.50	.64	.80	.69	.60	.37	.24	.07
2	.22	.41	.50	.55	.40	.55	.55	.73	.60	.46	.27	.07
3	.22	.41	.50	.55	.40	.60	.55	.73	.60	.41	.27	.07
4	.19	.41	.50	.40	.41	.69	.55	.73	.64	.41	.30	.07
5	.14	.34	.50	.40	.37	1.1	.55	.73	.55	.37	.22	.12
6	.14	.52	.50	.40	.37	.60	.50	.73	.50	.37	.17	.12
7	.20	.90	.45	.37	.32	.50	.46	.73	.46	.64	.17	.12
8	.24	.50	.50	.32	.30	.80	.50	.73	.41	.46	.17	.12
9	.24	.50	.55	.32	.32	.50	.50	.73	.41	.37	.17	.12
10	.24	.50	.50	.30	.32	.46	.50	.78	.41	.37	.17	.12
11	.24	.50	.40	.32	.30	.46	.55	.78	.41	.32	.17	.12
12	.24	.50	.45	.32	.30	.46	.55	.73	.37	.32	.17	.12
13	.30	.46	.55	.30	.32	.46	.55	.85	.37	.32	.17	.12
14	.30	.46	.55	.26	.27	.50	.69	.73	.46	.32	.17	.12
15	.32	.46	.55	.30	.27	.50	.60	.73	.52	.32	.17	.14
16	.37	.46	.55	.40	.50	.50	.60	.69	.55	.32	.17	.14
17	.84	.46	.55	.50	.46	.50	.60	.64	.50	.37	.10	.14
18	.60	.46	.55	.41	.41	.46	.60	.64	.50	.37	.10	.14
19	.50	.87	.60	.37	1.6	.55	.60	.69	.55	.32	.05	.12
20	.46	.46	.60	.37	1.6	.55	.60	.73	.50	.37	.07	.10
21	.46	.46	.64	.46	.92	.55	.60	.64	.50	.37	.05	.14
22	.46	.46	.64	.50	.69	.55	.60	.69	.41	.37	.05	.14
23	.46	.50	.64	.60	.69	.55	.60	.69	.41	.32	.07	.14
24	.44	.55	.64	.50	.60	.60	.60	.69	.46	.27	.07	.14
25	.41	.50	.69	.45	.55	.55	.60	.64	.41	.24	.07	.14
26	.41	.50	.64	.40	.50	.55	.73	.69	.50	.22	.07	.14
27	.41	.50	.60	.35	.87	.55	.73	.69	.46	.24	.05	.14
28	.41	.50	.55	.35	1.0	.72	.78	.64	.41	.24	.05	.14
29	.41	.50	.64	.45	.73	.70	.73	.69	.32	.22	.05	.17
30	.41	.50	.64	.50	-----	.55	.69	.64	.37	.20	.04	.17
31	.41	-----	.60	.55	-----	.55	-----	.64	-----	.22	.07	-----
TOTAL	10.89	14.96	17.27	12.87	16.29	17.80	18.06	21.86	14.16	10.49	4.13	3.72
MEAN	.35	.50	.56	.42	.56	.57	.60	.71	.47	.34	.13	.12
MAX	.84	.90	.69	.60	1.6	1.1	.80	.85	.64	.64	.30	.17
MIN	.14	.34	.40	.26	.27	.46	.46	.64	.32	.20	.04	.07
AC-FT	22	30	34	26	32	35	36	43	28	21	8.2	7.4

CAL YR 1971 TOTAL 180.70 MEAN .50 MAX 4.1 MIN .01 AC-FT 358
WTR YR 1972 TOTAL 162.50 MEAN .44 MAX 1.6 MIN .04 AC-FT 322

PONCA CREEK BASIN

06453400 Ponca Creek near Naper, Nebr.

LOCATION.--Lat 43°01'45", long 99°05'59", in SE 1/4 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. Datum of gage is 1,801.64 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 29.5 cfs (21,370 acre-ft per year); median of yearly mean discharges, 20 cfs (14,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 615 cfs May 1 (gage height, 5.74 ft, from floodmark); 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, 1964-72.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	1.0	1.8	.94	0	55	3.5	369	57	23	68	2.5
2	.18	1.0	1.6	1.0	0	50	3.5	218	50	25	64	2.5
3	.20	.70	1.6	1.2	0	46	4.2	160	44	23	52	2.5
4	.18	.60	1.5	1.2	0	46	3.5	120	40	20	40	2.5
5	.16	.50	1.6	1.3	0	48	4.9	90	37	17	35	2.5
6	.14	.40	1.5	1.3	0	49	6.3	70	34	14	30	2.5
7	.12	.30	1.6	1.3	0	48	5.6	60	32	12	24	2.5
8	.12	.31	1.6	1.6	0	50	4.9	56	38	10	18	3.0
9	.10	.31	1.5	1.6	0	52	6.3	52	37	9.0	14	3.0
10	.10	.26	1.5	1.8	0	52	5.6	50	32	8.0	22	3.0
11	.12	.26	1.3	1.8	0	34	6.3	90	29	6.0	200	3.0
12	.20	.26	1.3	1.6	0	26	6.3	170	26	5.0	60	3.0
13	.26	.31	1.0	1.0	0	19	5.6	335	24	4.5	30	3.0
14	.26	.31	.85	.60	0	13	4.9	566	22	5.4	20	3.0
15	.30	.31	.85	.60	0	12	5.6	528	19	5.0	15	3.0
16	.32	.42	.76	.80	9.1	9.8	4.9	291	18	4.0	11	3.0
17	.38	.68	.68	.94	84	7.7	4.9	181	20	13	10	3.0
18	.42	.94	.61	.92	115	7.7	4.2	135	23	28	9.0	3.0
19	.50	1.2	.54	1.0	87	6.3	3.5	120	43	34	8.0	3.0
20	.70	1.6	.42	.94	121	5.6	3.0	90	46	100	7.6	3.0
21	.40	1.6	.36	.94	159	6.3	3.5	70	40	200	7.4	3.0
22	.30	1.8	.42	.94	106	6.3	4.2	64	33	120	7.2	3.0
23	.30	2.5	.42	.85	80	7.0	4.2	70	27	50	6.8	3.0
24	.30	2.0	.48	.40	70	6.3	4.2	60	23	35	6.4	3.0
25	.30	2.0	.54	.20	62	6.3	1.3	54	36	50	6.0	3.0
26	.40	2.0	.54	.20	60	6.3	.68	48	46	80	5.5	2.5
27	.80	2.0	.61	.20	58	5.6	2.0	45	43	76	4.9	2.5
28	1.0	2.0	.68	.10	55	6.3	3.5	81	41	70	2.5	2.5
29	.90	2.0	.76	.10	57	5.6	.76	73	38	76	2.5	2.5
30	.80	1.8	.76	.10	-----	4.9	26	72	22	76	2.5	2.5
31	.70	-----	.85	.10	-----	4.2	-----	66	-----	64	2.5	-----
TOTAL	11.08	31.37	30.53	27.57	1,123.1	702.2	147.84	4,454	1,020	1,262.9	791.8	84.0
MEAN	.36	1.05	.98	.89	38.7	22.7	4.93	144	34.0	40.7	25.5	2.80
MAX	1.0	2.5	1.8	1.8	159	55	26	566	57	200	200	3.0
MIN	.10	.26	.36	.10	0	4.2	.68	45	18	4.0	2.5	2.5
AC-FT	22	62	61	55	2,230	1,390	293	8,830	2,020	2,500	1,570	167

CAL YR 1971 TOTAL 10,566.08 MEAN 28.9 MAX 1,320 MIN 0 AC-FT 20,960
WTR YR 1972 TOTAL 9,686.39 MEAN 26.5 MAX 566 MIN 0 AC-FT 19,210

PEAK DISCHARGE (BASE, 300 CFS).--May 1 (time unknown) 615 cfs (5.74 ft); May 14 (1000) 592 cfs (5.65 ft).

NOTE.--No gage-height record Oct. 1-17, Oct. 19 to Nov. 7, Apr. 25, 26, May 3-11, 19-27, July 1-16, July 20 to Aug. 7, Aug. 10-26.

PONCA CREEK BASIN

17

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.--23 years, 51.8 cfs (37,530 acre-ft per year); median of yearly mean discharges, 37 cfs (26,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,770 cfs May 13 (gage height, 7.41 ft); minimum daily, 0.02 cfs Jan. 25.

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 poor.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	4.1	2.6	1.1	.04	52	12	697	57	28	91	6.0
2	.55	4.1	2.2	.80	.04	62	14	393	46	34	87	6.0
3	.60	3.3	2.0	.60	.04	58	14	272	38	26	75	6.6
4	.45	2.4	2.2	.50	.04	58	11	180	39	22	59	6.0
5	.40	2.0	1.7	.80	.06	64	13	124	64	19	48	5.7
6	.30	1.4	2.2	1.2	.06	70	12	103	49	18	42	7.8
7	.30	1.0	2.1	1.8	.05	64	11	83	49	14	37	5.7
8	.18	1.2	1.5	2.0	.04	68	10	70	78	12	32	7.2
9	.22	1.4	1.9	1.6	.03	70	10	65	51	10	29	5.7
10	.22	2.0	1.4	1.3	.03	62	10	65	36	9.6	32	5.5
11	.30	2.0	1.5	1.5	.30	57	10	138	41	7.2	376	4.9
12	.40	1.7	1.5	1.3	.60	46	11	661	40	5.7	122	5.2
13	.40	1.8	1.5	.50	1.0	39	11	1,130	31	5.5	44	5.7
14	.50	1.6	1.0	.40	1.4	34	9.6	1,260	27	6.0	27	5.2
15	.55	1.6	1.1	.50	2.0	33	10	848	24	6.0	18	4.9
16	.65	4.6	.83	1.0	8.0	32	9.0	433	26	4.9	14	4.6
17	1.4	7.2	.63	1.3	70	30	8.4	265	32	49	11	4.4
18	1.7	5.5	.38	1.6	130	26	7.8	186	84	104	10	4.4
19	2.1	3.6	.80	1.5	120	26	7.8	136	180	64	9.0	4.1
20	3.8	3.8	.50	1.0	135	24	8.4	106	95	325	8.4	7.2
21	1.8	3.8	.64	1.3	160	23	9.6	88	63	538	8.4	6.6
22	1.3	4.1	.69	1.5	100	22	12	74	41	219	8.4	4.6
23	1.2	3.3	.80	1.2	54	19	13	79	31	90	8.4	4.1
24	1.2	2.8	.69	.04	60	20	10	79	33	51	8.4	3.8
25	1.2	2.6	.88	.02	56	21	9.6	68	95	76	7.8	4.1
26	1.2	2.8	.80	.03	62	21	16	59	86	160	7.2	4.4
27	2.1	2.6	.60	.03	66	22	49	50	46	99	6.0	4.4
28	5.7	2.4	.90	.04	62	22	69	93	41	91	6.6	4.1
29	4.1	2.4	.80	.04	58	18	52	96	42	97	6.0	4.4
30	3.8	2.8	.70	.05	-----	16	54	95	27	97	6.0	4.1
31	3.2	-----	1.0	.05	-----	14	-----	80	-----	84	5.7	-----
TOTAL	42.08	85.9	38.04	26.60	1,146.73	1,193	504.2	8,076	1,592	2,371.9	1,250.3	157.4
MEAN	1.36	2.86	1.23	.86	39.5	38.5	16.8	261	53.1	76.5	40.3	5.25
MAX	5.7	7.2	2.6	2.0	160	70	69	1,260	180	538	376	7.8
MIN	.18	1.0	.38	.02	.03	14	7.8	50	24	4.9	5.7	3.8
AC-FT	83	170	75	53	2,270	2,370	1,000	16,020	3,160	4,700	2,480	312

CAL YR 1971 TOTAL 13,596.22 MEAN 37.2 MAX 1,600 MIN 0 AC-FT 26,970
WTR YR 1972 TOTAL 16,484.15 MEAN 45.0 MAX 1,260 MIN .02 AC-FT 32,700

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-1	0630	6.34	1,050	7-20	2300	5.72	900
5-12	2200	6.71	1,400	8-11	1200	4.97	644
5-13	2230	7.41	1,770				

PONCA CREEK BASIN

06453600 Ponca Creek at Verdel, Nebr.

LOCATION.--Lat 42°48'40", long 98°10'35", in NE 1/4 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.--15 years, 80.5 cfs (58,320 acre-ft per year); median of yearly mean discharges, 56 cfs (40,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,980 cfs May 14 (gage height, 5.74 ft); maximum gage height observed, 6.77 ft Feb. 23 (backwater from ice); no flow Oct. 8, 9, 13.
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, 1965-72.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	11	12	1.6	.32	72	34	434	106	55	667	27
2	1.2	8.2	7.4	1.3	.20	80	31	607	80	48	404	29
3	1.1	6.4	6.6	.80	.10	78	30	414	63	51	242	28
4	.97	7.2	7.2	.20	.10	78	29	335	57	48	174	28
5	.35	7.8	7.4	.40	.10	82	29	302	89	42	138	26
6	.15	4.5	7.0	.60	.10	86	29	234	236	36	114	25
7	.05	3.5	6.0	.82	.10	82	25	188	121	33	94	24
8	0	4.7	4.0	.92	.10	84	25	159	84	28	80	26
9	0	5.5	4.2	.49	.10	88	25	140	79	26	69	26
10	.06	9.9	4.0	.70	.10	90	25	130	66	22	65	26
11	.01	9.2	3.4	.55	.10	88	27	148	55	20	168	28
12	.04	9.4	2.9	.56	.20	86	27	371	52	18	580	25
13	0	10	2.7	.54	.40	84	24	1,320	46	17	239	36
14	.02	10	2.9	.43	2.0	90	22	1,620	47	28	123	57
15	.12	7.8	2.9	.33	20	94	23	1,010	38	24	79	22
16	.20	23	2.5	.80	60	100	23	755	39	18	57	18
17	.30	35	2.6	1.4	140	96	22	530	72	156	46	16
18	.96	25	2.7	2.0	200	74	18	369	653	154	40	16
19	1.1	22	2.2	2.0	190	60	18	273	1,020	93	35	15
20	.79	19	2.4	1.6	170	50	19	208	502	378	32	16
21	1.4	16	2.5	1.8	240	43	23	163	264	1,220	31	16
22	2.1	14	3.1	2.0	150	37	23	314	171	710	29	17
23	6.0	14	3.0	1.6	84	41	21	248	118	392	31	16
24	3.1	14	3.0	.30	86	44	21	154	94	208	29	14
25	2.7	13	2.8	.10	80	46	20	127	110	156	29	17
26	2.3	13	1.4	.10	90	44	28	106	125	530	28	17
27	5.1	12	1.2	.10	96	44	47	91	138	408	27	18
28	5.3	12	1.6	.10	90	43	63	100	96	226	26	17
29	6.4	12	1.4	.30	78	41	96	114	69	168	26	17
30	11	11	1.6	.60	-----	40	87	156	66	156	27	16
31	13	-----	1.7	.60	-----	36	-----	118	-----	176	27	-----
TOTAL	66.35	370.1	116.3	25.64	1,778.02	2,101	934	11,238	4,756	5,645	3,756	679
MEAN	2.14	12.3	3.75	.83	61.3	67.8	31.1	363	159	182	121	22.6
MAX	13	35	12	2.0	240	100	96	1,620	1,020	1,220	667	57
MIN	0	3.5	1.2	.10	.10	36	18	91	38	17	26	14
AC-FT	132	734	231	51	3,530	4,170	1,850	22,290	9,430	11,200	7,450	1,350

CAL YR 1971 TOTAL 23,985.80 MEAN 65.7 MAX 1,550 MIN 0 AC-FT 47,580
WTR YR 1972 TOTAL 31,465.41 MEAN 86.0 MAX 1,620 MIN 0 AC-FT 62,410

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 1	1830	4.12	995	7-21	0900	5.14	1,560
5-14	0800	5.74	1,980	7-26	1400	4.05	940
5-22	1930	4.03	955	8- 1	0430	4.34	1,080
6-19	0830	4.67	1,270	8-12	0200	3.86	845

NIORARA RIVER BASIN

19

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.--17 years, 4.35 cfs (3,150 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 500 cfs Feb. 27 (gage height, 5.89 ft); minimum daily, 1.8 cfs July 28.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.2	3.1	3.8	2.9	9.9	3.4	3.5	2.3	3.0	4.5	4.7
2	3.3	3.4	3.2	3.6	2.8	8.9	3.4	3.3	2.3	3.3	3.7	3.6
3	3.2	3.4	3.2	3.8	2.7	11	3.7	3.1	2.8	3.4	3.6	3.6
4	3.2	3.8	3.0	4.0	2.7	8.0	3.7	3.1	3.8	3.4	3.5	4.6
5	3.2	3.7	3.0	3.7	2.7	7.1	3.8	3.1	11	3.4	3.1	3.4
6	3.2	3.6	3.1	3.5	2.6	7.0	3.8	3.0	9.9	3.3	2.8	3.6
7	3.1	3.7	3.1	3.4	2.7	6.6	3.7	3.0	6.2	3.3	2.4	3.2
8	3.2	4.1	2.8	3.4	2.7	6.4	3.7	2.9	5.6	3.3	2.2	3.0
9	3.8	4.8	2.7	3.5	2.7	6.3	3.6	3.7	4.7	3.1	2.2	3.0
10	3.7	4.5	2.8	3.4	2.5	6.2	3.4	3.8	4.6	2.9	2.1	3.0
11	3.5	4.0	2.7	3.6	2.5	6.0	3.5	4.6	4.0	2.8	2.0	3.0
12	3.4	3.8	3.0	3.4	2.5	6.0	3.5	4.7	4.2	2.5	1.9	2.9
13	3.6	3.8	3.2	3.4	2.7	5.9	3.4	4.8	4.5	2.4	1.9	2.8
14	3.5	3.5	3.2	3.1	2.5	5.5	3.7	4.4	4.1	2.4	2.1	2.9
15	3.7	3.4	3.8	3.0	3.1	5.2	3.6	3.6	3.9	2.3	2.3	2.9
16	3.8	3.3	3.6	2.8	5.0	5.1	3.4	3.4	4.4	2.2	2.4	2.8
17	4.0	3.2	3.2	2.8	6.0	5.1	3.4	3.2	4.5	3.5	2.4	2.8
18	4.5	3.0	3.1	3.0	4.6	4.6	3.4	3.3	4.5	2.9	2.4	2.8
19	3.9	3.2	3.1	3.0	4.4	4.1	3.4	3.5	4.0	2.8	2.5	2.8
20	3.7	3.2	2.9	3.0	4.6	4.1	3.5	3.8	3.8	3.1	2.8	2.8
21	3.6	3.1	3.0	3.4	5.2	3.8	3.5	3.5	4.6	3.1	2.5	2.7
22	3.6	3.2	2.9	3.3	5.2	3.6	3.4	3.6	5.0	2.7	2.6	2.7
23	3.7	3.2	3.2	3.6	5.4	3.6	3.3	3.5	5.1	2.3	2.7	2.7
24	3.6	3.2	3.4	3.6	5.2	3.7	3.3	3.5	4.6	2.2	2.7	2.7
25	3.5	3.3	3.3	3.6	9.6	3.6	3.3	3.3	4.0	2.0	2.7	2.8
26	3.6	3.2	3.6	3.2	9.2	3.4	4.2	3.2	3.5	2.2	2.9	2.8
27	3.7	3.1	3.5	3.1	58	3.3	4.9	3.2	3.4	2.0	2.8	2.9
28	3.4	3.1	3.4	3.0	227	3.3	5.1	3.1	3.2	1.8	2.8	2.8
29	3.2	3.0	3.6	3.1	68	3.4	5.0	2.9	3.0	2.6	2.8	2.8
30	3.1	3.2	3.6	2.9	-----	3.4	4.0	2.7	2.9	3.5	2.9	2.9
31	3.1	-----	3.6	2.8	-----	3.4	-----	2.5	-----	4.1	2.8	-----
TOTAL	108.8	104.2	98.9	102.8	457.7	167.5	111.0	106.8	134.4	87.8	83.0	92.0
MEAN	3.51	3.47	3.19	3.32	15.8	5.40	3.70	3.45	4.48	2.83	2.68	3.07
MAX	4.5	4.8	3.8	4.0	227	11	5.1	4.8	11	4.1	4.5	4.7
MIN	3.1	3.0	2.7	2.8	2.5	3.3	3.3	2.5	2.3	1.8	1.9	2.7
AC-FT	216	207	196	204	908	332	220	212	267	174	165	182

CAL YR 1971 TOTAL 1,603.3 MEAN 4.39 MAX 18 MIN 1.7 AC-FT 3,180
WTR YR 1972 TOTAL 1,654.9 MEAN 4.52 MAX 227 MIN 1.8 AC-FT 3,280

PEAK DISCHARGE (BASE, 20 CFS).--Feb. 27 (2230) 500 cfs (5.89 ft): Feb. 28 (2000) 353 cfs (5.13 ft).

NIOBRARA RIVER BASIN

06454100 Niobrara River at Agate, Nebr.

LOCATION.--Lat 42°25'22", long 103°47'28", in SW $\frac{1}{4}$ 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.--15 years, 14.8 cfs (10,720 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 96 cfs Mar. 2 (gage height, 4.24 ft); minimum daily, 5.4 cfs June 30.

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 except those for periods of no gage-height record, which are poor. Diversions for irrigation of about 6,700 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	18	18	17	15	46	13	16	10	5.9	11	9.4
2	8.9	18	17	17	14	82	13	17	11	7.0	11	10
3	8.4	18	18	14	14	57	16	14	11	7.2	11	11
4	8.4	18	17	14	13	37	14	14	13	7.0	11	13
5	8.4	18	17	14	14	28	14	14	15	6.4	11	13
6	8.4	18	18	14	15	27	14	14	8.4	6.4	10	15
7	8.4	17	15	14	15	25	14	13	9.5	6.4	9.9	18
8	8.2	17	13	18	16	25	14	13	7.6	6.2	9.6	16
9	8.4	17	16	17	16	25	14	13	7.2	6.2	9.6	15
10	8.4	17	17	15	16	25	13	13	9.8	6.0	9.7	14
11	8.4	17	14	16	16	24	13	15	8.2	6.0	9.6	14
12	8.2	18	15	15	16	16	8.2	14	7.6	6.0	9.7	14
13	8.2	18	16	14	17	20	7.5	13	7.9	6.2	9.2	14
14	8.4	18	14	11	17	17	8.6	13	9.3	6.4	9.2	13
15	8.0	18	15	13	18	21	9.1	13	8.3	7.0	9.4	13
16	8.2	18	15	14	19	19	8.6	14	6.8	10	10	13
17	8.4	18	14	16	19	19	8.0	13	6.6	11	10	12
18	10	17	17	15	19	19	7.5	11	6.6	13	10	12
19	9.6	16	17	16	20	19	7.0	11	6.6	11	9.7	12
20	9.1	19	18	16	20	19	6.6	11	6.6	10	9.6	12
21	8.6	19	19	16	22	17	6.4	11	6.6	9.8	9.3	12
22	8.4	19	18	17	22	17	6.0	11	6.5	9.6	8.8	12
23	8.2	19	20	17	23	17	5.7	7.9	7.3	9.6	8.8	13
24	8.2	19	19	17	22	17	5.5	8.0	7.5	9.6	8.5	13
25	8.0	18	20	12	23	15	13	7.8	7.0	10	8.5	13
26	7.7	18	19	12	23	15	16	7.5	6.5	11	8.4	13
27	7.7	18	16	12	25	16	17	9.0	6.3	11	8.5	13
28	9.6	18	16	12	26	15	16	7.8	6.2	10	8.2	13
29	18	19	20	12	29	13	16	7.8	5.8	10	8.1	13
30	18	18	17	13	-----	14	16	7.8	5.4	10	7.7	13
31	18	-----	17	14	-----	13	-----	7.8	-----	11	7.7	-----
TOTAL	291.0	538	522	454	544	739	340.7	362.4	242.1	262.9	292.7	391.4
MEAN	9.39	17.9	16.8	14.6	18.8	23.8	11.4	11.7	8.07	8.48	9.44	13.0
MAX	18	19	20	18	29	82	17	17	15	13	11	18
MIN	7.7	16	13	11	13	13	5.5	7.5	5.4	5.9	7.7	9.4
AC-FT	577	1,070	1,040	901	1,080	1,470	676	719	480	521	581	776

CAL YR 1971 TOTAL 6,180.0 MEAN 16.9 MAX 104 MIN 7.7 AC-FT 12,260
WTR YR 1972 TOTAL 4,980.2 MEAN 13.6 MAX 82 MIN 5.4 AC-FT 9,880

PEAK DISCHARGE (BASE, 35 CFS).--Mar. 2 (0330) 96 cfs (4.24 ft).

NOTE.--No gage-height record May 4-9, June 22 to July 23.

NIOBRARA RIVER BASIN

21

06454500 Niobrara River above Box Butte Reservoir, Nebr.

LOCATION.--Lat 42°27'35", long 103°10'15", in NE¹ 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.--26 years, 31.1 cfs (22,530 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 623 cfs July 16 (gage height, 6.72 ft); minimum daily, 6.2 cfs Aug. 30, 31.

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 winter period, 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	22	39	39	25	53	35	40	9.9	13	14	7.5
2	25	26	34	37	22	50	35	39	10	14	16	7.5
3	24	28	33	30	20	50	33	37	9.9	14	18	8.7
4	24	29	36	28	22	50	33	35	12	14	18	12
5	24	32	37	30	26	50	33	34	14	13	18	10
6	24	29	35	32	27	58	33	34	14	12	18	9.9
7	24	28	37	32	29	63	33	34	13	12	18	9.8
8	24	29	34	34	32	64	33	33	12	12	17	9.8
9	23	29	31	34	32	63	32	34	11	12	16	9.8
10	22	29	33	36	32	50	32	35	15	12	14	9.6
11	22	30	30	36	29	47	32	42	10	11	20	9.4
12	23	35	29	34	31	46	24	40	11	10	12	9.3
13	28	32	30	30	35	46	20	40	11	10	6.6	10
14	22	32	31	28	35	46	26	40	12	10	6.6	10
15	22	32	32	28	32	37	44	38	16	10	7.0	11
16	22	32	31	30	35	36	41	36	14	62	8.1	11
17	22	32	31	30	34	40	40	31	11	60	8.1	11
18	29	34	32	30	33	38	37	22	7.0	16	8.7	11
19	26	32	32	30	37	34	32	22	15	14	9.3	12
20	23	34	32	30	38	36	32	24	13	16	7.5	12
21	22	38	31	35	42	42	31	22	13	16	7.0	12
22	22	37	32	49	38	40	30	22	14	17	7.0	12
23	21	37	34	49	48	40	30	21	15	17	7.0	13
24	21	37	36	47	49	40	28	20	15	16	7.0	13
25	21	38	36	35	53	36	27	18	14	18	6.6	13
26	20	39	32	30	49	29	32	18	12	18	6.6	13
27	20	39	28	28	52	32	40	17	12	18	6.6	14
28	20	39	30	26	54	32	40	16	12	16	6.6	14
29	20	39	28	26	54	32	40	16	12	17	6.6	14
30	20	39	30	28	-----	34	41	13	12	16	6.2	14
31	20	-----	35	28	-----	36	-----	9.3	-----	17	6.2	-----
TOTAL	705	988	1,011	1,019	1,045	1,350	999	882.3	371.8	533	334.3	333.3
MEAN	22.7	32.9	32.6	32.9	36.0	43.5	33.3	28.5	12.4	17.2	10.8	11.1
MAX	29	39	39	49	54	64	44	42	16	62	20	14
MIN	20	22	28	26	20	29	20	9.3	7.0	10	6.2	7.5
AC-FT	1,400	1,960	2,010	2,020	2,070	2,680	1,980	1,750	737	1,060	663	661

CAL YR 1971 TOTAL 11,727.5 MEAN 32.1 MAX 100 MIN 5.7 AC-FT 23,260

WTR YR 1972 TOTAL 9,571.7 MEAN 26.2 MAX 64 MIN 6.2 AC-FT 18,990

PEAK DISCHARGE (BASE, 100 CFS).--July 16 (2345) 623 cfs (6.72 ft).

NIOBRARA RIVER BASIN

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, 16,750 acre-ft June 30 (elevation, 3,996.49 ft); minimum observed, 2,210 acre-ft Sept. 9 (elevation, 3,976.24 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 1971 TO SEPTEMBER 1972

Date	Elevation (feet) ^{a/}	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,976.57	2,320	-
Oct. 31.....	3,980.16	3,790	+1,470
Nov. 30.....	3,984.49	6,170	+2,380
Dec. 31.....	3,987.36	8,120	+1,950
CAL YR 1971.....	-	-	+70
Jan. 31.....	3,989.63	9,950	+1,830
Feb. 29.....	3,991.52	11,650	+1,700
Mar. 31.....	3,993.54	13,600	+1,950
Apr. 30.....	3,994.90	15,010	+1,410
May 31.....	3,995.98	16,180	+1,170
June 30.....	3,996.49	16,750	+570
July 31.....	3,989.02	9,430	-7,320
Aug. 31.....	3,977.00	2,460	-6,970
Sept. 30.....	3,978.27	2,940	+480
WTR YR 1972.....	-	-	+620

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

NIOBRARA RIVER BASIN

23

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, 213 cfs July 16 (gage height, 4.32 ft); minimum daily, 0.62 cfs Nov. 2, 5, Dec. 15, 16.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.77	.69	.71	.76	1.0	.96	1.0	1.2	1.1	151	74
2	.83	.62	.66	.87	.76	1.0	1.0	1.1	1.2	1.3	143	68
3	.80	.66	.66	.85	.76	1.0	.92	1.0	1.3	5.1	131	62
4	.80	.66	.66	.80	.76	1.0	.92	1.0	1.3	30	114	48
5	.80	.62	.66	.80	.80	1.0	.92	1.0	1.3	33	95	47
6	.80	.66	.66	.80	.80	1.0	.87	1.0	1.3	53	95	42
7	.80	.69	.66	.80	.80	1.0	.87	1.0	1.2	73	112	32
8	.80	.66	.66	.80	.80	1.0	.92	.92	1.1	87	146	32
9	.80	.66	.66	.83	.80	1.0	.92	1.0	1.1	87	156	11
10	.72	.66	.66	.83	.80	.96	.87	1.1	1.2	90	153	.87
11	.76	.66	.66	.87	.80	.96	.92	1.1	1.2	106	153	.83
12	.69	.66	.66	.80	.80	.92	.87	1.0	1.2	131	151	.83
13	.69	.66	.66	.80	.80	.92	.98	1.1	1.1	156	148	.87
14	.69	.69	.66	.80	.80	.92	1.1	1.1	1.2	161	161	.87
15	.69	.66	.62	.80	.83	.87	1.2	1.0	1.3	177	172	.96
16	.72	.66	.62	.83	.83	.92	1.2	1.0	1.3	189	166	.96
17	.80	.66	.66	.83	.83	.87	1.1	1.0	1.2	207	164	.96
18	.83	.66	.66	.80	.87	.92	1.1	1.0	1.1	189	146	.96
19	.76	.66	.69	.80	.87	.92	1.1	1.2	1.1	189	131	.96
20	.76	.66	.66	.80	.96	.96	1.1	1.3	1.1	180	131	.96
21	.76	.66	.66	.83	.92	.96	1.0	1.3	1.1	161	127	.96
22	.76	.66	.66	.83	1.0	.92	1.0	1.3	1.1	153	127	.96
23	.72	.72	.69	.83	.96	.92	1.0	1.3	1.1	151	125	.96
24	.72	.72	.69	.80	1.0	.92	1.0	1.3	1.2	148	125	.96
25	.69	.72	.69	.87	1.0	.92	1.1	1.2	1.1	146	123	.96
26	.72	.72	.69	.87	1.0	.96	1.4	1.2	1.1	136	118	.96
27	.69	.72	.69	.87	1.0	.92	1.4	1.3	1.1	123	114	.96
28	.72	.72	.69	.83	1.0	.92	1.2	1.3	1.0	118	110	.96
29	.76	.72	.69	.80	1.0	.96	1.1	1.2	1.0	118	108	1.0
30	.74	.72	.69	.80	-----	.96	1.0	1.2	1.2	125	94	.69
31	.80	-----	.69	.80	-----	.96	-----	1.2	-----	143	79	-----
TOTAL	23.42	20.37	20.71	25.35	25.11	29.46	31.04	34.72	35.0	3,667.5	4,069	435.40
MEAN	.76	.68	.67	.82	.87	.95	1.03	1.12	1.17	118	131	14.5
MAX	.83	.77	.69	.87	1.0	1.0	1.4	1.3	1.3	207	172	74
MIN	.69	.62	.62	.71	.76	.87	.87	.92	1.0	1.1	79	.69
AC-FT	46	40	41	50	50	58	62	69	69	7,270	8,070	864

CAL YR 1971 TOTAL 10,643.14 MEAN 29.2 MAX 204 MIN .58 AC-FT 21,110
WTR YR 1972 TOTAL 8,417.08 MEAN 23.0 MAX 207 MIN .62 AC-FT 16,700

NIOBRARA RIVER BASIN

06457500 Niobrara River near Gordon, Nebr.

LOCATION.--Lat 42°38'00", long 102°12'40", in NE¹ 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, 257 cfs Apr. 27 (gage height, 1.50 ft); maximum gage height, 2.43 ft Dec. 11 (backwater from ice); minimum daily discharge, 70 cfs Feb. 1, 2, Aug. 24, 26, 27.
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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	140	110	105	70	127	115	107	92	102	98	82
2	115	136	97	100	70	158	119	104	92	101	107	85
3	110	136	110	95	75	168	119	120	90	100	119	94
4	106	154	110	90	80	131	119	117	100	99	109	115
5	102	140	84	90	90	154	119	125	154	98	101	117
6	102	123	97	95	95	149	119	110	115	96	96	107
7	102	123	106	100	100	140	115	112	111	95	86	99
8	99	110	95	100	110	149	111	112	99	94	77	94
9	102	115	100	105	130	149	107	122	95	92	79	93
10	110	110	95	110	120	149	108	133	105	91	78	92
11	110	115	90	110	125	149	109	184	100	90	79	115
12	106	115	95	105	130	144	115	187	106	84	76	107
13	99	123	95	100	130	140	107	164	108	78	73	106
14	99	123	100	100	150	144	144	164	100	77	72	101
15	102	123	110	110	160	149	149	163	121	80	72	99
16	106	136	110	115	170	140	167	140	138	81	72	98
17	119	136	115	120	190	123	150	126	138	92	75	94
18	149	119	110	135	200	127	153	117	121	106	73	89
19	131	102	105	125	190	119	121	103	122	102	75	91
20	115	131	100	120	175	127	121	108	119	106	76	94
21	110	123	100	120	154	140	117	123	108	116	78	92
22	102	131	110	125	106	136	122	149	102	116	72	101
23	102	131	120	120	115	127	111	131	106	100	72	103
24	99	119	125	110	102	140	112	112	106	90	70	100
25	102	106	120	100	106	149	113	106	106	89	71	97
26	106	94	110	90	119	131	171	109	105	128	70	101
27	102	84	100	85	123	127	186	116	105	104	70	96
28	110	84	105	80	144	119	158	113	104	99	71	95
29	136	89	110	75	136	115	141	113	104	82	71	97
30	136	115	110	75	-----	110	117	101	103	75	71	97
31	140	-----	110	75	-----	102	-----	95	-----	77	74	-----
TOTAL	3,431	3,586	3,254	3,185	3,665	4,232	3,835	3,886	3,275	2,940	2,483	2,951
MEAN	111	120	105	103	126	137	128	125	109	94.8	80.1	98.4
MAX	149	154	125	135	200	168	186	187	154	128	119	117
MIN	99	84	84	75	70	102	107	95	90	75	70	82
AC-FT	6,810	7,110	6,450	6,320	7,270	8,390	7,610	7,710	6,500	5,830	4,930	5,850

CAL YR 1971 TOTAL 41,247 MEAN 113 MAX 278 MIN 59 AC-FT 81,810
WTR YR 1972 TOTAL 40,723 MEAN 111 MAX 200 MIN 70 AC-FT 80,770

06459200 Snake River above Merritt Reservoir, Nebr.

LOCATION.--Lat 42°35'40", long 101°02'20", in NE¹ 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.--440 sq mi (revised), approximately, of which about 28 sq mi contributes directly to surface runoff.

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.--10 years, 204 cfs (147,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 404 cfs June 16 (gage height, 3.35 ft); maximum gage height, 4.40 ft Dec. 27 (backwater from ice); minimum daily discharge, 160 cfs Dec. 8.
 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 those for winter period, which are fair. Records of water temperatures for the water year 1972 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	188	178	215	190	203	187	295	190	192	202	185
2	190	193	173	210	200	200	189	245	193	208	210	188
3	180	189	173	190	209	204	197	224	193	209	210	187
4	180	184	169	180	201	196	192	226	208	207	205	197
5	182	182	176	200	214	198	199	224	249	196	194	188
6	183	181	177	205	212	204	198	216	225	191	189	196
7	184	183	168	210	199	201	194	205	212	189	184	181
8	183	182	160	215	199	195	196	205	202	199	180	180
9	176	184	170	210	199	196	190	204	194	188	182	180
10	178	186	180	210	201	208	190	209	192	181	190	180
11	182	186	170	205	201	213	204	232	194	185	191	177
12	185	188	165	195	204	212	206	246	202	181	189	179
13	179	186	165	180	207	211	196	255	212	179	183	179
14	177	189	170	175	204	209	211	240	197	176	176	175
15	181	186	180	190	209	210	211	230	198	175	176	174
16	183	195	185	210	209	206	210	221	283	179	176	174
17	185	197	190	230	209	210	205	212	225	192	174	174
18	236	183	190	239	196	201	205	198	220	177	179	172
19	202	187	183	225	196	202	204	197	207	175	180	172
20	193	177	183	214	207	229	199	193	201	198	179	172
21	186	178	184	225	209	221	201	191	195	214	183	168
22	186	185	183	220	204	213	207	212	208	208	182	169
23	185	181	193	204	199	208	207	210	196	197	182	171
24	187	176	190	190	201	222	203	201	220	202	179	181
25	188	178	185	170	201	198	204	194	214	214	177	177
26	187	184	183	175	199	208	236	191	213	198	177	180
27	190	176	180	170	201	204	266	204	214	205	178	181
28	199	175	220	180	213	197	278	208	201	255	175	182
29	186	174	210	190	218	195	277	208	195	199	175	191
30	182	174	220	200	-----	197	288	198	192	188	176	190
31	182	-----	220	200	-----	195	-----	193	-----	187	175	-----
TOTAL	5,787	5,507	5,673	6,232	5,911	6,366	6,350	6,687	6,245	6,044	5,708	5,400
MEAN	187	184	183	201	204	205	212	216	208	195	184	180
MAX	236	197	220	239	218	229	288	295	283	255	210	197
MIN	176	174	160	170	190	195	187	191	190	175	174	168
AC-FT	11,480	10,920	11,250	12,360	11,720	12,630	12,600	13,260	12,390	11,990	11,320	10,710

CAL YR 1971 TOTAL 71,941 MEAN 197 MAX 371 MIN 130 AC-FT 142,700
 WTR YR 1972 TOTAL 71,910 MEAN 196 MAX 295 MIN 160 AC-FT 142,600

PEAK DISCHARGE (BASE, 350 CFS).--June 16 (0200) 404 cfs (3.35 ft).

NIOBRARA RIVER BASIN

06459300 Merritt Reservoir near Burge, Nebr.

LOCATION.--Lat 42°38'06", long 100°52'18", in SW1/4 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, 75,960 acre-ft Apr. 13-15 (elevation, 2,946.5 ft); minimum observed, 50,140 acre-ft Oct. 1 (elevation, 2,936.4 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 1971 TO SEPTEMBER 1972

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,936.2	49,710	-
Oct. 31.....	2,941.2	61,440	+11,730
Nov. 30.....	2,941.6	62,450	+1,010
Dec. 31.....	2,941.6	62,450	0
CAL YR 1971.....	-	-	+1,540
Jan. 31.....	2,941.5	62,190	-260
Feb. 29.....	2,941.7	62,710	+520
Mar. 31.....	2,944.5	70,230	+7,520
Apr. 30.....	2,946.2	75,080	+4,850
May 31.....	2,945.8	73,910	-1,170
June 30.....	2,945.8	73,910	0
July 31.....	2,945.3	72,480	-1,430
Aug. 31.....	2,940.3	59,160	-13,320
Sept. 30.....	2,940.6	59,910	+750
WTR YR 1972.....	-	-	+10,200

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 44 sq mi (revised) 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.--9 years (1963-72), 161 cfs (116,600 acre-ft per year), since storage and diversion began.

EXTREMES.--Current year: Maximum discharge, 374 cfs May 1 (gage height, 2.42 ft); minimum daily, 12 cfs Oct. 1-11.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	220	224	221	208	268	18	337	146	68	18	17
2	12	217	224	234	191	269	18	353	148	68	18	17
3	12	100	224	244	190	269	18	338	150	36	18	16
4	12	19	224	244	187	269	19	328	151	14	18	17
5	12	68	224	230	187	269	19	325	153	17	17	17
6	12	200	224	220	187	270	18	317	154	16	17	17
7	12	222	224	220	204	272	18	300	156	16	17	16
8	12	229	224	221	230	250	22	220	153	15	17	16
9	12	227	216	220	242	238	27	224	149	18	17	16
10	12	224	211	220	241	240	32	227	150	17	17	16
11	12	224	211	220	243	241	51	224	149	15	17	16
12	15	224	211	222	245	241	73	227	141	15	17	16
13	14	224	211	222	245	241	127	290	139	15	16	16
14	14	223	211	221	241	108	248	326	137	15	16	16
15	15	223	211	220	250	14	255	322	135	15	16	16
16	15	224	211	221	258	14	248	319	147	15	16	16
17	15	230	220	222	259	15	266	324	150	16	16	16
18	16	240	224	220	255	16	266	267	193	15	16	16
19	15	239	223	221	255	16	255	231	214	14	16	70
20	15	238	224	222	248	17	248	219	205	16	16	105
21	15	238	222	221	219	20	244	214	205	15	16	105
22	15	235	220	220	217	16	238	182	208	16	17	105
23	15	223	220	239	217	16	232	167	208	18	17	103
24	15	222	220	253	227	17	226	149	202	16	17	103
25	83	233	220	236	256	17	242	139	175	17	16	103
26	156	242	220	220	252	17	225	139	152	17	16	103
27	198	248	220	220	260	18	232	140	129	19	16	120
28	224	255	219	220	270	18	283	141	113	17	16	135
29	220	235	220	217	266	18	314	143	85	17	17	135
30	220	224	221	217	-----	19	318	143	68	17	16	150
31	220	-----	220	216	-----	18	-----	146	-----	18	17	-----
TOTAL	1,647	6,370	6,798	6,964	6,750	3,731	4,800	7,421	4,665	623	517	1,630
MEAN	53.1	212	219	225	233	120	160	239	156	20.1	16.7	54.3
MAX	224	255	224	253	270	272	318	353	214	68	18	150
MIN	12	19	211	216	187	14	18	139	68	14	16	16
AC-FT	3,270	12,630	13,480	13,810	13,390	7,400	9,520	14,720	9,250	1,240	1,030	3,230

CAL YR 1971 TOTAL 54,082 MEAN 148 MAX 351 MIN 12 AC-FT 107,300
WTR YR 1972 TOTAL 51,916 MEAN 142 MAX 353 MIN 12 AC-FT 103,000

NIOBRARA RIVER BASIN

06460900 Minnechadua Creek near Kilgore, Nebr.

LOCATION.--Lat 42°59'10", long 100°53'55", in NE¼ 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.--14 years, 7.47 cfs (5,410 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 42 cfs May 2 (gage height, 3.82 ft, backwater from beaver dams); no flow Aug. 30, 31, Sept. 22-25.

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, 1969-72.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	2.0	2.5	3.2	2.0	12	6.3	37	6.1	.68	2.7	.02
2	.91	2.0	2.6	3.4	1.5	11	6.4	41	6.2	.89	2.7	.04
3	1.5	2.0	2.6	3.4	1.6	11	6.4	38	6.1	.96	2.8	.06
4	2.1	2.0	2.7	3.4	1.6	11	6.4	31	6.5	.96	3.0	.05
5	1.6	2.0	2.7	3.4	1.8	10	6.4	27	7.2	.90	2.5	.06
6	1.3	1.9	2.8	3.3	1.8	11	6.2	26	7.5	.91	2.3	.53
7	1.6	1.9	2.8	3.3	2.0	13	6.0	21	7.8	.87	2.1	.48
8	1.5	1.9	2.9	3.4	2.2	12	6.0	18	7.3	.72	2.1	.37
9	1.3	1.8	2.9	3.4	2.4	12	5.8	16	6.9	.61	1.9	.25
10	1.0	1.8	2.9	3.4	2.6	12	5.6	15	6.6	.82	1.7	.22
11	.96	1.8	2.9	3.4	2.8	12	6.6	15	6.1	.75	1.5	.22
12	.88	1.7	2.9	3.4	3.0	12	7.0	17	6.0	.72	1.2	.23
13	1.5	1.7	2.9	3.2	3.5	12	7.2	19	5.9	.70	1.0	.19
14	1.4	1.6	2.9	3.0	4.9	12	8.9	20	5.8	.61	.82	.13
15	1.6	1.6	2.9	2.5	5.0	12	10	19	5.9	.51	.73	.12
16	1.6	1.7	2.9	2.8	7.6	11	11	17	6.0	.75	.52	.12
17	1.4	1.8	2.8	3.3	7.0	11	10	15	6.0	1.1	.33	.06
18	2.0	1.9	3.1	3.3	6.0	11	11	12	5.8	1.1	.33	.04
19	1.9	1.9	3.2	3.3	7.5	11	11	8.9	5.8	.86	.16	.02
20	1.6	2.1	3.2	3.4	8.7	11	11	7.3	5.3	1.9	.10	.01
21	1.6	2.1	3.2	3.6	9.4	11	10	6.3	4.9	2.6	.09	.01
22	1.8	2.2	3.3	4.0	9.4	11	10	7.0	4.9	2.7	.06	0
23	1.7	2.2	3.4	3.8	10	12	11	6.7	3.7	2.7	.03	0
24	1.7	2.2	3.3	3.5	10	11	10	6.6	3.7	2.7	.02	0
25	1.9	2.3	3.5	2.0	11	7.0	9.6	6.2	3.1	3.0	.04	0
26	1.7	2.3	3.5	.90	11	6.0	11	5.7	2.2	3.0	.03	.01
27	1.9	2.4	3.4	1.1	12	6.0	16	6.1	1.9	2.8	.02	.01
28	1.9	2.4	3.4	1.8	14	6.0	20	6.0	.82	2.8	.02	.01
29	2.1	2.5	3.3	2.2	13	6.0	23	5.9	.54	2.6	.01	.01
30	2.1	2.5	3.3	2.2	-----	6.0	31	6.1	.68	2.6	0	.01
31	2.2	-----	3.3	2.2	-----	6.2	-----	6.1	-----	2.4	0	-----
TOTAL	48.74	60.2	94.0	92.50	175.3	318.2	306.8	488.9	153.24	47.22	30.81	3.28
MEAN	1.57	2.01	3.03	2.98	6.04	10.3	10.2	15.8	5.11	1.52	.99	.11
MAX	2.2	2.5	3.5	4.0	14	13	31	41	7.8	3.0	3.0	.53
MIN	.49	1.6	2.5	.90	1.5	6.0	5.6	5.7	.54	.51	0	0
AC-FT	97	119	186	183	348	631	609	970	304	94	61	6.5

CAL YR 1971 TOTAL 2,218.29 MEAN 6.08 MAX 70 MIN 0 AC-FT 4,400
WTR YR 1972 TOTAL 1,819.19 MEAN 4.97 MAX 41 MIN 0 AC-FT 3,610

PEAK DISCHARGE (BASE, 45 CFS).--No peak above base.

29

06461000 Minnechaduza 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.--24 years (1948-72), 34.9 cfs (25,280 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 146 cfs May 14 (gage height, 2.51 ft); maximum gage height, 3.03 ft July 6 (backwater from culvert construction); minimum daily discharge, 6.2 cfs July 8, 10, 12, Aug. 22, 30, Sept. 6.

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 prior to July 1972 and poor thereafter. Flow regulated by powerplant 500 ft above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	37	34	28	27	44	31	67	27	15	25	18
2	20	35	27	24	22	30	46	82	28	16	35	13
3	23	34	31	26	26	44	34	72	22	16	32	23
4	30	36	32	16	25	27	31	76	38	15	35	20
5	15	33	29	24	15	41	41	90	35	11	20	13
6	18	28	32	16	24	43	36	58	43	25	25	6.2
7	23	22	30	31	26	44	31	67	38	20	20	25
8	24	36	22	32	24	35	32	53	26	6.2	20	16
9	25	25	20	29	17	34	32	67	27	18	23	16
10	14	31	32	20	30	47	37	49	32	6.2	23	16
11	17	31	25	31	25	43	26	68	36	23	20	13
12	27	31	20	26	21	34	36	58	9.6	6.2	20	16
13	15	30	26	17	29	45	31	59	27	23	11	18
14	20	30	30	15	25	40	34	82	25	8.6	18	13
15	19	29	25	23	25	41	33	75	23	18	18	13
16	17	31	30	22	38	39	44	69	24	18	11	16
17	25	39	25	20	39	38	32	51	24	35	11	16
18	33	31	32	27	30	43	42	63	28	30	18	16
19	34	35	29	30	31	40	35	47	14	16	18	11
20	35	33	25	26	42	43	35	44	23	18	13	16
21	25	25	30	29	42	35	43	39	22	20	20	11
22	31	39	25	25	39	37	33	42	17	25	6.2	20
23	19	31	32	29	40	39	39	36	22	25	11	13
24	21	34	30	26	39	39	38	46	20	25	13	8.6
25	36	33	34	15	34	49	32	30	17	25	18	20
26	16	28	23	16	37	40	41	28	12	25	13	13
27	23	31	14	24	43	40	50	39	16	56	16	20
28	27	30	16	31	40	41	50	30	16	39	11	16
29	30	35	35	23	39	39	59	39	12	42	18	16
30	22	24	26	25	-----	40	60	33	11	25	6.2	18
31	33	-----	31	17	-----	37	-----	34	-----	25	11	-----
TOTAL	742	947	852	743	894	1,231	1,144	1,693	714.6	676.2	559.4	469.8
MEAN	23.9	31.6	27.5	24.0	30.8	39.7	38.1	54.6	23.8	21.8	18.0	15.7
MAX	36	39	35	32	43	49	60	90	43	56	35	25
MIN	14	22	14	15	15	27	26	28	9.6	6.2	6.2	6.2
AC-FT	1,470	1,880	1,690	1,470	1,770	2,440	2,270	3,360	1,420	1,340	1,110	932

CAL YR 1971	TOTAL 12,635.5	MEAN 34.6	MAX 271	MIN 6.7	AC-FT 25,060
WTR YR 1972	TOTAL 10,666.0	MEAN 29.1	MAX 90	MIN 6.2	AC-FT 21,160

NIOBRARA RIVER BASIN

06461500 Niobrara River near Sparks, Nebr.

LOCATION.--Lat 42°54'10", long 100°21'40", in SE¼ 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 Minnechaduz Creek, and 6.5 miles southwest of Sparks.

DRAINAGE AREA.--8,090 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,287.57 ft above mean sea level.

AVERAGE DISCHARGE.--27 years, 806 cfs (583,900 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 1,850 cfs Nov. 1 (gage height, 3.67 ft), from reservoir flushing operations; maximum gage height, 4.12 ft Jan. 7 (backwater from ice); minimum daily discharge, 430 cfs Jan. 14.

Period of record: Maximum discharge, 10,200 cfs Mar. 5, 1949 (gage height, 6.73 ft), from rating curve extended above 3,800 cfs; maximum gage height recorded, 9.07 ft Mar. 1, 1963 (ice jam); minimum daily discharge, 100 cfs Jan. 10, 1957.

REMARKS.--Records good except those for winter period, which are poor. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541	792	777	940	700	920	577	1,230	752	641	520	458
2	619	784	762	780	640	892	560	1,140	746	600	557	466
3	526	798	754	600	600	881	587	1,120	736	661	537	487
4	535	593	763	580	620	870	576	1,030	825	588	548	488
5	511	553	760	620	680	863	578	1,030	999	564	527	474
6	508	665	757	740	740	870	565	1,040	880	537	506	510
7	482	740	745	800	780	875	563	1,000	834	535	499	496
8	474	782	663	820	820	831	560	921	749	505	494	498
9	474	749	560	840	860	807	578	885	706	512	463	478
10	466	739	600	800	900	837	572	885	671	487	476	480
11	474	739	640	820	940	818	570	969	700	508	478	471
12	508	749	600	760	980	834	621	1,030	624	514	495	470
13	450	749	640	560	1,000	850	645	1,030	756	494	474	476
14	474	749	720	430	1,040	836	829	1,080	691	478	468	473
15	466	757	780	450	1,060	604	942	1,000	677	471	464	471
16	491	819	800	600	1,100	585	881	993	687	495	459	471
17	517	821	700	920	1,180	592	854	933	778	858	460	476
18	618	820	740	880	1,180	597	983	921	750	652	497	480
19	628	806	780	740	1,180	573	933	793	763	505	474	469
20	570	786	820	660	1,260	598	911	816	769	558	466	529
21	535	787	800	700	1,220	694	855	793	699	633	466	534
22	526	793	740	800	1,180	607	833	850	715	582	458	549
23	508	781	800	780	1,150	620	828	836	702	541	450	540
24	508	767	820	700	1,100	667	770	861	726	571	458	537
25	530	768	700	480	995	659	773	804	724	616	466	554
26	604	795	520	480	1,080	619	912	780	678	553	466	558
27	682	798	450	500	1,060	640	986	809	822	567	474	570
28	817	811	500	540	1,010	615	1,120	844	710	719	466	576
29	834	813	680	600	977	604	1,220	831	646	644	466	601
30	819	764	760	680	-----	597	1,200	832	619	511	466	626
31	760	-----	880	740	-----	601	-----	771	-----	501	450	-----
TOTAL	17,455	22,867	22,011	21,340	28,032	22,456	23,382	28,857	22,134	17,601	14,948	15,266
MEAN	563	762	710	688	967	724	779	931	738	568	482	509
MAX	834	821	880	940	1,260	920	1,220	1,230	999	858	557	626
MIN	450	553	450	430	600	573	560	771	619	471	450	458
AC-FT	34,620	45,360	43,660	42,330	55,600	44,540	46,380	57,240	43,900	34,910	29,650	30,280

CAL YR 1971 TOTAL 257,688 MEAN 706 MAX 1,410 MIN 385 AC-FT 511,100

WTR YR 1972 TOTAL 256,349 MEAN 700 MAX 1,260 MIN 430 AC-FT 508,500

NIORARA RIVER BASIN

31

06462000 Niobrara River near Norden, Nebr.

LOCATION.--Lat 42°47'13", long 100°02'06", in N½SW¼ 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.--20 years, 890 cfs (644,800 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge recorded, 1,520 cfs Apr. 30 (gage height, 2.22 ft), but may have been exceeded during period of no gage height record Feb. 3-28; maximum gage height, 4.87 ft Dec. 28 (ice jam); minimum daily discharge, 454 cfs Aug. 16, 17.

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 poor. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	568	850	813	1,080	800	1,040	629	1,390	793	750	612	510
2	654	884	836	900	720	993	610	1,320	782	671	636	545
3	547	903	778	740	660	972	621	1,250	799	728	612	538
4	507	723	816	620	680	912	630	1,160	817	671	636	531
5	499	646	839	680	760	971	625	1,140	939	626	612	517
6	535	741	813	780	820	1,040	613	1,130	1,070	579	582	568
7	495	845	835	860	860	895	615	1,100	891	598	575	538
8	505	914	714	880	900	827	615	1,030	867	582	552	575
9	508	925	587	900	920	818	625	968	806	552	552	545
10	505	924	678	860	960	841	604	1,010	790	547	545	538
11	482	894	708	880	1,020	834	632	1,080	801	538	538	538
12	530	914	633	840	1,040	830	637	1,190	774	560	524	524
13	513	905	715	660	1,080	862	703	1,220	830	524	510	538
14	465	905	825	520	1,120	859	804	1,290	841	560	482	545
15	524	911	858	540	1,160	683	1,040	1,190	797	489	468	538
16	540	966	868	700	1,220	603	950	1,150	787	517	454	531
17	549	956	741	1,180	1,280	614	897	1,150	877	803	454	531
18	616	962	817	1,040	1,280	631	948	1,090	878	852	482	531
19	665	880	862	900	1,280	600	958	1,030	887	668	503	503
20	627	864	868	740	1,400	635	934	1,010	912	668	496	524
21	583	874	851	800	1,360	719	917	972	869	740	496	612
22	580	849	820	900	1,300	668	862	998	849	708	489	595
23	580	871	853	840	1,240	682	893	1,010	838	605	482	586
24	566	852	893	780	1,220	740	823	975	867	620	489	596
25	566	836	895	560	1,140	731	825	891	854	834	489	607
26	631	859	708	520	1,200	674	969	855	803	628	489	640
27	739	855	520	540	1,180	697	1,060	881	954	600	489	619
28	861	889	620	600	1,180	658	1,190	930	844	780	489	612
29	920	862	700	680	1,160	664	1,370	871	765	780	461	657
30	883	835	820	760	-----	650	1,390	873	719	605	475	670
31	930	-----	1,000	880	-----	642	-----	801	-----	590	475	-----
TOTAL	18,673	26,094	24,284	24,160	30,940	23,985	24,989	32,955	25,300	19,973	16,148	16,902
MEAN	602	870	783	779	1,067	774	833	1,063	843	644	521	563
MAX	930	966	1,000	1,180	1,400	1,040	1,390	1,390	1,070	852	636	670
MIN	465	646	520	520	660	600	604	801	719	489	454	503
AC-FT	37,040	51,760	48,170	47,920	61,370	47,570	49,570	65,370	50,180	39,620	32,030	33,530

CAL YR 1971 TOTAL 283,287 MEAN 776 MAX 1,470 MIN 400 AC-FT 561,900
WTR YR 1972 TOTAL 284,403 MEAN 777 MAX 1,400 MIN 454 AC-FT 564,100

NOTE.--No gage-height record Feb. 3-28.

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.--24 years (1948-72), 107 cfs (77,520 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 405 cfs Feb. 16 (gage height, 2.33 ft); maximum gage height, 3.28 ft Feb. 4 (backwater from ice); minimum daily discharge, 66 cfs Mar. 13.

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; 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	100	86	98	92	95	98	169	114	108	136	96
2	109	102	84	94	84	87	94	185	114	106	143	102
3	102	101	84	82	86	88	94	164	112	108	135	101
4	93	99	88	84	94	85	97	155	128	104	141	96
5	90	98	90	88	90	88	97	154	175	102	125	94
6	90	95	92	92	92	88	95	145	130	100	105	92
7	93	88	97	98	94	89	93	135	122	106	103	90
8	91	88	96	104	102	96	92	132	125	104	99	90
9	89	88	92	98	92	127	90	130	125	108	96	89
10	90	88	96	92	92	101	90	130	125	108	96	92
11	90	88	96	88	98	93	98	163	125	108	98	91
12	91	89	92	86	104	81	100	208	125	108	103	100
13	91	88	94	82	110	66	92	260	125	110	102	100
14	91	87	90	84	130	80	90	252	125	114	96	99
15	93	86	92	88	170	87	89	263	122	114	94	99
16	93	96	90	96	230	88	87	236	122	120	94	93
17	95	96	88	104	163	89	82	205	122	138	92	92
18	112	94	86	94	130	80	82	178	120	122	94	85
19	101	90	92	86	120	91	82	142	118	120	94	88
20	97	92	92	82	118	90	88	128	130	155	94	93
21	93	94	94	88	113	92	93	122	120	166	94	95
22	95	94	92	94	110	93	90	115	118	154	94	95
23	93	97	94	92	103	92	87	115	116	136	92	98
24	95	88	94	92	101	99	82	116	116	130	92	93
25	95	86	94	88	98	104	81	115	114	136	94	94
26	98	88	92	82	98	98	99	113	114	130	109	95
27	96	86	82	82	96	96	107	115	110	125	118	96
28	96	86	76	86	98	95	106	118	108	139	113	94
29	97	88	80	90	94	95	114	121	108	154	96	92
30	100	90	86	94	-----	96	138	122	106	127	94	100
31	96	-----	100	98	-----	98	-----	116	-----	131	94	-----
TOTAL	2,959	2,745	2,801	2,806	3,202	2,857	2,827	4,822	3,634	3,791	3,230	2,834
MEAN	95.5	91.5	90.4	90.5	110	92.2	94.2	156	121	122	104	94.5
MAX	112	102	100	104	230	127	138	263	175	166	143	102
MIN	89	86	76	82	84	66	81	113	106	100	92	85
AC-FT	5,870	5,440	5,560	5,570	6,350	5,670	5,610	9,560	7,210	7,520	6,410	5,620

CAL YR 1971 TOTAL 38,811 MEAN 106 MAX 274 MIN 66 AC-FT 76,980
WTR YR 1972 TOTAL 38,508 MEAN 105 MAX 263 MIN 66 AC-FT 76,380

PEAK DISCHARGE (BASE, 300 CFS).--Feb. 16 (1600) 405 cfs (2.33 ft); May 13 (1830) 309 cfs (1.86 ft).

NIORRARA 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.--23 years (1948-53, 1954-72), 132 cfs (95,630 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 809 cfs July 20 (gage height, 5.50 ft); minimum daily, 92 cfs Jan. 28.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	154	135	123	108	112	113	543	157	161	169	162
2	139	150	133	124	99	110	115	350	149	178	174	170
3	117	148	138	118	96	113	115	223	146	187	161	171
4	122	150	135	114	114	109	116	177	160	191	156	163
5	118	139	132	120	120	114	116	172	156	184	161	166
6	124	133	135	128	114	123	119	167	145	190	153	165
7	121	135	132	131	113	121	117	167	150	181	150	152
8	115	144	123	133	116	116	112	167	146	172	145	150
9	110	141	122	135	113	122	113	167	143	175	144	158
10	112	140	133	133	115	122	113	167	139	187	153	154
11	116	138	122	131	113	125	119	206	141	194	157	147
12	116	136	117	136	116	122	121	237	144	187	142	147
13	118	133	127	127	123	122	120	298	157	197	144	148
14	118	133	121	120	160	124	113	311	152	191	146	138
15	117	128	124	130	179	126	118	278	152	178	141	142
16	118	156	120	136	182	127	122	203	149	184	137	143
17	127	139	119	132	174	127	120	172	157	233	134	138
18	172	142	124	129	122	127	115	158	168	248	136	138
19	129	140	125	122	125	129	113	158	165	251	132	142
20	126	147	126	115	131	126	115	155	169	475	142	145
21	125	149	124	115	124	127	118	155	158	280	139	133
22	124	146	126	119	114	124	118	149	158	163	134	135
23	135	148	131	119	111	123	115	144	159	169	142	128
24	142	142	127	118	110	126	118	144	176	157	150	132
25	138	142	129	110	110	128	115	140	172	182	154	127
26	139	143	117	92	111	126	122	143	171	172	146	136
27	136	140	123	96	113	123	132	147	163	170	157	139
28	129	139	126	104	122	119	137	153	164	174	157	140
29	130	139	126	100	123	115	137	152	166	180	154	137
30	139	136	125	94	-----	117	163	153	162	182	159	135
31	143	-----	122	107	-----	111	-----	161	-----	160	157	-----
TOTAL	3,945	4,250	3,919	3,711	3,571	3,756	3,600	6,117	4,699	6,133	4,626	4,381
MEAN	127	142	126	120	123	121	120	197	157	198	149	146
MAX	172	156	138	136	182	129	163	543	176	475	174	171
MIN	110	128	117	92	96	109	112	140	139	157	132	127
AC-FT	7,820	8,430	7,770	7,360	7,080	7,450	7,140	12,130	9,320	12,160	9,180	8,690

CAL YR 1971 TOTAL 49,243 MEAN 135 MAX 4,444 MIN 95 AC-FT 97,670
WTR YR 1972 TOTAL 52,708 MEAN 144 MAX 543 MIN 92 AC-FT 104,500

PEAK DISCHARGE (BASE, 400 CFS).--May 1 (1400) 718 cfs (4.86 ft); July 20 (0330) 809 cfs (5.50 ft).

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.--27 years (1938-40, 1947-72), 71.1 cfs (51,510 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 803 cfs July 17 (gage height, 4.41 ft); minimum daily, 12 cfs Jan. 26-28.

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. 30 to Mar. 11; shifting-control method used May 24-29, June 20 to July 15, Aug. 15 to Sept. 30)

1.2	9.8	2.0	89
1.3	15	2.5	174
1.5	30	3.0	284
1.7	50	4.0	599

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	42	30	20	16	55	54	199	60	32	99	25
2	51	44	25	18	14	50	55	238	56	31	119	26
3	40	30	23	17	14	50	54	222	53	35	168	26
4	20	28	21	17	14	45	52	174	56	35	152	25
5	26	28	25	17	16	45	50	138	57	33	119	23
6	22	32	25	17	16	50	49	126	54	32	95	27
7	22	32	32	18	18	65	48	106	54	29	84	26
8	21	21	28	19	18	65	47	91	54	27	73	26
9	21	26	26	20	20	80	48	87	52	26	66	25
10	21	40	24	19	20	100	46	85	46	30	60	25
11	21	27	22	18	24	110	45	133	44	31	59	24
12	22	22	20	16	26	89	45	292	42	31	57	25
13	22	21	20	15	30	77	45	393	41	23	54	26
14	22	21	20	14	30	70	45	449	39	24	51	25
15	22	22	22	14	30	69	49	393	38	135	47	25
16	24	37	22	14	32	68	49	291	40	138	44	25
17	25	37	23	15	40	65	47	216	40	430	42	24
18	31	37	23	15	45	64	43	172	40	253	37	24
19	30	24	24	16	60	62	41	138	39	139	35	24
20	29	37	24	16	90	59	42	116	39	93	33	23
21	27	40	24	16	85	59	47	100	37	108	31	20
22	26	39	24	16	70	59	49	91	36	90	30	20
23	25	37	24	15	55	58	45	87	35	73	30	19
24	25	36	24	13	55	60	41	88	36	57	27	20
25	25	36	22	13	50	62	36	84	38	53	28	20
26	25	25	18	12	50	63	45	78	35	55	28	22
27	25	24	17	12	55	65	65	72	41	85	27	22
28	27	24	18	12	55	63	81	69	36	104	27	22
29	28	33	20	14	60	60	85	71	32	125	26	22
30	27	23	20	14	-----	60	111	68	31	107	25	22
31	34	-----	20	16	-----	57	-----	63	-----	92	23	-----
TOTAL	922	1,059	739	488	1,108	2,004	1,559	4,930	1,301	2,565	1,795	708
MEAN	26.5	35.3	23.9	15.7	39.2	64.6	52.0	159	43.4	82.7	57.9	23.6
MAX	51	44	35	20	90	110	111	449	60	430	168	27
MIN	21	17	17	12	14	45	36	63	31	23	23	19
AC-FT	1,630	2,100	1,470	968	2,200	3,970	3,090	9,780	2,580	5,090	3,560	1,400

CAL YR 1971 TOTAL 19,726.1 MEAN 54.0 MAX 500 MIN 2.5 AC-FT 39,130
WTR YR 1972 TOTAL 13,078.0 MEAN 52.1 MAX 449 MIN 12 AC-FT 37,840

PEAK DISCHARGE (BASE, 250 CFS).--May 14 (0045) 515 cfs (3.77 ft); July 17 (0700) 803 cfs (4.41 ft).

NIOBRARA RIVER BASIN

35

06464900 Keya Paha River near Naper, Nebr.

LOCATION.--Lat 42°55'00", long 99°05'50", in SE $\frac{1}{4}$ 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.--15 years, 139 cfs (100,700 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,890 cfs May 12 (gage height, 7.20 ft); maximum gage height, 8.67 ft Feb. 20 (backwater from ice); minimum daily discharge, 24 cfs July 15.

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 poor. Minor diversions for irrigation above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	64	70	62	30	135	95	906	83	83	164	40
2	56	64	40	56	27	145	99	991	66	83	395	43
3	56	68	35	46	33	140	97	557	61	73	423	44
4	64	72	45	43	29	135	97	288	66	62	357	46
5	54	69	58	49	32	150	92	276	100	57	334	45
6	43	60	76	56	40	200	87	263	80	51	224	49
7	40	56	64	54	41	180	78	168	243	47	174	42
8	36	54	50	58	41	180	73	151	142	43	139	46
9	35	67	52	54	48	200	75	181	114	37	121	51
10	34	68	50	56	52	280	78	188	100	37	114	52
11	35	72	45	52	52	300	83	504	97	47	103	46
12	35	76	36	50	62	247	81	1,070	86	32	97	48
13	35	75	37	41	64	192	70	1,530	93	30	83	54
14	34	73	39	35	72	173	62	1,300	100	26	75	51
15	33	71	40	38	155	193	70	684	86	24	70	50
16	34	93	35	41	195	185	74	408	83	26	62	46
17	38	99	36	41	290	174	79	396	97	316	57	41
18	66	103	41	44	250	174	73	289	319	357	53	41
19	67	81	46	47	200	158	71	181	169	302	51	40
20	55	85	49	42	290	145	70	136	117	406	45	67
21	50	81	48	42	250	139	91	112	90	428	41	52
22	51	76	50	43	175	119	77	111	78	427	45	47
23	50	77	52	46	150	115	77	124	73	219	45	41
24	49	74	50	37	145	123	76	109	130	118	43	40
25	51	74	56	30	145	146	77	96	142	87	43	43
26	52	74	30	31	150	147	113	85	86	102	43	47
27	55	71	36	29	175	144	230	95	78	120	43	49
28	52	71	48	32	160	129	246	229	84	333	40	49
29	51	65	54	32	150	112	293	145	73	584	34	49
30	62	67	58	33	-----	108	518	133	67	300	36	51
31	60	-----	60	28	-----	101	-----	102	-----	183	34	-----
TOTAL	1,481	2,200	1,486	1,348	3,503	5,069	3,402	11,808	3,203	5,040	3,588	1,410
MEAN	47.8	73.3	47.9	43.5	121	164	113	381	107	163	116	47.0
MAX	67	103	76	62	290	300	518	1,530	319	584	423	67
MIN	33	54	30	28	27	101	62	85	61	24	34	40
AC-FT	2,940	4,360	2,950	2,670	6,950	10,050	6,750	23,420	6,350	10,000	7,120	2,800

CAL YR 1971 TOTAL 42,957.25 MEAN 118 MAX 1,700 MIN .75 AC-FT 85,210
WTR YR 1972 TOTAL 43,538.00 MEAN 119 MAX 1,530 MIN 24 AC-FT 86,360

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
4-30	2230	6.82	1,360	7-18	0330	6.42	1,060
5-12	2200	7.20	1,890	7-28	0830	6.59	1,150

LOCATION.--Lat 42°48'33", long 98°30'19", in SE 1/4 sec.30, T.33 N., R.11 W., Boyd County, at Spencer powerplant dam 5 miles southeast of Spencer.

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, 1972, discharge computed as flow through powerhouse and over dam.

EXTREMES.--Current year: Maximum daily discharge, 5,260 cfs May 13; minimum daily, 392 cfs Dec. 30.
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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,060	1,510	1,480	784	952	2,050	1,230	4,290	1,290	1,260	2,170	983
2	1,390	1,460	1,200	1,070	1,080	1,810	1,210	4,300	1,270	1,230	1,970	969
3	1,420	1,420	1,080	1,150	1,200	1,750	1,170	3,360	1,260	1,410	1,790	905
4	1,190	1,450	1,500	1,190	1,210	1,610	1,210	2,570	1,390	1,110	1,560	918
5	1,080	1,320	951	1,180	1,100	1,630	1,200	2,640	1,580	1,130	2,470	819
6	813	1,030	1,490	892	1,100	1,980	1,130	2,560	1,690	957	1,520	897
7	874	1,612	1,730	899	1,110	2,490	1,110	2,260	1,880	882	1,480	889
8	908	2,470	658	1,010	1,130	2,600	1,140	1,950	1,510	894	1,070	956
9	938	1,740	426	1,190	1,130	2,670	1,190	2,000	1,320	804	1,050	868
10	888	1,470	967	1,410	1,130	2,760	1,110	1,930	1,310	781	1,010	883
11	887	1,370	970	1,540	1,130	3,330	1,180	2,660	1,400	783	1,160	824
12	896	1,400	814	1,560	1,160	3,620	1,300	3,820	1,090	754	957	929
13	877	1,410	726	1,440	1,120	2,260	1,280	5,260	1,320	738	914	1,040
14	933	1,410	740	1,080	1,180	1,930	1,050	5,020	1,250	786	890	1,010
15	867	1,400	971	751	1,150	1,970	1,320	3,810	1,210	761	824	893
16	924	2,040	1,020	552	1,500	1,900	1,470	3,070	1,300	806	752	994
17	1,010	1,860	1,050	657	2,020	1,470	1,530	2,530	1,560	1,450	719	993
18	1,070	1,860	1,110	794	1,870	1,440	1,390	2,190	1,960	1,980	693	1,240
19	1,390	1,490	1,140	983	2,030	1,330	1,530	1,910	2,000	1,690	673	1,070
20	1,210	1,550	1,130	1,250	2,120	1,320	1,610	1,790	1,810	2,750	696	1,130
21	1,140	1,500	1,220	1,410	2,390	1,380	1,660	1,770	1,500	3,040	730	1,060
22	1,050	1,480	1,390	1,500	2,010	1,320	1,530	1,380	1,400	2,020	792	923
23	1,000	1,480	1,620	1,450	1,890	1,370	1,460	1,620	1,290	1,570	854	938
24	1,020	1,480	1,540	1,430	1,860	1,340	1,450	1,580	1,490	1,320	830	917
25	1,020	1,440	1,500	1,340	1,850	1,490	1,360	1,520	2,010	1,430	864	997
26	1,000	1,440	1,430	1,160	1,840	1,440	1,610	1,360	1,430	2,220	845	1,040
27	1,270	1,480	833	881	1,990	1,620	2,320	1,480	1,350	1,560	812	1,020
28	1,270	1,500	582	667	2,290	1,460	2,150	1,730	1,370	2,160	777	987
29	1,390	1,390	396	644	2,560	1,280	2,080	1,670	1,290	2,470	785	1,070
30	1,670	1,370	392	656	-----	1,290	2,460	1,660	1,070	1,840	771	1,130
31	1,610	-----	546	784	-----	1,310	-----	1,410	-----	1,740	767	-----
TOTAL	34,065	44,832	32,602	33,304	45,102	57,220	43,440	77,100	43,			

CAL YR 1971	TOTAL	490,582	MEAN	1,344	MAX	4,960	MIN	392	AC-FT	973,100
WTR YR 1972	TOTAL	518,038	MEAN	1,415	MAX	5,260	MIN	392	AC-FT	1,028,000

NIOBARRA RIVER BASIN

37

06465500 Niobrara River near Verdel, Nebr.

LOCATION.--Lat 42°44'25", long 98°12'45", near center of N. 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.--15 years, 1,532 cfs (1,110,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,320 cfs May 13 (gage height, 5.26 ft); maximum gage height, 7.73 ft Feb. 18 (backwater from ice); minimum daily discharge, 359 cfs Dec. 9.

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 poor. Natural flow of stream affected by irrigation and power developments. Records of water temperatures and fluvial sediments for the water year 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,070	1,600	1,560	860	840	2,150	1,420	5,120	1,400	1,300	1,640	941
2	1,190	1,550	1,300	1,140	940	1,900	1,360	4,710	1,350	1,300	1,750	1,140
3	1,080	1,500	1,180	1,200	1,020	1,850	1,360	3,370	1,350	1,450	1,590	1,060
4	787	1,500	1,500	1,250	1,080	1,700	1,180	2,050	1,350	1,160	1,630	995
5	885	1,400	1,360	1,250	1,100	1,700	1,230	2,140	1,350	1,200	1,760	955
6	865	1,080	1,360	960	1,080	2,100	1,310	2,640	1,340	1,040	1,670	919
7	848	640	1,580	980	1,100	2,600	1,270	2,120	1,500	920	1,480	1,010
8	1,040	2,600	1,030	1,040	1,120	2,700	1,440	2,200	1,360	900	1,510	1,040
9	938	1,720	359	1,180	1,140	2,800	1,510	2,050	1,200	840	1,150	1,070
10	715	1,300	680	1,250	1,160	2,900	1,460	2,160	1,080	840	1,350	1,060
11	733	1,340	1,200	1,250	1,180	3,700	1,520	2,760	1,100	840	1,720	1,050
12	834	1,540	880	1,350	1,200	4,000	1,590	4,570	1,220	780	1,520	1,140
13	729	1,580	800	1,250	1,180	3,000	1,470	5,440	1,340	780	1,440	1,220
14	899	1,480	800	1,100	1,240	2,330	1,470	4,340	1,540	1,380	1,340	1,400
15	990	1,600	1,100	860	1,200	2,220	1,270	3,270	1,340	1,100	1,210	1,190
16	961	2,160	1,140	820	1,550	1,840	1,600	2,830	1,420	1,200	1,120	1,230
17	895	2,160	1,160	720	2,100	1,600	1,830	2,290	1,400	1,660	1,050	1,120
18	985	1,740	1,200	880	2,000	1,380	1,650	2,240	1,660	2,170	1,030	1,150
19	1,390	1,420	1,200	1,000	2,200	1,400	1,680	2,170	1,800	1,860	974	1,140
20	1,260	1,260	1,200	1,300	2,300	1,300	2,080	2,210	1,800	2,250	969	1,160
21	1,260	1,600	1,300	1,450	2,350	1,260	2,020	2,170	1,600	2,460	1,120	1,430
22	1,040	1,640	1,450	1,550	2,300	1,320	1,950	2,170	1,500	1,690	1,110	1,270
23	1,030	1,480	1,700	1,500	2,200	1,180	1,680	1,800	1,350	1,370	1,200	1,300
24	1,110	1,580	1,650	1,500	2,050	1,160	1,600	1,800	1,600	1,340	1,200	1,280
25	1,160	1,620	1,550	1,400	2,050	1,280	1,490	1,600	2,100	1,360	1,160	1,360
26	1,020	1,420	1,500	1,240	2,050	1,480	2,140	1,500	1,500	1,780	1,110	1,320
27	1,260	1,120	1,000	920	2,100	1,600	3,030	1,600	1,360	1,850	1,060	1,300
28	1,300	1,120	620	700	2,300	1,320	3,290	1,850	1,400	1,660	989	1,270
29	1,450	1,180	450	680	2,700	1,240	2,600	1,750	1,350	2,030	942	1,270
30	1,750	1,140	440	760	-----	1,420	3,280	1,750	1,160	1,640	817	1,280
31	1,700	-----	600	780	-----	1,540	-----	1,600	-----	1,390	811	-----
TOTAL	33,174	45,070	34,849	34,120	46,830	59,970	52,780	80,270	42,820	43,540	39,422	35,070
MEAN	1,070	1,502	1,124	1,101	1,615	1,935	1,759	2,589	1,427	1,405	1,272	1,169
MAX	1,750	2,600	1,700	1,550	2,700	4,000	3,290	5,440	2,100	2,460	1,760	1,430
MIN	715	640	359	680	840	1,160	1,180	1,500	1,080	780	811	919
AC-FT	65,800	89,400	69,120	67,680	92,890	119,000	104,700	159,200	84,930	86,360	78,190	69,560

CAL YR 1971 TOTAL 533,539 MEAN 1,462 MAX 5,400 MIN 359 AC-FT 1,058,000
WTR YR 1972 TOTAL 547,915 MEAN 1,497 MAX 5,440 MIN 359 AC-FT 1,087,000

BAZILE CREEK BASIN

06466500 Bazile Creek near Niobrara, Nebr.

LOCATION.--Lat 42°45'00", long 97°56'10", in NE¹ 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.--20 years, 89.1 cfs (64,550 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,200 cfs May 23 (gage height, 12.79 ft); maximum gage height, 19.12 ft Feb. 21 or 22 (ice jam); minimum daily discharge, 16 cfs Jan. 15.

