STATE OF WASHINGTON
Dixy Lee Ray, Governor

DEPARTMENT OF ECOLOGY
WILBUR G. HALLAUER, Director

WATER-SUPPLY BULLETIN 47

# Water in The Skagit River Basin, Washington

By
B. W. DROST and R. E. LOMBARD

Prepared in Cooperation With
United States Geological Survey
—1978—

STATE OF WASHINGTON
Dixy Lee Ray, Governor

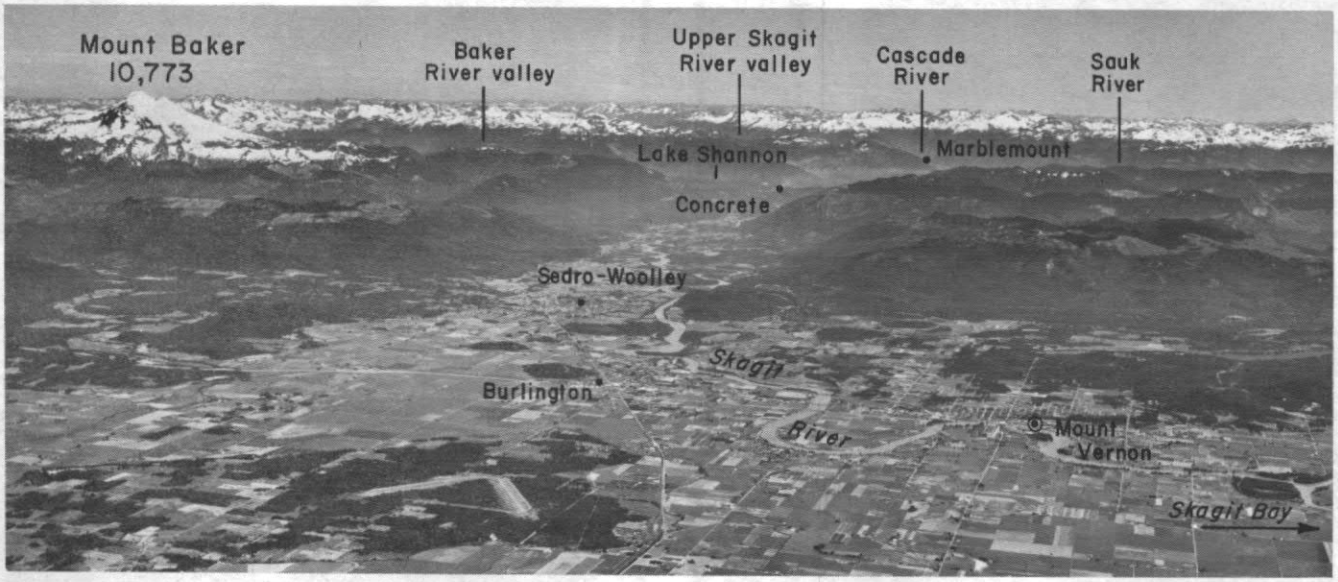
DEPARTMENT OF ECOLOGY
WILBUR G. HALLAUER, Director

WATER-SUPPLY BULLETIN 47

# Water in The Skagit River Basin, Washington

By
B. W. DROST and R. E. LOMBARD

Prepared in Cooperation With
United States Geological Survey
—1978—




View eastward across delta and flood-plain lowland of Skagit River basin, with Mount Baker on upper left and glacier-covered peaks of Cascade Range on skyline. By Northwest Air Photos.

View eastward up middle reach of Skagit River valley.
By Northwest Air Photos.

View north up Baker River valley, with Lower Baker Dam and Lake Shannon in foreground and Baker Lake and Mount Shuksan in background.
By Northwest Air Photos.

CONTENTS


| | Page |
|---|---|
| Conversion table | vi |
| Introduction | 1 |
| Part A: General hydrologic conditions | 3 |
| Physical and cultural features | 3 |
| The basin and its history--in brief | 3 |
| Topography and climate | 6 |
| Geology and soils | 7 |
| Land use and vegetation | 9 |
| The hydrologic cycle and water budget | 10 |
| Precipitation and inflow | 12 |
| Evapotranspiration and outflow | 13 |
| Snow and ice storage | 13 |
| Floods | 14 |
| Low flows | 17 |
| Ground water | 18 |
| Drainage-basin characteristics | 18 |
| Upper Skagit River basin | 20 |
| Baker River basin | 20 |
| Cascade River basin | 21 |
| Sauk River basin | 21 |
| Lower Skagit River basin | 22 |
| Water quality and temperature | 22 |
| Surface-water quality | 22 |
| Ground-water quality | 24 |
| Water use | 24 |
| Potential for future water development | 25 |
| Part B: Technical analysis of hydrologic data | 29 |
| Surface water | 29 |
| Streamflow records | 29 |
| Snow-survey and precipitation records | 30 |
| Statistical analysis--in general | 31 |
| Flow duration | 31 |
| Monthly and annual flows | 34 |
| Floods | 38 |
| Low flows | 40 |
| Quality of surface water | 49 |
| Harmonic temperature | 50 |
| Ground water | 53 |
| Well-numbering system | 53 |
| General availability and areal distribution | 53 |
| Quality of ground water | 56 |
| References cited | 57 |
| Part C: Basic data | 61 |

## ILLUSTRATIONS


FRONTISPIECE. Aerial photograph of Skagit River basin.

| | | Page |
|---|---|---|
| PLATE 1. | Map showing location of surface-water data-collection sites--- | In pocket |
| 2. | Map showing selected well locations in the lower Skagit River basin---------- | DO. |
| FIGURE A1. | Map showing Skagit River basin and hydrologic subareas-------- | 4 |
| A2. | Map showing areal distribution of average annual and monthly precipitation---------- | 8 |
| A3. | Diagrammatic sketch of the hydrologic cycle and water-budget values in Skagit River basin---------- | 11 |
| A4-A6. | Graphs showing: | |
| | A4. Annual precipitation at three sites in the basin---- | 12 |
| | A5. Precipitation at Skagit Powerplant (Newhalem) and discharge of Skagit River at Concrete, and Sauk River near Sauk, October 26 to December 13, 1949-- | 15 |
| | A6. Air temperature at Newhalem and discharge of Skagit River at Concrete, and Sauk River near Sauk, May 26 to July 25, 1972---------- | 16 |
| A7. | Map showing generalized availability of ground water---------- | 19 |
| A8. | Graph showing seasonal trends in water temperature, Cascade River at Marblemount---------- | 23 |
| A9. | Diagram showing uses of surface and ground water in the basin- | 24 |
| B1-B11. | Graphs showing: | |
| | B1. Comparison of depth, density, and water content of snow at Brown Top snow course during 1974------- | 30 |
| | B2. Flow-duration curve for Alder Creek near Hamilton---- | 32 |
| | B3. Comparison of frequency distributions of monthly mean discharge of Cascade River at Marblemount and monthly average air temperature and precipitation at Concrete---------- | 36 |
| | B4. Frequency distribution of monthly mean discharge of Skagit River at Newhalem---------- | 37 |
| | B5. Frequency distribution of monthly mean discharge of Sauk River near Sauk---------- | 37 |
| | B6. Log-Pearson type III flood-frequency curve for Skagit River near Mount Vernon---------- | 38 |
| | B7. Magnitude and frequency of annual low flows of Alder Creek near Hamilton and Stetattle Creek near Newhalem---------- | 41 |
| | B8. Number of consecutive days of deficient discharge, Sauk River near Sauk---------- | 44 |
| | B9. Flow-frequency-mass curve, Sauk River near Sauk------ | 46 |
| | B10. Harmonic fitting of irregular stream-temperature data, Stetattle Creek near Newhalem---------- | 51 |
| | B11. Water-level fluctuations in selected wells---------- | 54 |

TABLES


| | | Page |
|---|---|---|
| TABLE B1. | Daily-discharge durations at selected gaging stations | 33 |
| B2. | Periods of record, and monthly and annual mean, maximum, minimum and 2-year-recurrence interval discharges at selected gaging stations | 35 |
| B3. | Log-Pearson type III flood-frequency data | 39 |
| B4. | Low-flow-frequency data | 42 |
| B5. | Magnitude and frequency of deficient discharges at selected gaging stations | 45 |
| B6. | Low-flow indexes at selected gaging stations | 48 |
| B7. | Harmonic fitting of irregular stream temperatures at selected gaging stations | 52 |
| C1. | Record of streamflow at data-collection sites | 62 |
| C2. | Monthly and yearly mean stream discharges, gage height of Skagit River at international boundary, and end-of-month contents of reservoirs | 84 |
| C3. | Chemical quality of surface water | 107 |
| C4. | Sediment-discharge data | 131 |
| C5. | Temperature of surface water | 132 |
| C6. | Monthly water content at snow-survey sites | 184 |
| C7. | Yearly precipitation at storage-gage sites, 1962-73 | 192 |
| C8. | Records of selected wells | 193 |
| C9. | Drillers' logs of wells | 210 |
| C10. | Fluctuations of water levels in selected wells | 236 |
| C11. | Chemical quality of ground water from selected wells | 244 |

## CONVERSION TABLE

The following factors are provided for conversion of British units used in this report to metric units.

| Multiply | By | To obtain |
|---|---|---|
| Inches | 25.40 | millimeters (mm) |
| | 2.540 | centimeters (cm) |
| Feet (ft) | .3048 | meters (m) |
| Miles (mi) | 1.609 | kilometers (km) |
| Acres | .004047 | square kilometers ($km^2$) |
| Square miles ($mi^2$) | 2.590 | square kilometers ($km^2$) |
| Acre-feet (acre-ft) | 1233. | cubic meters ($m^3$) |
| Cubic feet per second ($ft^3/s$) | .02832 | cubic meters per second ($m^3/s$) |
| Gallons per minute (gal/min) | .06309 | liters per second (L/s) |
| | 3.785 | liters per minute (L/min) |
| Tons (2,000 lbs) | .9072 | tonne (t) |

# WATER IN THE SKAGIT RIVER BASIN, WASHINGTON

By B. W. Drost and R. E. Lombard

## INTRODUCTION

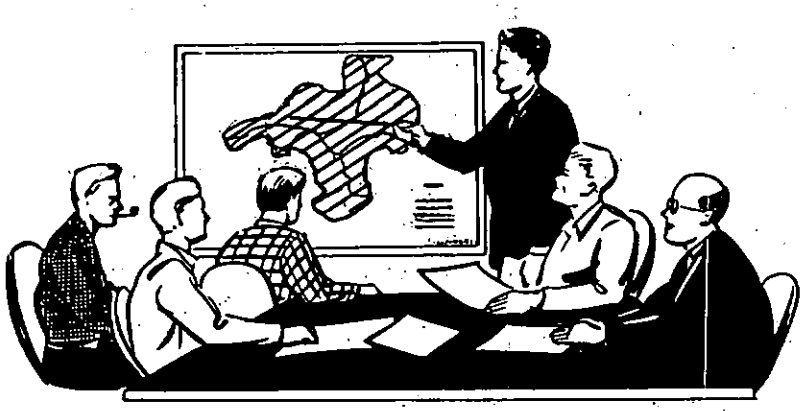
The Skagit River basin encompasses about 3,130 $mi^2$ in Washington and Canada. More than 15 million acre-feet of water, on the average, is cycled through the basin annually, supplying an important resource for agriculture, lumbering, food processing, oil refining, fishing, recreation, and power generation, all important activities in the area. This report describes the general availability and quality of surface and ground waters in the basin.

This report is the fourth in a series that describes conditions in major river basins in Washington State. In the course of this study, existing data were interpreted to define (1) the quantity of ground and surface water available, (2) the general quality of the water, (3) the types and quantities of water use, and (4) seasonal distribution of water availability.

The material contained in this report is the result of collecting, summarizing, and interpreting hydrologic records gathered from many sources and, in many cases, spanning many different periods. Much of the information comprises virtually raw data collected over many years and reported by different agencies in differing formats and for a wide variety of purposes. Despite such uneven distribution of the data with respect to subject, time, and area--which puts some constraints on detailed interpretations--the report provides considerable information on the general availability, quality, and use of water in the basin.

The report is presented in three parts: Part A contains pertinent background information of a basinwide nature, summarizes the hydrologic conditions of the basin, and discusses potential future use of and management considerations for the water in the Skagit River basin. Part B is a more technical discussion of the hydrologic information summarized in Part A. Part C contains tabulations of the basic hydrologic data collected throughout the basin since the late 1800's. Part A contains certain estimated values without qualification or substantiation, whereas Part B includes the interpretations and assumptions used to arrive at the estimates, based on the data in Part C.

The U.S. Geological Survey prepared the report as part of a program of studies in cooperation with the State of Washington Department of Ecology. The studies provide scientific information needed by the Department to efficiently and wisely protect and manage the water resources of Washington State.



## PART A. GENERAL HYDROLOGIC CONDITIONS

### Physical and Cultural Features

#### The Basin and Its History--In Brief

The Skagit River basin covers most of Skagit County and the northeastern and eastern parts of Snohomish and Whatcom Counties, respectively, and extends northward into Canada (fig. A1). The basin encompasses a total of about 2,730 $mi^2$ in Washington and about 400 $mi^2$ in Canada. The Skagit River originates in British Columbia, flows through Ross Lake, which extends a short distance across the international boundary, and continues in a southwestward path to empty into Skagit Bay below Mount Vernon. The river's main stem extends a total of 127.0 miles in Washington and 35.3 miles in Canada. This report covers only that part of the basin in Washington.

According to Willis (1973), the Skagit River basin was a forested wilderness until 1855, with members of 11 different Indian tribes living on the broad delta lands and mud flats near Skagit Bay on Puget Sound. In 1855 the basin was officially opened to white settlers with the signing of the Point Elliott Treaty by the Skagit Indian Tribe and other tribes of the area. Settlement in the basin was slow to start because of the dense vegetation and difficulty in navigating the Skagit River.

In 1863 Samuel Calhoun became one of the first settlers when he planted crops in the delta area of the Skagit River. Calhoun and the other settlers who followed were forced to construct elaborate systems of dikes along the tidal reach of the river to hold back the tidal waters of Skagit Bay. According to Willis (1973), these early pioneers were ridiculed by their neighbors on the adjacent islands for trying to reclaim such a desolate tide-swept wasteland. However, constructing dikes became good business in 1870 when Michael Sullivan diked 40 acres, raised the best barley crop in the area, and made $1,600 for his efforts.

In 1870 the first inland settlement was established near the present site of Mount Vernon. Navigation of the Skagit River upstream from Mount Vernon by anything other than a canoe was made impossible by two huge, natural logjams, which were eventually cleared in 1876-77 by local settlers. Clearing the jams allowed towns to be founded farther upstream: Burlington (1882), Sedro-Woolley (1884), and Concrete (1890).

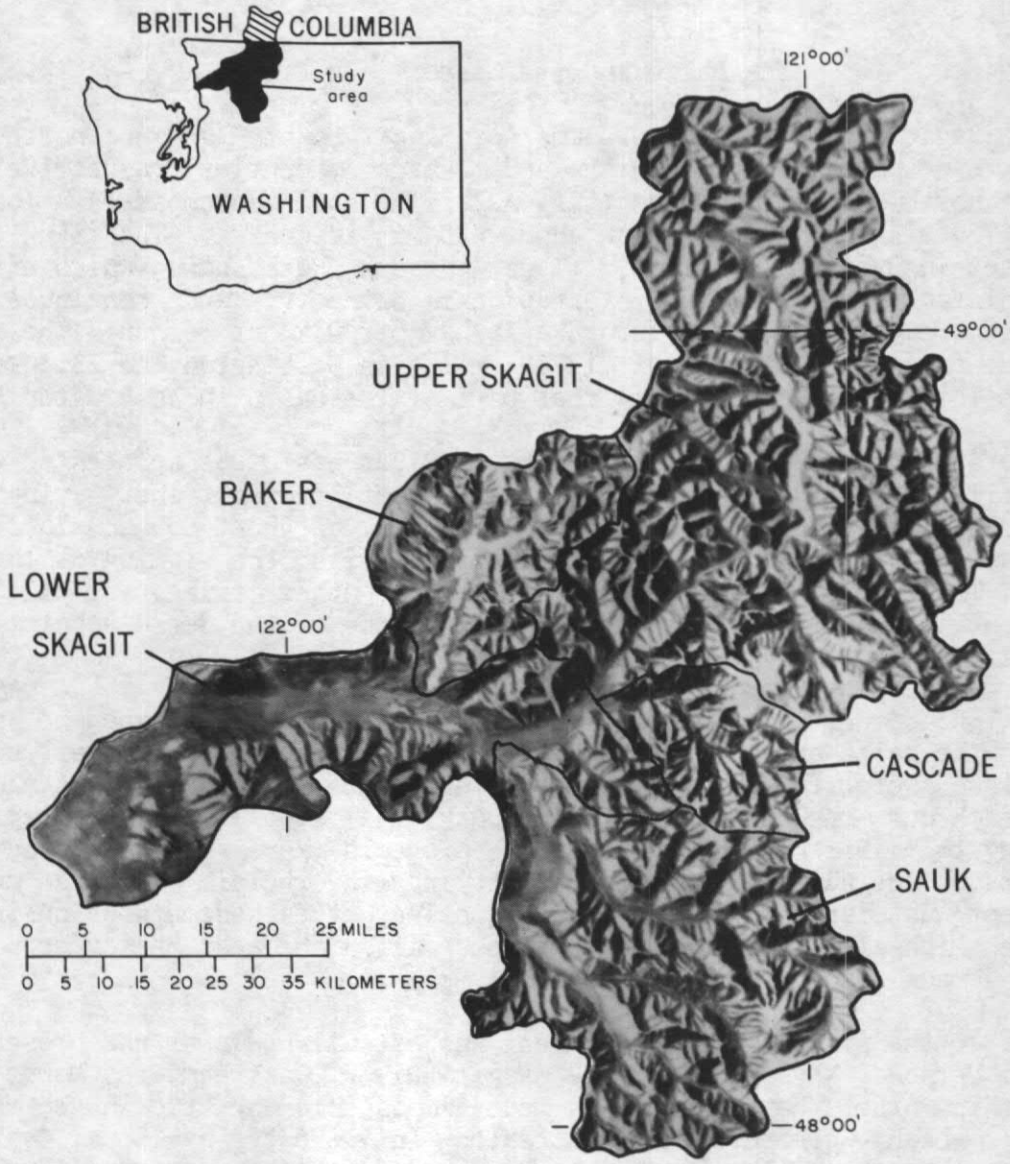



FIGURE A1.--Skagit River basin and major subareas.

Transportation was a major problem in the years before the jams were cleared. Mining operations had begun in the basin upstream of the jams, but logging operations were restricted to downstream areas. The coal area near Hamilton had been opened about 1876 and 20 tons of coal were shipped to San Francisco before transportation problems made further mining uneconomical. The coal had to be carried all the way downriver from Hamilton by canoe; this included a 2-mile portage around the logjams.

Logging extended rapidly upstream after the logjam-clearing operation, and by 1888 some 17 camps existed between Mount Vernon and Lyman. During this period the river was kept clear by a snag-boat authorized by the River and Harbor Act of 1874 (Brown, 1934). By 1879 sternwheelers had reached Sedro-Woolley and beyond, supplying the logging camps with essential goods. Forest products have since remained an important part of the economy of the basin.

Cutting through the logjams led to changes in riverflow patterns, resulting in much damage to the settlements and diked farmland downstream. Serious flooding of the diked areas occurred every 2 to 3 years until additional riverflow control was achieved in more recent years by large-scale levees, and flood peaks were modified by water storage in hydroelectric-power reservoirs.

The first major hydroelectric powerplant in the basin was at Baker Dam, installed in 1925 on the Baker River near Concrete. In 1959 a second hydroelectric powerplant was installed at upper Baker Dam near Concrete and upstream from Baker Dam. On the Skagit River three major hydroelectric facilities have been constructed: Diablo Dam (1929), Ross Dam (1940, raised in 1967), and Gorge Dam (1960).

Agriculture has been of prime importance since the earliest settlers arrived. Raising grains and vegetables were the earliest agricultural pursuits; these were followed by poultry, livestock, and dairy farming. The Reverend B. N. L. Davis reportedly brought the first purebred herd of Holstein cattle to the area in 1879. He previously had three successful years of growing hops, but stopped this activity when he learned that hops were used for making beer.

In addition to logging and agriculture, the basin has an important industrial input to the economy. Food processing, oil refining, chemical industries, and fisheries are all commercial activities supplied by water from the basin. Until recently, cement manufacturing was important in the basin; most activity was centered in the town of Concrete. The cement industry was founded in about 1892 by Amasa Everett who had spent 18 unsuccessful years prospecting in the basin; during those years his base camp was situated in the middle of clay and limestone deposits (the essential ingredients of cement) before he became aware of their value.

The permanent population of the Skagit River basin was about 42,500 in 1970. This indicated a decrease in the annual growth rate, from about 19 percent during 1950-60 to about 1.5 percent since 1960. Most of the permanent residents have settled in the main valley west of Concrete on farms and in small communities devoted primarily to farming and lumbering activities. During the period 1960-70, the population shifted from rural to incorporated areas. The populations of the incorporated towns in 1970 were as follows: Mount Vernon, 7,921; Sedro-Woolley, 3,705; Burlington, 2,968; Darrington, 1,272; Concrete, 840; Lyman, 400; and Hamilton, 271 (U.S.Bureau of the Census, 1971).

The mountainous parts of the basin have virtually no permanent residents, but the rugged scenic beauty of the North Cascades has continued to attract increasing numbers of outdoor recreationists--campers, fishermen, hikers, and mountain climbers. The completion of the new North Cross-State Highway, which links the northeastern and northwestern parts of the State during the summer and fall period (closed by snow in winter), has improved access to much of the upper parts of the basin. About 75 percent of the basin's land resources is administered as national forest and national park by the Federal Government, and about 5 percent of the basin's land is administered by the State.

## Topography and Climate

The Skagit River basin is mostly mountainous (fig. A 1). Except for the floors of the downstream reaches of the major valleys and the adjacent river terraces, the basin is almost entirely above 2,000 feet elevation. The eastern boundary of the basin follows the crest of the Cascade Range, where most of the peaks are between 7,000 and 9,000 feet above sea level. Peaks along the southern boundary decrease in elevation westward, from about 7,000 feet to about 3,000 feet. The highest point, Mount Baker (10,773 ft), is situated along the northwestern edge of the basin.

The Skagit River basin, which is drained to Skagit Bay, extends a maximum of about 100 miles from its northernmost point in British Columbia to its southernmost point in Snohomish County, and it varies considerably in width (fig. A1). Downstream from the junction of the Baker River and the Skagit River, the basin narrows to about 12 miles, a width it maintains to Skagit Bay.

The upper reaches of the Skagit River have essentially no flood plain. From a few miles north of Marblemount (pl. 1, in pocket) to Sedro-Woolley the flood plain is 1 to 2 miles wide, and from Sedro-Woolley downstream it widens rapidly to form the extensive and agriculturally productive delta area.

The Skagit River basin has a mild climate with fairly cool, dry summers and mild, moist winters. The mean annual precipitation across the basin is about 100 inches, but precipitation and temperature show wide ranges of daily and seasonal extremes due to the varied topography. Generally, the greatest precipitation and lowest temperatures occur at the highest elevations. According to the map of the U.S. Weather Bureau (1965), the average annual

precipitation exceeds 140 inches over most of the higher mountains and reaches a maximum of about 190 inches at Sloan Peak (7,790 ft) in the southern part of the basin (fig. A2). The main river valleys typically have less than 80 inches of precipitation a year, with a minimum of about 25 inches occurring in the western lowland parts of the basin, near the mouth of the Skagit River.

Precipitation is seasonally distributed (fig. A2), with about 75 percent occurring during the period October-March. During the period 1920-73, the temperature at the U.S. Weather Service station at Newhalem ranged from a high of 109°F (Fahrenheit) or 43°C (Celsius) to a low of -6°F (-21°C), with an average of 50°F (10°C). The highest temperatures usually occur in July and the lowest in January. The diurnal temperature range is about 9°F (5°C) in winter and 18°F (10°C) in summer. The average frost-free growing season in the delta lowland is about 227 days (March 28-November 10), and at Concrete it is about 194 days (April 16-October 27).

## Geology and Soils

The bedrock of the basin is at or near the surface everywhere, except in the floors of the major valleys, which have considerable thicknesses of alluvial and glacial deposits. Metamorphic and granitic rocks are the most common types of bedrock, but sedimentary and volcanic rocks also are found. The wide variety of rock types have been intricately faulted and folded.

The glaciers of the Pleistocene "ice age" are largely responsible for the present rugged landforms of the basin, although the glaciation was preceded by mountain building through uplift, folding, and volcanic action. The sharp peaks and ridges and deep valleys of the mountainous areas are products of deep cutting by local alpine glaciers, with some rounding by the continental ice sheet that entered the area from Canada. The lower slopes and valley bottoms became the sites of deposition of great thicknesses of sediment carried by glacial streams.

According to McLerran and Krashevski (1955), the two main types of soils in the basin are (1) alluvial, or bottom-land soils, and (2) upland soils. The bottom-land soils are generally fertile and highly productive, whereas the upland soils are much thinner and less fertile. The bottom-land soils are found in the delta area and on the main flood plain of the Skagit River. These soils are derived primarily from fine-grained alluvial materials and are often imperfectly to poorly drained. The upland soils are generally composed of glacial materials. These soils are generally thin and on steep slopes, conditions which are usually unsuited for agricultural purposes. However, where underlain by a well-cemented hardpan which aids in conserving moisture during dry periods, they are of some local agricultural use.

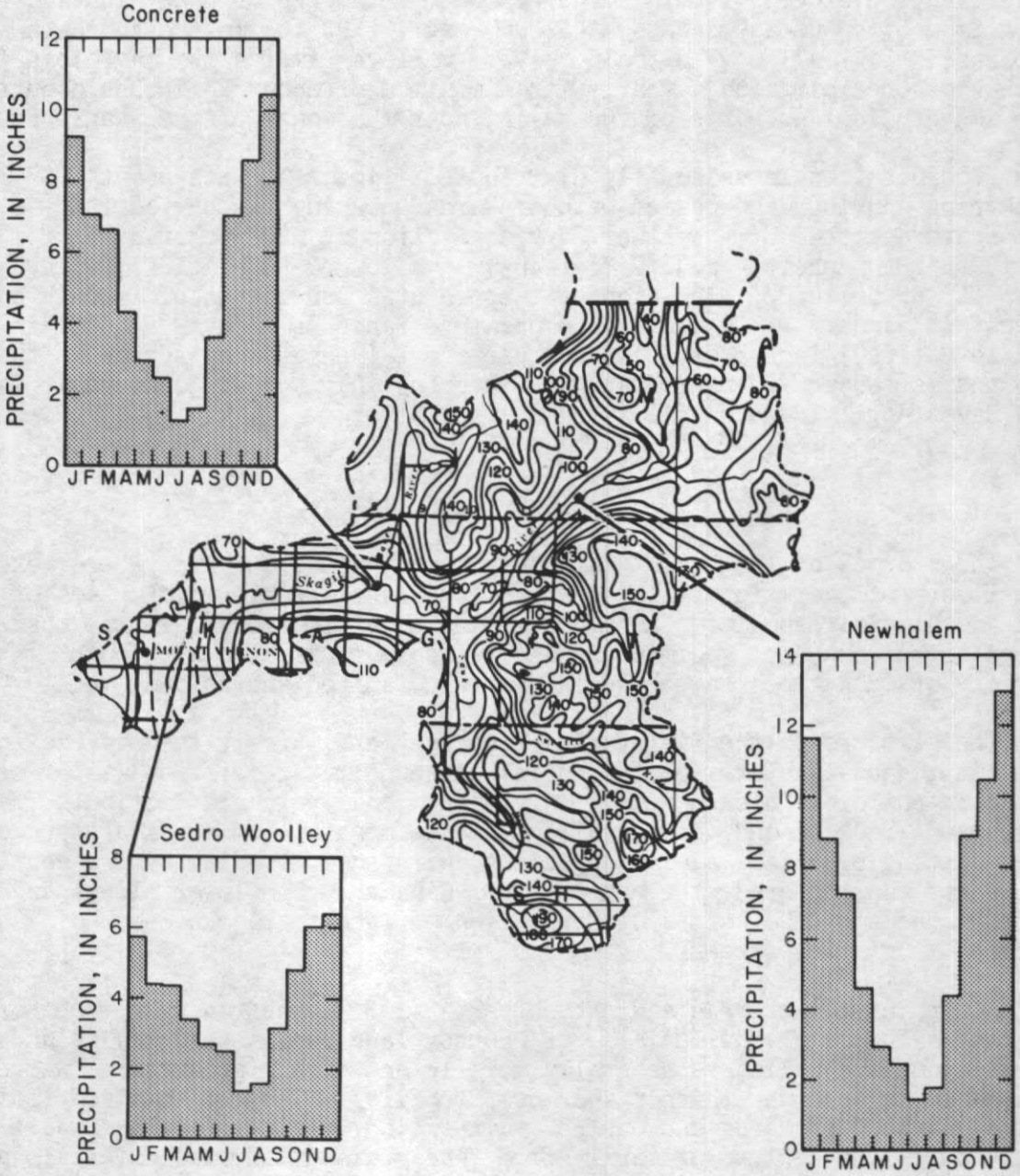



FIGURE A2.--Areal distribution of average annual precipitation in the Skagit River basin during 1930-57, and comparison of average monthly precipitation at three stations during 1931-73. Map from U.S. Weather Bureau (1965) and monthly data from U.S. Weather Bureau (1954-74, 1956).

## Land Use and Vegetation

The natural vegetation of the basin (Ness and others, 1960) is a dense growth of large conifers, except where small, scattered groves of deciduous trees occupy depressions. Douglas fir is the dominant and commercially most valuable tree in the lower mountains and foothills. The Western hemlock and Sitka spruce are also widespread. Balsam fir and mountain hemlock are the dominant species in the higher mountains. Western red cedar dominates in the wettest areas, while lodgepole pine and Rocky Mountain juniper are found in less-moist areas.

Many varieties of deciduous trees and shrubs are associated with the conifers, and are particularly plentiful in logged-off areas. Willow, vine maple, and alder comprise the most common vegetation in low, moist areas. Other common trees and shrubs, which are thinly scattered among the conifers, include Pacific dogwood, cascara buckthorn, elderberry, hazelnut, and oceanspray.

Most timber of economic value has been removed from the western part of the basin and from the lower elevations in the central part. Some extensive areas of virgin timber remain in the eastern part of the basin.

Forests cover about 1,450,000 acres (or 81.8 percent) of the Skagit River basin in Washington. Alpine grazing areas and rangeland account for about 226,000 acres (12.7 percent). Approximately 41,000 acres (2.3 percent) are used for farmland and 24,300 acres (1.4 percent) are either built-up areas or rural nonagricultural land. The remaining 31,600 acres (1.8 percent) are covered by lakes and streams. The above figures are a combination of 1966 data from the Puget Sound Task Force (1970) and Horner, Weeks, and Hungate (1969).

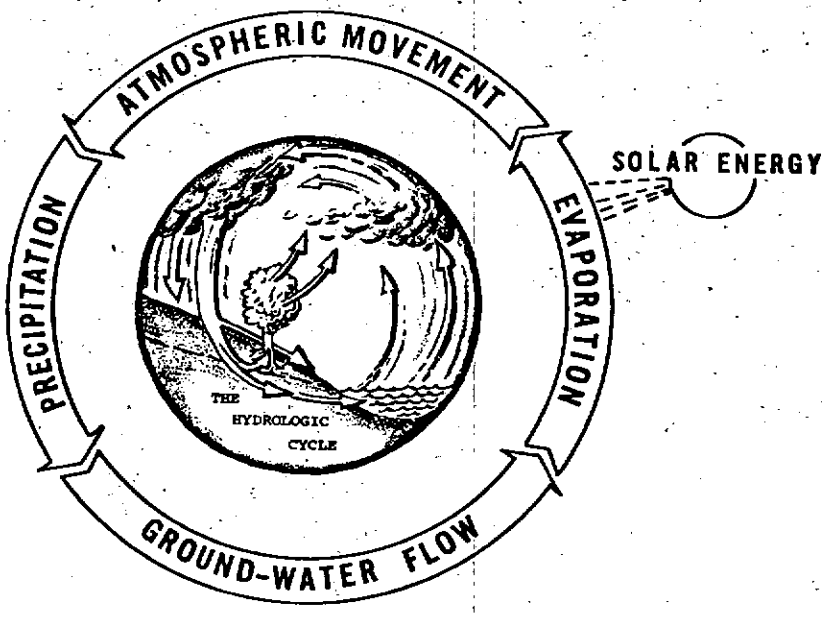
A wide variety of economic activities characterize the basin, according to Colver (1946), Horner, Weeks, and Hungate (1969), and the Puget Sound Task Force (1970). Lumbering has been one of the leading industries since the earliest settlements. Agricultural enterprises are centered on the Skagit River bottom lands and alluvial plain, where dairying far exceeds in acreage all other types of agricultural activities. Peas, strawberries, and hay are leading crops. Frozen-food processing, canning, heavy-equipment production, and chemical manufacturing have become important industries. Recreational activities in the basin include camping, fishing, swimming, boating, hunting, hiking and mountain climbing, winter sports, and tourism.

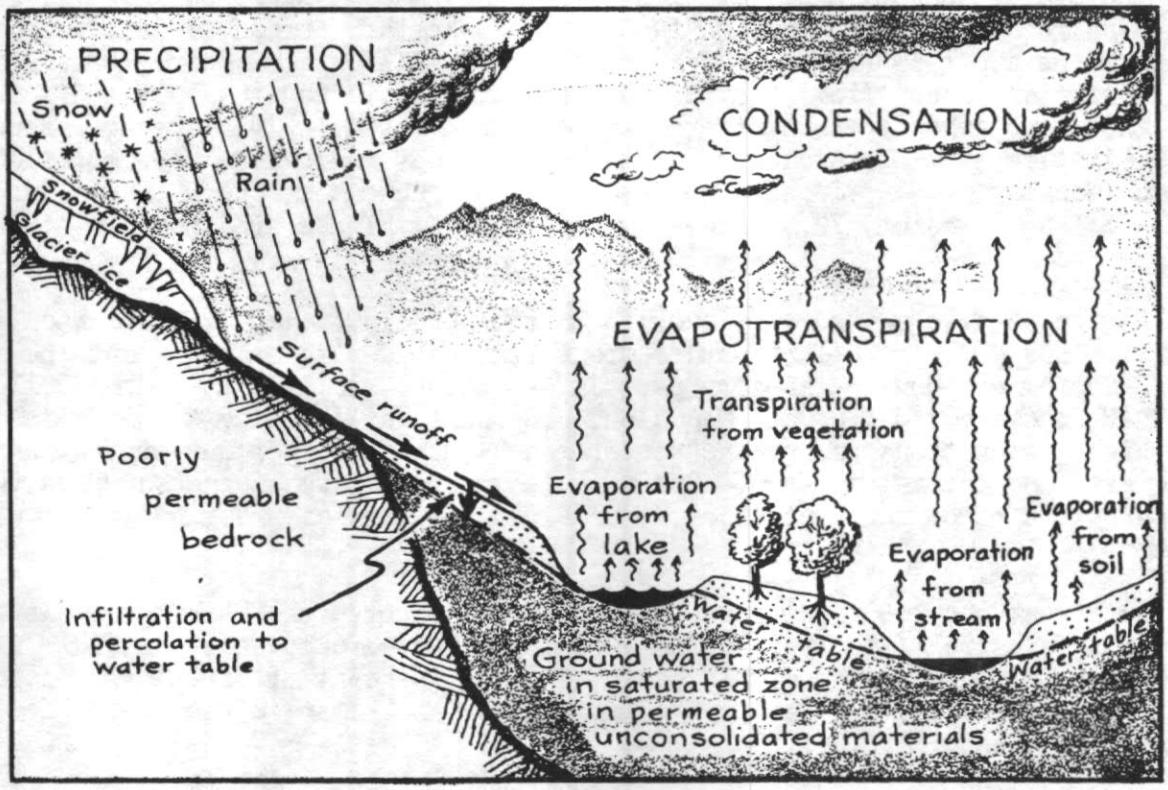
## The Hydrologic Cycle and Water Budget

The hydrologic cycle is the pattern of water movement as it circulates through the natural system. Precipitation as rain and snow is the source of all freshwater. A part of the precipitation runs off rapidly to streams, and a part is evaporated directly back to the atmosphere from the ground and from lakes, streams, and plant surfaces. A part soaks into the soil where some is drawn up by plants and returns to the atmosphere by transpiration from the leaves; the remainder percolates downward to the zone of saturation to become ground water. In turn, most of the ground water returns to the surface-water system by seepage to springs, lakes, streams and the sea. Figure A3 diagrammatically illustrates the hydrologic cycle and water budget (inflows and outflows of water) as it applies to the Skagit River basin.

The source of all freshwater in the Skagit River basin in Washington is directly from rain and snow, except for some surface water which flows into Ross Lake from Canada, and only insignificant amounts of ground water which move laterally into the basin from adjoining areas.

Precipitation becomes available to man as streamflow, storage in lakes and reservoirs, and as recharge of the ground-water reservoirs. Precipitation may remain only briefly before leaving the basin through evapotranspiration and as stream runoff, or it may percolate to the ground-water reservoir and remain underground for periods ranging from a few days to centuries. Some water stays temporarily in lakes and reservoirs and then discharges as streamflow. Approximately 79 percent of the water that enters the Skagit River basin in Washington as precipitation and as streamflow from British Columbia leaves as streamflow to Skagit Bay, approximately 19 percent returns to the atmosphere through evaporation from water, snow, ice, and soil surfaces and through transpiration by vegetation, and about 2 percent leaves as ground-water flow to the bay or adjacent basins or is pumped for consumptive uses other than evapotranspiration.






Yearly water budget of Washington part of Skagit River basin

| | Millions of acre-feet |
|---|---|
| **Inflow** | |
| Precipitation | 14.6 |
| Surface water | .8 |
| Ground water | (Negligible) |
| **Outflow** | |
| Evapotranspiration | 2.9 |
| Surface water | 12.1 |
| Ground water | .4 |
| Change in storage | (Negligible) |

**Ground-water inflow and outflow cannot be calculated directly from data available. However, because the system is essentially in balance, the ground-water outflow is estimated in order to balance the budget.**

FIGURE A3.--Schematic sketch of the hyrologic cycle and table of water-budget values, Skagit River basin, Washington.

## Precipitation and Inflow

The average annual precipitation over the Skagit River basin (fig. A2), based on records for the period 1930-57 (U.S. Weather Bureau, 1965), is estimated to be about 100 inches, or about 14.6 million acre-feet. The average precipitation ranges from about 25 inches near Skagit Bay to about 190 inches in the mountains of the southern part of the basin. The average annual precipitation at three stations, during the periods indicated, are as follows; Sedro Woolley, 45.9 inches during 1920-73; Concrete, 65.3 inches during 1925-73; and Newhalem, 77.9 inches during 1920-73. These are shown in figure A4.

Figure A2 also shows the average monthly precipitation at Sedro Woolley, Concrete and Newhalem. The average precipitation during the 6-month period April-September, during the same periods of record, is 14.6 at Sedro-Woolley, 16.1 at Concrete and 17.4 at Newhalem. Because of freezing temperatures at the higher elevations during the wetter months, about 75 percent of the annual precipitation occurs as snow. Spring and summer melting of the snowpack contributes the major part of the streamflow in the basin during the growing season.

Each year about 804,000 acre-feet of water enters the Washington part of the basin as streamflow from British Columbia, but ground-water inflow into the basin is considered insignificant. About 95 percent of streamflow across the border is carried in the upper Skagit River and most of the remainder is carried in Lightning Creek.

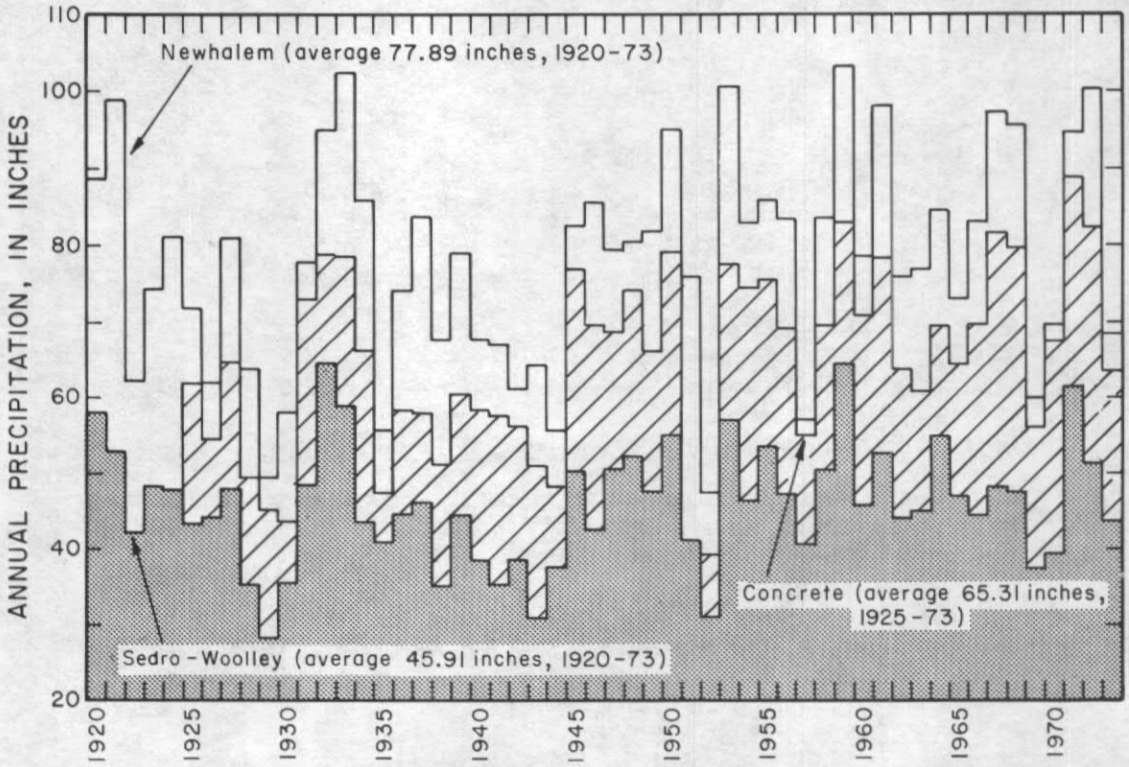



FIGURE A4.--Annual precipitation at three sites in the basin. Data from U.S. Weather Bureau (1936, 1956, and 1953-73).

## Evapotranspiration and Outflow

The evapotranspiration rate is dependent on the availability of water, air and water temperatures, solar radiation, humidity, wind movement, and the nature of the land and its plant cover. Evapotranspiration cannot average more than precipitation, except in areas of imported water, because it depends on the availability of water. At Sedro-Woolley, estimates of annual evapotranspiration for irrigated crops were as follows: alfalfa, 25.4 inches; grass pasture, 23.7 inches; corn, 18.4 inches; potatoes, 16.0 inches; and beans, 11.0 inches (Molenaar and others, 1952). According to maps prepared by the U.S. Weather Bureau and the U.S. Department of Agriculture (written commun., 1962), the mean annual evapotranspiration ranges from 18 to 22 inches over the basin. A basinwide average of 20 inches was used in computing the 2,910,000 acre-feet of water loss by evapotranspiration. Although most of the basin is at higher elevations, with correspondingly lower evapotranspiration rates, the continuous snow cover in some places and long-period snow cover at other high elevations tend to provide much opportunity for sublimation and evaporation. Also, diversion for irrigation in the lowlands tends to cause evapotranspiration there to be greater than average natural rates.

The quantity of water that leaves the basin as streamflow is represented by that gaged on the Skagit River near Mount Vernon, which is a few miles above the mouth of the river at Skagit Bay. During the period 1940-73 the average annual discharge was about 12,100,000 acre-feet.

The quantity of water leaving the basin as subsurface underflow--estimated as precipitation and surface-water inflow minus surface-water outflow and evapotranspiration--is about 400,000 acre-feet per year, or about 360,000 gallons per day. Because this quantity cannot be accurately calculated from available ground-water data, the best available estimate is based on the amount needed to balance the water budget.

## Snow and Ice Storage

The Skagit River basin contains more water stored in snowfields and glaciers than does any other basin within the conterminous United States. According to a study by Post and others (1971), the source of much of the following information, the Skagit River basin has 396 glaciers covering areas totaling about 64.4 $mi^2$. Almost all these glaciers occur at altitudes where annual precipitation exceeds 100 inches, and each square mile of glacier surface produces an average of about 9,000 acre-feet of streamflow per year, or an average total flow of 800 $ft^3/s$ of melt water from snow and ice in the Skagit River basin. The total amount of water stored as glacier ice in the region was estimated to be about 15 million acre-feet in 1971.

These frozen reservoirs have several characteristics including the following: (1) winter precipitation is retained and released during the summer, usually in July and August; (2) runoff from glaciers approximately equals precipitation when averaged over a long period of time, but in warm, dry years runoff can greatly exceed precipitation and in cool, wet years an appreciable

amount of precipitation is stored, (3) evaporation, transpiration, and other losses from glaciers is small, and (4) glacier streams may transport large sediment loads.

During most years, winter precipitation falls as snow at altitudes above 2,500 feet. Snow can be expected in October and it generally remains on the ground from November to June or July. Total cumulative winter snowfall in the mountains ranges from 350 to 500 inches.

## Floods

The history of significant flooding in the Skagit River basin dates back to about 1815, the approximate time of occurrence of the apparently largest flood in several hundred years. The exact elevation of that flood is not known but its magnitude has been determined by extensive research and study in the basin (Stewart and Bodhaine, 1961). The flood discharge was several times that of the flood of July 1972, which was 91,900 $ft^3/s$, as measured on the Skagit River at Concrete.

Flooding in the basin occurs during both winter and summer. Winter floods are the result of excessive rainfall on a heavy snowpack during warmer periods and are marked by sharp rises followed by recessions which are almost as rapid. Summer floods are the result of snowmelt from glaciers and snowfields at the higher elevations. The summer floods are of longer duration and greater volume, but have lower crests than do the winter floods.

The flood of November 1949 is an example of a winter flood. Figure A5 shows a comparison of precipitation at the Skagit Power Plant (Newhalem station) and discharge during that flood, as recorded at the gaging stations on the Skagit River at Concrete (regulated by dam) and the Sauk River near Sauk (unregulated).

Figure A6 compares, for a summer high-water period, air temperature at Newhalem and discharges at these same gaging stations. Only the peak of July 13 during this period was augmented by rainfall, the remainder of the high discharge being due to snowmelt.

The Skagit River flood of November 1949 was one of the largest floods of record, and would have been much larger had it not been for storage in the upstream reservoirs. Because of this upstream storage, the flood of 154,000 $ft^3/s$ at Concrete was estimated to have been reduced by 45,000 $ft^3/s$ (Stewart and Bodhaine, 1961). Streamflow has been regulated by power and flood-control reservoirs since 1925 on the Baker River and since 1929 on the Skagit River. Ross Dam on the Skagit River has an additional capacity of 120,000 acre-feet for winter-flood storage, as required by the Federal Power Commission license for the project.

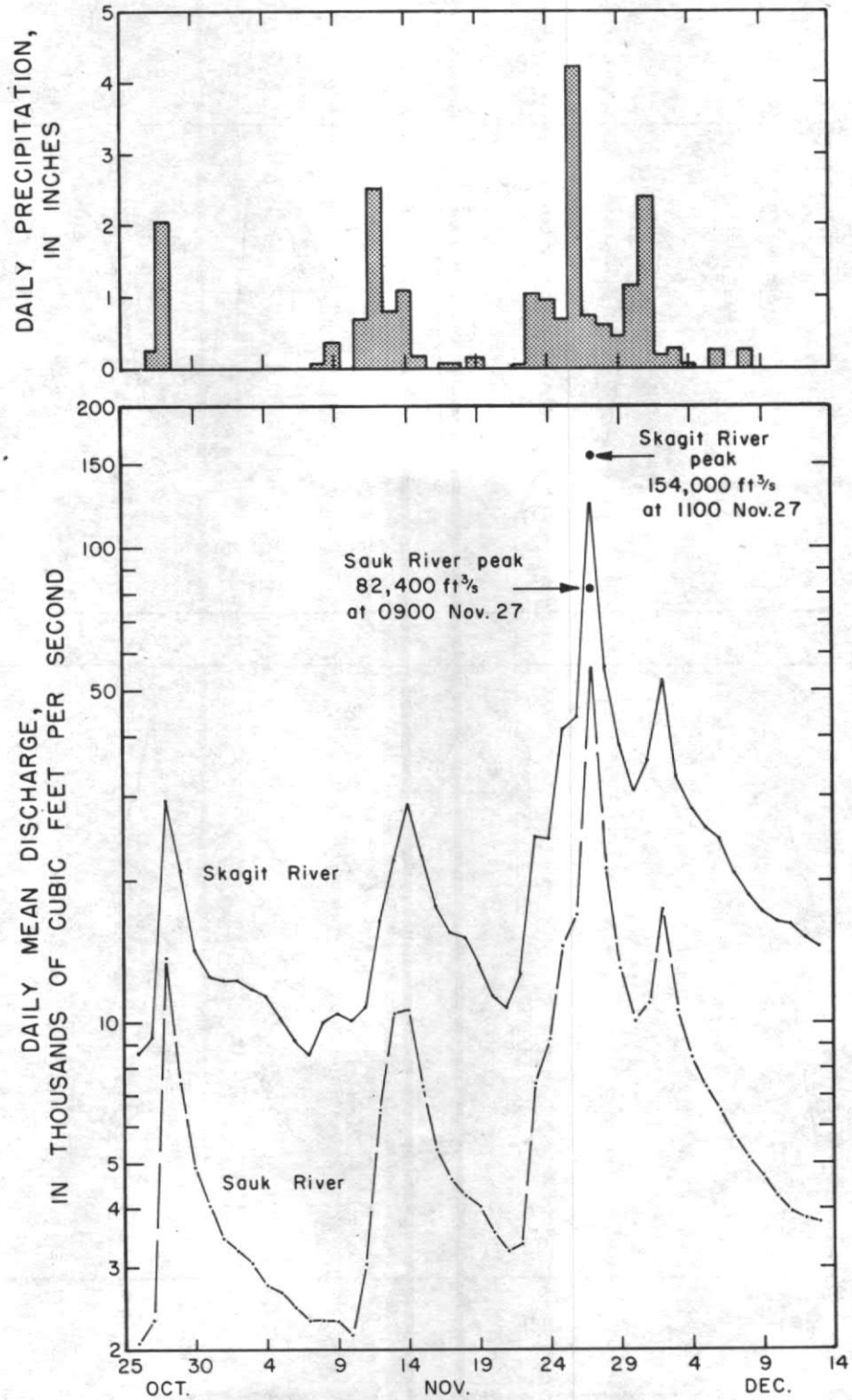



FIGURE A5.--Precipitation at Skagit Power Plant at Newhalem, and discharge of Skagit River at Concrete and Sauk River near Sauk, during the period October 26-December 13, 1949.

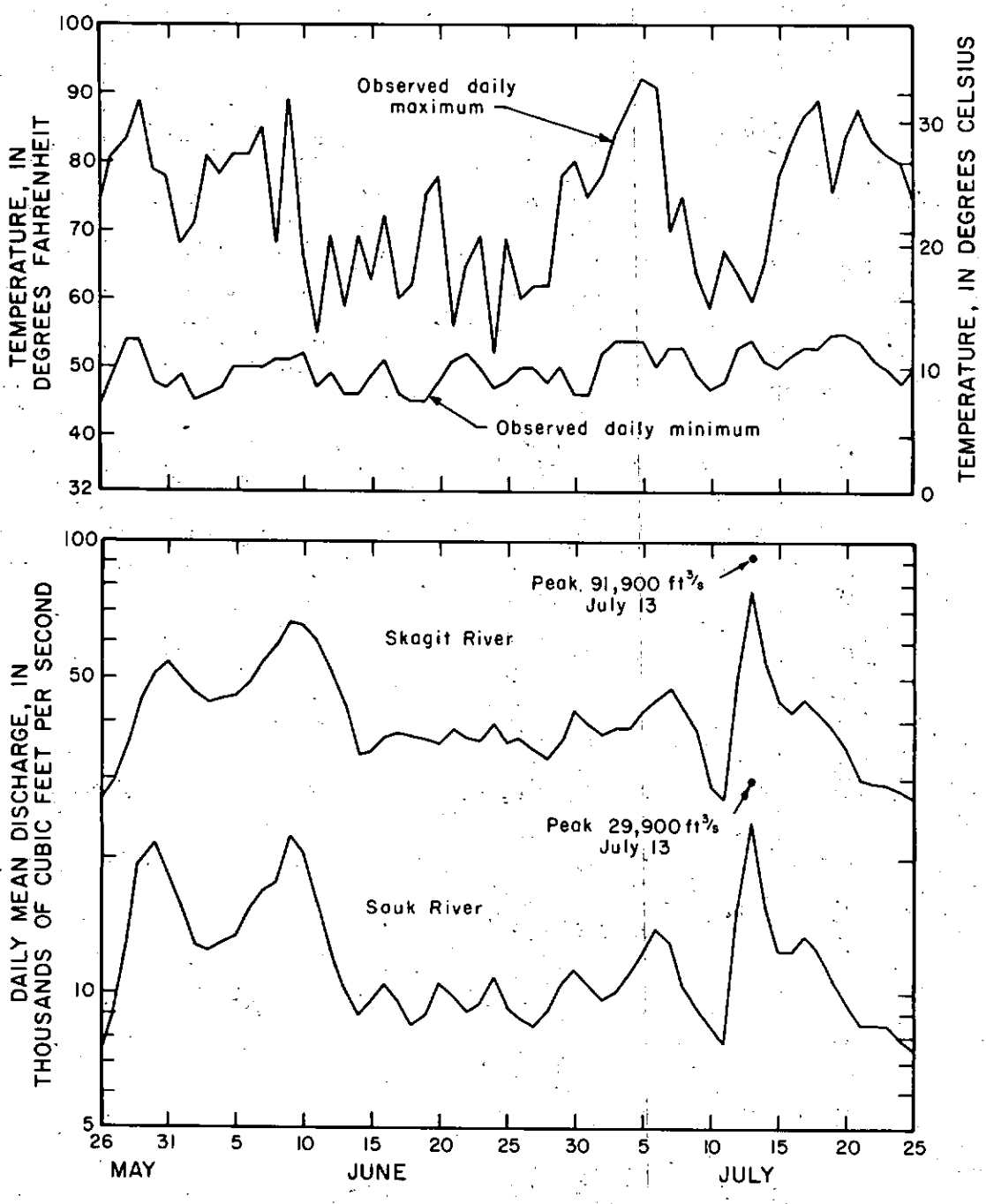



FIGURE A6.--Air temperature at Newhalem, and discharges of Skagit River at Concrete and Sauk River near Sauk, during the period May 26-July 25, 1972.

The major damage areas from floods in the Skagit River basin are along the flood plain downstream from Sedro-Woolley (fig. A1 and pl. 1). In fact, during major floods the Skagit River overflows onto the Samish River plain via a low divide at Sedro-Woolley and adds to the flood problems of the Samish River basin.

In its delta area, the Skagit River and its main distributaries are lined by 66 miles of levees; these provide partial protection of 45,000 acres (U.S. Army Corps of Engineers, 1967). Normal protection is against floods of a 3- to 8-year frequency interval, but the left-bank levee on the main stem, between Burlington and Mount Vernon, provides protection against floods with a 14-year frequency interval. Most of the broad delta downstream from Sedro-Woolley is used for agriculture, but also includes a large part of the basin's urban and rural population, many manufacturing plants, and major transportation routes.

Information on the magnitude and frequency of occurrence of floods in the basin had been computed for the design of flood-control structures and bridges and culverts, and the determination of channel capacities, roadbed elevations, and flood-plain zoning. This more technical information is included in Part B of this report.

## Low Flows

Periods of low streamflow are usually the most critical factor in relation to water use, not only from the standpoint of quantity available for diversion but for uses of the stream itself, such as for fish propagation. In addition--and most important for some streams--during low flow the stream is more susceptible to changes in temperature and to high concentrations of pollutants from industrial, municipal and agricultural wastes. The low-flow characteristics of the basin's streams are discussed in detail in Part B.

The low-flow periods for streams in the Skagit River basin vary during the year depending upon climatic influences. Low flows of low-elevation streams occur during the late-summer periods of minimum precipitation. The low-flow periods of high-altitude streams occur in the winter when low temperatures freeze up the sources at glaciers and snowfields. However, climatic influences on some high-altitude streams may cause low-flow periods to occur during both winter and summer. Occasionally a part of the winter precipitation may fall as rain, resulting in an increase in the streamflows. The amount of water stored as snow is thus reduced and the snow may be entirely gone by late spring, resulting in a low-flow period in late summer. Low-flow-frequency and flow-duration curves and low-flow indexes are discussed in Part B.

## Ground Water

Ground water in the basin occurs largely in unconsolidated alluvial and glacial deposits, mostly in layers of sand and gravel. These deposits are found in significant thicknesses only in the bottoms and along the lower sides of the major valleys and predominantly in the western, lowland part of the basin.

The major part of the basin is underlain by bedrock, composed primarily of igneous and metamorphic rocks. The bedrock can be regarded as the floor of the ground-water reservoir, although locally fractures and joints in these rocks may yield small quantities of water.

Figure A7 shows the general availability of ground water in the basin. The unconsolidated deposits in the major stream valleys contain sufficient ground water for most domestic and irrigation uses. Except in the extreme western part of the basin, where materials of the delta are finer grained, the highest yields are found in the western lowland where the deposits are thickest. Most of the bedrock areas are unexplored relative to ground-water occurrence, but the available data suggest that yields at most would be adequate only for small household supplies.

## Drainage-Basin Characteristics

The Skagit River drains an area of about 3,130 $mi^2$, of which an area of 400 $mi^2$ is in British Columbia, Canada (Richardson, 1962). For discussion in this report, the basin has been divided into five major subareas that include the upper Skagit River basin (above Marblemount), Baker River basin, Cascade River basin, Sauk River basin, and lower Skagit River basin (below Marblemount). These subareas are outlined in figure A1.

The sources of data for the discussion in this section are Post and others (1961) for glaciers, Wolcott (1961) for lakes, and Puget Sound Task Force (1970) for irrigation and other diversions.

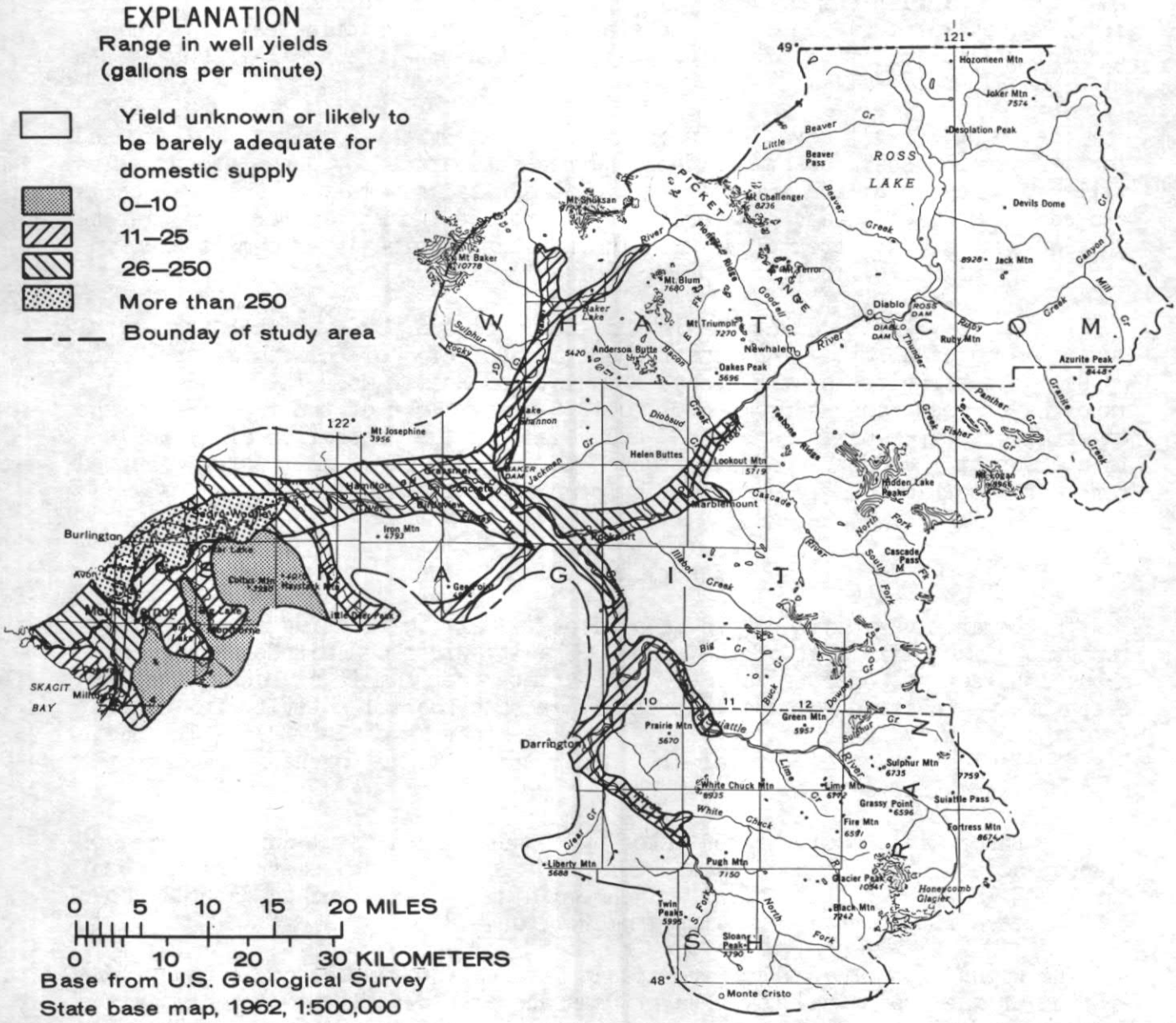



FIGURE A7.--Generalized availability of ground water in the Skagit River basin.

## Upper Skagit River Basin

The upper Skagit River basin covers an area of about 1,380 $mi^2$, of which 400 $mi^2$ is in British Columbia. The headwaters begin on the slopes of Skaist Mountain in British Columbia, about 20 miles north of the international boundary. Major tributaries and their drainage areas are Little Beaver (54 $mi^2$), Lightning (129 $mi^2$, 21.5 $mi^2$ in Canada), Big Beaver (67.8 $mi^2$), Ruby (215 $mi^2$), and Thunder (114 $mi^2$) Creeks.

The upper Skagit River basin is noted for its great vertical relief and for its rugged, sharp-crested ridges and peaks separated by deep, steep-walled valleys. The winter precipitation in the basin falls mainly as snow, which is stored in snowfields and glaciers. These provide the melt water for maintenance of year-around streamflow, with the periods of greatest snowmelt and runoff occurring during the late spring and early summer.

The upper Skagit River basin has 105 lakes and ponds which have a total surface area of about 14,200 acres; about 12,800 acres of this total are taken up by the reservoirs behind Gorge, Diablo, and Ross Dams. The remaining 102 lakes have areas ranging from 0.2 to 127 acres. Most of the runoff from the upper Skagit River basin is stored and used for the generation of hydroelectric power at the dams impounding these three reservoirs. All water diverted for hydroelectric power generation is returned to the river.

