# SURFACE WATER RECORDS OF COOK INLET BASIN, ALASKA, THROUGH SEPTEMBER 1975



U.S. DEPARTMENT OF THE INTERIOR

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# SURFACE WATER RECORDS OF COOK INLET BASIN, ALASKA, THROUGH SEPTEMBER 1975

by

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# SURFACE WATER RECORDS OF COOK INLET BASIN, ALASKA, THROUGH SEPTEMBER 1975

## ABSTRACT

Water resources data for Cook Inlet Basin are provided through the 1975 water year. A summary of water-discharge data is given as monthly and annual mean discharge for 60 stations; monthly and annual extremes of lake elevation for 1 station; and extremes of discharge for each year for 60 stations. The water-temperature data included are periodic water temperatures at 37 stations; monthly maximum and minimum water temperatures at 9 stations; and both types of water-temperature data at 6 stations. Crest-stage partial-record data are shown for 26 stations, miscellaneous discharge measurements given for 173 sites, and the results of seepage investigations provided for 4 streams.

## PURPOSE AND SCOPE

This report summarizes records of streamflow and water temperature collected prior to October 1, 1975, in the Cook Inlet Basin of south-central Alaska. In section 1 streamflow records for gaging stations are tabulated as monthly and annual summaries and annual extremes. For those gaging stations at which continuous or daily water temperature records have been collected, monthly summaries of water temperature extremes are shown. For other gaging stations periodic water temperatures are published. Discharge at crest-stage partial-record stations and at miscellaneous sites is tabulated in section 2. Results of seepage investigations are presented in section 3.

## COOPERATION

Many State, Municipal, and private organizations have cooperated with the Geological Survey in basic data collection by either furnishing or helping to collect data. Organizations that assisted through cooperative agreements with the Survey in Alaska are:

Alaska Department of Highways in cooperation with the Federal Highway Administration, U.S. Department of Transportation

Alaska Department of Fish and Game

Alaska Department of Natural Resources

Alaska Department of Environmental Conservation

Alaska Department of Health and Social Services

Municipality of Anchorage

Kenai Peninsula Borough

Assistance in the form of funds or services was given by the following Federal agencies:

Corps of Engineers, U.S. Army

Forest Service, U.S. Department of Agriculture

Alaska Power Administration, U.S. Department of Interior

Alaska Air Command, U.S. Air Force

The specific organizations that supplied data are acknowledged in station descriptions.

## DEFINITION OF TERMS

Terms related to streamflow, water temperature, and other hydrologic data, as used in this report, are defined below.

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

Basin characteristics is used in this report are selected physical attributes of the drainage basin upstream from the gaging station.

Area of lakes and ponds is expressed as the percentage of the total drainage area occupied by lakes and ponds.

Drainage area of a stream at a specific 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.

Glacier area is expressed as the percentage of the total drainage area shown as glacier on the topographic maps.

Main-channel slope is the average slope between points 10 percent and 85 percent of the distance along the main stream from the gaging site to the basin divide.

Mean elevation is the mean elevation of the drainage basin measured by the grid-sampling method from topographic maps.

Stream length is the length of the main channel between the gaging station and the basin divide measured along the channel that drains the largest basin.

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 ($ft^3/s$) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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

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

Minimum daily discharge is the numerically least daily mean discharge during a specific period.

Momentary maximum discharge is the numerically greatest instantaneous discharge during a specific period.

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

Gage height is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably withthe 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 or lake where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied herein only to those gaging stations where a continuous record of discharge is computed.

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

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

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

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

Water year is the period of time beginning October 1 and continuing for 12 months to September 30 of any year.

WDR is used as an abbreviation for "Water-Data Report" to refer to State annual basic-data reports published since the 1970 water year report.

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

## DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are, therefore, listed in the same downstream order as used for stations in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit station number, such as 15273900, appears just to the left of the station name and includes the 2-digit part number "15" plus the 6-digit downstream order number "273900".

## EXPLANATION OF STAGE, WATER-DISCHARGE, AND WATER-TEMPERATURE RECORDS

### Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams and stage of lakes. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, 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), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that from the control, the daily mean discharge is computed 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 most stream-gaging stations in Alaska 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 or estimated on the basis of the available gage-height record and occasional winter discharge measurements. Consideration is 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 some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge. This happens when the recorder is stopped for the winter or otherwise fails to operate properly, intakes to the stilling well 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, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins.

The data presented for most of the gaging stations comprise a description of the station, a table of annual extreme discharges, a table of monthly and annual mean discharges, a description of the water-temperature record, and a table of periodic water temperatures and/or monthly maximum and minimum water temperatures.

The description of the gaging station gives the location, basin characteristics, period of record, type and history of gages, general remarks, a credit statement for records furnished by

another agency, average discharge, and extremes of discharge. The location of the gaging station and the basin characteristics are obtained from the most accurate maps available. Periods for which there are published records for the station are given under "PERIOD OF RECORD".

The gage described first under "GAGE" is the one used most recently. The datum of the gage is given as the elevation above mean sea level. Where information as to datum is not available, the approximate elevation of the gage is given. Information is then given in chronological order for all gages used earlier, giving changes in location, type of gage, or datum. The location or datum of all earlier gages is given with references to the most recent gage.

Information pertaining to conditions which affect the natural flow at the gaging station is given under "REMARKS".

The AVERAGE DISCHARGE for a station is the average of all complete water years and is published only if there are five or more complete water years of record. The years used to determine the average are not necessarily consecutive. The average discharge at some stations does not reflect natural runoff due to the effects of diversion. For such stations, runoff in inches is not published unless satisfactory adjustments can be made for diversions or for other changes incident to use and control. The average discharge is not published for some stations because of extensive changes in diversion or storage, or other water development, that have occurred upstream.

In general, the momentary maximum discharge and gage height and the minimum daily discharge for the entire period of record are published in the "EXTREMES" paragraph. Unless otherwise qualified, the maximum discharge is the instantaneous discharge corresponding to the highest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a non-recording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge, it is given separately. For a few stations the instantaneous minimum discharge is given.

The table of annual extreme discharges gives the same information as the EXTREMES paragraph, except that data is given for each year. In most instances the minimum daily discharge occurs over a period of many days during the winter. During this period there is ice cover on the stream and, therefore, no stage-discharge relation. Discharge for the winter period is estimated as explained above. Footnotes to the table of annual extremes are used to qualify figures of discharge, gage height, or dates of occurrence. For some stations there is a horizontal line across the gage-height column. This line indicates a change in gage datum and means that the gage heights above and below the line are not comparable.

The streamflow data are summarized in a table of monthly and annual mean discharge. These figures represent discharge passing the station; they are unadjusted for storage or diversion upstream unless otherwise specified under "REMARKS" for the individual station. Each monthly figure is the mean for an entire month; no figure is shown for a partial month. Likewise, each annual figure is the mean flow for a full year, and no figure is shown for a partial year. The months are arranged on a water-year basis. The mean monthly discharge, mean annual discharge, and monthly percent of total flow are given below the table for stations with five or more years of record.

For water-temperature records, the PERIOD OF RECORD section indicates the periods for which there are published records of either periodic water temperature or daily water temperature measurements. The PERIOD OF DAILY RECORD indicates the period for which daily water temperature have been published. The REMARKS section indicates for daily water temperature whether there was a water temperature recorder or an observer and, if an observer, the frequency of readings. Factors that affect the natural water temperature are covered in REMARKS. The maximum and minimum water temperatures in the EXTREMES are limited to the period of daily record and are qualified if they do not represent the actual maximum or minimum.

The table of PERIODIC WATER TEMPERATURE lists by water year in chronological order the date and water temperature. These water temperatures were generally taken at the time of a discharge measurement. The table, WATER TEMPERATURE, gives, for those stations that have periods of daily record, the maximum and minimum water temperature for each month. Depending on the size of the stream, whether there was a water temperature recorder or an observer, and, if an observer, the frequency of readings, these figures may not necessarily give the absolute maximum or minimum.

Data collected at crest-stage partial-record stations and miscellaneous discharge measurement sites are given in section 2 of this report. On some streams, a series of discharge measurements is made within a short period to investigate seepage gains or losses along a reach of stream. These measurements are given for four streams in the Anchorage area in section 3 of this report.

## Accuracy of Field Data and Computed Results

The accuracy of streamflow 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 interpretations of records.

Figures of monthly and annual mean discharge in this report are shown to hundredths of cubic foot per second for discharges between 0.1 and 10 $ft^3/s$; to tenths between 10 and 100 $ft^3/s$; to units between 100 and 1,000 $ft^3/s$; and to four significant figures above 1,000 $ft^3/s$.

Discharge values listed in the extremes table and for the crest-stage partial-record stations and miscellaneous discharge measurements are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 $ft^3/s$; to tenths between 1.0 and 10 $ft^3/s$; to units between 10 and 100 $ft^3/s$; and to three significant figures above 100 $ft^3/s$. The number of significant figures used is based solely on the magnitude of the figure.

Water temperature values in this report are shown to the nearest one-half degree Celsius.

## PUBLICATIONS

Streamflow records in this report were obtained from previously published reports of the Geological Survey. These Water-Supply Papers (WSP) and annual Water-Data Reports (WDR) are listed in the following table:

| Number | Content |
|---|---|
| WSP 372 | A water-power reconnaissance in south-central Alaska, 1913 |
| WSP 1372 | Compilation through water year 1950 |
| WSP 1466 | Daily data, water years 1951-53 |
| WSP 1486 | Daily data, water years 1954-56 |
| WSP 1500 | Daily data, water year 1957 |
| WSP 1570 | Daily data, water year 1958 |
| WSP 1640 | Daily data, water year 1959 |
| WSP 1720 | Daily data, water year 1960 |
| WSP 1740 | Compilation for water years 1951-60 |
| WSP 1936 | Daily data, water years 1961-65 |
| WSP 2136 | Daily data, water years 1966-70 |
| WDR AK-71 | Daily data, water year 1971 |
| WDR AK-72 | Daily data, water year 1972 |
| WDR AK-73 | Daily data, water year 1973 |
| WDR AK-74 | Daily data, water year 1974 |
| WDR AK-75-1 | Daily data, water year 1975 |

Records of daily water temperature are available in most of these reports. However, those for water years 1961-70 are published in the following Water Supply Papers:

| | |
|---|---|
| WSP 1953 | Daily data, water years 1961-63 |
| WSP 1959 | Daily data, water year 1964 |
| WSP 1966 | Daily data, water year 1965 |
| WSP 1996 | Daily data, water year 1966 |
| WSP 2016 | Daily data, water year 1967 |
| WSP 2100 | Daily data, water year 1968 |
| WSP 2150 | Daily data, water year 1969 |
| WSP 2160 | Daily data, water year 1970 |

Most of the data from Water Supply Paper 372 for the Cook Inlet Basin have been included in this report. However, some data for selected stations were not included as they were judged to be insignificant when compared with all the available information. The reader is referred to the above publications if he is interested in more detailed information.

## OTHER DATA AVAILABLE

Information of a more detailed nature than that published for most of the gaging stations (such as discharge measurements, gage-height records, and rating tables) is on file in the Anchorage Subdistrict Office of the Water Resources Division. Also, most gaging-station records and daily water temperature records are available in computer-usable form and many statistical analyses have been made.

Water quality records also are collected at or near some gaging stations. Data are obtained on the suspended-sediment and chemical quality of the stream water. The data were published in annual Water-Supply Papers through water year 1970, in annual reports entitled "Water Data Report for Alaska, Part 2. Water Quality Records" for water years 1971-74, and in an annual water-data report entitled "U.S. Geological Survey Water Data Report AK-75-1" for the 1975 water year.

Information on the availability of unpublished data, statistical analyses, or quality of water records may be obtained by request to: District Chief, U.S. Geological Survey, Water Resources Division, 218 E. Street, Anchorage, AK 99501.

FACTORS FOR CONVERTING ENGLISH UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

| Multiply English Units | by | To Obtain SI Units |
|---|---|---|
| feet (ft) | 0.3048 | meters (m) |
| miles (mi) | 1.609 | kilometers (km) |
| acres | 0.4047 | square hectometers ($hm^2$) |
| square miles ($mi^2$) | 2.590 | square kilometers ($km^2$) |
| acre-feet per year (acre-ft/yr) | 1,233 | cubic meters per year ($m^3/yr$) |
| | $1.233 \times 10^{-3}$ | cubic hectometers per year ($hm^3/yr$) |
| | $1.233 \times 10^{-6}$ | cubic kilometers per year ($km^3/yr$) |
| cubic feet per second ($ft^3/s$) | 0.02832 | cubic meters per second ($m^3/s$) |
| inches per year (in/yr) | 25.4 | millimeters per year (mm/yr) |

TEMPERATURE CONVERSION TABLE

Degrees Celsius (°C) to degrees Fahrenheit (°F)*

| °C | °F | °C | °F | °C | °F | °C | °F | °C | °F |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 32 | 4.5 | 40 | 9.0 | 48 | 13.5 | 56 | 18.0 | 64 |
| 0.5 | 33 | 5.0 | 41 | 9.5 | 49 | 14.0 | 57 | 18.5 | 65 |
| 1.0 | 34 | 5.5 | 42 | 10.0 | 50 | 14.5 | 58 | 19.0 | 66 |
| 1.5 | 35 | 6.0 | 43 | 10.5 | 51 | 15.0 | 59 | 19.5 | 67 |
| 2.0 | 36 | 6.5 | 44 | 11.0 | 52 | 15.5 | 60 | 20.0 | 68 |
| 2.5 | 36 | 7.0 | 45 | 11.5 | 53 | 16.0 | 61 | 20.5 | 69 |
| 3.0 | 37 | 7.5 | 45 | 12.0 | 54 | 16.5 | 62 | 21.0 | 70 |
| 3.5 | 38 | 8.0 | 46 | 12.5 | 54 | 17.0 | 63 | 21.5 | 71 |
| 4.0 | 39 | 8.5 | 47 | 13.0 | 55 | 17.5 | 63 | 22.0 | 72 |

* °C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32

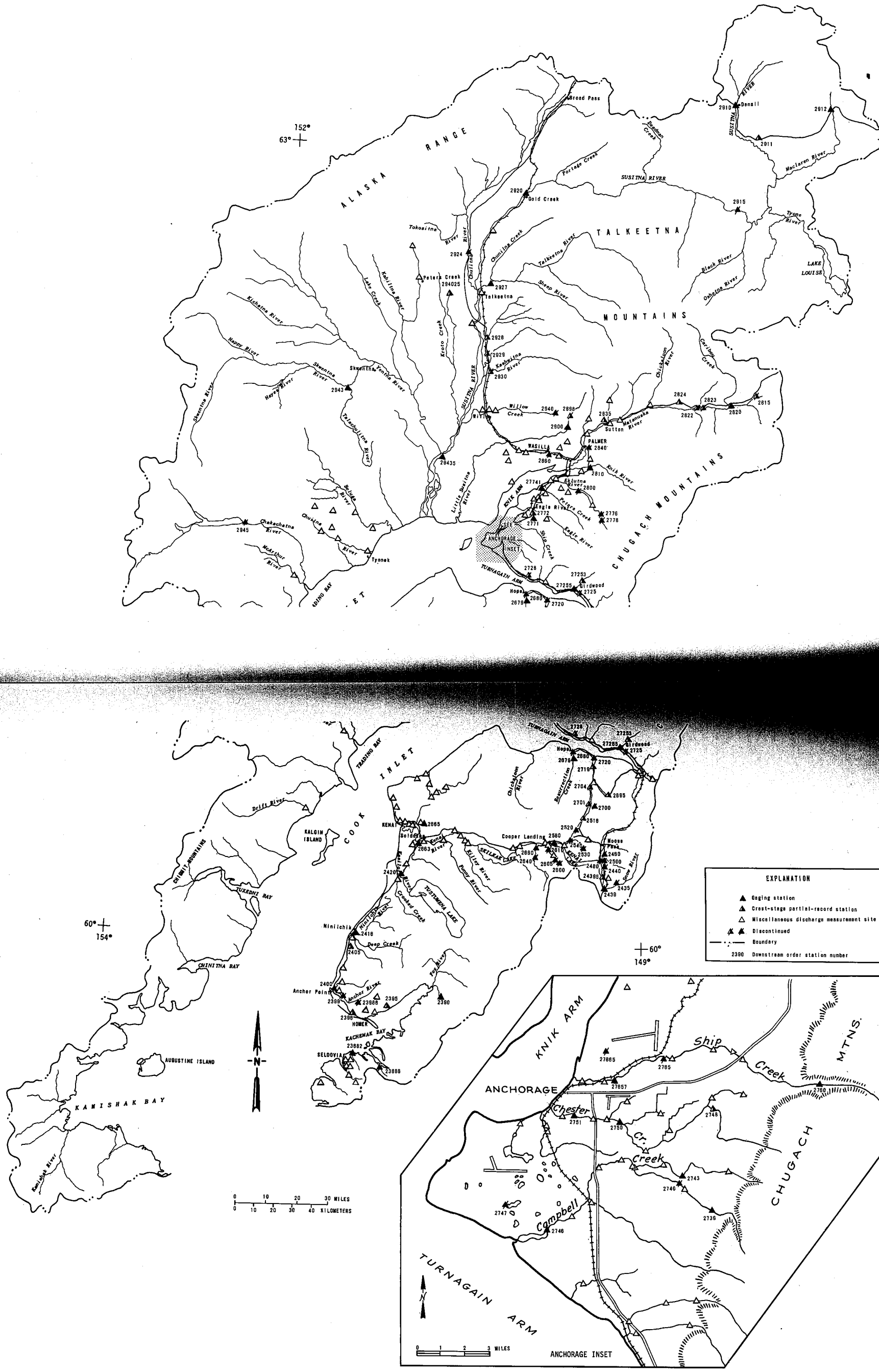


Figure 1.--Locations of gaging stations, crest-stage partial-record stations, and miscellaneous discharge measurement sites.

# SECTION 1

# GAGING STATION RECORDS

## 15238820 BARBARA CREEK NEAR SELDOVIA

LOCATION.--Lat 59°28'50", long 151°38'42", in SW¼ sec.15, T.8 S., R.14 W., Kenai Peninsula Borough, on left bank, 0.5 mi (0.8 km) above mouth, and 3.7 mi (6.0 km) northeast of Seldovia.

BASIN CHARACTERISTICS.--Drainage area, 20.7 mi$^2$ (53.6 km$^2$); slope, 122 ft/mi (23.1 m/km); stream length, 9.8 mi (15.8 km); area of lakes and ponds, 0 percent; mean elevation, 1,610 ft (491 m); glaicer area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1972 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (12 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 744 ft$^3$/s (21.1 m$^3$/s) June 29, 1975, gage height, 4.09 ft (1.247 m), from rating curve extended above 350 ft$^3$/s (9.9 m$^3$/s); minimum daily, about 16 ft $^3$/s (0.45 m$^3$/s) Feb. 27 to Apr. 3, 1973 and Mar. 18 to April 15, 1975.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1972a | June 16, 1972 | b280 | --- | Aug. 19, 1972 | 39 |
| 1973 | Oct. 16, 1972 | 335 | 3.35 | Feb. 27 to Apr. 3, 1973 | 16 |
| 1974 | June 3, 1974 | 312 | 3.28 | Mar. 21 to Apr. 4, 1974 | 18 |
| 1975 | June 29, 1975 | 744 | 4.09 | Mar. 18 to Apr. 15, 1975 | 16 |

a Period June to September.
b Maximum daily.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1972 | --- | --- | --- | --- | --- | --- | --- | --- | 184 | 141 | 54.4 | 94.0 | --- |
| 1973 | 103 | 51.3 | 29.8 | 21.6 | 17.9 | 16.0 | 26.6 | 107 | 238 | 149 | 56.9 | 69.6 | 74.1 |
| 1974 | 66.9 | 48.2 | 35.0 | 27.0 | 20.5 | 19.3 | 34.4 | 156 | 217 | 85.7 | 35.4 | 83.6 | 69.2 |
| 1975 | 106 | 94.7 | 46.4 | 25.8 | 21.4 | 17.5 | 17.3 | 129 | 343 | 224 | 63.8 | 107 | 99.9 |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1972-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | | 1973 | | 1974 | | 1974-cont | | 1975-cont | |
| 5-11-72 | 2.5 | 10- 8-72 | 2.5 | 10-11-73 | 3.0 | 6-20-74 | 6.0 | 1-24-75 | 0.5 |
| 6-22-72 | 4.5 | 11-30-72 | 0.5 | 1-24-74 | 0.5 | 9- 5-74 | 9.0 | 3-24-75 | 0.5 |
| 6-23-72 | 4.0 | 4-20-73 | 2.0 | 3-25-74 | 0.0 | 1975 | | 6- 9-75 | 4.0 |
| 8-15-72 | 9.5 | 7-25-73 | 6.0 | 4-25-74 | 2.0 | 10- 9-74 | 2.5 | 8- 6-75 | 8.0 |
| | | 9- 7-73 | 6.5 | | | 12- 7-74 | 1.5 | 9-11-75 | 6.5 |

## 15238860 TUTKA LAGOON CREEK NEAR HOMER

LOCATION.--Lat 59°25'59", long 151°24'36", on line between sec.36, T.8 S., R.13 W., and sec.2, T.9 S., R.13 W., Kenai Peninsula Borough, on left bank 700 ft (200 m) upstream from mean high water in Tutka Bay Lagoon, and 15 mi (24 km) south of Homer.

BASIN CHARACTERISTICS.--Drainage area, 10.8 $mi^2$ (28.0 $km^2$); main channel slope, 196 ft/mi (37.1 m/km); stream length, 8.5 mi (13.7 km); area of lakes and ponds, 2 percent; mean elevation, 1,610 ft (491 m); glacier area, 2 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 50 ft (15 m) from topographic map.

EXTREMES.--Maximum discharge during period of record, 1,540 $ft^3/s$ (43.6 $m^3/s$) Sept. 12, 1974, gage height, 6.67 ft (2.033 m); minimum daily, 6.0 $ft^3/s$ (0.17 $m^3/s$) Mar. 8 to Apr. 15, 1975.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1973a | Sept. 7, 1973 | 1,280 | 6.47 | Aug. 31, 1973 | 38 |
| 1974 | Sept. 12, 1974 | 1,540 | 6.67 | Jan. 11 to Apr. 7, 1974 | 7.0 |
| 1975 | Oct. 24, 1974 | 1,190 | 6.38 | Mar. 8 to Apr. 15, 1975 | 6.0 |
| | May 10, 1975 | --- | b6.49 | | |

a Period August to September.
b Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1973 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 70.9 | 121 | --- |
| 1974 | 40.1 | 14.8 | 9.74 | 7.32 | 7.00 | 7.00 | 12.8 | 114 | 213 | 101 | 56.2 | 183 | 64.0 |
| 1975 | 114 | 60.1 | 26.4 | 15.5 | 10.7 | 6.29 | 6.50 | 66.1 | 251 | 183 | 72.4 | 182 | 83.2 |

### WATER TEMPERATURE RECORDS

PERIOD OF DAILY RECORD.--October 1973 to September 1975.

REMARKS.--Continuous water-temperature recorder.

EXTREMES.--Maximum during period of daily record, 11.5°C August 13, 1974; minimum, 0.0°C on most days during winter period.

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1974 | Max | a | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 4.5 | 7.5 | 10.0 | 11.5 | 9.0 |
| | Min | a | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.5 | 3.5 | 5.0 | 4.0 |
| 1975 | Max | 6.0 | 4.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.5 | 4.5 | 6.0 | 8.0 | 9.5 | 8.0 |
| | Min | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 2.5 | 4.5 | 5.0 |

a Data insufficient to compute monthly maximum or minimum.

## 15239000 BRADLEY RIVER NEAR HOMER

LOCATION.--Lat 59°45'24", long 150°51'02", in NE¼ SW¼ sec.8, T.5 S., R.9 W., Kenai Peninsula Borough, on right bank about 800 ft (200 m) downstream from Bradley Lake outlet, 3.5 mi (5.6 km) upstream from unnamed tributary, and 26 mi (42 km) northeast of Homer.

BASIN CHARACTERISTICS.--Drainage area, 54.0 mi² (139.9 km²); main-channel slope, 191 ft/mi (36.2 m/km); stream length, 13.3 mi (21.4 km); area of lakes and ponds, 6 percent; mean elevation, 2,800 ft (853 m); glacier area, 36 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to August 1955, October 1957 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 1,050 ft (320 m), from topographic map. July 13-22, 1955, non-recording gage at site 1 mi (1.6 km) upstream at different datum, and July 23 to Aug. 5, 1955, nonrecording gage at site 3 mi (4.8 km) upstream at different datum.

AVERAGE DISCHARGE.--18 years, 404 ft³/s (11.44 m³/s), 101.60 in/yr (2,581 mm/yr), 292,700 acre-ft/yr (361 hm³/yr).

EXTREMES.--Maximum discharge during period of record, 5,480 ft³/s (155 m³/s) Oct. 14, 1969, gage height, 9.13 ft (2.783 m) from rating curve extended above 2,400 ft³/s (68 m³/s); minimum daily, about 16 ft³/s (0.45 m³/s) Mar. 26 to Apr. 25, 1972.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1958 | Aug. 13, 1958 | 4,220 | 8.20 | Mar. 1-31, 1958 | 32 |
| 1959 | Aug. 26, 1959 | 1,260 | 5.19 | Mar. 1-31, 1959 | 22 |
| 1960 | Aug. 2, 1960 | 2,000 | 6.00 | Mar. 1-31, 1960 | 24 |
| 1961 | Sept. 12, 1961 | 4,890 | 8.71 | Mar. 26,27, 1961 | 26 |
| 1962 | July 11, 1962 | 1,540 | 5.65 | Mar. 1-31, 1962 | 22 |
| 1963 | Aug. 25, 1963 | 3,250 | 7.35 | Apr. 1-30, 1963 | 45 |
| 1964 | Aug. 14, 1964 | a2,500 | --- | Mar. 28, 1964 | b17 |
| 1965 | Sept. 16, 1965 | 3,300 | 7.12 | Feb. 1-28, 1965 | 50 |
| 1966 | Sept. 16, 1966 | 4,230 | 8.21 | Mar. 1-31, 1966 | 31 |
| 1967 | Sept. 18, 1967 | 4,180 | 8.17 | Mar. 21 to Apr. 5, 1967 | 28 |
| 1968 | Aug. 11, 1968 | 2,040 | 6.04 | Apr. 13-23, 1968 | 60 |
| 1969 | June 16, 1969 | 2,780 | 6.72 | Jan. 9 to Mar. 25, 1969 | 34 |
| 1970 | Oct. 14, 1969 | 5,480 | 9.13 | Jan. 15-19, 1970 | 75 |
| 1971 | July 14, 1971 | 2,270 | 6.27 | Mar. 16 to Apr. 15, 1971 | 30 |
| 1972 | Aug. 23, 1972 | 2,970 | 7.07 | Mar. 26 to Apr. 25, 1972 | 16 |
| 1973 | Aug. 24, 1973 | 1,460 | 5.46 | Feb. 24 to Apr. 15, 1973 | 24 |
| 1974 | Sept. 12, 1974 | 3,300 | 7.40 | Mar. 13 to Apr. 20, 1974 | 19 |
| 1975 | June 29, 1975 | a2,000 | --- | Mar. 28 to Apr. 29, 1975 | 30 |

a Maximum daily.
b Momentary minimum, gage height, 0.26 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | 666 | 502 | 111 | 78.9 | 41.6 | 32.0 | 74.0 | 389 | 1116 | 1122 | 1378 | 355 | 492 |
| 1959 | 233 | 102 | 59.5 | 32.5 | 25.0 | 22.0 | 33.0 | 308 | 817 | 788 | 774 | 306 | 294 |
| 1960 | 160 | 94.0 | 60.0 | 39.0 | 35.0 | 24.0 | 33.0 | 593 | 719 | 906 | 859 | 455 | 333 |
| 1961 | 214 | 144 | 179 | 199 | 107 | 41.8 | 30.3 | 436 | 746 | 1070 | 906 | 1035 | 428 |
| 1962 | 300 | 116 | 71.4 | 55.0 | 31.0 | 22.0 | 39.0 | 177 | 669 | 845 | 656 | 413 | 285 |
| 1963 | 230 | 317 | 127 | 113 | 87.0 | 67.0 | 45.0 | 237 | 624 | 1199 | 1170 | 985 | 436 |
| 1964 | 484 | 93.5 | 108 | 74.6 | 63.1 | 40.2 | 32.6 | 86.9 | 647 | 965 | 1274 | 922 | 401 |
| 1965 | 411 | 140 | 85.0 | 63.8 | 50.0 | 55.0 | 75.0 | 131 | 527 | 900 | 965 | 1435 | 405 |
| 1966 | 513 | 165 | 70.0 | 39.0 | 32.0 | 31.0 | 41.0 | 150 | 762 | 886 | 1693 | 1512 | 493 |
| 1967 | 453 | 63.7 | 43.3 | 34.8 | 30.7 | 29.3 | 35.6 | 253 | 706 | 950 | 1228 | 1490 | 445 |
| 1968 | 198 | 224 | 136 | 98.9 | 90.9 | 105 | 62.3 | 307 | 564 | 872 | 984 | 408 | 339 |
| 1969 | 240 | 72.9 | 40.6 | 34.5 | 34.5 | 34.4 | 43.0 | 310 | 1358 | 1228 | 834 | 573 | 402 |
| 1970 | 1580 | 211 | 239 | 118 | 116 | 109 | 103 | 331 | 705 | 1048 | 1122 | 606 | 524 |
| 1971 | 197 | 382 | 75.7 | 45.4 | 35.8 | 30.5 | 31.0 | 115 | 641 | 1394 | 1262 | 507 | 396 |
| 1972 | 376 | 108 | 54.8 | 31.7 | 19.9 | 17.1 | 16.5 | 141 | 517 | 1172 | 1378 | 1019 | 406 |
| 1973 | 413 | 123 | 56.1 | 34.4 | 26.2 | 24.0 | 27.8 | 128 | 600 | 918 | 870 | 908 | 346 |
| 1974 | 575 | 173 | 49.8 | 31.7 | 22.9 | 19.4 | 22.7 | 227 | 551 | 860 | 1000 | 1501 | 421 |
| 1975 | 346 | 224 | 112 | 55.3 | 43.1 | 34.2 | 30.1 | 355 | 1035 | 1068 | 864 | 850 | 420 |
| MEAN | 422 | 181 | 93.2 | 65.5 | 49.5 | 41.0 | 43.1 | 260 | 739 | 1011 | 1068 | 848 | 404 |
| MONTHLY PERCENT | 9 | 4 | 2 | 1 | 1 | 1 | 1 | 5 | 15 | 21 | 22 | 17 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1955, 1957-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1955 | | 1959-cont | | 1961-cont | | 1963-cont | | 1966-cont | | 1969 | | 1972 | |
| 8- 2-55 | 8.0 | 9-17-59 | 8.5 | 6-10-61 | 3.5 | 5- 1-63 | 0.5 | 7-18-66 | 8.0 | 9-25-69 | 7.0 | 4- 6-72 | 0.0 |
| 1957 | | 1960 | | 7-13-61 | 9.0 | 1964 | | 1967 | | 1970 | | 6-24-72 | 4.0 |
| 7-15-57 | 11.0 | 2-10-60 | 0.0 | 8-24-61 | 7.5 | 9- 2-64 | 6.5 | 9- 1-67 | 8.5 | 10-16-69 | 5.0 | 8-16-72 | 8.0 |
| 1958 | | 3- 2-60 | 0.0 | 1962 | | 1965 | | 1968 | | 6-23-70 | 3.5 | 1973 | |
| 6- 4-58 | 4.5 | 4-13-60 | 0.0 | 10-15-61 | 4.5 | 6-11-65 | 1.0 | 10- 3-67 | 6.0 | 1971 | | 10- 7-72 | 6.0 |
| 7-10-58 | 5.5 | 7-27-60 | 8.5 | 1-15-62 | 0.0 | 7-21-65 | 5.5 | 3- 7-68 | 0.0 | 11-12-70 | 1.5 | 1974 | |
| 1959 | | 1961 | | 6-19-62 | 6.0 | 8-26-65 | 6.5 | 6-15-68 | 4.0 | 9- 8-71 | 7.0 | 4- 3-74 | 1.0 |
| 4- 2-59 | 2.5 | 10- 5-60 | 5.5 | 1963 | | 1966 | | 7-18-68 | 8.5 | 9-28-71 | 6.0 | 8-16-74 | 6.0 |
| 7-17-59 | 5.5 | 4- 4-61 | 0.0 | 10-19-62 | 6.5 | 1-14-66 | 0.5 | | | | | 1975 | |
| | | | | | | | | | | | | 9-24-75 | 8.0 |

## 15239880 TWITTER CREEK NEAR HOMER

LOCATION.--Lat 59°42'54", long 151°37'46", in SE¼ sec.27, T.5 S., R.14 W., Kenai Peninsula Borough, on right bank, 0.6 mi (1.0 km) upstream from mouth, and 5.7 mi (9.2 km) northwest of Homer.

BASIN CHARACTERISTICS.--Drainage area, 16.1 mi² (41.7 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1971 to September 1973.

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 536 ft³/s (15.2 m³/s) May 15, 1973, gage height, 4.14 ft (1.262 m), from rating curve extended above 65 ft³/s (1.8 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 4.51 ft (1.375 m) May 7, 1972, backwater from ice; minimum daily discharge, 3.9 ft³/s (0.11 m³/s) Apr. 4-6, 1973, gage height, 0.59 ft (0.180 m).

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1971a | Aug. 6, 1971 | 78 | 2.04 | Sept. 15, 18, 1971 | b10 |
| 1972 | May 7, 1972 | --- | c4.51 | Mar. 16 to Apr. 25, 1972 | 4.5 |
| | May 19, 1972 | 203 | 3.06 | | |
| 1973 | Apr. 13, 1973 | --- | c4.31 | Apr. 4-6, 1973 | d3.9 |
| | May 15, 1973 | 536 | 4.14 | | |

a Period August to September.
b Momentary minimum, gage height, 0.94 ft.
c Backwater from ice.
d Gage height, 0.59 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1971 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 24.7 | 15.3 | --- |
| 1972 | 40.5 | 10.2 | 6.61 | 5.48 | 5.00 | 4.74 | 4.65 | 76.0 | 38.8 | 11.8 | 14.9 | 39.7 | 21.6 |
| 1973 | 42.8 | 11.1 | 5.47 | 4.59 | 4.31 | 4.20 | 11.9 | 87.0 | 32.3 | 11.6 | 16.2 | 16.8 | 20.9 |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1971-74.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|
| 1971 | | 1972-cont | | 1972-cont | | 1973-cont | |
| 3-22-71 | 0.0 | 2-17-72 | 0.0 | 8-17-72 | 7.0 | 5-11-73 | 1.0 |
| 6-24-71 | 10.0 | 4-25-72 | 0.0 | 1973 | | 6-20-73 | 7.5 |
| 8-27-71 | 8.0 | 5-26-72 | 1.5 | 10- 9-72 | 0.5 | 9- 8-73 | 5.0 |
| 1972 | | 6-13-72 | 7.0 | 12- 1-72 | 0.0 | 1974 | |
| 11-10-71 | 0.0 | 7- 7-72 | 12.0 | 3-30-73 | 0.0 | 10-11-73 | 3.0 |

## 15239900 ANCHOR RIVER NEAR ANCHOR POINT

LOCATION.--Lat 59°44'50", long 151°45'11", in NE¼ sec.13, T.5 S., R.15 W., Kenai Peninsula Borough, on left bank at downstream side of bridge on Sterling Highway, and 3.3 mi (5.3 km) southeast of Anchor Point.

BASIN CHARACTERISTICS.--Drainage area, 133 $mi^2$ (344 $km^2$); main-channel slope, 45.8 ft/mi (8.67 m/km); stream length, 26.2 mi (42.2 km); area of lakes and ponds, 0 percent; mean elevation, 1120 ft (341 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1965 to September 1973. Annual maximum, water year 1974.

GAGE.--Water-stage recorder. Datum of gage is 168.64 ft (51.401 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 184 $ft^3/s$ (5.211 $m^3/s$), 18.79 in/yr (477 mm/yr), 133,300 acre-ft/yr (164 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 2,240 $ft^3/s$ (63.4 $m^3/s$) May 15, 1973, gage height, 5.91 ft (1.801 m), from rating curve extended above 950 $ft^3/s$ (27 $m^3/s$) on basis of slope-area and contracted-opening measurement at gage height 5.38 ft (1.640 m) and slope-area measurement of peak flow; maximum gage height, 7.00 ft (2.134 m) Apr. 27, 1968 (backwater from ice); minimum daily discharge, about 28 $ft^3/s$ (0.79 $m^3/s$) Jan. 1-31, 1969.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1965a | Sept. 19, 1965 | 956 | 4.03 | Sept. 3, 1965 | b90 |
| 1966 | Sept. 19, 1966 | 1,230 | 4.67 | Dec. 16, 1965, to Jan. 5, 1966 | 30 |
| 1967 | Sept. 7, 1967 | 1,010 | 4.10 | Mar. 11 to Apr. 2, 1967 | 55 |
| 1968 | Apr. 27, 1968 | --- | c7.00 | Mar. 25 to Apr. 6, 1968 | 54 |
| | May 13, 1968 | 1,140 | 4.39 | | |
| 1969 | (date unknown) | --- | c4.78 | Jan. 1-31, 1969 | 28 |
| | May 22, 1969 | 1,050 | 4.14 | | |
| 1970 | Oct. 14, 1969 | 1,370 | 4.72 | Oct. 2, 1969 | 74 |
| | Mar. 30, 1970 | --- | c6.61 | | |
| 1971 | Apr. 30, 1971 | --- | c6.94 | Apr. 1-20, 1971 | 72 |
| | June 6, 1971 | 1,860 | 5.38 | | |
| 1972 | May 7, 1972 | --- | c5.05 | Feb. 16 to Mar. 31, 1972 | 52 |
| | May 20,1972 | 1,260 | 4.56 | | |
| 1973 | May 15, 1973 | 2,240 | 5.91 | Feb. 6 to Apr. 4, 1973 | 54 |
| 1974 | June 1974 | 1,000 | 4.26 | | |

a Period June to September.
b Momentary minimum, gage height, 2.29 ft.
c Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1965 | | | | | | | | | | 184 | 142 | 245 | |
| 1966 | 191 | 58.1 | 32.4 | 41.3 | 60.9 | 44.5 | 185 | 739 | 307 | 164 | 215 | 328 | 198 |
| 1967 | 287 | 119 | 97.3 | 83.4 | 65.4 | 56.6 | 71.1 | 191 | 217 | 118 | 158 | 362 | 152 |
| 1968 | 159 | 334 | 134 | 93.3 | 86.1 | 68.6 | 257 | 585 | 167 | 91.4 | 74.7 | 82.6 | 178 |
| 1969 | 116 | 34.5 | 30.0 | 28.0 | 34.6 | 55.2 | 322 | 462 | 142 | 82.4 | 55.4 | 59.2 | 119 |
| 1970 | 390 | 158 | 128 | 100 | 119 | 194 | 288 | 801 | 299 | 122 | 144 | 159 | 243 |
| 1971 | 143 | 207 | 91.7 | 85.7 | 79.4 | 74.0 | 77.7 | 576 | 803 | 217 | 205 | 156 | 227 |
| 1972 | 294 | 136 | 91.6 | 67.6 | 53.3 | 52.0 | 54.8 | 664 | 237 | 94.9 | 127 | 288 | 181 |
| 1973 | 336 | 107 | 69.2 | 59.4 | 54.4 | 54.0 | 147 | 597 | 271 | 105 | 135 | 136 | 174 |
| MEAN | 239 | 144 | 84.3 | 69.8 | 69.2 | 74.8 | 175 | 577 | 305 | 131 | 139 | 202 | 184 |
| MONTHLY PERCENT | 11 | 7 | 4 | 3 | 3 | 3 | 8 | 26 | 14 | 6 | 6 | 9 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1965-74.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1965 | | 1967 | | 1968-cont | | 1969-cont | | 1970-cont | | 1971-cont | | 1973 | |
| 8-27-65 | 10.5 | 11- 8-66 | 0.5 | 6-18-68 | 13.0 | 6-24-69 | 12.0 | 6-25-70 | 11.5 | 8-27-71 | 9.0 | 10- 9-72 | 2.5 |
| 1966 | | 1-18-67 | 0.5 | 8- 1-68 | 11.0 | 7-30-69 | 13.0 | 8- 8-70 | 10.0 | 1972 | | 5-11-73 | 2.0 |
| 11- 3-65 | 0.0 | 3-27-67 | 0.0 | 8-20-68 | 12.0 | 9- 8-69 | 7.5 | 9-28-70 | 5.5 | 2-17-72 | 0.0 | 6-20-73 | 9.0 |
| 2- 7-66 | 0.0 | 6-14-67 | 8.5 | 1969 | | 1970 | | 1971 | | 5-10-72 | 2.0 | 7-24-73 | 15.5 |
| 4- 7-66 | 0.5 | 9- 3-67 | 9.5 | 10-22-68 | 0.0 | 10-23-69 | 0.0 | 11-11-70 | 1.0 | 5-25-72 | 3.5 | 9- 8-73 | 6.5 |
| 7-13-66 | 10.5 | 1968 | | 1-13-69 | 0.0 | 1-13-70 | 0.0 | 12-21-70 | 0.0 | 7- 6-72 | 18.0 | 1974 | |
| 8-17-66 | 8.5 | 10-21-67 | 0.5 | 3-21-69 | 0.0 | 3- 4-70 | 0.0 | 6-24-71 | 10.0 | 8-14-72 | 12.0 | 10-10-73 | 3.0 |
| | | 3-14-68 | 0.0 | 5- 8-69 | 2.0 | 4-24-70 | 2.0 | 7-15-71 | 9.5 | | | | |

## 15240000 ANCHOR RIVER AT ANCHOR POINT

LOCATION.--Lat 59°46'21", long 151°50'05", in SE¼ sec.4, T.5 S., R.15 W., Kenai Peninsula Borough, near right bank on downstream side of Sterling Highway bridge at Anchor Point, 0.1 mi (0.2 km) downstream from North Fork and 1 mi (2 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 226 $mi^2$ (585 $km^2$); main-channel slope, 51 ft/mi (9.7 m/km); stream length, 28 mi (45 km); area of lakes and ponds, 0 percent; mean elevation, 970 ft (296 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1953 to September 1966.

GAGE.--Non-recording gage. Datum of gage is 24 ft (7.3 m) above mean sea level (river profile survey).

AVERAGE DISCHARGE.--13 years, 299 $ft^3/s$ (8.468 $m^3/s$), 17.97 in/yr (456 mm/yr), 216,600 acre-ft/yr (267 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 3,030 $ft^3/s$ (85.8 $m^3/s$) Mar. 8, 1963 (discharge measurement), gage height, 6.36 ft (1.939 m), backwater from ice; maximum gage height, 11.6 ft (3.54 m) Jan. 20, 1961 from floodmarks (ice jam); minimum discharge observed, 28 $ft^3/s$ (0.79 $m^3/s$) July 28, 1953, gage height, 1.81 ft (0.552 m), but may have been less during periods of no gage-height record.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1953a | Sept. 24, 1953 | 958 | 3.63 | July 28, 1953 | b28 |
| 1954 | May 7, 1954 | 2,320 | 4.95 | Jan. 1 to Feb. 28, 1954 | 50 |
| 1955 | May 14, 1955 | c1,870 | 4.50 | Aug. 21, 1955 | d40 |
| 1956 | Apr. 29, 1956 | --- | e6.38 | Apr. 1-15, 1956 | 80 |
| | May 2, 1956 | c1,300 | --- | | |
| 1957 | Dec. 7, 1956 | --- | e5.90 | July 16, 1957 | f45 |
| | May 9, 1957 | 1,620 | 4.30 | | |
| 1958 | Oct. 22, 1957 | 1,710 | 4.34 | July 8, 1958 | f83 |
| | Dec. 24, 1957 | --- | e5.83 | | |
| 1959 | Apr. 24, 1959 | --- | e6.95 | July 10, 1959 | 77 |
| | Apr. 29, 1959 | 2,300 | 4.85 | | |
| 1960 | Apr. 30, 1960 | --- | e6.58 | July 22, 1960 | f63 |
| | May 23, 1960 | 1,750 | 4.38 | | |
| 1961 | Jan. 20, 1961 | --- | e11.6 | Nov. 25, 1960 | 91 |
| | Sept. 11, 1961 | 2,200 | 4.83 | | |
| 1962 | Apr. 6, 1962 | --- | e6.38 | Aug. 4, 5, 1962 | 75 |
| | June 14, 1962 | 1,770 | 4.40 | | |
| 1963 | Mar. 7, 1963 | --- | e10.00 | Dec. 1-10, 1962 | 75 |
| | Mar. 8, 1963 | g3,030 | 6.36 | | |
| 1964 | Apr. 6, 1964 | --- | e7.50 | Nov. 9-30, 1963 | 77 |
| | May 31, 1964 | 2,780 | 5.35 | | |
| 1965 | Dec. 3-5, 1964 | --- | e6.16 | Feb. 17-21, 1965 | 9c |
| | Sept. 27, 1965 | 1,370 | 4.14 | | |
| 1966 | Sept. 19, 1966 | 1,590 | 4.25 | Dec. 16, 1965, to Jan. 5, 1966 | 45 |

a Period June to September.
b Minimum observed, gage height, 1.81 ft, but may have been less during periods of no gage-height record.
c Maximum daily.
d Minimum observed, gage height, 1.66 ft.
e Backwater from ice.
f Momentary minimum.
g Discharge measurement.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953 | | | | | | | | | | 82.3 | 183 | 284 | |
| 1954 | 333 | 165 | 100 | 50.0 | 50.0 | 80.0 | 223 | 1014 | 206 | 134 | 335 | 194 | 242 |
| 1955 | 414 | 278 | 110 | 120 | 120 | 120 | 140 | 1115 | 808 | 252 | 239 | 328 | 338 |
| 1956 | 289 | 110 | 99.0 | 100 | 84.0 | 86.0 | 250 | 925 | 371 | 194 | 254 | 312 | 257 |
| 1957 | 247 | 153 | 80.7 | 69.0 | 73.9 | 105 | 193 | 564 | 131 | 133 | 192 | 544 | 208 |
| 1958 | 611 | 832 | 259 | 174 | 96.2 | 165 | 591 | 895 | 309 | 223 | 317 | 243 | 394 |
| 1959 | 238 | 191 | 145 | 90.0 | 94.0 | 95.0 | 457 | 919 | 215 | 184 | 171 | 219 | 253 |
| 1960 | 290 | 197 | 155 | 160 | 161 | 104 | 185 | 972 | 172 | 229 | 252 | 322 | 268 |
| 1961 | 280 | 163 | 185 | 284 | 173 | 115 | 550 | 869 | 325 | 233 | 233 | 599 | 335 |
| 1962 | 384 | 203 | 134 | 130 | 129 | 120 | 195 | 1035 | 531 | 186 | 106 | 129 | 275 |
| 1963 | 197 | 207 | 113 | 166 | 285 | 681 | 375 | 473 | 265 | 317 | 354 | 471 | 326 |
| 1964 | 556 | 92.0 | 160 | 150 | 130 | 95.0 | 280 | 1312 | 783 | 366 | 230 | 188 | 363 |
| 1965 | 415 | 339 | 165 | 117 | 97.4 | 144 | 497 | 796 | 496 | 258 | 206 | 477 | 335 |
| 1966 | 314 | 89.2 | 49.8 | 56.3 | 78.0 | 56.8 | 265 | 992 | 486 | 257 | 382 | 477 | 293 |
| MEAN | 351 | 232 | 135 | 128 | 121 | 151 | 323 | 914 | 392 | 218 | 247 | 342 | 299 |
| MONTHLY PERCENT | 10 | 7 | 4 | 4 | 3 | 4 | 9 | 26 | 11 | 6 | 7 | 10 | |

15240000 ANCHOR RIVER AT ANCHOR POINT--Continued

WATER TEMPERATURE RECORDS

PERIOD OF DAILY RECORD.--May to August 1953, November 1953 to September 1954, April 1959 to November 1966 (seasonal).

REMARKS.--Once-daily readings by observer on most days during open water season.

EXTREMES.--Maximum observed during period of daily record, 23.0°C June 27, 1953; minimum, 0.0°C on most days during winter period.

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953 | Max | --- | --- | --- | --- | --- | --- | --- | 9.0 | 23.0 | 21.0 | 18.0 | --- |
| | Min | --- | --- | --- | --- | --- | --- | --- | 2.0 | 5.5 | 15.5 | 12.0 | --- |
| 1954 | Max | --- | 1.0 | 0.5 | 1.0 | a | 1.0 | 1.0 | a | a | a | 18.0 | 12.0 |
| | Min | --- | 0.0 | 0.0 | 0.0 | a | 0.5 | 0.5 | a | 4.5 | a | 11.5 | 6.0 |
| 1959 | Max | --- | --- | --- | --- | --- | --- | 1.0 | 9.5 | 15.5 | 14.5 | 16.0 | 15.0 |
| | Min | --- | --- | --- | --- | --- | --- | a | a | 8.0 | 10.0 | 10.0 | 7.5 |
| 1960 | Max | 8.5 | 1.0 | a | --- | --- | --- | 1.5 | 6.0 | 12.0 | a | 16.0 | 12.0 |
| | Min | 0.0 | 0.0 | 0.0 | --- | --- | --- | 0.0 | 0.0 | a | a | 10.0 | 4.5 |
| 1961 | Max | 6.0 | 2.0 | --- | --- | --- | --- | a | 10.0 | 18.0 | 16.5 | 14.5 | 10.5 |
| | Min | 0.0 | 0.0 | --- | --- | --- | --- | a | 1.5 | 5.5 | 8.0 | 11.5 | a |
| 1962 | Max | --- | --- | --- | --- | --- | --- | --- | 9.0 | 14.5 | 18.5 | 15.5 | --- |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 5.5 | 7.0 | 11.0 | --- |
| 1963 | Max | --- | --- | --- | --- | --- | --- | --- | 14.0 | 13.5 | 20.5 | 16.5 | 13.5 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 5.0 | 9.5 | 8.5 | 6.5 |
| 1964 | Max | 8.0 | 0.5 | --- | 0.0 | 0.0 | 0.0 | 1.0 | 10.5 | 11.5 | 17.0 | 16.5 | 13.0 |
| | Min | 0.0 | 0.0 | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 8.0 | 10.0 | 5.5 |
| 1965 | Max | 9.5 | 0.5 | a | --- | --- | --- | --- | --- | a | a | 15.0 | 14.0 |
| | Min | 0.0 | 0.0 | 0.0 | --- | --- | --- | --- | --- | a | a | 8.0 | 1.0 |
| 1966 | Max | --- | --- | --- | --- | --- | --- | --- | 5.0 | 16.5 | 19.0 | 13.0 | 18.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 4.5 | 8.0 | 5.5 | 6.0 |
| 1967 | Max | 9.0 | a | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Min | 0.0 | a | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

a Data insufficient to compute monthly maximum or minimum.

## 15241600 NINILCHIK RIVER AT NINILCHIK

LOCATION.--Lat 60°02'56", long 151°39'48" in NE¼ sec.34, T.1 S., R.14 W., Kenai Peninsula Borough, on downstream side of bridge at Ninilchik, and 0.9 mi (1.4 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 131 $mi^2$ (339 $km^2$); main-channel slope, 12.7 ft/mi (2.41 m/km); stream length, 21 mi (34 km); area of lakes and ponds, 1 percent; mean elevation, 670 ft (204 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to September 1975.

GAGE.--Nonrecording gage. Altitude of gage is 30 ft (9 m), from topographic map. Prior to Oct. 1, 1965, at site 0.2 mi (0.3 km) upstream at different datum.

AVERAGE DISCHARGE.--12 years, 104 $ft^3/s$ (2.945 $m^3/s$), 10.78 in/yr (274 mm/yr), 75,350 acre-ft/yr (92.9 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 1,240 $ft^3/s$ (35.1 $m^3/s$) Apr. 24, 1974, gage height, 6.04 ft (1.841 m), from graph based on gage readings; maximum height observed, 8.69 ft (2.649 m) Apr. 14, 1969, backwater from ice; minimum discharge observed, 30 $ft^3/s$ (0.85 $m^3/s$) July 20, 1966, gage height, 3.64 ft (1.109 m).

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1963a | Apr. 24, 1963 | --- | b7.12 | Aug. 16, 1963 | c45 |
| | May 4, 1963 | d398 | --- | | |
| 1964 | Apr. 17, 1964 | --- | b6.28 | Nov. 16-30, 1963 | 34 |
| | June 2, 1964 | d650 | 4.46 | | |
| 1965 | Apr. 20, 1965 | 502 | 4.52 | Jan. 1-31, 1965 | 38 |
| 1966 | Nov. 3, 1965 | --- | b6.37 | July 20, 1966 | e30 |
| | Sept. 18, 1966 | d500 | --- | | |
| 1967 | Oct. 13, 1966 | d340 | --- | Mar. 1 to Apr. 10, 1967 | 50 |
| | Nov. 13, 1966 | --- | b6.24 | | |
| 1968 | Nov. 3, 1967 | d480 | 5.58 | Mar. 28 to Apr. 8, 1968 | 40 |
| | Dec. 5, 1967 | --- | b7.30 | | |
| 1969 | Oct. 8, 1968 | d127 | 4.56 | Jan. 11-20, 1969 | 38 |
| | Apr. 14, 1969 | --- | b8.69 | | |
| | May 5, 1969 | d127 | 4.49 | | |
| 1970 | Apr. 1, 1970 | --- | b6.45 | Oct. 23, 1969 | 36 |
| | May 15, 1970 | d304 | 5.17 | | |
| 1971 | May 4, 1971 | --- | b8.22 | Oct. 26, 27, 1970 | 40 |
| | May 21, 1971 | 624 | 5.84 | | |
| 1972 | May 5, 1972 | --- | b7.68 | July 30, 1972 | 56 |
| | May 12, 1972 | d1,000 | --- | | |
| 1973 | Apr. 9, 1973 | --- | b6.29 | July 25, 1973 | f52 |
| | May 15, 1973 | 462 | 5.37 | | |
| 1974 | Mar. 30, 1974 | --- | b6.80 | Jan. 11 to Mar. 27, 1974 | 36 |
| | Apr. 24, 1974 | 1,240 | 6.04 | | |
| 1975 | May 12, 1975 | 1,200 | 6.98 | Jan. 3-7, 1975 | 45 |

a Period April to September.
b Backwater from ice.
c Gage height, 2.80 ft.
d Maximum daily.
e Gage height, 3.64 ft.
f Gage height, 4.00 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1963 | | | | | | | | 210 | 108 | 83.8 | 72.6 | 109 | |
| 1964 | 151 | 41.1 | 55.3 | 60.9 | 65.6 | 55.8 | 138 | 381 | 238 | 115 | 109 | 101 | 126 |
| 1965 | 148 | 117 | 58.6 | 38.0 | 40.0 | 87.3 | 227 | 167 | 141 | 124 | 89.1 | 185 | 119 |
| 1966 | 144 | 46.0 | 42.0 | 44.0 | 60.0 | 60.0 | 134 | 310 | 170 | 109 | 144 | 199 | 122 |
| 1967 | 203 | 96.2 | 68.1 | 55.8 | 55.0 | 50.0 | 61.5 | 111 | 118 | 85.6 | 94.4 | 144 | 95.4 |
| 1968 | 103 | 248 | 70.1 | 50.2 | 49.9 | 61.3 | 155 | 283 | 112 | 67.1 | 54.5 | 61.2 | 110 |
| 1969 | 78.2 | 51.6 | 44.2 | 39.1 | 43.5 | 49.1 | 52.2 | 81.7 | 62.2 | 59.8 | 47.8 | 54.6 | 55.4 |
| 1970 | 83.5 | 73.8 | 69.8 | 55.0 | 66.6 | 108 | 151 | 193 | 80.6 | 75.5 | 68.1 | 93.6 | 93.4 |
| 1971 | 98.0 | 165 | 52.9 | 46.8 | 50.8 | 55.5 | 66.2 | 227 | 131 | 90.0 | 126 | 95.2 | 101 |
| 1972 | 108 | 61.3 | 62.0 | 62.0 | 62.0 | 61.0 | 61.0 | 324 | 117 | 69.0 | 88.0 | 155 | 103 |
| 1973 | 178 | 78.5 | 69.9 | 67.4 | 66.0 | 66.8 | 101 | 147 | 92.3 | 69.4 | 100 | 94.2 | 94.5 |
| 1974 | 91.2 | 55.4 | 42.6 | 36.8 | 36.0 | 36.9 | 548 | 151 | 76.5 | 68.2 | 76.5 | 113 | 111 |
| 1975 | 139 | 79.5 | 59.2 | 54.0 | 51.4 | 56.0 | 81.0 | 390 | 173 | 77.5 | 66.4 | 129 | 113 |
| MEAN | 127 | 92.8 | 57.9 | 50.8 | 53.9 | 62.3 | 148 | 229 | 124 | 84.1 | 87.5 | 118 | 104 |
| MONTHLY PERCENT | 10 | 8 | 5 | 4 | 4 | 5 | 12 | 18 | 10 | 7 | 7 | 10 | |

15241600 NINILCHIK RIVER AT NINILCHIK--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1963, 1965-75.

PERIOD OF DAILY RECORD.--May to September 1963, Octover 1964, April to July 1965.

REMARKS.--Once-daily readings by observer on most days for period of daily record.

EXTREMES.--Maximum observed during period of daily record, 16.5°C July 14, 1963.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | | 1967-cont | | 1969-cont | | 1970-cont | | 1972-cont | | 1973-cont | | 1975 | |
| 11- 4-65 | 0.0 | 9- 3-67 | 10.0 | 5- 7-69 | 5.5 | 8- 7-70 | 13.5 | 5-25-72 | 3.5 | 9- 6-73 | 10.0 | 10- 8-74 | 2.5 |
| 2- 8-66 | 0.0 | 1968 | | 6-23-69 | 15.0 | 9-28-70 | 5.0 | 6-13-72 | 11.0 | 1974 | | 2- 1-75 | 0.0 |
| 7-13-66 | 13.0 | 10-21-67 | 0.0 | 7-31-69 | 11.0 | 1971 | | 7- 6-72 | 15.0 | 10-10-73 | 3.0 | 4-24-75 | 1.0 |
| 8-17-66 | 13.0 | 3-11-68 | 0.0 | 9- 8-69 | 6.0 | 12-21-70 | 0.0 | 8-29-72 | 20.0 | 11-29-73 | 0.0 | 5- 5-75 | 0.0 |
| 9-20-66 | 6.5 | 6-18-68 | 13.0 | 1970 | | 3-23-71 | 0.0 | 1973 | | 4-26-74 | 0.5 | 5-13-75 | 3.0 |
| 1967 | | 8- 1-68 | 11.0 | 10-23-69 | 0.0 | 6-24-71 | 10.5 | 10- 6-72 | 4.5 | 4-27-74 | 0.5 | 5-14-75 | 3.5 |
| 11- 8-66 | 0.5 | 8-21-68 | 10.0 | 1-13-70 | 0.0 | 8-27-71 | 8.0 | 11-22-72 | 0.0 | 6-19-74 | 10.0 | 6-11-75 | 7.0 |
| 1-18-67 | 0.5 | 1969 | | 5- 4-70 | 0.0 | 1972 | | 5-10-73 | 5.5 | 6-22-74 | 9.5 | 7- 8-75 | 17.5 |
| 6-14-67 | 12.5 | 10-22-68 | 0.0 | 5- 6-70 | 3.0 | 11- 9-71 | | 6-20-73 | 9.5 | 9- 5-74 | 9.0 | 8- 6-75 | 11.0 |
| 7-28-67 | 15.0 | 3-21-69 | 0.0 | 6-25-70 | 10.0 | 2-17-72 | 0.5 | 7-25-73 | 13.5 | | | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1963 | Max | --- | --- | --- | --- | --- | --- | --- | 12.0 | 12.0 | 16.5 | 15.5 | 12.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 6.0 | 9.5 | 9.0 | 3.5 |
| 1965 | Max | 6.0 | --- | --- | --- | --- | --- | 4.0 | 10.0 | a | a | --- | --- |
| | Min | a | --- | --- | --- | --- | --- | a | 1.5 | 6.0 | a | --- | --- |

a. Data insufficient to compute monthly or minimum.

## 15242000 KASILOF RIVER NEAR KASILOF

LOCATION.--Lat 60°19'05", long 151°15'32", in SW¼ sec.30, T.2 N., R.11 W., Kenai Peninsula Borough, near center of span on downstream side of bridge on Sterling Highway, 0.9 mi( 1.4 km) upstream from Crooked Creek, 4 mi (6 km) downstream from Moosehead Rapids, 5 mi (8 km) south of Kasilof, and 10 mi (16 km) downstream from Tustumena Lake.

BASIN CHARACTERISTICS.--Drainage area, 738 mi² (1,911 km²); main-channel slope, 68.3 ft/mi (12.94 m/km); stream length, 55 mi (88 km); area of lakes and ponds, 15 percent; mean elevation, 1,810 ft (552 m); glacier area, 28 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1949 to September 1970. Annual maximum, water years, 1971-74.

GAGE.--Nonrecording gage. Datum of gage is 23.37 ft (7.123 m) above mean sea level (Corps of Engineers' bench mark).

AVERAGE DISCHARGE.--21 years, 2,385 ft³/s (67.54 m³/s), 43.89 in/yr (1,115 mm/yr), 1,728,000 acre-ft/yr (2.13 km³/yr).

EXTREMES.--Maximum discharge during period of record, 12,300 ft³/s (348 m³/s) Sept. 14, 1957, gage height, 7.90 ft (2.408 m) from graph based on gage readings; maximum gage height observed, 8.62 ft (2.627 m) Nov. 25, 1955, backwater from ice; minimum daily discharge, 19 ft³/s (0.54 m³/s) Apr. 2, 1964.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1949a | Sept. 9, 1949 | 7,860 | 6.06 | July 2, 1949 | b2,080 |
| 1950 | Aug. 27, 1950 | 8,440 | 6.30 | Mar. 1-31, 1950 | 530 |
| 1951 | Sept. 8, 1951 | 9,090 | 6.55 | Mar. 16-31, 1951 | 280 |
| 1952 | Aug. 16, 1952 | 7,430 | 5.88 | Mar. 11-20, 1952 | 450 |
| 1953 | Aug. 14, 1953 | 8,360 | 6.31 | Apr. 16, 1953 | c611 |
| 1954 | Dec. 13, 1953 | --- | d5.91 | Mar. 1-31, 1954 | 280 |
| | Aug. 28, 1954 | 7,090 | 5.77 | | |
| 1955 | Sept. 12, 1955 | 6,240 | 5.27 | Mar. 29, 1955 | 459 |
| 1956 | Nov. 25, 1955 | --- | d8.62 | Mar. 1-31, 1956 | 270 |
| | Aug. 29, 1956 | 7,880 | 5.92 | | |
| 1957 | Sept. 14, 1957 | 12,300 | 7.90 | Apr. 1, 2, 1957 | 353 |
| 1958 | Aug. 16, 1958 | 11,000 | 7.38 | Apr. 26,27,29, 1958 | 531 |
| 1959 | Sept. 1, 1959 | 8,150 | 6.22 | Mar. 23-26, 1959 | 270 |
| 1960 | Aug. 14, 1960 | 7,600 | 5.99 | Apr. 22, 1960 | 359 |
| 1961 | Sept. 15, 1961 | 8,150 | 6.12 | Apr. 19, 1961 | 596 |
| 1962 | Dec. 18, 1961 | --- | d7.43 | May 9, 1962 | 602 |
| | Sept. 5, 1962 | 7,110 | 5.73 | | |
| 1963 | Sept. 9, 1963 | 8,650 | 6.35 | May 11, 1963 | e428 |
| 1964 | Aug. 31, 1964 | 7,140 | 5.74 | Apr. 2, 1964 | 19 |
| 1965 | Sept. 30, 1965 | f6,970 | 5.67 | Jan. 16-31, 1965 | 520 |
| 1966 | Aug. 16, 1966 | 8,680 | 6.36 | Mar. 21 to Apr. 24, 1966 | 300 |
| 1967 | Aug. 25, 1967 | 11,400 | 7.36 | Mar. 21 to Apr. 7, 1967 | 380 |
| 1968 | Aug. 22, 1968 | 8,860 | 6.38 | May 5, 1968 | 536 |
| 1969 | Aug. 8, 1969 | 6,030 | 5.32 | Jan. 9 to Feb. 13, 1969 | 340 |
| 1970 | Oct. 22, 1969 | 7,370 | 5.85 | May 8, 1970 | 560 |
| 1971 | --- | 11,000 | 7.10 | | |
| 1972 | Sept. 1972 | 8,950 | 6.41 | | |
| 1973 | Sept. 1973 | 4,900 | 4.82 | | |
| 1974 | --- | 7,210 | 5.79 | | |

a Period July to September.
b Minimum observed, gage height, 3.05 ft.
c Gage height, 1.57 ft.
d Backwater from ice.
e Gage height, 1.32 ft.
f Stage rising, peak occurred Oct. 4, 1965; maximum peak discharge, 5,420 ft³/s Sept. 18, 1965.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | | | | | | | | | | 3412 | 5154 | 6948 | |
| 1950 | 4150 | 2098 | 1000 | 750 | 550 | 530 | 649 | 661 | 1182 | 3785 | 6514 | 6780 | 2399 |
| 1951 | 3739 | 1642 | 897 | 535 | 360 | 290 | 453 | 703 | 1364 | 4573 | 7239 | 8139 | 2508 |
| 1952 | 4342 | 2022 | 1235 | 837 | 582 | 464 | 569 | 591 | 824 | 2900 | 6623 | 4971 | 2173 |
| 1953 | 4223 | 2684 | 1886 | 1097 | 883 | 795 | 669 | 771 | 1821 | 4900 | 7810 | 6452 | 2848 |
| 1954 | 3651 | 1756 | 897 | 560 | 380 | 280 | 440 | 695 | 1390 | 3509 | 6406 | 5665 | 2148 |
| 1955 | 3654 | 2057 | 816 | 600 | 540 | 480 | 505 | 547 | 844 | 2681 | 5385 | 5561 | 1981 |
| 1956 | 2832 | 1161 | 358 | 290 | 280 | 270 | 449 | 743 | 1012 | 2462 | 6321 | 6483 | 1893 |
| 1957 | 3325 | 1441 | 725 | 454 | 401 | 428 | 414 | 625 | 1790 | 4855 | 6619 | 10480 | 2638 |
| 1958 | 5885 | 3706 | 1842 | 1145 | 719 | 572 | 581 | 656 | 1818 | 5513 | 9460 | 6207 | 3196 |
| 1959 | 2958 | 1425 | 847 | 414 | 314 | 285 | 494 | 717 | 1556 | 4311 | 6320 | 5691 | 2124 |
| 1960 | 3805 | 2037 | 1122 | 662 | 524 | 469 | 403 | 570 | 1576 | 3959 | 7029 | 5497 | 2313 |
| 1961 | 3203 | 1624 | 1138 | 952 | 955 | 693 | 673 | 809 | 1575 | 4060 | 7144 | 7057 | 2500 |
| 1962 | 4243 | 2083 | 1500 | 920 | 680 | 620 | 674 | 676 | 1400 | 4247 | 6148 | 5612 | 2414 |
| 1963 | 3022 | 1768 | 1130 | 716 | 609 | 566 | 520 | 591 | 1279 | 3656 | 6124 | 7462 | 2296 |
| 1964 | 4352 | 2328 | 1294 | 827 | 537 | 489 | 113 | 264 | 985 | 3785 | 6195 | 5857 | 2261 |
| 1965 | 3421 | 2014 | 1152 | 559 | 530 | 746 | 719 | 702 | 1038 | 2093 | 4168 | 5270 | 1874 |
| 1966 | 4954 | 1757 | 975 | 673 | 436 | 332 | 309 | 656 | 1281 | 4102 | 7638 | 7388 | 2557 |
| 1967 | 4981 | 2082 | 1048 | 666 | 491 | 399 | 457 | 981 | 1668 | 4565 | 10030 | 9594 | 3097 |
| 1968 | 5368 | 2494 | 1597 | 1156 | 868 | 700 | 597 | 649 | 1434 | 4024 | 7594 | 5506 | 2677 |
| 1969 | 2584 | 1262 | 635 | 350 | 371 | 492 | 488 | 581 | 1704 | 4725 | 5329 | 3982 | 1888 |
| 1970 | 5323 | 3430 | 1880 | 866 | 939 | 919 | 676 | 760 | 1218 | 2531 | 4575 | 4284 | 2293 |
| MEAN | 4001 | 2042 | 1142 | 716 | 569 | 515 | 517 | 664 | 1369 | 3848 | 6628 | 6404 | 2385 |
| MONTHLY PERCENT | 14 | 7 | 4 | 3 | 2 | 2 | 2 | 2 | 5 | 14 | 23 | 22 | |

## 15242000 KASILOF RIVER NEAR KASILOF--Continued

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1953-70

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953 | | 1957 | | 1959-cont | | 1961-cont | | 1964-cont | | 1967 | | 1969 | |
| 11- 7-52 | 4.5 | 10-18-56 | 4.5 | 7-29-59 | 11.0 | 8-23-61 | 12.5 | 4-17-64 | 0.0 | 11- 9-66 | 0.5 | 10-21-68 | 4.0 |
| 5-17-53 | 5.0 | 8-15-57 | 18.0 | 9-16-59 | 10.5 | 1962 | | 1965 | | 1-19-67 | 0.5 | 3-22-69 | 0.0 |
| 1954 | | 9-24-57 | 9.0 | 1960 | | 10-14-61 | 5.0 | 2- 2-65 | 0.0 | 3-30-67 | 0.0 | 5- 9-69 | 6.0 |
| 4-21-54 | 0.5 | 1958 | | 2- 4-60 | 0.0 | 6-25-62 | 10.5 | 4-23-65 | 5.5 | 6-14-67 | 12.0 | 6-25-69 | 13.0 |
| 5-27-54 | 10.5 | 4-28-58 | 4.5 | 3- 1-60 | 0.0 | 8- 7-62 | 14.0 | 6-10-65 | 9.0 | 7-28-67 | 15.0 | 8- 1-69 | 14.0 |
| 7-15-54 | 15.0 | 6- 3-58 | 10.5 | 4-12-60 | 0.0 | 8-30-62 | 11.5 | 7-22-65 | 13.0 | 9- 3-67 | 12.0 | 9- 9-69 | 9.5 |
| 1955 | | 8- 7-58 | 13.5 | 5-10-60 | 10.0 | 1963 | | 8-28-65 | 12.5 | 1968 | | 1970 | |
| 10-20-54 | 6.5 | 9-14-58 | 11.0 | 1961 | | 10-12-62 | 6.5 | 9-25-65 | 10.5 | 3-15-68 | 0.5 | 1-14-70 | 0.0 |
| 3-29-55 | 0.0 | 1959 | | 10- 4-60 | 7.0 | 11-29-62 | 0.0 | 1966 | | 5-16-68 | 8.0 | 3- 4-70 | 1.0 |
| 1956 | | 3-16-59 | 0.0 | 4- 5-61 | 0.5 | 7-29-63 | 13.5 | 11- 4-65 | 0.0 | 6-19-68 | 13.0 | 5- 6-70 | 8.0 |
| 8-14-56 | 15.5 | 4-23-59 | 1.5 | 6- 9-61 | 11.0 | 1964 | | 2-10-66 | 0.5 | 8- 2-68 | 11.0 | 8- 8-70 | 10.5 |
| 9-12-56 | 11.5 | 5-12-59 | 2.5 | 7-14-61 | 15.5 | 2-12-64 | 1.0 | | | 8-21-68 | 14.0 | 9-29-70 | 8.5 |

## 15243500 SNOW RIVER NEAR DIVIDE

LOCATION.--Lat 60°18'05", long 149°14'10", Kenai Peninsula Borough, on left bank 0.3 mi (0.5 km) upstream from small tributary, 0.7 mi (1.1 km) downstream from small tributary, 5.1 mi (8.2 km) northeast of Divide, and 6.2 mi (10.0 km) upstream from Alaska Railroad Bridge.