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 poor. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	37	44	36	24	82	55	259	87	48	136	44
2	38	32	40	34	24	76	51	259	77	47	110	47
3	24	30	42	30	25	78	53	203	73	56	99	45
4	21	32	41	25	26	74	51	164	73	55	67	44
5	19	31	43	28	25	78	51	181	117	51	56	40
6	20	23	45	30	24	82	53	160	130	45	56	37
7	20	32	42	32	25	86	50	130	93	45	51	40
8	21	45	38	31	25	82	53	112	67	45	47	41
9	24	40	40	30	26	86	50	99	53	44	45	41
10	25	42	43	31	27	90	50	95	47	38	45	45
11	25	41	41	32	29	96	53	120	44	37	166	47
12	26	40	40	30	28	90	56	160	41	35	103	50
13	27	40	39	22	29	94	58	293	54	33	71	51
14	28	37	40	20	39	99	53	271	95	38	50	50
15	31	40	43	16	46	89	50	215	47	51	44	40
16	34	53	40	22	52	87	50	167	63	45	34	38
17	34	58	38	24	56	87	47	130	69	108	32	34
18	34	62	39	27	130	85	44	115	99	63	27	33
19	35	56	45	25	150	91	41	101	293	53	25	32
20	35	50	42	24	160	89	42	91	167	234	25	67
21	35	47	40	30	90	83	63	81	101	476	31	83
22	35	47	39	26	90	77	56	79	75	320	30	55
23	35	50	42	27	104	73	48	888	62	184	37	47
24	37	48	43	24	80	67	47	559	63	99	33	45
25	35	45	41	21	96	63	45	280	77	77	35	95
26	37	51	35	22	86	65	50	164	73	103	35	91
27	45	50	32	22	90	58	79	125	62	118	32	58
28	42	40	34	24	96	58	101	108	51	154	28	50
29	38	44	32	25	90	56	101	101	50	81	27	48
30	51	47	36	25	-----	58	115	101	51	60	26	45
31	34	-----	39	25	-----	60	-----	91	-----	95	31	-----
TOTAL	979	1,290	1,238	820	1,792	2,439	1,716	5,902	2,454	2,938	1,634	1,483
MEAN	31.6	43.0	39.9	26.5	61.8	78.7	57.2	190	81.8	94.8	52.7	49.4
MAX	51	62	45	36	160	99	115	888	293	476	166	95
MIN	19	23	32	16	24	56	41	79	41	33	25	32
AC-FT	1,940	2,560	2,460	1,630	3,550	4,840	3,400	11,710	4,870	5,830	3,240	2,940

CAL YR 1971 TOTAL 30,928.1 MEAN 84.7 MAX 3,030 MIN 9.4 AC-FT 61,350
WTR YR 1972 TOTAL 24,685.0 MEAN 67.4 MAX 888 MIN 16 AC-FT 48,960

PEAK DISCHARGE (BASE, 2,000 CFS).--No peak above base.

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, 479,000 acre-ft Jan. 10 (elevation, 1,208.7 ft, affected by wind); minimum, 360,000 acre-ft Apr. 16 (elevation, 1,204.4 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 1971 TO SEPTEMBER 1972

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,208.5	472,000	-
Oct. 31.....	1,208.0	461,000	-11,000
Nov. 30.....	1,208.3	471,000	+10,000
Dec. 31.....	1,207.4	442,000	-29,000
CAL YR 1971.....	-	-	-18,000
Jan. 31.....	1,208.1	464,000	+22,000
Feb. 29.....	1,205.3	380,000	-84,000
Mar. 31.....	1,205.8	395,000	+15,000
Apr. 30.....	1,205.2	380,000	-15,000
May 31.....	1,205.0	374,000	-6,000
June 30.....	1,206.3	411,000	+37,000
July 31.....	1,207.7	451,000	+40,000
Aug. 31.....	1,207.3	439,000	-12,000
Sept. 30.....	1,208.4	472,000	+33,000
WTR YR 1972.....	-	-	0

MISSOURI RIVER MAIN STEM

06467500 Missouri River at Yankton, S. Dak.

LOCATION.--Lat 42°51'58", long 97°23'37", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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, 5.2 miles (corrected) 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.--42 years, 25,420 cfs (18,420,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 61,400 cfs Aug. 17 (gage height, 23.39 ft); minimum daily, 17,300 cfs Jan. 19.
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 (revised).--Records good. Flow completely regulated by Lewis and Clark Lake 5.2 miles upstream since July 1955. (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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49,400	52,400	46,200	20,200	20,000	19,600	38,800	38,900	41,200	41,600	48,000	48,000
2	49,900	52,400	45,200	20,100	20,000	19,900	41,200	36,500	41,300	41,300	47,800	47,800
3	49,900	52,400	44,500	20,000	20,000	19,800	40,600	38,500	41,400	41,400	47,700	48,100
4	50,000	52,900	42,600	20,300	20,000	20,100	41,200	38,000	41,400	41,300	47,800	48,000
5	51,300	52,800	40,600	20,100	20,000	19,800	41,200	36,800	41,400	42,900	47,800	47,800
6	51,500	53,200	38,700	20,000	20,000	19,800	41,200	33,700	41,200	44,200	47,400	48,800
7	49,600	53,400	36,600	20,100	20,000	19,600	41,300	31,200	41,600	45,100	47,400	47,700
8	50,500	51,900	33,800	20,100	20,000	20,100	41,200	35,000	39,400	46,000	47,500	48,400
9	49,400	53,200	31,900	20,100	20,000	20,300	41,000	35,500	38,700	46,300	47,500	48,600
10	49,500	53,100	30,000	20,000	20,000	20,200	41,000	35,600	41,400	46,200	47,300	48,300
11	49,500	52,900	28,000	20,100	20,000	20,200	41,000	37,600	41,700	46,500	47,500	45,100
12	49,400	52,900	26,100	20,000	20,000	20,200	40,900	38,700	41,800	46,500	46,700	43,100
13	49,400	52,900	24,500	20,000	20,000	20,200	40,800	37,800	41,800	46,200	49,300	48,400
14	49,400	52,800	21,900	20,000	20,000	20,100	40,900	36,100	41,800	46,800	48,500	48,400
15	49,500	52,700	21,700	20,000	20,500	20,000	40,900	35,700	41,800	46,500	48,800	49,200
16	49,500	52,700	21,500	20,000	20,200	20,200	41,000	36,400	41,900	46,800	48,100	49,300
17	49,500	52,700	21,300	20,000	19,300	23,100	41,000	36,500	42,000	41,500	48,700	49,200
18	49,500	52,500	21,100	19,000	22,500	26,200	40,800	37,900	42,000	39,100	49,000	49,200
19	49,500	53,200	20,900	17,300	20,800	29,300	40,900	38,100	41,500	46,400	48,800	48,900
20	50,700	53,900	20,800	20,000	20,300	32,300	40,900	40,800	42,200	47,400	48,700	48,600
21	51,500	54,300	18,200	20,400	20,000	35,300	40,600	41,500	42,100	44,500	47,400	48,600
22	51,500	54,400	20,800	20,100	20,300	35,500	40,100	41,400	42,000	42,100	49,100	48,900
23	51,700	54,500	20,400	20,000	19,900	36,100	39,900	40,400	41,800	47,500	48,400	49,000
24	51,700	53,400	20,500	19,600	19,700	36,200	40,000	37,100	41,900	44,800	48,400	49,500
25	51,700	52,300	20,400	20,000	19,600	36,000	40,500	40,400	41,700	45,500	48,100	49,900
26	51,800	51,100	20,400	20,000	19,600	36,100	40,200	41,300	40,900	47,000	48,100	49,000
27	51,900	50,100	20,400	20,000	19,600	35,900	40,200	41,500	41,600	47,100	48,200	49,800
28	51,900	49,200	20,400	20,000	19,700	35,900	40,000	41,000	41,800	47,900	48,400	49,600
29	51,800	48,100	20,500	20,000	19,800	35,800	40,000	41,000	41,400	48,000	48,400	49,700
30	52,500	47,200	20,300	20,000	-----	32,900	40,100	40,700	41,500	47,900	48,500	50,100
31	52,500	-----	20,300	20,000	-----	37,300	-----	41,400	-----	47,900	48,400	-----
TOTAL	1,567.4M	1,571.5M	840,500	617,500	581,800	824,000	1,219.4M	1,183.0M	1,244.2M	1,400.2M	1,491.7M	1,455.0M
MEAN	50,560	52,380	27,110	19,920	20,060	26,580	40,650	38,160	41,470	45,170	48,120	48,500
MAX	52,500	54,500	46,200	20,400	22,500	37,300	41,300	41,500	42,200	48,000	49,300	50,100
MIN	49,400	47,200	18,200	17,300	19,300	19,600	38,800	31,200	38,700	39,100	46,700	43,100
AC-FT	3,109M	3,117M	1,667M	1,225M	1,154M	1,634M	2,419M	2,346M	2,468M	2,777M	2,959M	2,886M
CAL YR 1971	TOTAL 14,102,600	MEAN 38,640	MAX 54,500	MIN 14,900	AC-FT 27,970,000							
WTR YR 1972	TOTAL 13,996,200	MEAN 38,240	MAX 54,500	MIN 17,300	AC-FT 27,760,000							

M Expressed in thousands.

06486000 Missouri River at Sioux City, Iowa

LOCATION.--Lat 42°29'10", long 96°24'47", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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.--75 years, 31,900 cfs (23,110,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 55,800 cfs July 17 (gage height, 24.53 ft); maximum gage height, 25.06 ft July 21; minimum daily discharge, 14,500 cfs Jan. 15, 16; minimum gage height observed, 14.00 ft Jan. 16.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48,900	53,800	48,200	22,800	21,500	24,400	40,900	47,600	47,900	44,300	50,200	49,200
2	49,500	54,100	46,600	22,600	20,500	21,600	42,700	46,600	47,900	44,000	50,200	48,200
3	50,200	53,800	45,000	22,000	19,700	21,400	44,300	44,300	48,900	42,700	50,500	47,600
4	50,500	53,400	43,700	21,000	19,200	21,400	42,700	49,200	49,200	43,400	49,800	48,600
5	49,800	54,400	41,800	20,500	19,700	19,800	42,400	50,200	49,500	42,100	50,200	48,600
6	50,800	54,400	39,700	21,000	19,800	23,700	43,000	48,200	49,800	45,300	51,200	48,600
7	51,500	53,100	38,500	22,000	19,700	28,400	43,700	43,700	48,900	46,600	51,200	50,200
8	49,800	53,800	37,300	23,000	19,300	26,600	44,600	40,000	52,800	46,600	50,800	47,900
9	50,200	52,800	34,300	22,800	19,300	24,800	44,600	43,700	51,500	47,200	50,200	49,200
10	48,900	53,800	33,100	22,800	19,000	24,600	44,000	44,300	49,800	47,600	49,500	49,800
11	48,900	54,700	31,300	22,200	19,300	26,000	44,300	43,400	52,400	47,900	49,200	50,200
12	49,800	53,100	28,400	22,000	19,800	29,200	44,600	45,000	50,500	49,500	49,200	46,000
13	49,800	53,100	26,300	21,400	20,000	29,500	43,700	47,600	50,500	48,900	46,900	42,700
14	49,800	53,800	25,800	21,000	20,000	29,500	42,400	44,300	50,200	48,900	49,200	51,800
15	49,800	54,100	23,300	14,500	20,000	30,100	41,800	42,100	48,600	49,500	48,600	50,800
16	49,500	54,400	22,800	14,500	20,000	31,300	41,200	42,400	47,600	49,500	48,600	50,200
17	49,500	55,700	22,000	19,000	20,200	33,100	42,100	43,700	47,900	54,100	48,900	50,200
18	49,800	55,400	22,200	25,000	19,300	36,400	43,400	43,000	46,600	46,000	49,200	49,800
19	50,200	53,400	23,700	20,000	19,000	39,100	44,000	43,700	46,600	40,900	48,600	49,800
20	50,200	54,400	22,800	15,000	20,600	39,400	44,300	43,400	46,000	50,500	50,500	50,500
21	50,500	55,000	22,600	17,000	23,700	39,400	44,600	45,000	46,600	53,100	49,500	50,200
22	51,500	55,700	20,000	18,000	23,300	40,600	43,000	46,300	46,000	47,200	48,900	49,800
23	51,200	55,400	22,800	19,000	20,800	39,400	42,100	48,200	45,000	42,700	50,800	49,500
24	51,500	55,700	22,600	18,000	21,600	38,800	41,500	48,600	44,600	49,800	49,200	49,500
25	51,500	54,700	22,400	17,000	21,400	39,400	41,800	43,700	45,000	49,200	49,800	49,800
26	51,500	53,400	22,400	16,000	21,200	39,700	42,700	48,200	44,300	46,900	49,500	50,800
27	52,800	52,400	21,600	15,000	21,400	40,300	43,400	50,800	43,700	49,800	48,900	49,200
28	52,400	50,500	21,400	18,000	23,500	40,000	42,700	50,500	44,600	48,600	48,900	49,500
29	51,200	50,200	22,800	19,000	25,800	40,000	42,100	48,900	45,000	48,600	48,900	49,500
30	52,100	49,200	22,800	20,000	-----	40,000	42,400	47,900	44,000	48,900	48,900	49,800
31	53,100	-----	22,000	22,000	-----	36,700	-----	46,900	-----	49,200	49,500	-----
TOTAL	1,566.7M	1,611.7M	900,200	614,100	598,600	994,600	1,291.0M	1,421.4M	1,431.9M	1,469.5M	1,535.5M	1,477.5M
MEAN	50,540	53,720	29,040	19,810	20,640	32,080	43,030	45,850	47,730	47,400	49,530	49,250
MAX	53,100	55,700	48,200	25,000	25,800	40,600	44,600	50,800	52,800	54,100	51,200	51,800
MIN	48,900	49,200	20,000	14,500	19,000	19,800	40,900	40,000	43,700	40,900	46,900	42,700
AC-FT	3,108M	3,197M	1,786M	1,218M	1,187M	1,973M	2,561M	2,819M	2,840M	2,915M	3,046M	2,931M
CAL YR 1971	TOTAL 14,818,000	MEAN 40,600	MAX 69,800	MIN 13,500	CFSM .13	IN 1.75	AC-FT 29,390,000					
WTR YR 1972	TOTAL 14,912,700	MEAN 40,750	MAX 55,700	MIN 14,500	CFSM .13	IN 1.76	AC-FT 29,580,000					

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.--168 sq mi (revised).

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.--27 years, 36.2 cfs (26,230 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,400 cfs July 17 (gage height, 17.5 ft, from floodmark); minimum daily, 3.7 cfs Jan. 28.

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 poor.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	9.4	9.0	5.2	5.0	40	12	750	15	19	40	16
2	6.0	7.4	8.6	4.6	4.8	30	12	38	15	10	37	15
3	5.4	6.6	8.4	4.3	4.7	50	12	30	15	9.6	29	15
4	5.4	6.6	8.0	4.1	4.8	35	13	24	16	9.4	26	14
5	5.1	7.4	7.8	4.4	4.9	25	13	20	16	8.8	24	14
6	4.4	6.3	7.6	4.8	4.8	55	13	40	15	60	24	14
7	5.1	6.0	7.4	5.4	4.7	125	11	30	14	11	24	16
8	5.1	6.0	7.8	6.0	4.6	31	9.8	26	14	9.0	61	14
9	5.4	6.0	8.2	6.6	4.8	32	10	24	13	8.0	24	13
10	5.4	6.4	8.8	6.9	5.4	25	11	23	15	7.6	20	13
11	5.1	7.0	8.4	6.6	5.8	35	10	28	13	7.0	19	36
12	5.1	7.2	7.7	6.2	6.2	42	9.8	34	13	40	20	32
13	5.1	7.0	7.0	5.4	7.0	116	11	82	12	10	19	19
14	4.7	6.8	6.3	5.0	7.9	36	9.8	34	12	11	18	16
15	5.1	7.6	7.0	4.6	8.4	28	10	28	11	10	17	14
16	5.4	8.0	6.3	4.8	9.0	24	13	25	12	9.0	16	13
17	5.1	25	6.3	5.2	25	22	9.8	22	16	2,600	15	12
18	5.7	17	6.0	5.4	90	22	10	20	14	85	15	12
19	7.4	9.6	5.4	5.5	150	19	9.4	19	12	38	15	11
20	6.6	8.7	5.0	5.4	1,000	19	9.8	18	11	167	14	12
21	6.6	8.0	5.2	5.0	1,140	29	45	18	10	1,240	14	17
22	6.6	7.6	5.5	4.8	102	23	19	18	11	44	14	13
23	6.3	7.3	5.5	4.7	249	15	12	18	9.8	35	18	12
24	6.3	7.4	5.2	4.6	379	14	10	27	9.4	33	19	11
25	6.3	8.6	4.9	4.6	99	14	9.8	19	9.0	28	16	14
26	6.3	8.6	5.0	4.5	60	14	9.8	16	8.8	1,000	18	14
27	9.4	8.6	5.2	4.3	388	14	15	15	8.6	54	16	13
28	11	8.6	5.4	3.7	1,080	14	17	18	13	40	15	13
29	9.0	12	6.2	4.1	470	12	15	18	10	30	14	12
30	23	9.4	7.2	4.5	-----	12	18	16	9.0	25	14	12
31	21	-----	6.0	5.2	-----	13	-----	16	-----	50	16	-----
TOTAL	220.1	258.1	208.3	156.4	5,324.8	985	390.0	1,514	372.6	5,708.4	651	452
MEAN	7.10	8.60	6.72	5.05	184	31.8	13.0	48.8	12.4	184	21.0	15.1
MAX	23	25	9.0	6.9	1,140	125	45	750	16	2,600	61	36
MIN	4.4	6.0	4.9	3.7	4.6	12	9.4	15	8.6	7.0	14	11
AC-FT	437	512	413	310	10,560	1,950	774	3,000	739	11,320	1,290	897

CAL YR 1971 TOTAL 26,188.0 MEAN 71.7 MAX 6,840 MIN 4.4 AC-FT 51,940
WTR YR 1972 TOTAL 16,240.7 MEAN 44.4 MAX 2,600 MIN 3.7 AC-FT 32,210

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	2400	11.28	4,340	5- 1	1030	8.50	2,950
2-24	0130	4.79	1,160	7-17	Unknown	17.5	8,400
2-28	0100	6.03	1,720	7-21	0300	11.1	4,250
2-28	2330	6.30	1,850	7-26	Unknown	13.8	5,840

NOTE.--No gage-height record Nov. 8-23, Dec. 1-13, Dec. 18 to Jan. 4, Jan. 17-25, May 2-9, June 24 to July 19, July 26 to Aug. 1.

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.--23 years, 6.17 cfs (4,470 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 477 cfs Sept. 12 (gage height, 6.44 ft); maximum gage height, 7.42 ft Feb. 20 (backwater from ice); minimum daily discharge, 0.15 cfs Oct. 2, 4.
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 fair except those for winter period, which are poor.

REVISIONS.--WSP 1630: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	1.1	.90	.60	1.0	1.3	1.3	160	2.0	1.0	18	.95
2	.15	1.0	.90	.50	.90	1.2	1.2	2.6	2.0	6.9	3.0	.90
3	.16	.93	.80	.50	.80	1.6	1.4	2.0	1.8	1.2	1.8	.86
4	.15	.84	.80	.40	.60	1.7	1.4	1.6	1.9	.98	1.4	.99
5	.16	.85	.80	.40	.70	2.0	1.3	50	1.9	.96	1.3	24
6	.17	.80	.90	.40	.70	2.1	1.2	2.0	1.7	4.3	1.3	1.0
7	.17	.70	.80	.70	.70	1.9	1.2	1.6	1.5	3.4	1.3	.86
8	.16	1.0	.80	.80	.70	1.9	1.1	1.4	1.5	1.0	23	.74
9	.17	1.9	.70	.90	.60	2.0	1.1	1.2	1.4	.87	1.6	.74
10	.17	1.5	1.1	1.0	.60	2.4	1.1	1.1	1.2	12	1.3	130
11	.20	1.3	1.0	1.1	.60	3.2	1.1	1.3	1.3	24	2.4	29
12	.22	1.2	.90	.70	.60	5.0	1.1	4.9	1.5	1.5	1.7	173
13	.23	1.2	.90	.40	.60	3.2	1.2	6.9	1.3	1.3	1.1	9.8
14	.26	1.2	.70	.40	.70	3.0	1.0	4.7	1.5	1.6	1.0	3.9
15	.26	1.1	.70	.40	.70	3.0	1.2	4.2	1.3	1.3	.90	2.9
16	.29	1.1	.70	.40	.70	2.5	1.5	3.4	1.4	.99	.82	2.5
17	.33	2.3	.60	.40	.90	2.3	1.1	3.0	1.6	78	.78	2.1
18	.65	2.5	.60	.50	1.0	2.3	.95	2.7	1.5	10	.75	2.0
19	.68	1.2	.60	.60	1.1	1.8	1.0	2.5	3.6	2.0	.71	2.0
20	.55	1.0	.60	.70	5.0	1.8	1.9	2.4	28	1.6	.68	3.4
21	.47	.98	.70	.80	1.5	3.2	16	2.3	2.0	1.4	.93	13
22	.48	.91	.70	.80	1.3	2.5	2.5	2.1	1.6	1.3	.87	2.9
23	.51	.97	.70	.80	1.2	1.7	1.4	2.2	1.4	1.1	.93	2.0
24	.51	.98	.70	.80	1.1	1.5	1.2	2.2	1.4	8.0	1.0	1.5
25	.54	1.0	.60	.70	1.6	1.5	1.1	2.2	1.4	1.4	4.8	1.4
26	.60	1.0	.70	.70	1.9	1.5	1.4	2.1	1.3	5.1	2.4	1.3
27	1.9	1.0	.70	.70	2.0	1.6	4.7	2.2	1.2	1.6	1.1	1.2
28	1.6	1.0	.70	.70	1.5	1.5	3.6	2.1	1.1	1.2	.90	1.1
29	2.7	.90	1.0	.70	1.6	1.3	2.7	2.0	.94	1.2	.81	1.1
30	7.7	.90	1.5	.70	-----	1.4	1.2	2.2	.88	1.2	.95	1.8
31	3.3	-----	.80	.90	-----	1.4	-----	2.2	-----	1.1	1.1	-----
TOTAL	25.60	34.36	24.60	20.10	32.90	65.3	60.15	283.3	73.12	179.50	80.63	418.94
MEAN	.83	1.15	.79	.65	1.13	2.11	2.01	9.14	2.44	5.79	2.60	14.0
MAX	7.7	2.5	1.5	1.1	5.0	5.0	16	160	28	78	23	173
MIN	.15	.70	.60	.40	.60	1.2	.95	1.1	.88	.87	.68	.74
AC-FT	51	68	49	40	65	130	119	562	145	356	160	831

CAL YR 1971 TOTAL 2,431.26 MEAN 6.66 MAX 860 MIN .03 AC-FT 4,820
WTR YR 1972 TOTAL 1,298.50 MEAN 3.55 MAX 173 MIN .15 AC-FT 2,580

PEAK DISCHARGE (BASE, 400 cfs).--Sept. 12 (0915) 477 cfs (6.44 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.--44 years, 28,700 cfs (20,790,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 70,500 cfs Sept. 11 (gage height, 12.57 ft); maximum gage height, 12.64 ft July 18; minimum daily discharge, 5,460 cfs Jan. 18; minimum gage height, 1.57 ft Jan. 18.
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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 761: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49,500	54,500	51,100	22,200	21,600	39,100	39,000	50,500	50,000	44,200	52,400	51,000
2	49,700	53,900	50,600	22,400	21,600	30,000	43,100	64,200	49,400	46,200	54,900	51,100
3	50,200	55,000	49,100	22,500	20,800	24,200	45,900	55,200	49,700	46,400	53,700	49,900
4	50,500	54,700	47,800	21,500	19,700	24,000	46,900	49,300	50,100	45,500	51,700	48,200
5	50,700	53,800	46,400	20,700	19,200	23,800	46,000	51,500	50,800	44,500	50,200	48,700
6	50,200	55,300	44,300	21,400	19,800	22,700	45,900	56,200	51,600	44,000	50,600	48,500
7	51,600	55,600	41,900	21,700	20,200	32,200	45,700	56,300	50,600	45,000	51,500	48,600
8	52,700	53,500	40,200	22,800	20,500	35,400	45,400	47,900	51,300	46,100	52,400	49,600
9	51,900	54,600	37,400	22,600	20,400	29,800	45,500	44,100	55,600	46,900	51,700	48,500
10	51,400	53,900	34,500	22,600	20,400	28,400	45,300	45,700	54,500	48,100	50,200	49,000
11	49,200	56,400	32,500	22,600	20,000	28,000	44,000	45,000	52,100	48,800	49,800	61,900
12	48,600	55,900	30,700	22,800	20,400	30,600	44,600	45,000	54,400	52,400	49,400	61,200
13	49,800	55,200	28,700	22,500	21,000	34,500	44,700	47,500	54,000	49,600	49,100	48,300
14	49,300	53,500	27,200	18,000	21,300	35,400	44,300	49,100	52,600	49,600	47,500	43,400
15	49,700	53,900	25,700	9,980	21,400	33,900	43,600	47,100	51,000	48,900	48,700	48,400
16	49,400	53,900	23,400	9,270	21,400	33,800	43,200	44,900	50,400	49,000	50,200	50,100
17	49,700	54,800	23,300	6,900	21,900	34,800	41,200	44,200	50,200	50,400	50,700	50,000
18	50,300	56,500	22,700	5,460	22,600	36,500	42,700	45,200	53,700	66,800	49,800	50,900
19	51,600	55,600	22,600	26,000	21,700	38,600	43,500	45,000	50,800	51,400	49,300	50,500
20	52,000	55,200	23,400	29,000	21,100	39,500	43,600	45,300	50,300	44,000	48,500	50,600
21	51,700	55,600	22,900	13,400	24,400	40,200	45,300	45,200	49,000	48,600	49,300	50,900
22	51,300	55,500	22,400	14,400	26,300	41,100	45,200	45,600	47,900	53,900	49,300	50,700
23	51,800	56,200	21,100	17,500	24,900	42,800	45,300	48,200	46,600	50,800	49,700	49,700
24	51,800	56,400	22,400	19,300	23,100	41,500	45,100	50,200	46,200	46,000	49,900	49,600
25	51,800	55,900	23,100	17,700	24,400	41,100	45,500	50,900	45,300	50,600	50,700	49,200
26	52,800	54,900	23,100	16,400	23,500	40,400	45,800	48,900	44,800	55,500	50,800	50,800
27	53,200	54,800	22,800	15,000	22,800	41,000	47,400	51,900	44,100	54,500	50,600	52,200
28	53,000	54,000	22,000	17,000	24,400	41,200	47,600	54,300	43,700	53,100	50,000	50,900
29	54,100	53,700	21,900	18,400	32,800	41,500	46,100	54,400	45,400	52,700	49,800	50,400
30	54,300	52,500	22,900	19,800	-----	41,700	45,400	52,500	44,400	52,200	50,200	50,300
31	54,100	-----	22,800	21,400	-----	41,200	-----	51,600	-----	52,100	50,600	-----
TOTAL	1,587.9M	1,645.2M	950,900	583,210	643,600	1,088.9M	1,342.8M	1,532.9M	1,490.5M	1,537.8M	1,563.2M	1,513.1M
MEAN	51,220	54,840	30,670	18,810	22,190	35,130	44,760	49,450	49,680	49,610	50,430	50,440
MAX	54,300	56,500	51,100	29,000	32,800	42,800	47,600	64,200	55,600	66,800	54,900	61,900
MIN	48,600	52,500	21,100	5,460	19,200	22,700	39,000	44,100	43,700	44,000	47,500	43,400
AC-FT	3,150M	3,263M	1,886M	1,157M	1,277M	2,160M	2,663M	3,041M	2,956M	3,050M	3,101M	3,001M

CAL YR 1971 TOTAL 15,560,300 MEAN 42,630 MAX 79,700 MIN 9,000 CFSM .13 IN 1.79 AC-FT 30,860,000
WTR YR 1972 TOTAL 15,480,010 MEAN 42,300 MAX 66,800 MIN 5,460 CFSM .13 IN 1.78 AC-FT 30,700,000

M Expressed in thousands.

06674500 North Platte River at Wyoming-Nebraska State line

LOCATION.--Lat 41°59'25", long 104°02'57", in SW 1/4 SE 1/4 sec. 4, T.23 N., R.58 W., Scotts Bluff County, Nebr., on right bank 700 ft downstream from Wyoming-Nebraska State line, 650 ft upstream from bridge on Nebraska State Highway 86, and 0.5 mile south of Henry, Nebr. Prior to Feb. 23, 1972, at site 0.5 mile upstream.

DRAINAGE AREA.--26,177 sq mi, of which 5,888 sq mi (including 3,959 sq mi in Great Divide Basin in southern Wyoming) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,020 ft (from topographic map). Prior to Nov. 6, 1929, non-recording gage and Nov. 6, 1929, to Feb. 22, 1972, water-stage recorder, at sites 0.5 mile upstream at different datums.

EXTREMES.--Current year: Maximum discharge, 2,620 cfs July 2 (gage height, 3.84 ft); minimum daily, 280 cfs Jan. 29.

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

REMARKS.--Records good except those for period of no gage-height record, which are poor. 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 0.8 mile upstream. Records of chemical analyses and water temperatures for the water year 1972 are published in Part 2 of this report.

REVISIONS.--WSP 1918: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	434	393	339	325	1,660	2,220	450	1,300	2,400	1,160	849
2	733	427	392	330	322	1,930	1,970	446	1,160	2,560	1,100	842
3	684	420	392	329	320	2,030	1,890	455	1,110	2,310	1,080	786
4	663	417	390	320	328	2,120	1,770	450	1,120	2,050	1,050	779
5	628	414	380	335	325	2,160	1,460	432	1,150	1,860	988	758
6	621	404	372	340	320	2,170	1,300	432	1,040	1,620	919	737
7	593	404	368	331	320	2,120	912	470	1,050	1,460	912	737
8	579	410	362	330	320	2,130	737	490	1,080	1,400	948	659
9	583	416	350	321	320	2,150	623	550	1,220	1,270	1,020	617
10	603	422	305	320	317	2,170	583	588	1,410	1,250	1,000	572
11	728	424	313	313	315	2,170	583	635	1,490	1,280	1,020	530
12	777	431	322	310	315	2,160	588	653	1,530	1,250	1,050	540
13	753	429	335	310	315	2,190	583	647	1,640	1,220	1,060	470
14	751	424	330	306	315	2,220	588	635	1,370	1,220	1,080	455
15	664	424	322	305	312	2,250	588	623	1,940	1,260	1,160	460
16	592	426	318	303	310	2,290	588	495	1,990	1,260	1,170	480
17	554	418	305	300	310	2,240	583	432	1,970	1,250	1,140	500
18	555	412	300	300	310	2,300	561	428	1,970	1,240	1,130	572
19	527	414	328	300	310	2,310	555	428	1,920	1,220	1,180	600
20	501	404	328	300	310	2,380	525	432	1,850	1,250	1,280	600
21	486	398	332	300	310	2,390	495	405	1,940	1,240	1,240	594
22	473	398	338	301	310	2,380	475	450	2,040	1,220	1,230	561
23	461	409	340	322	323	2,360	460	641	2,210	1,140	1,240	490
24	453	409	350	336	472	2,370	446	1,220	2,320	1,220	1,350	465
25	448	411	350	329	745	2,330	423	1,830	2,390	1,280	1,240	460
26	442	408	350	325	1,120	2,350	432	1,960	2,370	1,300	1,160	470
27	443	407	350	325	1,260	2,330	530	1,890	2,260	1,350	1,090	470
28	440	399	355	310	1,380	2,280	565	1,870	2,190	1,330	1,040	520
29	441	396	350	280	1,450	2,270	500	1,870	2,180	1,280	1,010	545
30	440	400	350	300	-----	2,310	470	1,800	2,250	1,230	940	540
31	436	-----	341	315	-----	2,270	-----	1,510	-----	1,160	849	-----
TOTAL	17,806	12,409	10,716	9,785	13,709	68,850	24,004	25,617	51,950	44,420	33,836	17,659
MEAN	574	414	346	316	473	2,221	800	826	1,732	1,433	1,091	589
MAX	777	434	393	340	1,450	2,380	2,220	1,960	2,390	2,560	1,350	849
MIN	436	396	300	280	310	1,680	423	405	1,040	1,160	849	455
AC-FT	35,320	24,610	21,260	19,410	27,190	136,600	47,610	50,810	103,000	88,110	67,110	35,020

CAL YR 1971 TOTAL 732,689 MEAN 2,007 MAX 9,700 MIN 250 AC-FT 1,453,000
WTR YR 1972 TOTAL 330,760 MEAN 904 MAX 2,560 MIN 290 AC-FT 656,100

NOTE.--No gage-height record Nov. 21 to Jan. 22.

PLATTE RIVER BASIN

06677500 Horse Creek near Lyman, Nebr.

LOCATION.--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.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 4,010 ft (from topographic map). Prior to Nov. 23, 1938, nonrecording gage at site 0.5 mile upstream at different datum. Nov. 23, 1938, to Apr. 14, 1968, water-stage recorder at three sites between 135 ft and 250 ft upstream from the bridge. Nov. 23, 1938, to Apr. 12, 1946, at datum 2.00 ft higher and Apr. 13, 1946, to Apr. 16, 1967, at datum 1.00 ft higher.

AVERAGE DISCHARGE.--41 years, 62.7 cfs (45,430 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 371 cfs Sept. 8 (gage height, 4.29 ft); minimum daily, 14 cfs Jan. 31.

Period of record: Maximum discharge, 5,110 cfs June 6, 1967 (gage height, 10.82 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.4 cfs Feb. 1, 2, 1949.

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 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	57	35	25	15	24	20	40	173	82	146	288
2	159	55	35	22	18	24	20	39	142	94	162	329
3	134	53	35	20	20	25	20	34	149	114	198	340
4	113	53	34	18	23	25	20	36	180	128	204	332
5	104	51	32	15	28	25	20	39	207	124	208	332
6	97	49	30	16	28	24	20	38	252	112	217	345
7	91	48	28	17	28	23	19	38	272	111	202	329
8	86	48	25	16	20	22	18	37	256	134	175	360
9	83	47	28	17	26	22	18	134	230	123	135	361
10	80	46	25	18	27	22	18	58	225	96	121	365
11	77	45	28	18	25	21	17	72	263	87	125	353
12	73	45	26	16	26	21	19	51	289	84	107	325
13	72	43	26	17	26	21	23	47	277	82	100	313
14	69	43	29	20	27	21	25	45	270	75	99	302
15	68	42	30	29	27	21	28	43	272	80	91	294
16	66	42	30	29	29	20	26	46	277	80	92	281
17	66	42	29	18	32	20	23	71	275	88	92	260
18	68	38	30	24	29	20	22	247	290	86	92	256
19	66	35	31	24	30	19	22	267	300	85	94	233
20	64	39	33	26	31	28	22	233	287	99	102	200
21	62	40	33	28	32	30	21	217	235	102	99	235
22	61	41	33	29	29	24	19	260	217	96	109	258
23	60	41	35	30	28	23	19	258	194	91	121	277
24	60	40	36	28	27	23	18	198	174	92	181	268
25	59	40	36	26	27	22	18	169	135	104	200	266
26	59	38	32	24	26	21	40	172	105	94	206	287
27	59	38	30	20	25	19	134	180	98	94	225	285
28	59	38	28	17	25	20	89	174	97	117	229	267
29	60	37	28	16	24	20	62	163	100	127	244	242
30	57	37	26	16	-----	20	51	159	92	131	257	203
31	56	-----	25	14	-----	20	-----	157	-----	125	247	-----
TOTAL	2,493	1,311	941	653	758	690	891	3,722	6,333	3,137	4,880	8,786
MEAN	80.4	43.7	30.4	21.1	26.1	22.3	29.7	120	211	101	157	293
MAX	205	57	36	30	32	30	134	267	300	134	257	365
MIN	56	35	25	14	15	19	17	34	92	75	91	200
AC-FT	4,940	2,600	1,870	1,300	1,500	1,370	1,770	7,380	12,560	6,220	9,680	17,430

CAL YR 1971 TOTAL 39,317 MEAN 108 MAX 581 MIN 16 AC-FT 77,990
WTR YR 1972 TOTAL 34,595 MEAN 94.5 MAX 365 MIN 14 AC-FT 68,620

PLATTE RIVER BASIN

47

06678000 Sheep Creek near Morrill, Nebr.

LOCATION.--Lat 41°57'50", long 103°56'20", in NW¹/₄ 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.

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,995.04 ft above mean sea level. Prior to Apr. 14, 1940, non-recording gage at site 20 ft upstream at same datum.

AVERAGE DISCHARGE.--41 years, 53.9 cfs (39,050 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 158 cfs Sept. 25 (gage height, 2.90 ft); minimum daily, 2.0 cfs June 4-11.

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).

REMARKS.--Records good above 10 cfs and fair below. 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 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	111	99	90	86	76	75	70	73	2.9	7.5	24
2	133	108	99	90	86	76	76	70	40	3.3	6.8	28
3	131	107	99	90	86	80	76	70	2.1	3.3	10	17
4	130	108	98	88	85	79	76	70	2.0	3.3	14	17
5	130	106	98	88	86	78	77	71	2.0	3.5	14	28
6	130	105	97	87	86	77	76	71	2.0	3.5	12	27
7	130	106	96	87	86	77	77	71	2.0	3.6	10	27
8	129	106	95	87	85	78	76	71	2.0	3.5	7.1	27
9	130	105	95	87	86	78	75	77	2.0	3.5	6.5	27
10	127	105	94	87	84	79	74	74	2.0	3.8	6.5	27
11	128	105	93	87	84	79	72	70	2.0	3.8	7.5	27
12	127	106	93	87	84	78	74	68	2.2	5.0	6.8	25
13	126	105	93	87	84	76	73	69	2.2	7.4	7.5	13
14	126	104	93	87	84	75	78	68	2.2	7.5	6.5	6.5
15	126	103	92	90	83	74	76	45	2.4	6.8	6.5	6.2
16	125	103	91	90	81	74	75	5.5	2.4	6.5	7.1	6.2
17	126	102	92	90	78	74	74	5.8	2.6	6.8	7.8	6.0
18	134	102	93	90	78	74	73	6.0	2.6	6.8	8.1	5.8
19	128	102	93	90	78	74	74	6.0	2.7	6.5	9.1	6.0
20	125	102	93	90	78	82	73	6.2	2.9	6.8	11	8.4
21	122	101	93	90	78	78	71	6.2	2.9	6.8	8.4	10
22	121	101	93	90	78	78	71	6.2	2.9	6.8	9.4	9.7
23	121	100	92	90	78	78	70	6.5	2.9	6.5	11	9.7
24	119	99	91	89	77	78	70	6.5	2.7	6.5	24	9.7
25	118	98	92	87	76	78	70	6.2	2.7	8.7	21	90
26	115	98	91	86	76	78	79	6.2	2.7	17	18	130
27	117	99	90	86	76	77	86	6.5	2.4	8.7	20	130
28	117	98	90	86	74	77	78	6.5	2.7	6.8	20	130
29	114	98	90	86	75	77	75	6.2	3.0	6.5	18	126
30	110	99	89	86	-----	76	74	36	7.6	6.5	18	130
31	110	-----	89	86	-----	75	-----	77	-----	6.5	18	-----
TOTAL	3,859	3,092	2,896	2,731	2,356	2,388	2,244	1,234.5	185.8	185.4	358.1	1,134.2
MEAN	124	103	93.4	88.1	81.2	77.0	74.8	39.8	6.19	5.98	11.6	37.8
MAX	134	111	99	90	86	82	86	77	73	17	24	130
MIN	110	98	89	86	74	74	70	5.5	2.0	2.9	6.5	5.8
AC-FT	7,650	6,130	5,740	5,420	4,670	4,740	4,450	2,450	369	368	710	2,250

CAL YR 1971 TOTAL 25,498.7 MEAN 69.9 MAX 143 MIN 2.0 AC-FT 50,580

WTR YR 1972 TOTAL 22,664.0 MEAN 61.9 MAX 134 MIN 2.0 AC-FT 44,950

PLATTE RIVER BASIN

06679000 Dry Spottedtail Creek at Mitchell, Nebr.

LOCATION.--Lat 41°56'45", long 103°49'35", at southeast corner of sec.20, T.23 N., R.56 W., Scotts Bluff County, on right bank 5 ft upstream from bridge on county road, 0.5 mile west of Mitchell, and 0.8 mile upstream from mouth.

DRAINAGE AREA.--77.2 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 3,943.75 ft above mean sea level. Prior to Oct. 1, 1958, at datum 1.00 ft higher.

AVERAGE DISCHARGE.--24 years, 32.7 cfs (23,690 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 454 cfs June 2 (gage height, 4.50 ft); minimum daily, 13 cfs Jan. 26-30.

Period of record: Maximum discharge, 2,010 cfs June 24, 1951 (gage height, 8.55 ft, present datum); minimum daily, 1.6 cfs June 28, 1966.

REMARKS.--Records good. Natural flow of stream affected by 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	58	25	17	23	20	18	26	36	35	84	58
2	62	64	25	17	25	20	18	27	76	51	89	57
3	60	65	25	16	25	20	18	24	76	47	93	56
4	59	61	25	16	24	19	17	22	74	48	87	57
5	55	54	24	16	24	19	17	23	49	50	81	58
6	52	51	25	16	23	18	17	24	38	47	72	56
7	43	51	22	17	22	21	29	23	46	48	51	58
8	40	48	22	17	21	21	46	23	53	49	44	64
9	39	47	24	18	21	21	49	36	53	49	44	68
10	39	46	25	19	21	19	39	33	59	51	42	68
11	38	46	21	20	21	20	42	34	53	51	47	69
12	38	43	21	20	21	20	41	44	46	48	43	70
13	37	46	20	20	21	20	15	49	40	41	43	59
14	37	50	20	18	21	19	19	46	37	44	39	53
15	37	51	20	18	22	20	17	43	36	53	40	55
16	37	52	19	19	22	20	14	35	36	51	34	49
17	38	53	19	16	22	20	14	36	39	64	38	45
18	38	51	20	15	22	20	19	36	41	63	38	46
19	38	51	20	15	21	20	21	35	37	56	39	43
20	45	50	20	16	22	24	21	35	35	61	42	38
21	86	48	19	16	22	23	20	34	34	59	40	39
22	91	46	19	15	21	22	16	37	33	60	42	40
23	90	44	19	15	21	21	14	35	32	57	52	57
24	87	43	19	14	21	21	15	36	34	69	88	68
25	74	37	19	14	20	21	18	40	39	98	93	74
26	55	36	18	13	20	20	25	40	40	163	76	85
27	55	34	18	13	21	20	29	40	41	111	67	95
28	55	33	17	13	20	19	28	36	41	102	66	69
29	55	32	18	13	20	18	27	36	43	93	69	66
30	55	28	17	13	-----	17	27	38	34	95	67	67
31	54	-----	17	14	-----	17	-----	38	-----	86	52	-----
TOTAL	1,654	1,419	642	499	630	620	710	1,064	1,331	2,000	1,802	1,787
MEAN	53.4	47.3	20.7	16.1	21.7	20.0	23.7	34.3	44.4	64.5	58.1	59.6
MAX	91	65	25	20	25	24	49	49	76	163	93	95
MIN	37	28	17	13	20	17	14	22	32	35	34	38
AC-FT	3,280	2,810	1,270	990	1,250	1,230	1,410	2,110	2,640	3,970	3,570	3,540

CAL YR 1971 TOTAL 18,527 MEAN 50.8 MAX 148 MIN 13 AC-FT 36,750
WTR YR 1972 TOTAL 14,158 MEAN 38.7 MAX 163 MIN 13 AC-FT 28,080

PLATTE RIVER BASIN

49

06679500 North Platte River at Mitchell, Nebr.

LOCATION (revised).--Lat 41°55'38", long 103°48'48", in NE 1/4 sec. 33, T. 33 N., R. 56 W., Scotts Bluff County, near right bank 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, 2,450 cfs Mar. 20 (gage height, 5.39 ft); minimum daily, 227 cfs Aug. 18, 19.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,320	805	736	610	547	1,590	2,270	691	1,450	1,630	418	488
2	1,220	800	727	606	520	1,860	2,050	444	1,140	1,700	426	570
3	1,160	800	723	583	511	2,000	1,950	330	790	1,620	493	581
4	1,100	810	714	538	547	2,050	1,910	289	790	1,440	534	579
5	1,070	820	705	525	547	2,120	1,660	275	845	1,240	489	597
6	1,050	830	700	534	547	2,160	1,540	268	880	1,010	457	633
7	1,010	835	691	538	547	2,120	1,230	300	925	845	410	621
8	975	845	664	556	552	2,120	1,020	330	945	781	366	646
9	950	855	642	556	561	2,130	915	493	1,010	664	312	649
10	945	870	655	547	565	2,150	850	439	1,180	534	274	650
11	975	885	655	574	556	2,150	820	471	1,310	402	269	647
12	1,020	885	651	579	561	2,160	786	484	1,370	358	258	624
13	1,120	860	664	565	556	2,160	754	475	1,410	326	245	594
14	1,010	840	664	520	570	2,190	786	462	1,570	300	239	561
15	985	845	664	502	570	2,210	805	426	1,680	303	234	546
16	940	825	669	534	579	2,240	786	354	1,770	314	233	520
17	910	820	669	565	583	2,250	763	303	1,770	318	229	486
18	915	800	687	588	574	2,250	745	394	1,790	330	227	458
19	895	795	705	597	565	2,290	745	471	1,760	303	227	449
20	855	786	714	606	565	2,400	736	457	1,780	346	302	420
21	840	781	723	615	561	2,390	714	430	1,760	350	293	431
22	830	768	723	628	552	2,360	691	444	1,810	330	268	451
23	825	772	723	637	552	2,350	673	418	1,890	307	282	481
24	820	781	723	646	579	2,360	651	601	1,930	307	450	505
25	810	777	718	610	727	2,360	628	1,020	1,910	342	554	582
26	790	763	709	547	996	2,380	682	1,370	1,910	493	495	712
27	795	763	696	502	1,270	2,360	805	1,390	1,840	511	440	901
28	795	759	687	507	1,390	2,350	890	1,400	1,740	597	440	998
29	795	750	669	511	1,480	2,290	835	1,440	1,720	543	449	1,040
30	800	745	655	520	-----	2,290	795	1,450	1,650	511	472	991
31	800	-----	619	538	-----	2,280	-----	1,510	-----	430	442	-----
TOTAL	29,325	24,270	21,344	17,484	19,230	68,370	30,485	19,629	44,325	19,485	11,227	18,411
MEAN	946	809	689	564	663	2,205	1,016	633	1,478	629	362	614
MAX	1,320	885	736	646	1,480	2,400	2,270	1,510	1,930	1,700	554	1,040
MIN	790	745	619	502	511	1,590	628	268	790	300	227	420
AC-FT	58,170	48,140	42,340	34,680	38,140	135,600	60,470	38,930	87,920	38,650	22,270	36,520

CAL YR 1971 TOTAL 750,452 MEAN 2,056 MAX 11,400 MIN 282 AC-FT 1,489,000
WTR YR 1972 TOTAL 323,585 MEAN 884 MAX 2,400 MIN 227 AC-FT 641,800

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.--24 years, 36.4 cfs (26,370 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 608 cfs June 3 (gage height, 4.36 ft); minimum daily, 23 cfs June 18.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	54	41	39	34	32	29	48	63	31	94	58
2	65	53	41	40	34	32	29	37	72	40	99	54
3	65	53	41	39	34	31	29	61	97	38	102	50
4	64	52	41	40	34	30	29	66	60	37	96	57
5	62	51	41	39	34	30	29	68	46	35	86	57
6	64	51	41	39	34	30	29	69	42	33	79	61
7	62	52	40	37	34	29	28	68	40	32	46	60
8	62	51	40	36	33	29	28	43	32	29	38	75
9	65	51	40	38	34	29	28	40	40	30	37	89
10	62	50	39	40	34	29	28	40	46	33	37	87
11	65	50	40	37	34	29	28	45	28	32	37	85
12	63	50	43	37	34	30	40	44	39	30	35	85
13	61	50	44	37	33	30	64	46	36	31	33	59
14	62	48	45	36	33	30	60	46	32	31	34	38
15	60	48	45	36	32	29	47	48	31	36	35	35
16	60	48	46	37	32	29	44	46	31	34	38	35
17	59	48	46	38	31	30	42	44	28	37	39	35
18	58	46	46	38	30	31	41	32	23	36	43	35
19	58	46	42	37	30	32	40	29	30	35	41	33
20	58	46	40	37	31	28	41	31	35	47	41	33
21	57	62	40	36	31	28	40	28	35	48	38	36
22	57	62	40	36	31	29	35	29	38	45	39	36
23	56	61	40	35	31	29	32	28	40	45	39	62
24	55	61	40	35	31	29	31	34	44	45	51	75
25	54	57	40	35	32	29	31	38	42	49	45	74
26	54	56	40	34	32	30	48	37	42	80	45	72
27	53	56	39	34	31	30	56	38	31	50	46	78
28	52	56	39	34	30	26	56	39	26	51	47	78
29	52	54	40	34	30	29	53	38	27	73	51	76
30	52	43	40	34	-----	29	51	47	29	86	49	72
31	52	-----	39	34	-----	29	-----	64	-----	88	45	-----
TOTAL	1,839	1,566	1,279	1,138	938	916	1,166	1,371	1,205	1,347	1,585	1,780
MEAN	59.3	52.2	41.3	36.7	32.3	29.5	38.9	44.2	40.2	43.5	51.1	59.3
MAX	70	62	46	40	34	32	64	69	97	88	102	89
MIN	52	43	39	34	30	26	28	28	23	29	33	33
AC-FT	3,650	3,110	2,540	2,260	1,860	1,820	2,310	2,720	2,390	2,670	3,140	3,530

CAL YR 1971 TOTAL 16,407 MEAN 45.0 MAX 194 MIN 24 AC-FT 32,540
WTR YR 1972 TOTAL 16,130 MEAN 44.1 MAX 102 MIN 23 AC-FT 31,990

PLATTE RIVER BASIN

51

06681000 Winters Creek near Scottsbluff, Nebr.
(Formerly published as Winter Creek near Scottsbluff)

LOCATION.--Lat 41°51'08", long 103°37'35", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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. Prior to October 1971, published as Winter Creek near Scottsbluff.

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.--41 years, 53.4 cfs (38,690 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 533 cfs June 4 (gage height, 6.05 ft); minimum daily, 24 cfs July 12.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	56	50	42	35	44	43	40	37	46	115	103
2	96	55	50	41	34	45	44	56	36	49	115	102
3	92	55	50	42	33	45	43	110	59	52	119	103
4	88	54	49	42	33	43	43	39	198	54	117	132
5	83	54	49	42	32	44	42	40	82	62	111	118
6	81	54	49	41	31	44	43	47	58	48	99	121
7	80	55	48	40	32	45	43	38	45	41	78	93
8	75	54	48	38	37	45	44	40	32	38	60	80
9	72	53	48	37	39	45	43	60	48	33	57	76
10	69	54	48	38	38	44	43	63	68	29	48	77
11	69	53	47	39	39	45	43	69	53	25	54	77
12	69	53	45	40	40	44	42	66	67	24	46	69
13	69	53	45	39	41	45	41	65	60	28	46	66
14	66	53	45	39	42	45	45	67	54	26	44	65
15	66	55	45	38	41	45	41	68	56	31	40	65
16	65	55	45	38	40	44	40	65	52	31	49	57
17	64	53	45	38	41	45	40	67	61	47	45	49
18	64	53	44	38	40	46	40	79	58	46	46	47
19	61	52	43	37	41	46	40	89	54	43	43	47
20	60	51	42	37	41	48	40	88	53	62	53	57
21	59	50	42	37	41	46	40	80	50	104	53	61
22	58	50	42	37	41	46	40	82	50	136	49	67
23	58	51	42	37	42	46	39	80	49	142	53	72
24	58	49	42	37	42	45	39	68	54	127	79	74
25	56	49	42	38	42	45	39	52	63	182	76	82
26	56	51	42	37	42	45	47	39	67	254	76	77
27	57	50	42	37	43	45	46	36	58	255	90	66
28	56	51	42	36	46	45	42	44	53	244	99	62
29	56	51	42	36	46	44	41	46	42	208	92	62
30	57	50	41	35	-----	44	41	44	49	195	91	65
31	57	-----	42	35	-----	43	-----	36	-----	179	86	-----
TOTAL	2,120	1,577	1,396	1,188	1,135	1,391	1,257	1,863	1,766	2,841	2,229	2,292
MEAN	68.4	52.6	45.0	38.3	39.1	44.9	41.9	60.1	58.9	91.6	71.9	76.4
MAX	103	56	50	42	46	48	47	110	198	255	119	132
MIN	56	49	41	35	31	43	39	36	32	24	40	47
AC-FT	4,210	3,130	2,770	2,360	2,250	2,760	2,490	3,700	3,500	5,640	4,420	4,550

CAL YR 1971 TOTAL 21,699 MEAN 59.4 MAX 352 MIN 21 AC-FT 43,040
WTR YR 1972 TOTAL 21,055 MEAN 57.5 MAX 255 MIN 24 AC-FT 41,760

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.--38 years, 42.6 cfs (30,860 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,440 cfs July 24 (gage height, 5.62 ft, top of surge); minimum daily, 25 cfs Feb. 17-21.

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 fair except those above 200 cfs, which are poor. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	39	34	32	30	28	28	26	145	111	109	146
2	50	39	34	33	28	28	28	26	146	127	103	152
3	50	39	34	30	30	29	28	26	166	130	116	166
4	49	38	34	28	31	29	28	26	225	121	111	163
5	48	38	34	33	31	28	27	26	165	113	110	169
6	47	38	35	32	30	27	27	26	179	109	111	188
7	46	38	34	32	30	26	27	26	168	130	97	193
8	46	38	34	32	29	26	27	26	174	120	91	188
9	44	38	34	32	28	27	27	47	330	109	91	182
10	44	38	34	31	28	27	27	32	419	94	90	177
11	43	38	34	31	28	26	27	34	204	83	85	177
12	42	38	34	31	27	26	27	27	188	80	78	177
13	41	38	35	31	26	27	27	26	180	82	76	182
14	42	37	35	28	26	27	30	26	187	70	73	187
15	42	37	35	30	26	28	28	26	184	74	76	192
16	42	37	35	32	26	28	28	26	180	78	80	196
17	42	37	36	32	25	28	26	26	179	76	73	192
18	42	37	36	31	25	28	26	45	174	74	76	174
19	41	37	36	31	25	28	26	141	171	83	80	151
20	41	36	36	31	25	29	27	122	163	94	80	151
21	41	36	35	31	25	29	26	144	163	91	80	152
22	40	36	34	32	26	28	26	153	159	88	83	158
23	40	36	34	31	26	28	26	138	148	88	95	165
24	40	34	34	30	26	28	26	128	139	453	113	163
25	40	34	34	30	26	28	26	135	128	180	95	166
26	40	34	34	30	26	28	31	132	131	155	100	180
27	40	34	34	28	27	28	33	124	120	144	109	192
28	39	34	33	30	27	28	28	123	110	139	111	192
29	39	34	33	30	28	28	27	124	104	134	114	116
30	39	34	33	31	-----	28	26	134	111	123	116	70
31	39	-----	33	31	-----	28	-----	148	-----	116	116	-----
TOTAL	1,330	1,101	1,064	957	791	859	821	2,269	5,240	3,669	2,938	5,057
MEAN	42.9	36.7	34.3	30.9	27.3	27.7	27.4	73.2	175	118	94.8	169
MAX	51	39	36	33	31	29	33	153	419	453	116	196
MIN	39	34	33	28	25	26	26	26	104	70	73	70
AC-FT	2,640	2,180	2,110	1,900	1,570	1,700	1,630	4,500	10,390	7,280	5,830	10,030

CAL YR 1971 TOTAL 27,539 MEAN 75.4 MAX 868 MIN 24 AC-FT 54,560
WTR YR 1972 TOTAL 26,036 MEAN 71.3 MAX 453 MIN 25 AC-FT 51,760

06682000 North Platte River near Minatare, Nebr.

LOCATION (revised).--Main channel gage: Lat 41°47'26", long 103°31'11", in NE 1/4 sec. 13, T. 21 N., R. 54 W., Scotts Bluff County, on left bank 220 ft upstream from bridge on State Highway 326 and 1.8 miles southwest of Minatare. Nine Mile channel gage: Lat 41°47'32", long 103°31'08", in NE 1/4 sec. 13, T. 21 N., R. 54 W., Scotts Bluff County, on left bank 50 ft upstream from bridge on State Highway 326 and 750 ft north of main channel bridge.

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 (revised).--Main channel: Water-stage recorder. Datum of gage is 3,811.7 ft above mean sea level. Prior to October 1919 nonrecording gages at bridge at different datum. April 1922 to Apr. 11, 1932, nonrecording gage and Apr. 12, 1932, to July 20, 1936, water-stage recorder at bridge site at datum 1.54 ft higher. July 21, 1936, to Mar. 21, 1956, water-stage recorder at site in vicinity of present gage; July 21, 1936, to Apr. 30, 1941, at datum 2.00 ft higher, May 1, 1941, to July 19, 1955, at datum 1.00 ft higher, and July 20, 1955, to Mar. 21, 1956, at datum 0.33 ft higher. Mar. 22, 1956, to Nov. 1, 1966, water-stage recorder at site 50 ft downstream from bridge; Mar. 22 to May 22, 1956, at datum 1.00 ft higher, and May 23, 1956, to Nov. 1, 1966, at present datum.

Nine Mile channel: Water-stage recorder. Datum of gage is 3,812.3 ft above mean sea level. No records collected prior to May 16, 1934. May 16, 1934, to May 19, 1940 (irrigation seasons only), non-recording gages at bridge 50 ft downstream at datum 1.00 ft higher. May 20, 1940, to June 28, 1955, water-stage recorder 25 ft downstream at datum 1.00 ft higher. June 29 to Sept. 30, 1955, nonrecording gage 25 ft downstream at datum 0.02 ft lower. Oct. 1, 1955, to June 28, 1961, water-stage recorder at present site at datum 1.00 ft higher. June 29, 1961, to May 18, 1971, water-stage recorder and May 19 to Aug. 24, 1971, nonrecording gage at present site and datum.

EXTREMES.--Current year: Maximum discharge, 2,780 cfs Mar. 20; minimum daily, 330 cfs July 15.

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

REVISIONS.--WSP 1710: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,850	1,180	1,010	840	755	1,810	2,590	979	1,850	1,720	786	922
2	1,690	1,160	1,010	839	750	2,070	2,470	806	1,630	1,820	768	1,000
3	1,600	1,150	998	832	745	2,250	2,280	715	1,290	1,870	870	1,050
4	1,510	1,160	993	810	749	2,350	2,220	560	1,630	1,670	927	1,090
5	1,450	1,140	976	780	762	2,450	2,060	536	1,300	1,510	889	1,080
6	1,390	1,130	965	783	767	2,480	1,840	534	1,270	1,260	806	1,170
7	1,340	1,130	961	785	749	2,490	1,620	526	1,280	1,080	710	1,140
8	1,320	1,140	934	793	762	2,440	1,370	550	1,280	951	601	1,090
9	1,290	1,130	915	786	808	2,500	1,210	734	1,300	837	543	1,090
10	1,310	1,140	931	779	757	2,500	1,110	695	1,610	705	467	1,080
11	1,340	1,140	901	786	756	2,510	1,040	690	1,590	574	440	1,090
12	1,460	1,150	894	804	762	2,520	1,020	675	1,610	476	418	1,090
13	1,490	1,130	889	790	762	2,530	981	689	1,680	392	395	1,050
14	1,520	1,120	889	770	781	2,560	1,020	679	1,770	337	368	977
15	1,500	1,130	879	760	784	2,580	1,020	650	1,940	330	343	929
16	1,440	1,120	868	756	793	2,590	971	586	2,040	342	363	895
17	1,390	1,120	861	777	801	2,590	935	555	2,080	352	354	845
18	1,410	1,080	884	801	801	2,590	909	567	2,080	369	363	804
19	1,370	1,080	889	817	807	2,600	914	725	2,040	369	389	750
20	1,340	1,060	888	823	819	2,700	911	737	2,030	428	433	724
21	1,290	1,030	885	841	821	2,710	923	725	2,010	509	510	718
22	1,270	1,050	898	869	819	2,690	905	721	1,990	538	485	742
23	1,250	1,040	907	886	824	2,650	904	701	2,070	513	493	771
24	1,230	1,050	907	894	827	2,650	897	688	2,140	633	668	840
25	1,220	1,050	912	873	911	2,640	891	974	2,090	1,110	753	910
26	1,200	1,030	912	849	1,100	2,650	1,060	1,400	2,090	1,130	762	1,020
27	1,190	1,030	897	825	1,380	2,630	1,200	1,540	2,020	1,100	732	1,170
28	1,170	1,020	893	770	1,550	2,620	1,270	1,560	1,890	1,140	756	1,370
29	1,170	1,010	882	750	1,680	2,590	1,150	1,600	1,820	1,070	739	1,380
30	1,170	1,030	864	754	-----	2,560	1,070	1,660	1,790	1,020	771	1,340
31	1,170	-----	837	760	-----	2,580	-----	1,790	-----	904	776	-----
TOTAL	42,340	32,930	28,329	24,982	25,382	78,080	38,761	26,547	53,210	27,059	18,678	30,127
MEAN	1,366	1,098	914	806	875	2,519	1,292	856	1,774	873	603	1,004
MAX	1,850	1,180	1,010	894	1,680	2,710	2,590	1,790	2,140	1,870	927	1,380
MIN	1,170	1,010	837	750	745	1,810	891	526	1,270	330	343	718
AC-FT	83,980	65,320	56,190	49,550	50,350	154,900	76,880	52,660	105,500	53,670	37,050	59,760

CAL YR 1971 TOTAL 869,546 MEAN 2,382 MAX 11,800 MIN 438 AC-FT 1,725,000
WTR YR 1972 TOTAL 426,425 MEAN 1,165 MAX 2,710 MIN 330 AC-FT 845,800

PLATTE RIVER BASIN

06682500 Ninemile drain near McGrew, Nebr.

LOCATION.--Lat 41°46'15", long 103°25'18", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.21 N., R.53 W., Scotts Bluff County, on right bank 15 ft upstream from highway bridge, 0.5 mile upstream from mouth, and 1.5 miles north of McGrew.

PERIOD OF RECORD.--January 1932 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,780 ft (revised, from topographic map). Prior to Apr. 14, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--40 years, 117 cfs (84,770 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 419 cfs June 4 (gage height, 3.42 ft); minimum daily, 61 cfs Apr. 24.

Period of record: Maximum discharge, 908 cfs June 2, 1971 (gage height, 5.31 ft); minimum daily, 24 cfs July 5, 1961, May 13, 1962.

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

REVISIONS (WATER YEARS).--WSP 926: 1936.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	118	111	94	77	76	70	82	108	122	256	257
2	176	117	109	94	77	76	72	81	101	124	293	244
3	169	115	107	93	77	76	67	89	119	171	301	261
4	170	115	105	94	77	75	67	120	255	178	262	294
5	169	115	103	93	78	74	67	146	196	175	229	271
6	168	114	102	93	78	74	66	135	210	130	218	276
7	161	113	100	93	78	75	65	172	195	131	200	264
8	156	113	100	92	78	75	66	171	202	129	193	259
9	157	113	100	89	78	74	65	204	201	127	181	236
10	155	113	100	89	75	74	66	184	209	128	177	224
11	154	113	99	89	74	73	80	184	209	128	176	222
12	151	113	99	92	73	73	84	175	204	125	169	216
13	151	113	99	91	71	73	76	167	202	125	170	212
14	149	112	98	90	69	73	75	164	202	118	175	211
15	147	112	97	90	68	71	72	163	201	121	175	203
16	145	113	97	89	66	70	68	157	208	123	179	199
17	147	112	98	89	67	70	64	120	208	130	194	197
18	141	113	99	89	67	70	73	105	204	130	184	199
19	136	113	98	89	70	69	77	107	207	161	190	195
20	134	114	98	88	73	75	75	108	209	209	221	197
21	132	114	98	87	75	73	73	103	170	222	247	197
22	130	115	97	86	78	70	65	102	128	229	238	197
23	130	116	97	85	78	70	62	114	124	237	233	190
24	130	117	97	83	78	68	61	120	127	252	268	189
25	128	116	97	82	77	68	62	107	108	288	263	189
26	126	116	96	82	77	67	89	110	111	297	251	188
27	125	115	96	81	77	67	92	119	112	306	258	188
28	122	114	94	80	76	67	87	119	112	313	277	210
29	121	114	93	79	76	68	85	120	115	297	258	197
30	121	112	94	78	-----	68	85	118	117	271	253	194
31	121	-----	93	77	-----	68	-----	115	-----	267	242	-----
TOTAL	4,510	3,423	3,071	2,720	2,163	2,220	2,176	4,081	5,074	5,764	6,931	6,576
MEAN	145	114	99.1	87.7	74.6	71.6	72.5	132	169	186	224	219
MAX	188	118	111	94	78	76	92	204	255	313	301	294
MIN	121	112	93	77	66	67	61	81	101	118	169	188
AC-FT	8,950	6,790	6,090	5,400	4,290	4,400	4,320	8,090	10,060	11,430	13,750	13,040

CAL YR 1971 TOTAL 48,731 MEAN 134 MAX 574 MIN 62 AC-FT 96,660
WTR YR 1972 TOTAL 48,709 MEAN 133 MAX 313 MIN 61 AC-FT 96,610

NOTE.--No gage-height record Feb. 2 to Mar. 5.

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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.

GAGE.--Water-stage recorder and concrete flume. Datum of gage is 3,746.28 ft above mean sea level. Prior to Jan. 7, 1939, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum discharge, 90 cfs May 9 (gage height, 1.83 ft); minimum daily, 0.40 cfs Apr. 12.

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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	31	28	22	22	20	.74	23	1.9	6.1	41	44
2	37	30	28	22	20	20	.63	6.9	1.7	7.5	46	46
3	34	31	26	22	24	21	.56	1.7	2.2	7.7	50	45
4	33	31	24	21	25	21	.56	1.6	3.4	7.4	50	54
5	34	29	23	21	27	21	.56	1.6	1.6	7.1	49	52
6	34	29	23	22	28	21	.53	1.6	4.7	6.3	46	54
7	29	29	22	22	28	20	.47	1.6	6.6	5.9	41	52
8	27	29	23	22	29	20	.47	11	6.5	4.6	38	52
9	27	28	22	21	26	21	.47	49	20	4.4	34	50
10	29	28	22	21	25	21	.47	33	29	4.8	33	46
11	34	28	21	21	24	21	.42	30	8.8	5.3	34	42
12	36	27	22	21	24	21	.40	11	8.5	6.5	32	35
13	36	27	22	19	25	21	.88	1.8	9.6	5.8	32	31
14	38	27	22	19	24	21	8.5	1.4	9.6	3.5	31	30
15	38	26	21	19	22	21	6.6	.88	10	8.5	30	30
16	37	27	20	20	23	21	5.3	.87	14	18	37	29
17	36	27	21	20	22	20	4.2	.80	11	20	40	27
18	30	27	23	20	22	21	2.2	1.3	8.5	20	38	27
19	25	27	22	20	22	21	.76	2.7	6.6	19	35	24
20	25	27	22	20	22	26	1.0	3.1	5.8	23	38	23
21	26	27	22	21	22	23	.98	1.4	5.2	26	41	21
22	26	27	22	20	23	21	.87	.59	4.6	32	43	20
23	24	28	23	21	24	6.5	.87	.56	5.5	36	43	16
24	22	28	23	20	22	1.4	.80	.51	8.8	35	50	13
25	20	28	24	19	21	1.4	.88	.61	10	39	49	14
26	20	27	23	19	21	1.4	8.1	2.3	14	41	46	27
27	21	28	23	19	21	1.2	9.3	5.5	9.5	41	44	41
28	22	27	23	20	21	.97	23	5.0	5.7	40	44	41
29	23	28	23	20	21	.98	29	4.1	5.5	39	41	41
30	27	27	22	22	-----	.94	26	3.1	5.1	40	40	41
31	31	-----	21	21	-----	.84	-----	3.3	-----	39	37	-----
TOTAL	920	840	706	637	680	479.63	135.52	211.82	243.9	599.4	1,253	1,068
MEAN	29.7	28.0	22.8	20.5	23.4	15.5	4.52	6.83	8.13	19.3	40.4	35.6
MAX	39	31	28	22	29	26	29	49	29	41	50	54
MIN	20	26	20	19	20	.84	.40	.51	1.6	3.5	30	13
AC-FT	1,820	1,670	1,400	1,260	1,350	951	269	420	484	1,190	2,490	2,120
CAL YR 1971	TOTAL	8,467.64	MEAN	23.2	MAX	157	MIN	.10	AC-FT	16,800		
WTR YR 1972	TOTAL	7,774.27	MEAN	21.2	MAX	54	MIN	.40	AC-FT	15,420		

PLATTE RIVER BASIN

06684000 Red Willow Creek near Bayard, Nebr.

LOCATION.--Lat 41°42'50", long 103°15'10", in NE 1/4 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.--41 years, 85.0 cfs (61,580 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 617 cfs May 9 (gage height, 3.67 ft); minimum daily, 26 cfs Apr. 11.

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. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	96	81	72	73	61	81	61	122	92	103	134
2	174	94	81	71	70	62	79	69	93	131	127	194
3	168	91	81	70	72	63	58	76	169	206	145	206
4	158	91	81	67	72	63	57	114	262	228	127	269
5	154	91	80	70	72	63	48	224	229	213	136	237
6	155	92	80	69	70	63	43	268	151	175	120	252
7	147	93	79	68	70	63	39	234	161	159	98	247
8	139	92	79	67	69	65	38	181	179	125	87	263
9	137	93	79	67	66	65	38	271	189	97	75	292
10	132	93	77	67	66	65	34	165	178	84	70	267
11	124	92	77	67	66	64	26	160	187	79	80	237
12	123	93	76	66	63	63	31	158	166	57	79	198
13	124	91	76	65	62	64	34	180	164	53	78	157
14	127	91	74	63	62	64	34	177	159	52	78	137
15	125	92	74	67	62	64	40	171	155	67	74	152
16	123	90	74	67	62	63	44	141	158	72	83	149
17	120	90	73	69	64	62	47	95	168	79	89	131
18	116	89	73	69	64	62	52	122	177	77	86	116
19	104	89	73	69	63	62	54	141	171	70	83	109
20	102	89	72	70	62	70	64	125	146	82	92	125
21	100	87	72	71	62	68	79	86	115	86	91	114
22	99	86	72	72	63	66	79	89	109	83	92	108
23	97	87	72	73	63	72	75	73	127	84	92	106
24	95	86	74	72	62	79	70	63	193	85	122	107
25	96	86	73	70	62	80	68	87	176	106	149	110
26	97	86	73	68	61	80	94	120	232	140	145	122
27	100	84	74	69	61	71	101	112	202	137	144	123
28	97	84	75	71	62	65	100	102	188	117	151	147
29	100	84	74	72	61	65	73	134	159	117	135	134
30	102	84	73	72	-----	77	68	156	109	133	130	133
31	97	-----	72	73	-----	75	-----	174	-----	117	124	-----
TOTAL	3,781	2,686	2,344	2,143	1,887	2,069	1,748	4,329	4,994	3,403	3,285	5,076
MEAN	122	89.5	75.6	69.1	65.1	66.7	58.3	140	166	110	106	169
MAX	174	96	81	73	73	80	101	271	262	228	151	292
MIN	95	84	72	63	61	61	26	61	93	52	70	106
AC-FT	7,500	5,330	4,650	4,250	3,740	4,100	3,470	8,590	9,910	6,750	6,520	10,070

CAL YR 1971 TOTAL 42,899 MEAN 118 MAX 943 MIN 45 AC-FT 85,090
WTR YR 1972 TOTAL 37,745 MEAN 103 MAX 292 MIN 26 AC-FT 74,870

PLATTE RIVER BASIN

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06684500 North Platte River at Bridgeport, Nebr.

LOCATION.--Main channel gage: Lat 41°40'39", long 103°05'45", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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, 3,140 cfs June 25; minimum daily, 400 cfs Jan. 27.

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. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,810	1,570	1,460	1,190	1,250	1,930	2,550	1,260	1,900	1,930	1,320	1,320
2	2,590	1,530	1,460	1,150	1,040	2,110	2,580	1,160	1,740	2,090	1,220	1,570
3	2,430	1,530	1,470	1,160	1,300	2,390	2,360	1,080	1,650	2,160	1,350	1,650
4	2,310	1,530	1,470	1,090	1,040	2,530	2,260	966	2,000	2,210	1,430	1,830
5	2,240	1,540	1,440	1,140	1,080	2,640	2,220	966	1,770	2,260	1,400	1,770
6	2,160	1,540	1,400	1,220	1,120	2,720	2,040	954	1,600	1,890	1,300	1,840
7	2,110	1,540	1,350	1,220	1,120	2,690	1,930	945	1,570	1,590	1,220	1,900
8	2,070	1,560	1,340	1,240	1,120	2,650	1,730	945	1,550	1,390	1,060	1,860
9	2,040	1,550	1,340	1,220	1,130	2,640	1,550	1,300	1,560	1,220	928	1,850
10	2,040	1,560	1,350	1,170	1,100	2,580	1,460	1,340	1,860	1,070	817	1,780
11	2,020	1,560	1,320	1,150	1,090	2,620	1,340	1,260	1,930	901	777	1,800
12	2,040	1,550	1,260	1,150	1,090	2,620	1,250	1,200	1,950	727	756	1,670
13	2,000	1,550	1,250	1,090	1,100	2,640	1,190	1,180	2,020	601	719	1,650
14	2,000	1,520	1,220	978	1,100	2,650	1,220	1,140	2,030	493	678	1,570
15	2,000	1,520	1,210	1,000	1,100	2,650	1,260	1,090	2,110	481	614	1,510
16	2,000	1,540	1,230	1,080	1,080	2,600	1,190	1,030	2,280	501	650	1,430
17	1,930	1,550	1,230	1,080	1,020	2,570	1,130	915	2,320	529	708	1,340
18	1,910	1,490	1,230	1,110	1,000	2,500	1,130	894	2,340	566	706	1,320
19	1,720	1,490	1,240	1,110	1,010	2,580	1,140	932	2,280	560	716	1,290
20	1,690	1,480	1,230	1,110	1,010	2,760	1,140	993	2,200	617	773	1,280
21	1,670	1,450	1,220	1,110	996	2,890	1,130	983	2,110	778	877	1,270
22	1,630	1,440	1,260	1,130	978	2,830	1,100	990	2,020	886	936	1,260
23	1,620	1,440	1,280	1,160	1,000	2,800	1,100	896	2,040	931	906	1,260
24	1,600	1,430	1,290	1,160	978	2,780	1,100	840	2,360	939	1,050	1,340
25	1,570	1,430	1,300	1,100	1,010	2,720	1,100	928	2,390	1,300	1,210	1,440
26	1,560	1,420	1,320	600	1,110	2,720	1,330	1,240	2,530	1,510	1,250	1,580
27	1,550	1,420	1,310	400	1,360	2,690	1,430	1,650	2,450	1,660	1,220	1,790
28	1,520	1,430	1,330	700	1,610	2,650	1,480	1,700	2,270	1,630	1,280	2,040
29	1,520	1,440	1,320	900	1,760	2,640	1,420	1,740	2,080	1,570	1,240	2,220
30	1,550	1,460	1,280	1,100	-----	2,580	1,350	1,830	2,010	1,520	1,210	2,140
31	1,550	-----	1,270	1,420	-----	2,570	-----	1,870	-----	1,430	1,230	-----
TOTAL	59,450	45,060	40,680	33,438	32,402	80,940	45,210	36,217	60,920	37,940	31,551	48,570
MEAN	1,918	1,502	1,312	1,079	1,117	2,611	1,507	1,168	2,031	1,224	1,018	1,619
MAX	2,810	1,570	1,470	1,420	1,760	2,890	2,580	1,870	2,530	2,260	1,430	2,220
MIN	1,520	1,420	1,210	400	978	1,930	1,100	840	1,550	481	614	1,260
AC-FT	117,900	89,380	80,690	66,320	64,270	160,500	89,670	71,840	120,800	75,250	62,580	96,340

CAL YR 1971 TOTAL 1,051,944 MEAN 2,882 MAX 14,500 MIN 574 AC-FT 2,087,000
WTR YR 1972 TOTAL 552,378 MEAN 1,509 MAX 2,890 MIN 400 AC-FT 1,396,000

PLATTE RIVER BASIN

06685000 Pumpkin Creek near Bridgeport, Nebr.

LOCATION.--Lat 41°37'38", long 103°02'10", in SW $\frac{1}{4}$ 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.--41 years, 31.5 cfs (22,820 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 98 cfs May 9 (gage height, 2.45 ft); maximum gage height, 2.62 ft Feb. 2 (backwater from ice); minimum daily discharge, 2.1 cfs July 18, 19.

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 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	22	21	20	22	19	15	22	5.8	3.2	11
2	11	19	21	23	20	23	19	18	11	4.0	3.2	26
3	11	20	21	23	20	24	19	21	12	3.9	3.2	29
4	11	20	22	21	18	24	18	37	25	3.9	3.2	31
5	12	20	22	20	18	25	17	75	15	3.9	3.6	28
6	12	21	22	21	19	24	15	74	11	3.4	4.7	27
7	13	20	20	21	20	22	14	78	22	3.5	3.3	27
8	14	20	20	22	22	23	13	78	26	3.3	3.1	26
9	16	21	21	24	23	23	12	83	25	3.2	3.0	26
10	17	21	22	23	24	23	13	83	28	3.2	2.9	26
11	17	20	21	22	24	24	16	84	33	3.1	2.7	26
12	16	21	20	23	24	23	17	80	33	3.1	2.7	27
13	18	21	20	23	25	24	16	48	33	2.6	3.0	27
14	15	21	21	22	25	24	18	29	22	2.4	3.0	27
15	14	21	20	20	24	23	15	31	26	2.5	2.3	18
16	15	21	21	22	25	24	12	25	24	2.3	2.4	24
17	15	21	20	23	27	23	11	22	22	2.2	2.5	16
18	18	21	21	22	27	22	12	18	21	2.1	2.9	19
19	17	21	22	23	27	22	12	17	20	2.1	3.0	14
20	18	22	22	23	28	22	12	16	25	2.2	3.2	10
21	18	23	22	23	28	21	11	24	25	2.3	3.2	10
22	18	22	22	23	29	23	8.7	13	25	2.2	3.3	9.9
23	18	23	23	24	30	21	6.3	16	23	2.4	3.3	9.9
24	18	23	23	23	28	20	6.7	20	24	2.5	3.3	9.6
25	18	23	23	22	27	22	5.9	8.9	19	2.6	3.3	10
26	18	23	23	20	26	22	12	17	24	2.7	3.3	10
27	18	22	22	20	26	19	16	13	25	2.6	3.2	10
28	18	23	21	22	25	20	15	15	25	3.2	3.0	13
29	19	23	22	25	24	19	15	5.7	23	5.1	3.2	16
30	20	23	22	28	-----	19	14	6.8	9.4	3.5	3.2	16
31	20	-----	21	20	-----	20	-----	20	-----	3.0	3.2	-----
TOTAL	498	639	665	692	703	690	410.6	1,091.4	678.4	94.8	96.6	579.4
MEAN	16.1	21.3	21.5	22.3	24.2	22.3	13.7	35.2	22.6	3.06	3.12	19.3
MAX	20	23	23	28	30	25	19	84	33	5.8	4.7	31
MIN	11	19	20	20	18	19	5.9	5.7	9.4	2.1	2.3	9.6
AC-FT	988	1,270	1,320	1,370	1,390	1,370	814	2,160	1,350	188	192	1,150

CAL YR 1971 TOTAL 7,263.1 MEAN 19.9 MAX 65 MIN 2.1 AC-FT 14,410
WTR YR 1972 TOTAL 6,838.2 MEAN 18.7 MAX 84 MIN 2.1 AC-FT 13,560

PLATTE RIVER BASIN

59

06686000 North Platte River at Lisco, Nebr.

LOCATION.--Lat 41°29'18", long 102°37'25", in NW 1/4 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, 3,200 cfs Mar. 21 (gage height, 2.09 ft); maximum gage height, 3.41 ft Jan. 6 (backwater from ice); minimum daily discharge, 520 cfs July 18, 19.