## Baker River Basin

The Baker River basin covers an area of 297 $mi^2$, with a rugged mountainous topography much like that of the upper Skagit River. Altitudes range from about 175 feet at Concrete to 10,773 feet at the summit of Mount Baker, an extensively glaciered volcano that still has some thermal activity in its crater; the activity has shown a marked increase since March 10, 1975. The basin has 63 glaciers covering a total area of 13 $mi^2$. Winter precipitation in the basin falls mainly as snow.

The Baker River basin has 39 lakes and ponds with a total surface area of 7,466.5 acres. Lake Shannon and Baker Lake, both manmade reservoirs, account for 7,203 acres of this total. The remaining 37 lakes and ponds, all above 2,500 feet altitude, range in size from 0.2 to 45.8 acres.

The water from the Baker River basin is used for hydroelectric power generation at the Upper and Lower Baker Dams and at two small powerplants in the Bear Creek drainage which divert water from Rocky and Sulphur Creeks. The entire flow of Sulphur Creek is often diverted to Rocky Creek and the combined flow of both creeks is in turn diverted to a reservoir on the North Fork of Bear Creek. The pipeline from the reservoir is capable of delivering 65 $ft^3/s$ to the first plant. The discharge from this plant then flows into the reservoir on the main stem of Bear Creek which passes on as much as 83 $ft^3/s$ to the second plant. All diverted water is discharged into Lake Shannon.

## Cascade River Basin

The Cascade River basin covers a rugged area of 185 $mi^2$, with the highest peak being about 8,900 feet altitude. The basin contains 57 glaciers with a total surface area of 6.9 $mi^2$. Because of the contribution to streamflow by the glacial melt water, the Cascade River and its upper tributaries during hot and dry summers rarely have extreme low flows. Annual precipitation in the basin (fig. A3) averages more than 100 inches per year, with most of the winter precipitation falling as snow.

The Cascade River basin has 35 lakes with a total surface area of 840 acres. The lakes range in size from 1 to 144 acres, and all are above 2,500 feet altitude.

The State of Washington Department of Fisheries diverts 10 $ft^3/s$ from Clark Creek and 15 $ft^3/s$ from Jordan Creek for fish propagation purposes. This water is ultimately returned to the Cascade River.

## Sauk River Basin

The Sauk River basin covers 732 $mi^2$ and is the largest of the subareas of the Skagit River basin. The basin includes those of the Suiattle River (346 $mi^2$) and the White Chuck River (86.2 $mi^2$). The headwaters of the basin's streams are at glaciers near the crest of the Cascade Range. Altitudes in the Sauk River basin range from 275 feet at the mouth of the Sauk River to 10,541 feet at Glacier Peak. The basin includes 96 glaciers covering a total of 15 $mi^2$; 62 of the glaciers cover 10.5 $mi^2$ in the Suiattle River drainage.

Annual precipitation over the Sauk River basin ranges from about 70 inches in the lowlands at the river's mouth to about 190 inches in the southern headwaters area (figs. A1 and A2). Most of the winter precipitation occurs as snow.

The Sauk River basin contains 122 lakes and ponds which have total surface area of 1,139 acres. The lakes range in size from 0.3 acre to 65 acres. Only four lakes are larger than 50 acres and 87 lakes are 10 acres or less.

The Sauk River basin has no dams or reservoirs, and the only stream diversions are two near Darrington for millpond use. The total diverted there is about 15 $ft^3/s$; the water is returned to the Sauk River below the millponds.

### Lower Skagit River Basin

The lower Skagit River basin covers 535 $mi^2$ downstream from Marblemount. The river flows westerly in a broad, mountain-bordered valley to the vicinity of Sedro-Woolley beyond which it meanders for several miles across a flood plain to about 8 miles from Puget Sound where in its delta it branches into two major distributaries, the North and South Forks, which flow into Skagit Bay. The mountains bordering the upper reach of the river attain a maximum altitude of about 5,000 feet. The principal tributaries in the lower Skagit River basin includes Illabot Creek (42.4 $mi^2$), Finney Creek (51.6 $mi^2$), Day Creek, (34.2 $mi^2$), and Nookachamps Creek (71.6 $mi^2$).

Average annual precipitation in the basin ranges from about 25 inches near the mouth at Skagit Bay to more than 100 inches in the mountains bordering the valley (fig. A2). Most of the precipitation in the lower Skagit River basin falls as rain in the lowlands and foothills and as snow in the higher mountains.

The basin contains 96 lakes with a total surface area of 2,176 acres. Judy Reservoir and Big, Clear, McMurray, Barney, and Day Lakes cover an area of 1,325 acres or 61 percent of the total lake area. The remaining 90 lakes range in size from 1 acre to 74 acres; 71 lakes cover 10 acres or less.

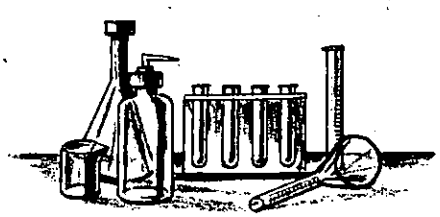
The Skagit County Public Utility District diverts water to Judy Reservoir from Turner, Mundt, East Fork Nookachamps, and Gilligan Creeks, to provide domestic and industrial supplies in the Sedro Woolley-Mount Vernon area. None of the diverted water is returned to the respective stream systems. The city of Anacortes on Fidalgo Island, outside the study area, receives about 3.5 $ft^3/s$ from the lower Skagit River for municipal use and none of this water is returned to the river. Irrigation diversion in the lower Skagit River basin totals about 3,000 acre-feet per year.

## Water Quality and Temperature

### Surface-Water Quality

All natural water contains chemical substances in solution, with the type and concentration of substances depending on the characteristics of the atmosphere and rock materials with which the water has been in contact.

The chemical character of the surface waters in the Skagit River basin is low in dissolved-solids concentration, and is of excellent quality for most uses, as determined by periodic sampling at sites on six streams and at three lakes. The chemical analyses of the collected samples appear in tables in Part C of this report.



The temperature of stream water can be as important as other aspects of its quality and its rate of flow. Stream temperatures are affected by many influences of the stream's environment. Some of these influences are properties of the natural setting, whereas others are associated with manmade alterations in the drainage basin.

During the period of record (1952-73) the range of water temperatures at four thermograph sites fluctuated between 32° and 63°F (0° and 17°C). Table C5 lists daily maximum and minimum temperatures at these four sites. Figure A8 illustrates the seasonal trends in water temperature of the Cascade River at Marblemount for the period October 1, 1972-September 30, 1973. As indicated in the figure the daily water temperature remained virtually constant during the period November 15-January 15, and again in mid-March.

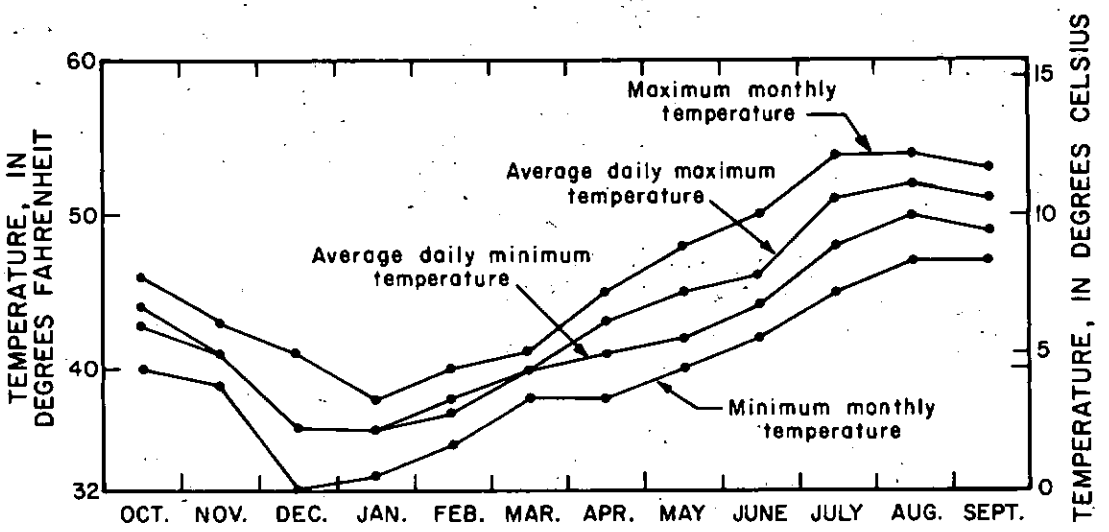



FIGURE A8.--Seasonal trends in water temperature, Cascade River at Marblemount, during the period October 1, 1972-September 30, 1973.

## Ground-Water Quality

Ground water in the Skagit River basin, although typically more mineralized and with greater variability in chemical composition than surface water, is generally suitable for most purposes. However, excessive concentrations of iron and extreme hardness were found in some wells tapping the unconsolidated deposits (see table C11), and the potential for saltwater encroachment exists in the delta area of the Skagit River. However, wells in the delta area presently show relatively small concentrations of chloride (which in large concentrations is an indicator of the presence of saltwater).

Most recorded ground-water temperatures were between 48° and 52°F (9° and 11°C), depending mainly on the depth of the aquifer. Shallower aquifers tend to yield colder water, with the temperature of the shallowest water approaching the average annual air temperature at that location.

## Water Use

The ground and surface waters of the Skagit River basin are used for a wide variety of purposes. Of the total water used in the basin, surface water accounts for about 81 percent and ground water about 19 percent. Both surface and ground waters are used for public supply and irrigation. Surface water also is used for food processing, oil refining, lumbering, and other industries, and provides a basis for recreational use and a means of dilution and transport of sewage and industrial wastes. The relative importance of surface and ground waters as sources of supply and the relative proportions of each used for various purposes are shown in figure A9.

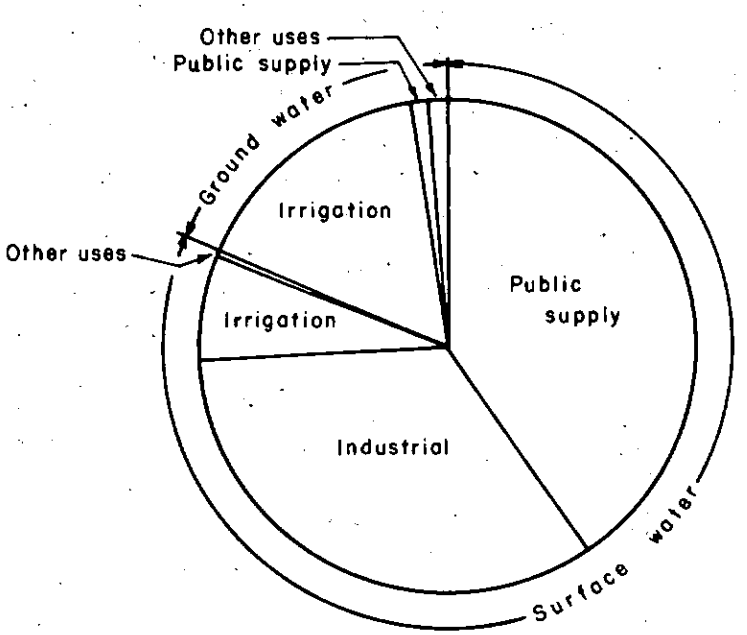



FIGURE A9.--Uses of surface and ground waters in the Skagit River basin, 1970. Total quantity withdrawn was about 52,000 acre-feet.

About 21,200 acre-ft/yr of surface water is used by towns, and about 17,700 acre-ft/yr is used by industries. However, diversion of surface water for irrigation is relatively small, about 3,600 acre-ft/yr. About 8,400 acre-ft/yr of ground water is used for irrigation, about 510 acre-ft/yr is used for public supply, and about 900 acre-ft/yr is used for rural domestic supplies.

Most of the irrigated land is located along the Skagit River from Concrete west to the river's mouth. Some of the irrigated land in the Samish River basin west of Sedro-Woolley also is supplied by Skagit River water. A total of about 6,200 acres in the Skagit River basin is irrigated at a rate of about 1.82 acre-ft/acre. The actual consumptive use is about 1.18 acre-ft/acre, giving an estimated farm irrigation efficiency of 65 percent. With an additional estimated operational loss (mostly leakage from canals, ditches, and pipes) of 5 percent of the diverted amount, the irrigated lands require an average annual diversion of approximately 12,000 acre-feet of water (Puget Sound Task Force, 1970). In most of the irrigated areas, extensive drainage systems collect the return flow and discharge it to Skagit Bay; only a minor amount (about 500 acre-ft/yr) of flow is returned to the Skagit River.

The principal industrial uses include pulp processing (about 5,600 acre-ft/yr) and oil-refining (about 7,300 acre-ft/yr). The total use by the remaining industries, led by food-processing and chemical and metal industries, is about 4,800 acre-ft/yr, according to unpublished data from U.S. Geological Survey files collected for a report by Parker (1971).

## Potential for Future Water Development

Water-related development in the Skagit Basin presently (1976) includes power generation, agriculture, municipal and industrial supplies, fisheries, and domestic and stock-water supplies.

Water used for power generation is not consumed, but such water use does result in the modification of the runoff characteristics of the basin. Increases in upper-basin storage for power generation creates a potential not only for greater power generation, but also for a reduction in flooding frequency in the low-lying parts of the flood plain. The International Joint Commission (1971) of Canada and United States estimates that an increase of 122.5 feet in the height of Ross Dam would increase the power-generation capacity of the Skagit River basin by 35 percent. Depending upon operational policies and procedures an additional 2.021 million acre-feet of total storage could be made available to reduce flooding in the basin's lowland.

The possible development of nuclear powerplants may affect the water resources of the basin. The use of water for cooling in such facilities would add heat to the hydrologic system, though little water would be consumed. For example, the Puget Sound Power and Light Co.'s proposed Skagit nuclear project (Washington State Thermal Power Plant Site Evaluation Council, 1975), if installed as proposed, would discharge to the Skagit River a maximum of 27.2 $ft^3/s$ of water at a maximum temperature of 70°F (21°C). The greatest effect on the river would occur when its discharge is at a minimum while the effluent

discharge and temperature are at their maximum values. Using the minimum flow recorded from October 1925 through September 1973, of 2,876 $ft^3/s$ (at Concrete) and the range of river temperature (34.0° to 62.5°F) recorded from July 1962 through August 1970 (at Mount Vernon), the effect of the powerplant effluent on the temperature of the river can be calculated as follows:

$$T_{RD} = \frac{Q_{RU}T_{RU} + Q_E T_E}{Q_{RD}}$$

In which:

$Q_{RD}$ and $T_{RD}$ = Discharge ($ft^3/s$) and temperature (°F), respectively, downstream of effluent input.

$Q_{RU}$ and $T_{RU}$ = Discharge ($ft^3/s$) and temperature (°F), respectively, upstream of effluent input; and

$Q_E$ and $T_E$ = Discharge ($ft^3/s$) and temperature (°F), respectively, of effluent.

Then,

(1) when river temperature is at a maximum,

$$T_{RD} = \frac{(2,160)(62.5) + (27.2)(70)}{(2,187.2)} = 62.6°F, \text{ and}$$

(2) when river temperature is at a minimum,

$$T_{RD} = \frac{(2,160)(34.0) + (27.2)(70)}{(2,187.2)} = 34.4°F$$

The above calculated temperature increases of 0.1°F (0.06°C) to 0.4°F (0.22°C) would occur after total mixing of the effluent with the river water. The temperature increase at the point of discharge of the effluent would depend upon the nature of the discharge apparatus as well as the discharges and temperatures of the river and effluent, and would be somewhat greater than the increase after total mixing.

Use of water for irrigation can be increased by 89,600 acres more than the 6,200 acres presently (1971) irrigated (Puget Sound Task Force, Appendix VII, 1971). Based on an average annual irrigation rate of 1.82 acre-ft/acre, a total of 163,000 acre-ft of water per year would be required to irrigate the additional acreage, creating a total irrigation demand of 174,000 acre-ft per year. The peak demand occurs in July and August when about 67 percent of the total annual irrigation would be applied. At full development, this peak demand would total about 117,000 acre-ft, or an average rate of about 950 $ft^3/s$ during the 2-month period. Because the average discharge of the Skagit River (at Mount Vernon) for the same period is about 16,800 $ft^3/s$, all of the potential irrigation could be accomplished by diversion from the river.

The basin's ground-water reservoirs probably also are capable of supplying most of the potential irrigation demand. The outflow of ground water from the basin is approximately 400,000 acre-ft/yr. This is the maximum rate at which ground water could be pumped, assuming all ground-water outflow could be intercepted by wells without creating any changes in the natural system (such as lowering the water table or increasing the amount of surface-water flow into the ground-water system). Assuming that 30 percent of the outflow can be intercepted by wells, a total of 120,000 acre-ft/yr could be obtained.

The general availability of ground water in the basin is shown in figure A7. Nearly all the potentially irrigable lands lie along the Skagit River where well yields from sand and gravel aquifers are generally the greatest in the basin; from 26 to more than 250 gal/min. The most productive wells are collector wells, which are constructed by placing vertical concrete cylinders in the ground and extending perforated pipes radially into the aquifer. Two collector wells placed near the Skagit River at Mount Vernon are each reported to yield more than 10,000 gal/min (Mikels, 1954). However, because much of the water obtained by these wells is from infiltration of Skagit River water through the riverbed, these wells reduce the discharge of the river.

An estimate of the quantity of surface water available at any point in the basin can be obtained by subtracting the desired minimum discharge from the average discharge of the river at that point. For example, a minimum discharge of 1,000 $ft^3/s$ (724,000 acre-ft/yr) is maintained at Newhalem (by Seattle City Light for salmon fisheries) and the average annual discharge is 4,470 $ft^3/s$ (3,240,000 acre-ft/yr). Therefore, an annual average discharge of about 3,470 $ft^3/s$ (2,510,000 acre-ft/yr) is available for use at Newhalem. The quantity of water available at Mount Vernon is a good estimate of the total quantity of water available in the entire basin. Using the average annual discharge of 16,700 $ft^3/s$ (12,100,000 acre-ft/yr) at Mount Vernon, and maintaining a minimum discharge equal to the average annual minimum discharge of 10,500 $ft^3/s$ (7,600,000 acre-ft/yr), leaves 6,200 $ft^3/s$ (4,500,000 acre-ft/yr) available for use.

The combined surface and ground waters available in the entire basin, from the above calculations is about 6,370 $ft^3/s$ (4,610,000 acre-ft/yr). Present use is at a rate of about 59 $ft^3/s$ (43,000 acre-ft/yr), or less than 1 percent of the available water in the basin. About 6,310 $ft^3/s$ (4,570,000 acre-ft/yr) of water remains untapped.

With present and foreseeable potential water use, being a small fraction of the abundant resources, the potential for development is not limited by the quantity of water available. However, any plan involving significant increases in water use must consider the effects upon water quality as well as quantity. The actual volume of water available for use will depend upon the desired quality of water to be maintained, the locations and volumes of water removed from surface- and ground-water resources, and the locations, volumes, and quality of effluents to be returned.

## PART B: TECHNICAL ANALYSIS OF HYDROLOGIC DATA

### Surface Water

#### Streamflow Records

The first records of streamflow in the Skagit River basin were collected on the Skagit River at Sedro-Woolley at station 12199000 (formal site number assigned by the U.S. Geological Survey) with the installation of a staff gage by the U.S. Army Corps of Engineers in May 1908. The gage was read twice daily by a local observer and periodic discharge measurements were made by the Corps of Engineers. The Geological Survey took over operation of the station in May 1910.

The Geological Survey installed several staff gages on the Skagit River and its main tributaries during 1908-10. At these sites local observers recorded daily gage heights, and discharge measurements were made by U.S. Geological Survey personnel. The first water-stage recorder was installed in April 1914 at the gaging station on the Skagit River at Reflector Bar, near Newhalem (12177000). Since 1908, miscellaneous streamflow measurements have been made at ungaged sites, and in 1973 continuous streamflow records were being collected at 15 locations in the basin. In all, streamflows have been measured at 207 locations on 123 streams either continuously through the use of water-stage recorders or intermittently by miscellaneous discharge measurements.

Indirect measurements of discharge, to determine the annual peak flows, have been made at nine crest-stage gages since the first of these was installed in 1951. Five crest-stage gages and three former gaging stations, converted to peak-flow sites after being discontinued as regular stations, are still in operation. Also, records of stage on the Skagit River at the international boundary near Hope, B.C., and records of elevations and contents at five reservoirs are currently being obtained.

Tables C1 and C2 (in Part C of the report) list all the data-collection sites with their locations, drainage areas, and lengths and types of records collected. The location of all the data-collection sites are shown on plate 1. Table C1 contains a complete record of all miscellaneous streamflow measurements, including the indirect measurements. All miscellaneous measurements prior to January 1961 are listed in a publication by the Washington State Department of Conservation (1964). Table C2 contains monthly and yearly mean discharges of streams, gage height of the Skagit River at the international boundary, and month-end contents of reservoirs in the Skagit River basin. Daily discharge records through the 1965 water year for any of the gaging stations are contained in U.S. Geological Survey water-supply papers. Records for the period 1966-73 are in annual reports of the U.S. Geological Survey (1967-74).

## Snow-Survey and Precipitation Records

The first snow courses in the Skagit River basin were established in the upper Skagit River subarea in 1943, and initial measurements of snow depth, water content, and density were made in February 1944. In 1958 snow courses were established in the Baker River subarea.

Snow-survey courses are located at strategic sites and elevations throughout the upper parts of the basin. During a 5-day period at the end of each month throughout the winter, measurements of the depth and water content of the snow cover are made at each site. From these measurements the density is computed to give the percentage of water in the snow. As winter progresses, the depth of the snow may vary but the density and water content generally show an upward trend (fig. B1) as the snowpack becomes a reservoir for later use.

The measurements of water content at 22 locations (table C6) in the Skagit River basin provide the basic data for predicting the amount of yearly runoff available in the basin. The location of the snow courses are shown on plate 1. Snow survey data prior to May 1960 are listed in a publication by the Washington State Department of Conservation (1960). The advance information is important for making full use of reservoirs for power generation and flood control. In years of above-normal water content, more water can be used early in the season for power generation, and the reservoir level can be lowered below the normal elevation for impounding the snowmelt water that comes later.

Storage precipitation gages (location shown on pl. 1) have been in use in the Skagit River basin since 1962. Interim readings are made at these sites during snow surveys and this information is used in combination with snow-survey data. Table C7 presents the yearly catches at the three storage gages in the basin.

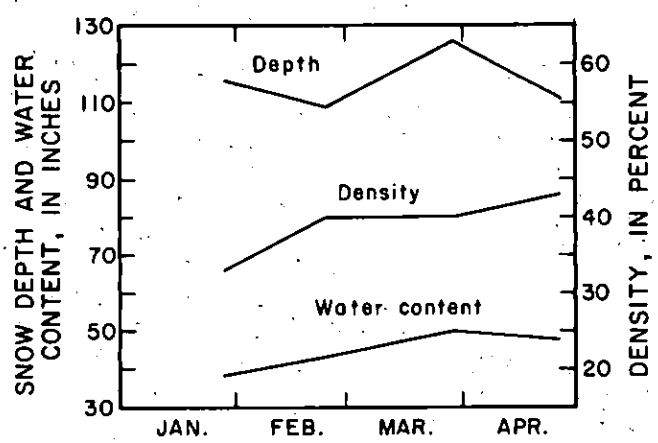



FIGURE B1.--Depth, density, and water content of snow at Brown Top Snow Course (S3 on pl. 1), in 1974.

## Statistical Analysis--In General

The value of the miscellaneous measurements and short-term seasonal records collected in the Skagit River basin can be realized in a study correlating the streamflows at these sites with those at long-term gaging-station sites in the basin. Such a study has not been made in the Skagit River basin but an example of the type of study is that by Collings and Hidaka (1974).

Some of the streamflow characteristics that need definition in the planning and development of surface-water resources--besides the maximum and minimum discharges--are the frequencies and durations of selected flood discharges and low flows. The statistical tool used to relate recurrence intervals to peak flows, minimum flows, or average flows for selected periods of time, is the frequency curve. Construction of the frequency curve was accomplished through a computer by use of the "Log-Pearson Type III" distribution method. The use of this method was recommended by the Water Resources Council (1967). Annual peak flows, low flows, or average flows of selected durations were analyzed statistically, and the corresponding frequency curves, relating discharges to recurrence intervals, were computed and plotted.

It should be noted that recurrence intervals, as in all frequency studies, are averages and by no means imply any regularity of recurrence. For example, a 25-year flood occurring in any particular year may be followed by another such flood the very next year, or may not occur for perhaps another 40 years. Thus, in the above example the intervals are an average probability calculated on a long-term basis. A better concept of the recurrence interval is the probability of occurrence. For example, a discharge having 20-year recurrence interval has a 5-percent (reciprocal of the recurrence interval) probability of being exceeded in any future year.

## Flow Duration

Streamflow variability at a gaging station can be shown graphically using the flow-duration curve, which depicts the percentage of time for the period of record that any discharge was equaled or exceeded. The flow-duration curve for a gaging station is constructed by (1) arraying, in order of magnitude, the daily discharges for a specific period of record; (2) grouping daily discharges into classes or rates; and (3) computing the percentages of time that the various rates of discharges were equaled or exceeded. The discharges are then plotted against the corresponding percentages, as shown in the flow-duration curve of figure B2. The curve indicates that the daily discharge past the gaging station on Alder Creek near Hamilton (12196000) was at least 27 $ft^3/s$ 50 percent of the time during the period of record 1944-71 and at least 6.7 $ft^3/s$ during 99 percent of that period. Flow-duration data for eight gaging stations in the Skagit River basin are presented in table B1.

The slope of the lower end of the flow-duration curve is a measure of the availability of streamflow during the low-flow period. The leveling of the curve for Alder Creek near Hamilton (fig. B2) indicates that the ground-water reservoir is maintaining flows during the low-flow period.

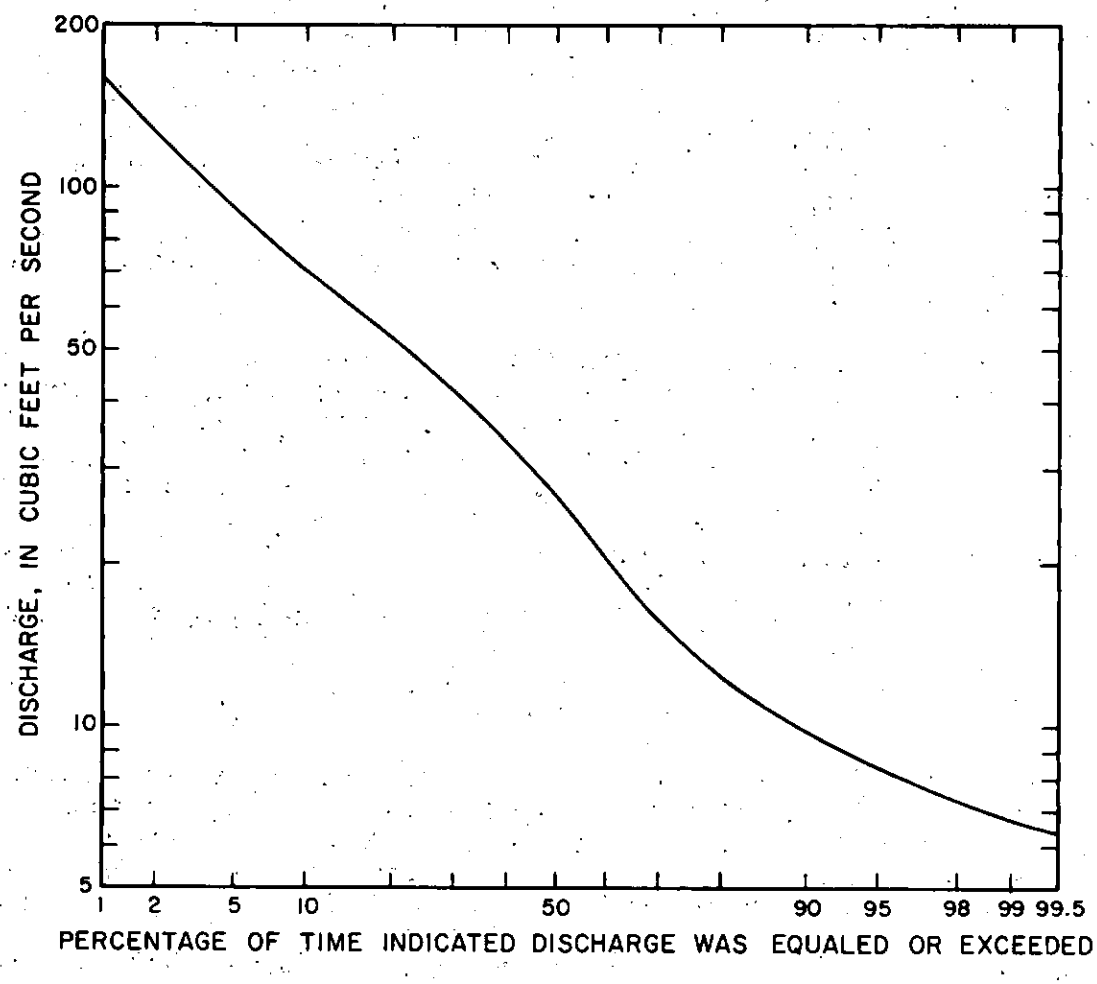



FIGURE B2.--Flow-duration curve for Alder Creek near Hamilton, for the period 1944-71.

TABLE B1.--Daily discharge durations at selected gaging stations

[Daily discharge, in cubic feet per second]

| Percentage of time discharge equaled or exceeded that shown | Thunder Creek near Newhalem (12175500) | Stetattle Creek near Newhalem (12177500) | Skagit River at Newhalem (12178000) | Cascade River at Marblemount (12182500) | Sauk River near Sauk (12189500) | Skagit River near Concrete (12194000) | Alder Creek near Hamilton (12196000) | Skagit River near Mount Vernon (12200500) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2,380 | 750 | 17,000 | 3,800 | 16,000 | 49,000 | 160 | 50,000 |
| 2 | 2,070 | 640 | 14,500 | 3,300 | 13,500 | 42,500 | 130 | 43,500 |
| 5 | 1,650 | 510 | 10,800 | 2,650 | 10,500 | 33,500 | 91 | 35,000 |
| 10 | 1,350 | 400 | 8,400 | 2,100 | 8,400 | 27,000 | 70 | 28,500 |
| 20 | 1,000 | 285 | 6,300 | 1,550 | 6,200 | 21,000 | 52 | 22,200 |
| 30 | 780 | 210 | 5,150 | 1,180 | 4,950 | 17,000 | 42 | 18,800 |
| 40 | 600 | 162 | 4,300 | 940 | 4,100 | 14,500 | 34 | 16,200 |
| 50 | 435 | 125 | 3,650 | 770 | 3,450 | 12,500 | 27 | 14,300 |
| 60 | 310 | 100 | 3,050 | 635 | 2,900 | 10,800 | 20 | 12,700 |
| 70 | 235 | 79 | 2,500 | 525 | 2,400 | 9,300 | 16 | 11,100 |
| 80 | 180 | 61 | 2,000 | 435 | 1,920 | 8,000 | 12 | 9,580 |
| 90 | 130 | 43 | 1,480 | 340 | 1,520 | 6,500 | 9.8 | 7,900 |
| 95 | 105 | 34 | 1,150 | 280 | 1,280 | 5,400 | 8.4 | 6,800 |
| 98 | 86 | 26 | 870 | 220 | 1,000 | 4,250 | 7.3 | 5,850 |
| 99 | 76 | 22 | 730 | 190 | 840 | 3,550 | 6.7 | 5,250 |

## Monthly and Annual Flows

Table B2 presents a summary of streamflow data, listing the monthly and annual mean, maximum, minimum and 2-year-recurrence-interval flows recorded at eight long-term gaging stations. In figure B3 the high-flow period for the Cascade River at Marblemount is shown to occur usually during the period May-July. As most of the precipitation, in the form of snow, occurs during the period October-March, it can be noted that temperature is the factor usually generating high flows; streamflow starts to increase slightly in April as the warming temperature initiates melting of the snowpack, and it reaches its peak in June, as temperature continues to rise. By the end of July most of the winter snowpack has melted, and the low-flow season begins. A comparison of the average monthly mean flows to the average annual mean flows for the unregulated stations listed in table B2 further substantiates this point. During the high-flow period, May-July, the average monthly mean flows range from 133 to 218 percent of the average annual flows, whereas during the low-flow period of August-April the average monthly mean flows range from 32 to 157 percent of the average annual flows. Table B2 shows some of the effects of man's regulation of streamflow, whereby water being stored during the high-flow periods is released to augment the natural streamflow during the low-flow periods.

The frequency distribution of monthly mean discharge depicted in figure B4, for the Skagit River at Newhalem (12178000), and in figure B5 for the Sauk River near Sauk (12189500), is similar to the flow pattern described for the Cascade River at Marblemount (12182500). For the Skagit River near Newhalem, a regulated stream with a larger drainage area (1,175 $mi^2$), discharges during the high-flow period have been affected by upstream storage and are no greater than those for the Sauk River near Sauk, an unregulated stream with a drainage area of 732 $mi^2$. Also, during the low-flow period, water is released from upstream storage and the receding flows of the Skagit River at Newhalem are not as low as those of the Sauk River near Sauk, particulary in September and October.

TABLE B2.--Periods of record, and monthly and annual mean, maximum, minimum, and 2-year recurrence interval discharges at selected gaging stations

| Station number and number on plate 1 (in parenthesis) | Station name and period of record | Type of discharge | Discharge, in cubic feet per second | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | October | November | December | January | February | March | April | May | June | July | August | September | Annual |
| 12175500 (35) | Thunder Creek near Newhalen (Oct.1933-Sept.1973) (unregulated) | Mean | 481 | 369 | 304 | 242 | 226 | 202 | 382 | 908 | 1,349 | 1,328 | 971 | 639 | 619 |
| | | Maximum | 917 | 919 | 746 | 686 | 630 | 663 | 1,060 | 1,350 | 2,020 | 1,830 | 1,330 | 894 | 863 |
| | | Minimum | 214 | 110 | 95 | 85 | 57 | 91 | 173 | 527 | 891 | 926 | 705 | 380 | 452 |
| | | 2-year recurrence interval | 451 | 334 | 273 | 211 | 199 | 162 | 338 | 889 | 1,320 | 1,320 | 956 | 636 | 612 |
| 12177500 (40) | Stetattle Creek near Newhalem (Oct.1934-Sept.1973 (unregulated) | Mean | 165 | 160 | 152 | 119 | 109 | 97 | 182 | 336 | 368 | 269 | 132 | 106 | 183 |
| | | Maximum | 361 | 363 | 327 | 346 | 279 | 305 | 323 | 493 | 562 | 481 | 276 | 285 | 244 |
| | | Minimum | 31 | 20 | 48 | 27 | 21 | 30 | 81 | 198 | 176 | 86 | 47 | 23 | 110 |
| | | 2-year recurrence interval | 160 | 150 | 140 | 103 | 99 | 80 | 176 | 332 | 367 | 263 | 125 | 96 | 184 |
| 12178000 (46) | Skagit River at Newhalem Oct.1921-Sept.1973 (regulated) | Mean | 3,268 | 3,533 | 3,927 | 3,648 | 3,508 | 3,291 | 4,241 | 6,718 | 8,414 | 6,308 | 3,521 | 2,670 | 4,424 |
| | | Maximum | 6,918 | 7,670 | 7,680 | 6,757 | 7,647 | 6,769 | 12,300 | 13,500 | 17,600 | 12,490 | 6,392 | 4,209 | 6,304 |
| | | Minimum | 862 | 606 | 767 | 598 | 598 | 809 | 2,170 | 1,513 | 2,316 | 3,135 | 2,152 | 1,460 | 2,650 |
| | | 2-year recurrence interval | 3,180 | 3,450 | 3,920 | 3,630 | 3,470 | 3,240 | 3,700 | 6,450 | 8,110 | 5,980 | 3,380 | 2,640 | 4,398 |
| 12182500 (77) | Cascade River at Marblemount Oct.1929-Sept.1973 (unregulated) | Mean | 785 | 832 | 813 | 697 | 651 | 572 | 873 | 1,690 | 2,165 | 1,685 | 914 | 672 | 1,030 |
| | | Maximum | 1,592 | 2,050 | 1,946 | 1,599 | 1,524 | 1,734 | 1,773 | 2,657 | 3,423 | 2,798 | 1,794 | 1,439 | 1,347 |
| | | Minimum | 294 | 176 | 252 | 201 | 146 | 257 | 432 | 1,074 | 1,144 | 858 | 556 | 361 | 708 |
| | | 2-year recurrence interval | 746 | 769 | 755 | 650 | 612 | 482 | 834 | 1,640 | 2,110 | 1,620 | 857 | 622 | 1,024 |
| 12189500 (118) | Sauk River near Sauk Oct.1929-Sept.1973 (unregulated) | Mean | 3,030 | 4,067 | 4,495 | 4,023 | 3,722 | 3,181 | 4,030 | 6,797 | 8,216 | 5,801 | 2,824 | 2,148 | 4,360 |
| | | Maximum | 6,770 | 9,590 | 11,580 | 8,381 | 9,062 | 9,443 | 7,375 | 10,570 | 12,610 | 10,610 | 5,452 | 4,941 | 6,050 |
| | | Minimum | 993 | 724 | 1,457 | 1,214 | 793 | 1,520 | 2,106 | 4,162 | 3,715 | 2,515 | 1,718 | 1,089 | 2,890 |
| | | 2-year recurrence interval | 2,810 | 3,810 | 4,140 | 3,820 | 3,510 | 2,690 | 3,920 | 6,650 | 8,100 | 5,500 | 2,620 | 1,960 | 4,335 |
| 12193500 (133) | Baker River at Concrete Oct.1944-Sept.1973 (regulated) | Mean | 2,472 | 2,829 | 2,863 | 2,663 | 2,456 | 1,985 | 2,048 | 3,216 | 4,058 | 3,577 | 2,075 | 1,757 | 2,670 |
| | | Maximum | 5,034 | 4,951 | 5,250 | 4,907 | 4,861 | 3,051 | 3,970 | 5,571 | 6,156 | 6,866 | 3,973 | 2,919 | 3,270 |
| | | Minimum | 1,134 | 1,067 | 1,459 | 736 | 1,097 | 160 | 478 | 783 | 935 | 1,625 | 1,156 | 1,098 | 1,710 |
| | | 2-year recurrence interval | 2,350 | 2,800 | 2,730 | 2,540 | 2,340 | 1,880 | 1,990 | 3,180 | 3,960 | 3,360 | 1,960 | 1,720 | 2,684 |
| 12194000 (134) | Skagit River near Concrete Oct.1925-Sept.1973 (regulated) | Mean | 11,660 | 14,010 | 15,360 | 13,900 | 12,750 | 11,250 | 14,100 | 22,270 | 26,740 | 19,790 | 10,640 | 8,485 | 15,090 |
| | | Maximum | 22,550 | 29,300 | 31,150 | 25,240 | 28,700 | 23,380 | 29,270 | 36,300 | 43,320 | 37,430 | 20,370 | 16,400 | 20,560 |
| | | Minimum | 3,810 | 2,876 | 5,290 | 4,490 | 3,190 | 6,220 | 7,825 | 11,620 | 12,300 | 9,310 | 6,403 | 4,852 | 9,629 |
| | | 2-year recurrence interval | 11,360 | 13,560 | 14,920 | 13,640 | 12,270 | 10,490 | 13,280 | 21,820 | 26,380 | 18,770 | 10,000 | 8,110 | 15,080 |
| 12200500 (209) | Skagit River near Mount Vernon Oct.1942-Sept.1973 (regulated) | Mean | 13,350 | 16,690 | 18,300 | 16,920 | 16,150 | 13,190 | 15,100 | 22,200 | 27,460 | 21,710 | 11,800 | 9,510 | 16,870 |
| | | Maximum | 23,700 | 29,620 | 30,560 | 26,740 | 31,140 | 27,010 | 23,360 | 36,530 | 43,460 | 37,650 | 20,290 | 17,540 | 21,910 |
| | | Minimum | 4,323 | 6,592 | 8,417 | 7,636 | 7,626 | 6,856 | 8,857 | 13,090 | 15,590 | 10,430 | 6,835 | 5,023 | 10,510 |
| | | 2-year recurrence interval | 13,090 | 16,160 | 17,930 | 16,830 | 15,480 | 12,210 | 14,860 | 21,700 | 26,910 | 20,830 | 11,330 | 9,060 | 16,900 |

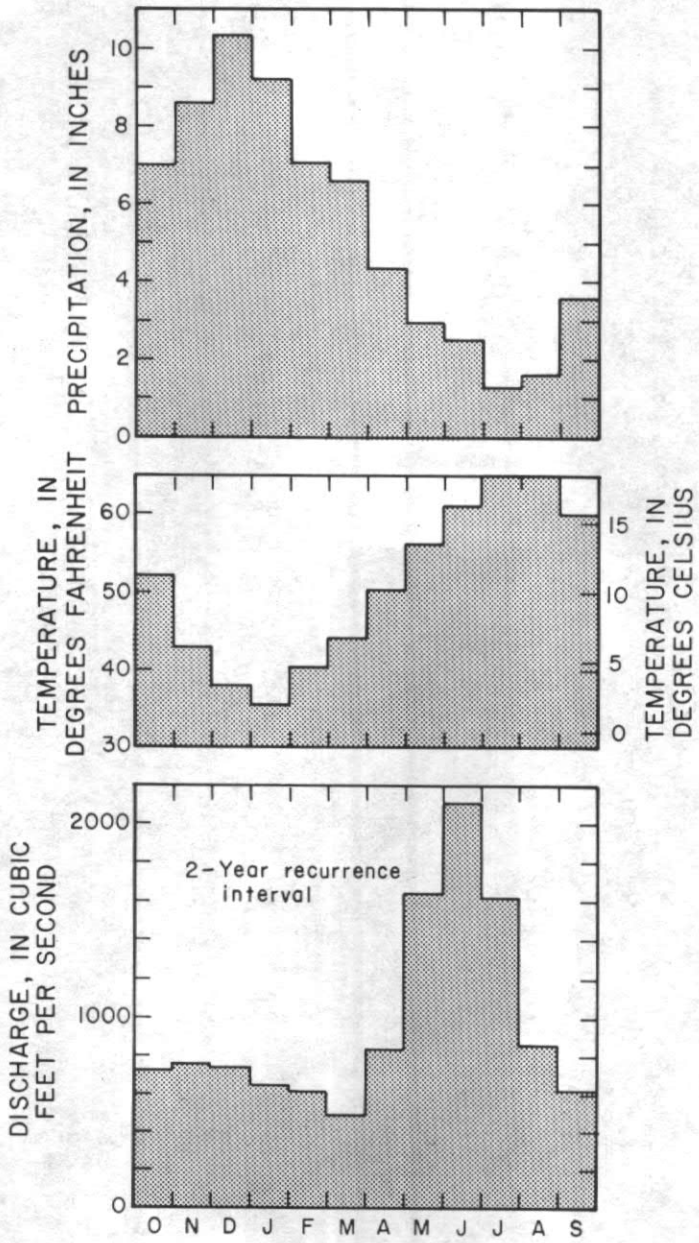



FIGURE B3.--Frequency distribution of monthly mean discharge of Cascade River at Marblemount during the period 1929-73, compared with the monthly average air temperature and precipitation at Concrete during the period 1925-73. Climatological data from U.S. Weather Bureau and National Weather Service for period indicated.

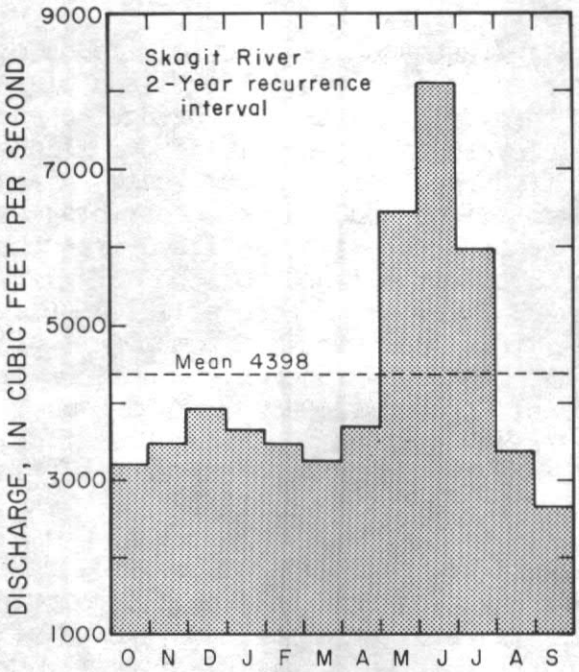



FIGURE B4.--Frequency distribution of monthly mean discharge of Skagit River at Newhalem during the period 1921-73.

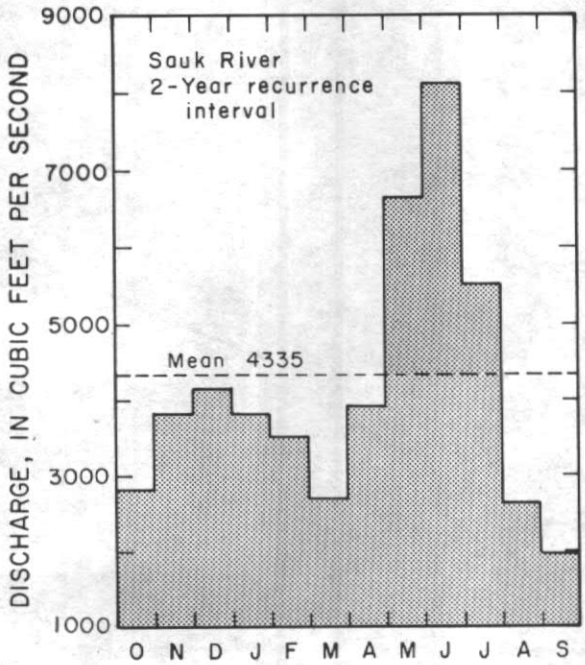



FIGURE B5.--Frequency distribution of monthly mean discharge of Sauk River near Sauk during the period 1929-73.

## Floods

Information on the magnitude and frequency of floods of streams in various parts of the Skagit River basin is essential to flood-plain zoning and to the design of flood-control projects, such as bridge openings, channel modifications, and roadbed elevations. In this study, floods were analyzed only for the magnitude and frequency of maximum peak discharges in each year. Twelve continuous gaging stations and three crest-stage gages, located on 13 streams, had adequate records to establish flood-frequency curves. Flood-frequency curves were not established for the Skagit River at Newhalem (12178000) and the Baker River at Concrete (12193500) because the flows of these streams are immediately downstream from points of regulation by dams, which has varied over the years. Although streamflows are also regulated on the Skagit River near Mount Vernon (12200500), its frequency curve is presented as it is the most downstream station on the Skagit River. The method of computation of magnitude and frequency of occurrence of floods is described by Riggs (1968) and the Water Resources Council (1967).

Flood-frequency curves at gaging stations included in this report were constructed by use of the log-Pearson Type III computer program based on evaluation of the mean, standard deviation, and skew coefficient. An example of the flood-frequency curve for the Skagit River near Mount Vernon (12200500) is presented in figure B6.

Flood-frequency data, including those from the station on the Skagit River near Mount Vernon, appear in table B3. These data can be used to construct flood-frequency curves if graphical representation is desired.

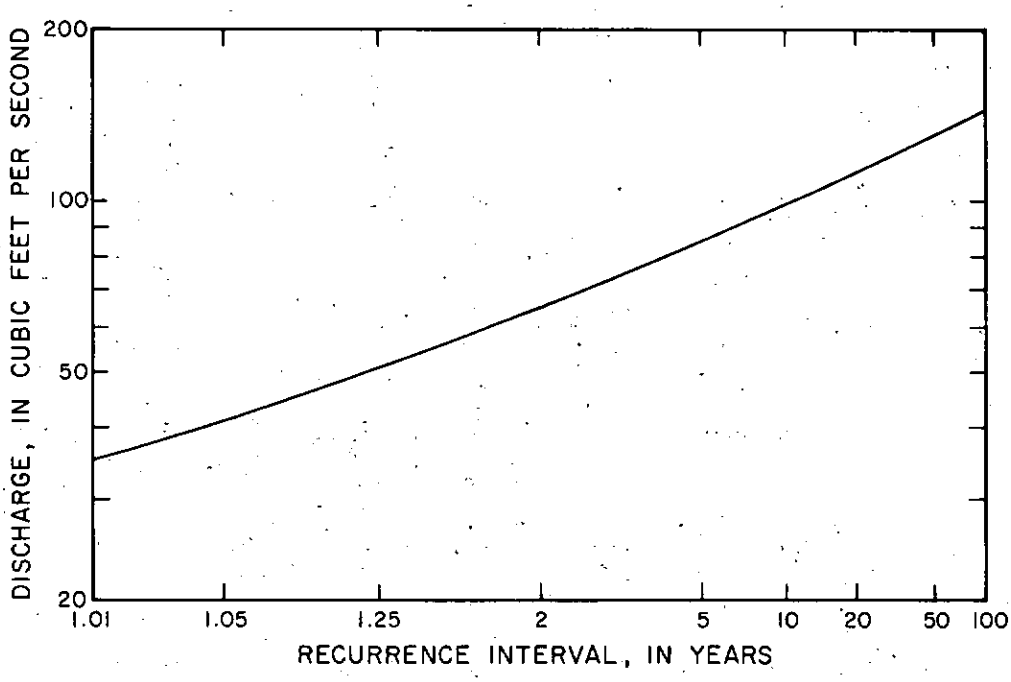



FIGURE B6.--Flood-frequency curve for Skagit River near Mount Vernon for the period 1942-73.

TABLE B3.--Log-Pearson Type III flood-frequency data

| Station number and number on plate 1 (in parenthesis) | Station name | Ordinate of flood-frequency curve, in cubic feet per second, for indicated recurrence interval: | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1.05-yr | 1.25-yr | 2.0-yr | 5.0-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| [a]12170500 (1) | Skagit River near Hope, B.C. | 2,340 | 3,960 | 5,960 | 7,870 | 9,000 | 10,800 | 12,000 | -- |
| [a]12174000 (27) | Ruby Creek near Newhalem | 2,200 | 3,077 | 4,270 | 5,780 | 6,700 | 7,800 | 8,570 | -- |
| 12175500 (35) | Thunder Creek near Newhalem | 2,050 | 2,710 | 3,830 | 5,750 | 7,290 | 9,580 | 11,500 | 13,800 |
| 12177500 (40) | Stetattle Creek near Newhalem | 910 | 1,220 | 1,800 | 2,880 | 3,820 | 5,310 | 6,680 | 8,300 |
| [b]12178100 (48) | Newhalem Creek near Newhalem | 797 | 1,010 | 1,440 | 2,370 | 3,270 | -- | -- | -- |
| 12182500 (77) | Cascade River at Marblemount | 3,210 | 4,510 | 6,570 | 9,790 | 12,200 | 15,500 | 18,100 | 21,000 |
| 12186000 (94) | Sauk River above White Chuck River near Darrington | 4,230 | 5,560 | 7,950 | 12,300 | 16,000 | 21,800 | 26,900 | 32,900 |
| [a]12189400 (116) | Sauk River Tributary near Darrington | 50 | 71 | 101 | 141 | 166 | 196 | 218 | -- |
| 12189500 (118) | Sauk River near Sauk | 12,700 | 18,200 | 27,000 | 40,400 | 50,100 | 63,400 | 74,000 | 85,000 |
| 12196000 (150) | Alder Creek near Hamilton | 140 | 200 | 297 | 451 | 567 | 727 | 857 | 997 |
| [c]12196500 (160) | Day Creek near Lyman | 3,260 | 3,780 | 4,390 | 5,090 | 5,490 | 5,940 | -- | -- |
| [a]12197200 (171) | Parker Creek near Lyman | 87 | 108 | 135 | 167 | 186 | 208 | 223 | -- |
| [b]12199800 (194) | East Fork Nookachamps Creek near Big Lake | 238 | 348 | 464 | 561 | 601 | -- | -- | -- |
| 12200500 (209) | Skagit River near Mount Vernon | 41,400 | 51,100 | 65,300 | 85,400 | 99,300 | 117,400 | 131,400 | 145,900 |
| [a]12200700 (212) | Carpenter Creek Tributary near Mount Vernon | 15 | 22 | 34 | 52 | 66 | 83 | 97 | -- |

[a]Period of record less than 25 years.

[b]Period of record less than 15 years.

[c]Period of record less than 20 years.

Flood magnitudes and frequencies for ungaged streams in the basin can be determined from the equations presented in a report by Cummans, Collings, and Nassar (1975). That report presents regionalized equations for recurrence intervals of 2,5,10,25,50, and 100 years.

## Low Flows

Knowledge of the magnitude and frequency of minimum flows is important in many hydrologic and water-management studies. The best tool presently in use to acquire this knowledge is a low-flow frequency analysis based on gaging-station records. Therefore, the 7-, 30-, 90-, and 183-day low-flow-frequency curves for 14 unregulated gaging stations in the study area were developed using methods described by Riggs (1968). For each climatic year (year beginning April 1 and ending March 31), the minimum average flow for the above number of consecutive days was computed and arranged in order of magnitude. These data were related to recurrence interval and plotted on a frequency graph. Figure B7 shows examples of families of such curves for Stetattle Creek near Newhalem (12177500) and Alder Creek near Hamilton (12196000). Stetattle Creek is an unregulated stream in the upper Skagit River basin, and Alder Creek is an unregulated stream in the lower Skagit River basin.

Low-flow-frequency data for the 14 stations are presented in table B4 in a form convenient for use in studies of water availability during periods of low flows. These data can be plotted and the curves would be similar to those in figure B7.

In designing a water-supply project dependent on the low flows of a stream, the project planner must know the greatest number of consecutive days a year that a predetermined given flow could be expected. Any time the flow in the stream is less than that predetermined flow, it is considered deficient. This information can be obtained from frequency curves, such as those developed for the Sauk River near Sauk (12189500) shown in figure B8. These frequency curves were constructed from data contained in table B4. Similar curves were constructed for each gaging station from its low-flow frequency data, and table B5 contains data for selected stations as derived from these curves.

In the design and planning of storage projects low-flow-frequency data contained in table B4 can be used to construct frequency-mass curves such as that depicted in figure B9. The frequency-mass curve represents the total discharge available during a low-flow period for a specified recurrence interval. The frequency-mass curve in figure B9 corresponds to a 20-year recurrence interval and is drawn smoothly through points obtained by plotting the volume of natural discharge for various durations of minimum average flow against the periods of 7, 30, 90 and 183 days. The maximum ordinate between this curve and the desired draft rate can be measured to indicate the volume of storage required. Riggs (1973) suggests that such frequency-mass curves be prepared for recurrence intervals of 5 and 20 years and for a greater recurrence interval only if justified by the length of record.

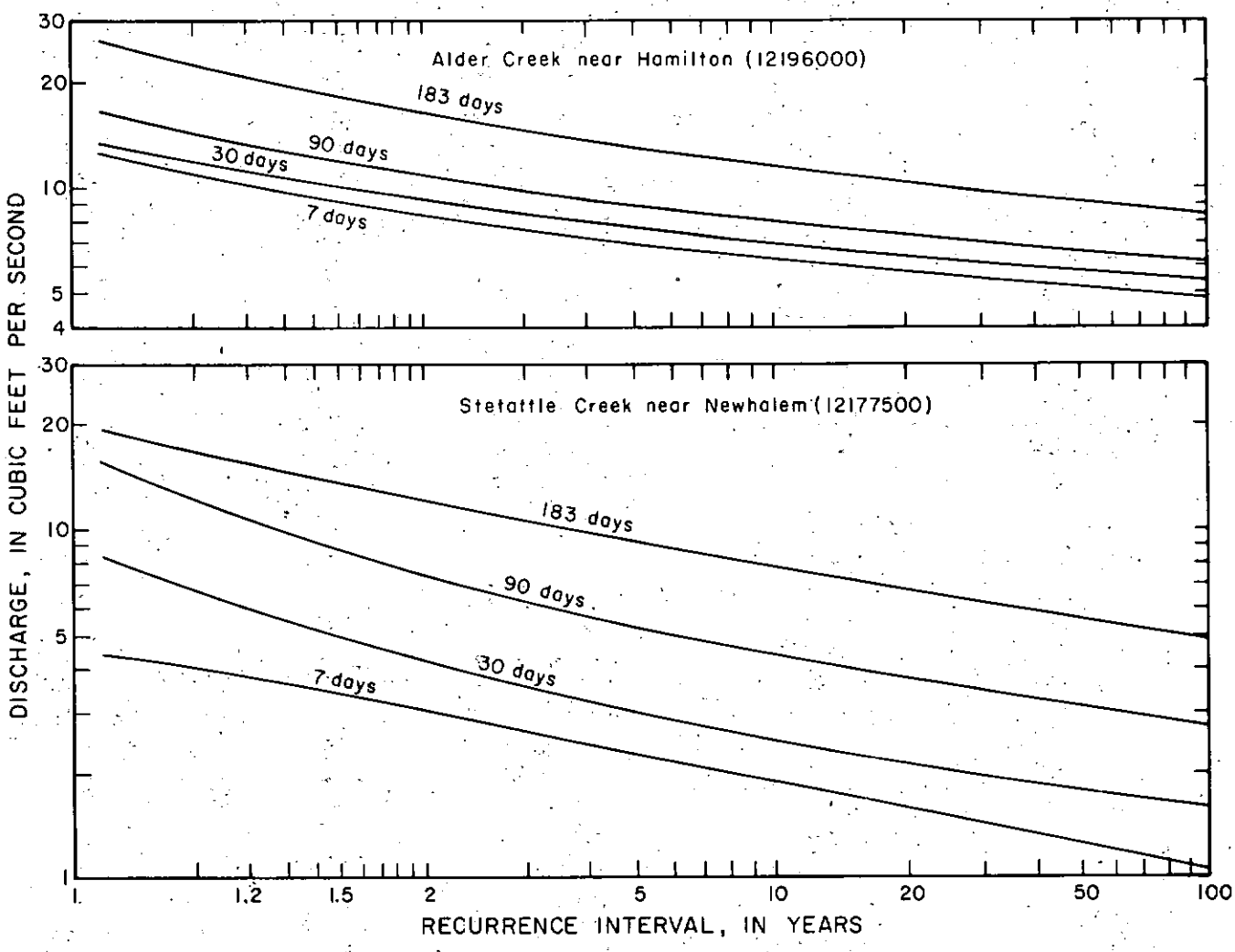



FIGURE B7.--Magnitude and frequency of annual low flows for specified periods, Alder Creek near Hamilton and Stetattle Creek near Newhalem.

TABLE B4.--Low-flow-frequency data

| Station number and number on plate 1 (in parenthesis) | Station name | Number of consecutive days | Ordinate of low-flow frequency curve, in cubic feet per second, for indicated recurrence interval: | | | |
|---|---|---|---|---|---|---|
| | | | 2.0-yr | 5.0-yr | 10-yr | 20-yr |
| 12170500 (1) | Skagit River near Hope, B.C. | 7 | 200 | 163 | 152 | 145 |
| | | 30 | 230 | 190 | 175 | 165 |
| | | 90 | 320 | 240 | 218 | 200 |
| | | 183 | 490 | 350 | 290 | 250 |
| 12172000 (15) | Big Beaver Creek near Newhalem | 7 | 88 | 75 | 70 | 67 |
| | | 30 | 107 | 88 | 80 | 75 |
| | | 90 | 157 | 124 | 112 | 105 |
| | | 183 | 241 | 194 | 175 | 161 |
| 12173500 (26) | Ruby Creek below Panther Creek near Newhalem | 7 | 115 | 81 | 67 | 57 |
| | | 30 | 134 | 95 | 78 | 67 |
| | | 90 | 186 | 125 | 100 | 83 |
| | | 183 | 285 | 201 | 164 | 138 |
| 12175500 (35) | Thunder Creek near Newhalem | 7 | 103 | 81 | 71 | 64 |
| | | 30 | 120 | 91 | 80 | 73 |
| | | 90 | 174 | 129 | 112 | 101 |
| | | 183 | 290 | 222 | 194 | 174 |
| 12177500 (40) | Stetattle Creek near Newhalem | 7 | 30 | 23 | 19 | 16 |
| | | 30 | 42 | 31 | 26 | 22 |
| | | 90 | 75 | 54 | 44 | 38 |
| | | 183 | 121 | 92 | 78 | 68 |
| 12178000 (46) | Skagit River at Newhalem | 7 | 1,390 | 928 | 749 | 625 |
| | | 30 | 1,730 | 1,120 | 879 | 715 |
| | | 90 | 2,340 | 1,540 | 1,210 | 982 |
| | | 183 | 2,980 | 2,040 | 1,630 | 1,350 |
| 12179000 (59) | Skagit River above Alma Creek, near Marblemount | 7 | 2,470 | 2,010 | 1,790 | 1,630 |
| | | 30 | 3,060 | 2,570 | 2,340 | 2,160 |
| | | 90 | 3,910 | 3,460 | 3,260 | 3,100 |
| | | 183 | 4,740 | 4,160 | 3,880 | 3,660 |
| 12180000 (63) | Bacon Creek near Marblemount | 7 | 97 | 76 | 67 | 61 |
| | | 30 | 122 | 91 | 80 | 74 |
| | | 90 | 240 | 152 | 130 | 116 |
| | | 183 | 390 | 290 | 255 | 235 |
| 12182500 (77) | Cascade River at Marblemount | 7 | 272 | 214 | 187 | 167 |
| | | 30 | 329 | 249 | 216 | 192 |
| | | 90 | 491 | 372 | 323 | 288 |
| | | 183 | 679 | 520 | 449 | 396 |
| 12186000 (94) | Sauk River above White Chuck River near Darrington | 7 | 222 | 177 | 158 | 144 |
| | | 30 | 278 | 216 | 190 | 172 |
| | | 90 | 471 | 338 | 284 | 246 |
| | | 183 | 776 | 575 | 487 | 422 |

TABLE B4.--Low-flow-frequency data--continued

| Station number and number on plate 1 (in parenthesis) | Station name | Number of consecutive days | Ordinate of low-flow frequency curvey, in cubic feet per second, for indicated recurrence interval: | | | |
|---|---|---|---|---|---|---|
| | | | 2.0-yr | 5.0-yr | 10-yr | 20-yr |
| 12189000 (114) | Suiattle River near Mansford | 7 | 620 | 510 | 450 | 390 |
| | | 30 | 750 | 600 | 510 | 440 |
| | | 90 | 990 | 820 | 730 | 670 |
| | | 183 | 1,400 | 1,120 | 1,000 | 900 |
| 12189500 (118) | Sauk River near Sauk | 7 | 1,210 | 951 | 825 | 728 |
| | | 30 | 1,510 | 1,170 | 1,010 | 889 |
| | | 90 | 2,170 | 1,650 | 1,400 | 1,220 |
| | | 183 | 3,080 | 2,380 | 2,070 | 1,840 |
| 12191500 (123) | Baker River below Anderson Creek, near Concrete | 7 | 580 | 440 | 390 | 350 |
| | | 30 | 690 | 500 | 440 | 390 |
| | | 90 | 1,100 | 780 | 670 | 600 |
| | | 183 | 1,700 | 1,300 | 1,100 | 990 |
| 12193500 (133) | Baker River at Concrete | 7 | 590 | 260 | 149 | 88 |
| | | 30 | 1,190 | 780 | 547 | 374 |
| | | 90 | 1,740 | 1,450 | 1,310 | 1,200 |
| | | 183 | 2,180 | 1,860 | 1,710 | 1,590 |
| 12194000 (134) | Skagit River near Concrete | 7 | 5,580 | 4,210 | 3,540 | 3,030 |
| | | 20 | 6,690 | 5,010 | 4,180 | 3,550 |
| | | 90 | 8,680 | 6,580 | 5,620 | 4,880 |
| | | 183 | 11,500 | 8,810 | 7,540 | 6,570 |
| 12196000 (150) | Alder Creek near Hamilton | 7 | 8.4 | 7.0 | 6.3 | 5.8 |
| | | 30 | 9.2 | 7.7 | 7.0 | 6.4 |
| | | 90 | 10.9 | 9.0 | 8.1 | 7.4 |
| | | 183 | 16 | 13 | 11.6 | 10.4 |
| 12196500 (160) | Day Creek near Lyman | 7 | 19.5 | 13 | 10.2 | 8.0 |
| | | 30 | 26 | 16 | 12 | 9.1 |
| | | 90 | 55 | 30 | 20 | 14 |
| | | 183 | 135 | 88 | 74 | 65 |
| 12200000 (200) | East Fork Noockachamps Creek near Clear Lake | 7 | 2.3 | 1.4 | 1.0 | .8 |
| | | 30 | 3.7 | 2.0 | 1.4 | 1.0 |
| | | 90 | 13 | 5.3 | 3.0 | 1.7 |
| | | 183 | 42 | 23.5 | 18.5 | 16 |
| 12200500 (209) | Skagit River near Mount Vernon | 7 | 6,670 | 5,450 | 4,850 | 4,380 |
| | | 30 | 7,910 | 6,490 | 5,770 | 5,190 |
| | | 90 | 10,300 | 8,370 | 7,440 | 6,700 |
| | | 183 | 13,300 | 11,100 | 10,000 | 9,180 |

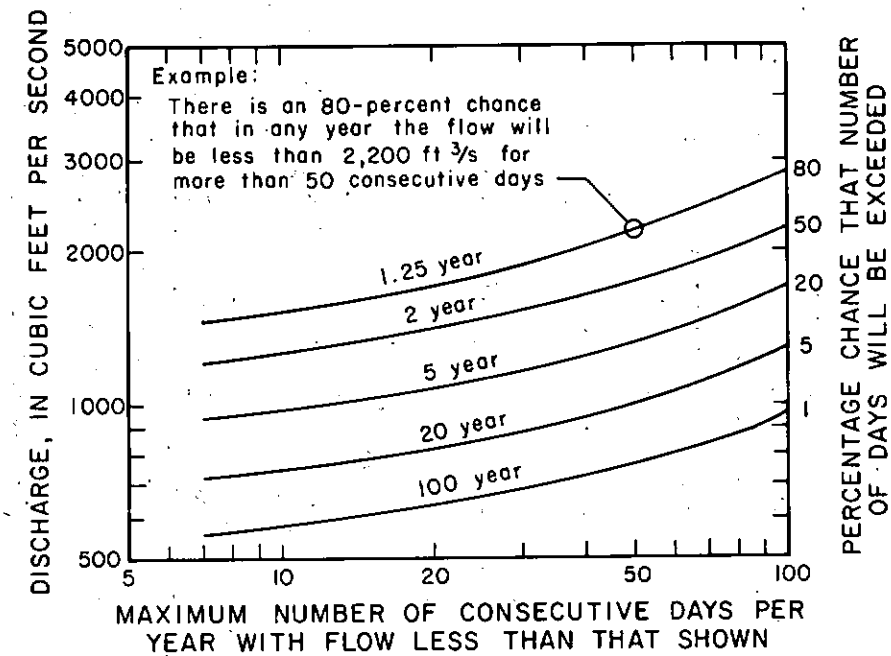



FIGURE B8.--Number of consecutive days of deficient discharge, Sauk River near Sauk, during the period July 1922-September 1973.