BASIN CHARACTERISTICS.--Drainage area, 99.8 $mi^2$ (258.5 $km^2$).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1960 to July 1965.

GAGE.--Water-stage recorder. Altitude of gage is 1,050 ft (320 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 25,000 $ft^3/s$ (708 $m^3/s$) Oct. 7, 1961, gage height, 10.3 ft (3.14 m) from floodmarks, from rating curve extended above 10,000 $ft^3/s$ (280 $m^3/s$) caused by release of stored water behind ice dam upstream; minimum daily about 16 $ft^3/s$ (0.45 $m^3/s$) Mar. 21-31, 1964.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1961a | Sept. 11, 1961 | b6,000 | --- | Mar. 16-31, 1961 | 53 |
| 1962 | Oct. 7, 1961 | c25,000 | 10.3 | Mar. 1-31, 1962 | 20 |
| 1963 | Aug. 24, 1963 | 3,930 | 6.85 | Apr. 1-15, 1963 | 22 |
| 1964 | Sept. 23, 1964 | c17,900 | 9.48 | Mar. 21-31, 1964 | 16 |
| 1965d | Oct. 7, 1964 | 5,050 | 6.96 | Mar. 1-15, 1965 | 28 |

a Period December to September.
b Maximum daily, estimated.
c Result of release of stored water from glacier-dammed lake.
d Period October to July.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1961 | | | 110 | 127 | 98.8 | 60.3 | 63.5 | 713 | 1277 | 2017 | 1805 | 2597 | |
| 1962 | 997 | 151 | 64.8 | 35.0 | 24.0 | 20.0 | 57.6 | 353 | 1277 | 2263 | 1629 | 739 | 640 |
| 1963 | 165 | 200 | 61.8 | 43.1 | 56.2 | 36.1 | 34.0 | 380 | 799 | 2040 | 1674 | 1591 | 592 |
| 1964 | 501 | 94.1 | 87.8 | 50.2 | 32.1 | 20.5 | 33.3 | 157 | 1561 | 1914 | 1974 | 3439 | 821 |
| 1965 | 1262 | 357 | 45.4 | 36.5 | 32.1 | 29.5 | 119 | 412 | 1300 | | | | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1961-64.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|
| 1961 | | 1961-cont | | 1962 | | 1963 | | 1964 | |
| 12- 3-60 | 0.0 | 6-12-61 | 5.5 | 10-11-61 | 0.5 | 11-30-62 | 0.0 | 11-26-63 | 0.0 |
| 2- 2-61 | 0.0 | 7-15-61 | 8.0 | 1-16-62 | 0.0 | 5- 1-63 | 2.5 | 4-21-64 | 0.0 |
| 2-20-61 | 0.0 | 8-26-61 | 6.0 | 8-17-62 | 9.5 | | | 5-21-64 | 1.0 |
| 4-29-61 | 4.0 | | | | | | | | |

## 15243900 SNOW RIVER NEAR SEWARD

LOCATION.--Lat 60°17'11", long 149°20'19", in SE¼ sec.6, T.2 N., R.1 E., Kenai Peninsula Borough, on downstream end of first pier on left bank at the Alaska Railroad bridge, 3.5 mi (5.6 km) upstream from mouth at Kenai Lake, and 13 mi (21 km) north of Seward.

BASIN CHARACTERISTICS.--Drainage area, 128 $mi^2$ (332 $km^2$).

PERIOD OF RECORD.--August to September 1970, August to September 1974.

GAGE.--Water-stage recorder above 38.5 ft (11.74 m) and nonrecording gage below this stage. Altitude of gage is 475 ft (145 m) from topographic map.

EXTREMES.--Maximum discharge August to September 1970, 17,800 $ft^3/s$ (504 $m^3/s$) Sept. 22, gage height, 39.57 ft (12.061 m), result of release of stored water from glacier-dammed lake.

Maximum discharge August to September 1974, 26,400 $ft^3/s$ (748 $m^3/s$) Sept. 20, gage height, 40.75 ft (12.421 m), result of release of stored water from glacier-dammed lake.

Glacier-dammed lake outburst flood of about Aug. 31, 1967 reached a stage of 42.6 ft (12.98 m), from floodmarks, discharge, 55,000 $ft^3/s$ (1,600 $m^3/s$), from rating curve extended above 27,000 $ft^3/s$ (760 $m^3/s$).

REMARKS.--Station installed to record inflow into Kenai Lake from sub-glacial breakout of lake at head of an unnamed glacier in headwaters of Snow River. The lake is about 28 mi (45 km) upstream from the gage.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1970 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3761 | --- |
| 1974 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2291 | 6294 | --- |

## 15244000 PTARMIGAN CREEK AT LAWING

LOCATION.--Lat 60°24'20", long 149°21'45", Kenai Peninsula Borough, on right bank 200 ft (61 m) upstream from bridge on Seward-Anchorage highway, 0.2 mi (0.3 km) north of Lawing, 0.3 mi (0.5 km) upstream from mouth, and 3 mi (5 km) downstream from Ptarmigan Lake.

BASIN CHARACTERISTICS.--Drainage area, 32.6 $mi^2$ (84.4 $km^2$); main-channel slope, 220 ft/mi (41.7 m/km); stream length, 14.6 mi (23.5 km); area of lakes and ponds, 6 percent; mean elevation, 2,800 ft (853 m); glacier area, 12 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1947 to September 1958.

GAGE.--Water-stage recorder. Altitude of gage is 500 ft (152 m), from topographic map. Prior to June 11, 1952, nonrecording gage at site 200 ft (61 m) downstream at different datum.

AVERAGE DISCHARGE.--11 years, 111 $ft^3/s$ (3.144 $m^3/s$), 46.24 in/yr (1,174 mm/yr), 80,420 acre-ft/yr (99.2 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 980 $ft^3/s$ (27.8 $m^3/s$) June 29, 1953, gage height, 3.28 ft (1.000 m); maximum gage height recorded, 4.38 ft (1.335 m) Dec. 18, 1956, backwater from ice; minimum daily discharge, about 9 $ft^3/s$ (0.25 $m^3/s$) Mar. 1-15, 1951 and Apr. 1-15, 1952.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1947a | bMay29, 1947 | c366 | 0.92 | May 1, 1947 | 18 |
| 1948 | July 7, 1948 | c590 | 1.30 | Mar. 22-24, Mar. 30 to Apr. 8, 1948 | 12 |
| 1949 | Sept. 4, 5, 1949 | d500 | --- | Feb. 8-10, 17-21, 1949 | 10 |
| 1950 | Nov. 23, 1949 | c518 | 1.65 | Apr. 7-9, 1950 | 13 |
| 1951 | July 5-15, 1951 | d310 | --- | Mar. 1-15, 1951 | 9.0 |
| 1952 | July 25, 1952 | 300 | 2.12 | Apr. 1-15, 1952 | 9.0 |
| 1953 | June 26, 1953 | --- | 3.32 | Apr. 1-10, 1953 | 17 |
| | June 29, 1953 | 980 | 3.28 | | |
| 1954 | Oct. 7, 1953 | 432 | 2.37 | Mar. 16-31, 1954 | 10 |
| | Jan. 19, 1954 | --- | e2.56 | | |
| 1955 | Dec. 25, 1954 | --- | e3.80 | Mar. 1 to Apr. 30, 1955 | 18 |
| | July 23, 1955 | 525 | 2.46 | | |
| 1956 | Nov. 26, 1955 | --- | e3.19 | Feb. 9, 1956 | f11 |
| | July 17, 1956 | 396 | 2.20 | | |
| 1957 | Dec. 18, 1956 | --- | e4.38 | Mar. 25-30, 1957 | 13 |
| | Sept. 3, 1957 | 796 | 2.80 | | |
| 1958 | Dec. 21, 1957 | --- | e3.63 | Mar. 1-31, 1958 | 18 |
| | June 21, 1958 | 590 | 2.42 | | |

a Period May to September.
b Also June 1, 1947.
c Maximum daily.
d Maximum daily, estimated.
e Backwater from ice.
f Minimum observed, discharge measurement.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | | | | | | | | 74.6 | 220 | 247 | 189 | 135 | |
| 1948 | 144 | 137 | 87.1 | 23.2 | 17.0 | 13.2 | 29.7 | 139 | 301 | 331 | 219 | 113 | 130 |
| 1949 | 144 | 71.1 | 24.9 | 14.0 | 11.4 | 13.7 | 16.2 | 93.8 | 276 | 334 | 233 | 265 | 125 |
| 1950 | 120 | 157 | 55.6 | 30.0 | 17.0 | 14.8 | 21.5 | 95.7 | 245 | 268 | 258 | 220 | 126 |
| 1951 | 66.0 | 30.3 | 16.5 | 12.4 | 10.0 | 9.52 | 19.7 | 79.3 | 155 | 251 | 162 | 245 | 88.5 |
| 1952 | 71.5 | 44.5 | 24.9 | 13.5 | 12.0 | 10.4 | 9.50 | 31.4 | 162 | 232 | 172 | 110 | 74.7 |
| 1953 | 198 | 185 | 85.5 | 41.5 | 28.7 | 20.0 | 33.0 | 158 | 511 | 381 | 233 | 141 | 169 |
| 1954 | 153 | 49.3 | 32.0 | 23.0 | 18.6 | 11.0 | 19.7 | 92.8 | 204 | 201 | 198 | 104 | 92.8 |
| 1955 | 91.8 | 92.1 | 38.2 | 27.8 | 20.0 | 15.9 | 14.9 | 37.4 | 170 | 359 | 199 | 125 | 100 |
| 1956 | 47.2 | 31.3 | 21.0 | 18.9 | 16.0 | 14.0 | 17.1 | 55.0 | 159 | 256 | 234 | 125 | 83.3 |
| 1957 | 47.5 | 41.2 | 33.6 | 19.4 | 16.0 | 15.2 | 20.2 | 90.3 | 234 | 175 | 187 | 352 | 103 |
| 1958 | 165 | 143 | 45.5 | 34.5 | 21.1 | 18.0 | 39.5 | 113 | 324 | 265 | 243 | 111 | 127 |
| MEAN | 113 | 89.2 | 42.2 | 23.5 | 17.1 | 14.2 | 21.9 | 88.4 | 247 | 275 | 211 | 170 | 111 |
| MONTHLY PERCENT | 9 | 7 | 3 | 2 | 1 | 1 | 2 | 7 | 19 | 21 | 16 | 13 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1953-58.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|
| 1953 | | 1954-cont | | 1955-cont | | 1957 | | 1958-cont | |
| 4-15-53 | 2.5 | 5-28-54 | 6.0 | 12- 1-54 | 3.0 | 6-14-57 | 10.0 | 6- 2-58 | 4.5 |
| 5-18-53 | 5.0 | 7-14-54 | 14.0 | 1-21-55 | 1.0 | 8-17-57 | 15.5 | 7- 7-58 | 13.0 |
| 1954 | | 1955 | | 1956 | | 9-27-57 | 6.5 | 8- 8-58 | 9.5 |
| 10- 9-53 | 6.0 | 10-22-54 | 5.0 | 8-13-56 | 11.5 | 1958 | | 9-15-58 | 9.0 |
| 4-23-54 | 2.5 | | | 9-10-56 | 9.0 | 5- 1-58 | 4.0 | | |

## 15246000 GRANT CREEK NEAR MOOSE PASS

LOCATION.--60°27'25", long 149°21'15", Kenai Peninsula Borough, on right bank 0.3 mi (0.5 km) upstream from mouth, 0.8 mi (1.3 km) downstream from Grant Lake, and 2.3 mi (3.7 km) south of Moose Pass.

BASIN CHARACTERISTICS.--Drainage area, 44.2 $mi^2$ (114.5 $km^2$); main-channel slope, 150 ft/mi (28.4 m/km); stream length, 12.8 mi (20.6 km); area of lakes and ponds, 10 percent; mean elevation, 2,900 ft (884 m); glacier area, 18 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1947 to September 1958.

GAGE.--Water-stage recorder. Datum of gage is 491 ft (149.7 m) above mean sea level (river-profile survey). Prior to July 1, 1952, nonrecording gage at site 0.1 mi (0.2 km) downstream at datum 7.23 ft (2.204 m) lower.

AVERAGE DISCHARGE.--11 years, 193 $ft^3/s$ (5.466 $m^3/s$), 59.30 in/yr (1,506 mm/yr), 139,800 acre-ft/yr (172 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 2,230 $ft^3/s$ (63.2 $m^3/s$) June 28, 1953, gage height, 4.46 ft (1.359 m) from rating curve extended above 1,100 $ft^3/s$ (31 $m^3/s$); minimum daily, about 11 $ft^3/s$ (0.31 $m^3/s$) Feb. 3, 8-10, 17-21, 1949.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1947a | Sept. 30, 1947 | b439 | 2.92 | Sept. 16, 1947 | c152 |
| 1948 | July 7, 1948 | b780 | --- | Apr. 5-7, 1948 | 14 |
| 1949 | Sept. 4, 5, 1949 | b800 | --- | Feb. 3, 8-10, 17-21, 1949 | 11 |
| 1950 | June 21, 1950 | b865 | 4.00 | Apr. 5-9, 1950 | 16 |
| 1951 | July 8, 1951 | b665 | --- | Mar. 1-15, 1951 | 13 |
| 1952 | July 24, 1952 | 820 | 3.00 | Apr. 16-30, 1952 | 14 |
| 1953 | June 28, 1953 | 2,230 | 4.46 | Apr. 1-5, 1953 | 24 |
| 1954 | Oct. 7, 1953 | 782 | 3.11 | Mar. 16 to Apr. 20, 1954 | 25 |
| 1955 | July 11, 1955 | 1,050 | 3.45 | Mar. 1 to Apr. 30, 1955 | 18 |
| 1956 | Jan. 10, 1956 | --- | d3.3 | Mar. 1-31, 1956 | 15 |
| | Aug. 20, 1956 | 663 | 2.93 | | |
| 1957 | Sept. 3, 1957 | 1,700 | 4.06 | Mar. 21-31, 1957 | 18 |
| 1958 | June 21, 1958 | 1,020 | 3.42 | Mar. 4, 1958 | e23 |

a Sept. 1-30.
b Maximum daily.
c Gage height, 2.10 ft.
d Backwater from ice.
e Momentary minimum, gage height, 0.56 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | | | | | | | | | | | | 260 | |
| 1948 | 262 | 200 | 116 | 32.4 | 24.1 | 16.5 | 27.1 | 244 | 493 | 556 | 385 | 162 | 211 |
| 1949 | 259 | 89.8 | 25.9 | 15.0 | 12.4 | 14.8 | 17.1 | 137 | 409 | 474 | 325 | 446 | 186 |
| 1950 | 194 | 197 | 71.3 | 37.2 | 21.1 | 18.3 | 26.1 | 117 | 447 | 521 | 481 | 338 | 207 |
| 1951 | 101 | 33.3 | 21.0 | 19.1 | 15.5 | 13.6 | 27.3 | 124 | 325 | 518 | 376 | 505 | 174 |
| 1952 | 87.8 | 51.5 | 30.4 | 18.5 | 15.9 | 15.7 | 14.5 | 66.1 | 375 | 572 | 434 | 268 | 163 |
| 1953 | 337 | 263 | 124 | 57.7 | 44.5 | 30.4 | 61.4 | 281 | 928 | 711 | 513 | 294 | 305 |
| 1954 | 257 | 69.1 | 39.7 | 32.1 | 33.3 | 28.4 | 29.7 | 173 | 409 | 420 | 384 | 201 | 174 |
| 1955 | 168 | 145 | 51.4 | 41.6 | 23.7 | 18.0 | 18.0 | 72.0 | 291 | 643 | 407 | 273 | 181 |
| 1956 | 81.5 | 42.0 | 25.0 | 20.0 | 17.0 | 15.0 | 21.9 | 121 | 269 | 471 | 453 | 215 | 147 |
| 1957 | 64.6 | 55.6 | 51.8 | 22.4 | 19.0 | 19.6 | 28.9 | 166 | 449 | 359 | 370 | 565 | 181 |
| 1958 | 207 | 161 | 56.3 | 44.1 | 29.1 | 25.5 | 65.6 | 170 | 535 | 449 | 418 | 155 | 194 |
| MEAN | 184 | 119 | 55.8 | 30.9 | 23.2 | 19.6 | 30.7 | 152 | 448 | 518 | 413 | 307 | 193 |
| MONTHLY PERCENT | 8 | 5 | 2 | 1 | 1 | 1 | 1 | 7 | 20 | 23 | 18 | 13 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-59.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1954 | | 1955-cont | | 1957 | | 1958-cont | |
| 12-15-51 | 0.5 | 10- 9-53 | 6.0 | 1-21-55 | 1.5 | 6-13-57 | 10.0 | 8- 9-58 | 11.0 |
| 1953 | | 4-22-54 | 3.5 | 1956 | | 8-17-57 | 15.5 | 9-15-58 | 11.0 |
| 11- 6-52 | 3.5 | 7-13-54 | 14.5 | 7-12-56 | 10.0 | 1958 | | 1959 | |
| 4-16-53 | 2.5 | 1955 | | 8-13-56 | 11.5 | 5- 1-58 | 5.0 | 10-17-58 | 4.0 |
| 5-19-53 | 4.0 | 10-21-54 | 6.5 | 9-11-56 | 10.5 | 7- 7-58 | 9.5 | | |

## 15248000 TRAIL RIVER NEAR LAWING

LOCATION.--Lat 60°26'01", long 149°22'19", in SW¼ sec.13, T.4 N., R.1 W., Kenai Peninsula Borough, near center of stream on downstream end of pier at bridge site on old Seward-Anchorage Highway, 0.2 mi (0.3 km) upstream from Falls Creek, 0.2 mi (0.3 km) downstream from Lower Trail Lake, 1.9 mi (3.1 km) upstream from mouth, and 2.1 mi (3.4 km) north of Lawing.

BASIN CHARACTERISTICS.--Drainage area, 181 $mi^2$ (469 $km^2$); main-channel slope, 89 ft/mi (16.9 m/km); stream length, 23 mi (45 km); area of lakes and ponds, 2 percent; mean elevation, 2,470 ft (753 m); glacier area, 11 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1947 to September 1974 (discharge); October 1974 to September 1975 (seasonal gage heights).

GAGE.--Water-stage recorder. Altitude of gage is 460 ft (140 m), from topograhic map. Prior to Sept. 13, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 780 $ft^3/s$ (22.09 $m^3/s$), 58.52 in/yr (1,486 mm/yr), 565,100 acre-ft/yr (697 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 7,480 $ft^3/s$ (212 $m^3/s$) Sept. 18, 1967, gage height, 11.93 ft (3.636 m); minimum daily, 48 $ft^3/s$ (1.36 $m^3/s$) Feb. 9, 10, 1949.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1947a | Aug. 2, 1947 | 2,800 | 7.4 | May 1, 1947 | 120 |
| 1948 | June 20, 1948 | b3,340 | 7.9 | Apr. 4-8, 1948 | 80 |
| 1949 | Sept. 4,5, 1949 | c3,000 | --- | Feb. 9, 10, 1949 | 48 |
| 1950 | June 21, 1950 | b3,600 | 8.12 | Apr. 10-12, 1950 | 63 |
| 1951 | July 10, 11, 1951 | c3,000 | --- | Mar. 1-15, 1951 | 52 |
| 1952 | July 14, 1952 | b2,960 | 7.40 | Apr. 1-15, 1952 | 61 |
| 1953 | June 28, 1953 | 5,860 | 10.16 | Apr. 8, 1953 | 86 |
| 1954 | Oct. 7, 1953 | 3,620 | 8.33 | Mar. 25-29, 1954 | 68 |
| 1955 | July 11, 1955 | 4,030 | 8.69 | Mar. 25, 1955 | 63 |
| 1956 | Aug. 20, 1956 | 3,030 | 7.77 | Mar. 30, 31, 1956 | d64 |
| 1957 | Sept. 4, 1957 | b4,700 | --- | Mar. 31, 1957 | e79 |
| 1958 | June 22, 1958 | 4,080 | 9.22 | Mar. 20, 1958 | f84 |
| 1959 | June 21, 1959 | 3,030 | 8.26 | Mar. 22, 23, 1959 | 64 |
| 1960 | July 26, 1960 | 2,780 | 8.01 | Apr. 5, 1960 | 84 |
| 1961 | Sept. 13, 1961 | 4,030 | 8.95 | Mar. 27, 1961 | 99 |
| 1962 | June 22, 1962 | 2,880 | 7.93 | Mar. 21-24, 1962 | 60 |
| 1963 | July 16, 1963 | 2,860 | 7.86 | Mar. 27, 1963 | g75 |
| 1964 | Aug. 14, 1964 | 4,370 | 9.19 | Mar. 28, 1964 | 62 |
| 1965 | July 13, 1965 | 2,790 | 7.79 | Feb. 20 to Mar. 2, 1965 | 105 |
| 1966 | Sept. 16, 1966 | 5,520 | 10.62 | Feb. 21 to Mar. 22, 1966 | 80 |
| 1967 | Sept. 18, 1967 | 7,480 | 11.93 | Mar. 21 to Apr. 6, 1967 | 85 |
| 1968 | July 10, 1968 | 2,550 | 7.92 | Apr. 15, 16, 1968 | 99 |
| 1969 | June 16, 1969 | 4,090 | 9.20 | Jan. 15-17, 1969 | 63 |
| 1970 | Oct. 7, 1969 | 6,080 | 10.59 | Apr. 12, 1970 | h166 |
| 1971 | July 14, 1971 | 4,150 | 9.30 | Jan. 28-30, 1971 | 53 |
| 1972 | Aug. 23, 1972 | 2,780 | 8.29 | Jan. 23-31, 1972 | 51 |
| 1973 | July 29, 1973 | 2,360 | 7.86 | Jan. 30, 31, Feb. 1, 1973 | 74 |
| 1974 | Sept. 16, 1974 | 3,220 | 8.57 | Mar. 7, 1974 | i64 |
| 1975 | July 11, 1975 | --- | 8.96 | | |

a Period May to September.
b Maximum daily.
c Maximum daily, estimated.
d Gage height, 2.99 ft.
e Momentary minimum, gage height, 2.89 ft.
f Gage height, 2.98 ft.
g Momentary minimum, gage height, 2.72 ft.
h Momentary minimum, gage height, 3.93 ft.
i Momentary minimum, gage height, 2.82 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | | | | | | | | 485 | 1594 | 2050 | 1673 | 998 | |
| 1948 | 909 | 755 | 543 | 167 | 131 | 95.6 | 175 | 758 | 1892 | 2243 | 1540 | 705 | 829 |
| 1949 | 729 | 311 | 115 | 69.2 | 56.5 | 69.5 | 104 | 581 | 1392 | 1989 | 1558 | 1651 | 723 |
| 1950 | 548 | 695 | 366 | 130 | 89.2 | 83.5 | 90.3 | 410 | 1895 | 2084 | 2160 | 1439 | 836 |
| 1951 | 427 | 142 | 84.8 | 71.2 | 57.6 | 55.5 | 110 | 543 | 1287 | 2221 | 1576 | 2050 | 722 |
| 1952 | 361 | 220 | 134 | 81.7 | 73.0 | 68.3 | 61.5 | 211 | 1295 | 2282 | 1624 | 976 | 618 |
| 1953 | 1132 | 857 | 397 | 209 | 149 | 105 | 268 | 1164 | 3007 | 2676 | 2165 | 1250 | 1120 |
| 1954 | 1076 | 291 | 157 | 117 | 90.0 | 76.6 | 116 | 833 | 1686 | 1796 | 1781 | 935 | 751 |
| 1955 | 675 | 580 | 239 | 146 | 90.2 | 72.3 | 81.1 | 435 | 1288 | 2686 | 1764 | 1221 | 778 |
| 1956 | 334 | 159 | 98.3 | 90.3 | 76.1 | 70.8 | 119 | 596 | 1083 | 1988 | 2129 | 964 | 646 |
| 1957 | 260 | 224 | 210 | 103 | 91.5 | 98.9 | 151 | 718 | 1963 | 1716 | 1770 | 2254 | 799 |
| 1958 | 989 | 729 | 241 | 188 | 114 | 90.5 | 307 | 767 | 2173 | 2031 | 1946 | 674 | 859 |
| 1959 | 419 | 264 | 164 | 109 | 84.1 | 74.9 | 173 | 931 | 2227 | 1767 | 1567 | 620 | 704 |
| 1960 | 517 | 366 | 222 | 143 | 129 | 94.6 | 126 | 1478 | 1887 | 2188 | 1693 | 986 | 823 |
| 1961 | 534 | 376 | 449 | 578 | 243 | 118 | 150 | 1038 | 1988 | 2378 | 1935 | 1359 | 934 |
| 1962 | 498 | 288 | 136 | 110 | 84.5 | 66.4 | 205 | 507 | 1706 | 2029 | 1480 | 769 | 660 |
| 1963 | 334 | 608 | 210 | 123 | 119 | 135 | 110 | 643 | 1303 | 2249 | 1657 | 1287 | 735 |
| 1964 | 613 | 232 | 262 | 175 | 127 | 88.1 | 303 | 488 | 2338 | 2006 | 2037 | 1087 | 815 |
| 1965 | 608 | 400 | 271 | 211 | 117 | 160 | 304 | 497 | 1350 | 2044 | 1694 | 1528 | 769 |
| 1966 | 557 | 197 | 154 | 123 | 89.2 | 88.1 | 150 | 468 | 1887 | 2025 | 2215 | 2082 | 840 |
| 1967 | 804 | 369 | 166 | 107 | 97.9 | 88.2 | 108 | 651 | 1691 | 1829 | 2045 | 2917 | 909 |
| 1968 | 709 | 332 | 253 | 190 | 176 | 225 | 134 | 922 | 1581 | 1904 | 1617 | 793 | 740 |
| 1969 | 306 | 240 | 117 | 68.5 | 86.1 | 89.2 | 187 | 824 | 2298 | 1953 | 1020 | 782 | 667 |
| 1970 | 2389 | 624 | 603 | 272 | 268 | 237 | 212 | 709 | 1501 | 1933 | 1849 | 846 | 961 |
| 1971 | 328 | 926 | 231 | 111 | 91.9 | 90.4 | 96.3 | 427 | 1771 | 2645 | 2437 | 1245 | 871 |
| 1972 | 598 | 212 | 132 | 77.6 | 60.3 | 71.2 | 64.8 | 367 | 1063 | 1936 | 1834 | 1230 | 640 |
| 1973 | 521 | 233 | 143 | 97.0 | 80.0 | 80.3 | 120 | 657 | 1288 | 1826 | 1436 | 916 | 621 |
| 1974 | 335 | 164 | 128 | 96.1 | 79.6 | 74.4 | 152 | 646 | 1614 | 1803 | 1467 | 1677 | 689 |
| MEAN | 648 | 400 | 231 | 147 | 109 | 98.8 | 155 | 670 | 1716 | 2081 | 1774 | 1259 | 780 |
| MONTHLY PERCENT | 7 | 4 | 2 | 2 | 1 | 1 | 2 | 7 | 19 | 22 | 19 | 14 | |

15248000 TRAIL RIVER NEAR LAWING--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-73.

PERIOD OF DAILY RECORD.--April 1959 to March 1967.

REMARKS.--Once-daily readings by observer.

EXTREMES.--Maximum observed during period of daily record, 13.0°C July 22, 1965 and July 23-25, 1966; minimum, 0.0°C on most days during winter period.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1955 | | 1958-cont | | 1969-cont | | 1970-cont | | 1971-cont | | 1972-cont | |
| 12-15-51 | 1.0 | 10-22-54 | 6.0 | 6- 2-58 | 9.0 | 3-20-69 | 0.0 | 6-23-70 | 9.5 | 8-10-71 | 9.0 | 8-31-72 | 11.0 |
| 1953 | | 1956 | | 7- 7-58 | 11.5 | 5- 7-69 | 3.5 | 8- 9-70 | 8.0 | 1972 | | 1973 | |
| 11- 5-52 | 4.5 | 9-14-56 | 9.0 | 8- 9-58 | 10.0 | 6-26-69 | 11.0 | 9-22-70 | 8.0 | 10- 7-71 | 5.0 | 10-10-72 | 4.5 |
| 4-15-53 | 0.5 | 1957 | | 9-15-58 | 9.5 | 7-29-69 | 11.0 | 1971 | | 1-25-72 | 0.0 | 1-11-73 | 0.5 |
| 5-18-53 | 5.0 | 10-17-56 | 1.5 | 1968 | | 9-10-69 | 9.0 | 10-29-70 | 2.0 | 2-23-72 | 0.0 | 3-28-73 | 1.0 |
| 1954 | | 6-13-57 | 11.5 | 2-15-68 | 0.5 | 1970 | | 1-29-71 | 0.0 | 3-22-72 | 0.0 | 5- 7-73 | 4.0 |
| 4-23-54 | 1.0 | 1958 | | 6-20-68 | 10.0 | 10- 9-69 | 6.0 | 3-18-71 | 0.0 | 4-19-72 | 0.0 | 6-18-73 | 9.0 |
| 5-28-54 | 6.5 | 4- 4-58 | 1.0 | 8-22-68 | 10.5 | 1-15-70 | 0.0 | 4-23-71 | 1.0 | 5-23-72 | 4.0 | 7-24-73 | 11.0 |
| 7-14-54 | 12.0 | 5- 1-58 | 5.0 | 1969 | | 3- 3-70 | 1.0 | 7- 1-71 | 3.5 | 7-10-72 | 10.0 | 9- 4-73 | 10.0 |
| | | | | 1-16-69 | 0.5 | 5- 5-70 | 5.0 | | | | | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1959 | Max | --- | --- | --- | --- | --- | --- | 3.5 | 7.0 | 12.0 | 11.0 | 12.0 | 10.0 |
| | Min | --- | --- | --- | --- | --- | --- | a | 4.0 | 7.0 | 8.0 | 10.0 | 8.0 |
| 1960 | Max | 8.5 | 4.0 | 1.0 | 2.0 | 1.5 | 0.5 | 2.0 | 6.5 | 10.0 | 12.0 | a | 9.5 |
| | Min | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.0 | 6.0 | 9.0 | a | 6.5 |
| 1961 | Max | 6.5 | a | 1.5 | 1.0 | 0.5 | 0.5 | 3.5 | 9.0 | 10.5 | 10.5 | 11.0 | 10.0 |
| | Min | 3.5 | a | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 3.5 | 5.5 | 6.0 | 9.0 | 6.5 |
| 1962 | Max | 6.5 | 2.0 | 0.5 | 0.5 | 1.5 | 1.5 | 4.0 | 6.5 | 10.0 | 12.0 | a | a |
| | Min | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 3.5 | 6.0 | 9.5 | a | a |
| 1963 | Max | 6.0 | 4.0 | 0.5 | 0.5 | 1.5 | 1.5 | 2.0 | 7.0 | 10.0 | 10.5 | 11.5 | 10.0 |
| | Min | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 3.0 | 7.0 | 10.0 | 9.0 | 8.0 |
| 1964 | Max | 7.0 | 2.0 | a | 0.0 | 0.0 | 0.0 | 2.0 | 5.0 | 9.0 | 11.0 | 11.0 | 9.5 |
| | Min | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 4.5 | 7.0 | 5.0 | 7.0 |
| 1965 | Max | 7.0 | 2.0 | 0.5 | 1.0 | 0.5 | 1.5 | 3.5 | 6.5 | 8.5 | 13.0 | 10.0 | --- |
| | Min | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 3.0 | 5.5 | 7.0 | 9.0 | --- |
| 1966 | Max | a | --- | 1.0 | 0.0 | 0.0 | 1.0 | 4.0 | 7.0 | 9.5 | 13.0 | 12.0 | 9.0 |
| | Min | 1.0 | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | a | 8.5 | 6.0 | 4.5 |
| 1967 | Max | 7.0 | 1.5 | a | 0.0 | 0.0 | 1.0 | --- | --- | --- | --- | --- | --- |
| | Min | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | --- | --- | --- | --- |

a Data insufficient to compute monthly maximum or minimum.

15250000 FALLS CREEK NEAR LAWING

LOCATION.--Lat 60°25'50", long 149°22'10", Kenai Peninsula Borough, 0.1 mi (0.2 km) upstream from mouth, and 2.0 mi (3.2 km) north of Lawing.

BASIN CHARACTERISTICS.--Drainage area, 11.8 mi² (30.6 km²), approximately; slope, 477 ft/mi (90.3 m/km); stream length, 8.1 mi (13.0 km); area of lakes and ponds, 0 percent; mean elevation, 3,480 ft (1061 m); glacier area, 6 percent.

PERIOD OF RECORD.--August to November 1913. Annual maximum, water years 1963-70.

GAGE.--Nonrecording gage. Altitude of gage is 460 ft (140 m), from topographic map. Different datum in 1913.

EXTREMES.--Maximum discharge, 693 ft³/s (19.6 m³/s) Sept. 5, 1966, gage height, 13.86 ft (4.225 m), from rating curve extended above 200 ft³/s (5.7 m³/s); minimum observed, 9.0 ft³/s (0.25 m³/s) Sept. 16, 1913, gage height, 2.50 ft (0.762 m), datum then in use.

MOMENTARY MAXIMUM, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Date | Discharge | Gage height |
|---|---|---|---|
| 1913 | Sept. 25, 1913 | 312 | 4.75 |
| 1963 | July 2, 1963 | 110 | 12.20 |
| 1964 | July 1964 | 130 | 11.72 |
| 1965 | July 1965 | 120 | 11.64 |
| 1966 | Sept. 5, 1966 | 693 | 13.86 |
| 1967 | September 1967 | 450 | 13.11 |
| 1968 | June 1968 | 210 | 12.16 |
| 1969 | June 1969 | 300 | 12.56 |
| 1970 | Oct. 6, 1969 | 491 | 13.22 |

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 43.5 | --- |
| 1914 | 22.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

## 15252000 QUARTZ CREEK NEAR GILPATRICKS

LOCATION.--Lat 60°33'00", long 149°36'10", Kenai Peninsula Borough, 1 mi (2 km) upstream from Devils Creek, 4.2 mi (6.8 km) southeast of Gilpatricks, and 7 mi (11 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 30 $mi^2$ (78 $km^2$), approximately.

PERIOD OF RECORD.--August to November 1913.

GAGE.--Nonrecording gage. Altitude of gage is 780 ft (238 m), from topographic map.

EXTREMES.--Maximum discharge observed during period of record, 135 $ft^3/s$ (3.82 $m^3/s$) Sept. 24,25, 1913, gage height, 3.75 ft (1.143 m); minimum observed, 44 $ft^3/s$ (1.25 $m^3/s$) Sept. 18-22, Oct. 29, 1913, gage height, 3.05 ft (0.930 m).

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 64.6 | --- |
| 1914 | 57.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

## 15253000 CRESCENT CREEK NEAR MOOSE PASS

LOCATION.--Lat 60°28'45", long 149°34'25", Kenai Peninsula Borough, on left bank 90 ft (27 m) downstream from Crescent Lake Outlet, and 7 mi (11 km) west of Moose Pass.

BASIN CHARACTERISTICS.--Drainage area, 21.4 $mi^2$ (55.4 $km^2$), main-channel slope, 136 ft/mi (25.8 m/km); stream length, 14.7 mi (23.7 km); area of lakes and ponds, 13 percent; mean elevation, 2,700 ft (820 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1957 to September 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,452.5 ft (442.72 m) above mean sea level (river-profile survey).

EXTREMES.--Maximum discharge during period of record, 262 $ft^3/s$ (7.42 $m^3/s$) May 25, 1960, gage height, 2.81 ft (0.856 m); maximum gage height, 2.85 ft (0.869 m) Sept. 15, 1957; minimum daily discharge, about 13 $ft^3/s$ (0.37 $m^3/s$) Apr. 1-13, 1960.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1957a | June 9, 1957 | b210 | 2.55 | Aug. 19, 20, 1957 | c31 |
| | Sept. 15, 1957 | --- | 2.85 | | |
| 1958 | Oct. 31, 1957 | --- | 2.65 | Feb. 19,25, Mar. 20,21,23,24,26, 1958 | 14 |
| | June 8, 1958 | 210 | 2.62 | | |
| 1959 | June 21, 1959 | 190 | 2.55 | Feb. 1-28, Mar. 14-31, 1959 | 14 |
| 1960 | May 25, 1960 | 262 | 2.81 | Apr. 1-13, 1960 | 13 |

a Period May to September.
b Maximum daily.
c Momentary minimum, gage height, 1.62 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1957 | --- | --- | --- | --- | --- | --- | --- | --- | 130 | 59.2 | 39.1 | 93.2 | --- |
| 1958 | 64.7 | 92.5 | 38.4 | 32.3 | 18.1 | 15.3 | 17.3 | 60.3 | 147 | 89.8 | 75.6 | 65.4 | 59.9 |
| 1959 | 58.4 | 37.3 | 22.3 | 15.4 | 14.0 | 14.4 | 18.1 | 64.9 | 160 | 93.5 | 64.3 | 46.2 | 50.9 |
| 1960 | 39.6 | 41.4 | 27.3 | 18.0 | 15.7 | 14.2 | 15.2 | 120 | 138 | 110 | 95.2 | 75.7 | 59.4 |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1956-61.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|
| 1956 | | 1958 | | 1960 | |
| 7-10-56 | 10.0 | 5-27-58 | 2.5 | 3- 3-60 | 0.5 |
| 8-16-56 | 13.0 | 8- 8-58 | 12.5 | 4-14-60 | 0.5 |
| 9-13-56 | 10.0 | 1959 | | 1961 | |
| 1957 | | 1-21-59 | 0.5 | 10- 3-60 | 6.5 |
| 10-15-56 | 2.5 | 4-21-59 | 1.0 | | |
| 8-16-57 | 18.5 | | | | |

## 15254000 CRESCENT CREEK NEAR COOPER LANDING

LOCATION.--60°29'49", long 149°40'38", Kenai Peninsula Borough, on left bank at bridge on old Seward-Kenai Highway, 0.3 mi (0.5 km) upstream from mouth, and 5.3 mi (8.5 km) east of Cooper Landing.

BASIN CHARACTERISTICS.--Drainage area, 31.7 mi$^2$ (82.1 km$^2$); main-channel slope, 136 ft/mi (25.8 m/km); stream length, 14.7 mi (23.6 km); area of lakes and ponds, 13 percent; mean elevation, 2,700 ft (823 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1949 to September 1966. Annual maximum, water years 1967-75.

GAGE.--Water-stage recorder. Crest-stage gage only, since October 1966. Altitude of gage is 550 ft (168 m), from topographic map. Prior to Aug. 19, 1949, nonrecording gage at same site and datum. Since October 1, 1969 at datum 10.00 ft (3.048 m) lower.

AVERAGE DISCHARGE.--17 years, 75.8 ft$^3$/s (2.147 m$^3$/s), 32.47 in/yr (825 mm/yr), 54,920 acre-ft/yr (67.7 hm$^3$/yr).

EXTREMES.--Maximum discharge during period of record, 1,500 ft$^3$/s (42.5 m$^3$/s) Oct. 9, 1969, gage height, 12.73 ft (3.880 m); maximum gage height recorded, 3.35 ft (1.021 m) Jan. 14, 1961, backwater from ice, datum then in use; minimum discharge observed, 2.7 ft$^3$/s (0.076 m$^3$/s) Mar. 8, 1954, discharge measurement, caused by storage behind ice jam upstream.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1949a | Sept. 26, 1949 | 220 | 1.61 | Sept. 21, 1949 | b65 |
| 1950 | Dec. 19, 1949 | --- | c2.18 | Apr. 1-13, 1950 | 12 |
| | Sept. 22, 1950 | 322 | 1.88 | | |
| 1951 | June 6, 1951 | 177 | 1.48 | Mar. 1-31, 1951 | 12 |
| 1952 | Dec. 16, 1951 | --- | c2.28 | Apr. 1-15, 1952 | 10 |
| | June 27, 1952 | 213 | 1.63 | | |
| 1953 | June 27, 1953 | --- | 2.85 | Apr. 17, 1953 | d14 |
| | June 28, 1953 | 820 | 2.55 | | |
| 1954 | Jan. 19, 1954 | --- | c1.37 | Mar. 8, 1954 | e2.7 |
| | June 9, 1954 | 184 | 1.10 | | |
| 1955 | Dec. 9, 1954 | --- | c2.52 | Apr. 6-30, 1955 | 14 |
| | July 4, 1955 | 380 | 1.97 | | |
| 1956 | Nov. 3, 1955 | --- | c2.23 | Mar. 1-31, 1956 | 17 |
| | July 4, 1956 | 220 | 1.62 | | |
| 1957 | Nov. 2, 1956 | --- | c2.20 | Mar. 17, 1957 | f6.0 |
| | June 7, 1957 | 342 | 1.90 | | |
| 1958 | Dec. 18, 1957 | --- | c3.09 | Mar. 31, 1958 | e8.0 |
| | June 7, 1958 | 300 | 1.55 | | |
| 1959 | Nov. 16, 1958 | --- | c1.95 | Mar. 15, 1959 | 12 |
| | June 11-30, 1959 | g230 | --- | | |
| 1960 | Dec. 17, 1959 | --- | c2.94 | Mar. 1-31, 1960 | 16 |
| | May 25, 1960 | 395 | 1.71 | | |
| 1961 | Jan. 14, 1961 | --- | c3.35 | Mar. 16-31, 1961 | 18 |
| | May 15, 1961 | 315 | 1.60 | | |
| 1962 | June 21, 1962 | h280 | 1.56 | Feb. 16 to Mar. 31, 1962 | 20 |
| 1963 | Dec. 3, 1962 | --- | c3.05 | Mar. 22-29, 1963 | 18 |
| | July 17, 1963 | 230 | 1.25 | | |
| 1964 | June 14, 1964 | h470 | --- | Mar. 1-31, 1964 | 18 |
| 1965 | Dec. 2, 1964 | --- | c2.57 | Feb. 18 to Mar. 1, 1965 | 15 |
| | July 13, 1965 | 292 | 1.25 | | |
| 1966 | Aug. 21, 1966 | 500 | 1.65 | Apr. 5, 1966 | f7.6 |
| 1967 | September 1967 | 720 | 2.30 | | |
| 1968 | --- | 190 | 1.18 | | |
| 1969 | May 27, 1969 | 300 | 1.32 | | |
| 1970 | Oct. 9, 1969 | 1,500 | 12.73 | | |
| 1971 | June 1971 | 560 | 11.55 | | |
| 1972 | --- | i400 | --- | | |
| 1973 | --- | i300 | --- | | |
| 1974 | June 1974 | 210 | 10.72 | | |
| 1975 | July 1975 | 330 | 11.09 | | |

a Period July to September.
b Gage height, 0.96 ft.
c Backwater from ice.
d Momentary minimum, gage height, 0.45 ft.
e Discharge measurement, caused by storage behind ice jam upstream.
f Momentary minimum, caused by storage behind ice jam upstream
g Maximum daily, estimated.
h Maximum daily.
i Estimated.

15254000 CRESCENT CREEK NEAR COOPER LANDING--Continued

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | | | | | | | | | | | 102 | 101 | |
| 1950 | 89.7 | 109 | 54.5 | 29.9 | 16.8 | 14.4 | 15.2 | 46.7 | 148 | 111 | 63.5 | 117 | 68.0 |
| 1951 | 48.5 | 28.0 | 18.5 | 16.5 | 14.5 | 12.0 | 20.0 | 66.2 | 120 | 103 | 59.8 | 118 | 52.1 |
| 1952 | 58.0 | 44.0 | 18.4 | 12.5 | 12.0 | 12.0 | 10.5 | 33.2 | 132 | 126 | 81.9 | 64.7 | 50.5 |
| 1953 | 156 | 168 | 71.0 | 37.6 | 40.6 | 29.4 | 26.6 | 116 | 351 | 265 | 122 | 92.9 | 123 |
| 1954 | 99.4 | 46.1 | 26.0 | 15.0 | 17.0 | 13.0 | 17.7 | 86.5 | 138 | 107 | 100 | 58.5 | 60.6 |
| 1955 | 79.8 | 111 | 35.4 | 28.0 | 20.0 | 16.4 | 14.5 | 36.2 | 176 | 246 | 130 | 86.9 | 82.1 |
| 1956 | 42.8 | 30.6 | 25.0 | 24.0 | 22.0 | 17.0 | 20.0 | 64.3 | 153 | 165 | 116 | 75.3 | 63.0 |
| 1957 | 40.6 | 36.8 | 44.5 | 21.9 | 18.0 | 17.2 | 15.5 | 96.5 | 193 | 87.1 | 62.5 | 135 | 64.1 |
| 1958 | 116 | 124 | 55.0 | 46.0 | 23.0 | 18.6 | 27.6 | 89.4 | 205 | 133 | 113 | 94.4 | 87.4 |
| 1959 | 76.2 | 44.5 | 28.1 | 19.7 | 18.0 | 16.8 | 22.3 | 105 | 222 | 147 | 88.9 | 66.4 | 71.6 |
| 1960 | 54.7 | 51.5 | 29.9 | 21.0 | 18.0 | 16.0 | 19.5 | 160 | 188 | 155 | 140 | 119 | 81.2 |
| 1961 | 85.5 | 59.2 | 63.8 | 71.1 | 34.0 | 19.5 | 26.9 | 121 | 199 | 198 | 145 | 190 | 101 |
| 1962 | 118 | 49.2 | 31.4 | 26.5 | 20.5 | 20.0 | 28.5 | 45.9 | 185 | 148 | 69.5 | 66.3 | 67.6 |
| 1963 | 40.6 | 49.0 | 34.0 | 25.1 | 21.0 | 19.7 | 20.1 | 64.7 | 140 | 166 | 92.1 | 58.2 | 61.1 |
| 1964 | 56.4 | 33.9 | 28.0 | 25.0 | 20.0 | 18.0 | 59.5 | 193 | 367 | 199 | 133 | 89.5 | 102 |
| 1965 | 82.7 | 51.2 | 32.6 | 19.7 | 15.7 | 23.9 | 39.7 | 77.0 | 164 | 195 | 133 | 95.7 | 78.0 |
| 1966 | 60.9 | 29.3 | 25.0 | 24.0 | 20.0 | 19.9 | 33.7 | 65.3 | 195 | 117 | 131 | 179 | 75.2 |
| MEAN | 76.8 | 62.7 | 36.5 | 27.3 | 20.7 | 17.9 | 24.6 | 86.3 | 193 | 157 | 105 | 100 | 75.8 |
| MONTHLY | 8 | 7 | 4 | 3 | 2 | 2 | 3 | 10 | 21 | 17 | 12 | 11 | |
| PERCENT | | | | | | | | | | | | | |

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-67.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1955 | | 1958 | | 1960-cont | | 1962 | | 1963-cont | | 1966 | |
| 12-16-51 | 1.0 | 10-18-54 | 4.5 | 4-28-58 | 5.0 | 4-11-60 | 0.0 | 10- 9-61 | 5.5 | 3- 5-63 | 2.5 | 2- 9-66 | 1.0 |
| 1953 | | 11-29-54 | 0.5 | 6- 3-58 | 7.5 | 5- 9-60 | 3.0 | 12- 4-61 | 0.0 | 7-12-63 | 14.0 | 4- 7-66 | 1.5 |
| 11- 7-52 | 3.0 | 1-20-55 | 0.5 | 8- 8-58 | 11.5 | 7-20-60 | 24.5 | 2- 7-62 | 0.5 | 1964 | | 6- 4-66 | 7.5 |
| 4-13-53 | 3.0 | 1956 | | 1959 | | 8-29-60 | 10.5 | 3-29-62 | 0.0 | 3-26-64 | 0.0 | 7-15-66 | 11.5 |
| 5-15-53 | 5.5 | 7-12-56 | 8.0 | 4-22-59 | 1.0 | 1961 | | 5-15-62 | 2.5 | 1965 | | 9-21-66 | 6.0 |
| 1954 | | 8-15-56 | 11.5 | 5-12-59 | 2.5 | 10- 4-60 | 4.5 | 6-23-62 | 8.5 | 1-25-65 | 0.0 | 1967 | |
| 10- 3-53 | 5.0 | 9-11-56 | 11.0 | 5-16-59 | 4.0 | 4- 3-61 | 1.0 | 8- 8-62 | 11.5 | 3-16-65 | 0.5 | 11-10-66 | 2.5 |
| 4-19-54 | 3.0 | 1957 | | 7-28-59 | 9.0 | 5- 9-61 | 5.5 | 8-29-62 | 11.5 | 4-25-65 | 4.5 | | |
| 5-25-54 | 5.5 | 10-17-56 | 2.5 | 9-16-59 | 7.5 | 6-11-61 | 8.5 | 1963 | | 6- 8-65 | 4.5 | | |
| 7-14-54 | 12.0 | 6-13-57 | 11.0 | 1960 | | 7-11-61 | 9.0 | 10-10-62 | 4.5 | 7-23-65 | 9.0 | | |
| | | 8-16-57 | 15.0 | 2- 2-60 | 0.0 | 8-22-61 | 10.0 | 11-28-62 | 0.0 | 9-24-65 | 7.5 | | |

## 15258000 KENAI RIVER AT COOPER LANDING

LOCATION.--Lat 60°29'34", long 149°48'28", in SE¼ sec.28, T.5 N., R.3 W., Kenai Peninsula Borough, near center of span on upstream side of bridge on Sterling Highway, 0.9 mi (1.4 km) east (upstream) of Cooper Landing, Bean Creek, and Kenai Lake outlet.

BASIN CHARACTERISTICS.--Drainage area, 634 mi² (1,642 km²); main-channel slope, 26.8 ft/mi (5.08 m/km); stream length, 60 mi (97 km); area of lakes and ponds, 5 percent; mean elevation, 2,650 ft (808 km); glacier area, 10 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1947 to September 1975.

GAGE.--Nonrecording gage. Altitude of gage is 430 ft (131 m) from topographic map. Prior to Apr. 13, 1950, at site 0.8 mi (1.3 km) downstream at different datum. Apr. 14, 1950 to Apr. 6, 1964, at site 20 ft (6 m) upstream of present location at datum 3.3 ft (1.0 m) higher. Apr. 7, 1964 to Aug. 27, 1965, at site 130 ft (40 m) downstream and Aug. 28, 1965 to Jan. 21, 1974 at site 30 ft (9 m) downstream at present datum.

REMARKS.--Diversion from Cooper Lake to Kenai Lake above gage through Cooper Lake powerplant began May 1961. Table of Extremes, below, has not been adjusted for diversion. Table of Monthly and Annual Mean Discharge, next page, has been adjusted to exclude diversion beginning in 1965 water year. Average annual diversion for the water years 1961-75 are as follows:

| Water year | Diversion ft³/s | Water year | Diversion ft³/s | Water year | Diversion ft³/s |
|---|---|---|---|---|---|
| 1961a | 25 | 1966 | 113 | 1971 | 136 |
| 1962 | 42 | 1967 | 48 | 1972 | 89 |
| 1963 | 123 | 1968 | 125 | 1973 | 69 |
| 1964 | 64 | 1969 | 66 | 1974 | 65 |
| 1965 | 129 | 1970 | 94 | 1975 | 84 |

a Period May to September.

COOPERATION.--Records of diversion furnished by Chugach Electric Association.

AVERAGE DISCHARGE.--28 years, 2,677 ft³/s (75.81 m³/s), 57.34 in/yr (1,456 mm/yr), 1,939,000 acre-ft/yr (2.39 km³/yr), adjusted to exclude diversion from Cooper Lake.

EXTREMES.--Maximum discharge during period of record, 23,100 ft³/s (654 m³/s) Sept. 21, 1974, gage height, 17.18 ft (5.236 m), result of release of stored water from glacier-dammed lake at head of unnamed glacier in the Snow River basin; no flow Mar. 27, 28, 1964 (caused by earthquake); minimum natural discharge (daily), 190 ft³/s (5.38 m³/s) Mar. 15-24, 1951.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | | |
|---|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge | Gage height |
| 1947a | Aug. 1, 1947 | 9,180 | 12.8 | May 1, 1947 | b350 | --- |
| 1948 | July 10, 1948 | 10,400 | 13.2 | Feb. 23 to April 11, 1948 | 220 | 5.9 |
| 1949 | Sept. 7, 1949 | 9,480 | 12.91 | Feb. 8-13, 1949 | 220 | 5.9 |
| 1950 | Oct. 28, 1949 | 11,600 | 13.55 | Apr. 13, 1950 | c282 | 1.43 |
| 1951 | Sept. 6, 1951 | 8,960 | 8.70 | Mar. 15-24, 1951 | 190 | --- |
| 1952 | July 26, 27, 1952 | 7,980 | 8.29 | Apr. 11-16, 1952 | 258 | 1.33 |
| 1953 | June 29, 1953 | 20,600 | 12.36 | Apr. 10,11, 1953 | 303 | 1.69 |
| 1954 | Aug. 3, 1954 | 8,000 | 8.30 | Apr. 17, 1954 | 265 | 1.38 |
| 1955 | July 12, 1955 | 10,600 | 9.40 | Mar. 25-27, 1955 | 260 | --- |
| 1956 | Aug. 20, 1956 | 9,000 | 8.79 | Mar. 26-29, 1956 | 214 | --- |
| 1957 | Sept. 6, 1957 | 16,300 | 11.15 | Mar. 29-31, 1957 | 260 | --- |
| 1958 | Nov. 4, 1957 | 12,400 | 10.01 | Mar. 26, 27, 1958 | 352 | 1.65 |
| 1959 | June 24, 1958 | 8,980 | 8.71 | Mar. 31, 1959 | 265 | 1.29 |
| 1960 | July 29, 1960 | 9,300 | 8.84 | Apr. 4-6, 1960 | 260 | --- |
| 1961 | Sept. 14, 1961 | 10,800 | 9.50 | Apr. 22, 1961 | 492 | --- |
| 1962 | Oct. 8, 1961 | 14,000 | 10.5 | Mar. 22-26, 1962 | 320 | --- |
| 1963 | July 17, 1963 | 8,800 | 8.74 | Apr. 16, 17, 19, 1963 | 516 | 2.15 |
| 1964 | Sept. 24, 1964 | 14,200 | 14.30 | Mar. 27, 28, 1964 | d0 | --- |
| 1965 | Aug. 3, 1965 | 6,840 | 10.97 | Mar. 19, 20, 1965 | 500 | --- |
| 1966 | Sept. 19, 1966 | 13,000 | --- | Mar. 19, 1966 | 333 | --- |
| 1967 | Sept. 1, 1967 | 21,500 | 16.25 | Mar. 24, 1967 | 372 | --- |
| 1968 | Oct. 1, 1967 | e8,500 | 11.80 | Apr. 22, 1968 | 500 | --- |
| 1969 | June 19, 1969 | 8,980 | 12.04 | Mar. 28, 29, 1969 | 360 | 4.80 |
| 1970 | Oct. 14, 1969 | 17,500 | 15.10 | Feb. 8, 9, 1970 | 900 | 5.92 |
| 1971 | July 14, 1971 | 10,600 | 12.87 | Apr. 1, 2, 1971 | 465 | 5.15 |
| 1972 | Aug. 24, 1972 | 8,420 | 11.76 | May 2, 1972 | 310 | 4.80 |
| 1973 | July 31, 1973 | 6,650 | 11.00 | Mar. 28, 1973 | 338 | 4.86 |
| 1974 | Sept. 21, 1974 | 23,100 | 17.18 | Mar. 16, 17, 1974 | 332 | --- |
| 1975 | July 15, 1975 | 9,630 | 12.22 | Apr. 15, 16, 1975 | 400 | --- |

a Period May to September.
b Estimated.
c Momentary minimum.
d Reverse flow observed, caused by earthquake.
e Stage falling, peak occurred Sept. 20, 1967; maximum peak discharge, 7,260 ft³/s July 10, 1968, gage height, 11.18 ft.

## 15258000 KENAI RIVER AT COOPER LANDING--Continued

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
(ADJUSTED TO EXCLUDE DIVERSION FROM COOPER LAKE BEGINNING IN 1965 WATER YEAR)

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | | | | | | | | 1209 | 5083 | 6510 | 5921 | 3723 | |
| 1948 | 3928 | 2404 | 2057 | 535 | 289 | 320 | 402 | 2175 | 5911 | 7880 | 5680 | 2998 | 2887 |
| 1949 | 3180 | 1638 | 671 | 328 | 251 | 315 | 337 | 1283 | 4966 | 6510 | 5272 | 6321 | 2601 |
| 1950 | 4715 | 3300 | 1481 | 584 | 371 | 331 | 306 | 746 | 4845 | 6349 | 6575 | 5326 | 2926 |
| 1951 | 1878 | 654 | 364 | 310 | 256 | 208 | 280 | 1239 | 3556 | 6894 | 5092 | 6852 | 2309 |
| 1952 | 1783 | 2623 | 781 | 347 | 311 | 291 | 262 | 658 | 3399 | 6616 | 5676 | 3045 | 2157 |
| 1953 | 4164 | 3199 | 1461 | 886 | 547 | 460 | 509 | 2972 | 10010 | 9653 | 7225 | 4570 | 3824 |
| 1954 | 3542 | 1192 | 1943 | 740 | 389 | 319 | 298 | 1823 | 4721 | 5611 | 6096 | 3267 | 2514 |
| 1955 | 2143 | 2205 | 826 | 612 | 438 | 312 | 284 | 802 | 3454 | 8178 | 5955 | 4263 | 2472 |
| 1956 | 1264 | 690 | 394 | 387 | 296 | 249 | 286 | 1300 | 3393 | 6074 | 6914 | 3855 | 2102 |
| 1957 | 2341 | 1663 | 992 | 420 | 303 | 306 | 364 | 1649 | 5831 | 5576 | 5752 | 9100 | 2864 |
| 1958 | 3786 | 4877 | 1149 | 703 | 515 | 384 | 631 | 1998 | 6600 | 7140 | 7310 | 2997 | 3189 |
| 1959 | 3596 | 1147 | 661 | 460 | 337 | 301 | 410 | 2196 | 7001 | 6125 | 5387 | 2780 | 2548 |
| 1960 | 1937 | 1548 | 768 | 481 | 441 | 324 | 318 | 3346 | 5748 | 7038 | 6399 | 3720 | 2683 |
| a1961 | 1880 | 1459 | 1398 | 1578 | 1320 | 598 | 518 | 2703 | 5667 | 7377 | 6603 | 5465 | 3059 |
| b1962 | 4567 | 1254 | 714 | 492 | 436 | 348 | 458 | 1181 | 4926 | 6547 | 4775 | 2928 | 2402 |
| c1963 | 1620 | 2252 | 1100 | 836 | 647 | 719 | 559 | 1525 | 3860 | 7019 | 5506 | 4680 | 2539 |
| d1964 | 2594 | 1066 | 869 | 795 | 556 | 382 | 665 | 1308 | 7378 | 7272 | 7453 | 6705 | 3091 |
| 1965 | 3389 | 1648 | 1215 | 642 | 523 | 452 | 776 | 1621 | 3246 | 4959 | 5616 | 4801 | 2421 |
| 1966 | 2695 | 867 | 574 | 484 | 362 | 266 | 314 | 1011 | 4823 | 5802 | 7911 | 7495 | 2729 |
| 1967 | 3882 | 1327 | 737 | 593 | 409 | 375 | 376 | 1395 | 5159 | 6249 | 8919 | 11460 | 3418 |
| 1968 | 3203 | 1449 | 940 | 629 | 667 | 775 | 541 | 2161 | 5033 | 6066 | 5556 | 2905 | 2504 |
| 1969 | 1464 | 863 | 521 | 365 | 295 | 315 | 343 | 1645 | 6435 | 5932 | 3587 | 2558 | 2035 |
| 1970 | 7743 | 2563 | 1995 | 1337 | 937 | 960 | 905 | 2185 | 5474 | 6859 | 7023 | 6107 | 3696 |
| 1971 | 1793 | 2781 | 880 | 542 | 449 | 441 | 353 | 760 | 4931 | 8348 | 7656 | 4351 | 2789 |
| 1972 | 2382 | 1001 | 612 | 422 | 295 | 228 | 271 | 784 | 3151 | 6403 | 6454 | 4999 | 2260 |
| 1973 | 2158 | 1218 | 669 | 455 | 390 | 316 | 318 | 1403 | 3669 | 5387 | 4857 | 3528 | 2042 |
| 1974 | 1592 | 830 | 525 | 434 | 300 | 269 | 362 | 1443 | 4465 | 5578 | 4706 | 9136 | 2474 |
| 1975 | 2613 | 2046 | 864 | 567 | 462 | 393 | 367 | 2376 | 4749 | 7491 | 5522 | 4046 | 2640 |
| MEAN | 2923 | 1777 | 970 | 606 | 457 | 388 | 422 | 1617 | 5086 | 6670 | 6117 | 4965 | |
| MONTHLY PERCENT | 9 | 5 | 3 | 2 | 1 | 1 | 1 | 5 | 16 | 21 | 19 | 15 | |

a Average diversion, period May to September 1961, 25 $ft^3/s$.
b Average annual diversion, 42 $ft^3/s$.
c Average annual diversion, 123 $ft^3/s$.
d Average annual diversion, 64 $ft^3/s$.

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1958 | | 1962 | | 1965-cont | | 1968-cont | | 1971-cont | | 1973-cont | |
| 12-14-51 | 1.0 | 4-30-58 | 5.0 | 10- 9-61 | 5.0 | 6- 9-65 | 6.5 | 8-22-68 | 12.0 | 7-13-71 | 6.0 | 5- 8-73 | 4.5 |
| 1953 | | 7- 9-58 | 10.0 | 12- 6-61 | 0.5 | 8-25-65 | 9.0 | 1969 | | 8-26-71 | 8.5 | 6-19-73 | 7.5 |
| 11- 6-52 | 4.0 | 8- 4-58 | 11.0 | 3-29-62 | 0.5 | 9-24-65 | 9.5 | 10-23-68 | 4.0 | 1972 | | 7-26-73 | 12.0 |
| 4-14-53 | 1.0 | 1959 | | 6-25-62 | 6.0 | 1966 | | 1-16-69 | 1.0 | 11-12-71 | 3.0 | 9- 5-73 | 10.5 |
| 5-17-53 | 5.0 | 3-15-59 | 0.0 | 8- 8-62 | 11.0 | 11- 5-65 | 0.0 | 2-28-69 | 1.0 | 1- 6-72 | 1.0 | 1974 | |
| 1954 | | 4-22-59 | 1.5 | 8-29-62 | 12.0 | 4- 7-66 | 1.5 | 6-25-69 | 9.0 | 1-25-72 | 0.5 | 10- 9-73 | 6.0 |
| 4-20-54 | 1.0 | 5-16-59 | 5.5 | 1963 | | 1967 | | 7- 3-69 | 10.0 | 2-23-72 | 0.0 | 11-27-73 | 2.0 |
| 7-17-54 | 10.0 | 7-28-59 | 10.0 | 10-14-62 | 7.5 | 11- 9-66 | 1.0 | 9-10-69 | 9.0 | 3-22-72 | 0.0 | 12-19-73 | 2.0 |
| 1955 | | 1960 | | 11-28-62 | 1.0 | 1-19-67 | 0.0 | 1970 | | 4-24-72 | 2.0 | 3-19-74 | 1.0 |
| 10-20-54 | 5.5 | 2- 2-60 | 0.5 | 1964 | | 3-30-67 | 1.0 | 1- 6-70 | 0.0 | 5-24-72 | 2.0 | 4-23-74 | 3.0 |
| 1956 | | 3- 1-60 | 0.5 | 11-21-63 | 1.5 | 7-25-67 | 13.0 | 3- 3-70 | 1.0 | 7-10-72 | 6.5 | 9-21-74 | 11.5 |
| 8-15-56 | 10.5 | 4-12-60 | 0.5 | 2-11-64 | 1.0 | 9- 2-67 | 10.0 | 5- 7-70 | 5.5 | 8-28-72 | 10.0 | 1975 | |
| 9-11-56 | 10.5 | 5-10-60 | 4.5 | 3-24-64 | 0.0 | 1968 | | 6-22-70 | 8.5 | 1973 | | 10- 7-74 | 5.0 |
| 1957 | | 1961 | | 4-16-64 | 0.0 | 10-19-67 | 4.0 | 8- 7-70 | 10.0 | 10- 9-72 | 5.0 | 11-22-74 | 2.5 |
| 10-19-56 | 2.5 | 10- 3-60 | 6.5 | 1965 | | 10-31-67 | 0.0 | 1971 | | 11-21-72 | 2.0 | 3-11-75 | 1.0 |
| 8-16-57 | 16.0 | 4- 5-61 | 2.0 | 2- 3-65 | 0.5 | 2-15-68 | 1.0 | 12-20-70 | 2.0 | 2- 2-73 | 1.0 | 4- 7-75 | 2.0 |
| 9-26-57 | 8.5 | 6- 9-61 | 6.5 | 3-16-65 | 0.0 | 5-17-68 | 6.0 | 3-19-71 | 1.0 | 4- 4-73 | 3.0 | 6- 9-75 | 6.5 |
| | | 8-23-61 | 9.5 | | | 6-21-68 | 7.5 | | | | | 8- 7-75 | 10.5 |

## 15260000 COOPER CREEK NEAR COOPER LANDING

LOCATION.--Lat 60°26'00", long 149°49'15", Kenai Peninsula Borough, on left bank 125 ft (38 m) downstream from Cooper Lake Outlet, 1.4 mi (2.3 km) upstream from Stetson Creek, and 4 mi (6 km) south of Cooper Landing.

BASIN CHARACTERISTICS.--Drainage area, 31.8 $mi^2$ (82.4 $km^2$); main-channel slope, 194 ft/mi (36.7 m/km); stream length, 9.9 mi (15.9 km); area of lakes and ponds, 16 percent; mean elevation, 2,400 ft (732 m); glacier area, 6 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1949 to July 1959.

GAGE.--Water-stage recorder. Datum of gage is 1,165.5 ft (355.24 m) above mean sea level (river-profile survey).

AVERAGE DISCHARGE.--9 years (water years 1950-58), 90.0 $ft^3/s$ (2.549 $m^3/s$), 38.43 in/yr (976 mm/yr), 65,200 acre-ft/yr (80.4 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 729 $ft^3/s$ (20.6 $m^3/s$) June 29, 1953, gage height, 4.02 ft (1.225 m); no flow July 31, 1959, due to construction of dam at lake outlet; minimum natural discharge (daily), about 8.0 $ft^3/s$ (0.23 $m^3/s$) Mar. 26 to Apr. 15, 1950.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1949a | Sept.27 or 28,1949 | 232 | 2.33 | Sept. 23, 1949 | b84 |
| 1950 | June 20, 21, 1950 | 298 | 2.59 | Mar. 26 to Apr. 15, 1950 | 8.0 |
| 1951 | Sept. 19, 1951 | 208 | 2.23 | Mar. 1-26, 1951 | 13 |
| 1952 | June 28, 1952 | 225 | 2.30 | Apr. 1-15, 1952 | 11 |
| 1953 | June 29, 1953 | 729 | 4.02 | Apr. 14-16, 1953 | c18 |
| 1954 | June 27, 1954 | 224 | 2.36 | Apr. 1-19, 1954 | 12 |
| 1955 | July 11, 1955 | 366 | 2.89 | Apr. 1-30, 1955 | 13 |
| 1956 | July 18, 1956 | 285 | 2.54 | Mar. 1-31, 1956 | 19 |
| 1957 | Sept. 4, 1957 | 316 | 2.67 | Mar. 21 to Apr. 30, 1957 | 19 |
| 1958 | June 22, 1958 | 422 | 3.13 | Mar. 1-31, 1958 | 18 |
| 1959d | June 22, 1959 | 269 | 3.48 | July 31, 1959 | 0 |

a Period August to September.
b Momentary minimum, gage height, 1.63 ft.
c Gage height, 1.07 ft.
d Period October to July.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | | | | | | | | | | | 129 | 131 | |
| 1950 | 102 | 130 | 44.5 | 22.6 | 12.1 | 9.13 | 12.0 | 58.7 | 188 | 182 | 134 | 155 | 87.9 |
| 1951 | 73.3 | 31.2 | 20.0 | 18.0 | 15.5 | 13.3 | 23.0 | 71.5 | 146 | 144 | 77.2 | 153 | 65.6 |
| 1952 | 66.6 | 55.0 | 22.2 | 13.5 | 13.0 | 12.5 | 11.5 | 34.9 | 138 | 181 | 107 | 69.3 | 60.5 |
| 1953 | 208 | 186 | 74.8 | 47.7 | 45.5 | 31.4 | 26.4 | 137 | 412 | 335 | 178 | 121 | 151 |
| 1954 | 132 | 46.9 | 32.2 | 25.0 | 27.2 | 17.0 | 12.7 | 96.6 | 196 | 169 | 136 | 72.8 | 80.7 |
| 1955 | 66.5 | 92.5 | 39.8 | 34.5 | 22.1 | 16.0 | 13.0 | 28.9 | 159 | 302 | 165 | 94.8 | 86.6 |
| 1956 | 45.3 | 30.0 | 23.0 | 22.0 | 21.0 | 19.0 | 20.0 | 61.3 | 174 | 236 | 161 | 101 | 76.4 |
| 1957 | 50.0 | 42.7 | 51.1 | 25.7 | 21.0 | 20.3 | 19.0 | 90.0 | 216 | 121 | 83.9 | 216 | 79.7 |
| 1958 | 155 | 190 | 56.7 | 38,0 | 21.0 | 18.0 | 32.0 | 125 | 289 | 244 | 186 | 108 | 122 |
| 1959 | 76.1 | 50.2 | 35.0 | 22.3 | 18.0 | 17.9 | 30.6 | 102 | 225 | 124 | | | |
| MEAN | 97.6 | 85.5 | 39.9 | 26.9 | 21.7 | 17.4 | 20.0 | 80.6 | 214 | 204 | 136 | 122 | 90.0 |
| MONTHLY PERCENT | 9 | 8 | 4 | 3 | 2 | 2 | 2 | 8 | 20 | 19 | 13 | 11 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1953-59.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|
| 1953 | | 1955 | | 1956-cont | | 1958 | |
| 11- 5-52 | 3.0 | 10-21-54 | 6.5 | 8-16-56 | 12.0 | 5-27-58 | 7.5 |
| 4-14-53 | 1.5 | 1-20-55 | 0.5 | 9-13-56 | 10.5 | 8- 4-58 | 11.5 |
| 1954 | | 1956 | | 1957 | | 1959 | |
| 4-20-54 | 2.0 | 7-10-56 | 8.5 | 10-15-56 | 2.5 | 10-15-58 | 2.5 |
| 7-16-54 | 12.0 | | | 8-16-57 | 19.0 | 4-21-59 | 0.5 |

## 15260500 STETSON CREEK NEAR COOPER LANDING

LOCATION.--Lat 60°26'30", long 149°51'05", Kenai Peninsula Borough, on left bank 0.3 mi (0.5 km) upstream from mouth, and 3.4 mi (5.5 km) southwest of Cooper Landing.