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 except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,620	1,670	1,430	1,360	1,300	2,020	2,880	1,430	1,740	2,130	1,390	1,240
2	2,440	1,660	1,430	1,350	1,300	2,140	2,880	1,330	1,700	2,030	1,360	1,430
3	2,230	1,630	1,460	1,300	1,200	2,370	2,780	1,290	1,620	2,190	1,360	1,560
4	2,110	1,600	1,480	1,200	1,250	2,470	2,600	1,250	1,740	2,350	1,460	1,760
5	2,320	1,600	1,440	1,100	1,250	2,570	2,530	1,140	2,020	2,190	1,440	1,840
6	1,980	1,600	1,430	1,000	1,250	2,680	2,400	1,140	1,730	2,000	1,380	1,850
7	1,960	1,600	1,380	1,000	1,250	2,740	2,190	1,110	1,600	1,700	1,270	1,980
8	1,920	1,600	1,320	1,200	1,080	2,740	2,030	1,100	1,530	1,470	1,160	1,970
9	1,880	1,600	1,360	1,250	1,090	2,800	1,800	1,400	1,550	1,320	981	1,970
10	1,860	1,600	1,430	1,150	1,090	2,860	1,660	1,560	1,620	1,210	850	1,920
11	1,850	1,620	1,390	1,100	1,110	2,900	1,530	1,480	1,940	1,050	770	2,000
12	1,850	1,600	1,350	1,000	1,120	2,900	1,420	1,410	1,940	920	710	1,940
13	1,880	1,600	1,310	900	1,130	2,900	1,360	1,350	1,940	810	650	1,850
14	1,910	1,560	1,310	950	1,140	2,940	1,360	1,300	1,980	700	600	1,730
15	1,920	1,550	1,310	1,000	1,160	2,960	1,420	1,270	2,000	690	580	1,590
16	1,920	1,570	1,300	1,050	1,180	2,960	1,360	1,230	2,680	590	560	1,530
17	1,960	1,590	1,260	1,200	1,200	2,960	1,270	1,110	2,590	540	580	1,480
18	1,980	1,550	1,300	1,300	1,190	2,940	1,230	1,100	2,590	520	620	1,430
19	1,880	1,520	1,300	1,500	1,200	2,980	1,210	1,000	2,490	520	590	1,380
20	1,800	1,510	1,310	1,550	1,210	3,030	1,230	990	2,490	580	600	1,310
21	1,790	1,510	1,300	1,500	1,230	3,160	1,200	1,000	2,470	670	680	1,250
22	1,760	1,500	1,310	1,400	1,230	3,110	1,180	1,050	2,370	790	770	1,250
23	1,760	1,530	1,370	1,400	1,240	3,070	1,170	950	2,370	890	790	1,260
24	1,740	1,550	1,410	1,200	1,240	3,030	1,160	920	2,620	970	780	1,300
25	1,730	1,590	1,410	950	1,230	3,000	1,170	890	2,620	1,010	920	1,350
26	1,720	1,590	1,410	900	1,250	3,000	1,580	1,000	2,820	1,400	1,110	1,390
27	1,690	1,550	1,390	800	1,430	2,980	1,760	1,390	2,660	1,590	1,110	1,460
28	1,700	1,500	1,380	950	1,700	2,980	1,700	1,640	2,470	1,640	1,100	1,600
29	1,670	1,480	1,390	1,100	1,900	3,000	1,640	1,720	2,280	1,590	1,190	1,860
30	1,720	1,460	1,350	1,150	-----	3,000	1,550	1,720	2,100	1,480	1,160	1,840
31	1,700	-----	1,350	1,200	-----	2,920	-----	1,720	-----	1,440	1,100	-----
TOTAL	58,950	47,090	42,370	36,010	36,150	88,110	51,250	38,990	64,270	38,980	29,621	48,320
MEAN	1,902	1,570	1,367	1,162	1,247	2,842	1,708	1,258	2,142	1,257	956	1,611
MAX	2,620	1,670	1,480	1,550	1,900	3,160	2,880	1,720	2,820	2,350	1,460	2,000
MIN	1,670	1,460	1,260	800	1,080	2,020	1,160	890	1,530	520	560	1,240
AC-FT	116,900	93,400	84,040	71,430	71,700	174,800	101,700	77,340	127,500	77,320	58,750	95,840
CAL YR 1971	TOTAL 986,376			MEAN 2,702	MAX 11,700	MIN 500	AC-FT 1,956,000					
WTR YR 1972	TOTAL 580,111			MEAN 1,585	MAX 3,160	MIN 520	AC-FT 1,151,000					

PLATTE RIVER BASIN

06687000 Blue Creek near Lewellen, Nebr.

LOCATION.--Lat 41°20'07", long 102°10'21", in NE $\frac{1}{4}$ 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.

DRAINAGE AREA.--1,120 sq mi, approximately, of which about 80 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 3,310.04 ft above mean sea level. See WSP 1918 for history of changes prior to Apr. 10, 1958.

AVERAGE DISCHARGE.--42 years, 70.0 cfs (50,720 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 140 cfs June 27 (gage height, 3.94 ft); maximum gage height, 5.81 ft Jan. 29 (backwater from ice); minimum daily discharge, 0.15 cfs Aug. 18-21.

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.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	94	90	99	45	94	83	95	46	68	.44	3.9
2	43	93	90	99	45	93	85	86	31	69	.44	33
3	39	91	91	75	55	94	84	88	19	70	6.3	35
4	44	93	90	76	60	92	85	88	47	71	12	35
5	55	92	90	95	70	91	85	86	72	69	6.2	36
6	60	91	90	95	75	93	85	84	76	42	4.6	36
7	51	90	89	95	90	92	85	82	66	16	3.3	36
8	44	92	78	100	100	90	87	82	58	2.2	2.0	34
9	42	91	75	105	100	92	86	90	56	1.2	1.6	36
10	41	94	85	110	95	93	89	91	55	1.1	.72	39
11	43	97	90	105	100	93	91	94	53	.98	.62	40
12	43	96	90	110	105	93	91	99	51	.72	.85	41
13	50	94	92	90	105	92	90	90	47	2.7	.44	41
14	59	96	91	85	109	92	88	88	41	1.8	.62	43
15	58	96	91	90	109	91	90	86	32	.85	.62	45
16	58	98	91	95	110	90	90	86	31	.30	.25	44
17	61	97	96	90	109	90	88	86	31	.30	.20	37
18	105	94	92	90	106	89	87	83	29	.25	.15	27
19	83	94	93	93	106	90	85	81	37	.25	.15	20
20	64	94	93	96	107	90	88	87	20	.30	.15	27
21	64	96	92	93	105	90	88	85	11	5.4	.15	24
22	64	96	93	91	102	89	86	77	2.5	7.5	.52	24
23	64	96	94	92	100	86	85	67	2.2	5.8	1.1	18
24	64	96	100	91	98	90	77	57	2.0	5.8	2.0	8.2
25	66	96	100	78	97	89	67	55	25	5.0	3.9	8.7
26	69	94	100	70	97	88	81	50	116	.72	3.9	9.6
27	71	93	93	75	97	85	101	45	122	.30	5.4	9.6
28	77	92	95	70	100	85	100	41	83	.38	3.6	8.9
29	89	91	95	60	100	85	102	41	73	.38	1.2	9.8
30	91	91	100	50	-----	85	98	36	69	.38	.52	10
31	93	-----	98	45	-----	85	-----	42	-----	.30	.38	-----
TOTAL	1,902	2,818	2,847	2,708	2,697	2,791	2,627	2,348	1,403.7	449.91	64.32	819.7
MEAN	61.4	93.9	91.8	87.4	93.0	90.0	87.6	75.7	46.8	14.5	2.07	27.3
MAX	105	98	100	110	110	94	102	99	122	71	12	45
MIN	39	90	75	45	45	85	67	36	2.0	.25	.15	3.9
AC-FT	3,770	5,590	5,650	5,370	5,350	5,540	5,210	4,660	2,780	892	128	1,630

CAL YR 1971 TOTAL 25,454.01 MEAN 69.7 MAX 126 MIN 0 AC-FT 50,490
WTR YR 1972 TOTAL 23,475.63 MEAN 64.1 MAX 122 MIN .15 AC-FT 46,560

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 W $\frac{1}{2}$ 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, 5,020 cfs June 26; minimum daily, 506 cfs July 19.
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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,530	1,850	1,720	1,240	1,160	2,060	3,080	1,810	1,860	1,990	1,460	1,120
2	2,490	1,780	1,700	1,200	1,210	2,170	3,040	1,590	1,830	2,040	1,380	1,350
3	2,280	1,800	1,700	950	1,190	2,310	3,040	1,470	1,730	2,050	1,390	1,490
4	2,120	1,840	1,720	650	1,170	2,490	2,810	1,360	1,960	2,330	1,440	1,770
5	2,080	1,820	1,700	670	1,210	2,590	2,610	1,240	2,230	2,390	1,560	1,860
6	2,070	1,800	1,680	760	1,250	2,730	2,520	1,140	2,280	2,220	1,520	1,890
7	2,030	1,800	1,660	950	1,280	2,820	2,370	1,130	1,870	1,970	1,420	1,920
8	2,000	1,790	1,200	1,150	1,320	2,860	2,120	1,120	1,680	1,630	1,320	1,960
9	1,920	1,830	980	1,430	1,330	2,880	1,940	1,480	1,620	1,410	1,160	1,950
10	1,960	1,850	1,040	1,700	1,310	2,980	1,780	1,730	1,660	1,260	1,010	1,930
11	1,960	1,840	1,050	1,690	1,340	3,010	1,680	1,770	1,820	1,080	883	1,890
12	1,950	1,820	1,090	1,360	1,380	3,010	1,640	1,660	1,950	955	772	1,960
13	1,960	1,830	1,190	1,360	1,420	2,980	1,470	1,580	1,990	818	654	1,860
14	2,040	1,820	1,240	1,140	1,420	3,030	1,460	1,480	2,050	710	576	1,780
15	2,090	1,830	1,260	1,230	1,430	3,040	1,490	1,400	2,030	693	541	1,720
16	2,140	1,870	1,270	1,300	1,460	2,990	1,470	1,380	2,270	613	524	1,690
17	2,160	1,820	1,350	1,410	1,450	2,970	1,430	1,320	2,550	549	522	1,600
18	2,380	1,780	1,420	1,510	1,440	2,960	1,410	1,170	2,420	518	549	1,520
19	2,170	1,720	1,490	1,540	1,430	3,040	1,370	1,060	2,390	506	570	1,450
20	2,050	1,720	1,540	1,600	1,440	3,080	1,360	1,090	2,330	536	587	1,380
21	1,970	1,680	1,520	1,660	1,440	3,250	1,380	1,150	2,320	664	630	1,290
22	1,940	1,660	1,500	1,620	1,430	3,310	1,340	1,150	2,280	662	650	1,220
23	1,960	1,650	1,550	1,630	1,440	3,280	1,300	1,140	2,200	704	712	1,260
24	1,950	1,650	1,580	1,600	1,460	3,280	1,220	1,070	2,430	855	720	1,270
25	1,940	1,660	1,650	1,100	1,450	3,190	1,160	1,020	3,090	925	745	1,320
26	1,920	1,660	1,720	550	1,420	3,150	1,720	988	3,820	938	838	1,360
27	1,920	1,650	1,600	540	1,510	3,120	2,160	1,280	3,130	1,330	959	1,440
28	1,890	1,670	1,500	710	1,680	3,130	2,140	1,640	2,670	1,720	993	1,530
29	1,900	1,660	1,410	820	1,940	3,160	1,920	1,720	2,330	1,660	1,020	1,750
30	1,960	1,700	1,350	920	-----	3,160	1,940	1,790	2,110	1,570	1,170	2,000
31	1,960	-----	1,270	1,030	-----	3,130	-----	1,840	-----	1,510	1,000	-----
TOTAL	63,690	52,850	44,650	37,020	40,410	91,160	56,370	42,768	66,900	38,806	29,275	48,530
MEAN	2,055	1,762	1,440	1,194	1,393	2,941	1,879	1,380	2,230	1,252	944	1,618
MAX	2,530	1,870	1,720	1,700	1,940	3,310	3,080	1,840	3,820	2,390	1,560	2,000
MIN	1,890	1,650	980	540	1,160	2,060	1,160	988	1,620	506	522	1,120
AC-FT	126,300	104,800	88,560	73,430	80,150	180,800	111,800	84,830	132,700	76,970	58,070	96,260

CAL YR 1971 TOTAL 1,028,712 MEAN 2,818 MAX 12,400 MIN 530 AC-FT 2,040,000
WTR YR 1972 TOTAL 612,429 MEAN 1,673 MAX 3,820 MIN 506 AC-FT 1,215,000

PLATTE RIVER BASIN

06690000 Lake McConaughy near Keystone, Nebr.

LOCATION.--Lat 41°12'45", long 101°40'03", in NW¼SW¼ 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, 1,838,000 acre-ft May 2-5 (elevation, 3,266.5 ft); minimum observed, 1,464,000 acre-ft Sept. 29, 30 (elevation, 3,253.5 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 1971 TO SEPTEMBER 1972

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,261.1	1,676,000	-
Oct. 31.....	3,263.2	1,738,000	+62,000
Nov. 30.....	3,264.0	1,762,000	+24,000
Dec. 31.....	3,263.1	1,735,000	-27,000
CAL YR 1971.....	-	-	+93,000
Jan. 31.....	3,262.4	1,714,000	-21,000
Feb. 29.....	3,262.7	1,723,000	+9,000
Mar. 31.....	3,264.1	1,765,000	+42,000
Apr. 30.....	3,266.3	1,832,000	+67,000
May 31.....	3,264.0	1,762,000	-70,000
June 30.....	3,264.0	1,762,000	0
July 31.....	3,259.0	1,616,000	-146,000
Aug. 31.....	3,255.1	1,507,000	-109,000
Sept. 30.....	3,253.5	1,464,000	-43,000
WTR YR 1972.....	-	-	-212,000

PLATTE RIVER BASIN

63

06690500 North Platte River near Keystone, Nebr.

LOCATION.--Lat 41°12'30", long 101°37'50", in SW $\frac{1}{4}$ 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 Keystone.

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

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.

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

EXTREMES.--Current year: Maximum discharge, 3,100 cfs May 15 (gage height, 5.58 ft); minimum daily, 0.77 cfs Feb. 2.

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 trans-mountain 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.

REVISIONS (WATER YEARS).--WSP 1390: 1942, 1946-47. WSP 1630: 1958. WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	574	1,010	1.9	1.7	1.4	145	1,370	578	239	1,820	1,430	1,500
2	623	1,010	2.2	1.8	.77	320	1,480	353	238	1,970	1,260	1,340
3	634	971	2.4	1.8	1.9	292	1,360	1,090	236	1,950	1,060	1,030
4	678	985	2.6	1.8	4.0	333	698	1,410	252	1,950	860	899
5	694	978	2.8	1.7	6.2	320	457	2,180	218	1,930	603	887
6	711	894	3.0	1.7	4.4	276	351	2,310	235	1,900	557	974
7	706	845	3.1	1.5	3.6	493	133	2,310	221	1,920	569	693
8	694	824	3.0	1.4	2.9	689	9.4	2,310	221	2,020	689	415
9	694	788	2.8	1.3	2.7	689	5.7	2,330	215	1,970	615	396
10	645	766	2.6	1.2	3.4	689	5.0	2,420	230	1,950	564	375
11	584	722	2.4	1.2	4.0	689	4.4	2,740	239	1,920	558	356
12	606	716	2.3	1.1	12	680	16	2,680	272	2,020	550	350
13	750	777	2.2	1.1	11	680	5.4	2,750	317	2,120	556	349
14	810	574	2.1	1.0	16	689	5.0	2,880	322	2,120	604	345
15	831	650	2.1	1.0	4.9	698	4.4	2,920	338	2,120	874	342
16	838	662	2.0	.90	45	689	3.4	2,720	334	2,070	1,120	338
17	845	672	1.9	.85	37	689	3.1	2,390	336	2,070	1,260	331
18	887	929	1.8	.86	4.9	673	2.6	2,140	350	2,080	1,510	331
19	838	1,040	1.7	.86	6.2	698	203	1,970	353	2,110	1,880	322
20	859	915	1.6	.86	9.7	734	332	1,670	362	2,070	1,870	312
21	859	810	1.5	22	18	770	342	1,480	366	1,910	1,860	308
22	866	750	1.5	32	7.6	770	323	1,220	381	1,910	1,840	291
23	866	711	1.5	18	7.6	781	327	709	523	1,900	1,810	284
24	894	894	1.5	29	16	803	320	611	790	1,840	1,810	280
25	901	612	1.5	16	13	781	309	583	1,110	1,700	1,800	265
26	915	526	1.6	15	13	792	362	575	1,340	1,680	1,780	265
27	915	2.0	1.6	14	51	792	346	565	1,330	1,700	1,760	263
28	950	2.0	1.6	13	48	792	336	562	1,340	1,580	1,750	265
29	957	1.9	1.6	9.7	11	836	342	470	1,410	1,480	1,680	264
30	1,030	1.9	1.7	7.1	-----	1,030	371	311	1,630	1,540	1,500	150
31	971	-----	1.7	4.0	-----	1,120	-----	239	-----	1,520	1,500	-----
TOTAL	24,625	21,038.8	63.8	205.43	367.17	20,432	9,826.4	49,476	15,748	58,840	38,079	14,520
MEAN	794	701	2.06	6.63	12.7	659	328	1,596	525	1,898	1,228	484
MAX	1,030	1,040	3.1	32	51	1,120	1,480	2,920	1,630	2,120	1,880	1,500
MIN	574	1.9	1.5	.85	.77	145	2.6	239	215	1,480	550	150
AC-FT	48,840	41,730	127	407	728	40,530	19,490	98,140	31,240	116,700	75,530	28,800

CAL YR 1971 TOTAL 516,647.48 MEAN 1,415 MAX 8,490 MIN .99 AC-FT 1,025,000
WTR YR 1972 TOTAL 253,221.60 MEAN 692 MAX 2,920 MIN .77 AC-FT 502,300

PLATTE RIVER BASIN

65

06692000 Birdwood Creek near Hershey, Nebr.

LOCATION.--Lat 41°13'20", long 101°04'12", in NE 1/4 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.

DRAINAGE AREA.--1,000 sq mi, approximately, of which about 80 sq mi contributes directly to surface runoff.

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

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

AVERAGE DISCHARGE.--41 years, 153 cfs (110,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 516 cfs July 28 (gage height, 2.01 ft); maximum gage height, 3.60 ft Jan. 15 (backwater from ice); minimum daily discharge, 100 cfs Jan. 29.

Period of record: Maximum discharge, 1,770 cfs Apr. 1, 1949 (gage height, 4.35 ft), from rating curve extended above 680 cfs; maximum gage height, 5.12 ft Dec. 15, 1940 (backwater from ice); minimum daily discharge, 61 cfs Jan. 19, 1935, Apr. 7, 1938.

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

REVISIONS (WATER YEARS).--WSP 1390: 1948(M), 1949, 1951-52(M). WRD Nebr. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	181	164	163	140	163	161	182	119	132	139	120
2	145	175	163	168	150	160	165	152	116	132	136	128
3	143	167	163	160	140	169	162	153	116	133	135	121
4	141	164	164	160	130	163	164	152	122	133	133	122
5	144	163	162	150	140	162	166	144	124	129	132	121
6	145	157	162	160	150	169	165	146	125	127	132	139
7	146	154	154	172	160	164	166	145	143	129	127	133
8	145	153	150	183	150	158	165	149	123	126	128	130
9	143	147	155	181	160	163	165	162	120	124	124	130
10	145	144	159	177	170	166	169	168	122	124	120	131
11	145	150	160	171	170	165	167	189	125	118	121	129
12	148	150	155	171	170	166	169	199	122	115	119	129
13	146	151	157	169	170	164	160	171	122	112	118	130
14	148	151	158	150	170	166	158	163	122	111	117	128
15	149	153	158	140	175	167	156	161	122	114	116	127
16	151	162	156	160	176	163	162	159	182	112	115	128
17	156	159	158	175	181	166	163	149	160	121	114	127
18	203	156	160	160	169	158	160	139	157	120	113	126
19	170	152	162	158	173	162	160	137	148	118	112	129
20	165	159	155	160	174	164	162	136	137	124	113	136
21	167	161	155	158	174	161	165	138	133	130	114	131
22	166	160	159	156	164	162	167	154	133	121	112	130
23	167	162	160	163	167	162	165	153	134	119	113	131
24	165	159	159	167	167	183	165	154	141	121	113	130
25	164	166	164	154	169	168	166	143	141	123	114	128
26	165	164	163	140	166	167	178	134	144	133	115	129
27	167	164	156	120	171	161	195	132	141	132	118	128
28	164	163	159	110	174	159	198	130	137	333	118	131
29	165	164	161	100	175	159	180	126	134	167	119	135
30	173	165	165	120	-----	161	186	123	134	147	120	145
31	179	-----	165	140	-----	163	-----	122	-----	139	119	-----
TOTAL	4,867	4,776	4,941	4,816	4,745	5,084	5,030	4,665	3,999	4,119	3,739	3,882
MEAN	157	159	159	155	164	164	168	150	133	133	121	129
MAX	203	181	165	183	181	183	198	199	182	333	139	145
MIN	141	144	150	100	130	158	156	122	116	111	112	120
AC-FT	9,650	9,470	9,800	9,550	9,410	10,080	9,980	9,250	7,930	8,170	7,420	7,700

CAL YR 1971 TOTAL 56,496 MEAN 155 MAX 356 MIN 110 AC-FT 112,100
WTR YR 1972 TOTAL 54,663 MEAN 149 MAX 333 MIN 100 AC-FT 108,400

PLATTE RIVER BASIN

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

LOCATION.--Lat 41°09'40", long 100°47'25", in NE¼NE¼ 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.--18 years, 62.7 cfs (45,430 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 254 cfs July 27 (gage height, 2.53 ft); minimum daily, 25 cfs Jan. 27, Mar. 19-21.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	52	41	33	28	27	48	73	80	98	111	165
2	75	52	40	32	28	27	44	70	84	118	111	161
3	71	51	40	31	31	27	47	46	80	132	137	151
4	69	51	39	32	31	27	50	53	87	114	134	155
5	67	50	39	32	32	27	36	53	89	101	128	157
6	66	49	39	32	31	27	30	48	92	96	129	162
7	66	50	37	32	31	26	45	52	103	85	134	153
8	64	50	36	33	31	26	37	67	84	85	114	138
9	63	49	37	33	30	26	34	73	76	88	106	134
10	62	48	37	32	30	26	32	79	75	93	103	132
11	62	48	36	32	31	26	28	82	86	88	107	122
12	61	47	36	32	31	26	38	100	80	90	106	141
13	60	47	36	31	30	26	42	106	80	96	107	132
14	59	45	36	28	30	26	45	111	87	94	95	126
15	58	46	36	30	30	26	52	109	93	98	101	116
16	57	46	35	31	30	26	48	108	111	101	103	116
17	57	45	35	31	29	26	38	107	107	105	107	116
18	68	44	35	31	29	26	40	99	113	109	119	107
19	64	44	35	31	29	25	49	85	105	117	130	105
20	63	44	34	31	29	25	58	87	104	122	137	116
21	61	44	34	31	29	25	70	87	107	131	144	106
22	58	43	34	31	29	27	82	86	111	129	136	112
23	58	43	34	30	29	54	87	92	110	128	126	111
24	57	43	34	30	28	58	88	93	106	123	130	113
25	56	43	34	30	29	55	77	100	103	125	143	113
26	55	42	32	28	28	49	86	98	114	164	138	108
27	54	42	32	25	28	50	90	97	113	168	147	103
28	54	42	32	28	28	50	79	98	112	198	142	99
29	53	41	33	28	28	51	73	99	111	144	138	102
30	54	41	33	28	-----	52	74	101	105	123	161	110
31	53	-----	33	28	-----	56	-----	94	-----	112	157	-----
TOTAL	1,900	1,382	1,104	947	857	1,051	1,647	2,653	2,908	3,575	3,881	3,782
MEAN	61.3	46.1	35.6	30.5	29.6	33.9	54.9	85.6	96.9	115	125	126
MAX	75	52	41	33	32	58	90	111	114	198	161	165
MIN	53	41	32	25	28	25	28	46	75	85	95	99
AC-FT	3,770	2,740	2,190	1,880	1,700	2,080	3,270	5,260	5,770	7,090	7,700	7,500

CAL YR 1971 TOTAL 24,148 MEAN 66.2 MAX 149 MIN 20 AC-FT 47,900
WTR YR 1972 TOTAL 25,687 MEAN 70.2 MAX 198 MIN 25 AC-FT 50,950

PLATTE RIVER BASIN

67

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, 3,310 cfs May 12 (gage height, 4.78 ft); minimum daily, 250 cfs Jan. 27.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	880	1,400	636	360	320	431	1,410	633	503	1,440	1,750	1,440
2	967	1,370	613	330	300	417	1,550	676	419	1,560	1,680	1,630
3	901	1,320	592	310	310	550	1,710	614	370	1,880	1,540	1,630
4	901	1,280	585	290	310	606	1,740	884	339	1,930	1,320	1,360
5	923	1,300	578	320	320	636	1,360	1,280	334	1,900	1,160	1,140
6	967	1,300	557	340	320	660	915	1,770	327	1,750	926	1,200
7	978	1,280	543	360	330	660	776	2,260	380	1,690	742	1,110
8	1,000	1,220	515	370	330	599	653	2,470	351	1,620	583	1,020
9	1,000	1,190	494	390	320	850	538	2,540	312	1,680	567	800
10	1,010	1,160	501	420	340	1,000	438	2,650	289	1,710	558	718
11	989	1,160	487	440	380	1,060	385	2,840	286	1,670	489	628
12	912	1,120	480	430	400	1,070	355	3,200	282	1,570	451	577
13	912	1,100	466	350	440	1,080	330	3,220	273	1,540	401	544
14	967	1,130	431	280	460	1,080	329	3,030	261	1,710	389	528
15	1,070	1,070	417	290	450	1,070	343	2,900	264	1,860	387	527
16	1,130	1,160	424	300	440	1,080	343	2,970	370	1,920	459	514
17	1,180	1,130	459	440	420	1,080	323	3,020	498	2,080	650	492
18	1,500	1,120	487	500	420	1,080	292	2,940	508	2,040	742	474
19	1,450	1,140	452	440	410	1,020	292	2,640	467	1,950	896	450
20	1,300	1,360	424	400	404	1,040	302	2,310	417	2,110	1,300	461
21	1,260	1,290	417	340	404	1,050	392	1,990	401	2,410	1,560	454
22	1,260	1,220	410	320	398	1,100	459	1,660	410	2,250	1,600	446
23	1,240	1,160	404	320	404	1,110	500	1,450	404	1,970	1,630	440
24	1,240	1,060	410	310	410	1,260	511	1,070	401	1,900	1,630	435
25	1,250	1,260	424	300	410	1,260	515	791	575	1,800	1,610	454
26	1,280	1,110	445	280	417	1,180	573	721	948	2,180	1,620	479
27	1,280	978	400	250	417	1,160	680	721	1,320	2,170	1,650	478
28	1,260	790	350	260	424	1,120	728	717	1,370	2,470	1,520	455
29	1,260	684	350	260	438	1,110	654	714	1,320	2,370	1,450	457
30	1,340	652	360	280	-----	1,130	629	695	1,280	1,850	1,640	462
31	1,390	-----	370	310	-----	1,280	-----	606	-----	1,730	1,500	-----
TOTAL	34,997	34,514	14,481	10,590	11,146	29,829	20,025	55,982	15,679	58,710	34,400	21,803
MEAN	1,129	1,150	467	342	384	962	668	1,806	523	1,894	1,110	727
MAX	1,500	1,400	636	500	460	1,280	1,740	3,220	1,370	2,470	1,750	1,630
MIN	880	652	350	250	300	417	292	606	261	1,440	387	435
AC-FT	69,420	68,460	28,720	21,010	22,110	59,170	39,720	111,000	31,100	116,500	68,230	43,250

CAL YR 1971 TOTAL 598,826 MEAN 1,641 MAX 9,100 MIN 200 AC-FT 1,188,000
WTR YR 1972 TOTAL 342,156 MEAN 935 MAX 3,220 MIN 250 AC-FT 678,700

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.--41 years, 12.1 cfs (8,770 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 258 cfs Aug. 23 (gage height, 4.65 ft from highwater mark); minimum daily, 2.9 cfs July 13-15.

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 fair. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	6.8	7.9	6.0	5.7	11	7.0	7.7	5.6	4.4	3.6	7.0
2	6.5	7.0	7.6	6.0	5.3	9.9	7.1	7.5	5.3	4.6	4.0	6.5
3	6.5	6.7	7.3	6.0	5.2	9.9	7.1	7.4	5.3	4.5	4.6	6.0
4	6.4	7.1	7.3	5.9	5.3	9.1	7.0	7.4	5.9	4.4	4.6	6.0
5	6.4	7.0	7.1	5.9	5.6	8.8	7.0	7.5	5.6	4.2	4.8	5.9
6	6.5	6.7	6.8	5.9	5.7	9.4	7.1	7.5	5.6	4.1	5.0	5.9
7	6.5	6.2	6.3	5.9	5.8	8.8	7.1	7.5	5.4	4.0	5.1	6.0
8	6.5	6.5	6.7	5.8	5.9	8.2	7.1	7.5	5.2	3.8	7.4	6.0
9	6.5	6.8	6.3	5.8	6.0	8.5	7.3	7.6	5.0	3.6	9.5	5.8
10	6.5	7.0	6.4	5.8	5.9	8.3	7.1	7.8	5.1	3.4	14	5.9
11	6.5	7.2	6.3	5.8	6.0	8.2	7.3	8.1	5.4	3.3	6.3	6.1
12	6.5	7.4	6.2	5.8	6.2	8.0	7.3	7.9	5.3	3.2	5.6	6.1
13	6.5	7.3	6.4	5.8	6.3	8.0	5.6	7.6	5.1	2.9	5.2	6.1
14	6.7	7.1	6.1	5.4	6.3	7.9	7.6	7.4	4.9	2.9	5.1	6.2
15	6.5	7.1	6.2	5.5	6.2	7.7	7.8	7.2	4.8	2.9	5.2	6.2
16	6.3	7.3	5.8	5.6	6.7	7.6	7.5	7.0	4.8	3.0	5.2	6.3
17	6.4	7.1	6.0	5.9	6.8	7.6	7.3	6.8	4.8	3.2	5.3	6.1
18	6.4	6.7	6.2	6.0	6.8	7.6	7.4	6.7	4.8	3.2	5.2	6.1
19	6.0	6.8	6.1	6.1	7.3	7.6	7.6	6.5	4.7	3.2	5.2	6.2
20	6.0	7.1	6.1	6.0	7.6	8.0	7.9	6.6	4.6	3.5	5.1	6.2
21	6.1	7.3	6.0	6.0	8.0	8.0	8.0	7.0	4.5	3.4	5.5	6.0
22	6.2	7.6	6.0	6.1	8.5	7.9	7.9	6.8	4.4	3.4	5.3	6.0
23	6.3	7.6	6.2	6.2	8.9	7.7	7.7	6.6	4.4	3.4	14	6.2
24	6.4	7.4	6.1	6.4	9.2	7.6	7.5	6.4	4.8	3.3	68	6.1
25	6.6	7.6	6.1	6.2	9.2	7.4	7.4	6.3	4.7	3.3	31	6.1
26	6.7	7.4	6.1	5.9	9.1	7.4	7.9	6.1	4.7	3.3	17	6.0
27	6.8	7.3	6.0	5.8	9.1	7.0	8.5	6.0	4.8	3.2	11	6.1
28	6.9	8.0	6.4	5.9	12	7.1	9.4	6.2	4.7	3.3	7.9	6.1
29	6.8	8.6	6.2	5.5	12	7.1	8.8	6.1	4.6	3.3	7.5	6.2
30	6.7	8.3	6.2	5.6	-----	7.0	8.2	5.9	4.4	3.3	7.2	6.2
31	6.8	-----	6.0	5.7	-----	7.0	-----	5.7	-----	3.4	7.2	-----
TOTAL	200.9	216.0	198.4	182.2	208.6	251.3	225.5	216.3	149.2	108.9	297.6	183.6
MEAN	6.48	7.20	6.40	5.88	7.19	8.11	7.52	6.98	4.97	3.51	9.60	6.12
MAX	6.9	8.6	7.9	6.4	12	11	9.4	8.1	5.9	4.6	68	7.0
MIN	6.0	6.2	5.8	5.4	5.2	7.0	5.6	5.7	4.4	2.9	3.6	5.8
AC-FT	398	428	394	361	414	498	447	429	296	216	590	364

CAL YR 1971 TOTAL 2,705.8 MEAN 7.41 MAX 80 MIN 2.7 AC-FT 5,370
 WTR YR 1972 TOTAL 2,438.5 MEAN 6.66 MAX 68 MIN 2.9 AC-FT 4,840

PLATTE RIVER BASIN

69

06763500 Lodgepole Creek at Ralton, Nebr.

LOCATION.--Lat 41°02'00", long 102°24'00", in NE1/4 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.--21 years (1951-72), 10.8 cfs (7,820 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 25 cfs Mar. 30 (gage height, 1.94 ft); maximum gage height, 3.11 ft Feb. 14 (backwater from ice); minimum daily discharge, 0.08 cfs July 18, 19.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.9	5.6	4.8	2.8	8.6	8.4	10	3.0	.19	1.5	2.5
2	2.1	4.1	5.4	4.7	3.2	8.9	8.4	9.7	3.9	.23	2.8	2.1
3	2.0	4.4	5.0	4.0	3.7	8.6	8.4	9.1	4.8	.32	2.5	1.8
4	2.2	4.1	4.9	3.7	4.7	8.6	8.9	8.9	6.1	.41	2.9	2.4
5	2.3	4.6	5.0	3.6	4.3	8.9	8.9	7.6	6.6	.37	2.6	1.5
6	2.3	5.0	5.0	3.6	4.5	11	8.9	8.6	6.4	.65	1.5	1.4
7	2.3	5.0	4.8	3.3	4.6	11	8.9	8.6	5.9	2.1	1.5	1.3
8	2.2	5.0	4.7	3.3	4.7	11	8.6	8.4	5.0	.59	2.6	1.2
9	2.3	5.0	5.0	3.5	4.8	11	8.4	8.6	4.2	.41	1.7	1.2
10	2.4	5.3	4.5	4.0	4.7	10	8.4	9.4	4.2	.19	2.2	1.2
11	2.3	5.3	4.5	4.5	4.0	10	8.4	10	4.2	.41	1.6	1.0
12	2.4	5.3	4.4	4.0	4.3	11	8.1	11	4.2	.15	1.4	1.3
13	2.5	5.5	4.0	3.0	4.5	11	7.6	11	3.7	.47	.53	1.3
14	2.6	5.5	3.3	2.3	5.0	10	6.6	11	3.3	.47	.14	1.2
15	2.6	5.5	3.5	2.4	5.4	10	6.6	11	2.9	.10	.18	1.2
16	2.6	5.7	4.0	2.7	5.5	10	6.4	11	2.8	.12	.20	.95
17	2.9	5.7	4.5	3.0	5.8	6.1	6.1	9.9	2.6	.10	.50	.77
18	5.5	5.5	4.4	3.5	5.9	5.7	6.4	9.1	2.5	.08	.70	.71
19	3.9	6.4	4.0	4.0	6.0	6.1	6.8	8.9	1.8	.08	.90	.71
20	3.1	6.1	4.2	4.2	6.4	5.9	6.8	8.4	.41	.15	1.0	.95
21	2.9	5.9	4.0	5.1	7.6	5.9	6.8	7.8	.23	.12	1.1	1.2
22	3.0	6.1	4.0	5.6	8.1	6.1	6.8	6.8	.23	.14	1.2	.95
23	3.0	5.7	3.8	5.5	8.6	8.9	6.6	6.8	.19	.10	1.4	.83
24	2.9	5.7	3.5	5.3	8.4	9.1	6.1	6.6	.37	1.6	1.6	.89
25	3.1	5.7	4.0	5.0	7.8	6.8	6.4	3.4	.37	1.4	1.8	.71
26	3.3	5.9	4.2	4.5	7.1	5.3	8.4	3.3	.32	1.3	1.9	.71
27	3.0	5.9	4.0	4.0	7.6	4.6	8.4	4.6	.32	1.8	2.0	.89
28	2.9	5.9	3.5	3.0	8.6	4.6	8.9	4.4	.41	2.1	2.1	.77
29	3.0	5.9	2.8	2.0	12	4.4	9.7	3.4	.32	1.3	2.2	.71
30	3.4	6.2	3.5	1.5	-----	8.1	11	3.4	.10	.89	2.3	.77
31	3.4	-----	4.0	2.2	-----	8.9	-----	3.1	-----	.71	2.4	-----
TOTAL	86.5	161.8	132.0	115.8	170.6	256.1	235.1	243.8	81.37	19.05	48.95	35.12
MEAN	2.79	5.39	4.26	3.74	5.88	8.26	7.84	7.86	2.71	.61	1.58	1.17
MAX	5.5	6.4	5.6	5.6	12	11	11	11	6.6	2.1	2.9	2.5
MIN	2.0	3.9	2.8	1.5	2.8	4.4	6.1	3.1	.10	.08	.14	.71
AC-FT	172	321	262	230	338	508	466	484	161	38	97	70

CAL YR 1971 TOTAL 2,911.16 MEAN 7.98 MAX 50 MIN .10 AC-FT 5,770
WTR YR 1972 TOTAL 1,586.19 MEAN 4.33 MAX 12 MIN .08 AC-FT 3,150

WOMAN'S RIGHTS IN INDIA TO GO ON

ft. from floodmark in

s report.

: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541	380	331	379	331	484	280	153	45	34	34	288
2	504	381	340	393	301	462	276	148	44	53	24	344
3	480	386	354	379	277	452	304	144	43	50	22	361
4	458	400	349	301	267	446	334	153	73	49	25	348
5	440	419	348	281	248	451	330	141	148	48	32	297
6	424	420	353	322	258	508	267	128	156	44	23	253
7	413	426	361	379	280	527	215	121	170	43	16	239
8	408	452	281	376	390	521	176	112	231	38	16	205
9	428	463	239	387	597	454	156	115	248	31	18	181
10	413	458	239	394	701	498	147	125	568	30	19	205
11	394	458	294	401	806	609	131	149	675	27	17	161
12	385	468	336	398	897	612	92	154	528	27	16	159
13	371	501	444	394	1,000	611	71	151	416	27	14	154
14	353	506	515	390	1,010	618	64	156	343	27	15	129
15	325	506	527	392	1,120	573	69	150	285	26	13	108
16	317	501	516	400	1,110	527	55	139	260	22	13	86
17	305	467	493	425	1,030	509	48	123	263	28	22	73
18	336	435	477	424	967	475	45	102	229	30	21	58
19	289	414	524	409	888	425	45	100	224	26	20	53
20	271	405	549	417	821	399	52	95	201	28	20	55
21	263	399	544	430	786	377	58	82	150	28	19	56
22	263	394	545	440	736	356	52	73	123	30	17	48
23	259	394	545	453	691	394	52	59	95	34	20	50
24	252	394	546	447	613	376	53	47	79	29	23	52
25	248	394	554	450	559	344	49	39	55	31	22	53
26	234	394	554	440	537	343	74	34	46	27	32	53
27	231	372	488	435	527	325	96	43	44	29	34	53
28	224	353	417	404	513	301	117	38	33	29	53	50
29	256	344	366	404	502	273	162	44	33	26	83	50
30	309	336	357	390	-----	276	168	44	31	25	302	54
31	372	-----	371	350	-----	280	-----	48	-----	23	278	-----
TOTAL	10,766	12,620	13,157	12,284	18,763	13,806	4,038	3,210	5,839	999	1,283	4,276
MEAN	347	421	424	396	647	445	135	104	195	32.2	41.4	143
MAX	541	506	554	453	1,120	618	334	156	675	53	302	361
MIN	224	336	239	281	248	273	45	34	31	22	13	48
AC-FT	21,350	25,030	26,100	24,370	37,220	27,380	8,010	6,370	11,580	1,980	2,540	8,480
CAL YR 1971	TOTAL 283,249		MEAN 776	MAX 4,170	MIN 17	AC-FT 561,800						
WTR YR 1972	TOTAL 101,041		MEAN 276	MAX 1,120	MIN 13	AC-FT 200,400						

PLATTE RIVER BASIN

71

06765500 South Platte River at North Platte, Nebr.

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.

DRAINAGE AREA.--24,300 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,787.73 ft above mean sea level. See WSP 1918 for history of changes prior to Dec. 11, 1956.

EXTREMES.--Current year: Maximum discharge, 1,170 cfs Feb. 21 (gage height, 3.00 ft); maximum gage height, 4.13 ft Feb. 13 (backwater from ice); minimum daily discharge, 112 cfs Aug. 18.

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.

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. South Platte canal diverts around station; diversion began Nov. 13, 1946.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	420	176	230	370	356	182	332	170	244	212	170
2	188	452	165	230	340	308	170	372	176	230	206	200
3	188	436	170	200	360	286	188	428	176	194	218	194
4	188	404	176	200	380	332	170	396	194	200	212	182
5	200	300	166	220	380	332	170	388	200	170	194	170
6	230	218	140	240	350	324	170	412	200	182	182	194
7	356	218	140	240	420	332	155	436	237	182	188	188
8	404	224	160	240	490	308	150	404	218	155	200	188
9	388	206	165	240	440	308	150	380	182	150	194	176
10	380	200	165	250	510	272	165	420	170	160	170	188
11	388	194	165	250	640	308	160	478	237	155	155	176
12	420	194	165	240	780	258	155	631	265	150	135	206
13	404	170	165	220	900	244	145	595	324	145	150	206
14	428	165	176	200	900	251	150	550	428	155	140	194
15	428	170	160	280	900	237	155	444	428	188	130	200
16	412	194	160	350	940	218	135	444	388	170	130	200
17	436	194	170	450	980	212	145	420	420	182	130	176
18	532	155	180	550	992	206	160	356	372	188	112	170
19	541	170	180	520	1,050	206	155	316	272	188	130	150
20	487	188	210	500	1,090	206	165	316	258	212	150	160
21	452	170	230	470	1,100	200	165	265	237	237	188	176
22	436	170	270	430	1,080	200	170	230	230	224	182	182
23	412	182	280	430	1,020	194	165	272	244	212	155	182
24	380	176	270	400	944	194	150	244	237	188	165	155
25	380	155	260	400	800	188	165	212	230	179	188	150
26	380	155	225	380	660	182	218	206	272	279	188	140
27	380	170	225	380	613	194	244	200	258	285	200	165
28	404	165	250	380	541	194	272	194	258	316	200	176
29	404	165	250	380	444	160	308	194	251	237	176	165
30	428	170	250	390	-----	160	308	194	265	237	182	176
31	412	-----	260	390	-----	165	-----	182	-----	212	160	-----

TOTAL	11,660	6,550	6,123	10,280	20,414	7,535	5,360	10,911	7,797	6,206	5,322	5,355
MEAN	376	218	198	332	704	243	179	352	260	200	172	179
MAX	541	452	280	550	1,100	356	308	631	428	316	218	206
MIN	188	155	140	200	340	160	135	182	170	145	112	140
AC-FT	23,130	12,990	12,140	20,390	40,490	14,950	10,630	21,640	15,470	12,310	10,560	10,620

CAL YR 1971	TOTAL 210,546	MEAN 577	MAX 4,070	MIN 90	AC-FT 417,600
WTR YR 1972	TOTAL 103,513	MEAN 283	MAX 1,100	MIN 112	AC-FT 205,300

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, 3,110 cfs May 13; minimum daily, 151 cfs Sept. 22, 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 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 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	489	412	216	240	750	739	1,250	220	266	868	1,890	457
2	611	445	280	199	688	687	1,170	214	224	965	1,740	462
3	678	421	300	179	678	720	1,190	205	215	1,120	1,690	530
4	549	339	318	162	630	962	995	194	208	1,310	1,470	437
5	541	253	314	184	658	1,030	957	191	198	1,330	1,240	294
6	441	211	310	234	670	1,070	658	204	205	1,250	1,040	239
7	298	206	289	270	686	1,050	407	439	198	1,290	816	238
8	267	198	268	320	736	1,020	321	692	192	1,470	637	214
9	238	195	240	370	732	1,070	275	934	187	1,480	601	198
10	221	192	250	410	724	1,240	240	1,180	181	1,540	508	195
11	217	189	239	449	810	1,260	225	1,780	190	1,410	420	185
12	212	186	228	490	914	1,220	220	2,670	190	1,470	338	182
13	209	186	258	448	1,020	1,200	219	3,040	193	1,590	283	200
14	205	186	249	340	1,180	1,210	212	2,640	193	1,620	250	246
15	208	187	230	648	1,340	1,240	209	2,110	195	1,690	348	231
16	227	219	219	1,010	1,340	1,240	204	1,840	208	1,730	366	180
17	258	223	198	1,210	1,300	1,250	200	1,780	231	1,750	428	171
18	392	222	209	1,310	1,270	1,300	197	1,720	314	1,810	633	162
19	674	216	222	1,310	1,240	1,340	197	1,580	383	1,790	761	155
20	494	209	182	1,210	1,260	1,340	197	1,290	216	1,770	999	154
21	372	212	220	1,070	1,180	1,340	187	846	201	2,020	1,420	154
22	327	211	244	971	1,100	1,260	172	555	205	2,080	1,460	151
23	302	212	273	871	1,080	1,230	169	358	200	1,830	1,470	151
24	284	200	331	831	1,090	1,360	165	322	191	1,710	1,560	188
25	280	197	400	534	1,060	1,420	163	251	188	1,610	1,450	188
26	277	196	441	490	939	1,380	191	225	234	1,810	1,290	178
27	270	193	415	536	809	1,340	220	394	593	1,850	1,230	179
28	252	199	376	640	712	1,310	233	498	793	2,160	1,160	171
29	249	188	343	696	686	1,290	226	458	816	2,410	1,060	172
30	313	190	332	700	-----	1,270	221	419	812	2,110	782	174
31	366	-----	270	732	-----	1,250	-----	361	-----	1,880	709	-----
TOTAL	10,721	6,893	8,664	19,064	27,282	36,638	11,490	29,610	8,620	50,723	30,049	6,836
MEAN	346	230	279	615	941	1,182	383	955	287	1,636	969	228
MAX	678	445	441	1,310	1,340	1,420	1,250	3,040	816	2,410	1,890	530
MIN	205	186	182	162	630	687	163	191	181	868	250	151
AC-FT	21,270	13,670	17,190	37,810	54,110	72,670	22,790	58,730	17,100	100,600	59,600	13,560

CAL YR 1971 TOTAL 747,186 MEAN 2,047 MAX 12,300 MIN 143 AC-FT 1,482,000
WTR YR 1972 TOTAL 246,590 MEAN 674 MAX 3,040 MIN 151 AC-FT 489,100

73

LOCATION.--Lat 40°50'08", long 99°59'13" (north channel) and lat 40°49'47", long 99°59'18" (south channel), in S $\frac{1}{2}$ sec.18, T.10 N., R.23 W., Dawson County, on downstream side of highway bridges, 1.5 miles south of Cozad.

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.

EXTREMES.--Current year: Maximum discharge, about 2,900 cfs May 13; minimum daily, 39 cfs June 22, 24, 25, Aug. 17.

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	442	422	319	406	965	1,300	1,380	298	139	185	679	180
2	563	452	331	446	915	1,300	1,400	292	80	197	641	154
3	620	483	382	406	824	1,210	1,400	267	58	191	863	206
4	550	453	418	308	855	1,240	1,180	261	52	249	743	315
5	568	419	436	371	900	1,410	1,140	264	47	288	586	267
6	582	352	434	475	882	1,520	1,080	258	47	215	458	276
7	458	332	434	558	917	1,570	774	262	51	108	334	279
8	361	317	391	640	966	1,600	578	393	49	127	270	269
9	309	305	341	759	993	1,660	468	561	51	206	309	305
10	318	299	319	835	979	1,770	396	790	55	165	318	317
11	315	293	334	915	899	1,730	315	1,160	55	124	198	257
12	285	287	357	862	930	1,340	303	1,920	57	72	105	215
13	261	281	322	750	1,050	1,230	296	2,530	53	73	60	178
14	247	278	322	576	1,160	1,280	278	2,750	43	67	43	186
15	221	278	327	546	1,240	1,280	278	2,640	44	64	42	189
16	258	345	303	946	1,400	1,390	281	1,890	94	107	42	204
17	270	360	280	1,400	1,600	1,380	259	1,620	116	152	39	167
18	323	355	286	1,490	1,650	1,350	256	1,540	132	244	44	158
19	474	359	328	1,690	1,730	1,430	236	1,400	147	326	45	154
20	603	349	328	1,680	1,850	1,430	239	1,290	94	327	49	158
21	511	352	294	1,360	1,890	1,430	241	971	46	390	90	186
22	422	352	336	1,170	1,990	1,420	238	720	39	588	117	183
23	390	352	349	1,090	1,960	1,310	219	477	40	651	71	183
24	369	350	383	1,060	1,950	1,460	209	378	39	501	157	183
25	352	343	350	955	1,880	1,620	211	266	39	374	210	202
26	346	322	399	862	1,690	1,660	226	188	46	310	279	295
27	336	325	408	1,020	1,660	1,510	265	165	73	455	297	230
28	327	333	357	1,360	1,530	1,350	304	240	206	468	300	146
29	321	331	348	1,220	1,400	1,360	313	259	279	847	315	144
30	343	319	308	1,020	-----	1,330	307	224	240	848	291	136
31	393	-----	307	1,040	-----	1,360	-----	166	-----	553	203	-----
TOTAL	12,138	10,398	10,831	28,216	38,655	44,230	15,070	26,440	2,511	9,472	8,198	6,322
MEAN	392	347	349	910	1,333	1,427	502	853	83.7	306	264	211
MAX	620	483	436	1,690	1,990	1,770	1,400	2,750	279	848	863	317
MIN	221	278	280	308	824	1,210	209	165	39	64	39	136
AC-FT	24,080	20,620	21,480	55,970	76,670	87,730	29,890	52,440	4,980	18,790	16,260	12,540
CAL YR 1971	TOTAL	667,681	MEAN	1,829	MAX	12,100	MIN	37	AC-FT	1,324,000		
WTR YR 1972	TOTAL	212,481	MEAN	581	MAX	2,750	MIN	39	AC-FT	421,500		

PLATTE RIVER BASIN

06767500 Plum Creek near Smithfield, Nebr.

LOCATION.--Lat 40°39'40", long 99°42'00", in NW¼SW¼ 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.--11 years (1946-53, 1968-72), 7.84 cfs (5,680 acre-ft per year); median of yearly mean discharges, 3.7 cfs (2,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 242 cfs June 24 (gage height, 14.28 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 poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	0	.14	.06	0	.50	0	0	0	0	14	1.1
2	1.8	0	.14	.02	0	.40	0	0	0	0	4.4	.11
3	2.1	0	.16	0	0	.30	0	0	0	0	.57	0
4	.53	0	.18	0	0	.20	0	0	0	0	.21	0
5	.02	0	.10	0	0	.10	0	0	0	0	.32	.48
6	0	0	.07	0	0	.10	0	0	0	0	.46	.45
7	0	0	.07	0	0	.20	0	0	0	.34	.45	.52
8	0	0	.05	0	0	.40	0	0	0	12	.16	.66
9	0	0	.04	0	0	.60	0	0	0	3.5	.02	.51
10	0	0	.04	0	0	.80	0	0	0	1.7	0	.10
11	0	0	.03	0	0	1.0	0	0	0	.21	0	.16
12	0	0	.06	0	0	.62	0	0	0	0	.05	1.1
13	0	0	.10	0	0	.42	0	0	0	0	.74	1.1
14	0	0	.14	0	0	.55	.01	0	0	0	1.1	.26
15	0	.56	.12	0	0	.45	.08	0	0	0	.87	.50
16	0	40	.08	0	0	.28	.02	0	0	0	.63	1.1
17	0	8.0	.05	0	0	.05	.02	0	0	.05	1.3	1.8
18	0	1.5	.05	0	0	0	.03	0	0	0	.78	.81
19	0	.98	.05	0	0	0	.13	0	0	0	.97	.51
20	0	.81	.05	0	.03	.29	.08	0	0	0	.25	.98
21	0	.37	.06	0	.10	.26	0	0	0	0	.04	.87
22	0	.22	.08	0	0	.01	0	0	0	0	.05	.59
23	0	.17	.10	0	.02	0	0	8.4	0	0	0	1.3
24	0	.08	.14	0	.22	0	0	4.5	38	0	0	.89
25	0	.06	.14	0	.30	0	0	.36	8.2	0	0	1.1
26	0	.06	.09	0	.35	0	0	.07	.74	0	0	.61
27	0	.03	.04	0	.40	0	0	0	.05	0	0	1.5
28	0	.02	0	0	.50	0	0	0	0	0	0	.43
29	0	.08	.01	0	.60	0	0	0	0	0	0	0
30	0	.09	.02	0	-----	0	0	0	0	0	0	0
31	0	-----	.04	0	-----	0	-----	0	-----	0	.37	-----
TOTAL	4.55	53.03	2.44	.08	2.52	7.53	0	13.70	46.99	17.80	27.74	19.54
MEAN	.15	1.77	.079	.003	.087	.24	0	.44	1.57	.57	.89	.65
MAX	2.1	40	.18	.06	.60	1.0	0	8.4	38	12	14	1.8
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	9.0	105	4.8	.2	5.0	15	0	27	93	35	55	39

CAL YR 1971 TOTAL 165.30 MEAN .45 MAX 40 MIN 0 AC-FT 328

WTR YR 1972 TOTAL 195.92 MEAN .54 MAX 40 MIN 0 AC-FT 389

PEAK DISCHARGE (BASE, 120 CFS).--June 24 (1840) 242 cfs (14.28 ft).

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, 4,750 cfs May 14 (gage height, 3.24 ft, north channel); maximum gage height, 5.78 ft Jan. 26 (backwater from ice, north channel); minimum daily discharge, 154 cfs July 16. 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 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. Records of chemical analyses and water temperatures for the water year 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,610	2,320	2,400	2,500	2,320	3,000	3,360	1,360	1,610	449	947	558
2	1,600	2,300	2,440	2,540	2,100	3,080	3,370	1,360	1,600	365	1,280	609
3	1,670	2,320	2,410	2,650	1,950	3,050	3,340	1,180	1,530	403	1,500	648
4	1,660	2,390	2,410	2,860	2,000	3,090	3,420	1,190	1,360	378	1,620	698
5	1,600	2,310	2,390	2,660	2,180	3,240	3,230	1,390	1,160	399	1,690	819
6	1,640	2,320	2,380	2,610	2,500	3,420	3,310	1,520	972	430	1,630	829
7	1,760	2,100	2,390	2,650	2,650	3,410	3,190	1,640	724	434	1,410	857
8	1,840	2,070	2,410	2,610	2,800	3,400	2,970	1,840	621	420	1,190	828
9	1,890	1,880	2,320	2,610	2,950	3,350	2,780	2,050	662	457	1,080	810
10	1,820	1,850	2,170	2,500	3,200	3,360	2,580	2,240	442	496	1,170	892
11	1,820	1,130	2,260	2,510	3,150	3,450	2,260	2,460	363	441	1,140	917
12	1,770	1,740	2,300	2,550	3,150	3,560	1,480	2,710	337	346	1,030	874
13	1,720	1,850	2,300	2,510	3,000	3,650	1,710	3,230	366	293	826	787
14	1,750	1,780	2,180	2,470	3,250	3,610	1,680	4,090	277	290	702	795
15	1,750	1,900	2,300	2,360	3,200	3,550	1,490	4,380	274	294	477	850
16	1,730	2,270	2,170	2,570	3,200	3,600	1,290	3,920	277	154	342	882
17	1,810	2,260	2,370	2,570	3,320	3,530	1,290	3,620	323	180	268	882
18	2,000	2,170	2,350	2,760	3,150	3,420	1,200	3,430	371	234	245	849
19	2,080	2,150	2,340	3,080	2,980	3,420	1,190	3,170	354	323	309	835
20	2,250	2,260	2,350	3,270	3,070	3,390	1,160	3,070	514	392	283	872
21	2,280	2,270	2,360	3,450	3,060	3,310	1,150	2,900	636	424	282	848
22	2,260	2,250	2,350	3,380	3,090	3,360	1,130	2,540	598	495	237	910
23	2,120	2,390	2,470	3,220	3,190	3,340	1,100	2,160	482	630	290	897
24	2,050	2,410	2,480	3,360	3,180	3,380	1,090	1,840	332	715	251	893
25	2,000	2,430	2,470	2,980	3,190	3,370	942	1,660	353	585	292	892
26	2,020	2,390	2,540	2,600	3,230	3,420	1,130	1,590	303	623	330	900
27	2,060	2,450	2,650	2,500	3,170	3,450	876	1,650	256	548	391	1,230
28	2,180	2,450	2,640	2,450	3,130	3,350	1,170	1,490	416	653	432	1,780
29	2,290	2,400	2,400	2,300	3,070	3,440	1,270	1,650	684	632	392	1,900
30	2,250	2,350	2,510	2,200	-----	3,200	1,370	1,660	551	877	455	1,900
31	2,220	-----	2,460	2,000	-----	3,280	-----	1,640	-----	924	578	-----
TOTAL	59,500	65,160	73,970	83,300	84,430	104,480	57,528	70,630	18,748	14,284	23,069	28,241
MEAN	1,919	2,172	2,386	2,687	2,911	3,370	1,918	2,278	625	461	744	941
MAX	2,290	2,450	2,650	3,450	3,320	3,650	3,420	4,380	1,610	924	1,690	1,900
MIN	1,600	1,130	2,170	2,000	1,950	3,000	876	1,180	256	154	237	558
AC-FT	118,000	129,200	146,700	165,200	167,500	207,200	114,100	140,100	37,190	28,330	45,760	56,020

CAL YR 1971 TOTAL 1,170,970 MEAN 3,208 MAX 14,600 MIN 177 AC-FT 2,323,000
WTR YR 1972 TOTAL 683,340 MEAN 1,867 MAX 4,380 MIN 154 AC-FT 1,355,000

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, 4,120 cfs May 16 (gage height, 3.15 ft); maximum gage height observed, 5.20 ft Jan. 13 (backwater from ice); minimum daily discharge, 40 cfs July 16.
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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,410	2,230	2,160	2,000	2,800	2,880	3,480	1,090	1,220	166	1,060	332
2	1,410	2,260	2,160	2,020	2,700	2,910	3,480	1,030	1,220	136	1,120	372
3	1,410	2,260	2,130	2,000	2,300	2,830	3,420	1,030	1,360	96	1,440	410
4	1,430	2,260	2,060	1,600	2,500	2,770	3,400	1,030	1,140	122	1,440	450
5	1,430	2,260	2,060	1,500	2,500	2,860	3,370	1,050	960	108	1,490	576
6	1,470	2,230	2,130	1,800	2,600	3,070	3,290	1,200	944	126	1,580	684
7	1,560	2,110	2,130	2,100	2,800	3,120	3,290	1,510	684	126	1,420	708
8	1,650	2,060	2,130	2,400	3,000	3,150	3,070	1,490	612	178	1,240	768
9	1,770	1,930	2,160	2,850	2,800	3,210	2,800	1,840	600	136	1,120	816
10	1,720	1,770	2,000	2,800	2,700	3,210	2,580	2,040	520	122	1,060	880
11	1,700	1,630	2,000	2,700	2,900	3,290	2,260	2,370	400	108	992	848
12	1,650	1,170	2,040	2,600	2,900	3,340	1,740	2,770	245	108	896	800
13	1,580	1,630	2,090	2,600	3,000	3,500	1,450	2,960	228	100	708	752
14	1,580	1,630	2,090	2,400	3,100	3,500	1,400	3,370	228	79	600	720
15	1,630	1,700	2,090	2,500	3,200	3,450	1,360	3,870	184	68	528	696
16	1,600	2,210	2,110	2,700	3,300	3,450	1,220	3,750	184	40	208	696
17	1,600	2,320	2,000	3,000	3,400	3,420	1,090	3,480	214	44	112	708
18	1,740	2,130	2,060	3,300	3,500	3,310	1,080	3,230	316	51	100	720
19	1,840	2,040	2,090	3,700	3,300	3,310	1,010	3,040	244	51	92	696
20	1,950	2,000	2,130	3,400	3,200	3,340	950	2,830	214	47	92	768
21	2,060	1,950	2,210	3,400	3,260	3,340	911	2,720	332	61	108	768
22	2,090	1,900	2,180	3,300	3,120	3,340	924	2,450	356	108	96	768
23	2,020	2,090	2,230	3,100	3,230	3,420	872	2,230	300	172	87	816
24	2,020	2,110	2,260	3,000	3,340	3,620	885	1,930	284	410	160	848
25	2,040	2,210	2,230	2,800	3,310	3,530	898	1,740	228	420	236	800
26	2,090	2,180	2,260	2,500	3,260	3,530	898	1,450	136	460	236	800
27	2,180	2,090	2,260	2,300	3,180	3,450	950	1,510	117	380	236	816
28	2,180	1,970	2,370	2,200	3,040	3,400	998	1,400	108	390	228	1,330
29	2,210	2,020	2,210	2,500	2,960	3,420	982	1,280	172	460	228	1,730
30	2,340	2,110	2,090	2,900	-----	3,400	1,030	1,360	252	460	276	1,800
31	2,260	-----	2,020	2,900	-----	3,310	-----	1,280	-----	624	308	-----
TOTAL	55,620	60,460	66,140	80,870	87,200	101,680	55,088	64,330	14,002	5,957	19,497	23,876
MEAN	1,794	2,015	2,134	2,609	3,007	3,280	1,836	2,075	467	192	629	796
MAX	2,340	2,320	2,370	3,700	3,500	3,620	3,480	3,870	1,360	624	1,580	1,800
MIN	1,410	1,170	2,000	1,500	2,300	2,770	872	1,030	108	40	87	332
AC-FT	110,300	119,900	131,200	160,400	173,000	201,700	109,300	127,600	27,770	11,820	38,670	47,360

CAL YR 1971 TOTAL 1,107,248 MEAN 3,034 MAX 13,000 MIN 243 AC-FT 2,196,000
WTR YR 1972 TOTAL 634,720 MEAN 1,734 MAX 3,870 MIN 40 AC-FT 1,259,000

PLATTE RIVER BASIN

77

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, 4,750 cfs May 6 (gage height, 3.38 ft); maximum gage height, 4.67 ft Feb. 21 (backwater from ice); minimum daily discharge, 37 cfs July 22.

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 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. Records of chemical analyses and water temperatures for the water year 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,090	1,990	1,910	1,800	1,800	3,170	2,760	2,090	1,220	349	970	284
2	1,170	1,830	1,890	1,600	1,650	3,030	2,890	1,770	1,240	375	1,590	334
3	1,200	1,790	1,960	1,200	1,700	2,930	2,930	1,620	1,320	327	1,590	356
4	1,220	1,830	1,960	600	1,750	2,890	2,880	1,530	1,350	301	1,710	365
5	1,240	1,850	1,910	760	1,800	2,820	2,950	1,570	1,270	272	1,770	397
6	1,290	1,790	1,860	820	1,750	2,630	3,000	4,210	1,170	227	1,740	439
7	1,270	1,780	1,850	880	1,800	2,730	2,920	3,050	1,090	236	1,760	479
8	1,260	1,790	1,820	1,040	1,900	2,970	2,880	2,390	955	223	1,690	504
9	1,320	1,780	1,880	1,200	1,950	3,010	2,740	2,230	783	212	1,560	524
10	1,440	1,890	1,910	1,300	1,950	3,010	2,550	2,340	703	212	1,400	560
11	1,430	1,830	2,000	1,400	2,000	2,970	2,520	2,690	663	370	1,270	558
12	1,430	1,870	1,960	1,450	2,300	2,890	2,400	3,580	651	314	1,230	573
13	1,410	1,550	1,980	1,150	2,600	2,830	2,250	4,140	519	249	1,200	580
14	1,410	1,730	1,960	900	2,800	2,930	1,900	3,960	439	188	1,010	574
15	1,400	1,880	2,190	1,100	3,000	2,840	1,760	4,060	373	166	808	513
16	1,460	2,020	1,900	1,400	3,100	2,760	1,810	4,450	326	139	627	462
17	1,460	2,780	1,830	1,800	3,300	2,840	1,650	4,160	334	120	512	442
18	1,520	2,980	1,750	2,300	3,300	2,850	1,360	3,610	360	103	364	409
19	1,600	2,320	1,880	1,900	3,500	2,940	1,240	3,130	356	72	262	405
20	1,620	1,990	1,930	1,850	3,800	3,000	1,220	2,870	325	57	192	529
21	1,660	1,920	2,020	2,000	3,700	3,190	1,160	2,630	287	53	192	644
22	1,770	1,880	2,190	2,200	3,600	3,190	1,040	2,500	310	37	148	606
23	1,830	1,810	2,230	1,950	3,900	3,080	947	3,090	388	51	130	628
24	1,820	1,850	2,200	1,400	3,800	3,210	929	3,010	475	100	135	639
25	1,710	1,920	2,250	1,200	3,700	3,290	993	2,060	490	155	141	685
26	1,700	1,860	2,150	1,040	4,200	3,120	1,300	1,530	433	660	147	699
27	1,640	1,840	1,840	960	4,600	3,090	1,590	1,320	369	699	118	694
28	1,640	1,820	1,750	900	4,000	3,040	1,500	1,350	370	660	121	729
29	1,790	1,810	1,800	1,200	3,460	2,960	1,350	1,300	288	660	111	840
30	2,030	1,880	1,900	1,600	-----	2,970	1,380	1,060	275	541	147	1,170
31	2,110	-----	1,950	1,850	-----	2,960	-----	1,190	-----	507	231	-----
TOTAL	46,940	57,860	60,610	42,750	82,710	92,140	58,799	80,490	19,132	8,635	24,876	16,621
MEAN	1,514	1,929	1,955	1,379	2,852	2,972	1,960	2,596	638	279	802	554
MAX	2,110	2,980	2,250	2,300	4,600	3,290	3,000	4,450	1,350	699	1,770	1,170
MIN	1,090	1,550	1,750	600	1,650	2,630	929	1,060	275	37	111	284
AC-FT	93,110	114,800	120,200	84,790	164,100	182,800	116,600	159,700	37,950	17,130	49,340	32,970

CAL YR 1971 TOTAL 1,009,200 MEAN 2,765 MAX 11,500 MIN 135 AC-FT 2,002,000
WTR YR 1972 TOTAL 591,563 MEAN 1,616 MAX 4,600 MIN 37 AC-FT 1,173,000

PLATTE RIVER BASIN

06771000 Wood River near Riverdale, Nebr.

LOCATION.--Lat 40°47'56", long 99°11'48", in NW1/4 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.--26 years, 12.9 cfs (9,350 acre-ft per year); median of yearly mean discharges, 7.4 cfs (5,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 156 cfs July 28 (gage height, 5.37 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, 1963-72.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.08	.42	.39	.87	.49	.98	.51	0	8.9	1.6
2		0	.18	.42	.31	.80	.44	.92	.37	0	5.6	1.8
3		0	.24	.42	.26	.70	.46	.90	.42	0	4.0	1.2
4		0	.18	.36	.35	.63	.58	.71	.45	0	2.4	.75
5		0	.12	.30	.56	.64	.49	.69	.32	0	1.2	.26
6		0	0	.18	.55	.77	.58	1.0	.08	.19	1.1	.02
7		0	0	.18	.56	.96	.58	1.2	0	.36	2.5	0
8		0	0	.36	.37	.88	.58	1.1	0	.14	58	0
9		0	0	.42	.05	.81	.57	1.0	0	0	46	0
10		0	0	.57	0	.81	.54	.87	0	.02	12	.15
11		0	0	.82	0	.96	.50	.98	0	.20	5.2	.17
12		0	0	.79	.04	.89	.39	1.4	0	.06	2.5	0
13		0	0	.59	.75	.88	.34	1.7	.03	.47	1.3	0
14		0	0	.28	2.4	.79	.34	1.6	.01	1.0	.60	0
15		0	0	.03	1.9	.84	.39	1.3	0	1.1	.51	0
16		0	0	0	2.0	.82	.42	1.3	0	.93	.16	0
17		.06	0	.01	2.4	.76	.36	1.1	0	.77	.14	0
18		.17	0	0	1.9	.50	.41	1.0	.11	.97	.14	0
19		.05	0	0	1.2	.44	.37	.93	.13	.82	1.2	0
20		0	0	0	1.0	.50	.34	.72	.02	.91	2.1	0
21		0	0	0	1.0	.69	.36	.54	0	1.2	2.3	0
22		0	0	.11	.75	.79	.27	.37	0	.76	2.1	0
23		0	.06	.53	.85	.64	.33	.60	0	.34	1.9	0
24		0	.42	.47	.72	.74	.40	.54	0	.09	1.9	0
25		0	.54	.30	.66	.76	.30	.25	0	3.9	2.1	0
26		0	.54	.21	.63	.69	.41	.39	.03	4.8	2.4	0
27		0	.36	.17	.71	.66	.50	.59	0	56	2.4	0
28		0	.12	.07	.81	.56	.42	.77	0	131	1.9	0
29		0	.24	.16	1.0	.49	.38	.63	0	40	1.7	0
30		0	.24	.19	-----	.48	.39	.56	.02	21	1.9	0
31		-----	.30	.37	-----	.50	-----	.46	-----	19	1.7	-----
TOTAL	0	.28	3.62	8.73	24.12	22.25	12.93	27.10	2.50	286.03	177.85	5.95
MEAN	0	.009	.12	.28	.83	.72	.43	.87	.083	9.23	5.74	.20
MAX	0	.17	.54	.82	2.4	.96	.58	1.7	.51	131	58	1.8
MIN	0	0	0	0	0	.44	.27	.25	0	0	.14	0
AC-FT	0	.6	7.2	17	48	44	26	54	5.0	567	353	12

CAL YR 1971 TOTAL 682.06 MEAN 1.87 MAX 50 MIN 0 AC-FT 1,350
WTR YR 1972 TOTAL 571.36 MEAN 1.56 MAX 131 MIN 0 AC-FT 1,130

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

PLATTE RIVER BASIN

79

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.--23 years, 14.6 cfs (10,580 acre-ft per year); median of yearly mean discharges, 11 cfs (8,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 239 cfs July 27 (gage height, 10.49 ft); 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, 1964-72.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95							0		0	56	2.5
2	1.2							0		0	77	1.9
3	.88							0		0	38	.72
4	.47							0		0	20	.21
5	.14							0		0	13	.01
6	0							0		0	10	0
7	0							0		.11	9.2	.08
8	0							0		.59	7.4	.07
9	.05							0		1.2	5.8	.10
10	.05							0		.97	4.1	.03
11	0							0		.48	19	0
12	0							0		.21	32	0
13	0							0		.13	20	0
14	0							0		1.5	14	0
15	0							0		3.5	13	0
16	0							0		5.0	11	0
17	0							0		4.7	11	0
18	0							0		2.9	10	0
19	0							0		2.2	9.8	0
20	0							0		2.0	7.2	0
21	0							0		2.1	8.5	0
22	0							0		3.2	7.8	0
23	0							0		2.2	6.9	0
24	0							2.0		1.7	3.8	0
25	0							8.8		2.3	2.6	0
26	0							3.6		60	2.7	0
27	0							15		177	2.5	0
28	0							3.5		53	1.4	0
29	0							1.1		22	1.3	0
30	0							1.2		33	1.2	0
31	0							.04		47	.78	0
TOTAL	3.74	0	0	0	0	0	0	35.24	0	428.99	426.98	5.62
MEAN	.12	0	0	0	0	0	0	1.14	0	13.8	13.8	.19
MAX	1.2	0	0	0	0	0	0	15	0	177	77	2.5
MIN	0	0	0	0	0	0	0	0	0	0	.78	0
AC-FT	7.4	0	0	0	0	0	0	70	0	851	847	11

CAL YR 1971 TOTAL 1,647.70 MEAN 4.51 MAX 230 MIN 0 AC-FT 3,270
WTR YR 1972 TOTAL 900.57 MEAN 2.46 MAX 177 MIN 0 AC-FT 1,790

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

PLATTE RIVER BASIN

06772000 Wood River near Alda, Nebr.

LOCATION.--Lat 40°51'10", long 98°28'20", in NE 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.--19 years, 11.9 cfs (8,620 acre-ft per year); median of yearly mean discharges, 7.9 cfs (5,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 246 cfs Aug. 2 (gage height, 7.56 ft); maximum gage height, 7.83 ft July 28; 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 pump diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0	.51	0	.69	.78
2								0	0	0	202	1.6
3								0	0	0	165	1.7
4								0	0	0	99	1.6
5								0	0	0	50	1.3
6								0	0	0	25	.78
7								0	0	0	16	.17
8								0	0	0	9.5	0
9								0	0	0	7.2	0
10								0	0	0	6.1	0
11								0	0	0	5.7	0
12								.18	0	113	4.4	0
13								.02	0	24	11	0
14								0	0	7.0	39	0
15								0	0	2.8	25	0
16								0	0	1.1	18	0
17								0	0	0	15	0
18								0	0	0	14	0
19								0	0	0	17	0
20								0	0	0	17	0
21								0	0	0	14	0
22								0	0	0	9.5	0
23								.83	0	0	6.6	0
24								1.9	0	1.1	6.1	0
25								.47	0	3.2	5.7	0
26								0	0	12	4.6	0
27								0	0	138	3.9	0
28								0	0	184	3.1	0
29								0	0	137	2.0	0
30								.70	0	57	2.4	0
31								1.8		26	1.8	
TOTAL	0	0	0	0	0	0	0	5.90	.51	706.2	874.6	7.93
MEAN	0	0	0	0	0	0	0	.19	.017	22.8	28.2	.26
MAX	0	0	0	0	0	0	0	1.9	.51	184	202	1.7
MIN	0	0	0	0	0	0	0	0	0	0	1.8	0
AC-FT	0	0	0	0	0	0	0	12	1.0	1,400	1,730	16

CAL YR 1971 TOTAL 1,445.90 MEAN 3.96 MAX 188 MIN 0 AC-FT 2,870
WTR YR 1972 TOTAL 1,595.14 MEAN 4.36 MAX 202 MIN 0 AC-FT 3,160

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

PLATTE RIVER BASIN

81

06774000 Platte River near Duncan, Nebr.

LOCATION.--Lat 41°22'04", long 97°29'40", in SE 1/4 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.

DRAINAGE AREA.--64,900 sq mi, approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 1,478.55 ft above mean sea level. June 1895 to December 1909, April 1912 to September 1915, and June to October 1928 nonrecording gage at site 7 miles downstream at different datums. Oct. 25, 1928, to Feb. 20, 1935, nonrecording gage at present site and datum.

EXTREMES.--Current year: Maximum discharge, about 7,800 cfs Feb. 29 (gage height, 4.08 ft, backwater from ice); maximum gage height, 4.36 ft Feb. 14, 16 (backwater from ice); minimum daily discharge, 44 cfs Aug. 29.

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.

REMARKS.--Records fair except those for winter period, which are poor. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	924	2,200	2,000	1,500	1,300	3,800	2,910	2,410	1,620	244	718	54
2	922	2,080	1,900	1,100	1,250	3,400	2,940	2,750	1,800	212	801	130
3	974	1,930	1,950	1,000	1,250	3,210	2,820	2,310	1,720	194	1,120	117
4	1,040	1,980	2,000	1,000	1,300	3,120	2,870	1,680	1,750	206	1,580	145
5	1,070	2,040	1,800	1,600	1,400	2,910	2,730	1,560	1,580	177	1,620	169
6	1,070	2,020	1,950	1,900	1,450	2,880	2,750	2,190	1,400	139	1,510	174
7	1,080	2,100	2,100	2,100	1,500	2,790	2,820	4,040	1,250	112	1,360	160
8	1,090	2,130	1,950	2,250	1,500	2,970	2,850	3,730	1,060	104	1,350	154
9	1,070	2,110	1,800	2,400	1,450	3,120	3,000	2,780	996	142	1,240	168
10	1,110	1,960	1,900	2,450	1,400	3,150	2,960	2,510	968	101	1,230	821
11	1,170	1,910	2,000	2,500	1,600	3,300	2,780	2,540	749	1,230	1,070	1,190
12	1,220	1,800	1,850	2,400	1,800	3,300	2,580	3,250	653	1,140	937	1,120
13	1,260	1,680	1,700	2,100	2,500	3,200	2,400	4,620	606	741	848	840
14	1,280	1,560	1,750	1,700	2,900	3,210	2,170	4,860	574	505	785	730
15	1,290	1,300	1,800	1,750	2,800	3,150	1,900	4,190	446	388	761	600
16	1,290	1,620	1,750	2,000	3,200	2,970	1,690	3,950	355	290	718	520
17	1,290	2,000	1,700	2,450	3,500	2,970	1,860	4,140	381	293	612	500
18	1,320	2,430	1,850	2,400	3,400	2,940	1,470	4,070	354	284	521	480
19	1,260	2,720	1,790	2,300	3,600	3,200	1,170	3,570	769	219	428	480
20	1,360	2,340	2,100	2,200	4,000	3,070	1,120	3,210	616	155	320	475
21	1,450	2,090	2,350	2,350	3,800	3,020	1,380	2,970	449	107	278	514
22	1,480	1,990	2,470	2,500	3,700	3,000	1,170	2,830	393	86	253	538
23	1,510	1,900	2,530	2,200	4,300	3,160	1,000	3,060	428	56	233	637
24	1,590	1,900	2,380	1,900	4,700	3,230	933	4,400	456	66	207	575
25	1,660	1,870	2,250	1,600	5,200	3,390	900	4,100	504	50	160	553
26	1,630	1,980	2,050	1,350	5,800	3,530	1,200	3,090	476	84	116	589
27	1,640	2,110	2,000	1,300	6,000	3,320	1,580	2,570	448	75	64	638
28	1,600	2,200	1,800	1,300	6,400	3,270	1,670	2,350	368	354	46	631
29	1,700	2,110	1,550	1,350	6,200	3,300	1,430	2,310	358	613	44	610
30	1,850	2,110	1,700	1,400	-----	3,030	1,220	2,080	311	710	57	641
31	2,240	-----	1,800	1,400	-----	2,850	-----	1,720	-----	697	61	-----
TOTAL	41,440	60,170	60,520	57,750	89,200	97,760	60,273	95,840	23,838	9,764	21,048	15,003
MEAN	1,337	2,006	1,952	1,863	3,076	3,154	2,009	3,092	795	315	679	500
MAX	2,240	2,720	2,530	2,500	6,400	3,800	3,000	4,860	1,800	1,230	1,620	1,190
MIN	922	1,300	1,550	1,000	1,250	2,790	900	1,560	311	50	44	54
AC-FT	82,200	119,300	120,000	114,500	176,900	193,900	119,600	190,100	47,280	19,370	41,750	29,760

CAL YR 1971 TOTAL 1,023,595 MEAN 2,804 MAX 11,000 MIN 77 AC-FT 2,030,000
WTR YR 1972 TOTAL 632,606 MEAN 1,728 MAX 6,400 MIN 44 AC-FT 1,255,000

PLATTE RIVER BASIN

06775500 Middle Loup River at Dunning, Nebr.

LOCATION.--Lat 41°49'50", long 100°06'00", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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.--1,850 sq mi (revised), 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.--27 years, 396 cfs (286,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 827 cfs July 28 (gage height, 2.28 ft); maximum gage height, 4.74 ft Jan. 5 (ice jam); minimum daily discharge, 290 cfs Jan. 14, 27.

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 poor. Records of water temperatures for the water year 1972 are published in Part 2 of this report.

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429	388	399	382	360	448	374	673	385	344	395	421
2	477	425	401	364	350	395	368	500	375	346	392	435
3	398	401	411	399	360	401	392	445	380	363	400	395
4	373	400	399	370	380	435	374	445	421	370	382	382
5	368	426	371	320	390	388	378	471	449	348	366	388
6	367	404	417	340	370	389	404	473	439	342	359	388
7	370	397	425	370	380	454	404	419	480	348	358	388
8	382	370	451	400	360	411	409	389	412	364	358	375
9	373	360	415	440	350	392	387	432	390	349	366	362
10	370	367	372	431	370	392	388	436	383	351	391	355
11	369	391	382	357	430	373	399	506	393	348	387	367
12	399	414	446	396	460	400	424	563	364	339	377	375
13	384	402	452	447	430	406	399	543	358	336	378	368
14	379	416	392	290	440	432	429	517	367	337	370	355
15	389	395	382	310	440	419	386	514	364	336	373	362
16	399	456	412	330	450	412	392	513	434	340	359	362
17	374	454	452	360	440	414	404	486	445	348	359	355
18	469	422	362	380	460	387	414	458	405	351	361	342
19	453	393	378	360	455	411	399	443	383	334	369	349
20	438	415	395	400	462	432	400	425	389	452	376	395
21	404	412	409	420	455	410	357	415	363	477	398	388
22	398	428	386	400	382	394	370	422	411	381	394	375
23	399	395	390	380	362	414	374	434	379	369	388	368
24	402	384	386	360	388	482	361	452	384	372	393	375
25	410	381	387	340	395	403	360	415	392	396	374	388
26	404	419	360	320	368	417	428	416	410	506	359	375
27	418	412	350	290	382	431	507	423	393	403	355	363
28	440	430	380	300	395	409	483	430	368	563	355	371
29	418	411	370	320	435	395	433	428	352	486	362	391
30	415	411	380	360	-----	405	552	411	341	384	382	388
31	367	-----	400	370	-----	403	-----	393	-----	387	388	-----
TOTAL	12,435	12,179	12,312	11,306	11,699	12,754	12,149	14,290	11,809	11,770	11,624	11,301
MEAN	401	406	397	365	403	411	405	461	394	380	375	377
MAX	477	456	452	447	462	482	552	673	480	563	400	435
MIN	367	360	350	290	350	373	357	389	341	334	355	342
AC-FT	24,660	24,160	24,420	22,430	23,200	25,300	24,100	28,340	23,420	23,350	23,060	22,420

CAL YR 1971 TOTAL 146,530 MEAN 401 MAX 778 MIN 270 AC-FT 290,600
WTR YR 1972 TOTAL 145,628 MEAN 398 MAX 673 MIN 290 AC-FT 288,900

PLATTE RIVER BASIN

83

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

LOCATION.--Lat 41°46'45", long 100°31'30", in SE $\frac{1}{4}$ 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.--6 years, 191 cfs (138,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 302 cfs July 28 (gage height, 2.37 ft); minimum daily, 156 cfs Jan. 27.