Four indexes computed from low-flow-frequency curves (Hidaka, 1973) and used as a basis to compare the low-flow characteristics of the streams include (1) low-flow-yield index, (2) base-flow index, (3) slope index, and (4) spacing index. At gaging stations on unregulated streams these indexes reflect the hydraulic relations between the stream and the adjacent reservoir of ground water, and (or) the storage in and release of surface water from snowfields and glaciers. At gaging stations on regulated streams these indexes also reflect the storage and release of surface waters in and from upstream reservoirs. Table B6 lists the four indexes for each of 14 unregulated stations, and includes the mean annual discharge and the normal low-flow season for each station.

The low-flow-yield index permits a direct comparison of the low flows of streams with various size drainage areas. Low-flow yields in the Puget Sound region with indexes larger than 1.5 are considered excellent, those of 1.0 to 1.5 are good, those of 0.5 to 1.0 are fair, and those of 0.0 to 0.5 are poor (Hidaka, 1973). The low-flow yields in the upper Skagit River basin are fair to good and those in the Baker, Cascade, and Sauk River basins are good to excellent. This condition is to be expected because of the high precipitation and large storage of surface waters in the ice- and snow-covered peaks of the latter basins. The low-flow yields of tributaries in the lower Skagit River basin are poor to fair because of the lower precipitation and low transmissivity of the ground-water reservoir.

TABLE B5.--Magnitude and frequency of deficient discharges at selected gaging stations

| Station number and number on plate 1 (in parenthesis) | Station name | Recurrence interval (years) | Percent chance that number of days will be exceeded | Discharge, in cubic feet per second, which flow remained continuously for length of period indicated: | | | |
|---|---|---|---|---|---|---|---|
| | | | | 7 day | 30 day | 90 day | 183 day |
| 12172000 (15) | Big Beaver Creek near Newhalem | 1.25 | 80 | 110 | 136 | 212 | 304 |
| | | 2 | 50 | 88.5 | 106 | 157 | 241 |
| | | 5 | 20 | 74.9 | 87.5 | 124 | 194 |
| | | 10 | 10 | 70.0 | 80.3 | 112 | 175 |
| | | 20 | 5 | 66.8 | 75.5 | 105 | 161 |
| | | 100 | 1 | 62.5 | 68.4 | 93.8 | 138 |
| 12173500 (26) | Ruby Creek below Panther Creek near Newhalem | 1.25 | 80 | 159 | 185 | 267 | 389 |
| | | 2 | 50 | 115 | 134 | 186 | 285 |
| | | 5 | 20 | 81.2 | 95.0 | 125 | 201 |
| | | 10 | 10 | 67.0 | 78.5 | 100 | 164 |
| | | 20 | 5 | 56.8 | 66.7 | 82.5 | 138 |
| | | 100 | 1 | 41.0 | 48.4 | 56.3 | 98.0 |
| 12175500 (35) | Thunder Creek near Newhalem | 1.25 | 80 | 130 | 164 | 248 | 379 |
| | | 2 | 50 | 103 | 120 | 174 | 290 |
| | | 5 | 20 | 81.1 | 91.5 | 129 | 222 |
| | | 10 | 10 | 71.4 | 80.4 | 112 | 194 |
| | | 20 | 5 | 64.1 | 72.7 | 101 | 174 |
| | | 100 | 1 | 52.3 | 61.3 | 85.0 | 141 |
| 12177500 (40) | Stettatle Creek near Newhalem | 1.25 | 80 | 37.2 | 57.4 | 103 | 151 |
| | | 2 | 50 | 30.5 | 42.5 | 75.0 | 121 |
| | | 5 | 20 | 22.9 | 30.6 | 53.5 | 92.0 |
| | | 10 | 10 | 19.0 | 25.5 | 44.4 | 78.3 |
| | | 20 | 5 | 15.9 | 21.9 | 37.9 | 67.9 |
| | | 100 | 1 | 10.8 | 16.1 | 27.8 | 50.5 |
| 12182500 (77) | Cascade River at Marblemount | 1.25 | 80 | 341 | 436 | 652 | 869 |
| | | 2 | 50 | 272 | 329 | 491 | 679 |
| | | 5 | 20 | 214 | 249 | 372 | 520 |
| | | 10 | 10 | 187 | 216 | 323 | 449 |
| | | 20 | 5 | 167 | 192 | 288 | 396 |
| | | 100 | 1 | 134 | 155 | 234 | 310 |
| 12186000 (94) | Sauk River above White Chuck River, near Darrington | 1.25 | 80 | 280 | 369 | 655 | 1,020 |
| | | 2 | 50 | 222 | 279 | 471 | 776 |
| | | 5 | 20 | 177 | 216 | 338 | 576 |
| | | 10 | 10 | 158 | 190 | 284 | 487 |
| | | 20 | 5 | 144 | 172 | 246 | 422 |
| | | 100 | 1 | 122 | 144 | 188 | 318 |
| 12189500 (118) | Sauk River near Sauk | 1.25 | 80 | 1,490 | 1,880 | 2,770 | 3,940 |
| | | 2 | 50 | 1,210 | 1,510 | 2,170 | 3,080 |
| | | 5 | 20 | 951 | 1,170 | 1,650 | 2,380 |
| | | 10 | 10 | 825 | 1,010 | 1,400 | 2,070 |
| | | 20 | 5 | 728 | 889 | 1,220 | 1,840 |
| | | 100 | 1 | 563 | 683 | 918 | 1,460 |
| 12196000 (150) | Alder Creek near Hamilton | 1.25 | 80 | 10.1 | 10.9 | 13.1 | 20.0 |
| | | 2 | 50 | 8.4 | 9.3 | 10.9 | 16.3 |
| | | 5 | 20 | 7.0 | 7.7 | 9.0 | 13.1 |
| | | 10 | 10 | 6.3 | 7.0 | 8.1 | 11.6 |
| | | 20 | 5 | 5.8 | 6.4 | 7.4 | 10.4 |
| | | 100 | 1 | 4.9 | 5.4 | 6.2 | 8.4 |

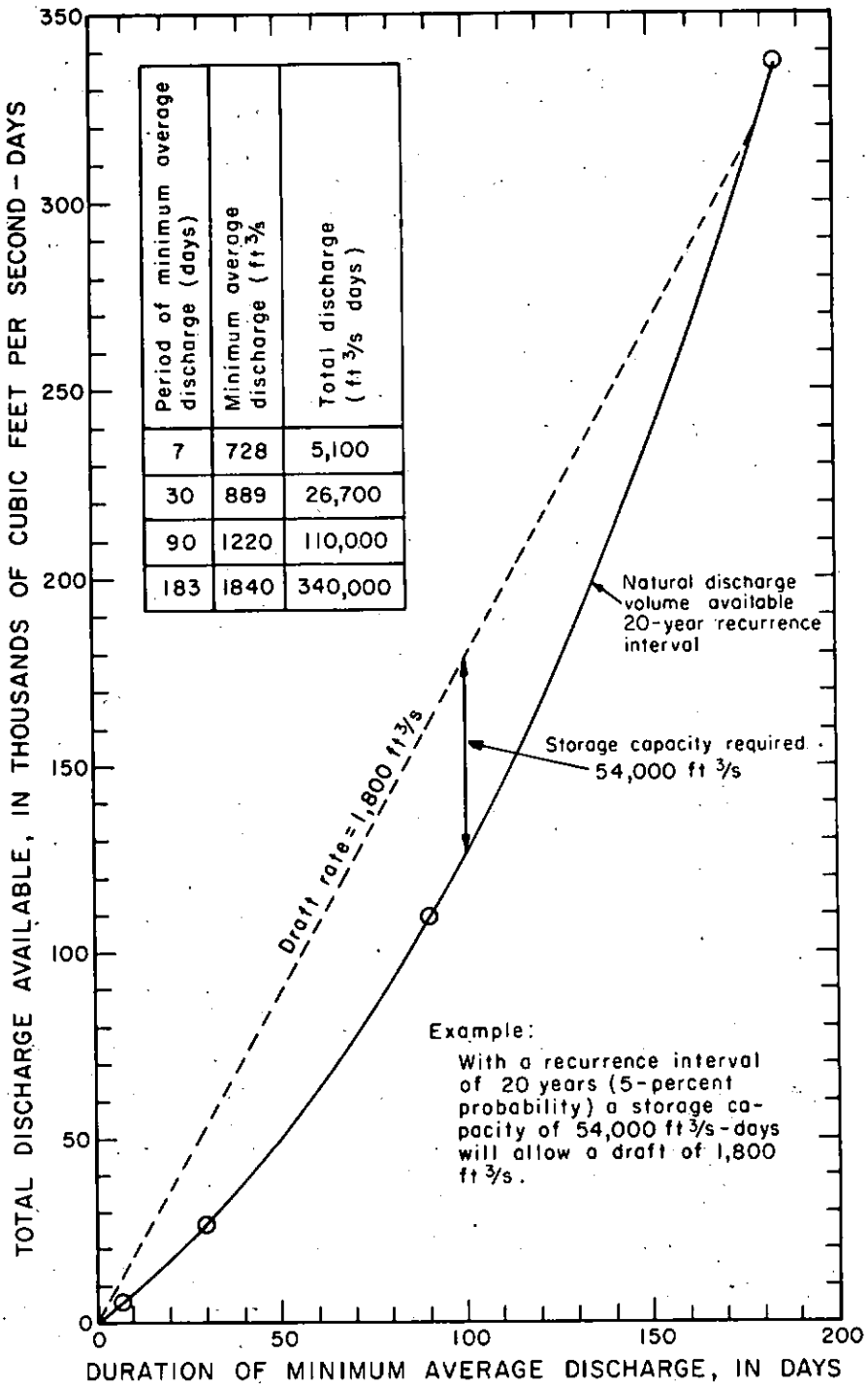



FIGURE B9.--Flow-frequency mass curve, at 20-year-recurrence interval, and storage draft rate, for Sauk River near Sauk.

The base-flow index indicates the amount of ground and (or) surface-water storage in the basin. Glacial streams, such as the Sauk River and the Suiattle River, have fairly high indexes, reflecting the influence of melt water. The nonglacial streams, such as Day and Alder Creeks, have large base-flow indexes because they are underlain by unconsolidated and permeable water-yielding glacial and alluvial deposits. On the other hand, the East Fork Nookachamps Creek has a very small base-flow index because it is underlain by impermeable sedimentary rock that stores and yields very small quantities of ground water.

The slope index shows the year-to-year differences in low flows and the ability of the geologic materials and (or) snowfields and glaciers to transmit water. A small slope index, with a nearly flat slope of the curve, indicates small year-to-year differences in low flow, whereas a large value and steep curve indicate large variations in low flow. The low slope indexes for streams in the upper Skagit River basin probably are due to the heavy snowpack which provides melt water for a continuous and relatively constant summer runoff. The large slope index for the East Fork Nookachamps Creek subbasin probably is due to the lack of ground-water storage in the consolidated sedimentary rocks.

The spacing index is influenced by the seasonal storage in the geologic materials underlying the basin above a gaging station. Basins underlain by relatively impermeable materials will have widely spaced frequency curves and large spacing indexes, whereas those basins underlain by permeable materials will have small spacing indexes, with their frequency curves being closely spaced. The factor responsible for the low spacing index of 1.90 for Alder Creek near Hamilton (12196000; fig. B7) probably is the rapid percolation of precipitation into the permeable unconsolidated glacial deposits that underlie this basin. Conversely, Stetattle Creek near Newhalem (12177500; fig. B7) drains a small basin underlain by bedrock, causing a rapid runoff and thereby appreciably increasing the 183-day low flow and the spacing index.

TABLE B6.--Low-flow indexes at selected gaging stations

| Station number and number on plate 1 (in parenthesis) | Station name | Low-flow season | Mean annual discharge ($ft^3/s$) | Low-flow index[1] | | | |
|---|---|---|---|---|---|---|---|
| | | | | Yield | Base-flow | Slope | Spacing |
| 12170500 (1) | Skagit River near Hope, B.C. | Mixed | 999 | 0.57 | 0.17 | 1.33 | 2.45 |
| 12172000 (15) | Big Beaver Creek near Newhalem | Mixed | 414 | 1.39 | .21 | 1.31 | 2.73 |
| 12173500 (26) | Ruby Creek below Panther Creek near Newhalem | Mixed | 714 | .56 | .16 | 1.72 | 2.48 |
| 12175500 (35) | Thunder Creek near Newhalem | Winter | 619 | .98 | .17 | 1.61 | 2.82 |
| 12177500 (40) | Stetattle Creek near Newhalem | Winter | 183 | 1.36 | .16 | 1.88 | 4.03 |
| 12178000 (46) | Skagit River at Newhalem | Regulated | 4,470 | 1.18 | .31 | 2.22 | 2.14 |
| 12179000 (59) | Skagit River above Alma Creek near Marblemount | Regulated | 5,614 | 1.94 | .44 | 1.52 | 1.92 |
| 12180000 (63) | Bacon Creek near Marblemount | Mixed | 429 | 1.90 | .20 | 1.59 | 4.02 |
| 12182500 (77) | Cascade River at Marblemount | Mixed | 1,030 | 1.62 | .26 | 1.63 | 2.50 |
| 12186000 (94) | Sauk River above White Chuck River near Darrington | Mixed | 1,145 | 1.46 | .19 | 1.54 | 3.50 |
| 12189000 (113) | Suiattle River near Mansford | Mixed | 1,750 | 1.85 | .29 | 1.59 | 2.26 |
| 12189500 (118) | Sauk River near Sauk | Mixed | 4,363 | 1.69 | .28 | 1.66 | 2.55 |
| 12191500 (123) | Baker River below Anderson Creek near Concrete | Mixed | 2,011 | 2.75 | .29 | 1.67 | 2.93 |
| 12193500 (133) | Baker River at Concrete | Regulated | 2,662 | 1.99 | .22 | 6.70 | 3.69 |
| 12194000 (134) | Skagit River at Concrete | Regulated | 15,090 | 2.04 | .37 | 1.84 | 2.06 |
| 12196000 (150) | Alder Creek at Hamilton | Summer | 33.5 | .78 | .25 | 1.45 | 1.90 |
| 12196500 (160) | Dry Creek near Lyman | Summer | 268 | .57 | .07 | 2.44 | 6.92 |
| 12200000 (200) | East Fork Nookachamps Creek near Clear Lake | Summer | 86.8 | .11 | .03 | 2.86 | 13.5 |
| 1200500 (209) | Skagit River near Mount Vernon | Regulated | 16,700 | 2.16 | .40 | 1.52 | 1.99 |

[1] The yield index is the ordinate of the annual 7-day minimum low-flow-frequency curve at a 2-year recurrence interval. It is expressed as $ft^3/s$ (cubic feet per second) per square mile of drainage area, and permits comparison of streams with various-size drainage areas.

The base-flow index is the ratio of the discharge, at the 2-year recurrence interval, of the annual 7-day minimum-flow-frequency curve to the mean annual discharge.

The slope index is the ratio of the discharges at the 2-year and 20-year recurrence intervals from the 7-day minimum frequency curve.

The spacing index is the ratio between the discharges at the 2-year recurrence intervals of the 183- and 7-day frequency curves.

## Quality of Surface Water

The first known samples collected for chemical analyses of water in the Skagit River basin were those taken from the Skagit River at Sedro-Woolley in February 1910. Since then, water-quality samples have been collected from six stream sites and three lakes; these included chemical, physical, and biological analyses (table C3 in Part C). Water-quality records through the 1973 water year are compiled in reports by the U.S. Geological Survey (1958-61, 1964-74) and Van Winkle (1914).

Samples taken from the Skagit River near Marblemount showed that dissolved-solids concentrations ranged from 21 to 44 mg/L (milligrams per liter) and hardness ranged from 12 to 30 mg/L, being within the classification of "soft" water. Mineralization increases only slightly downstream as indicated, and near Mount Vernon the dissolved-solids concentrations ranged from 22 to 52 mg/L and hardness ranged from 13 to 32 mg/L.

The sanitary quality of water in the basin was indicated by a test that determines the MPN (most probable number) of coliform bacteria in a 100-milliliter sample, in general, unpolluted stream water has low MPN values, usually less than 100. MPN in the upper basins were usually less than 100, but below the more populated areas in the lower Skagit basin they are much higher, often exceeding 1,000; the MPN for the Skagit River near Mount Vernon has been known to exceed 24,000.

In 1952, the first thermograph in the Skagit River basin was installed on the Cascade River at Marblemount. Since then, three other thermographs have been installed, to detect short-term fluctuations in temperature, chiefly because of the water-temperature requirements of fish spawning and rearing; the fisheries resources are important in the basin, both commercially and for recreation. Table C5 in Part C, lists the daily maximum and minimum temperatures and monthly average temperatures at these four stations.

An evaluation also was made of the suspended-sediment transport by streams in the basin. Much of the fluvial sediment in the upper Skagit River basin is carried in glacial streams, but because of the reservoirs in the basins of the upper Baker and Skagit Rivers, most of the fine glacial sediment settles out in these manmade lakes. The nonregulated Cascade, White Chuck, and Suiattle Rivers carry most of the sediment load in the upper Skagit River basin, with the greatest concentrations and loads in these rivers occurring during summer periods of high discharge of glacial melt water.

Generally throughout the Skagit River basin, although precipitation is abundant, excessive erosion of the soil is prevented by the protective vegetal cover. Only in those areas subjected to logging and accompanying road construction does the removal of fine sediments by erosion become accelerated during periods of intense rainfall and (or) snowmelt runoff. This is particularly true in the lower Skagit River basin where vegetation also has been removed for farming or building construction.

Analyses of data obtained in 1965 and 1966 indicate that streams in the Skagit River basin probably transport a sediment load of about 10 million tons to Skagit Bay during a year of normal streamflow. Table C4 in Part C lists data gathered at three sediment-sampling sites in 1965 and 1966.

## Harmonic Temperature

Temperature is one of the most important characteristics of water and is of interest to many people, fisheries agencies, water-quality agencies and industries. The lack of thermograph records and the many irregular observations of stream temperatures that had been collected over the years led to a study of the value and potential use of the random observations of stream temperatures. A computer program was developed by Collings (1969) to use these data. The stream-temperature data were fitted by harmonic curves (Higgins and Hill, 1973) to the form,

$$T = M+A \quad \sin(0.0172\ d+c) \quad ,$$

where

T = stream temperature, in °C;
M = annual median stream temperature, in °C;
A = annual amplitude of the harmonic curve (above and below the annual median temperature), in °C;
d = the calendar-year day with January 1 as "1" and December 31 as "365" or "366"; and
c = the phase coefficient of the cycle, in radians.

The method and reliability of the harmonic analysis have been described and evaluated in detail by Collings (1969).

Figure B10 is an example of a typical harmonic-curve fitting for Stetattle Creek near Newhalem (12177500). The curve and resulting equation is the average of individually computed annual curves for the period of record. Table B7 contains the average midmonthly temperature, annual median temperature, standard error, and variance (V) defined in percentage for 15 stations in the Skagit River basin.

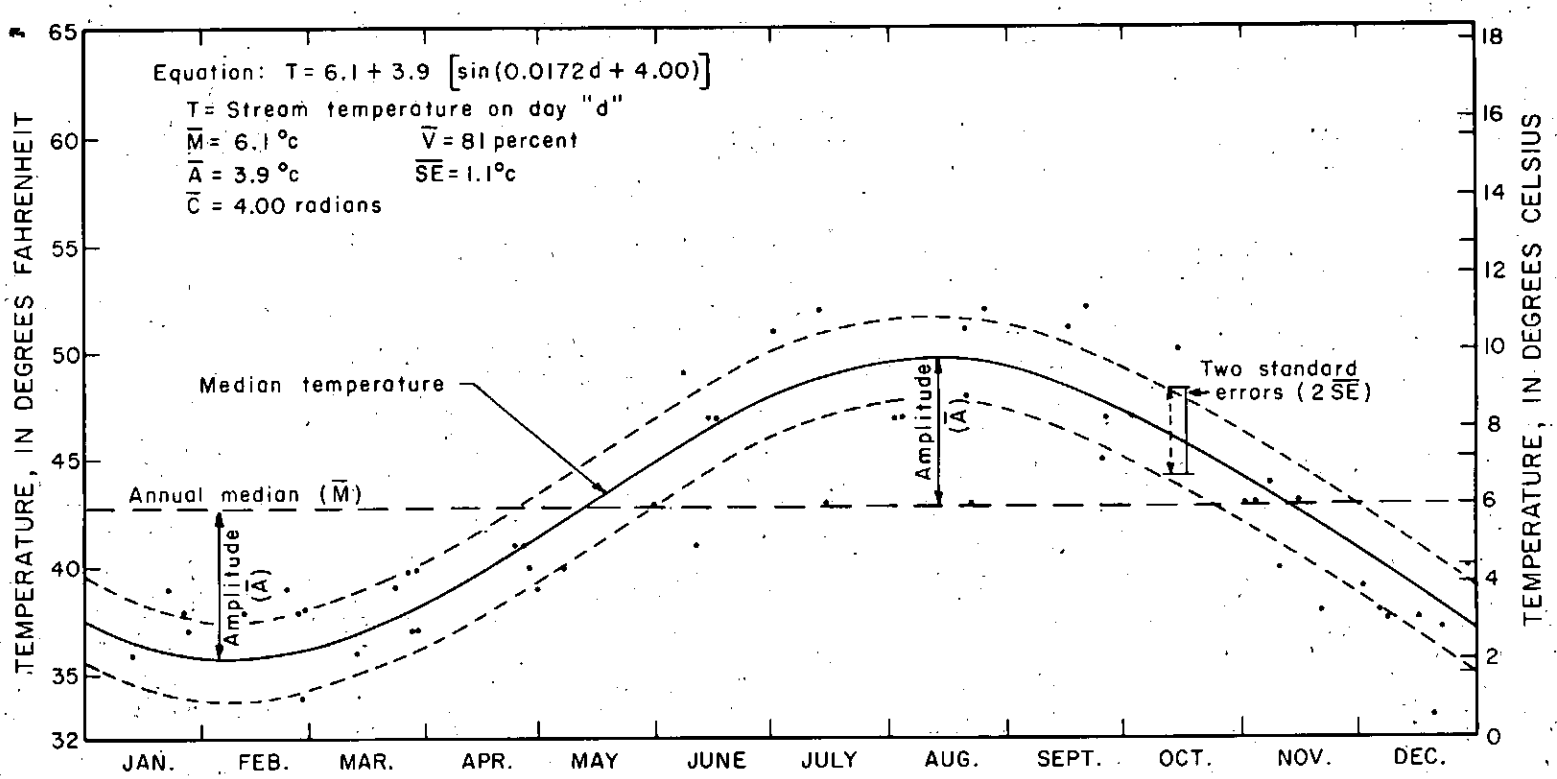



FIGURE B10.--Typical harmonic-curve fitting random stream-temperature data, for Stetattle Creek near Newhalem. Shown are temperature observations during 1960 and 1963-67, and the average harmonic curve and coefficients that define that period.

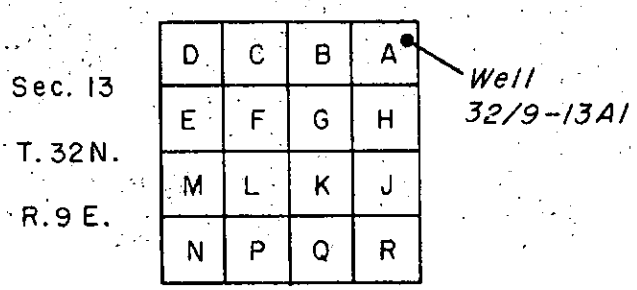
TABLE B7.--Harmonic fitting of irregular stream temperatures at selected gaging stations

| Average midmonthly temperatures (°C) | | | | | | | | | | | | Annual median (°C) | Standard error (°C) | Variance defined (percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | | | |
| 15. Big Beaver Creek near Newhalem (12172000) | | | | | | | | | | | | | | |
| 1.6 | 1.6 | 2.5 | 4.1 | 6.0 | 7.6 | 8.5 | 8.5 | 7.6 | 6.0 | 4.2 | 2.6 | 5.0 | 1.0 | 82 |
| 26. Ruby Creek below Panther Creek near Newhalem (12173500) | | | | | | | | | | | | | | |
| 0.7 | 0.7 | 1.7 | 3.7 | 5.9 | 7.8 | 9.0 | 9.0 | 7.9 | 6.0 | 3.7 | 1.8 | 4.8 | 1.3 | 79 |
| 35. Thunder Creek near Newhalem (12175500) | | | | | | | | | | | | | | |
| 2.2 | 2.1 | 2.7 | 3.9 | 5.5 | 6.9 | 7.9 | 8.1 | 7.5 | 6.3 | 4.7 | 3.3 | 5.1 | 1.1 | 71 |
| 40. Stetattle Creek near Newhalem (12177500) | | | | | | | | | | | | | | |
| 2.5 | 2.1 | 2.8 | 4.3 | 6.2 | 8.1 | 9.4 | 9.8 | 9.2 | 7.7 | 5.9 | 3.9 | 6.0 | 1.1 | 81 |
| 46. Skagit River at Newhalem (12178000) | | | | | | | | | | | | | | |
| 4.5 | 3.6 | 3.6 | 4.5 | 6.1 | 7.8 | 9.4 | 10.3 | 10.3 | 9.4 | 7.9 | 6.0 | 6.9 | 0.8 | 87 |
| 48. Newhalem Creek near Newhalem (12181000) | | | | | | | | | | | | | | |
| 2.0 | 1.7 | 2.6 | 4.3 | 6.4 | 8.3 | 9.6 | 9.9 | 9.0 | 7.4 | 5.3 | 3.3 | 5.8 | 1.2 | 76 |
| 94. Sauk River above White Chuck River near Darrington (12186000) | | | | | | | | | | | | | | |
| 2.9 | 2.9 | 3.8 | 5.3 | 7.2 | 8.8 | 9.8 | 9.9 | 9.0 | 7.5 | 5.6 | 3.9 | 6.4 | 1.3 | 73 |
| 118. Sauk River near Sauk (12189500) | | | | | | | | | | | | | | |
| 3.5 | 3.2 | 4.1 | 5.9 | 8.2 | 10.4 | 11.8 | 12.1 | 11.2 | 9.4 | 7.1 | 5.0 | 7.6 | 1.4 | 81 |
| 126. Sulphur River near Concrete (12191800) | | | | | | | | | | | | | | |
| 2.3 | 2.2 | 3.0 | 4.5 | 6.3 | 7.9 | 9.0 | 9.1 | 8.4 | 6.9 | 5.1 | 3.4 | 5.7 | 1.5 | 61 |
| 133. Baker River at Concrete (12193500) | | | | | | | | | | | | | | |
| 5.4 | 4.4 | 4.6 | 5.8 | 7.8 | 9.7 | 11.5 | 12.4 | 12.3 | 11.2 | 9.2 | 7.1 | 8.4 | 0.8 | 83 |
| 134. Skagit River near Concrete (12194000) | | | | | | | | | | | | | | |
| 5.4 | 5.2 | 6.0 | 7.4 | 9.2 | 10.9 | 12.0 | 12.3 | 11.6 | 10.1 | 8.3 | 6.6 | 8.7 | 1.1 | 79 |
| 150. Alder Creek near Hamilton (12196000) | | | | | | | | | | | | | | |
| 4.9 | 4.9 | 5.9 | 7.5 | 9.4 | 11.0 | 11.9 | 11.9 | 11.0 | 9.4 | 7.5 | 5.9 | 8.4 | 1.2 | 77 |
| 157. Day Creek below Day Lake, near Lyman (12196200) | | | | | | | | | | | | | | |
| 1.6 | 2.3 | 5.1 | 9.3 | 13.7 | 16.8 | 18.5 | 17.8 | 15.0 | 10.9 | 6.5 | 3.1 | 10.0 | 0.7 | 97 |
| 159. Day Creek near Hamilton (12196400) | | | | | | | | | | | | | | |
| 2.5 | 2.1 | 3.4 | 6.0 | 9.3 | 12.3 | 14.2 | 14.6 | 13.4 | 10.8 | 7.6 | 4.6 | 8.4 | 1.4 | 86 |
| 194. East Fork Nookachamps Creek near Big Lake (12199800) | | | | | | | | | | | | | | |
| 1.9 | 1.3 | 2.1 | 4.0 | 6.5 | 9.0 | 10.7 | 11.3 | 10.6 | 8.7 | 6.2 | 3.7 | 6.3 | 1.7 | 74 |

## Ground Water

### Well-Numbering System

The well numbers used in this report give the location of wells according to the official rectangular public-land survey. For example, in the number 32/9-13A1, the part preceding the hyphen indicates successively the township and range (T. 32 N., R. 9 E.) north and east of the Willamette base line and meridian. The first number following the hyphen indicates the section (sec.13), and the letter (A) indicates the 40-acre subdivision of the section as shown in the accompanying sketch. The last number is the sequence number of the well in the particular 40-acre tract. Thus, well 32/9-13A1 is the first well listed in the NE¼ of the NE¼ of sec.13, T.32 N., R.9 E.




In tables C8 and C10, this same well number is listed as 32N09E-13A01.

### General Availability and Areal Distribution

Ground water in the Skagit River basin occurs principally in the thick, unconsolidated alluvial and glacial deposits underlying the main river valleys. Bedrock (sedimentary, igneous, and metamorphic rocks) in the mountain areas yields unknown but probably considerably lesser quantities of water.

The unconsolidated deposits occur in the lower part of the basin where sand, gravel, silt, clay, and till (locally called "hardpan") attain thicknesses of 500 feet or more. In upstream reaches, where the main rivers of the basin are more confined, these water-bearing deposits become thinner and gradually disappear entirely.

Ground-water data are virtually nonexistent for most of the mountainous areas formed of bedrock. Sedimentary rocks of the western portion of the basin have been tapped by small-supply domestic wells but the igneous and metamorphic rocks which underlie most of the basin probably contain small amounts of water.

The most productive deposits underlie the lowland of the basin, from the riverbend area south of Mount Vernon to just west of Lyman. There, sand and (or) gravel aquifers, typically at depths of 35 feet or less, commonly yield 250-750 gal/min to properly constructed wells (fig. A7). Most of the wells for which data are available are used for irrigation and household purposes, except for a few public-supply wells, including the large infiltration systems supplying the towns of Mount Vernon (well 34/4-7P3, yielding 3,200 gal/min) and Anacortes (wells 34/3-13F2 and F3, each yielding 11,000 gal/min). However, the water-use calculations in this report include the withdrawals from these infiltration systems as surface water because the water is derived essentially by percolation from the Skagit River. Plate 2 (in pocket) shows selected well locations in the basin, and figure B11 shows typical water-level fluctuations in wells in this area.

From Mount Vernon southward to the mouth of the Skagit River, the unconsolidated deposits become progressively finer grained and yield substantially less water (Sceva, 1950). The aquifers in this area are generally fine-to-medium grained sand beneath 25-40 feet of clay and silt. Yields of 50 to 200 gal/min are generally obtained from properly constructed wells. The principal use of ground water in this area is for irrigation and household purposes.

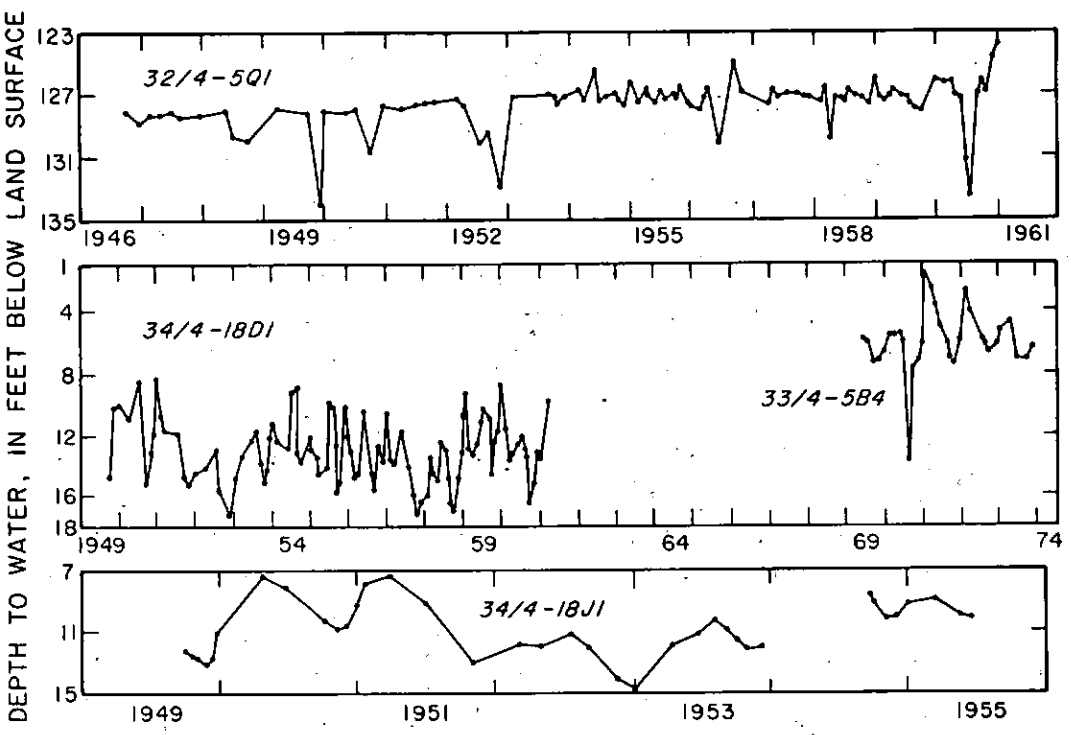



FIGURE B11.--Water-level fluctuations in selected wells in the Skagit River basin, 1946-73.

The unconsolidated deposits underlying the Skagit River valley eastward from Lyman to beyond Marblemount contain many productive aquifers. Data from 49 wells indicate that yields from coarse sand and (or) gravel aquifers are generally between 20 and 300 gal/min. These aquifers usually are found at depths between 15 and 75 feet, underlying similar, but non-water-bearing, materials.

Aquifers in the unconsolidated deposits are also found along the Baker and Sauk Rivers, and to a lesser degree along Day Creek and the upper reaches of Finney Creek. Of these only the ones along the Sauk River in the Darrington area are defined by sufficient well data; two groups of sand and gravel aquifers, one at a depth of 50-100 feet and the other at about 200 feet, provide average well yields of 20-25 gal/min. However, the yields of two of the deeper wells were measured as more than 100 gal/min. The aquifers appear to vary greatly in depth and areal extent.

Although the valleys in the higher, mountainous parts of the basin are narrow and confined between bedrock walls, with only minor amounts of unconsolidated sediment, there are several very localized, yet highly productive aquifers. Wells at Newhalem (37/12-21J1) and Diablo (37/13-8C1) yield more than 500 gal/min at depths of less than 175 feet. These wells tap aquifers in sand and gravel deposited along the insides of bends in the Skagit River. It is quite likely that many similar aquifers exist in the basin where similar geologic conditions exist.

In addition to the aquifers in the river valleys, which consist predominantly of unconsolidated deposits, a few remnants of glacial drift exposed in the western part of the basin contain significant amounts of water. These deposits are found on Pleasant Ridge and in the area southeast of Milltown. Wells which tap the thin, water-bearing zones in these materials average about 70 feet in depth and have yields of about 15 gal/min.

A large area of undifferentiated unconsolidated deposits is located east and southeast of Mount Vernon. Yields of 2 to 120 gal/min, with an average of about 15 gal/min, have been recorded for the various water-bearing zones which are generally encountered at depths of 40 to 100 feet. The aquifers are sand layers which are discontinuous and at unpredictable depths.

The only wells known to tap bedrock aquifers are those drilled in sedimentary rocks in the western part of the basin. The wells typically penetrate a thin cover of unconsolidated deposits or till and then about 50 feet of shale or sandstone. The water is obtained from cracks or joints in these rocks and is pumped at rates of about 5 or 6 gal/min. These bedrock wells tend to have insufficient yields for household purposes for long periods during late summer and early fall.

## Quality of Ground Water

The available data indicate that the ground water presently being tapped in the basin is suitable for most irrigation and domestic purposes. However, the data are limited with respect to some of the aquifers and certain imporant constituents of the water. Table C11 contains ground-water quality data.

The unconsolidated deposits are particularly prone to excessive concentrations of dissolved iron (greater than 0.30 mg/L) and are moderately hard (60 to 120 mg/L of $CaCO_3$, or harder). These same deposits probably tend to increase in salinity toward Skagit Bay, but no indication of a significant amount of saltwater encroachment can presently be observed.

Data are not available on the microbiological constituents in water of the various aquifers. However, the shallowness of the aquifers in several of the urbanized areas, and the typically coarse overlying sediments indicate a vulnerability to contamination from surface sources.

Measured temperatures of ground water are few, but those available range from 41° to 54°F (5° to 12°C), with most values being at or near 50°F (10°C).

## REFERENCES CITED


Brown, Lytle, 1934, Skagit River, Washington: Washington, D.C., House of Representatives, 73d Congress, 2d session, Document No. 187, 110 p.

Collings, M. R., 1969, Temperature analysis of a stream, in Geological Survey research, 1969: U.S. Geol. Survey Prof. Paper 650-B, p. B174-B179.

Collings, M. R., and Hidaka, F. T., 1974, Low-flow characteristics of streams in the Willapa Bay drainages, Washington: U.S. Geol. Survey Water-Resources Inv. 8-74, 15 p.

Colver, Carol, 1946, The economic base for power markets in Skagit County, Washington: U.S. Dept of the Interior, Bonneville Power Administration, 59 p.

Cummans, J. E., Collings, M. R., and Nassar, E. G., 1975, Magnitude and frequency of floods in Washington: U.S. Geol. Survey Open-File Rept. 74-336, 46 p.

Hidaka, F. T., 1973, Low-flow characteristics of streams in the Puget Sound region, Washington: U.S. Geol. Survey open-file report, 55 p.

Higgins, G. T., and Hill, G. W., 1973, Analysis and summary of temperatures of streams in Washington prior to 1968: Washington Dept. Ecology Misc. Rept. 73-003, 141 p.

Horner, Gerald, Weeks, Eldon, and Hungate, Eleanor, 1969, The Skagit trade area of Washington State: A survey of selected regional characteristics: Washington State Univ. (Pullman), Coll. Agriculture Expt. Sta. Circ. 509, 67 p.

International Joint Commission Canada and United States, 1971, Environmental and ecological consequences in Canada of raising Ross Lake in the Skagit Valley to elevation 1725: 191 p.

McLerran, J. H., and Krashevski, S. H., 1955, State of Washington engineering soils manual, Part IV - Soils of Skagit County: Washington State Council for Highway Research, 142 p.

Mikels, F. C., 1954, Report on hydrogeological survey for city of Anacortes, Washington: Ranney Method Water Supplies, Inc., Columbus, Ohio, 7 p.

-----1954, Report on hydrogeological survey for Skagit County Public Utility District No. 1, Mount Vernon, Washington: Ranney Method Water Supplies, Inc., Columbus, Ohio, 6 p.

Molenaar, Aldert, Criddle, W. D., and Pair, C. H., 1952, Estimates of consumptive use and irrigation requirements of crops in Washington: Washington State Coll. (Pullman), Agr. Expt. Sta. Circ. 201, 20 p.

Ness, A. O., Buchanan, D. E., and Richins, C. G., 1960, Soil survey of Skagit County, Washington: U.S. Soil Conserv. Service, series 1951, no. 6, 97 p.

Parker, G. G., Jr., 1971, Municipal, industrial, and irrigation water use in Washington, 1970: U.S. Geol. Survey open-file report, 21 p.

Post, Austin, Richardson, Donald, Tangborn, W. V., and Rosselot, F. L., 1971, Inventory of glaciers in the North Cascades, Washington: U.S. Geol. Survey Prof. Paper 705-A, 26 p.

Puget Sound Task Force, Hydrologic Studies Technical Committee, 1970, Comprehensive study of water and related land resources, Puget Sound and adjacent waters, State of Washington: Appendix III. Hydrology and natural environment, Appendix IV. Economic environment, Appendix V. Water-related land resources, Appendix VII. Irrigation, Appendix XII. Flood control, and Appendix XIII. Water quality control: Pacific Northwest River Basins Comm., Vancouver, Wash.

Richardson, Donald, 1962, Drainage-area data for western Washington: U.S. Geol. Survey open-file report, 244 p.

Riggs, H. C., 1968, Frequency curves: U.S. Geol. Survey Techniques Water-Resources Inv., book 4, ch. A2, 15 p.

-----1968, Some statistical tools in hydrology: U.S. Geol. Survey Water-Resources Inv. Techniques, book 4 ch. A1, 39 p.

-----1973, Storage analyses for water supply: U.S. Geol. Survey Techniques Water-Resources Inv., book 4, ch. B2, 20 p.

Sceva, J. E., 1950, Preliminary report on the ground-water resources of southwestern Skagit County, Washington: U.S. Geol. Survey open-file report, 40 p.

Stewart, J. E., and Bodhaine, G. L., 1961, Floods in the Skagit River basin, Washington: U.S. Geol. Survey Water-Supply Paper 1527, 66 p.

U.S. Army Corps of Engineers, 1967, Flood plain information study - Skagit River basin, Washington: Technical report and summary report.

U.S. Bureau of the Census, 1971, 1970 census of population, Washington: U.S. Dept. of Commerce, PC(V2)49, Washington, D.C., 12 p.

U.S. Dept. of Commerce, 1973, Climatological data, Washington: National Oceanic and Atmospheric Administration, Environmental Data Service, v. 77, Asheville, N.C.,

U.S. Geological Survey, 1958-61, 1964, 1966-68, Quality of surface waters of the United States, Parts 9-14: U.S. Geol. Survey Water-Supply Papers 1293, 1353, 1403, 1453, 1523, 1574, 1645, 1745, 1885, 1945, and 1951.

-----1955, Compilation of records of surface waters of the United States through September 1950, Part 12: U.S. Geol. Survey Water-Supply Paper 1316, 592 p.

-----1964, Compilation of records of surface waters of the United States, October 1950 to September 1960, Part 12: U.S. Geol. Survey Water-Supply Paper 1736, 415 p.

-----1965-74, Water resources data for Washington, Part 2, Water-quality records 1964-73: Tacoma, Wash., reports published annually for years indicated.

-----1967-74, Water resources data for Washington, Part 1, Surface water records, 1966-73: Tacoma, Wash., reports published annually for years indicated.

-----1971, Surface water supply of the United States 1961-65, Part 12: U.S. Geol. Survey Water-Supply Paper 1932, 679 p.

U.S. Weather Bureau, 1936, Climatic summary of the United States: Climatography of the United States no. 10-39, 40 p.

-----1954-74 Climatological data, Washington, annual summaries 1953 through 1973, v. 57, no. 13 through v. 77, no. 13.

-----1956, Climatic summary of the United States - supplement for 1931 through 1952: Climatography of the United States no. 11-39, 79 p.

-----1965, Mean annual precipitation, 1930-57, State of Washington: Portland, Oreg., U.S. Soil Conserv. Service, map M-4430.

Van Winkle, Walton, 1914, Quality of surface waters of Washington: U.S. Geological Survey Water-Supply Paper 339, 105 p.

Water Resources Council, 1967, A uniform technique for determining flood flow frequencies: Water Resources Council, Washington, D.C., Bull. 15, 15 p.

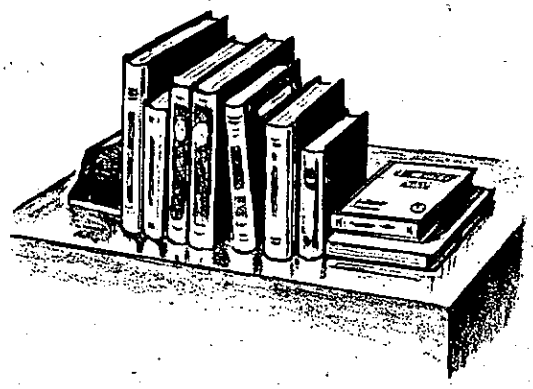
Washington State Department of Conservation, 1960, Summary of snow survey measurements in the State of Washington 1915-1960 inclusive: Washington Div. Water Resources Water Supply Bull. 13, 111 p.

-----1964, Miscellaneous stream-flow measurement in the State of Washington, 1890 to January 1961: Washington Div. Water Resources Water Supply Bull. 23, 292 p.

Washington State Thermal Power Plant Site Evaluation Council, 1975, Final environmental impact statement on Puget Sound Power and Light Company Skagit nuclear project (application 74-D):130 p.

Willis, Margaret, editor, 1973, Chechacos All, The pioneering of Skagit: Skagit County Historical Series No. 3, Skagit County Historical Society, Mount Vernon, Wash., 212 p.

Wolcott, E. E., 1961, Lakes of Washington, volume 1, Western Washington: Washington Div. Water Resources Water Supply Bull. 14, 619 p.



# PART C: BASIC DATA

Table C1.--Record of streamflow at data collection sites

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 1 | Skagit River | Skagit Bay | Lat. 49°02'50", long. 121°05'45", on left bank, Skagit Provincial Forest, just downstream from Galene Creek, 4.0 mi upstream from International boundry, and 28.0 mi southeast of Hope, British Columbia. (Station No. 12170500; international gaging station) | 357 (1 $mi^2$ in U.S.) | G2 | Apr. 1915-Sept. 1955 | See table C2 |
| 2 | do. | do. | Lat. 49°00'01", long. 121°04'15", on left bank at international boundary, approximately 31 mi southeast of Hope, British Columbia, and at mile 127.0 (Station No. 12170600; international gaging station) | 381 (3 $mi^2$ in U.S.) | R | Dec. 1953-Sept. 1973 | See table C2 |
| 3 | Lightning Creek | Ross Lake | Lat. 48°53'14", long. 120°58'32", T.39 N. R.14 E. (unsurveyed), Whatcom County, Ross Lake National Recreation Area, on right bank 0.3 mi downstream from Three Fools Creek, and 19.0 mi northeast of Newhalem. (Station No. 12171000) | 129 (21.5 $mi^2$ in Canada) | G2 | June 8, 1943<br>Oct. 1943-May 1948 | 3,630<br>See table C2 |
| 4 | do. | do. | Lat. 48°52'28", long. 121°01'02", T.39 N., R.14 E. (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 17.2 mi northeast of Newhalem. (1 mi upstream from former mouth) | 134 (21.5 $mi^2$ in Canada) | M | July 21, 1909 | 890 |
| 5 | do. | do. | Lat. 48°52'09", long. 121°01'25", T.39 N., R.14 E. (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 16.7 mi northeast of Newhalem. (1/2 mi upstream from former mouth). | -- | M | Aug. 21, 1936 | 111 |
| 6 | Skagit River | Skagit Bay | Lat. 48°51'32", long. 121°01'52", T.39 N. R.14 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 16.0 mi northeast of Newhalem (¼ mi downstream from former mouth of Lightning Creek) | 642 (400 $mi^2$ in Canada) | M | Jul. , 1909 | 3,290 |
| 7 | do. | do. | Lat. 48°50'24", long. 121°02'08", T.39 N., R.14 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 9.3 mi upstream from Ross Dam, and 14.7 mi northeast of Newhalem. (2.0 mi upstream from former mouth of Devils Creek) (Station 12171500) | 655 (400 $mi^2$ in Canada) | G2 | Apr. 1940-Sept. 1945 | See table C2 |
| 8 | Devils Creek | Ross Lake | Lat. 48°49'15", long. 121°01'11", T.39 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 14.5 mi northeast of Newhalem. (1.5 mi upstream from former mouth) | 31.5 | M | July 19, 1909 | 308 |
| 9 | do. | do. | Lat. 48°49'27", long. 121°01'48", T.39 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 14.6 mi northeast of Newhalem, and 100 ft upstream from mouth. | -- | M | Aug. 13, 1969 | 46.3 |
| 10 | do. | do. | Lat. 48°49'20", long. 121°02'24", T.39 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 14.5 mi northeast of Newhalem. (0.5 mi upstream from former mouth) | -- | M | Aug. 21, 1936 | 61.5 |
| 11 | May Creek | do. | Lat. 48°47'17", long. 121°01'41", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 12.0 mi northeast of Newhalem and 500 ft upstream from mouth. | -- | M | Aug. 13, 1969 | 23.3 |
| 12 | Unnamed Stream | do. | Lat. 48°47'12", long. 121°01'41", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.9 mi northeast of Newhalem and 100 ft upstream from mouth. | -- | M | Aug. 13, 1969 | 0.15 |
| 13 | do. | do. | Lat. 48°46'50", long. 121°01'38", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.5 mi northeast of Newhalem and at mouth. | -- | M | Aug. 13, 1969 | 0.60 |