BASIN CHARACTERISTICS.--Drainage area, 8.6 $mi^2$ (22.3 $km^2$); main-channel slope, 459 ft/mi (86.9 m/km); stream length, 4.8 mi (7.7 km); area of lakes and ponds, 0 percent; mean elevation, 3,200 ft (975 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1958 to September 1963.

GAGE.--Water-stage recorder. Altitude of gage is 1,100 ft (335 m), from topographic map.

AVERAGE DISCHARGE.--5 years, 24.8 $ft^3/s$ (0.702 $m^3/s$), 39.16 in/yr (995 mm/yr), 17,970 acre-ft/yr (22.2 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 291 $ft^3/s$ (8.24 $m^3/s$) Sept. 12, 1961, gage height, 3.00 ft (0.914 m), from rating curve extended above 150 $ft^3/s$ (4.2 $m^3/s$); maximum gage height, 3.13 ft (0.954 m) June 21, 1958; minimum daily discharge, 3.0 $ft^3/s$ (0.085 $m^3/s$) Apr. 11, 12, 1960.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1958a | June 21, 1958 | 193 | 3.13 | Sept. 18, 1958 | b23 |
| 1959 | June 18, 1959 | 150 | 2.75 | Feb. 6-20, Mar. 9-28, 1959 | 5.0 |
| 1960 | May 23, 1960 | 197 | 2.99 | Apr. 11, 12, 1960 | 3.0 |
| 1961 | Sept. 12, 1961 | 291 | 3.00 | Mar. 16-31, 1961 | 5.0 |
| 1962 | June 16, 1962 | 157 | 2.60 | Feb. 1 to Apr. 4, 1962 | 5.0 |
| 1963 | Mar. 11, 1963 | --- | c2.90 | Mar. 12-28, 1963 | 4.0 |
| | July 1, 1963 | 89 | 2.25 | | |

a Period May to September.
b Gage height, 1.88 ft.
c Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | | | | | | | | 90.6 | 52.8 | 37.7 | 27.0 | |
| 1959 | 19.1 | 11.4 | 7.58 | 6.00 | 5.46 | 5.35 | 6.80 | 30.8 | 84.2 | 43.3 | 32.4 | 27.6 | 23.4 |
| 1960 | 16.2 | 12.6 | 8.71 | 7.00 | 5.59 | 4.32 | 4.80 | 46.8 | 65.3 | 49.4 | 41.6 | 38.3 | 25.1 |
| 1961 | 21.0 | 12.5 | 15.5 | 18.5 | 9.43 | 5.48 | 6.40 | 45.6 | 98.4 | 70.1 | 46.5 | 60.5 | 34.2 |
| 1962 | 33.6 | 9.77 | 8.03 | 7.00 | 5.00 | 5.00 | 5.90 | 19.0 | 74.5 | 47.2 | 21.4 | 19.5 | 21.4 |
| 1963 | 15.1 | 16.4 | 7.90 | 5.87 | 5.00 | 4.45 | 5.17 | 29.4 | 51.1 | 54.8 | 24.8 | 15.2 | 19.7 |
| MEAN | 21.0 | 12.5 | 9.54 | 8.87 | 6.10 | 4.92 | 5.81 | 34.3 | 77.3 | 52.9 | 34.1 | 31.4 | 24.8 |
| MONTHLY PERCENT | 7 | 4 | 3 | 3 | 2 | 2 | 2 | 12 | 26 | 18 | 11 | 10 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1958-60.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|
| 1958 | | 1959 | | 1960 | |
| 5-24-58 | 0.0 | 10-16-58 | 1.5 | 12-16-59 | 0.0 |
| 7- 9-58 | 5.0 | 1-21-59 | 0.5 | 3- 3-60 | 0.5 |
| 8- 7-58 | 8.5 | 3-14-59 | 0.0 | 4-14-60 | 0.5 |
| 9-14-58 | 5.5 | 5-17-59 | 4.5 | 5-12-60 | 3.5 |
| | | 8-16-59 | 5.5 | | |

## 15261000 COOPER CREEK AT MOUTH, NEAR COOPER LANDING

LOCATION.--Lat 60°28'30", long 149°52'30", Kenai Peninsula Borough, on right bank 0.7 mi (1.1 km) upstream from mouth, 0.9 mi (1.4 km) downstream from unnamed tributary, 1.6 mi (2.6 km) west of Cooper Landing, and 4.5 mi (7.2 km) downstream from Cooper Lake Outlet.

BASIN CHARACTERISTICS.--Drainage area, 48.0 $mi^2$ (124.3 $km^2$); main-channel slope, 74.1 ft/mi (14.03 m/km); stream length, 13.5 mi (21.7 km); area of lakes and ponds, 10 percent; mean elevation, 2,500 ft (762 m); glacier area, 4 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to January 1965.

GAGE.--Water-stage recorder. Altitude of gage is 450 ft (137 m), from topographic map. Prior to May 28, 1963, at site about 160 ft (49 m) upstream at datum 4.20 ft (1.280 m) higher.

REMARKS.--Since July 1959, entire flow from 31.8 $mi^2$ (82.4 $km^2$) of drainage area has been controlled by dam at Cooper Lake Outlet. No spilling since 1959 except for period May 1961 to October 1962. Average diversions from Cooper Lake to Kenai Lake, through Cooper Lake powerplant are 25 $ft^3/s$ (0.71 $m^3/s$) May to September 1961, 42 $ft^3/s$ (1.19 $m^3/s$) 1962 water year, 123 $ft^3/s$ (3.48 $m^3/s$) 1963 water year, 64 $ft^3/s$ (1.81 $m^3/s$) 1964 water year, and 81 $ft^3/s$ (2.29 $m^3/s$) October to January 1965.

COOPERATION.--Records of diversion furnished by Chugach Electric Association.

EXTREMES.--Maximum discharge during period of record, 841 $ft^3/s$ (23.8 $m^3/s$) Sept. 21, 1961, gage height, 2.11 ft (0.643 m), caused by release of water behind log jam upstream (site and datum then in use); maximum gage height 4.7 ft (1.43 m) during winter period 1960-61, from floodmarks (ice jam), site and datum then in use; minimum discharge observed, 3.1 $ft^3/s$ (0.088 $m^3/s$) Mar. 1, 1960 (discharge measurement), caused by temporary storage behind ice dam upstream.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1958 | Dec. 21, 1957 | --- | a3.41 | Feb. 16-28, 1958 | 27 |
| | June 22, 1958 | 608 | 2.91 | | |
| 1959 | Dec. 9, 1958 | --- | a3.75 | Mar. 15, 1959 | 23 |
| | June 20, 1959 | 455 | 3.00 | | |
| 1960 | May 23, 1960 | 259 | 1.69 | Mar. 1, 1960 | b3.1 |
| 1961 | During winter period | --- | a4.7 | Mar. 1-15, 1961 | 11 |
| | Sept. 21, 1961 | 841 | 2.11 | | |
| 1962 | Oct. 2, 1961 | 540 | 0.36 | Mar. 1-31, 1962 | 8.0 |
| | June 22, 1962 | --- | 3.02 | | |
| 1963 | Nov. 23, 1962 | --- | a1.83 | Apr. 1-30, 1963 | 10 |
| | June 22, 1963 | 126 | 1.67 | | |
| 1964 | Nov. 20, 1963 | --- | a2.40 | Mar. 1-31, 1964 | 6.0 |
| | June 2, 1964 | 260 | 2.01 | | |
| 1965c | Oct. 7, 1964 | 77 | 1.47 | Jan. 1-31, 1965 | 10 |
| | Nov. 28, 1964 | --- | a3.20 | | |

a Backwater from ice.
b Discharge measurement; caused by temporary storage behind ice dam upstream.
c Period October to January.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | 264 | 285 | 82.9 | 58.9 | 32.4 | 28.0 | 50.3 | 184 | 412 | 309 | 225 | 151 | 174 |
| 1959 | 107 | 67.2 | 48.6 | 32.1 | 26.1 | 24.9 | 36.3 | 175 | 383 | 197 | 45.4 | 41.6 | 99.0 |
| 1960 | 29.3 | 23.5 | 14.5 | 10.5 | 7.52 | 7.00 | 9.00 | 90.1 | 87.2 | 68.1 | 54.3 | 58.2 | 38.4 |
| 1961 | 37.0 | 22.6 | 28.8 | 32.9 | 15.7 | 11.5 | 16.5 | 219 | 323 | 326 | 226 | 309 | 131 |
| 1962 | 177 | 37.0 | 17.0 | 14.0 | 11.0 | 8.00 | 12.0 | 58.3 | 212 | 228 | 79.8 | 52.1 | 76.0 |
| 1963 | 23.0 | 26.0 | 13.0 | 11.0 | 11.0 | 11.0 | 10.0 | 46.2 | 73.7 | 72.8 | 38.0 | 21.6 | 29.9 |
| 1964 | 20.7 | 11.9 | 10.0 | 8.00 | 7.00 | 6.00 | 17.8 | 42.6 | 152 | 75.8 | 52.5 | 33.5 | 36.4 |
| 1965 | 35.9 | 21.6 | 11.3 | 10.00 | | | | | | | | | |
| MEAN | 86.8 | 61.8 | 28.3 | 22.2 | 15.8 | 13.8 | 21.7 | 116 | 235 | 182 | 103 | 95.4 | 83.6 |
| MONTHLY PERCENT | 9 | 6 | 3 | 2 | 2 | 1 | 2 | 12 | 24 | 19 | 10 | 10 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1958-63.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | 1959-cont | | 1960 | | 1961 | | 1962 | | 1962-cont | | 1962-cont | |
| 4-30-58 | 2.5 | 4-22-59 | 1.5 | 12-15-59 | 0.5 | 10- 3-60 | 3.0 | 10-12-61 | 1.5 | 12- 6-61 | 0.0 | 8- 8-62 | 11.5 |
| 6- 3-58 | 7.5 | 5-12-59 | 2.0 | 2- 2-60 | 0.0 | 4- 5-61 | 0.5 | 10-13-61 | 1.0 | 2- 7-62 | 0.5 | 8-29-62 | 11.5 |
| 8- 7-58 | 11.0 | 5-16-59 | 3.0 | 3- 1-60 | 0.0 | 5-10-61 | 2.5 | 10-15-61 | 4.0 | 3-29-62 | 0.0 | 1963 | |
| 1959 | | 7-28-59 | 6.0 | 4-12-60 | 0.0 | 6-11-61 | 6.5 | 10-16-61 | 3.5 | 5-14-62 | 1.0 | 10-10-62 | 1.5 |
| 10-16-58 | 3.0 | 9-14-59 | 5.5 | 5-10-60 | 2.5 | 7-11-61 | 10.0 | 10-17-61 | 3.0 | 6-23-62 | 8.5 | 10-14-62 | 1.5 |
| | | | | | | 8-22-61 | 10.0 | | | | | | |

## 15264000 RUSSIAN RIVER NEAR COOPER LANDING

LOCATION.--Lat 60°27'10", long 149°59'05", Kenai Peninsula Borough, on right bank 50 ft (15 m) upstream from small unnamed tributary, 0.3 mi (0.5 km) downstream from Lower Russian Lake, 3.2 mi (5.1 km) upstream from mouth, and 6 mi (9.7 km) southwest of Cooper Landing.

BASIN CHARACTERISTICS.--Drainage area, 61.8 $mi^2$ (160.1 $km^2$); main-channel slope, 116 ft/mi (22.0 m/km); stream length, 23.5 mi (37.8 km); area of lakes and ponds, 4 percent; mean elevation, 2,100 ft (640 m); glacier area, 12 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1947 to September 1954.

GAGE.--Water-stage recorder. Altitude of gage is 500 ft (150 m), from topographic map. Prior to June 12, 1949, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--7 years, 124 $ft^3/s$ (3.512 $m^3/s$), 27.25 in/yr (692 mm/yr), 89,840 acre-ft/yr (111 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 1280 $ft^3/s$ (36.2 $m^3/s$) Nov. 24, 1952, gage height, 4.75 ft (1.448 m) from rating curve extended above 650 $ft^3/s$ (18 $m^3/s$); minimum daily, about 18 $ft^3/s$ (0.51 $m^3/s$) Feb. 8-11, 1949, Mar. 1-31, 1951.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1947a | May 30, 1947 | b414 | 2.05 | May 1, 1947 | 50 |
| 1948 | Nov. 28, 1947 | b798 | 3.25 | Apr. 6-8, 1948 | 30 |
| 1949 | June 2, 1949 | b254 | 1.85 | Feb. 8-11, 1949 | 18 |
| 1950 | Nov. 23 or 24,1950 | 687 | 3.32 | Apr. 9-11, 1950 | 24 |
| 1951 | Sept. 20, 1951 | 271 | 1.89 | Mar. 1-31, 1951 | 18 |
| 1952 | June 21, 1952 | 261 | 1.88 | Apr. 1-15, 1952 | 20 |
| 1953 | Nov. 24, 1952 | 1,280 | 4.75 | Apr. 1-13, 1953 | 38 |
| 1954 | May 14, 1954 | 533 | 3.41 | Apr. 1-19, 1954 | 24 |

a Period May to September.
b Maximum daily.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | | | | | | | | 191 | 216 | 138 | 98.3 | 80.0 | |
| 1948 | 137 | 281 | 172 | 59.9 | 51.2 | 35.6 | 51.2 | 223 | 224 | 166 | 91.4 | 47.1 | 128 |
| 1949 | 110 | 80.6 | 40.2 | 25.4 | 19.8 | 26.1 | 36.2 | 116 | 206 | 156 | 93.0 | 104 | 84.7 |
| 1950 | 131 | 275 | 110 | 45.6 | 30.2 | 28.7 | 30.8 | 135 | 256 | 157 | 92.7 | 167 | 122 |
| 1951 | 83.9 | 40.1 | 27.0 | 25.4 | 21.1 | 18.0 | 40.3 | 153 | 174 | 122 | 62.8 | 170 | 78.3 |
| 1952 | 84.6 | 98.5 | 36.3 | 24.0 | 23.0 | 21.8 | 20.5 | 62.2 | 214 | 188 | 96.7 | 69.8 | 78.4 |
| 1953 | 349 | 465 | 231 | 123 | 84.7 | 54.7 | 81.9 | 358 | 543 | 347 | 239 | 168 | 254 |
| 1954 | 236 | 79.8 | 49.1 | 37.5 | 38.6 | 26.0 | 32.9 | 340 | 267 | 155 | 150 | 86.1 | 126 |
| MEAN | 162 | 189 | 95.1 | 48.7 | 38.4 | 30.1 | 42.0 | 197 | 262 | 179 | 115 | 111 | 124 |
| MONTHLY | 11 | 13 | 6 | 3 | 3 | 2 | 3 | 13 | 18 | 12 | 8 | 8 | |
| PERCENT | | | | | | | | | | | | | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-55.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|
| 1952 | | 1953 | | 1954 | | 1955 | |
| 12-17-51 | 1.0 | 11- 5-52 | 4.5 | 4-20-54 | 0.5 | 10-21-54 | 5.0 |
| | | 4-14-53 | 1.5 | 5-26-54 | 8.0 | | |
| | | 5-16-53 | 4.5 | 7-16-54 | 13.0 | | |

## 15266000 RUSSIAN RIVER AT MOUTH NEAR COOPER LANDING

LOCATION.--Lat 60°29'10", long 149°59'50", Kenai Peninsula Borough, 0.1 mi (0.2 km) upstream from mouth, and 5.5 mi (8.8 km) west of Cooper Landing.

BASIN CHARACTERISTICS.--Drainage area 71.0 $mi^2$ (183.9 $km^2$). See station 15264000.

PERIOD OF RECORD.--August to October 1913.

GAGE.--Nonrecording gage. Altitude of gage is 350 ft (107 m), from topographic map.

EXTREMES.--Maximum discharge observed during period of record, 510 $ft^3/s$ (14.4 $m^3/s$) Sept. 26, 1913, gage height, 4.30 ft (1.311 m); minimum observed, 57 $ft^3/s$ (1.61 $m^3/s$) Sept. 14-22, 1913, gage height, 3.36 ft (1.024 m).

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 141 | --- |
| 1914 | 166 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

## 15266300 KENAI RIVER AT SOLDOTNA

LOCATION.--Lat 60°28'39", long 151°04'46", Kenai Peninsula Borough, near center of span on downstream side of bridge on Sterling Highway, 1.0 mi (1.6 km) southwest of Soldotna.

BASIN CHARACTERISTICS.--Drainage area, 2,010 mi² (5,210 km²); main-channel slope, 10.7 ft/mi (2.03 m/km); stream length, 118 mi (190 km); area of lakes and ponds, 5 percent; mean elevation, 1,750 ft (533 m); glacier area, 11 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1965 to September 1975.

GAGE.--Nonrecording gage. Datum of gage is 35.34 ft (10.772 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 5,365 ft³/s (151.9 m³/s), 36.25 in/yr (921 mm/yr), 3,887,000 acre-ft/yr (4.79 km³/yr).

EXTREMES.--Maximum discharge during period of record, 30,000 ft³/s (850 m³/s) Oct. 15, 1969, gage height, 12.20 ft (3.719 m); maximum gage height, 22.62 ft (6.895 m) Jan. 18, 1969, backwater from ice; minimum daily discharge, 770 ft³/s (21.8 m³/s) Apr. 1-4, 1966.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1965a | Sept. 21, 1965 | 16,100 | 9.79 | May 8, 1965 | b2,280 |
| 1966 | Sept. 19, 1966 | 24,000 | --- | Apr. 1-4, 1966 | 770 |
| 1967 | Sept. 21, 1967 | 24,900 | 11.48 | Feb. 1 to Apr. 30, 1967 | 1,100 |
| 1968 | Oct. 1, 1967 | 18,200 | c10.41 | Apr. 13, 1968 | 1,180 |
| 1969 | Jan 18, 1969 | --- | d22.62 | Jan. 11-17, 1969 | 1,200 |
| | July 6, 1969 | 15,400 | 9.93 | | |
| 1970 | Oct. 15, 1969 | 30,000 | 12.20 | Apr. 9, 1970 | 1,410 |
| 1971 | Dec. 6, 1970 | --- | d11.96 | Mar. 11 to Apr. 15, 1971 | 1,100 |
| | Sept. 12, 1971 | 24,200 | 11.60 | | |
| 1972 | Aug. 24, 1972 | 16,200 | 10.20 | Mar. 26 to Apr. 27, 1972 | 800 |
| 1973 | Aug. 6, 1973 | 12,600 | 9.39 | Mar. 21-30, 1973 | 800 |
| 1974 | Sept. 23,24,1974 | 26,900 | e12.15 | Mar. 1-21, 1974 | 850 |
| 1975 | July 15, 1975 | 17,200 | 10.43 | Mar. 10 to Apr. 20, 1975 | 1,000 |

a Period May to September.
b Gage height, 5.84 ft.
c Stage falling, peak occurred Sept. 21, 1967; maximum peak discharge, 15,100 ft³/s Aug. 15, 1968, gage height, 9.88 ft.
d Backwater from ice.
e Result of release of stored water from glacier-dammed lake at head of unnamed glacier in the Snow River basin.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1965 | | | | | | | | 2630 | 6535 | 10780 | 11440 | 11540 | |
| 1966 | 6305 | 2133 | 1500 | 1200 | 1000 | 850 | 859 | 1995 | 6777 | 10920 | 18970 | 17140 | 5834 |
| 1967 | 8538 | 2778 | 1548 | 1235 | 1100 | 1100 | 1100 | 2134 | 8524 | 13520 | 18970 | 20840 | 6812 |
| 1968 | 7322 | 2922 | 2161 | 1674 | 1616 | 1781 | 1512 | 3361 | 8457 | 11910 | 13110 | 6273 | 5198 |
| 1969 | 2861 | 1641 | 1413 | 2842 | 2417 | 1597 | 1486 | 2223 | 10220 | 13290 | 8706 | 5873 | 4562 |
| 1970 | 14370 | 4507 | 2828 | 2331 | 1752 | 1763 | 1708 | 2754 | 7983 | 11620 | 13560 | 9739 | 6284 |
| 1971 | 4110 | 4432 | 2234 | 1755 | 1250 | 1148 | 1150 | 1962 | 6760 | 15240 | 17950 | 13100 | 5958 |
| 1972 | 4807 | 2322 | 1629 | 1245 | 969 | 848 | 812 | 2375 | 4940 | 11440 | 14310 | 11470 | 4783 |
| 1973 | 4536 | 2458 | 1574 | 1197 | 954 | 842 | 998 | 1950 | 5458 | 9696 | 10530 | 7546 | 4002 |
| 1974 | 3504 | 1631 | 1190 | 1068 | 913 | 869 | 1335 | 2238 | 6804 | 11140 | 11390 | 16570 | 4902 |
| 1975 | 8590 | 3375 | 1640 | 1319 | 1146 | 1045 | 1087 | 3751 | 7351 | 13830 | 12150 | 8075 | 5317 |
| MEAN | 6495 | 2820 | 1772 | 1587 | 1312 | 1184 | 1205 | 2488 | 7255 | 12130 | 13740 | 11650 | 5365 |
| MONTHLY PERCENT | 10 | 4 | 3 | 2 | 2 | 2 | 2 | 4 | 11 | 19 | 22 | 18 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1965-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1965 | | 1968 | | 1969-cont | | 1970-cont | | 1971-cont | | 1973 | | 1974-cont | |
| 7-22-65 | 12.0 | 10-22-67 | 4.0 | 1-24-69 | 0.0 | 11- 7-69 | 2.0 | 3-24-71 | 0.0 | 10- 6-72 | 5.5 | 6-19-74 | 10.5 |
| 9-24-65 | 12.0 | 11- 2-67 | 4.0 | 2-27-69 | 0.0 | 1- 7-70 | 0.0 | 8-26-71 | 10.0 | 11-22-72 | 2.0 | 1975 | |
| 1966 | | 3-11-68 | 0.5 | 3-19-69 | 0.0 | 3- 5-70 | 0.0 | 1972 | | 3-31-73 | 0.0 | 10- 8-74 | 6.5 |
| 11- 5-65 | 1.5 | 4- 2-68 | 1.0 | 5- 5-69 | 5.0 | 5- 6-70 | 6.5 | 11- 9-71 | 0.0 | 5- 9-73 | 6.0 | 1-31-75 | 0.0 |
| 2-11-66 | 0.5 | 5-17-68 | 7.5 | 6-25-69 | 8.5 | 6-24-70 | 9.0 | 2-16-72 | 0.0 | 7-25-73 | 10.5 | 5- 6-75 | 0.0 |
| 1967 | | 6-19-68 | 10.0 | 7-31-69 | 13.0 | 8- 9-70 | 10.0 | 3-23-72 | 0.0 | 9- 5-73 | 10.5 | 6-10-75 | 7.0 |
| 11-10-66 | 0.5 | 8-21-68 | 11.0 | 9- 9-69 | 9.0 | 1971 | | 5-24-72 | 6.0 | 1974 | | 7- 8-75 | 8.5 |
| 3-29-67 | 0.5 | 1969 | | 1970 | | 1-28-71 | 0.0 | 7- 5-72 | 9.5 | 10- 9-73 | 6.0 | 8- 5-75 | 12.0 |
| 6-14-67 | 9.0 | 10-23-68 | 2.0 | 10-14-69 | 5.0 | 1-29-71 | 0.0 | 8-29-72 | 10.5 | 4-27-74 | 4.5 | | |
| 9- 2-67 | 11.5 | 1-15-69 | 0.0 | | | | | | | | | | |

## 15266500 BEAVER CREEK NEAR KENAI

LOCATION.--Lat 60°33'50", long 151°07'03", in SE¼ sec.36, T.6 N., R.11 W., Kenai Peninsula Borough, on right bank 25 ft (8 m) upstream from culvert on Kenai-Soldotna Road, 2.0 mi (3.2 km) upstream from mouth, and 4.5 mi (7.2 km) east of Kenai.

BASIN CHARACTERISTICS.--Drainage area, 51 $mi^2$ (132 $km^2$); main-channel slope, 4.75 ft/mi (0.900 m/km); stream length, 13.5 mi (21.7 km); area of lakes and ponds, 15 percent; mean elevation, 140 ft (43 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to September 1975.

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 48 ft (15 m), from topographic map.

AVERAGE DISCHARGE.--8 years, 26.6 $ft^3/s$ (0.753 $m^3/s$), 7.08 in/yr (180 mm/yr), 19,270 acre-ft/yr (23.8 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 598 $ft^3/s$ (16.9 $m^3/s$) May 8, 1972, gage height, 10.55 ft (3.216 m); minimum, 8.2 $ft^3/s$ (0.23 $m^3/s$) Oct. 23, 1969, temporary ice storage upstream.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1968 | a | b70 | --- | Sept. 8, 1968 | c17 |
| 1969 | Oct. 8, 1968 | 38 | 5.22 | Dec. 21, 1968 to Jan. 31, 1969 | 13 |
| 1970 | Mar. 19, 1970 | --- | d6.78 | Oct. 23, 1969 | e8.2 |
| | May 16, 1970 | 54 | 5.68 | | |
| 1971 | May 4, 1971 | 226 | 8.36 | Feb. 16 to Apr. 17, 1971 | 10 |
| 1972 | May 8, 1972 | 598 | 10.55 | Feb. 3 to Apr. 25, 1972 | 13 |
| 1973 | Oct. 18, 1972 | 128 | 7.21 | Feb. 23 to Mar. 23, July 22-27, 1973 | 13 |
| 1974 | Mar. 28, 1974 | --- | d7.34 | Jan. 14 to Mar. 14, 1974 | 12 |
| | Apr. 24, 1974 | 130 | 7.25 | | |
| 1975 | May 10, 1975 | 278 | 8.75 | Mar. 13-25, 1975 | 11 |

a Apr. 28 to May 3, 1968.
b Maximum daily.
c Momentary minimum, gage height, 4.52 ft.
d Backwater from ice.
e Momentary minimum, temporary ice storage upstream.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1968 | 35.4 | 49.7 | 33.3 | 26.5 | 26.0 | 29.5 | 38.0 | 58.5 | 38.9 | 25.5 | 20.5 | 19.2 | 33.4 |
| 1969 | 25.5 | 18.2 | 14.0 | 13.0 | 15.6 | 17.9 | 30.1 | 25.6 | 21.4 | 18.7 | 16.4 | 17.4 | 19.5 |
| 1970 | 20.1 | 16.8 | 14.0 | 13.0 | 13.5 | 22.3 | 32.8 | 30.6 | 22.6 | 21.6 | 23.1 | 25.8 | 21.4 |
| 1971 | 26.7 | 26.3 | 17.2 | 13.5 | 10.5 | 10.0 | 12.0 | 79.0 | 26.9 | 25.1 | 44.9 | 32.4 | 27.2 |
| 1972 | 37.1 | 22.5 | 17.4 | 15.0 | 13.1 | 13.0 | 13.5 | 111 | 35.7 | 19.6 | 18.9 | 31.1 | 29.1 |
| 1973 | 72.4 | 26.3 | 18.6 | 15.5 | 14.1 | 13.4 | 44.8 | 27.8 | 23.6 | 15.3 | 23.4 | 22.5 | 26.6 |
| 1974 | 32.0 | 17.0 | 14.5 | 12.6 | 12.0 | 19.8 | 84.6 | 36.5 | 20.0 | 18.5 | 16.4 | 20.5 | 25.4 |
| 1975 | 35.6 | 25.1 | 19.7 | 15.9 | 14.3 | 11.6 | 20.4 | 126 | 29.8 | 17.1 | 13.7 | 26.8 | 29.8 |
| MEAN | 35.6 | 25.2 | 18.6 | 15.6 | 14.9 | 17.2 | 34.5 | 61.9 | 27.4 | 20.2 | 22.2 | 24.5 | 26.6 |
| MONTHLY PERCENT | 11 | 8 | 6 | 5 | 5 | 5 | 11 | 19 | 9 | 6 | 7 | 8 | |

### WATER TEMPERATURE RECORDS

PERIOD OF DAILY RECORD.--July to September 1968, April 1969 to July 1972, May to July 1973, October 1973 to August 1974, October 1974 to September 1975.

REMARKS.--Continuous water-temperature recorder.

EXTREMES.--Maximum recorded during period of daily record, 16.5°C June 14, 1969; minimum, 0.0°C on most days during winter period.

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1968 | Max | --- | --- | --- | --- | --- | --- | --- | --- | --- | a | 12.0 | 8.5 |
| | Min | --- | --- | --- | --- | --- | --- | --- | --- | --- | a | 7.0 | a |
| 1969 | Max | --- | --- | --- | --- | --- | --- | 3.5 | 14.5 | 16.5 | 14.5 | 14.5 | 9.0 |
| | Min | --- | --- | --- | --- | --- | --- | 0.0 | 1.0 | 4.0 | 7.0 | 4.5 | 3.0 |
| 1970 | Max | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 10.5 | 14.5 | 13.5 | 11.5 | 9.0 |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 5.5 | 7.5 | 6.5 | 2.5 |
| 1971 | Max | 4.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 6.5 | 13.5 | 14.5 | 14.0 | 8.5 |
| | Min | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 4.0 | 6.0 | 7.0 | 3.0 |
| 1972 | Max | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 | 11.5 | a | --- | --- |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | a | --- | --- |
| 1973 | Max | --- | --- | --- | --- | --- | --- | --- | 11.5 | 14.0 | a | --- | --- |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 5.5 | a | --- | --- |
| 1974 | Max | a | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 11.5 | 14.0 | 14.5 | a | --- |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 9.0 | 11.0 | a | --- |
| 1975 | Max | 2.0 | 1.5 | 0.5 | 0.5 | a | 0.5 | 1.5 | 9.0 | 13.0 | 14.0 | 12.5 | a |
| | Min | 1.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 8.5 | 9.5 | 7.0 | a |

a Data insufficient to compute monthly maximum or minimum.

## 15267900 RESURRECTION CREEK NEAR HOPE

LOCATION.--Lat 60°53'40", long 149°38'13", Kenai Peninsula Borough, on right bank, 2.1 mi (3.4 km) upstream from mouth on south shore of Turnigain Arm, and 1.8 mi (2.9 km) south of Hope.

BASIN CHARACTERISTICS.--Drainage area, 149 $mi^2$ (386 $km^2$); main-channel slope, 126 ft/mi (23.9 m/km); stream length, 19.8 mi (31.9 km); area of lakes and ponds, 0 percent; mean elevation, 2,750 ft (838 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (55 m), from topographic map.

AVERAGE DISCHARGE.--8 years, 248 $ft^3/s$ (7.023 $m^3/s$), 22.60 in/yr (574 mm/yr), 179,700 acre-ft/yr (222 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 2,700 $ft^3/s$ (76.5 $m^3/s$) Oct. 6, 1969, gage height, 8.40 ft (2.560 m); minimum daily, about 46 $ft^3/s$ (1.30 $m^3/s$) Mar. 26 to Apr. 13, 1975.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1968 | June 15, 1968 | 1,020 | 7.20 | Apr. 20-22, 1968 | 62 |
| 1969 | June 16, 1969 | 939 | 7.11 | Mar. 1-25, 1969 | 60 |
| 1970 | Oct. 6, 1969 | 2,700 | 8.40 | Feb. 16 to Apr. 15, 1970 | 65 |
| 1971 | Aug. 9, 1971 | 2,300 | 8.26 | Apr. 1-17, 1971 | 70 |
| 1972 | June 16, 1972 | 1,030 | 7.21 | Apr. 29, 1972 | 50 |
| 1973 | Oct. 16, 1972 | 664 | 6.74 | Mar. 23 to Apr. 5, 1973 | 62 |
| | June 22, 1973 | --- | 6.76 | | |
| 1974 | June 12, 1974 | 711 | 6.87 | Feb. 26 to Apr. 15, 1974 | 60 |
| 1975 | June 30, 1975 | 1,240 | 7.77 | Mar. 26 to Apr. 13, 1975 | 46 |

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1968 | 365 | 235 | 170 | 120 | 110 | 126 | 74.6 | 422 | 683 | 382 | 221 | 164 | 256 |
| 1969 | 131 | 98.2 | 77.1 | 65.0 | 65.0 | 61.3 | 91.9 | 299 | 602 | 334 | 221 | 139 | 182 |
| 1970 | 656 | 216 | 192 | 138 | 70.7 | 65.0 | 75.1 | 367 | 780 | 703 | 478 | 265 | 336 |
| 1971 | 184 | 226 | 135 | 109 | 84.5 | 73.9 | 78.5 | 175 | 715 | 954 | 765 | 429 | 329 |
| 1972 | 294 | 158 | 108 | 79.5 | 67.0 | 64.0 | 57.5 | 264 | 589 | 590 | 309 | 302 | 241 |
| 1973 | 384 | 179 | 115 | 85.5 | 70.4 | 64.3 | 70.2 | 220 | 439 | 403 | 289 | 229 | 213 |
| 1974 | 165 | 113 | 94.1 | 71.3 | 64.0 | 60.0 | 67.1 | 265 | 517 | 353 | 186 | 150 | 176 |
| 1975 | 213 | 153 | 84.5 | 70.3 | 63.6 | 52.3 | 49.6 | 357 | 671 | 634 | 330 | 274 | 247 |
| MEAN | 299 | 172 | 122 | 92.4 | 74.5 | 70.8 | 70.6 | 296 | 625 | 544 | 350 | 244 | 248 |
| MONTHLY PERCENT | 10 | 6 | 4 | 3 | 3 | 2 | 2 | 10 | 21 | 18 | 12 | 8 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1968-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1968 | | 1969-cont | | 1970-cont | | 1971-cont | | 1972-cont | | 1973-cont | | 1974-cont | |
| 4-18-68 | 1.0 | 1-23-69 | 0.0 | 11- 6-69 | 0.0 | 5-13-71 | 0.5 | 9- 1-72 | 7.5 | 9- 4-73 | 6.5 | 9- 6-74 | 6.0 |
| 5- 2-68 | 0.5 | 3-24-69 | 0.0 | 3- 2-70 | 0.5 | 1972 | | 1973 | | 1974 | | 1975 | |
| 5-27-68 | 5.5 | 5-12-69 | 5.5 | 4-23-70 | 4.0 | 10- 6-71 | 3.0 | 10- 5-72 | 3.5 | 10- 5-73 | 2.0 | 10-10-74 | 2.0 |
| 6-25-68 | 8.0 | 5-22-69 | 5.0 | 6-30-70 | 5.5 | 2- 3-72 | 0.0 | 11-21-72 | 1.0 | 11-26-73 | 0.0 | 10-29-74 | 2.0 |
| 8- 4-68 | 7.0 | 8- 1-69 | 10.5 | 8-11-70 | 6.5 | 3-31-72 | 0.0 | 5- 7-73 | 4.0 | 1-21-74 | 0.0 | 4- 9-75 | 1.0 |
| 8-28-68 | 7.0 | 9-12-69 | 6.0 | 1971 | | 4-28-72 | 1.0 | 6- 9-73 | 6.0 | 4-22-74 | 2.0 | 5-15-75 | 3.0 |
| 1969 | | 1970 | | 10-29-70 | 0.0 | 6- 1-72 | 5.0 | 7-23-73 | 10.5 | 6-18-74 | 5.0 | 5-22-75 | 4.0 |
| 10-25-68 | 1.0 | 10- 9-69 | 4.5 | 4- 9-71 | 0.0 | 7-13-72 | 8.0 | | | | | | |

## 15268000 RESURRECTION CREEK AT HOPE

LOCATION.--Lat 60°55'15", long 149°38'40", Kenai Peninsula Borough, near right bank on downstream side of bridge pier at Hope 0.3 mi (0.5 km) downstream from Cripple Creek, 0.3 mi (0.5 km) upstream from mouth, and 2.0 mi (3.2 km) downstream from Wildhorse Creek.

BASIN CHARACTERISTICS.--Drainage area, 162 $mi^2$ (420 $km^2$). See station 15267900.

PERIOD OF RECORD.--October 1949 to September 1951.

GAGE.--Nonrecording gage. Altitude of gage is 50 ft (15 m), from topographic map.

EXTREMES.--Maximum discharge observed during period of record, 2,140 $ft^3/s$ (60.6 $m^3/s$) June 20, 1950, gage height, 2.80 ft (0.853 m), from rating curve extended above 810 $ft^3/s$ (23 $m^3/s$); minimum daily, about 37 $ft^3/s$ (1.05 $m^3/s$) Mar. 1-31, 1951.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1950 | June 20, 1950 | 2,140 | 2.80 | Apr. 7-10, 1950 | 54 |
| 1951 | June 6, 1951 | 1,330 | 2.22 | Mar. 1-31, 1951 | 37 |

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1950 | 207 | 304 | 86.3 | 68.0 | 63.0 | 58.1 | 94.9 | 339 | 1362 | 689 | 235 | 154 | 305 |
| 1951 | 112 | 79.3 | 60.7 | 49.4 | 45.0 | 37.0 | 58.2 | 259 | 782 | 392 | 282 | 512 | 222 |

## 15270000 MILLS CREEK NEAR GILPATRICKS

LOCATION.--Lat 60°40', long 149°25', Kenai Peninsula Borough, 1.2 mi (1.9 km) upstream from Juneau Creek, 2 mi (3 km) upstream from mouth, and 6 mi (10 km) northeast of Gilpatricks.

BASIN CHARACTERISTICS.--Drainage area, 25 $mi^2$ (65 $km^2$), approximately.

PERIOD OF RECORD.--August to November 1913.

GAGE.--Nonrecording gage. Altitude of gage is 1,500 ft (460 m), from topographic map.

EXTREMES.--Maximum discharge observed during period of record, 203 $ft^3/s$ (5.75 $m^3/s$) Sept. 25, 1913, gage height, 3.90 ft (1.189 m); minimum observed, 43 $ft^3/s$ (1.22 $m^3s$) Nov. 2, 1913, gage height, 2.70 ft (0.823 m).

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 82.1 | --- |
| 1914 | 60.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

## 15272000 SIXMILE CREEK AT SUNRISE

LOCATION.--Lat 60°54', long 149°25', Kenai Peninsula Borough, at Sunrise, and 0.5 mi (0.8 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 263 $mi^2$ (681 $km^2$).

PERIOD OF RECORD.--August to November 1913.

GAGE.--Nonrecording gage. Altitude of gage is 10 ft (3 m), from topographic map.

EXTREMES.--Maximum discharge observed during period of record, 6,150 $ft^3/s$ (174 $m^3/s$) Sept. 25, 1913, gage height, 6.95 ft (2.118 m), discharge measurement; minimum daily, 400 $ft^3/s$ (11.3 $m^3/s$) Nov. 28-30, 1913.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 897 | --- |
| 1914 | 661 | 514 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

## 15272550 GLACIER CREEK AT GIRDWOOD

LOCATION.--Lat 60°56'29", long 149°09'44", in SE¼ sec.19, T.10 N., R.2 E., Municipality of Anchorage, on left downstream wingwall of railroad bridge, 0.2 mi (0.3 km) upstream from mouth, and 0.2 mi (0.3 km) southeast of Girdwood.

BASIN CHARACTERISTICS.--Drainage area, 62.0 $mi^2$ (160.6 $km^2$); main-channel slope, 455 ft/mi (86.2 m/km); stream length, 11 mi (18 km); area of lakes and ponds, 0 percent; mean elevation, 2,610 ft (796 m); glacier area, 11 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1965 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 18.99 ft (5.788 m) above mean sea level (levels by Corps of Engineers, post-earthquake datum of October 1964). Prior to July 23, 1973, gage was on right downstream wingwall of railroad bridge.

AVERAGE DISCHARGE.--10 years, 251 $ft^3/s$ (7.108 $m^3/s$), 54.98 in/yr (1,396 mm/yr), 181,800 acre-ft/yr (224 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 7,710 $ft^3/s$ (218 $m^3/s$) Sept. 18, 1967, gage height, 7.90 ft (2.408 m) from floodmarks, from rating curve extended above 1,500 $ft^3/s$ (42 $m^3/s$); maximum gage height, 8.34 ft (2.542 m) Oct. 6, 1969, from outside floodmark; minimum daily discharge, 13 $ft^3/s$ (0.37 $m^3/s$) on several occasions.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1965a | b | 1,230 | 4.96 | Sept. 3, 1965 | 244 |
| 1966 | Aug. 8, 1966 | 4,950 | c7.31 | Feb. 21 to Mar. 31, 1966 | 20 |
| 1967 | Sept. 18, 1967 | 7,710 | 7.90 | Mar. 24 to Apr. 9, 1967 | 18 |
| 1968 | Oct. 5, 1967 | --- | d5.33 | Feb. 3-7, 1968 | 34 |
| | June 29, 1968 | 1,410 | 4.83 | | |
| 1969 | June 16, 1969 | 2,820 | 5.90 | Mar. 17, 18, 1969 | 16 |
| 1970 | Oct. 6, 1969 | 7,370 | 8.34 | Apr. 8-12, 1970 | 50 |
| 1971 | Aug. 8, 1971 | 4,510 | 6.50 | Mar. 13-17, Apr. 1, 1971 | 18 |
| 1972 | Oct. 5, 1971 | --- | d4.82 | Mar. 23, 24, Mar. 28 to Apr. 26, 1972 | 13 |
| | Oct. 8, 1971 | 1,250 | 4.38 | | |
| 1973 | May 15, 1973 | 1,350 | 4.41 | Mar. 21, 1973 | e13 |
| 1974 | Sept. 15, 1974 | 1,170 | 4.14 | Feb. 23-25, Mar. 16-22, 1974 | 13 |
| 1975 | July 12, 1975 | 1,260 | 4.46 | Apr. 3, 4, 1975 | f16 |
| | Sept. 7, 1975 | --- | d4.56 | | |

a Period August to September.
b On or about Aug. 14, 1965.
c May have been greater.
d Backwater from tide.
e Gage height, 1.84 ft.
f May have been less during period of ice affect.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1965 | | | | | | | | | | | 455 | 486 | |
| 1966 | 190 | 65.7 | 40.4 | 28.2 | 21.4 | 20.0 | 52.0 | 257 | 631 | 531 | 637 | 765 | 271 |
| 1967 | 219 | 121 | 39.7 | 30.0 | 22.6 | 19.2 | 35.6 | 339 | 560 | 564 | 586 | 976 | 294 |
| 1968 | 228 | 131 | 58.6 | 47.4 | 55.2 | 65.6 | 77.6 | 430 | 663 | 597 | 404 | 167 | 245 |
| 1969 | 119 | 103 | 35.2 | 24.6 | 19.9 | 19.0 | 94.3 | 453 | 850 | 569 | 274 | 288 | 238 |
| 1970 | 817 | 209 | 309 | 140 | 145 | 97.3 | 75.5 | 293 | 638 | 662 | 576 | 268 | 355 |
| 1971 | 219 | 255 | 74.7 | 36.3 | 43.2 | 22.3 | 47.9 | 246 | 837 | 883 | 900 | 329 | 326 |
| 1972 | 298 | 69.9 | 40.2 | 25.2 | 19.2 | 14.5 | 13.4 | 202 | 385 | 630 | 388 | 339 | 203 |
| 1973 | 255 | 91.7 | 45.4 | 25.9 | 19.4 | 17.9 | 69.5 | 338 | 464 | 477 | 312 | 182 | 193 |
| 1974 | 99.4 | 31.5 | 34.3 | 21.3 | 15.7 | 14.3 | 38.9 | 152 | 451 | 422 | 330 | 329 | 162 |
| 1975 | 211 | 157 | 55.5 | 36.4 | 30.6 | 28.4 | 44.7 | 364 | 518 | 521 | 378 | 379 | 228 |
| MEAN | 265 | 124 | 73.2 | 41.6 | 39.2 | 31.8 | 54.9 | 307 | 600 | 586 | 476 | 410 | 251 |
| MONTHLY PERCENT | 9 | 4 | 2 | 1 | 1 | 1 | 2 | 10 | 20 | 20 | 16 | 14 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1965-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1965 | | 1967-cont | | 1969-cont | | 1970-cont | | 1972-cont | | 1973-cont | | 1974-cont | |
| 8-31-65 | 5.5 | 8-17-67 | 8.0 | 1-23-69 | 1.0 | 6-10-70 | 7.5 | 12- 3-71 | 0.0 | 11-21-72 | 1.0 | 8-21-74 | 8.0 |
| 1966 | | 9-19-67 | 6.5 | 2-19-69 | 1.0 | 7-22-70 | 5.5 | 12-15-71 | 0.0 | 1-11-73 | 0.5 | 9- 6-74 | 9.5 |
| 11-10-65 | 0.5 | 9-21-67 | 6.0 | 4- 1-69 | 1.0 | 7-31-70 | 5.5 | 1- 5-72 | 0.0 | 5-12-73 | 3.5 | 1975 | |
| 2-11-66 | 1.0 | 1968 | | 5-27-69 | 4.0 | 8-31-70 | 7.0 | 1-25-72 | 0.0 | 6- 9-73 | 6.0 | 10-11-74 | 2.5 |
| 6- 9-66 | 6.5 | 10-12-67 | 3.5 | 7- 9-69 | 9.0 | 1971 | | 2-23-72 | 0.0 | 7-23-73 | 6.0 | 10-29-74 | 4.0 |
| 6-19-66 | 8.5 | 11-13-67 | 2.5 | 8-27-69 | 9.0 | 10-15-70 | 1.5 | 3-22-72 | 0.0 | 9- 4-73 | 6.0 | 11-22-74 | 1.5 |
| 8-22-66 | 5.5 | 1- 4-68 | 0.0 | 1970 | | 10-31-70 | 2.5 | 4-19-72 | 1.0 | 1974 | | 3-14-75 | 1.5 |
| 1967 | | 3-29-68 | 0.5 | 10- 8-69 | 5.5 | 11- 1-70 | 2.0 | 5-19-72 | 3.0 | 10- 5-73 | 5.5 | 3-26-75 | 1.0 |
| 11-12-66 | 1.0 | 5- 8-68 | 3.0 | 10- 9-69 | 4.5 | 12- 1-70 | 0.0 | 6-30-72 | 5.0 | 12- 3-73 | 0.0 | 4-14-75 | 2.0 |
| 1-20-67 | 0.0 | 6- 6-68 | 6.0 | 10-11-69 | 5.0 | 6-30-71 | 3.0 | 7- 9-72 | 10.0 | 12-27-73 | 1.0 | 4-23-75 | 3.0 |
| 4-17-67 | 3.5 | 8- 4-68 | 11.0 | 11- 5-69 | 2.0 | 8- 6-71 | 5.5 | 7-31-72 | 7.0 | 1-26-74 | 1.0 | 5-15-75 | 5.0 |
| 5- 4-67 | 3.5 | 1969 | | 12-17-69 | 0.0 | 8- 9-71 | 5.5 | 9- 1-72 | 7.5 | 2-20-74 | 0.0 | 6-12-75 | 5.5 |
| 6-21-67 | 9.0 | 10- 3-68 | 4.0 | 3- 5-70 | 1.5 | 9-15-71 | 5.0 | 1973- | | 5- 2-74 | 4.0 | 7-11-75 | 8.0 |
| 7-11-67 | 10.5 | 12- 3-68 | 0.0 | 4-14-70 | 2.0 | 1972 | | 10-20-72 | 3.5 | 6-17-74 | 7.0 | 8- 8-75 | 8.0 |
| | | | | | | 11-26-71 | 0.0 | | | | | 9-12-75 | 7.5 |

## 15273900 SOUTH FORK CAMPBELL CREEK AT CANYON MOUTH NEAR ANCHORAGE

LOCATION.--Lat 61°08'52", long 149°43'12", in NE¼ sec.12, T.12 N., R.3 W., Municipality of Anchorage, on right bank 1.9 mi (3.1 km) upstream from ford on Campbell Airstrip road crossing, and 7.5 mi (12.1 km) southeast of Anchorage Post Office.

BASIN CHARACTERISTICS.--Drainage area, 25.2 $mi^2$ (65.3 $km^2$); main-channel slope, 255 ft/mi (48.3 m/km); stream length, 9.2 mi (14.8 km); area of lakes and ponds, 1 percent; mean elevation, 2,760 ft (841 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 520 ft (158 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 38.4 $ft^3/s$ (1.087 $m^3/s$), 20.70 in/yr (526 mm/yr), 27,820 acre-ft/yr (34.3 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 300 $ft^3/s$ (8.50 $m^3/s$) Aug. 8, 1971, gage height, 3.77 ft (1.149 m); maximum gage height observed, 8.0 ft (2.44 m) winter 1970-71 (backwater from ice); minimum daily discharge, 8.0 $ft^3/s$ (0.23 $m^3/s$) Feb. 5, 1969.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1967 | Nov. 15, 1966 | --- | a6.80 | Apr. 13-17, 23-28, 1967 | 10 |
| | July 20, 1967 | 244 | 3.73 | | |
| 1968 | Nov. 10, 1967 | --- | a4.60 | Feb. 5, Mar. 20, 21, 1968 | 9.0 |
| | May 29, 1968 | 164 | 3.44 | | |
| 1969 | May 27, 1969 | --- | 3.19 | Feb. 5, 1969 | 8.0 |
| | July 29, 1969 | 140 | 3.16 | | |
| 1970 | (winter period) | --- | a5.90 | Apr. 6-10, 1970 | 9.5 |
| | Aug. 7, 1970 | 279 | 3.72 | | |
| 1971 | (winter period) | --- | a8.0 | Apr. 1-10, 1971 | 9.0 |
| | Aug. 8, 1971 | 300 | 3.77 | | |
| 1972 | Sept. 30, 1972 | 251 | 3.62 | Apr. 16 to May 2, 1972 | 10 |
| 1973 | Oct. 14, 1972 | 147 | 3.27 | Mar. 21 to Apr. 26, 1973 | 10 |
| 1974 | May 31, 1974 | 119 | 3.07 | Mar. 16 to Apr. 10, 1974 | 9.0 |
| 1975 | Sept. 11, 1975 | 292 | 3.84 | Mar. 25 to Apr. 1, Apr. 6-9, 1975 | 10 |

a Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | 40.0 | 20.3 | 19.4 | 17.5 | 13.2 | 13.0 | 10.7 | 31.9 | 93.0 | 85.4 | 73.2 | 112 | 44.2 |
| 1968 | 48.8 | 32.2 | 19.8 | 14.8 | 13.0 | 11.5 | 12.9 | 69.5 | 112 | 79.8 | 47.7 | 34.5 | 41.4 |
| 1969 | 27.2 | 22.1 | 17.1 | 13.6 | 9.52 | 9.58 | 11.5 | 37.8 | 66.6 | 51.1 | 37.8 | 24.4 | 27.5 |
| 1970 | 49.9 | 27.0 | 23.1 | 16.6 | 15.1 | 11.2 | 11.7 | 33.0 | 76.0 | 73.4 | 90.2 | 49.3 | 39.9 |
| 1971 | 34.4 | 30.6 | 18.7 | 12.7 | 13.0 | 9.73 | 9.63 | 15.6 | 93.0 | 98.7 | 108 | 53.1 | 41.6 |
| 1972 | 45.0 | 28.1 | 21.3 | 17.1 | 14.2 | 12.6 | 10.7 | 24.3 | 111 | 114 | 45.4 | 66.3 | 42.5 |
| 1973 | 74.1 | 36.9 | 28.9 | 21.4 | 14.6 | 11.1 | 10.2 | 23.5 | 67.7 | 58.5 | 49.0 | 41.0 | 36.5 |
| 1974 | 32.1 | 17.9 | 16.3 | 13.8 | 11.1 | 9.48 | 10.4 | 39.5 | 78.4 | 61.7 | 40.6 | 37.8 | 30.9 |
| 1975 | 40.3 | 27.0 | 23.2 | 20.2 | 15.1 | 11.3 | 10.9 | 38.7 | 89.3 | 84.0 | 50.8 | 85.4 | 41.4 |
| MEAN | 43.5 | 26.9 | 20.9 | 16.4 | 13.2 | 11.1 | 11.0 | 34.9 | 87.4 | 78.5 | 60.3 | 55.9 | 38.4 |
| MONTHLY PERCENT | 9 | 6 | 5 | 4 | 3 | 2 | 2 | 8 | 19 | 17 | 13 | 12 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1967-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | | 1968-cont | | 1969-cont | | 1970-cont | | 1972 | | 1973-cont | | 1974-cont | |
| 1- 5-67 | 0.0 | 11-15-67 | 0.5 | 12- 5-68 | 0.0 | 8-19-70 | 6.0 | 10- 4-71 | 1.5 | 6-21-73 | 5.5 | 6-27-74 | 11.5 |
| 2- 7-67 | 0.5 | 1- 3-68 | 0.0 | 3-28-69 | 0.0 | 1971 | | 12-28-71 | 1.0 | 9-10-73 | 6.0 | 8-15-74 | 12.0 |
| 3-20-67 | 0.5 | 3-29-68 | 0.0 | 6-10-69 | 6.0 | 10-12-70 | 1.5 | 2-25-72 | 0.0 | 1974 | | 1975 | |
| 4-18-67 | 1.0 | 4-30-68 | 2.0 | 7-18-69 | 9.0 | 2- 5-71 | 0.0 | 3-29-72 | 0.0 | 10- 4-73 | 3.0 | 10-16-74 | 2.0 |
| 5- 1-67 | 5.0 | 5-13-68 | 4.5 | 8-28-69 | 7.0 | 4-20-71 | 1.5 | 6- 7-72 | 2.5 | 11- 7-73 | 0.0 | 3-21-75 | 0.5 |
| 6- 5-67 | 5.5 | 6- 5-68 | 4.0 | 1970 | | 5-18-71 | 2.0 | 8- 1-72 | 8.0 | 12-17-73 | 0.5 | 4-14-75 | 1.5 |
| 7-10-67 | 11.0 | 6-28-68 | 6.0 | 12-19-69 | 1.0 | 7- 1-71 | 6.0 | 1973 | | 1- 4-74 | 0.5 | 6-13-75 | 5.5 |
| 8-15-67 | 10.0 | 9-13-68 | 5.0 | 3- 5-70 | 0.0 | 7-13-71 | 9.5 | 12-13-72 | 0.5 | 3-28-74 | 1.0 | 6-25-75 | 7.5 |
| 1968 | | 1969 | | 3-25-70 | 3.0 | 8- 9-71 | 9.0 | 2- 5-73 | 0.5 | 4- 9-74 | 1.0 | 7-11-75 | 11.0 |
| 10- 5-67 | 0.5 | 10- 4-68 | 2.0 | 6- 8-70 | 5.0 | 8-14-71 | 10.0 | 5- 7-73 | 3.5 | 5-20-74 | 6.0 | 9- 2-75 | 6.5 |
| | | | | 7-17-70 | 6.0 | | | | | | | | |

## 15274000 SOUTH FORK CAMPBELL CREEK NEAR ANCHORAGE

LOCATION.--Lat 61°09'57", long 149°46'15", in NW¼ sec.2, T.12 N., R.3 W., Municipality of Anchorage, on right bank 0.2 mi (0.3 km) downstream from ford on road leading to Campbell Airstrip, 2.0 mi (3.2 km) upstream from confluence with North Fork, and 5.5 mi (8.8 km) southeast of Anchorage Post Office.

BASIN CHARACTERISTICS.--Drainage area, 30.4 $mi^2$ (78.7 $km^2$); main-channel slope, 246 ft/mi (46.6 m/km); stream length, 11.5 mi (18.5 km); area of lakes and ponds, 1 percent; mean elevation, 2,530 ft (771 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1947 to September 1971. Annual maximum, water year 1972.

GAGE.--Water-stage recorder. Altitude of gage is 260 ft (79 m), from topographic map. Prior to Aug. 20, 1952, water-stage recorder at site 0.2 mi (0.3 km) upstream at different datum. Aug. 20, 1952 to July 15, 1958, water-stage recorder at site 70 ft (21 m) downstream from previous site at different datum.

AVERAGE DISCHARGE.--24 years, 38.3 $ft^3/s$ (1.085 $m^3/s$), 17.11 in/yr (435 mm/yr), 27,750 acre-ft/yr (34.2 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 891 $ft^3/s$ (25.2 $m^3/s$) June 21, 1949, gage height, 3.30 ft (1.006 m), site and datum then in use, from rating curve extended above 110 $ft^3/s$ (3.1 $m^3/s$); maximum gage height observed, 6.40 ft (1.951 m) Nov. 10, 1965 (backwater from ice); no flow part of Oct. 12, 1958, caused by temporary storage behind snowslide upstream.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1947a | Sept. 25, 1947 | 265 | 2.03 | Aug. 18, 19, 1947 | b33 |
| 1948 | Sept. 16, 1948 | 205 | 1.77 | Apr. 24, 1948 | c7.9 |
| | Sept. 17, 1948 | --- | 1.81 | | |
| 1949 | June 21, 1949 | 891 | 3.30 | Feb. 16-25, Apr. 3,4,9,10, 1949 | 6.0 |
| 1950 | June 19, 1950 | d140 | --- | Feb. 16-28, Apr. 2-10, 30, 1950 | 8.0 |
| 1951 | Nov. 20, 1950 | --- | e2.10 | Apr. 11-15, 1951 | 4.0 |
| | June 24, 1951 | 255 | 2.00 | | |
| 1952 | Sept. 1, 1952 | 213 | 2.14 | Apr. 1-30, 1952 | 7.0 |
| | Sept. 1, 1952 | --- | 2.19 | | |
| 1953 | May 31, 1953 | --- | 1.65 | Apr. 1-15, 1953 | 8.0 |
| | June 4, 1953 | 200 | 1.57 | | |
| 1954 | Nov. 24, 1953 | --- | e2.47 | Apr. 1-15, 1954 | 8.0 |
| | Aug. 1, 1954 | 162 | 1.50 | | |
| 1955 | July 3, 1955 | 431 | 2.10 | Feb. 21-28, 1955 | 5.0 |
| 1956 | July 31, 1956 | 356 | 2.25 | Mar. 1 to Apr. 15, 1956 | 8.0 |
| 1957 | Dec. 21, 1956 | --- | e2.70 | Jan. 22-25, Mar. 6-12, 1957 | 6.0 |
| | Sept. 19, 1957 | 181 | 1.85 | | |
| 1958 | Dec. 23, 1957 | --- | e1.88 | Mar. 13-16, 22-24, Mar. 26 to Apr 2, 1958 | 9.0 |
| | June 7, 1958 | 160 | 1.62 | | |
| 1959 | Nov. 18, 1958 | --- | e5.30 | Mar. 22-27, 1959 | 6.0 |
| | Aug. 25, 1959 | 173 | 2.54 | | |
| 1960 | Oct. 23, 1959 | --- | e4.78 | Apr. 1-15, 1960 | 6.0 |
| | May 23, 1960 | 228 | 2.68 | | |
| 1961 | Dec. 9, 1960 | --- | e4.58 | Apr. 1-15, 1961 | 9.0 |
| | Sept. 30, 1961 | 227 | 2.46 | | |
| 1962 | Nov. 16, 1961 | --- | e5.44 | Mar. 1-31, 1962 | 8.0 |
| | June 13, 1962 | 470 | 3.20 | | |
| 1963 | Nov. 21, 1962 | --- | e3.84 | Mar. 19 to Apr. 1, Apr. 9-20, 1963 | 5.0 |
| | July 17, 1963 | 399 | 3.03 | | |
| 1964 | Apr. 3, 1964 | --- | e5.60 | Mar. 28-30, 1964 | 2.0 |
| | June 13, 1964 | 172 | 2.34 | | |
| 1965 | Nov. 12, 1964 | --- | e3.70 | Jan. 13, 1965 | 3.8 |
| | Aug. 14, 1965 | 159 | 2.28 | | |
| 1966 | Nov. 10, 1965 | --- | e6.40 | Mar. 1 to Apr. 5, 1966 | 4.0 |
| | Sept. 19, 1966 | 147 | 2.28 | | |
| 1967 | Sept. 7, 1967 | 228 | 2.56 | Jan. 26 to Feb. 18, 1967 | 6.5 |
| 1968 | fMay 29, 1968 | 131 | 2.21 | Mar. 19-21, 1968 | 3.5 |
| 1969 | May 27, 1969 | 109 | 2.14 | Feb. 5, 6, 22, 24, Mar. 15, 1969 | 3.0 |
| 1970 | Aug. 7, 1970 | 210 | 2.51 | Apr. 6-9, 1970 | 2.8 |
| 1971 | Aug. 8, 1971 | 275 | 2.70 | Apr. 1-10, 1971 | 3.0 |
| 1972 | June 1972 | g200 | --- | | |

a Period July to September.
b Momentary minimum, gage height, 0.90 ft.
c Momentary minimum, discharge measurement.
d Maximum daily, estimated.
e Backwater from ice.
f Also June 13, 1968.
g Estimated.

15274000 SOUTH FORK CAMPBELL CREEK NEAR ANCHORAGE--Continued

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | | | | | | | | | | 61.5 | 49.1 | 81.4 | |
| 1948 | 55.7 | 34.3 | 24.5 | 22.3 | 15.7 | 10.9 | 9.87 | 43.1 | 84.6 | 80.6 | 72.7 | 66.5 | 43.5 |
| 1949 | 48.7 | 22.3 | 13.0 | 9.48 | 6.82 | 7.39 | 7.30 | 48.1 | 162 | 119 | 94.3 | 69.9 | 50.9 |
| 1950 | 53.7 | 30.4 | 19.9 | 13.0 | 8.54 | 9.48 | 8.97 | 21.5 | 85.6 | 57.0 | 36.2 | 30.9 | 31.4 |
| 1951 | 19.3 | 11.5 | 11.0 | 9.32 | 7.46 | 5.48 | 6.50 | 25.8 | 92.8 | 64.4 | 49.5 | 90.3 | 32.8 |
| 1952 | 35.7 | 27.0 | 19.0 | 12.0 | 9.00 | 8.00 | 7.00 | 18.3 | 73.8 | 84.3 | 57.5 | 79.7 | 36.0 |
| 1953 | 73.7 | 56.2 | 19.9 | 15.0 | 11.1 | 9.00 | 10.2 | 49.9 | 133 | 73.5 | 70.1 | 76.8 | 49.9 |
| 1954 | 48.8 | 27.0 | 19.0 | 13.0 | 10.0 | 9.00 | 9.00 | 36.2 | 49.2 | 37.8 | 56.4 | 38.0 | 29.6 |
| 1955 | 38.4 | 32.6 | 11.2 | 14.0 | 5.71 | 6.00 | 6.00 | 18.7 | 103 | 139 | 81.3 | 65.3 | 43.6 |
| 1956 | 30.7 | 18.7 | 17.0 | 12.0 | 10.0 | 8.00 | 9.73 | 27.9 | 75.6 | 75.3 | 64.8 | 41.0 | 32.6 |
| 1957 | 24.2 | 18.4 | 15.3 | 9.94 | 9.00 | 7.39 | 8.97 | 48.4 | 81.7 | 48.2 | 39.5 | 71.6 | 31.9 |
| 1958 | 52.3 | 34.5 | 21.0 | 15.0 | 13.1 | 9.97 | 11.2 | 34.3 | 101 | 53.1 | 66.8 | 36.1 | 37.4 |
| 1959 | 40.1 | 25.1 | 13.0 | 10.5 | 9.50 | 8.16 | 7.40 | 43.3 | 114 | 75.7 | 65.6 | 64.1 | 39.8 |
| 1960 | 40.3 | 25.9 | 16.6 | 13.5 | 11.5 | 9.52 | 7.33 | 62.8 | 83.4 | 68.7 | 91.9 | 122 | 46.2 |
| 1961 | 68.8 | 36.0 | 31.1 | 33.3 | 17.1 | 12.0 | 15.5 | 52.2 | 99.6 | 79.1 | 70.8 | 92.7 | 50.8 |
| 1962 | 83.7 | 38.7 | 20.6 | 14.0 | 12.0 | 8.00 | 10.2 | 32.6 | 166 | 92.4 | 47.0 | 41.4 | 47.3 |
| 1963 | 28.2 | 24.0 | 20.1 | 13.6 | 9.82 | 6.48 | 6.47 | 58.4 | 106 | 151 | 89.2 | 48.0 | 47.0 |
| 1964 | 30.8 | 21.9 | 18.2 | 11.5 | 9.69 | 5.77 | 20.3 | 20.5 | 132 | 79.2 | 49.6 | 34.2 | 36.1 |
| 1965 | 31.2 | 16.9 | 12.6 | 5.99 | 5.91 | 9.81 | 11.0 | 26.0 | 62.8 | 68.0 | 54.6 | 75.4 | 31.8 |
| 1966 | 71.4 | 34.8 | 19.0 | 11.7 | 6.04 | 4.00 | 5.13 | 20.8 | 93.0 | 58.2 | 60.1 | 71.1 | 38.1 |
| 1967 | 50.6 | 18.8 | 12.4 | 10.0 | 6.68 | 7.00 | 7.50 | 35.3 | 90.1 | 81.8 | 62.8 | 102 | 40.6 |
| 1968 | 44.8 | 28.1 | 17.5 | 12.5 | 7.76 | 5.39 | 5.95 | 50.0 | 95.0 | 70.3 | 39.9 | 27.1 | 33.8 |
| 1969 | 20.4 | 15.1 | 10.6 | 7.61 | 4.02 | 4.05 | 4.17 | 29.5 | 56.1 | 40.1 | 31.8 | 21.1 | 20.5 |
| 1970 | 46.1 | 21.1 | 17.1 | 10.5 | 7.18 | 3.44 | 5.10 | 27.3 | 69.6 | 62.8 | 86.4 | 49.9 | 34.1 |
| 1971 | 28.7 | 23.8 | 11.8 | 6.10 | 5.75 | 3.77 | 3.70 | 10.5 | 85.9 | 89.4 | 86.3 | 44.0 | 33.5 |
| MEAN | 44.4 | 26.8 | 17.1 | 12.8 | 9.14 | 7.42 | 8.52 | 35.1 | 95.6 | 76.4 | 63.0 | 61.6 | 38.3 |
| MONTHLY PERCENT | 10 | 6 | 4 | 3 | 2 | 2 | 2 | 8 | 21 | 17 | 14 | 13 | |

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1951-55, 1957-65, 1967-72

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1951 | | 1955 | | 1959-cont | | 1960-cont | | 1962-cont | | 1964-cont | | 1968-cont | |
| 3-22-51 | 0.0 | 12-10-54 | 0.0 | 4-28-59 | 3.0 | 7- 6-60 | 9.0 | 5- 7-62 | 4.0 | 12- 3-63 | 0.0 | 11-15-67 | 0.5 |
| 9-14-51 | 4.5 | 1-28-55 | 0.0 | 5- 7-59 | 3.5 | 7-25-60 | 9.0 | 5-16-62 | 4.0 | 1-20-64 | 0.5 | 1- 3-68 | 0.0 |
| 1952 | | 1957 | | 5-19-59 | 5.5 | 8-12-60 | 11.5 | 5-28-62 | 5.0 | 3-25-64 | 0.0 | 4-30-68 | 2.0 |
| 11-30-51 | 0.0 | 6-21-57 | 8.5 | 6-10-59 | 10.0 | 8-19-60 | 8.5 | 7-30-62 | 11.0 | 4- 3-64 | 0.0 | 5-13-68 | 5.0 |
| 1- 5-52 | 0.0 | 7- 3-57 | 10.5 | 7- 7-59 | 12.0 | 9-20-60 | 5.0 | 8- 9-62 | 11.0 | 4- 8-64 | 1.0 | 6- 5-68 | 5.5 |
| 2- 9-52 | 1.0 | 1958 | | 7-21-59 | 6.0 | 1961 | | 8-13-62 | 10.0 | 4-10-64 | 1.0 | 8-12-68 | 10.0 |
| 4-14-52 | 1.0 | 10- 4-57 | 2.0 | 7-31-59 | 5.5 | 11-10-60 | 0.0 | 9-11-62 | 5.5 | 8- 6-64 | 8.0 | 1969 | |
| 5- 6-52 | 0.5 | 10-27-57 | 5.5 | 8-25-59 | 9.0 | 11-16-60 | 0.0 | 1963 | | 1965 | | 10- 4-68 | 3.0 |
| 5- 9-52 | 0.5 | 4-29-58 | 4.5 | 9-29-59 | 7.0 | 11-29-60 | 5.0 | 10-17-62 | 3.0 | 10- 2-64 | 3.0 | 12- 5-68 | 0.0 |
| 6-13-52 | 8.0 | 5-13-58 | 5.5 | 1960 | | 12- 9-60 | 0.0 | 10-29-62 | 0.0 | 10-22-64 | 2.0 | 5-27-69 | 6.0 |
| 1953 | | 6- 5-58 | 11.5 | 10-12-59 | 1.0 | 1- 4-61 | 0.0 | 12-11-62 | 0.0 | 11- 2-64 | 0.5 | 7-18-69 | 10.0 |
| 11-19-52 | 0.5 | 6- 6-58 | 9.5 | 10-21-59 | 0.0 | 2-16-61 | 0.0 | 1-10-63 | 0.0 | 4-22-65 | 3.5 | 8-28-69 | 8.0 |
| 5- 8-53 | 3.5 | 6-23-58 | 9.0 | 11- 2-59 | 1.0 | 2-23-61 | 0.0 | 1-21-63 | 0.5 | 5-24-65 | 7.0 | 1970 | |
| 6- 4-53 | 5.5 | 7- 8-58 | 10.5 | 11-30-59 | 0.0 | 4-10-61 | 1.5 | 2-21-63 | 0.0 | 6-18-65 | 7.0 | 12-18-69 | 0.0 |
| 1954 | | 8-13-58 | 9.5 | 12-14-59 | 0.0 | 4-14-61 | 0.5 | 3- 1-63 | 1.0 | 8-31-65 | 6.5 | 3- 4-70 | 0.0 |
| 10- 2-53 | 0.5 | 8-22-58 | 9.5 | 12-22-59 | 0.0 | 5-19-61 | 4.5 | 4- 3-63 | 0.0 | 1967 | | 5-12-70 | 8.0 |
| 3-16-54 | 1.0 | 9- 4-58 | 8.0 | 12-31-59 | 0.0 | 5-19-61 | 4.5 | 4-25-63 | 1.0 | 10- 4-66 | 6.5 | 5-13-70 | 6.5 |
| 5- 3-54 | 3.5 | 9-12-58 | 8.0 | 1-28-60 | 0.0 | 6-27-61 | 13.0 | 5-16-63 | 7.0 | 11-14-66 | 0.0 | 5-20-70 | 5.5 |
| 5-12-54 | 3.0 | 1959 | | 2- 9-60 | 0.0 | 8-16-61 | 9.5 | 5-31-63 | 4.0 | 1- 5-67 | 0.0 | 6- 8-70 | 5.5 |
| 6- 4-54 | 9.5 | 10-10-58 | 1.0 | 2-18-60 | 0.5 | 1962 | | 7- 5-63 | 14.5 | 2- 7-67 | 0.5 | 7-17-70 | 6.0 |
| 6-18-54 | 10.5 | 11-18-58 | 0.5 | 2-26-60 | 0.0 | 10- 5-61 | 2.0 | 7-22-63 | 9.5 | 3-20-67 | 0.5 | 8-19-70 | 7.0 |
| 6-25-54 | 12.0 | 2-12-59 | 0.0 | 3-10-60 | 0.0 | 11- 7-61 | 0.0 | 8- 6-63 | 7.0 | 5- 1-67 | 5.5 | 1971 | |
| 7-21-54 | 11.0 | 2-21-59 | 0.0 | 3-22-60 | 0.5 | 12-14-61 | 0.0 | 8-26-63 | 9.5 | 6- 5-67 | 6.5 | 10-12-70 | 2.5 |
| 8- 2-54 | 6.0 | 2-26-59 | 0.5 | 3-31-60 | 0.0 | 1-16-62 | 0.0 | 9-24-63 | 4.5 | 7-10-67 | 14.0 | 5-18-71 | 2.5 |
| 8-19-54 | 12.0 | 3-10-59 | 0.0 | 4-19-60 | 1.5 | 1-26-62 | 0.0 | 1964 | | 8-15-67 | 11.5 | 7- 1-71 | 6.0 |
| 9-30-54 | 8.0 | 3-27-59 | 0.0 | 5-11-60 | 2.0 | 2-16-62 | 0.5 | 10- 7-63 | 5.0 | 9- 6-67 | 6.5 | 9- 2-71 | 8.0 |
| | | 4-20-59 | 1.0 | 6-22-60 | 12.0 | 3- 8-62 | 0.0 | 11- 6-63 | 0.0 | 1968 | | 1972 | |
| | | | | | | | | 11-19-63 | 0.0 | 10- 3-67 | 3.5 | 10- 4-71 | 1.5 |

## 15274300 NORTH FORK CAMPBELL CREEK NEAR ANCHORAGE

LOCATION.--Lat 61°10'10", long 149°45'43", in SW¼ sec.35, T.13 N., R.3 W., Municipality of Anchorage, on right bank 40 ft (12 m) upstream from Campbell Airstrip road, 2.5 mi (4.0 km) upstream from confluence with South Fork, and 5.5 mi (8.8 km) southeast of Anchorage Post Office.