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, 156 cfs Jan. 27, 1972.

REMARKS.--Records good. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	199	189	181	173	190	196	231	192	179	192	202
2	191	198	188	186	170	187	201	213	191	179	185	204
3	182	194	189	175	168	194	202	218	192	176	187	201
4	187	198	192	169	180	187	199	218	198	178	186	199
5	186	200	187	182	178	190	203	215	204	176	188	197
6	186	194	190	182	174	193	205	212	199	178	189	202
7	189	193	191	184	177	191	204	210	205	178	192	200
8	186	196	182	179	184	188	201	212	188	180	195	200
9	184	196	185	186	182	191	201	215	185	179	196	200
10	186	197	191	183	183	196	203	218	185	180	196	200
11	191	197	189	180	184	199	205	222	185	180	194	195
12	189	199	185	182	189	199	205	229	185	180	196	197
13	188	197	188	177	189	200	206	213	184	179	192	192
14	188	198	192	157	192	199	204	214	181	180	192	190
15	189	199	185	161	192	196	203	216	190	180	192	189
16	188	205	182	181	194	200	204	216	201	179	196	191
17	192	200	178	183	190	198	208	212	192	181	196	189
18	225	194	186	178	184	194	205	208	185	179	195	188
19	199	195	188	180	190	197	202	206	182	180	200	190
20	192	196	185	180	194	197	205	201	178	201	200	194
21	193	197	186	175	191	195	206	203	176	205	200	188
22	194	194	186	182	188	199	207	204	176	189	201	187
23	191	194	188	178	193	198	205	201	177	187	199	187
24	193	193	191	171	192	203	204	198	183	190	198	189
25	197	196	188	164	191	198	206	198	182	194	200	189
26	198	197	185	157	189	202	213	197	191	195	200	187
27	196	191	178	156	192	200	227	198	183	194	201	187
28	196	192	181	174	199	197	220	197	179	214	199	189
29	187	192	180	178	199	197	212	196	178	189	198	188
30	193	194	182	168	-----	197	241	193	179	189	198	188
31	197	-----	181	166	-----	193	-----	193	-----	196	199	-----
TOTAL	5,954	5,885	5,768	5,435	5,401	6,065	6,203	6,477	5,606	5,744	6,052	5,799
MEAN	192	196	186	175	186	196	207	209	187	185	195	193
MAX	225	205	192	186	199	203	241	231	205	214	201	204
MIN	182	191	178	156	168	187	196	193	176	176	185	187
AC-FT	11,810	11,670	11,440	10,780	10,710	12,030	12,300	12,850	11,120	11,390	12,000	11,500

CAL YR 1971 TOTAL 69,721 MEAN 191 MAX 256 MIN 165 AC-FT 138,300
WTR YR 1972 TOTAL 70,389 MEAN 192 MAX 241 MIN 156 AC-FT 139,600

PLATTE RIVER BASIN

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.--27 years (1945-72), 322 cfs (233,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 435 cfs Oct. 18 (gage height, 1.46 ft); maximum gage height, 2.81 ft Jan. 29 (backwater from ice); minimum daily discharge, 220 cfs Jan. 14.

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 except those for winter period, which are poor.

REVISIONS.--WSP 2118: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	358	287	315	288	290	300	300	351	302	278	326	301
2	383	292	312	279	260	290	311	294	297	275	311	305
3	320	304	316	272	270	300	311	297	299	273	301	303
4	316	312	312	267	280	310	309	308	305	282	304	296
5	319	315	318	230	280	300	324	314	323	279	304	302
6	315	298	309	300	280	305	334	309	329	281	305	308
7	318	298	314	350	280	285	323	292	326	287	301	295
8	317	301	298	333	300	282	315	301	308	290	304	289
9	307	315	300	321	280	294	306	319	294	286	316	294
10	309	324	302	315	280	302	317	320	293	284	317	296
11	317	327	295	312	290	320	321	361	295	288	319	301
12	320	330	296	313	310	325	330	377	290	281	316	303
13	311	338	299	250	330	319	315	344	292	281	309	301
14	316	336	301	220	310	319	301	320	286	281	305	290
15	310	333	298	230	330	312	295	329	288	276	305	291
16	304	359	293	260	320	309	309	326	331	277	304	297
17	313	341	299	280	320	317	311	323	327	285	300	291
18	375	321	302	300	310	310	303	317	315	280	302	290
19	352	324	299	290	320	322	294	311	299	282	303	288
20	320	330	298	310	320	323	295	308	282	342	311	308
21	311	330	295	330	310	308	301	310	284	349	312	288
22	307	344	289	320	300	315	307	310	299	313	305	289
23	306	333	298	310	300	312	296	316	281	296	304	291
24	308	330	300	300	310	325	298	315	300	295	300	299
25	307	333	299	290	310	317	297	306	303	305	299	298
26	305	338	298	250	300	326	304	300	313	308	295	294
27	314	330	292	240	310	311	347	307	303	314	299	300
28	289	326	295	250	310	309	338	307	285	355	304	307
29	263	315	297	270	320	302	315	303	282	313	302	310
30	282	318	299	290	-----	307	334	295	284	298	305	308
31	272	-----	294	300	-----	299	-----	295	-----	316	303	-----
TOTAL	9,764	9,682	9,332	8,870	8,730	9,575	9,361	9,785	9,015	9,150	9,491	8,933
MEAN	315	323	301	286	301	309	312	316	301	295	306	298
MAX	383	359	318	350	330	326	347	377	331	355	326	310
MIN	263	287	289	220	260	282	294	292	281	273	295	288
AC-FT	19,370	19,200	18,510	17,590	17,320	18,990	18,570	19,410	17,880	18,150	18,830	17,720

CAL YR 1971 TOTAL 114,890 MEAN 315 MAX 442 MIN 220 AC-FT 227,900
WTR YR 1972 TOTAL 111,688 MEAN 305 MAX 383 MIN 220 AC-FT 221,500

85

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.

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

AVERAGE DISCHARGE.--10 years (1962-72), 657 cfs (476,000 acre-ft per year) since diversion to Farwell Irrigation District canal.

EXTREMES.--Current year: Maximum discharge, 1,780 cfs Apr. 28 (gage height, 3.26 ft); maximum gage height, 4.55 ft Feb. 3 (backwater from ice); minimum daily discharge, 55 cfs July 15, Aug. 20.
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.

REMARKS.--Records fair except those for winter period, which are poor. Middle Loup Public Power and Irrigation District began diversion above station Mar. 30, 1938. Farwell Irrigation District canal began diversion from river in November 1962 at point 8 miles above station.

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	796	735	960	600	1,000	840	788	650	72	273	94
2	346	894	777	920	720	937	871	724	530	82	313	112
3	473	1,070	835	500	740	904	790	545	334	78	292	163
4	229	1,070	817	340	700	840	790	515	341	90	299	164
5	185	961	796	320	640	893	860	569	306	76	255	149
6	170	948	811	600	640	812	860	646	225	74	210	240
7	168	906	809	760	720	764	904	679	285	70	190	313
8	190	933	796	900	660	819	770	501	273	82	151	183
9	190	880	567	980	640	758	830	522	195	72	147	175
10	183	907	644	920	660	761	790	630	111	70	133	174
11	161	928	888	960	760	778	871	780	114	64	126	175
12	181	844	760	1,000	700	854	937	1,040	135	58	129	230
13	245	879	646	960	900	874	850	915	85	57	129	274
14	207	933	736	680	1,120	816	715	736	92	57	123	275
15	263	963	863	360	1,120	886	697	552	78	55	123	244
16	434	1,260	900	370	1,120	885	522	622	85	57	120	216
17	435	1,030	750	490	1,120	880	422	562	114	74	114	201
18	524	961	751	820	1,120	960	498	595	243	62	57	202
19	772	845	875	880	1,140	1,000	612	551	389	66	57	210
20	784	847	938	920	1,100	1,120	571	540	292	82	55	237
21	749	831	898	880	1,120	1,200	592	470	225	453	70	283
22	689	906	964	860	1,160	1,030	460	432	215	261	58	265
23	759	850	976	740	1,140	878	521	389	261	167	78	242
24	751	866	956	680	1,060	1,010	508	470	334	143	76	261
25	851	849	820	540	1,000	1,060	368	530	341	103	77	295
26	917	868	740	390	1,000	893	707	606	306	306	81	410
27	883	812	516	270	1,200	798	779	734	279	243	85	396
28	763	768	409	330	1,100	868	900	796	200	256	88	379
29	846	748	680	310	1,060	772	766	698	135	292	93	397
30	958	689	900	420	-----	780	576	783	80	398	86	435
31	910	-----	1,000	500	-----	893	-----	628	-----	220	86	-----
TOTAL	15,447	27,042	24,553	20,560	26,760	27,723	21,177	19,548	7,253	4,240	4,174	7,394
MEAN	498	901	792	663	923	894	706	631	242	137	135	246
MAX	958	1,260	1,000	1,000	1,200	1,200	937	1,040	650	453	313	435
MIN	161	689	409	270	600	758	368	389	78	55	55	94
AC-FT	30,640	53,640	48,700	40,780	53,080	54,990	42,000	38,770	14,390	8,410	8,280	14,670
CAL YR 1971	TOTAL 216,408		MEAN 593	MAX 1,560	MIN 62	AC-FT 429,200						
WTR YR 1972	TOTAL 205,871		MEAN 562	MAX 1,260	MIN 55	AC-FT 408,300						

PLATTE RIVER BASIN

06780000 Middle Loup River at Rockville, Nebr.

LOCATION.--Lat 41°06'39", long 98°50'19", in NE 1/4 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.

DRAINAGE AREA.--5,310 sq mi (revised), approximately, of which about 1,090 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 1,956.68 ft above mean sea level.

AVERAGE DISCHARGE.--14 years, 770 cfs (557,900 acre-ft per year) unadjusted.

EXTREMES.--Current year: Maximum discharge, 1,980 cfs Mar. 5 (gage height, 4.72 ft); maximum gage height, 6.32 ft Feb. 18 (backwater from ice); minimum daily discharge, 33 cfs Aug. 20.

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, Aug. 20, 1972.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	784	917	1,000	620	1,180	817	648	605	106	387	106
2	275	624	1,030	960	800	1,230	825	735	562	110	387	155
3	412	844	1,100	880	860	1,280	754	558	440	113	404	165
4	526	991	1,100	320	820	1,430	817	541	306	106	338	196
5	250	866	976	260	760	1,660	858	530	286	109	313	190
6	206	787	1,040	340	760	1,590	830	610	253	92	278	202
7	188	908	1,090	350	780	1,110	844	569	268	92	231	292
8	178	1,150	1,180	540	760	1,070	844	523	202	95	196	362
9	200	1,030	1,090	900	800	979	778	480	219	98	165	271
10	204	926	913	1,020	820	990	844	605	160	86	174	292
11	198	947	1,010	1,100	860	857	790	716	109	243	141	321
12	166	922	960	1,040	900	914	884	940	121	121	121	285
13	180	949	860	920	920	912	790	871	121	89	125	321
14	264	961	840	540	940	932	730	654	78	78	132	379
15	202	915	900	300	960	994	638	495	72	65	113	379
16	336	1,230	940	310	1,000	822	485	479	81	65	102	346
17	545	1,290	1,000	340	1,040	866	368	659	92	128	98	299
18	580	1,100	1,100	480	1,100	878	375	607	165	174	95	285
19	717	1,100	1,040	740	1,140	820	441	638	250	128	45	278
20	945	1,040	1,040	1,000	1,200	957	466	584	354	117	33	338
21	694	917	1,020	1,000	1,140	1,120	432	514	264	165	38	321
22	732	890	1,040	980	1,200	1,020	384	495	231	545	54	329
23	787	821	1,060	940	1,200	954	355	584	250	306	44	313
24	768	903	1,040	860	1,160	980	428	495	281	237	81	306
25	773	974	1,000	820	1,100	961	440	524	362	160	98	338
26	858	951	900	660	1,100	881	481	562	299	292	95	404
27	944	993	700	400	1,400	867	586	658	292	387	92	464
28	932	1,040	640	290	1,250	954	671	754	243	321	89	420
29	938	998	800	340	1,200	863	674	790	179	395	89	367
30	917	1,020	1,000	350	-----	809	653	754	150	379	95	386
31	776	-----	1,060	450	-----	790	-----	725	-----	462	98	-----
TOTAL	15,902	28,871	30,386	20,430	28,590	31,670	19,282	19,297	7,295	5,864	4,751	9,110
MEAN	513	962	980	659	986	1,022	643	622	243	189	153	304
MAX	945	1,290	1,180	1,100	1,400	1,660	884	940	605	545	404	464
MIN	166	624	640	260	620	790	355	479	72	65	33	106
AC-FT	31,540	57,270	60,270	40,520	56,710	62,820	38,250	38,280	14,470	11,630	9,420	18,070

CAL YR 1971 TOTAL 246,609 MEAN 676 MAX 1,900 MIN 54 AC-FT 489,100

WTR YR 1972 TOTAL 221,448 MEAN 605 MAX 1,660 MIN 33 AC-FT 439,200

PLATTE RIVER BASIN

87

06782500 South Loup River at Ravenna, Nebr.

LOCATION.--Lat 41°00'42", long 98°54'44", in SW 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.--1,570 sq mi (revised), 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.--23 years, 193 cfs (139,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,660 cfs July 26 (gage height, 7.41 ft); minimum daily, 35 cfs Jan. 4.

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 poor. Minor irrigation developments above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	180	180	78	125	175	145	219	150	107	496	88
2	128	180	180	70	108	175	150	180	130	97	274	101
3	125	193	186	45	80	180	155	145	123	107	408	113
4	151	193	212	35	90	206	150	155	123	131	255	113
5	137	206	193	45	94	165	160	175	130	112	182	113
6	126	200	186	60	88	165	160	226	130	100	172	109
7	127	200	180	80	92	175	165	226	126	91	365	120
8	123	180	175	88	90	170	170	190	201	91	261	151
9	124	170	180	92	90	160	155	193	226	78	198	131
10	131	155	193	92	88	170	165	206	132	69	204	156
11	124	135	175	88	110	165	175	219	113	86	198	146
12	119	135	170	90	150	170	186	252	118	68	193	151
13	116	126	140	64	150	200	186	271	115	66	182	151
14	116	140	145	45	160	180	175	304	120	60	198	128
15	119	175	160	50	150	160	170	238	100	60	182	120
16	116	290	130	80	150	170	175	271	96	54	135	116
17	119	330	120	100	155	170	170	284	100	58	124	107
18	155	278	130	110	165	155	165	271	125	57	109	105
19	135	258	125	100	170	130	170	264	132	62	103	107
20	145	226	150	90	170	135	180	297	118	57	94	135
21	170	193	140	86	160	130	180	258	116	66	88	125
22	186	165	140	94	150	145	180	219	119	57	92	125
23	165	180	150	90	160	145	175	278	112	82	90	111
24	165	186	135	76	150	160	165	226	105	150	90	114
25	155	193	130	58	145	170	165	186	108	254	94	117
26	155	193	120	50	160	160	193	165	133	4,460	98	125
27	150	193	60	48	180	180	232	180	127	1,430	90	124
28	140	200	74	46	212	175	304	200	123	489	88	129
29	170	200	74	60	165	160	271	193	97	198	86	136
30	212	180	80	100	-----	155	232	170	97	124	90	137
31	193	-----	84	120	-----	155	-----	165	-----	120	88	-----
TOTAL	4,434	5,833	4,497	2,330	3,957	5,111	5,424	6,826	3,745	9,041	5,327	3,704
MEAN	143	194	145	75.2	136	165	181	220	125	292	172	123
MAX	212	330	212	120	212	206	304	304	226	4,460	496	156
MIN	116	126	60	35	80	130	145	145	96	54	86	88
AC-FT	8,790	11,570	8,920	4,620	7,850	10,140	10,760	13,540	7,430	17,930	10,570	7,350

CAL YR 1971 TOTAL 60,741 MEAN 166 MAX 460 MIN 33 AC-FT 120,500
WTR YR 1972 TOTAL 60,229 MEAN 165 MAX 4,460 MIN 35 AC-FT 119,500

PLATTE RIVER BASIN

06783500 Mud Creek near Sweetwater, Nebr.

LOCATION.--Lat 41°02'15", long 98°59'35", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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.--707 sq mi (revised), 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.--26 years, 42.5 cfs (30,790 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 396 cfs July 27 (gage height, 10.21 ft); minimum daily, 0.83 cfs Aug. 26.

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 good except those for winter period, which are fair. Minor irrigation developments above station.

REVISIONS.--WSP 1710: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	18	18	21	13	21	23	29	21	5.5	41	2.0
2	10	18	18	20	10	14	23	27	20	3.2	27	3.6
3	10	18	18	15	9.0	18	23	24	19	.87	26	6.0
4	9.6	17	18	14	9.0	21	23	23	19	.90	22	8.8
5	11	17	13	13	9.0	18	23	21	19	2.6	23	7.4
6	13	16	16	14	10	24	23	22	19	3.0	18	9.4
7	13	14	16	15	10	22	22	22	19	1.4	17	11
8	12	16	22	17	12	20	22	22	19	1.6	16	11
9	11	15	17	19	14	22	23	23	18	2.2	16	31
10	11	15	21	18	16	25	23	22	51	1.5	14	22
11	11	21	19	17	19	31	24	24	28	4.5	14	15
12	10	16	18	15	19	25	24	28	21	3.9	15	14
13	9.6	16	20	12	19	24	22	33	19	1.4	16	14
14	11	16	24	10	18	24	21	37	20	1.4	14	14
15	11	15	21	11	18	23	22	34	22	1.5	10	13
16	12	17	20	14	18	23	22	32	20	1.5	8.7	13
17	11	21	18	13	18	23	21	29	18	2.0	5.3	14
18	16	31	23	13	18	23	21	25	18	5.7	1.5	13
19	16	30	23	12	20	22	20	23	17	2.8	1.4	13
20	14	25	23	12	21	23	19	22	17	1.5	1.4	14
21	15	20	20	14	21	22	20	24	17	1.7	1.4	14
22	15	18	23	15	22	23	21	22	16	2.1	.90	13
23	16	18	22	14	20	23	20	25	15	2.3	2.8	13
24	15	18	21	12	20	23	21	24	9.4	6.6	4.0	13
25	15	17	19	11	22	24	21	22	4.5	19	2.1	14
26	16	17	19	10	21	24	22	20	5.5	262	.83	13
27	15	17	13	9.0	19	24	25	21	3.7	278	2.2	13
28	15	18	12	8.0	24	23	26	24	14	48	1.1	13
29	14	18	14	10	23	23	27	59	15	58	1.5	13
30	16	18	16	12	-----	23	28	28	7.4	32	2.0	13
31	18	-----	21	14	-----	23	-----	22	-----	50	1.4	-----
TOTAL	403.2	551	586	424.0	492.0	701	675	813	531.5	808.67	327.53	381.2
MEAN	13.0	18.4	18.9	13.7	17.0	22.6	22.5	26.2	17.7	26.1	10.6	12.7
MAX	18	31	24	21	24	31	28	59	51	278	41	31
MIN	9.6	14	12	8.0	9.0	14	19	20	3.7	.87	.83	2.0
AC-FT	800	1,090	1,160	841	976	1,390	1,340	1,610	1,050	1,600	650	756

CAL YR 1971 TOTAL 8,045.00 MEAN 22.0 MAX 150 MIN 1.1 AC-FT 15,960
WTR YR 1972 TOTAL 6,694.10 MEAN 18.3 MAX 278 MIN .83 AC-FT 13,280

PEAK DISCHARGE (BASE, 550 CFS).--No peak above base.

PLATE RIVER BASIN

89

06784000 South Loup River at St. Michael, Nebr.

LOCATION.--Lat 41°01'53", long 98°44'25", in NE¹/₄ 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.--2,350 sq mi (revised), approximately, of which about 1,650 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1943 to current year.

GAGE.--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.--29 years, 246 cfs (178,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,380 cfs July 26 (gage height, 8.63 ft); minimum daily, 31 cfs Jan. 4.

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 poor. Minor irrigation developments above station.

REVISIONS.--WSP 1086: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	188	204	100	140	223	217	286	185	110	596	106
2	127	183	202	94	140	228	210	273	165	104	300	116
3	126	185	205	56	110	227	206	255	150	102	337	130
4	137	190	201	31	120	221	209	243	150	110	314	135
5	137	186	199	50	125	237	211	237	160	111	287	135
6	132	183	197	80	120	227	209	265	160	106	251	130
7	137	181	197	100	125	227	206	261	152	105	290	140
8	140	185	189	104	120	219	208	239	172	115	304	170
9	142	182	177	106	120	222	220	222	238	102	224	160
10	144	180	174	106	116	225	213	224	186	98	230	180
11	142	175	179	104	140	233	203	247	195	268	220	170
12	142	176	190	106	160	224	201	302	171	164	210	180
13	139	182	155	86	160	223	199	348	163	115	200	179
14	139	185	165	60	170	235	198	325	152	97	205	170
15	140	185	195	66	170	235	206	303	134	83	158	158
16	145	207	185	100	180	241	214	294	133	73	136	150
17	147	333	175	130	190	247	209	293	135	62	124	130
18	159	280	200	150	200	242	204	285	148	74	104	130
19	168	258	206	140	210	239	209	271	169	72	92	130
20	164	239	216	130	210	229	216	271	154	67	84	160
21	166	224	200	120	200	233	225	260	154	67	79	150
22	186	218	200	130	190	225	215	242	155	61	78	147
23	178	218	205	120	210	229	206	287	156	72	82	135
24	175	214	200	100	190	234	197	254	155	137	85	135
25	170	217	185	84	190	240	187	229	147	147	92	140
26	166	207	170	76	210	241	200	212	137	4,670	95	145
27	163	207	88	72	250	242	222	201	143	2,300	88	145
28	160	214	90	68	268	239	260	210	138	882	88	145
29	169	219	94	82	221	229	286	215	128	540	82	140
30	195	208	98	110	-----	227	269	210	117	470	104	142
31	195	-----	104	130	-----	221	-----	204	-----	445	104	-----
TOTAL	4,753	6,209	5,445	2,991	4,955	7,164	6,435	7,968	4,702	11,929	5,643	4,383
MEAN	153	207	176	96.5	171	231	215	257	157	385	182	146
MAX	195	333	216	150	268	247	286	348	238	4,670	596	180
MIN	123	175	88	31	110	219	187	201	117	61	78	106
AC-FT	9,430	12,320	10,800	5,930	9,830	14,210	12,760	15,800	9,330	23,660	11,190	8,690

CAL YR 1971 TOTAL 73,710 MEAN 202 MAX 680 MIN 28 AC-FT 146,200
WTR YR 1972 TOTAL 72,577 MEAN 198 MAX 4,670 MIN 31 AC-FT 144,000

PLATTE RIVER BASIN

06784200 Sherman Reservoir near Loup City, Nebr.

LOCATION.--Lat 41°18'10", long 98°52'45", in SW¹/₄ NW¹/₄ 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, 69,650 acre-ft June 18-21 (elevation, 2,162.5 ft); minimum observed, 26,820 acre-ft Sept. 4, 5 (elevation, 2,142.9 ft).

Period of record: Maximum contents observed, 69,650 acre-ft June 18-21 1972 (elevation, 2,162.5 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 1971 TO SEPTEMBER 1972

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,147.5	34,540	-
Oct. 31.....	2,155.7	51,770	+17,230
Nov. 30.....	2,154.8	49,650	-2,120
Dec. 31.....	2,153.9	47,590	-2,060
CAL YR 1971.....	-	-	+8,680
Jan. 31.....	2,153.2	46,030	-1,560
Feb. 29.....	2,152.6	44,720	-1,310
Mar. 31.....	2,151.9	43,210	-1,510
Apr. 30.....	2,156.3	53,210	+10,000
May 31.....	2,162.2	68,790	+15,580
June 30.....	2,162.1	68,500	-290
July 31.....	2,154.6	49,190	-19,310
Aug. 31.....	2,144.1	29,200	-19,990
Sept. 30.....	2,151.0	41,330	+12,130
WTR YR 1972.....	-	-	+6,790

PLATTE RIVER BASIN

91

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.--8,090 sq mi (revised), 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.--65 years, 1,212 cfs (878,100 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 9,050 cfs July 26 (gage height, 5.89 ft); minimum daily, 177 cfs July 16.

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 poor. Diversions above station for irrigation. Records of chemical analyses for the water year 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401	1,160	870	1,350	400	1,950	1,240	1,040	644	233	1,030	294
2	453	1,060	982	1,200	740	1,800	1,200	1,240	573	219	1,130	329
3	473	1,300	1,020	900	900	1,500	1,280	1,160	576	224	887	359
4	732	1,630	1,050	400	1,100	1,700	1,120	922	446	327	930	356
5	712	1,380	1,110	490	1,040	2,000	1,080	811	370	285	647	388
6	477	1,290	1,080	480	940	1,800	1,070	1,070	390	277	524	350
7	452	1,090	1,240	520	860	1,670	1,040	1,010	337	246	475	353
8	406	977	1,410	650	900	1,300	1,080	979	386	291	537	488
9	397	1,080	1,150	1,100	1,040	1,300	1,100	735	349	252	443	510
10	397	1,090	1,010	1,400	1,080	1,120	1,150	664	395	234	366	531
11	435	1,420	1,200	1,800	1,040	1,130	1,020	937	347	1,120	364	582
12	434	1,500	1,210	1,300	1,100	1,090	987	1,270	239	950	345	520
13	420	1,300	1,180	900	1,140	995	1,070	1,410	222	387	317	446
14	403	1,360	947	600	1,200	834	986	1,130	249	251	315	525
15	454	1,290	1,040	450	1,180	956	799	833	209	200	325	504
16	433	1,330	1,200	380	1,160	1,010	854	756	227	177	299	483
17	580	1,760	1,300	280	1,200	1,090	634	772	231	214	282	428
18	901	1,490	1,400	210	1,300	1,370	531	793	268	310	275	407
19	871	1,410	1,250	460	1,200	1,320	563	770	376	309	261	417
20	1,260	1,210	1,200	560	1,500	1,220	769	792	483	277	215	585
21	1,480	1,150	1,200	800	1,400	1,210	730	777	540	291	212	580
22	1,090	1,080	1,300	1,300	1,300	1,070	721	750	386	480	216	513
23	1,130	1,100	1,450	1,400	1,500	1,090	680	1,090	403	668	216	552
24	1,090	870	1,350	1,350	1,400	1,070	618	873	411	696	235	491
25	979	906	1,250	1,080	1,350	1,190	649	803	432	696	282	470
26	1,060	1,090	1,000	740	1,400	1,370	715	726	496	5,300	304	507
27	834	1,010	1,020	500	1,700	1,340	813	763	439	3,910	264	611
28	1,130	982	1,100	400	2,000	1,230	958	908	659	1,770	247	622
29	1,280	882	1,250	300	2,250	1,190	1,210	875	481	1,430	236	636
30	1,680	894	1,400	290	-----	1,090	1,090	850	295	870	246	603
31	1,340	-----	3,910	280	-----	1,020	-----	747	-----	829	280	-----
TOTAL	24,184	36,091	39,079	23,870	35,320	40,025	27,757	28,256	11,859	23,723	12,705	14,440
MEAN	780	1,203	1,261	770	1,218	1,291	925	911	395	765	410	481
MAX	1,680	1,760	3,910	1,800	2,250	2,000	1,280	1,410	659	5,300	1,130	636
MIN	397	870	870	210	400	834	531	664	209	177	212	294
AC-FT	47,970	71,590	77,510	47,350	70,060	79,390	55,060	56,050	23,520	47,050	25,200	28,640

CAL YR 1971 TOTAL 341,872 MEAN 937 MAX 4,130 MIN 142 AC-FT 678,100
WTR YR 1972 TOTAL 317,309 MEAN 867 MAX 5,300 MIN 177 AC-FT 629,400

PLATTE RIVER BASIN

06786000 North Loup River at Taylor, Nebr.

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.

DRAINAGE AREA.--2,280 sq mi (revised), approximately, of which about 180 sq mi contributes directly to surface runoff.

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.

AVERAGE DISCHARGE.--35 years (1937-72), 460 cfs (333,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,310 cfs May 1 (gage height, 5.13 ft); maximum gage height, 5.94 ft Jan. 7 (backwater from ice), but may have been higher during period of no gage-height record Feb. 15 to Mar. 7; minimum daily discharge, 130 cfs Aug. 18-20.

Period of record: Maximum discharge, 2,770 cfs June 14, 1951 (gage height, 6.50 ft), but may have been greater during ice breakup Mar. 10, 1955; maximum gage 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 poor. 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	502	507	464	500	400	470	502	937	340	257	487	218
2	620	532	486	450	370	480	499	712	344	290	450	290
3	494	461	471	400	380	460	528	694	345	271	465	328
4	462	452	472	350	390	480	500	641	350	318	445	316
5	448	433	483	390	370	480	509	618	366	286	437	293
6	455	398	539	450	350	490	515	618	394	260	413	389
7	448	369	504	480	370	500	507	596	428	214	354	339
8	434	416	454	490	360	485	470	551	413	188	313	321
9	412	419	289	480	350	519	451	527	344	164	299	333
10	416	426	327	490	320	528	484	589	316	163	287	341
11	425	422	397	450	350	538	499	714	323	167	267	351
12	435	428	446	440	400	574	512	909	327	157	234	352
13	419	446	430	320	450	558	487	917	303	154	210	351
14	418	438	494	260	500	528	467	754	295	150	183	349
15	421	441	510	300	470	541	448	626	275	134	158	326
16	436	546	510	370	520	527	455	582	338	134	144	314
17	460	559	462	430	500	523	463	560	391	137	133	303
18	547	483	502	470	520	516	452	528	665	155	130	312
19	581	406	502	470	540	519	453	460	535	156	130	317
20	571	413	485	470	580	517	452	420	326	427	130	342
21	482	437	502	490	640	510	464	390	324	693	150	352
22	461	462	510	470	660	516	491	390	329	583	161	331
23	450	437	462	480	620	510	506	660	327	360	168	321
24	459	442	485	450	540	530	502	420	408	462	181	314
25	466	457	519	360	490	572	503	400	421	457	181	347
26	475	496	462	310	480	570	561	400	380	564	185	322
27	481	494	390	320	490	507	665	420	373	467	184	330
28	474	498	330	310	520	519	849	430	324	425	181	344
29	447	465	430	350	490	494	759	380	307	434	174	358
30	439	453	470	400	-----	519	740	360	284	505	172	355
31	445	-----	520	450	-----	528	-----	350	-----	421	191	-----
TOTAL	14,483	13,636	14,307	12,850	13,420	16,008	15,693	17,553	10,895	9,553	7,597	9,859
MEAN	467	455	462	415	463	516	523	566	363	308	245	329
MAX	620	559	539	500	660	574	849	937	665	693	487	389
MIN	412	369	289	260	320	460	448	350	275	134	130	218
AC-FT	28,730	27,050	28,380	25,490	26,620	31,750	31,130	34,820	21,610	18,950	15,070	19,560

CAL YR 1971 TOTAL 160,758 MEAN 440 MAX 1,860 MIN 118 AC-FT 318,900
WTR YR 1972 TOTAL 155,854 MEAN 426 MAX 937 MIN 130 AC-FT 309,100

PLATTE RIVER BASIN

93

06787500 Calamus River near Burwell, Nebr.

LOCATION.--Lat 41°48'35", long 99°10'56", in NW¼NW¼ 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.--1,060 sq mi (revised), 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.--32 years, 299 cfs (216,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 580 cfs June 19 (gage height, 3.67 ft); maximum gage height, 5.35 ft Jan. 24 (backwater from ice); minimum daily discharge, 140 cfs Jan. 14.

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, which are poor. Diversions for irrigation above station. Records of chemical analyses and water temperatures for the water year 1972 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1086: Drainage area. WSP 1918: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	234	313	220	250	239	276	429	259	233	313	268
2	314	240	339	210	220	228	283	375	256	236	303	271
3	315	259	348	180	220	233	299	387	254	230	278	271
4	302	264	343	150	225	221	308	393	256	234	258	276
5	291	268	332	170	230	234	283	375	255	235	259	279
6	280	262	320	230	250	257	279	353	259	240	257	326
7	273	256	304	280	260	274	250	326	259	243	256	289
8	277	259	305	320	280	323	249	302	265	252	250	287
9	283	268	282	330	270	319	238	284	267	246	251	292
10	289	270	221	326	220	333	244	271	267	236	247	289
11	280	272	212	313	250	337	251	293	269	243	252	292
12	274	269	232	290	260	344	263	353	260	257	257	302
13	279	272	243	200	300	354	265	435	252	250	262	296
14	281	271	261	140	290	366	273	484	289	248	266	295
15	283	273	281	160	290	331	281	491	272	224	275	293
16	282	324	293	220	320	357	281	429	288	207	290	280
17	279	289	303	280	301	347	277	353	310	204	298	273
18	286	283	313	300	299	338	273	320	362	200	309	271
19	290	269	297	280	287	327	255	306	534	207	324	265
20	298	253	309	230	295	306	255	293	495	318	316	251
21	296	243	295	240	280	283	259	288	405	385	318	244
22	260	233	295	250	276	274	267	298	346	324	311	239
23	245	228	278	250	252	272	279	293	312	291	299	232
24	256	221	251	230	244	276	293	293	304	312	282	238
25	266	234	210	210	249	280	302	271	305	324	268	242
26	264	251	170	210	243	279	342	263	283	348	255	238
27	269	254	155	230	242	281	405	259	275	323	254	230
28	256	284	160	250	250	275	442	247	264	314	249	235
29	239	298	180	260	253	272	456	243	249	320	254	241
30	223	310	210	270	-----	281	449	251	239	316	263	247
31	226	-----	230	270	-----	278	-----	259	-----	309	270	-----
TOTAL	8,549	7,911	8,285	7,499	7,606	9,119	8,877	10,217	8,910	8,309	8,544	8,052
MEAN	276	264	267	242	262	294	296	330	297	268	276	268
MAX	315	324	348	330	320	366	456	491	534	385	324	326
MIN	223	221	155	140	220	221	238	243	239	200	247	230
AC-FT	16,960	15,690	16,430	14,870	15,090	18,090	17,610	20,270	17,670	16,480	16,950	15,970

CAL YR 1971 TOTAL 104,901 MEAN 287 MAX 760 MIN 155 AC-FT 208,100
WTR YR 1972 TOTAL 101,878 MEAN 278 MAX 534 MIN 140 AC-FT 202,100

PLATTE RIVER BASIN

95

06790500 North Loup River near St. Paul, Nebr.

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.

DRAINAGE AREA.--4,290 sq mi (revised), approximately, of which about 1,270 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 1,759.29 ft (adjusted) above mean sea level. See WSP 1918 for history of changes prior to Oct. 1, 1954.

AVERAGE DISCHARGE.--65 years, 972 cfs (704,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,700 cfs May 23 (gage height, 5.79 ft); maximum gage height, 6.22 ft Feb. 28 (backwater from ice); minimum daily discharge, 160 cfs Jan. 5-6.

Period of record: Maximum discharge, 90,000 cfs (estimated) June 6, 1896 (gage height, 14.9 ft, from floodmark, datum then in use); minimum daily since 1931, 85 cfs Aug. 8, 1941.

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	790	913	818	1,060	940	1,100	848	1,160	720	560	1,090	379
2	929	953	858	1,210	960	1,000	786	1,270	711	529	1,150	444
3	925	1,110	858	560	880	960	844	1,080	695	534	1,040	459
4	978	1,110	928	200	820	1,040	844	1,040	694	565	976	547
5	819	1,040	900	160	800	1,100	858	939	656	565	926	588
6	780	1,000	886	160	800	1,200	860	980	648	530	899	633
7	758	978	942	330	800	961	864	895	647	475	843	1,020
8	762	920	964	740	820	944	847	843	649	414	778	890
9	751	855	851	1,200	800	1,060	854	754	658	389	698	730
10	741	855	730	1,300	820	1,020	816	743	627	370	625	773
11	689	832	772	1,250	780	1,030	822	876	579	343	582	849
12	704	818	807	1,100	820	928	858	1,150	571	319	559	1,040
13	725	818	802	1,060	820	888	884	1,430	564	288	528	949
14	741	811	715	800	840	926	890	1,450	568	265	469	837
15	746	779	870	450	880	923	930	1,240	553	248	423	830
16	770	885	984	470	920	886	903	1,210	580	229	379	820
17	771	1,280	897	560	980	886	787	1,070	593	353	337	776
18	795	1,080	780	740	1,000	853	822	949	758	386	295	768
19	824	959	863	820	1,100	868	846	910	1,120	280	270	749
20	879	926	1,000	860	1,100	927	889	882	1,320	283	247	799
21	874	876	958	880	1,100	966	949	844	1,020	852	259	800
22	907	869	931	940	1,140	954	923	807	826	1,410	295	753
23	851	907	992	960	1,250	963	890	2,950	760	1,040	282	763
24	837	857	917	1,000	1,300	970	897	1,160	770	1,010	283	741
25	837	879	856	920	1,300	1,020	850	894	789	853	298	718
26	859	909	946	800	1,350	1,000	971	815	826	1,720	312	732
27	890	861	880	620	1,500	1,010	1,120	823	789	1,070	325	802
28	926	963	720	500	1,750	926	1,200	879	721	1,000	339	820
29	966	926	643	500	1,400	923	1,350	921	672	1,430	342	866
30	1,020	873	867	680	-----	930	1,120	833	629	970	357	872
31	986	-----	951	940	-----	920	-----	736	-----	956	362	-----
TOTAL	25,830	27,842	26,886	23,770	29,770	30,082	27,322	32,533	21,713	20,236	16,568	22,747
MEAN	833	928	867	767	1,027	970	911	1,049	724	653	534	758
MAX	1,020	1,280	1,000	1,300	1,750	1,200	1,350	2,950	1,320	1,720	1,150	1,040
MIN	689	779	643	160	780	853	786	736	553	229	247	379
AC-FT	51,230	55,220	53,330	47,150	59,050	59,670	54,190	64,530	43,070	40,140	32,860	45,120

CAL YR 1971 TOTAL 304,157 MEAN 833 MAX 2,720 MIN 194 AC-FT 603,300
WTR YR 1972 TOTAL 305,299 MEAN 834 MAX 2,950 MIN 160 AC-FT 605,600

PLATTE RIVER BASIN

06791500 Cedar River near Spalding, Nebr.

LOCATION.--Lat 41°42'41", long 98°26'48", in NE¹NE¹NE¹ 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 north-west 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.--24 years, 153 cfs (110,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 446 cfs July 21 (gage height, 4.19 ft); maximum gage height, 4.94 ft Feb. 14, 15, 20 (backwater from ice); minimum daily discharge, 66 cfs Jan. 26.

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 fair except those for winter period and periods 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	181	141	170	120	126	165	198	168	177	160	130
2	152	181	158	110	140	139	150	195	148	118	159	129
3	143	158	142	88	110	111	155	190	135	117	194	140
4	121	167	164	100	118	125	165	180	147	126	183	143
5	124	143	158	130	150	117	155	190	138	119	158	129
6	117	165	145	170	140	131	150	180	148	132	155	172
7	130	171	164	190	116	161	160	160	121	123	165	160
8	119	137	147	200	120	142	150	130	143	132	166	209
9	126	138	130	210	130	95	155	140	124	131	145	169
10	122	142	120	200	125	120	155	150	118	104	144	168
11	114	121	130	120	145	121	140	250	133	134	140	222
12	117	126	120	100	165	145	135	270	104	145	122	168
13	136	127	100	90	150	128	145	220	110	126	140	177
14	148	152	150	80	170	136	150	200	125	114	119	137
15	113	117	130	120	190	130	150	180	102	114	136	131
16	114	149	140	160	200	130	165	200	102	104	112	118
17	121	212	110	200	220	130	150	260	117	153	109	112
18	156	198	120	180	250	135	139	270	153	133	131	114
19	156	172	116	160	260	140	152	230	185	178	93	127
20	132	155	125	140	290	105	165	205	134	170	90	129
21	136	159	130	160	230	170	172	160	132	293	120	136
22	147	149	149	130	190	145	151	167	149	270	146	131
23	132	155	136	106	145	150	151	178	131	190	107	124
24	136	146	115	90	120	150	161	197	144	164	119	136
25	129	154	122	74	154	165	139	149	151	153	136	117
26	137	165	110	66	131	150	152	179	166	149	122	117
27	160	144	92	82	137	155	179	208	149	219	106	141
28	136	165	130	110	119	155	243	198	119	155	115	125
29	128	149	120	100	148	160	212	183	158	165	128	124
30	208	176	135	106	-----	150	251	186	89	194	115	157
31	166	-----	140	130	-----	155	-----	168	-----	204	126	-----
TOTAL	4,175	4,674	4,089	4,072	4,683	4,272	4,862	5,971	4,043	4,806	4,161	4,292
MEAN	135	156	132	131	161	138	162	193	135	155	134	143
MAX	208	212	164	210	290	170	251	270	185	293	194	222
MIN	99	117	92	66	110	95	135	130	89	104	90	112
AC-FT	8,280	9,270	8,110	8,080	9,290	8,470	9,640	11,840	8,020	9,530	8,250	8,510

CAL YR 1971 TOTAL 53,016 MEAN 145 MAX 270 MIN 78 AC-FT 105,200
WTR YR 1972 TOTAL 54,100 MEAN 148 MAX 293 MIN 66 AC-FT 107,300

NOTE.--No gage-height record Nov. 2-10, Feb. 6, 21, 22, Mar. 15 to Apr. 16, May 2-21.

PLATTE RIVER BASIN

97

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.--32 years (1940-72), 244 cfs (176,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,460 cfs July 21 (gage height, 4.53 ft); minimum daily, 68 cfs July 15.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	231	200	240	170	240	214	329	209	152	285	141
2	163	239	165	260	160	200	223	285	219	128	291	179
3	170	219	181	190	180	170	207	294	186	179	260	166
4	178	190	171	140	160	130	213	256	197	139	246	156
5	214	202	193	170	170	190	219	231	203	134	259	180
6	170	163	186	200	190	230	203	262	190	122	258	186
7	160	209	164	230	180	226	196	265	184	113	210	199
8	178	235	178	240	170	230	204	193	172	116	213	225
9	156	200	188	270	160	231	185	176	195	115	207	282
10	167	188	191	290	170	166	191	197	364	96	176	294
11	160	202	170	260	165	202	192	197	214	182	167	510
12	156	204	212	230	180	171	178	315	209	192	151	693
13	150	201	157	200	200	222	172	410	182	149	157	358
14	153	193	163	160	210	217	182	322	170	101	128	290
15	167	201	190	140	220	273	178	292	175	68	112	237
16	167	226	220	230	260	208	185	302	183	70	100	242
17	143	256	203	250	290	227	180	284	169	124	96	218
18	167	289	138	280	330	200	198	345	186	400	88	216
19	153	290	188	250	360	210	181	350	204	210	81	203
20	182	266	198	230	400	206	181	325	221	169	92	230
21	174	227	246	200	350	186	177	251	212	1,050	88	236
22	157	226	226	230	300	182	216	232	164	526	76	232
23	173	228	225	200	280	170	181	264	165	338	97	248
24	160	204	221	170	240	177	173	389	183	279	103	210
25	161	203	197	140	220	225	168	284	210	189	83	223
26	182	191	187	130	190	219	186	221	207	333	133	203
27	173	192	170	120	250	203	195	227	210	288	134	197
28	185	195	155	130	290	208	228	215	209	255	105	187
29	217	202	210	140	270	208	271	273	199	226	96	225
30	207	176	200	130	-----	212	291	232	160	224	142	223
31	216	-----	230	140	-----	208	-----	245	-----	220	138	-----
TOTAL	5,357	6,448	5,923	6,190	6,715	6,347	5,968	8,463	5,951	6,887	4,772	7,389
MEAN	173	215	191	200	232	205	199	273	198	222	154	246
MAX	217	290	246	290	400	273	291	410	364	1,050	291	693
MIN	143	163	138	120	160	130	168	176	160	68	76	141
AC-FT	10,630	12,790	11,750	12,280	13,320	12,590	11,840	16,790	11,800	13,660	9,470	14,660

CAL YR 1971 TOTAL 75,280 MEAN 206 MAX 1,000 MIN 47 AC-FT 149,300
WTR YR 1972 TOTAL 76,410 MEAN 209 MAX 1,050 MIN 68 AC-FT 151,600

PEAK DISCHARGE (BASE, 1,500 cfs).--No peak above base.

PLATTE RIVER BASIN

99

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, 12,200 cfs July 27 (gage height, 8.22 ft); maximum gage height, 9.21 ft Feb. 28 (backwater from ice); minimum daily discharge, 1.3 cfs July 9.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	182	20	2,000	60	3,000	86	620	78	7.6	33	4.6
2	15	28	18	2,480	44	2,900	89	530	58	10	36	4.4
3	7.8	21	7.1	2,820	13	2,470	89	703	65	4.8	36	4.1
4	32	23	940	1,620	17	3,000	83	65	58	5.1	23	3.5
5	42	38	1,100	990	20	2,720	61	57	60	3.6	19	35
6	50	36	51	860	21	1,500	49	121	32	2.7	13	60
7	42	603	28	1,120	22	656	34	95	38	2.2	12	51
8	40	98	1,250	1,320	23	162	37	69	34	2.9	12	56
9	28	105	1,800	1,880	40	58	66	52	41	1.3	8.3	14
10	20	104	1,350	1,950	80	36	98	60	67	31	7.9	65
11	18	101	1,400	1,500	150	29	44	86	54	273	7.8	174
12	36	80	1,700	1,240	210	29	49	1,140	60	105	7.1	134
13	22	33	1,700	1,700	270	29	47	2,700	51	55	7.1	110
14	17	43	1,750	1,750	360	26	35	1,620	61	25	6.8	78
15	16	33	1,820	1,750	290	25	34	1,100	59	14	5.7	71
16	17	35	1,860	1,450	420	25	33	174	58	11	5.9	62
17	19	680	2,000	1,400	800	21	47	96	57	34	5.3	49
18	19	842	2,050	1,350	1,050	43	38	89	47	19	4.4	65
19	20	308	2,050	1,040	1,150	22	67	78	58	21	3.9	58
20	20	60	1,780	800	1,140	50	75	47	84	11	4.2	67
21	25	30	1,810	740	1,010	81	81	49	80	13	4.3	54
22	31	26	1,240	470	1,080	82	63	56	76	30	3.9	47
23	18	23	289	300	1,120	78	51	1,880	65	33	3.9	60
24	16	23	688	150	1,120	89	60	1,350	90	16	4.0	49
25	13	21	853	250	1,120	67	50	118	17	17	4.3	51
26	13	20	1,950	400	1,180	33	75	73	16	773	4.2	60
27	13	18	2,050	470	1,320	76	60	83	8.4	6,690	4.1	65
28	11	19	1,590	560	2,400	65	90	80	6.2	1,030	4.1	29
29	16	40	1,190	300	3,000	71	275	60	4.3	388	5.0	16
30	680	18	1,480	200	-----	69	479	60	4.5	226	6.5	13
31	829	-----	1,900	120	-----	67	-----	80	-----	38	5.2	-----
TOTAL	2,175.8	3,691	39,714.1	34,980	19,530	17,579	2,445	13,391	1,487.4	9,893.2	307.9	1,609.6
MEAN	70.2	123	1,281	1,128	673	567	81.5	432	49.6	319	9.93	53.7
MAX	829	842	2,050	2,820	3,000	3,000	479	2,700	90	6,690	36	174
MIN	7.8	18	7.1	120	13	21	33	47	4.3	1.3	3.9	3.5
AC-FT	4,320	7,320	78,770	69,380	38,740	34,870	4,850	26,560	2,950	19,620	611	3,190

CAL YR 1971 TOTAL 211,978.87 MEAN 581 MAX 12,500 MIN .30 AC-FT 420,500
WTR YR 1972 TOTAL 146,804.00 MEAN 401 MAX 6,690 MIN 1.3 AC-FT 291,200

PLATTE RIVER BASIN

06794000 Beaver Creek at Genoa, Nebr.

LOCATION.--Lat 41°26'32", long 97°44'11", in NE 1/4 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.--32 years, 128 cfs (92,740 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,730 cfs May 24 (gage height, 8.59 ft); minimum daily, 27 cfs Aug. 22.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	87	82	74	78	96	93	408	188	70	82	46
2	63	91	78	72	76	96	94	210	155	90	87	52
3	64	86	78	68	68	120	92	185	134	67	116	56
4	64	80	76	64	70	200	91	175	118	67	109	59
5	63	77	72	66	72	130	92	170	127	62	94	57
6	60	75	78	72	74	106	95	266	101	52	86	54
7	59	74	80	82	74	115	93	174	98	48	80	51
8	58	69	76	94	74	102	88	143	97	48	76	77
9	58	70	76	100	76	96	86	128	92	41	64	80
10	58	77	80	110	76	90	86	120	165	39	58	79
11	58	77	86	108	76	90	89	126	101	111	55	251
12	60	76	80	106	80	90	89	216	88	51	53	830
13	60	76	82	70	80	91	88	325	89	41	54	170
14	61	76	84	64	84	93	85	359	86	38	52	160
15	62	76	88	66	90	93	82	390	83	32	38	140
16	61	77	84	68	110	94	83	314	81	28	33	120
17	62	89	86	74	108	97	84	250	82	38	31	100
18	64	94	92	78	120	98	84	192	80	111	30	90
19	66	98	90	80	118	97	81	162	90	202	29	82
20	68	100	94	76	116	100	80	138	93	122	28	78
21	68	96	90	72	106	99	84	125	108	296	31	76
22	66	92	94	76	94	96	85	120	89	1,040	27	69
23	66	88	96	74	98	95	95	128	80	393	28	72
24	66	86	90	68	92	94	91	1,280	82	206	34	70
25	66	84	92	60	92	94	86	429	81	230	32	68
26	68	82	80	62	94	96	90	360	84	190	31	70
27	69	80	74	58	106	98	96	282	96	130	37	67
28	69	80	78	66	110	103	112	234	86	100	43	71
29	70	80	76	74	90	106	145	339	79	92	42	71
30	78	80	72	80	-----	100	226	392	74	86	40	71
31	81	-----	76	80	-----	95	-----	259	-----	84	43	-----
TOTAL	1,995	2,473	2,560	2,362	2,602	3,170	2,865	8,399	3,007	4,205	1,643	3,337
MEAN	64.4	82.4	82.6	76.2	89.7	102	95.5	271	100	136	53.0	111
MAX	81	100	96	110	120	200	226	1,280	188	1,040	116	830
MIN	58	69	72	58	68	90	80	120	74	28	27	46
AC-FT	3,960	4,910	5,080	4,690	5,160	6,290	5,680	16,660	5,960	8,340	3,260	6,620

CAL YR 1971 TOTAL 52,332 MEAN 143 MAX 4,400 MIN 28 AC-FT 103,800
WTR YR 1972 TOTAL 38,618 MEAN 106 MAX 1,280 MIN 27 AC-FT 76,600

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-24	1645	8.59	1,730	9-12	0700	7.77	1,430
7-22	1345	7.19	1,200				

NOTE.--No gage height record Nov. 18 to 30, Dec. 2 to 22, Dec. 24 to Jan. 11, May 3-5, 26, July 25 to 30, Sept. 13 to 20.

PLATTE RIVER BASIN

101

06794500 Loup River at Columbus, Nebr.

LOCATION.--Lat 41°25'05", long 97°21'45", in SE1/4 sec.30, T.17 N., R.1 E., Platte County (corrected), 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, 18,000 cfs July 27 (gage height, 7.99 ft); minimum daily, 56 cfs Aug. 23.

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 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	492	146	2,600	210	3,500	236	1,340	318	120	170	78
2	136	231	143	3,000	160	3,600	218	1,180	290	130	160	92
3	115	172	146	3,400	150	3,300	226	973	265	140	170	88
4	115	154	823	2,290	140	3,500	236	971	259	122	190	92
5	129	143	1,080	1,030	130	2,900	262	576	255	114	170	97
6	132	143	420	1,010	120	2,340	253	1,080	250	106	160	130
7	143	324	246	980	125	1,600	250	799	218	98	145	140
8	136	316	702	1,280	130	580	243	589	212	90	140	143
9	132	213	2,300	1,980	150	308	228	500	190	92	130	165
10	129	208	2,100	2,100	200	356	246	495	200	80	125	261
11	115	195	1,800	2,200	300	231	256	569	264	150	120	920
12	115	182	1,750	2,050	400	264	220	901	208	490	115	740
13	129	146	2,100	1,800	500	240	205	3,940	190	150	110	390
14	122	118	2,050	1,550	620	231	193	3,020	177	100	110	304
15	115	112	2,000	1,580	760	213	178	2,950	168	86	104	261
16	115	118	2,000	1,660	900	200	175	1,060	164	80	82	246
17	115	207	2,200	1,580	1,100	190	171	550	172	70	70	246
18	129	1,530	2,400	964	1,300	190	174	452	172	120	64	229
19	115	802	2,400	610	1,450	200	169	388	172	200	60	226
20	115	172	2,200	600	1,600	177	208	324	164	250	60	236
21	122	236	2,100	858	1,500	218	236	276	182	200	58	213
22	129	195	1,900	590	1,450	218	226	258	190	500	62	203
23	126	172	520	308	1,400	226	200	1,120	182	1,260	56	197
24	115	159	816	250	1,450	226	195	3,180	168	748	58	206
25	115	150	1,030	310	1,800	258	195	1,370	200	500	68	200
26	118	159	1,290	400	2,500	226	226	647	185	460	64	197
27	132	154	2,300	480	3,100	204	287	494	170	7,950	62	197
28	112	154	1,850	580	3,300	231	294	444	150	1,320	74	203
29	122	164	1,500	640	3,400	231	322	449	130	680	84	174
30	177	159	1,600	460	-----	240	625	422	125	490	86	187
31	879	-----	2,050	320	-----	246	-----	384	-----	200	86	-----
TOTAL	4,639	7,680	45,962	39,460	30,345	26,644	7,153	31,701	5,990	17,096	3,213	7,061
MEAN	150	256	1,483	1,273	1,046	859	238	1,023	200	551	104	235
MAX	879	1,530	2,400	3,400	3,400	3,600	625	3,940	318	7,950	190	920
MIN	112	112	143	250	120	177	169	258	125	70	56	78
AC-FT	9,200	15,230	91,170	78,270	60,190	52,850	14,190	62,880	11,880	33,910	6,370	14,010

CAL YR 1971 TOTAL 300,753 MEAN 824 MAX 11,800 MIN 46 AC-FT 596,500
WTR YR 1972 TOTAL 226,944 MEAN 620 MAX 7,950 MIN 56 AC-FT 450,100

PLATTE RIVER BASIN

06795500 Shell Creek near Columbus, Nebr.

LOCATION.--Lat 41°31'33", long 97°16'55", in NE1/4 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.--25 years, 43.2 cfs (31,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,260 cfs Sept. 12 (gage height, 13.26 ft); minimum daily, 2.4 cfs Aug. 25.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	13	10	9.2	6.0	45	14	211	23	16	12	5.3
2	5.2	9.8	10	9.0	6.0	40	15	340	20	16	13	6.9
3	5.5	8.0	9.7	7.0	6.0	50	14	75	18	101	19	6.6
4	5.9	7.7	10	7.2	6.2	40	14	42	17	19	29	6.7
5	6.2	7.7	9.6	7.8	6.4	50	14	33	16	10	18	5.9
6	4.8	7.4	10	9.6	6.2	60	15	296	23	8.1	13	5.9
7	5.1	7.0	10	9.2	6.0	64	15	291	16	6.8	10	5.5
8	5.7	7.2	9.6	9.6	6.4	60	14	66	15	6.6	8.5	5.8
9	5.9	7.1	9.0	10	6.0	56	14	40	14	7.4	6.4	5.4
10	5.0	7.2	9.8	10	6.0	50	14	32	14	7.2	8.8	17
11	5.2	7.4	9.2	9.6	6.0	40	14	39	14	8.0	6.0	246
12	5.2	7.9	8.6	9.2	6.4	32	15	128	13	19	5.4	1,130
13	5.3	7.9	9.2	8.2	7.4	16	13	496	13	10	5.9	291
14	5.9	7.9	9.6	7.8	7.8	15	12	165	13	5.4	6.4	79
15	5.6	7.8	10	5.0	8.0	16	12	84	12	4.7	4.2	78
16	5.8	8.0	9.2	7.0	10	16	12	50	12	4.6	3.5	33
17	4.9	10	9.0	9.0	15	15	11	37	12	7.0	3.8	22
18	5.8	11	9.0	8.6	18	15	11	30	12	14	4.0	17
19	6.1	21	9.2	8.2	35	15	11	24	12	29	4.2	14
20	6.1	15	10	8.0	25	15	11	21	11	22	3.1	13
21	6.2	11	9.0	8.4	23	16	14	19	12	25	4.2	11
22	6.3	9.9	8.8	8.8	24	17	14	17	12	25	3.7	11
23	5.8	9.8	9.8	9.4	25	19	18	21	10	440	3.4	10
24	6.0	9.4	10	8.6	27	15	14	120	11	92	3.7	8.8
25	6.7	9.5	10	6.6	25	14	12	33	11	30	2.4	8.7
26	6.3	9.4	9.4	6.0	30	16	14	31	11	20	5.6	8.4
27	7.3	9.7	8.4	5.2	36	16	16	24	10	17	3.0	8.4
28	7.0	10	9.0	4.6	60	16	39	34	9.5	15	4.8	8.1
29	7.0	11	8.6	5.0	50	15	40	136	8.8	15	5.0	8.0
30	10	11	8.8	5.8	-----	15	66	54	11	14	4.4	8.1
31	9.6	-----	9.6	5.8	-----	14	-----	32	-----	11	3.8	-----
TOTAL	189.5	286.7	292.1	243.4	499.8	883	512	3,021	406.3	1,025.8	228.2	2,084.5
MEAN	6.11	9.56	9.42	7.85	17.2	28.5	17.1	97.5	13.5	33.1	7.36	69.5
MAX	10	21	10	10	60	64	66	496	23	440	29	1,130
MIN	4.8	7.0	8.4	4.6	6.0	14	11	17	8.8	4.6	2.4	5.3
AC-FT	376	569	579	483	991	1,750	1,020	5,990	806	2,030	453	4,130

CAL YR 1971 TOTAL 27,867.8 MEAN 76.4 MAX 3,300 MIN 3.3 AC-FT 55,280

WTR YR 1972 TOTAL 9,672.3 MEAN 26.4 MAX 1,130 MIN 2.4 AC-FT 19,190

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-6	2000	9.95	763	9-12	0930	13.26	1,260
5-13	1030	9.69	727				

PLATTE RIVER BASIN

103

06796000 Platte River at North Bend, Nebr.

LOCATION.--Lat 41°27'10", long 96°45'50", in SE $\frac{1}{4}$ 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. 30, 1970, water-stage recorder at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--23 years, 3,879 cfs (2,810,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,600 cfs May 24 (gage height, 6.08 ft); maximum gage height, 10.19 ft Feb. 29 (ice jam); minimum daily discharge, 879 cfs July 11.
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.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,080	5,550	5,300	1,900	2,300	8,600	5,280	7,040	4,510	1,920	2,980	1,040
2	2,270	5,220	4,950	1,600	2,400	7,900	5,680	7,420	3,860	1,410	2,590	983
3	2,430	5,030	4,830	1,400	2,400	6,800	4,560	6,630	4,050	1,370	2,980	1,270
4	2,250	4,620	4,980	1,200	2,400	5,600	4,680	6,340	3,910	1,370	3,680	1,290
5	2,500	4,540	5,260	976	2,300	5,100	4,790	5,530	3,310	1,240	3,800	1,240
6	2,770	4,520	5,340	964	2,300	5,300	4,740	6,600	3,460	1,190	3,560	1,310
7	2,750	4,740	5,000	988	2,200	6,000	4,590	7,640	3,210	1,210	3,190	1,470
8	2,490	3,940	4,600	1,330	2,200	6,100	4,320	7,580	2,930	1,010	3,020	1,530
9	2,460	4,530	3,800	2,260	2,200	5,800	4,800	6,430	2,700	1,390	3,220	1,710
10	2,460	3,960	3,900	3,100	2,200	5,520	5,200	5,760	2,600	920	2,950	2,200
11	2,440	4,250	3,700	4,260	2,200	5,440	4,740	5,560	2,700	879	2,650	6,240
12	2,610	4,090	3,500	5,390	2,300	5,480	4,810	6,870	2,310	1,920	2,380	7,920
13	2,620	4,320	3,600	5,050	2,500	5,560	4,570	8,880	2,370	2,770	2,280	6,280
14	2,550	4,110	3,700	4,000	2,700	5,480	4,100	10,900	1,890	2,050	1,980	3,560
15	2,430	3,770	3,700	3,300	2,900	5,680	4,220	8,960	1,770	1,510	1,810	3,130
16	2,540	3,930	3,500	3,200	3,200	5,760	4,390	8,090	1,640	1,180	1,650	2,860
17	2,740	4,780	3,600	3,400	3,600	5,880	3,980	7,420	1,590	1,140	1,690	2,470
18	2,860	6,220	3,700	3,700	4,000	5,720	3,910	7,320	1,790	1,350	1,370	1,770
19	4,000	6,400	3,800	3,800	4,500	5,760	3,710	6,950	1,930	1,330	1,220	1,950
20	3,330	5,760	4,000	3,300	5,000	5,560	3,160	6,300	2,720	1,690	1,010	2,050
21	3,270	5,280	3,900	3,300	5,600	6,730	3,860	6,190	2,700	1,370	1,040	2,640
22	4,070	4,780	4,000	3,500	6,400	5,640	3,930	5,380	2,720	1,550	996	2,330
23	3,050	4,360	4,200	3,500	7,200	5,920	4,140	5,230	2,700	2,770	944	2,350
24	3,830	4,790	4,000	3,300	8,000	5,760	3,260	10,400	2,060	2,740	931	2,200
25	4,370	4,490	4,200	2,900	8,300	4,360	3,350	10,300	2,480	2,620	944	2,260
26	4,150	4,480	3,500	2,600	8,600	6,040	3,140	7,060	2,030	2,530	944	1,870
27	4,640	4,600	2,700	2,400	8,800	6,130	4,090	5,760	2,100	4,160	944	2,360
28	4,480	4,900	2,500	2,200	8,800	5,360	4,180	5,580	2,300	7,680	983	2,210
29	4,850	4,970	2,300	2,200	8,900	5,680	5,220	5,170	2,020	4,440	970	2,070
30	4,950	5,110	2,400	2,200	-----	5,600	5,300	5,180	1,970	3,920	983	2,340
31	6,090	-----	2,400	2,300	-----	5,640	-----	5,180	-----	3,530	1,060	-----
TOTAL	100,330	142,040	120,860	85,518	126,400	181,900	130,700	215,650	78,330	65,859	60,749	74,903
MEAN	3,236	4,735	3,899	2,759	4,359	5,868	4,357	6,956	2,611	2,124	1,960	2,497
MAX	6,090	6,400	5,340	5,390	8,900	8,600	5,680	10,900	4,510	7,680	3,800	7,920
MIN	2,080	3,770	2,300	964	2,200	4,360	3,140	5,170	1,590	879	931	983
AC-FT	199,000	281,700	239,700	169,600	250,700	360,800	259,200	427,700	155,400	130,600	120,500	148,600

CAL YR 1971 TOTAL 1,966,914 MEAN 5,389 MAX 24,000 MIN 333 AC-FT 3,901,000
WTR YR 1972 TOTAL 1,383,239 MEAN 3,779 MAX 10,900 MIN 879 AC-FT 2,744,000

PLATTE RIVER BASIN

06797500 Elkhorn River at Ewing, Nebr.

LOCATION.--Lat 42°16'03", long 98°20'11", in NW¼SW¼ 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.--25 years, 180 cfs (130,400 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,680 cfs May 16 (gage height, 8.02 ft); minimum daily, 30 cfs Oct. 15, 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 fair except those for winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	58	72	60	45	88	124	446	161	199	458	54
2	41	62	70	56	43	82	118	507	147	175	694	59
3	40	60	72	52	42	94	112	487	138	161	659	60
4	41	58	68	47	44	86	106	517	135	148	522	59
5	38	56	66	52	45	104	103	621	127	132	423	56
6	36	51	68	54	42	132	99	700	116	118	370	54
7	35	46	68	54	40	146	94	607	112	107	314	52
8	33	42	66	54	37	161	88	453	110	99	262	50
9	32	58	64	56	36	129	86	358	104	90	219	49
10	32	60	68	54	35	121	84	303	96	82	188	50
11	31	59	66	56	35	119	86	334	93	85	166	52
12	32	57	64	50	36	116	90	587	89	71	147	53
13	31	56	64	44	38	113	87	1,160	95	65	133	52
14	31	53	64	43	38	111	81	1,280	96	61	120	54
15	30	53	68	42	38	111	79	1,440	86	57	107	50
16	30	69	64	44	40	109	78	2,480	82	54	96	49
17	31	86	62	46	42	109	75	2,380	89	75	87	47
18	40	107	66	44	44	108	71	1,860	106	69	81	45
19	39	100	66	43	47	105	69	1,390	142	72	74	44
20	37	94	64	43	50	104	72	1,000	187	114	69	45
21	37	91	64	42	49	103	80	630	220	150	72	43
22	36	90	68	45	52	101	80	407	226	173	69	42
23	36	87	68	44	56	97	77	313	232	160	66	41
24	36	85	64	42	52	100	73	304	263	147	64	41
25	38	83	64	40	52	106	71	262	290	179	63	46
26	38	81	62	41	76	116	77	232	289	760	61	51
27	41	80	58	39	110	129	115	214	300	578	59	50
28	42	78	56	37	113	133	152	212	304	541	57	51
29	45	76	58	42	110	131	193	226	283	915	55	49
30	53	74	60	45	-----	129	227	198	246	624	53	49
31	53	-----	58	46	-----	130	-----	174	-----	445	52	-----
TOTAL	1,153	2,110	2,210	1,457	1,487	3,523	2,947	22,082	4,964	6,706	5,860	1,497
MEAN	37.2	70.3	64.8	47.0	51.3	114	98.2	712	165	216	189	49.9
MAX	53	107	72	60	113	161	227	2,480	304	915	694	60
MIN	30	42	56	37	35	82	69	174	82	54	52	41
AC-FT	2,292	4,190	3,990	2,890	2,950	6,990	5,850	43,800	9,850	13,300	11,620	2,970

CAL YR 1971 TOTAL 47,482 MEAN 130 MAX 1,030 MIN 10 AC-FT 94,180
WTR YR 1972 TOTAL 55,796 MEAN 152 MAX 2,480 MIN 30 AC-FT 110,700

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-6	0700	5.51	715	7-29	0330	5.98	964
5-16	1400	8.02	2,680	8-2	1200	5.55	730
7-26	1400	5.91	922				

PLATTE RIVER BASIN

105

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 upstream 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 September 1972 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,842.80 ft above mean sea level. See WSP 1918 for history of changes prior to June 14, 1963.

AVERAGE DISCHARGE.--18 years, 66.4 cfs (48,110 acre-ft per year); median of yearly mean discharges, 51 cfs (36,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 290 cfs May 14 (gage height, 1.90 ft); maximum gage height, 2.99 ft Feb. 4 (backwater from ice); minimum daily discharge, 18 cfs Nov. 7.
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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	41	53	48	41	54	53	118	44	24	140	27
2	44	47	41	45	40	52	51	129	44	33	136	27
3	21	38	47	41	39	60	48	136	47	38	112	27
4	24	44	44	38	41	54	48	154	44	38	122	27
5	24	47	33	42	40	56	46	132	44	41	98	30
6	33	34	30	43	38	62	46	104	41	36	84	36
7	33	18	23	44	37	82	44	74	38	27	68	33
8	33	25	20	45	36	41	42	56	41	24	71	27
9	30	30	22	44	35	38	40	53	38	21	62	30
10	30	33	40	43	35	41	42	53	36	19	53	33
11	30	36	38	44	35	41	44	77	36	38	47	33
12	33	41	36	40	35	47	42	126	33	30	44	36
13	27	47	45	36	36	47	40	230	33	32	38	36
14	33	53	52	35	37	44	38	269	41	32	36	38
15	33	53	56	35	38	33	36	244	33	30	33	38
16	36	68	56	35	40	30	36	224	36	33	32	38
17	38	59	54	37	40	33	34	164	36	87	31	33
18	56	50	56	36	41	38	34	87	47	59	30	33
19	33	56	58	36	43	44	38	65	50	56	29	33
20	33	53	56	35	46	50	53	50	38	132	31	41
21	38	44	56	35	44	62	56	41	36	115	36	33
22	33	50	58	38	47	56	38	38	33	90	33	33
23	38	44	58	38	50	53	50	38	30	84	36	30
24	41	53	56	37	48	53	50	47	62	84	36	30
25	41	59	54	36	46	50	50	41	50	98	33	38
26	44	53	50	36	60	56	59	33	41	118	30	33
27	53	41	48	37	90	59	53	47	38	108	36	33
28	50	44	47	34	110	53	71	56	36	126	30	38
29	56	50	48	36	56	53	80	47	30	118	30	36
30	74	68	49	39	-----	53	104	50	24	98	30	36
31	59	-----	48	42	-----	55	-----	47	-----	112	24	-----
TOTAL	1,184	1,379	1,432	1,210	1,324	1,550	1,466	3,030	1,180	1,981	1,651	996
MEAN	38.2	46.0	46.2	39.0	45.7	50.0	48.9	97.7	39.3	63.9	53.3	33.2
MAX	74	68	58	48	110	82	104	269	62	132	140	41
MIN	21	18	20	34	35	30	34	33	24	19	24	27
AC-FT	2,350	2,740	2,840	2,400	2,630	3,070	2,910	6,010	2,340	3,930	3,270	1,980

CAL YR 1971 TOTAL 17,328 MEAN 47.5 MAX 210 MIN 13 AC-FT 34,370
WTR YR 1972 TOTAL 18,383 MEAN 50.2 MAX 269 MIN 18 AC-FT 36,460

PEAK DISCHARGE (BASE, 200 CFS).--May 14 (0700) 290 cfs (1.90 ft).

PLATTE RIVER BASIN

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.--40 years, 283 cfs (205,000 acre-ft per year); median of yearly mean discharges, 230 cfs (167,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,640 cfs May 17 (gage height, 7.23 ft); minimum daily, 99 cfs Oct. 9, 11, 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, which are poor. Records of fluvial sediments for the water year 1972 are published in Part 2 of this report.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	165	218	135	150	190	270	832	278	294	638	122
2	149	170	210	125	140	170	269	995	261	274	751	144
3	132	165	214	120	140	180	262	934	251	273	882	139
4	120	162	209	110	145	200	248	841	240	242	742	134
5	118	152	201	115	145	241	246	843	236	220	638	130
6	116	133	210	130	145	396	246	862	225	203	557	137
7	113	122	209	130	140	318	226	776	213	201	481	132
8	105	138	220	130	140	293	212	664	204	196	412	122
9	99	155	210	130	140	277	207	562	197	189	350	121
10	102	158	220	120	135	251	212	501	184	179	311	127
11	99	163	200	125	135	255	206	558	178	291	277	129
12	101	164	190	130	135	254	215	815	175	218	250	135
13	101	164	200	120	145	251	213	1,910	170	162	229	127
14	101	162	200	110	150	254	192	2,620	183	145	205	125
15	99	157	210	100	160	255	189	2,560	174	133	184	126
16	102	192	195	120	165	251	190	2,820	175	127	167	125
17	111	249	190	140	210	254	187	3,440	179	429	151	118
18	121	278	200	140	190	259	175	2,320	195	340	138	113
19	139	262	195	140	190	260	173	1,360	224	231	130	112
20	116	247	190	140	200	254	182	808	246	483	129	122
21	117	230	180	135	190	250	232	552	272	809	132	139
22	117	217	190	140	200	244	219	418	290	498	129	117
23	116	214	190	140	210	237	209	445	284	411	127	107
24	119	210	180	140	200	236	197	373	334	365	129	107
25	119	210	170	140	220	256	190	320	406	348	131	111
26	119	218	160	135	250	271	209	308	358	536	132	124
27	131	218	150	130	310	291	275	298	348	921	128	123
28	140	221	150	120	340	301	341	327	352	648	124	123
29	145	219	150	130	270	302	417	331	342	957	119	118
30	150	219	140	140	-----	295	509	303	321	861	115	119
31	160	-----	125	145	-----	284	-----	296	-----	655	116	-----
TOTAL	3,698	5,734	5,876	4,005	5,290	8,030	7,118	30,992	7,495	11,839	9,004	3,728
MEAN	119	191	190	129	182	259	237	1,000	250	382	290	124
MAX	160	278	220	145	340	396	509	3,440	406	957	882	144
MIN	99	122	125	100	135	170	173	296	170	127	115	107
AC-FT	7,330	11,370	11,660	7,940	10,490	15,930	14,120	61,470	14,870	23,480	17,860	7,390

CAL YR 1971 TOTAL 100,741 MEAN 276 MAX 1,360 MIN 44 AC-FT 199,800
WTR YR 1972 TOTAL 102,809 MEAN 281 MAX 3,440 MIN 99 AC-FT 203,900

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-1	2130	5.19	1,130	7-27	0500	5.05	1,020
5-17	0830	7.23	3,640	7-29	1500	5.19	1,130

06799000 Elkhorn River near Norfolk, Nebr.

LOCATION.--Lat 42°00'20", long 97°28'40", in SW $\frac{1}{4}$ 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.--27 years, 516 cfs (373,800 acre-ft per year); median of yearly mean discharges, 420 cfs (304,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,420 cfs July 21 (gage height, 5.79 ft, from floodmark); maximum gage height, 6.84 ft Mar. 6 (backwater from ice); minimum daily discharge, 180 cfs Dec. 26, Jan. 4, 5.

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 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	300	270	220	230	1,600	387	1,100	624	455	2,040	217
2	252	280	250	200	230	1,700	383	1,090	733	410	1,620	224
3	235	251	260	190	225	1,900	368	1,110	714	390	1,290	228
4	219	245	270	180	230	1,100	376	924	663	377	1,170	220
5	204	240	270	180	240	660	356	907	608	338	1,080	214
6	199	222	280	215	230	600	369	1,020	557	309	1,030	240
7	191	228	270	230	220	560	387	979	511	285	930	270
8	185	211	240	235	215	520	387	821	464	261	810	244
9	181	199	230	240	210	500	377	904	423	247	666	228
10	186	211	245	230	210	490	353	911	396	227	566	224
11	185	205	270	240	200	477	340	919	345	218	508	232
12	188	216	240	220	215	459	332	929	325	294	456	236
13	188	222	210	210	235	450	318	1,160	303	325	468	232
14	190	216	210	190	260	423	316	1,700	273	244	360	232
15	195	211	220	185	290	423	301	3,000	274	220	340	232
16	203	216	200	190	350	432	296	2,900	293	211	345	224
17	217	286	190	210	450	432	278	3,400	285	330	330	217
18	228	369	210	205	580	441	273	3,800	325	790	315	211
19	234	378	210	200	540	432	262	2,700	340	536	300	205
20	251	360	210	200	600	414	264	2,100	374	515	285	208
21	250	338	220	190	580	405	310	1,470	339	3,880	275	214
22	240	308	240	200	560	405	350	1,180	354	1,960	270	220
23	240	306	250	210	660	414	348	1,190	390	1,030	256	208
24	240	290	230	215	620	432	321	1,320	407	711	248	205
25	240	280	235	220	860	441	306	1,170	496	536	244	211
26	250	280	180	220	1,200	450	316	968	608	750	236	217
27	250	270	190	205	1,600	423	387	867	540	842	232	224
28	260	300	200	190	1,700	396	507	831	602	1,400	224	232
29	270	270	210	200	2,200	378	766	803	541	919	217	228
30	280	250	220	220	-----	379	810	793	505	1,100	214	224
31	300	-----	210	235	-----	386	-----	669	-----	1,500	214	-----
TOTAL	6,954	7,958	7,140	6,475	15,940	18,522	11,144	43,635	13,612	21,610	17,479	6,721
MEAN	224	265	230	209	550	597	371	1,408	454	697	564	224
MAX	300	378	280	240	2,200	1,900	810	3,800	733	3,880	2,040	270
MIN	181	199	180	180	200	378	262	669	273	211	214	205
AC-FT	13,790	15,780	14,160	12,840	31,620	36,740	22,100	86,550	27,000	42,860	34,670	13,330

CAL YR 1971 TOTAL 167,584 MEAN 459 MAX 11,300 MIN 82 AC-FT 332,400
WTR YR 1972 TOTAL 177,190 MEAN 484 MAX 3,880 MIN 180 AC-FT 351,500

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-29	0730	3.92	2,400	7-21	0800	5.79	6,420
5-18	Unknown	-	Unknown	8-1	1700	4.03	2,260

a About.

PLATTE RIVER BASIN

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.--12 years, 91.1 cfs (66,000 acre-ft per year); median of yearly mean discharges, 80 cfs (58,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,610 cfs July 26 (gage height, 14.08 ft); minimum daily, 25 cfs Jan. 4, 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	32	32	27	34	130	47	281	97	41	216	49
2	35	31	31	27	33	135	46	524	86	40	247	52
3	32	31	32	26	32	140	46	236	81	43	193	53
4	32	31	33	25	33	130	45	151	77	41	169	52
5	31	31	31	26	34	150	45	110	75	39	151	54
6	30	31	35	27	34	80	44	105	74	38	140	60
7	31	35	34	28	33	64	42	122	74	36	127	68
8	32	33	33	29	35	56	40	87	72	33	116	53
9	32	34	31	29	34	54	40	78	67	33	108	45
10	27	32	34	30	34	53	40	75	62	31	100	47
11	26	31	34	30	31	54	39	92	59	30	110	49
12	26	32	32	30	33	59	39	125	59	29	90	59
13	27	33	31	28	34	60	39	273	58	27	78	49
14	27	32	32	27	34	55	38	378	57	32	70	47
15	27	32	34	25	35	51	37	311	53	34	67	46
16	27	33	32	29	40	48	37	203	55	29	63	44
17	28	38	29	32	78	46	37	143	57	203	59	43
18	30	39	31	30	74	46	35	110	63	165	56	42
19	30	37	31	28	80	46	37	93	64	61	54	42
20	29	36	30	28	150	46	37	81	77	401	51	44
21	30	35	30	30	94	46	42	75	61	1,290	58	45
22	29	34	31	32	90	46	44	70	55	697	51	44
23	29	35	34	32	100	45	42	86	50	391	48	43
24	29	34	32	31	96	46	42	224	52	249	50	43
25	30	35	33	30	92	48	41	304	61	161	47	44
26	29	35	32	30	150	49	44	217	54	2,210	49	45
27	31	34	28	28	350	50	52	190	50	1,520	48	44
28	33	33	29	27	280	49	59	151	47	838	46	44
29	32	33	30	28	200	48	68	129	45	619	45	44
30	33	32	29	32	-----	48	74	118	43	344	49	44
31	33	-----	27	34	-----	47	-----	107	-----	233	50	-----
TOTAL	929	1,004	977	895	2,377	2,025	1,318	5,249	1,885	9,938	2,806	1,438
MEAN	30.0	33.5	31.5	28.9	82.0	65.3	43.9	169	62.8	321	90.5	47.9
MAX	35	39	35	34	350	150	74	524	97	2,210	247	68
MIN	26	31	27	25	31	45	35	70	43	27	45	42
AC-FT	1,840	1,990	1,940	1,780	4,710	4,020	2,610	10,410	3,740	19,710	5,570	2,850

CAL YR 1971 TOTAL 54,675 MEAN 150 MAX 10,200 MIN 20 AC-FT 108,400
WTR YR 1972 TOTAL 30,841 MEAN 84.3 MAX 2,210 MIN 25 AC-FT 61,170

PEAK DISCHARGE (BASE, 870 CFS).--July 21 (1700) 1,430 cfs (12.48 ft); July 26 (1530) 3,610 cfs (14.08 ft).

NOTE.--No gage-height record Oct. 31 to Nov. 2, Dec. 5-14, Jan. 26 to Feb. 14, Feb. 16 to Mar. 6, Aug. 8-14.

06799450 Logan Creek at Pender, Nebr. 60198140

LOCATION.--Lat 42°06'40", long 96°42'00", in NW¹ 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. Datum of gage is 1,300.96 ft above mean sea level. Prior to Apr. 23, 1966, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--7 years, 159 cfs (115,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,200 cfs July 26 (gage height, 14.25 ft, from floodmark); minimum daily, 33 cfs Jan. 26.