Table C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 14 | Unnamed Stream | Ross Lake | Lat. 48°46'37", long. 121°01'38", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.3 mi northeast of Newhalem and at mouth. | -- | M | Aug. 13, 1969 | 0.22 |
| 15 | Big Beaver Creek | do. | Lat. 48°46'33", long. 121°04'01", T.38 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, on left bank 3.0 mi north of Ross Dam on Skagit River, 10.5 mi northeast of Newhalem, and at mile 1.1 (station no. 12172000) (formerly Beaver Creek) | 63.2 | G2 | March 1940-<br>Sept. 1948<br>Nov. 1962-<br>Sept. 1969<br>Oct. 22, 1963 | Table C2<br><br><br><br>[a]4,420 |
| 16 | do. | do. | Lat. 48°46'33", long. 121°02'41", T.38 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 10.9 mi northeast of Newhalem. (500 ft upstream from former mouth) | 67.8 | M | July 18, 1909<br>Aug. 17, 1913<br>July 11, 1934<br>Aug. 19, 1936 | 700<br>437<br>512<br>275 |
| 17 | Roland Creek | do. | Lat. 48°46'20", long. 121°01'15", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.7 mi northeast of Newhalem and 0.2 mi upstream from mouth. | -- | M | Aug. 12, 1969 | 2.24 |
| 18 | do. | do. | Lat. 48°46'09", long. 121°01'22", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.5 mi northeast of Newhalem and at mouth. | -- | M | Aug. 12, 1969 | 1.09 |
| 19 | Unnamed Creek | do. | Lat. 48°45'24", long. 121°01'04", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.3 mi northeast of Newhalem and at mouth. | -- | M | Aug. 12, 1969 | 0.09 |
| 20 | do. | do. | Lat. 48°45'09", long. 121°01'04", T.34 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.2 mi northeast of Newhalem and at mouth. | -- | M | Aug. 12, 1969 | 0.31 |
| 21 | Skagit River | Skagit Bay | Lat. 48°44'46", long. 121°01'43", T.38 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 10.6 mi northeast of Newhalem. (1.2 mi upstream from former mouth of Ruby Creek) (station no. 12172500) | 780 ($mi^2$ (400 mi in Canada) | M<br><br><br><br>G2 | Sept. 4, 1928<br>Oct. 15, 1928<br>Dec. 5, 1928<br>Feb. 1, 1929<br>Mar. 1930-<br>Mar. 1940 | 924<br>638<br>366<br>500<br><br>Table C2 |
| 22 | Canyon Creek | Ruby Creek | Lat. 48°42'29", long. 120°54'56", T.37 N., R.16 E., (unsurveyed) Whatcom County, Mt. Baker National Forest, 15.0 mi east of Newhalem at bridge 500 ft upstream from mouth. | 58.8 | M | Dec. 7, 1946<br>Jan. 1, 1947<br>Jan. 31, 1947<br>Feb. 27, 1947<br>Aug. 8, 1947<br>Sept. 21, 1947<br>Nov. 3, 1947<br>Dec. 3, 1947<br>Dec. 31, 1947<br>Feb. 1, 1948<br>Feb. 27, 1948<br>Apr. 2, 1948 | 45.8<br>40.3<br>46.1<br>82.4<br>106.<br>45.1<br>110.<br>83.2<br>71.4<br>41.8<br>39.6<br>63.9 |
| 23 | Granite Creek | do. | Lat. 48°35'12", long. 120°48'13", in NW¼NE¼ sec. 36, T.36 N., R.16 E., Skagit County, Mt. Baker National Forest, 200 ft downstream from Easy Pass trail crossing, 900 ft downstream from Easy Pass Creek, 21.1 mi southeast of Newhalem and at mile 11.0. | -- | M | Aug. 29, 1973 | 28.6 |
| 24 | do. | do. | Lat. 48°42'11", long. 120°54'28", T.37 N., R.16 E., (unsurveyed) Whatcom County, Mt. Baker National Forest, at bridge on Cascade Crest trail, 0.5 mi upstream from Ruby Creek, and 15.5 mi east of Newhalem (station 12173000) | 71 | G2 | Oct. 1946-<br>Apr. 1948<br>June 10, 1948 | Table C2<br><br>1,890 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 25 | Panther Creek | Ruby Creek | Lat. 48°42'22", long. 120°58'33", in Sec. 10, T.37 N., R.14 E., Whatcom County, Ross Lake National Recreation Area, 400 ft upstream from State Highway 20 crossing, 13.0 mi northeast of Newhalem. | 36.3 | M | Aug.28, 1973 | *62.7 |
| 26 | Ruby Creek | Ross Lake | Lat. 48°42'32", long. 120°58'29", in NW¼ Sec. 10, T.37 N., R.14 E. (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 200 ft downstream from Panther Creek, 13.0 mi northeast of Newhalem and at mile 4.0 (Station No. 12173500). | 206 | G2 | Sept 1948- Sept 1956 | Table C2 |
| | | | | | M | Oct. 26, 1956 | 444 |
| | | | | | G2 | Oct. 1962- Sept.1969 | Table C2 |
| | | | | | | Nov.27,1949 | [a]8640 |
| 27 | do | do | Lat. 48°43'21", long. 121°00'29", in Sec. 5, T.37 N., R.14 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 11.5 mi northeast of Newhalem (2.2 mi upstream from former mouth). Prior to March 1940 gage was 1.5 mi downstream with drainage area of 215 sq. mi (Station No. 12174000). | 210 | M | Sept. 16, 1918 | 234 |
| | | | | | | Dec. 16, 1918 | 609 |
| | | | | | | Feb. 20, 1919 | 166 |
| | | | | | | May 8, 1919 | 1590 |
| | | | | | | May 9, 1919 | 1610 |
| | | | | | G2 | June 1919- March 1920 | Table C2 |
| | | | | | M | July 13, 1920 | 1370 |
| | | | | | G2 | Sept 1928- May 1949 | Table C2 |
| | | | | | M | June 21, 1949 | 1300 |
| 28 | do | do | Lat. 48°44'08", long. 121°02'57", in Sec. 36, T.38 N., R.13 E. (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 10.0 mi northeast of Newhalem (at former mouth). | -- | M | July 16, 1909 | 1260 |
| 29 | Skagit River | Skagit Bay | Lat. 48°44'17", long. 121°03'38", T.38 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 9.0 mi northeast of Newhalem (0.7 mi downstream from former mouth of Ruby Creek) Station No. 12174500. | 999 (400 $mi^2$ in Canada) | M | Dec. 12, 1918 | 2060 |
| | | | | | | Dec. 14, 1918 | 5250 |
| | | | | | G2 | June 1919- Sept. 1930 | Table C2 |
| | | | | | M | Nov. 14, 1930 | 1130 |
| | | | | | | Jan. 11, 1931 | 528 |
| | | | | | | Nov. 4, 1931 | 1750 |
| | | | | | | Apr. 22, 1933 | 3430 |
| 30 | Happy Creek | Ross Lake | Lat. 48°43'44", long. 121°03'17", T.38 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 9.5 mi northeast of Newhalem at Cross State Highway crossing. | -- | M | Aug. 15, 1969 | 2.40 |
| 31 | do | do | Lat. 48°43'53", long. 121°03'51", T.38 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 9.3 mi northeast of Newhalem. | -- | M | Aug. 14, 1969 | 2.11 |
| 32 | Ross Reservoir | -- | Lat. 48°43'58", long. 121°04'02", SE¼ Sec. 35, T.38 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, at Ross Dam on Skagit River 1.0 mi downstream from Ruby Creek, 9.1 mi northeast of Newhalem, and at mi 10.52 (Station No. 12175000). | 999 (400 $mi^2$ in Canada) | R | Mar. 1940- Sept. 1973 | Table C2 |
| 33 | Thunder Creek | Diablo Lake | Lat. 48°37'02", long. 121°03'18", T.36 N., R.13 E. (unsurveyed) Skagit County, Ross Lake National Recreation Area, 0.5 mi upstream from McAllister Creek and 9.5 mi southeast of Newhalem. | -- | M | May 17, 1919 | 5,960 |
| 34 | do | do | Lat. 48°37'38", long. 121°03'17", T.36 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 0.3 mi downstream from McAllister Creek, 9.4 mi southeast of Newhalem and at mile 7.0 (Station No. 12175400). | 91.7 | M | July 24, 1909 | 1600 |
| | | | | | | Jan. 17, 1920 | 1160 |
| | | | | | G2 | Oct. 1958- Sept. 1960 | Table C2 |
| | | | | | M | Oct. 4, 1962 | 390 |
| | | | | | | Nov. 4, 1962 | 318 |
| | | | | | | Jan. 31, 1963 | 106 |
| | | | | | | Feb. 27, 1963 | 347 |
| | | | | | | March 29, 1963 | 160 |
| | | | | | | Apr. 29, 1963 | 263 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on Plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 35 | Thunder Creek | Diablo Lake | Lat. 48°40'22", long. 121°04'18", in SE¼ Sec. 23, T.37 N., R.13 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, on right bank 0.4 mi upstream from high-water line (elevation 1,205 ft) of Diablo Reservoir 9.0 mi east of Newhalem, and at mi 3.4 (Station No. 12175500). | 105<br>105 | G1 | Oct. 1931-<br>Sept. 1973<br>Oct. 25, 1955 | Table C2<br>[a]10,800 |
| 36 | Colonial Creek | do. | Lat. 48°41'32", long. 121°05'58", in NW¼ sec. 15, T.37 N., R.13 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 6.8 mi east of Newhalem and at mouth. | 3.15 | M | Oct. 28, 1920<br>Sept. 19, 1929<br>Oct. 18, 1929<br>Dec. 7, 1929 | 13.1<br>27.6<br>8.7<br>0.71 |
| 37 | Thunder Creek | do. | Lat. 48°42'34", long. 121°06'02", in NW¼ sec. 10, T.37 N., R.13 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 7.0 mi northeast of Newhalem. (0.3 mi upstream from former mouth) Station No. 12176000. | 114 | M | June 26, 1918<br>Sept. 21, 1918<br>Nov. 2, 1918<br>Nov. 6, 1918<br>Nov. 11, 1918<br>Feb. 13, 1919<br>Feb. 16, 1919 | 1,700<br>735<br>383<br>240<br>297<br>146<br>133 |
| | | | | | G2 | Apr. 1919-<br>Sept. 1930 | Table C2 |
| 38 | Diablo Reservoir | do. | Lat. 48°42'56", long. 121°07'52", in SE¼ sec. 5, T.37 N., R.13 E. (unsurveyed), Whatcom County, Ross Lake National Recreation Area, in Diablo Dam on Skagit River, 1.2 mi downstream from Thunder Creek, 6.0 mi northeast of Newhalem, and at mi 101.0 (Station No. 12176500). | 1,125<br>(400 $mi^2$ in Canada) | R | Oct. 1929-<br>Sept. 1973 | Table C2 |
| 39 | Skagit River | Skagit Bay | Lat. 48°42'47", long. 121°08'11", in N¼ sec. 8, T.37 N., R.13 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, just downstream from Canyon Diablo, 0.2 mi downstream from later site of Diablo Dam, 0.8 mi upstream from Stetattle Cr. and 5.8 mi northeast of Newhalem (Station No. 12177000). | 1,125<br>(400 $mi^2$ in Canada) | G2 | Oct. 1913-<br>Sept. 1922 | Table C2 |
| | | | | | M | Feb. 13, 1929<br>Feb. 15, 1929<br>June 26, 1929<br>June 19, 1931<br>Oct. 16, 1931 | 676<br>579<br>11,300<br>5,170<br>2,090 |
| 40 | Stetattle Creek | Skagit River | Lat. 48°43'20", long. 121°08'58", in NE¼ sec. 6, T.37 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, on left bank 5.5 mi northeast of Newhalem and at mi 0.4 (Station No. 12177500). | 22.0 | M | July 15, 1909<br>Jan. 26, 1914<br>May 9, 1914<br>May 5, 1914<br>Aug. 25, 1914<br>Sept. 15, 1914<br>July 20, 1915<br>Sept. 10, 1915<br>June 16, 1918<br>June 20, 1918<br>June 24, 1918<br>Sept. 18, 1918<br>Nov. 7, 1918<br>Feb. 24, 1919<br>March 10, 1919<br>July 28, 1919<br>July 28, 1919<br>Sept. 27, 1919<br>March 29, 1920<br>July 11, 1920<br>Feb. 17, 1929<br>Oct. 17, 1931<br>Dec. 4, 1931<br>Apr. 8, 1932<br>June 12, 1932<br>July 11, 1932 | 526<br>49.1<br>248<br>489<br>88.5<br>73.4<br>130<br>35.0<br>260<br>331<br>392<br>82.8<br>68.6<br>33.5<br>26.0<br>221.<br>317.<br>51.<br>45.1<br>281.<br>10.6<br>36.1<br>42.8<br>109.<br>567.<br>264. |
| | | | | | G1 | Jan. 1914-<br>Mar. 1914<br>Dec. 1914-<br>Apr. 1915<br>Sept. 1933-<br>Sept. 1973<br>Nov. 26, 1949 | Table C2<br>do.<br>do.<br>[a]8,580 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 41 | Pyramid Creek | Skagit River | Lat. 48°42'37", long. 121°08'40", in NW¼ sec. 8, T.37 N., R.13 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, at State Highway 20, 5.3 mi northeast of Newhalem (Station 12177520). | 2.82 | C1 | Apr. 25, 1934 | + 47.2 |
| | | | | | | Jan. 19, 1971 | * 110. |
| | | | | | | Oct. 6, 1971 | 10.7 |
| | | | | | | May 9, 1972 | * 38.9 |
| | | | | | | May 29, 1972 | + 133. |
| | | | | | | June 28, 1972 | * 39.8 |
| | | | | | | Dec. 26, 1972 | + 190. |
| 42 | Skagit River | Skagit Bay | Lat. 48°42'37", long. 121°09'44", T.37 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 1.9 mi downstream from Diablo Dam and 4.6 mi northeast of Newhalem. | -- | M | Apr. 7, 1932 | 3,700 |
| | | | | | | June 17, 1932 | 12,400 |
| | | | | | | July 17, 1932 | 5,390 |
| | | | | | | Aug. 11, 1932 | 2,660 |
| | | | | | | Oct. 13, 1932 | 2,310 |
| | | | | | | Apr. 26, 1933 | 7,650 |
| | | | | | | Apr. 2, 1936 | 1,240 |
| | | | | | | June 4, 1943 | 7,930 |
| | | | | | | June 5, 1943 | 9,500 |
| | | | | | | June 11, 1943 | 14,000 |
| | | | | | | June 12, 1943 | 10,800 |
| | | | | | | July 9, 1943 | 13,500 |
| | | | | | | Sept. 1, 1943 | 2,970 |
| | | | | | | Oct. 20, 1943 | 3,050 |
| | | | | | | Dec. 9, 1943 | 1,800 |
| | | | | | | Feb. 5, 1944 | 1,880 |
| | | | | | | Mar. 5, 1944 | 104 |
| | | | | | | Apr. 7, 1944 | 2,430 |
| | | | | | | May 26, 1944 | 5,860 |
| | | | | | | June 22, 1944 | 7,110 |
| | | | | | | Aug. 5, 1944 | 2,620 |
| | | | | | | Sept. 21, 1944 | 4,440 |
| | | | | | | Nov. 8, 1944 | 2,700 |
| | | | | | | Dec. 27, 1944 | 1,790 |
| | | | | | | Mar. 3, 1945 | 4,130 |
| | | | | | | Apr. 4, 1945 | 1,950 |
| | | | | | | June 27, 1945 | 7,260 |
| | | | | | | Sept. 7, 1945 | 2,860 |
| | | | | | | Nov. 17, 1945 | 4,250 |
| | | | | | | Jan. 11, 1946 | 2,750 |
| | | | | | | Mar. 2, 1946 | 3,420 |
| | | | | | | Mar. 29, 1946 | 3,910 |
| | | | | | | May 13, 1946 | 13,500 |
| | | | | | | July 15, 1946 | 6,250 |
| | | | | | | Sept. 17, 1946 | 2,600 |
| | | | | | | Nov. 13, 1946 | 1,280 |
| | | | | | | Dec. 12, 1946 | 3,120 |
| | | | | | | Jan. 4, 1947 | 1,890 |
| | | | | | | Feb. 4, 1947 | 3,620 |
| | | | | | | Mar. 1, 1947 | 1,800 |
| | | | | | | Mar. 31, 1947 | 7,700 |
| | | | | | | May 27, 1947 | 11,700 |
| | | | | | | June 26, 1947 | 10,500 |
| | | | | | | Aug. 13, 1947 | 3,830 |
| | | | | | | Sept. 23, 1947 | 2,460 |
| | | | | | | Nov. 4, 1947 | 6,220 |
| | | | | | | Dec. 12, 1947 | 5,760 |
| | | | | | | Jan. 3, 1948 | 5,630 |
| | | | | | | Feb. 2, 1948 | 5,720 |
| | | | | | | Mar. 1, 1948 | 3,180 |
| | | | | | | Apr. 4, 1948 | 2,250 |
| | | | | | | May 1, 1948 | 3,240 |
| | | | | | | July 16, 1948 | 6,000 |
| | | | | | | Sept. 2, 1948 | 5,660 |
| | | | | | | Oct. 15, 1948 | 4,560 |
| | | | | | | Dec. 13, 1948 | 5,800 |
| | | | | | | Jan. 28, 1949 | 5,780 |
| | | | | | | Mar. 20, 1949 | 2,860 |
| | | | | | | May 3, 1949 | 5,850 |
| | | | | | | May 16, 1949 | 9,780 |
| | | | | | | July 22, 1949 | 5,220 |
| | | | | | | Sept. 5, 1949 | 1,250 |
| | | | | | | Oct. 15, 1949 | 4,420 |
| | | | | | | Nov. 17, 1949 | 4,630 |
| | | | | | | Dec. 8, 1949 | 6,830 |
| | | | | | | Jan. 8, 1950 | 5,310 |
| | | | | | | Jan. 26, 1950 | 5,160 |
| | | | | | | Feb. 25, 1950 | 9,070 |
| | | | | | | Apr. 1, 1950 | 6,310 |
| | | | | | | Apr. 26, 1950 | 5,530 |
| | | | | | | May 25, 1950 | 4,710 |
| | | | | | | June 23, 1950 | 9,600 |
| | | | | | | July 25, 1950 | 10,600 |
| | | | | | | Oct. 18, 1950 | 3,650 |
| | | | | | | Dec. 6, 1950 | 5,480 |
| | | | | | | Jan. 16, 1951 | 7,070 |
| | | | | | | Mar. 28, 1951 | 3,860 |
| | | | | | | May 23, 1951 | 6,860 |
| | | | | | | Aug. 1, 1951 | 5,400 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 42 | Skagit River | Skagit Bay | Lat. 48°42'37", long. 121°09'44", T.37 N., R.13 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, 1.9 mi downstream from Diablo Dam and 4.6 mi northeast of Newhalem--continued | -- | M | Sept. 5, 1951 | 3,560 |
| | | | | | | Sept. 30, 1951 | 1,860 |
| | | | | | | Sept. 30, 1951 | 1,890 |
| | | | | | | Nov. 17, 1951 | 5,680 |
| | | | | | | Jan. 24, 1952 | 5,860 |
| | | | | | | Mar. 28, 1952 | 2,660 |
| | | | | | | June 6, 1952 | 3,220 |
| | | | | | | Sept. 3, 1952 | 3,670 |
| | | | | | | Dec. 10, 1952 | 5,070 |
| | | | | | | Jan. 30, 1953 | 5,070 |
| | | | | | | Mar. 28, 1953 | 3,470 |
| | | | | | | Oct. 9, 1953 | 5,720 |
| | | | | | | Dec. 11, 1953 | 5,760 |
| | | | | | | Mar. 1, 1954 | 7,580 |
| | | | | | | Oct. 15, 1954 | 3,870 |
| | | | | | | Dec. 28, 1954 | 5,530 |
| | | | | | | Feb. 6, 1955 | 4,930 |
| | | | | | | Apr. 26, 1955 | 5,550 |
| | | | | | | July 15, 1955 | 15,700 |
| | | | | | | Jan. 4, 1956 | 5,610 |
| | | | | | | Feb. 29, 1956 | 5,640 |
| | | | | | | Apr. 28, 1956 | 7,600 |
| | | | | | | July 18, 1956 | 7,860 |
| | | | | | | Oct. 9, 1956 | 5,420 |
| | | | | | | Dec. 19, 1957 | 5,620 |
| | | | | | | Feb. 27, 1957 | 5,460 |
| 43 | Unnamed Stream | Skagit River | Lat. 48°42'19", long. 121°10'47", in sec. 12, T.37 N., R.12 E., (unsurveyed) Whatcom County, Ross Lake National Recreation Area, at State Highway 20, 3.7 mi northeast of Newhalem (Station 12177620). | 0.43 | C1 | Oct. 6, 1971 | * .03 |
| | | | | | | Mar. 13, 1972 | + 15. |
| | | | | | | May 9, 1972 | * 4.38 |
| | | | | | | June 28, 1972 | * 1.88 |
| | | | | | | Dec. 26, 1972 | + 11. |
| 44 | Gorge Reservoir | do. | Lat. 48°41'53", long 121°12'25", in NW¼ sec. 14, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, in Gorge Dam on Skagit River, 2.4 mi upstream from city of Seattle Gorge powerplant at Newhalem, and at mi 96.6 (Station 12177700). | 1,159 (400 $mi^2$ in Canada) | R | June 1960-Sept. 1973 | Table C2 |
| 45 | Ladder Creek | Skagit River | Lat. 48°40'32", long. 121°14'18", in NE¼SE¼ sec. 21, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, at Gorge Powerhouse at Newhalem and 250 ft upstream from mouth. | 7.95 | M | Apr. 26, 1934 | 97.1 |
| | | | | | | July 16, 1960 | 89.0 |
| 46 | Skagit River | Skagit Bay | Lat. 48°40'19", long. 121°14'48", in SW¼SE¼ sec. 21, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, on right bank 0.4 mi upstream from Newhalem Cr., 0.5 mi downstream from city of Seattle powerplant at Newhalem, 10.8 mi upstream from Bacon Cr., and at mi 93.7. (Station No. 12178000). | 1,175 (400 $mi^2$ in Canada) | M | Aug. 27, 1914 | 2,770. |
| | | | | | | Sept. 16, 1914 | 1,360 |
| | | | | | G1 | Oct. 1908-May 1914 | Table C2 |
| | | | | | | Oct. 1921-Sept. 1973 | do. |
| | | | | | | Nov. 29, 1909 | [a]63,500 |
| 47 | Newhalem Creek | Skagit River | Lat. 48°38'59", long. 121°13'52", in SW¼NW¼ sec. 34, T.37 N., R.12 E., Whatcom County, North Cascades National Park, 1.7 mi south of Newhalem, and 2.0 mi upstream from mouth. | -- | M | July 12, 1909 | 620 |
| 48 | do. | do. | Lat. 48°39'22", long. 121°14'14", in SE¼SE¼ sec. 28, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, on left bank 1.2 mi south of Newhalem, 1.5 mi downstream from East Fork, and at mi 1.5 (Station No. 12178100). | 27.9 | G1 | Jan. 1961-Sept. 1973 | Table C2 |
| | | | | | | Nov. 20, 1962 | [a]5,600 |
| 49 | do. | do. | Lat. 48°40'12", long. 121°14'54", NE¼NW¼ sec. 28, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, 50 ft downstream from powerplant at Newhalem. | -- | M | Oct. 7, 1943 | 35.9 |
| | | | | | | Sept. 8, 1944 | 23.4 |
| | | | | | | Aug. 9, 1960 | 58.7 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 50 | Newhalem Creek | Skagit River | Lat. 48°40'10", long. 121°15'15", NW¼NW¼ sec. 28, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, 0.2 mi upstream from mouth at Newhalem. | -- | M | Mar. 14, 1911 | 36.4 |
| | | | | | | June 18, 1918 | 295. |
| | | | | | | Sept. 20, 1918 | 53.0 |
| | | | | | | Oct. 22, 1918 | 8.85 |
| | | | | | | Feb. 25, 1919 | 64.5 |
| | | | | | | Mar. 13, 1919 | 39.5 |
| | | | | | | July 22, 1919 | 302. |
| | | | | | | Sept. 26, 1919 | 49.4 |
| | | | | | | Mar. 29, 1920 | 8.59 |
| 51 | do. | do. | Lat. 48°40'16", long. 121°15'14", SW¼SW¼ sec. 21, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, 400 ft upstream from mouth at Newhalem. | -- | M | Aug. 30, 1943 | 86.1 |
| | | | | | | Sept. 7, 1943 | 58.9 |
| | | | | | | Sept. 19, 1943 | 46.4 |
| | | | | | | Oct. 7, 1943 | 5.78 |
| | | | | | | Oct. 20, 1943 | 65.6 |
| | | | | | | Sept. 8, 1944 | 5.60 |
| | | | | | | Aug. 9, 1960 | 74.6 |
| 52 | Goodell Creek | do. | Lat. 48°41'12", long. 121°16'16", sec. 17, T.37 N., R.12 E., (unsurveyed) Whatcom County, North Cascades National Park, 1.0 mi northwest of Newhalem and 1.0 mi upstream from mouth. | 37.9 | M | June 17, 1918 | 712. |
| | | | | | | Sept. 19, 1943 | 108. |
| | | | | | | Sept. 28, 1943 | 129. |
| 53 | do. | do. | Lat. 48°40'27", long. 121°15'50", NW¼SW¼ sec. 20, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, at highway bridge 500 ft upstream from mouth at Newhalem (Station No. 12178500). | 38.8 | M | July 8, 1909 | 465. |
| | | | | | | Mar. 15, 1911 | 53.1 |
| | | | | | | Aug. 9, 1960 | 303. |
| | | | | | G2 | Sept. 1943-Oct. 1943 | Table C2 |
| | | | | | | July 1944-Oct. 1944 | do. |
| 54 | Babcock Creek | do. | Lat. 48°39'53", long. 121°16'52", in SE¼NE¼ sec. 30, T.37 N., R.12 E., Whatcom County, Ross Lake National Recreation Area, at State highway 20 crossing 1.1 mi southwest of Newhalem. | 1.78 | M | Mar. 14, 1911 | 12.2 |
| | | | | | | Sept. 18, 1943 | 0 |
| | | | | | | Sept. 27, 1943 | 0 |
| 55 | Thornton Creek | do. | Lat. 48°38'52", long. 121°18'15", in sec. 36, T.37 N., R.12 E., (unsurveyed), Whatcom County, Ross Lake National Recreation Area, 2.8 mi southwest of Newhalem and 300 ft above mouth. | 4.57 | M | Aug. 21, 1943 | 17.5 |
| | | | | | | Sept. 8, 1943 | 10.4 |
| | | | | | | Sept. 18, 1943 | 7.71 |
| | | | | | | Sept. 27, 1943 | 8.69 |
| | | | | | | Oct. 7, 1943 | 6.18 |
| | | | | | | Oct. 20, 1943 | 14.2 |
| | | | | | | Aug. 11, 1944 | 7.91 |
| | | | | | | Sept. 21, 1944 | 62.4 |
| | | | | | | Oct. 24, 1944 | 18.0 |
| | | | | | | July 13, 1960 | 46.3 |
| | | | | | | Aug. 13, 1960 | 12.8 |
| 56 | Sky Creek | do. | Lat. 48°37'49", long. 121°19'38", in SW¼SW¼ sec. 1, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area, at State highway 20 crossing 4.2 mi southwest of Newhalem. | 1.30 | M | Sept. 18, 1943 | .31 |
| | | | | | | Sept. 27, 1943 | .50 |
| | | | | | | Sept. 8, 1944 | trace |
| 57 | Damnation Creek | do. | Lat. 48°37'37", long. 121°20'10", in NW¼NE¼ sec. 11, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area, at road crossing 5.2 mi southwest of Newhalem. | 5.08 | M | Aug. 21, 1943 | 7.12 |
| | | | | | | Sept. 8, 1943 | 3.93 |
| | | | | | | Sept. 18, 1943 | 4.32 |
| | | | | | | Sept. 27, 1943 | 4.84 |
| | | | | | | Oct. 7, 1943 | 4.40 |
| | | | | | | Oct. 20, 1943 | 8.27 |
| | | | | | | Aug. 9, 1960 | 5.27 |
| | | | | | | Aug. 29, 1973 | * 5.53 |
| 58 | Skagit River Trib. | do. | Lat. 48°37'32", long. 121°20'10", NW¼ sec. 11, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area at road crossing 5.1 mi southwest of Newhalem. | -- | M | Sept. 18, 1943 | .44 |
| 59 | Skagit River | Skagit Bay | Lat. 48°36'27", long. 121°21'37", in SW¼NE¼ sec. 15, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area, on right bank 0.6 mi upstream from Alma Crk., 6.8 mi northeast of Marblemount, and at mi 85.8 (Station No. 12179000). | 1,274 ($mi^2$) (400 $mi^2$ in Canada) | G1 | Oct. 1950-Sept. 1973 | Table C2 |
| | | | | | | June 21, 1967 | *38,500 |
| | | | | | Q | 1959-1960 | Table C4 |
| | | | | | | 1953-1973 | Table C5 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 60 | Alma Creek | Skagit River | Lat. 48°35'59", long. 121°21'41", in SE¼ sec. 15, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area on left bank 6.4 mi northeast of Marblemount and 150 ft upstream from mouth. | 8.37 | G2 | Sept. 1943-Oct. 1943 | Table C2 |
| | | | | | | Jan. 12, 1944 | 20.2 |
| | | | | | | July 11, 1944 | 37.5 |
| | | | | | | Aug. 11, 1944 | 21.8 |
| | | | | | | Aug. 9, 1960 | 40.4 |
| 61 | Copper Creek | do. | Lat. 48°35'22", long. 121°22'21", in SE¼ sec. 21, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area, 5.5 mi northeast of Marblemount and 500 ft above mouth. | 3.77 | M | Sept. 19, 1943 | 0 |
| 62 | Bacon Creek | do. | Lat. 48°36'40", long. 121°24'17", in NE¼NW¼ sec. 17, T.36 N., R.11 E., Skagit County, Mt. Baker National Forest, 7.1 mi northeast of Marblemount and at mi 2.1. | 48.2 | M | Sept. 28, 1943 | 139. |
| | | | | | | Sept. 8, 1944 | 97.3 |
| 63 | do. | do. | Lat. 48°35'19", long. 121°23'38", in NE¼SE¼ sec. 20, T.36 N., R.11 E., Skagit County, Mt. Baker National Forest, at State highway 20 crossing, 6.0 mi northeast of Marblemount and at mi 0.2. (Station No. 12180000). | 51.1 | G2 | Aug. 1943-Sept. 1950 | Table C2 |
| | | | | | M | July 8, 1909 | 337 |
| | | | | | | Mar. 15, 1911 | 159 |
| | | | | | | Oct. 5, 1950 | 400 |
| | | | | | | Aug. 15, 1951 | 181 |
| | | | | | | Aug. 19, 1958 | 151 |
| | | | | | | Aug. 10, 1960 | 258 |
| 64 | Diobsud Creek | do. | Lat. 48°34'20", long. 121°25'24", in SW¼SE¼ sec. 30, T.36 N., R.11 E., Skagit County, Mt. Baker National Forest, 3.3 mi north of Marblemount and at mi 1.2. | 24.0 | M | Sept. 28, 1943 | 45.2 |
| 65 | do. | do. | Lat. 48°33'40", long 121°24'51", in SW¼ sec. 32, T.36 N., R.11 E., Skagit County, Mt. Baker National Forest, on right bank 200 ft upstream from State highway 20 crossing 2.6 mi northeast of Marblemount and at mi 0.2. | 25.4 | G2 | Aug. 1943-Oct. 1943 | Table C2 |
| | | | | | | July 1944-Oct. 1944 | do. |
| | | | | | M | Mar. 14, 1911 | 78.8 |
| | | | | | | July 13, 1960 | 194. |
| | | | | | | Aug. 9, 1960 | 85.6 |
| 66 | Olson Creek | do. | Lat. 48°32'43", long. 121°26'49" in NW¼SE¼ sec. 1, T.35 N., R.10 E., Skagit County, Mt. Baker National Forest, at forest service road crossing 1.2 mi north of Marblemount. | 4.30 | M | Aug. 21, 1943 | 1.20 |
| | | | | | | Sept. 7, 1943 | .87 |
| | | | | | | Sept. 19, 1943 | .58 |
| | | | | | | Sept. 27, 1943 | .52 |
| | | | | | | Oct. 7, 1943 | .33 |
| | | | | | | Oct. 19, 1943 | .58 |
| | | | | | | Sept. 8, 1944 | trace |
| | | | | | | July 14, 1960 | 1.20 |
| | | | | | | Aug. 10, 1960 | .56 |
| 67 | Skagit River | Skagit Bay | Lat. 48°32'00", long. 121°25'41", in NE¼SW¼ sec. 7, T.35 N., R.11 E., Skagit County, on right bank 0.6 mi upstream from Cascade River, 0.6 mi northeast of Marblemount and at mi 78.7 (station No. 12181000). | 1,381 ($mi^2$) (400 $mi^2$ in Canada) | G2 | Sept. 1943-July 1944 | Table C2 |
| | | | | | | Oct. 1946-Sept. 1951 | do. |
| | | | | | M | Oct. 3, 1951 | 8,490 |
| | | | | | | Jan. 3, 1973 | 2,400 |
| | | | | | | Jan. 3, 1973 | 3,760 |
| | | | | | | Jan. 3, 1973 | 5,880 |
| | | | | | | Jan. 4, 1973 | 3,190 |
| | | | | | | Jan. 4, 1973 | 4,770 |
| | | | | | Q | 1959-70 | Table C4 |
| 68 | South Fork Cascade River | Skagit River | Lat. 48°22'13", long 121°04'23", Skagit County, Mt. Baker National Forest, on left bank at outlet of South Cascade Lake, 10.2 mi upstream from confluence with North Fork, 21 mi southeast of Marblemount, and at mi 28.9 (Station No. 12181100). | 2.36 | G1 | July 1957-Sept. 1973 | Table C2 |
| 69 | Salix Creek | South Fork Cascade River | Lat. 48°22'16", long. 121°04'35", in SE¼ sec. 2, T.33 N., R.13 E. (unsurveyed), Skagit County, Mt. Baker National Forest, on left bank 900 ft west of South Cascade Lake, 0.5 mi upstream from mouth, and 21 mi southeast of Marblemount (Station No. 12181200). | 0.078 | G1 | June 1961-Sept. 1973 | Table C2 |
| 70 | North Fork Cascade River | Cascade River | Lat. 48°29'09", long. 121°08'34", in sec. 29 T.35 N., R.13 E., Skagit County, North Cascades National Park, 15.0 mi east of Marblemount, just upstream from Hidden Lake Cr. and 2.0 mi upstream from mouth. | 16.3 | M | Apr. 8, 1909 | 135 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area (mi²) | Type of record[1] | Date | Discharge (ft³) |
|---|---|---|---|---|---|---|---|
| 71 | Sibley Creek | Cascade River | Lat. 48°30'44", long. 121°14'52", in SW¼SE¼ sec. 16, T.35 N., R.12 E., Skagit County, Mt. Baker National Forest, 8.6 mi east of Marblemount, at road crossing, 0.5 mi upstream from mouth. | 4.73 | M | Sept. 18, 1943<br>Sept. 28, 1943<br>Sept. 7, 1944 | 12.6<br>9.05<br>5.08 |
| 72 | Marble Creek | do. | Lat. 48°32'08", long. 121°16'16", in SW¼NE¼ sec. 8, T.35 N., R.12 E., Skagit County, Mt. Baker National Forest, on left bank 7.7 mi east of Marblemount at road crossing, at at mi 0.5 (Station No. 12181500). | 17.1 | G2 | Sept. 1943-<br>Oct. 1944<br>Aug. 19, 1911 | Table C2<br><br>80. |
| 73 | Cascade River | Skagit River | Lat. 48°31'58", long. 121°18'19", in NW¼SW¼ sec. 7, T.35 N., R.12 E., Skagit County, Mt. Baker National Forest, 6.2 mi east of Marblemount and at mi 7.2 (Station No. 12182000). | 140. | G2 | Apr. 1909-<br>Apr. 1913<br>Nov. 9, 1909 | Table C2<br><br>[a]26,000. |
| 74 | Irene Creek | Cascade River | Lat. 48°31'48", long. 121°19'17" in NE¼SW¼ sec. 12, T.35 N., R.12 E., Skagit County, 5.3 mi east of Marblemount and at mouth. | 6.44 | M | Sept. 19, 1943 | 6.51 |
| 75 | Cascade River Trib. | do. | Lat. 48°31'54", long. 121°20'06" in NW¼SE¼ sec. 11, T.35 N., R.11 E., Skagit County, at road crossing, 4.5 mi east of Marblemount. (Station No. 12182200). | 0.72 | C1 | Jan. 30, 1971<br>Oct. 6, 1971<br>June 28, 1972 | + 77.<br>* .44<br>* 14.2 |
| 76 | Boulder Creek | do. | Lat. 48°30'58", long. 121°21'49" in NW¼SW¼ sec. 15, T.35 N., R.11 E., Skagit County, at road crossing 3.5 mi southeast of Marblemount and at mi 0.3. | 8.09 | M | Aug. 24, 1943<br>Sept. 8, 1943<br>Sept. 19, 1943<br>Sept. 28, 1943<br>Oct. 8, 1943<br>July 11, 1944<br>Aug. 12, 1944<br>Sept. 23, 1944<br>Aug. 9, 1960 | 22.8<br>14.5<br>15.3<br>13.4<br>12.4<br>31.9<br>14.3<br>33.4<br>34.5 |
| 77 | Cascade River | Skagit River | Lat. 48°31'26", long. 121°22'58", in N½ sec. 16, T.35 N., R.11 E., Skagit County, on right bank 1.1 mi downstream from Boulder Cr., 2.2 mi east of Marblemount, and at mi 2.9 (Station No. 12182500). | 168. | G1<br><br>Q | Oct. 1928-<br>Sept. 1973<br>Nov. 20, 1962<br>1952-1973 | Table C2<br><br>[a]18,700<br>Table C6 |
| 78 | North Fork Clark Creek | Clark Creek | Lat. 48°31'13", long. 121°24'46", in SW¼NW¼ sec. 17, T.35 N., R.11 E., Skagit County, 1.2 mi southeast of Marblemount, and 900 ft upstream from confluence. | -- | M | May 30, 1944<br>July 12, 1944<br>Aug. 13, 1944<br>Sept. 25, 1944<br>Oct. 25, 1944<br>Jan. 30, 1944<br>Apr. 3, 1945 | 11.7<br>7.73<br>6.94<br>10.0<br>8.08<br>10.0<br>16.7 |
| 79 | South Fork Clark Creek | do. | Lat. 48°31'06", long. 121°24'50" in NW¼SW¼ sec. 17, T.35 N., R.11 E., Skagit County, 1.2 mi southeast of Marblemount, and 1,000 ft upstream from confluence. | -- | M | May 30, 1944 | .51 |
| 80 | do. | do. | Lat. 48°31'12", long. 121°24'58" in SE¼NE¼ sec. 18, T.35 N., R.11 E., Skagit County, 1.0 mi southeast of Marblemount, at confluence and 100 ft upstream from county road bridge. | -- | M | May 30, 1944 | 1.55 |
| 81 | Clark Creek | do. | Lat. 48°31'14", long. 121°25'03", in SE¼NE¼ sec. 18, T.35 N., R.11 E., Skagit County, on left bank 0.9 mi southeast of Marblemount and 500 ft upstream from mouth (Station No. 12183000). | 1.42 | G2 | Aug. 1944-<br>June 1946 | Table C2 |
| 82 | do. | do. | Lat. 48°31'13", long. 121°25'05", in SE¼NE¼ sec. 18, T.35 N., R.11 E., Skagit County, 0.9 mi southeast of Marblemount and 100 ft upstream from mouth. | -- | M | Aug. 20, 1943<br>Sept. 7, 1943<br>Sept. 18, 1943 | 11.0<br>9.28<br>8.07 |
| 83 | Jordan Creek | Cascade River | Lat. 48°31'02", long. 121°25'02", in NE¼SE¼ sec. 18, T.35 N., R.11 E., Skagit County, 1.1 mi southeast of Marblemount, on left bank at mi 0.5 (Station No. 12183500). | 12.0 | G2<br><br>M | Aug. 1943-<br>Oct. 1948<br>July 14, 1960<br>Aug. 9, 1960 | Table C2<br><br>64.2<br>22.6 |
| 84 | Backus Creek | Skagit River | Lat. 48°32'08", long. 121°26'53", in SE¼NE¼ sec. 12, T.35 N., R.10 E., Skagit County, Mt. Baker National Forest, at road crossing 0.5 mi north of Marblemount. | 4.12 | M | Sept. 19, 1943<br>Sept. 27, 1943<br>Sept. 7, 1944 | .30<br>.19<br>0 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 85 | Corkindale Creek | Skagit River | Lat. 48°30'57", long. 121°28'55", on east line sec. 15, T.35 N., R.10 E., Skagit County, 2.2 mi southwest of Marblemount and 0.7 mi upstream from mouth. | 4.12 | M | Aug. 20, 1943 | .89 |
| | | | | | | Sept. 7, 1943 | .34 |
| | | | | | | Sept. 17, 1943 | .09 |
| | | | | | | Sept. 27, 1943 | .15 |
| 86 | Rocky Creek | do. | Lat. 48°30'27", long. 121°29'49", in SE¼NW¼ sec. 22, T.35 N., R.10 E., Skagit County, Mt. Baker National Forest, on right bank 3.0 mi southwest of Marblemount and 0.5 mi upstream from mouth (Station 12184000). | 10.0 | G2 | Sept. 1943-Oct. 1943 | Table C2 |
| | | | | | M | Aug. 20, 1943 | 7.76 |
| | | | | | | July 11, 1944 | 8.07 |
| | | | | | | Aug. 13, 1944 | 8.10 |
| | | | | | | Sept. 25, 1944 | 37.8 |
| | | | | | | Oct. 25, 1944 | 25.6 |
| | | | | | | July 14, 1960 | 36.1 |
| | | | | | | Aug. 10, 1960 | 4.05 |
| 87 | O'brian Creek | do. | Lat. 48°29'33", long. 121°28'23", in SE¼NW¼ sec. 26, T.35 N., R.10 E., Skagit County, at road crossing 5.5 mi east of Rockport. | -- | M | Setp. 18, 1943 | 0 |
| 88 | Iron Creek | Illabot Creek | Lat. 48°26'06", long. 121°27'53", in NE¼ sec. 14, T.34 N., R.10 E., Skagit County, Mt. Baker National Forest, at logging road 1.1 mi upstream from mouth, 7.0 mi southeast of Rockport (Station No. 12184300). | 1.70 | C1 | Nov. 30, 1964 | + 270 |
| | | | | | | Aug. 4, 1965 | 2.48 |
| | | | | | | Mar. 30, 1966 | + 116 |
| | | | | | | June 1, 1966 | 15.1 |
| | | | | | | Dec. 16, 1966 | + 240. |
| | | | | | | June 6, 1967 | 60.6 |
| | | | | | | Oct. 27, 1967 | + 240. |
| | | | | | | Jan. 4, 1969 | + 127. |
| | | | | | | Aug. 14, 1969 | * 1.62 |
| | | | | | | Nov. 4, 1969 | + 209. |
| | | | | | | May 26, 1970 | 36.9 |
| | | | | | | Aug. 13, 1970 | * 1.46 |
| | | | | | | Jan. 30, 1971 | + 170. |
| | | | | | | July 14, 1971 | * 41.1 |
| | | | | | | Oct. 5, 1971 | * 5.02 |
| | | | | | | May 10, 1972 | * 20.0 |
| | | | | | | June 28, 1972 | * 37.7 |
| | | | | | | July 12, 1972 | + 288. |
| | | | | | | Dec. 26, 1972 | + 195. |
| 89 | Illabot Creek | Skagit River | Lat. 48°28'26", long. 121°29'41", in NE¼SW¼ sec. 34, T.35 N., R.10 E., Skagit County, 4.2 mi east of Rockport, 1943 gage site, 0.5 mi downstream with drainage area of 42.4 (Station No. 12184500). | 41.3 | G2 | Sept. 1943-Oct. 1943 | Table C2 |
| | | | | | | July 1944-Oct. 1944 | do. |
| | | | | | M | July 15, 1960 | 313 |
| | | | | | | Aug. 8, 1960 | 144 |
| 90 | Swift Creek | do. | Lat. 48°29'42", long. 121°32'47", in SW¼NW¼ sec. 29, T.35 N., R.10 E., Skagit County, 2.2 mi east of Rockport and 0.2 mi upstream from mouth. (Also referred to as Sutter Cr.) | 1.39 | M | Aug. 20, 1943 | 3.07 |
| | | | | | | Sept. 6, 1943 | 2.18 |
| | | | | | | Sept. 17, 1943 | 1.52 |
| | | | | | | Sept. 27, 1943 | 1.14 |
| | | | | | | Oct. 7, 1943 | .75 |
| | | | | | | Oct. 18, 1943 | 4.21 |
| | | | | | | Sept. 7, 1944 | .69 |
| | | | | | | Aug. 19, 1958 | 0 |
| | | | | | | July 14, 1960 | 9.22 |
| | | | | | | Aug. 10, 1960 | 0 |
| 91 | Martin Creek | do. | Lat. 48°28'03", long. 121°33'25", NW¼NE¼ sec. 6, T.34 N., R.10 E., Skagit County, 2.1 mi southeast of Rockport. | -- | M | Sept. 7, 1944 | 0 |
| 92 | North Fork Sauk River | Sauk River | Lat. 48°05'27", long. 121°20'00", sec. 13, T.30 N., R.11 E., Snohomish County, Mt. Baker National Forest, 16.4 mi southeast of Darrington, and 6.5 mi northeast of Barlow Pass (Station No. 12185000). | 76.4 | G2 | Oct. 1917-Dec. 1920 | Table C2 |
| 93 | South Fork Sauk River | do. | Lat. 48°03-49", long. 121°24'38", in NE¼ sec. 29, T.30 N., R.11 E., Snohomish County, Mt. Baker National Forest, 2.7 mi northeast of Barlow Pass, 15.7 mi southeast of Darrington and at mi 2.8 (Station No. 12185500). | 33.1 | G2 | Oct. 1917-Jan. 1921 | Table C2 |
| | | | | | | Oct. 1928-Sept. 1931 | do. |
| | | | | | M | Sept. 25, 1917 | 88.9 |
| | | | | | | Sept. 5, 1922 | 251. |
| | | | | | | Nov. 14, 1931 | 532. |
| 94 | Sauk River | Skagit River | Lat. 48°10'08", long. 121°28'10", on north line NE¼NE¼ sec. 23, T.31 N., R.10 E., Snohomish County, Mt. Baker National Forest, on right bank 0.6 mi upstream from White Chuck River, 8.4 mi southeast of Darrington and at mi 32.5 (Station No. 12186000). | 152. | G1 | Oct. 1917-Sept. 1922 | Table C2 |
| | | | | | | Sept. 1928-Sept. 1973 | do. |
| | | | | | | Nov. 27, 1949 | [a]30,200. |
| | | | | | Q | Sept. 1965-June 1966 | Table C5 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 95 | White Chuck River | Sauk River | Lat. 48°10'45", long. 121°24'02", in SW¼NW¼ sec. 16, T.31 N., R.11 E., Snohomish County, Mt. Baker National Forest, on left bank, 10.6 mi southeast of Darrington. (Station No. 12186500). | 77.9 | G2 | July 1920-Nov. 1922 | Table C2 |
| | | | | | | Jan. 29, 1910 | 219 |
| 96 | do. | do. | Lat. 48°10'20", long. 121°28'12", in SE¼SE¼ sec. 14, T.31 N., R.10 E., Snohomish County, Mt. Baker National Forest, 8.1 mi southeast of Darrington and at mouth. | 86.2 | N | May 11, 1909 | 360 |
| | | | | | | Aug. 29, 1910 | 219 |
| 97 | Sauk River | Skagit River | Lat. 48°13'08", long. 121°34'01" in NW¼SW¼ sec. 31, T.32 N., R.10 E., Snohomish County, Mt. Baker National Forest, 2.6 mi southeast of Darrington, 0.1 mi upstream from Clear Creek and at mi 25.3. (Station No. 12187000). | 259 | G2 | Sept. 1910-Sept. 1911 | Table C2 |
| | | | | | | Jan. 1913-Sept. 1913 | do. |
| | | | | | M | Dec. 19, 1911 | 983 |
| | | | | | | Oct. 26, 1913 | 1300 |
| | | | | | | May 12, 1914 | 2490 |
| 98 | Clear Creek | Sauk River | Lat. 48°13'07", long. 121°34'06" in NE¼SW¼ sec. 31, T.32 N., R.10 E., Snohomish County, Mt. Baker National Forest, 2.6 mi southeast of Darrington. | 29.0 | M | Aug. 28, 1910 | 18.4 |
| | | | | | | Oct. 7, 1910 | 673. |
| | | | | | | Oct. 18, 1910 | 510. |
| | | | | | | Nov. 10, 1910 | 4,080 |
| | | | | | | Dec. 17, 1910 | 244 |
| | | | | | | Jan. 4, 1911 | 167 |
| | | | | | | Feb. 8, 1911 | 64.4 |
| | | | | | | Feb. 19, 1911 | 74.5 |
| | | | | | | Mar. 1, 1911 | 47.9 |
| | | | | | | Apr. 8, 1911 | 230. |
| | | | | | | May 26, 1911 | 281. |
| | | | | | | June 16, 1911 | 364. |
| | | | | | | Aug. 3, 1911 | 209. |
| | | | | | | Sept. 2, 1911 | 20.0 |
| | | | | | | Dec. 18, 1911 | 143. |
| | | | | | | Mar. 17, 1913 | 577. |
| | | | | | | Oct. 24, 1913 | 149. |
| | | | | | | May 12, 1914 | 265. |
| | | | | | | Sept. 25, 1919 | 22.9 |
| | | | | | | June 8, 1950 | 394. |
| | | | | | | July 23, 1950 | 300. |
| | | | | | | Aug. 12, 1950 | 92.6 |
| | | | | | | Sept. 1, 1950 | 65.0 |
| | | | | | | Aug. 16, 1951 | 19.4 |
| 99 | Sauk River | Skagit River | Lat. 48°14'42", long. 121°35'09" in NW¼SE¼ sec. 24, T.32 N., R.9 E., Snohomish County, 0.7 mi southeast of Darrington, 2.6 mi downstream from Clear Creek and at mi 22.6 (Station No. 12187500). | 293 | G2 | July 1914-Sept. 1926 | Table C2 |
| | | | | | | July 1928-Sept. 1932 | do. |
| | | | | | | Feb. 26, 1932 | [a]46,500 |
| | | | | | | Oct. 26, 1913 | 1,420 |
| | | | | | | May 12, 1914 | 2,760 |
| | | | | | Q | 1959-1961 | Table C4 |
| 100 | Dan Creek | Sauk River | Lat. 48°16'29", long. 121°33'08" in NW¼SW¼ sec. 8, T.32 N., R.10 E., Snohomish County, Mt. Baker National Forest, at road crossing 0.7 mi northeast of Darrington. | 16.5 | M | June 8, 1950 | 87.0 |
| | | | | | | July 23, 1950 | 48.3 |
| | | | | | | Aug. 12, 1950 | 14.7 |
| | | | | | | Aug. 31, 1950 | 11.6 |
| 101 | Suiattle River | do. | Lat. 48°09'41", long. 121°00'17" in sec. 28, T.31 N., R.15 E., (unsurveyed) Snohomish County, Glacier Peak Wilderness, 28.0 mi east of Darrington, 200 ft upstream from Small Creek and at mi 37.7. | 28.6 | M | Feb. 1, 1956 | 48.2 |
| | | | | | | Mar. 29, 1956 | 39.8 |
| 102 | Small Creek | Suiattle River | Lat. 48°09'47", long. 121°00'13" in sec. 28 T.31 N., R.15 E., (unsurveyed) Snohomish County, Glacier Peak Wilderness, 28.0 mi east of Darrington and 200 ft upstream from mouth. | 3.61 | M | Feb. 1, 1956 | 3.46 |
| | | | | | | Mar. 11, 1956 | 2.63 |
| | | | | | | Mar. 29, 1956 | 2.00 |
| | | | | | | Aug. 23, 1956 | 12.4 |
| | | | | | | Sept. 13, 1956 | 7.70 |
| 103 | Suiattle River | Sauk River | Lat. 48°09'47", long 121°00'20" in sec. 28, T.31 N., R.15 E., (unsurveyed) Snohomish County, Glacier Peak Wilderness, 28.0 mi east of Darrington and 200 ft downstream from Small Creek. | 32.3 | M | Mar. 11, 1956 | 61.4 |
| 104 | Miners Creek | Suiattle River | Lat. 48°11'13", long. 121°01'42" in sec. 17, T.31 N., R.15 E., (unsurveyed) Snohomish County, Glacier Peak Wilderness, 26.5 mi east of Darrington and 600 ft upstream from mouth. | 11.4 | M | Feb. 1, 1956 | 10.9 |
| | | | | | | Mar. 11, 1956 | 4.15 |
| | | | | | | Mar. 29, 1956 | 7.83 |
| | | | | | | Aug. 23, 1956 | 58.3 |
| | | | | | | Sept. 18, 1956 | 23.1 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 105 | Sulphur Creek | Suiattle River | Lat. 48°14'58", long. 121°11'23" in SE¼NE¼ sec. 24, T.32 N., R.12 E., Snohomish County, Mt. Baker National Forest, 19.7 mi east of Darrington. | 33.3 | M | Aug. 22, 1913 | 185. |
| 106 | Downey Creek | do. | Lat. 48°15'35", long. 121°13'25", in SW¼SW¼ sec. 14, T.32 N., R.12 E., Snohomish County, Mt. Baker National Forest, 300 ft upstream from forest service road crossing, 700 ft upstream from mouth and 17 mi east of Darrington. | 35.2 | M | Aug. 22, 1913<br>Aug. 27, 1973 | 208<br>* 90.4 |
| 107 | Suiattle River | Sauk River | Lat. 48°15'12", long. 121°14'24" in NE¼NW¼ sec. 22, T.32 N., R.12 E., Snohomish County, Mt. Baker National Forest, 16.5 mi east of Darrington, 1.0 mi downstream from Downey Creek and at mi 23.4. | 186 | M | June , 1909 | 1,400 |
| 108 | do. | do. | Lat. 48°15'03", long. 121°18'07" in SW¼NE¼ sec. 19, T.32 N., R.12 E., Snohomish County, Mt. Baker National Forest, 13.7 mi east of Darrington, 0.5 mi downstream from Lime Creek and at mi 20.3 (Station No. 12188000). | 213 | G2 | Oct. 1920-<br>Oct. 1921<br>Aug. 23, 1913 | Table C2<br><br>1,580 |
| 109 | Buck Creek | Suiattle River | Lat. 48°16'01", long. 121°19'58", in SW¼NW¼ sec. 13, T.32 N., R.11 E., Snohomish County, Mt. Baker National Forest, 12.3 mi east of Darrington, 0.2 mi downstream from road crossing and at mi 0.05. | 33.2 | M | June 28, 1909<br>Aug. 22, 1913 | 452<br>177 |
| 110 | Straight Creek | do. | Lat. 48°14'06", long. 121°23'09", in SW¼NE¼ sec. 28, T.32 N., R.11 E., Snohomish County, Mt. Baker National Forest, at logging road crossing, 2.8 mi upstream from mouth and 10.0 mi east of Darrington (Station No. 12188300). | 4.32 | C1 | Nov. 30, 1964<br>Aug. 3, 1965<br>May 6, 1966<br>June 1, 1966<br>Dec. 16, 1966<br>June 7, 1967<br>June 13, 1967<br>June 2, 1968<br>May 29, 1969<br>June 23, 1969<br>Aug. 14, 1969<br>Nov. 4, 1969<br>May 25, 1970<br>Aug. 13, 1970<br>May 12, 1971<br>July 14, 1971<br>Oct. 6, 1971<br>Feb. 28, 1972<br>June 28, 1972<br>Dec. 26, 1972 | + 243.<br>* 14.9<br>+ 163.<br>38.7<br>+ 235.<br>82.1<br>90.0<br>+ 374.<br>+ 301.<br>41.7<br>* 11.0<br>+ 330.<br>77.8<br>* 4.01<br>+ 406.<br>* 71.8<br>* 10.8<br>+ 494.<br>* 63.6<br>+ 225. |
| 111 | Tenas Creek | do. | Lat. 48°19'32", long. 121°26'18", in NW¼NW¼ sec. 30, T.33 N., R.11 E., Skagit County, 8.9 mi northeast of Darrington, and at mouth. | 10.5 | M | June 27, 1909<br>Aug. 31, 1943<br>Sept. 4, 1943<br>Sept. 17, 1943<br>Sept. 25, 1943<br>Oct. 6, 1943<br>Oct. 15, 1943<br>July 12, 1944<br>Aug. 17, 1944<br>Oct. 3, 1944<br>Oct. 23, 1944<br>July 15, 1960<br>Aug. 8, 1960 | 246.<br>26.4<br>22.8<br>18.4<br>15.3<br>13.8<br>19.8<br>31.5<br>20.6<br>49.5<br>27.6<br>55.2<br>29.9 |
| 112 | Suiattle River | Sauk River | Lat. 48°20'32", long. 121°27'08", in SW¼SE¼ sec. 13, T.33 N., R.10 E., Skagit County, on right bank 0.3 mi upstream from Big Creek, 1.5 mi downstream from Tenas Creek, 9.5 mi northeast of Darrington, and at mi 8.1. (Station No. 12188400). | 307 | G1 | Dec. 1970-<br>Sept. 1973 | Table C2 |
| 113 | Big Creek | Suiattle River | Lat. 48°20'36", long. 121°26'24" in NW¼SW¼ sec. 18, T.33 N., R.11 E., Skagit County, 9.5 mi northeast of Darrington, on right bank 0.5 mi upstream from mouth (Station No. 12188500). | 21.0 | G2 | Sept. 1943-<br>Oct. 1946 | Table C2 |
| 114 | Suiattle River | Sauk River | Lat. 48°21'52", long. 121°29'32" in SW¼NE¼ sec. 10, T.33 N., R.10 E., Skagit County, on left bank 9.2 mi northeast of Darrington, 2.7 mi downstream from Big Creek and at mi 5.1 (Station No. 12189000). | 335. | G2 | July 1938-<br>Nov. 1949<br>Nov. 27, 1949<br>Apr. 29, 1956 | Table C2<br><br>[a]30,700.<br>2,260. |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 115 | Suiattle River | Sauk River | Lat. 48°20'44", long. 121°30'36" in NE¼SE¼ sec. 16, T.33 N., R.10 E., Skagit County, 7.3 mi northeast of Darrington, and 3.0 mi upstream from mouth. | 339 | M | June 27, 1909 | 3,000 |
| 116 | Sauk River Trib. | do. | Lat. 48°20'28", long. 121°31'08" SE¼SE¼ sec. 18, T.33 N., R.10 E., Skagit County, at county road 0.2 mi upstream from mouth and 6.5 mi northeast of Darrington (Station No. 12189400). | 1.30 | C2 | Feb. 10, 1951 | + 160 |
| | | | | | | Feb. 2, 1952 | + 50.6 |
| | | | | | | Jan. 31, 1953 | + 145. |
| | | | | | | Dec. 19, 1953 | + 88.0 |
| | | | | | | Feb. 8, 1955 | + 78.2 |
| | | | | | | Nov. 3, 1955 | + 87.6 |
| | | | | | | Dec. 9, 1956 | + 184. |
| | | | | | | Dec. 25, 1957 | + 55.0 |
| | | | | | | Nov. 12, 1958 | + 122. |
| | | | | | | Nov. 22, 1959 | + 128. |
| | | | | | | Feb. 21, 1961 | + 157. |
| | | | | | | Jan. 3, 1962 | + 95. |
| | | | | | | Nov. 19, 1962 | + 183. |
| | | | | | | Nov. 26, 1963 | + 114. |
| | | | | | | Nov. 30, 1964 | + 100. |
| | | | | | | Jan. 13, 1966 | + 68. |
| | | | | | | Dec. 16, 1966 | + 82. |
| | | | | | | Dec. 24, 1967 | + 119. |
| | | | | | | Jan. 4, 1969 | + 83. |
| | | | | | | Aug. 4, 1969 | * 0.18 |
| | | | | | | Jan. 22, 1970 | + 48. |
| | | | | | | May 27, 1970 | * .93 |
| | | | | | | Aug. 13, 1970 | * .14 |
| | | | | | | May 12, 1971 | * 5.22 |
| | | | | | | Oct. 7, 1971 | * .51 |
| | | | | | | May 10, 1972 | * 6.61 |
| | | | | | | June 28, 1972 | * 2.01 |
| 117 | White Creek | do. | Lat. 48°23'56", long. 121°32'51", SW¼SW¼ sec. 29, T.34 N., R.10 E., Skagit County, 200 ft downstream from old road bridge, 6.4 mi southeast of Rockport and 0.2 mi upstream from mouth. | 9.50 | M | Aug. 31, 1943 | 6.35 |
| | | | | | | Sept. 4, 1943 | 7.74 |
| | | | | | | Sept. 17, 1943 | 5.38 |
| | | | | | | Sept. 25, 1943 | 3.60 |
| | | | | | | Oct. 6, 1943 | 3.90 |
| | | | | | | Oct. 15, 1943 | 10.6 |
| | | | | | | July 2, 1944 | 11.1 |
| | | | | | | Aug. 18, 1944 | 5.48 |
| | | | | | | Oct. 3, 1944 | 55.6 |
| | | | | | | Oct. 23, 1944 | 33.7 |
| | | | | | | July 15, 1960 | 18.5 |
| | | | | | | Aug. 8, 1960 | 7.41 |
| 118 | Sauk River | Skagit River | Lat. 48°25'29", long. 121°34'02", in NW¼NW¼ sec. 19, T.34 N., R.10 E., Skagit County, on left bank, 4.4 mi southeast of Rockport, 7.6 mi southeast of Sauk, 7.8 mi downstream from Suiattle River, and at mi 5.4 (Station No. 12189500). | 714 | M | Oct. 16, 1910 | 3,240 |
| | | | | | | Nov. 8, 1910 | 11,300 |
| | | | | | | Mar. 16, 1913 | 1,940 |
| | | | | | | Mar. 18, 1913 | 3,580 |
| | | | | | G1 | Apr. 1911-Aug. 1912 | Table C2 |
| | | | | | | Aug. 1928-Sept. 1973 | do. |
| | | | | | | Nov. 27, 1949 | *82,400 |
| | | | | | Q | | Table C5, C6 |
| 119 | Jackman Creek | do. | Lat. 48°31'24", long. 121°42'49", in SE¼NW¼ sec. 13, T.35 N., R.8 E., Skagit County 300' downstream from railroad bridge at Van Horn, 1.8 mi southeast of Concrete and at mi 0.2 (Station No. 12190000). | 23.9 | M | Apr. 20, 1911 | 84.5 |
| | | | | | | Sept. 11, 1912 | 45.0 |
| | | | | | | Aug. 15, 1951 | 12.3 |
| | | | | | | Aug. 19, 1951 | 9.06 |
| | | | | | | Aug. 18, 1958 | 9.43 |
| | | | | | | July 14, 1960 | 76.6 |
| | | | | | | Aug. 2, 1960 | 28.2 |
| | | | | | G2 | Sept. 1943-Sept. 1947 | Table C2 |
| 120 | Baker River | do. | Lat. 48°44'34", long. 121°33'15" in NE¼NW¼ sec. 31, T.38 N., R.10 E., Whatcom County, Mt. Baker National Forest, 200 ft upstream of road bridge, 16.4 mi northeast of Concrete and at mi 20.2. | 81.0 | M | Aug. 29, 1973 | * 245. |
| 121 | Morovitz Creek | Swift Creek | Lat. 48°45'35", long. 121°40'28" in SE¼SE¼ sec. 19, T.38 N., R.9 E., Whatcom County, Mt. Baker National Forest, at logging road 0.4 mi southwest of Baker Hot Spring, 15.7 mi north of Concrete (Station No. 12190700). | .55 | C1 | Aug. 26, 1965 | * 1.52 |
| | | | | | | Nov. 1, 1965 | + 32.0 |
| | | | | | | June 1, 1966 | * 3.48 |
| | | | | | | Feb. 4, 1967 | + 79.0 |
| | | | | | | June 6, 1967 | * 9.63 |
| | | | | | | Oct. 27, 1967 | + 163. |
| | | | | | | Jan. 4, 1969 | + 62. |
| | | | | | | Aug. 14, 1969 | * 0.13 |
| | | | | | | Nov. 4, 1969 | + 61. |
| | | | | | | May 26, 1970 | * 4.02 |
| | | | | | | Aug. 14, 1970 | * .30 |
| | | | | | | Jan. 31, 1971 | + 31. |
| | | | | | | July 16, 1971 | * 5.21 |
| | | | | | | Oct. 5, 1971 | * 1.52 |
| | | | | | | June 9, 1972 | + 96. |
| | | | | | | June 27, 1972 | * 13.4 |
| | | | | | | Dec. 19, 1972 | + 87. |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 122 | Sandy Creek | Baker River | Lat. 48°41'04", long. 121°42'23", in NE¼ sec. 24, T.37 N., R.8 E., (unsurveyed), Whatcom County, Mt. Baker National Forest, at downstream side of road crossing, 10.3 mi north of Concrete, and at mi 1.9. (Station No. 12191000). | 10.8 | G2 | March 1953-<br>Sept. 1954 | Table C2 |
| 123 | Baker River | Skagit River | Lat. 48°39'48", long. 121°40'28", in NE¼SE¼ sec. 30, T.37 N., R.9 E., Whatcom County, Mt. Baker National Forest, 350 ft downstream from Anderson Creek, 9.3 mi northeast of Concrete, and at mi 10.7 (Station No. 12191500). | 211. | G2 | Oct. 1910-<br>Sept. 1926<br>Sept. 1928-<br>Oct. 1932<br>Jan. 1955-<br>Sept. 1959<br>Dec. 29, 1917 | Table C2<br>do.<br>do.<br>[a]36,800 |
| 124 | Baker Lake | -- | Lat. 48°38'58", long. 121°41'22", in SW¼ sec. 31, T.37 N., R.9 E., Whatcom County, at upper Baker Dam on Baker River near center of dam, 0.3 mi upstream from Sulphur Creek, 8.0 mi north of Concrete, and at mi 9.3. (Station No. 12191600). | 215. | R | July 1959-<br>Sept. 1973 | Table C2 |
| 125 | Baker River Trib. | Baker River | Lat. 48°38'55", long. 121°41'34", in NW¼SW¼ sec. 31, T.37 N., R.9 E., Whatcom County, Mt. Baker National Forest, 0.5 mi Upper Baker Dam, and 8.1 mi northeast of Concrete. (Seepage from Baker Lake.) | - | M | Apr. 26, 1961 | 1.24 |
| 126 | Sulphur Creek | Lake Shannon | Lat. 48°40'04", long. 121°45'00", in SE¼ sec. 22, T.37 N., R.8 E., Whatcom County, Mt. Baker National Forest, on left bank 9.5 mi north of Concrete and at mi 3.5. (Station No. 12191800). | 8.36 | G1 | Feb. 1963-<br>Sept. 1973<br>Jan.5 or 6, 1969 | Table C2<br>[a]885 |
| 127 | do. | do. | Lat. 48°39'32", long. 121°42'42", in sec. 25 T.37 N., R.8 E., (unsurveyed) Whatcom County, Mt. Baker National Forest, at road crossing at Komo Kulshan Guard Station, 8.5 mi north of Concrete. | - | M | June 2, 1959 | 75. |
| 128 | do. | do. | Lat. 48°39'10", long. 121°41'51" in NE¼ sec. 36, T.37 N., R.8 E., (unsurveyed) Whatcom County, Mt. Baker National Forest, 0.2 mi upstream from mouth, and 8.2 mi northeast of Concrete. | 9.85 | M | June 2, 1959<br>July 13, 1960 | 103.<br>128. |
| 129 | Bear Creek | do. | Lat. 48°37'14", long. 121°44'34", in NE¼SE¼ sec. 10, T.36 N., R.8 E., Skagit County at road crossing 0.5 mi upstream from North Fork and 5.7 mi north of Concrete (Station No. 12192000). | 11.4 | G2<br>M | Apr. 1953-<br>Sept. 1954<br>Sept. 3, 1943<br>Sept. 17, 1943<br>Sept. 25, 1943<br>Oct. 5, 1943<br>Oct. 18, 1943<br>July 13, 1944<br>Aug. 14, 1944<br>Sept. 27, 1944<br>Oct. 22, 1944<br>July 14, 1960<br>Aug. 10, 1960 | Table C2<br>7.21<br>5.97<br>6.92<br>6.42<br>29.4<br>9.25<br>6.93<br>30.4<br>34.7<br>27.0<br>7.16 |
| 130 | North Fork Bear Creek | Bear Creek | Lat. 48°38'04", long. 121°44'22" in SW¼SW¼ sec. 2, T.36 N., R.8 E., Skagit County at road crossing 1.0 mi upstream from mouth and 6.6 mi north of Concrete. (Station No. 12192500). | 20.2 (includes 19.0 $mi^2$ in Sulphur and Rocky Cr. Basins) | G2 | March 1953-<br>Sept. 1954 | Table C2 |
| 131 | Thunder Creek | Lake Shannon | Lat. 48°36'13", long. 121°41'38", in NW¼SW¼ sec. 18, T.36 N., R.9 E., Skagit County, at road crossing 5.1 mi northeast of Concrete and 1.2 mi upstream from mouth. | 22.4 | M | Aug. 21, 1943<br>Sept. 6, 1943<br>Sept. 19, 1943<br>Sept. 25, 1943<br>Oct. 5, 1943<br>Oct. 18, 1943<br>July 12, 1944<br>Aug. 14, 1944<br>Sept. 27, 1944<br>Oct. 22, 1944<br>Aug. 2, 1960 | 27.4<br>21.0<br>15.8<br>15.8<br>17.0<br>72.9<br>28.3<br>22.4<br>48.8<br>86.7<br>30.6 |
| 132 | Lake Shannon | -- | Lat. 48°32'53", long. 121°44'22" in SW¼ sec. 2, T.35 N., R.8 E., Skagit County, at Baker Dam on Baker River near left bank, 0.7 mi north of Concrete and at mi 1.2. (Station No. 12193000). | 297. | R | Nov. 1925-<br>Sept. 1973 | Table C2 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area[2] (mi$^2$) | Type of record[1] | Date | Discharge (ft$^3$) |
|---|---|---|---|---|---|---|---|
| 133 | Baker River | Skagit River | Lat. 48°32'24", long. 121°44'31" in NW¼NW¼ sec. 11, T.35 N., R.8 E., Skagit County, on left bank just upstream from fish barrier, 0.2 mi northeast of Concrete, 0.3 mi downstream from Baker River powerplant, and at mi 0.7 (Station No. 12193500). | 297. | G1 | Sept. 1910-Mar. 1915 | Table C2 |
| | | | | | | Sept. 1943-Sept. 1973 | do. |
| | | | | | | Nov. 19, 1962 | [a]36,600 |
| | | | | | | Sept. 11, 1910 | 850 |
| | | | | | | Aug. 19, 1943 | 2,290 |
| | | | | | Q | 1961-1965 | Table C4 |
| 134 | Skagit River | Skagit Bay | Lat. 48°31'28", long. 121°46'11" in SE¼NE¼ sec. 16, T.35 N., R.8 E., Skagit County, on right bank at dalles 1.3 mi southwest of Concrete, 2.4 mi downstream from Baker River, and at mi 54.1. (Station No. 12194000). | 2,737. (400 mi$^2$ in Canada) | G1 | Sept. 1924-Sept. 1973 | Table C2 |
| | | | | | | Nov. 27, 1949 | [a]154,000 |
| | | | | | Q | 1970-1971 | Table C4 |
| 135 | Finney Creek | Skagit River | Lat. 48°27'49", long. 121°41'24", center of sec. 6, T.34 N., R.9 E., Skagit County, at road crossing 5.9 mi southeast of Concrete. | 32.9 | M | Sept. 7, 1943 | 17.1 |
| 136 | do. | do. | Lat. 48°29'51", long. 121°44'15", NE¼NW¼ sec. 26, T.35 N., R.8 E., Skagit County, 2.8 mi south of Concrete. | 39.6 | M | Sept. 9, 1944 | 14.6 |
| 137 | Hatchery Creek | Finney Creek | Lat. 48°30'21", long. 121°46'41", NE¼SW¼ sec. 21, T.35 N., R.8 E., Skagit County, at road crossing near mouth 2.8 mi southwest of Concrete. | 1.79 | M | Sept. 15, 1943 | 0 |
| 138 | Quartz Creek | do. | Lat. 48°30'22", long. 121°47'00", NW¼SW¼ sec. 21, T.35 N., R.8 E., Skagit County, at road crossing 2.9 mi southwest of Concrete. | 4.02 | M | Aug. 19, 1943 | 3.22 |
| | | | | | | Sept. 2, 1943 | 3.26 |
| | | | | | | Sept. 15, 1943 | 2.16 |
| | | | | | | Sept. 24, 1943 | 2.30 |
| 139 | Finney Creek | Skagit River | Lat. 48°30'36", long. 121°48'48", in SE¼NE¼ sec. 19, T.35 N., R.8 E., Skagit County, 2.5 mi upstream from mouth, 3.2 mi southwest of Concrete (Station No. 12194500). | 51.6 | G2 | Aug. 1943-Sept. 1948 | Table C2 |
| | | | | | M | Aug. 16, 1951 | 17.2 |
| | | | | | | Aug. 13, 1969 | 36.0 |
| | | | | | | May 26, 1970 | |
| | | | | | | Aug. 13, 1970 | |
| | | | | | | July 16, 1971 | 309. |
| 140 | do. | do. | Lat. 48°46'14", long. 121°50'17", in NW¼SE¼ sec. 13, T.35 N., R.7 E., Skagit County, 400 mi upstream from highway bridge, 3.7 mi southwest of Concrete, and 0.5 mi upstream from mouth. | - | M | Aug. 19, 1958 | 7.20 |
| | | | | | | July 7, 1960 | 109. |
| | | | | | | Aug. 2, 1960 | 32.2 |
| | | | | | | Sept. 1, 1967 | 13.6 |
| 141 | Pressentin Creek | do. | Lat. 48°31'03", long. 121°50'59", in SW¼SW¼ sec. 13, T.35 N., R.7 E., Skagit County, at road crossing 500 ft upstream from mouth, 4.5 mi southwest of Concrete. | 12.9 | M | Aug. 3, 1943 | 18.7 |
| | | | | | | Aug. 19, 1943 | 9.67 |
| | | | | | | Sept. 2, 1943 | 8.38 |
| | | | | | | Sept. 15, 1943 | 5.82 |
| | | | | | | Sept. 24, 1943 | 5.52 |
| | | | | | | Oct. 5, 1943 | 8.79 |
| | | | | | | Oct. 14, 1943 | 11.2 |
| | | | | | | July 12, 1944 | 8.68 |
| | | | | | | Aug. 15, 1944 | 6.39 |
| | | | | | | Sept. 27, 1944 | 17.9 |
| | | | | | | Oct. 21, 1944 | 14.3 |
| | | | | | | July 7, 1960 | 36.3 |
| | | | | | | Aug. 2, 1960 | 11.7 |
| | | | | | | Sept. 1, 1967 | 6.46 |
| | | | | | | Aug. 13, 1969 | * 11.2 |
| | | | | | | May 26, 1970 | * 76.4 |
| | | | | | | Aug. 13, 1970 | * 10.0 |
| | | | | | | July 16, 1971 | 121. |
| 142 | Grandy Lake Outlet | Grandy Creek | Lat. 48°33'43", long. 121°48'36", in SE¼SE¼ sec. 31, T.36 N., R.8 E., Skagit County, 100 ft downstream from outlet of Grandy Lake and 3.4 mi northwest of Concrete. | 4.90 | M | Sept. 17, 1943 | .21 |
| | | | | | | Sept. 25, 1943 | .22 |
| | | | | | | Sept. 7, 1944 | trace |
| | | | | | | Aug. 31, 1967 | 8.56 |
| 143 | Grandy Creek | Skagit River | Lat. 48°33'38", long. 121°49'27", in SE¼SW¼ sec. 31, T.36 N., R.8 E., Skagit County, 300 ft downstream from Grandy Lake outlet and 3.9 mi northwest of Concrete. | 9.54 | M | Sept. 17, 1943 | 1.74 |
| | | | | | | Sept. 25, 1943 | 2.43 |
| | | | | | | Sept. 7, 1944 | 1.90 |
| 144 | do. | do. | Lat. 48°32'01", long. 121°53'02", in NW¼SW¼ sec. 10, T.35 N., R.7 E., Skagit County, at state highway 20 crossing 1.2 mi upstream from mouth and 5.8 mi west of Concrete. (Station No. 12195000). | 17.4 | G2 | Aug. 1943-Sept. 1943 | Table C2 |
| | | | | | | Aug. 1944-Oct. 1944 | do. |
| | | | | | M | Aug. 16, 1951 | 6.09 |
| | | | | | | Aug. 10, 1956 | 12.0 |
| | | | | | | Sept. 8, 1956 | 7.87 |
| | | | | | | Aug. 18, 1958 | 3.72 |
| | | | | | | July 12, 1960 | 25.7 |
| | | | | | | Aug. 2, 1960 | 13.0 |
| | | | | | | Aug. 13, 1969 | * 8.24 |
| | | | | | | May 26, 1970 | * 58.9 |
| | | | | | | Aug. 14, 1970 | * 6.38 |
| | | | | | | July 16, 1971 | * 80.2 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 145 | Savage Creek | Skagit River | Lat. 48°30'52", long. 121°52'39", in NE¼NE¼ sec. 22, T.35 N., R.7 E., Skagit County, at road crossing near mouth 5.1 mi east of Hamilton. | 1.46 | M | July 30, 1943 | 1.71 |
| | | | | | | Sept. 14, 1943 | .82 |
| | | | | | | Sept. 28, 1944 | .79 |
| 146 | Mill Creek | do. | Lat. 48°30'46", long. 121°52'50", in NW¼NE¼ sec. 22, T.35 N., R.7 E., Skagit County, at road crossing near mouth 5.0 mi east of Hamilton. | 4.35 | M | July 30, 1943 | 3.95 |
| | | | | | | Aug. 19, 1943 | 2.21 |
| | | | | | | Sept. 2, 1943 | 1.61 |
| | | | | | | Sept. 14, 1943 | .81 |
| | | | | | | Sept. 24, 1943 | .72 |
| | | | | | | Oct. 4, 1943 | .92 |
| | | | | | | Oct. 14, 1943 | 2.06 |
| | | | | | | July 12, 1944 | 1.43 |
| | | | | | | Aug. 17, 1944 | .90 |
| | | | | | | Sept. 28, 1944 | 3.30 |
| | | | | | | Oct. 21, 1944 | 3.18 |
| | | | | | | July 7, 1960 | 7.34 |
| | | | | | | Aug. 2, 1960 | 1.17 |
| 147 | Boyd Creek | do. | Lat. 48°30'32", long. 121°53'32", in SW¼NW¼ sec. 22, T.35 N., R.7 E., Skagit County, at road crossing 500 ft upstream from mouth and 4.5 mi east of Hamilton. | 1.39 | M | July 30, 1943 | 1.06 |
| | | | | | | Sept. 14, 1943 | 0 |
| 148 | Skagit River Trib. No. 2 | do. | Lat. 48°30'42", long. 121°54'23", in NW¼NE¼ sec. 21, T.35 N., R.7 E., Skagit County, at road crossing near mouth and 3.8 mi east of Hamilton. | .45 | M | July 30, 1943 | .49 |
| | | | | | | Sept. 14, 1943 | .29 |
| 149 | O'toole Creek | do. | Lat. 48°30'39", long. 121°55'04", in SW¼NW¼ sec. 21, T.35 N., R.7 E., Skagit County, at road crossing 800 ft upstream from mouth and 3.3 mi east of Hamilton (Station No. 12195500). | 5.41 | G2 | Aug. 1943-Oct. 1943 | Table C2 |
| | | | | | | July 1944-Oct. 1944 | do. |
| | | | | | M | July 7, 1960 | 15.4 |
| | | | | | | Aug. 2, 1960 | 4.87 |
| 150 | Alder Creek | do. | Lat. 48°31'42", long. 121°56'58", in NW¼NE¼ sec. 18, T.35 N., R.7 E., Skagit County, on left bank 3 ft downstream from logging road culvert, 0.3 mi upstream from bridge on State highway 20, 2.0 mi east of Hamilton and at mi 0.8 (Station No. 12196000). | 10.7 | G2 | Aug. 1943-Sept. 1971 | Table C2 |
| | | | | | | Dec. 9, 1956 [a] | 714. |
| | | | | | | Aug. 13, 1943 | 10.5 |
| | | | | | C1 | Jan. 20, 1972 | + 445. |
| | | | | | | Dec. 26, 1972 | + 425. |
| | | | | | | Aug. 29, 1973 | * 8.25 |
| 151 | Cumberland Creek | do. | Lat. 48°30'26", long. 121°59'16", in NE¼SE¼ sec. 23, T.35 N., R.6 E., Skagit County, 600 ft downstream from road crossing and 1.2 mi south of Hamilton. | 6.67 | M | Sept. 14, 1943 | 2.78 |
| | | | | | | Sept. 23, 1943 | 2.53 |
| | | | | | | Sept. 6, 1944 | 1.44 |
| 152 | Careys Creek | do. | Lat. 48°31'48", long. 121°58'47", in NW¼NW¼ sec. 13, T.35 N., R.6 E., Skagit County, 100 ft downstream from Careys Lake, 0.7 mi northeast of Hamilton. | .96 | M | Sept. 4, 1943 | 4.11 |
| | | | | | | Sept. 15, 1943 | 2.50 |
| | | | | | | Sept. 24, 1943 | 2.67 |
| | | | | | | Oct. 4, 1943 | 2.58 |
| | | | | | | Oct. 13, 1943 | 2.44 |
| | | | | | | July 13, 1944 | 2.48 |
| | | | | | | Aug. 15, 1944 | 2.43 |
| | | | | | | Sept. 6, 1944 | 2.55 |
| | | | | | | Sept. 29, 1944 | 2.93 |
| | | | | | | Oct. 20, 1944 | 2.01 |
| | | | | | | July 12, 1960 | 5.09 |
| | | | | | | Aug. 2, 1960 | 4.62 |
| | | | | | | Aug. 31, 1967 | 2.77 |
| | | | | | | Aug. 13, 1967 | 3.27 |
| | | | | | | May 26, 1970 | 5.17 |
| 153 | Freeman Creek | Careys Creek | Lat. 48°31'46", long. 121°59'07", in NW¼NE¼ sec. 14, T.35 N., R.6 E., Skagit County, at road crossing 300 ft upstream from mouth and 0.5 mi north of Hamilton. | 2.84 | M | Sept. 1, 1943 | .43 |
| | | | | | | Sept. 15, 1943 | .41 |
| | | | | | | Sept. 24, 1943 | .45 |
| | | | | | | Sept. 6, 1944 | .31 |
| 154 | Muddy Creek | Skagit River | Lat. 48°32'01", long. 121°59'52", in SE¼SW¼ sec. 11, T.35 N., R.6 E., Skagit County, at road crossing 0.9 mi northwest of Hamilton. | 2.75 | M | Aug. 12, 1943 | 1.54 |
| | | | | | | Sept. 1, 1943 | 1.81 |
| | | | | | | Sept. 15, 1943 | 1.39 |
| | | | | | | Sept. 24, 1943 | 1.43 |
| | | | | | | Oct. 4, 1943 | 1.60 |
| | | | | | | Oct. 13, 1943 | 1.50 |
| | | | | | | July 13, 1944 | 1.35 |
| | | | | | | Aug. 15, 1944 | .52 |
| | | | | | | Sept. 6, 1944 | .18 |
| | | | | | | Sept. 29, 1944 | 2.53 |
| | | | | | | Oct. 20, 1944 | .97 |
| | | | | | | July 12, 1960 | 2.47 |
| | | | | | | Aug. 2, 1960 | 2.03 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 155 | Loretta Creek | Skagit River | Lat. 48°30'16", long. 122°01'18", in SW¼SW¼ sec. 22, T.35 N., R.6 E., Skagit County, at road crossing 600 ft upstream from mouth and 1.9 mi southwest of Hamilton. | 3.57 | M | Sept. 14, 1943 | 1.87 |
| | | | | | | Sept. 23, 1943 | 1.44 |
| | | | | | | Sept. 6, 1944 | .92 |
| 156 | Day Lake | Day Creek | Lat. 48°24'26", long. 121°58'34", in SE¼SW¼ sec. 25, T.34 N., R.6 E., Skagit County, 12.5 mi south of Lyman (Station No. 12196170). | 6.33 | Q | Mar. 1973-Sept. 1973 | Table C4 |
| 157 | Day Creek | Skagit River | Lat. 48°24'32", long. 121°58'47", in SE¼NW¼ sec. 25, T.34 N., R.6 E., Skagit County, on right bank 1,000 ft downstream from outlet of Day Lake, 8.9 mi southeast of Lyman, and at mi 10.4 (Station No. 12196200). | 6.56 | G2 | Aug. 1963-Sept. 1973 | Table C2 |
| | | | | | | Jan. 4, 1969 | [a] 672 |
| | | | | | | Sept. 17, 1947 | 21.8 |
| | | | | | C1 | Dec. 26, 1972 | + 543. |
| | | | | | | May 17, 1973 | 46.8 |
| | | | | | | July 2, 1973 | 15.0 |
| | | | | | | Sept. 20, 1973 | * 5.5 |
| 158 | do. | do. | Lat. 48°27'37", long. 122°01'08" in SE¼SW¼ sec. 3, T.34 N., R.6 E., Skagit County, 10.0 mi east of Clear Lake. | - | M | June 6, 1963 | 39.8 |
| | | | | | | July 10, 1963 | 126. |
| 159 | do. | do. | Lat. 48°29'10", long. 122°01'57", in NE¼ sec. 33, T.35 N., R.6 E., Skagit County, on left bank 2 mi upstream from mouth and 3.2 mi southwest of Hamilton (Station No. 12196400). | 32.3 | G2 | Sept. 1962-Sept. 1969 | Table C2 |
| | | | | | | Nov. 19, 1962 | [a] 5,500. |
| 160 | do. | do. | Lat. 48°30'08", long. 122°02'46" near north line of NW¼NW¼ sec. 28, T.35 N., R.6 E., Skagit County, 1.8 mi southeast of Lyman and at mi 1.6. (Station No. 12196500). | 34.2 | G2 | Aug. 1943-Sept. 1961 | Table C2 |
| | | | | | | Feb. 20, 1961 | [a] 6,000. |
| | | | | | M | Aug. 31, 1938 | 9.79 |
| | | | | | | Aug. 29, 1940 | 29.7 |
| | | | | | | Sept. 29, 1940 | 16.4 |
| | | | | | | Nov. 2, 1940 | 302. |
| | | | | | | Dec. 2, 1940 | 273. |
| | | | | | | Oct. 12, 1962 | 420. |
| | | | | | | June 6, 1962 | 50.4 |
| | | | | | | July 10, 1963 | 117. |
| | | | | | | Aug. 17, 1963 | 22.5 |
| | | | | | | Oct. 2, 1963 | 22.3 |
| | | | | | | Jan. 15, 1964 | 362. |
| | | | | | | Feb. 19, 1964 | 317. |
| | | | | | | Mar. 25, 1964 | 126. |
| | | | | | | Apr. 29, 1964 | 285. |
| | | | | | | June 3, 1964 | 346. |
| | | | | | | July 1, 1964 | 215. |
| | | | | | | Aug. 4, 1964 | 192. |
| | | | | | | Aug. 27, 1973 | * 13.3 |
| 161 | Red Cabin Creek | Etach Creek | Lat. 48°32'04", long. 122°01'20", in NW¼SW¼ sec. 10, T.35 N., R.6 E., Skagit County, at county road crossing 1.8 mi northeast of Lyman. | 4.85 | M | Aug. 12, 1943 | .32 |
| | | | | | | Sept. 1, 1943 | .17 |
| | | | | | | Sept. 13, 1943 | 0 |
| | | | | | | Sept. 24, 1943 | 0 |
| | | | | | | Oct. 13, 1943 | 0 |
| | | | | | | Sept. 6, 1944 | 0 |
| | | | | | | July 8, 1960 | .68 |
| | | | | | | Aug. 2, 1960 | 0 |
| 162 | Manser Creek | Skagit River | Lat. 48°32'05", long. 122°01'52", in NE¼SE¼ sec. 9, T.35 N., R.6 E., Skagit County, at county road crossing, 1.4 mi northeast of Lyman. | .97 | M | Aug. 12, 1943 | 1.75 |
| | | | | | | Sept. 1, 1943 | 2.06 |
| | | | | | | Sept. 13, 1943 | 1.56 |
| | | | | | | Sept. 24, 1943 | 1.36 |
| | | | | | | Oct. 4, 1943 | 1.20 |
| | | | | | | Oct. 13, 1943 | 1.70 |
| | | | | | | July 13, 1944 | 2.12 |
| | | | | | | Aug. 15, 1944 | 1.22 |
| | | | | | | Sept. 6, 1944 | .51 |
| | | | | | | Sept. 29, 1944 | 1.58 |
| | | | | | | Oct. 20, 1944 | 1.14 |
| | | | | | | July 8, 1960 | 3.97 |
| | | | | | | Aug. 2, 1960 | 3.42 |
| | | | | | | Aug. 31, 1967 | 0 |
| | | | | | | Aug. 13, 1969 | * 2.12 |
| | | | | | | May 26, 1970 | * 2.35 |
| | | | | | | Aug. 13, 1970 | * 1.59 |
| | | | | | | May 11, 1971 | * 4.62 |
| | | | | | | Oct. 5, 1971 | * 1.69 |
| | | | | | | May 9, 1972 | * 5.49 |
| | | | | | | June 27, 1972 | * 3.58 |
| 163 | Manser Creek Trib. | Manser Creek | Lat. 48°32'04", long. 122°02'19", in NE¼SW¼ sec. 9, T.35 N., R.6 E., at county road crossing 1.1 mi northeast of Lyman. | - | M | Sept. 14, 1943 | .12 |
| 164 | Manser Creek | Skagit River | Lat. 48°31'40", long. 122°02'27", in NE¼NW¼ sec. 16, T.35 N., R.6 E., at State Highway crossing 0.9 mi east of Lyman. | 1.75 | M | Sept. 14, 1943 | 1.69 |
| | | | | | | Feb. 24, 1943 | 1.25 |
| | | | | | | Aug. 18, 1958 | 0 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 165 | Jones Creek | Skagit River | Lat. 48°32'53", long. 122°03'12", in SE¼SE¼ sec. 5, T.35 N., R.6 E., Skagit County, 100 ft upstream from Lyman water-supply intake, 1.5 mi north of Lyman. | 7.29 | M | Sept. 6, 1944 | 1.61 |
| 166 | do. | do. | Lat. 48°32'39", long. 122°03'02", in NE¼NE¼ sec. 8, T.35 N., R.6 E., Skagit County, 0.2 mi downstream from Lyman water-supply intake and 1.3 mi north of Lyman. | -- | M | Aug. 31, 1943 | 1.05 |
| | | | | | | Sept. 14, 1943 | 1.74 |
| | | | | | | Sept. 24, 1943 | 1.86 |
| 167 | do. | do. | Lat. 48°32'05", long. 122°02'42", in NW¼SW¼ sec. 9, T.35 N., R.6 E., Skagit County, 0.8 mi upstream from mouth, 0.9 mi northeast of Lyman. (Station No. 12197000). | 8.12 | G2 | Aug. 1943-Oct. 1943 | Table C2 |
| | | | | | | July 1944-Oct. 1944 | do. |
| | | | | | M | July 8, 1960 | 5.32 |
| | | | | | | Aug. 2, 1960 | 3.31 |
| | | | | | | Aug. 31, 1967 | 0 |
| | | | | | | Aug. 13, 1969 | * 2.45 |
| | | | | | | May 26, 1970 | * 9.30 |
| | | | | | | Aug. 13, 1970 | * 1.85 |
| | | | | | | May 11, 1971 | * 41.4 |
| | | | | | | Oct. 5, 1971 | * 4.59 |
| | | | | | | May 9, 1972 | * 51.2 |
| | | | | | | June 27, 1972 | * 14.6 |
| 168 | do. | do. | Lat. 48°31'40", long. 122°03'00", in NE¼NE¼ sec. 17, T.35 N., R.6 E., Skagit County, at State highway 20 crossing 0.4 mi east of Lyman. | 8.40 | M | July 24, 1943 | .58 |
| | | | | | | Aug. 18, 1958 | 0 |
| 169 | Childs Creek | Minkler Lake | Lat. 48°31'36", long. 122°05'28", in SW¼ sec. 7, T.35 N., R.6 E., Skagit County, 0.3 mi upstream from highway crossing and 1.3 mi west of Lyman. | 1.80 | M | Aug. 2, 1943 | 1.10 |
| | | | | | | Aug. 13, 1943 | .67 |
| | | | | | | Sept. 1, 1943 | .70 |
| | | | | | | Sept. 13, 1943 | .54 |
| | | | | | | Sept. 24, 1943 | .66 |
| | | | | | | Oct. 2, 1943 | .40 |
| | | | | | | Oct. 11, 1943 | 1.09 |
| | | | | | | July 13, 1944 | .69 |
| | | | | | | Aug. 14, 1944 | .63 |
| | | | | | | Sept. 29, 1944 | 2.32 |
| | | | | | | Oct. 20, 1944 | .80 |
| | | | | | | Aug. 2, 1960 | .37 |
| 170 | do. | do. | Lat. 48°31'46", long. 122°05'17", NW¼NW¼ sec. 18, T.35 N., R.6 E., Skagit County at State highway 20 crossing 1.4 mi west of Lyman. | 2.38 | M | Aug. 2, 1943 | .13 |
| | | | | | | Sept. 24, 1943 | 0 |
| 171 | Parker Creek | do. | Lat. 48°29'24", long. 122°05'51", in SE¼SE¼ sec. 25, T.35 N., R.5 E., Skagit County, at South Skagit Highway crossing, 0.5 mi upstream from mouth, 3.0 mi southwest of Lyman (Station No. 12197200). | 1.82 | C2 | Sept. 14, 1943 | * .26 |
| | | | | | | Feb. 10, 1951 | + 164. |
| | | | | | | Jan. 30, 1952 | + 158. |
| | | | | | | Jan. 2, 1953 | + 141. |
| | | | | | | Dec. 19, 1953 | + 142. |
| | | | | | | Feb. 7, 1955 | + 132. |
| | | | | | | Nov. 3, 1955 | + 164. |
| | | | | | | Dec. 9, 1956 | + 233. |
| | | | | | | Dec. 25, 1957 | + 160. |
| | | | | | | Apr. 29, 1959 | + 171. |
| | | | | | | Dec. 14, 1959 | + 117. |
| | | | | | | Feb. 21, 1961 | + 168. |
| | | | | | | Jan. 3, 1962 | + 80. |
| | | | | | | Nov. 19, 1962 | + 102. |
| | | | | | | Jan. 1, 1964 | + 136. |
| | | | | | | Nov. 24, 1964 | + 125. |
| | | | | | | Jan. 18, 1966 | + 94. |
| | | | | | | Mar. 22, 1967 | + 116. |
| | | | | | | Oct. 27, 1967 | + 118. |
| | | | | | | Dec. 3, 1968 | + 161. |
| | | | | | | Aug. 13, 1969 | * .32 |
| | | | | | | Nov. 4, 1969 | + 91. |
| | | | | | M | May 26, 1970 | * 1.64 |
| | | | | | | Aug. 13, 1970 | * .22 |
| | | | | | | May 12, 1971 | * 15.8 |
| | | | | | | Oct. 4, 1971 | * 1.14 |
| | | | | | | May 9, 1972 | * 11.3 |
| | | | | | | June 27, 1972 | * 2.42 |
| 172 | Sorenson Creek | do. | Lat. 48°29'19", long. 122°06'13", SW¼SE¼ sec. 25, T.35 N., R.5 E., Skagit County; at highway crossing 3.2 mi southwest of Lyman. | 1.74 | M | Aug. 31, 1943 | .13 |
| | | | | | | Sept. 11, 1943 | .09 |
| | | | | | | Oct. 12, 1943 | .65 |
| | | | | | | Sept. 5, 1944 | 0 |
| | | | | | | July 7, 1960 | .55 |
| | | | | | | Aug. 2, 1960 | .18 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 173 | Anderson Creek | Minkler Lake | Lat. 48°29'08", long. 122°07'22", NW¼NE¼ sec. 35, T.35 N., R.5 E., Skagit County, at highway crossing 4.0 mi southwest of Lyman. | 3.29 | M | Aug. 12, 1943 | 1.35 |
| | | | | | | Sept. 11, 1943 | .63 |
| | | | | | | Sept. 23, 1943 | .50 |
| | | | | | | Oct. 1, 1943 | .46 |
| | | | | | | Oct. 12, 1943 | 1.69 |
| | | | | | | July 7, 1960 | 1.85 |
| | | | | | | Aug. 2, 1960 | .81 |
| 174 | Gilligan Creek | do. | Lat. 48°27'06", long. 122°07'05", SE¼NE¼ sec. 11, T.34 N., R.5 E., Skagit County, upstream from Sedro-Woolley water-supply intake, 5.4 mi east of Clear Lake, and 2.5 mi upstream from mouth. | 4.19 | M | Sept. 23, 1943 | 4.00 |
| | | | | | | Oct. 2, 1943 | 2.85 |
| | | | | | | Oct. 12, 1943 | 10.4 |
| | | | | | | July 14, 1944 | 3.89 |
| | | | | | | Aug. 18, 1944 | 2.62 |
| | | | | | | Oct. 2, 1944 | 10.9 |
| | | | | | | Oct. 19, 1944 | 6.55 |
| 175 | do. | do. | Lat. 48°27'55", long. 122°07'30", SW¼NE¼ sec. 2, T.34 N., R.5 E., Skagit County, 50 ft downstream from diversion intake to Judy Reservoir and 5.6 mi southeast of Sedro-Woolley. | - | M | Aug. 20, 1964 | .09 |
| 176 | do. | do. | Lat. 48°29'04", long. 122°08'02", NW¼NW¼ sec. 35, T.35 N., R.5 E., Skagit County, at South Skagit Highway crossing, 4.8 mi southeast of Sedro-Woolley (Station No. 12197500). | 6.76 | G2 | Aug. 1943-Oct. 1943 | Table C2 |
| | | | | | M | July 7, 1960 | 3.29 |
| | | | | | | Aug. 2, 1960 | .25 |
| | | | | | | Aug. 20, 1964 | .91 |
| 177 | Gilligan Creek Trib. | Gilligan Creek | Lat. 48°29'07", long. 122°08'06", NW¼NW¼ sec. 35, T.35 N., R.5 E., Skagit County, near mouth, 4.8 mi southeast of Sedro-Woolley. | - | M | July 24, 1943 | .19 |
| 178 | Powell Creek | Skagit River | Lat. 48°31'49", long. 122°08'08", SW¼SW¼ sec. 11, T.35 N., R.5 E., Skagit County, 500 ft upstream from State highway 20 crossing and 3.5 mi west of Lyman (Locally called Wiseman Creek). | 2.11 | M | Aug. 2, 1943 | 3.41 |
| | | | | | | Aug. 13, 1943 | 2.40 |
| | | | | | | Sept. 1, 1943 | 2.32 |
| | | | | | | Sept. 13, 1943 | 1.67 |
| | | | | | | Sept. 24, 1943 | 2.04 |
| | | | | | | Oct. 2, 1943 | 1.45 |
| | | | | | | Oct. 11, 1943 | 2.60 |
| | | | | | | July 13, 1944 | 1.98 |
| | | | | | | Aug. 14, 1944 | 2.47 |
| | | | | | | Oct. 1, 1944 | 3.57 |
| | | | | | | Oct. 20, 1944 | 2.98 |
| | | | | | | July 8, 1960 | 3.45 |
| | | | | | | Aug. 2, 1960 | 1.64 |
| 179 | do. | do. | Lat. 48°31'32", long. 122°07'47", SE¼NW¼ sec. 14, T.35 N., R.5 E., Skagit County, at old State highway 20 crossing, 3.2 mi west of Lyman (Locally called Wiseman Creek). | 2.48 | M | Aug. 2, 1943 | 1.01 |
| | | | | | | Sept. 24, 1943 | .05 |
| | | | | | | Sept. 6, 1944 | 0 |
| | | | | | | Aug. 19, 1958 | 0 |
| 180 | Cool Creek (formerly Coal Creek) | do. | Lat. 48°31'53", long. 122°08'57", SE¼SW¼ sec. 10, T.35 N., R.5 E., Skagit County, at State highway 20 crossing, 4.3 mi northeast of Sedro-Woolley (Station No. 12198000). | 1.88 | G2 | Oct. 1948-June 1950 | Table C2 |
| | | | | | M | Sept. 19, 1947 | 1.98 |
| | | | | | | Aug. 3, 1950 | 1.62 |
| | | | | | | Sept. 22, 1950 | .45 |
| | | | | | | Aug. 15, 1951 | .26 |
| | | | | | | Aug. 18, 1958 | 0 |
| | | | | | | Aug. 31, 1967 | .06 |
| | | | | | | Aug. 13, 1969 * | .66 |
| | | | | | | May 27, 1970 * | 2.19 |
| | | | | | | Aug. 13, 1970 * | .37 |
| | | | | | | May 11, 1971 * | 17.4 |
| | | | | | | May 12, 1971 * | 15.8 |
| 181 | Salmon Creek | do. | Lat. 48°28'58", long. 122°09'03" in NE¼NW¼ sec. 34, T.35 N., R.5 E., Skagit County, at South Skagit highway crossing 4.1 mi southeast of Sedro-Woolley. | - | M | Aug. 20, 1964 | .21 |
| 182 | Janicki Creek | do. | Lat. 48°28'39", long. 122°10'40", in NE¼SW¼ sec. 33, T.35 N., R.5 E., Skagit County, at Judy Reservoir diversion 3.2 mi southeast of Sedro-Woolley. | - | M | Aug. 20, 1964 | .41 |
| 183 | do. | do. | Lat. 48°29'11", long. 122°10'51", in SW¼SW¼ sec. 28, T.35 N., R.5 E., Skagit County at road crossing 2.3 mi southeast of Sedro-Woolley. | - | M | Sept. 11, 1943 | 0 |
| | | | | | | Aug. 21, 1964 | .90 |
| 184 | Unnamed Trib. | do. | Lat. 48°29'17", long. 122°11'48" in SE¼SW¼ sec. 29, T.35 N., R.5 E., Skagit County, at road crossing 1.7 mi southeast of Sedro-Woolley. | - | M | Sept. 11, 1943 | 0 |
| 185 | Hansen Creek | do. | Lat. 48°33'34", long. 122°12'24" in SE¼SE¼ sec. 31, T.36 N., R.5 E., Skagit County, at road crossing 4.2 mi northeast of Sedro-Woolley. | 2.59 | M | Sept. 19, 1947 | 1.42 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 186 | Hansen Creek | Skagit River | Lat. 48°32'03", long. 122°12'11", in NW¼SW¼ sec. 8, T.35 N., R.5 E., Skagit County, at road crossing at Northern State Hospital, 2.6 mi northeast of Sedro-Woolley and at mi 3.7. | 6.60 | M | Sept. 10, 1943 | 2.58 |
| | | | | | | Sept. 21, 1943 | 3.71 |
| | | | | | | Oct. 9, 1943 | 2.37 |
| | | | | | | Sept. 4, 1944 | 1.54 |
| 187 | East Fork Hansen Creek | Hansen Creek | Lat. 48°32'01", long. 122°11'11", in NE¼SE¼ sec. 8, T.35 N., R.5 E., Skagit County, at road crossing 3.0 mi northeast of Sedro-Woolley. | 0.96 | M | Sept. 10, 1943 | .03 |
| 188 | do. | do. | Lat. 48°31'23", long. 122°11'29", in SW¼NE¼ sec. 17, T.35 N., R.5 E., Skagit County, at railroad crossing 2.4 mi northeast of Sedro-Woolley. | - | M | Sept. 10, 1943 | 0 |
| 189 | Hansen Creek | Skagit River | Lat. 48°30'28", long. 122°12'08", in SW¼NW¼ sec. 20, T.35 N., R.5 E., Skagit County, at county road crossing, 0.7 mi upstream from mouth and 1.4 mi east of Sedro-Woolley. (Station No. 12198500). | 9.66 | G2 | Aug. 1943-Sept. 1945 | Table C2 |
| | | | | | M | Oct. 26, 1945 | 287. |
| | | | | | | Sept. 19, 1947 | 1.96 |
| | | | | | | July 8, 1958 | 4.58 |
| | | | | | | Aug. 2, 1958 | 2.28 |
| | | | | | | Aug. 18, 1958 | .69 |
| | | | | | | Aug. 31, 1967 | * 1.39 |
| | | | | | | Aug. 13, 1969 | * 2.60 |
| | | | | | | May 26, 1970 | * 10.9 |
| | | | | | | Aug. 13, 1970 | * 1.40 |
| | | | | | | May 11, 1971 | * 25.9 |
| 190 | Skagit River | Skagit Bay | Lat. 48°29'03", long. 122°14'25", in NE¼NW¼ sec. 36, T.35 N., R.4 E., at Northern Pacific Railway bridge, 1.2 mi south of Sedro-Woolley and at mi 22.6. (Station No. 12199000). | 3,015. (400 $mi^2$ in Canada) | G2 | May 1908-Sept. 1924 | Table C2 |
| | | | | | | Nov. 30, 1909 | [a]220,000. |
| | | | | | Q | Feb. 1, 1910-Jan. 31, 1911 | Table C3 |
| | | | | | M | Jan. 13, 1953 | 58,400 |
| | | | | | | Nov. 1, 1953 | 51,800 |
| | | | | | | Dec. 10, 1953 | 43,400 |
| | | | | | | June 12, 1955 | 58,800 |
| | | | | | | Oct. 26, 1955 | 72,300 |
| | | | | | | Apr. 30, 1959 | 113,000 |
| | | | | | | May 1, 1959 | 67,000 |
| | | | | | | Nov. 21, 1962 | 44,100 |
| | | | | | | Dec. 1, 1964 | 58,000 |
| 191 | McMurray Lake | Lake Creek | Lat. 48°19'28", long. 122°13'22", in NW¼NW¼ sec. 30, T.33 N., R.5 E., Skagit County, 0.9 mi northeast of McMurray (Station No. 12199020). | 3.25 | Q | Mar. 1973-Sept. 1973 | Table C4 |
| 192 | Nookachamps Creek | Skagit River | Lat. 48°24'03", long. 122°14'12", in SE¼SW¼ sec. 25, T.34 N., R.4 E., Skagit County, 0.2 mi downstream from outlet of Big Lake and 4.3 mi south of Clear Lake (Station No. 12199500). | 22.5 | G2 | Aug. 1943-Oct. 1943 | Table C2 |
| | | | | | | July 1944-Sept. 1944 | do. |
| | | | | | M | Oct. 1, 1944 | 5.68 |
| | | | | | | Oct. 19, 1944 | 4.68 |
| | | | | | | Nov. 17, 1944 | 22.6 |
| | | | | | | July 6, 1960 | 7.32 |
| | | | | | | Aug. 1, 1960 | .91 |
| 193 | do. | do. | Lat. 48°25'53", long. 122°15'47", in SE¼SW¼ sec. 14, T.34 N., R.4 E., at highway crossing 0.3 mi upstream from Barney Lake, and 3.4 mi northeast of Mt. Vernon. | 27.6 | M | Aug. 30, 1943 | .71 |
| | | | | | | Sept. 11, 1943 | .62 |
| | | | | | | Sept. 21, 1943 | .37 |
| | | | | | | Oct. 1, 1943 | .10 |
| | | | | | | Oct. 9, 1943 | .10 |
| | | | | | | July 16, 1944 | 3.35 |
| | | | | | | Aug. 13, 1944 | .52 |
| | | | | | | Oct. 2, 1944 | 5.33 |
| | | | | | | Oct. 20, 1944 | 5.57 |
| 194 | East Fork Nookachamps Creek | Nookachamps Creek | Lat. 48°24'50", long. 122°09'25", in SW¼SW¼ sec. 22, T.34 N., R.5 E., Skagit County, on right bank 3.0 mi upstream from Walker Creek, 3.8 mi northeast of town of Big Lake, and at mi 8.5 (Station no. 12199800). | 3.56 | G2 | Nov. 1961-Sept. 1971 | Table C2 |
| | | | | | M | Oct. 3, 1943 | 1.13 |
| | | | | | | Oct. 21, 1963 | [a]610 |
| | | | | | | July 16, 1944 | 1.01 |
| | | | | | | Aug. 13, 1944 | 3.84 |
| | | | | | | Oct. 2, 1944 | 7.12 |
| | | | | | | Oct. 19, 1944 | 3.45 |
| | | | | | C1 | Dec. 26, 1972 | + 54. |
| 195 | do. | do. | Lat. 48°24'24", long. 122°10'17", SW¼NW¼ sec. 28, T.34 N., R.5 E., at logging road crossing 4.8 mi southeast of Clear Lake. | 4.59 | M | Sept. 28, 1943 | 2.33 |
| 196 | do. | do. | Lat. 48°24'43", long. 122°12'14", NE¼NE¼ sec. 30, T.34 N., R.5 E., 30 ft upstream from Walker Creek and 6.2 mi south of Sedro-Woolley. | 7.62 | M | Sept. 21, 1943 | 3.79 |
| | | | | | | Oct. 9, 1943 | 1.12 |
| | | | | | | Aug. 21, 1964 | 6.72 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 197 | Walker Creek | East Fork Nookachamps Creek | Lat. 48°24'44", long. 122°12'17", in NE¼NE¼ sec. 30, T.34 N., R.5 E., Skagit County, 175 ft upstream from mouth and 6.2 mi south of Sedro-Woolley. | 10.5 | M | Sept. 11, 1943 | .63 |
| | | | | | | Sept. 21, 1943 | 2.14 |
| | | | | | | Oct. 9, 1943 | .46 |
| | | | | | | Sept. 4, 1944 | .36 |
| | | | | | | Aug. 21, 1964 | 3.82 |
| 198 | Coldsprings Creek | do. | Lat. 48°25'25", long. 122°10'20", in SE¼NW¼ sec. 21, T.34 N., R.5 E., Skagit County, at Skagit County P.U.D. intake and 6.1 mi southeast of Sedro-Woolley. | - | M | Sept. 29, 1943 | .45 |
| | | | | | | Sept. 5, 1944 | trace |
| | | | | | | Aug. 20, 1964 | .34 |
| 199 | Coldsprings Creek Trib. | Coldsprings Creek | Lat. 48°25'32", long. 122°10'23", in NE¼NW¼ sec. 21, T.34 N., R.5 E., Skagit County, 10 ft upstream from old road, and 5.9 mi southeast of Sedro-Woolley. | - | M | Aug. 20, 1964 | .11 |
| 200 | East Fork Nookachamps Creek | Nookachamps Creek | Lat. 48°25'27", long. 122°12'31", in NE¼ sec. 19, T.34 N., R.5 E., Skagit County, at county road crossing 2.8 mi southeast of Clear Lake, 4.2 mi upstream from mouth (Station No. 12200000). | 20.5 | G2 | Sept. 1943-Sept. 1950 | Table C2 |
| | | | | | | Dec. 1961-Sept. 1963 | do. |
| | | | | | M | Aug. 18, 1958 | .68 |
| | | | | | | July 6, 1960 | 7.55 |
| | | | | | | Aug. 1, 1960 | 1.82 |
| | | | | | | Nov. 9, 1963 | 94.1 |
| | | | | | | Jan. 17, 1964 | 174. |
| | | | | | | Aug. 21, 1964 | 10.5 |
| | | | | | | Sept. 16, 1964 | 10.3 |
| | | | | | | Aug. 31, 1967 | * 1.03 |
| | | | | | | Aug. 13, 1969 | * .61 |
| | | | | | | May 27, 1970 | * 17.4 |
| | | | | | | Aug. 27, 1973 | * 3.08 |
| 201 | Mundt Creek | East Fork Nookachamps Creek | Lat. 48°26'28", long. 122°10'26", NE¼NW¼ sec. 16, T.34 N., R.5 E., Skagit County, upstream from water supply intake and 3.2 mi southeast of Clear Lake. | 1.65 | M | Sept. 29, 1943 | .81 |
| | | | | | | Sept. 5, 1944 | .03 |
| 202 | Pigeon Creek | Mundt Creek | Lat. 48°25'50", long. 122°10'36", in SW¼SE¼ sec. 16, T.34 N., R.5 E., Skagit County, at water-supply intake 5.5 mi southeast of Sedro-Woolley. | - | M | Sept. 5, 1944 | 0 |
| | | | | | | Aug. 20, 1964 | .14 |
| 203 | Rock Springs Creek | Pigeon Creek | Lat. 48°26'03", long. 122°10'34", in SW¼ sec. 16, T.34 N., R.5 E., Skagit County, 5.3 mi southeast of Sedro-Woolley. | - | M | Aug. 20, 1964 | .07 |
| 204 | Mundt Creek | East Fork Nookachamps Creek | Lat. 48°25'37", long. 122°12'29", in NE¼NE¼ sec. 19, T.34 N., R.5 E., Skagit County, at county road crossing, 0.2 mi upstream from mouth and 5.2 mi south of Sedro-Woolley. | 4.17 | M | Aug. 30, 1943 | .46 |
| | | | | | | Sept. 11, 1943 | .45 |
| | | | | | | Sept. 21, 1943 | .54 |
| | | | | | | Oct. 1, 1943 | .32 |
| | | | | | | Oct. 9, 1943 | .29 |
| | | | | | | July 14, 1944 | .37 |
| | | | | | | Aug. 13, 1944 | .53 |
| | | | | | | Oct. 2, 1944 | 2.57 |
| | | | | | | Oct. 9, 1944 | 1.28 |
| | | | | | | July 12, 1960 | 1.19 |
| | | | | | | Aug. 1, 1960 | .59 |
| | | | | | | Aug. 21, 1964 | 2.39 |
| 205 | Turner Creek | do. | Lat. 48°27'05", long. 122°10'58", in SE¼NE¼ sec. 8, T.34 N., R.5 E., Skagit County, 25 ft upstream from water-supply intake, and 2.4 mi southeast of Clear Lake. | 1.19 | M | Sept. 5, 1944 | .06 |
| 206 | do. | do. | Lat. 48°26'28", long. 122°12'41", in NW¼NE¼ sec. 18, T.34 N., R.5 E., Skagit County, 1.8 mi southeast of Clear Lake. | - | M | Aug. 21, 1964 | .34 |
| 207 | Clear Lake | Beaver Lake | Lat. 48°27'15", long. 122°13'26", in NW¼NW¼ sec. 7, T.34 N., R.5 E., Skagit County, 0.8 mi southeast of town of Clear Lake (Station No. 12200020). | 2.34 | Q | March 1973-Sept. 1973 | Table C4 |
| 208 | East Fork Nookachamps Creek | Nookachamps Creek | Lat. 48°26'46", long. 122°15'03", in SE¼SE¼ sec. 11, T.34 N., R.4 E., Skagit County, at State highway crossing, 3.8 mi south of Sedro-Woolley. | 35.6 | M | Aug. 21, 1964 | 16.5 |
| 209 | Skagit River | Skagit Bay | Lat. 48°26'42", long. 122°20'03", in SE¼SE¼ sec. 7, T.34 N., R.4 E., Skagit County, on draw rest of and 150 ft downstream from bridge on former U.S. Highway 99, 1.5 mi north of Skagit Valley Junior College in Mt. Vernon, and at mi 15.7 (Station No. 12200500). | 3,093. ($mi^2$) (400 $mi^2$ in Canada) | G1 | Oct. 1940-Sept. 1973 | Table C2 |
| | | | | | | Feb. 11, 1951 | [a]144,000 |
| | | | | | Q | 1959-1970 | Table C4 |
| | | | | | Q | 1955 | Table C5 |
| | | | | | Q | 1962-1970 | Table C6 |