BASIN CHARACTERISTICS.--Drainage area, 13.4 mi$^2$ (34.7 km$^2$); main-channel slope, 389 ft/mi (73.7 m/km); stream length, 10.6 mi (17.1 km); area of lakes and ponds, 2 percent; mean elevation, 2,670 ft (814 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1967-74. June 1974 to September 1975.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 300 ft (91 m), from topographic map. May 7, 1967 to June 5, 1974, crest-stage gage located 25 ft (7.6 m) downstream at same datum.

EXTREMES.--Maximum discharge during period of record, 107 ft$^3$/s (3.03 m$^3$/s) Aug. 9, 1971, gage height, 12.18 ft (3.712 m); minimum daily, about 2.0 ft$^3$/s (0.057 m$^3$/s) Feb. 2-22 and Apr. 1-15, 1975.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1967 | Sept. 17 or 18,1967 | 81 | 11.45 | | |
| 1968 | June 15, 1968 | 55 | 11.02 | | |
| 1969 | June 16, 1969 | 48 | 10.89 | | |
| 1970 | Aug. 7, 1970 | 71 | 11.31 | | |
| 1971 | Aug. 9, 1971 | 107 | 12.18 | | |
| 1972 | June 15, 1972 | 91 | 11.95 | | |
| 1973 | June 1973 | 38 | 11.18 | | |
| 1974 | June 24, 1974 | 36 | 10.81 | Sept. 13, 1974 | a9.8 |
| 1975 | Sept. 12, 1975 | 68 | 11.48 | Feb. 2-22, Apr. 1-15, 1975 | 2.0 |

a Period June to September; momentary minimum, gage height, 10.11 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1974 | --- | --- | --- | --- | --- | --- | --- | --- | 23.3 | 23.9 | 15.4 | 12.9 | --- |
| 1975 | 11.5 | 6.07 | 4.39 | 4.00 | 2.25 | 3.00 | 2.93 | 9.50 | 28.8 | 38.2 | 22.8 | 29.8 | 13.7 |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1967-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | | 1968 | | 1968-cont | | 1970 | | 1971-cont | | 1973-cont | | 1975 | |
| 5- 1-67 | 5.5 | 1- 3-68 | 0.0 | 9-13-68 | 5.5 | 10-14-69 | 5.0 | 8- 9-71 | 9.5 | 9-11-73 | 4.0 | 10-18-74 | 2.0 |
| 6- 5-67 | 7.0 | 4- 1-68 | 0.5 | 1969 | | 6- 8-70 | 6.0 | 1972 | | 1974 | | 1-13-75 | 0.0 |
| 7-10-67 | 10.0 | 5-13-68 | 8.0 | 10- 4-68 | 2.0 | 1971 | | 6- 8-72 | 4.5 | 10- 4-73 | 3.5 | 6-13-75 | 5.0 |
| 7-20-67 | 9.0 | 6- 5-68 | 5.0 | 6-10-69 | 8.0 | 10-12-70 | 2.0 | 1973 | | 5-21-74 | 8.5 | 6-16-75 | 7.0 |
| 8-15-67 | 11.0 | 6-28-68 | 8.0 | 7-18-69 | 8.0 | 5-18-71 | 3.5 | 5- 7-73 | 7.5 | 6- 6-74 | 7.5 | 6-25-75 | 8.0 |
| | | 8-12-68 | 8.0 | | | 5-26-71 | 5.5 | 8- 1-73 | 9.0 | 7- 9-74 | 9.0 | 7- 1-75 | 6.5 |
| | | | | | | 7-13-71 | 10.5 | | | 8-14-74 | 12.0 | 7-11-75 | 10.5 |

## 15274600 CAMPBELL CREEK NEAR SPENARD

LOCATION.--Lat 61°08'17", long 149°55'20", on line between sec.11 and 14, T.12 N., R.4 W., Municipality of Anchorage, on upstream right wingwall of bridge at Dimond Blvd. crossing, 2.0 mi (3.2 km) upstream from mouth, and 4.3 mi (6.9 km) south of Spenard.

BASIN CHARACTERISTICS.--Drainage area, 69.7 mi$^2$ (180.5 km$^2$); main-channel slope, 162 ft/mi (30.7 m/km); stream length, 19.2 mi (30.9 km); area of lakes and ponds, 1 percent; mean elevation, 1,680 ft (512 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1966 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 18.04 ft (5.499 m) above mean sea level.

AVERAGE DISCHARGE.--9 years, 57.7 ft$^3$/s (1.634 m$^3$/s), 11.24 in/yr (285 mm/yr), 41,800 acre-ft/yr (51.5 hm$^3$/yr).

EXTREMES.--Maximum discharge during period of record, 421 ft$^3$/s (11.9 m$^3$/s) Aug. 9, 1971, gage height, 3.63 ft (1.106 m); maximum gage height observed, 4.90 ft (1.494 m) Mar. 3, 1970 (backwater from ice); minimum daily discharge, 2.2 ft$^3$/s (0.062 m$^3$/s) Feb. 5, 1969.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1966a | Sept. 19, 1966 | 196 | 2.24 | Sept. 11, 1966 | b65 |
| 1967 | Apr. 13, 1967 | --- | c3.00 | Feb. 7 to Mar. 25, 1967 | 17 |
| | Sept. 6, 1967 | 275 | 2.95 | | |
| 1968 | Apr. 18, 1968 | --- | c3.25 | Mar. 20-22, 1968 | 15 |
| | May 31, 1968 | 208 | 2.29 | | |
| 1969 | Feb. 4, 1969 | --- | c3.50 | Feb. 5, 1969 | 2.2 |
| | July 25, 1969 | 173 | 1.87 | | |
| 1970 | Mar. 3, 1970 | --- | c4.90 | Apr. 1-10, 1970 | 16 |
| | Aug. 7, 1970 | 262 | 2.82 | | |
| 1971 | Feb. 5, 1971 | --- | c3.70 | Mar. 2-10, 1971 | 5.5 |
| | Aug. 9, 1971 | 421 | 3.63 | | |
| 1972 | May 8, 1972 | --- | c3.69 | Mar.1 to Apr. 20, 1972 | 12 |
| | Sept. 30, 1972 | 274 | 2.55 | | |
| 1973 | Oct. 1, 1972 | 202 | d2.11 | Feb. 24 to Mar. 23, 1973 | 14 |
| 1974 | Apr. 29, 1974 | --- | c2.45 | Jan. 28 to Feb. 5, 1974 | 4.0 |
| | June 13, 1974 | 145 | 1.55 | | |
| 1975 | Sept. 11, 1975 | e350 | --- | Feb. 9-19, 1975 | 5.0 |

a Period June to September.
b Momentary minimum, gage height, 1.03 ft.
c Backwater from ice.
d Stage falling, peak occurred Sept. 30, 1972; maximum peak discharge, 188 ft$^3$/s Oct. 17, 1972, gage height, 2.00 ft.
e Estimated, based on runoff comparison with station 15273900.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | | | | | | | | | | 101 | 95.5 | 112 | |
| 1967 | 83.1 | 31.4 | 28.6 | 23.7 | 17.3 | 17.2 | 29.7 | 61.8 | 142 | 133 | 122 | 159 | 71.0 |
| 1968 | 73.2 | 44.8 | 32.5 | 30.8 | 21.3 | 18.1 | 44.7 | 90.3 | 162 | 126 | 70.8 | 52.9 | 64.1 |
| 1969 | 40.6 | 27.9 | 23.8 | 14.5 | 9.10 | 16.7 | 20.8 | 53.2 | 87.5 | 70.0 | 57.0 | 35.2 | 38.2 |
| 1970 | 69.9 | 36.3 | 24.0 | 20.3 | 20.5 | 18.3 | 18.7 | 44.3 | 100 | 102 | 128 | 73.3 | 54.9 |
| 1971 | 54.5 | 64.0 | 32.5 | 12.7 | 6.73 | 5.95 | 8.25 | 27.0 | 124 | 149 | 188 | 96.2 | 64.4 |
| 1972 | 79.2 | 40.9 | 24.5 | 18.6 | 13.7 | 12.0 | 12.3 | 50.2 | 135 | 146 | 75.0 | 99.1 | 59.0 |
| 1973 | 128 | 80.6 | 67.7 | 35.5 | 15.9 | 14.5 | 24.3 | 41.5 | 103 | 92.8 | 90.2 | 68.4 | 63.8 |
| 1974 | 50.5 | 22.9 | 16.9 | 8.03 | 6.93 | 10.1 | 21.5 | 50.3 | 106 | 90.2 | 55.6 | 51.8 | 41.1 |
| 1975 | 57.5 | 31.1 | 19.6 | 16.4 | 7.07 | 12.0 | 38.4 | 85.0 | 132 | 136 | 83.5 | 135 | 62.9 |
| MEAN | 70.7 | 42.2 | 30.0 | 20.0 | 13.2 | 13.9 | 24.2 | 55.9 | 121 | 115 | 96.5 | 88.3 | 57.7 |
| MONTHLY PERCENT | 10 | 6 | 4 | 3 | 2 | 2 | 3 | 8 | 18 | 17 | 14 | 13 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1967-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | | 1967-cont | | 1969-cont | | 1970-cont | | 1972 | | 1974 | | 1975-cont | |
| 10- 6-66 | 3.0 | 8- 5-67 | 13.0 | 2- 4-69 | 0.0 | 7-17-70 | 10.0 | 10- 5-71 | 2.0 | 10- 4-73 | 3.0 | 4-29-75 | 0.5 |
| 10-11-66 | 1.0 | 9- 7-67 | 7.5 | 3-28-69 | 0.0 | 8-19-70 | 9.5 | 1- 3-72 | 0.0 | 5- 2-74 | 0.5 | 5- 1-75 | 0.5 |
| 11-14-66 | 0.0 | 1968 | | 5-27-69 | 6.5 | 1971 | | 2-24-72 | 0.0 | 5-21-74 | 9.5 | 5- 8-75 | 0.5 |
| 1- 5-67 | 0.0 | 10- 3-67 | 3.5 | 7-18-69 | 13.0 | 10-12-70 | 3.5 | 7-31-72 | 13.0 | 7-12-74 | 9.0 | 5-19-75 | 6.5 |
| 2- 7-67 | 0.5 | 11-15-67 | 0.0 | 8-28-69 | 9.0 | 11-30-70 | 0.0 | 1973 | | 8-15-74 | 13.0 | 5-29-75 | 8.0 |
| 3-21-67 | 0.0 | 4-30-68 | 0.5 | 1970 | | 5-18-71 | 1.5 | 10-31-72 | 0.0 | 9-13-74 | 9.5 | 6-13-75 | 8.5 |
| 5- 1-67 | 0.5 | 6- 5-68 | 8.0 | 12-16-69 | 0.0 | 7- 1-71 | 9.0 | 12-12-72 | 0.0 | 1975 | | 6-26-75 | 11.5 |
| 5-15-67 | 6.0 | 6-28-68 | 13.0 | 3- 3-70 | 0.0 | 7-14-71 | 11.5 | 5- 7-73 | 3.5 | 10-18-74 | 2.5 | 7-11-75 | 13.0 |
| 6- 1-67 | 10.5 | 8-13-68 | 9.0 | 5-13-70 | 6.0 | 8-10-71 | 10.0 | 6-21-73 | 12.0 | 11-18-74 | 0.0 | 8-11-75 | 9.0 |
| 6-21-67 | 12.5 | 1969 | | 5-20-70 | 6.5 | 9- 2-71 | 7.0 | 8- 2-73 | 10.5 | 1-10-75 | 0.0 | 9- 2-75 | 10.5 |
| 7-11-67 | 15.0 | 10- 4-68 | 3.5 | 6- 3-70 | 8.0 | | | 9-11-73 | 6.0 | 4-28-75 | 0.5 | 9-11-75 | 7.5 |

500' above Little C. Creek
9-8-80 9 cfs

## 15274700 SAND LAKE NEAR SPENARD

LOCATION.--Lat 61°09'03", long 149°58'25", in NW¼ sec.10, T.12 N., R.4 W., Municipality of Anchorage, at west end of lake, 4.0 mi (6.4 km) southwest of Spenard.

PERIOD OF RECORD.--Water years 1967-75.

PERIOD OF DAILY RECORD.--May 1967 to June 1974 (open water period only).

GAGE.--Nonrecording gage. Datum of gage is at mean sea level. Prior to Oct. 1 1968, at datum 85.12 ft (25.944 m) higher.

REMARKS.--Lake level fluctuations are due to changes in ground-water level rather than surface inflow.

EXTREMES.--Maximum observed elevation during period of record, 87.02 ft (26.524 m), present datum, June 1, 2, 1968; minimum 83.62 ft (25.487 m) Sept. 10, 1974, but may have been less during the periods of no gage-height record September 1974 to January 1975.

### PERIODIC ELEVATION, IN FEET

| DATE | ELEV | DATE | ELEV | DATE | ELEV | DATE | ELEV |
|---|---|---|---|---|---|---|---|
| 1974 | | 1974-cont | | 1975 | | 1975-cont | |
| 7- 9-74 | 84.04 | 8-15-74 | 83.79 | 2- 4-75 | 83.94 | 6-13-75 | 84.91 |
| 7-16-74 | 84.02 | 8-30-74 | 83.69 | 2-11-75 | 83.94 | 7-22-75 | 84.59 |
| 7-18-74 | 84.00 | 9-10-74 | 83.62 | 2-21-75 | 83.92 | 8-22-75 | 84.41 |
| 7-24-74 | 83.94 | 9-19-74 | 83.63 | 2-27-75 | 83.96 | 8-26-75 | 84.38 |
| 7-26-74 | 83.90 | 9-25-74 | 83.71 | 5- 9-75 | 84.91 | 9- 8-75 | 84.30 |
| 8- 4-74 | 83.80 | 9-30-74 | 83.68 | 5-23-75 | 84.98 | 9-19-75 | 84.66 |
| 8- 6-74 | 83.80 | | | 5-30-75 | 85.04 | | |

### MONTHLY MAXIMUM AND MINIMUM ELEVATION, IN FEET

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | Max | --- | --- | --- | --- | --- | --- | --- | a | 86.92 | 86.74 | 86.58 | 86.78 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 86.72 | 86.57 | 86.51 | 86.56 |
| 1968 | Max | 86.72 | --- | --- | --- | --- | --- | --- | a | 87.02 | 86.76 | 86.43 | 86.17 |
| | Min | 86.58 | --- | --- | --- | --- | --- | --- | a | 86.76 | 86.44 | 86.18 | 85.95 |
| 1969 | Max | 86.05 | --- | --- | --- | --- | --- | a | 85.90 | 85.76 | 85.42 | 85.28 | 84.93 |
| | Min | a | --- | --- | --- | --- | --- | a | 85.78 | 85.43 | 85.14 | 84.94 | 84.78 |
| 1970 | Max | 84.79 | a | --- | --- | --- | --- | a | 84.78 | 84.54 | 84.23 | 84.12 | 84.08 |
| | Min | 84.68 | a | --- | --- | --- | --- | a | 84.55 | 84.24 | 84.04 | 84.05 | 83.92 |
| 1971 | Max | a | --- | --- | --- | --- | --- | --- | 84.86 | 84.84 | 84.62 | 84.78 | 84.76 |
| | Min | a | --- | --- | --- | --- | --- | --- | a | 84.63 | 84.44 | 84.60 | 84.68 |
| 1972 | Max | a | --- | --- | --- | --- | --- | --- | 85.52 | 85.52 | 85.29 | 84.91 | 84.88 |
| | Min | 84.76 | --- | --- | --- | --- | --- | --- | a | 85.29 | 84.92 | 84.72 | 84.71 |
| 1973 | Max | a | --- | --- | --- | --- | --- | 85.26 | 85.32 | 85.09 | 84.87 | 84.52 | 84.48 |
| | Min | 84.88 | --- | --- | --- | --- | --- | a | 85.11 | 84.88 | 84.44 | 84.38 | 84.35 |
| 1974 | Max | a | --- | --- | --- | --- | --- | --- | 84.48 | 84.25 | --- | --- | --- |
| | Min | 84.39 | --- | --- | --- | --- | --- | --- | 84.27 | 83.93 | --- | --- | --- |

a Data insufficient to compute monthly maximum or minimum.

## 15275000 CHESTER CREEK AT ANCHORAGE

LOCATION.--Lat 61°11'59", long 149°50'07", in SW¼ sec.21, T.13 N., R.3 W., Municipality of Anchorage, on right bank 10 ft (3 m) upstream from culverts on Lake Otis Parkway, 2.3 mi (3.7 km) southeast of Anchorage Post Office, and 3.2 mi (5.1 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 20.0 $mi^2$ (51.8 $km^2$); main-channel slope, 226 ft/mi (42.8 m/km); stream length, 11.4 mi (18.3 km); area of lakes and ponds, 1 percent; mean elevation, 800 ft (244 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to September 1975.

GAGE.--Water-stage recorder and culvert control. Datum of gage is 88.8 ft (27.07 m) above mean sea level. Prior to June 25, 1968, nonrecording gage, and June 25, 1968 to June 8, 1971, nonrecording gage and crest-stage gage.

AVERAGE DISCHARGE.--17 years, 18.7 $ft^3/s$ (0.530 $m^3/s$), 12.70 in/yr (323 mm/yr), 13,550 acre-ft/yr (16.7 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 95 $ft^3/s$ (2.69 $m^3/s$) Apr. 29, 1963, gage height, 2.40 ft (0.732 m) from graph based on gage readings; maximum gage height observed, 3.8 ft (1.16 m) Nov. 29, 1961 (backwater from ice); minimum daily discharge, 1.0 $ft^3/s$ (0.028 $m^3/s$) Mar. 4-7, 1971.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1958a | Aug. 3, 1958 | b42 | 2.16 | July 7, 15, 1958 | c18 |
| 1959 | Apr. 27, 1959 | 94 | 2.75 | Mar. 17-22, 1959 | 10 |
| 1960 | Apr. 28, 1960 | --- | 2.22 | Mar. 12-14, 1960 | 11 |
| | Sept. 13, 1960 | 72 | 2.16 | | |
| 1961 | Nov. 25, 1960 | --- | d3.06 | Mar. 13-15, 1961 | 14 |
| | Sept. 30, 1961 | 82 | 2.13 | | |
| 1962 | Nov. 29, 1961 | --- | d3.8 | Mar. 28, 29, 31, 1962 | 15 |
| | June 15, 1962 | 89 | 2.31 | | |
| 1963 | Dec. 7,29,30,1962 | --- | d2.99 | Many days, January to March, 1963 | 13 |
| | Apr. 29, 1963 | 95 | 2.40 | | |
| 1964 | Jan. 19, 1964 | --- | d2.45 | Mar. 28-31, 1964 | 4.0 |
| | Apr. 25, 1964 | b32 | 1.38 | | |
| 1965 | Nov. 1, 1964 | --- | d1.92 | Feb. 14-21, 1965 | 7.0 |
| | Sept. 27, 1965 | b48 | 1.70 | | |
| 1966 | Apr. 21, 1966 | b50 | d1.98 | Mar. 16-29, 1966 | 12 |
| 1967 | Nov. 14, 1966 | --- | d2.39 | Mar. 13, 14, 20, 1967 | 8.7 |
| | Sept. 5, 1967 | b57 | 1.78 | | |
| 1968 | Dec. 22, 1967 | --- | d2.94 | Feb. 4-7, 1968 | 11 |
| | Jan. 13, 1968 | --- | d2.94 | | |
| | May 31, 1968 | b42 | 1.56 | | |
| 1969 | Jan. 31, 1969 | --- | d2.38 | Mar. 13-19, 1969 | 7.0 |
| | July 24, 1969 | 60 | 2.28 | | |
| 1970 | Mar. 2, 1970 | --- | d2.54 | Jan. 29-31, 1970 | 6.3 |
| | Aug. 10, 1970 | 69 | 2.00 | | |
| 1971 | Feb. 3, 1971 | --- | d3.20 | Mar. 4-7, 1971 | 1.0 |
| | Aug. 9, 1971 | 62 | 1.90 | | |
| 1972 | May 3, 1972 | 87 | e3.14 | Mar. 21-28, 1972 | 7.2 |
| 1973 | Oct. 18, 1972 | 45 | 1.64 | Mar. 6-20, 1973 | 8.0 |
| | Nov. 3, 1972 | --- | d1.9 | | |
| 1974 | Sept. 23, 1974 | 32 | 1.36 | Jan. 30, 1974 | 4.0 |
| 1975 | Sept. 11, 1975 | 80 | 2.17 | Feb. 11-14, 1975 | 2.5 |

a Period July to September.
b Maximum daily.
c Gage height, 1.54 ft.
d Backwater from ice.
e Backwater from debris.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | | | | | | | | | 24.1 | 29.6 | 23.2 | |
| 1959 | 23.2 | 18.0 | 14.9 | 12.3 | 13.1 | 11.8 | 26.2 | 36.6 | 27.7 | 27.4 | 28.9 | 35.1 | 23.0 |
| 1960 | 29.8 | 24.9 | 20.0 | 17.7 | 16.4 | 14.1 | 26.3 | 30.6 | 24.3 | 23.6 | 28.3 | 48.0 | 25.3 |
| 1961 | 42.9 | 28.6 | 26.4 | 23.4 | 19.2 | 17.3 | 29.0 | 26.3 | 25.6 | 27.2 | 27.6 | 35.7 | 27.5 |
| 1962 | 49.2 | 35.5 | 29.3 | 20.5 | 19.1 | 17.0 | 34.9 | 35.5 | 47.3 | 38.8 | 31.2 | 27.2 | 32.2 |
| 1963 | 22.2 | 19.8 | 18.8 | 15.7 | 13.7 | 15.6 | 27.3 | 35.4 | 27.0 | 27.6 | 34.7 | 30.4 | 24.1 |
| 1964 | 23.0 | 14.7 | 12.7 | 11.9 | 10.2 | 9.74 | 18.7 | 22.0 | 23.3 | 21.9 | 21.3 | 18.0 | 17.3 |
| 1965 | 22.3 | 14.1 | 11.2 | 8.39 | 7.75 | 19.1 | 20.9 | 16.6 | 19.2 | 21.5 | 22.7 | 29.6 | 17.8 |
| 1966 | 34.1 | 21.7 | 20.1 | 18.3 | 15.1 | 12.7 | 27.7 | 27.8 | 23.2 | 20.2 | 20.0 | 22.5 | 22.0 |
| 1967 | 22.1 | 16.0 | 13.0 | 12.0 | 11.5 | 9.37 | 16.9 | 16.9 | 16.5 | 16.5 | 20.2 | 32.7 | 17.0 |
| 1968 | 22.7 | 19.7 | 16.6 | 16.1 | 12.6 | 13.9 | 19.8 | 23.4 | 28.1 | 21.2 | 18.7 | 19.9 | 19.4 |
| 1969 | 13.3 | 10.7 | 10.5 | 9.03 | 7.80 | 7.88 | 15.5 | 15.0 | 13.0 | 15.0 | 12.0 | 14.0 | 12.0 |
| 1970 | 13.4 | 9.03 | 8.82 | 6.80 | 7.01 | 8.55 | 8.86 | 9.01 | 8.08 | 8.44 | 13.9 | 9.58 | 9.32 |
| 1971 | 8.31 | 6.22 | 3.39 | 2.09 | 1.71 | 2.33 | 8.76 | 14.3 | 14.0 | 15.7 | 29.7 | 25.6 | 11.0 |
| 1972 | 26.2 | 14.8 | 12.8 | 10.5 | 9.00 | 8.04 | 12.3 | 27.8 | 22.8 | 18.1 | 16.8 | 20.8 | 16.7 |
| 1973 | 30.0 | 15.8 | 14.3 | 11.0 | 9.36 | 9.10 | 17.7 | 14.9 | 14.0 | 11.1 | 19.7 | 16.0 | 15.3 |
| 1974 | 18.4 | 11.9 | 10.6 | 7.81 | 6.21 | 9.55 | 13.9 | 10.8 | 10.5 | 11.4 | 11.8 | 13.3 | 11.4 |
| 1975 | 14.7 | 11.7 | 6.27 | 7.27 | 4.96 | 6.60 | 18.6 | 25.8 | 19.1 | 25.1 | 20.0 | 34.7 | 16.3 |
| MEAN | 24.4 | 17.2 | 14.7 | 12.4 | 10.9 | 11.3 | 20.2 | 22.9 | 21.4 | 20.8 | 22.6 | 25.3 | 18.7 |
| MONTHLY PERCENT | 11 | 8 | 7 | 6 | 5 | 5 | 9 | 10 | 10 | 9 | 10 | 11 | |

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1958-60, 1966-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | 1959-cont | | 1960-cont | | 1967-cont | | 1969-cont | | 1972-cont | | 1974-cont | |
| 4-29-58 | 8.0 | 5- 7-59 | 5.0 | 3-22-60 | 1.5 | 9- 7-67 | 7.0 | 8-27-69 | 10.0 | 2-23-72 | 0.5 | 7- 1-74 | 16.0 |
| 5-13-58 | 9.0 | 6-10-59 | 10.5 | 3-31-60 | 0.5 | 1968 | | 1970 | | 3-23-72 | 1.0 | 7- 9-74 | 12.5 |
| 6- 6-58 | 14.5 | 7- 7-59 | 10.0 | 4-19-60 | 2.0 | 10- 3-67 | 3.0 | 10-14-69 | 6.0 | 8- 1-72 | 13.0 | 7-11-74 | 11.0 |
| 7- 8-58 | 10.5 | 7-21-59 | 5.5 | 4-26-60 | 3.0 | 11-14-67 | 1.5 | 12-15-69 | 0.0 | 9-29-72 | 4.5 | 8-12-74 | 12.0 |
| 8-13-58 | 9.5 | 7-31-59 | 5.5 | 5-17-60 | 9.0 | 1- 2-68 | 1.0 | 3- 2-70 | 0.5 | 1973 | | 9-12-74 | 10.5 |
| 8-22-58 | 9.5 | 8-25-59 | 9.0 | 5-31-60 | 7.0 | 1-10-68 | 0.0 | 5-12-70 | 7.0 | 10-30-72 | 2.0 | 1975 | |
| 9- 4-58 | 6.5 | 1960 | | 6-22-60 | 12.0 | 2-13-68 | 1.0 | 6- 9-70 | 8.0 | 11-29-72 | 0.5 | 10-21-74 | 3.0 |
| 9-12-58 | 8.0 | 10-12-59 | 2.0 | 7- 6-60 | 9.5 | 3-28-68 | 1.0 | 7-16-70 | 11.0 | 12-11-72 | 1.0 | 11-15-74 | 0.5 |
| 9-25-58 | 1.5 | 10-21-59 | 3.5 | 8-12-60 | 11.5 | 4-29-68 | 2.0 | 7-21-70 | 10.0 | 2- 1-73 | 0.0 | 3-19-75 | 1.0 |
| 1959 | | 11- 2-59 | 2.0 | 9-20-60 | 5.0 | 5-14-68 | 6.0 | 8-18-70 | 8.0 | 5- 4-73 | 4.0 | 4- 7-75 | 2.0 |
| 10-10-58 | 3.5 | 11-16-59 | 4.0 | 1966 | | 6- 6-68 | 5.0 | 1971 | | 5- 8-73 | 9.0 | 4-15-75 | 1.5 |
| 10-29-58 | 1.5 | 11-30-59 | 0.0 | 1-12-66 | 0.0 | 7- 1-68 | 9.0 | 10- 9-70 | 3.0 | 6-21-73 | 11.0 | 5- 1-75 | 3.0 |
| 11-18-58 | 1.0 | 12-14-59 | 0.0 | 1967 | | 8- 8-68 | 9.0 | 12- 1-70 | 0.0 | 9-10-73 | 7.0 | 5- 2-75 | 3.0 |
| 2- 2-59 | 0.0 | 12-22-59 | 1.0 | 10- 6-66 | 3.5 | 9-12-68 | 7.5 | 5- 7-71 | 3.0 | 1974 | | 5-15-75 | 6.0 |
| 2-21-59 | 1.0 | 12-31-59 | 0.5 | 11-14-66 | 0.0 | 1969 | | 6-29-71 | 12.5 | 10- 4-73 | 4.0 | 5-29-75 | 7.0 |
| 2-26-59 | 1.0 | 1-28-60 | 1.0 | 1- 3-67 | 0.0 | 12-02-68 | 0.0 | 7-21-71 | 6.5 | 1- 3-74 | 0.5 | 6-26-75 | 9.5 |
| 3-27-59 | 1.0 | 2- 9-60 | 0.0 | 5- 3-67 | 4.5 | 4- 2-69 | 1.0 | 1972 | | 3-26-74 | 1.0 | 8- 4-75 | 9.5 |
| 4-20-59 | 2.0 | 2-18-60 | 0.5 | 5-31-67 | 6.5 | 5- 9-69 | 5.0 | 10- 5-71 | 4.0 | 5- 3-74 | 6.5 | 9- 3-75 | 7.0 |
| 4-27-59 | 0.5 | 2-26-60 | 0.0 | 7-10-67 | 14.0 | 6- 9-69 | 7.0 | 11- 3-71 | 0.5 | 5-20-74 | 11.5 | 9-10-75 | 7.0 |
| 4-30-59 | 11.5 | 3-10-60 | 0.0 | 8-16-67 | 10.0 | 7-14-69 | 10.0 | 12-29-71 | 1.0 | 5-24-74 | 12.0 | 9-11-75 | 8.0 |

## 15275100 CHESTER CREEK AT ARCTIC BOULEVARD AT ANCHORAGE

LOCATION.--Lat 61°12'19", long 149°53'43", on line between sec.19, R.3 W., and sec.24, R.4 W., T.13 N., Municipality of Anchorage, on upstream right bank wingwall of bridge on Arctic Boulevard at Anchorage.

BASIN CHARACTERISTICS.--Drainage area, 27.2 $mi^2$ (70.4 $km^2$); main-channel slope, 169 ft/mi (32.0 m/km); stream length, 12.8 mi (20.6 km); area of lakes and ponds, 1 percent; mean elevation, 780 ft (238 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1966 to September 1975.

GAGE.--Water-stage recorder and culvert control. Datum of gage is 16.02 ft (4.883 m) above mean sea level (from USC & GS, datum of 1968).

AVERAGE DISCHARGE.--9 years, 16.8 $ft^3/s$ (0.476 $m^3/s$), 8.39 in/yr (213 mm/yr), 12,170 acre-ft/yr (15.0 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 175 $ft^3/s$ (4.96 $m^3/s$) Sept. 11, 1975, gage height, 4.37 ft (1.332 m); minimum daily, about 1.6 $ft^3/s$ (0.045 $m^3/s$) Feb. 12-14, 1975.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1966a | June 21, 1966 | 44 | 2.00 | June 25, 26, 1966 | b18 |
| 1967 | Apr. 7, 1967 | --- | c2.68 | Jan. 1 to Feb. 20, 1967 | 12 |
| | Sept. 4, 1967 | 87 | 2.52 | | |
| 1968 | Mar. 18, 1968 | --- | c2.53 | Feb. 1-5, 1968 | 13 |
| | May 30, 1968 | 85 | 2.43 | | |
| 1969 | Jan. 31, 1969 | --- | c4.07 | Mar. 13-18, 1969 | 7.5 |
| | July 24, 1969 | 80 | 2.76 | | |
| 1970 | Aug. 10, 1970 | 89 | 2.88 | Jan. 29-31, 1970 | 7.2 |
| 1971 | Feb. 3, 1971 | --- | c4.25 | Mar. 4-7, 1971 | 2.0 |
| | Aug. 8, 1971 | 95 | 2.97 | | |
| 1972 | Sept. 29, 1972 | 89 | 2.89 | Mar. 10-19, 1972 | 7.5 |
| 1973 | Oct. 11, 1972 | 69 | 2.59 | June 29, 1973 | d9.4 |
| | Nov. 3, 1972 | --- | c2.97 | | |
| 1974 | Sept. 23, 1974 | 80 | 2.76 | Jan. 30, 1974 | 6.0 |
| 1975 | Sept. 11, 1975 | 175 | 4.37 | Feb. 12-14, 1975 | 1.6 |

a Period June to September.
b Momentary minimum, gage height, 1.41 ft.
c Backwater from ice.
d Momentary minimum, gage height, 1.44 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | | | | | | | | | 13.3 | 23.2 | 25.6 | 27.5 | |
| 1967 | 26.4 | 16.9 | 13.0 | 12.0 | 12.3 | 14.2 | 24.2 | 20.0 | 18.8 | 20.0 | 25.4 | 36.0 | 19.9 |
| 1968 | 22.7 | 21.1 | 17.5 | 17.3 | 15.0 | 15.0 | 24.8 | 27.6 | 32.5 | 24.0 | 20.2 | 25.8 | 22.0 |
| 1969 | 15.5 | 11.6 | 11.5 | 10.2 | 8.37 | 8.78 | 20.2 | 17.1 | 15.5 | 20.9 | 16.4 | 16.1 | 14.4 |
| 1970 | 17.0 | 11.0 | 10.1 | 7.79 | 8.01 | 10.1 | 10.6 | 11.0 | 10.1 | 11.6 | 17.4 | 12.5 | 11.5 |
| 1971 | 10.7 | 9.07 | 4.65 | 3.27 | 2.99 | 4.18 | 14.5 | 19.9 | 17.9 | 19.7 | 32.9 | 26.0 | 13.9 |
| 1972 | 28.9 | 16.2 | 14.1 | 11.9 | 8.62 | 8.32 | 14.2 | 31.3 | 24.0 | 18.7 | 18.4 | 24.5 | 18.3 |
| 1973 | 31.8 | 20.0 | 18.5 | 14.3 | 11.1 | 12.6 | 23.3 | 16.5 | 14.8 | 12.6 | 19.3 | 18.7 | 17.8 |
| 1974 | 20.0 | 12.7 | 13.1 | 10.9 | 8.07 | 12.7 | 16.5 | 12.4 | 11.5 | 13.1 | 14.7 | 17.7 | 13.6 |
| 1975 | 19.3 | 14.6 | 7.69 | 8.45 | 5.40 | 7.79 | 24.2 | 27.0 | 22.8 | 29.0 | 25.3 | 40.7 | 19.4 |
| MEAN | 21.3 | 14.8 | 12.2 | 10.7 | 8.86 | 10.4 | 19.2 | 20.3 | 18.1 | 19.3 | 21.5 | 24.5 | 16.8 |
| MONTHLY PERCENT | 11 | 7 | 6 | 5 | 4 | 5 | 10 | 10 | 9 | 10 | 11 | 12 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1967-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | | 1968 | | 1969-cont | | 1970-cont | | 1972 | | 1973-cont | | 1974-cont | |
| 10- 6-66 | 3.5 | 10- 3-67 | 3.5 | 3-20-69 | 2.0 | 5-12-70 | 9.0 | 10- 5-71 | 4.0 | 9-10-73 | 7.5 | 9-12-74 | 10.0 |
| 11-14-66 | 0.5 | 11-14-67 | 2.5 | 4- 2-69 | 1.0 | 6- 9-70 | 9.0 | 12-29-71 | 0.0 | 1974 | | 1975 | |
| 2-14-67 | 0.0 | 1- 2-68 | 2.5 | 5- 9-69 | 7.0 | 6-18-70 | 8.0 | 2-23-70 | 0.0 | 10- 4-73 | 4.0 | 10-18-74 | 3.5 |
| 3-21-67 | 0.0 | 3-28-68 | 1.5 | 7-14-69 | 10.0 | 7-16-70 | 13.5 | 3-27-72 | 1.0 | 11- 7-73 | 0.5 | 10-21-74 | 4.0 |
| 3-31-67 | 1.0 | 4-29-68 | 3.5 | 7-25-69 | 11.5 | 7-21-70 | 11.5 | 5- 9-72 | 6.5 | 1- 8-74 | 0.5 | 10-25-74 | 4.5 |
| 5- 3-67 | 7.5 | 6- 6-68 | 7.0 | 8-28-69 | 8.5 | 8-18-70 | 10.0 | 8- 1-72 | 13.0 | 2-11-74 | 0.0 | 11-15-74 | 9.5 |
| 5-15-67 | 6.5 | 8- 7-68 | 9.0 | 1970 | | 1971 | | 1973 | | 4- 4-74 | 1.5 | 1- 9-75 | 0.0 |
| 5-31-67 | 8.0 | 9-12-68 | 9.0 | 10-14-69 | 6.0 | 10- 9-70 | 3.5 | 10-30-72 | 2.0 | 4- 9-74 | 2.0 | 4-15-75 | 3.0 |
| 7-11-67 | 19.0 | 1969 | | 11-30-69 | 0.0 | 12- 2-70 | 0.5 | 11-29-72 | 0.5 | 5- 3-74 | 8.5 | 5-29-75 | 9.0 |
| 7-20-67 | 11.0 | 10- 1-68 | 4.0 | 12-15-69 | 0.0 | 2- 3-71 | 0.0 | 12-12-72 | 0.5 | 5-21-74 | 13.5 | 6-10-75 | 13.0 |
| 8-16-67 | 11.0 | 12- 2-68 | 0.0 | 3- 2-70 | 0.5 | 3-17-71 | 0.5 | 2- 1-73 | 0.0 | 7- 9-74 | 15.0 | 6-26-75 | 13.5 |
| 9- 6-67 | 7.5 | 5-14-69 | 1.0 | 3-25-70 | 3.0 | 6-30-71 | 9.5 | 5- 4-73 | 9.0 | 7-11-74 | 12.0 | 9- 3-75 | 10.5 |
| | | | | | | 7-21-71 | 11.0 | 6-21-73 | 16.0 | 8-15-74 | 12.5 | 9-10-75 | 9.0 |

## 15276000 SHIP CREEK NEAR ANCHORAGE

LOCATION.--Lat 61°13'25", long 149°37'55", in NE¼ sec.16, T.13 N., R.2 W., Municipality of Anchorage, in Fort Richardson Military Reservation, at diversion dam and Fort Richardson water-supply intake building, 3.5 mi (5.6 km) upstream from North Fork Ship Creek, and 8.5 mi (13.7 km) east of Anchorage.

BASIN CHARACTERISTICS.--Drainage area, 90.5 $mi^2$ (234.4 $km^2$); main-channel slope, 119 ft/mi (22.5 m/km); stream length, 19.0 mi (30.6 km); area of lakes and ponds, 1 percent; mean elevation, 3,100 ft (945 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to September 1975.

GAGE.--Water-stage recorder and masonry dam. Datum of gage is 530 ft (161.5 m) above mean sea level (levels by Corps of Engineers). Oct. 1, 1946 to Apr. 30, 1947, nonrecording gage, and May 1, 1947 to Apr. 19, 1954, water-stage recorder, at site 0.2 mi (0.3 km) downstream at different datum. June 18, 1953 to Sept. 30, 1954, supplemental water-stage recorder at site 2.7 mi (4.3 km) downstream at different datum.

REMARKS.--Diversion for water supply to Fort Richardson, Elmendorf Air Force Base, and Municipality of Anchorage began in 1944. Monthly and annual mean diversions since October 1946 are shown on the next page. Table of monthly and annual mean discharge on next page represents combined flow. Discharge data in table of EXTREMES represent net flow remaining after diversion.

COOPERATION.--Gage inspected and records of diversion furnished by Office of Post Engineers, Fort Richardson.

AVERAGE DISCHARGE.--29 years, 158 $ft^3/s$ (4.475 $m^3/s$), 23.71 in/yr (602 mm/yr), 114,500 acre-ft/yr (141 $hm^3/yr$). Adjusted to include diversion.

EXTREMES.--Maximum discharge during period of record, 1,860 $ft^3/s$ (52.7 $m^3/s$), June 21, 1949, gage height, 3.44 ft (1.049 m), site and datum then in use; maximum gage height, 5.03 ft (1.533 m) Nov. 20, 1974 (backwater from ice); no flow at times due to diversion.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1947 | May 31, 1947 | 780 | 1.95 | Apr. 1, 1947 | 24 |
| 1948 | June 14, 1948 | 662 | 1.75 | Apr. 6, 1948 | a26 |
| 1949 | June 21, 1949 | 1,860 | 3.44 | Feb. 20, 1949 | 20 |
| 1950 | June 18, 1950 | 857 | 2.01 | Feb. 17, 18, 1950 | 24 |
| 1951 | Sept. 4, 1951 | b983 | 2.19 | Apr. 13, 1951 | 12 |
| 1952 | June 20, 1952 | 734 | 1.69 | Apr. 1-15, 1952 | c13 |
| 1953 | June 4, 1953 | 999 | 2.07 | Apr. 1-15, 1953 | 10 |
| 1954 | Oct. 6, 1953 | 488 | 1.25 | Apr. 22, 1954 | d1.0 |
| 1955 | July 4, 1955 | 1,070 | 4.11 | Apr. 25, 1955 | d2.5 |
| 1956 | July 31, 1956 | 685 | 3.10 | Jan. 2,4,12-15, Feb. 11-13, 1956 | 0.0 |
| 1957 | June 4, 1957 | 712 | 2.99 | Apr. 5,8, 1957 | d4.0 |
| 1958 | June 7, 1958 | 874 | 3.41 | Mar. 17, 1958 | d10 |
| 1959 | Dec. 31, 1958 | --- | e2.99 | Mar. 19,20, 1959 | d7.0 |
| | June 3, 1959 | 670 | 2.85 | | |
| 1960 | May 25, 1960 | 966 | 3.58 | Mar. 7,15, 1960 | 0.0 |
| 1961 | Jan. 21, 1961 | --- | e3.55 | Mar. 23, 1961 | f21 |
| | June 20, 1961 | 750 | 3.05 | | |
| 1962 | June 13, 1962 | g1,200 | --- | Jan. 6, 1962 | d8.0 |
| 1963 | June 22, 1963 | 960 | 3.41 | Mar. 20-29, 1963 | d10 |
| 1964 | June 13, 1964 | 1,140 | 3.74 | Mar. 28, 1964 | 10 |
| 1965 | Sept. 20, 1965 | 591 | 2.49 | Feb. 19-21, 1965 | 14 |
| 1966 | June 7, 1966 | 926 | 3.29 | Apr. 5, 1966 | 11 |
| 1967 | Sept. 18, 1967 | 1,440 | 4.29 | Mar. 13-15, 1967 | 11 |
| 1968 | May 29, 1968 | 806 | 3.08 | Mar. 26,30, 1968 | d4.5 |
| 1969 | May 27, 1969 | 516 | 2.49 | Mar. 16, 1969 | h0.0 |
| 1970 | Oct. 7, 1969 | 850 | 3.25 | Mar. 9, 1970 | d3.5 |
| 1971 | Aug. 8, 1971 | 1,580 | 4.58 | Mar. 4,5, 1971 | 0.0 |
| 1972 | June 15, 1972 | 1,040 | 3.45 | Apr. 21, 1972 | d5.0 |
| 1973 | June 21, 1973 | 548 | 2.57 | Mar. 17-20, 1973 | 5.0 |
| 1974 | Jan. 3, 1974 | --- | e4.24 | Mar 4-10, 1974 | 3.0 |
| | June 2, 1974 | i500 | 2.45 | | |
| 1975 | Nov. 20, 1974 | --- | e5.03 | Mar. 17 to Apr. 5, 1975 | 7.0 |
| | June 30, 1975 | 650 | 2.81 | | |

a Momentary minimum, 6.2 $ft^3/s$ Apr. 23, 1948, gage height, 0.03 ft, result of ice jam above gage.
b Caused by failure of cofferdam upstream.
c No flow for several hours on Mar. 16, 17, 29, 1952, caused by temporary obstruction upstream.
d No flow for parts of several days.
e Backwater from ice.
f No flow for part of each day Mar. 23, 24, 1961.
g Maximum daily.
h Also no flow part of some days Dec. 11, 1968 to Mar. 27, 1969.
i May have been greater during the period of no gage height record May 27-31, 1974.

## 15276000 SHIP CREEK NEAR ANCHORAGE--Continued

DIVERSION FOR WATER SUPPLY
MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | 4.4 | 4.7 | 4.7 | 4.6 | 4.7 | 4.5 | 4.3 | 4.3 | 4.3 | 5.0 | 4.7 | 4.6 | 4.6 |
| 1948 | 4.4 | 4.4 | 4.7 | 4.5 | 4.5 | 4.6 | 4.5 | 4.6 | 4.3 | 4.4 | 4.6 | 4.2 | 4.5 |
| 1949 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |
| 1950 | 4.5 | 4.1 | 4.4 | 4.3 | 4.2 | 5.0 | 4.8 | 4.7 | 4.9 | 6.3 | 5.4 | 4.7 | 4.8 |
| 1951 | 5.0 | 4.8 | 10.7 | 10.8 | 11.1 | 11.4 | 11.1 | 11.8 | 11.0 | 11.4 | 10.3 | 10.6 | 10.0 |
| 1952 | 11.0 | 10.7 | 11.1 | 13.8 | 14.7 | 17.5 | 14.6 | 17.0 | 15.5 | 18.0 | 18.0 | 18.0 | 15.0 |
| 1953 | 19.0 | 20.0 | 20.0 | 20.0 | 21.0 | 21.0 | 21.0 | 22.0 | 22.0 | 23.0 | 23.0 | 22.0 | 21.2 |
| 1954 | 21.0 | 23.0 | 25.0 | 23.0 | 24.0 | 28.0 | 25.0 | 21.0 | 22.0 | 23.0 | 23.0 | 22.0 | 23.0 |
| 1955 | 21.0 | 24.0 | 26.0 | 26.0 | 26.0 | 26.0 | 24.0 | 21.0 | 22.0 | 23.0 | 24.0 | 24.0 | 24.0 |
| 1956 | 22.2 | 23.0 | 23.8 | 25.1 | 27.6 | 27.2 | 23.4 | 22.4 | 23.5 | 23.6 | 22.4 | 21.8 | 24.0 |
| 1957 | 22.1 | 21.9 | 22.9 | 23.4 | 20.9 | 20.7 | 20.6 | 22.8 | 23.7 | 22.3 | 22.3 | 21.6 | 22.1 |
| 1958 | 21.6 | 20.6 | 20.4 | 19.0 | 18.1 | 18.3 | 17.0 | 20.0 | 17.8 | 19.6 | 18.6 | 20.5 | 19.3 |
| 1959 | 19.6 | 16.1 | 16.2 | 18.0 | 17.9 | 18.0 | 16.9 | 14.5 | 20.3 | 18.9 | 17.9 | 17.9 | 17.7 |
| 1960 | 15.8 | 11.1 | 12.9 | 16.5 | 16.5 | 14.4 | 12.2 | 12.4 | 19.8 | 19.7 | 18.7 | 17.6 | 15.6 |
| 1961 | 18.8 | 17.2 | 15.7 | 15.5 | 14.0 | 15.6 | 13.1 | 14.1 | 18.9 | 19.0 | 18.0 | 18.9 | 16.6 |
| 1962 | 15.0 | 12.9 | 12.0 | 16.9 | 15.9 | 16.8 | 15.6 | 18.4 | 16.9 | 18.0 | 19.0 | 17.1 | 16.2 |
| 1963 | 17.7 | 16.5 | 17.7 | 17.7 | 16.6 | 15.6 | 14.7 | 14.1 | 18.8 | 21.0 | 18.2 | 18.5 | 17.3 |
| 1964 | 17.3 | 17.4 | 16.1 | 16.2 | 14.5 | 16.0 | 16.2 | 16.7 | 18.6 | 18.1 | 17.7 | 18.3 | 16.9 |
| 1965 | 15.5 | 15.8 | 18.9 | 18.4 | 18.4 | 19.1 | 17.5 | 19.0 | 20.5 | 16.1 | 20.3 | 19.3 | 18.2 |
| 1966 | 18.8 | 19.4 | 19.9 | 17.5 | 17.1 | 18.6 | 18.4 | 17.9 | 22.0 | 21.6 | 19.6 | 17.4 | 18.9 |
| 1967 | 16.7 | 14.4 | 18.6 | 18.9 | 18.6 | 19.0 | 19.4 | 20.0 | 19.6 | 19.3 | 19.0 | 19.8 | 18.6 |
| 1968 | 21.1 | 20.5 | 18.6 | 22.2 | 22.5 | 19.1 | 19.0 | 17.2 | 18.2 | 21.0 | 23.0 | 22.4 | 20.4 |
| 1969 | 21.8 | 22.5 | 22.1 | 19.4 | 17.8 | 15.1 | 14.1 | 16.4 | 21.6 | 21.2 | 22.4 | 23.6 | 19.7 |
| 1970 | 23.2 | 23.9 | 25.4 | 22.9 | 22.3 | 19.4 | 15.1 | 20.5 | 23.1 | 24.3 | 23.7 | 24.0 | 22.4 |
| 1971 | 22.6 | 18.0 | 22.3 | 24.3 | 23.1 | 23.9 | 22.8 | 17.0 | 17.8 | 18.9 | 19.5 | 20.8 | 20.9 |
| 1972 | 19.2 | 16.1 | 20.3 | 21.8 | 22.6 | 23.1 | 19.3 | 16.4 | 16.9 | 23.4 | 24.1 | 22.4 | 20.5 |
| 1973 | 21.2 | 19.6 | 21.6 | 22.6 | 23.5 | 23.3 | 20.9 | 21.6 | 22.4 | 23.8 | 23.1 | 22.4 | 22.2 |
| 1974 | 21.0 | 21.8 | 21.7 | 23.3 | 22.2 | 21.9 | 17.4 | 20.3 | 23.2 | 24.9 | 25.9 | 23.1 | 22.2 |
| 1975 | 23.8 | 21.0 | 21.0 | 22.4 | 21.0 | 21.4 | 19.8 | 20.6 | 22.0 | 22.7 | 20.4 | 17.1 | 21.1 |

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
(ADJUSTED TO INCLUDE DIVERSION FOR WATER SUPPLY)

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | 100 | 74.4 | 53.8 | 42.3 | 43.3 | 46.6 | 44.9 | 167 | 360 | 232 | 188 | 336 | 141 |
| 1948 | 273 | 143 | 112 | 77.4 | 45.9 | 38.3 | 36.5 | 197 | 428 | 298 | 272 | 231 | 180 |
| 1949 | 190 | 86.6 | 63.6 | 45.2 | 33.3 | 31.2 | 34.5 | 193 | 604 | 483 | 361 | 268 | 200 |
| 1950 | 180 | 103 | 67.2 | 49.6 | 34.7 | 37.1 | 35.2 | 69.1 | 440 | 276 | 151 | 111 | 130 |
| 1951 | 67.0 | 41.1 | 43.7 | 39.8 | 34.4 | 29.9 | 33.4 | 130 | 425 | 280 | 192 | 435 | 146 |
| 1952 | 169 | 94.8 | 59.5 | 42.2 | 30.7 | 31.5 | 28.1 | 105 | 394 | 329 | 246 | 274 | 150 |
| 1953 | 267 | 197 | 66.2 | 56.1 | 44.9 | 32.0 | 41.5 | 270 | 695 | 300 | 248 | 261 | 207 |
| 1954 | 182 | 87.1 | 70.6 | 46.6 | 38.4 | 34.0 | 29.8 | 174 | 246 | 151 | 224 | 160 | 120 |
| 1955 | 127 | 107 | 51.7 | 45.5 | 33.9 | 31.6 | 30.6 | 87.4 | 483 | 662 | 315 | 228 | 185 |
| 1956 | 103 | 70.8 | 40.6 | 32.2 | 33.5 | 30.8 | 37.9 | 126 | 394 | 311 | 236 | 170 | 133 |
| 1957 | 90.9 | 69.2 | 56.5 | 42.9 | 35.1 | 28.2 | 36.6 | 243 | 400 | 184 | 149 | 256 | 133 |
| 1958 | 194 | 127 | 79.6 | 59.8 | 43.8 | 38.2 | 48.9 | 180 | 481 | 243 | 259 | 140 | 158 |
| 1959 | 144 | 79.5 | 54.9 | 35.5 | 35.0 | 29.8 | 39.2 | 230 | 558 | 262 | 253 | 223 | 163 |
| 1960 | 116 | 81.1 | 59.4 | 52.4 | 37.3 | 26.5 | 36.5 | 353 | 452 | 291 | 275 | 358 | 179 |
| 1961 | 220 | 117 | 106 | 94.8 | 68.6 | 51.5 | 59.4 | 241 | 439 | 364 | 277 | 312 | 201 |
| 1962 | 277 | 104 | 60.5 | 46.7 | 40.8 | 35.4 | 40.7 | 152 | 687 | 367 | 169 | 152 | 178 |
| 1963 | 102 | 83.2 | 65.5 | 53.0 | 41.4 | 28.3 | 32.1 | 251 | 565 | 622 | 412 | 198 | 205 |
| 1964 | 121 | 52.1 | 56.0 | 41.4 | 37.8 | 33.2 | 65.6 | 90.6 | 761 | 380 | 210 | 148 | 166 |
| 1965 | 124 | 77.9 | 64.7 | 41.5 | 36.0 | 42.7 | 55.8 | 124 | 362 | 354 | 272 | 347 | 159 |
| 1966 | 255 | 125 | 79.1 | 50.8 | 39.9 | 31.9 | 37.6 | 92.4 | 461 | 269 | 246 | 311 | 167 |
| 1967 | 211 | 101 | 66.1 | 46.6 | 35.6 | 31.0 | 34.0 | 174 | 414 | 321 | 299 | 491 | 186 |
| 1968 | 170 | 95.2 | 58.4 | 43.3 | 40.5 | 33.7 | 33.6 | 291 | 511 | 306 | 165 | 107 | 155 |
| 1969 | 70.5 | 46.8 | 36.0 | 35.4 | 28.0 | 23.4 | 27.3 | 142 | 286 | 150 | 117 | 79.4 | 87.0 |
| 1970 | 216 | 73.1 | 60.1 | 38.2 | 33.2 | 30.6 | 32.7 | 132 | 386 | 344 | 264 | 150 | 147 |
| 1971 | 93.2 | 111 | 62.7 | 46.0 | 37.5 | 28.2 | 29.8 | 56.9 | 407 | 440 | 524 | 189 | 170 |
| 1972 | 145 | 82.9 | 55.8 | 42.4 | 33.3 | 32.8 | 26.8 | 85.6 | 447 | 428 | 175 | 216 | 148 |
| 1973 | 256 | 118 | 77.0 | 46.0 | 38.0 | 30.4 | 32.2 | 83.6 | 299 | 254 | 201 | 135 | 132 |
| 1974 | 96.4 | 64.1 | 48.2 | 37.9 | 30.9 | 28.2 | 33.7 | 170 | 333 | 210 | 125 | 113 | 108 |
| 1975 | 102 | 76.6 | 59.6 | 50.9 | 41.2 | 30.0 | 29.7 | 154 | 411 | 357 | 167 | 220 | 142 |
| MEAN | 161 | 92.7 | 63.3 | 47.7 | 38.2 | 33.0 | 37.4 | 164 | 453 | 326 | 241 | 228 | 158 |
| MONTHLY PERCENT | 9 | 5 | 3 | 3 | 2 | 2 | 2 | 9 | 24 | 18 | 13 | 12 | |

15276000 SHIP CREEK NEAR ANCHORAGE--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water year 1949-50, 1952-75.

PERIOD OF DAILY RECORD.--May 1949 to May 1950, July to September 1950.

REMARKS.--Once-daily readings by observer for period of daily record.

EXTREMES.--Maximum observed during period of daily record, 13.0°C August 14, 15, 1950; minimum, 0.0°C most days during winter period.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1958 | | 1959-cont | | 1961-cont | | 1963-cont | | 1968 | | 1971-cont | |
| 12- 3-51 | 0.5 | 10- 4-57 | 1.0 | 8-25-59 | 9.0 | 2- 3-61 | 0.5 | 8-26-63 | 6.5 | 10- 4-67 | 3.5 | 2- 2-71 | 0.0 |
| 1- 5-52 | 0.0 | 10-21-57 | 5.0 | 9-29-59 | 6.5 | 2-16-61 | 0.5 | 9-10-63 | 9.5 | 11-13-67 | 1.0 | 3-17-71 | 0.5 |
| 5- 6-52 | 0.0 | 10- 2-57 | 3.0 | 1960 | | 2-23-61 | 0.0 | 9-24-63 | 5.5 | 1- 2-68 | 0.0 | 5-17-71 | 2.0 |
| 6-13-52 | 9.0 | 11- 5-57 | 3.5 | 10-12-59 | 1.0 | 4-10-61 | 2.0 | 1964 | | 2-13-68 | 0.0 | 7-13-71 | 7.5 |
| 1953 | | 12-10-57 | 1.0 | 11- 2-59 | 0.0 | 4-13-61 | 1.0 | 10- 7-63 | 4.0 | 3-28-68 | 0.0 | 1972 | |
| 11-19-52 | 0.0 | 3-26-58 | 0.5 | 11-16-59 | 0.0 | 5-19-61 | 4.0 | 10-22-63 | 2.0 | 4-29-68 | 2.0 | 10- 6-71 | 1.0 |
| 5- 4-53 | 4.5 | 4-29-58 | 1.0 | 11-30-59 | 0.0 | 6-27-61 | 8.5 | 12- 3-63 | 0.0 | 6- 4-68 | 6.0 | 1- 3-72 | 0.0 |
| 5- 8-53 | 3.5 | 5-13-58 | 3.0 | 12-15-59 | 0.5 | 8-16-61 | 8.5 | 3-25-64 | 0.0 | 6-13-68 | 6.0 | 2-23-72 | 0.0 |
| 6- 6-53 | 5.5 | 6- 5-58 | 7.0 | 12-22-59 | 0.0 | 9- 6-61 | 6.0 | 4- 8-64 | 0.5 | 7- 1-68 | 6.0 | 3-24-72 | 0.0 |
| 6-29-53 | 7.0 | 6-26-58 | 10.5 | 12-31-59 | 0.0 | 1962 | | 4-10-64 | 1.0 | 9- 3-68 | 4.0 | 5-24-72 | 3.0 |
| 7-21-53 | 7.0 | 7- 8-58 | 11.0 | 1-11-60 | 0.5 | 10- 5-61 | 3.0 | 8- 7-64 | 10.5 | 1969 | | 1973 | |
| 1954 | | 8-13-58 | 8.0 | 1-28-60 | 0.5 | 12-14-61 | 0.0 | 1965 | | 10- 1-68 | 2.0 | 10-30-72 | 1.0 |
| 10- 2-53 | 1.0 | 8-22-58 | 8.5 | 2- 9-60 | 0.0 | 1-16-62 | 0.0 | 10- 2-64 | 2.0 | 11-29-68 | 0.0 | 12-11-72 | 0.5 |
| 3-16-54 | 1.0 | 9- 4-58 | 6.0 | 2-18-60 | 0.5 | 1-26-62 | 0.0 | 10-22-64 | 1.5 | 3-26-69 | 0.0 | 8- 1-73 | 7.0 |
| 4- 5-54 | 0.5 | 9-12-58 | 6.5 | 2-26-60 | 0.5 | 2- 7-62 | 0.0 | 11- 2-64 | 0.5 | 4- 7-69 | 1.0 | 9-12-73 | 5.0 |
| 5- 4-54 | 3.5 | 9-25-58 | 2.0 | 3-10-60 | 0.0 | 2-16-62 | 1.0 | 12-17-64 | 0.0 | 5-27-69 | 6.0 | 1974 | |
| 6- 4-54 | 6.5 | 1959 | | 3-22-60 | 0.5 | 3- 8-62 | 0.0 | 1- 6-65 | 0.0 | 7- 2-69 | 8.0 | 11- 6-73 | 0.0 |
| 6-18-54 | 13.0 | 10-10-58 | 1.0 | 3-31-60 | 0.5 | 3-28-62 | 0.0 | 2- 8-65 | 0.0 | 7-14-69 | 9.0 | 1- 7-74 | 0.5 |
| 6-25-54 | 10.0 | 10-29-58 | 1.5 | 4-19-60 | 0.5 | 5- 7-62 | 4.0 | 4-22-65 | 1.5 | 8-20-69 | 5.0 | 2-11-74 | 1.0 |
| 7-22-54 | 9.5 | 11-18-58 | 0.5 | 4-26-60 | 1.0 | 5-16-62 | 4.0 | 5- 6-65 | 1.0 | 1970 | | 3-28-74 | 1.0 |
| 8- 2-54 | 9.5 | 2-12-59 | 0.5 | 5-11-60 | 1.0 | 5-28-62 | 5.0 | 5-24-65 | 4.5 | 10- 7-69 | 4.5 | 5- 6-74 | 3.0 |
| 8-20-54 | 9.5 | 2-20-59 | 0.5 | 5-31-60 | 5.5 | 8- 9-62 | 8.0 | 8-31-65 | 7.0 | 10-23-69 | 0.5 | 5-20-74 | 4.0 |
| 9-30-54 | 7.0 | 2-26-59 | 0.0 | 6-22-60 | 8.0 | 8-23-62 | 8.0 | 1966 | | 12-18-69 | 0.0 | 7- 1-74 | 9.0 |
| 1955 | | 3-10-59 | 0.5 | 7- 6-60 | 7.0 | 1963 | | 2-25-66 | 1.0 | 1- 8-70 | 0.0 | 8-12-74 | 7.0 |
| 12-10-54 | 0.0 | 3-27-59 | 0.5 | 8-12-60 | 10.0 | 10-17-62 | 3.0 | 7-11-66 | 8.0 | 1- 9-70 | 0.0 | 9-12-74 | 8.0 |
| 1956 | | 4-20-59 | 1.0 | 8-19-60 | 8.0 | 10-29-62 | 0.5 | 1967 | | 3- 2-70 | 1.5 | 1975 | |
| 6-27-56 | 6.5 | 4-27-59 | 2.0 | 9-20-60 | 5.5 | 1-10-63 | 0.0 | 10- 4-66 | 4.0 | 4- 3-70 | 1.5 | 10-18-74 | 2.0 |
| 7-12-56 | 6.0 | 5- 7-59 | 2.0 | 1961 | | 3- 1-63 | 0.5 | 11- 1-66 | 2.0 | 6- 9-70 | 5.5 | 1-13-75 | 0.0 |
| 9- 5-56 | 8.0 | 5-19-59 | 2.0 | 11-10-60 | 0.0 | 5-16-63 | 7.0 | 2-16-67 | 0.0 | 7-27-70 | 10.5 | 3-20-75 | 0.5 |
| 1957 | | 6-10-59 | 5.0 | 11-16-60 | 0.0 | 5-31-63 | 4.0 | 3-21-67 | 0.0 | 8-18-70 | 7.0 | 4-10-75 | 0.5 |
| 5-23-57 | 4.0 | 7- 7-59 | 9.5 | 12- 9-60 | 0.5 | 6-26-63 | 6.5 | 5- 3-67 | 3.5 | 1971 | | 4-23-75 | 1.5 |
| 5-23-57 | 4.5 | 7-21-59 | 5.0 | 12-28-60 | 0.0 | 7- 5-63 | 13.5 | 5-31-67 | 5.0 | 10- 9-70 | 2.5 | 5-16-75 | 3.0 |
| 6-21-57 | 8.0 | 7-31-59 | 3.5 | 1- 4-61 | 0.0 | 7-22-63 | 7.0 | 7-15-67 | 7.5 | 10-16-70 | 1.0 | | |
| 7- 3-57 | 8.5 | | | | | 8- 6-63 | 8.0 | 8-16-67 | 9.0 | | | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | Max | --- | --- | --- | --- | --- | --- | --- | a | 8.0 | 10.0 | 10.0 | 9.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 4.5 | 6.0 | 7.0 | 5.0 |
| 1950 | Max | 4.5 | 2.0 | 0.0 | 0.0 | 0.0 | 1.5 | 3.5 | 8.5 | --- | 12.0 | 13.0 | 8.5 |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | --- | 4.5 | 5.5 | 5.5 |

a Data insufficient to compute monthly maximum or minimum.

## 15276500 SHIP CREEK AT ELMENDORF AIR FORCE BASE

LOCATION.--Lat 61°14'20", long 149°47'24", in NE¼ sec.10, T.13 N., R.3 W., Municipality of Anchorage, near right bank on downstream side of bridge at Elmendorf Air Force Base, 3.7 mi (6.0 km) northeast of Anchorage Post Office, and 4.9 mi (7.9 km) above mouth.

BASIN CHARACTERISTICS.--Drainage area, 113 $mi^2$ (293 $km^2$); main-channel slope 121 ft/mi (22.9 m/km); stream length, 23.0 mi (37.0 km); area of lakes and ponds, 1 percent; mean elevation, 2,600 ft (792 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1963 to September 1971.

GAGE.--Water-stage recorder. Datum of gage is 142.82 ft (43.532 m) above mean sea level, from levels of Sept. 3, 1968 to USC & GS benchmark, adjusted 1966. Prior to July 9, 1965, nonrecording gage at datum 1.6 ft (0.5 m) higher.

REMARKS.--Diversion above station for water supply to Fort Richardson, Elmendorf Air Force Base, and Municipality of Anchorage (see station 15276000).

AVERAGE DISCHARGE.--8 years, 113 $ft^3/s$ (3.200 $m^3/s$), 81,870 acre-ft/yr (101 $hm^3/yr$), unadjusted for diversion.