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 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	67	50	62	36	170	60	269	75	56	176	69
2	68	61	50	54	39	160	59	362	72	95	168	70
3	60	57	50	50	38	140	59	164	71	73	145	68
4	60	55	47	47	39	130	61	118	71	57	129	67
5	58	55	50	46	36	140	61	101	75	56	121	66
6	56	50	45	50	38	140	62	104	103	57	117	68
7	57	48	40	60	39	120	54	94	73	58	110	70
8	55	54	35	68	40	100	53	83	67	49	108	69
9	55	60	44	70	41	89	55	75	64	46	103	65
10	57	55	60	74	42	80	55	71	62	48	99	65
11	58	53	56	66	44	81	55	78	62	50	105	85
12	57	52	58	50	46	83	55	96	62	53	104	177
13	57	52	58	45	48	87	55	163	62	48	97	103
14	56	50	56	36	49	88	54	172	62	43	90	86
15	56	50	54	36	50	83	55	130	61	48	86	81
16	57	50	54	42	54	74	55	93	64	41	82	79
17	56	58	52	47	66	75	55	88	65	1,950	79	78
18	63	71	52	50	88	78	56	81	64	1,180	77	73
19	59	58	56	52	210	76	52	73	63	194	76	74
20	55	57	56	50	200	72	58	61	100	514	72	77
21	55	48	58	46	400	84	80	56	74	3,710	72	79
22	55	48	58	44	350	80	76	55	63	508	72	75
23	55	48	56	44	310	68	61	67	58	166	72	73
24	53	49	54	40	260	62	54	1,860	58	125	72	73
25	54	50	54	35	230	66	53	205	61	104	71	75
26	55	50	50	33	190	62	57	118	58	5,090	71	83
27	62	50	45	34	180	63	75	170	58	1,080	70	77
28	64	52	48	35	250	62	82	131	366	255	67	74
29	61	52	52	36	200	60	83	91	79	189	65	72
30	68	50	66	36	-----	64	83	87	59	155	67	72
31	80	-----	64	36	-----	61	-----	78	-----	147	71	-----
TOTAL	1,823	1,610	1,628	1,474	3,613	2,798	1,833	5,394	2,332	16,245	2,914	2,343
MEAN	58.8	53.7	52.5	47.5	125	90.3	61.1	174	77.7	524	94.0	78.1
MAX	80	71	66	74	400	170	83	1,860	366	5,090	176	177
MIN	53	48	35	33	36	60	52	55	58	41	65	65
AC-FT	3,620	3,190	3,230	2,920	7,170	5,550	3,640	10,700	4,630	32,220	5,780	4,650

CAL YR 1971 TOTAL 111,634 MEAN 306 MAX 30,400 MIN 35 AC-FT 221,400
WTR YR 1972 TOTAL 44,007 MEAN 120 MAX 5,090 MIN 33 AC-FT 87,290

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-20	-	-	2,450	7-21	0800	11.68	5,980
5-24	0600	11.1	5,320	7-26	0930	14.25	10,200
7-17	1700	10.5	4,550				

a About.

PLATTE RIVER BASIN

06799500 Logan Creek near Uehling, Nebr.

LOCATION.--Lat 41°42'50", long 96°31'15", on south line of SE 1/4 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.--31 years, 184 cfs (133,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,360 cfs July 26 (gage height, 14.13 ft); maximum gage height, 16.48 ft Feb. 21 (backwater from ice); minimum daily discharge, 40 cfs Jan. 4.

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	94	72	70	45	350	78	601	122	97	235	101
2	73	84	74	58	45	260	77	630	114	152	260	104
3	74	79	74	45	44	240	78	414	109	152	238	89
4	68	74	74	40	43	220	79	224	111	116	190	85
5	66	72	80	44	42	210	79	181	111	96	169	85
6	64	71	78	48	42	200	79	305	173	100	155	84
7	64	64	62	54	44	193	77	232	168	102	145	90
8	64	73	45	70	45	173	74	188	111	91	147	91
9	63	92	54	80	47	122	76	162	103	84	141	90
10	63	83	62	90	48	108	77	146	94	80	130	107
11	63	74	70	80	50	103	77	155	96	78	139	102
12	63	72	66	70	52	102	76	162	98	107	134	150
13	62	72	66	62	54	103	78	234	97	102	125	219
14	62	72	64	54	54	107	74	260	100	79	116	119
15	61	70	62	50	56	104	74	242	97	75	107	97
16	62	71	60	52	58	101	79	195	98	76	99	92
17	64	78	62	56	64	96	80	163	104	734	96	87
18	75	86	64	58	70	98	74	141	103	2,040	93	83
19	72	88	62	64	200	98	73	126	106	782	90	82
20	67	78	64	66	400	92	73	118	101	250	89	91
21	66	73	68	66	600	103	102	114	162	2,670	86	93
22	67	69	68	60	450	112	107	107	112	1,490	83	90
23	66	69	66	56	380	97	94	108	97	518	84	84
24	68	74	64	54	350	85	81	1,360	92	271	85	82
25	68	73	64	52	320	83	75	627	94	210	91	82
26	70	74	60	49	300	84	74	256	95	3,500	88	84
27	82	73	52	46	320	85	90	168	91	2,170	88	93
28	77	72	60	45	370	84	107	260	117	731	87	87
29	80	74	70	46	460	81	107	177	474	324	86	85
30	91	72	78	46	-----	81	104	141	126	244	89	84
31	94	-----	76	46	-----	80	-----	129	-----	204	99	-----
TOTAL	2,154	2,270	2,041	1,777	5,053	4,055	2,473	8,326	3,676	17,725	3,864	2,912
MEAN	69.5	75.7	65.8	57.3	174	131	82.4	269	123	572	125	97.1
MAX	94	94	80	90	600	350	107	1,360	474	3,500	260	219
MIN	61	64	45	40	42	80	73	107	91	75	83	82
AC-FT	4,270	4,500	4,050	3,520	10,020	8,040	4,910	16,510	7,290	35,160	7,660	5,780

CAL YR 1971 TOTAL 134,568 MEAN 369 MAX 20,100 MIN 39 AC-FT 266,900
WTR YR 1972 TOTAL 56,326 MEAN 154 MAX 3,500 MIN 40 AC-FT 111,700

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-24	1415	9.39	3,610	7-21	1415	10.61	4,860
7-17	2400	9.36	3,830	7-26	1800	14.13	8,360

PLATTE RIVER BASIN

111

06800000 Maple Creek near Nickerson, Nebr.

LOCATION.--Lat 41°32'44", long 96°30'09", in NE¼SW¼ 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.--21 years, 61.1 cfs (44,270 acre-ft per year); median of yearly mean discharges, 53 cfs (38,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,430 cfs Sept. 11 (gage height, 9.96 ft); minimum daily, 1.2 cfs Aug. 18, 19, 22, 29.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	25	2.5	9.0	2.1	217	6.0	447	38	8.9	9.6	1.4
2	3.0	17	2.5	8.0	2.0	50	6.8	224	35	9.4	66	1.4
3	2.7	7.6	2.8	6.6	1.9	20	6.8	86	29	26	67	1.4
4	2.2	5.2	3.4	6.0	1.8	12	6.8	56	22	19	22	1.7
5	2.2	4.4	3.7	7.3	1.7	10	6.8	45	19	12	14	2.1
6	2.2	3.3	3.7	8.0	1.6	14	7.6	178	18	11	10	2.0
7	2.2	2.7	3.6	8.4	1.5	22	7.1	182	17	10	8.4	1.7
8	2.2	2.4	3.5	8.4	1.5	18	6.4	73	16	8.9	7.1	1.7
9	1.9	3.0	3.4	8.6	1.5	15	6.4	60	16	8.4	6.0	2.0
10	1.9	3.0	3.3	9.0	1.6	14	6.0	56	15	8.9	5.6	6.4
11	1.9	3.0	3.1	9.6	1.7	15	6.0	54	14	8.9	5.4	447
12	1.9	3.0	2.9	8.0	1.7	15	6.0	71	15	5.4	4.4	838
13	1.7	3.0	2.7	6.0	1.7	16	5.6	208	15	12	3.8	161
14	1.7	3.0	2.6	3.0	1.7	14	5.4	142	26	7.9	3.3	40
15	1.5	3.0	3.1	2.2	5.0	13	6.0	103	17	6.0	2.5	20
16	1.3	3.0	2.9	3.0	20	11	6.0	72	15	5.0	1.7	13
17	2.4	4.0	2.9	4.0	50	11	5.4	60	14	12	1.4	9.4
18	2.2	5.2	3.1	4.5	100	11	5.0	50	14	19	1.2	7.9
19	2.4	12	3.3	4.0	70	11	5.4	42	41	15	1.2	7.1
20	2.4	14	3.5	3.6	150	9.4	7.1	35	30	8.4	1.5	14
21	2.4	8.8	4.2	4.0	200	12	12	33	21	6.4	1.4	16
22	2.4	3.7	4.8	5.0	170	15	16	29	15	5.4	1.2	12
23	2.4	3.7	5.2	3.0	190	16	16	31	14	5.4	1.4	8.9
24	2.4	3.7	5.8	2.0	170	10	13	266	13	5.0	1.5	7.9
25	2.2	3.7	6.2	1.5	150	8.4	9.4	292	13	9.6	2.8	7.6
26	1.7	4.0	5.0	1.4	120	7.9	9.4	77	13	21	2.1	7.1
27	4.0	3.0	3.6	1.3	170	8.4	16	52	13	15	1.5	6.8
28	4.8	2.9	3.0	1.4	409	7.9	45	44	12	11	1.4	7.1
29	7.6	2.8	4.0	1.5	300	7.1	42	48	12	9.4	1.2	7.6
30	10	2.6	6.7	1.7	-----	7.1	48	42	9.6	7.9	1.7	7.9
31	11	-----	7.6	2.2	-----	6.8	-----	39	-----	7.9	1.5	-----
TOTAL	94.1	165.7	118.6	152.2	2,298.0	625.0	351.4	3,197	561.6	326.1	259.8	1,668.1
MEAN	3.04	5.52	3.83	4.91	79.2	20.2	11.7	103	18.7	10.5	8.38	55.6
MAX	11	25	7.6	9.6	409	217	48	447	41	26	67	838
MIN	1.3	2.4	2.5	1.3	1.5	6.8	5.0	29	9.6	5.0	1.2	1.4
AC-FT	187	329	235	302	4,560	1,240	697	6,340	1,110	647	515	3,310

CAL YR 1971 TOTAL 31,765.0 MEAN 87.0 MAX 5,600 MIN 1.1 AC-FT 63,010
WTR YR 1972 TOTAL 9,817.6 MEAN 26.8 MAX 838 MIN 1.2 AC-FT 19,470

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 1	1830	8.37	830	9-11	2230	9.96	1,430
5-24	a2200	8.7	942				

a About.

PLATTE RIVER BASIN

06800500 Elkhorn River at Waterloo, Nebr.

LOCATION.--Lat 41°17'25", long 96°17'05", in SW $\frac{1}{4}$ 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.--52 years, 1,135 cfs (822,300 acre-ft per year); median of yearly mean discharges, 1,000 cfs (724,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,160 cfs July 27 (gage height, 7.48 ft); maximum gage height, 9.29 ft Feb. 23 (backwater from ice); minimum daily discharge, 230 cfs Dec. 13.

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 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	430	758	702	520	430	2,300	831	4,380	1,430	987	2,430	663
2	414	774	758	480	420	1,180	817	5,240	1,280	775	2,860	803
3	406	702	702	350	400	1,100	803	4,010	1,170	845	3,540	684
4	398	694	710	280	370	969	768	3,380	1,090	838	2,400	649
5	430	622	694	320	350	969	782	2,870	1,030	754	2,210	607
6	454	590	750	400	350	960	845	4,120	1,020	733	2,070	593
7	454	534	766	540	360	1,160	782	4,180	1,020	712	1,900	572
8	446	486	798	680	370	1,400	726	2,940	1,030	663	1,700	565
9	430	478	742	660	390	1,350	712	2,620	866	600	1,570	600
10	414	558	710	660	410	1,470	712	2,180	873	593	1,470	691
11	422	582	710	640	430	1,410	712	1,960	747	572	1,340	1,360
12	414	550	670	580	450	1,360	691	2,020	719	572	1,360	2,720
13	414	550	230	470	490	1,110	691	2,500	691	607	1,180	1,500
14	438	550	262	340	520	1,010	712	3,210	719	621	1,070	1,070
15	470	542	390	350	600	987	705	3,540	705	506	1,000	782
16	494	566	414	400	680	969	740	3,490	670	544	873	698
17	398	646	494	450	780	880	733	3,400	698	482	782	614
18	446	726	478	500	820	880	684	3,670	747	2,570	733	551
19	510	766	566	520	900	888	684	3,740	761	2,210	684	524
20	526	806	518	480	960	888	726	3,260	754	1,750	649	524
21	494	822	574	400	1,060	880	775	2,820	859	2,160	649	642
22	478	806	590	430	1,200	1,070	912	2,440	920	7,020	621	642
23	470	766	742	450	1,300	1,020	888	2,120	796	4,230	607	565
24	486	742	790	390	1,500	904	754	2,870	733	2,570	628	537
25	462	710	814	330	1,750	852	663	4,250	726	1,820	733	530
26	462	662	500	300	2,200	859	698	2,660	747	2,430	754	530
27	566	718	320	290	3,520	852	888	2,380	747	6,820	642	537
28	630	702	340	280	1,850	824	1,180	2,150	768	4,290	579	558
29	678	758	390	300	2,130	838	1,360	2,130	873	3,540	565	565
30	734	734	430	350	-----	824	1,310	1,770	1,430	2,480	551	579
31	758	-----	500	400	-----	838	-----	1,630	-----	2,210	551	-----
TOTAL	15,026	19,900	18,054	13,540	26,990	33,001	24,284	93,930	26,619	57,504	38,701	22,455
MEAN	485	663	582	437	931	1,065	809	3,030	887	1,855	1,248	749
MAX	758	822	814	680	3,520	2,300	1,360	5,240	1,430	7,020	3,540	2,720
MIN	398	478	230	280	350	824	663	1,630	670	482	551	524
AC-FT	29,800	39,470	35,810	26,860	53,530	65,460	48,170	186,300	52,800	114,100	76,760	44,540

CAL YR 1971 TOTAL 644,717 MEAN 1,766 MAX 37,300 MIN 230 AC-FT 1,279,000
WTR YR 1972 TOTAL 390,004 MEAN 1,066 MAX 7,020 MIN 230 AC-FT 773,600

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 1	2230	6.36	6,920	7-22	0300	7.35	8,900
5-25	0030	5.99	6,240	7-27	0100	7.48	9,160

PLATTE RIVER BASIN

113

06803000 Salt Creek at Roca, Nebr.

LOCATION.--Lat 40°39'29", long 96°39'55", in NW 1/4 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.

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.--21 years, 38.7 cfs (28,040 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 575 cfs May 1 (gage height, 9.85 ft); minimum daily, 3.1 cfs Sept. 27.

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 poor. Flood flow affected by several detention dams.

REVISIONS.--WRD Nebr. 1971: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	67	14	13	8.8	15	9.1	405	18	5.9	5.4	4.2
2	3.7	46	15	12	8.8	11	8.8	141	17	5.8	5.9	4.4
3	3.7	14	15	11	8.8	12	8.7	71	16	6.2	6.7	4.9
4	4.4	9.0	15	11	9.8	11	7.9	53	16	6.1	7.3	4.9
5	4.8	7.0	14	12	9.2	11	7.5	42	16	6.2	5.5	5.2
6	5.0	6.2	14	11	8.7	12	7.9	151	15	5.7	4.4	5.4
7	5.0	5.6	14	12	8.5	11	8.3	227	14	7.7	4.1	5.4
8	5.2	6.0	12	12	8.7	10	8.4	112	13	8.4	4.0	5.2
9	5.6	6.4	10	14	8.4	10	8.9	76	11	9.4	4.6	4.8
10	5.9	6.6	11	14	9.0	10	9.0	64	10	11	4.5	5.0
11	6.2	6.8	12	13	8.8	10	8.9	64	9.3	11	4.5	5.4
12	6.2	7.0	10	12	9.8	11	9.1	106	9.6	9.1	4.9	5.0
13	5.8	6.8	9.0	11	12	11	9.5	347	10	8.8	4.8	4.6
14	5.5	6.6	10	10	15	11	9.0	142	14	6.0	4.8	4.3
15	6.2	6.4	11	9.7	18	12	8.9	104	13	4.8	4.4	4.1
16	6.3	6.9	10	8.8	22	12	10	79	11	4.2	4.6	3.7
17	6.5	23	10	9.3	26	14	9.3	64	41	3.8	4.6	3.5
18	6.1	74	12	11	20	13	8.6	53	14	5.6	4.5	3.8
19	5.8	12	12	10	16	14	7.5	43	13	5.6	4.6	4.1
20	5.0	7.0	11	9.0	18	14	11	38	12	4.8	4.6	4.3
21	5.2	6.6	11	8.4	17	13	110	33	11	3.9	4.8	4.3
22	6.1	6.8	11	9.0	16	11	43	29	9.6	3.9	4.9	4.1
23	6.5	7.0	12	9.5	14	9.5	28	28	8.8	4.6	4.6	3.9
24	6.7	7.2	12	9.0	14	8.5	21	47	8.3	4.6	5.2	3.3
25	5.6	7.4	11	6.5	13	8.4	19	41	8.0	5.6	20	3.3
26	10	7.6	11	6.8	12	8.4	21	30	7.4	5.5	7.0	3.2
27	17	8.4	11	7.4	13	8.6	123	26	7.1	5.8	5.6	3.1
28	13	9.0	11	7.2	14	7.7	63	26	6.7	5.5	5.2	3.3
29	12	12	12	7.6	14	8.5	36	26	6.4	5.0	5.0	3.4
30	45	12	18	7.9	-----	8.4	30	24	6.0	5.0	4.6	3.8
31	35	-----	15	8.2	-----	9.1	-----	21	-----	4.7	4.0	-----
TOTAL	269.3	414.3	376.0	313.3	381.3	336.1	670.3	2,713	372.2	190.2	169.6	127.9
MEAN	8.69	13.8	12.1	10.1	13.1	10.8	22.3	87.5	12.4	6.14	5.47	4.26
MAX	45	74	18	14	26	15	123	405	41	11	20	5.4
MIN	3.7	5.6	9.0	6.5	8.4	7.7	7.5	21	6.0	3.8	4.0	3.1
AC-FT	534	822	746	621	756	667	1,330	5,380	738	377	336	254

CAL YR 1971 TOTAL 10,207.9 MEAN 28.0 MAX 556 MIN 2.6 AC-FT 20,250
WTR YR 1972 TOTAL 6,333.5 MEAN 17.3 MAX 405 MIN 3.1 AC-FT 12,560

PEAK DISCHARGE (BASE, 850 CFS).--No peak above base.

PLATTE RIVER BASIN

06803500 Salt Creek at Lincoln, Nebr.

LOCATION.--Lat 40°50'49", long 96°40'54", in NW¹/₄ 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.

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.--23 years, 195 cfs (141,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,980 cfs May 1 (gage height, 11.15 ft); minimum daily, 42 cfs July 16.

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 1972 are published in Part 2 of this report.

REVISIONS.--WRD Nebr. 1971: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	191	87	94	60	82	65	2,370	148	77	117	75
2	55	156	87	79	64	67	64	683	140	72	79	106
3	55	124	84	57	60	82	75	303	127	77	132	59
4	54	87	84	79	63	67	72	240	140	77	77	64
5	54	72	77	75	60	58	72	208	140	72	79	70
6	52	67	84	60	60	72	70	378	114	70	70	70
7	55	59	89	70	64	75	67	668	104	70	75	75
8	55	63	92	67	62	67	67	381	99	58	148	70
9	55	63	84	72	62	70	62	272	94	60	77	59
10	47	63	72	82	65	65	72	270	340	79	65	64
11	52	63	77	70	67	64	64	237	130	425	65	77
12	52	65	89	65	60	65	65	506	104	390	67	151
13	55	63	82	70	67	67	65	871	87	234	60	99
14	52	54	82	62	79	67	64	441	162	79	67	87
15	59	63	77	58	79	65	60	337	109	92	65	77
16	59	82	76	51	79	64	92	283	145	42	62	84
17	62	378	77	57	99	65	65	245	145	75	58	67
18	202	237	82	67	82	70	65	208	132	79	60	70
19	67	175	77	65	84	64	112	180	253	75	53	75
20	59	106	77	67	77	62	174	167	162	77	49	140
21	59	75	75	67	99	70	492	143	114	70	87	106
22	57	77	79	65	92	64	221	140	77	48	58	75
23	54	89	75	72	94	64	114	224	75	53	58	65
24	46	82	75	72	82	64	112	232	92	67	58	59
25	52	63	70	55	89	60	89	183	79	64	469	63
26	52	92	65	62	72	56	172	242	92	197	122	65
27	178	76	82	60	65	64	348	585	79	112	82	62
28	89	82	82	55	79	67	361	229	84	84	82	67
29	180	106	87	58	84	65	226	237	75	84	77	82
30	306	99	112	53	-----	64	210	232	79	58	106	67
31	154	-----	87	64	-----	70	-----	167	-----	70	87	-----
TOTAL	2,487	3,072	2,525	2,050	2,149	2,066	3,857	11,862	3,721	3,187	2,811	2,350
MEAN	80.2	102	81.5	66.1	74.1	66.6	129	383	124	103	90.7	78.3
MAX	306	378	112	94	99	82	492	2,370	340	425	469	151
MIN	46	54	65	51	60	56	60	140	75	42	49	59
AC-FT	4,930	6,090	5,010	4,070	4,260	4,100	7,650	23,530	7,380	6,320	5,580	4,660

CAL YR 1971 TOTAL 53,818 MEAN 147 MAX 2,550 MIN 46 AC-FT 106,700
WTR YR 1972 TOTAL 42,137 MEAN 115 MAX 2,370 MIN 42 AC-FT 83,580

PEAK DISCHARGE (BASE, 3,000 CFS).--May 1 (0830) 3,980 cfs (11.15 ft).

PLATTE RIVER BASIN

115

06803510 Little Salt Creek near Lincoln, Nebr.

LOCATION.--Lat 40°53'36", long 96°40'52", in NW¼SW¼ 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, 860 cfs May 1 (gage height, 7.05 ft); minimum daily, 0.29 cfs Oct. 9-12.

Period of record: Maximum discharge, 860 cfs May 1, 1972 (gage height, 7.05 ft); minimum daily, 0.20 cfs Sept. 29, 30, 1969.

REMARKS.--Records good except those for winter period, which are poor. Records of chemical analyses and water temperatures for the water year 1972 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	5.0	3.2	4.1	2.1	4.0	2.4	304	4.6	3.6	2.7	3.1
2	.38	3.2	3.2	3.4	2.0	3.6	2.7	40	4.3	3.6	2.7	3.9
3	.38	2.8	3.4	2.7	1.8	3.8	2.9	26	3.9	3.9	2.9	3.1
4	.35	2.4	3.4	2.2	1.7	4.0	2.9	20	22	3.6	2.1	2.1
5	.35	2.4	3.8	2.5	1.9	4.6	2.9	52	9.1	3.6	2.1	1.2
6	.35	2.4	3.8	3.0	1.8	5.0	2.4	140	5.0	3.6	2.1	1.2
7	.35	2.4	4.0	3.5	1.8	4.6	2.4	48	3.9	4.3	1.9	2.1
8	.38	2.4	4.3	4.0	1.8	3.4	2.4	26	3.6	4.3	3.1	1.7
9	.29	2.2	4.3	5.0	2.0	3.2	2.4	18	2.9	4.3	2.3	2.7
10	.29	2.4	4.3	4.6	2.5	3.4	2.2	18	52	4.3	2.1	2.9
11	.29	2.4	3.8	4.6	3.0	3.8	2.4	20	14	11	1.7	2.9
12	.29	2.4	3.6	3.8	4.0	3.8	2.2	83	7.6	8.6	1.7	3.3
13	.41	2.4	3.5	2.5	5.0	4.0	2.8	51	10	13	1.7	3.6
14	.50	2.4	3.4	1.8	4.5	4.3	2.8	25	31	3.9	1.7	15
15	.80	2.4	3.2	1.9	3.5	4.0	2.4	18	10	2.9	1.7	6.4
16	.60	2.9	2.9	2.2	3.3	3.4	2.9	14	7.1	2.7	1.9	2.9
17	4.3	19	2.6	2.6	3.2	3.2	2.8	11	15	2.9	1.9	2.7
18	7.6	8.4	2.9	2.7	3.1	3.8	2.8	8.6	6.7	3.1	1.9	2.7
19	3.2	4.6	3.2	2.1	3.5	4.0	3.8	6.7	50	2.9	1.7	2.5
20	2.8	4.0	2.8	1.9	3.9	4.0	5.7	6.0	15	2.5	2.1	26
21	2.4	3.4	2.8	2.0	3.5	4.3	14	5.0	10	2.3	2.3	20
22	2.8	3.2	2.8	2.6	3.2	4.0	12	4.6	8.1	2.1	2.3	9.0
23	2.9	3.4	3.4	2.3	3.2	3.3	8.0	17	6.7	1.9	1.9	3.3
24	3.4	3.4	3.8	2.0	3.0	2.8	5.7	50	5.3	2.7	2.1	1.3
25	4.0	3.4	4.3	1.9	3.5	2.8	4.3	12	4.6	2.7	16	1.3
26	4.6	3.8	3.6	1.8	3.8	2.9	6.0	14	4.6	6.4	7.6	1.3
27	8.8	4.0	3.1	1.7	4.0	2.7	29	31	4.6	3.6	2.5	1.3
28	11	3.8	3.4	1.6	4.6	2.7	23	10	4.3	2.9	1.9	1.3
29	12	4.0	4.5	1.8	4.6	2.4	24	11	3.9	2.5	1.7	1.4
30	13	3.4	4.6	2.0	-----	2.4	21	8.6	3.6	1.9	3.3	1.3
31	6.0	-----	4.5	2.4	-----	2.4	-----	5.7	-----	1.9	3.1	-----
TOTAL	95.41	114.3	110.4	83.2	89.8	110.6	203.2	1,104.2	333.4	123.5	86.7	133.5
MEAN	3.08	3.81	3.56	2.68	3.10	3.57	6.77	35.6	11.1	3.98	2.80	4.45
MAX	13	19	4.6	5.0	5.0	5.0	29	304	52	13	16	26
MIN	.29	2.2	2.6	1.6	1.7	2.4	2.2	4.6	2.9	1.9	1.7	1.2
AC-FT	189	227	219	165	178	219	403	2,190	661	245	172	265

CAL YR 1971 TOTAL 3,784.52 MEAN 10.4 MAX 250 MIN .29 AC-FT 7,510
WTR YR 1972 TOTAL 2,588.21 MEAN 7.07 MAX 304 MIN .29 AC-FT 5,130

PLATTE RIVER BASIN

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, 227 cfs May 1 (gage height, 6.07 ft); minimum daily, 0.47 cfs Oct. 4.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	2.9	2.6	2.9	1.5	6.7	1.6	163	5.6	1.8	1.3	1.0
2	.60	4.4	2.6	2.3	1.4	4.0	1.6	45	4.8	1.6	1.5	1.3
3	.52	2.7	2.3	1.7	1.4	2.8	1.5	24	4.2	1.5	1.8	1.3
4	.47	1.6	2.4	1.4	1.4	2.3	1.6	18	4.7	1.6	2.5	1.2
5	.50	1.5	2.5	1.3	1.4	2.6	1.4	13	4.5	1.5	1.9	1.0
6	.99	1.4	2.4	1.4	1.4	3.0	1.6	60	4.1	1.5	1.4	.96
7	.80	1.4	2.4	1.5	1.4	4.1	1.7	100	3.5	1.4	1.1	1.3
8	.69	1.4	2.3	1.8	1.4	3.4	1.7	32	3.2	1.6	1.3	.92
9	.63	1.4	2.3	2.3	1.4	2.8	1.8	22	2.8	1.4	1.4	1.1
10	.80	1.5	2.4	2.7	1.5	2.2	2.4	19	3.0	1.2	1.4	1.0
11	.70	1.5	2.2	2.8	1.6	2.7	2.6	20	3.6	1.6	1.2	.96
12	.81	1.5	2.0	2.4	1.7	3.0	3.0	25	3.0	1.9	.96	1.5
13	.86	1.5	1.9	2.0	1.9	3.0	3.0	54	3.3	1.8	.84	1.9
14	.89	1.6	2.2	1.4	2.2	2.8	2.9	25	6.1	1.4	.84	2.0
15	.73	1.7	2.2	.90	2.5	2.7	2.8	19	5.6	1.3	.80	1.4
16	.68	1.8	2.2	1.4	3.0	2.9	4.6	15	3.7	1.0	.80	1.2
17	.63	6.7	1.8	2.0	3.9	3.0	5.6	12	32	.96	.76	1.1
18	1.2	6.5	1.6	2.2	3.0	3.3	3.5	9.2	9.6	1.0	.76	1.1
19	1.3	2.9	1.7	2.3	2.3	3.3	5.4	7.2	17	1.3	.80	1.1
20	.90	1.4	1.8	2.1	1.9	2.8	5.9	6.3	10	1.4	.68	1.4
21	.90	1.5	1.9	1.9	2.2	3.1	23	14	5.3	1.3	.64	1.5
22	1.6	1.4	1.7	2.1	2.3	2.6	12	6.1	4.2	1.0	.64	1.1
23	.80	1.5	2.0	2.0	1.9	2.1	7.7	14	3.7	.92	.52	.96
24	1.0	1.8	2.2	1.9	1.7	1.9	5.2	33	3.3	.88	.64	.96
25	.80	1.9	2.2	1.5	1.9	1.8	4.0	16	3.0	.80	7.4	.92
26	.90	1.9	2.1	1.3	2.5	1.8	6.4	9.6	2.7	1.3	5.9	.92
27	3.4	2.5	1.8	1.1	4.0	1.9	32	7.6	2.7	1.8	2.4	.92
28	2.8	2.6	1.7	1.0	4.6	1.7	24	7.1	2.5	1.3	1.0	.88
29	2.2	2.9	1.7	1.1	6.1	1.4	21	7.8	2.1	1.0	.84	.92
30	6.1	3.0	2.0	1.3	-----	1.4	14	8.4	2.0	1.0	.80	1.2
31	6.3	-----	3.3	1.5	-----	1.5	-----	7.1	-----	.96	.88	-----
TOTAL	42.26	68.3	66.4	55.50	65.4	84.6	205.5	819.4	165.8	41.02	45.70	35.02
MEAN	1.36	2.28	2.14	1.79	2.26	2.73	6.85	26.4	5.53	1.32	1.47	1.17
MAX	6.3	6.7	3.3	2.9	6.1	6.7	32	163	32	1.9	7.4	2.0
MIN	.47	1.4	1.6	.90	1.4	1.4	1.4	6.1	2.0	.80	.52	.88
AC-FT	84	135	132	110	130	168	408	1,630	329	81	91	69

CAL YR 1971 TOTAL 3,133.76 MEAN 8.59 MAX 303 MIN .21 AC-FT 6,220
WTR YR 1972 TOTAL 1,694.90 MEAN 4.63 MAX 163 MIN .47 AC-FT 3,360

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

PLATTE RIVER BASIN

117

06803530 Rock Creek near Ceresco, Nebr.

LOCATION.--Lat 41°00'56", long 96°32'39", in NE 1/4 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.

DRAINAGE AREA.--119 sq mi.

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

GAGE.--Water-stage recorder.

EXTREMES.--Current year: Maximum discharge, 4,120 cfs May 1 (gage height, 14.2 ft, from floodmark); minimum daily, 2.9 cfs Oct. 3.

Period of record: Maximum discharge, 4,120 cfs May 1, 1972 (gage height, 14.2 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 1972 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	11	9.3	7.6	4.7	9.5	7.2	1,870	16	9.0	7.3	5.9
2	3.4	8.4	9.6	7.2	4.3	6.0	7.0	77	14	13	6.7	7.2
3	2.9	6.6	11	6.2	4.1	7.0	6.8	35	14	15	6.5	6.4
4	3.6	5.6	11	5.2	4.1	6.0	6.6	25	14	13	5.9	6.1
5	3.8	6.2	10	5.4	4.1	9.0	5.6	60	14	7.5	5.5	6.1
6	4.2	5.8	10	6.2	4.2	12	5.0	822	12	6.9	5.9	6.1
7	4.2	6.2	11	7.0	4.4	8.6	5.4	135	12	6.9	11	6.2
8	4.2	6.4	10	8.6	4.6	8.6	5.2	46	10	7.1	12	6.3
9	4.2	6.2	12	8.6	4.8	7.2	5.4	31	9.5	6.5	16	6.2
10	4.8	6.2	12	8.0	5.0	7.4	6.4	30	68	7.1	16	7.0
11	4.6	6.2	11	7.6	5.4	7.6	6.0	38	21	8.5	9.8	8.7
12	4.8	6.2	9.4	7.4	6.6	7.4	6.6	145	12	8.3	8.1	8.8
13	4.8	9.6	8.2	6.0	7.4	9.0	5.2	158	11	7.5	5.7	7.7
14	5.0	12	8.4	4.0	7.2	10	5.4	40	16	5.0	4.9	9.6
15	5.0	13	8.6	4.5	7.0	9.6	6.6	30	12	6.3	4.8	7.6
16	4.8	26	9.0	5.0	7.4	9.9	7.8	24	11	6.1	4.6	7.0
17	5.2	12	7.0	6.0	8.0	10	7.0	19	12	6.9	4.6	6.4
18	8.8	9.3	7.4	6.8	9.0	12	6.6	17	11	7.3	4.5	6.4
19	7.4	8.6	6.8	6.4	12	9.0	9.6	15	34	6.9	4.4	6.5
20	5.6	8.4	6.4	5.2	15	8.8	10	19	23	6.7	4.2	11
21	5.6	8.6	6.0	5.4	17	11	32	19	9.5	12	4.3	17
22	5.2	9.3	6.4	6.0	12	8.6	14	17	9.1	7.7	4.5	7.9
23	5.4	9.0	7.0	5.0	8.6	7.6	8.4	23	8.9	5.9	4.5	6.9
24	5.4	9.0	7.0	4.5	8.2	8.0	7.6	110	8.7	6.1	4.8	6.5
25	5.4	9.9	6.6	3.5	8.0	6.8	7.0	26	8.7	6.1	11	6.7
26	5.6	9.6	6.0	3.2	8.6	7.0	29	205	8.5	9.1	8.8	6.3
27	9.9	9.6	5.4	3.0	12	6.8	114	221	8.5	7.7	5.7	5.7
28	8.8	9.0	6.0	3.3	13	7.2	65	78	8.3	6.5	5.4	6.5
29	7.6	12	6.4	3.5	14	7.6	79	104	10	6.7	5.2	6.7
30	16	10	7.4	4.0	-----	8.2	44	33	8.3	6.5	5.5	6.3
31	13	-----	8.0	5.0	-----	7.2	-----	18	-----	6.3	6.2	-----
TOTAL	183.4	275.9	260.3	175.3	230.7	260.6	531.4	4,490	435.0	242.1	214.3	219.7
MEAN	5.92	9.20	8.40	5.65	7.96	8.41	17.7	145	14.5	7.81	6.91	7.32
MAX	16	26	12	8.6	17	12	114	1,870	68	15	16	17
MIN	2.9	5.6	5.4	3.0	4.1	6.0	5.0	15	8.3	5.0	4.2	5.7
AC-FT	364	547	516	348	458	517	1,050	8,910	863	480	425	436

CAL YR 1971 TOTAL 8,406.8 MEAN 23.0 MAX 970 MIN 2.8 AC-FT 16,670
WTR YR 1972 TOTAL 7,518.7 MEAN 20.5 MAX 1,870 MIN 2.9 AC-FT 14,910

PLATTE RIVER BASIN

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.

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.--20 years (1952-72), 247 cfs (179,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,860 cfs May 1 (gage height, 11.01 ft); minimum daily, 74 cfs Aug. 20.

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 poor. Records of chemical analyses, water temperatures, and fluvial sediments for the water year 1972 are published in Part 2 of this report.

COOPERATION.--Records furnished by Corps of Engineers.

REVISIONS.--WRD Nebr. 1971: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	260	109	103	109	135	92	3,860	231	117	145	105
2	86	209	103	95	109	126	94	1,240	211	112	119	142
3	87	161	91	90	107	125	95	501	200	108	147	110
4	87	160	103	105	105	125	103	378	224	115	127	97
5	89	137	102	97	103	114	96	468	217	108	110	92
6	86	117	100	88	100	115	96	1,700	190	105	106	100
7	82	120	104	93	100	124	89	1,180	171	104	99	105
8	78	117	107	100	97	114	93	600	164	103	175	101
9	76	117	100	105	96	107	104	407	158	100	128	91
10	78	116	103	118	100	107	94	357	439	95	117	100
11	82	113	96	126	103	105	93	393	340	252	105	101
12	84	106	90	115	109	101	92	529	197	370	105	123
13	88	107	94	118	107	103	95	1,400	173	180	99	148
14	88	103	95	115	109	107	92	743	331	141	88	152
15	90	105	96	120	111	104	97	472	219	125	93	116
16	90	99	94	124	111	101	160	393	176	115	89	113
17	94	404	88	128	111	104	116	334	308	105	82	106
18	300	331	92	133	111	121	82	295	220	123	80	99
19	122	184	95	128	114	109	220	262	439	111	81	98
20	105	125	92	122	118	98	178	240	335	112	74	138
21	90	91	93	124	118	115	629	227	208	108	89	241
22	86	79	90	128	126	111	311	213	173	105	86	131
23	84	86	95	131	122	99	194	360	161	96	83	116
24	82	95	98	128	111	96	141	568	150	96	79	108
25	80	86	96	111	114	99	129	329	142	100	502	100
26	83	84	92	105	107	96	239	321	134	207	239	101
27	299	113	76	105	107	95	786	965	142	161	147	91
28	146	96	90	107	109	97	428	482	131	133	120	86
29	165	115	105	109	126	94	614	394	123	122	110	89
30	384	119	122	109	-----	96	257	330	118	115	103	79
31	271	-----	111	111	-----	95	-----	263	-----	109	138	-----
TOTAL	3,749	4,155	3,022	3,491	3,170	3,338	5,909	20,204	6,425	4,053	3,865	3,379
MEAN	121	139	97.5	113	109	108	197	652	214	131	125	113
MAX	384	404	122	133	126	135	786	3,860	439	370	502	241
MIN	76	79	76	88	96	94	82	213	118	95	74	79
AC-FT	7,440	8,240	5,990	6,920	6,290	6,620	11,720	40,070	12,740	8,040	7,670	6,700

CAL YR 1971 TOTAL 79,801 MEAN 219 MAX 4,760 MIN 69 AC-FT 158,300
WTR YR 1972 TOTAL 64,760 MEAN 177 MAX 3,860 MIN 74 AC-FT 128,500

PEAK DISCHARGE (BASE, 2,200 CFS).--May 1 (1015) 5,860 cfs (11.01 ft); May 6 (1045) 2,240 cfs (7.44 ft).

PLATTE RIVER BASIN

119

06804000 Wahoo Creek at Ithaca, Nebr.

LOCATION.--Lat 41°08'40", long 96°32'10", in NW1/4 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.

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.--23 years, 77.4 cfs (56,080 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,530 cfs May 1 (gage height, 17.46 ft); minimum daily, 14 cfs Feb. 5.

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).

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

REVISIONS.--WRD Nebr. 1971: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	31	23	31	17	29	25	1,560	52	28	27	22
2	16	26	23	28	16	31	25	186	50	28	30	22
3	16	22	23	23	15	31	24	87	49	28	27	22
4	16	21	25	21	15	26	25	70	48	29	24	21
5	17	21	24	22	14	28	25	89	47	30	22	21
6	16	21	23	23	16	28	24	1,640	43	29	21	21
7	16	20	25	26	17	28	23	267	43	28	22	21
8	17	20	25	24	17	28	23	126	40	27	27	20
9	17	19	24	24	18	28	24	99	38	27	23	20
10	17	19	23	25	19	28	24	86	37	30	20	21
11	18	20	24	24	21	28	24	88	35	33	19	331
12	18	20	25	24	24	30	24	95	35	40	19	1,070
13	18	20	25	22	23	31	24	252	34	35	19	70
14	20	21	23	19	37	30	24	101	33	32	18	34
15	19	30	22	22	32	30	23	84	32	31	19	28
16	19	24	22	28	26	31	26	77	32	31	18	27
17	19	28	21	34	26	30	26	64	31	40	18	26
18	22	34	25	24	34	31	23	66	31	58	18	25
19	24	31	21	21	39	31	22	61	44	40	18	25
20	21	25	22	21	30	31	21	58	97	29	18	50
21	21	22	22	20	26	32	30	55	44	28	18	148
22	20	22	22	21	24	37	35	53	37	26	18	36
23	19	22	22	20	26	34	28	56	33	25	17	24
24	20	23	23	19	23	30	23	82	31	30	18	23
25	21	24	24	18	25	28	22	75	30	47	27	23
26	21	24	24	17	24	29	25	62	30	46	25	23
27	26	25	24	16	26	28	53	118	29	74	21	22
28	28	26	26	15	26	27	48	183	29	38	20	23
29	28	26	22	16	28	27	69	87	29	27	20	22
30	32	26	23	17	-----	26	53	82	29	26	20	22
31	33	-----	27	18	-----	26	-----	57	-----	25	21	-----
TOTAL	631	713	727	683	684	912	865	6,066	1,172	1,045	652	2,263
MEAN	20.4	23.8	23.5	22.0	23.6	29.4	28.8	196	39.1	33.7	21.0	75.4
MAX	33	34	27	34	39	37	69	1,640	97	74	30	1,070
MIN	16	19	21	15	14	26	21	53	29	25	17	20
AC-FT	1,250	1,410	1,440	1,350	1,360	1,810	1,720	12,030	2,320	2,070	1,290	4,490

CAL YR 1971 TOTAL 22,693 MEAN 62.2 MAX 2,000 MIN 14 AC-FT 45,010
WTR YR 1972 TOTAL 16,413 MEAN 44.8 MAX 1,640 MIN 14 AC-FT 32,560

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 1	1530	17.46	2,530	9-12	0800	15.70	1,790
5- 6	0430	16.82	2,230				

WEeping WATER CREEK BASIN

121

06806500 Weeping Water Creek at Union, Nebr.

LOCATION.--Lat 40°47'35", long 95°54'40", in NW¼ 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.--22 years, 76.2 cfs (55,210 acre-ft per year); median of yearly mean discharges, 69 cfs (50,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 278 cfs May 1 (gage height, 6.34 ft); minimum daily, 4.0 cfs Oct. 6, 7.

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 fair except those for winter period, which are poor.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	66	25	21	14	31	16	195	52	16	13	26
2	6.1	96	23	19	12	30	15	169	46	18	14	29
3	5.4	57	24	16	10	29	15	102	42	17	19	30
4	4.5	29	25	13	10	31	15	87	45	16	20	27
5	4.1	20	26	13	11	36	15	77	40	15	18	24
6	4.0	16	26	15	12	38	15	91	37	16	16	12
7	4.0	14	26	17	13	33	17	187	33	19	14	8.8
8	4.4	14	26	18	15	29	16	136	30	18	12	7.7
9	4.3	15	26	19	17	27	17	105	28	17	11	7.3
10	4.3	17	28	20	18	22	15	94	28	18	11	7.4
11	4.5	17	26	21	20	22	15	89	26	22	11	9.5
12	4.8	16	24	16	21	23	16	86	33	20	9.8	14
13	4.7	17	23	11	23	23	16	86	31	17	8.8	16
14	4.3	17	25	9.0	25	23	15	83	37	17	7.2	50
15	4.7	16	25	9.0	27	23	15	77	48	16	6.2	41
16	4.7	18	24	11	30	21	19	71	47	14	5.8	26
17	4.8	41	23	13	32	21	22	65	87	14	5.6	18
18	6.2	51	22	15	36	23	21	59	53	29	5.4	13
19	7.7	37	20	15	40	26	20	54	44	22	5.2	9.1
20	5.5	25	21	14	45	23	24	51	34	19	5.0	5.7
21	5.2	19	22	15	52	26	105	48	31	16	5.6	4.9
22	7.9	18	23	16	56	24	114	46	28	13	5.6	4.9
23	11	19	23	16	52	21	57	53	25	11	6.0	4.4
24	11	20	24	14	46	20	41	72	24	11	9.4	4.9
25	9.0	20	24	13	40	19	32	97	23	12	35	5.9
26	8.1	21	23	11	31	18	32	68	22	20	84	7.5
27	15	23	22	10	26	18	97	62	21	19	50	7.5
28	19	25	22	9.0	25	18	135	58	20	17	38	7.8
29	23	28	21	8.0	34	17	118	66	18	16	25	7.3
30	47	27	20	12	-----	16	91	64	17	14	27	9.0
31	56	-----	21	14	-----	17	-----	56	-----	14	26	-----
TOTAL	311.3	819	733	443.0	793	748	1,161	2,654	1,050	523	529.6	445.6
MEAN	10.0	27.3	23.6	14.3	27.3	24.1	38.7	85.6	35.0	16.9	17.1	14.9
MAX	56	96	28	21	56	38	135	195	87	29	84	50
MIN	4.0	14	20	8.0	10	16	15	46	17	11	5.0	4.4
AC-FT	617	1,620	1,450	879	1,570	1,480	2,300	5,260	2,080	1,040	1,050	884

CAL YR 1971 TOTAL 24,673.4 MEAN 67.6 MAX 1,710 MIN 2.6 AC-FT 48,940
WTR YR 1972 TOTAL 10,210.5 MEAN 27.9 MAX 195 MIN 4.0 AC-FT 20,250

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

MISSOURI RIVER MAIN STEM

06807000 Missouri River at Nebraska City, Nebr.
(International Hydrological Decade River Station)

LOCATION.--Lat 40°40'55", long 95°50'48", in NW¹/₄ 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.--43 years, 34,490 cfs (24,990,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 86,500 cfs Sept. 13 (gage height, 15.82 ft); minimum daily, 10,000 cfs Jan. 16, 17; minimum gage height, 2.40 ft Jan. 16.

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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 761: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50,300	60,600	56,600	25,900	24,500	57,000	46,100	59,000	57,600	45,400	56,600	52,000
2	52,000	60,600	55,900	25,600	24,500	51,700	47,800	80,800	55,600	45,800	58,700	52,400
3	53,100	60,600	54,800	26,100	24,000	37,100	50,300	71,000	54,200	47,200	59,800	51,700
4	53,400	61,000	53,400	24,500	22,500	33,400	52,800	62,200	54,500	46,100	58,400	49,600
5	53,800	58,700	51,700	22,000	22,000	31,800	52,400	62,200	55,600	46,800	57,300	50,000
6	52,000	59,000	49,600	22,700	23,000	29,700	52,000	78,600	57,000	45,400	56,600	50,300
7	52,000	61,000	47,500	23,400	23,500	34,400	51,700	77,600	57,300	47,500	56,600	51,000
8	53,800	59,400	45,800	24,300	24,000	46,800	50,600	68,200	57,000	48,600	57,300	51,700
9	53,800	58,400	44,200	25,200	24,000	41,200	51,400	58,000	60,600	48,900	57,600	51,000
10	54,200	56,600	41,800	25,200	24,000	38,200	51,700	55,600	60,600	49,200	55,900	50,300
11	52,400	58,700	38,800	25,400	24,000	36,600	51,000	56,600	57,300	51,400	54,500	63,400
12	51,000	59,000	36,800	25,900	23,500	36,800	50,300	56,200	57,600	55,200	54,200	74,600
13	51,400	59,000	34,100	25,000	24,000	40,900	50,000	58,000	56,600	51,000	53,100	75,000
14	52,400	56,600	31,400	22,000	25,400	43,900	48,200	64,200	59,000	51,700	52,000	55,600
15	52,800	56,200	29,700	12,000	27,400	42,100	47,500	66,200	54,800	51,700	51,400	56,600
16	53,100	56,600	27,200	10,000	27,700	40,900	48,200	61,400	52,400	50,300	52,800	57,300
17	52,400	58,000	27,200	10,000	28,400	41,500	46,800	58,400	51,700	50,600	51,700	55,900
18	52,400	60,600	27,200	12,000	29,000	43,300	46,800	57,300	55,200	68,200	51,700	55,200
19	52,000	61,400	27,400	22,700	28,800	44,800	49,200	57,000	54,800	66,200	51,000	54,500
20	53,800	61,400	27,400	41,500	27,700	46,800	49,600	56,600	51,700	50,000	51,000	54,500
21	54,500	61,000	27,400	21,600	30,600	46,800	52,800	55,600	51,400	52,000	50,600	54,500
22	53,800	61,800	27,200	19,000	34,800	48,600	52,400	53,400	51,700	56,200	51,700	54,200
23	54,200	61,400	26,600	21,200	35,800	50,300	51,000	55,900	51,000	64,600	52,400	54,200
24	54,800	61,800	26,800	22,000	33,400	48,600	48,900	57,000	50,000	53,800	52,400	53,800
25	53,400	61,400	29,000	20,000	33,400	47,800	48,600	62,200	49,200	55,600	55,200	53,800
26	54,500	61,000	28,400	19,000	33,400	48,200	48,600	62,200	48,900	60,600	54,200	54,500
27	57,300	61,400	28,400	19,000	32,800	47,500	51,000	61,400	48,900	61,400	53,800	57,300
28	58,000	60,600	27,200	20,600	33,400	48,600	52,000	62,200	46,800	61,400	52,800	56,200
29	60,200	59,000	26,100	22,000	42,100	48,200	51,400	64,200	48,600	61,000	52,800	55,900
30	61,800	58,400	27,000	22,500	-----	48,200	52,800	61,400	48,200	59,800	51,700	55,600
31	61,400	-----	26,800	23,600	-----	48,200	-----	59,400	-----	57,300	52,000	-----
TOTAL	1,676.0M	1,791.2M	1,109.4M	681.900	811.600	1,349.9M	1,503.9M	1,920.0M	1,615.8M	1,660.9M	1,677.8M	1,662.6M
MEAN	54,060	59,710	35,790	22,000	27,990	43,550	50,130	61,940	53,860	53,580	54,120	55,420
MAX	61,800	61,800	56,600	41,500	42,100	57,000	52,800	80,800	60,600	68,200	59,800	75,000
MIN	50,300	56,200	26,100	10,000	22,000	29,700	46,100	53,400	46,800	45,400	50,600	49,600
AC-FT	3,324M	3,553M	2,200M	1,353M	1,610M	2,678M	2,983M	3,808M	3,205M	3,294M	3,328M	3,298M

CAL YR 1971 TOTAL 18,292,400 MEAN 50,120 MAX 112,000 MIN 9,500 AC-FT 36,280,000

WTR YR 1972 TOTAL 17,461,000 MEAN 47,710 MAX 80,800 MIN 10,000 AC-FT 34,630,000

M Expressed in thousands.

LITTLE NEMAHA RIVER BASIN

123

06811500 Little Nemaha River at Auburn, Nebr.

LOCATION.--Lat 40°23'33", long 95°48'46", in NE1/4 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 WSP 2119 for history of changes prior to July 24, 1967.

AVERAGE DISCHARGE.--23 years, 263 cfs (190,500 acre-ft per year); median of yearly mean discharges, 180 cfs (130,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,050 cfs June 17 (gage height, 9.06 ft); minimum daily, 15 cfs Aug. 20.

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.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	530	80	50	46	109	54	529	91	38	29	35
2	42	1,160	76	40	43	81	52	985	80	37	31	39
3	31	219	74	31	40	92	51	270	153	43	46	39
4	28	113	74	31	41	103	51	192	256	38	51	37
5	28	81	74	37	43	95	51	169	83	36	45	34
6	27	63	74	50	42	85	50	168	76	36	37	33
7	25	55	74	52	42	85	49	842	71	39	32	35
8	25	54	75	54	42	77	44	518	67	38	32	33
9	24	58	74	55	45	73	50	250	61	36	33	31
10	26	56	77	55	50	69	53	208	73	33	32	32
11	27	55	74	54	60	68	51	189	77	43	30	35
12	27	53	68	52	70	69	50	186	75	52	27	56
13	28	52	57	37	80	69	50	186	62	50	24	48
14	28	50	80	30	104	69	46	216	66	41	23	61
15	28	48	77	31	129	69	45	179	74	35	22	38
16	28	49	72	52	138	66	54	158	94	31	20	36
17	28	219	63	60	145	64	55	146	1,050	34	18	30
18	41	530	95	58	178	66	52	134	260	86	17	27
19	42	173	83	56	143	68	46	124	123	77	16	26
20	37	113	69	54	123	67	50	116	88	51	15	24
21	37	86	62	54	118	66	115	110	76	38	16	23
22	37	76	63	56	117	64	344	108	67	31	16	22
23	37	74	67	52	105	61	136	109	61	29	17	22
24	36	78	67	47	104	55	96	139	57	25	19	24
25	34	76	67	45	102	55	81	231	53	25	63	24
26	33	74	66	43	93	56	82	153	50	27	110	23
27	45	74	45	40	104	56	157	117	49	29	73	23
28	51	78	31	43	102	54	496	125	48	31	54	25
29	86	87	35	48	106	53	218	146	44	33	40	25
30	189	88	39	50	-----	51	154	117	40	31	35	28
31	213	-----	46	52	-----	54	-----	105	-----	27	37	-----
TOTAL	1,451	4,522	2,078	1,469	2,555	2,169	2,883	7,225	3,525	1,200	1,060	968
MEAN	46.8	151	67.0	47.4	88.1	70.0	96.1	233	118	38.7	34.2	32.3
MAX	213	1,160	95	60	178	109	496	985	1,050	86	110	61
MIN	24	48	31	30	40	51	44	105	40	25	15	22
AC-FT	2,880	8,970	4,120	2,910	5,070	4,300	5,720	14,330	6,990	2,380	2,100	1,920

CAL YR 1971 TOTAL 58,701 MEAN 161 MAX 4,930 MIN 19 AC-FT 116,400
WTR YR 1972 TOTAL 31,105 MEAN 85.0 MAX 1,160 MIN 15 AC-FT 61,700

PEAK DISCHARGE (BASE, 5,000 CFS).--No peak above base.

MISSOURI RIVER MAIN STEM

06813500 Missouri River at Rulo, Nebr.

LOCATION.--Lat 40°03'14", long 95°25'12", in NW¹/₄ 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.--23 years, 37,880 cfs (27,440,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 94,200 cfs Sept. 13 (gage height, 17.84 ft); minimum daily, 10,600 cfs Jan. 17; minimum gage height, 1.38 ft Jan. 17 (result of freezeup).
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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50,800	65,000	60,000	26,700	23,700	51,800	47,900	56,200	62,500	47,900	56,700	52,200
2	51,300	67,000	59,000	26,300	23,900	59,500	46,300	73,500	60,500	47,100	57,000	54,000
3	52,200	63,000	58,000	26,900	24,000	40,700	50,400	79,000	59,000	48,700	60,500	54,000
4	52,600	62,500	57,200	26,900	24,100	32,900	52,200	69,500	58,500	48,300	60,500	51,800
5	54,000	60,500	55,400	25,300	23,000	31,100	53,100	64,000	59,000	48,300	59,500	50,800
6	53,600	57,600	52,200	24,100	22,500	30,500	51,300	70,500	59,000	48,300	59,000	50,800
7	52,200	60,000	48,700	24,900	23,000	29,700	50,800	79,000	60,500	49,100	57,200	51,300
8	53,600	60,500	46,700	25,300	24,000	44,900	51,300	80,100	60,500	50,800	59,000	50,800
9	54,400	58,500	46,000	26,100	25,000	46,700	51,300	67,000	63,000	50,400	59,000	52,200
10	53,600	57,200	43,500	26,100	25,000	39,400	51,300	62,000	65,000	50,800	58,000	50,400
11	53,600	58,000	39,900	25,900	25,000	37,600	51,300	63,500	63,000	51,200	55,400	54,000
12	51,300	59,500	38,400	26,100	25,000	37,200	50,000	63,500	60,500	52,200	54,400	88,900
13	51,300	59,500	36,400	26,500	24,500	39,900	50,400	62,500	62,000	60,000	53,600	91,300
14	52,600	58,500	34,300	26,700	26,100	44,200	50,800	67,000	63,000	52,600	52,200	80,100
15	52,200	56,200	32,500	24,900	26,500	44,600	50,000	71,000	61,000	52,600	50,400	73,500
16	52,600	57,600	31,400	17,800	27,300	41,900	50,000	68,500	59,000	52,600	51,800	78,400
17	52,200	59,000	29,500	10,600	27,500	41,600	48,700	62,500	59,500	53,600	52,200	75,200
18	51,800	63,500	29,100	13,300	28,300	42,800	46,700	60,000	58,000	65,000	51,800	69,000
19	51,800	65,000	28,900	16,800	28,900	44,900	47,900	60,000	60,500	77,400	52,200	64,500
20	53,600	65,000	28,900	33,600	29,100	46,700	49,500	59,000	54,900	58,000	51,300	60,000
21	55,400	63,500	28,700	26,300	29,700	48,700	52,200	59,000	55,400	50,400	50,800	58,500
22	54,400	62,500	28,300	19,700	33,800	49,100	54,000	57,200	54,900	56,700	52,200	58,000
23	53,100	62,000	27,700	20,700	35,600	50,800	53,100	57,200	55,800	65,500	53,100	59,000
24	54,000	63,000	26,700	23,000	35,000	51,300	51,300	59,500	52,600	58,500	53,600	56,700
25	54,400	61,500	28,500	21,000	33,400	49,100	49,500	60,000	52,600	52,600	55,400	55,800
26	54,400	61,500	29,100	20,000	34,300	49,100	49,100	65,000	50,800	57,200	58,000	57,600
27	58,000	61,000	28,700	19,500	32,900	47,900	50,800	61,500	49,500	65,000	54,900	59,000
28	59,000	61,000	28,300	19,500	32,200	49,100	55,400	65,500	48,300	65,000	54,000	59,500
29	61,000	61,000	27,100	21,000	36,200	49,500	55,800	68,500	47,900	61,500	52,600	56,700
30	63,500	61,000	26,900	22,500	-----	48,700	55,800	68,500	49,500	62,000	51,800	57,600
31	63,500	-----	27,300	23,500	-----	49,100	-----	65,500	-----	58,500	51,800	-----
TOTAL	1,682.0M	1,831.6M	1,163.3M	717,500	809,500	1,371.0M	1,528.2M	2,025.7M	1,726.2M	1,717.8M	1,699.9M	1,831.6M
MEAN	54,260	61,050	37,530	23,150	27,910	44,230	50,940	65,350	57,540	55,410	54,840	61,050
MAX	63,500	67,000	60,000	33,600	36,200	59,500	55,800	80,100	65,000	77,400	60,500	91,300
MIN	50,800	56,200	26,700	10,600	22,500	29,700	46,300	56,200	47,900	47,100	50,400	50,400
AC-FT	3,336M	3,633M	2,307M	1,423M	1,606M	2,719M	3,031M	4,018M	3,424M	3,407M	3,372M	3,633M

CAL YR 1971 TOTAL 18,806,800 MEAN 51,530 MAX 67,000 MIN 10,000 AC-FT 37,300,000
WTR YR 1972 TOTAL 18,104,300 MEAN 49,470 MAX 91,300 MIN 10,600 AC-FT 35,910,000

M Expressed in thousands.

BIG NEMAHA RIVER BASIN

125

06814000 Turkey Creek near Seneca, Kans.

LOCATION.--Lat 39°56'52", long 96°06'30", in SW1/4SW1/4 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.--24 years, 116 cfs (84,040 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,590 cfs Aug. 3 (gage height, 16.62 ft); minimum, 0.04 cfs July 7. 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 October through February, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	52	9.9	10	3.0	25	7.8	45	22	1.1	3.1	2.3
2	.28	210	8.3	7.1	3.0	22	8.5	205	20	.88	106	3.1
3	.26	49	8.3	6.2	2.4	17	8.4	49	18	.47	1,520	3.2
4	.24	15	9.9	8.7	2.4	17	7.0	28	16	.31	178	2.7
5	.22	5.2	11	6.9	2.8	19	6.7	25	15	.21	45	2.4
6	.20	2.1	11	5.2	2.8	14	6.2	26	13	.11	23	2.1
7	.18	1.8	10	5.6	2.6	14	5.8	420	12	.57	14	1.4
8	.16	2.7	9.8	6.6	2.6	13	5.6	173	11	2.2	10	5.5
9	.16	2.7	9.2	9.7	2.6	11	6.4	80	9.7	1.9	8.0	2.8
10	.16	2.4	10	14	2.8	9.0	6.9	54	8.9	1.9	6.9	2.2
11	.14	1.8	9.8	16	2.8	8.8	6.9	44	8.7	1.9	5.8	2.1
12	.14	1.6	8.7	19	3.0	9.5	9.3	39	9.2	2.2	5.1	2.0
13	.14	1.6	7.4	10	3.4	11	8.5	42	9.2	1.2	4.3	1.7
14	.12	1.4	8.9	7.0	3.8	12	6.0	48	13	1.2	3.9	1.5
15	.12	1.4	11	4.0	4.0	11	5.4	37	14	1.3	3.5	1.5
16	.12	10	11	4.0	9.0	9.9	7.8	31	12	1.1	3.3	1.4
17	.20	106	11	5.0	31	9.3	6.1	25	8.6	6.8	3.0	1.4
18	3.0	413	8.1	7.0	45	12	5.6	21	5.6	37	2.7	.85
19	.21	71	9.5	6.0	32	10	5.7	19	8.3	19	2.6	.78
20	.25	25	10	5.0	32	10	7.0	17	9.7	8.7	2.5	.94
21	.18	12	9.8	4.0	36	11	34	16	4.6	3.4	3.1	.92
22	.14	8.9	8.9	6.0	35	10	44	16	3.5	1.4	3.4	.80
23	.14	7.5	8.2	8.0	30	9.4	20	22	3.2	.82	2.6	.70
24	.12	8.0	9.3	8.0	32	8.2	12	514	3.4	.87	3.1	.65
25	.12	7.8	8.6	7.0	30	7.5	8.6	167	3.0	.67	51	.65
26	.12	7.2	7.5	6.0	30	7.7	9.9	63	1.9	.47	26	2.0
27	.40	6.4	8.0	3.6	27	8.3	23	38	1.8	.39	7.8	.56
28	9.0	8.7	6.4	2.4	27	8.2	46	31	2.1	.30	4.3	.34
29	14	13	6.0	2.4	26	7.4	30	53	1.6	.35	2.6	.21
30	38	12	7.2	2.4	-----	6.6	20	40	1.4	.33	2.1	.35
31	66	-----	7.4	3.0	-----	7.8	-----	28	-----	.23	2.1	-----
TOTAL	134.80	1,067.2	280.1	215.8	466.0	356.6	385.1	2,416	270.4	99.28	2,058.8	61.65
MEAN	4.35	35.6	9.04	6.96	16.1	11.5	12.8	77.9	9.01	3.20	66.4	2.06
MAX	66	413	11	19	45	25	46	514	22	37	1,520	14
MIN	.12	1.4	6.0	2.4	2.4	6.6	5.4	16	1.4	.11	2.1	.21
AC-FT	267	2,120	556	428	924	707	764	4,790	536	197	4,080	122
CAL YR 1971	TOTAL	21,933.80	MEAN	60.1	MAX	2,110	MIN	.12	AC-FT	43,510		
WTR YR 1972	TOTAL	7,811.73	MEAN	21.3	MAX	1,520	MIN	.11	AC-FT	15,490		

PEAK DISCHARGE (BASE, 3,100 CFS).--NO PEAK ABOVE BASE.

BIG NEMAHA RIVER BASIN

06814500 North Fork Big Nemaha River at Humboldt, Nebr.

LOCATION.--Lat 40°09'25", long 95°56'40", in N $\frac{1}{2}$ sec.10, T.2 N., R.13 E., Richardson County, on right pile bent of bridge on State Highway 105 at south edge of Humboldt, 800 ft downstream from Long Branch Creek.

DRAINAGE AREA.--548 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1965 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.--20 years, 173 cfs (125,300 acre-ft per year); median of yearly mean discharges, 110 cfs (79,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,410 cfs Nov. 17 (gage height, 6.76 ft); minimum daily, 7.2 cfs Sept. 29.

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 poor.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	169	30	58	25	70	21	383	30	13	16	20
2	24	375	32	52	21	65	25	410	29	13	60	21
3	16	138	33	46	14	67	23	130	28	14	601	23
4	13	67	37	36	20	72	19	73	22	13	52	21
5	13	40	42	30	22	59	24	63	22	13	35	21
6	14	26	42	26	21	52	31	86	20	13	21	15
7	11	22	39	30	20	47	22	546	19	18	18	20
8	10	27	39	34	21	43	13	235	17	21	27	18
9	7.5	32	32	38	22	43	22	130	16	20	24	15
10	11	32	46	40	24	42	31	89	8.3	16	18	22
11	12	31	40	37	25	40	26	76	9.8	44	16	22
12	11	28	22	33	27	41	28	74	14	38	14	24
13	10	26	19	28	30	42	31	81	12	21	13	20
14	13	26	36	22	33	41	20	270	32	18	13	15
15	14	25	46	18	35	41	18	115	35	10	12	15
16	16	26	42	23	37	38	28	77	28	10	12	19
17	14	444	27	30	40	36	31	62	58	130	12	19
18	33	446	31	40	43	40	24	47	38	484	10	19
19	37	114	46	37	48	40	17	41	40	74	11	19
20	20	74	39	34	52	37	18	40	23	37	10	15
21	19	41	26	32	56	41	86	37	19	17	13	10
22	19	27	30	37	62	33	89	31	16	12	12	9.3
23	18	27	43	40	66	27	69	68	20	11	9.8	8.5
24	19	34	41	36	72	24	38	81	17	18	10	14
25	21	35	44	32	95	23	20	140	13	16	214	15
26	20	34	40	27	97	30	35	68	13	21	75	11
27	26	32	18	22	92	28	76	51	18	21	40	10
28	26	35	25	15	69	24	140	56	18	19	33	11
29	31	46	42	18	65	20	89	56	14	18	25	7.2
30	82	40	54	22	-----	20	63	42	14	16	17	8.2
31	95	-----	57	28	-----	22	-----	36	-----	15	24	-----
TOTAL	694.5	2,519	1,140	1,001	1,254	1,248	1,177	3,694	663.1	1,204	1,467.8	487.2
MEAN	22.4	84.0	36.8	32.3	43.2	40.3	39.2	119	22.1	38.8	47.3	16.2
MAX	95	446	57	58	97	72	140	546	58	484	601	24
MIN	7.5	22	18	15	14	20	13	31	8.3	10	9.8	7.2
AC-FT	1,380	5,000	2,260	1,990	2,490	2,480	2,330	7,330	1,320	2,390	2,910	966

CAL YR 1971 TOTAL 38,616.6 MEAN 106 MAX 3,370 MIN 7.5 AC-FT 76,600
WTR YR 1972 TOTAL 16,549.6 MEAN 45.2 MAX 601 MIN 7.2 AC-FT 32,830

PEAK DISCHARGE (BASE, 5,000 CFS).--No peak above base.

BIG NEMAHA RIVER BASIN

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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 1965, 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.--28 years, 547 cfs (396,300 acre-ft per year); median of yearly mean discharges, 380 cfs (275,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,320 cfs Aug. 3 (gage height, 11.02 ft); minimum daily, 20 cfs Oct. 6, 8, 9.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	424	102	90	50	152	66	134	100	24	35	58
2	22	1,490	92	71	45	100	65	644	80	24	35	62
3	22	800	88	60	35	112	65	548	72	26	2,350	57
4	21	298	86	57	38	94	63	212	68	25	3,550	56
5	21	150	86	45	40	102	60	152	64	26	632	50
6	20	100	86	52	45	108	58	134	58	23	232	45
7	21	82	84	58	42	96	55	448	55	27	136	46
8	20	76	86	66	42	92	57	1,100	51	36	121	56
9	20	76	86	70	45	92	58	496	48	29	90	103
10	21	74	90	75	48	81	57	262	46	26	76	65
11	22	72	85	80	52	81	57	195	44	26	63	54
12	22	72	84	85	55	78	59	166	44	48	54	56
13	22	70	62	75	60	90	58	162	42	35	49	47
14	22	66	91	60	65	83	56	218	47	29	43	40
15	22	66	92	40	70	82	57	220	54	24	39	40
16	23	66	90	50	75	78	61	158	53	22	36	36
17	23	100	83	60	80	76	60	128	52	67	34	36
18	29	1,300	86	75	85	78	57	108	79	1,350	32	32
19	44	800	81	78	90	77	56	88	51	576	29	30
20	37	280	86	75	100	78	61	78	50	132	31	29
21	43	150	76	70	110	77	81	72	43	88	37	27
22	36	109	77	75	128	75	178	69	40	58	36	26
23	32	102	82	80	166	73	205	74	39	44	31	26
24	31	91	80	70	138	71	124	81	37	140	36	27
25	29	92	80	55	136	71	94	725	35	73	917	27
26	29	86	78	45	116	70	92	308	32	53	979	35
27	32	84	58	35	127	68	130	152	32	50	277	170
28	32	84	64	30	136	69	232	127	36	46	122	74
29	75	104	80	35	152	66	238	112	27	41	83	50
30	205	108	82	40	-----	65	162	190	26	38	66	44
31	420	-----	66	45	-----	68	-----	124	-----	34	58	-----
TOTAL	1,439	7,472	2,549	1,902	2,371	2,603	2,722	7,685	1,505	3,240	10,309	1,504
MEAN	46.4	249	82.2	61.4	81.8	84.0	90.7	248	50.2	105	333	50.1
MAX	420	1,490	102	90	166	152	238	1,100	100	1,350	3,550	170
MIN	20	66	58	30	35	65	55	69	26	22	29	26
AC-FT	2,850	14,820	5,060	3,770	4,700	5,160	5,400	15,240	2,990	6,430	20,450	2,980

CAL YR 1971 TOTAL 92,867 MEAN 254 MAX 4,220 MIN 18 AC-FT 184,200
WTR YR 1972 TOTAL 45,301 MEAN 124 MAX 3,550 MIN 20 AC-FT 89,050

PEAK DISCHARGE (BASE, 15,000 CFS).--No peak above base.

BIG NEMAHA RIVER BASIN

06815500 Muddy Creek at Verdon, Nebr.

LOCATION.--Lat 40°08'40", long 95°43'10", in NE1/4 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 September 1972 (discontinued).

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.--20 years, 66.3 cfs (48,030 acre-ft per year); median of yearly mean discharges, 53 cfs (38,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,320 cfs July 18 (gage height, 14.35 ft); minimum daily, 7.0 cfs Oct. 8, 9.

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.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	120	19	21	10	25	13	160	14	9.2	12	10
2	7.7	226	17	22	9.6	22	13	57	13	9.2	13	11
3	7.4	32	17	20	9.2	20	12	30	14	8.8	31	9.6
4	7.7	20	17	17	8.8	18	11	27	78	8.8	30	9.2
5	7.7	15	17	12	9.2	19	12	25	17	8.4	17	9.2
6	7.7	12	17	13	10	20	13	57	13	9.2	13	9.6
7	7.4	12	18	15	11	17	12	243	11	8.4	12	9.2
8	7.0	14	19	17	12	15	12	73	10	11	13	9.2
9	7.0	13	19	20	13	14	12	38	10	8.8	11	9.2
10	7.7	13	18	21	15	16	12	25	10	8.0	10	9.6
11	8.8	15	19	22	17	15	12	25	10	10	9.6	9.6
12	8.0	16	18	24	19	14	13	25	10	9.2	8.4	10
13	8.0	15	17	20	21	16	13	26	12	9.2	8.0	9.6
14	7.7	14	17	15	23	14	12	29	15	8.4	7.7	9.2
15	7.7	13	17	10	26	13	10	25	14	7.7	9.2	8.8
16	7.7	60	18	11	27	13	11	20	9.6	7.4	8.4	9.6
17	9.2	158	18	13	29	16	14	18	667	58	7.7	8.4
18	18	251	20	15	32	14	13	17	79	1,520	7.7	8.0
19	11	44	18	17	33	13	14	17	23	198	7.7	8.0
20	11	27	18	14	35	12	15	16	15	58	7.4	7.4
21	9.6	21	17	12	37	15	31	14	13	17	8.8	7.4
22	10	19	17	13	40	13	30	16	12	13	8.4	8.0
23	9.6	15	16	14	44	12	17	18	12	12	8.4	8.0
24	9.6	17	16	12	39	12	15	18	11	12	11	8.0
25	9.6	17	17	10	34	12	16	18	11	13	268	8.8
26	10	16	15	9.4	31	12	22	17	10	13	85	8.4
27	14	16	16	9.0	26	12	182	17	10	14	14	8.8
28	13	14	17	8.4	21	12	152	18	9.6	12	10	8.4
29	37	23	18	8.6	28	13	45	17	9.6	11	9.6	8.4
30	92	21	19	9.4	-----	13	39	16	9.6	11	9.6	9.6
31	68	-----	20	11	-----	14	-----	16	-----	12	9.2	-----
TOTAL	454.2	1,269	546	455.8	669.8	466	798	1,138	1,152.4	2,115.7	685.8	268.2
MEAN	14.7	42.3	17.6	14.7	23.1	15.0	26.6	36.7	38.4	68.2	22.1	8.94
MAX	92	251	20	24	44	25	182	243	667	1,520	268	11
MIN	7.0	12	15	8.4	8.8	12	10	14	9.6	7.4	7.4	7.4
AC-FT	901	2,520	1,080	904	1,330	924	1,580	2,260	2,290	4,200	1,360	532

CAL YR 1971 TOTAL 14,485.5 MEAN 39.7 MAX 820 MIN 5.1 AC-FT 28,730
WTR YR 1972 TOTAL 10,018.9 MEAN 27.4 MAX 1,520 MIN 7.0 AC-FT 19,870

PEAK DISCHARGE (BASE, 4,000 CFS).--July 18 (0430) 4,320 cfs (14.35 ft).

06821500 Arikaree River at Haigler, Nebr.

LOCATION.--Lat 40°01'45", long 101°58'10", in NE1/4 sec.29, T.1 N., R.41 W., Dundey 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.--41 years, 25.7 cfs (18,620 acre-ft per year); median of yearly mean discharges, 21 cfs (15,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,080 cfs June 17 (gage height, 7.79 ft); minimum daily, 0.50 cfs Jan. 5.

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. WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	1.8	.98	1.2	.70	9.4	8.0	25	13	24	5.6	26
2	13	1.5	.96	1.3	.60	9.0	11	25	9.1	21	3.6	37
3	16	1.2	.94	1.0	.54	12	8.4	17	16	37	4.4	23
4	16	1.1	.85	.70	.56	7.2	7.8	15	11	42	9.2	16
5	11	.96	.92	.50	.60	7.1	8.9	13	10	29	4.6	16
6	4.3	.64	.94	.54	.90	12	9.0	21	6.2	23	6.9	18
7	2.3	.72	.80	.60	.80	8.8	8.4	25	4.6	20	6.4	13
8	1.4	.72	.76	.70	.98	5.8	10	21	2.3	33	4.7	6.7
9	1.2	.64	.78	.80	.90	8.7	34	29	1.8	21	3.2	12
10	1.4	.64	.89	.88	.78	8.9	28	39	1.8	28	2.0	13
11	.83	.72	.94	.88	.80	8.7	20	63	2.1	19	1.3	8.9
12	1.6	.80	.91	.90	1.0	8.3	7.5	111	4.2	5.0	1.2	16
13	5.8	.88	1.1	.90	3.5	7.3	18	33	6.0	3.2	.98	9.8
14	6.4	.88	1.1	.80	7.0	8.2	18	30	4.4	1.8	1.3	2.3
15	10	.96	.99	.72	8.5	8.6	12	26	6.2	.78	1.6	20
16	21	1.0	.93	.75	10	8.4	13	53	50	2.4	1.8	7.9
17	19	1.8	.95	.90	11	7.8	13	51	789	2.5	1.2	3.7
18	25	1.6	1.2	1.5	14	6.9	7.1	21	760	2.0	1.2	16
19	9.1	1.7	1.1	2.0	14	8.2	8.7	15	315	1.7	1.3	14
20	7.8	1.8	1.1	3.0	13	8.1	12	26	89	1.3	1.0	26
21	8.6	2.1	1.2	4.0	13	8.6	10	19	57	1.0	1.4	52
22	14	2.1	1.2	4.0	11	9.1	5.8	16	502	.84	1.9	10
23	8.2	1.9	1.1	3.8	13	9.2	3.6	26	73	.87	3.2	14
24	9.9	1.6	1.1	3.8	13	16	3.2	20	32	1.3	52	16
25	8.9	1.4	1.2	3.8	10	13	2.7	13	36	2.1	8.7	15
26	8.6	1.2	1.2	2.5	8.9	11	8.5	15	85	2.7	3.0	11
27	10	1.1	1.2	.90	12	8.3	32	388	105	50	1.9	11
28	15	1.1	1.3	.60	13	7.5	25	561	161	8.7	3.3	16
29	13	1.1	1.3	.65	11	9.0	14	88	32	3.0	3.5	15
30	2.6	1.1	1.2	.65	-----	10	22	39	21	2.4	333	22
31	1.9	-----	1.1	.70	-----	10	-----	22	-----	5.5	33	-----
TOTAL	286.83	36.76	32.24	45.97	195.06	281.1	389.6	1,866	3,205.7	396.09	508.38	487.3
MEAN	9.25	1.23	1.04	1.48	6.73	9.07	13.0	60.2	107	12.8	16.4	16.2
MAX	25	2.1	1.3	4.0	14	16	34	561	789	50	333	52
MIN	.83	.64	.76	.50	.54	5.8	2.7	13	1.8	.78	.98	2.3
AC-FT	569	73	64	91	387	558	773	3,700	6,360	786	1,010	967

CAL YR 1971 TOTAL 3,519.33 MEAN 9.64 MAX 105 MIN 0 AC-FT 6,980
WTR YR 1972 TOTAL 7,731.03 MEAN 21.1 MAX 789 MIN .50 AC-FT 15,330

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-27	0945	6.56	1,120	6-18	0700	7.52	1,870
5-28	0115	6.76	1,260	6-22	0515	7.01	1,460
6-17	0245	7.79	2,080	8-30	0900	6.96	1,420

KANSAS RIVER BASIN

06823000 North Fork Republican River at Colorado-Nebraska State line

LOCATION.--Lat 40°04'10", long 102°03'05", in sec.10, T.1 N., R.42 W., Dundy County, Nebr., 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 at Colorado-Nebraska State line. 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.--42 years, 49.0 cfs (35,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 152 cfs Oct. 18 (gage height, 2.01 ft); maximum gage height, 2.93 ft Jan. 5, Feb. 3 (backwater from ice); minimum daily discharge, 6.7 cfs July 19.

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. WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	65	66	67	64	64	50	14	42	16	9.6	16
2	18	63	65	67	58	63	49	15	33	16	11	37
3	16	62	65	69	52	64	47	16	23	31	11	34
4	15	62	64	60	54	62	42	15	14	34	11	34
5	19	63	64	54	58	62	43	15	13	31	12	31
6	17	61	64	60	70	63	41	16	12	34	13	32
7	12	62	63	65	64	63	41	18	11	16	13	35
8	7.1	61	64	70	65	62	20	17	11	22	13	34
9	9.0	61	66	75	66	63	28	16	10	12	15	33
10	9.4	62	62	71	64	64	22	42	12	11	13	31
11	9.0	62	62	68	63	64	36	88	12	11	14	30
12	9.2	64	62	68	64	63	40	102	9.9	9.6	12	28
13	10	63	62	68	65	62	15	79	13	7.5	12	40
14	9.9	60	63	62	65	62	13	63	13	6.8	10	32
15	8.5	61	65	61	64	63	15	48	13	8.9	10	20
16	12	65	62	74	66	61	14	36	71	9.4	8.5	34
17	18	69	62	65	65	61	14	35	75	8.9	9.9	26
18	92	71	62	67	63	60	13	48	54	9.9	8.5	12
19	50	68	67	69	64	59	9.4	34	38	6.7	7.8	11
20	45	69	66	69	64	60	8.1	34	34	7.3	8.9	21
21	27	75	68	69	64	63	9.1	34	31	9.4	8.0	21
22	25	74	68	69	62	58	13	34	33	10	8.2	12
23	31	72	70	70	62	59	13	24	31	11	9.7	12
24	31	70	71	71	63	61	13	31	27	11	13	11
25	32	68	71	68	64	58	16	31	22	12	11	11
26	32	66	71	69	63	59	17	30	39	12	11	13
27	31	64	70	56	63	56	16	48	45	14	13	15
28	31	68	70	62	64	57	16	64	41	10	14	13
29	53	66	71	70	64	57	15	48	33	11	13	12
30	61	67	70	69	-----	57	15	49	17	9.3	13	10
31	64	-----	67	66	-----	52	-----	47	-----	7.0	12	-----
TOTAL	822.1	1,964	2,043	2,068	1,827	1,882	703.6	1,191	832.9	425.7	349.1	701
MEAN	26.5	65.5	65.9	66.7	63.0	60.7	23.5	38.4	27.8	13.7	11.3	23.4
MAX	92	75	71	75	70	64	50	102	75	34	15	40
MIN	7.1	60	62	54	52	52	8.1	14	9.9	6.7	7.8	10
AC-FT	1,630	3,900	4,050	4,100	3,620	3,730	1,400	2,360	1,650	844	692	1,390

CAL YR 1971 TOTAL 16,077.6 MEAN 44.0 MAX 92 MIN 4.5 AC-FT 31,890

WTR YR 1972 TOTAL 14,809.4 MEAN 40.5 MAX 102 MIN 6.7 AC-FT 29,370

PEAK DISCHARGE (BASE, 130 CFS).--Oct. 18 (1130) 152 cfs (2.01 ft); June 16 (1030) 140 cfs (1.90 ft).