TABLE C1.--Record of streamflow at data collection sites--continued

| Number on plate 1 | Stream | Tributary to: | Location | Drainage area ($mi^2$) | Type of record[1] | Date | Discharge ($ft^3$) |
|---|---|---|---|---|---|---|---|
| 210 | South Fork Skagit River | Distributary of Skagit River | Lat. 48°21'16", long. 122°21'06", in NE¼NE¼ sec. 13, T.33 N., R.3 E., Skagit County, 1.2 mi northeast of Conway (Station No. 12200670). | - | M | Jan. 4, 1962 | 24,700 |
| | | | | | | Apr. 16, 1962 | 4,270 |
| | | | | | | Aug. 13, 1962 | 1,130 |
| | | | | | | Sept. 12, 1962 | 3,840 |
| | | | | | | Oct. 24, 1962 | 4,160 |
| | | | | | | Nov. 20, 1962 | 33,100 |
| | | | | | | Feb. 5, 1963 | 22,300 |
| | | | | | | Mar. 21, 1963 | 4,180 |
| | | | | | | June 12, 1963 | 8,560 |
| | | | | | | July 8, 1963 | 5,520 |
| | | | | | | Aug. 19, 1963 | 2,450 |
| | | | | | | Nov. 5, 1963 | 4,450 |
| | | | | | | Nov. 27, 1963 | 29,600 |
| | | | | | | Dec. 5, 1963 | 6,870 |
| | | | | | | Jan. 7, 1964 | 7,790 |
| | | | | | | June 1, 1965 | 6,740 |
| | | | | | | Aug. 31, 1965 | 1,520 |
| | | | | | | May 15, 1967 | 4,680 |
| | | | | | | June 20, 1967 | 25,800 |
| 211 | do. | do. | Lat. 48°20'31", long. 122°21'03", in SW¼SW¼ sec. 18, T.33 N., R.3 E., Skagit County, at Fir Island road crossing, 0.2 mi west of Conway and at mi 4.4 (Station No. 12200675). | 3,105. (400 $mi^2$ in Canada) | M | Oct. 9, 1908 | 1,780 |
| | | | | | | Aug. 16, 1944 | 2,090 |
| | | | | | | Dec. 7, 1944 | 11,400 |
| | | | | | | May 22, 1945 | 7,120 |
| | | | | | | May 11, 1951 | 57,000 |
| | | | | | | Oct. 26, 1955 | 32,300 |
| | | | | | | Oct. 27, 1955 | 19,000 |
| | | | | | | Sept. 30, 1957 | 750 |
| | | | | | | Oct. 1, 1957 | 1,020 |
| | | | | | | Jan. 16, 1961 | 27,800 |
| | | | | | Q | 1971 | Table C4 |
| 212 | Carpenter Creek Trib. | Carpenter Creek | Lat. 48°17'13", long. 122°17'27", in NE¼SE¼ sec. 4, T.32 N., R.4 E., Snohomish County, at U.S. Highway 99, 4.4 mi southeast of Conway (Station No. 12200700). | 2.58 | C2 | Feb. 2, 1949 | + 61.1 |
| | | | | | | Jan. 22, 1950 | + 62.0 |
| | | | | | | Mar. 13, 1951 | + 27.0 |
| | | | | | | Mar. 28, 1952 | + 38.8 |
| | | | | | | Dec. 9, 1953 | + 30.5 |
| | | | | | | Feb. 7, 1955 | + 40.0 |
| | | | | | | Dec. 11, 1955 | + 29.7 |
| | | | | | | Dec. 9, 1956 | + 42.7 |
| | | | | | | Jan. 16, 1958 | + 19. |
| | | | | | | Jan. 23, 1959 | + 52. |
| | | | | | | May 15, 1961 | + 32. |
| | | | | | | Jan. 3, 1962 | + 16. |
| | | | | | | Dec. 6, 1963 | + 16. |
| | | | | | | Jan. 29, 1965 | + 51. |
| | | | | | | Jan. 8, 1966 | + 56. |
| | | | | | | Feb. 18, 1967 | + 26. |
| | | | | | | Dec. 25, 1967 | + 23. |
| | | | | | | Jan. 4, 1969 | + 86. |
| | | | | | | Aug. 12, 1969 | * .03 |
| | | | | | | Jan. 27, 1970 | + 24. |
| | | | | | M | May 6, 1970 | * 1.78 |
| | | | | | | Aug. 13, 1970 | * .18 |
| | | | | | | May 11, 1971 | * .24 |
| | | | | | | Oct. 6, 1971 | * .004 |
| | | | | | | May 10, 1972 | * 3.21 |
| | | | | | | June 28, 1972 | * 1.12 |
| 213 | Freshwater Slough | Distributary of Skagit River | Lat. 48°19'38", long. 122°21'27" in SE¼SE¼ sec. 24, T.33 N., R.3 E., Skagit County, 1.2 mi southwest of Conway. | - | M | Nov. 27, 1963 | 15,400 |
| 214 | Dry Slough | do. | Lat. 48°20'29", long. 122°23'23", SE¼SW¼ sec. 14, T.33 N., R.5 E., Skagit County, at crossing of Fir Island road 2.1 mi west of Conway. | - | M | Dec. 7, 1944 | 803 |
| | | | | | | May 22, 1945 | 320 |
| | | | | | | May 30, 1945 | 869 |
| 215 | North Fork Skagit River | do. | Lat. 48°21'15", long. 122°22'23", in SW¼SW¼ sec. 36, T.34 N., R.3 E., just downstream from Skagit City. | - | M | Oct. 9, 1908 | 2,260 |
| 216 | do. | do. | Lat. 48°21'54", long. 122°24'55", in SE¼NW¼ sec. 10, T.33 N., R.3 E., 0.4 mi upstream from road crossing at Rexville. | - | M | Aug. 16, 1944 | 7,300 |
| | | | | | | Dec. 7, 1944 | 17,500 |
| | | | | | | May 22, 1945 | 13,700 |
| | | | | | | May 30, 1945 | 26,100 |
| | | | | | | Oct. 26, 1955 | 42,400 |
| | | | | | | Oct. 27, 1955 | 26,500 |
| | | | | | | Sept. 30, 1957 | 5,970 |
| | | | | | | Oct. 1, 1957 | 7,690 |

Note: +, peak discharge; *, measurement of base flow; a, peak of record at continuous gaging station.

[1] M, miscellaneous discharge measuring site; C1, active crest-stage gage; C2, discontinued crest-stage gage; G1, active continuous discharge record gage; G2, discontinued continuous discharge record gage; R, reservoir stage gage; Q, quality of surface water collection site.

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs

[Number before station name is that on Plate 1; number after station name is that assigned by U.S. Geological Survey]

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1. Skagit River near Hope, British Columbia (12170500) | | | | | | | |
| 1915 | -- | -- | -- | -- | -- | -- | 957 | 897 | 814 | 420 | 292 | 166 | -- |
| 1916 | 423 | 549 | 373 | -- | -- | -- | 1,400 | 2,550 | 4,430 | 2,410 | 877 | 378 | -- |
| 1917 | 220 | 312 | 191 | 164 | 169 | 182 | 498 | 2,910 | 3,870 | 2,290 | 682 | 355 | 987 |
| 1918 | 283 | 453 | 826 | 1,670 | 625 | 315 | 1,430 | 2,630 | 3,520 | 1,310 | 551 | 301 | 1,160 |
| 1919 | 365 | 407 | 485 | 336 | 303 | 413 | 1,510 | 3,010 | 3,600 | 2,320 | 697 | 451 | 1,160 |
| 1920 | 180 | 850 | 730 | 670 | 912 | 416 | 460 | 2,200 | 3,000 | 1,990 | 570 | 528 | 1,040 |
| 1921 | 1,200 | 510 | 435 | 494 | 783 | 721 | 842 | 3,020 | 4,520 | 1,660 | 538 | 474 | 1,270 |
| 1922 | 644 | 757 | 1,230 | 372 | 261 | 213 | 484 | 2,250 | 3,810 | 985 | 413 | 339 | 980 |
| 1935 | 282 | 1,010 | 618 | 1,090 | 1,530 | 519 | 560 | 2,130 | 2,710 | 1,330 | 495 | 308 | 1,040 |
| 1936 | 217 | 184 | 213 | 184 | 120 | 232 | 1,720 | 3,310 | 1,910 | 538 | 263 | 192 | 757 |
| 1937 | 145 | 115 | 277 | 125 | 94 | 287 | 682 | 2,440 | 4,120 | 1,230 | 395 | 240 | 847 |
| 1938 | 329 | 651 | 667 | 542 | 282 | 520 | 1,140 | 3,210 | 2,870 | 903 | 311 | 199 | 971 |
| 1939 | 181 | 196 | 387 | 553 | 211 | 457 | 1,520 | 2,820 | 2,140 | 1,190 | 405 | 201 | 859 |
| 1940 | 243 | 419 | 1,020 | 465 | 417 | 614 | 1,060 | 1,860 | 1,070 | 431 | 224 | 165 | 667 |
| 1941 | 362 | 243 | 365 | 310 | 343 | 431 | 944 | 1,080 | 853 | 388 | 202 | 334 | 488 |
| 1942 | 1,000 | 848 | 1,040 | 361 | 245 | 225 | 893 | 1,670 | 1,740 | 781 | 337 | 172 | 779 |
| 1943 | 136 | 237 | 528 | 471 | 413 | 490 | 2,010 | 2,160 | 3,160 | 2,090 | 570 | 264 | 1,040 |
| 1944 | 207 | 193 | 285 | 175 | 152 | 180 | 576 | 1,510 | 1,530 | 549 | 285 | 260 | 492 |
| 1945 | 253 | 281 | 385 | 470 | 474 | 284 | 385 | 2,320 | 2,120 | 818 | 305 | 238 | 695 |
| 1946 | 469 | 672 | 380 | 329 | 256 | 430 | 986 | 3,890 | 2,850 | 1,280 | 465 | 245 | 1,030 |
| 1947 | 241 | 214 | 471 | 312 | 586 | 823 | 1,500 | 3,280 | 2,180 | 882 | 362 | 237 | 925 |
| 1948 | 533 | 583 | 552 | 463 | 276 | 244 | 870 | 3,380 | 5,090 | 1,110 | 651 | 439 | 1,180 |
| 1949 | 528 | 373 | 302 | 236 | 191 | 386 | 1,440 | 3,880 | 2,750 | 1,270 | 706 | 522 | 1,050 |
| 1950 | 432 | 1,200 | 1,070 | 430 | 429 | 592 | 777 | 2,680 | 6,560 | 3,500 | 678 | 317 | 1,560 |
| 1951 | 602 | 1,180 | 1,650 | 788 | 1,010 | 477 | 1,520 | 3,270 | 3,070 | 1,450 | 477 | 277 | 1,320 |
| 1952 | 377 | 404 | 343 | 221 | 268 | 219 | 1,390 | 2,970 | 2,160 | 1,060 | 360 | 201 | 832 |
| 1953 | 147 | 139 | 122 | 561 | 824 | 396 | 910 | 2,930 | 3,080 | 2,030 | 700 | 416 | 1,020 |
| 1954 | 679 | 960 | 785 | 549 | 766 | 593 | 885 | 3,570 | 4,010 | 3,970 | 1,480 | 892 | 1,600 |
| 1955 | 576 | 1,360 | 930 | 496 | 351 | 289 | 665 | 1,710 | 4,430 | 2,530 | 847 | 420 | 1,220 |
| | | | | | | 2. Skagit River at International Boundary near Hope, British Columbia (12170600) | | | | | | | |
| 1954 | -- | -- | 2.67 | 1.89 | 3.23 | 2.20 | 3.15 | 6.38 | 7.80 | 17.97 | 18.28 | 16.40 | -- |
| 1955 | 10.10 | 5.84 | 3.05 | -- | -- | -- | 3.23 | 5.67 | 7.54 | 17.78 | 17.12 | 13.65 | -- |
| 1956 | 10.64 | 5.63 | 4.15 | -- | 3.29 | 3.86 | 7.40 | 9.43 | 8.12 | 18.19 | 17.69 | 13.60 | -- |
| 1957 | 11.85 | 6.04 | 5.84 | 4.73 | 6.11 | 5.55 | 8.00 | 9.15 | 16.48 | 17.60 | 17.86 | 11.64 | -- |
| 1958 | 5.99 | 4.32 | 4.64 | 5.37 | 6.36 | 5.30 | -- | 8.62 | 15.70 | 18.20 | 18.15 | 14.40 | -- |
| 1959 | 7.95 | 6.30 | 6.93 | 5.98 | 5.15 | 5.70 | 9.68 | 8.71 | 14.61 | 18.22 | 16.52 | 17.51 | -- |
| 1960 | 10.05 | 8.50 | 5.30 | 5.22 | 4.77 | -- | 6.31 | 7.47 | 11.71 | 18.33 | 13.27 | 11.47 | -- |
| 1961 | 5.46 | 4.48 | 4.33 | 5.23 | 5.68 | 5.31 | 6.37 | 8.37 | 18.41 | 18.47 | 18.46 | 13.38 | -- |
| 1962 | 9.40 | 4.01 | 4.48 | -- | 4.11 | -- | 5.16 | 6.62 | 15.53 | 18.13 | 17.80 | 17.91 | -- |
| 1963 | 11.95 | 8.20 | 7.62 | 3.82 | 5.54 | 4.30 | 4.81 | 10.03 | 18.34 | 18.35 | 17.97 | 16.28 | -- |
| 1964 | 14.37 | 8.07 | 5.42 | -- | -- | -- | -- | 8.17 | 13.30 | 18.43 | 18.45 | 16.69 | -- |
| 1965 | 13.01 | 4.25 | 3.74 | 4.84 | 4.37 | 4.01 | 6.22 | 6.52 | 18.20 | 18.51 | 18.50 | 17.41 | -- |
| 1966 | 12.94 | 7.19 | 3.46 | 3.20 | 3.04 | 5.46 | 4.23 | 5.61 | 8.32 | 18.43 | 18.47 | 16.38 | -- |
| 1967 | 13.35 | 3.68 | 4.69 | -- | 3.40 | 3.50 | 3.66 | 5.99 | 18.29 | -- | -- | 17.18 | -- |
| 1968 | 17.88 | 10.12 | 4.02 | 3.94 | 3.82 | 3.20 | 3.45 | 7.89 | 20.51 | 20.61 | 20.30 | 17.93 | -- |
| 1969 | 13.12 | 10.56 | -- | -- | 2.55 | 3.19 | 3.75 | 5.36 | 20.67 | 20.81 | 19.87 | 18.68 | -- |
| 1970 | 13.72 | 4.83 | -- | 2.54 | 2.75 | 2.63 | 2.66 | 4.36 | 18.02 | 20.83 | 16.01 | -- | -- |
| 1971 | 5.45 | 2.68 | -- | 3.99 | 2.85 | 2.70 | 4.04 | 10.98 | 20.84 | 20.87 | 20.80 | 18.29 | -- |
| 1972 | 15.26 | 10.62 | -- | 2.69 | 3.72 | 3.47 | 3.57 | 10.30 | -- | -- | 20.79 | 18.60 | -- |
| 1973 | 14.35 | 9.21 | 3.43 | -- | -- | -- | -- | 6.24 | 14.35 | 19.41 | 16.22 | 16.08 | -- |

Note: gage heights are month end daily mean. Datum of gage is 1,583.44 ft. above mean sea level, U.S. Coast and Geodetic Survey datum of 1929, supplementary adjustment of 1947; 1,582.53 ft. above Geodetic Survey of Canada 1959 datum; 1,584.07 ft. above City of Seattle 1936 datum; 1,581.65 ft. above City of Seattle Ross Dam Datum (by water level transfer in 1955).