EXTREMES.--Maximum discharge during period of record, 1,610 $ft^3/s$ (45.6 $m^3/s$) Aug. 9, 1971, gage height, 4.89 ft (1.490 m); minimum daily, 0.36 $ft^3/s$ (0.010 $m^3/s$) Apr. 13,14, 1970.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1963a | June 23, 1963 | 758 | 2.90 | May 1, 1963 | 37 |
| | July 17, 1963 | --- | 3.00 | | |
| 1964 | June 8, 1964 | 766 | 2.87 | Mar. 28-31, 1964 | 2.0 |
| 1965 | Sept. 20, 1965 | 397 | 3.72 | Feb. 19-22, 1965 | 2.7 |
| 1966 | June 8, 1966 | 626 | 4.19 | Mar. 30, 1966 | 2.2 |
| 1967 | Sept. 18, 1967 | 875 | 4.74 | Mar. 10,20,21,23,26,30, Apr. 1, 1967 | 2.5 |
| 1968 | May 29, 1968 | 601 | 3.86 | Mar. 30, Apr. 10, 1968 | 2.5 |
| 1969 | May 27, 1969 | 432 | 3.33 | Mar. 15 to Apr. 9, Apr. 23, 1969 | 1.2 |
| 1970 | Oct. 7, 1969 | 637 | 3.82 | Apr. 13,14, 1970 | 0.36 |
| 1971 | Aug. 9, 1971 | 1,610 | 4.89 | Apr. 14, 1971 | 0.60 |

a Period May to September.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1963 | | | | | | | | 200 | 492 | 508 | 346 | 159 | |
| 1964 | 98.3 | 18.3 | 21.2 | 14.7 | 12.0 | 7.94 | 32.3 | 57.5 | 594 | 313 | 176 | 102 | 120 |
| 1965 | 86.6 | 39.7 | 30.8 | 9.23 | 4.62 | 15.4 | 23.3 | 87.3 | 286 | 269 | 213 | 264 | 111 |
| 1966 | 185 | 54.2 | 28.5 | 18.2 | 8.42 | 2.80 | 12.3 | 72.9 | 390 | 243 | 218 | 256 | 124 |
| 1967 | 117 | 66.2 | 33.6 | 14.4 | 3.96 | 2.92 | 5.22 | 146 | 334 | 280 | 276 | 380 | 144 |
| 1968 | 139 | 56.4 | 26.2 | 17.3 | 7.84 | 7.41 | 9.84 | 227 | 417 | 263 | 112 | 64.2 | 113 |
| 1969 | 35.9 | 9.97 | 2.27 | 1.71 | 1.35 | 1.25 | 3.88 | 108 | 245 | 118 | 82.0 | 39.6 | 54.2 |
| 1970 | 176 | 32.9 | 18.5 | 2.17 | 1.35 | 1.70 | 1.26 | 100 | 335 | 295 | 222 | 114 | 109 |
| 1971 | 56.3 | 76.1 | 19.3 | 4.69 | 1.78 | 1.31 | 1.56 | 20.3 | 354 | 403 | 450 | 159 | 130 |
| MEAN | 119 | 44.2 | 22.5 | 10.3 | 5.16 | 5.09 | 11.2 | 113 | 383 | 299 | 233 | 171 | 113 |
| MONTHLY PERCENT | 8 | 3 | 2 | 1 | 0 | 0 | 1 | 8 | 27 | 21 | 16 | 12 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1963-71.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1963 | | 1965 | | 1967-cont | | 1968-cont | | 1969 | | 1970 | | 1971 | |
| 7-22-63 | 10.0 | 10-22-64 | 1.0 | 2-16-67 | 0.5 | 1-10-68 | 0.0 | 10- 1-68 | 4.0 | 10-16-69 | 2.5 | 10- 9-70 | 4.0 |
| 8- 6-63 | 8.0 | 1- 6-65 | 0.0 | 3-21-67 | 0.0 | 2-13-68 | 1.0 | 11- 8-68 | 0.5 | 10-23-69 | 1.0 | 12- 2-70 | 1.0 |
| 9-10-63 | 9.5 | 2- 8-65 | 1.0 | 5- 3-67 | 9.0 | 3- 6-68 | 1.5 | 11-29-68 | 2.0 | 12-17-69 | 1.0 | 2- 2-71 | 2.5 |
| 1964 | | 5-24-65 | 7.0 | 6- 1-67 | 6.0 | 3-28-68 | 1.5 | 12-27-68 | 2.5 | 3- 2-70 | 3.0 | 5-17-71 | 4.0 |
| 10- 7-63 | 5.5 | 6- 8-65 | 7.0 | 7- 5-67 | 9.5 | 4-10-68 | 4.0 | 1- 3-69 | 1.5 | 4- 3-70 | 3.5 | 6-23-71 | 10.0 |
| 12- 3-63 | 0.0 | 8-31-65 | 8.5 | 8-16-67 | 10.0 | 4-29-68 | 5.5 | 3-26-69 | 3.0 | 5-13-70 | 11.0 | 9- 8-71 | 5.5 |
| 4- 3-64 | 1.0 | 1966 | | 1968 | | 6- 4-68 | 6.0 | 6- 9-69 | 7.0 | 5-21-70 | 6.5 | | |
| 4- 6-64 | 2.0 | 5-25-66 | 10.0 | 10- 4-67 | 4.5 | 7- 1-68 | 7.0 | 7- 9-69 | 10.0 | 6- 3-70 | 7.5 | | |
| 4- 8-64 | 1.0 | 1967 | | 11-13-67 | 1.0 | 8- 8-68 | 10.0 | 8-20-69 | 9.0 | 7-27-70 | 11.5 | | |
| 8- 7-64 | 11.0 | 10- 3-66 | 5.5 | 1- 2-68 | 0.5 | | | | | 8-18-70 | 9.0 | | |

## 15276570 SHIP CREEK BELOW POWER PLANT AT ELMENDORF AIR FORCE BASE

LOCATION.--Lat 61°13'29", long 149°50'39", in SE¼ sec.8, T.13 N., R.3 W., Municipality of Anchorage, on left bank 0.5 mi (0.8 km) downstream from southwest corner of Elmendorf Air Force Base, 500 ft (150 m) downstream from North Sitka Street, and 2.0 mi (3.2 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 115 $mi^2$ (298 $km^2$); main-channel slope, 110 ft/mi (20.8 m/km); stream length, 25.0 mi (40.2 km); area of lakes and ponds, 1 percent; mean elevation, 2,400 ft (730 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft (24 m), from topographic map. Prior to Aug. 7, 1972, gage was located 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Diversion above station for water supply to Fort Richardson, Elmendorf Air Force Base, and Municipality of Anchorage (see station 15276000). Water also diverted for cooling of power plants and fish hatchery operation and returned to stream above this station.

AVERAGE DISCHARGE.--5 years, 122 $ft^3/s$ (3.455 $m^3/s$), 88,390 acre-ft/yr (109 $hm^3/yr$), unadjusted for diversion.

EXTREMES.--Maximum discharge during period of record, 1,600 $ft^3/s$ (45.3 $m^3/s$) Aug. 9, 1971 (estimated from records at station 15276500); minimum, 5.8 $ft^3/s$ (0.16 $m^3/s$) Apr. 14, 1971.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Momentary minimum Date | Discharge | Gage height |
|---|---|---|---|---|---|---|
| 1971 | Aug. 9, 1971 | a1,600 | --- | Apr. 14, 1971 | 5.8 | 4.91 |
| 1972 | June 16, 1972 | b900 | --- | Apr. 16-29, 1972 | c12 | --- |
| 1973 | June 22, 1973 | 497 | 3.38 | Mar. 10, 1973 | d17 | --- |
| 1974 | May 31, 1974 | 501 | 3.65 | Mar. 22, 1974 | 17 | 1.39 |
| 1975 | June 29, 1975 | 626 | 3.99 | Apr. 8, 1975 | 13 | 1.64 |

a Estimated from records at station 15276500.
b Maximum daily.
c Minimum daily.
d May have been less during period of ice affect Mar. 16-25, 1973.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1971 | 58.1 | 46.8 | 40.9 | 20.9 | 17.6 | 14.9 | 18.9 | 38.0 | 426 | 393 | 455 | 173 | 147 |
| 1972 | 138 | 56.8 | 29.0 | 21.9 | 19.1 | 15.9 | 12.7 | 66.2 | 433 | 411 | 151 | 204 | 131 |
| 1973 | 284 | 112 | 63.8 | 32.9 | 23.2 | 21.0 | 26.2 | 75.2 | 276 | 227 | 175 | 118 | 118 |
| 1974 | 86.2 | 57.5 | 28.9 | 23.7 | 22.1 | 22.2 | 23.6 | 135 | 325 | 201 | 94.8 | 98.9 | 91.6 |
| 1975 | 43.1 | 52.3 | 38.1 | 22.3 | 20.4 | 18.7 | 23.2 | 134 | 393 | 364 | 136 | 203 | 125 |
| MEAN | 127 | 73.9 | 40.1 | 24.2 | 20.3 | 18.6 | 20.7 | 89.8 | 370 | 319 | 202 | 158 | 122 |
| MONTHLY PERCENT | 9 | 5 | 3 | 2 | 1 | 1 | 1 | 6 | 25 | 22 | 14 | 11 | |

### WATER TEMPERATURE RECORDS

PERIOD OF DAILY RECORD.--May to August 1971, December 1971, May 1972 to September 1975.

REMARKS.--Continuous water-temperature recorder. Water temperatures at low flow are significantly increased by power plant effluent located 0.9 mi (1.4 km) upstream. Prior to August 1972, sampling site was 0.5 mi (0.8 km) upstream.

EXTREMES.--Maximum recorded during period of daily record, 18.0°C Aug. 15, 16, 1974; minimum, 0.0°C Jan. 13, 14, 1974.

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1971 | Max | --- | --- | --- | --- | --- | --- | --- | a | 15.5 | 11.0 | a | --- |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 4.0 | 4.5 | a | --- |
| 1972 | Max | --- | --- | 7.5 | --- | --- | --- | --- | a | a | --- | 14.5 | 13.0 |
| | Min | --- | --- | 4.0 | --- | --- | --- | --- | a | a | --- | 10.5 | 3.0 |
| 1973 | Max | 5.5 | 5.5 | 6.5 | 9.0 | 11.0 | 13.5 | 14.5 | 15.5 | 13.5 | 15.0 | 14.5 | 11.0 |
| | Min | 1.5 | 1.0 | 2.5 | 1.5 | 3.5 | 4.5 | 7.0 | 7.0 | 7.0 | 8.5 | 7.5 | 4.5 |
| 1974 | Max | 8.0 | 7.0 | 7.5 | 6.5 | 10.0 | 10.0 | 10.5 | 11.5 | 12.5 | 15.5 | 18.0 | 15.5 |
| | Min | 0.5 | 1.5 | 1.5 | 0.0 | 3.5 | 3.0 | 5.0 | 5.5 | 5.5 | 8.0 | 11.0 | 5.5 |
| 1975 | Max | 7.0 | 6.5 | 6.0 | 8.5 | 10.5 | 12.0 | 13.5 | 11.0 | 12.0 | 13.5 | 14.0 | 13.0 |
| | Min | 3.0 | 2.5 | 3.0 | 2.0 | 3.5 | 5.5 | 8.0 | 4.0 | 4.5 | 6.5 | 9.0 | 5.5 |

a Data insufficient to compute monthly maximum or minimum.

## 15276650 DITCH ON ELMENDORF AIR FORCE BASE

LOCATION.--Lat 61°14'25", long 149°51'30", in SW¼ sec.5, T.13 N., R.3 W., Municipality of Anchorage, on right bank 100 ft (30 m) downstream from Acacia Drive on Elmendorf Air Force Base, and 0.9 mi (1.4 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 3.73 $mi^2$ (9.66 $km^2$).

PERIOD OF RECORD.--April 1973 to July 1975.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (40 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 195 $ft^3/s$ (5.52 $m^3/s$) Apr. 28, 1975, gage height, 4.3 ft (1.31 m), from floodmarks, from rating extended above 33 $ft^3/s$ (0.93 $m^3/s$) on basis of slope-area measurement of peak flow; minimum, 0.27 $ft^3/s$ (0.008 $m^3/s$) Apr. 15, 1974.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1973a | Aug. 21, 1973 | 26 | 1.87 | June 28, 1973 | 0.57 |
| 1974 | bJuly 9, 1974 | 34 | 2.33 | Apr. 15, 1974 | c0.27 |
| 1975d | Apr. 28, 1975 | 195 | 4.3 | Feb. 13-16, 1975 | 0.37 |

a Period April to September.
b Also Sept. 23, 1974.
c Momentary minimum.
d Period October to July.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1973 | --- | --- | --- | --- | --- | --- | 2.02 | 1.71 | 1.28 | 1.88 | 1.59 | 1.15 | --- |
| 1974 | 1.23 | 0.96 | 1.24 | 0.95 | 0.73 | 2.06 | 0.57 | 0.74 | 1.13 | 1.75 | 1.67 | 1.55 | 1.22 |
| 1975 | 1.54 | 1.27 | 0.86 | 0.79 | 0.59 | 0.72 | 13.1 | 3.14 | 2.08 | --- | --- | --- | --- |

## 15277100 EAGLE RIVER AT EAGLE RIVER

LOCATION.--Lat 61°18'28", long 149°33'32", in NW¼ sec.13, T.14 N., R.2 W., Municipality of Anchorage, on right bank 800 ft (240 m) upstream from Eagle River campground, 0.6 mi (1.0 km) upstream from Glenn Highway crossing, and 1.0 mi (1.6 km) south of Eagle River.

BASIN CHARACTERISTICS.--Drainage area, 192 mi² (497 km²); main-channel slope, 112 ft/mi (21.2 m/km); stream length, 33.5 mi (53.9 km); area of lakes and ponds, 1 percent; mean elevation, 3,120 ft (951 m); glacier area, 13 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (76 m), from topographic map.

AVERAGE DISCHARGE.--10 years, 498 ft³/s (14.10 m³/s), 35.22 in/yr (895 mm/yr), 360,800 acre-ft/yr (445 hm³/yr).

EXTREMES.--Maximum discharge during period of record, 6,240 ft³/s (177 m³/s) Sept. 18, 1967, gage height, 9.49 ft (2.893 m); minimum daily, about 24 ft³/s (0.68 m³/s) Jan. 29 to Feb. 5, 1974.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1966 | Aug. 8, 1966 | 3,650 | 7.52 | Jan. 8 to Apr. 25, 1966 | 50 |
| 1967 | Sept. 18, 1967 | 6,240 | 9.49 | Feb. 8 to Mar. 15, 1967 | 50 |
| 1968 | Aug. 8, 1968 | 2,560 | 7.06 | Mar. 11 to Apr. 20, 1968 | 60 |
| 1969 | June 17, 1969 | 2,530 | 7.10 | Jan. 29 to Feb. 10, 1969 | 30 |
| 1970 | Oct. 7, 1969 | 3,150 | 7.40 | Apr. 16-25, 1970 | 75 |
| 1971 | Aug. 9, 1971 | 4,750 | 8.50 | Apr. 16-30, 1971 | 35 |
| 1972 | Sept. 13, 1972 | 2,700 | 7.27 | Feb. 20 to Mar. 20, 1972 | 33 |
| 1973 | Aug. 22, 1973 | 2,570 | 7.22 | Mar. 6 to Apr. 5, 1973 | 44 |
| 1974 | Aug. 30, 1974 | 2,920 | 7.43 | Jan. 29 to Feb. 5, 1974 | 24 |
| 1975 | July 11, 1975 | 2,710 | 7.28 | Feb. 8 to Mar. 26, 1975 | 44 |

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | 425 | 162 | 82.6 | 51.5 | 50.0 | 50.0 | 51.0 | 235 | 1150 | 1858 | 1958 | 1177 | 608 |
| 1967 | 342 | 103 | 77.4 | 66.9 | 51.2 | 52.6 | 75.0 | 255 | 1507 | 2116 | 2221 | 1593 | 709 |
| 1968 | 288 | 133 | 81.9 | 71.6 | 63.6 | 60.6 | 63.0 | 356 | 961 | 1775 | 1450 | 476 | 485 |
| 1969 | 155 | 107 | 70.0 | 38.7 | 31.9 | 41.6 | 78.5 | 322 | 1252 | 1564 | 874 | 457 | 418 |
| 1970 | 707 | 174 | 119 | 99.4 | 90.0 | 84.8 | 78.4 | 218 | 739 | 1303 | 1241 | 588 | 457 |
| 1971 | 181 | 103 | 74.8 | 57.2 | 52.0 | 40.1 | 35.7 | 82.1 | 725 | 1772 | 2002 | 552 | 478 |
| 1972 | 191 | 100 | 90.2 | 65.2 | 39.0 | 36.4 | 59.0 | 145 | 689 | 1747 | 1589 | 970 | 479 |
| 1973 | 418 | 143 | 123 | 73.5 | 48.4 | 44.3 | 71.4 | 160 | 662 | 1290 | 1227 | 430 | 394 |
| 1974 | 267 | 85.7 | 53.5 | 39.0 | 26.1 | 40.4 | 77.0 | 272 | 921 | 1472 | 1489 | 1141 | 493 |
| 1975 | 231 | 123 | 81.1 | 48.1 | 44.5 | 44.5 | 77.0 | 313 | 746 | 1652 | 1307 | 756 | 456 |
| MEAN | 321 | 123 | 85.4 | 61.1 | 49.7 | 49.5 | 66.6 | 236 | 935 | 1655 | 1536 | 814 | 498 |
| MONTHLY PERCENT | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 16 | 28 | 26 | 14 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1966-75.

PERIOD OF DAILY RECORD.--November 1967 to September 1969, June to July 1971.

REMARKS.--Once-daily readings by observer on most days during period of daily record.

EXTREMES.--Maximum observed during period of daily record, 14.0°C July 19, 22, 1968, June 14, 1969; minimum, 0.0°C most days during winter period.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | | 1967-cont | | 1968-cont | | 1970 | | 1971-cont | | 1972-cont | | 1974-cont | |
| 1-11-66 | 0.0 | 5- 4-67 | 4.0 | 5- 6-68 | 4.0 | 10- 7-69 | 4.0 | 12- 8-70 | 0.0 | 6- 9-72 | 9.0 | 5- 3-74 | 1.5 |
| 2-15-66 | 0.5 | 5-12-67 | 9.5 | 6- 3-68 | 7.0 | 10-26-69 | 0.0 | 3-10-71 | 0.0 | 8- 3-72 | 6.5 | 5- 8-74 | 6.0 |
| 2-17-66 | 0.5 | 6- 5-67 | 7.0 | 7- 3-68 | 8.0 | 12-16-69 | 0.0 | 5-19-71 | 4.0 | 1973 | | 7-12-74 | 8.0 |
| 3- 4-66 | 0.0 | 6-29-67 | 6.5 | 8-13-68 | 7.0 | 3- 3-70 | 0.0 | 5-27-71 | 7.0 | 12-13-72 | 0.5 | 8-13-74 | 7.0 |
| 3- 9-66 | 0.0 | 8-17-67 | 8.0 | 1969 | | 4-29-70 | 4.5 | 6- 1-71 | 5.5 | 2- 5-73 | 0.0 | 1975 | |
| 3-14-66 | 0.0 | 9-19-67 | 4.5 | 10- 3-68 | 4.0 | 5-21-70 | 8.0 | 6-21-71 | 6.5 | 5- 8-73 | 7.0 | 10-17-74 | 2.0 |
| 9-15-66 | 5.0 | 9-21-67 | 4.5 | 11-27-68 | 0.0 | 6-16-70 | 8.0 | 7-14-71 | 6.0 | 6-27-73 | 7.0 | 10-25-74 | 3.0 |
| 1967 | | 1968 | | 5-27-69 | 7.0 | 7-22-70 | 8.0 | 8-14-71 | 6.0 | 9-12-73 | 5.5 | 1-14-75 | 0.0 |
| 11-16-66 | 0.0 | 10- 4-67 | 2.0 | 7-15-69 | 6.0 | 8-28-70 | 6.0 | 1972 | | 1974 | | 5- 3-75 | 0.0 |
| 2-16-67 | 0.0 | 11- 7-67 | 0.0 | 8-20-69 | 7.0 | 1971 | | 10- 4-71 | 3.0 | 10- 2-73 | 4.0 | 5- 8-75 | 6.5 |
| 3-20-67 | 0.0 | 1-18-68 | 0.0 | | | 10-15-70 | 0.5 | 12-28-71 | 0.0 | 12- 2-73 | 0.0 | 5-29-75 | 8.5 |
| | | | | | | | | 3-30-72 | 0.0 | 1-29-74 | 0.0 | 8- 8-75 | 7.5 |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1968 | Max | --- | a | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.0 | 13.0 | 14.0 | 13.0 | 9.0 |
| | Min | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.0 | 8.0 | 8.0 | 3.0 |
| 1969 | Max | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 13.0 | 14.0 | 12.0 | 12.0 | 8.0 |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 8.0 | 7.0 | 7.0 | 6.0 |
| 1971 | Max | --- | --- | --- | --- | --- | --- | --- | --- | 12.0 | a | --- | --- |
| | Min | --- | --- | --- | --- | --- | --- | --- | --- | a | a | --- | --- |

a Data insufficient to compute monthly maximum or minimum.

## 15277410 PETERS CREEK NEAR BIRCHWOOD

LOCATION.--Lat 61° 25'08", long 149°29'20", in NW¼SE¼ sec.5, T.15 N., R.1 W., Municipality of Anchorage, on left bank upstream from Alaska Railroad bridge, 0.5 mi (0.8 km) downstream from unnamed tributary, 0.8 mi (1.3 km) upstream from mouth, and 1.0 mi (1.6 km) north of Birchwood.

BASIN CHARACTERISTICS.--Drainage area, 87.8 mi$^2$ (227.4 km$^2$); slope, 133 ft/mi (25.2 m/km); stream length, 21.0 mi (33.8 km); area of lakes and ponds, 0 percent; mean elevation, 3,150 ft (960 m); glacier area, 2 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 75 ft (22.9 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 564 ft$^3$/s (16.0 m$^3$/s) June 30, 1975, gage height, 5.75 ft (1.753 m); maximum gage height, 6.37 ft (1.942 m) Dec. 30, 1974, backwater from ice; minimum daily discharge, 18 ft$^3$/s (0.51 m$^3$/s) Jan. 5, 6, 1975.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1973a | Aug. 22, 1973 | 332 | 5.61 | Sept. 29, 1973 | b105 |
| 1974 | Aug. 28, 1974 | 300 | 5.39 | Mar. 27 to Apr. 10, 1974 | 24 |
| 1975 | Dec. 30, 1974 | --- | c6.37 | Jan. 5,6, 1975 | 18 |
| | June 30, 1975 | 564 | 5.75 | | |

a Period August to September
b Momentary minimum, gage height, 4.65 ft.
c Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1973 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 210 | 129 | --- |
| 1974 | 93.6 | 54.1 | 48.1 | 47.0 | 44.6 | 31.9 | 26.5 | 48.6 | 157 | 230 | 193 | 153 | 94.3 |
| 1975 | 69.3 | 41.7 | 34.4 | 32.1 | 25.5 | 25.3 | 23.0 | 64.0 | 221 | 349 | 181 | 169 | 104 |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1973-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|
| 1973 | | 1974-cont | | 1974-cont | | 1975-cont | | 1975-cont | |
| 8- 6-73 | 6.5 | 11- 6-73 | 0.5 | 8-12-74 | 7.0 | 1-14-75 | 0.0 | 5- 8-75 | 4.5 |
| 8-10-73 | 7.0 | 1- 3-74 | 1.0 | 1975 | | 2-18-75 | 0.0 | 5-29-75 | 8.0 |
| 9-12-73 | 4.5 | 4-25-74 | 3.5 | 10-17-74 | 2.5 | 3-19-75 | 0.5 | 6-16-75 | 9.5 |
| 1974 | | 5-23-74 | 9.5 | 10-31-74 | 2.5 | 4- 2-75 | 1.0 | 7- 8-75 | 10.5 |
| 10-10-73 | 1.5 | 7- 2-74 | 6.5 | 11-29-74 | 0.0 | 4-29-75 | 3.5 | 7-10-75 | 10.5 |
| | | | | | | | | 9- 9-75 | 5.0 |

## 15277600 EAST FORK EKLUTNA CREEK NEAR PALMER

LOCATION.--Lat 61°18'40", long 148°57'05", Municipality of Anchorage, on left bank 2.2 mi (3.5 km) upstream from confluence with West Fork, 3 mi (5 km) upstream from Eklutna Lake, and 21 mi (34 km) south of Palmer.

BASIN CHARACTERISTICS.--Drainage area, 38 mi$^2$ (98 km$^2$), approximately.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1960 to September 1962.

GAGE.--Water-stage recorder. Altitude of gage is 1,100 ft (335 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 1,320 ft$^3$/s (37.4 m$^3$/s) Sept. 12, 1961, gage height, 3.86 ft (1.177 m); minimum daily, about 13 ft$^3$/s (0.37 m$^3$/s) Mar. 1 to Apr. 15, 1962.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1960a | Sept. 11, 1960 | 770 | 3.22 | Sept. 26, 1960 | b92 |
| 1961 | Sept. 12, 1961 | 1,320 | 3.86 | Mar. 1 to Apr. 30, 1961 | 30 |
| 1962 | Aug. 29, 1962 | 1,270 | 2.39 | Mar. 1 to Apr. 15, 1962 | 13 |

a Period June to September.
b Momentary minimum, gage height, 1.38 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1960 | --- | --- | --- | --- | --- | --- | --- | --- | 316 | 402 | 321 | 166 | --- |
| 1961 | 95.3 | 54.5 | 39.9 | 37.0 | 34.0 | 30.0 | 30.0 | 127 | 327 | 450 | 443 | 205 | 157 |
| 1962 | 88.5 | 39.6 | 27.0 | 21.0 | 16.0 | 13.0 | 15.5 | 71.9 | 423 | 464 | 404 | 190 | 149 |

15277600 EAST FORK EKLUTNA CREEK NEAR PALMER--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water year 1960-62

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|
| 1960 | | 1961-cont | | 1961-cont | |
| 6- 3-60 | 8.0 | 12-16-60 | 0.0 | 8- 2-61 | 6.0 |
| 7-20-60 | 8.5 | 2- 1-61 | 0.0 | 8-22-61 | 5.0 |
| 9-26-60 | 4.0 | 5-16-61 | 4.5 | 9-28-61 | 4.0 |
| 1961 | | 5-24-61 | 7.5 | 1962 | |
| 10-26-60 | 0.0 | 6-26-61 | 6.5 | 8-23-62 | 1.5 |

15277800 WEST FORK EKLUTNA CREEK NEAR PALMER

LOCATION.--Lat 61°18'00", long 148°58'25", Municipality of Anchorage, on right bank 2.3 mi (3.7 km) upstream from confluence with East Fork, 3 mi (5 km) upstream from Eklutna Lake, and 22 mi (35 km) south of Palmer.

BASIN CHARACTERISTICS.--Drainage area, 26 mi² (67 km²), approximately; main-channel slope, 580 ft/mi (109.9 m/km); stream length, 9.0 mi (14.5 km); area of lakes and ponds, 0 percent; mean elevation, 4,800 ft (1,460 m); glacier area, 52 percent.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1960 to September 1962.

GAGE.--Water-stage recorder. Altitude of gage is 1,020 ft (311 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 1,470 ft³/s (41.6 m³/s) Aug. 29, 1962, gage height, 3.84 ft (1.170 m); no flow for part of winter periods.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1960a | July 24, 1960 | 850 | 3.08 | Sept. 27, 1960 | b28 |
| | Aug. 6, 1960 | --- | c3.12 | | |
| 1961 | Sept. 12, 1961 | 1,200 | 3.68 | Mar. 1 to Apr. 20, 1961 | 0.0 |
| 1962 | Aug. 29, 1962 | 1,470 | 3.84 | Jan. 11 to Apr. 15, 1962 | 0.0 |

a Period June to September.
b Momentary minimum.
c Backwater from debris.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1960 | --- | --- | --- | --- | --- | --- | --- | --- | 271 | 498 | 469 | 186 | --- |
| 1961 | 18.2 | 7.00 | 4.00 | 2.00 | 1.00 | 0 | 0.67 | 32.1 | 186 | 492 | 493 | 229 | 123 |
| 1962 | 23.2 | 3.00 | 1.00 | 0.32 | 0 | 0 | 0.50 | 18.9 | 282 | 599 | 693 | 175 | 151 |

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1961, 1962.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP |
|---|---|---|---|
| 1961 | | 1961-cont | |
| 10-26-60 | 0.0 | 9- 7-61 | 1.0 |
| 12-16-60 | 0.0 | 9-28-61 | 1.0 |
| 5-16-61 | 3.5 | 1962 | |
| 5-24-61 | 2.5 | 10-16-61 | 1.0 |
| 6-26-61 | 1.5 | 8-23-62 | 0.5 |

## 15280000 EKLUTNA CREEK NEAR PALMER

LOCATION.--Lat 61°24'05", long 149°09'00", in SW¼ sec.8, T.15 N., R.2 E., Municipality of Anchorage, on right bank 200 ft (60 m) downstream from dam at outlet of Eklutna Lake, 8 mi (13 km) upstream from abandoned Eklutna power diversion dam, 11 mi (18 km) upstream from mouth, and 14 mi (23 km) south of Palmer.

BASIN CHARACTERISTICS.--Drainage area, 119 mi² (308 km²); main-channel slope, 265 ft/mi (50.2 m/km); stream length, 18 mi (29 km); area of lakes and ponds, 3 percent; mean elevation, 3,700 ft (1,130 m); glacier area, 17 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to September 1962.

GAGE.--Water-stage recorder. Datum of gage is 856.53 ft (261.070 m) above mean sea level (Corps of Engineers benchmark). Prior to Aug. 31, 1948, nonrecording gage at site 100 ft (30 m) upstream and prior to Oct. 1, 1953, at datum 1.96 ft (0.597 m) higher.

REMARKS.--Flow regulated by Eklutna Lake reservoir, usable capacity, 160,000 acre-ft (197 hm³). Since December 1954, entire flow, except for periods of spilling, diverted from Eklutna Lake into Knik River basin by Eklutna power plant. Records of spill and diversion for water years 1955-62 are published in WSP 1740 and 1936.

AVERAGE DISCHARGE.--8 years (water years 1947-54), 346 ft³/s (9.799 m³/s), 39.48 in/yr (1,003 mm/yr), 250,700 acre-ft/yr (309 hm³/yr), unadjusted.

EXTREMES.--Maximum discharge during period of record, 2,530 ft³/s (71.6 m³/s) Sept. 18, 1951, gage height, 6.10 ft (1.859 m) in gage well, datum then in use; minimum daily during period October 1946 to September 1954, 3.0 ft³/s (0.085 m³/s) Nov. 3,5,6, 1946; no flow for long periods since 1954.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1947 | July 31, 1947 | a1,680 | 5.8 | Nov. 3,5,6, 1946 | 3.0 |
| 1948 | Aug. 18, 1948 | a1,470 | 5.40 | Oct. 23, 1947 | 98 |
| 1949 | Sept. 6, 1949 | 1,810 | 5.9 | May 7, 1949 | 50 |
| 1950 | Aug. 25, 1950 | 1,420 | 5.5 | Sept. 24, 1950 | 74 |
| 1951 | Sept. 18, 1951 | 2,530 | b6.5 | Oct. 17,18, 1950 | 25 |
| 1952 | July 31, 1952 | 1,420 | 4.61 | May 13, 1952 | c34 |
| 1953 | June 27, 1953 | 2,460 | 5.41 | Aug. 23,26, Sept. 5,14-17, 1953 | 7.0 |
| 1954 | Aug. 3, 1954 | 1,430 | 5.18 | Mar. 27,28, 1954 | 65 |
| 1955 | Aug. 1, 1955 | 1,070 | 4.39 | | |
| 1956 | Aug. 16, 1956 | 1,220 | 4.68 | | |
| 1957 | Sept. 5, 1957 | 1,250 | 4.74 | | |
| 1958 | Aug. 12, 1958 | 910 | 3.99 | | |
| 1959 | Aug. 30,31, 1959 d | 162 | 1.57 | | |

a Maximum observed.
b Outside gage; 6.10 ft in gage well.
c Momentary minimum, gage height, 0.82 ft.
d No flow during water years 1960-62.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | 175 | 146 | 143 | 99.4 | 86.4 | 90.2 | 86.2 | 77.3 | 462 | 1095 | 893 | 388 | 314 |
| 1948 | 284 | 133 | 136 | 123 | 149 | 127 | 120 | 144 | 508 | 958 | 871 | 157 | 311 |
| 1949 | 132 | 131 | 134 | 119 | 112 | 75.0 | 87.4 | 112 | 427 | 833 | 936 | 713 | 319 |
| 1950 | 195 | 121 | 134 | 133 | 125 | 120 | 111 | 93.4 | 501 | 979 | 898 | 409 | 320 |
| 1951 | 72.8 | 126 | 125 | 122 | 89.5 | 56.5 | 46.9 | 99.8 | 373 | 1301 | 989 | 1097 | 375 |
| 1952 | 191 | 136 | 141 | 162 | 122 | 125 | 81.0 | 45.5 | 296 | 959 | 831 | 365 | 290 |
| 1953 | 354 | 201 | 120 | 131 | 126 | 129 | 123 | 133 | 897 | 1672 | 1402 | 608 | 495 |
| 1954 | 205 | 137 | 141 | 140 | 115 | 94.0 | 99.1 | 139 | 550 | 985 | 1025 | 485 | 345 |
| MEAN | 201 | 142 | 134 | 129 | 113 | 102 | 94.2 | 105 | 502 | 1098 | 980 | 528 | 346 |
| MONTHLY PERCENT | 5 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 12 | 27 | 24 | 13 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1950, 1952-56, 1958-59.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1950 | | 1950-cont | | 1950-cont | | 1950-cont | | 1950-cont | | 1950-cont | | 1954-cont | |
| 10- 3-49 | 7.0 | 11-28-49 | 3.0 | 1-27-50 | 0.0 | 4-28-50 | 4.5 | 7- 8-50 | 13.0 | 9- 8-50 | 10.0 | 5-21-54 | 5.5 |
| 10- 7-49 | 6.5 | 12- 2-49 | 3.5 | 1-30-50 | 0.0 | 5- 1-50 | 4.5 | 7-10-50 | 8.5 | 9-11-50 | 9.0 | 6-11-54 | 8.0 |
| 10-10-49 | 6.5 | 12- 5-49 | 3.5 | 2- 3-50 | 0.0 | 5- 5-50 | 6.0 | 7-14-50 | 11.5 | 9-15-50 | 8.0 | 6-23-54 | 9.0 |
| 10-14-49 | 6.5 | 12- 9-49 | 1.5 | 2- 7-50 | 0.0 | 5- 9-50 | 4.5 | 7-17-50 | 9.0 | 9-18-50 | 8.0 | 7-20-54 | 12.0 |
| 10-17-49 | 6.0 | 12-12-49 | 1.5 | 2-10-50 | 0.0 | 5-12-50 | 5.5 | 7-21-50 | 12.0 | 9-22-50 | 8.0 | 8-19-54 | 13.5 |
| 10-20-49 | 6.5 | 12-16-49 | 1.5 | 2-13-50 | 0.0 | 5-15-50 | 5.5 | 7-24-50 | 10.5 | 9-25-50 | 8.0 | 1955 | |
| 10-21-49 | 6.5 | 12-19-49 | 2.0 | 2-17-50 | 0.0 | 5-19-50 | 5.5 | 7-28-50 | 11.0 | 1952 | | 10- 1-54 | 9.0 |
| 10-24-49 | 5.5 | 12-23-49 | 1.5 | 3-24-50 | 1.5 | 5-22-50 | 5.5 | 7-31-50 | 10.0 | 12- 5-51 | 1.0 | 1-27-55 | 1.5 |
| 10-28-49 | 5.5 | 12-26-49 | 1.5 | 3-27-50 | 1.5 | 5-26-50 | 6.5 | 8- 4-50 | 10.5 | 1- 4-52 | 1.0 | 1956 | |
| 10-31-49 | 5.5 | 12-30-49 | 1.5 | 3-31-50 | 1.5 | 5-29-50 | 6.5 | 8-11-50 | 16.0 | 1953 | | 8-17-56 | 13.5 |
| 11- 4-49 | 5.5 | 1- 3-50 | 1.0 | 4- 3-50 | 1.5 | 6- 2-50 | 5.5 | 8-14-50 | 14.5 | 11-20-52 | 4.0 | 1958 | |
| 11- 7-49 | 5.5 | 1- 6-50 | 1.0 | 4- 7-50 | 1.5 | 6- 6-50 | 5.5 | 8-19-50 | 13.5 | 5-11-53 | 6.0 | 10-10-57 | 6.0 |
| 11-11-49 | 4.5 | 1- 9-50 | 0.5 | 4-10-50 | 1.5 | 6-10-50 | 6.5 | 8-21-50 | 14.0 | 6- 4-53 | 6.5 | 8-25-58 | 11.0 |
| 11-14-49 | 4.5 | 1-13-50 | 0.5 | 4-14-50 | 2.0 | 6-12-50 | 9.5 | 8-25-50 | 12.0 | 9- 9-53 | 6.5 | 9- 2-58 | 9.5 |
| 11-18-49 | 4.0 | 1-16-50 | 0.5 | 4-17-50 | 2.0 | 6-30-50 | 9.5 | 8-28-50 | 11.5 | 1954 | | 1959 | |
| 11-21-49 | 5.5 | 1-20-50 | 0.5 | 4-21-50 | 4.5 | 7- 3-50 | 9.0 | 9- 1-50 | 10.0 | 3-18-54 | 3.0 | 8-31-59 | 8.0 |
| 11-25-49 | 4.5 | 1-23-50 | 0.0 | 4-25-50 | 4.5 | 7- 7-50 | 8.5 | 9- 4-50 | 10.0 | 4-29-54 | 4.5 | 9- 2-59 | 9.5 |
| | | | | | | | | | | | | 9-15-59 | 8.0 |

## 15281000 KNIK RIVER NEAR PALMER

LOCATION.--Lat 61°30'20", long 149°01'11", in NE¼ SW¼ sec.1, T.16 N., R.2 E., Matanuska-Susitna Borough, on left bank 0.4 mi (0.6 km) upstream from bridge on old Glenn Highway, and 7 mi (11 km) south of Palmer.

BASIN CHARACTERISTICS.--Drainage area, 1,180 mi² (3,060 km²); main-channel slope, 183 ft/mi (34.7 m/km); stream length, 43.0 mi (69.2 km); area of lakes and ponds, 4 percent; mean elevation, 4,000 ft (1,220 m); glacier area 54 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years, 1948-59. October 1959 to September 1975.

GAGE.--Nonrecording gage read twice daily and crest-stage gage. Altitude of gage is 50 ft (15 m), from topographic map. Prior to June 27, 1960, nonrecording gage, and June 27, 1960 to Apr. 25, 1974, water-stage recorder at bridge 0.4 mi (0.6 km) downstream at different datum.

AVERAGE DISCHARGE.--16 years, 6,783 ft³/s (192.1 m³/s), 78.06 in/yr (1,983 mm/yr), 4,914,000 acre-ft/yr (6.06 km³/yr).

EXTREMES.--Maximum discharge since at least 1948, 359,000 ft³/s (10,200 m³/s) July 18, 1958, gage height 25.3 ft (7.71 m), site and datum then in use, caused by release of stored water (Lake George) behind Knik Glacier, minimum daily discharge (water years 1960-75), about 260 ft³/s (7.4 m³/s) Mar. 1-31, 1962.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1948 | Aug. 5, 1948 | a198,000 | 19.86 | | |
| 1949 | Aug. 22, 1949 | a193,000 | 19.68 | | |
| 1950 | Aug. 3, 1950 | a178,000 | 19.07 | | |
| 1951 | July 27, 1951 | a189,000 | 19.54 | | |
| 1952 | Aug. 8, 1952 | a200,000 | 19.97 | | |
| 1953 | July 23, 1953 | a262,000 | 22.20 | | |
| 1954 | July 26, 1954 | a260,000 | 22.13 | | |
| 1955 | Aug. 9, 1955 | a265,000 | 22.3 | | |
| 1956 | Aug. 8, 1956 | a260,000 | 22.15 | | |
| 1957 | July 18, 1957 | a333,000 | 24.5 | | |
| 1958 | July 18, 1958 | a359,000 | 25.3 | | |
| 1959 | July 1, 1959 | a223,000 | 20.81 | | |
| 1960 | July 17, 1960 | a328,000 | 24.35 | Mar. 1-15, 1960 | 300 |
| 1961 | July 26, 1961 | a355,000 | 24.3 | Mar. 16-31, 1961 | 310 |
| 1962 | June 29, 1962 | a165,000 | 18.50 | Mar. 1-31, 1962 | 260 |
| 1963 | Aug. 26, 1963 | 41,500 | 11.25 | Apr. 1-15, 1963 | 540 |
| 1964 | July 1, 1964 | a216,000 | 20.05 | Feb. 16-29, Mar. 16-31, 1964 | 460 |
| 1965 | July 11, 1965 | a236,000 | 21.35 | Mar. 30 to Apr. 1, 1965 | 450 |
| 1966 | June 24, 1966 | a144,000 | 17.95 | Jan. 16 to Apr. 25, 1966 | 450 |
| 1967 | Sept. 19, 1967 | 35,900 | 11.58 | Mar. 21 to Apr. 15, 1967 | 380 |
| 1968 | Aug. 9, 1968 | 32,700 | 11.04 | Apr. 8-14, 1968 | 460 |
| 1969 | July 7, 1969 | 31,000 | 10.63 | Jan. 1 to Feb. 28, 1969 | 480 |
| 1970 | July 30, 1970 | 24,700 | 10.04 | Apr. 6, 1970 | 600 |
| 1971 | Aug. 10, 1971 | 45,800 | 12.52 | Mar. 1-26, 1971 | 440 |
| 1972 | Aug. 23, 1972 | 31,600 | 11.06 | Apr. 8-26, 1972 | 340 |
| 1973 | Aug. 24, 1973 | 27,500 | 10.62 | Mar. 9-30, 1973 | 300 |
| 1974 | Aug. 31, 1974 | 31,300 | 9.82 | Dec. 1, 1973 to Mar. 31, 1974 | 500 |
| 1975 | Aug. 16, 1975 | 33,400 | 9.93 | Jan. 5, 1975 | 350 |

a Caused by release of stored water (Lake George) behind Knik Glacier.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1960 | 3822 | 2208 | 978 | 527 | 361 | 331 | 557 | 2550 | 5396 | 37450 | 20900 | 9916 | 7148 |
| 1961 | 3195 | 1350 | 1478 | 1401 | 1378 | 358 | 565 | 1891 | 4920 | 34040 | 21580 | 11720 | 7062 |
| 1962 | 3305 | 1658 | 871 | 607 | 338 | 260 | 404 | 1226 | 15780 | 23740 | 20130 | 9688 | 6547 |
| 1963 | 3106 | 2106 | 945 | 656 | 710 | 778 | 670 | 4135 | 11380 | 22940 | 23340 | 14400 | 7150 |
| 1964 | 4272 | 1282 | 1197 | 837 | 538 | 475 | 1177 | 1129 | 11620 | 26930 | 18230 | 9864 | 6500 |
| 1965 | 6364 | 4844 | 1004 | 630 | 671 | 539 | 658 | 1039 | 2598 | 27350 | 17400 | 16910 | 6721 |
| 1966 | 5052 | 1241 | 570 | 474 | 450 | 450 | 466 | 1164 | 15320 | 21770 | 23680 | 13670 | 7072 |
| 1967 | 4781 | 1040 | 787 | 635 | 473 | 401 | 507 | 4251 | 16630 | 23500 | 24570 | 16260 | 7872 |
| 1968 | 4666 | 1757 | 756 | 565 | 514 | 490 | 697 | 4446 | 12420 | 23430 | 21790 | 8461 | 6708 |
| 1969 | 2295 | 637 | 516 | 480 | 480 | 523 | 1048 | 7223 | 19960 | 24510 | 15260 | 9153 | 6883 |
| 1970 | 9419 | 2420 | 1529 | 860 | 704 | 765 | 901 | 4493 | 11370 | 17440 | 16430 | 8880 | 6317 |
| 1971 | 3219 | 2587 | 745 | 514 | 460 | 446 | 615 | 1726 | 10520 | 24180 | 25100 | 10090 | 6743 |
| 1972 | 4281 | 1168 | 679 | 505 | 419 | 375 | 348 | 2831 | 10070 | 23280 | 24040 | 13460 | 6829 |
| 1973 | 4238 | 1773 | 710 | 469 | 363 | 315 | 793 | 3357 | 10060 | 19340 | 17620 | 7454 | 5590 |
| 1974 | 2087 | 683 | 500 | 500 | 500 | 500 | 955 | 5145 | 16060 | 20810 | 19360 | 16960 | 7041 |
| 1975 | 2685 | 1459 | 687 | 595 | 473 | 471 | 527 | 3954 | 12040 | 21130 | 19690 | 11880 | 6345 |
| MEAN | 4174 | 1763 | 872 | 641 | 552 | 467 | 680 | 3160 | 11630 | 24490 | 20570 | 11800 | 6783 |
| MONTHLY PERCENT | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 14 | 30 | 25 | 15 | |

15281000 KNIK RIVER NEAR PALMER--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1957, 1960, 1963, 1965-75.

PERIOD OF DAILY RECORD.--May to September 1963, April to September 1965.

REMARKS.--Once-daily readings by observer on most days during period of daily record.

EXTREMES.--Maximum observed during period of daily record, 13.0°C May 18, 1965.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1957 | | 1966 | | 1968-cont | | 1969-cont | | 1971 | | 1972-cont | | 1974-cont | |
| 7-18-57 | 1.5 | 12-28-65 | 0.0 | 4-19-68 | 2.5 | 7-29-69 | 5.0 | 10-13-70 | 3.0 | 6-29-72 | 4.5 | 5-14-74 | 5.0 |
| 7-22-57 | 4.0 | 7-28-66 | 3.5 | 7-10-68 | 4.0 | 9- 2-69 | 6.0 | 12-11-70 | 0.0 | 8- 7-72 | 7.5 | 6-28-74 | 5.5 |
| 1960 | | 1967 | | 1969 | | 1970 | | 3- 9-71 | 0.0 | 9-11-72 | 6.0 | 7-25-74 | 4.0 |
| 12-18-59 | 0.0 | 11-17-66 | 0.0 | 10-29-68 | 0.0 | 10-23-69 | 0.0 | 5-26-71 | 4.0 | 1973 | | 1975 | |
| 1-29-60 | 0.0 | 5- 2-67 | 7.5 | 11-26-68 | 0.0 | 1-30-70 | 0.0 | 9- 9-71 | 3.5 | 10- 3-72 | 1.0 | 3-27-75 | 0.0 |
| 2-23-60 | 0.0 | 5-29-67 | 10.0 | 1-24-69 | 0.5 | 4- 1-70 | 1.5 | 1972 | | 12-27-72 | 0.0 | 5- 2-75 | 4.0 |
| 5- 4-60 | 3.0 | 8-27-67 | 5.5 | 3-27-69 | 0.0 | 6-17-70 | 5.0 | 12- 2-71 | 0.0 | 2-15-73 | 0.0 | 7- 1-75 | |
| 8-11-60 | 6.0 | 9-29-67 | 3.5 | 4-18-69 | 0.0 | 7-24-70 | 7.5 | 2-24-72 | 0.0 | 8- 9-73 | 6.5 | 7-14-75 | 6.5 |
| 9-21-60 | 6.5 | 1968 | | 6-12-69 | 9.0 | 9- 4-70 | 5.5 | 5-31-72 | 6.0 | 1974 | | 9-23-75 | 4.5 |
| | | 11- 7-67 | 0.0 | | | | | | | 4-25-74 | 2.0 | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1963 | Max | --- | --- | --- | --- | --- | --- | --- | 8.0 | 7.0 | 8.0 | 5.5 | 6.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 | 1.5 |
| 1965 | Max | --- | --- | --- | --- | --- | --- | 8.0 | 13.0 | 12.0 | 10.5 | a | a |
| | Min | --- | --- | --- | --- | --- | --- | 0.0 | 3.5 | 8.0 | 4.0 | a | a |

a Data insufficient to compute monthly maximum or minimum.

## 15282000 CARIBOU CREEK NEAR SUTTON

LOCATION.--Lat 61°48'12", long 147°40'57", in SE¼ sec.20, T.20 N., R.10 E., Matanuska-Susitna Borough, on left pier of bridge on Glenn Highway, 1.4 mi (2.3 km) downstream from Dan Creek, 1.8 mi (2.9 km) upstream from mouth, and 40 mi (64 km) east of Sutton.

BASIN CHARACTERISTICS.--Drainage area, 289 $mi^2$ (749 $km^2$); main-channel slope, 91.1 ft/mi (17.3 m/km); stream length, 30.0 mi (48.3 km); area of lakes and ponds, 0 percent; mean elevation, 4,190 ft (1,277 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1955 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 1,767 ft (538.6 m) above mean sea level.

AVERAGE DISCHARGE.--20 years, 302 $ft^3/s$ (8.553 $m^3/s$), 14.19 in/yr (360 mm/yr), 218,800 acre-ft/yr (270 $hm^3/yr$).

EXTREMES.--Maximum discharge during period of record, 8,720 $ft^3/s$ (247 $m^3/s$) June 15, 1973, gage height, 7.18 ft (2.188 m); no flow Mar. 16 to Apr. 10, 1966 and Mar. 10-18, 1971.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1955a | June 18, 1955 | 5,060 | 5.92 | May 1, 1955 | 44 |
| 1956 | June 8, 1956 | 4,800 | 5.80 | Mar. 1-15, 1956 | b3.0 |
| 1957 | June 2, 1957 | c3,760 | 5.37 | Apr. 6-8, 1957 | 22 |
| 1958 | June 1, 1958 | 3,420 | 5.25 | Feb. 1-15, 1958 | d27 |
| 1959 | June 7, 1959 | 3,950 | 5.25 | Jan. 16-31, 1959 | 14 |
| 1960 | May 25, 1960 | e5,000 | --- | Mar. 16-31, 1960 | 24 |
| 1961 | June 24, 1961 | e5,800 | --- | Mar. 16-31, 1961 | 13 |
| 1962 | June 16, 1962 | 7,670 | 6.89 | Mar. 1-31, 1962 | 28 |
| 1963 | May 21, 1963 | 4,630 | 4.96 | Apr. 1-15, 1963 | 26 |
| 1964 | May 31, 1964 | 5,860 | 6.55 | Jan. 16 to Mar. 31, 1964 | f1.0 |
| 1965 | July 13, 1965 | 3,580 | 5.52 | Jan. 1-31, 1965 | 14 |
| 1966 | July 28, 1966 | 2,170 | 4.72 | Mar. 16 to Apr. 10, 1966 | 0.0 |
| 1967 | June 11, 1967 | 3,000 | 5.23 | Feb. 1 to Mar. 31, 1967 | 32 |
| 1968 | June 15, 1968 | 5,400 | 6.36 | Feb. 18 to Apr. 24, 1968 | 32 |
| 1969 | May 24, 1969 | 3,920 | 5.90 | Jan. 10-14, 1969 | 14 |
| 1970 | June 28, 1970 | 4,360 | 6.15 | Jan. 25 to Feb. 9, 1970 | 5.0 |
| 1971 | June 9, 1971 | 5,060 | 6.59 | Mar. 10-18, 1971 | 0.0 |
| 1972 | June 16, 1972 | 4,700 | 7.10 | Apr. 16-26, 1972 | 22 |
| 1973 | June 15, 1973 | 8,720 | 7.18 | Feb. 1 to Mar. 8, 1973 | 3.0 |
| 1974 | Apr. 26, 1974 | --- | g6.58 | Feb. 24 to Mar. 20, 1974 | 10 |
| | May 30, 1974 | 3,400 | 5.40 | | |
| 1975 | July 13, 1975 | 8,600 | 7.15 | Mar. 22 to Apr. 6, 1975 | 15 |

a Period May to September.
b Momentary minimum, 0.23 $ft^3/s$ Mar. 9, 1956, discharge measurement, caused by temporary storage upstream.
c May have been greater during period of no gage-height record.
d Minimum observed, 17 $ft^3/s$ Feb. 11, 1958, discharge measurement.
e Maximum daily.
f Minimum observed, 0.62 $ft^3/s$ Feb. 24, 1964, discharge measurement.
g Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1955 | | | | | | | | 299 | 1193 | 531 | 269 | 242 | |
| 1956 | 86.1 | 31.5 | 12.4 | 9.00 | 8.03 | 5.58 | 81.3 | 634 | 1501 | 1064 | 466 | 352 | 355 |
| 1957 | 112 | 55.3 | 44.9 | 33.4 | 26.0 | 27.4 | 33.2 | 921 | 1269 | 695 | 314 | 291 | 320 |
| 1958 | 145 | 75.5 | 60.5 | 38.5 | 30.2 | 29.5 | 67.0 | 377 | 433 | 134 | 411 | 195 | 167 |
| 1959 | 102 | 57.0 | 34.9 | 15.9 | 19.4 | 19.4 | 18.5 | 671 | 1246 | 690 | 930 | 443 | 356 |
| 1960 | 131 | 66.0 | 53.4 | 41.3 | 29.5 | 25.0 | 31.0 | 1639 | 1126 | 770 | 500 | 655 | 424 |
| 1961 | 173 | 56.0 | 43.9 | 47.7 | 17.7 | 13.5 | 19.0 | 563 | 2118 | 566 | 337 | 220 | 348 |
| 1962 | 113 | 67.0 | 52.0 | 43.0 | 35.0 | 28.0 | 29.0 | 513 | 2620 | 942 | 785 | 482 | 476 |
| 1963 | 185 | 60.5 | 40.8 | 38.1 | 32.2 | 29.0 | 28.5 | 990 | 875 | 859 | 220 | 190 | 298 |
| 1964 | 118 | 18.0 | 3.97 | 1.48 | 1.00 | 1.00 | 52.3 | 332 | 2130 | 766 | 879 | 248 | 379 |
| 1965 | 136 | 94.0 | 44.0 | 14.0 | 16.0 | 29.0 | 36.0 | 378 | 697 | 745 | 288 | 287 | 232 |
| 1966 | 159 | 68.0 | 38.2 | 9.35 | 2.00 | 0.48 | 2.33 | 214 | 961 | 322 | 315 | 285 | 198 |
| 1967 | 116 | 52.0 | 40.0 | 34.0 | 32.0 | 32.0 | 39.7 | 656 | 876 | 457 | 514 | 742 | 300 |
| 1968 | 142 | 68.0 | 42.2 | 36.6 | 33.2 | 32.0 | 33.2 | 802 | 1588 | 663 | 347 | 305 | 341 |
| 1969 | 134 | 43.2 | 17.7 | 15.4 | 18.1 | 25.5 | 51.9 | 469 | 283 | 351 | 167 | 140 | 144 |
| 1970 | 79.4 | 29.5 | 12.1 | 5.77 | 5.86 | 6.84 | 21.2 | 551 | 939 | 829 | 299 | 250 | 254 |
| 1971 | 103 | 52.4 | 26.1 | 14.9 | 7.93 | 1.97 | 13.0 | 105 | 1308 | 474 | 799 | 460 | 281 |
| 1972 | 210 | 116 | 56.5 | 42.6 | 34.7 | 29.4 | 23.9 | 636 | 1320 | 640 | 366 | 300 | 315 |
| 1973 | 121 | 50.4 | 28.6 | 8.26 | 3.00 | 5.23 | 28.1 | 286 | 1539 | 379 | 444 | 240 | 261 |
| 1974 | 84.8 | 23.9 | 12.6 | 11.8 | 10.8 | 10.9 | 50.8 | 680 | 643 | 431 | 299 | 162 | 203 |
| 1975 | 76.5 | 40.0 | 26.7 | 20.4 | 18.4 | 16.0 | 23.3 | 378 | 1307 | 1275 | 885 | 613 | 392 |
| MEAN | 126 | 56.2 | 34.6 | 24.1 | 19.1 | 18.4 | 34.2 | 576 | 1237 | 647 | 468 | 338 | 302 |
| MONTHLY PERCENT | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 16 | 35 | 18 | 13 | 9 | |

15282000 CARIBOU CREEK NEAR SUTTON--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1957-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1957 | | 1959-cont | | 1961-cont | | 1965 | | 1968-cont | | 1971-cont | | 1973-cont | |
| 10-23-56 | 0.0 | 5- 5-59 | 0.0 | 8- 1-61 | 11.0 | 10-12-64 | 0.5 | 9-30-68 | 1.0 | 7- 7-71 | 12.0 | 7-10-73 | 9.0 |
| 5-14-57 | 3.5 | 5-15-59 | 1.0 | 9-11-61 | 3.5 | 11-30-64 | 0.0 | 1969 | | 8-26-71 | 8.0 | 8-20-73 | 11.5 |
| 5-23-57 | 8.0 | 6- 5-59 | 6.0 | 1962 | | 5-19-65 | 1.0 | 12-16-68 | 0.0 | 9-30-71 | 2.0 | 1974 | |
| 7- 4-57 | 10.0 | 6-19-59 | 8.0 | 10- 9-61 | 0.0 | 8- 1-65 | 14.0 | 4-10-69 | 0.0 | 1972 | | 10- 2-73 | 0.5 |
| 8- 3-57 | 10.5 | 7-27-59 | 5.5 | 12-14-61 | 0.0 | 1966 | | 5-20-69 | 3.0 | 12-13-71 | 0.0 | 6-17-74 | 8.0 |
| 9- 2-57 | 10.5 | 9-28-59 | 1.0 | 4-23-62 | 0.0 | 10- 5-65 | 1.0 | 5-24-69 | 1.0 | 2-18-72 | 0.0 | 7-24-74 | 9.0 |
| 9-16-57 | 5.5 | 1960 | | 1963 | | 6-28-66 | 11.5 | 5-25-69 | 1.0 | 4-28-72 | 0.5 | 8-27-74 | 8.0 |
| 1958 | | 12- 7-59 | 0.0 | 10-23-62 | 0.0 | 9-29-66 | 3.0 | 7- 8-69 | 11.0 | 7- 9-72 | 8.0 | 9-21-74 | 3.5 |
| 10- 1-57 | 0.0 | 1-18-60 | 0.0 | 7- 3-63 | 9.0 | 1967 | | 8-15-69 | 8.0 | 8-14-72 | 12.0 | 1975 | |
| 10-12-57 | 1.0 | 2-29-60 | 0.0 | 7-12-63 | 6.5 | 1-16-67 | 0.0 | 1970 | | 9-30-72 | 2.0 | 2- 5-75 | 0.0 |
| 12-27-57 | 0.0 | 5- 4-60 | 1.0 | 7-26-63 | 10.5 | 6-14-67 | 8.0 | 4- 8-70 | 0.0 | 1973 | | 3-21-75 | 0.0 |
| 5-13-58 | 8.5 | 5- 5-60 | 2.5 | 1964 | | 9-23-67 | 3.0 | 5-12-70 | 0.5 | 12-19-72 | 0.0 | 4-10-75 | 0.5 |
| 6-10-58 | 11.5 | 5- 9-60 | 4.0 | 10-17-63 | 1.0 | 1968 | | 5-17-70 | 2.5 | 2-23-73 | 0.0 | 4-16-75 | 0.5 |
| 7-22-58 | 13.0 | 1961 | | 11-20-63 | 0.0 | 3- 5-68 | 0.0 | 7- 6-70 | 8.0 | 4- 3-73 | 0.5 | 4-30-75 | 0.0 |
| 1959 | | 10-19-60 | 0.0 | 2-24-64 | 0.0 | 5-26-68 | 4.0 | 8-17-70 | 7.0 | 5- 3-73 | 0.0 | 5-21-75 | 3.0 |
| 3- 2-59 | 0.0 | 5- 9-61 | 0.0 | 5-18-64 | 1.0 | 7- 7-68 | 12.0 | 1971 | | 5-21-73 | 0.5 | 6-24-75 | 4.5 |
| 4- 7-59 | 0.0 | 7-20-61 | 10.0 | 8-17-64 | 4.0 | 8-19-68 | 9.0 | 12-13-70 | 0.0 | 6-18-73 | 8.0 | 9- 2-75 | 6.0 |
| | | | | | | | | | | | | 9-30-75 | 1.0 |

15282800 CHICKALOON RIVER NEAR SUTTON

LOCATION.--Lat 61°47'12", long 148°27'05", in NE¼ sec.36, T.20N., R.5 E., Matanuska-Susitna Borough, at bridge on Glenn Highway, 0.2 mi (0.3 km) upstream from mouth, and 15 mi (24 km) east of Sutton.

WATER TEMPERATURE RECORDS

PERIOD OF DAILY RECORD.--October 1952 to September 1954.

REMARKS.--Once-daily readings by observer.

EXTREMES.--Maximum observed during period of daily record, 15.0°C June 26, 27, July 24, 25, 1953; minimum, 0.0°C on most days during winter period.

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953 | Max | 5.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 11.0 | 15.0 | 15.0 | 11.0 | 7.0 |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 9.0 | 9.0 | 4.5 | 0.0 |
| 1954 | Max | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 4.5 | 7.0 | 11.5 | 9.5 | 9.0 |
| | Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 4.0 | 4.5 | 4.0 | 1.5 |

## 15284000 MATANUSKA RIVER AT PALMER

LOCATION.--Lat 61°36'34", long 149°04'16", in N½ sec.34, T.18 N., R.2 E., Matanuska-Susitna Borough, on left bank 100 ft (30 m) downstream from bridge on old Glenn Highway, and 1 mi (1.6 km) east of Palmer.

BASIN CHARACTERISTICS.--Drainage area, 2,070 $mi^2$ (5,360 $km^2$); main-channel slope, 79.7 ft/mi (15.10 m/km); stream length, 77 mi (124 km); area of lakes and ponds, 0 percent; mean elevation, 4,000 ft (1,220 m); glacier area, 12 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1949 to September 1973. Annual maximum, water year 1974.

GAGE.--Water-stage recorder. Datum of gage is 170.92 ft (52.096 m) above mean sea level (Alaska Road Commission bench mark). Prior to Nov. 2, 1950, nonrecording gage at bridge 120 ft (37 m) upstream at same datum. Nov. 2, 1950 to Apr. 30, 1952 nonrecording gage at bridge 100 ft (30 m) upstream at same datum.

AVERAGE DISCHARGE.--24 years, 3,857 $ft^3/s$ (109.2 $m^3/s$), 25.30 in/yr (643 mm/yr), 2,794,000 acre-ft/yr (3.45 $km^3/yr$).

EXTREMES.--Maximum discharge during period of record, 82,100 $ft^3/s$ (2,330 $m^3/s$) Aug. 10, 1971, gage height, 13.60 ft (4.145 m), from rating curve extended above 34,000 $ft^3/s$ (960 $m^3/s$) on basis of velocity-area study; minimum daily, 234 $ft^3/s$ (6.63 $m^3/s$) Apr. 25, 1956.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1949a | July 11, 1949 | 23,600 | 12.03 | May 5, 1949 | 546 |
| 1950 | July 25, 1950 | 21,200 | 11.18 | Feb. 16-20, 1950 | 410 |
| 1951 | June 8, 1951 | 21,400 | 11.00 | Mar. 1-15, 1951 | 380 |
| 1952 | July 30, 1952 | 23,400 | 9.93 | Mar. 16,17, 1952 | 390 |
| | July 31, 1952 | --- | 10.00 | | |
| 1953 | June 28, 1953 | 22,200 | 10.40 | Feb. 1 to Mar. 31, 1953 | 460 |
| 1954 | July 31, 1954 | 21,500 | 8.71 | Apr. 7-9, 1954 | 410 |
| 1955 | Aug. 27, 1955 | 24,000 | 9.96 | Mar. 12, 1955 | 400 |
| 1956 | July 31, 1956 | 21,400 | 10.50 | Apr. 25, 1956 | 234 |
| 1957 | June 20, 1957 | 25,900 | 10.90 | Mar. 11-20, 1957 | 440 |
| 1958 | June 8, 1958 | --- | 9.60 | Mar. 20-25, 1958 | 450 |
| | July 5, 1958 | 17,500 | 9.05 | | |
| 1959 | Aug. 24, 1959 | 37,300 | 10.82 | Jan. 16-31, 1959 | 310 |
| 1960 | May 26, 1960 | 22,600 | 10.05 | Aprl 11, 1960 | 408 |
| 1961 | Jan. 11, 1961 | --- | b10.44 | Apr. 15, 1961 | 460 |
| | June 21, 1961 | 18,000 | 9.90 | | |
| 1962 | June 18, 1962 | 28,400 | 10.38 | Mar. 1-31, 1962 | 490 |
| | Aug. 29, 1962 | --- | 12.00 | | |
| 1963 | Aug. 23, 1963 | 23,200 | 11.40 | Mar. 14, 1963 | 440 |
| 1964 | June 8, 1964 | 40,100 | 11.45 | Nov. 16-30, 1963 | 480 |
| 1965 | July 13, 1965 | 28,600 | 10.38 | Feb. 20 to Mar. 1, 1965 | 480 |
| 1966 | June 7, 1966 | --- | 10.34 | Mar. 1-31, 1966 | 490 |
| | July 29, 1966 | 25,300 | 10.01 | | |
| 1967 | June 12, 1967 | 25,500 | 9.66 | Mar. 20-25, 1967 | 340 |
| | Aug. 14, 1967 | --- | 10.09 | | |
| 1968 | June 15, 1968 | 28,300 | 10.47 | Apr. 11-22, 1968 | 500 |
| 1969 | Aug. 5, 1969 | 17,200 | 10.15 | Nov. 24, 1968 to Apr. 5, 1969 | 440 |
| 1970 | June 27, 1970 | 25,600 | 10.08 | Mar. 26 to Apr. 5, 1970 | 430 |
| 1971 | Aug. 10, 1971 | c82,100 | 13.60 | Feb. 16 to Mar. 31, 1971 | 360 |
| 1972 | June 14, 1972 | 34,000 | 11.05 | Apr. 9-25, 1972 | 440 |
| 1973 | June 15, 1973 | 28,600 | 10.67 | Mar. 11 to Apr. 2, 1973 | 460 |
| 1974 | September 1974 | 12,900 | 8.68 | | |

a Period April to September.
b Backwater from ice.
c Result of breach of embankment at outlet of lake in Granite Creek basin.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | | | | | | | | 4369 | 11300 | 16310 | 12290 | 6368 | |
| 1950 | 2335 | 1168 | 807 | 601 | 485 | 495 | 599 | 1628 | 8896 | 14050 | 11100 | 4378 | 3908 |
| 1951 | 1300 | 660 | 580 | 500 | 450 | 401 | 796 | 3575 | 11290 | 13940 | 9185 | 8966 | 4323 |
| 1952 | 2923 | 1255 | 944 | 793 | 500 | 438 | 533 | 1597 | 8456 | 13360 | 9854 | 3309 | 3684 |
| 1953 | 2361 | 1304 | 820 | 560 | 460 | 460 | 817 | 3788 | 14110 | 14230 | 11390 | 4360 | 4582 |
| 1954 | 1569 | 790 | 620 | 570 | 450 | 420 | 599 | 3166 | 9376 | 12820 | 12770 | 6111 | 4134 |
| 1955 | 2445 | 1066 | 770 | 680 | 525 | 437 | 482 | 1782 | 6949 | 13830 | 10470 | 4988 | 3732 |
| 1956 | 1554 | 717 | 579 | 520 | 456 | 400 | 502 | 2611 | 7673 | 15620 | 10750 | 5961 | 3966 |
| 1957 | 1626 | 690 | 651 | 660 | 588 | 521 | 723 | 4235 | 15860 | 14000 | 10940 | 7042 | 4815 |
| 1958 | 2355 | 1148 | 645 | 660 | 533 | 487 | 891 | 2120 | 10410 | 10670 | 9029 | 3186 | 3531 |
| 1959 | 1451 | 568 | 474 | 349 | 441 | 400 | 568 | 2816 | 11580 | 10650 | 11270 | 4259 | 3757 |
| 1960 | 1793 | 975 | 715 | 669 | 580 | 563 | 702 | 6019 | 8886 | 11840 | 9020 | 5537 | 3959 |
| 1961 | 2492 | 1059 | 836 | 821 | 628 | 480 | 696 | 2641 | 9502 | 10840 | 9051 | 4664 | 3664 |
| 1962 | 2014 | 1100 | 860 | 760 | 570 | 490 | 714 | 2445 | 14040 | 14410 | 11760 | 5042 | 4542 |
| 1963 | 1729 | 869 | 627 | 601 | 577 | 495 | 526 | 3788 | 6698 | 13630 | 11220 | 4886 | 3837 |
| 1964 | 2013 | 616 | 629 | 553 | 530 | 530 | 985 | 1624 | 17250 | 12490 | 11210 | 4105 | 4384 |
| 1965 | 1764 | 1132 | 722 | 756 | 548 | 572 | 831 | 1526 | 5415 | 12790 | 9388 | 7809 | 3628 |
| 1966 | 1932 | 946 | 863 | 651 | 554 | 490 | 649 | 1007 | 9105 | 13400 | 7607 | 3814 | 3439 |
| 1967 | 1554 | 734 | 634 | 563 | 476 | 364 | 558 | 3157 | 10670 | 11690 | 10880 | 5742 | 3941 |
| 1968 | 1921 | 1097 | 755 | 705 | 617 | 550 | 531 | 3719 | 11500 | 13450 | 9355 | 2964 | 3947 |
| 1969 | 1317 | 573 | 440 | 440 | 440 | 440 | 526 | 2148 | 6747 | 10340 | 4992 | 2123 | 2562 |
| 1970 | 1170 | 745 | 589 | 502 | 457 | 440 | 475 | 2842 | 8207 | 11200 | 6726 | 3183 | 3065 |
| 1971 | 1652 | 1317 | 894 | 554 | 381 | 360 | 491 | 1016 | 10730 | 11890 | 15730 | 4996 | 4196 |
| 1972 | 2884 | 1793 | 1024 | 687 | 578 | 494 | 465 | 3204 | 8512 | 14380 | 9667 | 4926 | 4072 |
| 1973 | 2009 | 900 | 540 | 500 | 494 | 466 | 698 | 1713 | 7653 | 9206 | 8045 | 2452 | 2909 |
| MEAN | 1923 | 968 | 709 | 611 | 513 | 466 | 640 | 2741 | 10030 | 12840 | 10150 | 4847 | 3857 |
| MONTHLY PERCENT | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 6 | 22 | 28 | 22 | 10 | |

15284000 MATANUSKA RIVER AT PALMER--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-73.

PERIOD OF DAILY RECORD.--March 1952 to September 1953 (seasonal), April 1959 to October 1967 (seasonal).

REMARKS.--Once-daily readings by observer on most days during open water season for period of daily record.

EXTREMES.--Maximum observed during period of daily record, 14.5°C August 25, 1964 and July 17, 1966; minimum, 0.0°C on most days during winter period.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1954 | | 1955 | | 1957-cont | | 1967 | | 1968-cont | | 1970-cont | | 1972 | |
| 3-12-54 | 0.5 | 10- 1-54 | 5.5 | 7-22-57 | 14.0 | 4-10-67 | 0.5 | 4-19-68 | 1.0 | 1-30-70 | 0.0 | 1-13-72 | 0.0 |
| 4- 2-54 | 0.0 | 1956 | | 9-20-57 | 3.5 | 5- 2-67 | 2.0 | 7- 3-68 | 6.0 | 4- 1-70 | 0.0 | 3-28-72 | 0.0 |
| 4-14-54 | 0.5 | 6-26-56 | 11.0 | 1958 | | 5-29-67 | 9.0 | 1969 | | 6-16-70 | 7.0 | 5-31-72 | 3.5 |
| 4-29-54 | 1.0 | 7-10-56 | 5.5 | 4-30-58 | 1.0 | 6-30-67 | 6.5 | 10- 2-68 | 3.0 | 7-24-70 | 8.0 | 6-28-72 | 4.0 |
| 5-24-54 | 8.0 | 9-18-56 | 9.0 | 5-14-58 | 8.0 | 7- 6-67 | 7.5 | 10-29-68 | 0.0 | 9- 4-70 | 6.0 | 8- 7-72 | 9.5 |
| 6- 3-54 | 9.0 | 1957 | | 5-26-58 | 7.5 | 8-24-67 | 6.0 | 11-26-68 | 0.0 | 1971 | | 9-11-72 | 8.0 |
| 6-23-54 | 9.0 | 10-10-56 | 2.5 | 6-12-58 | 7.5 | 1968 | | 3-27-69 | 0.0 | 10-13-70 | 2.5 | 1973 | |
| 7-20-54 | 7.5 | 10-24-56 | 0.0 | 6-28-58 | 10.5 | 10- 6-67 | 3.5 | 6-11-69 | 9.0 | 12-14-70 | 0.0 | 10- 3-72 | 1.5 |
| 8- 2-54 | 6.0 | 5-21-57 | 6.0 | 7- 7-58 | 10.5 | 11-16-67 | 0.0 | 7-17-69 | 9.0 | 2- 4-71 | 0.0 | 2-15-73 | 0.0 |
| 8-18-54 | 8.0 | 6- 3-57 | 7.0 | 7-17-58 | 9.0 | 1-15-68 | 0.0 | 9- 2-69 | 7.0 | 4-30-71 | 1.5 | 3-27-73 | 0.5 |
| 8-31-54 | 7.5 | 6-29-57 | 10.5 | 8-19-58 | 9.0 | 3- 5-68 | 0.5 | 1970 | | 7-26-71 | 7.0 | 4-17-73 | 1.5 |
| | | | | 9- 5-58 | 9.5 | 4- 2-68 | 0.0 | 10-23-69 | 0.0 | 8- 9-71 | 7.0 | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | Max | --- | --- | --- | --- | --- | 1.5 | 4.5 | 9.5 | 12.0 | a | a | --- |
| | Min | --- | --- | --- | --- | --- | 0.0 | 0.5 | 3.0 | 5.5 | a | a | --- |
| 1953 | Max | --- | --- | --- | --- | --- | --- | 2.0 | 9.5 | 12.0 | a | a | a |
| | Min | --- | --- | --- | --- | --- | --- | 0.0 | 1.0 | 6.5 | a | a | a |
| 1959 | Max | --- | --- | --- | --- | --- | --- | 2.0 | 11.0 | 13.5 | 11.0 | 12.0 | 9.0 |
| | Min | --- | --- | --- | --- | --- | --- | a | 1.5 | 7.0 | 2.0 | 6.0 | 4.5 |
| 1960 | Max | 5.5 | a | --- | --- | --- | --- | --- | 11.5 | 12.0 | 12.0 | 9.5 | 6.0 |
| | Min | 0.0 | 0.0 | --- | --- | --- | --- | --- | a | 7.0 | 6.5 | 6.0 | 2.0 |
| 1961 | Max | a | --- | --- | --- | --- | --- | 1.5 | 10.5 | 13.0 | 11.5 | 11.0 | 7.0 |
| | Min | a | --- | --- | --- | --- | --- | a | 0.5 | 5.5 | 6.0 | 4.5 | 2.0 |
| 1962 | Max | 4.5 | --- | --- | --- | --- | --- | a | 10.0 | 11.0 | 10.5 | 10.0 | a |
| | Min | 0.0 | --- | --- | --- | --- | --- | 0.0 | 0.0 | 5.5 | 6.0 | 4.0 | a |
| 1963 | Max | a | --- | --- | --- | --- | --- | a | 9.0 | 11.0 | 11.0 | a | a |
| | Min | a | --- | --- | --- | --- | --- | 0.0 | 0.0 | 5.0 | 5.5 | a | a |
| 1964 | Max | --- | --- | --- | --- | --- | --- | a | 9.5 | 13.0 | 13.5 | 14.5 | 10.0 |
| | Min | --- | --- | --- | --- | --- | --- | a | 1.0 | 6.5 | 7.0 | 7.0 | 5.0 |
| 1965 | Max | --- | --- | --- | --- | --- | --- | 5.0 | 11.0 | 10.0 | 13.0 | 11.5 | a |
| | Min | --- | --- | --- | --- | --- | --- | 0.0 | 1.0 | 7.0 | 4.5 | 5.0 | a |
| 1966 | Max | --- | --- | --- | --- | --- | --- | --- | 9.0 | 13.5 | 14.5 | 11.0 | 10.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 7.0 | 6.0 | 4.5 | 5.0 |
| 1967 | Max | a | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Min | 0.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

a Data insufficient to compute monthly maximum or minimum.