KANSAS RIVER BASIN

131

06823500 Buffalo Creek near Haigler, Nebr.

LOCATION.--Lat 40°02'45", long 101°52'15", in NW¼NW¼ 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.--32 years, 8.05 cfs (5,830 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18 cfs May 12 (gage height, 3.75 ft); maximum gage height, 4.66 ft Feb. 4 (backwater from ice); minimum daily discharge, 0.05 cfs June 12-15.

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).--WSP 2119: 1948-50(M), 1957(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.7	9.5	9.0	8.5	8.7	8.8	.14	4.7	5.7	.13	6.8
2	5.2	8.1	9.4	9.0	7.6	9.0	9.0	.15	4.5	5.6	.14	10
3	5.0	8.1	9.6	4.0	6.0	9.1	8.9	.46	4.4	6.1	.12	9.8
4	5.0	8.1	9.6	4.5	6.4	8.9	9.0	1.3	4.2	6.0	.14	9.1
5	5.1	8.4	9.0	6.0	6.6	8.9	9.0	1.6	3.8	7.1	.12	7.5
6	5.0	8.4	9.4	6.5	8.6	9.0	8.7	1.3	3.8	7.6	.09	7.2
7	5.0	9.0	9.6	7.0	8.0	9.1	8.0	1.2	3.3	7.3	.08	7.1
8	5.1	8.7	8.6	8.0	9.1	9.2	7.5	1.2	3.1	6.6	.08	6.6
9	5.0	8.4	7.6	8.5	8.2	9.3	7.4	1.2	1.9	5.6	.08	6.6
10	5.0	8.7	7.8	8.5	8.0	9.2	5.9	1.3	.10	4.2	.07	6.6
11	4.8	8.7	8.2	8.5	8.6	9.4	7.1	5.6	.07	4.0	.08	6.6
12	4.8	8.4	8.5	8.5	9.4	8.8	7.7	13	.05	3.4	.08	6.6
13	4.7	8.4	8.7	8.0	10	8.7	7.6	12	.05	.08	.09	6.5
14	4.7	8.1	9.9	7.0	9.7	8.9	7.6	11	.05	.15	.06	6.6
15	4.8	8.1	9.5	7.0	9.5	8.7	7.4	10	.05	.19	.06	6.6
16	4.8	8.7	9.5	7.5	9.9	8.7	7.4	6.6	.06	.18	.06	6.5
17	4.9	9.0	9.0	8.5	9.5	8.6	7.0	3.3	1.5	.17	.08	6.4
18	5.2	9.5	9.0	9.0	9.5	8.2	6.6	3.4	3.0	.19	.62	6.3
19	5.0	10	8.9	9.5	9.5	8.2	6.0	3.3	2.8	.18	1.1	6.3
20	4.9	9.4	8.5	10	9.4	8.3	6.1	3.0	2.5	.15	.72	6.4
21	4.9	9.3	8.7	9.7	9.3	8.6	2.3	2.1	2.5	.14	.53	6.3
22	4.9	9.3	8.7	9.7	9.2	8.7	.09	1.2	2.6	.13	.47	6.2
23	4.8	9.0	8.7	9.8	9.3	8.9	.08	2.8	2.2	.15	.49	6.1
24	4.9	9.1	8.5	9.9	8.8	9.2	.12	2.8	2.3	.17	7.3	5.8
25	4.8	9.1	8.7	9.8	8.6	9.0	.15	2.9	2.5	.17	11	5.8
26	4.8	9.2	8.8	7.0	9.0	8.9	.16	2.7	2.7	.21	10	5.9
27	4.7	9.3	8.8	5.5	8.9	8.6	.15	3.3	2.2	.52	7.5	6.0
28	4.8	9.0	10	6.0	8.9	8.6	.14	5.0	1.4	.18	5.6	5.8
29	4.9	9.3	9.0	7.5	8.8	8.6	.15	4.8	3.9	.18	5.6	5.7
30	5.0	9.4	8.5	8.0	-----	9.0	.15	4.8	6.2	.17	6.0	5.4
31	4.9	-----	8.5	8.0	-----	8.8	-----	4.7	-----	.15	5.8	-----
TOTAL	153.0	262.9	276.7	245.4	252.8	273.8	156.19	118.15	72.43	72.66	64.29	201.1
MEAN	4.94	8.76	8.93	7.92	8.72	8.83	5.21	3.81	2.41	2.34	2.07	6.70
MAX	5.6	10	10	10	10	9.4	9.0	13	6.2	7.6	11	10
MIN	4.7	6.7	7.6	4.0	6.0	8.2	.08	.14	.05	.08	.06	5.4
AC-FT	303	521	549	487	501	543	310	234	144	144	128	399

CAL YR 1971 TOTAL 2,439.49 MEAN 6.68 MAX 23 MIN .03 AC-FT 4,840
WTR YR 1972 TOTAL 2,149.42 MEAN 5.87 MAX 13 MIN .05 AC-FT 4,260

PEAK DISCHARGE (BASE, 20 CFS).--No peak above base.

KANSAS RIVER BASIN

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., Dundy 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.--32 years, 14.3 cfs (10,360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 41 cfs July 6 (gage height, 2.32 ft); maximum gage height, 2.63 ft Jan. 27 (backwater from ice); minimum daily discharge, 9.1 cfs Aug. 21.
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). WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	14	13	14	15	13	15	14	13	11	13
2	13	13	14	13	12	15	13	14	13	13	11	13
3	13	12	14	13	11	15	13	14	13	14	12	13
4	14	13	14	10	12	15	14	14	13	14	12	13
5	14	13	15	11	14	14	14	14	12	13	12	13
6	14	13	14	12	15	13	13	14	12	15	11	13
7	14	13	14	13	16	13	13	14	12	18	11	13
8	13	13	13	13	15	13	13	14	12	17	11	13
9	13	13	13	14	15	12	13	14	12	16	11	13
10	13	13	14	15	15	13	13	16	12	16	10	13
11	14	13	15	16	15	13	13	21	12	14	9.5	13
12	13	13	14	15	15	13	13	24	12	13	9.8	12
13	12	13	14	15	15	13	13	20	12	12	10	12
14	13	13	13	13	15	13	13	17	13	12	10	12
15	13	13	13	11	15	12	14	16	15	13	10	12
16	13	14	13	13	15	12	14	16	16	13	9.7	12
17	14	16	14	15	15	11	13	15	16	13	9.7	12
18	15	16	13	15	15	12	14	14	17	13	9.7	12
19	17	15	13	15	15	12	14	13	15	13	9.4	12
20	25	15	13	15	15	13	14	13	14	12	9.2	13
21	11	15	13	15	15	13	14	12	13	13	9.1	13
22	12	15	13	15	14	13	14	12	13	12	9.2	12
23	13	14	13	15	14	13	13	12	12	13	10	12
24	13	14	13	15	14	13	13	12	12	12	13	13
25	13	14	13	14	15	13	13	12	12	12	13	13
26	13	14	13	12	15	13	14	12	15	12	13	13
27	13	14	13	10	15	13	18	14	16	12	12	14
28	13	14	13	10	15	13	17	16	14	12	12	13
29	13	14	13	11	15	13	16	15	13	12	12	13
30	14	14	13	13	-----	13	15	14	13	11	13	13
31	14	-----	13	14	-----	13	-----	14	-----	11	13	-----
TOTAL	426	413	417	414	421	405	414	457	400	409	338.3	381
MEAN	13.7	13.8	13.5	13.4	14.5	13.1	13.8	14.7	13.3	13.2	10.9	12.7
MAX	25	16	15	16	16	15	18	24	17	18	13	14
MIN	11	12	13	10	11	11	13	12	12	11	9.1	12
AC-FT	845	819	827	821	835	803	821	906	793	811	671	756

CAL YR 1971 TOTAL 4,868.0 MEAN 13.3 MAX 25 MIN 7.2 AC-FT 9,660
WTR YR 1972 TOTAL 4,895.3 MEAN 13.4 MAX 25 MIN 9.1 AC-FT 9,710

PEAK DISCHARGE (BASE, 25 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-20	0615	1.91	32	7-6	2045	2.32	41
5-12	0200	1.81	26				

06824500 Republican River at Benkelman, Nebr.

LOCATION.--Lat 40°01'55", long 101°32'30", in SE1/4 sec.19, T.1 N., R.37 W., Dundy County, on right bank 150 ft downstream from 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. Prior to May 27 at site 150 ft upstream.

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 (published as North Fork Republican River at Benkelman), October 1902 to November 1906, October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

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; Dec. 17, 1946, to May 26, 1972, water-stage recorder at site 150 ft upstream at same datum.

AVERAGE DISCHARGE.--31 years, 92.8 cfs (67,230 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,180 cfs June 17 (gage height, 4.69 ft); minimum daily, 0.54 cfs Aug. 20.

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 fair except those for winter period, which are poor. Natural flow affected by irrigation developments above station. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1310: 1895. WSP 1919: 1952, 1956. WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	94	89	80	90	100	71	58	105	51	15	61
2	34	92	88	80	84	94	72	53	98	47	22	57
3	35	94	86	72	76	94	77	55	89	57	26	71
4	34	88	84	60	78	100	75	54	74	84	21	64
5	35	84	79	54	80	95	66	54	59	68	21	57
6	33	86	77	56	90	97	63	55	51	70	17	54
7	30	86	77	65	88	103	64	59	42	248	14	56
8	24	88	70	68	94	103	66	64	36	100	14	53
9	21	88	65	75	90	97	62	68	29	102	11	52
10	20	86	72	85	84	100	66	85	27	70	8.4	56
11	22	86	80	94	86	100	56	133	25	66	6.9	53
12	23	81	90	98	90	100	56	329	20	60	5.0	50
13	23	80	96	95	96	100	64	218	21	54	3.2	51
14	22	81	96	80	105	94	52	167	23	46	3.0	53
15	20	82	92	72	115	89	52	134	30	40	2.1	51
16	22	84	92	76	115	92	48	120	43	35	1.5	45
17	28	89	94	90	120	97	47	103	473	30	1.4	48
18	39	98	100	100	135	94	45	86	595	30	1.0	41
19	76	95	100	110	150	79	46	74	255	26	.67	33
20	70	96	96	105	147	84	45	59	171	26	.54	41
21	67	95	100	105	133	86	45	54	87	22	.67	47
22	56	97	105	108	122	76	41	43	245	20	.55	55
23	50	99	100	108	124	78	38	43	128	17	1.7	40
24	50	94	97	108	124	96	38	52	76	18	14	37
25	50	88	80	100	118	96	37	54	72	23	24	35
26	49	85	78	92	105	79	38	48	95	25	17	34
27	49	86	68	78	103	78	60	59	120	35	15	32
28	50	86	74	78	103	83	60	543	135	39	12	32
29	50	89	91	82	105	87	63	186	118	23	15	36
30	91	89	77	86	-----	86	64	135	70	16	36	36
31	96	-----	75	86	-----	79	-----	118	-----	14	164	-----
TOTAL	1,304	2,666	2,668	2,646	3,050	2,836	1,677	3,363	3,412	1,562	494.63	1,431
MEAN	42.1	88.9	86.1	85.4	105	91.5	55.9	108	114	50.4	16.0	47.7
MAX	96	99	105	110	150	103	77	543	595	248	164	71
MIN	20	80	65	54	76	76	37	43	20	14	.54	32
AC-FT	2,590	5,290	5,290	5,250	6,050	5,630	3,330	6,670	6,770	3,100	981	2,840

CAL YR 1971 TOTAL 25,486.54 MEAN 69.8 MAX 262 MIN 0 AC-FT 50,550
WTR YR 1972 TOTAL 27,109.63 MEAN 74.1 MAX 595 MIN .54 AC-FT 53,770

PEAK DISCHARGE (BASE, 550 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-12	1500	3.81	600	6-18	1400	4.53	1,890
5-28	1000	4.36	1,610	6-22	1300	4.21	1,350
6-17	1045	4.69	2,180	7-7	0500	-	a710

a About.

KANSAS RIVER BASIN

06827500 South Fork Republican River near Benkelman, Nebr.

LOCATION.--Lat 40°00'34", long 101°32'32", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 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.--42 years, 56.6 cfs (41,010 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,700 cfs June 17 (gage height, 6.82 ft); 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. WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	6.2	4.5	29	16	28	104	126	5.4	1.1
2			0	5.6	4.0	32	23	16	77	126	2.6	8.7
3			0	4.4	2.0	42	23	13	52	145	229	7.1
4			0	2.8	2.6	38	15	11	93	139	312	2.6
5			0	1.0	2.6	35	22	12	120	84	84	1.3
6			0	.70	3.0	24	19	14	117	60	43	.38
7			0	.20	3.1	21	19	9.1	127	122	18	.22
8			0	.03	4.0	28	13	12	94	52	7.1	0
9			0	0	3.8	27	12	15	50	136	5.0	0
10			0	0	3.0	17	17	32	44	52	1.6	0
11			0	0	2.6	22	12	55	38	28	.04	0
12			0	0	4.6	21	13	77	30	22	0	0
13			0	0	8.0	23	14	64	12	56	0	0
14			0	1.0	15	20	11	42	18	74	0	0
15			.10	1.0	25	16	12	40	188	44	0	0
16			1.0	1.8	32	11	17	35	602	38	0	0
17			0	6.0	38	11	10	63	1,230	25	0	0
18			0	15	40	9.8	11	89	365	14	0	0
19			4.0	22	40	14	18	89	173	14	0	0
20			5.4	30	42	18	26	89	129	8.7	0	0
21			6.0	35	31	15	32	92	108	5.9	0	0
22			7.6	35	33	15	23	94	95	3.7	0	0
23			8.0	34	43	12	14	89	213	3.0	0	0
24			8.4	33	45	20	19	100	68	3.2	0	0
25			8.4	27	42	14	14	110	58	2.1	0	0
26			8.4	10	42	14	21	116	74	1.2	0	0
27			4.0	2.4	38	12	54	99	70	560	0	0
28			4.3	2.0	41	11	50	711	98	340	0	0
29			5.0	2.6	31	12	39	444	157	82	0	0
30			5.0	3.8	-----	17	34	147	123	34	0	0
31			-----	5.5	4.0	-----	18	97	-----	12	27	-----
TOTAL	0	0	81.10	286.53	625.8	618.8	623	2,904.1	4,727	2,412.8	734.74	21.40
MEAN	0	0	2.62	9.24	21.6	20.0	20.8	93.7	158	77.8	23.7	.71
MAX	0	0	8.4	35	45	42	54	711	1,230	560	312	8.7
MIN	0	0	0	0	2.0	9.8	10	9.1	12	1.2	0	0
AC-FT	0	0	161	568	1,240	1,230	1,240	5,760	9,380	4,790	1,460	42

CAL YR 1971 TOTAL 9,401.52 MEAN 25.8 MAX 279 MIN 0 AC-FT 18,650
WTR YR 1972 TOTAL 13,035.27 MEAN 35.6 MAX 1,230 MIN 0 AC-FT 25,860

KANSAS RIVER BASIN

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06828500 Republican River at Stratton, Nebr.

LOCATION.--Lat 40°08'28", long 101°13'42", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.

DRAINAGE AREA.--8,450 sq mi, approximately, of which about 3,800 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,775.49 ft above mean sea level. Prior to Aug. 1, 1967, at site 0.3 mile downstream at present datum.

AVERAGE DISCHARGE.--22 years, 143 cfs (103,600 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,330 cfs June 17 (gage height, 8.30 ft); no flow Oct. 1-16, Aug. 14-23.

Period of record: Maximum discharge, 26,800 cfs July 31, 1962 (gage height, 9.34 ft, site then in use); no flow at times in most years.

Maximum flood since at least 1826 occurred May 31, 1935 (discharge, about 200,000 cfs, based on slope-area measurement at Max).

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. (See sta 06826000.)

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	80	89	98	90	147	110	90	189	197	14	49
2	0	72	89	98	85	142	107	77	190	175	12	40
3	0	69	88	92	80	139	99	73	142	181	40	40
4	0	68	95	75	85	131	93	72	117	219	170	48
5	0	65	91	60	85	118	93	68	134	224	142	45
6	0	68	94	60	95	112	93	68	124	195	54	39
7	0	70	91	72	85	116	92	72	110	671	34	37
8	0	76	85	80	90	114	89	77	102	241	20	38
9	0	76	80	86	82	106	86	105	78	151	12	37
10	0	75	82	92	80	108	78	174	53	203	5.6	35
11	0	75	85	98	76	110	80	270	49	114	1.0	33
12	0	75	85	110	82	108	78	370	41	83	.24	33
13	0	75	85	98	95	109	75	328	34	72	.05	29
14	0	75	88	90	110	103	73	290	34	68	0	29
15	0	78	88	78	130	109	64	220	32	71	0	30
16	0	92	88	86	150	106	60	175	259	57	0	25
17	.11	95	88	92	170	103	54	140	808	47	0	19
18	10	90	90	110	190	103	50	138	739	44	0	20
19	16	88	95	140	200	100	49	152	525	39	0	16
20	58	90	90	160	180	96	49	156	325	29	0	24
21	58	86	96	155	172	97	49	151	208	25	0	23
22	48	86	100	150	160	96	50	144	145	18	0	30
23	40	86	110	145	165	99	47	141	393	16	0	34
24	37	91	120	140	170	116	43	140	239	11	.09	23
25	38	96	120	125	175	115	40	136	136	15	5.7	20
26	41	93	115	100	175	116	54	128	257	8.8	2.9	18
27	40	89	90	85	160	109	88	146	309	6.6	.58	17
28	39	89	85	80	166	105	108	395	334	384	.22	15
29	40	89	89	80	152	103	112	605	275	136	.09	14
30	64	91	90	85	-----	105	104	309	268	49	.10	17
31	86	-----	92	85	-----	108	-----	240	-----	25	9.0	-----
TOTAL	615.11	2,448	2,873	3,105	3,735	3,449	2,267	5,650	6,649	3,775.4	523.57	877
MEAN	19.8	81.6	92.7	100	129	111	75.6	182	222	122	16.9	29.2
MAX	86	96	120	160	200	147	112	605	808	671	170	49
MIN	0	65	80	60	76	96	40	68	32	6.6	0	14
AC-FT	1,220	4,860	5,700	6,160	7,410	6,840	4,500	11,210	13,190	7,490	1,040	1,740

CAL YR 1971 TOTAL 36,283.27 MEAN 99.4 MAX 656 MIN 0 AC-FT 71,970
WTR YR 1972 TOTAL 35,967.08 MEAN 98.3 MAX 808 MIN 0 AC-FT 71,340

KANSAS RIVER BASIN

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, 109,800 acre-ft July 11, 12 (elevation, 2,749.86 ft); minimum contents, 60,380 acre-ft Oct. 16, 17 (elevation, 2,738.00 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.--WSP 2119: Drainage area.

Capacity table (elevation, in feet, and
usable contents, in acre-feet)

2,735	50,280	2,745	87,930
2,740	67,730	2,750	110,500

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61,090	61,160	65,360	69,450	73,460	80,460	85,800	88,790	97,560	106,200	94,320	76,560
2	61,050	61,270	65,510	69,560	73,500	80,710	85,840	88,790	97,740	106,300	94,100	76,480
3	61,020	61,380	65,700	69,760	73,620	80,910	85,970	88,830	97,830	106,600	94,140	76,360
4	60,950	61,410	65,850	69,840	73,740	81,080	86,090	88,880	97,920	106,700	93,970	76,200
5	60,870	61,450	66,040	69,870	73,810	81,240	86,220	88,920	97,960	106,800	93,920	76,200
6	60,840	61,490	66,150	69,910	73,850	81,580	86,220	89,130	98,010	107,200	93,570	76,080
7	60,800	61,560	66,260	69,950	73,970	81,620	86,220	89,180	98,010	108,900	93,170	76,000
8	60,770	61,670	66,300	69,990	74,130	81,830	86,220	89,260	98,010	109,300	92,690	75,840
9	60,730	61,810	66,410	70,070	74,290	82,030	86,220	89,310	97,880	109,500	92,160	75,680
10	60,730	61,850	66,520	70,300	74,410	82,280	86,260	89,990	97,740	109,600	91,510	75,560
11	60,660	61,920	66,560	70,450	74,640	82,490	86,310	91,040	97,700	109,800	90,950	75,440
12	60,620	62,210	66,670	70,530	74,800	82,740	86,990	91,730	97,560	109,500	90,420	75,320
13	60,590	62,420	66,750	70,760	75,080	82,860	87,080	92,470	97,470	109,000	89,780	75,120
14	60,520	62,460	66,900	70,800	75,320	83,030	87,080	93,090	97,250	108,100	88,790	75,040
15	60,420	62,570	67,050	70,920	75,640	83,280	87,160	93,130	97,210	107,500	87,670	74,840
16	60,380	62,780	67,240	71,070	76,040	83,320	87,250	93,390	97,600	106,700	86,990	74,760
17	60,770	63,190	67,270	71,070	76,440	83,620	87,290	93,530	99,760	105,900	85,970	74,680
18	60,870	63,330	67,310	71,190	76,840	83,700	87,290	93,570	101,700	104,900	85,040	74,370
19	60,800	63,480	67,390	71,420	77,330	83,990	87,370	93,660	102,700	104,100	83,910	74,290
20	60,800	63,580	67,620	71,580	77,850	84,040	87,370	93,750	103,100	103,200	83,030	74,170
21	60,800	63,770	67,730	71,850	78,090	84,120	87,420	93,880	103,300	102,300	82,000	73,970
22	60,800	63,990	67,840	72,010	78,380	84,200	87,500	94,010	103,400	101,500	81,040	73,890
23	60,840	64,100	68,070	72,320	78,790	84,540	87,500	94,010	103,700	100,600	80,050	73,700
24	60,840	64,290	68,220	72,560	79,030	84,750	87,500	94,140	103,900	99,760	79,680	73,540
25	60,870	64,510	68,530	72,750	79,190	84,830	87,500	94,230	104,100	98,960	79,150	73,460
26	60,870	64,580	68,640	72,910	79,560	85,000	87,540	94,270	104,700	98,010	78,750	73,340
27	60,840	64,770	68,790	72,980	79,810	85,130	87,970	94,450	105,200	97,080	78,260	73,180
28	60,770	64,990	68,870	73,060	80,010	85,210	88,140	94,980	105,500	97,340	77,850	73,140
29	60,800	65,100	69,140	73,100	80,300	85,380	88,320	96,620	105,800	96,580	77,490	73,100
30	61,050	65,140	69,220	73,100	-----	85,510	88,490	96,940	106,000	95,780	77,210	73,100
31	61,050	-----	69,300	73,220	-----	85,670	-----	97,430	-----	95,020	76,800	-----
MAX	61,090	65,140	69,300	73,220	80,300	85,670	88,490	97,430	106,000	109,800	94,320	76,560
MIN	60,380	61,160	65,360	69,450	73,460	80,460	85,800	88,790	97,210	95,020	76,800	73,100
(†)	-80	+4,090	+4,160	+3,920	+7,080	+5,370	+2,820	+8,940	+8,570	-10,980	-18,220	-3,700
(‡)	2,738.19	2,739.31	2,740.41	2,741.42	2,743.18	2,744.47	2,745.13	2,747.17	2,749.06	2,746.63	2,742.32	2,741.39
CAL YR 1971	MAX 117,700	MIN 60,380	† +4,310									
WTR YR 1972	MAX 109,800	MIN 60,380	† +11,970									

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

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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 southwest of Trenton.

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

AVERAGE DISCHARGE.--26 years, 104 cfs (75,350 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.

REMARKS.--Records good. Natural flow affected by irrigation development above station, since July 6, 1950, by storage in Bonny Reservoir, since 1953 by storage in Swanson Lake (see sta 06829000), and since June 1957 by Meeker-Driftwood Canal which diverts directly from Swanson Lake for irrigation of about 16,400 acres. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

REVISIONS.--WSP 2119: Drainage area.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.7	1.2	.98	1.1	.82	1.0	1.2	1.4	1.7	79	1.1
2	1.7	1.7	1.3	.95	1.1	.79	1.1	.93	1.3	1.6	93	1.1
3	1.5	1.6	1.2	.90	1.1	1.0	1.0	.91	1.2	1.6	36	1.1
4	1.4	1.4	1.3	.85	1.1	1.1	1.2	.91	1.4	1.4	2.5	1.1
5	1.2	1.4	1.4	.85	1.1	1.0	1.1	.91	1.4	1.2	12	1.1
6	1.1	1.4	1.3	1.0	1.2	.96	1.1	1.1	1.4	1.2	20	1.1
7	1.1	1.3	1.2	1.1	1.2	.91	.95	1.1	1.2	1.3	19	.98
8	1.1	1.2	1.2	1.1	1.1	.86	.89	2.9	1.2	.95	17	1.0
9	1.1	1.1	1.3	1.1	1.1	.73	1.0	1.4	1.4	.79	17	.98
10	.92	1.1	1.2	1.1	1.0	.72	1.0	1.5	1.4	.96	17	1.1
11	.91	1.2	1.2	1.1	1.1	.72	1.2	3.7	1.4	17	16	1.1
12	.91	1.1	1.2	1.1	1.0	.72	1.1	1.6	1.4	75	16	1.1
13	.91	1.3	1.2	1.1	1.0	.63	1.0	1.4	1.5	112	16	1.1
14	.91	1.1	1.2	1.1	1.0	1.0	1.1	1.2	1.4	111	78	1.1
15	.91	1.2	1.1	1.1	1.0	.94	1.3	1.4	1.5	114	107	1.1
16	.82	1.6	.98	1.1	.91	.91	1.1	1.4	2.4	114	150	1.1
17	1.1	1.9	.98	1.1	.91	.85	1.1	1.4	2.1	114	174	1.2
18	1.6	1.3	.97	1.1	.91	.73	1.1	1.4	1.6	116	125	1.2
19	1.2	1.1	.96	1.1	1.0	.73	1.1	1.4	1.2	115	100	1.2
20	1.1	1.1	.95	1.1	1.0	.82	1.1	1.4	1.2	118	97	1.2
21	1.1	1.1	.93	1.1	1.0	.82	1.2	1.4	1.2	116	95	1.3
22	1.1	1.2	.91	1.1	.94	.72	1.2	1.5	1.2	115	94	1.3
23	1.2	1.1	.84	1.1	.91	.80	1.1	1.5	1.2	116	93	1.3
24	1.2	1.2	.76	1.1	1.0	.85	1.1	1.8	1.1	115	51	1.3
25	1.2	1.2	.81	1.1	1.0	.82	1.1	1.4	1.3	115	13	1.4
26	1.2	1.2	.82	1.0	.92	.82	1.6	1.4	1.7	115	4.1	1.4
27	1.2	1.3	.84	1.1	.91	.82	1.4	1.7	1.4	115	3.2	1.4
28	1.2	1.4	.86	1.1	.91	.82	.93	1.4	1.4	115	2.8	1.4
29	1.2	1.2	.87	1.1	.82	.91	.95	1.4	1.4	99	3.6	1.5
30	1.8	1.2	.96	1.1	-----	.95	1.1	1.4	4.4	81	3.1	1.5
31	1.7	-----	.89	1.1	-----	1.0	-----	1.4	-----	80	1.7	-----
TOTAL	36.89	38.9	32.83	32.93	29.34	26.27	33.22	45.46	45.3	2,200.70	1,556.0	35.86
MEAN	1.19	1.30	1.06	1.06	1.01	.85	1.11	1.47	1.51	71.0	50.2	1.20
MAX	1.8	1.9	1.4	1.1	1.2	1.1	1.6	3.7	4.4	118	174	1.5
MIN	.82	1.1	.76	.85	.82	.63	.89	.91	1.1	.79	1.7	.98
AC-FT	73	77	65	65	58	52	66	90	90	4,370	3,090	71
CAL YR 1971	TOTAL	6,438.61	MEAN	17.6	MAX	146	MIN	.72	AC-FT	12,770		
WTR YR 1972	TOTAL	4,113.70	MEAN	11.2	MAX	174	MIN	.63	AC-FT	8,160		</

KANSAS RIVER BASIN

06831500 Frenchman River near Imperial, Nebr.

LOCATION.--Lat 40°25'45", long 101°37'25", in SW1/4 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 1965, 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.--32 years, 70.8 cfs (51,290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 115 cfs May 11 (gage height, 1.75 ft); maximum gage height, 1.84 ft Feb. 3 (backwater from ice); minimum daily discharge, 34 cfs Aug. 22.

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 except those for winter period, which are fair. Natural flow affected by irrigation development and regulation at low flow from powerplants above station.

REVISIONS (WATER YEARS).--WSP 976: 1942(M). WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	62	76	63	70	48	46	74	53	48	38	54
2	49	60	65	67	42	50	61	68	47	51	45	50
3	48	58	67	58	50	50	47	57	55	47	56	51
4	43	58	61	57	55	48	46	57	60	46	54	52
5	46	59	67	55	60	48	64	57	60	46	46	52
6	49	58	70	57	60	52	60	57	65	48	43	52
7	53	53	68	59	67	44	57	57	57	45	45	43
8	41	47	53	61	63	51	59	62	61	47	44	51
9	50	43	54	65	66	40	54	57	57	44	43	59
10	37	55	63	67	64	54	66	60	52	44	42	49
11	55	56	70	66	64	49	60	81	59	51	42	49
12	46	58	62	64	64	49	61	82	54	35	42	52
13	57	59	62	60	59	52	62	82	62	42	44	47
14	41	57	65	55	67	49	59	73	55	39	41	38
15	50	57	70	50	66	50	59	67	55	35	38	48
16	43	59	65	60	66	45	53	65	48	38	35	43
17	42	61	60	67	63	51	60	61	60	36	43	35
18	65	61	60	68	63	49	54	63	62	47	36	49
19	60	64	60	67	67	51	48	54	57	46	36	37
20	53	66	64	64	60	50	60	52	62	48	35	40
21	53	66	68	67	56	49	50	54	66	40	41	53
22	54	67	68	73	55	49	63	62	66	43	34	38
23	54	67	63	69	49	50	53	53	65	49	44	39
24	47	66	58	67	49	50	52	55	50	48	50	35
25	49	66	63	65	49	50	52	48	49	47	54	52
26	60	67	61	55	46	50	57	54	50	37	54	40
27	59	65	60	50	50	55	68	55	61	46	50	54
28	56	68	55	53	52	54	74	54	51	50	36	41
29	58	66	57	56	53	50	62	50	35	43	44	39
30	46	74	59	58	-----	55	45	65	50	48	44	43
31	71	-----	59	67	-----	46	-----	55	-----	41	47	-----
TOTAL	1,587	1,823	1,953	1,910	1,695	1,538	1,712	1,891	1,684	1,375	1,346	1,385
MEAN	51.2	60.8	63.0	61.6	58.4	49.6	57.1	61.0	56.1	44.4	43.4	46.2
MAX	71	74	76	73	70	55	74	82	66	51	56	59
MIN	37	43	53	50	42	40	45	48	35	35	34	35
AC-FT	3,150	3,620	3,870	3,790	3,360	3,050	3,400	3,750	3,340	2,730	2,670	2,750

CAL YR 1971 TOTAL 21,892 MEAN 60.0 MAX 116 MIN 27 AC-FT 43,420
WTR YR 1972 TOTAL 19,899 MEAN 54.4 MAX 82 MIN 34 AC-FT 39,470

PEAK DISCHARGE (BASE, 150 CFS).--No peak above base.

KANSAS RIVER BASIN

139

06832000 Enders Reservoir near Enders, Nebr.

LOCATION.--Lat 40°25'05", long 101°30'55", in NE 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, 38,370 acre-ft July 6, 7 (elevation, 3,108.54 ft); minimum, 9,900 acre-ft Sept. 8 (elevation, 3,082.29 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.--WSP 2119: 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		

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12,220	15,850	19,560	23,280	26,620	29,320	31,190	33,490	36,170	38,310	26,410	10,760
2	12,330	15,960	19,680	23,380	26,670	29,410	31,260	33,510	36,260	38,310	25,970	10,450
3	12,420	16,090	19,800	23,460	26,790	29,470	31,320	33,550	36,470	38,310	25,530	10,290
4	12,520	16,240	19,920	23,550	26,930	29,510	31,380	33,620	36,580	38,310	25,140	10,150
5	12,600	16,330	20,060	23,690	27,040	29,580	31,480	33,710	36,630	38,340	24,760	10,020
6	12,720	16,420	20,220	23,830	27,120	29,670	31,560	33,750	36,740	38,370	24,310	9,950
7	12,830	16,540	20,310	23,960	27,260	29,700	31,640	33,820	36,800	38,360	23,810	9,910
8	12,930	16,640	20,400	24,080	27,330	29,790	31,660	33,910	36,830	38,290	23,330	9,910
9	13,040	16,730	20,540	24,190	27,460	29,820	31,760	34,020	36,900	38,160	22,840	10,020
10	13,150	16,850	20,640	24,300	27,540	29,910	31,860	34,240	36,920	38,020	22,330	10,110
11	13,270	16,970	20,800	24,440	27,670	29,990	31,940	34,550	37,000	37,750	21,900	10,240
12	13,350	17,080	20,920	24,530	27,800	30,040	32,010	34,700	37,060	37,370	21,430	10,420
13	13,470	17,210	21,010	24,600	27,910	30,090	32,040	34,830	37,070	36,980	20,900	10,560
14	13,560	17,300	21,150	24,680	28,000	30,170	32,070	34,950	37,130	36,500	20,300	10,690
15	13,680	17,450	21,280	24,810	28,120	30,220	32,170	35,050	37,200	35,990	19,680	10,840
16	13,770	17,570	21,400	24,930	28,230	30,280	32,260	35,170	37,230	35,360	19,080	10,960
17	13,960	17,740	21,510	25,070	28,300	30,320	32,300	35,260	37,430	34,770	18,470	11,040
18	14,090	17,840	21,640	25,180	28,410	30,400	32,320	35,330	37,570	34,140	17,860	11,180
19	14,220	17,980	21,730	25,290	28,510	30,460	32,370	35,370	37,580	33,520	17,270	11,310
20	14,340	18,130	21,850	25,370	28,630	30,490	32,460	35,430	37,610	32,980	16,640	11,420
21	14,460	18,240	21,990	25,520	28,690	30,560	32,530	35,490	37,640	32,440	16,050	11,540
22	14,580	18,370	22,120	25,640	28,780	30,610	32,610	35,560	37,740	31,830	15,430	11,640
23	14,680	18,500	22,240	25,750	28,890	30,680	32,680	35,580	37,840	31,210	14,750	11,750
24	14,810	18,640	22,330	25,840	28,940	30,750	32,690	35,650	37,920	30,630	14,310	11,840
25	14,900	18,800	22,480	25,910	28,990	30,820	32,730	35,670	37,950	30,050	13,810	11,980
26	15,030	18,900	22,560	25,950	29,050	30,870	32,900	35,700	38,030	29,530	13,310	12,060
27	15,130	19,070	22,680	26,060	29,150	30,900	33,020	35,830	38,220	28,990	12,850	12,210
28	15,260	19,160	22,810	26,180	29,220	30,950	33,135	35,890	38,280	28,440	12,360	12,310
29	15,410	19,280	22,940	26,310	29,290	31,030	33,250	35,930	38,330	27,950	11,910	12,390
30	15,550	19,410	23,040	26,390	-----	31,110	33,320	35,870	38,340	27,390	11,470	12,560
31	15,720	-----	23,160	26,530	-----	31,140	-----	36,110	-----	26,870	11,030	-----
MAX	15,720	19,410	23,160	26,530	29,290	31,140	33,320	36,110	38,340	38,370	26,410	12,560
MIN	12,220	15,850	19,560	23,280	26,620	29,320	31,190	33,490	36,170	26,870	11,030	9,910
(†)	+3,640	+3,690	+3,750	+3,370	+2,760	+1,850	+2,180	+2,790	+2,230	-11,470	-15,840	+1,530
(‡)	3,089.88	3,093.72	3,097.17	3,099.99	3,102.16	3,103.55	3,105.13	3,107.05	3,108.52	3,100.26	3,083.97	3,086.05
CAL YR 1971	MAX 40,800		MIN 8,950		† +130							
WTR YR 1972	MAX 38,370		MIN 9,910		† +480							

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

KANSAS RIVER BASIN

06832500 Frenchman River near Enders, Nebr.

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 1965, published as Frenchman Creek near Enders.

GAGE.--Water-stage recorder. Datum of gage is 3,026.22 ft above mean sea level (Bureau of Reclamation bench mark). Prior to June 14, 1948, at site 800 ft upstream at datum 6.03 ft higher. June 14, 1948, to Sept. 14, 1972, at present site at datum 5.00 ft higher.

AVERAGE DISCHARGE.--26 years, 70.0 cfs (50,720 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 397 cfs Aug. 24 (gage height, 8.80 ft, present datum); maximum gage height, 8.97 ft (present datum) July 18; no flow Oct. 8-11.

Period of record: Maximum discharge, 763 cfs Aug. 20, 1953 (gage height, 11.31 ft, present datum); maximum gage height, 11.65 ft (present datum) July 18, 1958 (backwater from downstream tributary); no flow Oct. 8-11, 1971.

REMARKS.--Records good. Flow regulated by Enders Reservoir. (See preceding page.)

REVISIONS (WATER YEARS).--WSP 2119: 1956, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.4	5.7	6.0	7.7	7.9	7.3	8.0	2.4	29	300	260
2	5.1	5.6	5.7	6.0	8.5	7.8	7.0	7.8	2.4	34	292	224
3	5.1	6.0	6.0	6.5	8.2	7.3	7.3	7.8	2.4	37	286	174
4	5.1	6.0	6.0	6.9	8.3	7.4	7.3	7.5	2.7	26	265	147
5	5.4	5.8	6.0	7.1	8.1	7.0	7.4	7.6	2.5	25	258	135
6	5.4	5.7	6.0	6.8	8.4	7.1	7.4	7.8	2.5	35	270	129
7	2.5	5.4	6.0	6.7	8.3	7.1	7.1	8.0	2.5	58	312	104
8	0	5.7	6.0	6.4	8.1	7.1	7.1	8.1	2.5	70	288	66
9	0	6.0	6.0	6.3	8.4	7.1	7.4	8.5	2.5	103	289	44
10	0	6.0	6.0	6.2	8.4	7.1	7.2	8.9	2.5	112	296	35
11	0	6.0	5.9	6.6	8.6	7.0	7.1	9.7	5.1	170	291	17
12	8.6	6.0	4.8	6.7	8.7	6.8	7.0	8.4	8.4	222	284	1.3
13	4.7	6.0	5.0	7.0	8.5	7.0	7.3	8.1	8.4	243	316	1.3
14	4.6	6.0	5.4	7.8	8.5	7.0	8.1	8.0	8.4	254	344	1.4
15	4.5	6.0	5.4	7.3	8.5	7.1	7.9	7.8	8.4	270	365	1.4
16	4.8	6.0	5.5	7.1	8.4	7.1	7.6	7.8	9.9	198	360	1.4
17	5.1	5.7	5.7	7.2	8.2	6.8	7.4	7.5	6.0	330	351	1.5
18	5.1	5.4	5.7	7.1	8.1	7.0	8.1	7.2	2.8	347	350	1.5
19	4.8	5.4	5.7	7.1	8.1	6.7	8.1	6.9	2.5	371	344	1.4
20	5.1	5.4	5.7	7.1	8.2	6.7	8.1	7.1	2.5	308	344	1.4
21	5.1	5.4	5.7	7.1	7.8	7.1	8.0	6.9	2.3	313	354	1.3
22	5.1	5.4	5.7	7.1	7.8	7.1	7.6	7.3	2.0	352	368	1.3
23	5.1	5.4	5.7	7.1	9.8	7.3	8.0	7.5	2.1	360	390	1.2
24	5.1	5.4	5.7	6.7	8.4	7.4	8.3	8.1	7.8	361	369	1.4
25	5.1	5.4	5.7	7.3	7.8	6.8	8.0	7.8	8.0	353	339	1.4
26	5.3	5.4	5.7	8.6	7.8	7.3	8.5	6.0	8.7	338	327	1.3
27	5.5	5.7	5.7	8.6	7.4	7.4	8.6	2.3	9.3	337	309	1.3
28	5.7	5.7	6.0	7.8	7.5	7.4	8.3	2.4	8.0	330	303	1.3
29	5.7	5.7	6.0	7.4	7.9	7.6	8.1	2.4	7.4	316	299	2.2
30	5.7	5.7	6.0	7.7	-----	7.3	8.0	2.4	15	304	292	1.7
31	5.4	-----	6.0	7.6	-----	7.1	-----	2.4	-----	308	274	-----
TOTAL	139.8	170.7	178.1	218.9	238.4	221.9	230.6	214.0	157.9	6,914	9,829	1,362.0
MEAN	4.51	5.69	5.75	7.06	8.22	7.16	7.69	6.90	5.26	223	317	45.4
MAX	8.6	6.0	6.0	8.6	9.8	7.9	8.6	9.7	15	371	390	260
MIN	0	5.4	4.8	6.0	7.4	6.7	7.0	2.3	2.0	25	258	1.2
AC-FT	277	339	353	434	473	440	457	424	313	13,710	19,500	2,700

CAL YR 1971 TOTAL 23,026.2 MEAN 63.1 MAX 405 MIN 0 AC-FT 45,670
WTR YR 1972 TOTAL 19,875.3 MEAN 54.3 MAX 390 MIN 0 AC-FT 39,420

KANSAS RIVER BASIN

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06834000 Frenchman River at Palisade, Nebr.

LOCATION.--Lat 40°20'50", long 101°07'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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.

DRAINAGE AREA.--1,110 sq mi, approximately, of which about 950 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to October 1896, June 1950 to current year. Published as Frenchman Creek at Palisade, June 1950 to September 1965.

GAGE.--Water-stage recorder. Datum of gage is 2,747.49 ft above mean sea level. October 1894 to October 1896, nonrecording gage at railroad bridge 0.4 mile downstream at different datum.

AVERAGE DISCHARGE.--24 years, 92.6 cfs (67,090 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,670 cfs June 18 (gage height, 7.94 ft); minimum daily, 17 cfs Apr. 24.

Period of record: Maximum discharge, 5,560 cfs June 17, 1956 (gage height, 8.79 ft); minimum daily, 13 cfs Mar. 12, 1951.

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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	38	37	36	35	38	27	22	31	31	304	301
2	37	38	36	34	38	38	27	22	30	37	342	296
3	34	37	37	30	36	38	27	22	30	47	355	271
4	27	38	37	22	25	38	26	22	30	54	300	228
5	25	38	37	24	26	37	26	21	41	50	283	206
6	24	37	38	28	28	38	25	22	34	46	278	187
7	23	38	38	31	32	39	23	23	30	53	279	178
8	23	37	36	33	35	38	19	24	21	59	311	158
9	25	36	27	34	35	37	20	27	20	62	295	131
10	24	35	32	36	30	40	20	30	25	85	295	110
11	23	35	38	36	32	40	21	38	27	92	299	95
12	23	35	44	31	37	40	20	50	27	123	297	89
13	24	35	43	26	45	34	20	49	26	184	290	74
14	27	34	41	25	50	27	21	46	23	207	309	66
15	27	34	37	30	51	27	21	44	21	226	332	60
16	28	36	36	36	47	28	19	42	24	248	347	57
17	61	37	35	43	43	28	19	41	105	292	347	52
18	41	38	40	47	42	28	19	40	370	308	341	50
19	38	37	40	50	42	27	18	39	73	321	339	48
20	37	37	37	45	41	27	18	38	46	341	339	46
21	37	36	38	42	40	27	18	37	39	320	338	45
22	37	36	38	44	40	27	19	37	35	306	343	42
23	36	36	36	43	39	27	18	36	33	331	354	41
24	37	36	35	41	39	28	17	35	31	340	400	39
25	36	36	35	38	41	28	18	35	31	340	378	38
26	36	37	35	34	40	27	22	34	34	331	348	37
27	36	36	33	28	39	27	27	35	36	320	340	36
28	36	38	31	22	39	27	26	35	38	319	324	36
29	36	37	32	25	38	27	23	33	34	314	318	32
30	39	37	34	28	-----	27	23	33	33	306	319	33
31	39	-----	35	31	-----	27	-----	32	-----	298	309	-----
TOTAL	1,011	1,095	1,128	1,053	1,105	986	647	1,044	1,378	6,391	10,053	3,082
MEAN	32.6	36.5	36.4	34.0	38.1	31.8	21.6	33.7	45.9	206	324	103
MAX	61	38	44	50	51	40	27	50	370	341	400	301
MIN	23	34	27	22	25	27	17	21	20	31	278	32
AC-FT	2,010	2,170	2,240	2,090	2,190	1,960	1,280	2,070	2,730	12,680	19,940	6,110

CAL YR 1971 TOTAL 30,458 MEAN 83.4 MAX 346 MIN 19 AC-FT 60,410
WTR YR 1972 TOTAL 28,973 MEAN 79.2 MAX 400 MIN 17 AC-FT 57,470

KANSAS RIVER BASIN

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.--23 years, 43.7 cfs (31,660 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 688 cfs June 17 (gage height, 8.60 ft); minimum daily, 17 cfs Aug. 18, 19.

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. Records of water temperatures and fluvial sediments for the water year 1972 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1730: 1952(M). WSP 1919: 1951(P), 1955. WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	43	42	35	40	48	41	48	37	39	25	25
2	35	46	41	37	35	47	40	46	36	36	25	27
3	32	44	43	23	25	45	40	44	35	44	29	31
4	31	41	42	25	27	46	40	41	36	52	50	31
5	31	38	41	28	27	46	41	40	46	48	38	30
6	30	38	41	32	30	46	40	39	40	42	31	28
7	29	38	41	35	30	47	40	40	37	52	28	28
8	29	37	39	38	32	46	40	41	34	37	26	28
9	29	37	23	40	32	45	39	34	33	43	25	29
10	28	37	30	41	30	44	40	37	32	38	23	29
11	28	37	36	41	33	45	41	59	31	34	23	29
12	29	37	38	42	38	46	40	90	31	32	21	29
13	29	38	38	42	41	46	38	119	31	32	21	28
14	29	37	38	28	44	46	42	99	31	31	19	28
15	29	37	40	26	50	46	41	75	31	29	19	28
16	30	38	34	32	53	46	41	58	33	30	19	28
17	31	41	34	38	52	44	41	52	98	31	18	27
18	52	44	42	40	52	43	41	48	167	31	17	26
19	43	44	41	47	49	43	40	44	84	32	17	25
20	44	42	39	51	47	43	39	42	75	30	18	26
21	45	43	35	51	49	43	41	40	59	30	19	26
22	37	43	38	47	49	43	41	36	44	28	20	27
23	34	43	43	45	49	43	39	37	38	28	20	26
24	34	41	43	46	47	42	36	37	36	30	23	26
25	33	40	43	35	48	46	35	36	35	28	25	27
26	33	39	44	18	47	47	38	35	35	26	27	26
27	34	39	44	19	47	45	51	36	52	25	25	26
28	34	42	24	25	46	42	61	36	61	27	23	25
29	33	43	25	30	47	41	60	37	65	31	23	26
30	36	43	30	33	-----	40	53	38	50	30	24	25
31	38	-----	33	36	-----	41	-----	39	-----	26	23	-----
TOTAL	1,038	1,210	1,165	1,106	1,196	1,381	1,260	1,503	1,453	1,052	744	820
MEAN	33.5	40.3	37.6	35.7	41.2	44.5	42.0	48.5	48.4	33.9	24.0	27.3
MAX	52	46	44	51	53	48	61	119	167	52	50	31
MIN	28	37	23	18	25	40	35	34	31	25	17	25
AC-FT	2,060	2,400	2,310	2,190	2,370	2,740	2,500	2,980	2,880	2,090	1,480	1,630

CAL YR 1971 TOTAL 15,290 MEAN 41.9 MAX 140 MIN 15 AC-FT 30,330
WTR YR 1972 TOTAL 13,928 MEAN 38.1 MAX 167 MIN 17 AC-FT 27,630

PEAK DISCHARGE (BASE, 150 CFS).--June 17 (2300) 688 cfs (8.60 ft).

KANSAS RIVER BASIN

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06835500 Frenchman River at Culbertson, Nebr.

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.

DRAINAGE AREA.--2,770 sq mi, approximately, of which about 1,470 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--June 1913 to September 1915 (gage heights and discharge measurements only), October 1930 to current year. Prior to October 1965, published as Frenchman Creek at Culbertson. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,583.44 ft above mean sea level. See WSP 1919 for history of changes prior to Nov. 2, 1950.

AVERAGE DISCHARGE.--42 years, 114 cfs (82,590 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,190 cfs June 18 (gage height, 8.91 ft); minimum daily, 16 cfs June 12, 14.

Period of record: Maximum discharge, 15,000 cfs (estimated) May 31, 1935 (gage height, 14.8 ft, from floodmarks, present site and datum); minimum daily, 7.0 cfs Aug. 13, 14, 26, 1936.

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 1972 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 1931, 1933, 1934(M), 1938(M). WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	88	95	85	80	98	33	38	34	59	24	30
2	84	85	97	94	75	99	32	37	31	62	30	27
3	83	99	92	80	65	103	31	44	26	55	334	45
4	80	97	94	50	70	99	31	45	22	55	117	36
5	77	91	92	45	75	97	30	35	20	61	75	37
6	74	91	95	50	80	99	30	33	22	50	66	33
7	69	90	98	65	85	101	32	44	19	46	58	32
8	69	86	80	75	90	102	32	47	18	52	51	34
9	68	89	65	85	90	97	31	49	17	42	55	41
10	68	93	80	95	85	95	33	52	17	39	42	47
11	67	91	86	95	85	97	34	95	17	34	34	49
12	67	90	88	85	95	99	33	132	16	29	34	52
13	66	90	89	70	103	100	31	121	17	31	35	53
14	67	87	99	50	112	99	30	126	16	31	32	87
15	68	87	92	55	114	101	31	107	17	28	31	129
16	67	94	83	70	124	96	31	85	32	27	32	101
17	73	94	78	95	134	90	29	71	32	37	29	94
18	139	95	85	100	123	93	28	65	1,220	37	27	93
19	107	95	99	105	119	99	28	50	250	34	25	86
20	96	95	92	107	117	90	28	44	166	37	22	93
21	93	92	88	107	113	88	28	39	116	36	24	90
22	92	87	93	113	111	92	27	36	94	33	26	84
23	90	92	92	115	109	97	26	36	73	27	24	85
24	88	94	93	113	108	99	26	34	61	26	29	84
25	86	89	95	84	111	93	28	30	57	28	51	80
26	84	92	96	70	108	97	35	33	80	26	35	79
27	82	92	87	46	100	91	37	30	114	22	29	80
28	85	90	80	52	101	62	35	33	132	26	25	83
29	88	94	91	60	102	47	36	33	85	23	27	82
30	88	90	94	67	-----	41	39	32	75	27	32	77
31	90	-----	84	74	-----	36	-----	33	-----	26	37	-----
TOTAL	2,538	2,739	2,772	2,457	2,884	2,797	935	1,689	2,896	1,146	1,492	2,023
MEAN	81.9	91.3	89.4	79.3	99.4	90.2	31.2	54.5	96.5	37.0	48.1	67.4
MAX	139	99	99	115	134	103	39	132	1,220	62	334	129
MIN	66	85	65	45	65	36	26	30	16	22	22	27
AC-FT	5,030	5,430	5,500	4,870	5,720	5,550	1,850	3,350	5,740	2,270	2,960	4,010

CAL YR 1971 TOTAL 25,878.8 MEAN 70.9 MAX 160 MIN 7.5 AC-FT 51,330
WTR YR 1972 TOTAL 26,368.0 MEAN 72.0 MAX 1,220 MIN 16 AC-FT 52,300

KANSAS RIVER BASIN

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.--26 years, 6.56 cfs (4,750 acre-ft per year); median of yearly mean discharges, 5.8 cfs (4,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 618 cfs June 19 (gage height, 6.35 ft); minimum daily, 1.0 cfs Apr. 19.

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.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.8	2.9	2.3	2.5	2.7	7.6	10	8.4	11	3.5	7.5
2	2.5	3.8	2.7	2.8	1.7	2.6	12	14	5.6	14	7.7	11
3	2.5	3.6	2.6	2.2	1.7	2.5	17	16	6.1	8.2	15	15
4	2.3	3.6	2.6	2.4	1.8	2.3	16	14	6.0	4.7	9.6	14
5	2.3	3.6	2.7	2.7	1.9	2.1	10	6.5	5.3	3.4	9.2	19
6	2.3	3.4	2.5	2.8	2.1	2.3	4.3	6.7	3.2	7.3	8.0	18
7	2.3	3.4	2.4	2.9	2.1	2.0	2.0	8.6	2.3	13	7.6	19
8	2.2	3.2	1.8	3.0	2.4	2.0	2.0	6.0	2.1	8.2	7.7	19
9	2.8	3.0	2.6	3.0	2.3	2.0	3.8	7.5	2.7	9.8	8.8	19
10	2.9	3.2	2.1	2.9	2.3	2.3	3.9	5.6	2.1	8.8	8.0	17
11	2.7	3.2	2.2	2.6	2.4	2.2	2.3	7.1	2.3	5.3	4.7	13
12	2.6	3.2	2.3	2.9	2.6	2.1	2.4	64	1.7	3.8	7.6	14
13	2.6	3.2	2.4	2.0	2.6	2.1	3.9	21	2.0	4.0	8.5	8.9
14	2.4	3.1	2.3	2.4	3.0	2.0	2.0	8.6	2.2	6.3	8.1	14
15	2.1	3.2	2.3	1.9	2.7	2.0	3.9	7.7	3.8	7.8	8.3	30
16	2.4	3.9	2.3	2.1	2.4	2.0	1.3	5.2	47	5.9	5.7	19
17	2.9	3.7	2.2	2.2	2.2	2.0	1.5	4.9	92	5.7	4.9	4.7
18	4.3	3.4	2.2	2.3	2.1	2.0	2.1	4.1	308	12	5.1	3.3
19	1.6	3.2	2.3	2.1	2.1	1.9	1.0	3.4	277	6.2	5.9	3.3
20	6.4	3.1	2.6	1.9	2.1	1.9	1.3	3.5	20	8.1	7.8	2.0
21	4.4	3.0	3.0	1.9	2.1	2.0	1.3	3.7	10	9.5	11	2.1
22	4.1	3.0	2.0	1.9	2.0	2.1	1.7	3.5	7.7	7.9	10	2.8
23	4.1	2.9	2.1	1.9	2.3	2.0	1.8	4.3	6.2	5.4	9.8	3.1
24	3.3	2.8	2.0	1.8	2.6	2.3	2.0	8.7	7.5	7.2	8.8	3.3
25	3.3	2.7	2.1	1.4	2.3	2.2	2.2	7.7	5.6	5.6	11	3.6
26	3.2	2.7	2.1	1.7	2.1	2.1	4.5	7.4	8.8	5.8	7.1	3.7
27	3.0	2.9	2.0	1.7	2.0	2.0	7.8	6.4	15	3.2	19	3.4
28	3.2	3.9	2.3	2.0	2.1	2.0	5.8	5.0	16	5.0	17	3.5
29	3.5	3.2	2.5	2.7	2.4	2.0	9.4	8.9	17	7.3	19	3.5
30	3.9	2.9	2.3	2.7	-----	2.2	6.8	11	12	6.8	14	3.5
31	3.8	-----	2.4	2.4	-----	4.0	-----	12	-----	3.4	8.3	-----
TOTAL	94.0	97.8	72.8	71.5	64.9	67.9	143.6	303.0	905.6	220.6	286.7	303.2
MEAN	3.03	3.26	2.35	2.31	2.24	2.19	4.79	9.77	30.2	7.12	9.25	10.1
MAX	6.4	3.9	3.0	3.0	3.0	4.0	17	64	308	14	19	30
MIN	1.6	2.7	1.8	1.4	1.7	1.9	1.0	3.4	1.7	3.2	3.5	2.0
AC-FT	186	194	144	142	129	135	285	601	1,800	438	569	601

CAL YR 1971 TOTAL 2,004.9 MEAN 5.49 MAX 101 MIN 1.5 AC-FT 3,980

WTR YR 1972 TOTAL 2,631.6 MEAN 7.19 MAX 308 MIN 1.0 AC-FT 5,220

PEAK DISCHARGE (BASE, 150 CFS).--June 17 (0130) 221 cfs (4.38 ft); June 19 (0330) 618 cfs (about 6.35 ft).

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.--26 years, 10.7 cfs (7,750 acre-ft per year); median of yearly mean discharges, 7.8 cfs (5,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,660 cfs June 18 (gage height, 18.20 ft); minimum daily, 0.33 cfs Apr. 16, 19.

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 in 1946-50, 1952-56.

REMARKS.--Records good. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	5.9	5.3	4.5	5.0	5.6	4.2	5.4	7.2	11	18	17
2	3.7	5.3	5.3	4.5	5.2	5.4	4.4	4.8	5.3	7.7	16	17
3	2.7	4.8	5.3	4.5	4.8	6.0	4.7	4.7	5.0	5.9	179	15
4	2.4	4.8	5.3	4.5	4.8	6.0	4.4	4.1	5.9	5.2	36	13
5	2.4	5.0	5.3	4.6	4.8	5.4	4.2	4.3	13	4.5	16	16
6	2.7	4.5	5.7	4.8	4.8	5.5	4.2	5.3	15	3.6	15	16
7	3.1	4.6	6.2	4.8	5.1	6.4	4.2	5.3	18	28	14	18
8	3.6	4.9	5.8	5.0	5.2	5.5	4.2	5.1	8.5	481	12	14
9	4.7	4.5	5.6	5.0	5.0	5.3	4.2	5.0	7.4	57	13	11
10	5.4	4.5	5.3	5.0	5.0	5.3	4.2	5.7	15	18	13	11
11	4.6	4.5	5.0	4.8	4.8	6.1	4.2	7.1	14	11	17	12
12	4.2	4.5	5.0	5.3	5.0	5.9	4.2	7.9	9.7	19	17	12
13	4.1	4.5	5.0	5.4	5.0	5.9	4.1	6.6	6.5	16	12	12
14	4.3	4.5	5.0	4.8	5.3	5.6	3.9	5.3	6.3	12	13	13
15	4.5	4.5	5.0	4.8	5.5	6.1	.99	5.3	6.6	16	13	13
16	4.7	5.7	5.0	5.0	5.3	5.6	.33	14	6.1	14	11	8.3
17	4.7	6.2	4.8	5.1	5.3	5.6	.90	11	46	15	13	6.6
18	55	6.1	4.5	5.5	5.1	5.6	.58	9.4	462	16	12	5.9
19	7.9	5.4	5.1	5.6	4.6	4.9	.33	7.2	36	16	12	6.3
20	6.2	5.3	5.0	5.4	4.7	5.3	1.4	7.7	8.1	17	14	8.2
21	5.0	5.1	4.8	5.3	4.9	5.3	3.1	8.7	5.3	14	15	7.1
22	4.8	4.8	4.6	5.3	4.4	5.0	3.9	6.1	4.3	13	17	6.3
23	4.2	4.9	4.5	5.3	4.5	4.6	4.1	3.6	4.9	19	17	5.7
24	4.5	5.0	4.5	5.3	5.3	4.9	3.9	8.2	5.7	258	34	5.9
25	5.0	5.0	4.5	5.4	6.4	4.8	4.8	9.6	7.9	59	47	6.8
26	5.0	5.0	4.5	5.0	5.6	4.6	5.8	5.6	35	27	25	5.6
27	5.1	4.8	4.5	5.0	5.0	4.8	5.9	5.6	55	20	10	5.8
28	5.6	5.0	4.5	5.0	5.0	4.8	5.9	6.2	13	50	10	4.9
29	5.6	5.0	4.5	5.0	5.3	4.9	5.7	6.5	108	169	11	5.1
30	6.4	5.0	4.5	5.0	-----	4.5	5.6	6.9	26	32	12	5.7
31	6.2	-----	4.5	5.0	-----	4.2	-----	8.6	-----	20	15	-----
TOTAL	195.1	149.6	154.4	155.5	146.7	165.4	112.53	206.8	966.7	1,454.9	679	374.2
MEAN	6.29	4.99	4.98	5.02	5.06	5.34	3.75	6.67	32.2	46.9	21.9	10.1
MAX	55	6.2	6.2	5.6	6.4	6.4	5.9	14	462	481	179	18
MIN	2.4	4.5	4.5	4.5	4.4	4.2	.33	3.6	4.3	3.6	10	4.9
AC-FT	387	297	306	308	291	328	223	410	1,920	2,890	1,350	603

CAL YR 1971 TOTAL 3,047.30 MEAN 8.35 MAX 241 MIN 2.4 AC-FT 6,040
WTR YR 1972 TOTAL 4,690.83 MEAN 12.8 MAX 481 MIN .33 AC-FT 9,300

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
6-18	0315	18.20	1,660	7-29	0215	13.57	386
7- 8	1445	15.22	707	8- 3	0915	13.41	362
7-24	0700	13.39	358				

KANSAS RIVER BASIN

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.--19 years, 212 cfs (153,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,900 cfs June 18 (gage height, 6.80 ft); minimum daily, 47 cfs June 9.

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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	124	150	140	100	127	85	94	64	139	144	105
2	101	117	144	135	85	122	80	92	63	147	148	115
3	102	117	147	130	70	128	97	110	57	149	675	113
4	100	113	147	90	70	117	92	112	55	127	299	121
5	95	117	144	62	75	120	87	107	55	122	155	112
6	89	115	141	65	90	125	73	100	54	112	125	103
7	90	111	146	75	85	122	67	85	57	121	120	94
8	91	112	130	90	90	120	66	90	50	496	104	91
9	91	110	115	110	85	117	67	102	47	257	115	89
10	89	111	120	120	80	117	68	117	68	112	109	97
11	89	110	120	115	80	125	65	165	79	92	94	89
12	89	111	120	110	90	125	63	332	52	89	89	97
13	89	112	120	110	95	128	65	294	51	118	86	95
14	91	107	125	90	110	125	68	228	51	135	81	96
15	94	110	125	70	120	122	70	200	51	150	116	173
16	98	147	125	75	140	117	70	168	61	165	144	185
17	98	153	125	85	155	112	62	144	189	175	168	131
18	196	152	125	100	175	112	60	120	1,360	191	192	119
19	188	143	130	110	180	120	60	97	1,040	191	163	104
20	152	136	135	120	160	120	62	80	232	172	151	111
21	125	135	135	115	140	115	65	78	144	186	156	111
22	118	139	140	110	130	110	61	69	112	185	167	106
23	112	138	145	110	130	110	58	64	95	184	171	105
24	110	138	150	105	133	117	56	70	84	425	199	101
25	113	138	156	100	133	115	57	82	69	246	223	102
26	113	138	157	80	135	117	79	65	188	196	168	102
27	107	135	140	60	135	122	116	60	217	168	109	103
28	99	147	130	60	133	113	103	59	343	174	110	98
29	107	144	140	70	131	92	97	67	265	357	104	102
30	124	147	140	85	-----	78	97	71	187	172	106	105
31	125	-----	145	97	-----	82	-----	69	-----	141	100	-----
TOTAL	3,389	3,827	4,212	2,994	3,335	3,592	2,216	3,591	5,440	5,694	4,891	3,275
MEAN	109	128	136	96.6	115	116	73.9	116	181	184	158	109
MAX	196	153	157	140	180	128	116	332	1,360	496	675	185
MIN	89	107	115	60	70	78	56	59	47	89	81	89
AC-FT	6,720	7,590	8,350	5,940	6,610	7,120	4,400	7,120	10,790	11,290	9,700	6,500

CAL YR 1971 TOTAL 48,075 MEAN 132 MAX 616 MIN 46 AC-FT 95,360
WTR YR 1972 TOTAL 46,456 MEAN 127 MAX 1,360 MIN 47 AC-FT 92,150

KANSAS RIVER BASIN

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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.--12 years, 29.8 cfs (21,590 acre-ft per year).

EXTREMES.--Current year: Maximum discharge observed, 4,020 cfs June 16 (gage height, 13.27 ft), from rating curve extended above 1,000 cfs on basis of slope-conveyance study; minimum daily, 10 cfs Jan. 28.

Period of record: Maximum discharge, 4,020 cfs June 16, 1972 (gage height, 13.27 ft, from rating curve extended above 1,000 cfs on basis of slope-conveyance study; minimum daily, 4.0 cfs July 4, 5, 1963.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by pump irrigation development above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	30	31	22	18	38	31	51	27	27	24	15
2	18	36	31	18	15	38	31	46	26	26	20	16
3	26	38	31	12	12	36	31	41	23	25	21	17
4	26	36	31	15	12	36	32	38	27	26	24	18
5	24	34	30	23	14	34	30	35	23	24	28	20
6	23	32	30	23	17	35	29	34	23	24	38	21
7	21	30	29	23	17	34	29	33	23	30	37	18
8	20	29	25	22	20	34	28	31	23	33	31	17
9	19	29	18	22	19	34	29	31	21	28	26	17
10	19	29	20	22	17	34	29	33	21	25	21	17
11	19	29	20	22	17	32	29	77	21	23	18	17
12	19	29	22	21	19	34	29	246	21	21	16	17
13	19	29	22	21	22	34	30	123	22	20	16	17
14	19	29	24	13	28	33	31	118	22	19	15	17
15	19	29	23	11	30	33	32	100	22	18	13	16
16	19	31	21	15	32	33	31	66	355	17	13	16
17	19	33	19	20	32	34	30	49	103	17	12	16
18	24	36	24	28	34	33	31	41	383	16	12	16
19	29	38	25	30	35	33	31	36	296	15	13	14
20	40	38	23	27	40	33	31	33	74	15	12	15
21	51	37	22	24	36	33	31	29	44	15	12	15
22	44	38	22	24	36	31	28	26	36	14	11	15
23	38	37	24	22	36	31	27	24	32	15	11	15
24	32	36	25	20	37	34	28	23	29	15	13	15
25	26	35	25	20	36	34	27	23	27	15	15	13
26	27	32	26	18	36	36	29	22	25	15	16	13
27	28	31	20	12	36	38	33	22	25	14	15	13
28	27	31	18	10	37	36	42	21	34	14	15	13
29	27	31	20	12	38	34	59	20	29	14	15	14
30	27	31	20	14	-----	34	62	24	31	16	14	14
31	27	-----	22	16	-----	32	-----	27	-----	20	14	-----
TOTAL	794	983	743	602	778	1,058	970	1,523	1,868	616	561	477
MEAN	25.6	32.8	24.0	19.4	26.8	34.1	32.3	49.1	62.3	19.9	18.1	15.9
MAX	51	38	31	30	40	38	62	246	383	33	38	21
MIN	18	29	18	10	12	31	27	20	21	14	11	13
AC-FT	1,570	1,950	1,470	1,190	1,540	2,100	1,920	3,020	3,710	1,220	1,110	946

CAL YR 1971 TOTAL 10,611.5 MEAN 29.1 MAX 100 MIN 9.7 AC-FT 21,050
WTR YR 1972 TOTAL 10,973.0 MEAN 30.0 MAX 383 MIN 10 AC-FT 21,760

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-12	0330	4.12	492	6-17	2315	7.50	1,470
6-16	0830	13.27	4,020	6-19	1100	3.56	353

a Observed.

KANSAS RIVER BASIN

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, 39,510 acre-ft June 19, 20 (elevation, 2,582.85 ft); minimum, 27,740 acre-ft Oct. 1 (elevation, 2,574.95 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.--WSP 2119: 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27,750	28,880	30,350	31,450	32,490	33,580	34,680	35,410	36,920	38,260	34,160	29,420
2	27,800	28,920	30,400	31,490	32,510	33,620	34,710	35,430	36,920	38,300	34,020	29,350
3	27,830	28,950	30,440	31,560	32,510	33,700	34,720	35,430	37,000	38,300	33,900	29,300
4	27,850	29,000	30,500	31,550	32,540	33,730	34,740	35,430	37,080	38,260	33,760	29,240
5	27,880	29,040	30,540	31,590	32,550	33,740	34,770	35,460	37,080	38,230	33,670	29,160
6	27,890	29,060	30,580	31,620	32,570	33,840	34,780	35,490	37,000	38,230	33,580	29,130
7	27,930	29,100	30,640	31,650	32,600	33,850	34,810	35,490	36,920	38,230	33,480	29,090
8	27,930	29,140	30,640	31,690	32,610	33,850	34,810	35,490	36,840	38,230	33,390	29,050
9	27,930	29,160	30,670	31,720	32,630	33,900	34,830	35,540	36,740	38,230	33,280	29,020
10	27,930	29,200	30,730	31,780	32,660	33,940	34,860	35,600	36,820	38,150	33,160	29,000
11	27,960	29,240	30,740	31,820	32,720	33,990	34,890	35,920	36,760	38,030	33,040	28,970
12	28,000	29,280	30,770	31,830	32,740	34,050	34,950	36,280	36,710	37,840	32,880	28,970
13	28,000	29,360	30,810	31,860	32,770	34,050	34,920	36,500	36,660	37,550	32,690	28,980
14	28,000	29,420	30,850	31,860	32,800	34,140	34,940	36,630	36,580	37,210	32,440	28,980
15	28,000	29,460	30,910	31,880	32,830	34,160	34,970	36,790	36,580	36,940	32,170	29,000
16	28,040	29,530	30,940	31,920	32,910	34,220	34,970	36,890	37,370	36,660	31,830	29,020
17	28,050	29,610	30,950	31,960	32,940	34,220	34,980	36,940	37,740	36,400	31,610	29,020
18	28,270	29,620	30,970	32,010	32,980	34,250	34,980	36,950	39,260	36,170	31,390	29,020
19	28,300	29,680	31,000	32,050	33,050	34,310	34,980	36,970	39,510	35,950	31,270	29,050
20	28,340	29,750	31,040	32,100	33,110	34,320	35,000	36,980	39,410	35,800	31,080	29,050
21	28,440	29,770	31,050	32,160	33,160	34,340	35,050	36,980	39,190	35,610	30,850	29,050
22	28,500	29,860	31,110	32,200	33,190	34,360	35,060	36,980	39,030	35,380	30,660	29,020
23	28,520	29,900	31,140	32,260	33,260	34,400	35,060	37,000	38,790	35,250	30,430	29,020
24	28,560	29,950	31,150	32,290	33,320	34,480	35,060	37,000	38,660	35,140	30,340	28,980
25	28,620	30,020	31,220	32,290	33,330	34,480	35,080	36,970	38,430	35,020	30,180	28,880
26	28,670	30,080	31,250	32,320	33,350	34,540	35,110	36,970	38,360	34,890	30,020	28,790
27	28,670	30,120	31,290	32,350	33,420	34,560	35,160	36,970	38,380	34,710	29,880	28,700
28	28,710	30,200	31,310	32,390	33,520	34,580	35,190	36,950	38,350	34,580	29,760	28,620
29	28,750	30,240	31,410	32,440	33,580	34,600	35,220	36,940	38,310	34,450	29,660	28,590
30	28,810	30,320	31,410	32,450	-----	34,650	35,380	36,920	38,280	34,340	29,570	28,560
31	28,830	-----	31,420	32,450	-----	34,660	-----	36,920	-----	34,250	29,440	-----
MAX	28,830	30,320	31,420	32,450	33,580	34,660	35,380	37,000	39,510	38,300	34,160	29,420
MIN	27,750	28,880	30,350	31,450	32,490	33,580	34,680	35,410	36,580	34,250	29,440	28,560
(†)	+1,080	+1,490	+1,100	+1,030	+1,130	+1,080	+720	+1,540	+1,360	-4,030	-4,810	-880
(‡)	2,575.78	2,576.88	2,577.66	2,578.37	2,579.13	2,579.84	2,580.30	2,581.27	2,582.11	2,579.57	2,576.24	-

CAL YR 1971 MAX 38,740 MIN 27,270 † -270

WTR YR 1972 MAX 39,510 MIN 27,750 † +810

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

a Contents interpolated.

KANSAS RIVER BASIN

149

06837500 Red Willow Creek near McCook, Nebr.

LOCATION.--Lat 40°20'50", long 100°38'35", in SW¼ 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.--19 years, 24.8 cfs (17,970 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 141 cfs June 13, 17 (gage height, 10.18 ft); minimum daily, 3.3 cfs Oct. 16, June 3.

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 (discharge, 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.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.0	4.4	4.9	4.4	4.5	4.2	17	4.7	22	97	55
2	3.9	4.0	4.4	4.9	4.4	4.6	4.4	16	4.4	31	96	54
3	4.0	4.0	4.4	4.6	4.7	4.6	4.4	16	3.3	27	96	54
4	4.1	4.0	4.4	4.4	4.7	4.5	4.7	16	3.6	20	84	53
5	3.9	4.0	4.4	4.5	5.0	4.6	4.4	16	8.4	20	74	52
6	3.9	4.0	4.4	5.9	5.5	4.3	4.4	16	33	21	75	49
7	3.8	4.0	4.7	6.3	4.8	4.3	4.2	16	33	21	74	45
8	3.7	4.0	4.7	6.0	4.4	4.3	4.2	16	34	21	79	38
9	4.0	4.0	4.7	6.0	4.4	4.8	4.2	17	34	23	83	37
10	4.0	4.0	4.9	6.3	4.4	4.4	4.2	5.2	34	37	89	39
11	3.7	4.0	4.9	6.3	4.4	5.1	4.7	5.0	35	58	97	37
12	3.8	4.0	4.7	6.3	4.4	5.0	4.7	4.4	35	102	97	21
13	3.9	4.2	4.7	6.2	4.4	5.3	4.7	4.4	35	131	98	6.2
14	3.9	4.2	4.7	5.3	4.4	4.8	4.9	4.4	36	140	124	6.1
15	3.9	4.2	4.7	5.4	4.3	4.4	4.7	4.4	42	139	139	6.1
16	3.3	5.2	4.7	5.9	4.4	4.5	4.6	4.4	45	140	140	5.5
17	3.6	5.2	4.7	6.0	4.4	4.5	4.4	4.4	47	127	134	5.5
18	5.6	4.9	4.7	4.8	4.4	4.9	4.7	4.4	49	114	105	5.6
19	3.6	4.9	4.7	3.7	4.4	4.5	4.9	4.4	59	110	94	4.2
20	3.7	4.9	4.7	3.5	4.7	4.4	5.1	4.4	101	97	94	5.4
21	3.7	4.7	4.7	3.5	4.9	4.4	4.9	4.4	102	92	106	5.2
22	3.9	4.7	4.4	5.0	4.4	5.1	4.4	4.4	104	88	111	4.3
23	4.6	4.7	5.1	5.2	4.4	6.6	4.4	4.4	104	87	112	5.0
24	4.7	4.7	4.8	5.2	4.6	5.1	8.2	4.5	104	84	111	33
25	3.8	4.7	5.2	5.2	4.8	4.4	34	4.3	104	76	100	64
26	4.9	4.4	4.8	4.2	4.4	4.2	29	4.3	78	77	92	54
27	4.0	4.4	5.0	4.2	4.1	4.0	21	4.2	46	78	91	55
28	3.7	4.2	5.2	4.2	4.4	4.0	19	4.6	39	78	81	57
29	3.8	4.2	5.2	4.4	4.5	4.0	17	5.3	33	74	68	28
30	4.1	4.4	5.2	4.4	-----	4.2	17	4.2	25	78	67	6.5
31	3.9	-----	5.2	4.4	-----	4.2	-----	4.6	-----	88	61	-----
TOTAL	123.9	130.8	147.4	157.1	131.4	142.5	249.6	245.0	1,415.4	2,301	2,969	890.6
MEAN	4.00	4.36	4.75	5.07	4.53	4.60	8.32	7.90	47.2	74.2	95.8	29.7
MAX	5.6	5.2	5.2	6.3	5.5	6.6	34	17	104	140	140	64
MIN	3.3	4.0	4.4	3.5	4.1	4.0	4.2	4.2	3.3	20	61	4.2
AC-FT	246	259	292	312	261	283	495	486	2,810	4,560	5,890	1,770

CAL YR 1971 TOTAL 8,787.3 MEAN 24.1 MAX 192 MIN 3.3 AC-FT 17,430
WTR YR 1972 TOTAL 8,903.7 MEAN 24.3 MAX 140 MIN 3.3 AC-FT 17,660

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.--33 years, 33.4 cfs (24,200 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.

REVISIONS (WATER YEARS).--WSP 1510: 1945(M). WSP 2119: Drainage area.

CAL YR 1971	TOTAL	5,592.43	MEAN	15.3	MAX	211	MIN	.33	AC-FT	11,090
WTR YR 1972	TOTAL	5,502.30	MEAN	15.0	MAX	94	MIN	2.0	AC-FT	10,910

KANSAS RIVER BASIN

151

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.--22 years, 71.0 cfs (51,440 acre-ft per year); median of yearly mean discharges, 60 cfs (43,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,820 cfs June 3 (gage height, 11.69 ft); minimum daily, 20 cfs Aug. 23.

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 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.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	58	59	50	42	72	61	66	55	49	80	33
2	63	58	59	45	40	69	62	63	53	47	45	38
3	69	56	58	40	38	67	61	61	187	49	144	40
4	54	55	58	37	40	66	61	60	290	52	78	41
5	47	54	58	40	44	66	61	60	56	49	55	40
6	45	53	57	45	46	65	62	61	51	47	47	40
7	45	52	57	50	47	65	61	61	48	55	42	40
8	44	53	58	55	50	64	61	61	46	46	37	38
9	44	53	54	60	45	63	60	61	44	42	34	38
10	45	54	56	64	42	63	61	63	43	40	33	38
11	46	55	57	66	42	62	61	104	55	39	35	37
12	46	55	56	66	50	63	61	256	61	37	33	38
13	46	56	58	62	60	65	60	182	57	35	34	37
14	47	56	54	45	66	66	59	120	51	34	32	37
15	47	56	56	40	68	65	59	92	49	31	31	36
16	47	63	56	43	72	65	58	83	50	29	32	36
17	48	70	54	47	72	64	57	74	53	28	30	35
18	148	70	54	52	72	63	56	68	106	29	25	34
19	116	69	54	57	70	63	55	63	89	28	24	33
20	71	64	58	62	69	63	56	61	56	29	24	35
21	60	62	59	66	69	64	57	59	49	32	24	36
22	56	61	55	68	68	62	58	57	46	33	22	38
23	54	61	55	66	68	62	57	57	46	31	20	38
24	53	60	56	66	67	64	54	56	46	29	29	38
25	51	59	57	60	67	68	53	55	46	28	35	38
26	50	58	59	50	67	67	58	54	49	32	36	39
27	51	58	56	40	67	65	65	55	53	30	33	40
28	51	60	55	37	68	63	81	55	62	41	32	40
29	51	61	55	37	71	62	81	56	63	46	31	41
30	54	61	58	40	-----	62	74	57	56	36	31	41
31	56	-----	55	42	-----	62	-----	56	-----	31	31	-----
TOTAL	1,745	1,761	1,751	1,598	1,687	2,000	1,831	2,337	2,016	1,164	1,219	1,133
MEAN	56.3	58.7	56.5	51.5	58.2	64.5	61.0	75.4	67.2	37.5	39.3	37.8
MAX	148	70	59	68	72	72	81	256	290	55	144	41
MIN	40	52	54	37	38	62	53	54	43	28	20	33
AC-FT	3,460	3,490	3,470	3,170	3,350	3,970	3,630	4,640	4,000	2,310	2,420	2,250

CAL YR 1971 TOTAL 21,148 MEAN 57.9 MAX 201 MIN 23 AC-FT 41,950

WTR YR 1972 TOTAL 20,242 MEAN 55.3 MAX 290 MIN 20 AC-FT 40,150

PEAK DISCHARGE (BASE, 1,200 CFS).--June 3 (2315) 1,820 cfs (11.69 ft).

KANSAS RIVER BASIN

06841500 Mitchell Creek above Harry Strunk Lake, Nebr.

LOCATION.--Lat 40°28'20", long 100°15'25", in NW¼SE¼ 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.--22 years, 2.44 cfs (1,770 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 240 cfs June 4 (gage height, 6.18 ft); no flow most of year.
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 time in each year.
Flood of June 21, 1948, reached a stage of about 28 ft, from floodmarks (discharge not determined).