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3. Lightning Creek near Newhalem (12171000)** | | | | | | | | | | | | | |
| 1944 | 91.8 | 78.9 | 102 | 73.4 | 65.3 | 75.1 | 229 | 611 | 598 | 192 | 107 | 89.7 | 193 |
| 1945 | 88.8 | 84.3 | 125 | 142 | 201 | 105 | 160 | 970 | 903 | 344 | 137 | 110 | 281 |
| 1946 | 176 | 218 | 125 | 105 | 91.5 | 146 | 400 | 1,388 | 1,124 | 538 | 189 | 112 | 386 |
| 1947 | 94.5 | 82.4 | 112 | 109 | 185 | 284 | 513 | 1,210 | 805 | 340 | 152 | 98.1 | 333 |
| 1948 | 188 | 183 | 190 | 146 | 104 | 96.6 | 304 | 1,222 | -- | -- | -- | -- | -- |
| **7. Skagit River above Devils Creek near Newhalem (12171500)** | | | | | | | | | | | | | |
| 1940 | -- | -- | -- | -- | -- | -- | 2,164 | 3,770 | 2,434 | 1,081 | 630 | 492 | -- |
| 1941 | 1,137 | 676 | 938 | 796 | 891 | 1,007 | 1,998 | 2,258 | 1,910 | 976 | 567 | 728 | 1,157 |
| 1942 | 1,873 | 1,695 | 2,298 | 763 | 532 | 520 | 1,780 | 3,088 | 3,360 | 1,713 | 843 | 435 | 1,581 |
| 1943 | 342 | 536 | 1,016 | 746 | 762 | 993 | 3,851 | 3,826 | 5,888 | 4,611 | 1,483 | 708 | 2,067 |
| 1944 | 524 | 463 | 669 | 481 | 434 | 476 | 1,226 | 3,025 | 3,198 | 1,257 | 724 | 662 | 1,095 |
| 1945 | 607 | 627 | 867 | 1,027 | 1,235 | 763 | 1,021 | 4,609 | 4,328 | 2,032 | 832 | 613 | 1,548 |
| **15. Big Beaver Creek near Newhalem (12172000)** | | | | | | | | | | | | | |
| 1940 | -- | -- | -- | -- | -- | 410 | 510 | 759 | 605 | 396 | 261 | 237 | -- |
| 1941 | 606 | 220 | 278 | 201 | 201 | 257 | 428 | 501 | 502 | 387 | 243 | 306 | 345 |
| 1942 | 443 | 379 | 481 | 112 | 88.4 | 108 | 355 | 516 | 607 | 552 | 280 | 137 | 340 |
| 1943 | 118 | 200 | 266 | 152 | 125 | 191 | 651 | 670 | 929 | 907 | 393 | 212 | 402 |
| 1944 | 177 | 126 | 200 | 157 | 114 | 138 | 270 | 488 | 551 | 340 | 226 | 269 | 255 |
| 1945 | 232 | 254 | 251 | 235 | 266 | 141 | 209 | 874 | 742 | 555 | 273 | 235 | 356 |
| 1946 | 338 | 285 | 172 | 154 | 147 | 212 | 455 | 1,224 | 962 | 812 | 448 | 257 | 458 |
| 1947 | 190 | 125 | 306 | 156 | 310 | 278 | 498 | 899 | 726 | 568 | 294 | 227 | 382 |
| 1948 | 508 | 269 | 299 | 180 | 119 | 113 | 330 | 966 | 1,399 | 628 | 484 | 355 | 471 |
| 1963 | -- | 512 | 501 | 282 | 530 | 213 | 257 | 600 | 677 | 540 | 408 | 338 | -- |
| 1964 | 499 | 476 | 375 | 324 | 141 | 117 | 277 | 636 | 1,173 | 1,005 | 530 | 309 | 490 |
| 1965 | 330 | 229 | 243 | 140 | 278 | 216 | 419 | 680 | 808 | 648 | 484 | 191 | 389 |
| 1966 | 350 | 427 | 296 | 158 | 95.1 | 180 | 476 | 776 | 875 | 769 | 453 | 306 | 432 |
| 1967 | 331 | 243 | 591 | 228 | 211 | 163 | 191 | 757 | 1,384 | 852 | 523 | 350 | 487 |
| 1968 | 646 | 456 | 277 | 495 | 457 | 418 | 233 | 736 | 1,083 | 856 | 450 | 393 | 542 |
| 1969 | 269 | 424 | 222 | 157 | 76.9 | 124 | 457 | 1,088 | 1,141 | 560 | 335 | 451 | 443 |
| **21. Skagit River near Newhalem (12172500)** | | | | | | | | | | | | | |
| 1929 | -- | -- | -- | -- | -- | -- | -- | -- | 5,530 | 2,330 | 1,260 | 750 | -- |
| 1930 | 703 | 414 | 1,000 | 550 | 1,930 | 1,690 | 5,030 | 4,300 | 4,860 | 2,750 | 1,390 | 980 | 2,130 |
| 1931 | 860 | 873 | 627 | 1,290 | 1,650 | 1,850 | 2,330 | 6,200 | 4,400 | 2,090 | 1,110 | 1,280 | 2,050 |
| 1932 | 831 | 1,580 | 1,120 | 1,180 | 2,740 | 2,850 | 3,500 | 6,260 | 7,120 | 3,070 | 1,650 | 938 | 2,730 |
| 1933 | 1,240 | 3,980 | 2,560 | 1,360 | 790 | 1,080 | 2,840 | 5,150 | 9,570 | 7,010 | 2,890 | 1,670 | 3,350 |
| 1934 | 3,422 | 3,436 | 3,420 | 3,396 | 2,497 | 3,779 | 7,858 | 7,193 | 4,844 | 2,721 | 1,612 | 1,048 | 3,774 |
| 1935 | 1,122 | 3,718 | 2,049 | 3,392 | 3,875 | 1,539 | 1,627 | 4,942 | 6,142 | 3,804 | 1,661 | 1,444 | 2,932 |
| 1936 | 842 | 601 | 726 | 733 | 480 | 936 | 4,307 | 7,366 | 5,161 | 2,013 | 1,189 | 847 | 2,102 |
| 1937 | 631 | 419 | 887 | 518 | 384 | 1,045 | 1,945 | 5,346 | 8,973 | 3,678 | 1,431 | 980 | 2,191 |
| 1938 | 1,327 | 2,244 | 2,171 | 1,709 | 845 | 1,579 | 3,222 | 7,136 | 7,330 | 3,230 | 1,251 | 947 | 2,757 |
| 1939 | 814 | 798 | 1,357 | 2,022 | 804 | 1,339 | 3,607 | 6,218 | 4,844 | 3,445 | 1,526 | 837 | 2,311 |
| 1940 | 943 | 1,294 | 3,311 | 1,535 | 1,377 | 2,076 | -- | -- | -- | -- | -- | -- | -- |
| **24. Granite Creek near Newhalem (12173000)** | | | | | | | | | | | | | |
| 1947 | 61.9 | 47.9 | 56.4 | 47.1 | 62.4 | 141 | 369 | 917 | 634 | 282 | 98.0 | 53.3 | 232 |
| 1948 | 124 | 101 | 78.5 | 57.5 | 41.0 | 40.7 | 137 | -- | -- | -- | -- | -- | -- |
| **26. Ruby Creek below Panther Creek, near Newhalem (12173500)** | | | | | | | | | | | | | |
| 1948 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 284 | -- |
| 1949 | 362 | 191 | 142 | 116 | 102 | 218 | 810 | 2,636 | 1,916 | 1,023 | 409 | 288 | 688 |
| 1950 | 283 | 900 | 630 | 252 | 185 | 241 | 314 | 1,295 | 3,532 | 2,108 | 595 | 244 | 883 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26. Ruby Creek below Panther Creek, near Newhalem (12173500) (continued)** | | | | | | | | | | | | | |
| 1951 | 363 | 561 | 744 | 365 | 657 | 261 | 862 | 2,173 | 2,234 | 1,186 | 394 | 232 | 836 |
| 1952 | 248 | 215 | 152 | 96.6 | 132 | 114 | 719 | 1,822 | 1,564 | 815 | 326 | 161 | 531 |
| 1953 | 98.9 | 74.7 | 71.5 | 247 | 327 | 187 | 494 | 1,855 | 1,885 | 1,251 | 461 | 227 | 600 |
| 1954 | 351 | 369 | 302 | 226 | 271 | 221 | 367 | 2,006 | 2,445 | 2,599 | 980 | 448 | 887 |
| 1955 | 298 | 757 | 393 | 226 | 168 | 86.8 | 295 | 957 | 2,361 | 1,676 | 520 | 221 | 665 |
| 1956 | 557 | 943 | 297 | 174 | 115 | 113 | 844 | 2,421 | 2,536 | 1,592 | 499 | 284 | 866 |
| 1963 | 237 | 481 | 561 | 324 | 585 | 318 | 346 | 1,414 | 1,680 | 815 | 411 | 272 | 620 |
| 1964 | 409 | 316 | 422 | 432 | 412 | 197 | 173 | 375 | 1,200 | 3,076 | 1,923 | 531 | 279 |
| 1965 | 409 | 220 | 225 | 236 | 314 | 313 | 605 | 1,520 | 2,202 | 1,145 | 506 | 188 | 658 |
| 1966 | 189 | 220 | 169 | 117 | 91.1 | 180 | 615 | 1,523 | 1,515 | 951 | 353 | 218 | 514 |
| 1967 | 298 | 268 | 507 | 259 | 224 | 170 | 224 | 1,422 | 3,538 | 1,464 | 478 | 244 | 759 |
| 1968 | 479 | 634 | 369 | 592 | 534 | 571 | 321 | 1,592 | 2,457 | 1,463 | 427 | 273 | 810 |
| 1969 | 203 | 274 | 197 | 217 | 127 | 178 | 600 | 2,266 | 2,090 | 666 | 249 | 230 | 610 |
| **27. Ruby Creek near Newhalem (12174000)** | | | | | | | | | | | | | |
| 1919 | -- | -- | -- | -- | -- | -- | -- | -- | 2,210 | 1,620 | 610 | 309 | -- |
| 1920 | 135 | 356 | 293 | 281 | 319 | 212 | -- | -- | -- | -- | -- | -- | -- |
| 1928 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 170 | -- |
| 1929 | 347 | 197 | 181 | 117 | 105 | 160 | 274 | 1,610 | 1,730 | 588 | 248 | 138 | 477 |
| 1930 | 107 | 78.8 | 74.9 | 60 | 185 | 290 | 1,040 | 1,220 | 1,500 | 762 | 284 | 175 | 481 |
| 1931 | 143 | 130 | 90.0 | 172 | 250 | 283 | 493 | 1,860 | 1,230 | 498 | 226 | 214 | 467 |
| 1932 | 146 | 254 | 194 | 155 | 631 | 575 | 816 | 1,920 | 2,240 | 791 | 357 | 178 | 686 |
| 1933 | 221 | 803 | 480 | 249 | 143 | 182 | 606 | 1,270 | 2,950 | 2,110 | 717 | 331 | 840 |
| 1934 | 821 | 860 | 787 | 531 | 435 | 857 | 2,216 | 2,164 | 1,648 | 810 | 367 | 201 | 976 |
| 1935 | 182 | 733 | 420 | 643 | 834 | 300 | 396 | 1,605 | 2,132 | 1,225 | 426 | 264 | 761 |
| 1936 | 145 | 105 | 104 | 106 | 82.5 | 131 | 989 | 2,279 | 1,670 | 489 | 250 | 152 | 542 |
| 1937 | 109 | 76.5 | 120 | 81.6 | 66.4 | 188 | 326 | 1,538 | 2,749 | 1,039 | 283 | 192 | 565 |
| 1938 | 269 | 394 | 359 | 288 | 163 | 282 | 755 | 2,059 | 2,304 | 810 | 227 | 167 | 675 |
| 1939 | 154 | 140 | 189 | 308 | 140 | 291 | 894 | 1,895 | 1,464 | 929 | 310 | 157 | 575 |
| 1940 | 178 | 266 | 518 | 250 | 229 | 316 | 649 | 1,570 | 1,048 | 394 | 203 | 159 | 483 |
| 1941 | 400 | 215 | 264 | 181 | 177 | 274 | 807 | 922 | 793 | 348 | 199 | 274 | 405 |
| 1942 | 559 | 406 | 500 | 194 | 134 | 141 | 626 | 1,362 | 1,371 | 670 | 239 | 115 | 528 |
| 1943 | 85.6 | 119 | 194 | 176 | 176 | 224 | 959 | 1,287 | 2,388 | 1,872 | 481 | 210 | 683 |
| 1944 | 160 | 121 | 180 | 111 | 108 | 133 | 415 | 1,237 | 1,308 | 438 | 204 | 257 | 389 |
| 1945 | 206 | 180 | 240 | 290 | 309 | 180 | 252 | 1,699 | 1,682 | 696 | 243 | 190 | 515 |
| 1946 | 313 | 361 | 200 | 183 | 139 | 221 | 676 | 2,663 | 2,067 | 1,184 | 402 | 194 | 720 |
| 1947 | 177 | 146 | 197 | 145 | 235 | 440 | 942 | 2,357 | 1,702 | 810 | 311 | 174 | 639 |
| 1948 | 359 | 278 | 248 | 191 | 139 | 129 | 445 | 2,162 | 3,602 | 1,317 | 467 | 305 | 803 |
| 1949 | 382 | 228 | 182 | 129 | 122 | 257 | 857 | 2,646 | -- | -- | -- | -- | -- |
| **29. Skagit River below Ruby Creek, near Marblemount (12174500)** | | | | | | | | | | | | | |
| 1919 | -- | -- | -- | -- | -- | -- | -- | -- | 9,870 | 7,380 | 2,990 | 1,510 | -- |
| 1920 | 779 | 2,140 | 2,190 | 2,230 | 2,210 | 1,270 | 1,350 | 4,790 | 7,260 | 6,370 | 2,250 | 2,050 | 2,910 |
| 1921 | 3,960 | 1,880 | 1,540 | 1,790 | 2,570 | 2,320 | 2,740 | 8,830 | 13,500 | 5,790 | 2,650 | 1,720 | 4,110 |
| 1922 | 3.060 | 2,840 | 5,250 | 1,200 | 750 | 657 | 1,670 | 6,870 | 12,200 | 4,070 | 2,120 | 1,600 | 3,540 |
| 1923 | 1,420 | 1,120 | 1,660 | 2 040 | 934 | 1,130 | 4,350 | 8,400 | 9,940 | 5,780 | 2,160 | 1,320 | 3,360 |
| 1924 | 965 | 748 | 1,460 | 983 | 4,810 | 1,650 | 1,880 | 10,400 | 6,070 | 3,210 | 1,660 | 1,280 | 2,930 |
| 1925 | 2,020 | 2,050 | 4,500 | 1,660 | 2,700 | 1,750 | 4,810 | 11,900 | 8,640 | 4,380 | 1,920 | 1,050 | 3,960 |
| 1926 | 577 | 605 | 2,160 | 1,250 | 1,220 | 1,460 | 3,900 | 3,770 | 2,870 | 1,920 | 1,290 | 818 | 1,820 |
| 1927 | 1,980 | 1,190 | 1,710 | 1,290 | 909 | 1,060 | 2,530 | 6,130 | 11,500 | 4,360 | 2,140 | 2,320 | 3,100 |
| 1928 | 3,250 | 3,150 | 2,790 | 3,940 | 1,500 | 2,060 | 2,480 | 10,500 | 6,020 | 3,480 | 1,510 | 1,060 | 3,500 |
| 1929 | 2,090 | 1,160 | 976 | 619 | 497 | 928 | 1,710 | 7,110 | 7,410 | 3,140 | 1,630 | 919 | 2,360 |
| 1930 | 826 | 500 | 591 | 500 | 2,280 | 1,830 | 6,230 | 5,680 | 6,650 | 3,760 | 1,700 | 1,160 | 2,630 |

32. At end of table (Ross Reservoir)

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **34. Thunder Creek below McAllister Creek near Newhalem (12175400)** | | | | | | | | | | | | | |
| 1958 | 302 | 204 | 151 | 177 | 191 | 144 | 212 | 1,185 | 1,400 | 1,323 | 984 | 603 | 576 |
| 1959 | 546 | 401 | 584 | 267 | 126 | 131 | 460 | 759 | 1,384 | 1,476 | 880 | 833 | 657 |
| 1960 | 755 | 764 | 309 | 137 | 172 | 165 | 376 | 649 | 1,312 | 1,389 | 886 | 543 | 622 |
| 1961 | 428 | 277 | 219 | 383 | 389 | 200 | 304 | 869 | 1,845 | 1,421 | 1,211 | 524 | 674 |
| 1962 | 436 | 214 | 172 | 403 | 303 | 112 | 374 | 493 | 1,161 | 1,048 | 941 | 484 | 513 |
| **35. Thunder Creek near Newhalem (12175500)** | | | | | | | | | | | | | |
| 1931 | 360 | 179 | 95.2 | 278 | 212 | 222 | 333 | 985 | 1,350 | 1,140 | 825 | 664 | 555 |
| 1932 | 214 | 301 | 195 | 180 | 630 | 455 | 590 | 842 | 1,620 | 1,140 | 935 | 380 | 623 |
| 1933 | 400 | 760 | 352 | 183 | 97.8 | 121 | 332 | 619 | 1,390 | 1,710 | 1,330 | 678 | 668 |
| 1934 | 917 | 728 | 746 | 493 | 335 | 546 | 1,057 | 1,125 | 1,245 | 1,382 | 1,125 | 608 | 863 |
| 1935 | 451 | 717 | 331 | 686 | 500 | 201 | 216 | 747 | 1,279 | 1,401 | 947 | 850 | 695 |
| 1936 | 343 | 110 | 108 | 100 | 57.3 | 116 | 689 | 1,339 | 1,515 | 1,153 | 1,009 | 614 | 598 |
| 1937 | 371 | 115 | 167 | 84.6 | 64.2 | 144 | 243 | 784 | 1,633 | 1,375 | 796 | 640 | 537 |
| 1938 | 554 | 433 | 356 | 238 | 111 | 189 | 463 | 981 | 1,588 | 1,417 | 744 | 782 | 657 |
| 1939 | 361 | 175 | 258 | 300 | 115 | 183 | 468 | 968 | 922 | 1,318 | 942 | 548 | 550 |
| 1940 | 494 | 375 | 502 | 241 | 202 | 285 | 407 | 912 | 1,047 | 1,025 | 832 | 747 | 591 |
| 1941 | 915 | 210 | 313 | 185 | 161 | 201 | 430 | 609 | 891 | 1,194 | 930 | 600 | 557 |
| 1942 | 572 | 358 | 412 | 128 | 103 | 101 | 347 | 703 | 963 | 1,289 | 982 | 526 | 544 |
| 1943 | 257 | 197 | 277 | 168 | 144 | 199 | 640 | 709 | 1,204 | 1,533 | 875 | 607 | 570 |
| 1944 | 345 | 146 | 221 | 120 | 111 | 124 | 283 | 651 | 979 | 965 | 726 | 737 | 452 |
| 1945 | 452 | 251 | 266 | 302 | 270 | 141 | 192 | 882 | 1,011 | 1,080 | 786 | 514 | 515 |
| 1946 | 429 | 335 | 168 | 157 | 129 | 182 | 409 | 1,247 | 1,191 | 1,300 | 863 | 441 | 574 |
| 1947 | 303 | 147 | 253 | 171 | 261 | 289 | 583 | 1,217 | 1,140 | 1,057 | 720 | 527 | 558 |
| 1948 | 753 | 290 | 262 | 174 | 117 | 113 | 298 | 1,071 | 2,072 | 1,126 | 1,019 | 598 | 659 |
| 1949 | 426 | 183 | 147 | 103 | 109 | 212 | 540 | 1,353 | 1,249 | 1,214 | 930 | 730 | 602 |
| 1950 | 422 | 918 | 394 | 201 | 138 | 237 | 271 | 804 | 1,886 | 1,826 | 1,251 | 703 | 757 |
| 1951 | 562 | 582 | 700 | 246 | 564 | 169 | 527 | 1,035 | 1,271 | 1,367 | 924 | 640 | 717 |
| 1952 | 480 | 246 | 152 | 92.3 | 140 | 105 | 437 | 905 | 1,053 | 1,256 | 1,083 | 592 | 547 |
| 1953 | 390 | 120 | 132 | 401 | 366 | 152 | 308 | 858 | 932 | 1,410 | 1,030 | 699 | 568 |
| 1954 | 526 | 391 | 379 | 216 | 270 | 194 | 288 | 958 | 1,190 | 1,591 | 1,166 | 744 | 663 |
| 1955 | 364 | 777 | 296 | 162 | 127 | 92.3 | 211 | 568 | 1,475 | 1,457 | 1,031 | 636 | 602 |
| 1956 | 777 | 732 | 247 | 140 | 89.3 | 91.1 | 458 | 1,168 | 1,462 | 1,709 | 1,066 | 794 | 730 |
| 1957 | 602 | 339 | 448 | 143 | 149 | 173 | 346 | 1,336 | 1,372 | 997 | 739 | 679 | 613 |
| 1958 | 356 | 239 | 178 | 220 | 233 | 179 | 257 | 1,345 | 1,518 | 1,424 | 1,095 | 684 | 647 |
| 1959 | 624 | 477 | 699 | 336 | 164 | 162 | 523 | 836 | 1,476 | 1,576 | 927 | 879 | 727 |
| 1960 | 827 | 810 | 352 | 157 | 193 | 188 | 438 | 706 | 1,407 | 1,485 | 926 | 543 | 671 |
| 1961 | 464 | 317 | 245 | 443 | 461 | 267 | 329 | 919 | 2,016 | 1,504 | 1,246 | 529 | 730 |
| 1962 | 443 | 238 | 205 | 443 | 322 | 120 | 398 | 527 | 1,220 | 1,106 | 1,006 | 515 | 547 |
| 1963 | 325 | 623 | 462 | 300 | 457 | 214 | 229 | 719 | 1,057 | 926 | 853 | 801 | 581 |
| 1964 | 804 | 467 | 374 | 313 | 145 | 129 | 246 | 614 | 1,508 | 1,565 | 916 | 531 | 636 |
| 1965 | 474 | 242 | 271 | 208 | 289 | 218 | 394 | 735 | 1,171 | 1,282 | 1,187 | 427 | 577 |
| 1966 | 421 | 323 | 214 | 146 | 104 | 170 | 407 | 761 | 989 | 1,114 | 933 | 676 | 524 |
| 1967 | 547 | 273 | 579 | 264 | 222 | 160 | 173 | 721 | 1,953 | 1,436 | 1,134 | 894 | 699 |
| 1968 | 855 | 506 | 335 | 557 | 428 | 367 | 219 | 748 | 1,512 | 1,483 | 910 | 749 | 724 |
| 1969 | 316 | 378 | 244 | 282 | 102 | 130 | 425 | 1,254 | 1,786 | 1,034 | 705 | 778 | 621 |
| 1970 | 324 | 242 | 154 | 147 | 182 | 152 | 198 | 658 | 1,487 | 1,129 | 822 | 536 | 504 |
| 1971 | 232 | 194 | 162 | 305 | 485 | 170 | 262 | 1,120 | 1,197 | 1,715 | 1,307 | 499 | 640 |
| 1972 | 344 | 239 | 141 | 146 | 250 | 663 | 369 | 1,240 | 1,770 | 1,804 | 1,334 | 596 | 744 |
| 1973 | 297 | 172 | 283 | 232 | 131 | 150 | 201 | 751 | 1,001 | 1,087 | 863 | 561 | 480 |
| **37. Thunder Creek near Marblemount (12176000)** | | | | | | | | | | | | | |
| 1919 | -- | -- | -- | -- | -- | 148 | 515 | 988 | 1,070 | 1,570 | 1,260 | 666 | -- |
| 1920 | 202 | 490 | 381 | 346 | 317 | 185 | 196 | 536 | 887 | 1,860 | 1,340 | 899 | 639 |
| 1921 | 721 | 296 | 244 | 289 | 402 | 330 | 355 | 1,010 | 1,970 | 1,560 | 1,230 | 573 | 750 |
| 1922 | 920 | 486 | 998 | 149 | 82.6 | 77.5 | 196 | 753 | 1,660 | 1,430 | 1,210 | 860 | 740 |
| 1923 | 477 | 233 | 305 | 362 | 173 | 189 | 546 | 905 | 1,330 | 1,680 | 1,220 | 740 | 684 |
| 1924 | 369 | 162 | 280 | 173 | 751 | 236 | 269 | 1,230 | 1,020 | 1,240 | 996 | 646 | 614 |
| 1925 | 443 | 315 | 563 | 196 | 323 | 208 | 522 | 1,300 | 1,400 | 1,560 | 1,030 | 598 | 708 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 37. Thunder Creek near Marblemount (12176000)--cont. | | | | | | | |
| 1926 | 234 | 135 | 435 | 225 | 214 | 239 | 587 | 680 | 1,050 | 1,320 | 1,060 | 463 | 556 |
| 1927 | 868 | 312 | 294 | 205 | 147 | 154 | 305 | 658 | 1,560 | 1,410 | 1,230 | 919 | 676 |
| 1928 | 778 | 597 | 425 | 639 | 199 | 264 | 289 | 1,290 | 1,200 | 1,500 | 971 | 665 | 739 |
| 1929 | 747 | 206 | 135 | 73.6 | 58.9 | 103 | 205 | 921 | 1,240 | 1,140 | 1,000 | 539 | 535 |
| 1930 | 275 | 90.6 | 87.5 | 84.7 | 407 | 267 | 690 | 617 | 970 | 1,140 | 927 | 674 | 519 |
| | | | | | | 38. At end of table (Diablo Reservoir) | | | | | | | |
| | | | | | | 39. Skagit River at Reflector Bar, near Newhalem (12177000) | | | | | | | |
| 1914 | 2,580 | 2,690 | 1,830 | 3,590 | 1,270 | 2,800 | 5,350 | 9,180 | 8,490 | 6.010 | 3,200 | 1,960 | 4,100 |
| 1915 | 1,910 | 3,840 | 1,730 | 899 | 769 | 1,560 | 5,200 | 4,520 | 3,920 | 3,590 | 3,480 | 1,500 | 2,750 |
| 1916 | 1,830 | 2,030 | 1,870 | 860 | 1,170 | 1,720 | 3,020 | 8,210 | 15,600 | 10,400 | 4,760 | 2,740 | 4,520 |
| 1917 | 1,230 | 1,390 | 930 | 910 | 1,250 | 925 | 2,000 | 8,180 | 12,300 | 8,990 | 3,800 | 2,220 | 3,690 |
| 1918 | 1,580 | 1,840 | 5,090 | 7,220 | 2,530 | 1,980 | 5,270 | 8,380 | 12,700 | 6,620 | 3,700 | 2,420 | 4,960 |
| 1919 | 2,370 | 1,960 | 3,330 | 2,100 | 1,410 | 1,220 | 5,150 | 10,300 | 12,000 | 9,320 | 4,510 | 2,340 | 4,680 |
| 1920 | 1,020 | 2,780 | 2,690 | 2,810 | 2,710 | 1,570 | 1,670 | 5,480 | 8,750 | 8,470 | 3,690 | 3,100 | 3,730 |
| 1921 | 4,950 | 2,270 | 1,850 | 2,240 | 3,210 | 2,760 | 3,220 | 10,400 | 16,700 | 7,650 | 4,030 | 2,430 | 5,140 |
| 1922 | 4,070 | 3,510 | 6,700 | 1,420 | 876 | 785 | 2,000 | 8,150 | 14,500 | 5,700 | 3,490 | 2,530 | 4,490 |
| | | | | | | 40. Stetattle Creek near Newhalem (12177500) | | | | | | | |
| 1914 | -- | -- | -- | 192 | 39.0 | 126 | -- | -- | -- | -- | -- | -- | -- |
| 1915 | -- | -- | 56.9 | 37.2 | 41.0 | 106 | 259 | -- | -- | -- | -- | -- | -- |
| 1933 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 178 | -- |
| 1934 | 293 | 203 | 290 | 212 | 141 | 243 | 323 | 323 | 255 | 192 | 109 | 77.5 | 223 |
| 1935 | 147 | 320 | 162 | 301 | 164 | 85.2 | 116 | 285 | 336 | 261 | 114 | 80.9 | 198 |
| 1936 | 93.5 | 53.8 | 98.9 | 78.6 | 20.7 | 83.3 | 290 | 375 | 341 | 166 | 76.8 | 54.1 | 144 |
| 1937 | 39.8 | 20.5 | 113 | 27.2 | 27.5 | 102 | 141 | 305 | 437 | 205 | 80.7 | 47.0 | 129 |
| 1938 | 169 | 240 | 171 | 94.2 | 42.2 | 101 | 232 | 365 | 412 | 216 | 71.7 | 54.5 | 181 |
| 1939 | 95.4 | 100 | 167 | 168 | 42.0 | 100 | 233 | 368 | 301 | 270 | 105 | 63.0 | 169 |
| 1940 | 169 | 190 | 286 | 105 | 105 | 180 | 174 | 321 | 219 | 116 | 62.7 | 45.3 | 165 |
| 1941 | 234 | 85.9 | 144 | 103 | 79.5 | 111 | 162 | 198 | 176 | 85.9 | 47.1 | 164 | 133 |
| 1942 | 240 | 173 | 177 | 41.3 | 44.9 | 52.9 | 160 | 228 | 258 | 171 | 49.8 | 22.6 | 135 |
| 1943 | 31.1 | 87.7 | 152 | 105 | 75.5 | 104 | 272 | 250 | 368 | 395 | 139 | 54.4 | 170 |
| 1944 | 84.9 | 67.6 | 115 | 84.9 | 56.6 | 75.7 | 127 | 222 | 209 | 93.9 | 57.2 | 128 | 110 |
| 1945 | 101 | 127 | 116 | 150 | 145 | 66.8 | 118 | 373 | 278 | 198 | 71.7 | 95.7 | 153 |
| 1946 | 190 | 121 | 89.7 | 101 | 81.0 | 99.5 | 203 | 463 | 366 | 293 | 153 | 76.5 | 187 |
| 1947 | 98.4 | 74.9 | 137 | 103 | 153 | 138 | 225 | 373 | 310 | 222 | 96.7 | 78.7 | 167 |
| 1948 | 251 | 105 | 151 | 65.8 | 53.8 | 55.1 | 160 | 383 | 520 | 216 | 164 | 131 | 188 |
| 1949 | 133 | 92.6 | 48.5 | 39.7 | 52.2 | 106 | 251 | 493 | 366 | 303 | 147 | 130 | 181 |
| 1950 | 152 | 363 | 106 | 85.8 | 94.7 | 130 | 137 | 326 | 520 | 386 | 210 | 94.1 | 217 |
| 1951 | 216 | 292 | 327 | 104 | 279 | 55.5 | 217 | 354 | 362 | 245 | 112 | 100 | 221 |
| 1952 | 193 | 104 | 65.7 | 36.2 | 95.2 | 52.3 | 218 | 334 | 336 | 259 | 111 | 55.6 | 155 |
| 1953 | 41.2 | 40.5 | 65.8 | 346 | 153 | 66.5 | 174 | 320 | 292 | 316 | 157 | 167 | 179 |
| 1954 | 202 | 195 | 169 | 80.4 | 143 | 77.6 | 150 | 380 | 411 | 481 | 276 | 184 | 230 |
| 1955 | 169 | 360 | 110 | 51.8 | 53.8 | 30.5 | 117 | 272 | 464 | 396 | 182 | 93.1 | 192 |
| 1956 | 310 | 245 | 120 | 52.7 | 26.6 | 45.5 | 233 | 455 | 431 | 396 | 169 | 174 | 222 |
| 1957 | 267 | 139 | 216 | 45.5 | 85.9 | 93.1 | 205 | 428 | 328 | 204 | 118 | 86.7 | 185 |
| 1958 | 94.7 | 81.9 | 109 | 146 | 150 | 74.5 | 136 | 412 | 339 | 162 | 81.8 | 118 | 159 |
| 1959 | 194 | 222 | 303 | 160 | 52.6 | 91.8 | 310 | 309 | 455 | 380 | 163 | 285 | 244 |
| 1960 | 279 | 266 | 128 | 73.9 | 98.8 | 104 | 207 | 288 | 430 | 287 | 125 | 88.3 | 198 |
| 1961 | 185 | 173 | 137 | 243 | 236 | 113 | 173 | 354 | 532 | 277 | 124 | 81.5 | 219 |
| 1962 | 186 | 124 | 141 | 192 | 161 | 40.5 | 213 | 246 | 391 | 274 | 181 | 126 | 190 |
| 1963 | 144 | 248 | 221 | 113 | 252 | 84.2 | 114 | 253 | 280 | 202 | 118 | 95.6 | 176 |
| 1964 | 171 | 212 | 182 | 135 | 78.9 | 65.9 | 143 | 290 | 422 | 417 | 250 | 164 | 211 |
| 1965 | 176 | 130 | 120 | 94.1 | 149 | 94.9 | 204 | 278 | 331 | 251 | 154 | 67.4 | 171 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 40. Stetattle Creek near Newhalem (12177500)--Cont. | | | | | | | | |
| 1966 | 163 | 183 | 135 | 92.1 | 49.3 | 115 | 192 | 304 | 335 | 291 | 141 | 83.2 | 174 |
| 1967 | 198 | 119 | 308 | 131 | 100 | 79.7 | 81.0 | 325 | 562 | 322 | 158 | 94.9 | 207 |
| 1968 | 361 | 154 | 163 | 244 | 244 | 165 | 118 | 287 | 416 | 303 | 137 | 159 | 229 |
| 1969 | 138 | 211 | 97.9 | 96.6 | 28.3 | 68.3 | 196 | 432 | 397 | 185 | 92.2 | 169 | 176 |
| 1970 | 113 | 113 | 89.3 | 89.0 | 105 | 80.6 | 119 | 242 | 358 | 196 | 86.7 | 107 | 141 |
| 1971 | 70.8 | 139 | 84.4 | 193 | 202 | 72.7 | 160 | 469 | 398 | 464 | 229 | 108 | 216 |
| 1972 | 122 | 149 | 56.5 | 86.7 | 162 | 305 | 161 | 472 | 480 | 454 | 241 | 164 | 238 |
| 1973 | 81.4 | 81.6 | 190 | 91.1 | 54.3 | 67.1 | 106 | 291 | 308 | 220 | 122 | 85.5 | 142 |
| | | | | | 44. Gorge Reservoir near Newhalem (12177700) | | | | | | | | |
| 1960 | -- | -- | -- | -- | -- | -- | -- | -- | 183 | 1,464 | 1,013 | 1,609 | -- |
| 1961 | 1,590 | 1,562 | 8,461 | 7,923 | 8,366 | 8,342 | 8,414 | 8,485 | 8,366 | 8,318 | 9,029 | 8,461 | -- |
| 1962 | 8,295 | 8,461 | 8,247 | 8,461 | 8,414 | 8,414 | 8,212 | 8,492 | 8,196 | 7,500 | 7,704 | 7,522 | -- |
| 1963 | 8,200 | 7,201 | 7,720 | 7,876 | 8,224 | 7,698 | 7,456 | 7,854 | 9,106 | 8,107 | 8,212 | 8,271 | -- |
| 1964 | 7,558 | 9,256 | 7,877 | 7,742 | 7,991 | 7,077 | 8,107 | 8,534 | 8,321 | 8,271 | 8,366 | 8,100 | -- |
| 1965 | 7,950 | 9,106 | 7,952 | 7,491 | 8,212 | 8,385 | 7,795 | 7,943 | 7,909 | 2,074 | 8,142 | 8,302 | -- |
| 1966 | 7,522 | 7,786 | 8,130 | 7,446 | 8,037 | 7,212 | 8,154 | 8,075 | 7,980 | 8,485 | 7,939 | 7,264 | -- |
| 1967 | 8,026 | 7,859 | 8,014 | 8,428 | 8,392 | 8,210 | 8,200 | 7,609 | 8,841 | 8,558 | 7,968 | 8,184 | -- |
| 1968 | 9,192 | 7,889 | 8,082 | 7,827 | 8,154 | 7,370 | 8,801 | 7,966 | 8,266 | 7,678 | 7,818 | 8,114 | -- |
| 1969 | 7,843 | 8,016 | 7,825 | 8,254 | 8,030 | 8,075 | 8,023 | 8,376 | 8,302 | 8,454 | 7,775 | 8,104 | -- |
| 1970 | 8,084 | 8,273 | 8,051 | 7,472 | 8,271 | 8,318 | 8,023 | 8,318 | 8,203 | 8,311 | 8,318 | 8,406 | -- |
| 1971 | 8,098 | 8,356 | 8,437 | 7,968 | 8,340 | 8,256 | 8,414 | 8,402 | 8,414 | 9,238 | 9,054 | 8,084 | -- |
| 1972 | 8,366 | 8,224 | 7,968 | 7,689 | 7,270 | 7,802 | 8,368 | 8,739 | 8,297 | 8,690 | 8,330 | 8,359 | -- |
| 1973 | 8,447 | 8,276 | 7,930 | 8,219 | 7,820 | 8,366 | 8,406 | 8,126 | 8,065 | 8,449 | 8,445 | 8,093 | -- |
| | | | | | 46. Skagit River at Newhalem (12178000) | | | | | | | | |
| 1909 | 1,380 | 3,600 | 1,540 | 1,980 | 1,590 | 1,740 | 3,020 | 7,270 | 14,100 | 8,170 | 3,960 | 2,820 | 4,270 |
| 1910 | 2,150 | 7,880 | 4,250 | 2,050 | 1,660 | 4,660 | 8,060 | 14,800 | 10,400 | 8,270 | 3,890 | 2,160 | 5,870 |
| 1911 | 5,950 | 6,600 | 2,940 | 1,690 | 1,020 | 1,880 | 3,640 | 7,850 | 13,900 | 7,890 | 3,880 | 2,890 | 5,030 |
| 1912 | 1,250 | 1,880 | 1,620 | 1,560 | 2,270 | 1,210 | 2,890 | 9,290 | 10,900 | 5,650 | 3,570 | 1,680 | 3,650 |
| 1913 | 1,230 | 2,210 | 1,530 | 1,090 | 1,520 | 1,520 | 4,040 | 9,870 | 15,900 | 8,950 | 4,480 | 3,430 | 4,650 |
| 1914 | 2,860 | 3,070 | 1,860 | 4,080 | 1,430 | 3,080 | 5,900 | 9,730 | -- | -- | -- | -- | -- |
| 1921 | 5,740 | 2,660 | 2,310 | 2,810 | 3,970 | 3,350 | 3,810 | 11,400 | 17,600 | 8,560 | 4,160 | 2,720 | 5,760 |
| 1922 | 4,680 | 4,170 | 7,680 | 1,530 | 938 | 809 | 2,290 | 8,850 | 14,600 | 5,960 | 3,680 | 2,690 | 4,840 |
| 1923 | 2,150 | 1,460 | 2,510 | 2,840 | 1,190 | 1,480 | 5,530 | 9,590 | 11,700 | 8,230 | 3,800 | 2,250 | 4,420 |
| 1924 | 1,440 | 1,090 | 2,180 | 1,440 | 6,270 | 2,010 | 2,340 | 12,400 | 7,700 | 4,930 | 2,930 | 2,090 | 3,900 |
| 1925 | 2,900 | 2,660 | 5,660 | 2,150 | 3,480 | 2,240 | 5,850 | 13,500 | 10,500 | 6,520 | 3,200 | 1,720 | 5,040 |
| 1926 | 863 | 851 | 3,170 | 1,680 | 1,670 | 1,920 | 4,810 | 4,890 | 4,270 | 3,500 | 2,640 | 1,460 | 2,650 |
| 1927 | 3,220 | 1,850 | 2,410 | 1,830 | 1,260 | 1,430 | 3,270 | 7,360 | 13,700 | 6,460 | 3,690 | 3,630 | 4,190 |
| 1928 | 4,550 | 4,330 | 3,550 | 5,210 | 1,940 | 2,670 | 3,070 | 12,400 | 7,670 | 5,340 | 2,590 | 1,790 | 4,610 |
| 1929 | 3,250 | 1,590 | 1,300 | 771 | 598 | 1,210 | 2,170 | 8,580 | 9,190 | 4,460 | 2,720 | 1,470 | 3,130 |
| 1930 | 1,160 | 606 | 767 | 744 | 3,110 | 2,580 | 7,400 | 6,620 | 7,870 | 5,150 | 2,520 | 1,470 | 3,320 |
| 1931 | 1,420 | 1,420 | 1,110 | 1,750 | 2,520 | 2,850 | 3,690 | 9,930 | 7,710 | 4,110 | 2,310 | 2,540 | 3,450 |
| 1932 | 1,870 | 1,950 | 1,790 | 1,650 | 4,680 | 4,460 | 5,710 | 9,710 | 11,600 | 5,680 | 3,280 | 2,050 | 4,530 |
| 1933 | 1,970 | 6,410 | 3,830 | 2,190 | 1,940 | 1,710 | 3,280 | 7,490 | 14,700 | 11,500 | 5,350 | 3,090 | 5,300 |
| 1934 | 6,027 | 5,706 | 5,829 | 5,050 | 3,819 | 5,995 | 12,300 | 11,500 | 8,352 | 5,325 | 3,373 | 2,237 | 6,304 |
| 1935 | 2,025 | 5,684 | 3,224 | 5,695 | 5,792 | 3,070 | 2,440 | 7,419 | 10,500 | 6,952 | 3,263 | 2,961 | 4,906 |
| 1936 | 2,103 | 1,131 | 1,168 | 1,279 | 930 | 1,594 | 5,679 | 12,010 | 9,211 | 4,105 | 2,684 | 1,929 | 3,658 |
| 1937 | 1,254 | 723 | 1,290 | 1,162 | 927 | 1,157 | 2,856 | 8,220 | 14,330 | 6,517 | 2,734 | 2,071 | 3,611 |
| 1938 | 2,293 | 3,717 | 3,406 | 2,576 | 1,309 | 2,360 | 4,927 | 10,790 | 11,950 | 5,855 | 2,409 | 2,008 | 4,480 |
| 1939 | 1,538 | 1,459 | 2,078 | 3,175 | 1,258 | 2,139 | 5,556 | 9,779 | 7,917 | 6,195 | 3,047 | 1,694 | 3,837 |
| 1940 | 1,907 | 2,322 | 5,011 | 2,248 | 2,051 | 3,314 | 3,822 | 6,803 | 6,033 | 3,135 | 2,251 | 2,128 | 3,424 |
| 1941 | 3,638 | 1,966 | 2,222 | 1,870 | 1,877 | 2,416 | 3,815 | 5,021 | 4,858 | 3,158 | 2,519 | 2,605 | 3,003 |
| 1942 | 3,892 | 3,428 | 4,732 | 2,338 | 2,089 | 1,440 | 2,930 | 5,122 | 7,385 | 4,789 | 2,693 | 1,626 | 3,547 |
| 1943 | 1,181 | 1,907 | 2,155 | 2,056 | 2,145 | 3,033 | 5,670 | 7,540 | 11,800 | 10,240 | 3,792 | 2,399 | 4,503 |
| 1944 | 2,362 | 1,077 | 1,392 | 1,346 | 1,393 | 1,531 | 2,768 | 5,028 | 6,970 | 3,576 | 2,152 | 2,656 | 2,687 |
| 1945 | 2,420 | 1,785 | 2,220 | 2,271 | 3,504 | 2,051 | 2,209 | 7,740 | 9,341 | 5,231 | 2,576 | 2,451 | 3,648 |