## 15286000 COTTONWOOD CREEK NEAR WASILLA

LOCATION.--Lat 61°34'30", long 149°24'35", in SW¼ sec.11, T.17 N., R.1 W., Matanuska-Susitna Borough, near center of span on downstream side of highway bridge on Wasilla-Matanuska road, 0.8 mi (1.3 km) downstream from Wasilla Lake and 1.1 mi (1.8 km) southwest of Wasilla.

BASIN CHARACTERISTICS.--Drainage area, 28.5 $mi^2$ (73.8 $km^2$); main-channel slope, 44 ft/mi (8.3 m/km); stream length, 11.4 mi (18.3 km); area of lakes and ponds, 6 percent; mean elevation, 500 ft (152 m); glacier area, 0 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1949 to September 1954.

Gage.--Nonrecording gage. Datum of gage is 309 ft (94.2 m) above mean sea level (river-profile survey).

AVERAGE DISCHARGE.--5 years, 15.9 $ft^3/s$ (0.450 $m^3/s$), 7.58 in/yr (193 mm/yr), 11,520 acre-ft/yr (14.2 $hm^3/yr$).

EXTREMES.--Maximum daily discharge during period of record, 55 $ft^3/s$ (1.56 $m^3/s$) July 5 and 6, 1949; maximum gage height observed, 4.07 ft (1.241 m) Jan. 26, 1950 (backwater from ice); minimum discharge, 3.5 $ft^3/s$ (0.099 $m^3/s$) Sept. 2, 1954, discharge measurement, caused by temporary storage upstream.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1949a | July 5, 6, 1949 | b55 | --- | Sept. 23, 24, 1949 | 33 |
| 1950 | Oct. 4, 1949 | b40 | 1.05 | Sept. 25, 26, 28-30, 1950 | 10 |
| | Jan. 26, 1950 | --- | c4.07 | | |
| 1951 | Dec. 22, 1950 | --- | c2.77 | Mar. 1-31, Aug. 18, 24-28, 1951 | 10 |
| | Apr. 23-25, 1951 | b24 | 0.84 | | |
| 1952 | Jan. 2, 1952 | --- | c2.35 | July 23, 24, Aug. 13, 14, 24, 25, 1952 | 7.0 |
| | July 1, 1952 | 54 | 1.16 | | |
| 1953 | d | b33 | --- | June 6, 1953 | e6.9 |
| 1954 | Jan. 22, 1954 | --- | c2.30 | May 25, 27, June 1, 1954 | f9.5 |
| | Aug. 6-8, 1954 | b20 | 0.92 | | |

a Period July to September.
b Maximum daily.
c Backwater from ice.
d Nov. 10-15, 20, 22-28, 1952.
e Momentary minimum, gage height, 0.56 ft.
f Momentary minimum, 3.5 $ft^3/s$ Sept. 2, 1954, discharge measurement, caused by temporary storage upstream.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | | | | | | | | | | 46.9 | 44.6 | 37.4 | |
| 1950 | 34.4 | 26.8 | 19.7 | 19.8 | 14.3 | 20.3 | 18.1 | 16.0 | 19.0 | 16.3 | 13.7 | 11.3 | 19.2 |
| 1951 | 13.8 | 12.9 | 11.5 | 11.0 | 11.5 | 10.0 | 17.5 | 16.9 | 15.0 | 14.3 | 12.5 | 16.4 | 13.6 |
| 1952 | 19.1 | 16.9 | 16.0 | 15.5 | 13.0 | 12.5 | 14.7 | 17.2 | 11.0 | 19.7 | 12.1 | 17.6 | 15.5 |
| 1953 | 21.3 | 32.2 | 24.7 | 19.5 | 17.5 | 17.0 | 19.0 | 15.2 | 9.20 | 9.90 | 12.4 | 17.0 | 17.9 |
| 1954 | 13.9 | 14.3 | 13.9 | 12.0 | 12.0 | 13.0 | 12.7 | 12.3 | 12.2 | 12.0 | 17.2 | 11.7 | 13.1 |
| MEAN | 20.5 | 20.6 | 17.2 | 15.6 | 13.7 | 14.6 | 16.4 | 15.5 | 13.3 | 19.8 | 18.8 | 18.6 | 15.9 |
| MONTHLY PERCENT | 10 | 10 | 8 | 8 | 7 | 7 | 8 | 8 | 6 | 10 | 9 | 9 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-54.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|
| 1952 | | 1953-cont | | 1954-cont | | 1954-cont | |
| 1- 3-52 | 0.5 | 5- 7-53 | 8.5 | 4- 2-54 | 1.5 | 6-24-54 | 21.0 |
| 5- 2-52 | 1.5 | 6- 2-53 | 17.0 | 4-14-54 | 4.0 | 7-23-54 | 16.5 |
| 6- 9-52 | 18.5 | 9-29-53 | 6.5 | 4-28-54 | 6.5 | 8- 2-54 | 16.5 |
| 1953 | | 1954 | | 5-19-54 | 15.0 | 8-18-54 | 17.0 |
| 10-29-52 | 3.5 | 10-19-53 | 3.0 | 6- 4-54 | 19.0 | 9-29-54 | 9.5 |
| 11-21-52 | 1.0 | 1-22-54 | 1.5 | | | | |

## 15290000 LITTLE SUSITNA RIVER NEAR PALMER

LOCATION.--Lat 61°42'32", long 149°13'36", in NE¼ sec.26, T.19 N., R.1 E., Matanuska-Susitna Borough, on right bank 40 ft (12 m) downstream from highway bridge on Wasilla-Fishhook Road, 1.5 mi (2.4 km) north of road junction, 1.8 mi (2.9 km) downstream from unnamed tributary, and 8 mi (13 km) northwest of Palmer.

BASIN CHARACTERISTICS.--Drainage area, 61.9 mi² (160.3 km²); main-channel slope, 187 ft/mi (35.4 m/km); stream length, 14.9 mi (24.0 km); area of lakes and ponds, 0 percent; mean elevation, 3,700 ft (1,130 m); glacier area, 5 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1948 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 918.6 ft (279.99 m) above mean sea level (river-profile survey). Prior to Aug. 16, 1948, nonrecording gage and Aug. 16, 1948 to May 15, 1972, water-stage recorder on left bank. Prior to Oct. 1, 1974, at datum 2.00 ft (0.610 m) higher.

REMARKS.--During water years 1950-62 winter discharge measurements were made at a site 3.5 mi (5.6 km) downstream from the gage location. There is a channel loss of about 6 ft³/s (0.2 m³/s) in the 3.5 mi (5.6 km) reach.

AVERAGE DISCHARGE.--27 years, 203 ft³/s (5.749 m³/s), 44.54 in/yr (1,131 mm/yr), 147,100 acre-ft/yr (181 hm³/yr).

EXTREMES.--Maximum discharge during period of record, 7,840 ft³/s (222 m³/s) Aug. 10, 1971, gage height, 9.84 ft (2.999 m) in gage well, 12.30 ft (3.749 m), top of needle peak in gage well, about 13 ft (4.0 km) from floodmarks, present datum, from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of slope-area measurement of peak flow; minimum daily, about 8.0 ft³/s (0.23 m³/s) Apr. 1-20, 1956 and Mar. 11 and 12, 1957.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1948a | Aug. 16, 1948 | 2,500 | 5.82 | Sept. 15, 1948 | b181 |
| 1949 | June 21, 1949 | 3,070 | 6.33 | Feb. 21, Apr. 4,8, 1949 | 16 |
| 1950 | June 17, 1950 | 1,170 | 4.25 | Feb. 16-28, Mar. 25,26,29, Apr.1-5,1950 | c15 |
| 1951 | June 8, 1951 | 1,900 | 5.25 | Apr. 4-9, 1951 | 14 |
| 1952 | July 27, 1952 | 2,500 | 5.66 | Mar. 1 to Apr. 3, 1952 | 13 |
| 1953 | Aug. 22, 1953 | 1,840 | 5.56 | Apr. 1-15, 1953 | 12 |
| 1954 | July 31, 1954 | 1,850 | 5.58 | Apr. 1-13, 1954 | d12 |
| 1955 | Aug. 27, 1955 | 2,320 | 6.13 | Mar. 21-31, 1955 | 9.0 |
| 1956 | July 31, 1956 | 2,340 | 5.60 | Apr. 1-20, 1956 | 8.0 |
| 1957 | Sept. 19, 1957 | 2,510 | 6.11 | Mar. 11,12, 1957 | 8.0 |
| 1958 | May 31, 1958 | 1,280 | 4.95 | Mar. 16-31, 1958 | e13 |
| 1959 | Aug. 24, 1959 | 5,160 | 7.39 | Mar. 16-31, 1959 | 13 |
| 1960 | May 25, 1960 | 1,600 | 5.15 | Mar. 1 to Apr. 3, 1960 | 13 |
| 1961 | Aug. 3, 1961 | 1,420 | 4.84 | Apr. 1-15, 1961 | 16 |
| 1962 | Aug. 29, 1962 | 3,890 | 6.60 | Dec. 26-29, 1961 | 9.0 |
| 1963 | Aug. 23, 1963 | 3,350 | 6.32 | Mar. 2, 1963 | 19 |
| 1964 | June 25, 1964 | 1,850 | 5.33 | Mar. 19-24, 1964 | 18 |
| 1965 | Aug. 14, 1965 | 1,870 | 5.35 | Mar. 13, 15-17, 1965 | 22 |
| 1966 | June 7, 1966 | 1,200 | 4.72 | Mar. 16 to Apr. 5, 1966 | 20 |
| 1967 | July 20, 1967 | 2,630 | 5.90 | Apr. 16-23, 1967 | 20 |
| 1968 | June 13, 1968 | 1,680 | 4.99 | Apr. 18-21, 1968 | 23 |
| 1969 | May 25, 1969 | 909 | 4.27 | Mar. 27 to Apr. 3, 1969 | 16 |
| 1970 | Aug. 5, 1970 | 946 | 4.42 | Feb. 21 to Mar. 10, Apr. 16-27, 1970 | 19 |
| 1971 | Aug. 10, 1971 | 7,840 | f7.84 | Mar. 8-17, 1971 | 17 |
| 1972 | Sept. 12, 1972 | 2,560 | 5.61 | Apr. 6-12, 1972 | 16 |
| 1973 | Aug. 21, 1973 | 2,340 | 5.47 | Apr. 25-28, 1973 | 20 |
| 1974 | Aug. 27, 1974 | 2,930 | 5.20 | Mar. 21 to Apr. 15, 1974 | 18 |
| 1975 | Sept. 11, 1975 | 1,360 | 5.82 | Apr. 24, 25, 1975 | g18 |

a Period July to September.
b Momentary minimum.
c Momentary minimum, 9.4 ft³/s Feb. 16, 1950, discharge measurement.
d Momentary minimum, 6.6 ft³/s Apr. 12, 1954, discharge measurement.
e Momentary minimum, 9.6 ft³/s Mar. 27, 1958, discharge measurement.
f Maximum outside gage height, about 11 ft, from floodmarks.
g Momentary minimum, 15 ft³/s Apr. 17, 1975, result of ice jam.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1948 | | | | | | | | | | 558 | 661 | 280 | |
| 1949 | 137 | 60.0 | 43.9 | 30.9 | 21.7 | 20.4 | 23.5 | 315 | 1176 | 940 | 681 | 321 | 316 |
| 1950 | 135 | 50.8 | 30.8 | 25.0 | 16.6 | 17.8 | 17.8 | 57.4 | 519 | 358 | 296 | 154 | 140 |
| 1951 | 67.9 | 35.0 | 31.0 | 27.0 | 21.0 | 16.5 | 22.1 | 214 | 708 | 489 | 446 | 543 | 219 |
| 1952 | 139 | 50.3 | 36.0 | 23.1 | 14.0 | 13.0 | 15.0 | 152 | 967 | 697 | 428 | 387 | 243 |
| 1953 | 134 | 80.4 | 38.5 | 31.0 | 20.7 | 16.0 | 22.3 | 268 | 642 | 278 | 444 | 246 | 186 |
| 1954 | 83.0 | 47.0 | 31.0 | 21.0 | 16.0 | 13.0 | 18.0 | 202 | 297 | 381 | 500 | 298 | 160 |
| 1955 | 127 | 56.2 | 17.4 | 19.6 | 15.9 | 11.3 | 10.0 | 88.4 | 666 | 806 | 556 | 280 | 222 |
| 1956 | 85.2 | 37.7 | 27.0 | 20.0 | 16.0 | 10.0 | 17.0 | 129 | 577 | 610 | 398 | 305 | 186 |
| 1957 | 86.6 | 56.3 | 32.9 | 24.1 | 19.4 | 10.5 | 17.7 | 348 | 702 | 310 | 218 | 540 | 197 |
| 1958 | 170 | 81.4 | 43.1 | 24.4 | 20.7 | 14.5 | 20.0 | 158 | 398 | 240 | 305 | 125 | 134 |
| 1959 | 111 | 44.5 | 31.9 | 17.5 | 15.5 | 14.5 | 16.5 | 212 | 797 | 459 | 736 | 305 | 231 |
| 1960 | 111 | 54.0 | 30.9 | 29.5 | 19.6 | 13.0 | 19.1 | 382 | 398 | 367 | 361 | 351 | 179 |
| 1961 | 129 | 60.7 | 44.1 | 54.1 | 25.0 | 17.5 | 20.5 | 186 | 606 | 506 | 456 | 348 | 205 |
| 1962 | 156 | 65.2 | 33.1 | 36.4 | 27.4 | 24.8 | 25.6 | 142 | 994 | 569 | 534 | 345 | 247 |
| 1963 | 98.7 | 47.9 | 37.3 | 33.2 | 24.7 | 22.3 | 23.9 | 320 | 858 | 1047 | 825 | 202 | 297 |
| 1964 | 168 | 59.6 | 38.1 | 27.4 | 22.9 | 19.8 | 24.5 | 72.2 | 932 | 456 | 294 | 178 | 191 |
| 1965 | 123 | 62.5 | 41.9 | 31.0 | 26.3 | 25.6 | 34.1 | 121 | 482 | 497 | 451 | 606 | 209 |
| 1966 | 181 | 70.3 | 47.4 | 30.5 | 25.1 | 21.0 | 23.0 | 83.5 | 546 | 361 | 402 | 223 | 168 |
| 1967 | 110 | 69.2 | 42.5 | 27.3 | 23.1 | 21.4 | 23.2 | 248 | 790 | 633 | 524 | 312 | 236 |
| 1968 | 88.3 | 46.5 | 33.3 | 29.8 | 29.0 | 27.6 | 26.7 | 374 | 920 | 601 | 231 | 115 | 210 |
| 1969 | 51.3 | 24.5 | 19.8 | 24.0 | 22.5 | 18.1 | 21.9 | 179 | 289 | 242 | 169 | 82.2 | 95.8 |
| 1970 | 76.3 | 45.9 | 33.0 | 25.9 | 20.4 | 19.7 | 19.7 | 194 | 406 | 419 | 422 | 199 | 158 |
| 1971 | 118 | 71.6 | 43.0 | 30.5 | 24.5 | 18.2 | 18.3 | 52.9 | 675 | 622 | 909 | 177 | 232 |
| 1972 | 92.3 | 63.9 | 35.2 | 31.2 | 25.9 | 19.6 | 18.0 | 117 | 884 | 743 | 297 | 409 | 228 |
| 1973 | 210 | 80.2 | 44.2 | 31.6 | 27.7 | 25.0 | 24.0 | 157 | 671 | 374 | 392 | 165 | 184 |
| 1974 | 90.4 | 50.8 | 36.3 | 32.4 | 27.7 | 19.8 | 21.0 | 396 | 643 | 407 | 259 | 178 | 181 |
| 1975 | 96.2 | 56.3 | 36.1 | 30.0 | 25.8 | 21.4 | 20.8 | 135 | 731 | 720 | 348 | 522 | 229 |
| MEAN | 118 | 56.6 | 35.5 | 28.5 | 22.0 | 18.2 | 20.9 | 196 | 677 | 525 | 448 | 293 | 203 |
| MONTHLY PERCENT | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 8 | 28 | 22 | 18 | 12 | |

15290000 LITTLE SUSITNA RIVER NEAR PALMER--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1958 | | 1961 | | 1963-cont | | 1967 | | 1970 | | 1973 | |
| 1- 2-52 | 0.0 | 10- 3-57 | 3.0 | 12-29-60 | 0.0 | 4-26-63 | 1.0 | 10-28-66 | 0.0 | 11-25-69 | 0.0 | 10-26-72 | 1.0 |
| 4- 8-52 | 0.0 | 4-28-58 | 3.0 | 5- 3-61 | 4.0 | 5-27-63 | 0.5 | 11-29-66 | 0.0 | 12-29-69 | 1.0 | 11-27-72 | 0.5 |
| 5- 5-52 | 0.5 | 5-27-58 | 6.0 | 6- 5-61 | 6.0 | 6- 4-63 | 3.5 | 12-27-66 | 0.0 | 1-27-70 | 0.0 | 12-20-72 | 0.0 |
| 6- 9-52 | 6.5 | 6-12-58 | 8.0 | 6-20-61 | 5.0 | 6-18-63 | 5.0 | 2-24-67 | 0.0 | 2-19-70 | 1.0 | 1-26-73 | 0.0 |
| 1953 | | 6-26-58 | 9.0 | 7- 5-61 | 6.0 | 6-27-63 | 3.5 | 3-30-67 | 0.5 | 3-26-70 | 3.0 | | |
| 10-29-52 | 1.5 | 7- 7-58 | 10.0 | 8- 2-61 | 7.5 | 7-18-63 | 5.0 | 4-27-67 | 1.0 | 4-27-70 | 1.0 | 2-23-73 | 0.5 |
| 5- 6-53 | 2.5 | 7-17-58 | 8.5 | 8-29-61 | 7.5 | 7-29-63 | 9.0 | 5-26-67 | 6.0 | 5-26-70 | 4.0 | 4-23-73 | 1.0 |
| 6- 2-53 | 8.5 | 8- 7-58 | 8.0 | 9-13-61 | 5.5 | 8- 5-63 | 4.5 | 6-28-67 | 5.0 | 6-24-70 | 7.0 | 5-24-73 | 2.5 |
| 1954 | | 8-18-58 | 6.5 | 9-25-61 | 3.5 | 8-12-63 | 5.5 | 7-25-67 | 9.0 | 7-27-70 | 9.5 | 8-27-73 | 7.5 |
| 4- 2-54 | 2.5 | 9- 9-58 | 5.5 | 1962 | | 8-28-63 | 5.5 | 9-27-67 | 5.0 | 8-26-70 | 6.0 | 1974 | |
| 4-12-54 | 1.0 | 1959 | | 10-11-61 | 0.0 | 9- 9-63 | 7.5 | 1968 | | 9-24-70 | 2.0 | 10-25-73 | 0.5 |
| 4-13-54 | 1.0 | 11-12-58 | 0.0 | 11- 7-61 | 0.0 | 1964 | | 10-27-67 | 0.0 | 1971 | | 11-26-73 | 0.5 |
| 4-28-54 | 1.0 | 1-30-59 | 0.0 | 11-16-61 | 0.0 | 10- 4-63 | 2.0 | 11-27-67 | 0.0 | 10-26-70 | 0.0 | 4-25-74 | 0.0 |
| 5-19-54 | 8.0 | 2-17-59 | 0.5 | 11-27-61 | 0.0 | 10-22-63 | 1.0 | 12-27-67 | 0.5 | 11-23-70 | 0.0 | 4-30-74 | 1.5 |
| 6- 4-54 | 8.5 | 3-16-59 | 0.0 | 12-26-61 | 0.0 | 10-29-63 | 0.0 | 1-27-68 | 0.0 | 12-28-70 | 0.0 | 5-23-74 | 5.5 |
| 6-24-54 | 9.0 | 4- 8-59 | 0.5 | 1-15-62 | 0.0 | 11- 5-63 | 0.5 | 2-26-68 | 0.5 | 1-25-71 | 0.0 | 8-27-74 | 7.0 |
| 8- 2-54 | 8.0 | 4-24-59 | 1.0 | 3- 6-62 | 0.0 | 11-12-63 | 0.0 | 4-24-68 | 0.5 | 2-23-71 | 0.0 | 9-26-74 | 5.0 |
| 8-18-54 | 9.5 | 5- 7-59 | 2.5 | 3-27-62 | 0.0 | 11-21-63 | 0.0 | 5-23-68 | 3.0 | 3-25-71 | 0.5 | 1975 | |
| 9- 2-54 | 7.5 | 5-20-59 | 4.0 | 4- 6-62 | 0.5 | 1-15-64 | 0.5 | 5-27-68 | 0.0 | 4-26-71 | 1.0 | 10-17-74 | 1.5 |
| 9-29-54 | 5.5 | 7- 8-59 | 7.5 | 4-13-62 | 1.5 | 3-11-64 | 0.0 | 7-25-68 | 9.0 | 5-24-71 | 2.5 | 10-23-74 | 1.5 |
| 1955 | | 7-30-59 | 2.5 | 5- 8-62 | 2.5 | 3-26-64 | 0.0 | 8-27-68 | 7.0 | 6-25-71 | 8.5 | 11-25-74 | 0.0 |
| 10-15-54 | 3.5 | 8-18-59 | 7.5 | 6- 4-62 | 4.0 | 1965 | | 1969 | | 7-26-71 | 6.0 | 11-29-74 | 0.0 |
| 1956 | | 1960 | | 8-21-62 | 9.0 | 10-26-64 | 0.0 | 10-25-68 | 0.0 | 8-24-71 | 7.5 | 12-12-74 | 0.0 |
| 6-26-56 | 5.5 | 10-30-59 | 1.5 | 8-28-62 | 8.0 | 12-14-64 | 0.0 | 11-25-68 | 0.0 | 1972 | | 12-23-74 | 0.0 |
| 7-10-56 | 5.0 | 12- 3-59 | 0.0 | 1963 | | 12-28-64 | 0.0 | 12-27-68 | 0.0 | 10-22-71 | 0.5 | 1-27-75 | 0.0 |
| 8- 1-56 | 5.5 | 12-22-59 | 0.5 | 10- 9-62 | 2.0 | 3-26-65 | 1.5 | 1-27-69 | 0.0 | 11-26-71 | 0.0 | 2-24-75 | 0.0 |
| 8-13-56 | 9.5 | 2-19-60 | 0.0 | 10-26-62 | 0.0 | 4-27-65 | 1.0 | 2-25-69 | 0.0 | 12-22-71 | 0.0 | 3-26-75 | 0.0 |
| 9-20-56 | 2.5 | 3-30-60 | 0.5 | 11- 5-62 | 0.0 | 7-29-65 | 8.0 | 3-25-69 | 0.0 | 1-26-72 | 0.0 | 4-10-75 | 1.0 |
| 1957 | | 5- 4-60 | 3.0 | 12-21-62 | 0.0 | 1966 | | 4-28-69 | 2.0 | 2-24-72 | 0.0 | 4-16-75 | 1.0 |
| 10-10-56 | 2.5 | 6-10-60 | 3.5 | 12-28-62 | 0.0 | 12-28-65 | 0.0 | 5-26-69 | 5.0 | 3-28-72 | 0.0 | 4-24-75 | 0.5 |
| 5-22-57 | 4.5 | 8-10-60 | 9.5 | 1- 4-63 | 0.0 | 1-25-66 | 0.0 | 6-25-69 | 9.0 | 4-25-72 | 0.5 | 5-13-75 | 2.0 |
| 6-19-57 | 6.0 | 8-18-60 | 7.5 | 4- 5-63 | 1.0 | 2-24-66 | 1.0 | 7-25-69 | 8.0 | 7-25-72 | 7.0 | 5-27-75 | 4.0 |
| 7-22-57 | 9.0 | 9-29-60 | 3.0 | 4-12-63 | 0.0 | 7-27-66 | 8.0 | 8-26-69 | 5.0 | 8-28-72 | 6.0 | 6- 2-75 | 4.0 |
| 9-10-57 | 7.5 | | | 4-19-63 | 1.0 | 8-29-66 | 6.0 | 9-29-69 | 4.5 | 9-25-72 | 2.5 | 6-23-75 | 5.5 |
| | | | | | | 9-28-66 | 4.5 | | | | | 7- 1-75 | 5.5 |
| | | | | | | | | | | | | 7-14-75 | 8.0 |
| | | | | | | | | | | | | 9-25-75 | 6.5 |

## 15291000 SUSITNA RIVER NEAR DENALI

LOCATION.--Lat 63°06'14", long 147°30'57", in NE¼ sec.10, T.21 S., R.1 E., Matanuska-Susitna Borough, on upstream right pier of bridge on Denali Highway, 0.2 mi (0.3 km) downstream from Windy Creek, 3.3 mi (5.3 km) upstream from Butte Creek, and 5.3 mi (8.5 km) southwest of Denali.

BASIN CHARACTERISTICS.--Drainage area, 950 mi² (2,460 km²); main-channel slope, 56.6 ft/mi (10.7 m/km); stream length, 51 mi (82 km); area of lakes and ponds, 1 percent; mean elevation, 4,510 ft (1,370 km); glacier area, 25 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1957 to September 1966, July 1968 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 2,440 ft (744 m), from topographic map. Prior to May 27, 1965, water-stage recorder at site 1.9 mi (3.1 km) downstream at different datum. May 27, 1965 to Sept. 30, 1966, nonrecording gage near right downstream end of bridge and July 4, 1968 to Aug. 28, 1974, water-stage recorder on left upstream wingwall, at present datum.

AVERAGE DISCHARGE.--16 years (water years 1958-66, 1969-75), 2,695 ft³/s (76.32 m³/s), 38.53 in/yr (979 mm/yr), 1,953,000 acre-ft/yr (2.41 km³/yr).

EXTREMES.--Maximum discharge during period of record, 38,200 ft³/s (1,080 m³/s) Aug. 10, 1971, gage height, 13.32 ft (4.060 m) from rating curve extended above 19,000 ft³/s (540 m³/s); maximum gage height, 13.58 ft (4.139 m) May 11, 1970, backwater from ice; minimum daily discharge, about 34 ft³/s (0.96 m³/s) Mar. 16-31, 1959. Flood of Aug. 14 or 15, 1967 reached a discharge of 28,200 ft³/s (799 m³/s), gage height, 12.7 ft (3.87 m) from flood-marks, from rating curve extended above 19,000 ft³/s (540 m³/s).

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1957a | June 7, 1957 | 18,700 | 5.54 | Sept. 23, 1957 | 1,800 |
| 1958 | July 28, 1958 | 14,500 | 4.74 | Mar. 1-31, 1958 | 120 |
| 1959 | Aug. 25, 1959 | 14,800 | 4.43 | Mar. 16-31, 1959 | 34 |
| 1960 | July 29, 1960 | 12,900 | 4.43 | Mar. 16 to Apr. 15, 1960 | 260 |
| 1961 | Aug. 4,5,or 6,1961 | 15,500 | 4.94 | Mar. 1-15, 1961 | 240 |
| 1962 | July 30, 1962 | 15,500 | 4.48 | Mar. 1-31, 1962 | 220 |
| | Aug. 3, 1962 | --- | 4.55 | | |
| 1963 | Aug. 18, 1963 | 17,000 | 5.02 | Mar. 1-31, 1963 | 200 |
| 1964 | June 7, 1964 | b16,000 | --- | Mar. 1-31, 1964 | 110 |
| 1965 | Sept. 9, 1965 | 15,800 | 11.80 | Feb. 1 to Mar. 25, 1965 | 200 |
| 1966 | July 16-31, 1966 | b9,400 | --- | Feb. 1 to Mar. 31, 1966 | 200 |
| 1967 | Aug. 14 or 15,1967 | 28,200 | 12.7 | | |
| 1968c | July 27, 1968 | 19,000 | 12.02 | Sept. 23, 1968 | 1,020 |
| 1969 | June 22, 1969 | 14,900 | 11.73 | Jan. 16 to Mar. 15, 1969 | 140 |
| | July 15, 1969 | 14,900 | 11.69 | | |
| 1970 | May 11, 1970 | --- | d13.58 | Mar. 10 to Apr. 3, 1970 | 190 |
| | July 30, 1970 | 14,100 | 11.38 | | |
| 1971 | Aug. 10, 1971 | 38,200 | 13.32 | Feb. 16 to Apr. 10, 1971 | 120 |
| 1972 | Aug. 7, 1972 | 17,200 | 11.87 | Apr. 1-22, 1972 | 260 |
| 1973 | Aug. 23, 1973 | 14,100 | 11.81 | Mar. 11 to Apr. 25, 1973 | 150 |
| 1974 | July 18, 1974 | --- | 11.94 | Apr. 6-15, 1974 | 200 |
| | Aug. 28, 1974 | 16,800 | 11.84 | | |
| 1975 | July 12, 1975 | 21,700 | 12.23 | Feb. 1 to Apr. 30, 1975 | 200 |

a Period June to September.
b Maximum daily, estimated.
c Period July to September.
d Backwater from ice.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1957 | | | | | | | | | 12210 | 11170 | 9769 | 4017 | |
| 1958 | 1277 | 610 | 288 | 219 | 150 | 120 | 210 | 1163 | 8367 | 9150 | 6536 | 1879 | 2514 |
| 1959 | 939 | 390 | 170 | 119 | 81.0 | 41.7 | 43.0 | 1782 | 8891 | 8333 | 7882 | 2498 | 2614 |
| 1960 | 1577 | 760 | 575 | 444 | 321 | 275 | 265 | 3349 | 5237 | 9039 | 7910 | 4817 | 2896 |
| 1961 | 1781 | 660 | 483 | 331 | 271 | 281 | 415 | 2959 | 6412 | 8078 | 7253 | 2695 | 2655 |
| 1962 | 1290 | 680 | 440 | 280 | 240 | 220 | 280 | 2197 | 9087 | 10220 | 9454 | 3649 | 3191 |
| 1963 | 1079 | 510 | 310 | 250 | 230 | 200 | 210 | 3253 | 6763 | 10500 | 10210 | 3949 | 3148 |
| 1964 | 925 | 290 | 185 | 140 | 140 | 110 | 130 | 910 | 11630 | 7577 | 6552 | 2633 | 2604 |
| 1965 | 1468 | 702 | 279 | 220 | 200 | 208 | 320 | 2464 | 4647 | 6756 | 5764 | 6955 | 2510 |
| 1966 | 920 | 300 | 240 | 210 | 200 | 200 | 280 | 1629 | 6850 | 8287 | 6432 | 3200 | 2411 |
| 1968 | | | | | | | | | | 11840 | 9825 | 2192 | |
| 1969 | 700 | 304 | 172 | 145 | 140 | 145 | 229 | 1768 | 8146 | 9445 | 3919 | 2213 | 2290 |
| 1970 | 1002 | 501 | 339 | 265 | 221 | 193 | 319 | 2210 | 5013 | 8454 | 6216 | 1946 | 2243 |
| 1971 | 528 | 395 | 276 | 170 | 125 | 120 | 135 | 629 | 8099 | 10410 | 10400 | 3288 | 2903 |
| 1972 | 1039 | 478 | 380 | 339 | 307 | 286 | 270 | 3468 | 6562 | 10450 | 8664 | 2778 | 2937 |
| 1973 | 667 | 323 | 211 | 178 | 164 | 153 | 153 | 1042 | 5741 | 8346 | 7268 | 2445 | 2242 |
| 1974 | 876 | 462 | 366 | 310 | 271 | 235 | 262 | 2541 | 5642 | 9547 | 9292 | 5452 | 2960 |
| 1975 | 2135 | 673 | 381 | 300 | 200 | 200 | 200 | 1640 | 7040 | 12110 | 7295 | 3571 | 3003 |
| MEAN | 1138 | 502 | 318 | 245 | 204 | 187 | 233 | 2063 | 7431 | 9428 | 7813 | 3343 | 2695 |
| MONTHLY PERCENT | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 6 | 23 | 29 | 24 | 10 | |

15291000 SUSITNA RIVER NEAR DENALI--Continued

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1957-75.

PERIOD OF DAILY RECORD.--August to September 1974, May to September 1975.

REMARKS.--Continuous water-temperature recorder for period of daily record.

EXTREMES.--Maximum during period of daily record, 10.5°C June 15, 16, 1975.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1957 | | 1959-cont | | 1961-cont | | 1963 | | 1965 | | 1969 | | 1971 | |
| 7-10-57 | 11.5 | 7-19-59 | 4.5 | 8- 8-61 | 8.5 | 10-16-62 | 0.5 | 7-30-65 | 10.0 | 5-23-69 | 0.0 | 10-15-70 | 0.0 |
| 8-13-57 | 6.0 | 8- 3-59 | 6.0 | 8-23-61 | 5.5 | 7-25-63 | 7.0 | 1966 | | 7-11-69 | 3.0 | 7-12-71 | 7.0 |
| 1958 | | 9-30-59 | 2.5 | 9-15-61 | 4.0 | 1964 | | 7- 3-66 | 5.5 | 8-13-69 | 5.0 | 8-20-71 | 7.0 |
| 7-29-58 | 7.5 | 1960 | | 1962 | | 10- 1-63 | 5.5 | 1967 | | 1970 | | 1972 | |
| 1959 | | 11-20-59 | 0.0 | 11-28-61 | 0.0 | 12- 6-63 | 0.0 | 10- 1-66 | 3.5 | 10- 4-69 | 3.0 | 9-27-72 | 0.0 |
| 2-18-59 | 0.0 | 9- 9-60 | 5.5 | 1-21-62 | 0.0 | 3-12-64 | 0.0 | 8-17-67 | 6.5 | 5-15-70 | 0.0 | 1973 | |
| 4- 1-59 | 0.0 | 1961 | | 7-13-62 | 6.5 | 6-19-64 | 4.0 | 1968 | | 7-11-70 | 6.0 | 6- 9-73 | 5.0 |
| 6-16-59 | 9.0 | 1- 3-61 | 0.0 | 8-23-62 | 5.5 | 7-10-64 | 6.0 | 7- 4-68 | 7.0 | 8-21-70 | 5.5 | 8-15-73 | 7.5 |
| | | | | | | | | 8-20-68 | 8.0 | | | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1974 | Max | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | a | 5.5 |
| | Min | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | a | 0.5 |
| 1975 | Max | --- | --- | --- | --- | --- | --- | --- | 8.0 | 10.5 | 9.5 | 8.5 | 6.5 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 3.0 | 2.0 | 2.0 | 2.0 |

a Data insufficient to compute monthly maximum or minimum.

## 15291200 MACLAREN RIVER NEAR PAXSON

LOCATION.--Lat 63°07'10", long 146°31'45", Matanuska-Susitna Borough, near left bank on downstream side of bridge on Denali Highway, 1.5 mi (2.4 km) downstream from Boulder Creek, and 34 mi (55 km) west of Paxson.

BASIN CHARACTERISTICS.--Drainage area, 280 mi$^2$ (730 km$^2$); main-channel slope, 133 ft/mi (25.2 m/km); stream length, 23 mi (37 km); area of lakes and ponds, 1 percent; mean elevation, 4,520 ft (1,380 m); glacier area, 19 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1958 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 2,865.84 ft (873.508 m) above mean sea level (Alaska Department of Public Works bench mark). Prior to Sept. 20, 1961, at site 1,200 ft (400 m) downstream at same datum. Sept. 20, 1961 to June 7, 1964, at present site and datum; June 8, 1964 to Aug. 22, 1968, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--17 years, 976 ft$^3$/s (27.64 m$^3$/s), 47.34 in/yr (1,202 mm/yr), 707,100 acre-ft/yr (872 hm$^3$/yr).

EXTREMES.--Maximum discharge during period of record, 9,260 ft$^3$/s (262 m$^3$/s) Aug. 11, 1971, gage height, 8.24 ft (2.512 m), from rating curve extended above 5,300 ft$^3$/s (150 m$^3$/s); maximum gage height, 9.10 ft (2.774 m) in May 1964, from floodmarks, backwater from ice; minimum daily discharge, about 40 ft$^3$/s (1.1 m$^3$/s) Mar. 1-25, 1965.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1958a | Aug. 4, 1958 | 5,770 | 5.64 | Sept. 27, 1958 | 634 |
| 1959 | June 22, 1959 | 4,410 | 5.02 | Mar. 16-31, 1959 | 61 |
| 1960 | Sept. 13, 1960 | 8,920 | 7.14 | Apr. 1-15, 1960 | 88 |
| 1961 | Aug. 5, 1961 | 6,540 | 6.05 | Mar. 1-15, 1961 | 81 |
| 1962 | June 14, 1962 | 6,540 | 6.85 | Mar. 1-31, 1962 | 92 |
| 1963 | July 18, 1963 | 7,300 | 7.27 | Mar. 1-31, 1963 | 80 |
| 1964 | May 1964 | --- | b9.10 | Mar. 1-31, 1964 | 71 |
| | June 7, 1964 | c6,400 | --- | | |
| 1965 | May 31, 1965 | --- | b7.95 | Mar. 1-25, 1965 | 40 |
| | July 14, 1965 | 4,840 | 6.00 | | |
| 1966 | June 7, 1966 | 4,210 | 5.65 | Mar. 1-31, 1966 | 43 |
| 1967 | Aug. 14, 1967 | 7,460 | 7.34 | Apr. 1-20, 1967 | 50 |
| 1968 | June 14, 1968 | 5,040 | 6.01 | Jan. 16 to May 5, 1968 | 95 |
| 1969 | June 16, 1969 | 4,140 | 5.45 | Jan. 21 to Mar. 15, 1969 | 55 |
| 1970 | Aug. 1, 1970 | 4,730 | 5.70 | Feb. 3 to Mar. 14, 1970 | 50 |
| 1971 | Aug. 11, 1971 | 9,260 | 8.24 | Mar. 1 to Apr. 5, 1971 | 55 |
| 1972 | June 16, 1972 | 7,070 | 7.14 | Apr. 1-15, 1972 | 90 |
| 1973 | June 15, 1973 | 5,140 | 6.21 | Mar. 19 to Apr. 25, 1973 | 50 |
| 1974 | May 31, 1974 | 4,440 | 5.70 | Mar. 11 to Apr. 20, 1974 | 55 |
| 1975 | Sept. 11, 1975 | 5,790 | 6.67 | Mar. 1 to Apr. 24, 1975 | 100 |

a Period June to September.
b Backwater from ice.
c Maximum daily.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | | | | | | | | 3532 | 3525 | 2699 | 784 | |
| 1959 | 378 | 115 | 123 | 129 | 95.4 | 62.5 | 77.5 | 587 | 2879 | 2680 | 2083 | 856 | 843 |
| 1960 | 549 | 250 | 190 | 150 | 110 | 94.3 | 91.5 | 1742 | 2124 | 3359 | 3048 | 2439 | 1184 |
| 1961 | 687 | 195 | 149 | 110 | 93.9 | 96.0 | 145 | 1237 | 2678 | 3369 | 3299 | 1168 | 1111 |
| 1962 | 381 | 210 | 170 | 120 | 100 | 92.0 | 120 | 632 | 2916 | 3265 | 2927 | 1127 | 1011 |
| 1963 | 383 | 210 | 130 | 100 | 91.0 | 80.0 | 83.0 | 2131 | 3110 | 4649 | 3136 | 1213 | 1287 |
| 1964 | 416 | 140 | 98.0 | 85.0 | 88.0 | 71.0 | 72.0 | 386 | 4297 | 2764 | 2224 | 871 | 960 |
| 1965 | 379 | 147 | 49.3 | 44.0 | 42.0 | 41.0 | 62.0 | 984 | 2268 | 3223 | 2409 | 2098 | 985 |
| 1966 | 522 | 180 | 55.0 | 45.0 | 45.0 | 43.0 | 50.0 | 265 | 2990 | 2505 | 2095 | 954 | 816 |
| 1967 | 369 | 95.0 | 70.0 | 65.0 | 60.0 | 55.0 | 53.3 | 1023 | 3634 | 3255 | 3605 | 1416 | 1149 |
| 1968 | 417 | 130 | 100 | 97.4 | 95.0 | 95.0 | 95.0 | 208 | 3245 | 3427 | 2129 | 680 | 896 |
| 1969 | 265 | 121 | 68.5 | 58.2 | 55.0 | 57.6 | 95.3 | 849 | 2613 | 2692 | 974 | 470 | 697 |
| 1970 | 249 | 117 | 73.2 | 59.4 | 50.4 | 52.7 | 69.2 | 746 | 1751 | 2441 | 2367 | 773 | 735 |
| 1971 | 301 | 192 | 131 | 83.4 | 60.4 | 55.0 | 66.0 | 365 | 3414 | 3528 | 3659 | 1165 | 1092 |
| 1972 | 375 | 156 | 123 | 115 | 107 | 97.4 | 98.5 | 1218 | 3069 | 3255 | 2676 | 1366 | 1059 |
| 1973 | 550 | 243 | 136 | 87.4 | 65.2 | 53.4 | 51.2 | 576 | 2906 | 2856 | 2271 | 821 | 890 |
| 1974 | 307 | 123 | 82.6 | 68.5 | 61.8 | 56.6 | 56.7 | 649 | 2069 | 2634 | 2439 | 1543 | 846 |
| 1975 | 385 | 232 | 140 | 115 | 110 | 100 | 103 | 768 | 3178 | 3649 | 1982 | 1574 | 1033 |
| MEAN | 407 | 168 | 111 | 90.2 | 78.2 | 70.7 | 81.7 | 845 | 2926 | 3171 | 2557 | 1184 | 976 |
| MONTHLY PERCENT | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 25 | 27 | 22 | 10 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1958-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | 1960-cont | | 1962-cont | | 1964-cont | | 1968 | | 1970 | | 1974 | |
| 6-16-58 | 6.0 | 5-10-60 | 0.0 | 1-20-62 | 0.0 | 3-12-64 | 0.0 | 3-27-68 | 0.0 | 10- 4-69 | 3.0 | 3-30-74 | 3.5 |
| 7-28-58 | 6.5 | 6- 9-60 | 5.0 | 7-11-62 | 8.0 | 9-21-64 | 3.0 | 7- 4-68 | 10.0 | 5-16-70 | 0.0 | 6-21-74 | 6.0 |
| 1959 | | 1961 | | 7-14-62 | 6.5 | 1965 | | 8-21-68 | 8.0 | 7-11-70 | 6.0 | 7-29-74 | 7.5 |
| 2-18-59 | 0.0 | 1- 3-61 | 0.0 | 8-22-62 | 7.5 | 7-30-65 | 7.0 | 8-22-68 | 8.0 | 8-20-70 | 5.5 | 8-30-74 | 8.0 |
| 4- 1-59 | 0.0 | 5-28-61 | 11.0 | 1963 | | 1966 | | 1969 | | 1971 | | 9-21-74 | 2.0 |
| 6-18-59 | 13.0 | 9-14-61 | 5.5 | 10-15-62 | 0.5 | 10- 2-65 | 1.5 | 10- 1-68 | 0.5 | 7-11-71 | 7.0 | 1975 | |
| 8- 3-59 | 6.5 | 9-21-61 | 2.0 | 1- 7-63 | 0.0 | 7- 3-66 | 5.5 | 4-16-69 | 0.0 | 8-20-71 | 6.5 | 6- 5-75 | 5.0 |
| 9- 6-59 | 2.5 | 1962 | | 6- 8-63 | 4.0 | 8-24-66 | 6.0 | 5-23-69 | 3.0 | 1972 | | 6-28-75 | 10.5 |
| 9-29-59 | 1.5 | 10-10-61 | 0.0 | 7-24-63 | 5.5 | 1967 | | 7-10-69 | 9.0 | 10- 1-71 | 0.5 | 7-25-75 | 6.5 |
| 1960 | | 11-26-61 | 0.0 | 1964 | | 7-22-67 | 7.0 | 8-13-69 | 4.0 | 9-27-72 | 0.5 | 9- 5-75 | 6.0 |
| 11-19-59 | 0.0 | | | 12- 6-63 | 0.0 | 9-20-67 | 3.5 | | | 1973 | | | |
| | | | | | | | | | | 6- 9-73 | 2.5 | | |

## 15291500 SUSITNA RIVER NEAR CANTWELL

LOCATION.--Lat 62°41'57", long 147°32'40", Matanuska-Susitna Borough, on right bank at lower end of gorge, 1.1 mi (1.8 km) downstream from small tributary, 13 mi (21 km) upstream from Jay Creek, and 65 mi (105 km) southeast of Cantwell.

BASIN CHARACTERISTICS.--Drainage area, 4,140 mi$^2$ (10,720 km$^2$); main-channel slope, 10.0 ft/mi (1.89 m/km); stream length, 107 mi (172 km); area of lakes and ponds, 2 percent; mean elevation, 3,560 ft (1,090 m); glacier area, 7 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1961 to September 1972.

GAGE.--Water-stage recorder. Altitude of gage is 1,900 ft (580 m), from topographic map.

AVERAGE DISCHARGE.--11 years, 6,295 ft$^3$/s (178.3 m$^3$/s), 20.65 in/yr (525 mm/yr), 4,561,000 acre-ft/yr (5.62 km$^3$/yr).

EXTREMES.--Maximum daily discharge during period of record, 55,000 ft$^3$/s (1,560 m$^3$/s) Aug. 10, 1971, on basis of discharge record at stations 15291000 and 15292000; minimum daily, about 400 ft$^3$/s (11 m$^3$/s) Mar. 16-31, 1964.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage Height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1961a | June 23, 1961 | 30,400 | 6.42 | May 1, 1961 | 2,000 |
| 1962 | About June 15,1962 | 46,800 | 8.0 | Mar. 1-31, 1962 | 940 |
| 1963 | July 18, 1963 | b32,000 | --- | Apr. 1-30, 1963 | 720 |
| 1964 | June 8, 1964 | 51,200 | 8.35 | Mar. 16-31, 1964 | 400 |
| 1965 | July 13, 1965 | b26,000 | --- | Feb. 1-28, 1965 | 680 |
| 1966 | June 6-10, 1966 | b27,000 | --- | Feb. 1 to Mar. 31, 1966 | 650 |
| 1967 | Aug. 14, 1967 | 38,800 | 6.97 | Apr. 1-25, 1967 | 500 |
| 1968 | May 22, 1968 | b25,000 | --- | Jan. 11 to Apr. 25, 1968 | 1,200 |
| 1969 | July 15, 1969 | 19,300 | 4.43 | Feb. 8 to Mar. 3, 1969 | 480 |
| 1970 | Aug. 1, 1970 | 20,500 | 4.86 | Jan. 16 to Feb. 20, 1970 | 420 |
| 1971 | Aug. 10, 1971 | c55,000 | --- | Mar. 16 to Apr. 6, 1971 | 460 |
| 1972 | June 17, 1972 | 44,700 | 7.63 | Mar. 20 to Apr. 21, 1972 | 850 |

a Period May to September.
b Maximum daily.
c Maximum daily, estimated on basis of discharge record at stations 15291000 and 15292000.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1961 | | | | | | | | 9688 | 15710 | 14820 | 16700 | 6725 | |
| 1962 | 3281 | 1800 | 1400 | 1300 | 1000 | 940 | 1200 | 10000 | 28320 | 20890 | 16000 | 9410 | 7995 |
| 1963 | 4326 | 2200 | 1400 | 1000 | 850 | 760 | 720 | 11340 | 15000 | 22790 | 18190 | 9187 | 7372 |
| 1964 | 3848 | 1300 | 877 | 644 | 586 | 429 | 465 | 2806 | 34630 | 17040 | 11510 | 5352 | 6615 |
| 1965 | 3134 | 1911 | 921 | 760 | 680 | 709 | 1097 | 8818 | 16430 | 18350 | 13440 | 12910 | 6629 |
| 1966 | 3116 | 1000 | 750 | 700 | 650 | 650 | 875 | 4387 | 18500 | 12220 | 12680 | 6523 | 5190 |
| 1967 | 2322 | 780 | 720 | 680 | 640 | 560 | 513 | 9452 | 19620 | 16880 | 19190 | 10280 | 6843 |
| 1968 | 3084 | 1490 | 1332 | 1232 | 1200 | 1200 | 1223 | 9268 | 19500 | 17480 | 10940 | 5410 | 6131 |
| 1969 | 2406 | 1063 | 618 | 508 | 485 | 548 | 998 | 7471 | 12330 | 13510 | 6597 | 3376 | 4186 |
| 1970 | 1638 | 815 | 543 | 437 | 426 | 463 | 887 | 7580 | 9909 | 13900 | 12320 | 5211 | 4548 |
| 1971 | 2155 | 1530 | 1048 | 731 | 503 | 470 | 529 | 1915 | 21970 | 18130 | 22710 | 9800 | 6824 |
| 1972 | 4058 | 2050 | 1371 | 1068 | 922 | 881 | 876 | 9694 | 20000 | 16690 | 15620 | 9423 | 6907 |
| MEAN | 3033 | 1449 | 998 | 824 | 722 | 692 | 853 | 7701 | 19330 | 16890 | 14660 | 7800 | 6295 |
| MONTHLY PERCENT | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 10 | 26 | 23 | 20 | 10 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1961, 1962, 1964, 1966-72.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1961 | | 1962-cont | | 1964-cont | | 1967 | | 1968 | | 1970 | | 1971 | |
| 6-29-61 | 10.5 | 1-20-62 | 0.0 | 9- 9-64 | 8.5 | 6- 7-67 | 3.5 | 6- 8-68 | 8.0 | 10- 5-69 | 2.5 | 7-12-71 | 8.5 |
| 9-18-61 | 5.0 | 1964 | | 1966 | | 6-11-67 | 7.5 | 7-24-68 | 13.0 | 3-23-70 | 0.0 | 8-17-71 | 10.0 |
| 1962 | | 10- 5-63 | 3.0 | 8-27-66 | 9.5 | 6-20-67 | 9.5 | 1969 | | 5-27-70 | 7.0 | 1972 | |
| 10-17-61 | 0.0 | 12-23-63 | 0.0 | 9-29-66 | 5.5 | 8-23-67 | 9.0 | 5-15-69 | 4.0 | 7-17-70 | 9.5 | 7- 7-72 | 12.0 |
| 10-20-61 | 0.0 | 3-12-64 | 0.0 | | | 9-28-67 | 4.0 | 7-29-69 | 8.0 | 9-18-70 | 5.5 | 8-10-72 | 10.5 |

## 15292000 SUSITNA RIVER AT GOLD CREEK

LOCATION.--Lat 62°46'04", long 149°41'28", in NW¼ sec.20, T.31 N., R.2 W., Matanuska-Susitna Borough, near left bank under Alaska Railroad bridge, 0.1 mi (0.2 km) downstream from Gold Creek, 0.9 mi (1.4 km) north of Gold Creek railroad station, and 2.0 mi (3.2 km) downstream from Indian River.

BASIN CHARACTERISTICS.--Drainage area, 6,160 $mi^2$ (15,950 $km^2$); main-channel slope, 10.2 ft/mi (1.93 m/km); stream length, 189 mi (304 km); area of lakes and ponds, 1 percent; mean elevation, 3,420 ft (1,040 m); glacier area, 5 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1949 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 676.50 ft (206.197 m) above mean sea level. Prior to June 6, 1957, nonrecording gage at same site and datum. June 7, 1957 to June 2, 1964, water-stage recorder at site 0.3 mi (0.5 km) upstream at same datum.

AVERAGE DISCHARGE.--26 years, 9,707 $ft^3/s$ (274.9 $m^3/s$), 21.40 in/yr (544 mm/yr), 7,033,000 acre-ft/yr (8.67 $km^3/yr$).

EXTREMES.--Maximum discharge during period of record, 90,700 $ft^3/s$ (2,570 $m^3/s$) June 7, 1964, gage height, 16.58 ft (5.054 m); maximum gage height observed, 24.48 ft (7.462 m) May 10, 1954, ice jam; minimum daily discharge, about 600 $ft^3/s$ (17.0 $m^3/s$) Feb. 16-20, 1950.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1949a | Aug. 1, 1949 | b35,000 | --- | Sept. 21, 1949 | 9,160 |
| 1950 | June 21, 1950 | b34,000 | --- | Feb. 16-20, 1950 | 600 |
| 1951 | May 6, 1951 | --- | c16.20 | Mar. 1 to Apr. 5, 1951 | 740 |
| | June 8, 1951 | d37,400 | 12.15 | | |
| 1952 | June 17, 1952 | d44,700 | 12.90 | Mar. 1-31, 1952 | 880 |
| 1953 | Apr. 30, 1953 | --- | c15.25 | Feb. 1 to Mar. 31, 1953 | 820 |
| | June 7, 1953 | d38,400 | 12.25 | | |
| 1954 | May 10, 1954 | --- | c24.48 | Mar. 1-31, 1954 | 780 |
| | Aug. 4, 1954 | d42,400 | 12.85 | | |
| 1955 | May 18, 1955 | --- | c18.49 | Mar. 1-31, 1955 | 1,100 |
| | Aug. 26, 1955 | d58,100 | 14.20 | | |
| 1956 | May 10, 1956 | --- | c17.10 | Mar. 1-31, 1956 | 940 |
| | June 9, 1956 | 51,700 | 13.42 | | |
| 1957 | June 8, 1957 | 42,200 | 13.68 | Mar. 1 to Apr. 30, 1957 | 1,200 |
| 1958 | Dec. 21, 1957 | --- | c14.91 | Mar. 16 to Apr. 2, 1958 | 1,100 |
| | Aug. 3, 1958 | 49,600 | 14.74 | | |
| 1959 | Aug. 25, 1959 | 62,300 | 15.42 | Mar. 1-31, 1959 | 980 |
| 1960 | (date unknown) | --- | c18.23 | Mar. 16 to Apr. 15, 1960 | 1,100 |
| | Sept. 13, 1960 | 41,900 | 14.45 | | |
| 1961 | June 23, 1961 | b54,000 | --- | Mar. 1-15, 1961 | 1,500 |
| 1962 | June 15, 1962 | 80,600 | 18.30 | Mar. 1-31, 1962 | 1,400 |
| 1963 | July 18, 1963 | b49,000 | --- | Apr. 1-30, 1963 | 830 |
| 1964 | June 7, 1964 | 90,700 | 16.58 | Mar. 16-31, 1964 | 660 |
| 1965 | June 28, 1965 | 43,600 | 12.95 | Feb. 1-28, 1965 | 860 |
| 1966 | June 6, 1966 | 63,600 | 14.66 | Feb. 1 to Mar. 31, 1966 | 1,300 |
| 1967 | May 16, 1967 | --- | c20.78 | Apr. 1-20, 1967 | 1,100 |
| | Aug. 15, 1967 | 80,200 | 15.93 | | |
| 1968 | May 17, 1968 | --- | c14.08 | Apr. 6-15, 1968 | 1,800 |
| | May 22, 1968 | 41,800 | 12.75 | | |
| 1969 | May 25, 1969 | 28,400 | 11.17 | Jan. 14 to Feb. 15, 1969 | 700 |
| 1970 | June 30, 1970 | 33,400 | 11.80 | Feb. 11 to Mar. 15, 1970 | 750 |
| 1971 | Aug. 10, 1971 | 87,400 | 16.36 | Mar. 1 to Apr. 5, 1971 | 950 |
| 1972 | June 17, 1972 | 82,600 | 16.04 | Apr. 17-24, 1972 | 1,600 |
| 1973 | June 16, 1973 | 54,100 | 13.92 | Mar. 1 to Apr. 25, 1973 | 1,000 |
| 1974 | May 29, 1974 | 37,200 | 11.79 | Mar. 16 to Apr. 10, 1974 | 700 |
| 1975 | June 3, 1975 | 47,300 | 13.30 | Feb. 21 to Apr. 13, 1975 | 1,400 |

a Period August to September.
b Maximum daily.
c Backwater from ice.
d Maximum observed.

15292000 SUSITNA RIVER AT GOLD CREEK--Continued

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | | | | | | | | | | | 24250 | 15650 | |
| 1950 | 6335 | 2583 | 1439 | 1027 | 788 | 726 | 870 | 11510 | 19600 | 22600 | 19880 | 8301 | 8032 |
| 1951 | 3848 | 1300 | 1100 | 960 | 820 | 740 | 1617 | 14090 | 20790 | 22570 | 19670 | 21240 | 9106 |
| 1952 | 5571 | 2744 | 1900 | 1600 | 1000 | 880 | 920 | 5419 | 32370 | 26390 | 20920 | 14480 | 9529 |
| 1953 | 8202 | 3497 | 1700 | 1100 | 820 | 820 | 1615 | 19270 | 27320 | 20200 | 20610 | 15270 | 10090 |
| 1954 | 5604 | 2100 | 1500 | 1300 | 1000 | 780 | 1235 | 17280 | 25250 | 20360 | 26100 | 12920 | 9681 |
| 1955 | 5370 | 2760 | 2045 | 1794 | 1400 | 1100 | 1200 | 9319 | 29860 | 27560 | 25750 | 14290 | 10260 |
| 1956 | 4951 | 1900 | 1300 | 980 | 970 | 940 | 950 | 17660 | 33340 | 31090 | 24530 | 18330 | 11450 |
| 1957 | 5806 | 3050 | 2142 | 1700 | 1500 | 1200 | 1200 | 13750 | 30160 | 23310 | 20540 | 19800 | 10380 |
| 1958 | 8212 | 3954 | 3264 | 1965 | 1307 | 1148 | 1533 | 12900 | 25700 | 22880 | 22540 | 7550 | 9476 |
| 1959 | 4811 | 2150 | 1513 | 1448 | 1307 | 980 | 1250 | 15990 | 23320 | 25000 | 31180 | 16920 | 10560 |
| 1960 | 6558 | 2850 | 2200 | 1845 | 1452 | 1197 | 1300 | 15780 | 15530 | 22980 | 23590 | 20510 | 9690 |
| 1961 | 7794 | 3000 | 2694 | 2452 | 1754 | 1810 | 2650 | 17360 | 29450 | 24570 | 22100 | 13370 | 10810 |
| 1962 | 5916 | 2700 | 2100 | 1900 | 1500 | 1400 | 1700 | 12590 | 43270 | 25850 | 23550 | 15890 | 11570 |
| 1963 | 6723 | 2800 | 2000 | 1600 | 1500 | 1000 | 830 | 19030 | 26000 | 34400 | 23670 | 12320 | 11070 |
| 1964 | 6449 | 2250 | 1494 | 1048 | 966 | 713 | 745 | 4307 | 50580 | 22950 | 16440 | 9571 | 9774 |
| 1965 | 6291 | 2799 | 1211 | 960 | 860 | 900 | 1360 | 12990 | 25720 | 27840 | 21120 | 19350 | 10170 |
| 1966 | 7205 | 2098 | 1631 | 1400 | 1300 | 1300 | 1775 | 9645 | 32950 | 19860 | 21830 | 11750 | 9432 |
| 1967 | 4163 | 1600 | 1500 | 1500 | 1400 | 1200 | 1167 | 15480 | 29510 | 26800 | 32620 | 16870 | 11220 |
| 1968 | 4900 | 2353 | 2055 | 1981 | 1900 | 1900 | 1910 | 16180 | 31550 | 26420 | 17170 | 8816 | 9789 |
| 1969 | 3822 | 1630 | 882 | 724 | 723 | 816 | 1510 | 11050 | 15500 | 16100 | 8879 | 5093 | 5597 |
| 1970 | 3124 | 1215 | 866 | 824 | 768 | 776 | 1080 | 11380 | 18630 | 22660 | 19980 | 9121 | 7591 |
| 1971 | 5288 | 3407 | 2290 | 1442 | 1036 | 950 | 1082 | 3745 | 32930 | 23950 | 31910 | 14440 | 10250 |
| 1972 | 5847 | 3093 | 2510 | 2239 | 2028 | 1823 | 1710 | 21890 | 34430 | 22770 | 19290 | 12400 | 10860 |
| 1973 | 4826 | 2253 | 1465 | 1200 | 1200 | 1000 | 1027 | 8235 | 27800 | 18250 | 20290 | 9074 | 8087 |
| 1974 | 3733 | 1523 | 1034 | 874 | 777 | 724 | 992 | 16180 | 17870 | 18800 | 16220 | 12250 | 7630 |
| 1975 | 3739 | 1700 | 1603 | 1516 | 1471 | 1400 | 1593 | 15350 | 32310 | 27720 | 18090 | 16310 | 10280 |
| MEAN | 5580 | 2435 | 1748 | 1438 | 1213 | 1085 | 1339 | 13400 | 28150 | 23990 | 21950 | 13770 | 9707 |
| MONTHLY PERCENT | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 12 | 24 | 21 | 19 | 12 | |

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1952-54, 1956-75.

PERIOD OF DAILY RECORD.--June to September 1957, July to November 1974, May to September 1975.

REMARKS.--Once-daily readings by observer on most days June to September 1957; continuous water-temperature recorder remainder of period of daily record.

EXTREMES.--Maximum observed during period of daily record, 17.0°C July 13, 1957.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | 1956 | | 1959-cont | | 1962 | | 1965 | | 1969 | | 1971 | |
| 4- 1-52 | 0.0 | 8- 7-56 | 10.5 | 7-16-59 | 5.5 | 10-13-61 | 0.0 | 10- 9-64 | 5.0 | 4-15-69 | 0.0 | 6-10-71 | 6.0 |
| 1953 | | 8-21-56 | 10.5 | 9- 3-59 | 5.5 | 1963 | | 1966 | | 5-16-69 | 3.0 | 7- 3-71 | 9.0 |
| 5-28-53 | 5.5 | 1958 | | 1960 | | 10-11-62 | 0.5 | 8-23-66 | 9.0 | 6-21-69 | 12.0 | 8-12-71 | 13.0 |
| 6-26-53 | 15.5 | 8-28-58 | 9.0 | 10-14-59 | 0.5 | 5-30-63 | 3.5 | 9-29-66 | 5.5 | 1970 | | 1972 | |
| 1954 | | 1959 | | 9- 7-60 | 5.5 | 1964 | | 1967 | | 10- 5-69 | 3.0 | 1-20-72 | 0.0 |
| 2-11-54 | 0.5 | 10- 7-58 | 0.0 | 1961 | | 10-14-63 | 3.0 | 4- 8-67 | 0.0 | 4- 1-70 | 0.0 | 7- 7-72 | 13.0 |
| 3-30-54 | 0.0 | 2-19-59 | 0.0 | 1-18-61 | 0.0 | 12-23-63 | 0.0 | 6- 7-67 | 4.0 | 5-27-70 | 7.5 | 1973 | |
| 9- 7-54 | 8.5 | 4- 2-59 | 0.0 | 6-27-61 | 9.0 | 2-18-64 | 0.0 | 1968 | | 7-16-70 | 9.5 | 2-13-73 | 0.0 |
| | | 6-25-59 | 2.5 | 9-19-61 | 6.0 | 3-13-64 | 0.0 | 1-11-68 | 0.5 | 9-18-70 | 6.0 | 9-27-73 | 4.0 |
| | | | | | | | | 5-22-68 | 3.0 | | | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1957 | Max | --- | --- | --- | --- | --- | --- | --- | --- | 15.0 | 17.0 | 15.0 | a |
| | Min | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 9.0 | 9.0 | a |
| 1974 | Max | --- | --- | --- | --- | --- | --- | --- | --- | --- | a | 13.5 | 10.5 |
| | Min | --- | --- | --- | --- | --- | --- | --- | --- | --- | a | 5.5 | 5.5 |
| 1975 | Max | 6.5 | 2.5 | --- | --- | --- | --- | --- | a | --- | --- | a | 9.5 |
| | Min | 1.0 | a | --- | --- | --- | --- | --- | a | --- | --- | a | 3.5 |

a Data insufficient to compute monthly maximum or minimum.

## 15292400 CHULITNA RIVER NEAR TALKEETNA

LOCATION.--Lat 62°33'31", long 150°14'02", in SE¼ sec.32, T.29 N., R.5 W., Matanuska-Susitna Borough, on right bank 0.5 mi (0.8 km) downstream from Anchorage-Fairbanks Highway crossing, 4.5 mi (7.2 km) downstream from Troublesome Creek, 16 mi (26 km) northwest of Talkeetna, and 18 mi (29 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 2,570 $mi^2$ (6,660 $km^2$); main-channel slope, 23 ft/mi (4.4 m/km); stream length, 87 mi (140 km); area of lakes and ponds, 1 percent; mean elevation, 3,760 ft (1,150 m); glacier area, 27 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1958 to September 1972. Annual maximum, water years 1973-75.

GAGE.--Water-stage recorder. Altitude of gage is 520 ft (158 m), from topographic map. Prior to July 29, 1964, at site 4 mi (6 km) downstream at different datum.

AVERAGE DISCHARGE.--14 years, 8,748 $ft^3/s$ (247.7 $m^3/s$), 46.22 in/yr (1,174 mm/yr), 6,338,000 acre-ft/yr (7.81 $km^3/yr$).

EXTREMES.--Maximum discharge during period of record, 75,900 $ft^3/s$ (2,150 $m^3/s$) July 20, 1967, gage height, 22.48 ft (6.852 m); minimum daily, about 650 $ft^3/s$ (18.4 $m^3/s$) Apr. 1-15, 1963.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1958a | Aug. 3, 1958 | 35,100 | 14.08 | Mar. 16-31, 1958 | 900 |
| 1959 | July 12, 1959 | 38,800 | 15.11 | Mar. 16-31, 1959 | 690 |
| 1960 | May 26, 1960 | 38,000 | 14.90 | Mar. 16-31, 1960 | 880 |
| 1961 | Aug. 5,6,or 7,1961 | 41,100 | 15.7 | Mar. 1-15, 1961 | 950 |
| 1962 | June 16, 1962 | 39,600 | 14.90 | Mar. 1-31, 1962 | 930 |
| 1963 | July 6-20, 1963 | b34,000 | --- | Apr. 1-15, 1963 | 650 |
| 1964 | June 1-10, 1964 | b45,000 | --- | Mar. 1-31, 1964 | 770 |
| 1965 | Sept. 7, 1965 | 42,100 | 13.44 | Mar. 1-31, 1965 | 1,300 |
| 1966 | Aug. 23, 1966 | 38,600 | 12.78 | Feb. 1 to Mar. 31, 1966 | 1,100 |
| 1967 | July 20, 1967 | 75,900 | 22.48 | Apr. 4-21, 1967 | 900 |
| 1968 | June 13, 1968 | 40,200 | 13.49 | Mar. 16 to Apr. 2, 1968 | 1,100 |
| 1969 | June 17, 1969 | 28,400 | 10.10 | Mar. 16-31, 1969 | 800 |
| 1970 | Aug. 2, 1970 | 36,400 | 12.40 | Feb. 16 to Apr. 5, 1970 | 1,100 |
| 1971 | Aug. 11, 1971 | 50,800 | 16.21 | Mar. 16-25, 1971 | 900 |
| 1972 | July 10, 1972 | 34,700 | 11.91 | Apr. 7-25, 1972 | 850 |
| 1973 | (date unknown) | 36,700 | 12.49 | | |
| 1974 | Aug. 31, 1974 | 32,200 | 11.19 | | |
| 1975 | July 12, 1975 | 36,700 | 12.49 | | |

a Period February to September.
b Maximum daily, estimated.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | | | | 1044 | 948 | 1220 | 10460 | 23170 | 25010 | 20760 | 8000 | |
| 1959 | 4197 | 1883 | 1262 | 1097 | 1049 | 738 | 890 | 7413 | 23660 | 25650 | 22100 | 9957 | 8376 |
| 1960 | 4723 | 2283 | 1700 | 1448 | 1103 | 933 | 1000 | 13890 | 17390 | 23650 | 19320 | 12420 | 8363 |
| 1961 | 5135 | 1950 | 1745 | 1452 | 1100 | 1079 | 1600 | 10100 | 20490 | 27420 | 24580 | 16030 | 9451 |
| 1962 | 5777 | 2400 | 1500 | 1300 | 1000 | 930 | 1170 | 7743 | 20620 | 27220 | 21980 | 13490 | 8818 |
| 1963 | 3506 | 1500 | 1552 | 1600 | 1300 | 846 | 700 | 11060 | 17750 | 28950 | 18390 | 11330 | 8268 |
| 1964 | 8062 | 2300 | 1000 | 1007 | 820 | 770 | 1133 | 2355 | 40330 | 24430 | 20250 | 9235 | 9312 |
| 1965 | 5642 | 2900 | 2100 | 1600 | 1400 | 1300 | 1400 | 7452 | 20070 | 23230 | 22550 | 22260 | 9365 |
| 1966 | 6071 | 1620 | 1350 | 1200 | 1100 | 1100 | 1300 | 3971 | 21740 | 23750 | 27720 | 12200 | 8648 |
| 1967 | 4682 | 1680 | 1500 | 1458 | 1257 | 1045 | 972 | 12400 | 25520 | 35570 | 33670 | 12510 | 11110 |
| 1968 | 3483 | 1660 | 1397 | 1235 | 1200 | 1148 | 1347 | 10940 | 29000 | 30140 | 20710 | 7375 | 9172 |
| 1969 | 2898 | 1480 | 1139 | 974 | 900 | 824 | 1333 | 6001 | 18560 | 20820 | 11300 | 6704 | 6110 |
| 1970 | 4578 | 1887 | 1316 | 1200 | 1154 | 1100 | 1437 | 9643 | 19670 | 26100 | 24660 | 11330 | 8736 |
| 1971 | 3826 | 2210 | 1403 | 1113 | 950 | 934 | 982 | 4468 | 22180 | 27280 | 23810 | 11080 | 8406 |
| 1972 | 5439 | 2157 | 1432 | 1174 | 1041 | 939 | 893 | 9765 | 17900 | 25770 | 20970 | 12120 | 8340 |
| MEAN | 4859 | 1994 | 1457 | 1276 | 1095 | 976 | 1158 | 8511 | 22540 | 26330 | 22190 | 11740 | 8748 |
| MONTHLY PERCENT | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 8 | 22 | 25 | 21 | 11 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1958-60, 1966-73.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1958 | | 1959-cont | | 1966 | | 1968 | | 1970 | | 1971 | | 1972 | |
| 8-30-58 | 6.5 | 3-31-59 | 0.0 | 5-31-66 | 7.5 | 3-26-68 | 0.0 | 3-31-70 | 0.0 | 1- 7-71 | 0.0 | 1-18-72 | 0.0 |
| 1959 | | 6- 3-59 | 3.5 | 7-15-66 | 8.5 | 9-10-68 | 4.0 | 5-27-70 | 7.0 | 4- 1-71 | 0.0 | 4-17-72 | 0.0 |
| 10- 8-58 | 0.0 | 6-24-59 | 2.5 | 1967 | | 1969 | | 6-12-70 | 6.5 | 5-17-71 | 0.0 | 5-26-72 | 3.0 |
| 11-11-58 | 0.0 | 1960 | | 4- 9-67 | 0.0 | 10- 2-68 | 2.0 | 7-15-70 | 8.5 | 7- 3-71 | 6.0 | 8- 9-72 | 9.5 |
| 2-17-59 | 0.0 | 11-16-59 | 0.0 | 7-22-67 | 7.5 | 4- 4-69 | 0.0 | 8-12-70 | 8.0 | 8-11-71 | 7.0 | 1973 | |
| | | 9- 7-60 | 5.0 | 7-24-67 | 7.5 | 6-19-69 | 10.0 | 9-16-70 | 5.5 | 9-17-71 | 4.5 | 1-12-73 | 0.0 |
| | | | | | | 7-25-69 | 6.0 | | | | | | |

## 15292700 TALKEETNA RIVER NEAR TALKEETNA

LOCATION.--Lat 62°20'49", long 150°01'01", in NE¼ sec.16, T.26 N., R.4 W., Matanuska-Susitna Borough, on left bank 1.7 mi (2.7 km) downstream from Chunilna Creek, 3.5 mi (5.6 km) northeast of Talkeetna, and about 5 mi (8 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 2,006 mi² (5,196 km²); main-channel slope, 35 ft/mi (6.6 m/km); stream length, 90.3 mi (145.3 km); area of lakes and ponds, 0 percent; mean elevation, 3,630 ft (1,106 m); glacier area, 7 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1964 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (120 m), from topographic map.