REMARKS.--Records poor.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									0		0	
2									0		0	
3									0		.60	
4									63		6.4	
5									1.0		.57	
6												
7									.02		.01	
8									0		0	
9									0		0	
10									0		0	
11									0		0	
12									0		0	
13									0		0	
14									0		0	
15									0		0	
16									0		0	
17									0		0	
18									8.7		0	
19									1.6		0	
20									.02		0	
21									0		0	
22									0		0	
23									0		0	
24									0		0	
25									0		0	
26									0		0	
27									.01		0	
28									0		0	
29									0		0	
30									0		0	
31											0	
TOTAL	0	0	0	0	0	0	0	0	74.35	0	7.58	0
MEAN	0	0	0	0	0	0	0	0	2.48	0	.24	0
MAX	0	0	0	0	0	0	0	0	63	0	6.4	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	147	0	15	0

CAL YR 1971 TOTAL 159.87 MEAN .44 MAX 51 MIN 0 AC-FT 317
WTR YR 1972 TOTAL 81.93 MEAN .22 MAX 63 MIN 0 AC-FT 163

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

06842000 Harry Strunk Lake near Cambridge, Nebr.

LOCATION.--Lat 40°22'40", long 100°13'00", in NE $\frac{1}{4}$ 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, 39,140 acre-ft May 13 (elevation, 2,367.16 ft); minimum, 17,660 acre-ft Aug. 29, 30 (elevation, 2,352.40 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.--WSP 2119: Drainage area.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

2,350	15,250	2,365	35,140
2,355	20,550	2,370	44,890
2,360	27,100		

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20,160	23,200	26,770	29,580	32,480	35,470	38,080	38,550	37,540	38,290	26,470	17,870
2	20,240	23,320	26,820	29,720	32,580	35,580	38,140	38,510	37,590	38,230	26,290	17,920
3	20,340	23,400	26,870	29,830	32,670	35,760	38,160	38,470	37,860	38,250	26,250	17,990
4	20,430	23,500	26,930	29,840	32,740	35,830	38,290	38,460	38,360	38,230	26,290	18,080
5	20,510	23,580	27,010	29,890	32,780	35,890	38,340	38,570	38,400	38,210	26,290	18,160
6	20,610	23,710	27,100	30,050	32,850	36,100	38,340	38,550	38,290	38,210	26,190	18,290
7	20,730	23,780	27,260	30,090	32,940	36,120	38,320	38,530	38,170	38,230	26,090	18,320
8	20,740	23,880	27,310	30,270	33,000	36,160	38,300	38,490	38,120	38,270	25,960	18,380
9	20,790	23,990	27,380	30,350	33,120	36,250	38,300	38,550	38,060	38,210	25,810	18,440
10	20,860	24,080	27,460	30,440	33,200	36,370	38,300	38,550	38,000	38,040	25,510	18,530
11	20,960	24,170	27,590	30,570	33,300	36,540	38,320	38,700	38,000	37,720	25,320	18,600
12	21,050	24,260	27,660	30,670	33,390	36,610	38,360	38,930	38,020	37,220	25,050	18,650
13	21,100	24,400	27,770	30,800	33,510	36,650	38,340	39,120	38,000	36,650	24,680	18,720
14	21,180	24,480	27,870	30,820	33,630	36,840	38,300	39,120	37,930	35,980	24,120	18,740
15	21,270	24,750	27,960	30,850	33,740	36,900	38,290	39,040	37,910	35,320	23,480	18,820
16	21,330	24,910	28,050	30,940	33,910	36,970	38,270	38,970	37,930	34,810	22,830	18,880
17	21,460	25,090	28,140	31,100	33,960	37,080	38,320	38,760	38,100	34,270	22,190	18,930
18	21,680	25,170	28,240	31,170	34,060	37,100	38,230	38,300	38,290	33,580	21,570	18,960
19	21,930	25,310	28,340	31,280	34,200	37,270	38,190	38,210	38,380	32,650	20,910	19,020
20	22,040	25,450	28,520	31,380	34,340	37,290	38,170	37,970	38,250	32,050	20,260	19,050
21	22,160	25,530	28,560	31,520	34,460	37,350	38,230	37,700	38,120	31,510	19,670	19,060
22	22,240	25,640	28,660	31,650	34,590	37,440	38,230	37,520	38,100	30,980	19,060	19,110
23	22,340	25,740	28,750	31,730	34,730	37,570	38,210	37,500	38,100	30,380	18,460	19,170
24	22,440	25,850	28,830	31,850	34,850	37,690	38,170	37,440	38,100	29,840	18,040	19,240
25	22,550	25,980	28,870	31,950	34,920	37,740	38,080	37,370	38,100	29,350	17,850	19,310
26	22,630	26,090	29,040	31,980	35,020	37,820	38,190	37,370	38,210	28,870	17,760	19,330
27	22,720	26,200	29,180	32,020	35,160	37,870	38,290	37,420	38,250	28,280	17,700	19,370
28	22,800	26,330	29,210	32,150	35,340	37,970	38,340	37,460	38,250	27,800	17,670	19,450
29	22,890	26,420	29,410	32,230	35,470	37,970	38,360	37,480	38,270	27,400	17,660	19,500
30	22,970	26,640	29,430	32,280	-----	38,000	38,530	37,460	38,270	26,940	17,740	19,570
31	23,110	-----	29,570	32,350	-----	38,040	-----	37,460	-----	26,600	17,790	-----
MAX	23,110	26,640	29,570	32,350	35,470	38,040	38,530	39,120	38,400	38,290	26,470	19,570
MIN	20,160	23,200	26,770	29,580	32,480	35,470	38,080	37,370	37,540	26,600	17,660	17,870
(†)	+3,050	+3,530	+2,930	+2,780	+3,120	+2,570	+490	-1,070	+810	-11,670	-8,810	+1,780
(‡)	2,357.08	2,359.68	2,361.64	2,363.37	2,365.18	2,366.58	2,366.84	2,366.27	2,366.70	2,359.65	2,352.53	2,354.15
CAL YR 1971	MAX 39,220	MIN 18,470	†	+4,560								
WTR YR 1972	MAX 39,120	MIN 17,660	†	-490								

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

KANSAS RIVER BASIN

06842500 Medicine Creek below Harry Strunk Lake, Nebr.

LOCATION.--Lat 40°22'20", long 100°13'20", at center of sec.25, T.5 N.; R.26 W., Frontier County, on right bank 0.5 mile downstream from Medicine Creek Dam and 6.5 miles northwest of Cambridge.

DRAINAGE AREA.--880 sq mi, approximately, of which about 640 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1950, published as "below Medicine Creek Dam." Monthly discharge only for some periods, published in WSP 1730.

GAGE.--Water-stage recorder. Concrete control since August 1950. Datum of gage is 2,295.26 ft above mean sea level (Bureau of Reclamation bench mark). Prior to Apr. 24, 1950, nonrecording gage at site 0.5 mile upstream at different datum.

AVERAGE DISCHARGE.--23 years, 66.9 cfs (48,470 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 368 cfs July 13 (gage height, 3.05 ft); minimum daily, 0.90 cfs Oct. 1, 2.

Period of record: Maximum discharge, 1,300 cfs Mar. 23, 1960 (gage height, 5.97 ft); minimum daily, 0.10 cfs Nov. 13, 1952, Sept. 19, 1963, Sept. 27-29, 1964.

REMARKS.--Records good. Flow regulated by Harry Strunk Lake. (See preceding page.) Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	4.3	2.2	2.1	3.5	1.8	18	59	17	46	174	2.0
2	.90	6.8	2.3	2.1	3.5	1.8	20	55	17	46	156	2.0
3	1.0	1.6	2.4	2.1	3.5	1.9	22	53	18	45	135	1.9
4	1.0	1.9	2.4	2.1	3.5	1.8	29	53	31	44	71	1.8
5	1.0	2.0	2.4	2.1	3.5	1.8	34	54	68	44	91	1.8
6	.95	2.1	2.3	2.1	3.5	1.8	35	57	91	44	98	1.8
7	.95	2.3	2.3	2.1	3.5	1.8	47	57	79	44	100	1.8
8	.95	2.9	2.1	2.1	3.5	1.8	52	57	52	44	79	1.8
9	.93	3.0	1.7	2.1	3.5	1.8	51	58	44	57	109	1.9
10	.93	2.4	1.7	2.1	3.5	1.8	51	60	43	104	140	1.9
11	.91	1.7	1.7	2.1	3.5	1.9	51	80	42	167	150	1.9
12	.91	1.9	1.7	2.1	3.5	1.8	50	109	43	266	166	1.8
13	.91	2.7	1.7	2.1	3.5	2.4	50	144	79	311	185	1.6
14	1.4	2.9	1.7	2.1	3.5	2.1	50	146	73	326	274	1.7
15	1.7	3.1	1.7	2.1	3.5	2.1	50	143	59	330	331	1.6
16	2.9	2.4	1.8	2.2	4.5	2.0	49	140	42	332	330	1.6
17	2.7	2.1	1.8	2.2	3.4	2.8	49	162	30	330	328	1.6
18	2.6	1.9	1.9	2.2	3.3	2.3	50	187	36	329	315	1.7
19	1.6	1.7	1.9	2.3	3.4	2.3	48	180	41	314	324	1.7
20	1.5	1.7	1.9	2.1	3.4	2.3	48	175	82	300	323	1.2
21	1.6	2.0	1.8	2.1	3.4	2.3	48	169	83	290	332	1.2
22	2.4	2.0	1.9	2.1	3.4	2.3	49	118	58	284	328	1.2
23	3.1	3.4	1.9	2.1	3.5	2.5	47	75	42	283	318	1.2
24	3.0	1.8	1.9	2.1	3.8	3.5	47	69	41	284	268	1.3
25	5.2	1.8	2.0	2.2	3.6	5.5	47	53	41	239	143	1.3
26	4.7	1.7	1.9	2.6	3.6	9.2	49	51	44	268	82	1.3
27	3.7	1.8	2.0	3.4	3.7	12	51	39	45	277	73	1.4
28	4.3	2.0	1.9	3.4	3.7	13	52	32	46	245	53	1.4
29	4.1	2.0	2.0	3.4	3.2	14	53	33	46	228	19	1.4
30	4.2	2.1	1.9	3.4	-----	15	54	33	46	228	1.4	1.5
31	4.6	-----	2.1	3.5	-----	18	-----	23	-----	211	1.8	-----
TOTAL	67.54	72.0	60.9	72.8	102.4	137.4	1,351	2,724	1,479	6,360	5,498.2	48.3
MEAN	2.18	2.40	1.96	2.35	3.53	4.43	45.0	87.9	49.3	205	177	1.61
MAX	5.2	6.8	2.4	3.5	4.5	18	54	187	91	332	332	2.0
MIN	.90	1.6	1.7	2.1	3.2	1.8	18	23	17	44	1.4	1.2
AC-FT	134	143	121	144	203	273	2,680	5,400	2,930	12,620	10,910	96

CAL YR 1971 TOTAL 17,137.38 MEAN 47.0 MAX 352 MIN .12 AC-FT 33,990
WTR YR 1972 TOTAL 17,973.54 MEAN 49.1 MAX 332 MIN .90 AC-FT 35,650

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LOCATION.--Lat 40°17'05", long 100°08'35", in NW 1/4 sec.28, T.4 N., R.25 W., Furnas County, on left bank 400 ft south of U.S. Highways 6 and 34, 0.5 mile downstream from Medicine Creek, 1 mile east of Cambridge, and 1.3 miles upstream from Cambridge diversion dam.

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

GAGE.--Water-stage recorder. Datum of gage is 2,239.07 ft above mean sea level. Prior to July 13, 1948, non-recording gage at site 150 ft upstream at same datum and July 13, 1948, to Sept. 25, 1950, at present site and datum.

AVERAGE DISCHARGE.--27 years, 351 cfs (254,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,110 cfs June 18 (gage height, 6.89 ft); minimum daily, 55 cfs Jan. 4.

Period of record: Maximum discharge, 160,000 cfs June 22, 1947 (gage height, 16.7 ft, from floodmarks), from rating curve extended above 12,000 cfs on basis of slope-area measurement of peak flow; minimum daily, 6.4 cfs Aug. 14, 1949.

Maximum stage since at least 1826, 17.6 ft May 31 to June 1, 1935, from information by local resident (discharge, about 280,000 cfs).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and since 1949 by regulation from upstream reservoirs.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	147	178	160	105	180	126	162	94	243	276	107
2	121	141	177	150	105	172	130	159	90	221	232	131
3	95	142	179	100	98	171	130	149	90	265	222	129
4	95	139	179	55	95	170	140	143	90	243	615	121
5	101	135	176	60	95	168	142	136	111	204	331	124
6	91	137	174	80	95	171	137	153	140	188	251	129
7	92	142	174	95	95	172	139	143	117	197	202	123
8	89	147	160	110	97	162	146	134	92	181	176	119
9	88	139	155	130	100	161	141	150	78	529	163	115
10	90	145	165	150	105	163	143	184	62	324	212	110
11	92	150	176	145	110	165	145	208	107	254	210	109
12	92	154	174	140	125	166	145	264	118	300	223	109
13	92	156	172	135	135	166	145	379	91	350	219	114
14	95	157	167	110	150	165	145	346	124	414	307	94
15	99	159	166	95	160	160	151	328	92	427	377	102
16	101	225	161	90	195	153	145	309	94	423	398	162
17	109	206	155	100	225	150	139	295	122	422	397	155
18	114	203	150	110	240	149	130	329	962	412	412	122
19	178	193	145	120	250	149	125	306	1,660	382	425	104
20	171	183	145	125	235	152	131	295	899	353	397	94
21	152	172	150	130	210	144	133	276	588	342	386	99
22	137	169	160	140	189	138	119	254	433	353	401	105
23	134	163	170	145	179	138	115	182	359	361	394	110
24	135	158	166	135	185	148	108	170	323	386	392	112
25	129	161	168	110	181	151	82	162	290	481	308	117
26	130	169	155	90	179	150	94	150	375	412	268	147
27	133	166	145	75	181	155	130	143	485	366	216	134
28	131	177	140	80	180	154	156	129	395	344	175	132
29	136	180	140	90	181	149	150	120	375	321	158	134
30	154	176	145	105	-----	138	154	119	308	449	116	129
31	153	-----	155	110	-----	129	-----	109	-----	314	105	-----
TOTAL	3,627	4,891	5,022	3,470	4,480	4,859	4,016	6,386	9,164	10,461	8,964	3,592
MEAN	117	163	162	112	154	157	134	206	305	337	289	120
MAX	178	225	179	160	250	180	156	379	1,660	529	615	162
MIN	88	135	140	55	95	129	82	109	62	181	105	94
AC-FT	7,190	9,700	9,960	6,880	8,890	9,640	7,970	12,670	18,180	20,750	17,780	7,120
CAL YR 1971	TOTAL 69,760			MEAN 191	MAX 704	MIN 55	AC-FT 138,400					
WTR YR 1972	TOTAL 68,932			MEAN 188	MAX 1,660	MIN 55	AC-FT 136,700					

KANSAS RIVER BASIN

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 September 1972 (discontinued).

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.--21 years (1951-72), 15.6 cfs (11,300 acre-ft per year); median of yearly mean discharges, 11 cfs (8,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 173 cfs May 23 (gage height, 7.04 ft); minimum daily, 4.4 cfs Sept. 19.

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.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	8.0	9.0	7.5	5.2	8.9	7.3	8.4	7.1	7.6	11	6.7
2	8.0	7.3	8.8	7.1	5.0	8.3	7.3	7.6	6.9	7.7	9.5	6.6
3	7.0	6.7	8.8	6.2	5.0	8.9	7.2	6.9	6.5	8.2	9.6	6.5
4	6.6	6.8	8.8	5.5	5.0	7.8	7.2	7.1	9.4	8.2	9.9	6.7
5	6.0	6.8	8.2	5.5	5.3	8.2	7.4	7.1	8.4	7.7	8.9	6.3
6	5.8	6.7	8.3	5.7	5.3	8.2	7.3	9.6	17	7.8	7.8	6.3
7	5.7	6.7	8.1	6.0	5.3	8.3	7.0	9.1	8.9	8.5	7.7	5.8
8	5.8	7.3	6.8	6.5	5.3	8.1	7.7	11	7.0	8.1	7.7	5.5
9	5.9	7.2	6.8	7.0	5.0	7.9	7.6	33	6.2	8.6	7.5	5.4
10	6.0	7.0	7.1	7.0	5.4	8.0	7.6	26	5.8	8.9	7.5	5.5
11	6.0	7.3	7.4	6.6	6.0	8.2	8.3	16	5.7	8.3	7.5	5.4
12	6.1	7.3	8.2	6.6	6.5	8.5	7.7	14	5.9	7.2	7.2	5.2
13	6.3	7.3	8.6	6.0	7.0	8.4	7.5	11	7.2	7.4	7.1	5.0
14	6.4	7.3	8.8	5.5	7.8	8.2	7.1	9.2	6.1	7.3	7.0	5.0
15	6.4	7.7	7.8	5.3	8.6	8.3	7.5	14	5.5	7.4	7.3	4.9
16	6.4	16	6.8	5.8	10	8.0	8.2	14	5.1	7.5	7.6	4.9
17	6.7	15	9.0	7.0	10	7.8	7.8	7.9	5.3	7.6	7.6	4.6
18	7.7	10	9.3	8.0	12	7.6	7.5	7.5	7.5	7.9	7.9	4.5
19	7.7	8.2	8.5	8.4	11	7.7	7.1	7.9	7.6	7.3	8.3	4.4
20	6.8	7.6	7.2	8.8	10	7.7	7.5	7.3	6.0	7.6	8.3	4.9
21	6.7	7.6	8.6	9.0	9.0	7.8	7.4	7.0	5.7	7.9	7.7	6.3
22	6.7	7.6	8.1	9.1	9.0	7.7	7.4	6.9	5.0	6.6	6.9	4.7
23	6.6	7.5	8.4	8.7	8.8	7.8	6.9	46	4.6	6.4	7.1	4.5
24	6.6	7.6	8.1	8.2	9.0	8.7	6.8	36	5.4	6.3	9.9	4.5
25	6.6	7.9	8.2	8.0	9.1	8.5	6.6	11	7.5	7.7	8.8	4.6
26	6.7	8.2	7.5	7.0	8.0	8.2	7.7	8.4	12	9.9	7.5	4.6
27	6.6	8.4	7.1	6.0	8.8	8.0	9.9	7.8	10	9.3	6.0	4.8
28	6.7	9.0	6.9	5.0	9.4	7.6	9.9	8.3	9.9	39	5.7	4.8
29	6.9	9.3	7.4	5.0	9.5	7.3	8.8	9.5	8.9	38	6.2	4.7
30	8.3	9.3	7.8	5.2	-----	7.4	8.1	8.3	7.6	23	6.7	4.9
31	8.8	-----	7.8	5.2	-----	7.3	-----	7.5	-----	12	6.8	-----
TOTAL	207.3	246.6	248.2	208.4	221.3	249.3	229.3	391.3	297.3	322.9	242.2	158.5
MEAN	6.69	8.22	8.01	6.72	7.63	8.04	7.64	12.6	9.91	10.4	7.81	5.28
MAX	8.8	16	9.3	9.1	12	8.9	9.9	46	84	39	11	6.7
MIN	5.7	6.7	6.8	5.0	5.0	7.3	6.6	6.9	4.6	6.3	5.7	4.4
AC-FT	411	489	492	413	439	494	455	776	590	640	480	314

CAL YR 1971 TOTAL 3,537.7 MEAN 9.69 MAX 117 MIN 2.6 AC-FT 7,020

WTR YR 1972 TOTAL 3,022.6 MEAN 8.26 MAX 84 MIN 4.4 AC-FT 6,000

PEAK DISCHARGE (BASE, 750 CFS).--No peak above base.

KANSAS RIVER BASIN

157

06844500 Republican River near Orleans, Nebr.

LOCATION.--Lat 40°07'53", long 99°30'08", in NE¼NE¼ 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.

DRAINAGE AREA.--15,640 sq mi, approximately, of which about 8,910 sq mi contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 1,972.57 ft above mean sea level. Prior to June 2, 1948, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--25 years, 344 cfs (249,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,530 cfs June 20 (gage height, 6.33 ft); minimum daily, 19 cfs Aug. 18.

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.

Maximum flood since at least 1826 occurred June 1, 1935. Flood of June 23, 1947, reached a stage of 14.00 ft, from floodmark (discharge not determined).

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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	158	200	200	135	227	183	237	155	321	162	87
2	99	153	199	205	120	222	180	212	156	287	150	84
3	98	151	201	175	110	220	171	212	146	252	140	85
4	97	151	202	115	100	215	169	204	144	249	135	102
5	96	151	203	60	100	211	172	202	144	253	198	107
6	95	151	204	60	100	209	174	276	182	217	312	103
7	99	151	205	90	105	209	175	249	172	196	209	101
8	97	153	203	130	105	207	171	232	157	176	164	100
9	107	152	185	160	105	206	178	215	130	155	127	100
10	111	151	190	170	110	202	176	199	120	156	107	101
11	105	152	196	175	120	202	175	228	125	297	93	101
12	93	155	214	175	140	199	174	288	134	163	76	95
13	91	155	207	155	170	196	172	322	135	106	64	91
14	91	154	214	130	210	194	165	381	133	85	54	88
15	91	153	216	110	250	197	170	431	112	88	42	91
16	95	193	209	90	300	197	184	356	110	80	38	82
17	97	299	206	85	350	196	177	350	135	80	29	88
18	109	258	202	115	400	192	169	312	135	85	19	123
19	109	222	208	130	450	193	168	305	397	90	23	122
20	119	213	190	140	450	191	173	300	1,350	83	32	128
21	162	203	185	150	430	190	175	290	790	76	48	121
22	153	200	200	160	400	188	176	278	501	64	78	115
23	144	199	214	165	350	189	172	289	398	57	72	108
24	140	193	214	165	320	198	164	265	327	56	93	108
25	138	191	209	150	284	201	155	257	298	50	132	104
26	138	188	207	110	262	203	174	199	338	74	147	101
27	138	186	200	85	249	201	172	181	358	111	151	102
28	136	189	190	70	238	198	179	174	407	138	149	103
29	140	196	185	80	234	198	204	176	393	145	127	104
30	158	201	185	100	-----	197	212	179	377	157	112	105
31	162	-----	190	125	-----	189	-----	158	-----	152	107	-----
TOTAL	3,609	5,422	6,233	4,030	6,697	6,237	5,259	7,957	8,459	4,499	3,390	3,050
MEAN	116	181	201	130	231	201	175	257	282	145	109	102
MAX	162	299	216	205	450	227	212	431	1,350	321	312	128
MIN	91	151	185	60	100	188	155	158	110	50	19	82
AC-FT	7,160	10,750	12,360	7,990	13,280	12,370	10,430	15,780	16,780	8,920	6,720	6,050

CAL YR 1971 TOTAL 65,180 MEAN 179 MAX 873 MIN 26 AC-FT 129,300
WTR YR 1972 TOTAL 64,842 MEAN 177 MAX 1,350 MIN 19 AC-FT 128,600

KANSAS RIVER BASIN

06845000 Sappa Creek near Oberlin, Kans.

LOCATION.--Lat 39°47'07", long 100°34'28", in NW¼NE¼ 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 September 1972 (discontinued). Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,562.607 above mean sea level (levels by Kansas Water Resources Board). See WSP 1919 for history of changes prior to May 20, 1959.

AVERAGE DISCHARGE.--33 years, 17.7 cfs (12,820 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 65 cfs June 19, July 8 (gage height, 2.91 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.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.14	.10	.10	.18	.13	.16	.08	1.2	.03	
2		0	.15	.10	.09	.15	.13	.18	.07	.24	0	
3		0	.15	.11	.09	.16	.13	.16	.07	.13	0	
4		0	.15	.12	.08	.18	.13	.14	.06	.10	0	
5		0	.15	.10	.09	.16	.13	.14	.05	.09	0	
6		0	.14	.10	.10	.15	.12	.14	.05	.08	0	
7		0	.13	.10	.09	.14	.12	.13	.04	.12	0	
8		0	.13	.09	.09	.13	.13	.13	.04	.55	0	
9		.01	.13	.09	.09	.13	.13	.13	.04	.36	0	
10		.03	.12	.09	.09	.14	.13	.13	.13	.13	0	
11		.03	.12	.09	.09	.14	.13	.13	.08	4.3	0	
12		.04	.12	.10	.09	.13	.13	.12	.06	1.2	0	
13		.04	.12	.10	.09	.13	.12	.12	.06	.30	0	
14		.04	.12	.10	.08	.14	.13	.13	.07	.14	0	
15		.08	.12	.10	.08	.14	.13	.12	.06	.11	0	
16		.09	.12	.10	.09	.14	.13	.12	.22	.06	0	
17		.09	.12	.10	.16	.14	.12	.11	.18	0	0	
18		.09	.12	.10	.08	.14	.13	.10	1.0	0	0	
19		.09	.11	.10	.06	.14	.12	.10	40	0	0	
20		.09	.11	.10	.04	.13	.12	.10	11	0	0	
21		.09	.11	.10	.08	.13	.12	.09	3.3	0	0	
22		.11	.11	.10	.12	.13	.12	.12	.78	0	0	
23		.11	.11	.10	.14	.12	.13	.12	.20	0	0	
24		.11	.11	.10	.15	.11	.12	.10	.15	0	0	
25		.13	.11	.10	.14	.11	.13	.09	.14	0	0	
26		.14	.11	.10	.14	.12	.14	.10	.40	0	0	
27		.14	.11	.10	.15	.12	.15	.10	.18	0	0	
28		.13	.10	.10	.15	.12	.14	.10	.14	0	0	
29		.13	.09	.10	.15	.12	.13	.10	16	6.6	0	
30		.13	.10	.11	-----	.13	.13	.10	6.9	8.3	0	
31		-----	.10	.11	-----	.13	-----	.10	-----	.46	0	-----
TOTAL	0	1.94	3.73	3.09	2.99	4.23	3.85	3.71	81.55	127.43	.03	0
MEAN	0	.065	.12	.10	.10	.14	.13	.12	2.72	4.11	.001	0
MAX	0	.14	.15	.11	.16	.18	.15	.18	.40	.55	.03	0
MIN	0	0	.09	.09	.04	.11	.12	.09	.04	0	0	0
AC-FT	0	3.9	7.4	6.1	5.9	8.4	7.6	7.4	162	253	.06	0

CAL YR 1971 TOTAL 1,386.37 MEAN 3.80 MAX 254 MIN 0 AC-FT 2,750
WTR YR 1972 TOTAL 232.55 MEAN .64 MAX 55 MIN 0 AC-FT 461

PEAK DISCHARGE (BASE, 200 CFS).--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

159

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 September 1972 (discontinued). 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.--36 years, 38.3 cfs (27,750 acre-ft per year); median of yearly mean discharges, 26 cfs (18,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 300 cfs June 20 (stage unknown); no flow Aug. 16-23, 29, 30, Sept. 8, 24, 25, 27, 29.

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). WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.92	1.9	1.9	1.0	3.8	2.4	4.0	2.2	12	.59	.14
2	.41	1.9	1.9	1.8	.85	6.6	2.4	3.1	2.0	21	2.2	.11
3	.24	1.6	2.4	1.4	.95	5.0	2.4	3.0	1.9	13	2.8	.14
4	.22	1.6	2.1	.80	.95	5.5	2.5	3.0	1.6	5.5	.77	.08
5	.23	1.2	2.4	.75	1.1	4.6	2.4	3.1	1.4	2.6	.53	.13
6	.18	.90	2.6	.90	1.1	4.2	2.4	16	1.3	1.7	.39	.09
7	.21	.57	1.8	1.1	1.2	5.2	2.4	14	1.2	2.4	.22	.08
8	1.0	.51	1.7	1.2	1.2	5.1	2.4	11	1.2	1.6	1.5	0
9	.83	.39	1.8	1.4	1.0	4.2	2.3	5.9	1.1	1.1	1.5	80
10	.26	.66	1.9	1.6	.90	3.7	2.2	5.5	1.2	.92	.51	46
11	.24	.65	2.0	1.8	.80	3.7	2.2	5.6	1.2	1.7	.21	17
12	.13	.69	2.0	1.8	.95	3.5	2.1	27	1.2	2.0	.16	8.0
13	.14	1.1	2.0	1.2	1.0	3.3	2.0	54	.97	.68	.12	4.1
14	.12	.79	1.9	.90	1.1	3.3	1.9	15	1.3	3.1	.06	2.3
15	.13	1.5	1.9	.85	1.2	3.4	2.1	8.3	1.1	8.8	.02	1.3
16	.13	32	1.9	1.1	1.3	3.1	2.6	6.2	.86	5.3	0	.91
17	.15	62	1.9	1.4	1.4	3.0	2.5	5.1	16	2.4	0	.30
18	.80	38	2.0	1.6	1.5	2.8	2.1	4.1	21	1.4	0	.13
19	.30	59	2.0	1.9	1.7	2.8	1.3	3.6	100	1.1	0	.01
20	.15	25	2.0	2.1	1.9	2.8	.97	3.3	275	1.0	0	.68
21	.14	13	2.0	2.2	2.1	2.6	1.8	3.2	150	.72	0	.50
22	1.5	9.2	1.9	1.9	2.2	2.7	2.0	2.9	81	.63	0	.13
23	.97	7.5	2.0	1.2	2.4	2.8	1.2	7.7	37	.45	0	.06
24	.75	5.7	2.0	1.1	2.6	3.0	1.0	9.4	23	.30	.15	0
25	.58	3.7	2.2	.95	2.9	2.8	2.4	3.2	20	.20	.26	0
26	.64	2.9	2.0	.80	3.6	2.8	3.5	2.6	18	.20	.09	.01
27	.50	2.5	1.8	.75	4.3	2.7	3.6	2.4	16	.37	.06	0
28	.70	2.5	1.8	.85	4.3	2.5	3.6	5.6	19	.99	.01	.01
29	.40	2.6	1.9	1.0	4.4	2.5	3.7	7.8	57	.37	0	0
30	1.4	2.2	1.9	1.1	-----	2.5	3.9	4.8	26	.19	0	.03
31	1.0	-----	2.0	1.2	-----	2.5	-----	2.7	-----	.17	.04	-----
TOTAL	14.64	282.78	61.6	40.55	51.90	109.0	70.27	253.1	880.73	93.89	12.19	162.24
MEAN	.47	9.43	1.99	1.31	1.79	3.52	2.34	8.16	29.4	3.03	.39	5.41
MAX	1.5	62	2.6	2.2	4.4	6.6	3.9	54	275	21	2.8	80
MIN	.12	.39	1.7	.75	.80	2.5	.97	2.4	.86	.17	0	0
AC-FT	29	561	122	80	103	216	139	502	1,750	186	24	322

CAL YR 1971 TOTAL 2,814.13 MEAN 7.71 MAX 184 MIN .03 AC-FT 5,580
WTR YR 1972 TOTAL 2,032.89 MEAN 5.55 MAX 275 MIN 0 AC-FT 4,030

PEAK DISCHARGE (BASE, 700 CFS).--No peak above base.

KANSAS RIVER BASIN

06846500 Beaver Creek at Cedar Bluffs, Kans.

LOCATION.--Lat 39°59'06", long 100°33'35", in NW 1/4 sec.10, T.1 S., R.29 W., Decatur County, on right bank at downstream side of bridge on U.S. Highway 83, 0.2 mile north of Cedar Bluffs, 1.0 mile south of Kansas-Nebraska state line, and at mile 107.4. Prior to July 13, 1972, at temporary site 0.8 mile downstream.

DRAINAGE AREA.--1,618 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 2,520.33 ft above mean sea level. Prior to Aug. 19, 1971, at site 0.1 mile upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mile downstream at datum 5.00 ft lower.

AVERAGE DISCHARGE.--27 years, 23.4 cfs (16,950 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 985 cfs June 17 (gage height, 13.60 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. Records of suspended sediment loads for the water year 1972 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0								0	7.6	50	.01
2	0								0	5.2	111	0
3	0								0	6.4	60	0
4	0								0	9.8	43	0
5	0								0	8.7	32	14
6	0								0	9.3	40	3.1
7	0								0	9.0	101	.25
8	0								0	73	58	.64
9	0								0	82	44	.05
10	0								0	23	58	0
11	0								0	10	65	0
12	0								.21	8.4	16	0
13	0								1.2	9.2	7.6	0
14	0								.31	6.8	5.4	0
15	0								0	6.0	3.5	0
16	0								1.8	4.7	1.9	0
17	0								110	4.0	1.0	0
18	0								311	2.0	1.2	0
19	.76								43	1.2	.08	0
20	.90								14	1.0	0	0
21	.22								57	.51	0	0
22	0								35	.07	0	0
23	0								14	4.6	0	0
24	0								7.8	101	0	0
25	0								5.4	43	0	0
26	0								8.4	20	0	0
27	0								4.8	20	0	0
28	0								2.9	31	0	0
29	0								6.5	115	0	0
30	0								6.4	52	0	0
31	0									30	0	
TOTAL	1.88	0	0	0	0	0	0	0	629.72	704.48	698.68	18.05
MEAN	.061	0	0	0	0	0	0	0	21.0	22.7	22.5	.60
MAX	.90	0	0	0	0	0	0	0	311	115	111	14
MIN	0	0	0	0	0	0	0	0	0	.07	0	0
AC-FT	3.7	0	0	0	0	0	0	0	1,250	1,400	1,390	36

CAL YR 1971 TOTAL 872.06 MEAN 2.39 MAX 254 MIN 0 AC-FT 1,730
WTR YR 1972 TOTAL 2,052.81 MEAN 5.61 MAX 311 MIN 0 AC-FT 4,070

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.T.	DISCHARGE
06-17	2400	13.60	985

KANSAS RIVER BASIN

161

06847000 Beaver Creek near Beaver City, Nebr.

LOCATION.--Lat 40°07'12", long 99°53'35", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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.--36 years, 29.8 cfs (21,590 acre-ft per year); median of yearly mean discharges, 22 cfs (15,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 97 cfs June 22 (gage height, 4.15 ft); no flow Oct. 1-9, 20-22. 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 in 1937-40, 1946, 1953-57, 1959, 1969-72.

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). WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.36	.69	.60	.33	1.1	.78	1.1	.69	8.5	1.8	.30
2	0	.36	.78	.60	.35	1.5	.78	.96	.69	7.8	5.4	.36
3	0	.36	.87	.50	.38	1.1	.87	.96	.69	5.2	21	.36
4	0	.36	.78	.20	.38	.96	.87	.96	.54	3.7	9.8	.36
5	0	.36	.78	.30	.40	1.1	.87	1.1	.48	2.6	4.5	.30
6	0	.36	.78	.42	.36	.96	.87	2.3	.48	1.9	2.3	.24
7	0	.36	.78	.39	.36	1.1	.87	1.3	.48	1.6	12	.18
8	0	.36	.78	.37	.36	.96	.87	1.1	.42	1.4	8.5	.18
9	0	.42	.75	.44	.34	.96	.87	1.1	.36	1.8	2.8	.18
10	.06	.42	.70	.37	.30	.96	.87	1.2	.42	1.9	1.9	.18
11	.06	.48	.70	.32	.30	.96	.87	1.2	.54	1.5	15	.06
12	.06	.48	.75	.26	.36	.96	.78	2.3	.54	15	32	.06
13	.12	.48	.78	.22	.45	.96	.78	1.3	.54	46	21	.06
14	.24	.42	.78	.22	.55	.96	.69	1.1	.48	24	27	.18
15	.30	.60	.78	.29	.60	.87	.87	1.1	.48	14	40	.18
16	.36	8.3	.74	.45	.64	.87	1.1	1.1	.42	7.3	19	.24
17	.54	2.3	.74	.55	.68	.87	.87	1.1	.60	4.5	6.0	.30
18	.60	1.1	.76	.55	.72	.87	.78	.96	1.1	2.9	2.3	.24
19	.06	.78	.76	.60	.76	.87	.78	.96	.78	2.9	1.2	.24
20	0	.69	.76	.60	.80	.96	.78	1.1	.54	2.4	.96	.42
21	0	.60	.73	.65	.85	.87	.78	.87	.54	1.7	.54	.36
22	0	.60	.69	.65	.90	.87	.78	.87	78	1.1	.42	.24
23	.06	.60	.69	.70	1.1	.87	.69	1.1	46	.87	.36	.18
24	.12	.60	.69	.60	1.4	1.1	.69	.96	22	.87	.48	.12
25	.24	.69	.69	.20	1.3	.96	.69	.87	38	.87	.54	.12
26	.30	.69	.65	.16	1.4	.87	1.1	.87	45	.87	.42	.12
27	.30	.69	.54	.20	1.3	.87	1.1	.87	36	.78	.30	.12
28	.30	.78	.54	.24	1.4	.87	.96	.96	22	.96	.24	.06
29	.36	.69	.56	.30	1.4	.87	.87	.87	13	2.9	.24	.06
30	.78	.78	.56	.30	-----	.87	1.1	.78	8.3	6.8	.30	.06
31	.48	-----	.60	.30	-----	.87	-----	.69	-----	3.1	.18	-----
TOTAL	5.34	26.07	22.18	12.55	20.47	29.74	25.58	34.01	320.11	177.72	238.48	6.06
MEAN	.17	.87	.72	.40	.71	.96	.85	1.10	10.7	5.73	7.69	.20
MAX	.78	8.3	.87	.70	1.4	1.5	1.1	2.3	78	46	40	.42
MIN	0	.36	.54	.16	.30	.87	.69	.69	.36	.78	.18	.06
AC-FT	11	52	44	25	41	59	51	67	635	353	473	12

CAL YR 1971 TOTAL 1,230.73 MEAN 3.37 MAX 145 MIN 0 AC-FT 2,440
WTR YR 1972 TOTAL 918.31 MEAN 2.51 MAX 78 MIN 0 AC-FT 1,820

PEAK DISCHARGE (BASE, 400 CFS).--No peak above base.

KANSAS RIVER BASIN

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.--27 years, 76.6 cfs (55,500 acre-ft per year); median of yearly mean discharges, 56 cfs (40,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 330 cfs Aug. 4 (gage height, 6.89 ft); no flow for many days. Period of record: Maximum discharge, 43,400 cfs June 24, 1966 (gage height, 22.13 ft, from floodmark), from contracted opening and flow-over-road measurement of peak flow; no flow at times in many years.

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. WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	3.1	2.5	.60	.85	5.2	43	15	65	3.3	0
2	0	0	3.1	2.5	.50	1.5	5.2	32	15	58	3.9	0
3	0	0	3.4	1.9	.40	2.5	5.1	20	11	32	34	0
4	0	0	3.4	.60	.35	4.0	5.0	12	9.1	25	218	0
5	0	0	3.6	.40	.40	6.0	5.5	10	7.4	25	58	0
6	0	0	3.1	.50	.45	9.0	5.2	127	6.2	9.1	18	0
7	0	0	4.2	.80	.45	15	5.2	87	5.6	6.3	4.5	0
8	0	0	3.5	1.0	.50	16	5.2	67	4.6	9.6	1.7	0
9	0	0	3.0	1.3	.20	9.3	5.2	23	4.2	5.3	5.3	0
10	0	0	2.8	2.0	.10	9.4	5.3	15	4.3	5.2	5.1	0
11	0	0	2.6	2.6	.08	9.8	5.3	13	4.2	24	1.0	27
12	0	0	2.4	2.9	.08	9.3	5.8	16	4.4	20	0	61
13	0	0	2.2	2.0	.08	8.0	5.4	19	4.0	13	7.7	29
14	0	0	2.0	.60	.08	7.5	5.0	25	3.1	21	14	12
15	0	0	2.0	.80	.10	7.4	5.0	57	1.6	29	4.9	5.9
16	0	0	2.1	1.1	.20	6.7	6.1	37	1.2	13	12	3.2
17	0	6.0	2.1	1.4	.25	6.6	6.0	20	11	8.0	16	1.3
18	0	58	2.2	1.8	.30	6.2	5.7	14	37	12	4.6	.01
19	0	71	2.3	2.2	.40	6.4	5.5	12	37	4.7	0	0
20	0	39	2.3	2.5	.50	6.1	5.7	10	96	.08	0	2.4
21	0	46	2.8	3.0	.60	5.9	5.6	9.2	199	0	0	2.2
22	0	34	3.6	3.5	.60	5.7	5.1	9.8	290	0	0	1.4
23	0	15	5.0	3.5	.70	5.6	4.6	10	224	0	0	1.1
24	0	8.9	6.1	3.0	.75	6.5	3.9	12	159	0	6.0	1.0
25	0	7.2	5.5	2.0	.80	6.9	3.5	9.9	103	0	7.2	1.2
26	0	6.0	3.9	1.1	.80	6.2	5.5	9.8	84	0	2.4	.30
27	0	5.3	3.2	.54	.80	6.0	6.4	19	120	0	.03	.04
28	0	5.0	2.5	.28	.80	5.8	5.6	13	100	3.5	2.6	.02
29	0	4.5	2.5	.26	.80	5.5	6.1	11	58	0	.20	.01
30	0	3.7	2.5	.40	-----	5.4	9.3	9.5	40	0	0	0
31	.03	-----	2.5	.48	-----	5.2	-----	10	-----	0	0	-----
TOTAL	.03	309.6	95.5	49.46	12.67	212.25	163.2	782.2	1,658.9	388.78	430.43	149.08
MEAN	.001	10.3	3.08	1.60	.44	6.85	5.44	25.2	55.3	12.5	13.9	4.97
MAX	.03	71	6.1	3.5	.80	16	9.3	127	290	65	218	61
MIN	0	0	2.0	.26	.08	.85	3.5	9.2	1.2	0	0	0
AC-FT	.06	614	189	98	25	421	324	1,550	3,290	771	854	296

CAL YR 1971 TOTAL 4,764.21 MEAN 13.1 MAX 205 MIN 0 AC-FT 9,450

WTR YR 1972 TOTAL 4,252.10 MEAN 11.6 MAX 290 MIN 0 AC-FT 8,430

PEAK DISCHARGE (BASE, 1,000 CFS).--No peak above base.

KANSAS RIVER BASIN

163

06848500 Prairie Dog Creek near Woodruff, Kans.

LOCATION.--Lat 39°59'09", long 99°28'39", in NW¼NW¼ 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.--32 years, 44.3 cfs (32,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 226 cfs July 12 (gage height, 5.91 ft); no flow for part of each day July 8-12.

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, 1971-72.

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 1972 are published in Part 2 of WRD Kans.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.1	3.3	3.4	5.0	7.0	3.0	3.4	3.3	1.3	1.0	.18
2	1.1	3.5	3.5	4.1	4.0	7.0	2.8	112	2.3	.51	10	.25
3	1.2	3.9	3.6	3.9	3.0	7.0	2.9	35	2.3	1.2	53	.17
4	1.4	4.4	3.6	3.6	3.0	7.0	2.9	8.3	2.3	1.1	75	.15
5	1.4	2.9	3.4	3.0	3.0	8.0	3.0	5.5	1.9	.53	62	.15
6	1.3	2.1	3.8	2.5	3.0	8.0	3.1	6.5	1.9	.26	11	.19
7	1.4	1.8	5.1	4.0	3.0	8.2	3.6	13	1.7	.29	1.2	.18
8	1.2	1.7	3.6	5.3	3.0	4.9	3.9	60	1.5	.16	.41	.15
9	1.2	1.7	3.2	5.5	2.0	5.6	4.2	26	1.4	.37	.39	.18
10	1.2	1.9	3.5	5.6	2.0	6.3	4.1	7.6	1.4	.05	.42	.26
11	1.3	2.3	4.5	4.7	2.0	4.6	4.2	4.9	1.5	.07	.37	.15
12	1.2	2.1	3.2	6.0	3.0	4.3	4.2	4.9	1.5	105	.28	.11
13	1.3	2.1	3.6	7.8	4.0	4.5	4.0	4.6	1.4	75	.44	.12
14	1.2	2.1	4.7	8.9	5.0	4.5	3.6	4.3	1.0	10	.32	.16
15	1.2	2.4	4.9	2.6	5.0	4.6	3.8	4.1	1.2	1.2	.33	.23
16	1.4	3.1	3.5	3.7	4.0	4.1	4.2	3.6	1.3	.87	.33	.19
17	1.3	5.4	3.8	4.8	4.0	3.8	3.4	3.0	1.9	.61	.39	.27
18	7.0	7.9	3.4	5.5	4.0	3.5	3.2	2.7	3.8	1.4	.34	6.1
19	1.5	31	4.5	11	4.0	3.9	3.2	2.5	31	1.1	.31	2.2
20	.56	21	4.4	18	5.0	3.5	3.0	2.5	19	1.8	.30	.98
21	.51	10	2.9	14	5.0	3.7	2.8	2.3	6.3	.96	.39	.90
22	.67	5.8	3.3	12	5.0	3.8	2.6	2.3	3.6	.64	.31	.90
23	1.3	3.9	4.4	9.4	4.0	3.5	2.5	2.9	2.1	.81	.33	.90
24	1.2	3.4	3.7	8.5	4.0	3.9	2.5	2.9	1.7	.47	.64	.90
25	1.2	3.1	3.5	6.0	4.0	4.0	2.3	4.9	1.8	.46	1.6	.80
26	.86	3.1	3.0	4.0	4.0	4.1	2.9	5.2	2.5	.92	4.8	.80
27	.71	2.9	3.2	2.0	5.0	4.0	3.2	3.1	5.2	.54	6.6	.80
28	1.4	3.1	2.5	2.5	6.0	4.3	3.5	2.7	4.9	2.3	2.1	.70
29	1.7	3.2	5.3	3.0	6.0	4.2	4.0	2.5	3.5	1.6	.68	.70
30	2.2	3.4	4.1	4.0	-----	4.2	3.6	2.5	2.5	27	.40	.70
31	4.2	-----	3.9	5.0	-----	3.8	-----	4.2	-----	2.8	.21	-----
TOTAL	46.41	148.3	116.9	184.3	114.0	153.8	100.2	349.9	117.7	241.32	235.89	20.47
MEAN	1.50	4.94	3.77	5.95	3.93	4.96	3.34	11.3	3.92	7.78	7.61	.68
MAX	7.0	31	5.3	18	6.0	8.2	4.2	112	31	105	75	6.1
MIN	.51	1.7	2.5	2.0	2.0	3.5	2.3	2.3	1.0	.05	.21	.11
AC-FT	92	294	232	366	226	305	199	694	233	479	468	41

CAL YR 1971 TOTAL 1,738.54 MEAN 4.76 MAX 92 MIN .20 AC-FT 3,450
WTR YR 1972 TOTAL 1,829.19 MEAN 5.00 MAX 112 MIN .05 AC-FT 3,630

PEAK DISCHARGE (REGULATED) ABOVE 400 CFS.--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

06849000 Harlan County Lake near Republican City, Nebr.

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 1965 published as Harlan County Reservoir near Republican City.

GAGE.--Water-stage recorder. Gage is referred to mean sea level.

EXTREMES.--Current year: Maximum contents, 314,500 acre-ft July 1 (elevation, 1,943.80 ft); minimum, 218,000 acre-ft Oct. 1 (elevation, 1,935.04 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)

1,935	217,600	1,945	329,600
1,940	270,200		

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218,200	223,400	234,000	243,700	250,700	261,400	272,100	282,000	297,600	313,900	270,000	250,600
2	218,400	223,600	234,500	244,000	251,000	261,900	272,300	282,100	297,700	313,400	270,200	250,600
3	218,400	223,600	234,700	244,400	251,200	262,400	272,400	282,300	297,700	313,000	270,200	250,600
4	218,400	223,800	235,000	244,400	251,500	262,800	272,500	282,600	297,900	312,000	270,300	250,600
5	218,400	223,900	235,600	244,500	251,900	263,100	272,700	283,400	298,000	310,700	271,700	250,800
6	218,400	224,000	235,800	244,800	251,900	263,500	273,000	284,700	298,000	309,600	272,600	250,900
7	218,600	224,100	236,300	244,900	252,200	263,800	273,000	285,300	298,100	308,200	273,500	250,900
8	218,600	224,400	236,700	245,100	252,300	264,000	273,400	285,900	298,100	307,100	273,200	250,900
9	218,400	224,500	236,900	245,300	252,500	264,400	273,600	286,500	298,100	305,300	273,100	251,100
10	218,400	224,700	237,000	245,500	252,700	264,800	274,100	286,800	298,300	303,500	272,500	251,400
11	218,400	224,900	237,100	245,600	252,900	265,200	274,300	287,600	298,600	302,500	272,200	251,400
12	218,600	225,400	237,300	246,200	253,200	265,700	274,600	289,400	298,600	301,100	271,400	251,700
13	218,400	225,800	237,700	246,500	253,400	265,800	274,800	289,800	298,700	299,400	270,500	251,700
14	218,300	225,900	238,200	246,700	253,600	266,400	275,100	290,200	298,700	297,700	269,100	251,700
15	218,600	226,200	238,500	246,800	253,900	266,800	276,600	291,100	298,500	295,800	267,800	251,800
16	218,600	227,100	239,000	246,900	254,300	266,900	276,600	291,500	298,400	293,700	266,200	251,800
17	218,600	228,900	239,100	247,200	254,500	267,100	276,800	291,900	303,000	292,200	264,200	251,800
18	219,800	229,400	239,500	247,300	254,900	267,300	276,900	292,400	303,300	290,100	262,500	251,800
19	219,900	229,800	239,800	247,500	255,400	267,900	277,000	292,900	306,500	288,300	260,500	251,800
20	220,100	230,000	240,100	247,800	255,900	268,600	277,700	293,200	308,200	286,800	258,400	252,600
21	220,300	230,300	240,100	248,200	256,500	268,700	277,700	293,400	309,600	285,100	256,500	252,600
22	220,600	230,800	240,400	248,500	257,200	269,000	277,900	294,400	310,700	283,200	254,400	252,400
23	220,900	231,300	241,100	248,800	257,800	269,400	278,000	295,200	311,500	280,900	252,400	252,300
24	220,900	231,500	241,400	249,200	258,500	270,100	278,000	295,300	312,000	279,200	252,800	252,300
25	221,300	232,000	241,900	249,400	259,000	270,200	278,100	295,200	312,500	277,300	252,000	252,400
26	221,500	232,300	242,200	249,900	259,400	270,700	278,800	295,400	313,400	275,800	251,500	252,200
27	221,500	232,400	242,300	250,100	259,900	270,800	279,800	295,800	313,900	274,300	251,000	252,200
28	221,600	233,200	242,400	250,200	260,300	271,100	279,800	296,400	314,200	273,000	250,700	252,200
29	222,100	233,400	242,700	250,300	260,900	271,400	280,100	296,500	314,300	271,800	250,700	252,000
30	222,900	233,600	243,000	250,300	-----	271,700	280,900	296,300	314,300	270,700	250,600	252,000
31	222,900	-----	243,300	250,400	-----	272,000	-----	297,600	-----	270,200	250,400	-----
MAX	222,900	233,600	243,300	250,400	260,900	272,000	280,900	297,600	314,300	313,900	273,500	252,600
MIN	218,200	223,400	234,000	243,700	250,700	261,400	272,100	282,000	297,600	270,200	250,400	250,600
(†)	+4,800	+10,700	+9,700	+7,100	+10,500	+11,100	+8,900	+16,700	+16,700	-44,100	-19,800	+1,600
(‡)	1,935.52	1,936.56	1,937.50	1,938.17	1,939.15	1,940.16	1,940.95	1,942.39	1,943.78	1,940.00	1,938.17	1,938.32
CAL YR 1971	MAX 317,500		MIN 214,300		† +9,500							
WTR YR 1972	MAX 314,300		MIN 218,200		† +33,900							

† Change in contents, in acre-feet.

‡ Elevation, in feet, at end of month.

KANSAS RIVER BASIN

165

06849500 Republican River below Harlan County Dam, Nebr.

LOCATION.--Lat 40°04'45", long 99°10'05", in SW¹ 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.--19 years (1953-72), 325 cfs (235,500 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 732 cfs July 23 (gage height, 3.56 ft); minimum daily, 5.7 cfs Apr. 23-25.

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 since at least 1826 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 six upstream reservoirs. Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	16	10	9.4	10	10	9.2	7.5	8.3	324	227	25
2	9.2	16	10	9.8	9.5	7.0	9.5	6.6	8.1	431	189	23
3	8.9	13	10	9.6	9.1	8.5	9.5	6.8	8.2	486	111	21
4	8.9	13	9.9	8.0	8.6	9.9	9.8	6.8	7.7	545	17	21
5	9.4	12	9.9	8.5	9.0	10	10	6.3	8.1	591	12	18
6	10	12	10	8.6	10	10	8.0	9.1	8.4	677	28	18
7	10	12	11	9.0	9.0	9.5	9.5	8.1	8.9	716	24	15
8	11	12	10	9.5	10	9.3	11	7.3	9.9	713	89	17
9	10	12	11	10	9.6	9.3	11	7.3	8.1	715	170	17
10	10	12	9.9	10	9.2	9.3	9.9	6.8	8.1	715	175	14
11	12	12	10	10	9.4	9.3	9.4	6.8	27	535	178	14
12	12	12	11	11	9.8	9.2	10	8.3	33	629	215	12
13	11	12	12	10	11	8.9	10	7.3	8.5	694	254	11
14	11	13	12	9.0	12	9.2	9.9	6.0	7.4	690	297	11
15	11	12	11	8.4	11	8.7	11	6.0	6.8	694	352	9.3
16	11	15	10	8.8	10	9.1	12	6.7	6.8	681	438	8.8
17	10	15	12	9.6	9.9	8.5	11	7.3	152	673	510	10
18	12	9.4	11	11	9.8	8.9	9.9	6.5	212	666	542	10
19	12	10	11	11	10	11	8.9	6.6	197	664	582	10
20	11	9.9	12	12	9.8	9.2	8.9	7.2	27	664	624	16
21	11	9.9	13	11	10	8.6	6.6	7.7	19	664	628	9.8
22	11	9.4	10	10	11	8.6	6.1	7.9	18	655	642	9.4
23	11	8.9	12	10	11	9.4	5.7	9.3	18	660	619	9.2
24	10	9.4	10	9.4	11	8.8	5.7	8.9	65	655	486	7.9
25	10	10	11	8.9	10	9.3	5.7	9.2	158	610	321	7.4
26	10	10	10	8.5	11	9.5	7.4	8.4	158	582	233	7.5
27	10	10	9.6	8.0	11	8.6	7.8	8.2	150	529	195	6.7
28	10	11	9.8	8.0	11	9.2	7.2	6.9	150	424	107	6.9
29	12	10	9.9	8.8	11	9.6	6.8	6.7	215	338	31	6.2
30	16	10	9.4	9.2	-----	9.2	7.1	6.0	310	269	28	6.5
31	16	-----	9.4	9.5	-----	9.0	-----	6.9	-----	246	25	-----
TOTAL	336.6	348.9	327.8	294.5	293.7	284.6	264.5	227.4	2,022.3	18,135	8,349	378.6
MEAN	10.9	11.6	10.6	9.50	10.1	9.18	8.82	7.34	67.4	585	269	12.6
MAX	16	16	13	12	12	11	12	9.3	310	716	642	25
MIN	8.9	8.9	9.4	8.0	8.6	7.0	5.7	6.0	6.8	246	12	6.2
AC-FT	668	692	650	584	583	565	525	451	4,010	35,970	16,560	751

CAL YR 1971 TOTAL 42,698.1 MEAN 117 MAX 793 MIN 5.2 AC-FT 84,690
WTR YR 1972 TOTAL 31,262.9 MEAN 85.4 MAX 716 MIN 5.7 AC-FT 62,010

KANSAS RIVER BASIN

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. Annual maximums and occasional low-flow measurements, 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.--12 years (1948-56, 1968-72), 6.80 cfs (4,930 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 390 cfs June 18 (gage height, 3.84 ft); minimum daily, 4.4 cfs Aug. 15, 17.

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 fair except those for winter period, which are poor. Two small diversions above station for irrigation.

REVISIONS (WATER YEARS).--WSP 2119: 1963(M), 1965(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	6.0	6.8	6.2	5.2	7.1	5.7	6.6	6.3	5.5	5.1	5.1
2	5.1	6.1	7.0	6.2	5.0	7.1	5.5	6.3	6.0	5.6	5.1	5.4
3	5.1	6.0	7.2	6.0	4.8	7.2	5.5	6.5	6.5	5.6	4.7	5.1
4	5.1	6.0	6.8	5.5	4.6	7.6	5.7	6.5	6.5	5.2	4.8	5.4
5	5.1	6.3	6.6	5.0	4.7	7.5	5.4	6.6	6.3	5.1	4.8	5.6
6	5.5	6.2	6.7	6.0	5.0	7.0	5.5	7.4	6.2	5.0	4.5	5.4
7	5.6	6.3	6.7	7.0	5.5	7.2	5.6	7.2	6.3	4.8	4.8	5.4
8	5.5	6.0	6.7	6.8	6.0	7.8	5.7	7.0	6.3	4.5	4.9	5.2
9	5.6	6.0	6.3	6.8	5.8	7.2	6.3	6.8	6.1	5.0	5.1	5.4
10	5.6	6.2	6.3	6.8	5.5	7.1	6.5	6.7	6.3	5.2	5.1	5.2
11	5.5	6.7	6.6	6.7	6.0	6.8	6.5	6.5	8.4	5.2	4.6	5.2
12	5.4	6.0	6.3	6.8	6.5	7.1	6.3	6.7	6.8	5.1	4.7	5.1
13	5.2	6.0	6.1	6.8	6.1	7.2	7.0	6.2	7.0	4.7	4.8	5.0
14	5.2	6.0	6.0	6.4	6.1	7.2	7.1	6.7	7.0	4.6	4.8	5.1
15	5.5	6.7	6.1	6.0	6.0	7.2	7.5	6.6	6.8	4.9	4.4	5.1
16	5.7	5.8	6.1	6.4	6.0	7.4	7.0	6.5	7.0	4.8	4.8	5.2
17	6.0	5.7	6.2	6.8	6.1	7.0	7.1	6.5	7.5	4.7	4.4	5.1
18	6.5	5.6	6.1	6.3	6.5	6.7	6.8	6.5	11	4.6	5.1	5.1
19	6.2	6.5	6.0	6.1	6.0	6.7	7.2	6.7	7.0	4.7	4.9	5.2
20	6.0	6.3	6.2	6.3	6.0	6.6	7.0	6.6	6.5	4.6	5.0	5.7
21	6.3	6.2	6.2	6.1	6.2	6.3	7.1	6.3	6.5	4.5	5.1	5.1
22	6.3	6.7	6.0	6.0	6.6	6.2	7.1	6.1	6.2	4.5	5.0	5.1
23	6.3	6.5	5.8	5.6	6.7	5.8	6.6	6.6	6.1	4.5	5.0	5.2
24	6.1	6.2	5.7	5.6	6.7	6.1	6.6	6.8	6.0	4.6	5.6	5.4
25	6.0	6.6	5.4	8.4	6.6	6.0	6.8	6.6	5.8	4.7	5.1	5.4
26	5.8	6.5	5.4	5.5	6.8	5.6	7.0	6.6	6.1	4.8	5.0	5.4
27	6.1	6.7	6.0	5.0	6.5	5.6	6.8	6.8	5.5	5.2	4.9	5.1
28	5.7	6.3	5.8	5.2	6.6	5.8	6.6	6.8	5.6	5.0	4.9	5.2
29	6.3	6.5	5.7	5.5	6.3	6.0	6.5	6.5	5.5	4.7	5.1	5.6
30	6.1	6.7	5.6	5.8	-----	5.4	6.6	6.6	5.2	4.5	5.1	5.5
31	5.7	-----	5.7	5.5	-----	5.2	-----	6.3	-----	4.7	5.1	-----
TOTAL	177.2	187.3	192.1	191.1	172.4	206.7	194.6	205.9	196.3	151.1	152.3	158.0
MEAN	5.72	6.24	6.20	6.16	5.94	6.67	6.49	6.64	6.54	4.87	4.91	5.27
MAX	6.5	6.7	7.2	8.4	6.8	7.8	7.5	7.4	11	5.6	5.6	5.7
MIN	5.1	5.6	5.4	5.0	4.6	5.2	5.4	6.1	5.2	4.5	4.4	5.0
AC-FT	351	372	381	379	342	410	386	408	389	300	302	313

CAL YR 1971 TOTAL 2,123.9 MEAN 5.82 MAX 13 MIN 3.1 AC-FT 4,210
WTR YR 1972 TOTAL 2,185.0 MEAN 5.97 MAX 11 MIN 4.4 AC-FT 4,330

PEAK DISCHARGE (BASE, 35 CFS).--June 18 (2115) 390 cfs (3.84 ft).

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 (revised).--279 sq mi, of which about 190 sq mi contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956. Annual maximums, water years 1962-68 and occasional low-flow measurements, water years 1961-68. October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,753.38 ft above mean sea level. Apr. 1 to Oct. 1, 1948, non-recording gage 240 ft downstream at datum 2.32 ft higher. Oct. 1, 1948, to July 11, 1950, water-stage recorder at present site at datum 1.32 ft higher 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.--12 years (1948-56, 1968-72), 30.4 cfs (22,020 acre-ft per year); median of yearly mean discharges, 27 cfs (19,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, about 60 cfs May 27 (gage height, 3.57 ft); maximum gage height, 4.98 ft Jan. 27 (backwater from ice); minimum daily discharge, 17 cfs July 20-23, 26, 27, Sept. 18, 19. 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 fair except those for periods of no gage-height record, which are poor. Natural flow affected by irrigation development above station.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	22	21	21	24	22	24	22	18	28	21
2	20	20	22	21	19	23	22	24	22	19	27	21
3	19	20	22	20	19	23	22	24	22	19	54	20
4	19	20	22	19	18	23	22	24	21	19	35	20
5	20	20	22	18	19	23	22	24	21	19	21	20
6	18	19	22	19	20	23	22	25	20	19	20	20
7	18	19	22	20	21	23	22	25	21	20	19	19
8	18	19	22	20	23	22	22	25	20	22	19	19
9	18	19	22	21	22	22	22	25	20	23	20	19
10	20	19	23	21	23	22	23	25	20	23	19	20
11	19	20	22	22	22	23	23	26	24	21	19	18
12	19	21	22	22	24	23	23	26	31	23	21	18
13	18	21	22	22	24	22	23	26	23	19	20	18
14	18	22	23	20	24	23	23	26	23	18	20	19
15	20	21	22	21	24	22	23	26	20	19	19	18
16	20	23	22	22	24	22	23	25	20	18	18	18
17	20	27	22	25	24	23	23	24	21	19	18	18
18	23	24	22	25	24	22	23	24	23	19	18	17
19	21	23	22	24	24	22	23	23	26	19	19	17
20	20	22	21	24	24	22	23	23	20	17	19	19
21	20	22	21	23	24	22	23	22	20	17	19	18
22	19	22	22	22	24	21	23	22	20	17	18	18
23	19	21	22	22	24	21	23	28	19	17	19	18
24	19	21	22	23	24	21	23	25	19	18	32	18
25	19	22	21	24	24	21	24	24	18	18	31	19
26	20	22	21	24	24	20	24	23	20	17	20	19
27	19	22	21	24	24	20	24	32	19	17	19	19
28	19	22	21	24	24	21	24	24	18	20	20	19
29	20	22	22	23	24	21	24	24	18	23	20	19
30	23	22	21	22	-----	21	24	23	18	23	21	19
31	21	-----	21	22	-----	22	-----	23	-----	24	21	-----
TOTAL	605	638	676	680	659	683	687	764	629	604	693	565
MEAN	19.5	21.3	21.8	21.9	22.7	22.0	22.9	24.6	21.0	19.5	22.4	18.8
MAX	23	27	23	25	24	24	24	32	31	24	54	21
MIN	18	19	21	18	18	20	22	22	18	17	18	17
AC-FT	1,200	1,270	1,340	1,350	1,310	1,350	1,360	1,520	1,250	1,200	1,370	1,120

CAL YR 1971 TOTAL 9,395 MEAN 25.7 MAX 565 MIN 16 AC-FT 18,630
WTR YR 1972 TOTAL 7,883 MEAN 21.5 MAX 54 MIN 17 AC-FT 15,640

PEAK DISCHARGE (BASE, 280 CFS).--No peak above base.

NOTE.--No gage-height record Jan. 9, 10, Jan. 29 to Feb. 7, Feb. 9, Mar. 21 to Apr. 2, Apr. 4-16, Apr. 18 to May 1, May 3-14.

KANSAS RIVER BASIN

06852500 Courtland Canal at Nebraska-Kansas State line

LOCATION.--Lat 40°00'15", long 98°07'55", in SW¹SE¹ sec.32, T.1 N., R.7 W., Nuckolls County, Nebr., 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.--18 years, 72.4 cfs (52,450 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 565 cfs July 11 (gage height, 4.10 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56							0	97	124	149	48
2	62							0	92	153	127	42
3	61							0	86	166	100	42
4	58							0	83	265	90	42
5	58							20	77	328	91	41
6	56							66	70	384	90	38
7	55							66	68	444	71	20
8	55							76	66	516	59	34
9	52							52	65	540	58	43
10	52							52	58	538	58	34
11	56							60	58	540	59	7.1
12	56							71	72	536	58	0
13	55							69	115	460	57	0
14	54							66	138	502	75	0
15	56							77	121	520	107	0
16	58							76	90	512	120	0
17	60							64	77	516	164	0
18	66							66	77	522	233	0
19	68							64	103	526	287	0
20	68							61	133	522	332	0
21	68							55	139	512	382	0
22	80							53	167	484	402	0
23	77							63	167	482	400	0
24	75							68	136	486	386	0
25	68							110	126	472	324	0
26	54							110	100	446	217	0
27	34							118	101	432	176	0
28	0							118	118	396	125	0
29	0							115	122	303	88	0
30	0							114	115	220	75	0
31	0	-----			-----		-----	106	-----	164	57	-----
TOTAL	1,618	0	0	0	0	0	0	2,036	3,037	13,011	5,017	391.1
MEAN	52.2	0	0	0	0	0	0	65.7	101	420	162	13.0
MAX	80	0	0	0	0	0	0	118	167	540	402	48
MIN	0	0	0	0	0	0	0	0	58	124	57	0
AC-FT	3,210	0	0	0	0	0	0	4,040	6,020	25,810	9,950	776
CAL YR 1971	TOTAL 34,324.00		MEAN 94.0	MAX 542	MIN 0	AC-FT 68,080						
WTR YR 1972	TOTAL 25,110.10		MEAN 68.6	MAX 540	MIN 0	AC-FT 49,810						

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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.

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.--22 years, 411 cfs (297,800 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 2,930 cfs July 11 (gage height, 13.03 ft); minimum daily, 1.3 cfs Oct. 22.

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 since at least 1826 occurred June 1 or 2, 1935 (discharge, about 250,000 cfs, from slope-area measurements near Bloomington and Hardy).

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station, by regulation of upstream reservoirs, and since Nov. 14, 1952, by storage in Harlan County Lake. (See sta 06849000.) Records of chemical analyses for the water year 1972 are published in Part 2 of this report.

REVISIONS.--WSP 2119: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	145	116	95	80	106	110	160	6.5	8.7	204	126
2	3.3	123	110	95	75	102	109	135	6.2	9.6	238	139
3	3.0	118	107	90	70	105	106	69	5.6	25	391	111
4	2.3	120	107	78	70	108	102	48	5.6	26	374	87
5	2.4	120	101	80	74	107	101	21	5.9	53	210	76
6	3.4	110	99	85	80	112	106	127	6.6	25	113	104
7	3.0	112	97	90	70	113	107	166	6.3	18	89	128
8	3.0	114	95	95	73	108	107	90	6.1	14	88	114
9	2.5	135	86	100	75	107	107	23	6.0	5.8	45	118
10	2.2	128	103	100	70	107	110	22	6.3	12	73	122
11	2.4	125	97	96	72	110	112	35	7.7	1,740	128	117
12	2.6	120	93	92	75	110	112	98	12	405	110	128
13	2.7	115	101	90	90	110	109	138	42	49	103	106
14	2.5	110	110	80	120	112	104	88	40	68	70	106
15	2.2	105	103	75	140	113	106	30	10	3.5	19	106
16	2.4	109	99	80	138	107	112	11	9.2	3.8	6.4	104
17	2.5	155	91	95	126	107	123	15	8.5	47	2.0	98
18	2.0	138	95	105	144	106	124	6.9	7.8	26	29	89
19	1.8	127	101	110	142	107	119	3.8	365	28	31	85
20	1.5	117	99	100	152	96	118	2.8	858	11	35	101
21	1.4	112	95	94	153	110	120	1.8	178	2.9	82	102
22	1.3	112	97	86	132	106	122	2.6	47	4.1	79	100
23	1.5	112	99	80	131	104	122	209	4.7	12	89	85
24	1.4	115	99	74	123	109	115	90	4.8	75	180	84
25	50	116	98	68	120	112	114	26	4.9	59	526	84
26	93	117	101	60	117	111	122	5.0	6.8	74	327	86
27	96	114	83	52	123	107	137	45	34	45	229	87
28	94	115	85	56	119	105	135	78	31	149	206	87
29	95	118	90	60	117	103	132	21	12	206	198	85
30	122	116	90	65	-----	104	122	10	7.6	205	161	86
31	139	-----	92	70	-----	108	-----	6.9	-----	192	124	-----
TOTAL	745.1	3,593	3,039	2,596	3,071	3,332	3,445	1,784.8	1,752.1	3,602.4	4,559.4	3,051
MEAN	24.0	120	98.0	83.7	106	107	115	57.6	58.4	116	147	102
MAX	139	155	116	110	153	113	137	209	858	1,740	526	139
MIN	1.3	105	83	52	70	96	101	1.8	4.7	2.9	2.0	76
AC-FT	1,480	7,130	6,030	5,150	6,090	6,610	6,830	3,540	3,480	7,150	9,040	6,050
CAL YR 1971	TOTAL	35,237.7	MEAN	96.5	MAX	2,890	MIN	1.3	AC-FT	69,890		
WTR YR 1972	TOTAL	34,570.8	MEAN	94.5	MAX	1,740	MIN	1.3	AC-FT	68		

KANSAS RIVER BASIN

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.--41 years (1913-14, 1932-72), 645 cfs (467,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,940 cfs July 12 (gage height, 7.08 ft); minimum, 23 cfs Oct. 1, 2, 12-14.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	140	152	160	105	145	119	281	84	57	294	193
2	32	142	150	155	100	142	118	240	77	58	285	183
3	30	133	148	125	95	140	115	191	70	70	465	185
4	28	129	150	115	90	140	116	133	67	70	648	174
5	26	127	150	110	90	138	115	110	64	90	480	153
6	25	129	148	115	90	138	115	111	60	87	287	144
7	28	127	145	120	95	140	119	142	54	84	165	161
8	26	133	142	125	95	135	113	197	50	76	125	168
9	24	135	140	130	95	133	113	169	48	76	116	182
10	32	135	142	135	95	131	114	124	45	65	105	218
11	32	135	148	145	100	131	115	115	46	73	104	182
12	26	133	148	140	100	127	115	164	52	1,310	149	162
13	23	135	145	125	100	129	114	224	53	538	132	158
14	24	135	155	110	105	129	113	236	90	189	142	142
15	24	140	155	105	110	126	116	172	97	175	119	133
16	26	140	150	110	125	125	126	132	69	132	104	133
17	26	170	148	125	145	125	127	106	57	131	84	123
18	44	188	145	145	170	125	132	95	54	145	84	119
19	38	178	150	160	210	124	132	91	158	139	87	115
20	30	165	150	150	240	121	129	82	407	125	99	113
21	29	158	150	135	230	126	138	78	718	110	117	125
22	29	150	145	120	215	126	139	75	274	101	104	127
23	28	150	145	105	178	124	136	126	149	99	107	127
24	29	150	142	95	170	127	130	304	97	146	125	123
25	29	150	142	90	165	133	126	238	80	176	254	117
26	40	148	142	85	158	134	146	163	75	190	485	117
27	95	148	142	80	150	132	163	154	76	193	405	113
28	109	152	135	80	148	125	166	231	65	203	313	113
29	117	158	145	85	148	121	164	203	80	449	259	111
30	131	155	168	90	-----	120	166	128	66	395	269	113
31	135	-----	165	95	-----	119	-----	96	-----	316	237	-----
TOTAL	1,340	4,368	4,582	3,665	3,917	4,031	3,850	4,911	3,382	6,068	6,749	4,327
MEAN	43.2	146	148	118	135	130	128	158	113	196	218	144
MAX	135	188	168	160	240	145	166	304	718	1,310	648	218
MIN	23	127	135	80	90	119	113	75	45	57	84	111
AC-FT	2,660	8,660	9,090	7,270	7,770	8,000	7,640	9,740	6,710	12,040	13,390	8,580

CAL YR 1971 TOTAL 58,770 MEAN 161 MAX 4,160 MIN 23 AC-FT 116,600
WTR YR 1972 TOTAL 51,190 MEAN 140 MAX 1,310 MIN 23 AC-FT 101,500

PEAK DISCHARGE (REGULATED) ABOVE 2,500 CFS.--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

171

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 1965, published as North Branch Big Blue River at Surprise.

GAGE.--Water-stage recorder and concrete broad-crested weir control. Altitude of gage is 1,520 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 32.9 cfs (23,840 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,540 cfs July 12 (gage height, 10.17 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 in most years.

REMARKS.--Records good above 5 cfs and fair below.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	30	8.6	2.6	4.2	.32
2							0	24	5.2	5.0	4.2	.32
3							0	18	2.2	2.0	3.9	.32
4							0	19	1.8	1.4	3.1	.44
5							0	43	1.4	.71	3.1	.73
6							0	177	1.1	.76	2.8	.93
7							0	40	.58	1.0	2.6	.82
8							0	42	.44	.88	2.4	.64
9							0	34	.44	.13	2.0	.58
10							0	25	.44	.26	1.8	.58
11							0	16	.44	19	1.8	.57
12							0	40	.44	2,180	2.6	.54
13							0	49	.32	2,110	2.6	.57
14							0	48	.32	461	3.1	.67
15							0	65	.15	79	3.0	.53
16							0	38	.03	37	1.4	.55
17							0	21	.06	23	1.6	.58
18							0	9.4	.06	15	2.4	.42
19							0	4.9	9.7	14	2.6	.31
20							0	2.9	489	14	2.4	268
21							0	2.1	288	7.4	1.6	285
22							0	1.9	100	3.7	1.6	32
23							0	8.7	37	2.2	2.0	18
24							0	56	22	1.8	1.4	9.6
25							0	46	12	3.9	1.2	6.8
26							0	78	7.4	22	2.2	3.6
27							0	58	6.0	22	1.4	2.2
28							0	34	9.1	28	.89	1.6
29							.05	31	8.1	12	.89	1.3
30							.26	21	5.2	5.9	1.1	1.0
31								12		4.4	.58	
TOTAL	0	0	0	0	0	0	.31	1,094.9	1,017.52	5,080.04	68.46	639.52
MEAN	0	0	0	0	0	0	.010	35.3	33.9	164	2.21	21.3
MAX	0	0	0	0	0	0	.26	177	489	2,180	4.2	285
MIN	0	0	0	0	0	0	0	1.9	.03	.13	.58	.31
AC-FT	0	0	0	0	0	0	.6	2,170	2,020	10,080	136	1,270

CAL YR 1971 TOTAL 14,612.79 MEAN 40.0 MAX 2,460 MIN 0 AC-FT 28,980
WTR YR 1972 TOTAL 7,900.75 MEAN 21.6 MAX 2,180 MIN 0 AC-FT 15,670

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-6	0115	3.48	352	7-12	1730	10.17	3,540
6-20	1915	4.37	643	9-20	2330	5.01	713

KANSAS RIVER BASIN

06880000 Lincoln Creek near Seward, Nebr.

LOCATION.--Lat 40°54'57", long 97°08'43", in NW1/4 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.--19 years, 46.1 cfs (33,400 acre-ft per year); median of yearly mean discharges, 44 cfs (31,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 477 cfs July 27 (gage height, 11.14 ft); minimum daily, 2.9 cfs Oct. 3.

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, which are poor. Small diversions for irrigation above station.

REVISIONS.--WSP 2119: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	6.6	6.3	5.4	8.0	14	6.6	62	27	8.4	31	11
2	5.1	6.1	6.1	5.0	7.0	13	6.5	66	19	8.3	22	9.9
3	2.9	5.8	6.3	4.5	5.0	14	6.5	24	16	8.1	16	9.3
4	4.2	5.2	6.7	4.0	4.8	15	6.7	17	14	7.8	14	8.5
5	4.4	5.1	8.1	5.0	5.4	16	6.7	14	13	7.8	12	7.8
6	4.3	5.4	6.7	5.6	5.8	23	6.9	33	12	6.7	11	7.8
7	5.2	5.1	6.6	7.0	6.0	17	7.0	141	12	5.9	11	7.4
8	6.0	5.0	6.8	9.0	6.2	16	6.9	78	11	7.0	11	6.8
9	5.0	5.4	6.0	9.6	6.4	8.5	7.1	31	11	7.8	10	6.5
10	4.2	5.6	6.4	10	6.8	8.0	7.0	28	10	8.8	9.9	6.2
11	5.0	5.4	6.0	9.6	7.6	8.1	7.2	33	9.7	10	9.6	6.3
12	5.1	5.6	5.4	8.0	8.8	8.0	7.5	43	10	13	8.9	6.4
13	4.9	6.1	5.6	6.0	10	7.8	7.7	123	10	25	8.1	6.0
14	5.0	5.6	6.0	3.5	11	7.6	7.3	101	10	22	8.0	4.9
15	5.2	5.6	6.6	3.9	12	7.6	7.1	103	9.9	16	8.0	4.1
16	5.6	5.6	6.2	4.5	13	7.1	7.9	114	9.9	26	7.0	5.1
17	5.4	8.4	5.6	5.2	12	7.0	7.6	65	10	18	5.4	5.2
18	6.6	9.1	5.8	6.0	11	7.1	6.9	39	10	16	4.6	5.2
19	7.9	7.0	6.2	5.6	10	7.4	7.1	33	12	11	5.9	5.2
20	6.1	5.6	6.6	5.0	9.0	7.2	7.5	32	20	10	7.3	5.2
21	5.3	5.4	6.0	4.4	8.2	7.9	9.6	26	15	9.7	9.6	6.0
22	5.5	5.9	6.6	4.8	8.4	7.8	9.1	21	21	8.9	9.1	159
23	5.4	5.9	7.4	4.6	8.6	6.9	8.4	19	15	7.5	10	106
24	5.5	6.0	7.0	4.0	9.0	6.8	7.8	58	12	7.0	10	73
25	5.7	6.1	7.2	3.5	10	6.8	7.6	78	9.4	9.1	14	51
26	6.4	6.2	6.2	3.4	12	6.9	8.7	27	8.9	112	17	31
27	9.2	6.7	5.0	3.3	15	6.6	12	35	8.6	407	13	21
28	7.1	6.8	4.5	3.0	19	6.4	11	21	8.8	380	12	16
29	7.0	7.1	4.8	3.5	16	6.4	12	22	8.6	191	12	13
30	9.2	6.9	5.2	4.5	-----	6.6	14	41	8.4	103	11	11
31	8.7	-----	5.6	6.0	-----	6.6	-----	48	-----	51	11	-----
TOTAL	177.8	182.3	191.5	167.4	272.0	295.1	241.9	1,576	372.2	1,529.8	349.4	621.8
MEAN	5.74	6.08	6.18	5.40	9.38	9.52	8.06	50.8	12.4	49.3	11.3	20.7
MAX	9.2	9.1	8.1	10	19	23	14	141	27	407	31	159
MIN	2.9	5.0	4.5	3.0	4.8	6.4	6.5	14	8.4	5.9	4.6	4.1
AC-FT	353	362	380	332	540	585	480	3,130	738	3,030	693	1,230

CAL YR 1971 TOTAL 16,548.4 MEAN 45.3 MAX 1,400 MIN 2.8 AC-FT 32,820
WTR YR 1972 TOTAL 5,977.2 MEAN 16.3 MAX 407 MIN 2.9 AC-FT 11,860

PEAK DISCHARGE (BASE, 350 CFS).--July 27 (2330) 477 cfs (11.14 ft).

KANSAS RIVER BASIN

173

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.--19 years, 112 cfs (81,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,780 cfs July 15 (gage height, 14.89 ft); minimum daily, 6.9 cfs Oct. 6, 11.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	15	12	13	12	16	17	326	190	17	88	18
2	8.1	14	12	13	11	15	17	153	135	16	59	18
3	7.2	13	13	11	10	16	16	246	87	16	44	16
4	7.0	12	13	11	10	15	15	220	60	14	36	16
5	7.2	12	12	12	9.8	16	15	136	47	14	33	14
6	6.9	11	13	13	9.6	17	15	234	40	12	30	14
7	7.0	11	13	14	9.4	18	14	388	35	10	26	14
8	8.3	10	13	14	9.4	16	14	500	35	9.9	27	13
9	7.0	10	12	15	9.2	16	14	268	30	10	24	13
10	7.4	10	14	14	9.0	15	14	180	28	8.2	24	13
11	6.9	10	12	13	9.8	16	14	151	62	12	20	13
12	7.7	9.8	11	13	11	16	17	193	185	13	17	12
13	8.6	10	12	13	13	18	16	429	70	42	15	13
14	8.6	10	12	10	17	17	15	358	37	869	13	12
15	11	9.8	12	10	23	17	15	356	29	1,590	13	11
16	9.0	10	12	11	27	16	15	226	29	1,320	12	20
17	8.8	19	12	13	32	16	14	168	25	212	9.9	20
18	10	16	11	14	27	17	12	134	23	111	9.5	16
19	10	14	11	14	22	17	14	102	34	75	9.2	15
20	10	12	11	13	20	17	15	78	93	55	9.8	15
21	8.6	12	11	14	22	19	20	62	204	42	12	13
22	9.6	11	10	14	21	19	20	48	515	40	11	396
23	9.6	11	11	14	17	19	18	46	396	32	12	551
24	9.6	12	12	13	18	18	16	77	177	24	13	232
25	10	12	12	11	16	18	15	147	84	38	18	129
26	10	12	12	8.2	20	21	28	185	50	113	24	76
27	15	12	11	9.0	18	21	32	374	39	424	19	50
28	12	12	13	10	17	20	30	320	31	408	18	37
29	13	13	13	11	17	19	26	193	23	240	19	29
30	16	13	14	12	-----	17	41	253	18	167	19	23
31	17	-----	13	13	-----	17	-----	252	-----	125	18	-----
TOTAL	294.5	358.6	375	383.2	467.2	535	544	6,803	2,811	6,079.1	702.4	1,832
MEAN	9.50	12.0	12.1	12.4	16.1	17.3	18.1	219	93.7	196	22.7	61.1
MAX	17	19	14	15	32	21	41	500	515	1,590	88	551
MIN	6.9	9.8	10	8.2	9.0	15	12	46	18	8.2	9.2	11
AC-FT	584	711	744	760	927	1,060	1,080	13,490	5,580	12,060	1,390	3,630

CAL YR 1971 TOTAL 57,922.9 MEAN 159 MAX 6,240 MIN 5.5 AC-FT 114,900
WTR YR 1972 TOTAL 21,185.0 MEAN 57.9 MAX 1,590 MIN 6.9 AC-FT 42,020

PEAK DISCHARGE (BASE, 900 CFS).--July 15 (2200) 1,780 cfs (14.89 ft).