TABLE C.2--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 46. Skagit River at Newhalem (12178000)--cont. | | | | | | | |
| 1946 | 2,776 | 3,452 | 1,891 | 2,307 | 1,537 | 2,286 | 3,683 | 12,610 | 11,430 | 7,305 | 3,133 | 1,947 | 4,548 |
| 1947 | 1,524 | 1,406 | 2,315 | 1,954 | 2,281 | 4,959 | 4,845 | 6,496 | 9,103 | 4,765 | 2,702 | 2,279 | 3,723 |
| 1948 | 5,216 | 3,433 | 5,203 | 4,317 | 2,031 | 1,404 | 2,731 | 4,389 | 8,613 | 7.194 | 4,441 | 3,628 | 4,394 |
| 1949 | 3,867 | 3,377 | 3,701 | 4,596 | 4,278 | 3,451 | 3,813 | 6,745 | 4,191 | 4,776 | 5,120 | 3,884 | 4,322 |
| 1950 | 4,120 | 4,416 | 5,825 | 5,082 | 7,647 | 6,769 | 4,938 | 5,004 | 6,643 | 10,640 | 4,910 | 3,640 | 5,797 |
| 1951 | 3,555 | 4,946 | 7,288 | 6,757 | 7,138 | 3,999 | 7,732 | 8,060 | 5,140 | 6,301 | 3,616 | 3,666 | 5,675 |
| 1952 | 5,060 | 5,299 | 4,516 | 4,327 | 4,488 | 2,860 | 2,300 | 2,039 | 2,316 | 3,555 | 3,147 | 2,644 | 3,545 |
| 1953 | 3,891 | 4,153 | 2,987 | 3,302 | 3,190 | 3,073 | 3,788 | 4,205 | 4,365 | 6,776 | 4,299 | 3,124 | 3,936 |
| 1954 | 4,720 | 4,807 | 5,676 | 4,618 | 5,477 | 5,498 | 5,804 | 7,208 | 6,671 | 9,855 | 6,392 | 4,196 | 5,920 |
| 1955 | 3,795 | 7,563 | 4,916 | 4,710 | 4,529 | 4,578 | 4,337 | 4,269 | 4,644 | 7,557 | 4,340 | 3,184 | 4,870 |
| 1956 | 5,575 | 7,670 | 4,561 | 4,495 | 4,759 | 4,591 | 5,387 | 7,230 | 9,529 | 7,630 | 4,192 | 3,834 | 5,784 |
| 1957 | 5,049 | 4,586 | 5,614 | 5,731 | 5,121 | 4,523 | 3,996 | 4,772 | 6,080 | 4,279 | 2,487 | 3,415 | 4,635 |
| 1958 | 3,560 | 3,910 | 3,929 | 4,400 | 3,779 | 4,026 | 2,710 | 3,439 | 5,575 | 3,843 | 2,853 | 3,113 | 3,761 |
| 1959 | 4,799 | 5,349 | 6,862 | 6,439 | 5,687 | 5,289 | 5,922 | 5,472 | 5,917 | 8,642 | 4,049 | 4,209 | 5,724 |
| 1960 | 6,918 | 6,695 | 5,797 | 5,413 | 4,816 | 3,612 | 4,456 | 4,495 | 5,311 | 6,006 | 4,246 | 2,409 | 5,019 |
| 1961 | 3,807 | 4,189 | 4,487 | 4,586 | 4,044 | 3,389 | 4,136 | 5,698 | 13,390 | 6,389 | 3,539 | 3,000 | 5,050 |
| 1962 | 3,301 | 4,096 | 4,475 | 4,832 | 4,713 | 3,951 | 3,192 | 2,836 | 3,140 | 5,245 | 3,648 | 2,118 | 3,795 |
| 1963 | 3,322 | 5,198 | 5,247 | 5,098 | 4,071 | 3,668 | 3,532 | 3,845 | 6,875 | 5,117 | 3,484 | 3,098 | 4,379 |
| 1964 | 3,932 | 5,664 | 4,882 | 4,799 | 4,855 | 4,843 | 4,539 | 5,361 | 7,376 | 10,130 | 4,507 | 3,197 | 5,345 |
| 1965 | 4,002 | 4,408 | 5,054 | 4,317 | 3,910 | 3,848 | 4,080 | 3,773 | 6,100 | 6,476 | 3,955 | 1,952 | 4,328 |
| 1966 | 3,116 | 4,068 | 5,196 | 5,671 | 4,910 | 4,576 | 3,835 | 3,134 | 2,974 | 4,747 | 3,467 | 2,662 | 4,029 |
| 1967 | 3,318 | 4,640 | 4,789 | 4,662 | 4,486 | 4,362 | 4,207 | 3,546 | 13,240 | 7,585 | 3,842 | 3,256 | 5,154 |
| 1968 | 4,638 | 6,280 | 5,089 | 5,766 | 5,164 | 5,534 | 5,269 | 3,620 | 10,600 | 8,283 | 3,525 | 3,560 | 5,604 |
| 1969 | 2,916 | 3,691 | 6,058 | 6,165 | 4,919 | 3,831 | 3,850 | 3,935 | 6,188 | 4,432 | 2,625 | 3,089 | 4,304 |
| 1970 | 3,055 | 3,841 | 4,745 | 5,219 | 4,275 | 4,409 | 2,928 | 1,513 | 2,904 | 4,000 | 3,523 | 2,895 | 3,609 |
| 1971 | 2,174 | 2,667 | 4,281 | 4,800 | 4,630 | 4,579 | 3,008 | 4,850 | 10,730 | 10,890 | 5,058 | 2,682 | 5,035 |
| 1972 | 2,599 | 3,087 | 5,140 | 6,075 | 5,120 | 3,906 | 5,104 | 5,416 | 17,110 | 12,490 | 5,861 | 3,357 | 6,269 |
| 1973 | 2,750 | 2,378 | 4,578 | 5,278 | 3,401 | 3,754 | 2,476 | 2,373 | 2,332 | 3,865 | 3,292 | 1,755 | 3,195 |
| | | | | | | 48. Newhalem Creek near Newhalem (12178100) | | | | | | | |
| 1961 | - | - | - | - | 236 | 127 | 141 | 327 | 538 | 267 | 102 | 87.1 | - |
| 1962 | 165 | 119 | 117 | 202 | 150 | 48.7 | 150 | 183 | 361 | 270 | 165 | 99.5 | 169 |
| 1963 | 113 | 245 | 222 | 103 | 209 | 85.5 | 96.1 | 215 | 270 | 167 | 119 | 90.3 | 161 |
| 1964 | 153 | 233 | 183 | 136 | 70.9 | 62.3 | 119 | 263 | 494 | 445 | 234 | 159 | 213 |
| 1965 | 166 | 116 | 121 | 118 | 137 | 96.4 | 169 | 256 | 348 | 265 | 134 | 63.7 | 166 |
| 1966 | 116 | 156 | 104 | 74.5 | 50.3 | 99.9 | 167 | 270 | 320 | 275 | 106 | 63.2 | 151 |
| 1967 | 181 | 121 | 302 | 113 | 90.1 | 69.3 | 79.9 | 293 | 542 | 289 | 114 | 75.1 | 190 |
| 1968 | 351 | 154 | 161 | 256 | 204 | 137 | 90.9 | 227 | 431 | 284 | 118 | 140 | 213 |
| 1969 | 128 | 191 | 94.3 | 108 | 39.9 | 68.7 | 178 | 391 | 383 | 173 | 71.5 | 143 | 164 |
| 1970 | 109 | 106 | 84.4 | 93.2 | 105 | 67.8 | 95.2 | 195 | 372 | 161 | 60.8 | 93.7 | 128 |
| 1971 | 74.4 | 137 | 77.9 | 132 | 191 | 62.4 | 120 | 354 | 342 | 405 | 154 | 72.3 | 177 |
| 1972 | 99.9 | 126 | 53.9 | 78.8 | 130 | 290 | 164 | 448 | 500 | 476 | 236 | 163 | 231 |
| 1973 | 81.1 | 81.7 | 185 | 113 | 59.1 | 71.8 | 95.5 | 258 | 293 | 229 | 121 | 75.6 | 139 |
| | | | | | | 53. Goodell Creek near Newhalem (12178500) | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 136 | -- |
| 1944 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 234 | 144 | 300 | -- |
| 1945 | 224 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | | 59. Skagit River above Alma Creek near Marblemount (12179000) | | | | | | | |
| 1951 | 4,932 | 6,048 | 8,739 | 7,370 | 8,952 | 4,436 | 8,754 | 9,418 | 6,454 | 7,089 | 3,987 | 4,032 | 6,670 |
| 1952 | 5,973 | 5,804 | 4,862 | 4,514 | 4,964 | 3,171 | 3,165 | 3,321 | 3,310 | 4,474 | 3,594 | 2,893 | 4,170 |
| 1953 | 4,038 | 4,193 | 3,266 | 4,565 | 3,804 | 3,461 | 4,487 | 5,404 | 5,512 | 8,202 | 4,842 | 3,572 | 4,621 |
| 1954 | 5,477 | 5,640 | 6,559 | 5,065 | 6,122 | 5,864 | 6,285 | 8,517 | 7,813 | 11,770 | 7,384 | 4,859 | 6,792 |
| 1955 | 4,467 | 9,329 | 5,522 | 5,019 | 4,861 | 4,732 | 4,826 | 5,203 | 6,511 | 9,212 | 5,117 | 3,555 | 5,699 |
| 1956 | 6,896 | 9,382 | 5,254 | 4,926 | 4,970 | 4,897 | 6,385 | 9,066 | 11,590 | 9,255 | 4,740 | 4,237 | 6,798 |
| 1957 | 6,234 | 5,351 | 6,793 | 6,117 | 5,705 | 5,073 | 4,867 | 6,555 | 7,512 | 5,181 | 2,976 | 3,834 | 5,516 |
| 1958 | 4,126 | 4,448 | 4,615 | 5,389 | 4,674 | 4,509 | 3,344 | 5,098 | 7,043 | 4,580 | 3,207 | 3,687 | 4,558 |
| 1959 | 5,893 | 6,705 | 8,425 | 7,370 | 5,784 | 5,495 | 6,930 | 6,596 | 7,603 | 10,490 | 4,513 | 5,189 | 6,759 |
| 1960 | 8,120 | 7,985 | 6,691 | 5,926 | 5,516 | 4,128 | 5,406 | 5,797 | 6,778 | 6,876 | 4,609 | 2,762 | 5,886 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59. Skagit River above Alma Creek near Marblemount (12179000)--cont. | | | | | | | | | | | | | |
| 1961 | 4,661 | 5,098 | 5,302 | 5,949 | 5,261 | 4,161 | 4,844 | 7,053 | 15,940 | 7,648 | 4,220 | 3,586 | 6,138 |
| 1962 | 4,287 | 4,932 | 5,510 | 6,039 | 5,789 | 4,474 | 4,122 | 3,871 | 4,689 | 6,627 | 4,617 | 2,633 | 4,797 |
| 1963 | 4,063 | 6,464 | 6,822 | 6,481 | 5,186 | 4,319 | 4,232 | 5,042 | 8,350 | 6,295 | 4,291 | 3,660 | 5,433 |
| 1964 | 4,939 | 6,991 | 6,100 | 5,855 | 5,435 | 5,130 | 5,124 | 6,545 | 9,433 | 12,180 | 5,448 | 3,821 | 6,423 |
| 1965 | 4,721 | 4,986 | 5,738 | 4,879 | 4,722 | 4,345 | 4,842 | 4,849 | 7,459 | 7,539 | 4,565 | 2,280 | 5,082 |
| 1966 | 3,783 | 4,953 | 5,906 | 6,260 | 5,343 | 5,220 | 4,756 | 4,360 | 4,336 | 5,938 | 4,035 | 2,988 | 4,825 |
| 1967 | 4,092 | 5,347 | 6,419 | 5,556 | 5,196 | 4,887 | 4,631 | 4,793 | 15,180 | 8,795 | 4,542 | 3,760 | 6,095 |
| 1968 | 6,022 | 7,044 | 5,853 | 6,787 | 6,092 | 6,146 | 5,675 | 4,672 | 12,110 | 9,418 | 4,121 | 4,215 | 6,507 |
| 1969 | 3,548 | 4,619 | 6,643 | 6,612 | 5,166 | 4,327 | 4,775 | 5,674 | 7,895 | 5,236 | 3,093 | 3,831 | 5,116 |
| 1970 | 3,689 | 4,444 | 5,240 | 5,718 | 4,867 | 4,796 | 3,531 | 2,469 | 4,404 | 4,785 | 3,901 | 3,384 | 4,268 |
| 1971 | 2,585 | 3,336 | 4,811 | 5,620 | 5,668 | 5,034 | 3,771 | 6,655 | 12,190 | 2,520 | 5,963 | 3,215 | 5,954 |
| 1972 | 3,134 | 3,801 | 5,467 | 6,433 | 5,698 | 5,291 | 5,777 | 7,116 | 18,610 | 14,100 | 6,720 | 4,071 | 7,183 |
| 1973 | 3,127 | 2,806 | 5,437 | 5,789 | 3,876 | 4,232 | 2,942 | 3,494 | 3,515 | 4,718 | 3,785 | 2,115 | 3,830 |
| 60. Alma Creek near Marblemount (12179500) | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 21.6 | -- |
| 1944 | 30.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 63. Bacon Creek near Marblemount (12180000) | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 258 | 146 | -- |
| 1944 | 205 | 197 | 312 | 295 | 190 | 209 | 311 | 527 | 525 | 233 | 150 | 326 | 290 |
| 1945 | 269 | 397 | 306 | 486 | 428 | 224 | 260 | 815 | 651 | 474 | 194 | 234 | 395 |
| 1946 | 447 | 466 | 328 | 302 | 257 | 306 | 370 | 891 | 864 | 741 | 330 | 179 | 458 |
| 1947 | 320 | 223 | 447 | 283 | 432 | 351 | 482 | 722 | 658 | 433 | 193 | 178 | 393 |
| 1948 | 574 | 325 | 431 | 272 | 199 | 177 | 338 | 833 | 1,202 | 526 | 404 | 350 | 470 |
| 1949 | 357 | 306 | 172 | 113 | 161 | 360 | 545 | 1,030 | 748 | 620 | 315 | 297 | 420 |
| 1950 | 354 | 954 | 511 | 248 | 375 | 445 | 368 | 646 | 1,267 | 917 | 529 | 315 | 578 |
| 65. Diobsud Creek near Marblemount (12180500) | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 91.4 | 63.9 | -- |
| 1944 | 93.8 | -- | -- | -- | -- | -- | -- | -- | -- | 82.2 | 62.0 | 182 | -- |
| 1945 | 134 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 67. Skagit River at Marblemount (12181000) | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3,044 | -- |
| 1944 | 3,263 | 1,864 | 2,609 | 2,450 | 2,115 | 2,343 | 3,932 | 7,133 | 8,639 | -- | -- | -- | -- |
| 1947 | 2,663 | 2,224 | 4,331 | 3,254 | 4,159 | 6,289 | 6,650 | 9,294 | 11,580 | 6,290 | 3,460 | 2,934 | 5,263 |
| 1948 | 7,258 | 4,763 | 6,725 | 5,323 | 2,910 | 2,222 | 4,085 | 7,303 | 12,870 | 8,931 | 5,925 | 4,890 | 6,112 |
| 1949 | 5,142 | 4,716 | 4,556 | 5,088 | 4,947 | 4,824 | 5,702 | 10,330 | 6,864 | 6,848 | 6,133 | 4,978 | 5,855 |
| 1950 | 5,421 | 7,433 | 7,428 | 6,467 | 8,912 | 8,438 | 6,455 | 7,487 | 11,260 | 14,730 | 7,635 | 5,120 | 8,064 |
| 1951 | 6,153 | 7,848 | 10,300 | 7,928 | 10,340 | 4,988 | 9,534 | 10,630 | 7,535 | 7,719 | 4,204 | 4,292 | 7,604 |
| 68. South Fork Cascade River at South Cascade Glacier near Marblemount (12181100) | | | | | | | | | | | | | |
| 1957 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 69.6 | 51.4 | 51.0 | -- |
| 1958 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 98.1 | 88.6 | 53.9 | -- |
| 1959 | 33.3 | 13.6 | -- | -- | -- | -- | -- | -- | -- | 97.7 | 73.7 | 60.5 | -- |
| 1960 | 35.0 | 16.5 | 7.85 | -- | -- | -- | -- | 13.3 | 50.9 | 83.2 | 62.7 | 38.9 | -- |
| 1961 | 26.5 | 9.0 | 2.76 | -- | -- | -- | -- | 17.4 | 81.3 | 84.9 | 82.4 | 41.1 | -- |
| 1962 | 25.8 | 6.25 | 3.75 | 4.81 | 3.80 | 2.00 | 2.50 | 7.07 | 43.9 | 66.4 | 64.1 | 48.7 | 23.4 |
| 1963 | 16.5 | 18.7 | 9.12 | 2.88 | 10.2 | 3.26 | 2.63 | 22.0 | 52.2 | 63.3 | 65.4 | 57.9 | 27.1 |
| 1964 | 39.7 | 10.3 | 7.05 | 7.05 | 1.96 | 1.73 | 2.00 | 11.3 | 44.9 | 76.5 | 60.1 | 34.3 | 24.9 |
| 1965 | 22.4 | 9.19 | 5.53 | 4.04 | 3.16 | 1.96 | 3.74 | 12.0 | 42.9 | 71.3 | 72.2 | 27.7 | 23.2 |
| 1966 | 26.6 | 12.0 | 3.73 | 3.08 | 1.59 | 1.52 | 3.55 | 13.7 | 34.9 | 59.5 | 62.3 | 42.8 | 22.3 |
| 1967 | 26.2 | 6.35 | 6.59 | 3.60 | 3.57 | 1.63 | 1.31 | 8.83 | 57.8 | 68.3 | 62.6 | 53.5 | 25.1 |
| 1968 | 31.7 | 16.1 | 4.50 | 9.23 | 5.20 | 4.76 | 2.66 | 15.8 | 56.8 | 75.5 | 56.6 | 44.0 | 27.0 |
| 1969 | 13.6 | 11.0 | 4.96 | 5.76 | 1.39 | 2.16 | 7.38 | 30.7 | 80.2 | 61.5 | 52.5 | 51.9 | 27.0 |
| 1970 | 18.3 | 12.3 | 3.71 | 2.58 | 1.93 | 1.56 | 2.01 | 12.6 | 65.5 | 72.8 | 64.5 | 46.0 | 25.4 |
| 1971 | 15.5 | 6.37 | 3.31 | 5.64 | 6.12 | 2.86 | 4.18 | 21.0 | 42.5 | 78.4 | 76.3 | 35.0 | 24.9 |
| 1972 | 18.2 | 4.14 | 3.12 | 3.62 | 2.75 | 3.55 | 2.17 | 21.3 | 56.4 | 85.3 | 80.2 | 36.1 | 26.6 |
| 1973 | 13.0 | 4.25 | 4.16 | 3.68 | 2.56 | 2.64 | 3.69 | 18.8 | 49.9 | 70.7 | 62.9 | 46.9 | 23.8 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **69. Salix Creek at South Cascade Glacier near Marblemount (12181200)** | | | | | | | | | | | | | |
| 1961 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.70 | 0.16 | 0.33 | -- |
| 1962 | 0.57 | 0.30 | -- | -- | -- | -- | -- | 1.73 | 3.15 | 1.93 | .39 | .14 | -- |
| 1963 | -- | -- | -- | 0.13 | 1.31 | 0.18 | 0.24 | 1.71 | 2.00 | -- | -- | .23 | -- |
| 1964 | .42 | .45 | 0.47 | -- | -- | -- | -- | -- | 2.52 | 2.96 | .88 | .49 | -- |
| 1965 | .55 | .34 | .20 | .16 | .12 | .16 | .50 | 1.15 | 2.30 | 1.40 | .25 | .17 | 0.61 |
| 1966 | .401 | .546 | -- | -- | -- | -- | .210 | 1.50 | 2.09 | .935 | .105 | .50 | -- |
| 1967 | .625 | .253 | .540 | .069 | .048 | .044 | .044 | 0.883 | 2.95 | 1.80 | .164 | .175 | .635 |
| 1968 | 1.09 | .386 | .066 | .318 | .238 | .270 | .197 | 1.26 | 2.43 | 1.03 | .281 | .412 | .666 |
| 1969 | .48 | .49 | .088 | .33 | .051 | .064 | .33 | 1.83 | 2.02 | .39 | .081 | .56 | .56 |
| 1970 | .39 | .29 | .11 | .052 | .075 | .080 | .056 | 1.02 | 2.50 | .47 | .062 | .32 | .45 |
| 1971 | .21 | .33 | .10 | .33 | .30 | .071 | .099 | 1.43 | 1.59 | 2.37 | .33 | .22 | .62 |
| 1972 | .21 | .16 | .064 | .039 | .046 | .15 | .14 | 1.64 | 2.85 | 3.52 | 1.14 | .47 | .87 |
| 1973 | .27 | .23 | .24 | .16 | .064 | .055 | .20 | 1.56 | 1.86 | .51 | .093 | .16 | .45 |
| **72. Marble Creek near Marblemount (12181500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.7 | -- |
| 1944 | 69.5 | -- | -- | -- | -- | -- | -- | -- | -- | 143 | 91.4 | 150 | -- |
| 1945 | 89.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **73. Cascade River near Marblemount (12182000)** | | | | | | | | | | | | | |
| 1909 | -- | -- | -- | -- | -- | -- | 543 | 1,180 | 2,320 | 1,800 | 983 | 836 | -- |
| 1910 | 647 | 2,890 | 1,100 | 498 | 355 | 976 | 1,270 | 1,860 | 1,220 | 2,250 | 1,010 | 674 | 1,230 |
| 1911 | 2,380 | 2,090 | 816 | 446 | 275 | 376 | 516 | 1,350 | 3,010 | 2,380 | 1,080 | 848 | 1,300 |
| 1912 | 312 | 729 | 423 | 500 | 705 | 274 | 393 | 2,050 | 3,470 | 2,120 | 1,370 | 473 | 1,070 |
| 1913 | 324 | 626 | 350 | 278 | 382 | 326 | 738 | -- | -- | -- | -- | -- | -- |
| **77. Cascade River at Marblemount (12182500)** | | | | | | | | | | | | | |
| 1929 | 1,020 | 416 | 317 | 201 | 146 | 313 | 509 | 1,600 | 1,960 | 1,220 | 699 | 361 | 734 |
| 1930 | 307 | 176 | 335 | 210 | 972 | 611 | 1,310 | 1,160 | 1,580 | 1,330 | 724 | 552 | 769 |
| 1931 | 645 | 476 | 352 | 841 | 639 | 681 | 851 | 1,710 | 1,790 | 1,110 | 556 | 746 | 867 |
| 1932 | 482 | 804 | 598 | 524 | 1,140 | 1,040 | 1,220 | 1,660 | 2,290 | 1,580 | 941 | 505 | 1,060 |
| 1933 | 653 | 2,050 | 941 | 585 | 270 | 447 | 880 | 1,320 | 2,600 | 2,730 | 1,600 | 1,070 | 1,270 |
| 1934 | 1,592 | 1,371 | 1,946 | 1,372 | 858 | 1,173 | 1,773 | 1,676 | 1,489 | 1,270 | 843 | 556 | 1,331 |
| 1935 | 682 | 1,409 | 912 | 1,599 | 1,053 | 485 | 481 | 1,288 | 2,018 | 1,598 | 813 | 680 | 1,085 |
| 1936 | 393 | 255 | 307 | 455 | 221 | 475 | 1,368 | 2,538 | 2,492 | 1,177 | 689 | 490 | 906 |
| 1937 | 359 | 197 | 511 | 219 | 195 | 522 | 674 | 1,525 | 2,815 | 1,575 | 687 | 498 | 817 |
| 1938 | 696 | 1,078 | 785 | 738 | 353 | 488 | 1,027 | 1,702 | 2,198 | 1,327 | 585 | 511 | 960 |
| 1939 | 494 | 481 | 836 | 932 | 358 | 561 | 1,047 | 1,873 | 1,861 | 1,788 | 833 | 505 | 969 |
| 1940 | 792 | 873 | 1,344 | 751 | 638 | 850 | 860 | 1,604 | 1,283 | 867 | 593 | 512 | 916 |
| 1941 | 1,053 | 501 | 831 | 512 | 417 | 449 | 736 | 1,074 | 1,144 | 858 | 565 | 886 | 754 |
| 1942 | 1,191 | 755 | 1,054 | 373 | 323 | 316 | 788 | 1,263 | 1,784 | 1,464 | 700 | 395 | 871 |
| 1943 | 299 | 612 | 792 | 624 | 555 | 562 | 1,340 | 1,306 | 1,991 | 2,167 | 936 | 541 | 979 |
| 1944 | 473 | 369 | 582 | 409 | 377 | 397 | 638 | 1,282 | 1,550 | 949 | 603 | 863 | 708 |
| 1945 | 681 | 508 | 632 | 919 | 777 | 467 | 557 | 1,845 | 1,748 | 1,310 | 689 | 653 | 900 |
| 1946 | 1,043 | 877 | 559 | 507 | 459 | 644 | 973 | 2,395 | 2,086 | 1,848 | 954 | 517 | 1,076 |
| 1947 | 727 | 462 | 900 | 626 | 878 | 801 | 1,173 | 2,130 | 1,945 | 1,415 | 735 | 560 | 1,030 |
| 1948 | 1,239 | 797 | 864 | 572 | 407 | 384 | 721 | 2,026 | 3,413 | 1,526 | 1,109 | 749 | 1,152 |
| 1949 | 836 | 609 | 463 | 278 | 354 | 729 | 1,128 | 2,657 | 2,137 | 1,811 | 1,032 | 794 | 1,074 |
| 1950 | 880 | 1,753 | 947 | 560 | 589 | 852 | 775 | 1,541 | 3,423 | 2,735 | 1,406 | 672 | 1,347 |
| 1951 | 1,065 | 1,252 | 1,568 | 678 | 1,524 | 479 | 1,087 | 1,782 | 1,968 | 1,425 | 710 | 571 | 1,172 |
| 1952 | 875 | 611 | 448 | 230 | 551 | 337 | 984 | 1,702 | 1,720 | 1,549 | 789 | 461 | 856 |
| 1953 | 294 | 185 | 252 | 1,324 | 952 | 415 | 697 | 1,566 | 1,686 | 2,136 | 1,071 | 719 | 943 |
| 1954 | 898 | 1,054 | 1,210 | 717 | 1,071 | 581 | 750 | 1,829 | 2,213 | 2,790 | 1,794 | 1,195 | 1,345 |
| 1955 | 754 | 1,468 | 693 | 441 | 407 | 257 | 619 | 1,153 | 2,780 | 2,275 | 1,178 | 640 | 1,057 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **77. Cascade River at Marblemount (12182500)--cont.** | | | | | | | | | | | | | |
| 1956 | 1,202 | 1,604 | 918 | 466 | 257 | 311 | 1,113 | 2,278 | 2,363 | 2,056 | 919 | 761 | 1,189 |
| 1957 | 1,134 | 761 | 1,165 | 381 | 485 | 593 | 847 | 2,283 | 1,969 | 1,217 | 718 | 529 | 1,011 |
| 1958 | 477 | 484 | 547 | 775 | 729 | 472 | 651 | 2,111 | 1,868 | 1,065 | 691 | 717 | 883 |
| 1959 | 1,017 | 1,191 | 1,655 | 1,055 | 452 | 491 | 1,178 | 1,637 | 2,609 | 2,370 | 1,000 | 1,439 | 1,345 |
| 1960 | 1,512 | 1,797 | 964 | 481 | 666 | 556 | 1,047 | 1,490 | 2,225 | 1,800 | 909 | 635 | 1,174 |
| 1961 | 752 | 934 | 715 | 1,289 | 1,239 | 745 | 783 | 1,471 | 2,983 | 1,573 | 887 | 635 | 1,165 |
| 1962 | 736 | 624 | 688 | 1,277 | 758 | 340 | 904 | 1,095 | 2,068 | 1,695 | 1,136 | 668 | 1,000 |
| 1963 | 637 | 1,196 | 1,290 | 774 | 1,249 | 507 | 562 | 1,287 | 1,646 | 1,256 | 858 | 665 | 992 |
| 1964 | 783 | 1,053 | 912 | 837 | 464 | 429 | 669 | 1,373 | 2,824 | 2,588 | 1,369 | 838 | 1,180 |
| 1965 | 869 | 604 | 768 | 745 | 925 | 615 | 924 | 1,453 | 2,041 | 1,726 | 1,059 | 448 | 1,016 |
| 1966 | 516 | 727 | 543 | 473 | 308 | 532 | 941 | 1,568 | 1,809 | 1,679 | 856 | 503 | 875 |
| 1967 | 811 | 659 | 1,450 | 865 | 677 | 492 | 432 | 1,577 | 3,051 | 1,910 | 1,017 | 694 | 1,139 |
| 1968 | 1,574 | 1,010 | 968 | 1,390 | 1,183 | 870 | 576 | 1,386 | 2,360 | 1,835 | 926 | 937 | 1,252 |
| 1969 | 718 | 1,013 | 642 | 727 | 268 | 425 | 936 | 2,259 | 2,521 | 1,198 | 601 | 877 | 1,018 |
| 1970 | 678 | 567 | 484 | 577 | 648 | 403 | 542 | 1,158 | 2,255 | 1,191 | 608 | 607 | 809 |
| 1971 | 433 | 655 | 570 | 915 | 1,355 | 497 | 759 | 2,305 | 2,148 | 2,708 | 1,398 | 620 | 1,197 |
| 1972 | 554 | 690 | 372 | 408 | 761 | 1,734 | 891 | 2,456 | 3,024 | 2,798 | 1,559 | 946 | 1,352 |
| 1973 | 493 | 447 | 958 | 716 | 373 | 413 | 543 | 1,484 | 1,712 | 1,354 | 770 | 535 | 820 |
| **81. Clark Creek at Marblemount (12183000)** | | | | | | | | | | | | | |
| 1944 | -- | -- | -- | -- | -- | -- | -- | -- | --- | -- | 7.10 | 12.9 | -- |
| 1945 | 10.9 | 15.1 | 17.2 | 26.9 | 32.2 | 27.4 | 26.7 | 33.4 | 26.6 | 18.4 | 9.45 | 11.2 | 21.2 |
| 1946 | 24.2 | 34.1 | 27.4 | 29.4 | 29.5 | 22.9 | 19.9 | 26.5 | 20.4 | -- | -- | -- | -- |
| **83. Jordan Creek near Marblemount (12183500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 33.2 | 17.7 | -- |
| 1944 | 29.7 | -- | -- | -- | -- | -- | -- | -- | -- | 29.6 | 17.2 | 37.9 | -- |
| 1945 | 38.8 | 48.2 | 53.5 | 68.8 | 53.3 | 33.6 | 38.4 | 110 | 87.6 | 48.4 | 16.6 | 29.6 | 52.3 |
| 1946 | 68.6 | 82.7 | 62.5 | 60.3 | 48.0 | 53.2 | 79.5 | 179 | 137 | 72.4 | 28.5 | 16.9 | 74.2 |
| 1947 | 46.3 | 43.1 | 88.9 | 65.2 | 80.7 | 59.4 | 89.9 | 135 | 104 | 56.0 | 23.6 | 23.7 | 67.9 |
| 1948 | 65.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **86. Rocky Creek near Marblemount (12184000)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.60 | -- |
| 1944 | 20.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **89. Illabot Creek near Rockport (12184500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 93.9 | -- |
| 1944 | 130 | -- | -- | -- | -- | -- | -- | -- | -- | 169 | 93.0 | 187 | -- |
| 1945 | 159 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **92. North Fork Sauk River near Barlow Pass (12185000)** | | | | | | | | | | | | | |
| 1918 | 132 | 254 | 1,290 | 757 | 283 | 238 | 565 | 831 | 1,450 | 663 | 308 | 175 | 581 |
| 1919 | 438 | 349 | 562 | 406 | 220 | 171 | 524 | 997 | 1,080 | 1,010 | 403 | 212 | 534 |
| 1920 | 121 | 571 | 565 | 698 | 391 | 244 | 234 | 594 | 882 | 738 | 307 | 643 | 499 |
| 1921 | 807 | 402 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **93. South Fork Sauk River near Barlow Pass (12185500)** | | | | | | | | | | | | | |
| 1918 | 118 | 202 | 1,070 | 498 | 213 | 176 | 322 | 376 | 575 | 322 | 209 | 93.5 | 350 |
| 1919 | 373 | 238 | 459 | 313 | 126 | 136 | 377 | 654 | 620 | 517 | 203 | 102 | 345 |
| 1920 | 70.0 | 508 | 291 | 431 | 163 | 134 | 110 | 291 | 410 | 326 | 133 | 487 | 279 |
| 1921 | 480 | 202 | 192 | 228 | -- | -- | -- | -- | -- | -- | -- | 294 | -- |
| 1929 | 363 | 159 | 149 | 62.9 | 30.8 | 129 | 164 | 495 | 578 | 335 | 133 | 60.6 | 223 |
| 1930 | 76.0 | 59.2 | 195 | 72.7 | 475 | 195 | 376 | 317 | 351 | 233 | 90.3 | 82.2 | 208 |
| 1931 | 204 | 135 | 121 | 493 | 393 | 430 | 296 | 468 | 503 | 218 | 105 | 180 | 295 |
| **94. Sauk River above White Chuck River near Darrington (12186000)** | | | | | | | | | | | | | |
| 1918 | 421 | 545 | 3,510 | 2,160 | 954 | 732 | 1,290 | 1,570 | 2,390 | 1,230 | 650 | 323 | 1,320 |
| 1919 | 1,130 | 978 | 1,580 | 1,190 | 591 | 572 | 1,280 | 2,080 | 2,120 | 1,970 | 770 | 384 | 1,230 |
| 1920 | 260 | 1,430 | 1,200 | 1,560 | 827 | 603 | 555 | 1,200 | 1,680 | 1,310 | 508 | 1,500 | 1,050 |
| 1921 | 1,890 | 843 | 841 | 1,010 | 1,350 | 1,060 | 940 | 1,980 | 3,400 | 1,830 | 784 | 911 | 1,400 |
| 1922 | 1,430 | 1,390 | 2,660 | 464 | 321 | 340 | 692 | 1,900 | 2,680 | 1,030 | 529 | 458 | 1,160 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 94. Sauk River above White Chuck River near Darrington (12186000)--cont. | | | | | | | | | | | | | |
| 1928 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 288 | -- |
| 1929 | 1,070 | 482 | 468 | 250 | 167 | 481 | 654 | 2,020 | 2,150 | 1,070 | 392 | 217 | 790 |
| 1930 | 240 | 210 | 657 | 284 | 1,540 | 700 | 1,520 | 1,310 | 1,430 | 809 | 291 | 239 | 763 |
| 1931 | 564 | 424 | 433 | 1,180 | 869 | 1,060 | 1,160 | 2,020 | 1,980 | 819 | 251 | 416 | 931 |
| 1932 | 585 | 1,060 | 665 | 665 | 1,560 | 1,480 | 1,530 | 2,070 | 2,510 | 1,480 | 614 | 315 | 1,210 |
| 1933 | 705 | 2,580 | 1,230 | 890 | 297 | 625 | 962 | 1,690 | 3,180 | 2,800 | 1,240 | 1,050 | 1,440 |
| 1934 | 1,704 | 1,416 | 3,077 | 1,968 | 948 | 1,698 | 1,991 | 1,859 | 1,231 | 770 | 395 | 394 | 1,461 |
| 1935 | 996 | 1,970 | 1,102 | 2,108 | 1,199 | 667 | 606 | 1,619 | 2,151 | 1,385 | 525 | 427 | 1,229 |
| 1936 | 309 | 345 | 406 | 707 | 267 | 648 | 1,536 | 2,772 | 2,419 | 910 | 370 | 314 | 923 |
| 1937 | 252 | 137 | 1,051 | 244 | 272 | 656 | 912 | 1,835 | 2,951 | 1,307 | 426 | 268 | 862 |
| 1938 | 588 | 1,687 | 1,380 | 892 | 334 | 595 | 1,317 | 1,917 | 2,051 | 953 | 283 | 215 | 1,020 |
| 1939 | 509 | 711 | 1,057 | 1,324 | 460 | 673 | 1,392 | 2,303 | 1,948 | 1,614 | 506 | 291 | 1,070 |
| 1940 | 567 | 870 | 1,795 | 781 | 914 | 1,083 | 1,160 | 1,834 | 1,136 | 451 | 261 | 196 | 922 |
| 1941 | 1,034 | 712 | 1,067 | 677 | 521 | 552 | 840 | 1,162 | 895 | 396 | 215 | 749 | 736 |
| 1942 | 1,441 | 1,030 | 1,395 | 368 | 369 | 409 | 1,053 | 1,390 | 1,928 | 1,059 | 336 | 177 | 916 |
| 1943 | 276 | 1,186 | 1,047 | 667 | 670 | 763 | 1,629 | 1,661 | 2,222 | 1,976 | 604 | 283 | 1,083 |
| 1944 | 399 | 490 | 986 | 606 | 495 | 602 | 814 | 1,501 | 1,419 | 586 | 262 | 635 | 733 |
| 1945 | 600 | 776 | 808 | 1,381 | 1,139 | 571 | 620 | 2,191 | 1,778 | 984 | 343 | 480 | 972 |
| 1946 | 901 | 1,067 | 832 | 792 | 592 | 707 | 1,203 | 2,926 | 2,677 | 1,839 | 644 | 308 | 1,211 |
| 1947 | 728 | 695 | 1,469 | 986 | 1,210 | 973 | 1,483 | 2,402 | 2,010 | 1,154 | 459 | 376 | 1,159 |
| 1948 | 1,594 | 1,436 | 1,146 | 711 | 588 | 499 | 970 | 2,604 | 3,531 | 1,267 | 687 | 663 | 1,308 |
| 1949 | 823 | 813 | 624 | 314 | 684 | 899 | 1,258 | 2,965 | 2,294 | 1,693 | 774 | 652 | 1,152 |
| 1950 | 1,065 | 2,360 | 1,466 | 1,019 | 996 | 1,264 | 996 | 1,706 | 3,505 | 2,671 | 1,153 | 469 | 1,557 |
| 1951 | 1,362 | 1,611 | 1,988 | 921 | 2,369 | 581 | 1,252 | 2,202 | 1,843 | 977 | 406 | 428 | 1,322 |
| 1952 | 1,248 | 828 | 582 | 353 | 730 | 363 | 1,208 | 2,302 | 1,969 | 1,319 | 502 | 278 | 974 |
| 1953 | 194 | 230 | 516 | 2,584 | 1,444 | 570 | 967 | 1,973 | 2,008 | 2,131 | 815 | 545 | 1,165 |
| 1954 | 901 | 1,314 | 1,687 | 919 | 1,328 | 697 | 949 | 2,101 | 2,494 | 2,875 | 1,393 | 843 | 1,460 |
| 1955 | 818 | 1,715 | 760 | 472 | 669 | 293 | 724 | 1,429 | 3,117 | 2,357 | 982 | 431 | 1,147 |
| 1956 | 1,692 | 2,255 | 1,308 | 647 | 286 | 483 | 1,398 | 2,875 | 2,948 | 2,345 | 739 | 639 | 1,471 |
| 1957 | 1,435 | 1,062 | 1,986 | 437 | 765 | 774 | 1,168 | 2,724 | 1,938 | 918 | 456 | 328 | 1,170 |
| 1958 | 427 | 595 | 924 | 1,117 | 1,006 | 580 | 987 | 2,464 | 1,784 | 712 | 324 | 493 | 951 |
| 1959 | 1,010 | 1,999 | 2,018 | 1,504 | 525 | 722 | 1,718 | 1,895 | 2,675 | 1,975 | 638 | 1,480 | 1,516 |
| 1960 | 1,845 | 2,268 | 1,483 | 612 | 811 | 610 | 1,232 | 1,760 | 2,188 | 1,289 | 524 | 383 | 1,250 |
| 1961 | 716 | 1,315 | 856 | 1,599 | 1,746 | 968 | 941 | 1,903 | 2,663 | 1,177 | 468 | 431 | 1,227 |
| 1962 | 855 | 708 | 1,085 | 1,545 | 778 | 357 | 1,207 | 1,198 | 2,051 | 1,342 | 677 | 491 | 1,025 |
| 1963 | 665 | 1,435 | 1,598 | 870 | 1,735 | 699 | 795 | 1,367 | 1,425 | 851 | 436 | 343 | 1,013 |
| 1964 | 817 | 1,404 | 1,309 | 1,266 | 593 | 553 | 756 | 1,523 | 3,020 | 2,620 | 1,301 | 786 | 1,331 |
| 1965 | 1,022 | 920 | 1,291 | 1,126 | 1,297 | 685 | 1,252 | 1,838 | 2,107 | 1,392 | 655 | 332 | 1,159 |
| 1966 | 594 | 1,015 | 778 | 833 | 396 | 721 | 1,314 | 2,040 | 2,155 | 1,525 | 605 | 290 | 1,025 |
| 1967 | 810 | 735 | 1,838 | 1,281 | 873 | 624 | 470 | 1,735 | 3,313 | 1,785 | 661 | 405 | 1,213 |
| 1968 | 2,174 | 1,253 | 1,453 | 1,755 | 1,879 | 1,147 | 742 | 1,704 | 2,489 | 1,422 | 577 | 737 | 1,444 |
| 1969 | 813 | 1,370 | 910 | 924 | 310 | 554 | 1,160 | 2,749 | 2,840 | 943 | 432 | 706 | 1,145 |
| 1970 | 824 | 709 | 682 | 918 | 854 | 628 | 777 | 1,332 | 2,281 | 946 | 380 | 528 | 903 |
| 1971 | 459 | 1,065 | 797 | 1,355 | 1,505 | 647 | 805 | 2,495 | 2,318 | 2,746 | 1,105 | 501 | 1,316 |
| 1972 | 521 | 943 | 578 | 760 | 1,433 | 2,442 | 1,148 | 2,785 | 3,183 | 2,754 | 1,236 | 850 | 1,554 |
| 1973 | 367 | 657 | 1,479 | 1,108 | 392 | 496 | 642 | 1,668 | 1,668 | 1,044 | 435 | 397 | 867 |
| 95. White Chuck River near Darrington (12186500) | | | | | | | | | | | | | |
| 1920 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 950 | 488 | -- | -- |
| 1921 | 679 | 323 | 278 | 306 | 366 | 300 | 300 | 727 | 1,410 | 946 | 591 | 362 | 550 |
| 1922 | 461 | 438 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 97. Sauk River above Clear Creek near Darrington (12187000) | | | | | | | | | | | | | |
| 1910 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 523 | -- |
| 1911 | 3,100 | 4,470 | 3,250 | 1,490 | 660 | 901 | 1,250 | 2,590 | 4,030 | 2,410 | 952 | 948 | 2,180 |
| 1913 | -- | -- | -- | 957 | 1,060 | 807 | 1,400 | -- | -- | 3,760 | 1,580 | 1,610 | -- |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **99. Sauk River at Darrington (12187500)** | | | | | | | | | | | | | |
| 1914 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2,010 | 876 | 1,020 | -- |
| 1915 | 1,570 | 3,610 | 841 | 755 | 739 | 1,190 | 2,790 | 1,510 | 1,220 | 1,020 | 844 | 449 | 1,380 |
| 1916 | 1,620 | 1,760 | 2,230 | 586 | 2,490 | 2,590 | 2,140 | 2,900 | 4,600 | 4,100 | 1,880 | 962 | 2,320 |
| 1917 | 541 | 1,590 | 893 | 795 | 1,190 | 679 | 1,520 | 3,110 | 5,240 | 5,050 | 1,710 | 836 | 1,930 |
| 1918 | 632 | 1,130 | 7,430 | 4,430 | 1,970 | 1,560 | 2,070 | 2,570 | 4,050 | 2,210 | 1,270 | 665 | 2,510 |
| 1919 | 2,390 | 2,100 | 3,350 | 2,830 | 1,790 | 1,490 | 2,980 | 3,870 | 3,860 | 3,450 | 1,640 | 747 | 2,550 |
| 1920 | 582 | 2,960 | 2,710 | 2,830 | 1,500 | 1,130 | 1,030 | 2,080 | 2,770 | 2,290 | 999 | 2,690 | 1,960 |
| 1921 | 3,500 | 1,590 | 1,750 | 2,080 | 2,430 | 1,740 | 1,630 | 3,490 | 5,640 | 3,050 | 1,350 | 1,440 | 2,470 |
| 1922 | 2,640 | 2,680 | 4,510 | 808 | 531 | 479 | 1,240 | 3,140 | 4,410 | 1,880 | 980 | 920 | 2,030 |
| 1923 | 1,260 | 996 | 2,360 | 2,990 | 1,010 | 1,060 | 2,150 | 2,980 | 3,490 | 2,560 | 963 | 641 | 1,880 |
| 1924 | 938 | 1,470 | 2,640 | 1,600 | 4,210 | 984 | 1,190 | 3,560 | 2,440 | 1,460 | 821 | 817 | 1,830 |
| 1925 | 2,870 | 2,360 | 2,860 | 2,590 | 2,980 | 1,170 | 2,340 | 4,350 | 3,490 | 2,320 | 881 | 506 | 2,390 |
| 1926 | 691 | 865 | 3,180 | 1,860 | 1,870 | 1,340 | 1,790 | 2,110 | 1,400 | 874 | 672 | 929 | 1,460 |
| 1928 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,830 | 684 | 470 | -- |
| 1929 | 1,930 | 1,040 | 1,030 | 590 | 377 | 1,110 | 1,320 | 3,450 | 3,750 | 1,860 | 779 | 420 | 1,480 |
| 1930 | 497 | 417 | 1,320 | 651 | 3,890 | 1,440 | 2,870 | 2,220 | 2,500 | 1,600 | 689 | 507 | 1,530 |
| 1931 | 1,120 | 855 | 919 | 2,360 | 1,670 | 2,220 | 2,220 | 3,400 | 3,390 | 1,540 | 609 | 1,020 | 1,780 |
| 1932 | 1,140 | 2,130 | 1,570 | 1,550 | 2,770 | 2,710 | 2,730 | 3,270 | 4,240 | 2,870 | 1,190 | 735 | 2,240 |
| **108. Suiattle River below Lime Creek near Darrington (12188000)** | | | | | | | | | | | | | |
| 1921 | 1,490 | 802 | 690 | 744 | 924 | 775 | 741 | 1,840 | 3,380 | 2,390 | 1,410 | 827 | 1,340 |
| 1922 | 1,020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **112. Suiattle River above Big Creek near Darrington (12188400)** | | | | | | | | | | | | | |
| 1971 | -- | -- | 1,055 | 1,920 | 2,280 | 1,006 | 1,167 | 3,746 | 3,848 | 4,882 | 2,132 | 888 | -- |
| 1972 | 726 | 1,114 | 685 | 736 | 1,457 | 2,972 | 1,384 | 4,102 | 5,574 | 5,032 | 2,695 | 1,528 | 2,338 |
| 1973 | 898 | 798 | 1,619 | 1,300 | 673 | 659 | 776 | 2,205 | 2,651 | 1,965 | 1,146 | 834 | 1,299 |
| **113. Big Creek near Mansford (12188500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 47.9 | -- |
| 1944 | 64.7 | 72.6 | 103 | 74.6 | 65.3 | 72.7 | 112 | 234 | 228 | 89.2 | 56.3 | 105 | 106 |
| 1945 | 85.6 | 91.7 | 105 | 155 | 133 | 73.3 | 95.4 | 332 | 275 | 156 | 55.2 | 103 | 138 |
| 1946 | 142 | 167 | 117 | 110 | 94.8 | 101 | 155 | 389 | 347 | 253 | 94.6 | 64.9 | 170 |
| 1947 | 127 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **114. Suiattle River near Mansford (12189000)** | | | | | | | | | | | | | |
| 1938 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2,274 | 1,034 | 878 | -- |
| 1939 | 774 | 882 | 1,490 | 1,879 | 807 | 1,020 | 1,964 | 3,463 | 3,449 | 3,275 | 1,450 | 852 | 1,783 |
| 1940 | 987 | 1,237 | 2,254 | 1,356 | 1,242 | 1,551 | 1,611 | 2,939 | 2,492 | 1,476 | 998 | 801 | 1,581 |
| 1941 | 1,532 | 964 | 1,595 | 1,172 | 846 | 774 | 1,280 | 1,836 | 1,985 | 1,491 | 1,014 | 1,287 | 1,318 |
| 1942 | 1,874 | 1,455 | 1,989 | 774 | 674 | 675 | 1,501 | 2,315 | 3,333 | 2,673 | 1,328 | 778 | 1,620 |
| 1943 | 582 | 1,362 | 1,598 | 1,163 | 1,199 | 1,108 | 2,427 | 2,417 | 3,856 | 4,026 | 1,644 | 922 | 1,861 |
| 1944 | 751 | 682 | 1,110 | 828 | 750 | 757 | 1,198 | 2,366 | 2,868 | 1,592 | 983 | 1,381 | 1,272 |
| 1945 | 1,087 | 1,119 | 1,218 | 1,746 | 1,672 | 975 | 1,035 | 3,256 | 3,277 | 2,256 | 1,190 | 1,121 | 1,663 |
| 1946 | 1,588 | 1,695 | 1,209 | 1,225 | 958 | 1,131 | 1,594 | 4,434 | 4,142 | 3,314 | 1,515 | 870 | 1,980 |
| 1947 | 1,151 | 1,045 | 1,888 | 1,260 | 1,635 | 1,383 | 1,989 | 3,986 | 3,716 | 2,500 | 1,221 | 919 | 1,893 |
| 1948 | 2,080 | 1,860 | 1,799 | 1,250 | 919 | 823 | 1,276 | 3,870 | 7,091 | 3,047 | 1,835 | 1,142 | 2,250 |
| 1949 | 1,352 | 1,236 | 1,044 | 650 | 1,017 | 1,395 | 1,938 | 5,217 | 4,150 | 3,259 | 1,704 | 1,239 | 2,024 |
| 1950 | 1,468 | 3,024 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **118. Sauk River near Sauk (12189500)** | | | | | | | | | | | | | |
| 1911 | | -- | -- | -- | -- | -- | 2,690 | 5,500 | 8,520 | 5,630 | 2,360 | 2,350 | -- |
| 1912 | 1,100 | 5,320 | 3,170 | 4,000 | 4,430 | 1,520 | 2,410 | 6,760 | 9,580 | 5,180 | -- | -- | -- |
| 1928 | | | | | | | | -- | -- | -- | 2,000 | 1,410 | -- |
| 1929 | 3,490 | 1,980 | 1,930 | 1,280 | 793 | 2,180 | 2,630 | 6,650 | 7,810 | 4,450 | 2,210 | 1,220 | 3,070 |
| 1930 | 993 | 724 | 2,290 | 1,310 | 5,620 | 2,960 | 5,260 | 4,580 | 5,670 | 4,130 | 1,960 | 1,400 | 3,050 |
| 1931 | 2,090 | 1,700 | 1,740 | 4,300 | 3,390 | 4,050 | 4,250 | 6,830 | 7,230 | 3,700 | 1,820 | 2,150 | 3,600 |
| 1932 | 1,990 | 3,730 | 3,110 | 3,040 | 6,090 | 5,690 | 5,510 | 6,750 | 8,990 | 6,040 | 2,970 | 1,700 | 4,620 |
| 1933 | 2,830 | 9,590 | 5,140 | 3,890 | 1,760 | 3,000 | 3,620 | 5,600 | 10,800 | 10,100 | 5,070 | 3,860 | 5,450 |
| 1934 | 6,203 | 5,819 | 11,580 | 8,136 | 4,287 | 6,303 | 7,375 | 7,305 | 5,519 | 3,934 | 2,422 | 1,897 | 5,919 |
| 1935 | 3,281 | 6,944 | 4,353 | 8,381 | 4,722 | 2,762 | 2,386 | 5,376 | 7,606 | 5,465 | 2,502 | 2,040 | 4,650 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118. Sauk River near Sauk (12189500) | | | | | | | | | | | | | |
| 1936 | 1,424 | 1,468 | 1,842 | 3,220 | 1,539 | 2,948 | 5,311 | 10,040 | 9,904 | 4,348 | 2,148 | 1,645 | 3,824 |
| 1937 | 1,183 | 751 | 3,923 | 1,214 | 1,332 | 2,903 | 3,710 | 6,437 | 11,430 | 5,935 | 2,209 | 1,498 | 3,553 |
| 1938 | 2,327 | 6,031 | 5,399 | 4,204 | 1,891 | 2,638 | 4,947 | 6,921 | 7,940 | 4,268 | 1,758 | 1,426 | 4,154 |
| 1939 | 1,976 | 2,753 | 4,234 | 5,542 | 2,353 | 2,834 | 4,816 | 7,805 | 7,171 | 6,420 | 2,823 | 1,589 | 4,209 |
| 1940 | 2,200 | 3,183 | 6,585 | 3,480 | 3,512 | 4,148 | 3,784 | 6,166 | 4,469 | 2,522 | 1,718 | 1,371 | 3,600 |
| 1941 | 3,034 | 2,697 | 3,906 | 2,665 | 2,106 | 2,168 | 2,860 | 4,162 | 3,715 | 2,515 | 1,778 | 2,991 | 2,887 |
| 1942 | 4,262 | 3,693 | 5,692 | 1,882 | 1,920 | 1,863 | 3,569 | 5,033 | 6,933 | 4,742 | 1,988 | 1,089 | 3,566 |
| 1943 | 1,136 | 3,672 | 4,283 | 2,871 | 3,386 | 3,410 | 6,216 | 5,448 | 7,964 | 7,785 | 2,961 | 1,653 | 4,232 |
| 1944 | 1,743 | 1,877 | 3,444 | 2,620 | 2,187 | 2,175 | 2,912 | 5,321 | 5,679 | 2,970 | 1,719 | 2,412 | 2,922 |
| 1945 | 2,534 | 3,047 | 2,816 | 4,655 | 4,689 | 2,765 | 2,701 | 7,092 | 6,098 | 4,143 | 1,909 | 2,132 | 3,709 |
| 1946 | 3,372 | 4,497 | 3,458 | 3,691 | 2,648 | 3,290 | 4,310 | 9,104 | 8,635 | 6,386 | 2,761 | 1,547 | 4,487 |
| 1947 | 2,706 | 2,624 | 5,429 | 3,785 | 4,704 | 3,470 | 4,798 | 7,983 | 7,149 | 4,821 | 2,330 | 1,751 | 4,295 |
| 1948 | 4,432 | 4,053 | 4,233 | 3,470 | 2,875 | 2,366 | 3,472 | 8,411 | 12,610 | 5,533 | 3,469 | 2,703 | 4,811 |
| 1949 | 3,178 | 3,459 | 2,760 | 1,464 | 2,649 | 3,881 | 4,867 | 10,570 | 8,217 | 6,206 | 3,241 | 2,540 | 4,430 |
| 1950 | 3,718 | 8,028 | 5,642 | 3,904 | 4,153 | 5,395 | 4,254 | 6,189 | 12,430 | 10,310 | 4,811 | 2,175 | 5,923 |
| 1951 | 4,647 | 6,135 | 7,418 | 4,122 | 9,062 | 2,775 | 4,777 | 7,442 | 7,628 | 4,757 | 2,215 | 1,853 | 5,206 |
| 1952 | 4,164 | 3,209 | 2,760 | 1,695 | 3,492 | 1,798 | 4,431 | 7,188 | 6,590 | 5,043 | 2,347 | 1,511 | 3,684 |
| 1953 | 1,089 | 886 | 1,457 | 7,956 | 5,615 | 2,465 | 3,393 | 6,029 | 6,216 | 7,174 | 3,492 | 2,280 | 4,000 |
| 1954 | 3,152 | 4,284 | 6,140 | 3,929 | 5,686 | 3,049 | 3,707 | 7,119 | 8,471 | 10,140 | 5,452 | 3,583 | 5,394 |
| 1955 | 2,942 | 6,513 | 3,832 | 2,532 | 3,083 | 1,523 | 3,311 | 5,212 | 11,480 | 9,099 | 4,173 | 2,070 | 4,648 |
| 1956 | 5,580 | 7,752 | 5,055 | 3,273 | 1,627 | 2,328 | 4,970 | 9,054 | 9,709 | 8,068 | 3,122 | 2,562 | 5,267 |
| 1957 | 4,780 | 3,832 | 6,922 | 2,238 | 3,594 | 3,696 | 4,175 | 9,197 | 7,326 | 3,975 | 2,211 | 1,648 | 4,476 |
| 1958 | 1,704 | 2,040 | 3,213 | 4,275 | 3,945 | 2,412 | 3,369 | 8,134 | 6,741 | 3,195 | 1,882 | 2,115 | 3,583 |
| 1959 | 3,774 | 7,046 | 7,571 | 5,952 | 2,506 | 2,950 | 5,934 | 6,626 | 9,347 | 7,673 | 3,015 | 4,941 | 5,621 |
| 1960 | 6,380 | 8,827 | 5,832 | 2,714 | 3,756 | 2,769 | 4,527 | 6,074 | 7,762 | 5,575 | 2,655 | 1,981 | 4,901 |
| 1961 | 2,776 | 4,947 | 3,456 | 6,406 | 6,850 | 3,865 | 3,450 | 6,444 | 10,300 | 4,660 | 2,274 | 1,758 | 4,744 |
| 1962 | 2,780 | 2,847 | 4,427 | 6,507 | 3,135 | 1,735 | 4,148 | 4,235 | 7,480 | 5,439 | 3,190 | 2,154 | 4,012 |
| 1963 | 2,454 | 5,271 | 6,234 | 3,655 | 5,945 | 2,749 | 3,025 | 4,878 | 5,477 | 3,640 | 2,296 | 1,720 | 3,930 |
| 1964 | 3,023 | 5,465 | 4,575 | 5,285 | 2,871 | 2,618 | 3,133 | 5,577 | 11,120 | 9,498 | 4,725 | 3,066 | 5,085 |
| 1965 | 3,448 | 3,277 | 4,500 | 4,369 | 5,343 | 2,945 | 4,286 | 6,160 | 7,581 | 5,642 | 3,074 | 1,576 | 4,344 |
| 1966 | 2,162 | 3,372 | 2,909 | 3,351 | 1,935 | 2,994 | 4,466 | 6,610 | 7,107 | 5,540 | 2,612 | 1,500 | 3,723 |
| 1967 | 2,782 | 2,912 | 7,373 | 5,279 | 3,833 | 2,903 | 2,106 | 5,907 | 11,760 | 6,613 | 2,854 | 1,904 | 4,693 |
| 1968 | 6,770 | 4,702 | 5,751 | 7,166 | 6,911 | 4,549 | 3,181 | 5,894 | 8,734 | 5,844 | 2,909 | 3,131 | 5,460 |
| 1969 | 3,153 | 4,869 | 4,201 | 3,887 | 1,664 | 2,529 | 4,381 | 9,345 | 9,984 | 3,917 | 2,039 | 2,849 | 4,412 |
| 1970 | 2,953 | 2,674 | 2,925 | 3,944 | 3,694 | 2,493 | 3,119 | 4,760 | 8,263 | 3,954 | 1,929 | 2,043 | 3,556 |
| 1971 | 1,792 | 3,516 | 3,383 | 5,851 | 6,440 | 3,283 | 3,575 | 9,114 | 8,707 | 10,240 | 4,643 | 2,228 | 5,229 |
| 1972 | 2,056 | 3,655 | 2,681 | 3,503 | 5,905 | 8,443 | 4,169 | 9,665 | 12,070 | 10,610 | 5,177 | 3,618 | 6,048 |
| 1973 | 1,938 | 2,635 | 5,887 | 4,165 | 1,879 | 2,047 | 2,135 | 5,424 | 5,939 | 3,995 | 2,205 | 1,781 | 3,350 |
| 119. Jackman Creek near Concrete (12190000) | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 17.5 | -- |
| 1944 | 55.7 | 81.9 | 146 | 131 | 82.0 | 82.4 | 115 | 197 | 105 | 27.0 | 17.5 | 81.3 | 93.5 |
| 1945 | 75.0 | 144 | 126 | 339 | 161 | 103 | 113 | 377 | 170 | 50.8 | 20.3 | 46.9 | 144 |
| 1946 | 166 | 262 | 140 | 132 | 150 | 165 | 191 | 397 | 342 | 152 | 35.0 | 18.2 | 179 |
| 1947 | 141 | 131 | 231 | 188 | 258 | 150 | 207 | 242 | 158 | 50.7 | 14.4 | 32.5 | 150 |
| 122. Sandy Creek near Concrete (12191000) | | | | | | | | | | | | | |
| 1953 | -- | -- | -- | -- | -- | 47.6 | 75.5 | 138 | 128 | 124 | 55.8 | 59.0 | -- |
| 1954 | 119 | 138 | 139 | 85.0 | 124 | 63.5 | 81.0 | 167 | 173 | 150 | 91.0 | 68.2 | 117 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123. Baker River below Anderson Creek near Concrete (12191500) | | | | | | | | | | | | | |
| 1911 | 3,400 | 3,500 | 1,900 | 909 | 503 | 943 | 1,380 | 2,660 | 4,040 | 3,710 | 2,060 | 1,930 | 2,250 |
| 1912 | 926 | 1,970 | 1,440 | 1,610 | 1,920 | 736 | 1,160 | 2,830 | 4,140 | 2,980 | 2,190 | 1,370 | 1,940 |
| 1913 | 1,120 | 2,360 | 936 | 688 | 1,190 | 764 | 1,830 | 3,830 | 5,030 | 4,690 | 2,330 | 1,590 | 2,200 |
| 1914 | 1,790 | 2,170 | 1,090 | 2,720 | 962 | 1,560 | 1,900 | 3,010 | 2,690 | 2,590 | 1,610 | 1,610 | 1,970 |
| 1915 | 1,810 | 2,800 | 777 | 884 | 856 | 1,300 | 3,040 | 1,990 | 1,800 | 1,900 | 1,810 | 893 | 1,660 |
| 1916 | 2,340 | 1,380 | 1,710 | 633 | 2,330 | 2,080 | 1,940 | 2,430 | 3,920 | 3,650 | 2,490 | 1,350 | 2,190 |
| 1917 | 730 | 1,270 | 713 | 734 | 1,050 | 632 | 1,470 | 3,250 | 4,490 | 4,960 | 2,230 | 1,400 | 1,910 |
| 1918 | 1,320 | 2,100 | 5,230 | 5,280 | 1,240 | 1,180 | 1,800 | 2,460 | 4,080 | 3,080 | 1,850 | 1,400 | 2,600 |
| 1919 | 2,360 | 1,430 | 2,410 | 1,370 | 977 | 790 | 1,960 | 3,100 | 2,910 | 3,350 | 1,890 | 1,130 | 1,980 |
| 1920 | 603 | 2,650 | 2,090 | 2,290 | 1,370 | 980 | 998 | 1,910 | 3,160 | 3,170 | 1,740 | 3,030 | 2,000 |
| 1921 | 3,510 | 1,470 | 1,490 | 1,450 | 2,230 | 1,360 | 1,400 | 2,880 | 5,050 | 3,110 | 2,020 | 2,240 | 2,350 |
| 1922 | 3,350 | 2,050 | 3,070 | 604 | 465 | 471 | 1,100 | 2,700 | 4,290 | 2,540 | 1,830 | 1,790 | 2,030 |
| 1923 | 1,820 | 922 | 1,840 | 1,580 | 732 | 847 | 1,830 | 2,700 | 3,340 | 2,990 | 1,500 | 1,300 | 1,790 |
| 1924 | 1,000 | 952 | 1,590 | 1,470 | 4,720 | 1,110 | 1,360 | 3,460 | 2,720 | 2,010 | 1,510 | 1,480 | 1,940 |
| 1925 | 2,510 | 1,650 | 3,260 | 1,360 | 2,220 | 1,110 | 2,030 | 3,860 | 3,280 | 2,730 | 1,550 | 927 | 2,210 |
| 1928 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,030 | -- |
| 1929 | 2,430 | 1,260 | 960 | 558 | 387 | 883 | 1,140 | 3,070 | 3,370 | 2,120 | 1,390 | 832 | 1,540 |
| 1930 | 924 | 462 | 1,140 | 620 | 2,290 | 1,340 | 2,450 | 2,190 | 2,700 | 2,110 | 1,280 | 1,190 | 1,550 |
| 1931 | 1,460 | 1,140 | 935 | 2,540 | 1,250 | 1,820 | 1,960 | 2,960 | 3,660 | 2,050 | 1,070 | 1,750 | 1,880 |
| 1932 | 1,290 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1955 | -- | -- | -- | 963 | 893 | 523 | 1,290 | 2,264 | 4,228 | 3,905 | 2,381 | 1,395 | -- |
| 1956 | 2,861 | 2,951 | 1,580 | 1,104 | 553 | 731 | 2,080 | 3,435 | 4,425 | 3,903 | 1,906 | 1,662 | 2,270 |
| 1957 | 2,827 | 1,545 | 2,235 | 697 | 1,217 | 1,301 | 1,953 | 3,475 | 2,892 | 2,254 | 1,456 | 1,166 | 1,924 |
| 1958 | 1,069 | 1,036 | 1,484 | 2,126 | 2,093 | 995 | 1,213 | 3,032 | 2,804 | 1,700 | 1,096 | 1,204 | 1,652 |
| 1959 | 1,995 | 2,268 | 3,272 | 2,375 | 911 | 1,118 | 2,444 | 2,892 | 3,951 | 3,276 | 1,621 | 2,635 | 2,404 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **124. Baker Lake at Upper Baker Dam near Concrete (12191600)** | | | | | | | | | | | | | |
| 1959 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 98,210 | 80,920 | 130,090 | -- |
| 1960 | 214,890 | 221,610 | 223,780 | 168,640 | 103,150 | 106,960 | 104,300 | 151,670 | 283,440 | 284,080 | 284,780 | 268,220 | -- |
| 1961 | 283,590 | 251,910 | 186,880 | 237,940 | 248,020 | 242,930 | 208,370 | 200,300 | 243,840 | 277,510 | 269,860 | 272,380 | -- |
| 1962 | 249,830 | 233,110 | 233,190 | 226,000 | 249,640 | 168,280 | 223,300 | 271,160 | 280,960 | 283,740 | 274,470 | 283,390 | -- |
| 1963 | 261,940 | 266,380 | 268,310 | 176,390 | 284,330 | 222,610 | 239,800 | 284,930 | 278,490 | 283,290 | 281,400 | 283,690 | -- |
| 1964 | 267,780 | 267,590 | 248,300 | 189,750 | 185,190 | 135,630 | 143,010 | 251,120 | 285,320 | 284,230 | 282,350 | 284,980 | -- |
| 1965 | 268,840 | 266,910 | 231,020 | 242,020 | 258,390 | 223,300 | 254,020 | 256,120 | 279,820 | 285,470 | 285,520 | 279,920 | -- |
| 1966 | 281,500 | 272,140 | 243,200 | 222,820 | 198,080 | 168,500 | 242,430 | 277,810 | 280,510 | 284,580 | 282,740 | 284,230 | -- |
| 1967 | 279,040 | 256,730 | 244,580 | 241,340 | 206,720 | 183,060 | 120,960 | 206,840 | 279,870 | 282,450 | 282,540 | 280,410 | -- |
| 1968 | 284,980 | 245,490 | 238,530 | 249,830 | 254,530 | 280,510 | 189,320 | 229,830 | 277,310 | 281,110 | 284,330 | 284,230 | -- |
| 1969 | 276,230 | 266,870 | 210,380 | 138,170 | 119,550 | 137,680 | 218,340 | 282,200 | 281,650 | 284,430 | 283,830 | 281,110 | -- |
| 1970 | 260,700 | 255,330 | 233,860 | 186,540 | 125,050 | 110,590 | 111,720 | 162,740 | 281,350 | 285,470 | 285,720 | 280,120 | -- |
| 1971 | 262,610 | 258,060 | 216,710 | 181,430 | 208,830 | 223,390 | 275,250 | 264,660 | 274,280 | 285,570 | 285,320 | 281,060 | -- |
| 1972 | 271,020 | 263,280 | 224,470 | 149,800 | 131,660 | 232,040 | 197,120 | 281,800 | 284,280 | 282,740 | 284,080 | 285,470 | -- |
| 1973 | 258,010 | 259,000 | 257,540 | 177,720 | 140,340 | 143,330 | 142,410 | 176,680 | 272,720 | 286,020 | 278,690 | 282,050 | -- |
| **127. Sulphur Creek near Concrete (12191800)** | | | | | | | | | | | | | |
| 1963 | -- | -- | -- | -- | -- | 25.1 | 26.8 | 36.9 | 36.3 | 31.1 | 23.9 | 27.2 | -- |
| 1964 | 53.0 | 62.4 | 48.5 | 40.3 | 24.4 | 17.9 | 21.9 | 41.3 | 77.9 | 78.2 | 46.5 | 37.0 | 45.8 |
| 1965 | 41.1 | 46.4 | 43.1 | 32.6 | 34.2 | 24.6 | 34.4 | 45.9 | 58.4 | 45.2 | 30.0 | 25.1 | 38.4 |
| 1966 | 45.7 | 62.5 | 48.5 | 41.1 | 23.7 | 27.6 | 37.0 | 53.1 | 64.1 | 64.9 | 30.5 | 24.2 | 43.7 |
| 1967 | 45.0 | 49.8 | 78.1 | 39.1 | 29.6 | 23.2 | 19.5 | 47.5 | 94.7 | 65.9 | 33.9 | 37.5 | 47.1 |
| 1968 | 98.7 | 66.7 | 53.0 | 64.3 | 61.6 | 45.1 | 26.0 | 46.5 | 77.3 | 46.7 | 29.8 | 44.7 | 55.0 |
| 1969 | 53.0 | 57.5 | 40.6 | 67.6 | 19.4 | 20.4 | 30.9 | 64.9 | 82.5 | 41.1 | 28.3 | 56.7 | 47.0 |
| 1970 | 43.2 | 45.7 | 38.2 | 34.8 | 29.7 | 26.5 | 30.3 | 34.4 | 64.4 | 37.5 | 24.6 | 30.4 | 36.6 |
| 1971 | 40.7 | 50.6 | 34.7 | 36.6 | 41.3 | 24.5 | 25.4 | 60.9 | 64.4 | 86.0 | 48.9 | 37.8 | 46.0 |
| 1972 | 47.1 | 52.5 | 31.6 | 25.6 | 29.8 | 50.3 | 29.5 | 62.3 | 79.3 | 97.7 | 45.4 | 41.7 | 49.5 |
| 1973 | 39.6 | 47.6 | 81.2 | 44.9 | 24.1 | 21.5 | 21.3 | 56.3 | 61.0 | 40.1 | 23.5 | 23.6 | 40.6 |
| **129. Bear Creek near Concrete (12192000)** | | | | | | | | | | | | | |
| 1953 | -- | -- | -- | -- | -- | -- | 62.5 | 71.9 | 58.9 | 43.8 | 12.1 | 15.8 | -- |
| 1954 | 67.0 | 127 | 152 | 91.8 | 150 | 68.6 | 86.3 | 88.0 | 99.7 | 69.0 | 35.3 | 28.3 | 88.2 |
| **130. North Fork Bear Creek near Concrete (12192500)** | | | | | | | | | | | | | |
| 1953 | -- | -- | -- | -- | -- | 49.5 | 55.2 | 78.4 | 73.9 | 71.5 | 56.4 | 48.0 | -- |
| 1954 | 55.0 | 79.0 | 85.2 | 52.5 | 54.2 | 27.7 | 60.5 | 69.2 | 73.2 | 68.5 | 70.7 | 47.3 | 62.0 |
| **132. Lake Shannon at Concrete (12193000)** | | | | | | | | | | | | | |
| 1926 | -- | 24,500 | 76,020 | 75,780 | 76,090 | 74,580 | 77,940 | 90,840 | 93,350 | 72,760 | 69,140 | 48,650 | -- |
| 1927 | 92,650 | 95,040 | 91,210 | 90,170 | 76,480 | 54,040 | 92,520 | 132,780 | 145,890 | 155,520 | 151,750 | 154,910 | -- |
| 1928 | 153,000 | 155,140 | 137,160 | 151,040 | 132,230 | 146,840 | 142,610 | 152,150 | 151,480 | 154,980 | 117,010 | 97,120 | -- |
| 1929 | 137,420 | 115,410 | 105,570 | 55,010 | 34,800 | 57,010 | 63,190 | 155,790 | 155,720 | 152,060 | 119,900 | 81,970 | -- |
| 1930 | 58,220 | 42,590 | 108,570 | 78,960 | 152,330 | 132,210 | 155,480 | 155,340 | 156,130 | 141,880 | 122,080 | 111,080 | -- |
| 1931 | 126,500 | 85,270 | 84,280 | 155,790 | 130,040 | 154,660 | 155,140 | 155,700 | 155,090 | 146,620 | 93,740 | 86,420 | -- |
| 1932 | 77,430 | 136,450 | 146,530 | 143,270 | 140,770 | 136,750 | 146,790 | 142,610 | 144,100 | 156,020 | 154,890 | 107,160 | -- |
| 1933 | 117,950 | 155,790 | 153,470 | 142,590 | 127,420 | 151,550 | 144,750 | 145,340 | 145,630 | 154,120 | 154,400 | 154,890 | -- |
| 1934 | 152,350 | 155,520 | 152,220 | 152,530 | 153,090 | 154,420 | 150,260 | 155,140 | 156,220 | 156,240 | 156,240 | 138,150 | -- |
| 1935 | 155,590 | 154,660 | 149,350 | 154,190 | 139,370 | 132,970 | 119,150 | 139,180 | 151,170 | 154,640 | 121,040 | 117,590 | -- |
| 1936 | 85,880 | 58,940 | 72,860 | 95,560 | 47,980 | 68,580 | 136,170 | 146,770 | 156,170 | 148,870 | 98,410 | 52,060 | -- |
| 1937 | 46,660 | 45,170 | 94,030 | 47,860 | 41,090 | 77,240 | 123,550 | 135,280 | 152,940 | 152,400 | 128,390 | 109,060 | -- |
| 1938 | 145,690 | 156,080 | 152,530 | 151,840 | 119,900 | 121,140 | 137,120 | 151,910 | 155,450 | 153,720 | 119,640 | 99,740 | -- |
| 1939 | 108,490 | 118,800 | 141,860 | 138,600 | 115,790 | 107,340 | 141,400 | 153,900 | 153,360 | 156,240 | 134,430 | 123,120 | -- |
| 1940 | 153,770 | 149,090 | 153,500 | 151,750 | 147,100 | 151,970 | 152,870 | 154,260 | 152,890 | 146,770 | 148,160 | 143,140 | -- |
| 1941 | 153,880 | 151,420 | 151,840 | 154,010 | 140,150 | 139,090 | 139,240 | 155,360 | 155,360 | 153,900 | 154,640 | 153,700 | -- |
| 1942 | 153,990 | 156,220 | 151,220 | 150,350 | 141,030 | 127,170 | 138,360 | 155,090 | 157,600 | 154,580 | 151,910 | 152,200 | -- |
| 1943 | 155,700 | 156,240 | 155,480 | 147,280 | 153,340 | 155,200 | 151,310 | 152,440 | 152,110 | 158,180 | 153,090 | 152,310 | -- |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 132. Lake Shannon at Concrete (12193000)--cont. | | | | | | | | | | | | | |
| 1944 | 146,220 | 145,160 | 152,800 | 146,840 | 124,910 | 120,250 | 122,320 | 154,480 | 157,600 | 156,400 | 154,550 | 151,420 | -- |
| 1945 | 150,710 | 156,490 | 138,940 | 147,960 | 145,760 | 138,840 | 132,420 | 155,560 | 157,570 | 153,770 | 142,830 | 145,780 | -- |
| 1946 | 156,830 | 154,220 | 153,860 | 151,770 | 148,090 | 150,420 | 133,070 | 139,140 | 153,390 | 153,340 | 155,810 | 148,340 | -- |
| 1947 | 154,440 | 158,160 | 155,300 | 156,510 | 154,080 | 156,830 | 156,240 | 151,860 | 157,440 | 156,960 | 155,430 | 147,780 | -- |
| 1948 | 157,710 | 151,680 | 158,230 | 148,780 | 141,070 | 103,860 | 117,630 | 150,510 | 156,330 | 157,980 | 157,890 | 157,210 | -- |
| 1949 | 143,400 | 158,090 | 137,540 | 138,620 | 138,210 | 152,310 | 155,410 | 149,220 | 157,350 | 158,050 | 150,860 | 152,040 | -- |
| 1950 | 157,080 | 158,120 | 155,590 | 133,030 | 152,600 | 154,530 | 154,530 | 150,970 | 158,000 | 157,100 | 156,330 | 156,440 | -- |
| 1951 | 157,980 | 158,160 | 157,820 | 157,320 | 149,040 | 119,580 | 157,840 | 155,160 | 158,250 | 155,790 | 152,470 | 156,580 | -- |
| 1952 | 156,200 | 123,980 | 115,690 | 109,620 | 121,260 | 72,240 | 132,740 | 156,650 | 158,230 | 158,860 | 158,160 | 158,640 | -- |
| 1953 | 145,580 | 127,890 | 147,960 | 160,020 | 130,960 | 67,900 | 68,970 | 155,900 | 160,160 | 157,870 | 159,520 | 160,450 | -- |
| 1954 | 152,400 | 159,640 | 157,460 | 116,910 | 156,830 | 123,220 | 114,730 | 159,360 | 159,750 | 159,140 | 159,040 | 156,780 | -- |
| 1955 | 141,230 | 160,200 | 140,900 | 78,610 | 64,880 | 106,150 | 140,840 | 151,080 | 159,610 | 159,700 | 152,270 | 123,020 | -- |
| 1956 | 160,130 | 156,580 | 156,060 | 148,840 | 71,750 | 49,790 | 133,810 | 158,610 | 159,820 | 158,950 | 156,850 | 159,320 | -- |
| 1957 | 155,680 | 132,760 | 151,000 | 86,760 | 112,300 | 106,910 | 130,520 | 146,260 | 154,510 | 150,860 | 155,810 | 141,880 | -- |
| 1958 | 146,660 | 126,060 | 151,000 | 160,200 | 159,390 | 126,500 | 153,720 | 159,700 | 159,070 | 154,870 | 159,410 | 151,420 | -- |
| 1959 | 149,550 | 156,240 | 160,130 | 159,270 | 132,500 | 126,840 | 159,450 | 158,430 | 158,820 | 159,470 | 158,760 | 154,650 | -- |
| 1960 | 159,470 | 156,730 | 144,980 | 160,150 | 142,030 | 104,470 | 122,170 | 149,150 | 143,340 | 156,600 | 159,890 | 155,830 | -- |
| 1961 | 160,070 | 153,390 | 152,850 | 153,520 | 149,920 | 148,960 | 158,650 | 157,390 | 152,630 | 156,200 | 156,600 | 157,790 | -- |
| 1962 | 155,630 | 156,560 | 153,000 | 153,870 | 153,960 | 145,310 | 120,890 | 157,240 | 149,750 | 158,200 | 158,320 | 159,050 | -- |
| 1963 | 156,910 | 157,430 | 157,260 | 139,470 | 129,260 | 154,720 | 145,230 | 148,900 | 153,590 | 157,650 | 158,090 | 157,760 | -- |
| 1964 | 158,360 | 157,350 | 157,590 | 156,160 | 151,700 | 103,830 | 89,860 | 128,840 | 158,200 | 157,760 | 156,160 | 158,580 | -- |
| 1965 | 157,240 | 158,800 | 146,830 | 153,520 | 150,070 | 153,440 | 143,340 | 144,410 | 140,560 | 138,910 | 135,580 | 132,800 | -- |
| 1966 | 139,040 | 136,330 | 137,870 | 135,410 | 136,450 | 136,610 | 134,530 | 137,790 | 140,850 | 138,180 | 134,510 | 134,770 | -- |
| 1967 | 137,460 | 141,370 | 136,730 | 135,920 | 134,710 | 136,530 | 132,800 | 134,090 | 138,830 | 136,990 | 136,590 | 136,950 | -- |
| 1968 | 143,070 | 136,060 | 136,610 | 138,360 | 150,690 | 147,280 | 142,450 | 136,630 | 139,080 | 139,700 | 158,560 | 158,910 | -- |
| 1969 | 151,450 | 148,980 | 138,950 | 112,910 | 49,730 | 52,450 | 107,470 | 157,430 | 158,560 | 158,340 | 157,850 | 159,310 | -- |
| 1970 | 155,740 | 151,600 | 149,710 | 148,920 | 123,200 | 71,100 | 79,040 | 96,300 | 156,530 | 159,490 | 159,490 | 158,250 | -- |
| 1971 | 155,880 | 156,690 | 152,310 | 157,810 | 130,560 | 131,250 | 156,360 | 154,980 | 153,200 | 158,490 | 159,250 | 157,610 | -- |
| 1972 | 152,920 | 145,630 | 145,690 | 144,680 | 125,340 | 153,150 | 110,150 | 129,240 | 157,170 | 157,700 | 159,250 | 158,980 | -- |
| 1973 | 156,490 | 140,350 | 153,020 | 140,750 | 84,870 | 74,580 | 96,560 | 125,770 | 143,280 | 159,450 | 158,340 | 155,720 | -- |
| 133. Baker River at Concrete (12193500) | | | | | | | | | | | | | |
| 1911 | 4,560 | 4,630 | 2,560 | 1,420 | 736 | 1,280 | 1,630 | 3,210 | 4,470 | 3,770 | 2,170 | 2,550 | 2,760 |
| 1912 | 1,260 | 3,060 | 1,740 | 2,260 | 2,680 | 992 | 1,380 | 3,460 | 4,570 | 2,980 | 2,100 | 1,250 | 2,310 |
| 1913 | 1,360 | 3,080 | 1,800 | 980 | 1,740 | 1,230 | 1,970 | 3,540 | 5,610 | 5,030 | 2,630 | 2,320 | 2,610 |
| 1914 | 2,690 | 2,990 | 1,160 | 3,370 | 1,050 | 2,280 | 2,740 | 3,280 | 2,950 | 2,740 | 1,730 | 1,780 | 2,400 |
| 1915 | 2,190 | 3,260 | 1,010 | 1,280 | 1,070 | -- | -- | -- | -- | -- | -- | -- | -- |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,128 | -- |
| 1944 | 1,409 | 1,067 | 1,711 | 1,968 | 1,526 | 1,387 | 1,588 | 2,314 | 2,853 | 1,625 | 1,156 | 1,943 | 1,712 |
| 1945 | 1,633 | 2,351 | 2,070 | 2,616 | 2,519 | 1,719 | 1,786 | 4,191 | 3,580 | 2,845 | 1,596 | 1,453 | 2,363 |
| 1946 | 2,690 | 2,620 | 2,024 | 1,995 | 1,823 | 1,831 | 2,925 | 4,917 | 4,440 | 3,856 | 1,947 | 1,279 | 2,701 |
| 1947 | 1,671 | 1,455 | 3,219 | 1,896 | 2,847 | 2,017 | 2,669 | 4,038 | 3,684 | 2,659 | 1,349 | 1,427 | 2,409 |
| 1948 | 3,708 | 2,369 | 2,961 | 1,872 | 1,424 | 1,677 | 1,667 | 3,850 | 6,156 | 3,003 | 2,459 | 2,199 | 2,783 |
| 1949 | 2,170 | 1,811 | 1,564 | 736 | 1,097 | 1,938 | 2,997 | 5,571 | 4,191 | 3,548 | 2,089 | 1,814 | 2,469 |
| 1950 | 1,865 | 4,262 | 2,969 | 1,653 | 1,776 | 2,783 | 2,372 | 3,778 | 6,042 | 5,048 | 3,055 | 1,764 | 3,119 |
| 1951 | 3,357 | 3,397 | 5,188 | 2,448 | 4,861 | 1,781 | 1,860 | 3,689 | 3,582 | 2,487 | 1,409 | 1,232 | 2,930 |
| 1952 | 2,773 | 2,041 | 1,707 | 1,028 | 1,734 | 1,872 | 1,691 | 3,598 | 3,938 | 3,303 | 1,786 | 1,098 | 2,217 |
| 1953 | 1,134 | 1,263 | 1,459 | 4,907 | 3,244 | 2,287 | 2,000 | 2,100 | 3,443 | 4,113 | 2,121 | 1,738 | 2,482 |
| 1954 | 3,177 | 3,308 | 3,635 | 2,740 | 2,244 | 2,169 | 2,163 | 3,097 | 4,612 | 5,130 | 3,221 | 2,311 | 3,150 |
| 1955 | 2,660 | 4,951 | 2,535 | 2,328 | 1,596 | 160 | 1,349 | 2,852 | 5,403 | 4,768 | 2,731 | 1,943 | 2,776 |
| 1956 | 3,014 | 4,178 | 2,398 | 1,940 | 2,164 | 1,590 | 1,535 | 4,363 | 5,704 | 4,808 | 2,198 | 2,097 | 3,000 |
| 1957 | 3,873 | 2,548 | 2,996 | 2,040 | 1,296 | 2,036 | 2,085 | 4,510 | 3,573 | 2,577 | 1,516 | 1,574 | 2,564 |
| 1958 | 1,293 | 1,717 | 1,727 | 2,869 | 2,902 | 1,923 | 1,474 | 4,337 | 3,932 | 2,224 | 1,307 | 1,714 | 2,281 |
| 1959 | 2,945 | 3,410 | 4,528 | 3,409 | 1,848 | 1,890 | 2,948 | 3,734 | 4,985 | 2,547 | 2,182 | 2,279 | 3,065 |
| 1960 | 1,498 | 3,778 | 2,668 | 2,624 | 3,909 | 2,304 | 2,546 | 2,338 | 2,200 | 3,275 | 1,828 | 1,860 | 2,561 |
| 1961 | 2,586 | 3,681 | 3,631 | 3,299 | 4,165 | 2,186 | 2,640 | 3,894 | 4,456 | 2,383 | 2,022 | 1,280 | 3,009 |
| 1962 | 2,760 | 2,259 | 2,540 | 3,139 | 1,675 | 2,420 | 1,825 | 1,011 | 3,697 | 2,707 | 2,556 | 1,669 | 2,360 |
| 1963 | 2,415 | 3,599 | 3,438 | 3,667 | 1,816 | 1,989 | 1,655 | 1,905 | 2,956 | 2,369 | 1,720 | 1,541 | 2,427 |
| 1964 | 3,413 | 4,134 | 3,227 | 3,622 | 1,642 | 3,051 | 1,989 | 783 | 4,349 | 6,466 | 2,988 | 2,140 | 3,159 |
| 1965 | 2,476 | 2,339 | 2,816 | 1,773 | 2,537 | 2,092 | 2,070 | 3,160 | 3,400 | 2,885 | 2,118 | 1,134 | 2,401 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 133. Baker River at Concrete (12193500)--cont. | | | | | | | |
| 1966 | 1,973 | 3,202 | 2,758 | 2,259 | 1,582 | 2,497 | 1,349 | 2,992 | 3,936 | 3,611 | 1,997 | 1,214 | 2,455 |
| 1967 | 2,359 | 2,526 | 5,250 | 2,805 | 2,747 | 1,934 | 2,330 | 1,949 | 5,962 | 5,718 | 2,065 | 1,648 | 3,111 |
| 1968 | 5,034 | 3,558 | 3,172 | 3,834 | 3,497 | 2,288 | 3,266 | 2,530 | 4,082 | 3,399 | 1,668 | 2,562 | 3,238 |
| 1969 | 2,686 | 3,447 | 3,360 | 3,677 | 2,271 | 1,132 | 478 | 3,111 | 5,059 | 2,637 | 1,543 | 2,919 | 2,694 |
| 1970 | 2,196 | 2,104 | 2,321 | 2,916 | 3,654 | 2,492 | 1,914 | 1,413 | 935 | 2,424 | 1,399 | 1,844 | 2,127 |
| 1971 | 1,868 | 2,459 | 2,543 | 3,360 | 3,266 | 2,253 | 1,431 | 4,938 | 4,430 | 6,866 | 3,973 | 1,755 | 3,270 |
| 1972 | 1,966 | 2,958 | 2,007 | 2,889 | 3,082 | 2,466 | 3,970 | 3,350 | 4,898 | 6,131 | 2,786 | 2,126 | 3,217 |
| 1973 | 1,546 | 2,071 | 3,569 | 3,568 | 2,933 | 1,394 | 999 | 2,390 | 1,501 | 2,061 | 1,599 | 1,229 | 2,072 |
| | | | | | | 134. Skagit River near Concrete (12194000) | | | | | | | |
| 1925 | 14,000 | 13,800 | 21,300 | 12,700 | 17,800 | 9,160 | 17,600 | 36,300 | 29,700 | 19,600 | 9,330 | 5,300 | 17,200 |
| 1926 | 3,810 | 4,430 | 18,600 | 9,530 | 9,380 | 8,100 | 14,000 | 14,400 | 12,300 | 9,400 | 7,410 | 5,680 | 9,760 |
| 1927 | 14,900 | 10,500 | 12,700 | 10,400 | 8,900 | 7,750 | 10,200 | 20,600 | 36,800 | 19,900 | 10,400 | 12,300 | 14,600 |
| 1928 | 16,600 | 19,900 | 14,400 | 22,600 | 8,340 | 11,500 | 11,000 | 31,900 | 22,500 | 16,000 | 8,190 | 5,710 | 15,800 |
| 1929 | 13,100 | 8,460 | 6,850 | 4,670 | 3,190 | 6,220 | 8,990 | 24,100 | 28,000 | 15,000 | 8,880 | 5,690 | 11,100 |
| 1930 | 5,140 | 3,540 | 5,290 | 4,490 | 15,400 | 10,100 | 20,300 | 17,600 | 21,400 | 14,900 | 7,670 | 5,530 | 10,900 |
| 1931 | 7,010 | 6,570 | 5,550 | 11,900 | 10,900 | 12,400 | 14,300 | 26,500 | 25,400 | 13,300 | 7,670 | 9,600 | 12,600 |
| 1932 | 7,460 | 11,100 | 9,650 | 8,770 | 18,200 | 18,700 | 18,700 | 25,600 | 32,600 | 20,300 | 11,000 | 7,440 | 15,800 |
| 1933 | 9,750 | 29,300 | 16,300 | 11,700 | 6,360 | 8,650 | 12,500 | 21,300 | 38,300 | 33,800 | 16,800 | 12,500 | 18,100 |
| 1934 | 20,690 | 18,440 | 31,150 | 24,010 | 13,830 | 19,830 | 29,270 | 27,720 | 20,200 | 14,560 | 9,094 | 7,374 | 19,740 |
| 1935 | 9,505 | 22,830 | 14,090 | 25,240 | 19,010 | 10,050 | 8,624 | 19,290 | 26,500 | 18,240 | 9,663 | 8,858 | 15,960 |
| 1936 | 7,010 | 5,582 | 6,369 | 9,264 | 5,661 | 8,855 | 20,150 | 35,150 | 32,180 | 14,090 | 8,984 | 7,114 | 13,380 |
| 1937 | 4,614 | 2,876 | 9,393 | 4,604 | 3,991 | 7,721 | 11,350 | 23,800 | 42,130 | 19,790 | 9,245 | 6,440 | 12,190 |
| 1938 | 9,018 | 19,060 | 16,870 | 12,580 | 6,544 | 9,076 | 16,480 | 27,310 | 30,770 | 16,130 | 7,462 | 6,251 | 14,830 |
| 1939 | 6,742 | 8,003 | 12,600 | 16,720 | 7,376 | 9,102 | 16,080 | 28,450 | 25,330 | 21,510 | 10,060 | 6,350 | 14,080 |
| 1940 | 8,759 | 11,640 | 22,720 | 11,020 | 11,000 | 14,680 | 13,480 | 22,270 | 17,390 | 9,310 | 6,550 | 5,998 | 12,920 |
| 1941 | 13,790 | 8,307 | 11,670 | 8,882 | 7,869 | 8,083 | 10,810 | 15,300 | 14,330 | 9,337 | 6,403 | 10,480 | 10,450 |
| 1942 | 16,540 | 12,970 | 18,040 | 7,043 | 6,951 | 6,313 | 11,220 | 16,730 | 23,610 | 16,460 | 7,955 | 4,852 | 12,430 |
| 1943 | 4,145 | 11,800 | 12,800 | 9,975 | 9,883 | 10,670 | 21,590 | 20,160 | 30,330 | 27,810 | 10,460 | 6,394 | 14,680 |
| 1944 | 7,042 | 5,469 | 9,265 | 8,162 | 6,866 | 6,907 | 9,712 | 16,310 | 19,360 | 10,440 | 6,464 | 9,556 | 9,629 |
| 1945 | 8,511 | 9,450 | 10,170 | 13,720 | 14,170 | 9,192 | 9,574 | 24,520 | 23,980 | 15,620 | 7,874 | 7,992 | 12,890 |
| 1946 | 13,170 | 15,520 | 11,140 | 11,900 | 9,395 | 11,300 | 15,410 | 34,720 | 31,720 | 23,300 | 10,580 | 6,364 | 16,250 |
| 1947 | 528 | 8,179 | 16,040 | 10,850 | 14,320 | 13,600 | 16,680 | 24,680 | 25,570 | 15,690 | 8,161 | 6,875 | 14,090 |
| 1948 | | 13,500 | 15,810 | 12,660 | 8,463 | 7,393 | 10,950 | 23,200 | 36,540 | 20,140 | 13,500 | 10,850 | 16,040 |
| 1949 | | 11,430 | 10,500 | 8,098 | 10,060 | 13,100 | 16,620 | 31,410 | 23,170 | 19,830 | 13,180 | 10,470 | 15,020 |
| 1950 | | 22,900 | 20,250 | 13,460 | 16,600 | 18,710 | 14,680 | 20,080 | 35,650 | 33,950 | 16,860 | 9,677 | 19,620 |
| 1951 | 16,050 | 19,470 | 26,950 | 17,250 | 28,700 | 11,000 | 19,270 | 25,330 | 21,550 | 16,980 | 8,850 | 8,148 | 18,220 |
| 1952 | 16,150 | 13,710 | 11,500 | 8,605 | 13,000 | 8,440 | 12,290 | 19,020 | 18,380 | 16,210 | 9,316 | 6,305 | 12,740 |
| 1953 | 6,753 | 7,079 | 7,595 | 23,150 | 16,370 | 9,740 | 12,320 | 18,250 | 20,060 | 24,320 | 12,010 | 8,668 | 13,860 |
| 1954 | 14,490 | 17,410 | 21,310 | 14,930 | 18,590 | 13,390 | 14,790 | 23,620 | 26,720 | 33,360 | 20,370 | 13,360 | 19,380 |
| 1955 | 12,480 | 24,980 | 14,880 | 11,980 | 11,640 | 7,664 | 12,250 | 16,750 | 29,550 | 28,110 | 14,980 | 9,023 | 16,200 |
| 1956 | 18,100 | 26,630 | 15,970 | 12,330 | 9,355 | 9,946 | 16,120 | 27,370 | 32,470 | 26,890 | 12,270 | 10,810 | 18,200 |
| 1957 | 18,870 | 14,530 | 21,070 | 11,950 | 12,430 | 13,520 | 14,130 | 26,070 | 22,940 | 14,350 | 8,006 | 7,784 | 15,500 |
| 1958 | 7,802 | 9,526 | 11,820 | 15,950 | 14,790 | 10,570 | 10,240 | 22,310 | 21,530 | 12,090 | 7,440 | 8,581 | 12,710 |
| 1959 | 14,860 | 20,770 | 25,330 | 21,150 | 12,250 | 12,620 | 19,970 | 22,450 | 28,110 | 25,430 | 12,180 | 16,400 | 19,330 |
| 1960 | 20,460 | 26,040 | 19,030 | 13,270 | 16,460 | 11,140 | 16,100 | 18,910 | 22,730 | 19,790 | 10,800 | 7,858 | 16,870 |
| 1961 | 12,050 | 17,450 | 15,210 | 20,350 | 21,860 | 13,160 | 13,610 | 22,150 | 36,250 | 17,280 | 9,813 | 7,986 | 17,260 |
| 1962 | 11,980 | 11,620 | 15,100 | 19,730 | 12,790 | 9,658 | 12,720 | 11,790 | 20,460 | 18,030 | 12,530 | 7,876 | 13,700 |
| 1963 | 10,580 | 20,040 | 21,760 | 16,440 | 16,850 | 10,790 | 10,840 | 15,240 | 20,800 | 14,740 | 9,864 | 8,247 | 14,660 |
| 1964 | 13,720 | 20,550 | 17,260 | 18,230 | 12,040 | 13,200 | 13,040 | 17,330 | 33,100 | 33,920 | 16,850 | 11,090 | 18,380 |
| 1965 | 13,370 | 12,800 | 16,180 | 13,840 | 16,800 | 11,720 | 14,040 | 18,530 | 23,540 | 19,940 | 12,000 | 5,874 | 14,880 |
| 1966 | 9,681 | 14,340 | 14,030 | 14,230 | 10,400 | 13,030 | 13,840 | 18,210 | 19,940 | 18,920 | 10,570 | 6,746 | 13,690 |
| 1967 | 11,510 | 13,240 | 24,810 | 17,450 | 15,130 | 12,230 | 10,990 | 16,930 | 38,760 | 23,770 | 11,790 | 8,850 | 17,130 |
| 1968 | 22,550 | 19,020 | 18,710 | 22,750 | 20,830 | 16,250 | 14,300 | 16,950 | 30,540 | 22,730 | 10,820 | 12,250 | 18,960 |
| 1969 | 11,770 | 16,480 | 17,160 | 17,370 | 10,240 | 9,697 | 12,870 | 23,970 | 28,480 | 14,650 | 7,855 | 11,520 | 15,190 |
| 1970 | 10,660 | 11,100 | 12,590 | 15,330 | 14,950 | 11,400 | 10,900 | 11,620 | 18,450 | 13,510 | 8,239 | 8,688 | 12,260 |
| 1971 | 7,419 | 11,630 | 13,140 | 18,300 | 20,460 | 12,310 | 10,930 | 27,230 | 31,540 | 34,840 | 17,290 | 9,220 | 17,860 |
| 1972 | 9,229 | 13,170 | 12,020 | 15,060 | 18,010 | 23,380 | 17,510 | 26,310 | 43,320 | 37,430 | 18,570 | 12,640 | 20,560 |
| 1973 | 8,131 | 9,266 | 18,750 | 16,580 | 10,190 | 9,265 | 7,825 | 15,320 | 15,010 | 13,680 | 9,185 | 6,232 | 11,650 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **139. Finney Creek near Concrete (12194500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 35.3 | 22.6 | -- |
| 1944 | 117 | -- | -- | -- | -- | -- | -- | -- | -- | 30.8 | 21.0 | 110 | -- |
| 1945 | 130 | 322 | 232 | 527 | 285 | 198 | 258 | 521 | 144 | 39.2 | 19.4 | 98.4 | 231 |
| 1946 | 329 | 536 | 462 | 488 | 386 | 440 | 490 | 534 | 358 | 125 | 33.1 | 27.9 | 351 |
| 1947 | 263 | 362 | 692 | 442 | 577 | 296 | 345 | 224 | 184 | 116 | 42.8 | 109 | 303 |
| 1948 | 498 | 412 | 518 | 360 | 309 | 255 | 312 | 556 | 378 | 91.1 | 79.0 | 156 | 327 |
| **144. Grandy Creek near Concrete (12195000)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.0 | 7.92 | -- |
| 1944 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.54 | 23.6 | -- |
| 1945 | 23.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **149. O'Toole Creek near Hamilton (12195500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.53 | 4.26 | -- |
| 1944 | 19.7 | -- | -- | -- | -- | -- | -- | -- | -- | 4.87 | 3.72 | 14.7 | -- |
| 1945 | 20.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **150. Alder Creek near Hamilton (12196000)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.70 | -- |
| 1944 | 10.1 | 10.9 | 29.5 | 38.4 | 29.2 | 31.5 | 23.1 | 23.1 | 16.9 | 8.96 | 7.15 | 8.91 | 19.8 |
| 1945 | 9.77 | 22.8 | 27.2 | 78.8 | 40.9 | 47.2 | 58.6 | 34.1 | 15.5 | 10.4 | 9.08 | 9.48 | 30.3 |
| 1946 | 35.4 | 65.6 | 50.1 | 62.7 | 51.6 | 62.0 | 45.2 | 27.7 | 20.9 | 15.7 | 10.4 | 8.79 | 37.9 |
| 1947 | 18.8 | 32.1 | 82.4 | 64.4 | 65.5 | 38.7 | 38.3 | 23.6 | 17.8 | 13.9 | 10.2 | 11.6 | 34.6 |
| 1948 | 37.6 | 60.6 | 63.2 | 62.1 | 47.6 | 44.6 | 49.9 | 45.8 | 21.0 | 15.5 | 12.9 | 11.9 | 39.4 |
| 1949 | 17.5 | 56.1 | 55.0 | 24.8 | 42.9 | 85.7 | 49.3 | 31.5 | 15.0 | 12.3 | 10.0 | 10.8 | 34.2 |
| 1950 | 19.9 | 36.1 | 85.8 | 44.9 | 76.8 | 102 | 66.5 | 45.4 | 25.1 | 15.1 | 13.1 | 12.4 | 45.1 |
| 1951 | 33.5 | 47.9 | 72.2 | 82.5 | 127 | 53.9 | 42.5 | 23.6 | 15.7 | 10.9 | 8.59 | 7.00 | 43.3 |
| 1952 | 18.6 | 32.3 | 34.0 | 28.6 | 65.0 | 33.1 | 32.2 | 19.2 | 12.6 | 11.0 | 8.65 | 7.44 | 25.1 |
| 1953 | 6.64 | 7.93 | 19.7 | 80.9 | 63.4 | 32.8 | 32.2 | 23.1 | 19.0 | 13.2 | 9.73 | 8.47 | 26.2 |
| 1954 | 15.5 | 48.6 | 111 | 70.7 | 77.2 | 43.0 | 51.5 | 27.5 | 27.6 | 18.7 | 14.9 | 14.5 | 43.2 |
| 1955 | 14.7 | 57.5 | 43.5 | 62.7 | 69.3 | 40.4 | 68.3 | 48.8 | 33.8 | 22.5 | 15.3 | 10.8 | 40.4 |
| 1956 | 45.4 | 91.0 | 75.1 | 67.5 | 35.0 | 47.4 | 50.7 | 26.6 | 20.2 | 14.0 | 11.1 | 9.75 | 41.2 |
| 1957 | 65.1 | 37.1 | 94.3 | 32.2 | 36.9 | 67.1 | 46.1 | 23.3 | 17.3 | 12.6 | 9.92 | 9.75 | 37.8 |
| 1958 | 11.7 | 13.5 | 35.2 | 51.5 | 46.7 | 30.0 | 24.3 | 13.6 | 9.64 | 7.58 | 5.93 | 6.92 | 21.3 |
| 1959 | 19.6 | 70.4 | 65.0 | 90.4 | 52.8 | 59.6 | 76.4 | 44.3 | 22.1 | 15.1 | 11.7 | 23.2 | 45.8 |
| 1960 | 35.5 | 74.1 | 65.2 | 42.7 | 75.2 | 40.2 | 51.3 | 42.2 | 23.2 | 14.5 | 12.8 | 14.0 | 40.7 |
| 1961 | 22.3 | 63.2 | 51.7 | 59.3 | 86.0 | 61.4 | 52.4 | 30.0 | 17.9 | 14.2 | 10.6 | 12.8 | 39.8 |
| 1962 | 25.3 | 34.0 | 52.9 | 65.8 | 38.1 | 26.8 | 33.7 | 24.8 | 17.5 | 12.7 | 12.3 | 11.1 | 29.6 |
| 1963 | 15.7 | 48.9 | 66.1 | 56.6 | 43.0 | 34.4 | 34.3 | 23.2 | 13.6 | 11.5 | 9.24 | 9.65 | 30.4 |
| 1964 | 17.9 | 65.0 | 47.3 | 68.5 | 49.4 | 62.4 | 62.3 | 41.7 | 31.0 | 19.3 | 12.6 | 15.7 | 41.0 |
| 1965 | 21.9 | 27.5 | 35.5 | 65.6 | 92.3 | 38.4 | 25.5 | 28.5 | 15.8 | 10.5 | 8.97 | 7.79 | 31.2 |
| 1966 | 11.6 | 25.9 | 35.1 | 56.6 | 43.5 | 47.9 | 40.0 | 24.9 | 17.5 | 14.9 | 9.72 | 8.80 | 28.0 |
| 1967 | 16.6 | 29.8 | 72.6 | 80.6 | 81.7 | 59.6 | 37.0 | 28.6 | 17.4 | 11.7 | 9.37 | 8.98 | 37.6 |
| 1968 | 55.8 | 40.7 | 97.2 | 60.6 | 60.4 | 44.8 | 44.8 | 29.6 | 24.7 | 15.1 | 12.0 | 18.2 | 42.0 |
| 1969 | 34.6 | 40.5 | 69.8 | 67.5 | 36.0 | 46.7 | 44.7 | 28.8 | 16.5 | 13.1 | 10.2 | 11.8 | 35.1 |
| 1970 | 15.4 | 24.4 | 28.7 | 44.3 | 46.4 | 23.1 | 46.9 | 20.3 | 12.1 | 9.20 | 7.63 | 12.5 | 24.1 |
| 1971 | 23.1 | 40.0 | 45.5 | 131 | 115 | 69.1 | 51.9 | 42.4 | 22.6 | 17.3 | 12.2 | 10.5 | 48.0 |
| **157. Day Creek below Day Lake near Lyman (12196200)** | | | | | | | | | | | | | |
| 1963 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14.8 | 14.5 | -- |
| 1964 | 54.4 | 123 | 76.1 | 84.1 | 56.6 | 53.2 | 89.2 | 95.9 | 82.7 | 31.5 | 22.0 | 45.6 | 67.7 |
| 1965 | 50.6 | 68.0 | 75.5 | 84.6 | 114 | 47.7 | 70.7 | 61.2 | 21.3 | 9.29 | 12.2 | 14.0 | 52.0 |
| 1966 | 46.0 | 65.7 | 53.4 | 75.4 | 48.3 | 77.9 | 69.2 | 59.1 | 27.9 | 23.9 | 9.41 | 8.47 | 47.1 |
| 1967 | 58.2 | 71.5 | 128 | 127 | 85.6 | 67.5 | 43.4 | 73.2 | 37.7 | 9.91 | 4.70 | 7.85 | 59.5 |
| 1968 | 108 | 57.0 | 110 | 81.9 | 99.7 | 69.1 | 60.5 | 40.9 | 36.8 | 18.1 | 20.1 | 46.7 | 62.3 |
| 1969 | 56.8 | 72.0 | 80.4 | 59.5 | 31.1 | 51.6 | 96.9 | 77.7 | 28.8 | 34.4 | 9.73 | 48.7 | 54.1 |
| 1970 | 39.1 | 45.0 | 59.6 | 67.9 | 83.6 | 42.9 | 66.8 | 31.7 | 13.2 | 13.7 | 8.15 | 55.0 | 43.6 |
| 1971 | 43.8 | 68.4 | 68.5 | 113 | 100 | 73.1 | 71.7 | 97.7 | 62.2 | 31.7 | 7.83 | 23.3 | 63.2 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **159. Day Creek near Hamilton (12196400)** | | | | | | | | | | | | | |
| 1963 | 181 | 460 | 448 | 263 | 328 | 167 | 290 | 210 | 54.0 | 66.4 | 40.5 | 44.2 | 212 |
| 1964 | 215 | 624 | 325 | 422 | 215 | 245 | 336 | 398 | 364 | 148 | 94.4 | 195 | 298 |
| 1965 | 174 | 367 | 300 | 417 | 484 | 165 | 282 | 267 | 101 | 25.4 | 34.7 | 35.4 | 219 |
| 1966 | 181 | 315 | 261 | 400 | 186 | 375 | 283 | 282 | 140 | 95.5 | 32.1 | 27.7 | 215 |
| 1967 | 247 | 308 | 676 | 611 | 370 | 303 | 157 | 309 | 206 | 36.8 | 13.3 | 42.1 | 273 |
| 1968 | 545 | 232 | 487 | 375 | 488 | 322 | 233 | 174 | 151 | 54.5 | 72.1 | 158 | 274 |
| 1969 | 255 | 300 | 377 | 226 | 137 | 222 | 421 | 365 | 113 | 95.1 | 33.4 | 240 | 232 |
| **160. Day Creek near Lyman (12196500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 28.4 | 26.6 | -- |
| 1944 | 195 | 117 | 356 | 420 | 206 | 203 | 228 | 187 | 78.3 | 21.4 | 18.7 | 131 | 180 |
| 1945 | 143 | 498 | 230 | 530 | 296 | 263 | 248 | 397 | 74.9 | 22.1 | 14.2 | 114 | 235 |
| 1946 | 358 | 517 | 502 | 455 | 340 | 372 | 400 | 319 | 346 | 81.1 | 24.4 | 30.5 | 312 |
| 1947 | 240 | 262 | 584 | 395 | 436 | 269 | 349 | 120 | 187 | 92.2 | 41.0 | 96.8 | 255 |
| 1948 | 453 | 321 | 438 | 301 | 275 | 202 | 282 | 516 | 238 | 60.6 | 86.7 | 200 | 281 |
| 1949 | 200 | 432 | 226 | 105 | 380 | 414 | 375 | 444 | 203 | 107 | 65.8 | 99.1 | 253 |
| 1950 | 238 | 487 | 573 | 263 | 539 | 514 | 421 | 368 | 368 | 129 | 96.7 | 67.6 | 337 |
| 1951 | 398 | 423 | 644 | 433 | 701 | 198 | 261 | 228 | 60.1 | 19.8 | 11.7 | 29.6 | 282 |
| 1952 | 356 | 287 | 224 | 249 | 377 | 173 | 359 | 343 | 228 | 53.1 | 34.2 | 50.0 | 227 |
| 1953 | 33.1 | 72.1 | 343 | 984 | 403 | 232 | 235 | 256 | 211 | 58.2 | 33.5 | 79.2 | 245 |
| 1954 | 374 | 484 | 634 | 336 | 516 | 200 | 307 | 278 | 255 | 113 | 87.7 | 86.6 | 304 |
| 1955 | 143 | 476 | 388 | 254 | 310 | 133 | 392 | 419 | 428 | 269 | 90.1 | 51.4 | 279 |
| 1956 | 501 | 631 | 468 | 418 | 105 | 269 | 368 | 323 | 300 | 84.9 | 22.8 | 114 | 301 |
| 1957 | 449 | 258 | 601 | 113 | 276 | 341 | 333 | 210 | 78.8 | 58.3 | 50.7 | 20.6 | 233 |
| 1958 | 69.8 | 173 | 404 | 500 | 462 | 176 | 245 | 96.1 | 36.6 | 14.1 | 9.23 | 60.0 | 186 |
| 1959 | 312 | 536 | 540 | 546 | 183 | 315 | 586 | 244 | 172 | 45.8 | 43.5 | 363 | 324 |
| 1960 | 284 | 621 | 442 | 330 | 378 | 306 | 442 | 344 | 131 | 27.8 | 85.9 | 66.2 | 287 |
| 1961 | 354 | 456 | 253 | 515 | 996 | 457 | 297 | 220 | 71.2 | 27.5 | 27.9 | 64.0 | 307 |
| 1962 | 280 | 300 | 480 | 480 | 220 | 160 | 360 | 260 | 170 | 34.0 | 110 | 96.0 | 270 |
| **167. Jones Creek near Lyman (12197000)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.50 | 1.83 | -- |
| 1944 | 6.09 | -- | -- | -- | -- | -- | -- | -- | -- | 1.38 | 1.26 | 5.10 | -- |
| 1945 | 5.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **176. Gilligan Creek near Lyman (12197500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.03 | 0.57 | -- |
| 1944 | 14.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **180. Cool Creek near Sedro Wooley (12198000)** | | | | | | | | | | | | | |
| 1948 | 12.3 | 16.8 | 15.1 | 12.5 | 9.63 | 8.22 | 10.1 | 13.5 | 7.73 | 2.65 | 4.69 | 4.10 | 9.77 |
| 1949 | 5.85 | 14.8 | 8.00 | 3.75 | 14.9 | 19.1 | 10.9 | 10.2 | 3.77 | 2.72 | 1.77 | 3.28 | 8.20 |
| 1950 | 9.37 | 10.5 | 22.1 | 7.66 | 14.7 | 17.3 | 13.3 | 13.5 | 10.4 | -- | -- | -- | -- |
| **189. Hansen Creek near Sedro Wooley (12198500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.32 | 2.75 | -- |
| 1944 | 6.10 | 4.82 | 28.6 | 25.8 | 28.4 | 24.8 | 20.0 | 21.5 | 9.83 | 2.58 | 2.26 | 5.97 | 15.0 |
| 1945 | 4.54 | 29.1 | 18.0 | 79.2 | 37.4 | 34.4 | 36.1 | 23.5 | 5.71 | 1.29 | 1.05 | 9.66 | 23.3 |
| **190. Skagit River near Sedro Wooley (12199000)** | | | | | | | | | | | | | |
| 1908 | -- | -- | -- | -- | -- | -- | -- | 15,700 | 26,000 | 25,100 | 10,500 | 5,570 | -- |
| 1909 | 5,520 | 18,700 | 8,370 | 10,600 | 7,890 | 6,360 | 8,360 | 14,600 | 28,100 | 17,900 | 9,410 | 7,300 | 11,900 |
| 1910 | 7,010 | 33,200 | 23,600 | 11,800 | 9,220 | 19,400 | 22,800 | 35,100 | 24,900 | 19,900 | 10,700 | 6,500 | 18,700 |
| 1911 | 23,900 | 29,500 | 17,600 | 11,600 | 5,470 | 8,430 | 11,400 | 21,700 | 35,500 | 23,400 | 11,400 | 10,800 | 17,600 |
| 1912 | 4,930 | 17,500 | 11,500 | 12,800 | 15,300 | 5,990 | 8,870 | 25,200 | 33,200 | 19,300 | 11,600 | 6,490 | 14,400 |
| 1913 | 5,930 | 15,100 | 11,600 | 9,200 | 11,000 | 8,720 | 14,300 | 25,700 | 42,900 | 30,100 | 15,200 | 13,100 | 16,900 |
| 1914 | 14,000 | 16,700 | 8,870 | 22,000 | 8,470 | 15,000 | 19,800 | 26,100 | 23,700 | 19,500 | 10,300 | 9,360 | 16,200 |
| 1915 | 9,920 | 19,600 | 7,930 | 7,120 | 6,060 | 8,580 | 19,700 | 13,700 | 11,700 | 10,400 | 9,220 | 4,500 | 10,700 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **190. Skagit River near Sedro Wooley (12199000)--cont.** | | | | | | | | | | | | | |
| 1916 | 10,000 | 12,100 | 14,300 | 5,460 | 16,400 | 19,100 | 16,900 | 24,000 | 39,400 | 33,300 | 17,600 | 8,620 | 18,100 |
| 1917 | 5,920 | 11,400 | 7,290 | 7,650 | 9,320 | 6,280 | 11,000 | 26,100 | 40,100 | 37,600 | 16,500 | 10,000 | 15,800 |
| 1918 | 8,140 | 11,100 | 36,300 | 32,800 | 14,100 | 11,500 | 16,800 | 23,200 | 36,900 | 22,100 | 12,800 | 8,260 | 19,600 |
| 1919 | 14,400 | 12,600 | 21,400 | 15,300 | 10,000 | 9,110 | 18,100 | 28,900 | 30,000 | 27,800 | 13,800 | 8,220 | 17,500 |
| 1920 | 5,990 | 19,100 | 16,900 | 18,000 | 14,100 | 9,400 | 7,200 | 16,300 | 25,100 | 25,500 | 11,900 | 17,300 | 15,600 |
| 1921 | 23,100 | 11,900 | 11,700 | 13,100 | 18,100 | 12,000 | 12,000 | 27,700 | 45,800 | 25,400 | 14,700 | 13,200 | 19,100 |
| 1922 | 15,700 | 19,500 | 34,500 | 6,950 | 5,410 | 5,540 | 9,330 | 24,200 | 41,700 | 18,800 | 11,300 | 10,700 | 17,000 |
| 1923 | 10,400 | 7,090 | 15,000 | 20,600 | 6,700 | 7,710 | 16,800 | 25,500 | 31,200 | 23,900 | 10,600 | 7,440 | 15,300 |
| 1924 | 6,370 | 6,900 | 13,700 | 11,000 | 34,600 | 10,500 | 9,540 | 32,600 | 21,500 | 14,700 | 9,370 | 8,330 | 14,900 |
| **192. Nookachamps Creek near Mount Vernon (12199500)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.00 | .357 | -- |
| 1944 | 1.63 | -- | -- | -- | -- | -- | -- | -- | -- | 2.79 | .35 | 1.32 | -- |
| **194. East Fork Nookachamps Creek near Big Lake (12199800)** | | | | | | | | | | | | | |
| 1962 | -- | -- | 31.5 | 42.0 | 20.3 | 11.8 | 41.6 | 29.6 | 17.7 | 2.44 | 16.5 | 7.13 | -- |
| 1963 | 16.3 | 32.7 | 41.4 | 24.3 | 30.8 | 15.2 | 31.7 | 22.7 | 11.1 | 8.04 | 4.29 | 3.87 | 20.1 |
| 1964 | 15.0 | 47.5 | 23.5 | 27.9 | 20.5 | 18.9 | 30.6 | 51.3 | 57.3 | 18.9 | 12.5 | 22.5 | 28.8 |
| 1965 | 16.3 | 31.0 | 24.2 | 35.9 | 40.4 | 19.3 | 34.1 | 34.3 | 14.9 | 2.35 | 3.85 | 4.74 | 21.6 |
| 1966 | 14.6 | 22.4 | 19.4 | 28.9 | 15.1 | 34.9 | 37.2 | 44.9 | 21.9 | 11.7 | 3.53 | 4.49 | 21.6 |
| 1967 | 20.2 | 28.1 | 51.3 | 46.9 | 29.6 | 21.4 | 17.3 | 46.5 | 27.7 | 3.06 | 0.839 | 3.15 | 24.7 |
| 1968 | 41.3 | 19.4 | 46.7 | 32.3 | 42.7 | 29.5 | 28.2 | 31.9 | 15.6 | 4.79 | 6.59 | 18.8 | 26.5 |
| 1969 | 23.6 | 24.3 | 28.7 | 22.0 | 10.8 | 20.4 | 38.7 | 42.5 | 12.7 | 11.2 | 3.47 | 20.6 | 21.6 |
| 1970 | 10.0 | 19.7 | 22.7 | 30.0 | 36.5 | 19.3 | 29.2 | 24.7 | 4.73 | 3.79 | 1.55 | 18.3 | 18.2 |
| 1971 | 29.7 | 32.7 | 22.7 | 59.3 | 44.5 | 17.6 | 21.4 | 74.3 | 45.2 | 17.9 | 2.13 | 10.9 | 31.5 |
| **200. East Fork Nookachamps Creek near Clear Lake (12200000)** | | | | | | | | | | | | | |
| 1943 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.92 | -- |
| 1944 | 50.8 | 18.4 | 76.1 | 105 | 67.5 | 68.5 | 82.0 | 77.4 | 31.1 | 2.31 | 3.97 | 42.1 | 52.1 |
| 1945 | 27.7 | 179 | 55.4 | 178 | 84.2 | 81.8 | 111 | 88.0 | 16.1 | 3.91 | 4.49 | 43.7 | 72.5 |
| 1946 | 160 | 264 | 125 | 147 | 141 | 130 | 104 | 71.8 | 84.1 | 25.8 | 4.53 | 4.39 | 105 |
| 1947 | 84.6 | 115 | 171 | 157 | 91.1 | 51.4 | 150 | 43.6 | 68.9 | 15.8 | 6.66 | 45.3 | 83.2 |
| 1948 | 136 | 216 | 166 | 131 | 128 | 88.3 | 87.3 | 178 | 130 | 12.0 | 47.3 | 55.6 | 115 |
| 1949 | 102 | 145 | 136 | 39.4 | 217 | 128 | 96.9 | 86.2 | 41.0 | 40.2 | 23.0 | 21.4 | 88.8 |
| 1950 | 88.9 | 126 | 285 | 132 | 210 | 197 | 153 | 106 | 73.0 | 20.0 | 9.36 | 13.9 | 117 |
| 1962 | -- | -- | 160 | 151 | 52.9 | 70.6 | 82.4 | 64.5 | 45.9 | 6.39 | 32.5 | 15.2 | -- |
| 1963 | 40.1 | 121 | 126 | 102 | 90.0 | 48.0 | 73.6 | 66.7 | 23.9 | 16.1 | 10.4 | 10.7 | 60.6 |
| **209. Skagit River near Mount Vernon (12200500)** | | | | | | | | | | | | | |
| 1941 | 14,800 | 9,880 | 14,290 | 10,310 | 8,654 | 8,487 | 11,080 | 15,880 | 14,970 | 9,820 | 6,441 | 11,450 | 11,360 |
| 1942 | 17,330 | 13,860 | 20,490 | 7,636 | 7,626 | 6,856 | 11,510 | 16,870 | 25,400 | 17,230 | 8,373 | 5,023 | 13,220 |
| 1943 | 4,323 | 13,380 | 15,710 | 11,730 | 11,970 | 11,600 | 23,360 | 21,660 | 31,420 | 29,840 | 11,430 | 7,183 | 16,140 |
| 1944 | 8,100 | 6,592 | 10,670 | 9,965 | 8,044 | 7,878 | 10,610 | 17,400 | 19,620 | 10,430 | 6,835 | 9,945 | 10,510 |
| 1945 | 8,736 | 10,810 | 10,930 | 15,950 | 14,860 | 9,714 | 10,130 | 25,960 | 25,370 | 16,170 | 8,083 | 8,469 | 13,760 |
| 1946 | 14,340 | 17,990 | 12,540 | 13,670 | 10,680 | 12,820 | 16,580 | 36,530 | 32,810 | 23,750 | 10,590 | 6,745 | 17,460 |
| 1947 | 8,957 | 9,351 | 18,200 | 12,800 | 16,430 | 14,460 | 17,720 | 24,720 | 25,740 | 15,780 | 8,319 | 7,390 | 14,980 |
| 1948 | 19,110 | 15,670 | 19,050 | 15,180 | 10,380 | 8,448 | 11,800 | 24,680 | 39,280 | 20,380 | 13,760 | 11,590 | 17,460 |
| 1949 | 12,820 | 13,290 | 12,840 | 9,015 | 12,020 | 15,200 | 17,900 | 33,920 | 24,470 | 20,010 | 13,320 | 10,910 | 16,340 |
| 1950 | 12,970 | 23,740 | 21,830 | 15,560 | 19,740 | 22,810 | 17,720 | 22,020 | 37,920 | 35,710 | 17,060 | 10,200 | 21,440 |
| 1951 | 17,120 | 21,000 | 30,560 | 19,650 | 31,140 | 11,760 | 19,580 | 26,400 | 21,700 | 17,460 | 9,269 | 8,329 | 19,420 |
| 1952 | 16,800 | 14,480 | 12,790 | 9,541 | 14,910 | 9,501 | 13,690 | 20,280 | 18,810 | 16,260 | 9,607 | 6,642 | 13,600 |
| 1953 | 6,898 | 7,252 | 8,417 | 26,740 | 20,170 | 10,930 | 13,180 | 19,180 | 20,030 | 23,920 | 12,430 | 8,995 | 14,830 |
| 1954 | 14,810 | 19,540 | 24,900 | 17,730 | 21,230 | 15,290 | 16,640 | 25,150 | 27,770 | 34,840 | 20,290 | 13,950 | 21,030 |
| 1955 | 12,840 | 27,200 | 15,810 | 13,550 | 13,560 | 9,192 | 13,990 | 17,250 | 31,010 | 28,420 | 15,010 | 9,201 | 17,250 |
| 1956 | 20,430 | 29,620 | 18,580 | 15,120 | 10,500 | 11,460 | 17,590 | 28,420 | 34,460 | 26,950 | 12,220 | 10,890 | 19,700 |
| 1957 | 21,100 | 15,110 | 23,770 | 12,230 | 13,270 | 15,010 | 14,790 | 26,660 | 23,240 | 14,240 | 8,486 | 7,962 | 16,360 |
| 1958 | 8,086 | 10,170 | 12,770 | 17,420 | 16,540 | 11,570 | 11,600 | 22,410 | 21,080 | 12,080 | 7,677 | 8,838 | 13,330 |
| 1959 | 16,040 | 23,450 | 27,720 | 24,420 | 13,680 | 14,170 | 21,730 | 24,760 | 27,960 | 25,360 | 12,510 | 17,540 | 20,820 |
| 1960 | 20,850 | 29,350 | 21,190 | 14,530 | 18,110 | 12,330 | 17,470 | 19,510 | 22,140 | 18,980 | 11,050 | 8,383 | 17,810 |