AVERAGE DISCHARGE.--11 years, 4,086 ft³/s (115.7 m³/s), 27.66 in/yr (703 mm/yr), 2,960,000 acre-ft/yr (3.65 km³/yr).

EXTREMES.--Maximum discharge during period of record, 67,400 ft³/s (1,910 m³/s) Aug. 10, 1971, gage height, 16.35 ft (4.983 m); minimum daily, about 380 ft³/s (10.8 m³/s) Feb. 21 to Apr. 10, 1969.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1964a | About June 1,1964 | 33,200 | 12.30 | Sept. 22, 1964 | b3,060 |
| 1965 | Sept. 27, 1965 | 25,900 | 11.08 | Mar. 1-31, 1965 | 540 |
| 1966 | June 7, 1966 | 28,600 | 11.53 | Mar. 9-29, 1966 | 390 |
| 1967 | July 20, 1967 | 59,400 | 15.75 | Apr. 3-25, 1967 | 420 |
| 1968 | June 13, 1968 | 25,000 | 10.89 | Mar. 6 to Apr. 3, 1968 | 740 |
| 1969 | May 25, 1969 | 16,800 | 9.30 | Feb. 21 to Apr. 10, 1969 | 380 |
| 1970 | June 28, 1970 | 23,400 | 10.62 | Feb. 21 to Apr. 10, 1970 | 440 |
| 1971 | Aug. 10, 1971 | 67,400 | 16.35 | Feb. 25 to Mar. 28, 1971 | 400 |
| 1972 | June 17, 1972 | 36,500 | 11.92 | Apr. 1-7, 1972 | 400 |
| 1973 | June 16, 1973 | 30,200 | 10.87 | Apr. 1-10, 1973 | 500 |
| 1974 | Aug. 28, 1974 | 24,500 | 10.11 | Mar. 21 to Apr. 14, 1974 | 450 |
| 1975 | July 12, 1975 | 22,200 | 9.74 | Mar. 6 to Apr. 20, 1975 | 500 |

a Period June to September.
b Momentary minimum, gage height, 4.97 ft.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1964 | | | | | | | | | 17080 | 9820 | 8396 | 3815 | |
| 1965 | 3115 | 1568 | 1100 | 720 | 620 | 540 | 580 | 3474 | 11090 | 12180 | 11150 | 10610 | 4749 |
| 1966 | 4438 | 1460 | 876 | 711 | 526 | 395 | 422 | 2410 | 12970 | 10100 | 10730 | 5370 | 4221 |
| 1967 | 2388 | 897 | 750 | 637 | 546 | 471 | 427 | 4112 | 9286 | 12600 | 14160 | 6971 | 4470 |
| 1968 | 2029 | 1253 | 987 | 851 | 777 | 743 | 983 | 8840 | 14100 | 11230 | 7546 | 4120 | 4468 |
| 1969 | 1637 | 827 | 556 | 459 | 401 | 380 | 519 | 3869 | 5207 | 7080 | 3787 | 2070 | 2249 |
| 1970 | 1450 | 765 | 587 | 504 | 458 | 440 | 545 | 3950 | 7979 | 10320 | 8752 | 5993 | 3500 |
| 1971 | 2817 | 1647 | 1103 | 679 | 459 | 402 | 503 | 2145 | 19040 | 11760 | 16770 | 5990 | 5299 |
| 1972 | 2632 | 1310 | 845 | 727 | 628 | 481 | 519 | 3516 | 12700 | 12030 | 9576 | 8709 | 4479 |
| 1973 | 3630 | 1373 | 889 | 748 | 654 | 574 | 577 | 3860 | 12210 | 7676 | 9927 | 3861 | 3851 |
| 1974 | 1807 | 960 | 745 | 645 | 559 | 482 | 535 | 5678 | 8030 | 7755 | 7704 | 4763 | 3325 |
| 1975 | 1967 | 1002 | 774 | 694 | 586 | 508 | 522 | 4084 | 13180 | 12070 | 8487 | 7960 | 4336 |
| MEAN | 2537 | 1187 | 838 | 671 | 565 | 492 | 557 | 4176 | 11910 | 10390 | 9749 | 5853 | 4086 |
| MONTHLY PERCENT | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 9 | 24 | 21 | 20 | 12 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1954, 1966-75.

PERIOD OF DAILY RECORD.--May to September 1954.

REMARKS.--Once-daily readings by observer for period of daily record.

EXTREMES.--Maximum observed during period of daily record, 14.0°C June 27, 1954.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1966 | | 1967-cont | | 1969 | | 1970-cont | | 1971-cont | | 1973 | | 1974-cont | |
| 5-14-66 | 5.0 | 7-21-67 | 9.5 | 10- 1-68 | 2.0 | 7-16-70 | 9.5 | 8-12-71 | 7.5 | 1-11-73 | 0.0 | 8-14-74 | 13.0 |
| 6- 9-66 | 6.5 | 8-23-67 | 9.0 | 5- 1-69 | 2.0 | 8-10-70 | 8.5 | 8-14-71 | 7.0 | 3-28-73 | 0.0 | 9-18-74 | 7.5 |
| 7-13-66 | 9.5 | 9-20-67 | 9.5 | 6-20-69 | 12.0 | 9- 9-70 | 6.0 | 8-17-71 | 7.0 | 7- 3-73 | 9.0 | 1975 | |
| 8-25-66 | 9.5 | 1968 | | 7-25-69 | 10.0 | 9-17-70 | 6.5 | 9-16-71 | 3.5 | 8-16-73 | 8.0 | 3-12-75 | 0.0 |
| 1967 | | 1-10-68 | 0.5 | 8-28-69 | 8.0 | 1971 | | 1972 | | 9-28-73 | 4.0 | 5-19-75 | 3.5 |
| 10- 1-66 | 5.5 | 5-21-68 | 5.0 | 1970 | | 3-31-71 | 0.5 | 5-25-72 | 3.5 | 1974 | | 6-19-75 | 6.0 |
| 1-14-67 | 0.0 | 6-18-68 | 7.0 | 4- 1-70 | 0.0 | 7- 2-71 | 7.5 | 7- 5-72 | 12.0 | 1-11-74 | 0.0 | 7-16-75 | 10.0 |
| 5-24-67 | 3.5 | 7-22-68 | 12.0 | 5-26-70 | 7.0 | 8-10-71 | 8.5 | 8-11-72 | 12.5 | 5-16-74 | 4.5 | 8-19-75 | 6.5 |
| | | 9- 9-68 | 9.0 | | | 8-11-71 | 9.5 | 9-28-72 | 1.0 | 7- 2-74 | 11.5 | | |

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1954 | Max | --- | --- | --- | --- | --- | --- | --- | 10.0 | 14.0 | 13.5 | 13.0 | 10.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | 3.0 | 9.0 | 8.5 | 9.0 | 4.5 |

## 15294000 CRAIGIE CREEK NEAR WASILLA

LOCATION.--Lat 61°47'45", long 149°21'10", Matanuska-Susitna Borough, 4 mi (6 km) upstream from mouth, and 15 mi (24 km) north of Wasilla.

BASIN CHARACTERISTICS.--Drainage area, 2.8 mi² (7.3 km²), approximately.

PERIOD OF RECORD.--June to September 1913.

GAGE.--Nonrecording gage and Cippoletti weir. Altitude of gage is 3,100 ft (940 m), from topographic map.

EXTREMES.--Maximum discharge observed during period of record, 70 ft³/s (1.98 m³/s) June 15, 1913, gage height, 1.66 ft (0.506 m); minimum observed, 3.6 ft³/s (0.10 m³/s) Sept. 14, 21, 1913, gage height, 0.22 ft (0.067 m).

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | --- | --- | --- | --- | --- | --- | --- | --- | 38.4 | 20.1 | 13.7 | 8.32 | --- |

## 15294300 SKWENTNA RIVER NEAR SKWENTNA

LOCATION.--Lat 61°52'23", long 151°22'01", in NW¼ sec.31, T.21 N., R.11 W., Matanuska-Susitna Borough, on right bank 2 mi (3 km) downstream from Shell Creek, 8 mi (13 km) southwest of Skwentna, and 13 mi (21 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 2,250 mi² (5,830 km²); main-channel slope, 30.6 ft/mi (5.80 m/km); stream length, 98 mi (158 km); area of lakes and ponds, 5 percent; mean elevation, 2,810 ft (856 m); glacier area, 16 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 200 ft (61 m), from topographic map.

AVERAGE DISCHARGE.--16 years, 6,177 ft³/s (174.9 m³/s), 37.28 in/yr (947 mm/yr), 4,475,000 acre-ft/yr (5.52 km³/yr).

EXTREMES.--Maximum discharge during period of record, 50,000 ft³/s (1,420 m³/s) June 25, 1971, gage height, 14.74 ft (4.493 m) from rating curve extended above 27,000 ft³/s (760 m³/s); minimum daily, about 600 ft³/s (17.0 m³/s) Mar. 1-31, 1964, Dec. 16, 1968 to Mar. 15, 1969, Mar. 9 to Apr. 26, 1971, and Mar. 5 to Apr. 5, 1973.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum | | | Minimum daily | |
|---|---|---|---|---|---|
| | Date | Discharge | Gage height | Date | Discharge |
| 1960 | Aug. 1, 1960 | 33,200 | 11.45 | Apr. 1-15, 1960 | 780 |
| 1961 | Sept. 11, 1961 | 36,800 | 11.90 | Mar. 1-15, 1961 | 1,000 |
| 1962 | April or May 1962 | --- | a14.65 | Mar. 1-31, 1962 | 760 |
| | June 16, 1962 | b28,000 | --- | | |
| 1963 | (date unknown) | --- | a13.86 | Apr. 1-30, 1963 | 650 |
| | July 18, 1963 | b30,000 | --- | | |
| 1964 | June 8, 1964 | 38,300 | 12.91 | Mar. 1-31, 1964 | 600 |
| 1965 | Sept. 23, 1965 | 32,600 | 11.35 | Apr. 1-15, 1965 | 720 |
| 1966 | Aug. 8, 1966 | 42,400 | 12.55 | Jan. 1 to Mar. 31, 1966 | 1,100 |
| 1967 | Aug. 16, 1967 | 31,000 | 11.17 | Feb. 1 to Mar. 31, 1967 | 650 |
| 1968 | June 13, 1968 | 30,400 | 11.45 | Mar. 1 to Apr. 14, 1968 | 950 |
| 1969 | June 17, 1969 | 31,600 | 11.74 | Dec. 16, 1968 to Mar. 15, 1969 | 600 |
| 1970 | June 8, 1970 | 30,100 | 12.17 | Mar. 1 to Apr. 20, 1970 | 650 |
| 1971 | June 25, 1971 | 50,000 | 14.74 | Mar. 9 to Apr. 26, 1971 | 600 |
| 1972 | June 17, 1972 | 29,400 | 11.27 | Apr. 15-26, 1972 | 700 |
| 1973 | June 19, 1973 | 27,800 | 11.37 | Mar. 5 to Apr. 5, 1973 | 600 |
| 1974 | Sept. 1, 1974 | 20,800 | 9.75 | Mar. 29 to Apr. 15, 1974 | 750 |
| 1975 | June 30, 1975 | 33,200 | 12.49 | Feb. 1 to Apr. 20, 1975 | 750 |

a Backwater from ice.
b Maximum daily.

15294300 SKWENTNA RIVER NEAR SKWENTNA--Continued

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1960 | 3532 | 1850 | 1400 | 1097 | 961 | 843 | 835 | 10480 | 13440 | 16690 | 15990 | 9171 | 6387 |
| 1961 | 3889 | 1600 | 1597 | 1403 | 1154 | 1155 | 1700 | 11210 | 20570 | 16480 | 13910 | 12020 | 7255 |
| 1962 | 4605 | 2200 | 1400 | 1200 | 860 | 760 | 1000 | 6613 | 15630 | 14930 | 12080 | 6723 | 5699 |
| 1963 | 2801 | 1250 | 1100 | 1000 | 810 | 700 | 650 | 7765 | 14050 | 20430 | 12020 | 7180 | 5854 |
| 1964 | 5355 | 1550 | 840 | 970 | 750 | 600 | 840 | 1635 | 27250 | 16480 | 12680 | 6224 | 6266 |
| 1965 | 4425 | 1790 | 1300 | 920 | 800 | 740 | 770 | 4810 | 17160 | 19370 | 14010 | 13090 | 6628 |
| 1966 | 4122 | 1575 | 1150 | 1100 | 1100 | 1100 | 1300 | 4502 | 19550 | 14180 | 17320 | 9812 | 6427 |
| 1967 | 5576 | 1400 | 900 | 720 | 650 | 650 | 780 | 1794 | 14430 | 14740 | 15760 | 9517 | 5607 |
| 1968 | 3832 | 1560 | 1181 | 1023 | 1000 | 950 | 1293 | 13460 | 20770 | 17480 | 10560 | 3855 | 6438 |
| 1969 | 1929 | 678 | 624 | 600 | 600 | 626 | 1487 | 11070 | 19580 | 13650 | 7471 | 3783 | 5199 |
| 1970 | 5654 | 1607 | 832 | 766 | 700 | 650 | 728 | 11710 | 22880 | 21120 | 13030 | 6665 | 7241 |
| 1971 | 2919 | 2023 | 1184 | 865 | 721 | 613 | 607 | 5963 | 25400 | 20600 | 15920 | 6024 | 6937 |
| 1972 | 3020 | 1327 | 1103 | 989 | 898 | 811 | 742 | 8045 | 15330 | 16840 | 13370 | 9256 | 5998 |
| 1973 | 4551 | 2340 | 1316 | 910 | 702 | 606 | 727 | 6349 | 15200 | 13850 | 9874 | 6164 | 5243 |
| 1974 | 3540 | 1700 | 1265 | 1023 | 902 | 811 | 1005 | 6765 | 10650 | 11670 | 10480 | 11800 | 5156 |
| 1975 | 4557 | 2328 | 919 | 800 | 750 | 750 | 767 | 7852 | 19060 | 19520 | 11710 | 8471 | 6491 |
| MEAN | 4019 | 1674 | 1132 | 962 | 835 | 773 | 952 | 7501 | 18190 | 16750 | 12890 | 8109 | 6177 |
| MONTHLY PERCENT | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 10 | 25 | 23 | 18 | 11 | |

WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1959-66, 1968-75.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1959 | | 1961-cont | | 1962-cont | | 1965-cont | | 1969 | | 1971-cont | | 1974 | |
| 8-14-59 | 7.5 | 8-17-61 | 8.0 | 1-18-62 | 0.0 | 7-17-65 | 9.5 | 4- 1-69 | 0.0 | 6-18-71 | 5.0 | 10-30-73 | 1.0 |
| 9- 4-59 | 1.5 | 9-26-61 | 5.5 | 1963 | | 7-24-65 | 11.0 | 6-12-69 | 8.0 | 8-25-71 | 8.0 | 7- 3-74 | 9.5 |
| 1960 | | 1962 | | 1- 2-63 | 0.0 | 1966 | | 7-31-69 | 11.5 | 1972 | | 9-19-74 | 5.5 |
| 11-18-59 | 0.0 | 10-25-61 | 0.0 | 1964 | | 8-26-66 | 8.5 | 1970 | | 1-19-72 | 0.0 | 1975 | |
| 4-21-60 | 0.0 | 11-14-61 | 0.0 | 11-27-63 | 0.0 | 1968 | | 8-25-70 | 9.5 | 9-19-72 | 3.5 | 3-16-75 | 0.0 |
| 9-30-60 | 4.5 | 11-17-61 | 0.0 | 3-16-64 | 0.0 | 10-11-67 | 1.5 | 1971 | | 1973 | | 5-26-75 | 4.0 |
| 1961 | | 11-20-61 | 0.0 | 1965 | | 3-26-68 | 0.0 | 10-14-70 | 2.0 | 2-14-73 | 0.0 | 7- 7-75 | 12.0 |
| 1- 5-61 | 0.0 | | | 10-15-64 | 3.0 | | | 3-31-71 | 0.0 | | | 8- 6-75 | 7.5 |

15294350 SUSITNA RIVER AT SUSITNA STATION

LOCATION.--Lat 61°32'41", long 150°30'45", in SE¼ SE¼ sec.22, T.17 N., R.7 W., Matanuska-Susitna Borough, on left bank at Susitna Station, 1.5 mi (2.4 km) downstream from Yentna River, and 12.5 mi (20.1 km) upstream from Alexander Creek.

BASIN CHARACTERISTICS.--Drainage area, 19,400 mi² (50,200 km²); main-channel slope, 11 ft/mi (2.1 m/km); stream length, 289 mi (465 km); area of lakes and ponds, 2 percent; mean elevation, 3,200 ft (975 m); glacier area, 18 percent.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (12 m), from topographic map.

EXTREMES.--Maximum discharge during period of record, 173,000 ft³/s (4,900 m³/s) July 1, 1975, gage height, 17.44 ft (5.316 m); minimum daily, about 6,500 ft³/s (184 m³/s) Apr. 5-21, 1975.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 19520 | 10400 | 9419 | 8597 | 7804 | 7048 | 6867 | 47540 | 128800 | 135700 | 91360 | 77740 | 46100 |

WATER TEMPERATURE RECORDS

PERIOD OF DAILY RECORD.--May to September 1975.

REMARKS.--Continuous water-temperature recorder.

EXTREMES.--Maximum during period of daily record, 14.0°C June 28, 29, 1975.

WATER TEMPERATURE, °C

| WATER YEAR | | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | Max | --- | --- | --- | --- | --- | --- | --- | a | 14.0 | 13.0 | 12.0 | 9.0 |
| | Min | --- | --- | --- | --- | --- | --- | --- | a | 6.5 | 10.0 | 10.0 | 6.5 |

a Data insufficient to compute monthly maximum or minimum.

## 15294500 CHAKACHATNA RIVER NEAR TYONEK

LOCATION.--Lat 61°12'44", long 152°21'26", in SE¼ sec.17, T.13 N., R.17 W., Kenai Peninsula Borough, on right bank just downstream from outlet of Lake Chakachamna, opposite Barrier Glacier, 19 mi (31 km) upstream from Straight Creek, and 38 mi (61 km) northwest of Tyonek.

BASIN CHARACTERISTICS.--Drainage area, 1,120 mi² (2,900 km²); main-channel slope, 48.8 ft/mi (9.24 m/km); stream length, 54.5 mi (87.7 km); area of lakes and ponds, 4 percent; mean elevation, 3,900 ft (1,190 m); glacier area, 30 percent.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1959 to September 1972.

GAGE.--Water-stage recorder. Datum of gage is 1,125.1 ft (342.93 m) above mean sea level (river-profile survey).

AVERAGE DISCHARGE.--13 years, 3,645 ft³/s (103.2 m³/s), 44.20 in/yr (1,123 mm/yr), 2,641,000 acre-ft/yr (3.26 km³/yr).

EXTREMES.--Maximum discharge during period of record, 470,000 ft³/s (13,300 m³/s) Aug. 11, 1971, gage height unknown, determined by field estimate at site 5 mi (8 km) below gaging station. Discharge was result of sudden release of stored water in Chakachamna Lake when portion of terminus of Barrier Glacier was eroded away; minimum daily, about 240 ft³/s (6.80 m³/s) Apr. 16-30, 1960.

EXTREMES, DISCHARGE IN CUBIC FEET PER SECOND, GAGE HEIGHT IN FEET

| Water year | Momentary maximum Date | Discharge | Gage height | Minimum daily Date | Discharge |
|---|---|---|---|---|---|
| 1959a | Aug. 28, 1959 | 17,400 | 22.53 | Sept. 26-30, 1959 | 3,200 |
| 1960 | July 27, 1960 | 13,400 | 21.22 | Apr. 16-30, 1960 | 240 |
| 1961 | July 31 or Aug.1, 1961 | 17,600 | 24.8 | Apr. 24, 1961 | b342 |
| 1962 | Aug. 1-5, 1962 | c14,000 | --- | Apr. 1 to May 15, 1962 | 470 |
| 1963 | July 16, 1963 | 18,000 | 26.33 | Apr. 20, 24, 1963 | d315 |
| 1964 | Aug. 26, 1964 | e14,000 | --- | May 1-10, 1964 | 310 |
| 1965 | Aug. 1-15, 1965 | c15,500 | --- | Apr. 1-30, 1965 | 350 |
| 1966 | Aug. 1-15, 1966 | c12,000 | --- | Mar. 1 to Apr. 30, 1966 | 350 |
| 1967 | Aug. 18, 1967 | 23,400 | 29.30 | Apr. 1-15, 1967 | 360 |
| 1968 | Aug. 11, 12, 1968 | 15,000 | 26.62 | Mar. 16 to Apr. 15, 1968 | 480 |
| 1969 | July 3-6, 1969 | 15,400 | 27.02 | Mar. 1 to Apr. 10, 1969 | 500 |
| 1970 | July 30, 1970 | 11,200 | 26.24 | Feb. 11 to Apr. 10, 1970 | 550 |
| 1971 | Aug. 11, 1971 | f470,000 | --- | Feb. 11 to Mar. 22, 1971 | 460 |
| 1972 | July 14, 1972 | 16,600 | 14.88 | Mar. 11 to Apr. 5, 1972 | 440 |

a Period June to September.
b Momentary minimum, gage height, 7.21 ft.
c Maximum daily, estimate.
d Momentary minimum, gage height, 8.90 ft.
e Maximum daily.
f Result of sudden release of stored water in Chakachamna Lake.

MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND

| YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ANNUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1959 | | | | | | | | | 7685 | 10990 | 10960 | 5758 | |
| 1960 | 2022 | 992 | 658 | 504 | 381 | 325 | 250 | 1483 | 6368 | 10500 | 10300 | 4364 | 3196 |
| 1961 | 1800 | 1116 | 882 | 817 | 780 | 544 | 394 | 876 | 5673 | 12090 | 12330 | 6989 | 3717 |
| 1962 | 2638 | 1200 | 730 | 690 | 630 | 540 | 470 | 620 | 5222 | 13000 | 11060 | 6904 | 3669 |
| 1963 | 1827 | 1144 | 744 | 553 | 387 | 361 | 332 | 748 | 3441 | 12640 | 12240 | 7373 | 3513 |
| 1964 | 2768 | 1384 | 1007 | 618 | 436 | 424 | 370 | 471 | 6278 | 10590 | 12030 | 5654 | 3520 |
| 1965 | 2026 | 1090 | 852 | 620 | 449 | 360 | 350 | 525 | 2114 | 10020 | 13180 | 10260 | 3512 |
| 1966 | 4072 | 1180 | 650 | 480 | 400 | 350 | 350 | 615 | 5995 | 10040 | 10310 | 7145 | 3489 |
| 1967 | 3790 | 1100 | 820 | 600 | 500 | 430 | 380 | 935 | 6616 | 14380 | 16610 | 7333 | 4497 |
| 1968 | 2939 | 1565 | 947 | 626 | 535 | 490 | 511 | 1695 | 6190 | 12580 | 12170 | 4369 | 3741 |
| 1969 | 1552 | 939 | 723 | 639 | 550 | 500 | 533 | 1003 | 6548 | 13100 | 8416 | 3347 | 3179 |
| 1970 | 3098 | 1822 | 1006 | 705 | 568 | 550 | 625 | 1285 | 4893 | 9960 | 8884 | 3587 | 3106 |
| 1971 | 2201 | 1247 | 829 | 532 | 467 | 467 | 692 | 2381 | 10930 | 14470 | 16710 | 4513 | 4658 |
| 1972 | 1351 | 902 | 726 | 585 | 484 | 446 | 481 | 906 | 4294 | 12860 | 12750 | 6995 | 3586 |
| MEAN | 2468 | 1206 | 813 | 613 | 505 | 445 | 441 | 1042 | 5875 | 11950 | 12000 | 6042 | 3645 |
| MONTHLY PERCENT | 6 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 13 | 28 | 28 | 14 | |

### WATER TEMPERATURE RECORDS

PERIOD OF RECORD.--Water years 1959, 1960, 1962-73.

PERIODIC WATER TEMPERATURE, °C

| DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP | DATE | TEMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1959 | | 1962 | | 1964 | | 1967 | | 1969-cont | | 1970-cont | | 1972 | |
| 6-16-59 | 0.0 | 8-28-62 | 8.0 | 2-13-64 | 0.0 | 8-31-67 | 11.5 | 6-12-69 | 2.0 | 7-23-70 | 7.0 | 6-20-72 | 4.0 |
| 7- 9-59 | 4.0 | 1963 | | 1965 | | 1968 | | 7-31-69 | 6.0 | 8-25-70 | 7.0 | 7-17-72 | 5.0 |
| 1960 | | 8-21-63 | 6.5 | 10-10-64 | 5.5 | 8-14-68 | 4.0 | 9- 8-69 | 7.0 | 1971 | | 8-11-72 | 6.0 |
| 10-23-59 | 0.5 | 9-30-63 | 6.5 | 1966 | | 1969 | | 1970 | | 3-30-71 | 1.0 | 1973 | |
| | | | | 6- 8-66 | 2.5 | 4- 1-69 | 3.0 | 4-10-70 | 2.5 | 7- 6-71 | 3.5 | 10- 3-72 | 5.0 |
| | | | | 8-26-66 | 7.5 | | | | | 7-29-71 | 5.0 | | |

# SECTION 2

# MISCELLANEOUS DISCHARGE MEASUREMENTS

# and

# CREST-STAGE PARTIAL-RECORD STATION DATA

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Measurements Discharge ($ft^3/s$) |
|---|---|---|---|---|
| English Bay River | Lat 59°20'30", long 151°54'45", about 0.5 mi upstream from mouth at English Bay, and 1 mi southeast of Alexandrovsk. | -- | 1968 | |
| | | | 3-12-68 | 99 |
| Seldovia River | Lat 59°20'45", long 151°35'35", at outlet of Seldovia Lake, 7.5 mi southeast of Seldovia. | -- | 1954 | |
| | | | 10-7-53 | 166 |
| | | | 3-6-54 | a0.5 |
| | Lat 59°23'20", long 151°40'40", in NW¼ sec.20, T.9 S., R.14 W., 0.2 mi upstream from mouth, and 3.7 mi southeast of Seldovia. | -- | 1967 | |
| | | | 7-25-67 | 36 |
| | | | 1968 | |
| | | | 10-20-67 | 72 |
| Fish Creek | Lat 59°26'10", long 151°42'05", in S½ sec.32, T.8 S., R.14 W., above dam 0.1 mi upstream from mouth, and 0.5 mi southeast of Seldovia. | 3.83 | (Listed below) | |
| 1967 | 1968-cont. | 1972 | 1973 | 1973-cont. |
| 3-28-67 2.7 | 3-12-68 8.7 | 5-11-72 25 | 10-8-72 4.2 | 4-20-73 9.4 |
| 7-26-67 1.5 | 8-20-68 2.0 | 6-21-72 17 | 11-30-72 5.1 | 6-21-73 22 |
| 1968 | 1970 | 8-15-72 2.2 | 3-8-73 0.98 | |
| 10-20-67 5.8 | 7-28-70 4.0 | | | |
| Seldovia Lagoon Tributary | Lat 59°26'30", long 151°41'05", in SW¼ sec.33, T.8 S., R.14 W., upstream from reservoir, 0.9 mi upstream from mouth, and 1.2 mi east of Seldovia. | 0.93 | (Listed below) | |
| 1967 | 1968 | 1970 | 1972 | 1973 |
| 3-28-67 0.72 | 10-20-67 1.3 | 7-28-70 0.61 | 5-12-72 8.3 | 10-8-72 0.89 |
| 7-26-67 0.38 | 3-12-68 2.2 | | 6-21-72 4.2 | 11-30-72 0.65 |
| | 8-20-68 0.17 | | | |
| Kachemak Bay Tributary | Lat 59°27'33", long 151°41'46", in NE¼ sec.29, T.8 S., R.14 W., 0.4 mi upstream from mouth, and 1.5 mi north of Seldovia. | 0.73 | 1972 | |
| | | | 5-11-72 | 3.7 |
| | | | 6-22-72 | 1.7 |
| | | | 8-15-72 | 0.17 |
| | | | 1973 | |
| | | | 10-8-72 | 0.29 |
| | | | 11-30-72 | 0.32 |
| | Lat 59°27'45", long 151°40'29", in SW¼ sec.21, T.8 S., R.14 W., 0.6 mi upstream from mouth, and 2 mi north of Seldovia. | 1.35 | 1972 | |
| | | | 5-11-72 | 8.0 |
| | | | 6-22-72 | 7.1 |
| | | | 8-15-72 | 1.0 |
| | | | 1973 | |
| | | | 10-8-72 | 2.0 |
| | | | 11-30-72 | 0.93 |
| | | | 3-8-73 | 0.34 |
| | | | 4-20-73 | 0.89 |
| | | | 6-21-73 | 9.4 |
| 15239500 Fritz Creek | Lat 59°42'30", long 151°20'35", SW¼ sec.28, T.5 S., R.12 W., Kenai Peninsula Borough, on left bank 200 ft above culvert on east road, and 9 mi northeast of Homer. | 10.4 | (Listed below) | |
| 1962 | 1966-cont | 1968-cont | 1970-cont | 1972-cont |
| 5-2-62 20 | 6-1-66 26 | 8-1-68 2.5 | 6-25-70 6.8 | 8-15-72 10 |
| 5-18-62 34 | 7-12-66 24 | 8-20-68 4.6 | 7-29-70 4.9 | 1973 |
| 1963 | 8-16-66 7.0 | 1969 | 8-8-70 6.2 | 10-7-72 23 |
| 7-13-63 12 | 9-19-66 46 | 10-22-68 3.3 | 9-29-70 4.7 | 5-10-73 29 |
| 8-23-63 †107 | 1967 | 1-13-69 0.85 | 1971 | 5-15-73 †309 |
| 1964 | 3-27-67 3.3 | 3-19-69 9.4 | 11-1-70 †349 | 6-20-73 12 |
| 10-2-63 9.6 | 5-23-67 12 | 5-7-69 28 | 11-12-70 19 | 1974 |
| 6-5-64 32 | -- †18 | -- †55 | 3-22-71 3.2 | 10-10-73 22 |
| 6-19-64 18 | 6-13-67 14 | 6-23-69 7.2 | 7-16-71 13 | -- †61 |
| -- †99 | 7-26-67 4.0 | 7-31-69 4.8 | 8-28-71 7.8 | 6-21-74 6.8 |
| 1965 | 9-3-67 7.6 | 9-8-69 2.7 | 1972 | 1975 |
| 7-22-65 9.4 | 1968 | 1970 | 4-1-72 1.8 | 10-9-74 12 |
| 9-19-65 †37 | -- †19 | 10-6-69 †181 | 5-10-72 61 | 5-14-75 76 |
| 1966 | 10-21-67 8.4 | 10-12-69 47 | -- †135 | -- †150 |
| 10-2-65 †60 | 3-14-68 2.2 | 3-4-70 6.8 | 5-26-72 25 | 6-11-75 31 |
| | | 3-19-70 28 | 7-7-72 6.2 | 9-11-75 32 |
| Palmer Creek | Lat 59°39'54", long 151°28'00", in SE¼ sec.10, T.6 S., R.13 W., 3.3 mi northeast of Homer | | 1970 | |
| | | | 3-20-70 | 2.3 |

a Estimated
† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|

**15239800 Diamond Creek**

Lat 59°40'10", long 151°40'00", in SE¼ sec.9, T.6 S., R.14 W., Kenai Peninsula Borough, on right upstream wingwall of culvert on Sterling Highway, 1.3 mi upstream from mouth at Cook Inlet, and 4.6 mi northwest of Homer.

5.35

(Listed below)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1962 | | 1966 | | 1968-cont | | 1970-cont | | 1972-cont | |
| 5-4-62 | 21 | -- | †80 | -- | †37 | 6-25-70 | 2.4 | 5-25-72 | 21 |
| 5-18-62 | 16 | 6-1-66 | 15 | 6-19-68 | 3.1 | 7-29-70 | 2.2 | 7-7-72 | 5.1 |
| 1963 | | 7-13-66 | 8.6 | 8-1-68 | 1.3 | 8-8-70 | 1.7 | 8-15-72 | 5.4 |
| 3-8-63 | 36 | 8-17-66 | 4.0 | 1969 | | 9-29-70 | 3.0 | 1973 | |
| 7-13-63 | 3.8 | 9-20-66 | 24 | 10-22-68 | 1.8 | 1971 | | 10-8-72 | 5.9 |
| 8-23-63 | †36 | 1967 | | 5-8-69 | 26 | 11-1-70 | †84 | 5-11-73 | 28 |
| 1964 | | -- | †76 | -- | †36 | 11-12-70 | 14 | 5-15-73 | †147 |
| 10-2-63 | 8.0 | 5-23-67 | 7.6 | 6-24-69 | 2.9 | 3-23-71 | 1.2 | 6-20-73 | 5.0 |
| 6-5-64 | 18 | 6-13-67 | 12 | 7-31-69 | 1.5 | 5-4-71 | 2.9 | 1974 | |
| 6-19-64 | 6.4 | 7-27-67 | 2.1 | 9-8-69 | 1.1 | 6-25-71 | 6.5 | 10-11-73 | 13 |
| -- | †40 | 9-3-67 | 5.5 | 1970 | | 7-16-71 | 7.4 | -- | †46 |
| 1965 | | 1968 | | -- | †52 | 8-28-71 | 2.6 | 6-21-74 | 2.9 |
| 4-24-65 | 13 | 10-21-67 | 4.0 | 10-12-69 | 19 | 1972 | | 1975 | |
| 7-21-65 | 4.0 | 3-14-68 | 2.0 | 3-4-70 | 5.4 | 4-1-72 | 0.56 | 5-14-75 | 47 |
| 9-19-65 | †58 | 5-16-68 | 17 | 3-20-70 | 13 | 5-9-72 | †86 | -- | †83 |
| 9-27-65 | 20 | | | | | 5-10-72 | 63 | 9-10-75 | 14 |

**Beaver Creek**

Lat 59°44'44", long 151°27'20", in NW¼ sec.14, T.5 S., R.13 W., 2 mi upstream from mouth, and 7.8 mi northeast of Homer.

--

1970
7-29-70 8.9

**Bridge Creek**

Lat 59°40'46", long 151°32'45", in SE¼ sec.6, T.6 S., R.13 W., 3.2 mi upstream from mouth and 2.5 mi north of Homer.

--

(Listed below)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1970 | | 1971 | | 1972-cont | | 1973 | |
| 3-20-70 | 2.4 | 8-28-71 | 1.8 | 6-24-72 | 5.6 | 10-7-72 | 4.2 |
| 7-29-70 | 1.5 | 1972 | | 7-6-72 | 3.0 | 12-1-72 | 0.86 |
| 9-29-70 | 2.5 | 5-26-72 | 16 | | | | |

**Anchor River**

Lat 59°46'22", long 151°49'48", in SE¼ sec.4, T.5 S., R.15 W., at Anchor Point just upstream from North Fork Anchor River

--

1951
7-28-51 76
8-23-51 94

**North Fork Anchor River**

Lat 59°46'24", long 151°49'52", in SE¼ sec.4, T.5 S., R.15 W., at mouth at Anchor Point.

--

1951
8-23-51 26
1952
3-5-52 19

**Stariski Creek**

Lat 59°51'09", long 151°47'17", on line between secs. 1 and 12, T.4 S., R.15 W., at bridge on Sterling Highway, 6 mi north of Anchor Point.

--

1951
7-27-51 17
1952
3-5-52 14

**15240500 Cook Inlet Tributary**

Lat 59°58'45", long 151°43'20", Kenai Peninsula Borough, on left upstream culvert wingwall on Sterling Highway, 0.2 mi upstream from mouth at Cook Inlet, and 5.4 mi southwest of Ninilchik.

1.69

(Listed below)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1966 | | 1968 | | 1969-cont | | 1971-cont | | 1973-cont | |
| -- | †73 | 10-21-67 | 3.2 | 7-30-69 | 1.1 | 11-11-70 | 4.9 | 5-10-73 | 4.2 |
| 6-2-66 | 14 | 4-3-68 | 0.82 | 9-8-69 | 0.76 | 8-27-71 | 2.7 | 1974 | |
| 7-14-66 | 4.8 | 5-16-68 | 8.8 | 1970 | | 1972 | | 10-10-73 | 8.0 |
| 9-20-66 | 12 | -- | †49 | 3-4-70 | 1.7 | 5-25-72 | 14 | 4-26-74 | 56 |
| 1967 | | 8-1-68 | 0.82 | -- | †51 | 7-6-72 | 2.0 | 4-26-74 | †67 |
| 3-29-67 | 0.86 | 1969 | | 6-25-70 | 2.1 | 8-29-72 | 2.1 | 4-27-74 | 34 |
| 6-14-67 | 3.9 | 10-22-68 | 1.4 | 8-8-70 | 2.5 | 9-9-72 | †47 | 1975 | |
| 7-28-67 | 1.2 | 5-8-69 | 3.5 | 9-28-70 | 2.4 | 1973 | | 10-10-74 | 7.5 |
| -- | †25 | 6-24-69 | 1.4 | 1971 | | 10-6-72 | 6.9 | 5-12-75 | †30 |
| 9-3-67 | 3.2 | -- | †40 | 11-1-70 | †65 | -- | †49 | 5-14-75 | 25 |

**Deep Creek**

Lat 60°01'50", long 151°40'50", on line between sec.3 and 4, T.2 S., R.14 W., at bridge on Sterling Highway, 1 mi upstream from mouth, and 1.5 mi southwest of Ninilchik.

--

(Listed below)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1951 | | 1959 | | 1961 | | 1965-cont | | 1966-cont | |
| 7-27-51 | 128 | 7-22-59 | 316 | 4-28-61 | 1480 | 8-27-65 | 153 | 7-13-66 | 249 |
| 8-23-51 | 132 | 8-20-59 | 116 | 6-19-61 | 186 | 9-25-65 | 318 | 8-17-66 | 151 |
| 1952 | | 9-20-59 | 157 | 8-3-61 | 150 | 1966 | | 9-20-66 | 631 |
| 3-6-52 | 150 | 1960 | | 1965 | | 11-3-65 | 117 | 1967 | |
| 1954 | | 5-10-60 | 1130 | 4-25-65 | 277 | 2-8-66 | 57 | 3-30-67 | 131 |
| 3-7-54 | 112 | 7-8-60 | 158 | 6-10-65 | 498 | 4-7-66 | 140 | 1968 | |
| | | 8-25-60 | 138 | 7-22-65 | 276 | 6-2-66 | 975 | 10-21-67 | 191 |
| | | | | | | | | 3-14-68 | 43 |

†Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Crooked Creek | Lat 60°17'50", long 151°16'20", in NE¼ sec.1, T.2 N., R.12 W., at culvert on the Old Sterling Highway, 1.8 mi upstream from mouth and 6.5 mi southeast of Kasilof. | 53.8 | (Listed below) | |
| | 1951 7-30-51 37; 8-22-51 45; 1952 3-7-52 29; 1973 8-3-73 50; 1974 1-25-74 20; 2-21-74 18; 1974-cont 3-22-74 25; 8-3-74 33; 1975 2-1-75 40; 3-13-75 22 | | | |
| Coal Creek | Lat 60°20'59", long 151°15'38", in NW¼ sec.18, T.3 N., R.11 W., at culvert on Kasilof road, 0.8 mi upstream from mouth and 2.7 mi southeast of Kasilof. | 32.0 | 1973 8-3-73 | 4.8 |
| Snow River | Lat 60°20'00", long 149°21'00", at bridge on Seward-Anchorage Highway, 0.3 mi upstream from mouth and 5 mi south of Lawing. | -- | (Listed below) | |
| | 1959 7-21-59 221; 8-19-59 1510; 9-20-59 455; 1960 5-10-60 347; 7-8-60 1080; 8-24-60 1040 | | | |
| 15243950 Porcupine Creek | Lat 60°20'30", 149°22'15", Kenai Peninsula Borough, on right bank at 18-mi campground road, 0.2 mi upstream from mouth at Kenai Lake, and 0.8 mi west of Primrose. | 16.8 | (Listed below) | |
| | 1963 5-30-63 †298; 1964 6-3-64 286; -- †560; 1965 7-24-65 119; -- †760; 9-29-65 96; 1966 7-16-66 110; 8-21-66 †1200; 1966-cont 9-23-66 103; 1967 6-15-67 226; 8-3-67 86; 9-9-67 162; -- †1100; 1968 10-18-67 54; -- †350; 1969 10-24-68 22; 1969-cont 5-22-69 247; -- †660; 7-29-69 64; 9-10-69 23; 1970 10-13-69 †1400; 6-22-70 299; 8-10-70 117; 1971 10-31-70 †640; 7-2 -71 179; 1972 5-23-72 44; 7-10-72 190; 8-30-72 62; 9-3-72 †970; 9-27-72 27; 1973 10-16-72 †680; 5-7-73 7.6; 6-18-73 312; 7-24-73 98; 1974 10-8-73 29; 6-19-74 102; 9-3-74 40; 9-18-74 228; 9-20-74 †859; 1975 7-7-75 245; 9-8-75 †530 | | | |
| Carter Creek | Lat 60°29'40", long 149°27'20", at Carter Lake Outlet, 3 mi west of Moose Pass. | 2.28 | 1955 8-13-55 | 14 |
| 15250000 Falls Creek | Lat 60°25'50", long 149°22'10", at mi 25 on Seward-Anchorage Highway, and 2 mi north of Lawing. | 11.8 | (Listed below) | |
| | 1948 8-10-48 60; 1963 6-1-63 64; 7-12-63 †110; 9-30-63 38; 1964 6-3-64 115; -- †130; 1965 -- †120; 7-23-65 86; 1966 6-9-66 108; 1966-cont 7-15-66 86; 8-20-66 66; 9-15-66 †693; 9-23-66 68; 1967 6-15-67 125; 1967-cont 9-8-67 180; -- †450; 1968 10-19-67 14; -- †210; 6-21-68 99; 8-3-68 52; 1969 -- †300; 7-29-69 57; 9-10-69 50; 1970 10-6-69 †491; 10-8-69 192; 6-22-70 72 | | | |
| 15251800 Quartz Creek | Lat 60°35'45", long 149°32'35", on right bank at mi 42 on Seward-Anchorage Highway, and 0.4 mi south of Gilpatricks. | 9.41 | (Listed below) | |
| | 1963 6-1-63 69; 7-11-63 86; -- †112; 9-30-63 19; 1964 6-2-64 60; -- †112; 1965 6-8-65 47; -- †110; 7-24-65 54; 1966 6-4-66 65; 7-19-66 73; -- †165; 1967 6-16-67 73; 9-4-67 34; -- †350; 1968 -- †88; 6-21-68 72; 1969 10-25-68 9.5; 5-12-69 6.1; 5-27-69 91; -- †175; 8-1-69 28; 1969-cont 9-11-69 20; 1970 10-6-69 †633; 10-8-69 163; 6-22-70 92 | | | |
| | Lat 60°30'05", long 159°41'20", 0.2 mi upstream from Crescent Creek and 5 mi east of Cooper Landing. | -- | 1957 12-20-56 | 58 |
| 15253000 Crescent Creek | Lat 60°28'45", long 149°34'25", at Crescent Lake Outlet, 7 mi west of Moose Pass. | 21.4 | 1955 7-25-55 151; 8-12-55 88 | |
| 15254000 Crescent Creek | Lat 60°29'49", long 149°40'38", Kenai Peninsula Borough, on left bank at bridge on old Seward-Kenai Highway, 0.3 mi upstream from mouth, and 5.3 mi east of Cooper Landing. | 31.7 | (Listed below) | |
| | 1967 11-10-66 80; 9-4-67 96; 1968 8-2-68 97; 1969 10-23-68 32; 5-13-69 33; 9-10-69 51; 1970 10-9-69 467; 10-13-69 841; 1970-cont 5-7-70 14; 6-26-70 217; 1971 11-11-70 114; 1972 11-12-71 40; 1972-cont 5-4-72 55; 8-30-72 72; 1973 10-5-72 67; 5-8-73 23; 6-19-73 160; 1973-cont 7-26-73 97; 1974 10-8-73 52; 6-19-74 123; 1975 9-12-75 104 | | | |

†Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Quartz Creek | Lat 60°28'50", long 149°43'05", at old highway bridge, about 0.5 mi upstream from mouth and about 4 mi east of Cooper Landing. | -- | (Listed below) | |
| 1947 | 1949 | 1950 | 1957-cont | 1958-cont |
| 8-24-47 342 | 10-9-48 526 | 10-22-49 194 | 6-13-57 632 | 2-3-58 83 |
| 1948 | 3-10-49 49 | 12-17-49 112 | 7-24-57 223 | 4-28-58 211 |
| 11-3-47 203 | 4-13-49 49 | 3-16-50 54 | 9-26-57 479 | 1959 |
| 4-20-48 118 | 8-19-49 293 | 1957 | 1958 | 12-17-58 104 |
| 6-22-48 730 | | 3-13-57 57 | 10-23-57 588 | 4-22-59 72 |
| 8-14-48 533 | | 5-2-57 117 | 12-6-57 180 | |
| Juneau Creek | Lat 60°30'30", long 149°53'30", 1.5 mi upstream from mouth and 2.5 mi northwest of Cooper Landing. | -- | 1955<br>7-14-55<br>8-11-55 | <br>289<br>115 |
| | Lat 60°29'20", long 149°52'30", at mouth, 1.5 mi west of Cooper Landing. | 53.4 | 1955<br>5-4-55 | <br>15 |
| 15260000 Cooper Creek | Lat 60°26'00", long 149°49'15", 125 ft downstream from Cooper Lake Outlet, 1.4 mi upstream from Stetson Creek and 4 mi south of Cooper Landing. | 31.8 | 1962<br>10-15-61 | <br>67 |
| Cooper Creek | Lat 60°27'00", long 149°51'00", 15 ft upstream from Stetson Creek and 3 mi south of Cooper Landing. | -- | 1958<br>2-4-58<br>4-30-58 | <br>31<br>57 |
| | Lat 60°29'05", long 149°52'40", at bridge on Sterling Highway, just upstream from mouth, 1.5 mi west of Cooper Landing. | -- | 1956<br>12-28-55<br>1-11-56<br>2-10-56<br>3-30-56<br>4-25-56<br>5-29-56<br>7-11-56 | <br>29<br>32<br>26<br>23<br>40<br>182<br>312 |
| Jean Creek | Lat 60°29'04", long 150°06'55", at culvert on Skilak Lake Road, 0.3 mi from Sterling Highway Junction, and 10 mi southwest of Cooper Landing. | 11.7 | 1974<br>1-22-74<br>2-22-74<br>3-19-74<br>8-1-74<br>1975<br>1-30-75<br>3-11-75 | <br>1.9<br>1.0<br>1.8<br>3.3<br><br>2.3<br>2.0 |
| Hidden Creek | Lat 60°27'30", long 150°11'47", at culvert on Skilak Lake Road, 0.7 mi downstream from Hidden Lake, and 13 mi southwest of Cooper Landing. | *b* 23 | 1973<br>7-23-73<br>1974<br>1-22-74<br>2-22-74<br>3-19-74<br>8-1-74<br>1975<br>1-30-75<br>3-11-75 | <br>5.5<br><br>7.8<br>7.4<br>6.3<br>2.7<br><br>6.3<br>7.9 |
| Kenai River | Lat 60°28'00", long 150°36'00", in SW¼ sec.1, T.4 N., R.8 W., 3 mi downstream from Skilak Lake, and 7 mi southeast of Sterling. | -- | 1968<br>11-2-67 | <br>3230 |
| Killey River | Lat 60°28'55", long 150°37'40", in NE¼ sec.35, T.5 N., R.8 W., at mouth at Kenai River and 6 mi southeast of Sterling. | -- | 1968<br>11-2-67 | <br>233 |
| Kenai River | Lat 60°30'55", long 150°41'55", in NW¼ sec.21, T.5 N., R.8 W., at Bings Landing, and 2.5 mi southeast of Sterling. | -- | 1968<br>11-2-67 | <br>3150 |
| Moose River | Lat 60°32'15", long 150°45'10", in SW¼ sec.7, T.5 N., R.8 W., at Sterling Highway, 500 ft upstream from mouth at Kenai River at Sterling. | -- | 1951<br>7-26-51<br>8-22-51<br>1952<br>3-10-52<br>1968<br>11-1-67<br>4-4-68 | <br>79<br>128<br><br>62<br><br>126<br>88 |

*b* Estimated; drainage area boundary is difficult to determine.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Funny River | Lat 60°29'25", long 150°51'30", in SE¼ sec.28, T.5 N., R.9 W., at Funny River Road, 11 mi east of Soldotna. | -- | 1968<br>11-1-67<br>4-2-68<br>1969<br>2-27-69<br>1970<br>3-5-70 | <br>107<br>49<br><br>30<br><br>34 |
| Soldotna Creek | Lat 60°29'20", long 151°02'40", in T.5 N., R.10 W., 0.4 mi east of Soldotna, and 0.5 mi upstream from mouth at Kenai River. | 40.4 | (Listed below) | |
| 1968<br>4-2-68 16<br>8-8-68 11 | 1969<br>2-28-69 11<br>7-15-69 8.8 | 1970<br>3-6-70 12 | 1971<br>8-28-71 14 | |
| Slikok Creek | Lat 60°28'25", long 151°08'17", in sec.2, T.5 N., R.11 W., 0.8 mi upstream from mouth at Kenai River, and 3 mi southwest of Soldotna. | -- | 1968<br>8-8-68<br>1969<br>2-27-69<br>7-16-69<br>1971<br>8-28-71 | <br>4.3<br><br>No flow<br>5.8<br><br>9.3 |
| Beaver Creek Tributary | Lat 60°33'39", long 151°07'35", in SE¼ sec.36, T.6 N., R.11 W., at Beaver Loop Road, 4.5 mi east of Kenai. | -- | 1969<br>7-15-69 | <br>0.53 |
| Kenai River Tributary | Lat 60°33'13", long 151°13'42", in NW¼ sec.4, T.5 N., R.11 W., at Beaver Loop Road, 0.1 mi upstream from mouth at Kenai River. | -- | 1968<br>8-9-68<br>1969<br>2-27-69<br>7-15-69 | <br>1.0<br><br>No flow<br>0.63 |
| Kenai River Tributary | Lat 60°33'20", long 151°14'42", in NE¼ sec.5, T.5 N., R.11 W., at Kenai Road, 0.1 mi upstream from mouth at Kenai River. | -- | 1968<br>8-9-68<br>1969<br>2-26-69<br>7-15-69 | <br>No flow<br><br>No flow<br>No flow |
| Cook Inlet Tributary | Lat 60°33'28', long 151°15'48", in NE¼ sec.6, T.5 N., R.11 W., at Kenai Road, 0.5 mi upstream from mouth at Cook Inlet. | -- | 1968<br>8-9-68 | <br>0.95 |
| Cook Inlet Tributary | Lat 60°33'38", long 151°16'12", in SE¼ sec.31, T.6 N., R.11 W., at Kenai Road, 0.5 mi upstream from mouth at Cook Inlet. | -- | 1968<br>8-9-68 | <br>0.80 |
| Salamatof Creek | Lat 60°37'20", long 151°19'50", in SE¼ sec.11, T.6 N., R.12 W., at North Kenai Road, 0.5 mi upstream from mouth at Cook Inlet, and 5 mi northwest of Kenai. | -- | (Listed below) | |
| 1968<br>4-3-68 2.7<br>9-25-68 No flow | 1969<br>2-26-69 No flow<br>7-15-69 No flow | 1970<br>9-30-70 No flow | | |
| Bernice Creek | Lat 60°41'30", long 151°22'50", in SE¼ sec.16, T.17 N., R.12 W., at North Kenai Road, 500 ft downstream from Bernice Lake, and 11 mi northwest of Kenai. | -- | (Listed below) | |
| 1968<br>4-3-68 1.3<br>8-8-68 0.12 | 1969<br>2-26-69 No flow<br>7-15-69 No flow | 1970<br>9-30-70 No flow | | |
| Bishop Creek | Lat 60°46'35", long 151°05'45", in NW¼ NE¼ sec.19, T.8 N., R.10 W., at North Kenai Road, 1.4 mi upstream from mouth at Cook Inlet, and 16 mi northwest of Kenai. | 33.9 | (Listed below) | |
| 1968<br>10-31-67 30<br>4-1-68 12<br>8-8-68 16 | 1969<br>10-23-68 20<br>2-27-69 14 | 1969-cont<br>7-15-69 7.7<br>8-20-69 4.2 | 1970<br>3-5-70 12<br>9-30-70 15 | 1971<br>3-25-71 17<br>1972<br>7-26-72 14 |
| 15267050 Swanson River | Lat 60°44'40", long 150°50'55", in NW¼ sec.34, T.8 N., R.9 W., at Swanson River Road, and 19 mi northeast of Kenai. | -- | (Listed below) | |
| 1968<br>11-1-67 98<br>7-24-68 48<br>8-9-68 35 | 1969<br>2-28-69 32<br>7-16-69 34<br>8-20-69 22 | 1970<br>3-6-70 36 | | |

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| 15267080 Swanson River | Lat 60°42'48", long 150°55'53", in NW¼ sec.7, T.7 N., R.9 W., 12 mi upstream from mouth at Cook Inlet and 15.5 mi northeast of Kenai. | -- | 1968 | |
| | | | 7-24-68 | 55 |
| 15267100 Swanson River | Lat 60°41'22", long 150°58'16", in NE¼ sec.23, T.7 N., R.10 W., 10 mi upstream from mouth at Cook Inlet and 13.5 mi northeast of Kenai. | -- | 1968 | |
| | | | 7-24-68 | 62 |
| 15267130 Swanson River | Lat 60°42'57", long 150°59'23", in NW¼ sec.11, T.7 N., R.10 W., 7 mi upstream from mouth at Cook Inlet and 14.5 mi northeast of Kenai. | -- | 1968 | |
| | | | 7-24-68 | 62 |
| 15267160 Swanson River | Lat 60°47'15", long 151°00'30", in NE¼ sec.15, T.8 N., R.10 W., 1 mi upstream from mouth at Cook Inlet and 18 mi northeast of Kenai. | -- | 1968 | |
| | | | 7-24-68 | 72 |
| | | | 1970 | |
| | | | 3-31-70 | 49 |
| | | | 9-30-70 | 65 |
| 15268000 Resurrection Creek | Lat 60°55'15", long 149°38'40", at bridge at Hope, 0.5 mi upstream from mouth. | 162 | 1959 | |
| | | | 8-19-59 | 409 |
| | | | 9-19-59 | 384 |
| 15269500 Granite Creek | Lat 60°43'40", long 149°17'00", Kenai Peninsula Borough, on upstream side of center pier of bridge on Seward-Anchorage Highway, and 12 mi southwest of Portage. | 28.2 | (Listed below) | |

| 1967 | | 1969 | | 1970-cont | | 1972-cont | | 1974 | |
|---|---|---|---|---|---|---|---|---|---|
| 9-4-67 | 130 | 10-25-68 | 52 | 10-10-69 | 410 | 7-11-72 | 272 | 10-5-73 | 70 |
| -- | †1940 | 5-12-69 | 90 | 1971 | | 9-1-72 | 147 | -- | †640 |
| 1968 | | 5-22-69 | 811 | 11-10-70 | 113 | 1973 | | 6-17-74 | 374 |
| -- | †730 | -- | †1150 | -- | †960 | 10-10-72 | 56 | 1975 | |
| 5-27-68 | 331 | 9-12-69 | 150 | 1972 | | 5-12-73 | 92 | -- | †640 |
| 6-24-68 | 283 | 1970 | | 10-6-71 | 79 | 6-18-73 | 401 | 5-15-75 | 258 |
| 8-4-68 | 107 | 10-6-69 | †2040 | 6-1-72 | 260 | 7-26-73 | 242 | 7-11-75 | 489 |
| | | | | -- | †350 | -- | †811 | | |

| 15270100 Fresno Creek | Lat 60°40'15", long 149°28'35", on right bank at mi 48 on Seward-Anchorage Highway, and 0.6 mi south of Shield. | 6.03 | (Listed below) |
|---|---|---|---|

| 1963 | | 1965-cont | | 1967 | | 1968-cont | | 1969-cont | |
|---|---|---|---|---|---|---|---|---|---|
| -- | †78 | 7-24-65 | 34 | -- | †72 | 8-4-68 | 17 | 8-1-69 | 16 |
| 7-11-63 | 43 | 9-29-65 | 24 | 6-16-67 | 55 | 1969 | | 9-11-69 | 10 |
| 1964 | | 1966 | | 9-4-67 | 26 | 10-25-68 | 4.8 | 1970 | |
| 6-2-64 | 58 | 6-3-66 | 40 | 1968 | | -- | †135 | 10-6-69 | †85 |
| -- | †84 | -- | †80 | -- | †82 | 5-12-69 | 7.1 | 10-8-69 | 58 |
| 1965 | | 7-19-66 | 36 | 6-21-68 | 50 | 5-27-69 | 65 | 6-22-70 | 39 |
| -- | †42 | | | | | | | 11-13-70 | 8.9 |

| 15270400 Donaldson Creek | Lat 60°45'40", long 149°27'20", on left bank at mi 54.5 on Seward-Anchorage Highway, and 1.5 mi north of Wibel. | 4.07 | (Listed below) |
|---|---|---|---|

| 1963 | | 1965-cont | | 1967-cont | | 1969-cont | | 1971 | |
|---|---|---|---|---|---|---|---|---|---|
| -- | †60 | 9-29-65 | 10 | -- | †170 | 5-12-69 | 4.6 | 11-13-70 | 4.7 |
| 7-11-63 | 27 | 1966 | | 1968 | | -- | †70 | 7-1-71 | 32 |
| 1964 | | 6-3-66 | †42 | -- | †60 | 8-31-69 | 14 | -- | †130 |
| 6-2-64 | 24 | 7-19-66 | 25 | 6-21-68 | 44 | 9-11-69 | 6.4 | 1972 | |
| -- | †60 | 1967 | | 8-4-68 | 9.3 | 1970 | | -- | †90 |
| 1965 | | 7-16-67 | 31 | 1969 | | 10-8-69 | 24 | 6-1-72 | 10 |
| 7-24-65 | †22 | 9-4-67 | 11 | 10-25-68 | 5.6 | 10-13-69 | †70 | 7-13-72 | 29 |
| | | | | | | 6-22-70 | 25 | 8-31-72 | 6.9 |

| Canyon Creek | Lat 60°46'49", long 149°25'37", in SW¼SE¼ sec.15, T.8 N., R.1 W., at bridge on Anchorage-Seward Highway, about 16 mi southwest of Portage. | -- | 1948 | |
|---|---|---|---|---|
| | | | 8-15-48 | 434 |

| 15271900 Cub Creek | Lat 60°52'12", long 149°26'02", Kenai Peninsula Borough, on right wingwall of culvert, on Hope Highway, 0.1 mi upstream from mouth at Sixmile Creek, and 7.7 mi southeast of Hope. | 1.80 | (Listed below) |
|---|---|---|---|

| 1965 | | 1967-cont | | 1970 | | 1972-cont | | 1974 | |
|---|---|---|---|---|---|---|---|---|---|
| -- | †16 | -- | †54 | 10-6-69 | †37 | 7-13-72 | 16 | 10-5-73 | 3.4 |
| 8-18-65 | 9.7 | 1968 | | 1971 | | -- | †27 | -- | †28 |
| 9-29-65 | 8.9 | 5-27-68 | †9.1 | 11-13-70 | 3.8 | 9-1-72 | 3.6 | 6-17-74 | 9.9 |
| 1966 | | 8-4-68 | 5.8 | 7-6-71 | 27 | 1973 | | 1975 | |
| 6-4-66 | 13 | 1969 | | -- | †37 | 10-5-72 | 6.6 | 10-6-74 | †23 |
| -- | †21 | 10-25-68 | 1.3 | 1972 | | 5-7-73 | 0.71 | 10-10-74 | 1.9 |
| 7-19-66 | 13 | -- | †25 | 10-6-71 | 5.0 | -- | †28 | 7-11-75 | 20 |
| 1967 | | 9-11-69 | 2.7 | 6-1-72 | 10 | 7-23-73 | 8.5 | 9-12-75 | 6.5 |
| 9-4-67 | 8.0 | | | | | | | | |

†Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| 15272200 Placer River | Lat 60°49'05", long 148°59'15", in NE¼ sec.6, T.8 N., R.3 E., at bridge on Seward Highway, 0.3 mi upstream from mouth, and 1.5 mi south of Portage. | -- | 1965 | |
| | | | 7-25-65 | 3520 |
| | | | 9-22-65 | 4930 |
| | | | 1966 | |
| | | | 12-21-65 | 27 |
| | | | 2-18-66 | 53 |
| Portage Creek | Lat 60°47'20", long 148°51'05", in NW¼ sec.13, T.8 N., R.3 E., 400 ft west of railroad tunnel, 0.6 mi downstream from Portage Lake outlet, and 5.5 mi southeast of Portage. | -- | 1965 | |
| | | | 4-22-65 | 114 |
| 15272300 Portage Creek | Lat 60°49'15", long 148°58'25", in SE¼ sec.31, T.9 N., R.3 E., at bridge on Seward Highway, 0.3 mi upstream from mouth and 1.0 mi south of Portage. | -- | 1965 | |
| | | | 7-26-65 | 1470 |
| 15272500 Turnagain Arm Tributary | Lat 60°55'27", long 149°07'40", in SE¼ sec.29, T.10 N., R.2 E., on left bank 5 ft upstream from culvert at the Alaska Railroad, and 1.9 mi southeast of Girdwood. | 0.44 | 1966 | |
| | | | 6-9-66 | 5.2 |
| | | | -- | †19 |
| | | | 1967 | |
| | | | 9-18-67 | †69 |
| | | | 1968 | |
| | | | 8-4-68 | 0 |
| 15272530 California Creek | Lat 60°57'53", long 149°08'02", at culverts on Alyeska Highway, 0.2 mi west of Girdwood Post Office, and 2.0 mi northeast of Seward-Anchorage Highway. | 6.96 | (Listed below) | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | | 1970 | | 1971-cont | | 1972-cont | | 1974 | | |
| 9-8-67 | †593 | 10-6-69 | †600 | 5-26-71 | 21 | 9-1-72 | 21 | 10-5-73 | 14 | |
| 1968 | | 10-8-69 | 125 | 6-30-71 | 92 | 9-8-72 | 20 | -- | †78 | |
| 7-2-68 | †72 | 10-11-69 | 157 | 8-8-71 | †350 | 1973 | | 6-17-74 | 43 | |
| 8-4-68 | 25 | 6-10-70 | 61 | 1972 | | 10-20-72 | 29 | 1975 | | |
| 1969 | | 1971 | | -- | †200 | 5-12-73 | 14 | 5-12-75 | 71 | |
| 5-12-69 | 19 | 10-31-70 | 229 | 5-19-72 | 18 | -- | †240 | -- | †175 | |
| 6-16-69 | †125 | 11-1-70 | 95 | 6-30-72 | 41 | 7-23-73 | 50 | 7-11-75 | 109 | |
| 8-27-69 | 12 | | | 7-31-72 | 40 | | | | | |

| | | | |
|---|---|---|---|
| Bird Creek | Lat 60°58'29", long 149°27'51", 100 ft upstream from mouth and Seward Highway bridge. | -- | 1969 |
| | | | 4-1-69 17 |
| | | | 1970 |
| | | | 3-5-70 45 |
| 15272800 Rainbow Creek | Lat 61°00'03", long 149°38'57", in NW¼ sec.33, T.11 N., R.2 W., on right bank at Seward-Anchorage Highway, and 19.4 mi southeast of Anchorage. | 4.18 | (Listed below) |

| 1965 | | 1966 | | 1967 | |
|---|---|---|---|---|---|
| -- | †41 | 6-9-66 | 30 | -- | †130 |
| 8-15-65 | 26 | 6-19-66 | 10 | | |
| 8-24-65 | 12 | -- | †80 | | |

| | | | |
|---|---|---|---|
| Little Rabbit Creek | Lat 61°04'57", long 149°44'50", in SE¼ sec.35, T.12 N., R.3 W., at bridge crossing 10.0 mi south of Anchorage. | -- | 1971 9-10-71 8.1 |
| | Lat 61°04'40", long 149°48'35", in NE¼ sec.4, T.11 N., R.3 W., at Seward Highway, 10.0 mi south of Anchorage. | -- | (Listed below) |

| 1968 | | 1969 | | 1971 | |
|---|---|---|---|---|---|
| 7-2-68 | 8.2 | 12-3-68 | 1.6 | 9-10-71 | 8.6 |
| 8-7-68 | 4.7 | 7-15-69 | 3.0 | 1972 | |
| 9-30-68 | 3.5 | | | 4-6-72 | 1.2 |

| | | | |
|---|---|---|---|
| Rabbit Creek | Lat 61°05'51", long 149°44'10", in SW¼ sec.25, T.12 N., R.3 W., near Hillside Road crossing, 9.5 mi south of Anchorage. | -- | 1971 9-10-71 24 |
| | | | 1972 4-6-72 4.5 |
| | Lat 61°05'42", long 149°46'59", in SE¼ sec.27, at Canyon Road crossing, 9.5 mi south of Anchorage. | -- | 1971 9-10-71 23 |
| | Lat 61°05'05", long 149°49'25", in SW¼ sec.33, T.12 N., R.3 W., at Seward Highway 9.5 mi south of Anchorage. | -- | (Listed below) |

| 1968 | | 1969 | | 1971 | |
|---|---|---|---|---|---|
| 7-2-68 | 34 | 12-3-68 | 8.4 | 9-10-71 | 25 |
| 8-7-68 | 14 | 4-1-69 | 5.2 | 1972 | |
| 9-30-68 | 12 | 7-15-69 | 10 | 4-6-72 | 4.8 |

† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Furrow Creek | Lat 61°06'25", long 149°52'40", in NW¼ sec.30, T.12 N., R.3 W., at Johns Road, 7.8 mi south of Anchorage. | -- | 1968 | |
| | | | 7-2-68 | 0.2 |
| | | | 8-7-68 | 0.1 |
| | | | 9-30-68 | 0.2 |
| | | | 1969 | |
| | | | 12-3-68 | 0.1 |
| South Fork Campbell Creek | Lat 61°09'25", long 149°45'25", in N½ sec.2, T.12 N., R.3 W., 0.5 mi above bridge on gravel road, 3 mi upstream from confluence with North Fork, and 6 mi southeast of Anchorage Post Office. | -- | (Listed below) | |
| | 1958 6-23-58 91 | 1959 4-28-59 10 | 1960 4-25-60 12 | 1961 10-25-60 56; 4-14-61 10 |
| North Fork Campbell Creek | Lat 61°10'20", long 149°42'30", in SW¼ sec.31, T.13 N., R.2 W., 5 mi upstream from confluence with South Fork, and 7 mi southeast of Anchorage Post Office. | -- | (Listed below) | |
| 1958 6-24-58 32 | 1959 4-28-59 4.1 | 1960 4-25-60 3.7 | 1961 10-25-60 20 | 1968 9-13-68 14 |
| 15274300 North Fork Campbell Creek | Lat 61°10'10", long 149°45'43", in SW¼ sec.35, T.13 N., R.3 W., at old Campbell Airstrip road crossing. 2.5 mi upstream from confluence with South Fork Campbell Creek, and 5.5 mi southeast of Anchorage Post Office. | 13.4 | (Listed below) | |
| 1947 | 1949-cont | 1960 | 1968-cont | 1970 |
| 8-11-47 19 | 6-17-49 35 | 4-25-60 10 | 5-13-68 8.1 | 5-18-70 5.3 |
| 1948 | 7-18-49 52 | 1961 | 6-5-68 32 | 5-26-70 5.7 |
| 10-31-47 19 | 1950 | 10-25-60 23 | 6-28-68 41 | 7-13-70 68 |
| 2-13-48 7.9 | 10-12-49 20 | 4-14-61 7.0 | 8-12-68 22 | 7-16-70 35 |
| 4-13-48 8.3 | 1952 | 1967 | 9-13-68 16 | 1971 |
| 4-24-48 6.3 | 12-3-51 17 | 5-1-67 7.6 | 1969 | 10-12-70 15 |
| 6-17-48 43 | 2-21-52 6.2 | 6-5-67 25 | 10-4-68 12 | 8-9-71 100 |
| 7-28-48 25 | 3-22-52 5.6 | 7-10-67 34 | 5-8-69 5.2 | 1972 |
| 8-20-48 33 | 1954 | 7-20-67 39 | 6-8-69 21 | 6-8-72 12 |
| 9-10-48 26 | 7-21-54 13 | 8-15-67 41 | 6-10-69 21 | 1973 |
| 1949 | 1955 | 9-6-67 72 | 7-18-69 15 | 4-19-73 8.8 |
| 11-3-48 15 | 7-11-55 72 | 1968 | 1970 | 5-7-73 6.0 |
| 12-1-48 6.4 | 1958 | 1-3-68 10 | 10-14-69 16 | 8-1-73 22 |
| 3-24-49 4.2 | 6-24-58 31 | 4-1-68 5.1 | | 9-11-73 18 |
| 4-26-49 7.9 | 1959 | | | |
| 5-25-49 15 | 4-28-59 12 | | | |
| North Fork Campbell Creek | Lat 61°10'35", long 149°47'00", in NE¼ sec.34, T.13 N., R.3 W., 1.5 mi upstream from confluence with South Fork, and 4.5 mi southeast of Anchorage Post Office. | -- | (Listed below) | |
| | 1958 6-24-58 30 | 1959 4-28-59 23 | 1960 4-25-60 15 | 1961 10-25-60 24; 4-13-61 7.2 |
| | Lat 61°10'30", long 149°49'05", in NW¼ sec.33, T.13 N., R.3 W., 600 ft upstream from confluence with South Fork, and 4 mi southeast of Anchorage Post Office. | -- | (Listed below) | |
| | 1958 6-24-58 35 | 1959 4-28-59 28 | 1960 4-25-60 18 | 1961 10-25-60 25; 4-14-61 8.4 |
| Campbell Creek | Lat 61°10'35", long 149°49'20", in NW¼ sec.33, T.13 N., R.3 W., 400 ft downstream from confluence of North Fork and South Fork, 0.8 mi upstream from bridge on Lake Otis Road, and 3.8 mi southeast of Anchorage Post Office. | -- | (Listed below) | |
| | 1958 6-23-58 114; 6-24-58 110 | 1959 4-28-59 55 | 1960 4-25-60 32 | 1961 10-25-60 91; 4-14-61 20 |

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Campbell Creek | Lat 61°10'40", long 149°50'10", on line between secs.32 and 33, T.13 N., R.3 W., at bridge on Lake Otis Road, 3.5 mi southeast of Anchorage Post Office. | 46.4 | (Listed below) | |
| 1958 | | | 1960 | |
| 3-26-58 | 17 | | 4-25-60 | 36 |
| 1959 | | | 1961 | |
| 4-28-59 | 47 | | 10-25-60 | 86 |
| | | | 4-13-61 | 25 |
| | | | 1961-cont | |
| | | | 4-14-61 | 22 |
| | | | 1967 | |
| | | | 10-11-66 | 71 |
| | | | 1967-cont | |
| | | | 2-7-27 | 17 |
| | | | 1968 | |
| | | | 5-13-68 | 41 |
| | | | 1968-cont | |
| | | | 9-13-68 | 49 |
| | | | 1972 | |
| | | | 3-28-72 | 14 |
| | | | 6-7-72 | 62 |
| 15274400 Campbell Creek | Lat 61°10'25", long 149°52'00", on line between secs.31 and 32, T.13 N., R.3 W., at bridge on Old Seward-Anchorage Highway, and 3.5 mi southeast of Anchorage Post Office. | -- | 1961 | |
| | | | 10-25-60 | 85 |
| | | | 4-14-61 | 25 |
| | | | 1967 | |
| | | | 10-11-66 | 75 |
| Little Campbell Creek | Lat 61°09'10", long 149°52'20", in SE¼ sec.6, T.12 N., R.3 W., 0.2 mi upstream from mouth and 4.5 mi south of Anchorage. | -- | (Listed below) | |
| 1968 | | | 1968-cont | |
| 5-13-68 | 11 | | 7-10-68 | 3.6 |
| 6-5-68 | 14 | | 8-12-68 | 3.5 |
| | | | 1968-cont | |
| | | | 9-13-68 | 2.4 |
| | | | 1969 | |
| | | | 12-6-68 | 0.57 |
| | | | 1971 | |
| | | | 11-13-70 | 0.47 |
| | | | 11-13-70 | 0.64 |
| Campbell Creek | Lat 61°08'45", long 149°53'25", on line between sec.7, T.12 N., R.3 W., and sec.12, T.12 N., R.4 W., at bridge on Campbell Road, and 5 mi south of Anchorage Post Office. | -- | 1961 | |
| | | | 10-25-60 | 90 |
| 15274600 Campbell Creek | Lat 61°08'17", long 149°55'20", on line between secs.11 and 14, T.12 N., R.3 W., at bridge on Dimond Blvd., and 2.0 mi upstream from mouth. | 69.7 | 1961 | |
| | | | 10-25-60 | 106 |
| | | | 11-29-60 | 47 |
| | | | 12-9-60 | 59 |
| | | | 12-20-60 | 30 |
| | | | 3-28-61 | 27 |
| 15274770 Hood Creek at Northern Lights Boulevard | Lat 61°12'05", long 149°57'04", in SE¼ sec.22, T.13 N., R.4 W., at mouth, near Susitna View Parkway, and 2.5 mi southwest of Anchorage Post Office. | -- | 1961 | |
| | | | 8-1-61 | 0.35 |
| Fish Creek | Lat 61°11'45", long 149°55'30", in SW¼ sec.24, T.13 N., R.4 W., at Northern Lights Blvd., crossing at Anchorage. | -- | 1968 | |
| | | | 4-18-68 | 13 |
| | | | 7-10-68 | 1.0 |
| | | | 8-7-68 | 1.0 |
| | | | 9-30-68 | 1.0 |
| | | | 1969 | |
| | | | 12-2-68 | 0.51 |
| | Lat 61°12'00", long 149°55'40", in SE¼ sec.23, T.13 N., R.4 W., at culvert on Northward Drive, 2 mi southwest of Anchorage Post Office. | -- | 1961 | |
| | | | 8-1-61 | 6.2 |
| | | | 8-1-61 | 3.2 |
| I5274800 South Branch of South Fork Chester Creek | Lat 61°12'37", long 149°43'57", on line between secs. 13 and 24, T.13 N., R.3 W., at Muldoon Road crossing, 5.4 mi east of Anchorage. | 10.8 | (Listed below) | |
| 1960 | | | 1967-cont | |
| 4-26-60 | 23 | | 5-9-67 | 5.2 |
| 1961 | | | 5-31-67 | 6.3 |
| 10-27-60 | 13 | | 9-6-67 | 26 |
| 4-13-61 | 6.5 | | 9-18-67 | †34 |
| 1967 | | | 1968 | |
| 10-10-66 | 21 | | 10-5-67 | 10 |
| 2-14-67 | 3.8 | | 4-1-68 | 4.4 |
| | | | 5-14-68 | 5.6 |
| | | | 1968-cont | |
| | | | 6-15-68 | †27 |
| | | | 8-7-68 | 8.3 |
| | | | 9-12-68 | 6.6 |
| | | | 1969 | |
| | | | 12-2-68 | 4.7 |
| | | | 5-7-69 | 4.7 |
| | | | 7-24-69 z | †20 |
| | | | 9-3-69 | 6.4 |
| | | | 1970 | |
| | | | 10-5-69 | †8.7 |
| | | | 10-14-69 | 6.1 |
| | | | 6-8-70 | 4.1 |
| | | | 1971 | |
| | | | 5-19-71 | 6.2 |
| | | | 8-9-71 | †44 |
| | | | 8-10-71 | 32 |
| | | | 1972 | |
| | | | 3-28-72 | 2.2 |
| | | | 9-29-72 | †37 |
| | | | 1973 | |
| | | | -- | †11 |
| | | | 1974 | |
| | | | 10-3-73 | 8.4 |
| | | | 5-21-74 | 5.0 |
| | | | 1975 | |
| | | | 5-1-75 | 22 |
| | | | 5-2-75 | †37 |
| | | | 5-2-75 | 34 |
| Middle Branch South Fork Chester Creek | Lat 61°13'10", long 149°41'20", in NE¼ sec.18, T.13 N., R.2 W., at tank trail, 6.5 mi east of Anchorage. | -- | 1967 | |
| | | | 10-10-66 | 1.3 |
| | | | 1968 | |
| | | | 9-12-68 | 0.85 |
| | Lat 61°12'55", long 149°43'50", in S½ sec.13, T.13 N., R.3 W., at Muldoon Road, 5 mi east of Anchorage. | -- | 1968 | |
| | | | 9-12-68 | 1.6 |
| | Lat 61°11'45", long 149°47'25", on line between secs. 22 and 27, T.13 N., R.3 W., at East Northern Lights Blvd., 3.3 mi southeast of Anchorage. | -- | 1960 | |
| | | | 4-26-60 | 2.0 |
| | | | 1961 | |
| | | | 10-27-60 | 5.8 |
| | | | 4-13-61 | 1.7 |
| | | | 1968 | |
| | | | 5-14-68 | 0.05 |

† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| South Fork Chester Creek | Lat 61°11'00", long 149°48'20", on line between secs. 27 and 28, T.13 N., R.3 W., at the City of Anchorage pipeline station off Tudor Road, 4 mi southeast of Anchorage Post Office. | -- | 1967<br>2-14-67 | 5.7 |
| 15274980 Russian Jack Springs | Lat 61°12'25", long 149°46'55", in NE¼ sec.22, T.13 N., R.3 W., 3.5 mi east of Anchorage Post Office. | -- | (Listed below) | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1948 | | 1955-cont | | 1959-cont | | 1962 | | 1965-cont | | | |
| 7-28-48 | 5.1 | 1-13-55 | 3.8 | 5-19-59 | 5.8 | 1-16-62 | 8.2 | 3-25-65 | 4.7 | | |
| 9-10-48 | 5.1 | 2-25-55 | 3.9 | 6-2-59 | 6.3 | 2-27-62 | 5.4 | 4-22-65 | 4.8 | | |
| 1949 | | 5-4-55 | 6.3 | 7-7-59 | 4.8 | 3-28-62 | 5.5 | 7-27-65 | 4.8 | | |
| 12-1-48 | 4.4 | 7-19-55 | 5.9 | 7-21-59 | 6.9 | 4-18-62 | 5.6 | 1967 | | | |
| 1952 | | 1956 | | 7-31-59 | 6.6 | 5-16-62 | 6.9 | 3-21-67 | 3.2 | | |
| 11-30-51 | 5.6 | 4-20-56 | 4.2 | 8-13-59 | 7.4 | 6-26-62 | 7.0 | 5-3-57 | 4.5 | | |
| 2-9-52 | 4.2 | 4-20-56 | 4.2 | 9-16-59 | 7.3 | 8-9-62 | 7.1 | 6-6-67 | 3.9 | | |
| 1953 | | 6-6-56 | 5.8 | 1960 | | 9-24-62 | 7.3 | 1968 | | | |
| 2-4-53 | 6.4 | 7-12-56 | 5.0 | 10-12-59 | 8.0 | 1963 | | 10-3-67 | 4.8 | | |
| 2-10-53 | 5.7 | 9-11-56 | 7.3 | 11-16-59 | 6.9 | 11-21-62 | 6.6 | 11-14-67 | 4.8 | | |
| 2-16-53 | 6.1 | 1957 | | 12-15-59 | 7.0 | 1-3-63 | 6.0 | 1-2-68 | 5.3 | | |
| 2-23-53 | 5.6 | 10-3-56 | 7.0 | 12-31-59 | 6.9 | 2-11-63 | 4.9 | 2-13-68 | 4.3 | | |
| 3-4-53 | 5.4 | 12-27-56 | 5.4 | 1-11-60 | 6.4 | 3-1-63 | 4.7 | 3-28-68 | 3.9 | | |
| 3-13-53 | 5.8 | 3-27-57 | 4.8 | 2-9-60 | 5.4 | 4-3-63 | 4.9 | 4-30-68 | 4.4 | | |
| 3-26-53 | 5.0 | 4-26-57 | 6.8 | 3-10-60 | 4.8 | 5-16-63 | 6.2 | 5-14-68 | 4.4 | | |
| 4-21-53 | 5.9 | 7-3-57 | 5.3 | 4-12-60 | 4.6 | 6-14-63 | 6.4 | 6-6-68 | 5.2 | | |
| 4-28-53 | 5.8 | 1958 | | 4-26-60 | 5.5 | 7-22-63 | 5.6 | 8-16-68 | 4.8 | | |
| 5-8-53 | 6.1 | 11-8-57 | 6.8 | 5-11-60 | 5.2 | 8-26-63 | 5.9 | 9-12-68 | 5.3 | | |
| 6-4-53 | 5.5 | 12-10-57 | 6.5 | 6-14-60 | 5.2 | 9-24-63 | 6.0 | 1969 | | | |
| 6-16-53 | 5.4 | 1-24-58 | 5.6 | 6-22-60 | 5.6 | 1964 | | 4-2-69 | 2.8 | | |
| 6-29-53 | 5.2 | 2-26-58 | 4.8 | 7-25-60 | 5.8 | 10-22-63 | 5.3 | 5-7-69 | 2.8 | | |
| 7-21-53 | 5.7 | 3-11-58 | 5.0 | 8-19-60 | 6.7 | 11-19-63 | 5.6 | 6-10-69 | 2.4 | | |
| 8-20-53 | 6.3 | 4-1-58 | 4.4 | 9-20-60 | 7.9 | 12-13-63 | 7.0 | 7-15-69 | 1.8 | | |
| 9-11-53 | 6.8 | 4-29-58 | 5.2 | 1961 | | 1-14-64 | 5.4 | 9-3-69 | 2.3 | | |
| 1954 | | 7-1-58 | 5.3 | 10-4-60 | 8.9 | 2-13-64 | 4.7 | 1970 | | | |
| 10-2-53 | 6.4 | 7-29-58 | 4.7 | 10-27-60 | 7.8 | 3-25-64 | 3.5 | 3-6-70 | 1.3 | | |
| 11-24-53 | 5.4 | 8-13-58 | 6.8 | 12-9-60 | 7.3 | 3-31-64 | 3.9 | 5-12-70 | 1.3 | | |
| 12-29-53 | 5.6 | 8-22-58 | 6.8 | 12-28-60 | 7.1 | 4-3-64 | 3.7 | 6-18-70 | 1.0 | | |
| 1-14-54 | 5.1 | 9-25-58 | 5.9 | 1-16-61 | 7.0 | 4-6-64 | 4.1 | 7-23-70 | 0.94 | | |
| 2-24-54 | 4.5 | 1959 | | 2-1-61 | 7.2 | 4-8-64 | 4.6 | 9-17-70 | 1.6 | | |
| 3-16-54 | 4.0 | 10-10-58 | 5.9 | 3-17-61 | 6.0 | 4-10-64 | 4.1 | 1971 | | | |
| 4-5-54 | 4.4 | 11-6-58 | 5.7 | 4-13-61 | 5.9 | 5-6-64 | 5.6 | 12-1-70 | 1.4 | | |
| 5-4-54 | 4.2 | 12-11-58 | 5.6 | 5-19-61 | 5.9 | 6-25-64 | 4.2 | 5-17-71 | 1.5 | | |
| 6-4-54 | 3.7 | 12-30-58 | 5.3 | 6-6-61 | 5.3 | 8-6-64 | 5.0 | 1972 | | | |
| 6-11-54 | 3.7 | 2-3-59 | 4.4 | 7-13-61 | 4.6 | 9-1-64 | 4.9 | 10-5-71 | 3.2 | | |
| 6-25-54 | 4.0 | 2-21-59 | 4.2 | 9-6-61 | 6.2 | 1965 | | 2-23-72 | 2.9 | | |
| 7-21-54 | 3.8 | 3-10-59 | 4.0 | 9-18-61 | 6.1 | 10-2-64 | 5.1 | 6-8-72 | 3.8 | | |
| 8-19-54 | 3.7 | 3-21-59 | 4.6 | 9-28-61 | 6.7 | 11-2-64 | 4.4 | 1973 | | | |
| 9-17-54 | 3.9 | 4-20-59 | 4.7 | 1961 | | 12-2-64 | 4.6 | 11-29-72 | 4.1 | | |
| 1955 | | 4-27-59 | 5.9 | 10-24-61 | 7.7 | 1-4-65 | 4.6 | 1974 | | | |
| 11-4-54 | 4.4 | | | 11-30-61 | 7.0 | 2-10-65 | 3.4 | 10-5-73 | 3.8 | | |

| | | | | |
|---|---|---|---|---|
| North Fork Chester Creek | Lat 61°12'54", long 149°49'17", in SW¼ sec.16, T.13 N., R.3 W., at Airport Heights Road, at Anchorage. | -- | 1972<br>3-27-72<br>1974<br>6-7-74 | 0.59<br>0.72 |
| | Lat 61°12'10", long 149°50'40", in SE¼ sec.20, T.13 N., R.3 W., at mouth, 1.5 mi southeast of Anchorage Post Office. | -- | 1968<br>5-14-68<br>9-12-68 | 1.2<br>1.3 |
| 15275050 Chester Creek | Lat 61°12'10", long 149°52'00", on line between secs.19 and 20, T.13 N., R.3 W., at culvert on Seward-Anchorage Highway at Anchorage, 2.2 mi upstream from mouth. | -- | (Listed below) | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | | 1948-cont | | 1949-cont | | 1952 | | 1959 | |
| 8-11-47 | 17 | 4-24-48 | 25 | 3-25-49 | 13 | 12-3-51 | 20 | 4-27-59 | 102 |
| 1948 | | 6-17-48 | 18 | 4-25-49 | 59 | 12-15-51 | 14 | 1960 | |
| 10-31-47 | 24 | 7-28-48 | 20 | 5-27-49 | 44 | 2-9-52 | 13 | 10-27-59 | 40 |
| 2-13-48 | 19 | 8-20-48 | 26 | 6-30-49 | 67 | 3-22-52 | 12 | 4-26-60 | 56 |
| 4-1-48 | 19 | 9-10-48 | 24 | 7-20-49 | 40 | 1954 | | 1961 | |
| 4-5-48 | 19 | 1949 | | 1950 | | 7-21-54 | 14 | 4-13-61 | 22 |
| 4-13-48 | 46 | 11-3-48 | 28 | 10-13-49 | 37 | 1955 | | | |
| | | 2-28-49 | 9.9 | | | 7-19-55 | 29 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15275150 Chester Creek | Lat 61°12'20", long 149°54'10", in NE¼ sec.24, T.13 N., R.3 W., at culvert on Spenard Road, at Anchorage, 1 mi upstream from mouth. | | | | | | -- | (Listed below | |
| 1947 | | 1959 | | 1960 | | 1961 | | | |
| 7-27-47 | 17 | 4-27-59 | 92 | 4-26-60 | 62 | 10-27-60 | 37 | | |
| | | | | | | 4-13-61 | 26 | | |

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| 15276200 Ship Creek | Lat 61°14'14", long 149°41'20", on line between secs.6 and 7, T.13 N., R.2 W., at bridge on Glenn Highway and 6.5 mi east of Anchorage Post Office. | -- | (Listed below) | |
| | 1958 3-26-58 5.1 | | 1959 4-27-59 28 | |
| | 1960 4-13-60 29 4-26-60 27 | | 1967 5-16-67 172 | |
| 15276300 Ship Creek | Lat 61°14'40", long 149°43'20", in SE¼ sec.1, T.13 N., R.3 W., 0.2 mi downstream from North Fork and 6 mi east of Anchorage Post Office. | -- | (Listed below) | |
| | 1959 4-27-59 30 | | 1960 4-26-60 23 | |
| | 1961 10-26-60 178 | | | |
| 15276400 Ship Creek | Lat 61°14'17", long 149°46'40", on line between secs. 10 and 11, T.13 N., R.3 W., at bridge on Glenn (Davis) Highway, and 4 mi northeast of Anchorage Post Office. | -- | (Listed below) | |
| | 1959 4-27-59 28 | | 1960 4-26-60 20 | |
| | 1961 10-26-60 172 | | | |
| 15276500 Ship Creek | Lat 61°14'20", long 149°47'24", in NE¼ sec.10, T.13 N., R.3 W., near right bank on downstream side of bridge at Elmendorf Air Force Base, 3.7 mi northeast of Anchorage Post Office, and 4.9 mi upstream from mouth. | 113 | (Listed below) | |
| 1972 2-23-72 2.4 | 1973 1-31-73 4.7 | | 1974 1-7-74 3.1 | |
| | 1975 1-8-75 5.7 2-12-75 2.4 | | 1975-cont 3-20-75 1.7 4-10-75 0.56 | |
| 15276600 Ship Creek | Lat 61°13'25", long 149°51'25", in NW¼ sec.17, T.13 N., R.3 W., at bridge on Post Road at Anchorage and 1.5 mi upstream from mouth. | -- | (Listed below) | |
| 1959 4-27-59 81 1960 4-26-60 45 | 1961 10-26-60 186 1967 3-26-67 20 | | 1967-cont 5-3-67 47 1969 11-8-68 42 | |
| | 1969-cont 11-15-68 24 1-3-69 21 1-30-69 23 | | 1969-cont 3-26-69 20 5-7-69 33 1970 4-3-70 21 | |
| Ship Creek | 50 ft downstream from Glenn highway bridge. | -- | 1968 9-10-68 88 | |
| | Lat 61°14'35", long 149°42'27", in SW¼ sec.6, T.13 N., R.2 W., 200 ft upstream from Fort Richardson power plant. | -- | 1975 11-20-74 23 | |
| | Downstream from power plant. | -- | 1967 5-16-67 133 | |
| | Lat 61°13'25", long 149°52'50", in NE¼ sec.18, T.13 N., R.3 W., just downstream from City of Anchorage dam at Anchorage, and 0.8 mi upstream from mouth. | -- | (Listed below) | |
| | 1960 4-26-60 45 | | 1961 10-26-60 193 4-13-61 41 | |
| | 1967 5-16-67 191 | | | |
| | At "C" Street Bridge. | -- | 1968 9-10-68 100 | |
| | 250 ft upstream from Post Road culvert. | -- | 1968 9-10-68 97 | |
| | 150 ft downstream from Weir at Cooling Road. | -- | 1968 9-10-68 83 | |
| Sixmile Lake Outlet | Lat 61°17'31", long 149°48'44", at outlet of lake, on loop road, 0.8 mi upstream from mouth on Elmendorf Air Force Base, 5.7 mi north of Anchorage. | -- | 1970 4-29-70 2.0 | |
| South Fork Eagle River | Lat 61°18'00", long 149°28'00", 0.2 mi upstream from mouth and 15 mi northeast of Anchorage. | -- | 1952 10-3-51 80 12-29-51 15 3-8-52 13 | |
| 15277200 Meadow Creek | Lat 61°19'14", long 149°32'11", in NW¼ sec.7, T.14 N., on left bank at Eagle Loop Road, and 1 mi east of Eagle River. | 7.43 | (Listed below) | |
| 1965 8-4-65 10 9-28-65 22 -- †22 1966 6-28-66 16 -- †30 | 1967 6-5-67 18 -- †30 1968 -- †20 | | 1969 -- †20 1970 8-7-70 †16 | |
| | 1971 8-9-71 124 8-9-71 †184 1972 6-9-72 17 -- †36 | | 1973 6-26-73 †21 8-21-73 †21 1974 10-3-73 6.4 | |

†Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Eagle River | In SE¼ sec.11, T.14 N., R.2 W., at bridge on Glenn Highway, 7 mi upstream from mouth, and 13 mi northeast of Anchorage. | -- | (Listed below) | |
| 1949 6-29-49 1,840; 7-21-49 1,290; 9-20-49 510; 1950 10-25-49 241 | 1950-cont 8-26-50 1,880; 1951 7-24-51 1,840; 1952 12-4-51 99 | 1952-cont 1-6-52 62; 2-3-52 49; 3-1-52 60; 3-22-52 55; 4-4-52 41 | 1952-cont 8-26-52 1,240; 9-30-52 693; 1954 7-21-54 1,660 | 1954-cont 8-20-54 3,670; 1955 7-21-55 1,460; 8-18-55 767 |
| Otter Lake Outlet | Lat 61°17'44", long 149°43'34", at loop road crossing, 0.2 mi downstream from lake on Fort Richardson military reservation, 7.7 mi northeast of Anchorage. | -- | 1970 4-29-70 | 1.9 |
| Upper Fire Lake Inlet | Lat 61°22'20", long 149°31'25", in SW¼ sec.30, T.15 N., R.1 W., at inlet to Lake, 2.7 mi northeast of Eagle River. | -- | 1968 5-9-68 | 0.81 |
| Upper Fire Lake Outlet | Lat 61°21'00", long 149°32'05", in NW¼ sec.31, T.15 N., R.1 W., at lake outlet, 2.2 mi northeast of Eagle River. | -- | (Listed below) | |
| | 1968 6-4-68 11; 7-18-68 2.2 | 1968--cont 8-13-68 1.1; 9-30-68 0.94 | 1969 11-26-68 1.3 | |
| 15277300 Fire Creek | Lat 61°21'10", long 149°32'45", in NE¼ sec.36, T.15 N., R.2 W., at road crossing at lake outlet, 2.0 mi north of Eagle River. | -- | (Listed below) | |
| | 1968 5-9-68 1.0; 6-4-68 11 | 1968-cont 7-18-68 2.6; 8-15-68 1.8; 9-30-68 1.0 | 1969 11-26-68 0.48 | |
| Peters Creek | Lat 61°24'00", long 149°27'00", at bridge on Glenn Highway just upstream from Little Peters Creek, 20 mi northeast of Anchorage. | -- | 1952 12-31-51 44; 2-22-52 28; 3-2-52 24; 4-26-52 22 | |
| 15277600 East Fork Eklutna Creek | Lat 61°18'40", long 148°57'05", 2.2 mi upstream from confluence with West Fork, 3 mi upstream from Eklutna Lake, and 21 mi south of Palmer. | 38 | 1963 10-8-62 | 58 |
| 15277800 West Fork Eklutna Creek | Lat 61°18'00", long 148°58'25", 2.3 mi upstream from confluence with East Fork, 3 mi upstream from Eklutna Lake, and 22 mi south of Palmer. | 26 | 1963 10-8-62 | 14 |
| Eklutna Creek | Lat 61°20'00", long 149°00'00", just upstream from Eklutna Lake, 14 mi southeast of Eklutna. | -- | 1953 10-6-52 | 582 |
| 15280000 Eklutna Creek | Lat 61°24'05", long 149°09'00", in SW¼ sec.8, T.15 N., R.2 E., 200 ft downstream from dam at outlet of Eklutna Lake, 8 mi upstream from abandoned Eklutna power diversion dam, 11 mi upstream from mouth, and 14 mi south of Palmer. | 119 | 1963 9-3-63 15; 9-4-63 15; 9-11-63 16; 1964 7-23-64 207; 8-3-64 784 | |
| Eklutna Creek | Lat 61°27'00", long 149°18'00", 1.8 mi upstream from Thunder Bird Creek, 7 mi downstream from Eklutna lake, and 13 mi southwest of Palmer. | -- | (Listed below) | |
| | 1955 7-5-55 14 | 1956 6-26-56 8.4; 7-9-56 7.0; 7-13-56 6.6 | 1956-cont 7-26-56 6.6; 8-2-56 11 | |
| | Lat 61°27'00", long 149°21'00", just upstream from Thunder Bird Creek, 2 mi upstream from mouth, 9 mi downstream from Eklutna Lake, and 13 mi southwest of Palmer. | -- | 1955 11-24-54 17; 7-5-55 16 | |
| Thunder Bird Creek | Lat 61°18'20", long 149°12'30", in SE¼ sec.14, T.15 N., R.1 E., at altitude 1,950 ft, 6.9 mi upstream from mouth, and 14.9 mi south of Palmer. | -- | 1964 10-22-63 | 19 |
| | Lat 61°24'00", long 149°14'10", in SW¼ sec.11, T.15 N., R.1 E., at altitude 1,700 ft, 5.8 mi upstream from mouth, and 14.4 mi south of Palmer. | -- | 1964 10-22-63 | 21 |
| Goat Creek | Lat 61°29'00", long 149°06'00", at bridge on Glenn Highway, 8.5 mi south of Palmer. | -- | 1955 7-19-55 | 60 |
| Palmer Creek | Lat 61°33'40", long 149°02'15", 1 mi north of Bodenburg Butte and 3.5 mi southeast of Palmer. | -- | 1959 12-23-58 | 40 |
| 15281500 Camp Creek | Lat 61°50'20", long 147°24'31", on left bank at Glenn Highway, and 3.5 mi northeast of Sheep Mountain. | 1.09 | (Listed below) | |
| 1966 8-27-66 0.72 | 1967 6-14-67 3.9 | 1968 5-20-68 12; -- †26 | 1969 -- †19 | 1971 8-10-71 †30 |

† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| 15282200 Hicks Creek | Lat 61°47'40", long 147°56'00", on left bank at mi 96.4 Glenn Highway and 31.9 mi northeast of Sutton. | 47.7 | (Listed below) | |
| | 1963 7-3-63 128; 1964 10-17-63 27, 6-15-64 494; 1964-cont 6-26-64 186, -- †1,200 | | | |
| 15282300 Pinochle Creek | Lat 61°47'37", long 147°55'46", on left bank at mi 96.7 Glenn Highway and 35.8 mi east of Sutton. | 7.99 | (Listed below) | |
| | 1966 5-27-66 †5.8, 9-29-66 3.8; 1967 5-8-67 †8.7; 1968 5-26-68 †17; 1969 -- †17; 1971 -- †20 | | | |
| 15282400 Puritan Creek | Lat 61°48'42", long 148°08'01", in NW¼ sec.23, T.20 N., R.7 E., Matanuska-Susitna Borough, on right bank downstream from bridge at mi 89.3 Glenn Highway, and 25.2 mi northeast of Sutton. | 8.51 | (Listed below) | |
| | 1963 7-3-63 7.2, -- †11; 1964 6-26-64 22, -- †35; 1965 8-1-65 8.4, 9-7-65 †13; 1966 5-19-66 8.0, 6-28-66 †12, 8-16-66 8.3; 1967 -- †28, 6-14-67 6.5; 1968 5-20-68 †19; 1969 5-20-69 5.0, -- †6, 8-12-69 2.2; 1970 5-12-70 †17, 7-6-70 6.4; 1971 7-7-71 15, 8-10-71 †41; 1971-cont 9-30-71 10; 1972 5-9-72 †85, 5-10-72 57, 7-28-72 38, 8-14-72 6.9, 9-30-72 10; 1973 6-5-73 9.7, 6-16-73 43; 1973-cont 6-16-73 †45, 7-10-73 9.5; 1974 5-9-74 25, 5-11-74 21, -- †46; 1975 5-14-75 33, -- †49, 7-21-75 26 | | | |
| Chickaloon River | Lat 61°47'11", long 148°27'08", in NE¼ sec.36, T.20 N., R.5 E., at bridge on Glenn Highway, 15 mi northeast of Sutton. | -- | (Listed below) | |
| | 1948 7-13-48 2,150, 9-5-48 778; 1949 10-1-48 398, 11-9-48 184; 1949-cont 5-15-49 218, 8-8-49 2,090; 1950 10-5-49 480; 1955 7-20-55 1,930, 8-19-55 770 | | | |
| Kings River | Lat 61°43'58", long 148°44'52", in SW¼ sec.16, T.19 N., R.4 E., at bridge at milepost 67 on Glenn Highway, and 5 mi east of Sutton. | 151 | (Listed below) | |
| | 1948 7-13-48 789, 9-5-48 461; 1949 10-1-48 233, 11-9-48 101, 4-19-49 41; 1949-cont 5-15-49 118, 8-19-49 637; 1950 10-5-49 219; 1955 7-19-55 976; 1955-cont 8-19-55 333; 1971 8-20-71 c 9,800 | | | |
| Granite Creek | Lat 61°46'46", long 148°50'12", center sec.36, (projected), T.20 N., R.3 E., 5 mi upstream from mouth at Matanuska River, and 5 mi north of Sutton. | 52.5 | 1971 8-10-71 c58,600 | |
| | At Glenn Highway bridge, about 1.5 mi east of Sutton. | -- | 1949 7-6-49 925 | |
| 15283500 Eska Creek | Lat 61°43'44", long 148°54'31", in NE¼ sec.21, T.19 N., R.3 E., on right bank at culverts on Eska-Jonesville road, and 1.5 miles northeast of Sutton. | 13.4 | (Listed below) | |
| | 1965 8-4-65 24; 1966 5-19-66 7.8, 6-28-66 34, -- †86; 1966-cont 8-27-66 24, 9-29-66 11; 1967 5-20-67 29, 7-25-67 67; 1971 8-10-71 c 1,680; 1972 7-5-72 106, 8-14-72 17, 9-29-72 †180, 9-30-72 58; 1973 6-5-73 18, 6-16-73 94, -- †140, 7-17-73 26; 1974 -- †80; 1975 5-12-75 46, 5-19-75 34, 6-23-75 60, 7-21-75 59, 9-2-75 17, 9-11-75 112, 9-11-75 †117 | | | |
| Moose Creek | Lat 61°43'32", long 149°03'00", in NW¼ sec.23, T.19 N., R.2 E., 0.3 mi upstream from Buffalo Mine, 5 mi west of Sutton, 5.5 mi upstream from mouth at Matanuska River, and 9 mi northeast of Palmer. | 40.7 | 1971 8-10-71 c 18,000 | |
| Moose Creek | In NW¼ sec.2, T.18 N., R.2 E., at bridge on Glenn Highway, 0.2 mi upstream from mouth and 6 mi northeast of Palmer. | -- | (Listed below) | |
| | 1947 8-18-47 164; 1948- 7-14-48 215, 9-5-48 130; 1949 4-19-49 14, 7-6-49 71; 1950 10-6-49 121; 1955 7-19-55 373, 8-19-55 108 | | | |
| Wasilla Creek | Lat 61°38'47", long 149°11'45", in SW¼ sec.13, T.18 N., R.1 E., at culvert on Fishhook Road, and 4.1 mi northwest of Palmer. | 19.3 | (Listed below) | |
| | 1954 3-23-54 4.2; 1955 12-8-54 4.8; 1971 8-10-71 c 700 | | | |

c Measurement of peak flow.
† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Wasilla Creek | Lat 61°36'52", long 149°14'24", in SE¼ sec.27, T.18 N., R.1 E., at bridge on Bogard Road, 1 mi north of Four Corners and 4 mi west of Palmer. | -- | 1948 | |
| | | | 7-14-48 | 16 |
| | | | 1955 | |
| | | | 12-8-54 | 7.2 |
| Wasilla Creek | Lat 61°34'08", long 149°18'51", in NW¼ sec.17, T.17 N., R.1 E., at bridge on Wasilla-Matanuska Road, 3 mi northwest of Matanuska and 4 mi southeast of Wasilla. | -- | (Listed below) | |
| 1947 | 1948 | 1948-cont | 1949-cont | 1949-cont |
| 7-17-47 7.0 | 11-7-47 9.0 | 8-28-48 47 | 7-21-49 61 | 9-30-49 71 |
| 8-18-47 13 | 4-26-48 10 | 1949 | 8-4-49 76 | 1955 |
| | 7-14-48 19 | 5-19-49 168 | | 7-20-55 30 |
| Little Meadow Creek | Lat 61°34'28", long 149°40'50", in SW¼ sec.8, T.17 N., R.2 W., at outlet of Blodgett Lake, 8.1 mi southeast of Houston. | -- | 1975 | |
| | | | 3-13-75 | 2.0 |
| | Lat 61°34'38", long 149°43'33", in SE¼ sec.12, T.17 N., R.3 W., 500 ft downstream from former Parks Highway crossing, 2.4 mi upstream from Lucile Creek, and 5.5 mi southeast of Houston. | 17 | (Listed below) | |
| 1974 | 1974-cont | 1974-cont | 1975 | 1975-cont |
| 1-10-74 8.2 | 3-5-74 6.8 | 7-3-74 7.1 | 12-11-74 8.3 | 1-15-75 7.5 |
| 2-8-74 7.5 | 4-1-74 17 | 8-22-74 6.4 | | 3-13-75 4.4 |
| Meadow Creek | Lat 61°33'49", long 149°49'22", in SE¼ sec.16, T.17 N., R.3 W., at crossing of road to Beaver Lake, 1.8 mi downstream from confluence of Little Meadow Creek and Lucile Creek, and 3.2 mi upstream from Big Lake. | b 41 | (Listed below) | |
| | 1974 | 1974-cont | 1975 | 1975-cont |
| | 1-10-74 7.9 | 3-5-74 8.8 | 12-11-74 13 | 3-13-75 12 |
| | 2-8-74 2.2 | 8-22-74 11 | 1-15-75 4.1 | 8-6-75 31 |
| Fish Creek | Lat 61°32'03", long 149°49'30", in SE¼ sec.28, T.17 N., R.3 W., at outlet of Big Lake, and 13 mi west of Wasilla. | b 68 | (Listed below) | |
| 1971 | 1974-cont | 1974-cont | 1974-cont | 1975-cont |
| 6-29-71 41 | 2-8-74 20 | 4-1-74 19 | 8-22-74 19 | 1-15-75 22 |
| 1974 | 3-5-74 20 | 7-3-74 21 | 1975 | 3-13-75 20 |
| 1-10-74 26 | | | 12-11-74 29 | 8-6-75 38 |
| | Lat 61°26'21", long 149°47'04", in NE¼ sec.34, T.16 N., R.3 W., 150 ft upstream from bridge on Goose Bay Road, and 2.2 mi southwest of Knik. | b 100 | (Listed below) | |
| | 1974 | 1974-cont | 1975 | |
| | 1-10-74 27 | 4-1-74 33 | 12-11-74 43 | |
| | 2-8-74 16 | 8-22-74 27 | 1-15-75 24 | |
| | 3-5-74 17 | | 3-13-75 27 | |
| 15289800 Fishhook Creek | Lat 61°45'05", long 149°13'40", on left bank on Fishhook Road, and 12 mi north of Palmer. | 8.52 | (Listed below) | |
| 1963 | 1963-cont | 1963-cont | 1964 | 1965 |
| 6-5-63 85 | 6-18-63 79 | 8-5-63 109 | 6-11-64 111 | -- †380 |
| | 7-2-63 265 | 8-23-63 †960 | -- †500 | 9-27-65 153 |
| 15291100 Raft Creek | Lat 63°03'04", long 147°16'22", in SE¼ sec.36, T.21 S., R.2 E., Matanuska-Susitna Borough, on right bank above culverts at mile 69.2 Denali Highway, and 10.7 mi southeast of Denali. | 4.33 | (Listed below) | |
| 1963 | 1965-cont | 1967-cont | 1970 | 1973-cont |
| -- †128 | 9-6-65 29 | -- †103 | -- †98 | 6-9-73 28 |
| 7-25-63 3.2 | 1966 | 7-22-67 29 | 1971 | 1974 |
| 1964 | 10-2-65 6.2 | 8-16-67 28 | -- †132 | 6-21-74 14 |
| 10-1-63 3.9 | -- †119 | 1968 | 1972 | -- †69 |
| -- †133 | 7-5-66 10 | -- †66 | -- †123 | 1975 |
| 1965 | 8-26-66 30 | 1969 | 8-18-72 22 | 6-28-75 60 |
| -- †128 | 1967 | -- †73 | 1973 | 9-5-75 5.8 |
| 7-30-65 11 | 6-17-67 23 | | -- †51 | 9-11-75 †115 |
| Susitna River | Lat 62°37'05", long 150°00'40", in SW¼ sec.10, T.29 N., R.4 W., at Curry. | -- | 1948 | |
| | | | 8-3-48 | 18,000 |
| | | | 9-22-48 | 9,790 |
| Talkeetna River | Lat 62°19'38", long 150°06'54", in SW¼ sec.24, T.26 N., R.5 W., at Alaska Railroad bridge, 1 mi north of Talkeetna. | -- | 1949 | |
| | | | 8-5-49 | 10,300 |
| | | | 9-21-49 | 3,860 |
| Susitna River | Lat 62°10'35", long 150°10'18", in NW¼ sec.15, T.24 N., R.5 W., at bridge on Anchorage-Fairbanks Highway, 1.5 mi downstream from Sunshine Creek, and 3 mi west of Sunshine. | b 11,500 | 1965 | |
| | | | 6-1-65 | 80,200 |
| | | | 1971 | |
| | | | 5-27-71 | 37,400 |
| | | | 7-2-71 | 74,600 |
| | | | 8-10-71 | 200,000 |
| | | | 8-11-71 | 171,000 |

b Estimated; drainage area boundary is difficult to determine.
† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Discharge ($ft^3/s$) |
|---|---|---|---|---|

**15292800 Montana Creek** — Lat 62°06'32", long 150°03'12", in SW¼ sec.5, T.23 N., R.4 W., on right bank on Anchorage-Fairbanks HIghway, and 2.1 mi north of Montana. — 164 — (Listed below)

| 1963 | | 1965 | | 1967 | | 1969-cont | | 1971-cont | |
|---|---|---|---|---|---|---|---|---|---|
| -- | †3,700 | 9-8-65 | †3,300 | 6-30-67 | 2,860 | 7-25-69 | 504 | 8-9-71 | 3,550 |
| 6-4-63 | 1,450 | 9-14-65 | 399 | 7-19-67 | †4,600 | 7-25-69 | †820 | 8-10-71 | †6,970 |
| 7-9-63 | 724 | 1966 | | 7-21-67 | 2,300 | 1970 | | 9-17-71 | 376 |
| 7-31-63 | 427 | 10-15-65 | 221 | 1968 | | 6-11-70 | 420 | 1972 | |
| 8-23-63 | 2,840 | 6-3-66 | 1,150 | -- | †3,500 | 6-29-70 | 987 | 5-23-72 | 637 |
| 9-26-63 | 181 | 7-13-66 | 754 | 7-24-68 | 200 | 9-12-70 | †2,600 | 5-31-72 | †2,600 |
| 1964 | | -- | †2,200 | 9-11-68 | 199 | 9-18-70 | 478 | 8-11-72 | 182 |
| 5-28-64 | 572 | 8-22-66 | 813 | 1969 | | 1971 | | 9-26-72 | 606 |
| 6-2-64 | †3,600 | 9-27-66 | 289 | 5-14-69 | 382 | 7-1-71 | 2,280 | 1973 | |
| 6-10-64 | 2,140 | | | | | | | 1-12-73 | 169 |

**15292900 Goose Creek** — Lat 62°03'42", long 150°03'20", in NW¼ sec.29, T.23 N., R.4 W., on Anchorage-Fairbanks Highway, and 1.5 mi south of Montana. — 14.5 — (Listed below)

| 1963 | | 1964 | | 1966-cont | | 1967-cont | | 1970 | |
|---|---|---|---|---|---|---|---|---|---|
| 6-4-63 | 153 | 5-28-64 | 243 | 9-27-66 | 44 | 8-21-67 | 170 | 6-29-70 | 66 |
| 7-9-63 | 70 | -- | †530 | 1967 | | 1968 | | -- | †150 |
| 7-16-63 | †385 | 6-10-64 | 189 | 5-24-67 | 240 | -- | †500 | 1971 | |
| 7-31-63 | 62 | 1965 | | 6-30-67 | 434 | 9-11-68 | 19 | 5-18-71 | 150 |
| 9-26-63 | 39 | -- | †350 | -- | †495 | 1969 | | 7-1-71 | 274 |
| | | 1966 | | 7-21-67 | 384 | 7-25-69 | †80 | 8-9-71 | 509 |
| | | 6-3-66 | 109 | | | 7-25-69 | 67 | 8-10-71 | †3,270 |
| | | -- | †230 | | | | | 9-30-71 | 336 |
| | | 8-22-66 | 107 | | | | | | |

**15293000 Caswell Creek** — Lat 61°56'55", long 150°03'14", in SW¼ sec.32, T.22 N., R.4 W., Matanuska-Susitna Borough, upstream from culvert on Anchorage-Fairbanks Highway, and 2.3 mi south of Caswell. — 19.6 — (Listed below)

| 1963 | | 1965 | | 1967 | | 1970-cont | | 1973 | |
|---|---|---|---|---|---|---|---|---|---|
| 6-5-63 | 55 | -- | †207 | 5-24-67 | 58 | 6-29-70 | 13 | -- | †140 |
| 7-9-63 | 39 | 9-14-65 | 31 | 6-30-67 | 83 | -- | †34 | 5-24-73 | 34 |
| -- | †85 | 1966 | | -- | †103 | 9-16-70 | 32 | 1974 | |
| 7-31-63 | 42 | -- | †120 | 8-21-67 | 66 | 1971 | | 4-30-74 | †46 |
| 9-26-63 | 28 | 6-3-66 | 44 | 1968 | | 5-17-71 | 70 | 1975 | |
| 1964 | | 7-11-66 | 29 | -- | †120 | 7-1-71 | 73 | 5-13-75 | 41 |
| 5-28-64 | 83 | 8-22-66 | 36 | 9-11-68 | 17 | 8-10-71 | †135 | 5-15-75 | 75 |
| -- | †107 | 9-27-66 | 24 | 1969 | | 9-16-71 | 35 | 5-19-75 | †155 |
| | | | | -- | †42 | 1972 | | 5-20-75 | 124 |
| | | | | 7-24-69 | 11 | 5-23-72 | †132 | | |
| | | | | 1970 | | 8-9-72 | 23 | | |
| | | | | 3-31-70 | 7.7 | 9-26-72 | 31 | | |

| | | | | |
|---|---|---|---|---|
| Deception Creek | Lat 61°45'55", long 150°02'10", in sec.5, T.19 N., R.4 W., at bridge, 0.3 mi upstream from mouth and 1.3 mi north of Willow. | -- | 1957 7-5-57 | 42 |
| Willow Creek | Lat 61°45'55", long 150°02'50", in sec.5, T.19 N., R.4 W., at Alaska Railroad bridge, 1.3 mi north of Willow. | -- | 1948 7-15-48 | 763 |
| | | | 1957 7-5-57 | 951 |
| | Lat 61°46'01", long 150°03'52", in NE¼ sec.6, T.19 N., R.4 W., at highway crossing, 1 mi downstream from Deception Creek, and 1.8 mi southeast of Willow. | -- | 1969 7-24-69 | 249 |

**15294025 Moose Creek** — Lat 62°19'00", long 150°26'30", Matanuska-Susitna Borough, at bridge on Petersville Road, and 10.5 mi west of Talkeetna. — 52.3 — (Listed below)

| 1972 | | 1973 | | 1974 | | 1975-cont | | 1975-cont | |
|---|---|---|---|---|---|---|---|---|---|
| 6-23-72 | 82 | -- | †1,400 | 4-30-74 | 393 | 5-15-75 | 784 | 6-4-75 | 299 |
| 8-9-72 | 12 | 8-14-73 | 49 | -- | †700 | -- | †1,100 | 6-18-75 | 61 |
| 8-22-72 | †1,850 | 9-25-73 | 40 | 1975 | | 5-20-75 | 579 | 7-18-75 | 46 |
| 9-26-72 | 171 | | | 5-13-75 | 620 | 5-22-75 | 572 | 9-23-75 | 259 |
| 9-30-72 | 1,290 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Peters Creek | Lat 62°31'57", long 150°48'27", in NE¼ sec.7, T.28 N., R.8 W., 0.1 mi downstream from Pioneer Gulch, and 3 mi northwest of Petersville. | 25.4 | 1975 8-7-75 | 66 |
| | Lat 62°23'00", long 150°43'53", in SE¼ sec.34, T.27 N., R.8 W., 0.7 mi upstream from Martin Creek and 0.7 mi northeast of Peters Creek. | 53.1 | 1975 8-7-75 | 113 |
| Beluga River | Near Lower Beluga Lake, about 60 mi west of Anchorage. | -- | 1950 10-2-49 | 5,830 |
| | Lat 61°17'20", long 151°17'40", 3.5 mi downstream from Lower Beluga Lake. | -- | 1970 2-18-70 | 449 |
| | Lat 61°12'32", long 151°09'36", 1.5 mi upstream from Coffee Creek. | -- | 1970 3-27-70 | 408 |
| Capps Creek | Lat 61°19'46", long 151°37'26", in SW¼ sec.4, T.14 N., R.13 W., 0.5 mi upstream from mouth, and 24 mi northwest of Tyonek. | 11.8 | 1975 8-14-75 | 49 |

† Maximum for year determined from high-water mark and rating analysis.

| Stream | Location | Drainage area ($mi^2$) | Measurements Date (Wtr yr) | Measurements Discharge ($ft^3/s$) |
|---|---|---|---|---|
| Bishop Creek | Lat 61°18'23", long 151°30'27", in NW¼ sec.18, T.14 N., R.12 W., 3 mi west of Bishop Lake, and 21 mi northwest of Tyonek. | 10.9 | 1975<br>8-14-75 | 59 |
| Chuitna River | Lat 61°11'52", long 151°39'20", in SW¼ sec.20, T.13 N., R.13 W., 0.2 mi downstream from Wolverine Fork, and 20 mi northwest of Tyonek. | 19.5 | 1975<br>8-14-75 | 68 |
| Chuit Creek | Lat 61°12'44", long 151°33'54", in SW¼ sec.14, T.13 N., R.13 W., 5.4 mi upstream from mouth and 17 mi northwest of Tyonek. | 9.80 | 1975<br>8-14-75 | 55 |
| Chuit Creek | Lat 61°10'19", long 151°31'12", in SE¼ sec.36, T.13 N., R.13 W., 1.6 mi upstream from mouth, and 15 mi northwest of Tyonek. | 12.4 | 1975<br>8-14-75 | 75 |
| 15294450 Chuitna River | Lat 61°06'31", long 151°15'07", in NE¼ sec.29, T.12 N., R.11 W., 2.5 mi downstream from Lone Creek and 5 mi northwest of Tyonek. | 131 | 1975<br>8-14-75 | 387 |
| McArthur River | Lat 60°58'52", lqng 151°49'21", 5.5 mi upstream from mouth. | -- | 1970<br>2-25-70 | 1,500 |
| Drift River | Lat 60°37'29", long 152°11'56", 3.5 mi upstream from mouth. | -- | 1970<br>2-25-70 | 320 |

# SECTION 3

# SEEPAGE INVESTIGATIONS

## NORTH FORK CAMPBELL CREEK SEEPAGE INVESTIGATIONS

Two series of discharge measurements were made during the 1971 water year, on Nov. 17, 1970 and May 26, 1971, on the North Fork of Campbell Creek in the Anchorage bowl to study channel gains and losses. The reach is 3.5 mi (5.6 km) in length and extends from the mountain front to Campbell Field Road (Stuckagain Heights Road). The measurements were made during periods of constant flow. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

| DATE | MILES UPSTREAM FROM MOUTH | LOCATION | DISCHARGE, IN CUBIC FEET PER SECOND: MEAS. DISCH. | GAIN OR LOSS |
|---|---|---|---|---|
| 11-17-70 | 6.0 | SE¼ sec.31 in canyon at mountain front | 13.7 | --- |
| 11-17-70 | 5.0 | SW¼ sec.31 at tank trail crossing | 11.6 | -2.1 |
| 11-17-70 | 4.2 | SE¼ sec.36 | 7.01 | -4.59 |
| 11-17-70 | 3.8 | NW¼ sec.36 | 9.44 | +2.43 |
| | | Overall net gain or loss | | -4.26 |
| 5-26-71 | 6.0 | SE¼ sec.31 in canyon at mountain front | 4.28 | --- |
| 5-26-71 | 5.0 | SW¼ sec.31 at tank trail crossing | 4.70 | +.42 |
| 5-26-71 | 3.8 | NW¼ sec.36 | 4.75 | +.05 |
| 5-26-71 | 2.5 | SW¼ sec.35 at Campbell Field road | 5.71 | +.96 |
| | | Overall net gain or loss | | +1.43 |

## SHIP CREEK SEEPAGE INVESTIGATIONS

Many series of discharge measurements were made during the water years 1960 to 1975 in the lower reaches of Ship Creek in the Anchorage bowl to study channel gains and losses. The entire reach is 10.3 mi (16.9 km) in length and extends from the gaging station Ship Creek near Anchorage (15276000) to the C Street bridge crossing 0.2 mi (0.3 km) upstream from the mouth. The measurements were made during periods of relatively constant flow. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

| SHIP CREEK MILE | LOCATION (abbreviated) | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Apr. 26, 1960 | | Oct. 26, 1960 | | Apr. 13, 1961 | | May 3, 1961 | | Sept. 10, 1968 | |
| 10.5 | Gage: 15276000 | 26.8 | | 179 | | 28.4 | | 38.1 | | 92.0 | |
| 10.0 | Brdg blw divr dam | --- | | --- | | --- | | --- | | --- | |
| 9.1 | Golf driving rng | --- | | --- | | --- | | --- | | --- | |
| 9.0 | Recharge divr | --- | | --- | | --- | | --- | | --- | |
| 8.1 | Glenn Hwy brdg | 26.8 | 0.0 | --- | | 28.9 | +0.5 | --- | | 87.7 | -4.3 |
| 7.7 | 2.8 mi dwnst | --- | | --- | | --- | | --- | | --- | |
| 7.4 | Cooling Pd-Ft Rich | --- | | --- | | --- | | --- | | 82.8 | -4.9 |
| 7.2 | ¼ mi dwnst N Fk | 22.7 | -4.1 | 178 | -1 | --- | | --- | | --- | |
| 5.9 | 1 mi upst Boniface | --- | | 172 | -6 | 19.2 | -9.7 | --- | | --- | |
| 4.9 | Old Glenn Hwy brdg | 20.4 | -2.3 | --- | | --- | | 26.7 | -11.4 | --- | |
| 4.3 | Gage: 15276500 | --- | | --- | | --- | | --- | | 75.0 | -7.8 |
| 3.0 | Abv Pwr Plt divr | --- | | --- | | --- | | --- | | --- | |
| 2.8 | 200 ft dwnst dam | --- | | --- | | --- | | --- | | --- | |
| 1.9 | Gage: 15276570 | --- | | --- | | --- | | --- | | --- | |
| 1.5 | Post Rd | 44.6 | +24.2 | 186 | +14 | --- | | 47.3 | +20.6 | 97.4 | +22.4 |
| 1.0 | 250 ft dwnst ARR | --- | | --- | | --- | | --- | | --- | |
| 0.2 | C Street | 44.6 | 0.0 | 193 | +7 | 40.8 | +21.6 | --- | | 99.8 | +2.4 |
| | | Nov. 8, 1968 | | Nov. 15, 1968 | | Jan. 3, 1969 | | Jan.30, 1969 | | Mar. 26, 1969 | |
| 10.5 | Gage: 15276000 | a28 | | a19 | | a16 | | 16.3 | | 13.0 | |
| 10.0 | Brdg blw divr dam | --- | | --- | | --- | | --- | | --- | |
| 9.1 | Golf driving rng | --- | | --- | | --- | | --- | | --- | |
| 9.0 | Recharge divr | --- | | --- | | --- | | --- | | --- | |
| 8.1 | Glenn Hwy brdg | --- | | --- | | --- | | --- | | --- | |
| 7.7 | 2.8 mi dwnst | --- | | --- | | --- | | --- | | --- | |
| 7.4 | Cooling Pd-Ft Rich | --- | | --- | | --- | | --- | | --- | |
| 7.2 | ¼ mi dwnst N Fk | --- | | --- | | --- | | --- | | --- | |
| 5.9 | 1 mi upst Boniface | --- | | --- | | --- | | --- | | --- | |
| 4.9 | Old Glenn Hwy brdg | --- | | --- | | --- | | --- | | --- | |
| 4.3 | Gage: 15276500 | 17.6 | -10 | 2.76 | -16 | 2.29 | -14 | 1.41 | -14.9 | 1.27 | -11.7 |
| 3.0 | Abv Pwr Plt divr | --- | | --- | | --- | | --- | | --- | |
| 2.8 | 200 ft dwnst dam | --- | | --- | | --- | | --- | | --- | |
| 1.9 | Gage: 15276570 | --- | | --- | | --- | | --- | | --- | |
| 1.5 | Post Rd | 41.6 | +24.0 | 24.1 | +21.3 | 21.3 | +19.0 | 23.3 | +21.9 | 19.9 | +18.6 |
| 1.0 | 250 ft dwnst ARR | --- | | --- | | --- | | --- | | --- | |
| 0.2 | C Street | --- | | --- | | --- | | --- | | --- | |
| | | May 7, 1969 | | Apr. 3, 1970 | | Feb. 23, 1972 | | May 18, 1972 (AM) | | May 18, 1972 (PM) | |
| 10.5 | Gage: 15276000 | 18.8 | | 10.9 | | 9.71 | | 50.9 | | 53.0 | |
| 10.0 | Brdg blw divr dam | --- | | --- | | --- | | 50.1 | -0.8 | 50.5 | -2.5 |
| 9.1 | Golf driving rng | --- | | --- | | --- | | 50.9 | +0.8 | 52.1 | +1.6 |
| 9.0 | Recharge divr | --- | | --- | | --- | | --- | | --- | |
| 8.1 | Glenn Hwy brdg | --- | | --- | | --- | | 49.6 | -1.3 | 49.4 | -2.7 |
| 7.7 | 2.8 mi dwnst | --- | | --- | | --- | | --- | | --- | |
| 7.4 | Cooling Pd-Ft Rich | --- | | --- | | --- | | --- | | --- | |
| 7.2 | ¼ mi dwnst N Fk | --- | | --- | | --- | | --- | | --- | |
| 5.9 | 1 mi upst Boniface | --- | | --- | | --- | | --- | | --- | |
| 4.9 | Old Glenn Hwy brdg | --- | | --- | | --- | | --- | | --- | |
| 4.3 | Gage: 15276500 | 11.3 | -7.5 | 1.35 | -9.5 | 2.39 | -7.32 | --- | | 37.5 | -11.9 |
| 3.0 | Abv Pwr Plt divr | --- | | --- | | --- | | --- | | --- | |
| 2.8 | 200 ft dwnst dam | --- | | --- | | --- | | --- | | --- | |
| 1.9 | Gage: 15276570 | --- | | --- | | --- | | --- | | --- | |
| 1.5 | Post Rd | 32.8 | +21.5 | 20.7 | +19.3 | 18.7 | +16.3 | --- | | --- | |
| 1.0 | 250 ft dwnst ARR | --- | | --- | | --- | | --- | | --- | |
| 0.2 | C Street | --- | | --- | | --- | | --- | | --- | |

SHIP CREEK SEEPAGE INVESTIGATIONS - continued

| SHIP CREEK MILE | LOCATION (abbreviated) | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS | MEAS. DISCH. $ft^3/s$ | GAIN OR LOSS |
|---|---|---|---|---|---|---|---|---|---|
| | | May 24, 1972 | | Jan. 31, 1973 | | Jan. 7, 1974 | | May 6, 1974 | |
| 10.5 | Gage: 15276000 | 70.3 | | a16 | | 20.9 | | 29.1 | |
| 10.0 | Brdg blw divr dam | 67.7 | -2.6 | --- | | --- | | --- | |
| 9.1 | Golf driving rng | 67.3 | -0.4 | --- | | --- | | --- | |
| 9.0 | Recharge divr | --- | | --- | | --- | | 28.8 | -0.3 |
| 8.1 | Glenn Hwy brdg | 65.4 | -1.9 | --- | | --- | | --- | |
| 7.7 | 2.8 mi dwnst | --- | | --- | | --- | | --- | |
| 7.4 | Cooling Pd-Ft Rich | --- | | --- | | --- | | --- | |
| 7.2 | ¼ mi dwnst N Fk | --- | | --- | | --- | | --- | |
| 5.9 | 1 mi upst Boniface | --- | | --- | | --- | | --- | |
| 4.9 | Old Glenn Hwy brdg | --- | | --- | | --- | | --- | |
| 4.3 | Gage: 15276500 | --- | | 4.67 | -11 | 3.06 | -17.8 | 13.9 | -14.9 |
| 3.0 | Abv Pwr Plt divr | --- | | --- | | --- | | --- | |
| 2.8 | 200 ft dwnst dam | --- | | --- | | --- | | --- | |
| 1.9 | Gage: 15276570 | --- | | 28.6 | +23.9 | 26.0 | +22.9 | 35.8 | +21.9 |
| 1.5 | Post Rd | --- | | --- | | --- | | --- | |
| 1.0 | 250 ft dwnst ARR | --- | | --- | | --- | | --- | |
| 0.2 | C Street | --- | | --- | | --- | | --- | |

a Mean daily discharge.

October 11, 1974

| SHIP CREEK MILE | STREAM | LOCATION | MEAS. DISCH. INFLOW $ft^3/s$ | MEAS. DISCH. MAIN STEM $ft^3/s$ | GAIN OR LOSS $ft^3/s$ |
|---|---|---|---|---|---|
| 10.5 | Ship Creek | NW¼NE¼NE¼ sec.16, T.13 N., R.2 W., gaging station 15276000..... | --- | 76.4 | --- |
| 9.0 | diversion | NE¼NW¼SE¼ sec.8, T.13 N., R.2 W., diversion to recharge pit..... | -6.20 | --- | --- |
| 9.0 | Ship Creek | NE¼NW¼SE¼ sec.8, T.13 N., R.2 W., 10 ft blw diversion to recharge pit..... | --- | 67.0 | -3.2 |
| 7.7 | ....do.... | SW¼NE¼SW¼ sec.6, T.13 N., R.2 W., 200 ft above fish hatchery dam at Fort Richardson power plant..... | --- | 60.1 | -6.9 |
| 7.5 | tributary | NW¼NW¼SW¼ sec.6, T.13 N., R.2 W., ground water pumped from wells at hatchery, discharged to stream..... | 5.8 | --- | --- |
| 7.4 | Ship Creek | NW¼NW¼SW¼ sec.6, T.13 N., R.2 W., 1,300 ft blw fish hatchery dam. | --- | 65.3 | -0.6 |
| 5.9 | ....do.... | NW¼SE¼SE¼ sec.2, T.13 N., R.3 W., 1.0 mi upstream from Boniface Parkway bridge..... | --- | 59.8 | -5.5 |
| 4.3 | ....do.... | NW¼NW¼NE¼ sec.10, T.13 N., R.3 W., discontinued gaging station 15276500..... | --- | 54.7 | -5.1 |
| 4.2 | tributary | SE¼NE¼NW¼ sec.10, T.13 N., R.3 W., 600 ft blw discontinued gaging station 15276500..... | e0.9 | --- | --- |
| 3.0 | Ship Creek | SE¼SE¼NW¼ sec.9, T.13 N., R.3 W., 500 ft above Elmendorf AFB power plant dam..... | --- | 67.1 | +11.5 |
| 3.0 | tributary | SE¼SE¼NW¼ sec.9, T.13 N., R.3 W., 300 ft above Elmendorf AFB power plant dam..... | e0.2 | --- | --- |
| 2.8 | Ship Creek | NW¼NE¼SW¼ sec.9, T.13 N., R.3 W., 200 ft blw Elmendorf AFB power plant dam..... | --- | 67.1 | -0.2 |
| 2.8 | tributary | NW¼NE¼SW¼ sec.9, T.13 N., R.3 W., 300 ft blw Elmendorf AFB power plant dam..... | e0.7 | --- | --- |
| 2.8 | tributary | NW¼NE¼SW¼ sec.9, T.13 N., R.3 W., pipe discharging to stream 350 ft blw power plant dam..... | e0.5 | --- | --- |
| 2.2 | tributary | SE¼SE¼SE¼ sec.8, T.13 N., R.3 W..... | e0.3 | --- | --- |
| 2.0 | Ship Creek | SE¼SW¼SE¼ sec.8, T.13 N., R.3 W., gaging station 15276570..... | --- | 73.4 | +4.8 |
| 1.0 | ....do.... | NW¼NW¼NW¼ sec.17, T.13 N., R.3 W., 250 ft blw Alaska Railroad bridge..... | --- | 80.3 | +6.9 |

e Estimated

## EAGLE RIVER SEEPAGE INVESTIGATIONS

Two series of discharge measurements were made on the Eagle River near Eagle River, Alaska to study channel gains and losses. The first series was made Apr. 29, 1970 in a reach 5.3 mi (8.5 km) in length extending from the gaging station Eagle River at Eagle River (15277100) to a road crossing 3.2 mi (5.1 km) upstream from the mouth. The second series was made May 8, 1974 in a reach 31.5 mi (50.7 km) in length extending from near the terminus of Eagle Glacier to a road crossing 3.2 mi (5.1 km) upstream from the mouth. The measurements were made during periods of constant flow. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

DISCHARGE, IN CUBIC FEET PER SECOND

| EAGLE RIVER MILE | STREAM | LOCATION | INFLOW | MAIN STEM | GAIN OR LOSS |
|---|---|---|---|---|---|
| Apr. 29, 1970 | | | | | |
| 8.5 | Eagle River | SW¼NW¼NW¼ sec.13, T.14 N., R.2 W., gaging station 15277100..... | --- | 78.5 | --- |
| 6.2 | ....do..... | SW¼SE¼NW¼ sec.10, T.14 N., R.2 W., blw Alaska Railroad bridge... | --- | 76.4 | -2.1 |
| 3.2 | ....do..... | NW¼NW¼NW¼ sec.17, T.14 N., R.2 W., at road crossing..... | --- | 79.1 | +2.7 |
| | | Overall net gain or loss | | | +0.6 |
| May 8, 1974 | | | | | |
| 34.7 | Eagle River | SE¼NW¼NW¼ sec.15, T.12 N., R.2 E., lake outlet at terminus..... | --- | 24.1 | --- |
| 33.5 | tributary | SE¼NW¼NE¼ sec.9, T.12 N., R.2 E., at mouth..... | e4.5 | --- | --- |
| 33.0 | tributary | NW¼SE¼SW¼ sec.4, T.12 N., R.2 E., at mouth..... | e.5 | --- | --- |
| 32.6 | Raven Creek | NW¼NE¼NE¼ sec.8, T.12 N., R.2 E., at mouth..... | 22.4 | --- | --- |
| 29.3 | Eagle River | SW¼SE¼SW¼ sec.25, T.13 N., R.1 E. ..... | --- | 63.1 | +11.6 |
| 28.5 | tributary | SW¼SW¼NW¼ sec.25, T.13 N., R.1 E., at mouth..... | e1.0 | --- | --- |
| 24.2 | Eagle River | SW¼SW¼NE¼ sec.16, T.13 N., R.1 E. ..... | --- | 76.7 | +12.6 |
| 19.0 | ....do..... | NE¼NW¼NW¼ sec.36, T.14 N., R.1 W. ..... | --- | 75.7 | -1.0 |
| 17.8 | tributary | NW¼NE¼NE¼ sec.26, T.14 N., R.1 W., at mouth..... | 58.8 | --- | --- |
| 13.2 | South Fork | SW¼SW¼SW¼ sec.16, T.14 N., R.1 W., 500 ft above mouth..... | 12.7 | --- | --- |
| 13.1 | Eagle River | NW¼SW¼SW¼ sec.16, T.14 N., R.1 W., 150 ft dwnst mouth S Fk..... | --- | 136.8 | -10.4 |
| 8.5 | ....do..... | SW¼NW¼NW¼ sec.13, T.14 N., R.2 W., gaging station 15277100..... | --- | 133.2 | -3.6 |
| 7.9 | Meadow Creek | NE¼NW¼NE¼ sec.14, T.14 N., R.2 W., at mouth..... | e1.5 | --- | --- |
| 6.2 | Eagle River | SW¼SE¼NW¼ sec.10, T.14 N., R.2 W., blw Alaska Railroad bridge... | --- | 136.8 | +2.1 |
| 3.2 | ....do..... | NW¼NW¼NW¼ sec.17, T.14 N., R.2 W., at road crossing..... | --- | 144.0 | +7.2 |
| | | Overall net gain or loss | | | +18.5 |

e Estimated

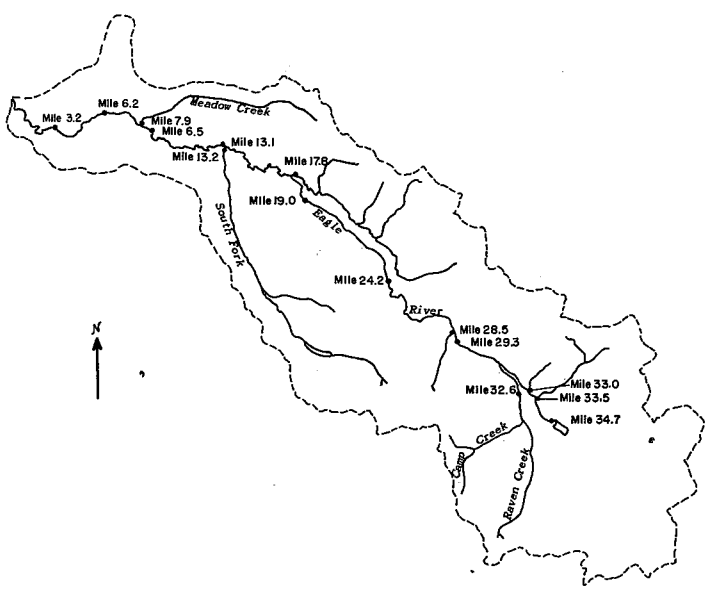


Figure 2.--Location of discharge measurement sites in the Eagle River Drainage Basin.

## MEADOW CREEK SEEPAGE INVESTIGATION

Two discharge measurements were made on July 1, 1974 on Meadow Creek near Eagle River, Alaska to study channel gains and losses. The reach is 1.5 mi (2.4 km) in length and extends from near the apex of an alluvial fan at the mountain front to the mouth of Meadow Creek. The measurements were made during a period of constant flow. Indicated loss may be substantially in error as affected by small inaccuracies in open-channel measurements.

DISCHARGE, IN CUBIC FEET PER SECOND

| MEADOW CREEK MILE | LOCATION | MEAS. DISCH. | GAIN OR LOSS |
|---|---|---|---|
| 1.5 | NE¼NW¼NW¼ sec.7, T.14 N., R.1 W., 1,000 ft above crest-stage gage 15277200.... | 8.75 | --- |
| 0.04 | SW¼SE¼SE¼ sec.11, T.14 N., R.2 W., 200 ft above mouth at Eagle River..... | 6.87 | -1.88 |