KANSAS RIVER BASIN

06880800 West Fork Big Blue River near Dorchester, Nebr.

LOCATION.--Lat 40°43'52", long 97°10'38", in SW 1/4 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.--14 years, 178 cfs (129,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,380 cfs July 13 (gage height, 16.88 ft); minimum daily, 32 cfs Jan. 27, 28.

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 fair 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	58	52	48	54	61	53	280	104	52	524	92
2	41	57	51	47	52	58	53	179	92	59	462	93
3	41	52	50	46	50	60	53	143	87	59	450	90
4	44	50	50	45	50	62	53	116	83	115	361	91
5	44	50	51	44	49	58	52	109	77	65	295	89
6	42	50	50	46	48	59	51	118	74	49	312	86
7	40	51	49	50	48	60	50	118	70	48	288	84
8	39	52	50	52	48	60	48	108	70	46	243	81
9	40	53	47	54	47	60	51	98	64	47	183	76
10	40	52	50	54	47	60	52	104	66	46	154	73
11	41	51	50	50	46	60	50	115	67	518	136	68
12	42	51	48	41	50	60	50	173	65	3,610	124	64
13	39	56	47	37	60	59	50	284	65	3,510	112	62
14	38	58	50	36	66	60	48	338	65	1,480	102	62
15	39	58	51	35	70	60	50	280	65	428	92	61
16	39	58	48	37	74	59	49	268	65	277	89	61
17	39	71	47	40	76	57	50	223	74	208	82	60
18	44	73	47	42	72	58	47	182	132	175	80	61
19	46	69	49	40	68	57	52	171	132	157	83	56
20	42	66	50	39	63	57	52	144	166	146	102	56
21	42	59	49	38	58	56	58	121	159	125	104	54
22	42	55	48	37	57	56	58	104	202	117	102	57
23	42	54	47	35	56	54	56	133	171	113	104	169
24	41	53	48	35	59	54	56	239	151	109	113	170
25	40	55	48	34	56	57	54	118	127	104	124	168
26	41	58	48	33	57	57	67	133	97	249	121	155
27	44	56	47	32	56	53	90	165	87	428	118	127
28	43	55	46	32	59	52	72	257	75	615	117	96
29	46	55	60	40	59	53	77	153	66	1,090	113	80
30	56	53	56	50	-----	53	82	134	58	1,480	102	72
31	56	-----	53	56	-----	53	-----	116	-----	899	94	-----
TOTAL	1,314	1,689	1,537	1,305	1,655	1,783	1,684	5,224	2,876	16,424	5,486	2,614
MEAN	42.4	56.3	49.6	42.1	57.1	57.5	56.1	169	95.9	530	177	87.1
MAX	56	73	60	56	76	62	90	338	202	3,610	524	170
MIN	38	50	46	32	46	52	47	98	58	46	80	54
AC-FT	2,610	3,350	3,050	2,590	3,280	3,540	3,340	10,360	5,700	32,580	10,880	5,180

CAL YR 1971 TOTAL 58,081 MEAN 159 MAX 3,230 MIN 38 AC-FT 115,200
WTR YR 1972 TOTAL 43,591 MEAN 119 MAX 3,610 MIN 32 AC-FT 86,460

PEAK DISCHARGE (BASE, 1,500 CFS).--July 13 (0030) 4,380 cfs (16.88 ft); July 30 (1000) 1,550 cfs (11.50 ft).

KANSAS RIVER BASIN

175

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.--19 years (1953-72), 347 cfs (251,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,860 cfs July 14 (gage height, 18.20 ft); minimum daily, 52 cfs Jan. 14.

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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	96	88	102	73	105	86	1,240	339	98	947	134
2	65	98	86	87	78	98	85	1,120	294	87	633	134
3	64	95	86	98	80	103	85	566	256	83	573	128
4	64	89	86	88	76	95	85	385	228	71	511	126
5	67	85	85	84	80	100	84	353	207	106	417	123
6	66	82	86	92	82	98	83	335	182	74	362	121
7	64	81	85	86	82	98	83	444	165	62	362	120
8	64	82	85	85	73	96	82	460	151	57	337	116
9	63	84	72	88	82	98	84	519	140	54	284	114
10	63	84	97	92	73	96	84	398	131	57	228	111
11	63	83	85	94	74	95	84	307	125	108	191	107
12	64	82	72	86	72	95	85	410	132	698	163	103
13	64	82	60	66	73	95	84	881	220	2,850	150	99
14	63	85	94	52	76	95	85	821	213	3,450	134	99
15	63	89	103	56	78	95	83	694	153	1,950	109	100
16	65	91	90	64	90	100	86	614	141	1,590	95	96
17	66	121	83	68	103	97	84	530	134	1,350	88	94
18	78	128	73	75	100	91	82	444	134	493	80	96
19	78	118	109	79	109	90	85	353	183	316	80	97
20	78	106	89	85	105	90	97	296	197	258	90	99
21	77	100	85	84	110	97	102	251	238	219	107	99
22	75	94	95	79	112	94	98	218	307	173	109	97
23	74	90	96	85	105	92	95	203	556	148	101	243
24	72	88	89	80	105	89	94	369	500	159	103	574
25	72	87	90	80	104	87	92	382	335	140	130	380
26	74	88	88	82	100	86	98	301	243	171	156	330
27	84	90	55	64	105	89	128	585	182	538	157	264
28	80	91	81	72	115	88	178	632	151	922	156	225
29	87	93	92	84	119	88	150	634	134	1,100	150	181
30	95	89	102	82	-----	87	142	402	116	1,370	142	154
31	95	-----	94	78	-----	88	-----	353	-----	1,520	147	-----
TOTAL	2,213	2,771	2,681	2,497	2,634	2,915	2,873	15,500	6,487	20,272	7,292	4,764
MEAN	71.4	92.4	86.5	80.5	90.8	94.0	95.8	500	216	654	235	159
MAX	95	128	109	102	119	105	178	1,240	556	3,450	947	574
MIN	63	81	55	52	72	86	82	203	116	54	80	94
AC-FT	4,390	5,500	5,320	4,950	5,220	5,780	5,700	30,740	12,870	40,210	14,460	9,450

CAL YR 1971 TOTAL 139,509 MEAN 382 MAX 7,870 MIN 55 AC-FT 276,700
WTR YR 1972 TOTAL 72,899 MEAN 199 MAX 3,450 MIN 52 AC-FT 144,600

PEAK DISCHARGE (BASE, 3,000 CFS).--July 14 (0500) 3,860 cfs (18.20 ft).

KANSAS RIVER BASIN

06881200 Turkey Creek near Wilber, Nebr.

LOCATION.--Lat 40°28'48", long 97°00'43", in NE¹/₄ 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.--13 years, 77.9 cfs (56,440 acre-ft per year); median of yearly mean discharges, 50 cfs (36,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,480 cfs July 14 (gage height, 13.15 ft); minimum daily, 0.65 cfs Oct. 5, 8.

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 1972 are published in Part 2 of this report.

REVISIONS.--WSP 1919: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	7.6	5.6	6.0	2.2	9.2	7.1	352	22	6.5	65	13
2	.85	6.1	5.6	5.2	2.1	8.8	7.2	646	20	6.1	46	12
3	.80	5.3	5.5	3.5	1.9	9.2	7.3	385	17	5.1	41	11
4	.70	5.2	5.5	3.4	2.2	8.4	7.2	306	17	4.9	38	11
5	.65	4.7	5.5	3.5	2.6	8.8	7.1	167	16	3.8	36	9.9
6	.75	4.6	5.4	4.0	3.1	9.2	7.0	90	16	3.3	43	8.5
7	.80	4.1	5.7	4.1	4.0	10	7.0	159	14	3.6	64	7.8
8	.65	3.8	5.7	4.1	4.5	11	7.1	141	14	4.5	46	6.9
9	.80	3.8	5.1	4.1	5.0	10	7.8	64	14	4.3	40	7.0
10	.85	3.7	5.5	4.5	5.6	9.6	7.2	51	13	3.9	27	7.2
11	.85	3.5	5.2	4.6	6.2	9.4	7.2	44	13	62	21	6.4
12	.85	3.7	4.5	4.1	6.8	10	7.3	141	13	604	17	5.9
13	1.4	4.0	5.0	2.5	8.2	8.5	7.3	417	13	1,050	15	5.5
14	1.3	3.8	6.1	1.1	7.8	7.8	7.2	487	14	1,020	15	5.1
15	1.1	3.7	5.6	1.2	7.6	7.7	7.2	585	19	156	15	4.9
16	1.2	3.8	5.2	1.2	7.8	7.5	7.2	419	16	92	17	4.7
17	1.3	8.8	5.0	1.2	8.4	7.3	5.4	165	13	64	14	4.7
18	2.2	13	5.6	1.6	9.4	7.3	6.5	83	12	46	12	4.7
19	2.9	13	6.1	2.4	11	7.3	7.0	52	12	37	9.5	3.8
20	2.5	10	5.3	2.1	13	7.1	8.1	38	12	30	10	3.8
21	3.5	7.7	5.6	2.0	12	7.6	10	30	13	27	11	4.0
22	2.9	6.1	6.0	2.3	11	7.0	9.0	26	10	24	12	3.8
23	2.4	6.8	6.2	2.4	9.5	7.4	8.7	24	9.8	24	13	3.7
24	2.4	6.2	6.2	2.3	9.0	7.5	8.3	28	9.6	29	18	3.7
25	2.3	5.8	6.0	2.2	10	7.3	7.5	54	9.3	28	27	3.5
26	2.7	5.6	5.8	2.1	9.4	7.2	14	28	8.9	28	25	3.3
27	4.1	5.5	4.3	2.1	12	7.2	66	23	8.2	53	19	3.3
28	3.7	5.5	4.7	2.0	9.8	7.2	76	45	8.0	172	18	4.1
29	4.7	5.4	5.4	2.1	9.8	7.2	40	41	7.6	261	20	3.3
30	8.0	5.4	5.9	2.2	-----	6.9	19	28	7.6	180	18	3.4
31	6.7	-----	7.4	2.2	-----	6.8	-----	21	-----	103	16	-----
TOTAL	67.15	176.2	172.2	88.3	211.9	253.4	400.9	5,140	392.0	4,136.0	788.5	179.9
MEAN	2.17	5.87	5.55	2.85	7.31	8.17	13.4	166	13.1	133	25.4	6.00
MAX	8.0	13	7.4	6.0	13	11	76	646	22	1,050	65	13
MIN	.65	3.5	4.3	1.1	1.9	6.8	5.4	21	7.6	3.3	9.5	3.3
AC-FT	133	349	342	175	420	503	795	10,200	778	8,200	1,560	357

CAL YR 1971 TOTAL 28,556.85 MEAN 78.2 MAX 2,150 MIN .65 AC-FT 56,640
WTR YR 1972 TOTAL 12,006.45 MEAN 32.8 MAX 1,050 MIN .65 AC-FT 23,810

PEAK DISCHARGE (BASE, 1,000 CFS).--July 14 (0830) 1,480 cfs (13.15 ft).

KANSAS RIVER BASIN

177

06882000 Big Blue River at Barneston, Nebr.

LOCATION.--Lat 40°03'11", long 96°35'16", in SE 1/4 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.--40 years, 755 cfs (547,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,720 cfs May 14 (gage height, 8.27 ft); minimum daily, 28 cfs Feb. 4.

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	257	91	48	179	48	53	863	637	306	1,850	344
2	85	427	74	242	54	248	58	2,980	473	76	1,430	92
3	87	303	270	147	95	49	256	2,730	505	82	1,030	351
4	85	362	69	78	28	291	51	1,450	437	86	860	88
5	76	220	73	74	33	59	193	930	417	90	760	417
6	83	76	310	74	122	213	56	820	421	313	725	68
7	84	73	77	239	49	230	270	920	389	90	592	299
8	85	74	223	62	127	53	49	1,080	316	94	485	517
9	83	192	64	188	59	162	55	974	351	92	545	306
10	80	94	253	62	59	214	199	825	323	90	469	320
11	71	182	45	274	121	51	116	1,060	78	94	477	81
12	104	77	48	63	52	54	32	389	101	264	362	362
13	76	93	274	229	103	185	260	2,760	437	206	86	78
14	77	76	49	80	53	164	40	3,310	86	2,720	433	78
15	205	200	249	83	161	56	210	1,890	377	3,510	99	348
16	73	74	43	83	56	261	40	1,550	425	2,560	334	79
17	71	738	198	188	195	54	218	1,330	373	1,880	95	86
18	71	618	46	46	209	246	45	962	78	1,650	99	292
19	71	442	50	176	57	59	262	780	334	1,050	327	79
20	73	380	310	57	211	256	46	700	409	682	88	86
21	95	200	46	181	209	168	241	557	81	465	92	101
22	325	220	267	63	225	58	177	429	362	413	97	397
23	77	80	46	64	162	237	123	517	103	302	292	74
24	71	288	50	216	208	57	173	489	461	348	92	73
25	66	77	229	91	193	197	301	485	583	355	513	94
26	80	81	48	152	244	56	46	541	521	90	875	646
27	71	87	285	57	43	235	258	633	505	365	646	323
28	91	260	56	84	214	56	423	441	377	251	469	485
29	288	71	62	38	236	222	689	825	385	775	101	425
30	183	285	299	94	-----	56	500	880	97	1,380	413	81
31	78	-----	45	53	-----	244	-----	735	-----	1,550	348	-----
TOTAL	3,300	6,607	4,249	3,586	3,757	4,539	5,440	34,835	10,442	22,229	15,084	7,070
MEAN	106	220	137	116	130	146	181	1,124	348	717	487	236
MAX	325	738	310	274	244	291	689	3,310	637	3,510	1,850	646
MIN	66	71	43	38	28	48	32	389	78	76	86	68
AC-FT	6,550	13,100	8,430	7,110	7,450	9,000	10,790	69,100	20,710	44,090	29,920	14,020

CAL YR 1971 TOTAL 268,985 MEAN 737 MAX 9,420 MIN 38 AC-FT 533,500
WTR YR 1972 TOTAL 121,138 MEAN 331 MAX 3,510 MIN 28 AC-FT 240,300

PEAK DISCHARGE (BASE, 10,000 CFS).--No peak above base.

KANSAS RIVER BASIN

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 September 1972 (discontinued).

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.--19 years, 148 cfs (107,200 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,740 cfs Aug. 3 (gage height, 9.55 ft); minimum daily, 23 cfs July 23.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	53	51	56	60	53	57	76	113	59	1,520	42
2	48	50	51	54	56	54	58	68	97	56	2,320	42
3	44	48	53	52	45	53	58	66	89	51	2,440	39
4	43	50	54	45	44	53	56	64	82	50	1,320	35
5	43	50	52	32	45	53	58	66	78	48	706	35
6	44	47	52	36	46	54	59	130	73	45	425	41
7	44	45	53	45	48	56	59	258	69	43	304	35
8	44	48	51	54	49	54	57	440	66	44	238	34
9	44	47	46	56	50	56	58	244	65	38	191	35
10	45	48	48	56	52	56	58	153	62	34	164	38
11	45	47	52	54	54	59	58	134	65	35	140	36
12	45	47	52	56	60	59	59	146	68	37	121	36
13	46	47	52	50	70	59	59	276	65	34	106	36
14	46	47	54	40	80	59	58	262	66	30	86	37
15	46	50	56	42	90	61	59	195	64	35	71	38
16	48	50	53	46	70	61	64	150	62	32	62	39
17	48	64	52	54	53	62	59	122	220	79	59	39
18	54	57	53	62	48	59	59	105	162	66	65	39
19	50	53	54	70	50	61	57	93	730	39	48	39
20	48	53	54	68	51	62	58	87	453	36	69	52
21	48	51	54	64	52	65	62	83	202	31	62	65
22	50	50	54	61	51	52	58	80	132	26	64	122
23	51	52	56	57	52	57	57	158	110	23	61	119
24	51	53	56	58	52	62	54	505	99	103	62	78
25	50	53	56	56	53	59	57	182	90	296	62	61
26	51	52	56	45	51	61	68	129	83	515	62	54
27	52	50	45	43	52	59	69	175	79	748	50	52
28	48	54	42	45	53	57	65	304	73	786	47	51
29	54	52	48	52	54	56	61	358	69	546	40	51
30	61	51	57	56	-----	57	61	280	64	350	46	50
31	54	-----	54	60	-----	59	-----	153	-----	218	48	-----
TOTAL	1,487	1,519	1,621	1,625	1,591	1,788	1,780	5,542	3,750	4,533	11,079	1,470
MEAN	48.0	50.6	52.3	52.4	54.9	57.7	59.3	179	125	146	357	49.0
MAX	61	64	57	70	90	65	69	505	730	786	2,440	122
MIN	42	45	42	32	44	52	54	64	62	23	40	34
AC-FT	2,950	3,010	3,220	3,220	3,160	3,550	3,530	10,990	7,440	8,990	21,980	2,920

CAL YR 1971 TOTAL 32,139 MEAN 88.1 MAX 960 MIN 24 AC-FT 63,750
WTR YR 1972 TOTAL 37,785 MEAN 103 MAX 2,440 MIN 23 AC-FT 74,950

PEAK DISCHARGE (BASE, 1,500 CFS).--Aug. 1 (1630) 2,690 cfs (9.49 ft); Aug. 3 (0030) 2,740 cfs (9.55 ft).

KANSAS RIVER BASIN

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06883570 Little Blue River near Gilead, Nebr.

LOCATION.--Lat 40°11'23", long 97°24'26", in NE 1/4 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 September 1972 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,371.29 ft above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--13 years, 234 cfs (169,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,050 cfs Aug. 3 (gage height, 9.52 ft); minimum daily, 34 cfs July 22, 23.

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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	82	87	82	72	84	80	748	228	100	258	68
2	52	80	84	80	70	76	79	374	190	96	797	70
3	53	78	69	70	64	80	78	221	162	93	2,140	68
4	51	74	64	40	62	78	75	160	147	87	2,630	68
5	50	74	60	60	60	76	74	142	140	86	1,210	66
6	49	72	56	80	66	79	74	147	126	82	594	63
7	50	68	52	92	66	78	76	160	122	77	377	61
8	49	70	48	96	68	70	74	174	113	74	288	62
9	50	70	46	98	60	70	76	290	107	73	237	63
10	50	68	46	94	64	72	78	267	103	66	204	84
11	51	68	54	92	62	73	78	208	99	64	176	83
12	52	68	54	92	66	73	79	320	97	51	156	80
13	52	68	56	90	68	74	78	614	102	49	138	73
14	51	68	54	52	66	73	76	386	107	55	125	65
15	53	68	58	60	70	74	76	299	99	47	111	62
16	53	70	64	78	68	76	83	254	102	43	99	60
17	56	79	64	84	72	78	82	217	94	41	88	59
18	91	85	62	86	76	76	78	193	102	41	81	58
19	75	85	72	84	78	76	74	175	178	61	74	56
20	66	85	74	74	82	76	83	161	517	58	78	54
21	63	83	74	76	84	79	95	146	519	40	87	58
22	63	82	76	78	86	76	88	135	261	34	80	61
23	63	80	78	84	88	75	86	140	179	34	68	65
24	63	81	80	80	92	78	79	139	143	183	74	99
25	65	81	78	74	95	80	78	367	184	305	107	94
26	67	84	80	70	89	80	89	299	138	322	111	82
27	73	84	78	62	93	80	118	285	114	258	94	73
28	69	85	70	58	93	78	114	206	108	488	83	66
29	72	89	74	56	91	79	97	251	109	659	73	61
30	86	89	86	62	-----	80	110	268	103	651	76	61
31	85	-----	84	66	-----	80	-----	283	-----	389	73	-----
TOTAL	1,873	2,318	2,082	2,350	2,171	2,377	2,505	8,029	4,793	4,707	10,787	2,043
MEAN	60.4	77.3	67.2	75.8	74.9	76.7	83.5	259	160	152	348	68.1
MAX	91	89	87	98	95	84	118	748	519	659	2,630	99
MIN	49	68	46	40	60	70	74	135	94	34	68	54
AC-FT	3,720	4,600	4,130	4,660	4,310	4,710	4,970	15,930	9,510	9,340	21,400	4,050

CAL YR 1971 TOTAL 70,482 MEAN 193 MAX 5,320 MIN 30 AC-FT 139,800
WTR YR 1972 TOTAL 46,035 MEAN 126 MAX 2,630 MIN 34 AC-FT 91,310

PEAK DISCHARGE (BASE, 2,000 CFS).--Aug. 3 (2330) 3,050 cfs (9.52 ft).

06884000 Little Blue River near Fairbury, Nebr.

LOCATION.--Lat 40°06'54", long 97°10'13", in NW 1/4 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.--51 years, 361 cfs (261,500 acre-ft per year); median of yearly mean discharges, 320 cfs (232,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,400 cfs Aug. 4 (gage height, 7.50 ft); minimum daily, 42 cfs Jan. 4.

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 good except those for winter period, which are fair. 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 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	132	103	123	84	128	104	2,130	308	130	399	145
2	77	125	100	114	85	117	105	1,590	240	128	494	130
3	78	112	100	79	78	122	103	667	211	128	2,710	117
4	84	106	85	42	78	117	103	372	194	129	4,180	114
5	80	103	101	68	85	116	103	266	182	123	2,520	110
6	79	99	102	86	78	120	105	272	183	120	1,200	107
7	78	98	100	89	78	119	105	322	168	118	764	111
8	77	98	97	98	83	115	106	308	159	114	512	105
9	76	100	87	106	83	115	107	366	153	108	397	106
10	77	100	100	118	80	115	106	448	147	108	324	118
11	80	100	94	117	85	114	108	338	143	145	290	122
12	77	100	95	118	93	114	109	697	142	122	250	118
13	76	103	83	84	98	113	106	1,850	145	105	215	114
14	77	103	100	56	102	113	107	1,330	188	109	195	107
15	77	103	101	62	106	114	105	760	157	108	181	103
16	77	104	101	80	114	111	84	497	143	107	167	101
17	79	141	95	89	126	111	118	370	137	108	163	101
18	112	169	91	98	137	108	116	294	133	110	157	100
19	148	134	102	104	124	106	108	242	217	110	151	97
20	108	126	102	109	137	107	113	224	398	130	149	99
21	98	117	102	111	153	109	147	210	872	117	152	100
22	96	112	102	109	137	108	130	198	422	105	153	98
23	93	110	104	116	141	106	119	202	265	105	148	99
24	92	107	105	117	147	106	113	199	207	123	154	110
25	92	105	105	76	139	108	111	275	205	450	216	133
26	95	106	105	62	129	109	147	480	205	492	203	121
27	120	103	75	68	129	106	278	375	173	348	192	110
28	107	103	75	76	132	106	165	298	155	485	161	106
29	104	108	101	74	137	105	145	278	145	674	147	100
30	134	106	118	77	-----	105	143	313	139	1,040	136	99
31	137	-----	118	80	-----	105	-----	317	-----	700	137	-----
TOTAL	2,862	3,333	3,049	2,806	3,178	3,468	3,619	16,488	6,536	6,999	17,217	3,301
MEAN	92.3	111	98.4	90.5	110	112	121	532	218	226	555	110
MAX	148	169	118	123	153	128	278	2,130	872	1,040	4,180	145
MIN	76	98	75	42	78	105	84	198	133	105	136	97
AC-FT	5,680	6,610	6,050	5,570	6,300	6,880	7,180	32,700	12,960	13,880	34,150	6,550

CAL YR 1971 TOTAL 122,486 MEAN 336 MAX 7,610 MIN 57 AC-FT 243,000
WTR YR 1972 TOTAL 72,856 MEAN 199 MAX 4,180 MIN 42 AC-FT 144,500

PEAK DISCHARGE (BASE, 3,000 CFS).--May 1 (1300) 3,540 cfs (6.64 ft); Aug. 4 (0900) 4,400 cfs (7.50 ft).

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 1972

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Niobrara River basin						
06460800	Minnehaduz Creek near S. Dak.-Nebr. State line.	Lat 43°01'14", long 100°57'49", 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, 1959-72	10- 4-71 5-24-72 6-12-72 7- 5-72 7-24-72 8-14-72 9- 5-72 9-25-72	0.67 4.1 1.8 1.0 1.3 .37 .62 .49
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.	-	1969-72	11- 9-71 4-25-72	20 19
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.	-	1969-72	11- 9-71 4-25-72	63 56
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.	-	1969-72	11- 8-71 4-26-72	2.5 3.1
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.	-	1969-72	11- 9-71 4-26-72	32 36
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.	-	1969-72	11- 4-71 5-17-72	18 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.	-	1969-72	11- 4-71 5-17-72	8.2 11
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.	-	1969-72	11- 4-71 5-17-72	.02 .24

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 1972--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.	-	1969-72	11- 4-71 5-17-72	0.09 1.0
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.	-	1969-72	11- 4-71 5-17-72	26 16
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.	-	1969-72	11- 4-71 5-17-72	6.9 12
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.	-	1968-72	10-26-71 12-17-71 3-31-72	0 0 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.	-	1968-72	10-26-71 12-17-71 3-31-72	2.3 2.7 2.4
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.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 1.3
06768035	West Branch Platte River tributary near Westmark, Nebr.	Lat 40°40'17", long 99°32'23", in SE¼SE¼SW¼ sec.12, T.8 N., R.20 W., Phelps County, 0.6 mile south of Platte River bridge south of Overton.	-	1972	10-26-71 12-17-71 3-31-72	3.6 3.6 4.1
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.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 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.	-	1968-72	10-26-71 12-17-71 3-30-72	.40 4.0 1.9
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.	-	1968-72	10-26-71 12-17-71	c.10 .20
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.	-	1968-72	10-26-71 12-17-71 3-30-72	1.0 1.0 1.1
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.	-	1968-72	10-26-71 3-30-72	1.4 1.5
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.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 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.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 .1

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1972--Continued

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 SE¼SW¼SW¼ sec.14, T.8 N., R.17 W., Phelps County, 2.3 miles southeast of Platte River bridge south of Odessa.	-	1968-72	10-26-71 12-17-71 3-30-72	2.1 2.1 2.3
06770195	North Dry Creek south of Kearney, Nebr.	Lat 40°38'32", long 99°06'52", in SE¼SE¼SW¼ sec.22, T.8 N., R.16 W., Kearney County, 2.0 miles southwest of Platte River bridge south of Kearney.	-	1968-72	10-26-71 12-17-71 3-30-72	6.8 19 13
06770198	Whiskey Slough near Kearney, Nebr.	Lat 40°38'45", long 99°08'26", in SW¼NW¼SW¼ sec.21, T.8 N., R.16 W., Kearney County, 3.2 miles southwest of Platte River bridge south of Kearney.	-	1968-72	10-26-71 12-17-71 3-30-72	.10 .40 1.7
06770250	Crooked Creek drain at Newark, Nebr.	Lat 40°39'05", long 98°58'16", in NE¼SE¼NE¼ sec.23, T.8 N., R.15 W., Kearney County, 0.8 mile northwest of Newark.	-	1968-72	10-26-71 12-17-71 3-30-72	.8 4.7 7.7
06770330	Dry Creek near Axtell, Nebr.	Lat 40°32'33", long 99°05'10", in NE¼SE¼SE¼ sec.26, T.7 N., R.16 W., Kearney County, 4.8 miles northeast of Axtell.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 0
06770335	Dry Creek near Minden, Nebr.	Lat 40°34'44", long 98°57'07", in NE¼SE¼NE¼ sec.13, T.7 N., R.15 W., Kearney County, 5.8 miles north of Minden.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 0
06770340	Lost Creek near Axtell, Nebr.	Lat 40°35'23", long 99°05'01", in NW¼NW¼SW¼ sec.12, T.7 N., R.16 W., Kearney County, 7.7 miles northeast of Axtell.	-	1968-72	10-26-71 12-17-71 3-30-72	0 c2.0 1.4
06770345	Lost Creek near Minden, Nebr.	Lat 40°35'43", long 98°57'07", in SE¼NE¼NE¼ sec.12, T.7 N., R.15 W., Kearney County, 7.0 miles north of Minden.	-	1968-72	10-26-71 12-17-71 3-30-72	0 0 0
06772500	Wood River near Chapman, Nebr. _b /	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, 1961-72	10- 6-71 10-18-71 11- 1-71 11-15-71 11-29-71 12-16-71 12-28-71 1-10-72 1-31-72 2-17-72 3- 8-72 3-27-72 4- 6-72 4-17-72 5- 8-72 5-22-72 6- 6-72 6-22-72 7-10-72 7-25-72 8- 9-72 8-22-72 9-11-72 9-26-72	8.8 7.5 10 12 20 19 15 13 16 13 10 9.9 11 8.3 33 14 15 8.8 6.3 12 22 31 15 4.4
Kansas River basin						
06824200	Horse Creek near Parks, Nebr.	Lat 40°02'23", long 101°41'09", in SE¼NE¼ 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, 1961-72	10- 6-71 3- 6-72 4-18-72 5-17-72 7-12-72 8-15-72 9-19-72	0 2.1 1.6 1.7 1.5 1.3 .08

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1972--Continued

Discharge measurements made at low-flow partial-record stations during water year 1972--Continued						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					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., Dundy County, at county road bridge 0.2 mile north of U.S. Highway 34 and 2.5 miles east of Max.	-	1949, 1951-60a, 1961-72	10- 6-71 3- 6-72 4-18-72 5-17-72 7-12-72 8-15-72 9-18-72	2.2 4.4 1.8 5.7 4.2 2.1 2.8
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.	-	1968-72	12-17-71 3-28-72	1.8 2.1
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.	-	1968-72	12-17-71 3-28-72	.08 .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.	-	1968-72	12-17-71 3-28-72	2.8 3.6
06844180	West Branch Turkey Creek near Bertrand, Nebr.	Lat 40°26'09", long 99°46'29", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.5 N., R.22 W., Gosper County, upstream from county road bridge 10 miles southwest of Bertrand.	-	1968-72	12-17-71 3-28-72	.08 .16
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.	-	1968-72	12-17-71 3-28-72	5.8 7.1
06847550	Flag Creek at Orleans, Nebr.	Lat 40°08'04", long 99°27'49", in SE $\frac{1}{4}$ 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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	1.0 1.8 1.6 1.7 1.7 17 4.6 3.7 7.9
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	.48 .99 1.1 .86 1.0 .65 1.0 .63 .37
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	.99 .47 .62 .65 .75 .66 1.5 1.4 1.2
*06850000	Turkey Creek at Naponee, Nebr.	Lat 40°04'34", long 99°08'17", 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+, 1954-60a, 1961-72	10- 5-71 4-17-72 5-15-72 6-12-72 8-21-72 9-19-72	8.3 12 13 14 9.4 8.0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1972--Continued

Discharge measurements made at low-flow partial-record stations during water year 1972--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°05'08", long 99°03'56", in SE¼NE¼ 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, 1961-72	10- 5-71 4-17-72 5-15-72 6-11-72 6-12-72 8-21-72 9-19-72	3.3 4.6 4.3 d670 6.5 3.8 3.6
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	1.8 1.7 2.1 2.4 2.1 2.0 2.2 2.1 2.3
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	1.7 .81 .94 .84 .86 .87 .79 .62 .88
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	3.4 3.5 3.2 4.1 5.2 3.3 2.3 2.0 2.5
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-19-72 8- 9-72 9- 5-72	1.7 2.0 1.7 2.3 3.2 2.0 6.7 2.0 2.0
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, 1961-72	11- 3-71 3- 3-72 3-23-72 4-20-72 5-18-72 6-15-72 7-11-72 7-19-72 8- 9-72 9- 5-72	1.2 1.5 1.6 1.7 1.9 1.5 d8,130 2.4 1.6 1.2
*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, at bridge on U.S. Highway 136 at east edge of Amboy, 2.5 miles upstream from mouth.	39.2	1948-53+, 1954-60a, 1961-72	10- 5-71 4-17-72 5-15-72 6-12-72 7-11-72 8-21-72 9-18-72	14 14 18 16 1,530 16 13

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1972--Continued

Discharge measurements made at low-flow partial-record stations during water year 1972			Measurements			
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	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, 1961-72	11- 3-71	1.2
					3- 3-72	.90
					3-23-72	.48
					4-20-72	.96
					5-18-72	1.2
					6-15-72	2.5
					7-19-72	1.8
					8- 9-72	.93
					9- 5-72	.63

* 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.

d Indirect measurement of yearly maximum flow.

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 1972

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (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	1969-72	7-18-69 6-12-70 5-23-71 7-16-72	a15.37 a11.02 15.19 14.56	270 20 190 78
White River basin							
06443300	Deep Creek near Glen, Nebr.	Lat 42°36'37", long 103°33'22", in SE $\frac{1}{4}$ sec.32, T.31 N., R.53 W., Sioux County, at bridge 1.4 miles east of Glen.	10.9	1953-72	5-27-72	10.73	173
06443700	Soldiers Creek near Crawford, Nebr.	Lat 42°41'18", long 103°32'09", in NE $\frac{1}{4}$ sec.3, T.31 N., R.53 W., Sioux County, on right bank 6 miles west of Crawford.	52.6	1955-72	7-16-72	12.02	75
06445530	Chadron Creek tributary at Chadron State Park near Chadron, Nebr.	Lat 42°41'49", long 103°00'09", in NE $\frac{1}{4}$ 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.	b2.59	1953-72	1972	-	0
06445560	Chadron Creek at Chadron State Park near Chadron, Nebr.	Lat 42°42'27", long 103°00'33", in SE $\frac{1}{4}$ sec.36, T.32 N., R.49 W., Dawes County, on left downstream wingwall of concrete culvert, 8 miles south of Chadron.	b15.4	1953-72	5- 5-72	8.38	1
Niobrara River basin							
06454400	Niobrara River tributary near Belmont, Nebr.	Lat 42°36'16", long 103°22'31", in SE $\frac{1}{4}$ 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	1971-72	5-26-72	11.63	(†)
06456200	Pebble Creek near Esther, Nebr.	Lat 42°35'38", long 103°03'55", in 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	1953-72	7-30-72	10.89	12
06456400	Cottonwood Creek near Dunlap, Nebr.	Lat 42°29'29", long 102°58'08", in SW $\frac{1}{4}$ 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	1948, 1951-72	6-17-48 6-16-72	- 11.49	c10,800 3
06457100	Point of Rocks Creek near Marsland, Nebr.	Lat 42°16'57", long 103°18'23", in 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	1970-72	1972	-	0

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 1972--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)
Niobrara River basin--Continued							
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.	32.3	1953-70d, 1971-72	5-10-72	10.67	32
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	1953-72	1972	-	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	1971-72	5-13-72	10.81	(+)
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	1956-72	7-20-72	12.52	120
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	1958-72	6-18-72	(e)	f5
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.	g6.5	1968-72	6-18-72	11.64	(+)
Weigand Creek basin							
06466950	Weigand Creek near Crofton, Nebr.	Lat 42°43'36", long 97°37'55" 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.	g3.5	1968-72	7-20-72	f9.0	f5
Bow Creek basin							
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.	b52.7	1964-65, 1967h, 1967-72	5-23-72	10.53	185
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.	1.65	1950-72	8- 1-72	12.47	880
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.	51.2	1951-72	8- 1-72	14.51	1,980
Tekamah Creek basin							
06607800	South Branch Tekamah Creek tributary near Tekamah, Nebr.	Lat 41°45'15", long 96°17'11", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.34, T.21 N., R.10 E., Burt County, at bridge on east-west county road, 4 miles southwest of Tekamah.	4.08	1950-72	3-21-72	a6.54	3

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)
New York Creek basin							
06608700	New York Creek tributary near Spiker, Nebr.	Lat 41°38'24", long 96°18'27", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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	1951-72	10-30-71	26.46	190
06608800	New York Creek north of Spiker, Nebr.	Lat 41°37'32", long 96°18'34", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, 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 (revised).	6.50	1951-72	3-21-72	11.10	280
06608900	New York Creek east of Spiker, Nebr.	Lat 41°36'53", long 96°16'14", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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	1950-72	5- 1-72	8.34	150
Papillion Creek basin							
06610700	Big Papillion Creek near Orum, Nebr.	Lat 41°32'44", long 96°13'10", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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	1968-72	7-26-72	10.67	(†)
Platte River basin							
06678750	Dry Spottedtail Creek tributary near Mitchell, Nebr.	Lat 42°07'00", long 103°49'22", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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	1971-72	6- 2-71 1972	11.58 -	c147 0
06684900	Hackberry Creek near Redington, Nebr.	Lat 41°35'00", long 103°25'17", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 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	1970-72	5- 9-72	11.80	(†)
06687600	Ash Hollow near Oshkosh, Nebr.	Lat 41°15'05", long 102°20'28", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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	1968h, 1968, 1970-72	7- 2-71 9- 1-72	11.49 11.47	b23 20
06762650	Lodgepole Creek tributary near Kimball, Nebr.	Lat 41°17'57", long 103°36'32", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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	1970-72	1972	-	0
06763200	Lodgepole Creek tributary near Sunol, Nebr.	Lat 41°10'00", long 102°43'25", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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	1968h, 1968-72	7-27-72	11.50	172
06767200	North Fork Plum Creek tributary near Farnam, Nebr.	Lat 40°42'18", long 100°14'24", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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	1952-72	6- 3-72	10.55	30
06767410	Plum Creek near Farnam, Nebr.	Lat 40°41'13", long 100°08'42", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 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.	b80.4	1947, 1951-72	6- 3-72	-	f10

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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)
Platte River basin--Continued							
06768050	Buffalo Creek tributary No. 1 near Buffalo, Nebr.	Lat 41°00'44", long 99°48'48", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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	1965-72	1972	-	0
06768100	East Buffalo Creek near Buffalo, Nebr.	Lat 41°00'17", long 99°50'14", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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	1951-72	7-20-72	-	f1
06768400	West Buffalo Creek near Buffalo, Nebr.	Lat 40°59'22", long 99°52'21", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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	1951-72	6- 2-71 7-20-72	10.50 10.50	bf5 f5
06769100	Elm Creek tributary near Overton, Nebr.	Lat 40°53'14", long 99°33'48", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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	1951-72	6-27-72	13.49	88
06769200	Elm Creek near Sumner, Nebr.	Lat 40°51'24", long 99°32'21", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 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	1951-72	6-27-72	12.20	86
06769300	Elm Creek tributary No. 2 near Overton, Nebr.	Lat 40°51'02", long 99°32'21", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.10 N., R.19 W., Dawson County, at culvert on gravel road, 7.5 miles north of Overton.	5.62	1951-72	6-27-72	11.47	115
06770600	Wood River tributary near Lodi, Nebr.	Lat 41°11'58", long 99°50'21", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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	1952-72	8- 3-62 6- 5-65 6-24-68 6-25-69 7-26-72	j12.30 12.98 11.78 11.91 13.20	b60 b90 b40 b45 100
06770700	Wood River near Lodi, Nebr.	Lat 41°10'15", long 99°48'17", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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	1952-72	6-16-55 8-17-56 5-30-70 6-30-71 7-26-72	k12.60 k12.07 10.64 10.95 12.95	b189 b121 b1 b4 183
06770800	Wood River near Oconto, Nebr.	Lat 41°09'46", long 99°47'38", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.24, T.14 N., R.22 W., Custer County, on State Highway 40, 2.6 miles northwest of Oconto.	26.4	1950, 1952-72	6- 4-67 6-24-68 5- 7-69 5-30-70 6-30-71 7-26-72	11.87 10.91 12.89 11.22 11.95 14.21	b32 b8 b196 b14 b35 530
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, 1952-72	7- 8-50 3-13-52 5-28-53 6-17-54 6-16-55 8-17-56 6-16-57 6-29-59 6- 7-62 4-10-63 6-22-64 6- 5-65 2- 8-66 6- 4-67 5- 7-69 6-30-71 7-26-72	a14.8 a10.64 a9.96 15.55 14.48 a9.2 12.14 10.60 15.35 11.26 10.79 13.48 14.41 a9.21 12.48 12.61 14.13	b600 b115 b69 b735 b545 bf35 b244 b115 b700 b82 b63 b200 bf240 b20 b142 b105 191

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)
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	1952-72	6-11-70 6-30-71 7-26-72	(e) 13.36 13.10	b110 b177 155
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	1971-72	4-27-72	15.63	91
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	1952-72	7-10-72	(m)	f2
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, 1951-72	7-20-72	11.30	800
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	1951-72	9- 6-72	11.65	19
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	1951-72	7-20-72	13.33	218
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.	b86	1945, 1951-72	7-20-72	11.08	28
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, 1951-72	6- 6-72	n14.97	720
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, 1953-72	5-23-72	a12.2	f3
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	1951-72	6-12-70 6- 2-71 5-22-72	12.79 14.02 a20.46	b14 b30 218
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	1952-72	8-24-72	12.43	78
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, 1952-72	6-10-71 5-22-72	a14.18 a17.53	b455 1,160

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)	Discharge (cfs)
Platte River basin--Continued							
06791100	Spring Creek near Cushing, Nebr.	Lat 41°17'08", long 98°22'42", in SW¼NW¼ 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.	184	1948p, 1949-53p, 1953-72	5-23-72	14.67	700
06793995	Skeedee Creek tributary near Genoa, Nebr.	Lat 41°29'46", long 97°52'23", in NE¼NE¼ 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	1964h, 1964, 1968-72	6-24-68 3-18-69 8- 2-70 6- 4-71 9-11-72	12.12 14.75 12.53 13.54 12.82	c55 c485 c75 c175 93
06794710	Bone Creek near David City, Nebr.	Lat 41°16'42", long 97°02'51", in SW¼SE¼ 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	1963h, 1963, 1968-72	9-20-72	15.21	1,010
06799190	South Fork Union Creek tributary near Cornlea, Nebr.	Lat 41°42'00", long 97°34'22", in SE¼SW¼ 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	1967-72	6- 4-67 6-24-68 3-18-69 4-12-70 2-18-71 5-24-72	11.57 10.18 n13.50 11.20 13.52 10.93	c270 c11 c800 c170 c980 107
06799423	North Logan Creek near Laurel, Nebr.	Lat 42°28'00", long 97°02'55", in NW¼NW¼ 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.	g25.3	1965h, 1965, 1967h, 1967-72	7-20-72	13.22	175
06799850	Pond Creek near Schuyler, Nebr.	Lat 41°31'15", long 97°03'33", in SE¼NE¼ sec.22, T.18 N., R.3 E., Colfax County, at culvert on State Highway 15, 4.7 miles north of Schuyler.	.54	1968-72	5-10-71 9-11-72	a8.02 11.78	c6 500
06800350	Elkhorn River tributary near Nickerson, Nebr.	Lat 41°30'34", long 96°33'06", in NE¼NW¼ sec.29, T.18 N., R.8 E., Dodge County, at bridge on county road, 4.5 miles southwest of Nickerson.	6.53	1968-72	5- 1-72	11.29	(†)
06801340	Hickman Branch above Hickman, Nebr. (discontinued 8-28-61).	Lat 40°36'51", long 96°34'20", in SW¼SW¼ sec.31, T.8 N., R.8 E., Lancaster County, at wooden bridge on north-south county road near Missouri Pacific Railroad crossing, 3 miles east and 0.2 mile south of Hickman.	b14.7	1956-61	7-10-58	13.94	cf9,000
06801360	Hickman Branch at Hickman, Nebr. (discontinued 8-28-61).	Lat 40°37'00", long 96°37'45", in NW¼SW¼ sec.34, T.8 N., R.7 E., Lancaster County, at steel bridge on north-south county road, 0.2 mile south of Hickman.	b42.8	1956-61	7- 1-57b 7-10-58 5- 5-59b	b9.31 19.31 15.20	b755 cf12,800 4,100
06803200	Antelope Creek at 48th Street, Lincoln, Nebr.	Lat 40°47'16", long 96°39'13", in SE¼SW¼ sec.32, T.10 N., R.7 E., Lancaster County, on left downstream wingwall of culvert at 48th Street in Lincoln.	7.14	1951, 1958-72	5- 6-72	7.98	280
06803300	Antelope Creek at 27th Street, Lincoln, Nebr.	Lat 40°48'10", long 96°40'56", in NE¼SE¼ sec.25, T.10 N., R.6 E., Lancaster County, on downstream side of bridge at 27th and Alpha Streets in Lincoln.	10.6	1957-72	8-24-72	a5.30	540
06803400	Antelope Creek at 17th Street, Lincoln, Nebr.	Lat 40°49'26", long 96°41'47", in SW¼NW¼ 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.	12.1	1958-62†, 1963-72	8-24-72	5.20	650

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)
Platte River basin--Continued							
06803540	Dee Creek near Alvo, Nebr.	Lat 40°54'52", long 96°25'04", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.11 N., R.9 E., Cass County, at bridge on county road, 2 miles west and 3 miles north of Alvo.	7.88	1961h, 1962-72	4-20-72	a8.35	175
06803570	Dunlap Creek tributary near Weston, Nebr.	Lat 41°12'25", long 96°48'46", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 north-west of Weston.	.43	1950-72	6-19-72	12.72	113
06803600	North Fork Wahoo Creek near Prague, Nebr.	Lat 41°15'37", long 96°48'47", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.	15.4	1951-72	9-11-72	a6.00	70
06803900	North Fork Wahoo Creek at Weston, Nebr.	Lat 41°12'19", long 96°43'40", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.10, T.14 N., R.6 E., Saunders County, at bridge on State Highway 92, 1 mile northeast of Weston.	43.3	1951-72	5- 1-72	a9.37	460
06804100	Silver Creek near Cedar Bluffs, Nebr.	Lat 41°22'48", long 96°35'15", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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.	7.00	1950-72	5- 1-72	11.63	600
06804200	Silver Creek near Colon, Nebr.	Lat 41°18'26", long 96°33'47", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.	30.3	1950-72	5- 1-72	11.06	310
06804300	Silver Creek tributary near Colon, Nebr.	Lat 41°21'03", long 96°38'45", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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.	10.3	1951-72	5- 1-72	11.79	45
06804400	Silver Creek tributary at Colon, Nebr.	Lat 41°17'55", long 96°36'18", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.15 N., R.7 E., Saunders County, at culvert on State Highway 109, 0.2 mile east of Colon.	17.6	1951-72	5- 1-72	13.19	152
06804500	Silver Creek at Ithaca, Nebr.	Lat 41°09'44", long 96°31'38", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 $\frac{1}{2}$, 1959-72	5- 1-72	10.15	820
06805510	Buffalo Creek near Gretna, Nebr.	Lat 41°06'12", long 96°13'30", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 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	1968-72	8-25-72	a5.39	(+)
Weeping Water Creek basin							
06806440	Stove Creek at Elmwood, Nebr.	Lat 40°50'32", long 96°17'37", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.15, T.10 N., R.10 E., Cass County, at bridge on State Highway 1 at south side of Elmwood.	10.3	1950-72	5- 6-72	13.20	370

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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)	Discharge (cfs)
Weeping Water Creek basin--Continued							
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.	80.1	1947, 1950-72	5- 1-72	a2.17	f55
06806470	Weeping Water Creek tributary near Weeping Water, Nebr.	Lat 40°51'46", long 96°06'43", in NE¼SW¼ 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.	.73	1950-72	5- 1-72	11.82	100
Honey Creek basin							
06810060	Honey Creek near Peru, Nebr.	Lat 40°26'38", long 95°45'12", in SW¼NE¼ sec.32, T.6 N., R.15 E., Nemaha County, at bridge on county road, 1 mile west and 2 miles south of Peru.	3.43	1963-72	7-18-72	12.37	350
Little Nemaha River basin							
06810100	Hooper Creek tributary near Palmyra, Nebr.	Lat 40°46'10", long 96°25'23", in NW¼NW¼ 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.	8.00	1950-72	5- 6-72	a8.41	45
06810400	Little Nemaha River tributary near Syracuse, Nebr.	Lat 40°40'05", long 96°11'54", in SE¼SE¼ 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.	.71	1950-72	4-27-72	(e)	f25
Big Nemaha River basin							
06815510	Temple Creek near Falls City, Nebr.	Lat 40°08'36", long 95°36'27", in NE¼NW¼ sec.15, T.2 N., R.16 E., Richardson County, at culvert on U.S. Highway 73, 6 miles north of Falls City.	2.99	1968-72	8- 3-72	8.24	165
Kansas River basin							
06828100	North Branch Indian Creek near Max, Nebr.	Lat 40°09'52", long 100°23'51", in SW¼SW¼ 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.	g4.76	1962h, 1962, 1970-72	6-19-70, 6-18-72	a12.34, 15.65	c355, 1,640
06829700	Thompson Canyon near Trenton, Nebr.	Lat 40°09'44", long 100°57'31", in SE¼SW¼ 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.	b9.06	1966h, 1968h, 1966-72	7-18-66, 9-19-67, 5- 7-69, 6- 9-71, 8- 2-72	6.98, 6.80, 8.28, 7.65, 11.35	c132, c120, c292, c207, 1,140
06834100	Spring Creek tributary near Grant, Nebr.	Lat 40°49'52", long 101°48'57", in SW¼SW¼ 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	1970-72	1972	-	0
06835100	Bobtail Creek near Palisade, Nebr.	Lat 40°18'17", long 101°06'40", in SE¼NW¼ 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.	g30.2	1966-67h, 1966-72	6-17-72	27.17	15,200

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)
Kansas River basin--Continued							
06837100	Ash Creek near Red Willow, Nebr.	Lat 40°11'28", long 100°29'19", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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.	22.0	1966h, 1966-72	6-18-72	8.64	290
06838200	Coon Creek at Indianola, Nebr.	Lat 40°14'03", long 100°25'37", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.13, T.3 N., R.28 W., Red Willow County, at bridge on U.S. Highways 6 and 34, 0.5 mile west of Indianola.	g69	1961-72	6-18-72	-	f20
06838550	Dry Creek at Bartley, Nebr.	Lat 40°15'02", long 100°19'02", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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.	bg42	1961-72	6-18-72	-	f15
06839000	Medicine Creek at Maywood, Nebr.	Lat 40°39'23", long 100°36'41", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 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.	g259	1951-58 $\frac{1}{2}$, 1960-72	5-12-72	a4.1	190
06839200	Elkhorn Canyon near Maywood, Nebr.	Lat 40°36'10", long 100°42'02", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 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	1952-72	5-12-72	10.0	48
06839500	Brushy Creek near Maywood, Nebr.	Lat 40°37'51", long 100°37'47", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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.	g95	1935, 1947, 1951-58 $\frac{1}{2}$, 1960-72	5-12-72	a9.5	680
06839700	Frazier Creek tributary near Maywood, Nebr.	Lat 40°35'32", long 100°37'46", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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	1952-72	1972	-	0
06839900	Fox Creek upstream from Cut Canyon near Curtis, Nebr.	Lat 40°44'40", long 100°31'52", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.9 N., R.28 W., Lincoln County, at timber bridge 8.0 miles north of Curtis (revised).	31.8	1951-72	10-17-71	11.24	140
06839950	Cut Canyon near Curtis, Nebr.	Lat 40°43'39", long 100°32'10", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.29, T.9 N., R.28 W., Lincoln County, at timber bridge 6.5 miles north of Curtis.	25.6	1951-72	10-17-71	12.20	155
06849600	Turkey Creek near Holdrege, Nebr.	Lat 40°19'33", long 99°22'04", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.4 N., R.18 W., Harlan County, at bridge on U.S. Highway 183, 7.8 miles south of Holdrege.	b22.9	1941-1960-1967h, 1967-72	8- 6-72	14.03	410
*06850000	Turkey Creek at Naponee, Nebr.	Lat 40°04'34", long 99°08'17", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.1 N., R.16 W., Franklin County, on downstream side of county bridge at east side of Naponee.	b129	1948-53 $\frac{1}{2}$, 1954-61h, 1962-72	6-18-72	7.56	865
*06850200	Cottonwood Creek near Bloomington, Nebr.	Lat 40°05'09", long 99°04'05", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 (revised).	15.6	1948-56 $\frac{1}{2}$, 1957-61h, 1962-72	7-11-62 9-21-63 7- 1-64 7- 1-65 6-24-66 6-21-67 8-10-68 7- 6-69 6-11-70 4-20-71 6-11-72	6.29 5.26 5.12 5.23 4.95 5.85 6.83 6.76 5.27 q4.79 8.88	b230 b117 b105 b114 b90 b178 b306 b293 b118 b76 670

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)	Discharge (cfs)
Kansas River basin--Continued							
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.	21,000	1929-57h, 1960-67h, 1970-72r	9-19-72	1.16	r33.5
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.	21,300	1963-67h, 1970-72r	9-19-72	2.36	r46.3
06851300	West Branch Thompson Creek tributary near Hildreth, Nebr.	Lat 40°19'10", long 99°00'33", 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.	b11.5	1953-72	5- 6-72	11.19	40
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.	b128	1953-72	5- 6-72	10.49	198
*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	1948-53h, 1954-60h, 1959, 1961-72	7-11-72	14.29	1,570
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	1938-70h, 1971-72	6-18-72	2.32	78
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	1961-65h, 1967h, 1971-72r	7-12-72	8.26	r1,410
06879850	Big Blue River tributary (site 2) near Hordville, Nebr.	Lat 41°02'47", long 97°56'15", in NW¼NW¼ sec.6, T.12 N., R.5 W., Hamilton County, at bridge on east-west county road, 2.2 miles south and 2.8 miles west of Hordville (formerly at site 1.08 miles upstream).	5.03	1968-71s, 1972	6-29-71h, 5-24-72	bs14.48, 12.62	b550, 77
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	1963h, 1963, 1968-72	5- 6-72	11.26	320
06880590	North Branch West Fork Big Blue River tributary at Giltner, Nebr. (formerly Flessner Creek tributary).	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	1968-72	9-19-72	10.22	(+)
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.	b51.5	1953-72	6-29-65, 7-29-66, 6-13-67, 6-25-68, 3-17-69, 2-18-71, 7-25-72	16.20, 14.76, 15.08, 14.33, 16.27, 14.07, 17.06	b520, b198, b237, b160, b550, b139, 1,030
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.	b16.4	1953-72	7-25-72	15.42	375

Annual maximum discharge at crest-stage partial-record stations during water year 1972--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1972--Continued					Annual maximum		
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Date	Gage height (feet)	Discharge (cfs)
Kansas River basin--Continued							
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	1968-72	8-10-68 3-18-69 8- 1-70 7- 9-71b 7-11-72	12.19 12.05 11.42 12.10 10.10	c52 c49 c34 c50 10
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, 6.2 miles southeast of Western and 1.1 miles south and 6.3 miles east of Dakin (revised).	.07	1968-72	5- 1-72	9.13	(†)
06881450	Indian Creek at Beatrice, Nebr.	Lat 40°17'08", long 96°44'47", in SE¼NE¼ sec.28, T.4 N., R.6 E., Gage County, at bridge on U.S. Highway 77 at north edge of Beatrice.	74.7	1960-72	5-13-72	7.45	88
06881500	Big Blue River at Beatrice, Nebr.	Lat 40°15'22", long 96°44'47", in SW¼NW¼ 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.	3,900	1910-15†, 1954h, 1960-65h, 1967h, 1968-69†, 1969, 1971-72	7-15-72 7-15-72	10.94 11.15	r4,590 4,700
06881530	Big Blue River tributary near Beatrice, Nebr.	Lat 40°15'46", long 96°39'09", in SW¼SE¼ 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	1971-72	10-30-71	10.80	34
06883540	Spring Creek tributary near Ruskin, Nebr.	Lat 40°06'50", long 97°49'13", in SE¼NE¼ 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	1967-72	7-24-72	12.68	78
06883700	South Fork Big Sandy Creek near Davenport, Nebr.	Lat 40°18'27", long 97°52'39", in SW¼SW¼ 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, 1952-72	5- 1-72	10.44	51
06883955	Little Sandy Creek near Ohioa, Nebr.	Lat 40°25'37", long 95°23'38", in SE¼SE¼ 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	1968-72	4-30-72	12.77	(†)
06884005	Dry Branch tributary near Fairbury, Nebr.	Lat 40°02'43", long 97°10'14", in SW¼SE¼ 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	1968-72	4-27-72	11.80	(†)

* Also a low-flow partial-record station.

† Discharge not determined.

‡ Operated as a continuous-record gaging station.

a Outside flood mark.

b Revised.

c Not previously published.

d At site 1.2 miles downstream, drainage area 34.0 sq mi.

e Stage below bottom of gage, which is 10.0 ft.

f Estimate.

g Approximate.

h Discharge measurements published in table for miscellaneous sites.

j Datum of 12-4-63, which is 1.46 ft lower than original datum used in 1962.

k Datum of 12-4-63, which is 0.97 ft lower than datum of previously published gage height.

m Stage below bottom of gage, which is 10.5 ft.

n Affected by backwater.

p At site 1 mile north, record considered equivalent.

q Consider maximum for 1971 but may have been higher between July 1 and Sept. 30 while gage was removed for channel straightening.

r Discharge measurement only.

s At site 1.08 miles upstream, drainage area 4.07 sq mi.

t 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 peak flow are designated by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1972

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 SE¼NE¼ 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†, 1969-71†	10-14-71 11-10-71 12-15-71 1-24-72 2-15-72 3-15-72 4-11-72 5- 8-72 6- 8-72	20 8.6 2.4 3.9 1.9 32 8.5 6.7 7.4
Niobrara River basin						
Niobrara River (06455900)a/	.....do.....	Lat 42°27'45", long 102°55'25", on river and two diversion canals in SE¼NW¼ 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, Nebr.	b1,580	1931-42†, 1961-71†	10- 1-71 10-13-71 10-27-71 11- 9-71 11-24-71 12-13-71 12-27-71 1-12-72 2-14-72 3-13-72 4-10-72 5- 8-72 6-19-72 7-10-72 7-25-72 8-11-72 8-25-72 9- 8-72 9-25-72	13 14 12 12 17 10 12 11 12 12 12 13 12 96 165 126 134 41 12
Niobrara River (06457000)a/	.....do.....	Lat 42°32'38", long 102°29'58", in NW¼SE¼ 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 south-west of bridge on State Highway 250 near Colclesser, Nebr.	-	1947-48†, 1963-64, 1969-71	10-13-71 10-27-71 11- 9-71 11-24-71 12-13-71 12-27-72 1-12-72 2-14-72 3-13-72 4-10-72 5- 8-72 6-19-72 7-10-72 7-25-72 8-11-72 8-25-72 9- 8-72 9-27-72	46 47 47 49 c40 45 41 42 53 50 57 48 38 45 25 27 34 42
East Branch Verdigre Creek	Verdigre Creek	Lat 42°20'49", long 98°05'43", in NW¼NE¼ sec.2, T.27 N., R.7 W., Antelope County, above Grove Lake rearing station diversion dam 1.5 miles northeast of Royal, Nebr.	-	1967-68	10-20-71	4.5
Platte River basin						
North Platte River (06680100)a/	Platte River	Lat 41°51'45", long 103°43'23", in NW¼SE¼ sec.20, T.22 N., R.55 W., Scotts Bluff County, at bridge on State Highway 29, 3.0 miles west of inter-section of Highway 29 and Broadway Avenue, Scottsbluff, Nebr.	-	-	9-13-72	711
North Platte River (06683100)a/	.....do.....	Lat 41°42'09", long 103°14'44", in SE¼SW¼ sec.18, T.20 N., R.51 W., Morrill County, at Belmont diversion dam 0.6 mile upstream from Red Willow Creek and 5.7 miles southeast of Bayard, Nebr.	-	-	9-13-72	1,270

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1972--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Cedar Creek (06685650) <u>a/</u>	North Platte River	Lat 41°33'08", long 102°48'44", in NW¼NE¼ sec.11, T.18 N., R.48 W., Morrill County, at bridge on county road 3.7 miles southeast of Broadwater, Nebr.	-	-	8-28-72	3.4
Applegate drain (06765150) <u>a/</u>	South Platte River	Lat 41°08'21", long 101°08'23", in NE¼SE¼ sec.31, T.14 N., R.33 W., Lincoln County, on county road 0.7 mile north of Sutherland Reservoir and 1.5 miles southwest of Sutherland, Nebr.	-	-	8-29-72	44
Fremont Slough (06765710) <u>a/</u>	.....do.....	Lat 41°06'02", long 100°45'55", in SW¼NW¼ sec.16, T.13 N., R.30 W., Lincoln County, at bridge on U.S. Highway 83, 3.0 miles south of North Platte, Nebr.	-	-	8-29-72	21
Flock drain (06765720) <u>a/</u>	Platte River	Lat 41°06'41", long 100°40'23", in NW¼SW¼ sec.8, T.13 N., R.29 W., Lincoln County, near Tri-County diversion dam 5 miles southeast of North Platte, Nebr.	-	-	8-29-72	6.6
Stenger ditch (06765730) <u>a/</u>	.....do.....	Lat 41°04'32", long 100°37'14", in NE¼NE¼ sec.27, T.13 N., R.29 W., Lincoln County, at bridge on county road 1 mile northwest of Bignell and 5 miles west of Maxwell, Nebr.	-	-	8-30-72	2.0
Sheldon drain (06766050) <u>a/</u>	.....do.....	Lat 40°55'44", long 100°14'42", in NE¼NE¼ sec.14, T.11 N., R.26 W., Lincoln County, at bridge on county road 4 miles west of Gothenburg, Nebr.	-	-	8-30-72	8.0
Rowe ditch (06766550) <u>a/</u>	.....do.....	Lat 40°48'34", long 99°53'17", in SE¼NW¼ sec.27, T.10 N., R.23 W., Dawson County, at bridge on county road 3 miles west of Darr, Nebr.	-	-	8-30-72	34
Nisley-Lauby ditch (06766850) <u>a/</u>	.....do.....	Lat 40°44'55", long 99°46'23", in NE¼SW¼ sec.15, T.9 N., R.22 W., Dawson County, at bridge on county road 4 miles southwest of Lexington, Nebr.	-	-	8-30-72	5.5
Spring Creek (06768005) <u>a/</u>	.....do.....	Lat 40°41'51", long 99°32'28", in NE¼NW¼ sec.1, T.8 N., R.20 W., Dawson County, at bridge on county road 2.7 miles south of Overton, Nebr.	-	-	8-30-72	25
Dry Creek (06770360) <u>a/</u>	.....do.....	Lat 40°40'41", long 98°43'21", in SW¼NW¼ sec.7, T.8 N., R.12 W., Adams County, at culvert on county-line road 1.3 miles south of Denman, Nebr.	-	-	8-29-72	3.4
Platte River (north channel) (06770489) <u>a/</u>	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.	-	1971	10-20-71 11-16-71 12-16-71	585 563 767
Prairie Creek	Platte River	Lat 40°55'38", long 98°36'27", in NW¼ sec.18, T.11 N., R.11 W., Hall County, at bridge on State Highway 11, 5.3 miles south of Cairo, Nebr.	-	-	8- 2-72	105

Discharge measurements made at miscellaneous sites during water year 1972--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Middle Loup River (06777000) <u>a</u> /	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 north-west of Milburn, Nebr.	-	1952-56+, 1958+, 1960-64+, 1969-71	10-13-71 10-21-71 10-28-71 11- 2-71 11- 9-71 11-16-71 11-23-71 12- 1-71 12- 9-71 12-14-71 12-21-71 1-25-72 2-14-72 3-28-72 4-17-72 5-30-72 6-20-72 7- 6-72 7-11-72 7-18-72 8- 2-72 8- 8-72 8-14-72 8-21-72 8-28-72 9- 6-72 9-11-72 9-28-72	758 790 760 875 774 848 798 881 741 764 836 391 845 790 944 833 713 693 648 658 680 674 674 785 783 818 835 761
Middle Loup River (06778500) <u>a</u>/	.....do.....	Lat 41°28'49", long 99°12'43", in NW¼ sec.6, T.17 N., R.16 W., Custer County, at bridge on county-line highway 0.8 mile below part of river known as "Narrows" and 5.5 miles southeast of Comstock, Nebr.	-	1937+, 1969-71	10- 5-71 10-15-71 10-19-71 10-28-71 11- 4-71 11- 9-71 11-16-71 11-23-71 11-30-71 12- 9-71 12-15-71 12-21-71 12-27-71 1-12-72 1-28-72 2-15-72 2-24-72 3- 6-72 3-21-72 3-29-72 4- 4-72 4-18-72 5- 1-72 5- 3-72 5-16-72 5-31-72 6-20-72 7- 6-72 7-12-72 7-18-72 8- 2-72 8- 8-72 8-14-72 8-22-72 8-28-72 9- 6-72 9-12-72 9-28-72	189 398 686 853 1,230 874 1,100 849 709 623 874 954 455 1,000 294 1,100 1,290 964 1,120 765 923 649 891 624 846 624 233 69 57 60 302 132 120 74 84 350 272 367
Mud Creek (06783300) <u>a</u> /	South Loup River	Lat 41°08'48", long 99°09'08", in NW¼NE¼ sec.33, T.14 N., R.16 W., Sherman County, at bridge on State Highway 2, 1.1 miles southeast of Litchfield, Nebr.	-	-	8-25-72	4.8

Discharge measurements made at miscellaneous sites during water year 1972--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Clear Creek (06783400) <u>a/</u>	Mud Creek	Lat 41°08'48", long 99°06'15", in NW¼NW¼ sec.36, T.14 N., R.16 W., Sherman County, at bridge on county road 2.5 miles southeast of Litchfield, Nebr.	-	-	8-25-72	0.38
Oak Creek (06784300) <u>a/</u>	Middle Loup River	Lat 41°17'36", long 98°52'04", in NW¼NE¼ sec.12, T.15 N., R.14 W., Sherman County, at bridge on county road 1.5 miles downstream from Sherman Dam and 5.1 miles northeast of Loup City, Nebr.	41.9	1952-60*, 1961-64†	8-25-72	7.0
Oak Creek (06784510) <u>a/</u>	.....do.....	Lat 41°06'35", long 98°33'01", in NW¼SW¼ sec.11, T.13 N., R.11 W., Howard County, at bridge on State Highway 11, 0.8 mile southwest of Dannebrog, Nebr.	-	-	8-30-72	44
Turkey Creek (06784800) <u>a/</u>	.....do.....	Lat 41°09'24", long 98°33'22", in SW¼NW¼ sec.26, T.14 N., R.11 W., Howard County, on left bank 25 ft downstream from bridge on State Highway 11, 2.8 miles north of Dannebrog, Nebr.	66.2	1966-70*	8-30-72	21
Fish Creek	North Loup River	Lat 41°28'50", long 98°37'35", in SE¼SW¼ sec.31, T.18 N., R.11 W., Greeley County, 3.5 miles east and 1 mile north of Scotia, Nebr.	8.37	-	5-22-72	+12,100
Timber Creek (06791900) <u>a/</u>	Cedar River	Lat 41°24'51", long 98°05'13", in NW¼SE¼ sec.26, T.17 N., R.7 W., Nance County, at bridge on county road 4.1 miles south of Belgrade, Nebr.	-	-	8-30-72	.70
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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	5.3 40 6.3 4.2 11
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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	4.9 30 6.4 3.5 12
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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	5.5 44 9.4 5.1 10
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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	0 0 c.05 .01 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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	.22 2.9 1.2 .13 .25
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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	0 8.6 3.8 .02 .21

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1972--Continued

Discharge measurements made at miscellaneous sites during water year 1972--Continued						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	0 c.06 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.	-	1971	4-10-72 5- 8-72 6- 8-72 7- 5-72 8- 9-72	6.3 13 6.0 3.4 2.3
Willow Creek (06799050)	North Fork Elkhorn River	Lat 42°11'17", long 97°32'34", in SW¼NW¼ sec.34, T.26 N., R.2 W., Pierce County, at bridge on county road 0.5 mile west and 0.5 mile south of Pierce, Nebr.	-	1961-63, 1968-69	7-26-72	323
Salt Creek (06801330)a/	Platte River	Lat 40°38'41", long 96°41'11", in NW¼SW¼ 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	1971	11-30-71 3-15-72 5- 2-72 9-25-72	8.6 11 60 3.2
Hickman Branch (06802600)a/	Salt Creek	Lat 40°39'02", long 96°40'02", in NE¼NE¼ 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	1971	11-30-71 3-15-72 5- 2-72	2.2 2.3 54
Salt Creek (06803010)a/	Platte River	Lat 40°41'51", long 96°41'00", in SE¼SE¼SE¼ sec.36, T.9 N., R.6 E., Lancaster County, at bridge on county road 0.9 mile east and 3.0 miles south of Lincoln Memorial Park Cemetery, Lincoln, Nebr.	-	-	9- 5-72 9- 7-72	5.1 5.2
Salt Creek (06803080)a/	Platte River	Lat 40°46'13", long 96°43'05", in SW¼SW¼ 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	1971	10- 7-71 10-27-71 11-10-71 11-24-71 12- 7-71 12-21-71 1-12-72 1-19-72 2- 9-72 2-24-72 3-15-72 3-29-72 4-11-72 4-20-72 5- 2-72 5-23-72 6- 6-72 6-21-72 7-25-72 8- 8-72 9-11-72 9-25-72	4.7 11 12 11 16 11 20 15 11 10 14 10 12 10 229 37 23 15 6.3 7.3 6.7 5.5
Beal Slough (06803085)a/	Salt Creek	Lat 40°46'13", long 96°42'47", in NE¼NE¼NW¼ 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	1971	11-24-71 3-15-72 5- 2-72	.25 .08 4.4

Discharge measurements made at miscellaneous sites during water year 1972--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Haines Branch (06803098) <u>a</u> /	Salt Creek	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	1971	11-12-71 3-28-72 5- 2-72	3.4 4.8 51
Middle Creek (06803180) <u>a</u>/	.....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	1971	10-27-71 11-24-71 12-21-71 1-19-72 2-24-72 3-28-72 4-20-72 5- 2-72 6- 6-72	4.8 3.5 3.0 3.0 1.9 2.2 14 21 14
Salt Creek (06803190) <u>a</u> /	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	1971	11- 1-71 11-23-71 12-22-71 1-20-72 2-24-72 3-28-72 4-19-72 5- 3-72 6- 6-72 9-12-72 9-25-72	66 37 30 30 33 24 69 178 60 29 25
Antelope Creek (06803300) <u>a</u> /	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	1971e	10-27-71 11-24-71 12-21-71 2-24-72 3-23-72 4-19-72 5- 4-72 6- 6-72	14 .18 .02 e.01 .20 6.5 1.2 .27
Antelope Creek (06803405) <u>a</u>/	.....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	1971	11- 1-71 11-23-71 12-21-71 1-20-72 2-24-72 3-28-72 4-19-72 5- 3-72 6- 6-72 9-27-72	67 9.4 1.6 1.1 1.3 1.0 8.4 2.0 3.6 1.2
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	1971	11-12-71 3-23-72 5- 3-72	3.2 3.7 7.4
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	1971	10-28-71 11-24-71 12-21-71 1-19-72 2-24-72 3-23-72 4-20-72 5- 3-72 6- 6-72	9.5 8.5 9.3 5.4 11 11 8.4 25 15
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	1971	11-12-71 3-23-72 5- 3-72	.69 1.0 5.0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1972--Continued

Discharge measurements made at miscellaneous sites during water year 1972--Continued						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Oak Creek (06803493) <u>a</u> /	Salt Creek	Lat 40°50'10", long 96°42'03", in SE¼NE¼ 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	1971	11- 1-71 11-23-71 12-22-71 1-20-72 2-24-72 3-28-72 4-19-72 5- 3-72 6- 6-72 9-25-72	30 18 14 11 12 12 44 47 20 13
Dead Mans Run (06803503) <u>a</u>/	.....do.....	Lat 40°50'33", long 96°40'40", in SW¼SW¼ sec.7, T.10 N., R.7 E., Lancaster County, at bridge on Corn-husker Highway (U.S. Highway 6) 0.23 mile east of 27th Street at Lincoln, Nebr.	9.46	1971	10-28-71 11-24-71 12-21-71 1-18-72 2-23-72 3-23-72 4-18-72 5- 3-72 6- 6-72	2.2 .89 .80 .84 .63 .72 1.0 2.6 1.4
Salt Creek (06803512) <u>a</u> /	Platte River	Lat 40°53'02", long 96°38'37", in NW¼NW¼ sec.33, T.11 N., R.7 E., Lancaster County, at bridge on U.S. Highway 77, 1.9 miles north of intersection with U.S. Highway 6 at northwest edge of Havelock, Lincoln, Nebr.	-	-	9- 6-72	87
Stevens Creek (06803515) <u>a</u> /	Salt Creek	Lat 40°48'47", long 96°33'31", in SW¼SW¼ 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	1971	11-11-71 3-22-72 5- 4-72	1.0 1.6 12
Salt Creek (06803525) <u>a</u> /	Platte River	Lat 40°54'18", long 96°35'09", in NW¼SW¼ 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	1971	10- 7-71 10-26-71 11-10-71 11-23-71 12- 7-71 12-22-71 1-12-72 1-18-72 2- 8-72 2-22-72 3-16-72 3-29-72 4-11-72 4-18-72 5- 9-72 5-23-72 6- 7-72 6-21-72 7-25-72 8- 8-72 9- 6-72 9-27-72	52 55 68 86 86 78 89 76 62 75 76 66 67 71 295 391 119 130 73 266 93 62
Rock Creek (06803534) <u>a</u> /	Salt Creek	Lat 40°57'55", long 96°29'52", in NW¼SW¼ sec.35, T.12 N., R.8 E., Lancaster County, at bridge on county road 3.0 miles west of Greenwood, Nebr.	137	1971	11- 9-71 3-22-72 5- 9-72	6.7 12 37
Camp Creek (06803537) <u>a</u>/	.....do.....	Lat 40°56'20", long 96°28'57", in SE¼NE¼ 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	1971	11-11-71 3-22-72 5- 4-72	1.5 2.6 6.8
Dee Creek (06803550) <u>a</u> /do.....	Lat 40°56'58", long 96°27'20", in NE¼SW¼ 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 south-west of Greenwood, Nebr.	13.2	1960+, 1961-63a, 1971	11-11-71 3-22-72 5- 4-72	.98 1.4 2.8

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1972--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Platte River basin--Continued						
Greenwood Creek (06803558) <u>a/</u>	Salt Creek	Lat 40°59'08", long 96°25'04", in NE¼NW¼ 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	1971	11- 9-71 3-16-72 5- 4-72	0.64 .72 1.7
Callahan Creek (06803563) <u>a/</u>	.....do.....	Lat 40°59'59", long 96°24'13", in NW¼NW¼ 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	1971	11- 9-71 3-16-72 5- 4-72	1.9 2.8 5.6
Salt Creek (06803565) <u>a/</u>	Platte River	Lat 41°01'34", long 96°24'22", in NW¼NW¼ sec.10, T.12 N., R.9 E., Saunders County, at bridge on county road 2 miles southwest of Ashland, Nebr.	1,118	1971	10- 7-71 10-26-71 11-10-71 11-23-71 12- 7-71 12-22-71 1-12-72 1-18-72 2- 8-72 2-22-72 3-16-72 3-29-72 4-11-72 4-18-72 5- 9-72 5-23-72 6- 7-72 6-21-72 7-25-72 8- 8-72 9-27-72	63 88 107 120 132 109 134 115 99 97 108 90 111 107 438 226 180 215 108 112 93
Salt Creek (06803567) <u>a/</u>	.....do.....	Lat 41°02'03", long 96°22'02", in SW¼NW¼SW¼ sec.1, T.12 N., R.9 E., Saunders County, at bridge on Highway 63 at southeast edge of Ashland, Nebr.	-	-	9- 7-72	107
Salt Creek (06805000) <u>a/</u>	.....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.	1,617	1947-67†, 1971	11- 9-71 3-16-72 5- 4-72	135 115 454
Salt Creek (06805005) <u>a/</u>	.....do.....	Lat 41°02'07", long 96°18'48", in NE¼SE¼ sec.5, T.12 N., R.9 E., Cass County, 0.1 mile upstream from mouth and 2.5 miles east of Ashland, Nebr.	-	-	9- 5-72 9- 8-72	135 144
Kansas River basin						
Beaver Creek (06880770)	West Fork Big Blue River	Lat 40°51'33", long 97°49'26", in SW¼SW¼ sec.6, T.10 N., R.4 W., York County, at bridge on county-line road 4 miles southeast of Hampton, Nebr.	-	1969-70d	5-15-72 8-10-72	19 2.1

† Operated as a continuous-record gaging station.

a Also published with additional data in Part 2 of this report.

b Approximate.

c Estimated.

d Published as low-flow partial-record station.

e Published as a crest-stage partial-record station.



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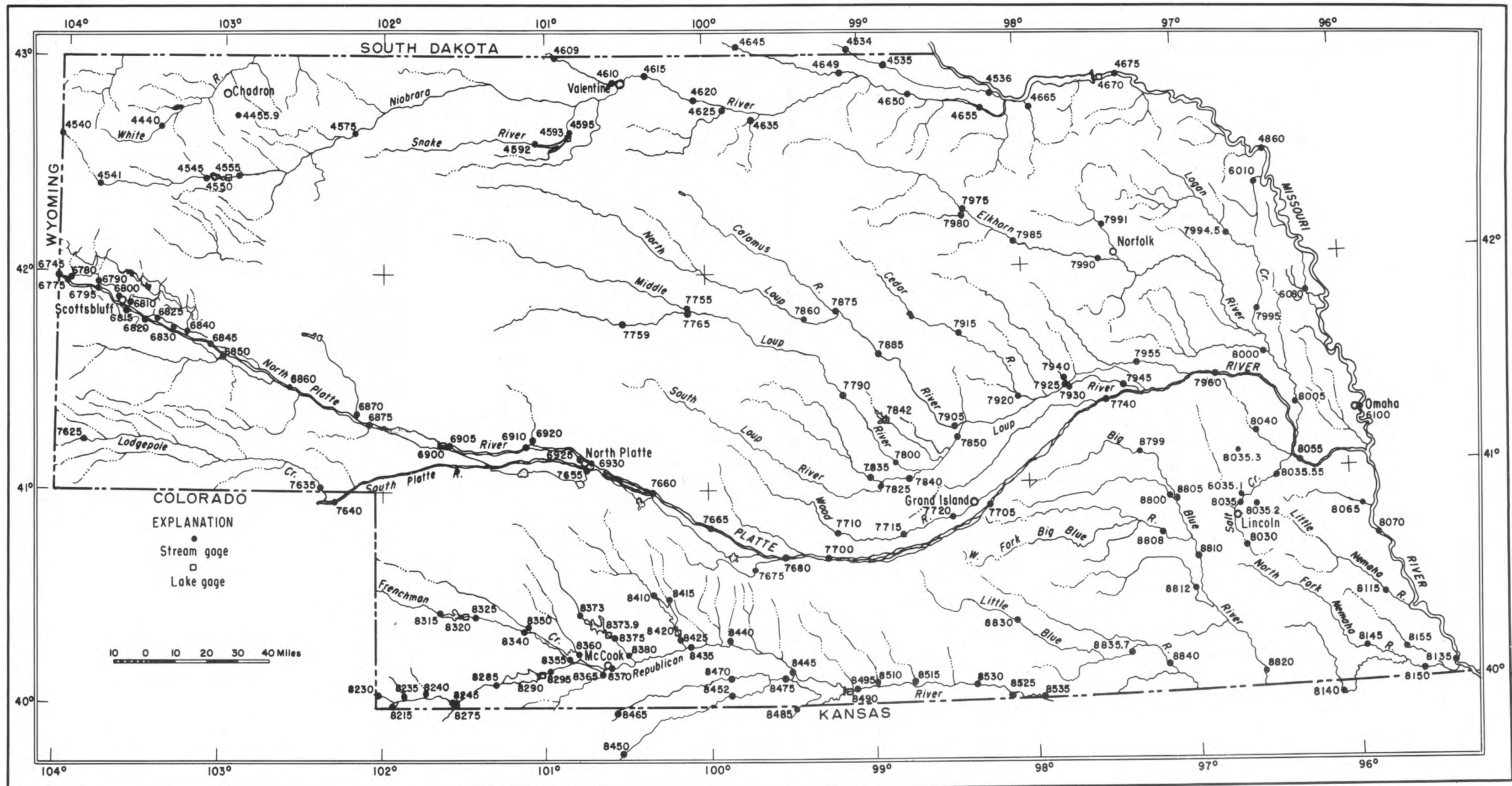


Figure 1.--Map of Nebraska showing location of complete-record stations.