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 209. Skagit River near Mount Vernon (12200500) | | | | | | | | | | | | | |
| 1961 | 12,620 | 19,250 | 16,260 | 22,400 | 25,250 | 15,730 | 15,150 | 22,100 | 36,670 | 17,220 | 10,000 | 8,502 | 18,360 |
| 1962 | 12,820 | 13,300 | 17,490 | 22,570 | 14,050 | 10,920 | 14,320 | 13,090 | 20,520 | 17,760 | 13,550 | 8,809 | 14,950 |
| 1963 | 11,780 | 21,070 | 23,490 | 18,800 | 19,020 | 12,320 | 12,280 | 16,060 | 20,630 | 15,260 | 10,530 | 8,861 | 15,820 |
| 1964 | 14,460 | 23,210 | 19,450 | 21,260 | 14,340 | 15,110 | 15,290 | 19,100 | 35,020 | 34,310 | 17,130 | 11,880 | 20,050 |
| 1965 | 15,000 | 14,060 | 18,760 | 16,340 | 20,470 | 13,230 | 15,240 | 19,940 | 23,960 | 20,170 | 12,760 | 6,624 | 16,360 |
| 1966 | 10,430 | 15,660 | 15,360 | 16,360 | 11,660 | 14,900 | 15,680 | 19,540 | 20,660 | 19,570 | 11,090 | 7,201 | 14,870 |
| 1967 | 12,390 | 14,390 | 29,060 | 21,490 | 18,090 | 14,410 | 12,280 | 18,530 | 39,660 | 23,970 | 11,900 | 9,096 | 18,780 |
| 1968 | 23,700 | 21,600 | 22,400 | 26,020 | 24,150 | 18,630 | 15,870 | 18,560 | 31,790 | 23,440 | 11,750 | 13,410 | 20,930 |
| 1969 | 13,360 | 18,580 | 20,190 | 19,850 | 11,880 | 11,230 | 15,220 | 26,030 | 29,730 | 15,360 | 8,411 | 12,110 | 16,850 |
| 1970 | 11,870 | 12,230 | 13,940 | 17,160 | 16,710 | 12,310 | 12,660 | 12,460 | 18,890 | 14,320 | 8,887 | 9,763 | 13,400 |
| 1971 | 8,827 | 13,390 | 15,330 | 21,500 | 24,840 | 14,620 | 13,210 | 28,300 | 31,940 | 33,960 | 16,970 | 9,398 | 19,340 |
| 1972 | 9,562 | 14,850 | 14,020 | 16,780 | 20,350 | 27,010 | 19,550 | 27,150 | 43,460 | 37,650 | 18,910 | 13,610 | 21,910 |
| 1973 | 8,810 | 10,600 | 21,060 | 18,350 | 11,260 | 10,800 | 8,857 | 16,260 | 15,590 | 13,870 | 9,492 | 6,894 | 12,690 |

TABLE C2.-- Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

32. Ross Reservoir near Newhalem, Wash. (12175000) (International gaging station)

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1940 | -- | -- | -- | -- | -- | 4,530 | 25,360 | 106,540 | 97,140 | 105,660 | 102,620 | 86,490 | -- |
| 1941 | 106,190 | 89,760 | 105,540 | 105,830 | 105,560 | 84,580 | 108,060 | 107,650 | 100,820 | 111,740 | 96,800 | 91,770 | -- |
| 1942 | 102,920 | 107,190 | 99,990 | 43,440 | 1,600 | 1,990 | 22,810 | 107,040 | 108,060 | 110,480 | 105,110 | 92,640 | -- |
| 1943 | a84,480 | 66,730 | 85,550 | 85,730 | 69,240 | 7,450 | 107,740 | 107,740 | 111,710 | 107,740 | 99,530 | 77,400 | -- |
| 1944 | 28,820 | 30,930 | 54,850 | 55,810 | 41,330 | 25,940 | 22,380 | 103,810 | 103,420 | 98,960 | 103,030 | 91,920 | -- |
| 1945 | 59,320 | 55,670 | 49,280 | 71,310 | 32,560 | 9,340 | 5,200 | 111,310 | 95,310 | 84,660 | 79,770 | 51,360 | -- |
| 1946 | 64,000 | 39,060 | 42,300 | 10,600 | 8,360 | 5,600 | 62,810 | 169,560 | 145,600 | 150,270 | 169,070 | 165,180 | -- |
| 1947 | 171,530 | 160,640 | 182,200 | 171,280 | 209,390 | 117,940 | 172,520 | 498,930 | 482,190 | 506,940 | 498,360 | 469,210 | -- |
| 1948 | 382,470 | 322,340 | 174,780 | 42,540 | 7,610 | 6,360 | 52,690 | 482,190 | 1,003,700 | 909,900 | 883,860 | 828,450 | -- |
| 1949 | 766,390 | 680,500 | 551,670 | 333,840 | 166,390 | 100,700 | 229,170 | 715,010 | 1,087,000 | 1,178,600 | 1,082,900 | 1,013,400 | -- |
| 1950 | 909,000 | 1,069,700 | 987,300 | 794,120 | 469,740 | 224,410 | 129,240 | 370,220 | 1,128,100 | 1,166,900 | 1,157,400 | 1,082,900 | -- |
| 1951 | 1,087,000 | 1,121,900 | 1,122,900 | 892,800 | 851,120 | 729,470 | 562,600 | 776,410 | 1,163,700 | 1,203,000 | 1,169,000 | 1,084,900 | -- |
| 1952 | 926,300 | 715,010 | 534,240 | 318,220 | 157,600 | 60,180 | 220,010 | 720,610 | 1,077,800 | 1,202,000 | 1,194,500 | 1,140,600 | -- |
| 1953 | 975,800 | 782,290 | 647,160 | 703,900 | 725,430 | 642,710 | 630,260 | 980,600 | 1,296,100 | 1,398,300 | 1,396,000 | 1,345,500 | -- |
| 1954 | 1,258,500 | 1,202,000 | 1,081,900 | 943,000 | 821,530 | 622,300 | 488,820 | 763,070 | 1,157,400 | 1,400,700 | 1,403,000 | 1,379,800 | -- |
| 1955 | 1,309,500 | 1,245,300 | 1,148,000 | 969,200 | 802,630 | 589,970 | 496,660 | 625,180 | 1,258,500 | 1,399,500 | 1,391,400 | 1,244,400 | -- |
| 1956 | 1,314,000 | 1,247,500 | 1,128,100 | 943,900 | 731,890 | 530,590 | 571,110 | 1,005,600 | 1,278,400 | 1,403,000 | 1,397,200 | 1,352,400 | -- |
| 1957 | 1,326,300 | 1,250,800 | 1,181,700 | 930,000 | 746,570 | 608,760 | 602,440 | 1,191,300 | 1,384,400 | 1,394,900 | 1,398,300 | 1,323,000 | -- |
| 1958 | 1,199,800 | 1,055,700 | 918,100 | 787,350 | 723,020 | 604,530 | 616,570 | 1,188,100 | 1,372,900 | 1,400,700 | 1,401,800 | 1,355,800 | -- |
| 1959 | 1,276,200 | 1,205,200 | 1,168,000 | 1,009,500 | 801,780 | 603,140 | 582,490 | 846,740 | 1,363,800 | 1,403,000 | 1,379,800 | 1,393,700 | -- |
| 1960 | 1,305,000 | 1,251,900 | 1,116,700 | 895,500 | 748,200 | 677,400 | 731,900 | 933,700 | 1,329,700 | 1,405,300 | 1,342,200 | 1,325,800 | -- |
| 1961 | 1,233,300 | 1,137,500 | 983,500 | 974,900 | 998,800 | 962,600 | 943,000 | 1,224,600 | 1,404,100 | 1,405,300 | 1,405,300 | 1,345,500 | -- |
| 1962 | 1,298,400 | 1,170,100 | 1,019,200 | 964,500 | 897,300 | 744,900 | 811,200 | 992,100 | 1,376,400 | 1,404,100 | 1,396,000 | 1,358,300 | -- |
| 1963 | 1,327,500 | 1,283,900 | 1,279,500 | 1,142,700 | 1,221,400 | 1,149,000 | 1,095,100 | 1,315,100 | 1,404,100 | 1,405,300 | 1,399,500 | 1,378,600 | -- |
| 1964 | 1,356,900 | 1,283,900 | 1,232,200 | 1,162,700 | 992,100 | 804,300 | 718,200 | 827,600 | 1,350,100 | 1,405,300 | 1,404,100 | 1,386,700 | -- |
| 1965 | 1,341,000 | 1,212,700 | 1,048,700 | 916,300 | 885,600 | 818,100 | 838,900 | 1,126,000 | 1,403,000 | 1,405,300 | 1,405,300 | 1,392,500 | -- |
| 1966 | 1,346,700 | 1,211,700 | 1,247,500 | 1,132,300 | 1,021,700 | 866,090 | 732,700 | 1,059,700 | 1,405,300 | 1,434,800 | 1,434,800 | 1,391,400 | -- |
| 1967 | 1,341,000 | 1,275,000 | 1,110,500 | 867,900 | 656,900 | 503,500 | 571,800 | 928,200 | 1,292,800 | 1,405,300 | 1,405,300 | 1,381,000 | -- |
| 1968 | 1,404,100 | 1,309,500 | 1,219,200 | 1,212,700 | 1,208,400 | 1,155,300 | 992,100 | 1,290,600 | 1,434,800 | 1,432,400 | 1,428,800 | 1,398,300 | -- |
| 1969 | 1,346,700 | 1,314,000 | 1,087,000 | 835,400 | 616,600 | 481,100 | 546,000 | 1,104,400 | 1,434,800 | 1,434,800 | 1,422,900 | 1,410,000 | -- |
| 1970 | 1,351,300 | 1,251,000 | 1,067,400 | 849,500 | 724,600 | 568,100 | 540,700 | 890,500 | 1,405,100 | 1,434,600 | 1,372,800 | 1,317,400 | -- |
| 1971 | 1,260,400 | 1,198,000 | 1,027,800 | 894,300 | 912,300 | 757,600 | 775,700 | 1,323,600 | 1,434,600 | 1,434,600 | 1,430,500 | 1,404,100 | -- |
| 1972 | 1,367,800 | 1,314,300 | 1,091,800 | 822,400 | 680,100 | 833,100 | 768,500 | 1,314,700 | 1,424,700 | 1,434,900 | 1,432,600 | 1,410,200 | -- |
| 1973 | 1,355,800 | 1,296,500 | 1,191,600 | 997,300 | 874,700 | 734,100 | 723,600 | 1,055,900 | 1,360,300 | 1,415,500 | 1,379,300 | 1,378,600 | -- |

a Contents by capacity table used beginning Oct. 1, 1942; contents Sept. 30, 1942, by capacity table used since Oct. 1, 1942, was 92,850 acre-ft.

Note.--Contents at 12 p.m. based on 2 daily observations March to September 1940, June 1943 to March 1948. All other contents from elevations at 12 p.m.

TABLE C2.--Monthly and yearly mean stream discharges, gage height of Skagit River at International Boundary, and end-of-month contents of reservoirs--Continued

| Year | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38. Diablo Reservoir near Newhalem (12176500) | | | | | | | | | | | | | |
| 1930 | 660 | 1,850 | 6,020 | 1,780 | 7,770 | 2,690 | 650 | 820 | 600 | 3,070 | 24,570 | 59,570 | -- |
| 1931 | 70,300 | 64,200 | 54,860 | 91,770 | 88,400 | 88,950 | 90,550 | 80,050 | 80,220 | 90,640 | 91,110 | 84,500 | -- |
| 1932 | 49,700 | 85,680 | 78,700 | 81,730 | 82,060 | 77,750 | 79,290 | 80,800 | 90,450 | 88,010 | 91,020 | 72,420 | -- |
| 1933 | 86,010 | 91,020 | 87,540 | 80,220 | 30,490 | 22,960 | 79,960 | 85,840 | 86,980 | 89,610 | 89,610 | 90,920 | -- |
| 1934 | 91,390 | 90,830 | 89,980 | 90,080 | 89,700 | 89,800 | 86,980 | 88,010 | 88,860 | 88,200 | 87,730 | 72,880 | -- |
| 1935 | 72,800 | 87,920 | 91,820 | 91,540 | 88,860 | 45,400 | 53,100 | 88,290 | 88,200 | 86,350 | 91,300 | 83,580 | -- |
| 1936 | 47,730 | 36,720 | 38,760 | 35,470 | 21,750 | 19,680 | 90,610 | 89,980 | 90,140 | 91,020 | 91,020 | 81,730 | -- |
| 1937 | 79,180 | 75,450 | 91,860 | 64,600 | 44,990 | 80,640 | 86,630 | 90,550 | 86,500 | 90,680 | 89,640 | 78,870 | -- |
| 1938 | 91,980 | 91,540 | 91,220 | 91,250 | 86,430 | 86,090 | 88,550 | 90,280 | 90,750 | 91,440 | 90,560 | 92,010 | -- |
| 1939 | 92,040 | 85,000 | 91,850 | 91,810 | 88,710 | 87,720 | 86,720 | 88,280 | 88,520 | 91,540 | 91,300 | 89,510 | -- |
| 1940 | 91,770 | 91,250 | 91,910 | 91,840 | 91,510 | 71,600 | 91,270 | 89,790 | 91,300 | 91,840 | 91,520 | 91,110 | -- |
| 1941 | 88,470 | 89,980 | 90,930 | 91,330 | 86,540 | 88,550 | 91,430 | 90,720 | 90,540 | 90,570 | 90,660 | 85,410 | -- |
| 1942 | 90,100 | 92,160 | 89,420 | 90,750 | 81,940 | 63,520 | 87,220 | 89,630 | 87,790 | 88,260 | 88,950 | 88,570 | -- |
| 1943 | 85,820 | 85,990 | 87,590 | 84,320 | 73,660 | 87,590 | 88,130 | 88,220 | 80,060 | 81,320 | 87,860 | 87,320 | -- |
| 1944 | 86,340 | 88,130 | 88,950 | 85,020 | 84,240 | 86,520 | 88,580 | 88,760 | 87,500 | 87,500 | 86,520 | 86,700 | -- |
| 1945 | 86,800 | 87,500 | 86,880 | 86,080 | 87,230 | 85,640 | 86,340 | 86,520 | 86,880 | 88,040 | 86,790 | 88,130 | -- |
| 1946 | 88,040 | 86,960 | 86,170 | 87,140 | 86,080 | 87,320 | 87,410 | 89,220 | 88,400 | 86,880 | 85,460 | 86,880 | -- |
| 1947 | 86,080 | 87,050 | 85,820 | 86,340 | 86,340 | 87,500 | 86,080 | 87,770 | 87,590 | 87,770 | 87,410 | 87,860 | -- |
| 1948 | 89,130 | 89,310 | 88,490 | 87,590 | 89,500 | 88,580 | 88,040 | 87,590 | 87,590 | 88,860 | 87,860 | 88,220 | -- |
| 1949 | 88,670 | 87,770 | 86,520 | 88,580 | 88,670 | 87,410 | 88,400 | 89,590 | 86,170 | 87,590 | 77,300 | 77,700 | -- |
| 1950 | 77,300 | 77,380 | 76,900 | 76,590 | 76,750 | 76,670 | 78,420 | 78,910 | 78,670 | 77,460 | 78,180 | 77,780 | -- |
| 1951 | 79,080 | 79,400 | 77,700 | 78,910 | 30,280 | 28,420 | 79,160 | 77,780 | 61,140 | 74,800 | 84,500 | 85,990 | -- |
| 1952 | 79,400 | 88,400 | 86,700 | 87,050 | 87,400 | 87,140 | 88,760 | 87,050 | 87,770 | 89,680 | 88,950 | 88,580 | -- |
| 1953 | 86,700 | 79,490 | 86,700 | 88,580 | 87,050 | 85,990 | 86,700 | 85,730 | 88,040 | 86,790 | 54,830 | 84,760 | -- |
| 1954 | 87,410 | 88,400 | 82,940 | 86,430 | 86,960 | 86,670 | 87,230 | 85,020 | 86,430 | 89,130 | 88,130 | 86,520 | -- |
| 1955 | 86,700 | 87,140 | 85,640 | 88,490 | 88,400 | 87,860 | 85,200 | 84,760 | 85,820 | 87,140 | 87,950 | 86,430 | -- |
| 1956 | 86,790 | 87,410 | 85,290 | 88,400 | 87,410 | 85,990 | 85,290 | 86,960 | 86,700 | 85,990 | 86,080 | 85,110 | -- |
| 1957 | 87,230 | 87,320 | 86,790 | 86,790 | 85,200 | 83,890 | 87,590 | 85,020 | 84,240 | 83,800 | 89,130 | 84,060 | -- |
| 1958 | 83,550 | 82,770 | 84,760 | 87,590 | 85,460 | 83,290 | 86,340 | 83,980 | 75,110 | 87,860 | 85,460 | 88,220 | -- |
| 1959 | 89,220 | 84,670 | 85,820 | 86,340 | 83,630 | 88,040 | 85,290 | 83,800 | 82,170 | 83,800 | 84,150 | 84,320 | -- |
| 1960 | 84,240 | 84,240 | 87,320 | 84,150 | 88,760 | 88,950 | 83,980 | 78,750 | 80,060 | 79,900 | 87,950 | 83,290 | -- |
| 1961 | 83,630 | 83,550 | 86,790 | 85,110 | 85,290 | 87,320 | 84,940 | 83,800 | 85,020 | 84,590 | 86,790 | 85,820 | -- |
| 1962 | 85,460 | 85,290 | 84,500 | 84,850 | 89,040 | 82,770 | 82,600 | 84,240 | 85,990 | 83,290 | 84,500 | 84,410 | -- |
| 1963 | 83,720 | 86,340 | 83,460 | 82,080 | 82,170 | 84,760 | 86,430 | 85,640 | 89,130 | 85,820 | 84,410 | 83,630 | -- |
| 1964 | 86,340 | 84,060 | 83,200 | 83,550 | 83,550 | 83,890 | 83,720 | 84,410 | 84,320 | 87,590 | 88,490 | 85,820 | -- |
| 1965 | 86,080 | 83,290 | 83,550 | 82,600 | 83,200 | 83,460 | 84,760 | 82,340 | 86,520 | 89,400 | 83,980 | 82,340 | -- |
| 1966 | 83,890 | 84,760 | 86,430 | 85,290 | 85,990 | 83,980 | 85,460 | 83,800 | 84,320 | 89,500 | 83,980 | 82,260 | -- |
| 1967 | 83,460 | 84,150 | 84,670 | 84,410 | 83,120 | 83,720 | 82,690 | 83,980 | 89,500 | 89,770 | 86,520 | 86,080 | -- |
| 1968 | 89,500 | 84,760 | 85,380 | 85,640 | 83,980 | 83,980 | 87,950 | 86,880 | 89,860 | 87,140 | 85,730 | 83,370 | -- |
| 1969 | 81,920 | 86,080 | 84,060 | 82,260 | 87,500 | 88,040 | 86,700 | 87,320 | 88,310 | 87,410 | 83,630 | 86,260 | -- |
| 1970 | 84,390 | 86,380 | 84,660 | 83,190 | 85,090 | 86,480 | 86,190 | 86,160 | 87,450 | 89,060 | 87,840 | 86,590 | -- |
| 1971 | 86,940 | 84,760 | 85,190 | 84,040 | 83,200 | 84,080 | 88,090 | 87,460 | 86,240 | 89,470 | 89,310 | 87,040 | -- |
| 1972 | 86,010 | 89,270 | 83,080 | 83,650 | 83,530 | 87,650 | 88,080 | 88,580 | 88,320 | 89,550 | 88,710 | 87,040 | -- |
| 1973 | 87,620 | 85,280 | 83,860 | 83,160 | 87,000 | 87,300 | 88,170 | 89,450 | 87,400 | 87,430 | 89,200 | 88,690 | -- |

## TABLE C3.--Chemical quality of surface water

12181000 - SKAGIT RIVER AT MARBLEMOUNT, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | | | |
| 15... | 11700 | 4.8 | -- | 7.0 | .1 | .6 | .4 | 22 | 0 | 18 | 3.0 |
| AUG. | | | | | | | | | | | |
| 20... | 4320 | 4.7 | 20 | 6.5 | .5 | .6 | .7 | 22 | 0 | 18 | 3.4 |
| SEP. | | | | | | | | | | | |
| 29... | 5990 | 5.1 | 100 | 6.5 | .8 | .8 | .6 | 23 | 0 | 19 | 3.2 |
| OCT. | | | | | | | | | | | |
| 21... | 11400 | 5.6 | 150 | 7.5 | 1.1 | .9 | .9 | 27 | 0 | 22 | 3.7 |
| NOV. | | | | | | | | | | | |
| 19... | 6950 | 5.3 | 70 | 7.5 | .5 | .8 | .2 | 24 | 0 | 20 | 3.6 |
| DEC. | | | | | | | | | | | |
| 22... | 6780 | 6.5 | 70 | 8.0 | 1.1 | .8 | .3 | 29 | 0 | 24 | 4.2 |
| JAN., 1960 | | | | | | | | | | | |
| 20... | 6880 | 6.5 | 40 | 10 | 1.2 | .7 | .4 | 34 | 0 | 28 | 4.8 |
| FEB. | | | | | | | | | | | |
| 17... | 5470 | 6.4 | 30 | 8.0 | 1.4 | .8 | .7 | 30 | 0 | 25 | 3.7 |
| MAR. | | | | | | | | | | | |
| 16... | 4650 | 6.4 | 40 | 10 | 1.2 | .9 | .3 | 34 | 0 | 28 | 4.8 |
| APR. | | | | | | | | | | | |
| 19... | 5620 | 6.2 | 40 | 10 | .9 | .9 | .4 | 33 | 0 | 27 | 4.8 |
| MAY | | | | | | | | | | | |
| 17... | 5940 | 5.4 | 20 | 8.0 | .7 | .8 | .4 | 26 | 0 | 21 | 3.6 |
| JUNE | | | | | | | | | | | |
| 08... | 7180 | 5.0 | 150 | 6.0 | .8 | .7 | .3 | 21 | 0 | 17 | 3.6 |
| JULY | | | | | | | | | | | |
| 22... | 7090 | 4.0 | 80 | 6.0 | .5 | 1.0 | .6 | 20 | 0 | 16 | 2.8 |
| SEP. | | | | | | | | | | | |
| 08... | 5140 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | | |
| 05... | 4170 | 4.6 | 50 | 7.5 | 8.0 | 1.0 | .3 | 26 | 0 | 21 | 4.0 |
| JAN., 1961 | | | | | | | | | | | |
| 03... | 5950 | 6.2 | 50 | 9.0 | 1.4 | .8 | .4 | 32 | 0 | 26 | 3.8 |
| APR. | | | | | | | | | | | |
| 20... | 5260 | 5.8 | 10 | 9.5 | .7 | .8 | .2 | 31 | 0 | 25 | 4.0 |
| JULY | | | | | | | | | | | |
| 06... | 10800 | 4.7 | 110 | 7.0 | .7 | .7 | .5 | 24 | 0 | 20 | 3.6 |
| NOV. | | | | | | | | | | | |
| 02... | 5010 | 5.2 | 20 | 6.5 | .7 | .9 | .9 | 23 | 0 | 19 | 3.2 |
| FEB., 1962 | | | | | | | | | | | |
| 07... | 6630 | 5.6 | 8 | 7.0 | .6 | .8 | .7 | 24 | 0 | 20 | 3.8 |
| MAY | | | | | | | | | | | |
| 03... | 4120 | 5.5 | 30 | 8.0 | .8 | .9 | .5 | 26 | 0 | 21 | 3.8 |

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | | | |
| 15... | .5 | .2 | .05 | .20 | .00 | -- | 23 | 28 | 18 | 0 | 43 |
| AUG. | | | | | | | | | | | |
| 20... | .2 | .1 | .00 | .00 | .06 | -- | 28 | 28 | 18 | 0 | 44 |
| SEP. | | | | | | | | | | | |
| 29... | .0 | .1 | .11 | .50 | .00 | -- | 32 | 29 | 19 | 0 | 46 |
| OCT. | | | | | | | | | | | |
| 21... | .2 | .0 | .00 | .00 | -- | .03 | 35 | 33 | 23 | 1 | 54 |
| NOV. | | | | | | | | | | | |
| 19... | .2 | .1 | .25 | 1.1 | -- | .00 | 32 | 31 | 20 | 1 | 49 |
| DEC. | | | | | | | | | | | |
| 22... | .2 | .1 | .07 | .30 | -- | .00 | 31 | 36 | 24 | 0 | 58 |
| JAN., 1960 | | | | | | | | | | | |
| 20... | .0 | .0 | .05 | .20 | -- | .05 | 38 | 41 | 30 | 0 | 64 |
| FEB. | | | | | | | | | | | |
| 17... | .2 | .0 | .05 | .20 | -- | .02 | 35 | 36 | 26 | 1 | 60 |
| MAR. | | | | | | | | | | | |
| 16... | .2 | .1 | .05 | .20 | -- | .00 | 42 | 41 | 30 | 2 | 70 |
| APR. | | | | | | | | | | | |
| 19... | .5 | .0 | .05 | .20 | -- | .00 | 42 | 40 | 29 | 2 | 66 |
| MAY | | | | | | | | | | | |
| 17... | .0 | .0 | .05 | .20 | -- | .01 | 33 | 32 | 23 | 2 | 52 |
| JUNE | | | | | | | | | | | |
| 08... | .2 | .0 | .05 | .20 | -- | .02 | 27 | 27 | 18 | 1 | 43 |
| JULY | | | | | | | | | | | |
| 22... | .0 | .0 | .00 | .00 | -- | .00 | 28 | 25 | 17 | 0 | 40 |
| SEP. | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | | |
| 05... | .0 | .0 | .05 | .20 | -- | .01 | 35 | 38 | 22 | 1 | 51 |
| JAN., 1961 | | | | | | | | | | | |
| 03... | .0 | .0 | .05 | .20 | -- | .01 | 39 | 38 | 28 | 2 | 64 |
| APR. | | | | | | | | | | | |
| 20... | .0 | .1 | .05 | .20 | -- | .00 | 38 | 37 | 26 | 1 | 61 |
| JULY | | | | | | | | | | | |
| 06... | .0 | .0 | .05 | .20 | -- | .01 | 29 | 29 | 20 | 0 | 46 |
| NOV. | | | | | | | | | | | |
| 02... | .0 | .0 | .07 | .30 | -- | .01 | 30 | 29 | 19 | 0 | 45 |
| FEB., 1962 | | | | | | | | | | | |
| 07... | .0 | .0 | .11 | .50 | -- | .00 | 37 | 31 | 20 | 0 | 48 |
| MAY | | | | | | | | | | | |
| 03... | .0 | .1 | .05 | .20 | -- | .00 | 35 | 33 | 23 | 2 | 54 |

## TABLE C3.--Chemical quality of surface water--Continued

12181000 - SKAGIT RIVER AT MARBLEMOUNT, WASH.

WATER QUALITY DATA

| DATE | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | DIS-SOLVED OXYGEN (MG/L) | COM-PLETE COLI-FORM (MPN) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | | |
| 15... | 6.9 | 11.7 | 5 | -- | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 20... | 7.2 | -- | 0 | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 29... | 7.2 | 10.0 | 5 | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 21... | 7.3 | 11.8 | 5 | 11.4 | 0 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 19... | 7.1 | 6.7 | 0 | 11.5 | 36 | 0 | -- | 0 | 0 | -- |
| DEC. | | | | | | | | | | |
| 22... | 7.2 | 5.0 | 5 | 12.1 | 0 | -- | -- | -- | -- | -- |
| JAN., 1960 | | | | | | | | | | |
| 20... | 8.0 | 5.6 | 5 | 13.1 | 36 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 17... | 7.4 | 4.6 | 5 | 12.7 | 0 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 16... | 7.4 | 3.8 | 0 | 13.1 | 36 | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 19... | 7.6 | 6.0 | 5 | 12.7 | 0 | 0 | 0 | 0 | 20 | -- |
| MAY | | | | | | | | | | |
| 17... | 7.7 | 7.8 | 5 | 11.0 | 0 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 08... | 7.2 | 11.6 | 0 | 10.5 | 0 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 22... | 7.4 | 11.0 | 5 | 11.4 | 0 | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | 0 | -- | 20 | 0 | -- |
| OCT. | | | | | | | | | | |
| 05... | 7.2 | 10.5 | 5 | 11.0 | 91 | -- | -- | -- | -- | -- |
| JAN., 1961 | | | | | | | | | | |
| 03... | 7.5 | 5.5 | 5 | -- | 0 | 0 | 20 | 0 | 10 | -- |
| APR. | | | | | | | | | | |
| 20... | 7.4 | 6.2 | 5 | 12.5 | 36 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 06... | 7.3 | 15.2 | 5 | 11.6 | 0 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 02... | 7.3 | 7.0 | 5 | 12.4 | 36 | 0 | 20 | 20 | 0 | 0 |
| FEB., 1962 | | | | | | | | | | |
| 07... | 7.2 | 5.0 | 5 | 12.0 | 0 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 03... | 7.1 | 6.2 | 5 | 12.1 | 91 | 0 | 10 | 0 | 0 | 0 |

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG., 1962 | | | | | | | | | | | |
| 15... | 4570 | 4.7 | 60 | 6.5 | .8 | .8 | .6 | 23 | 0 | 19 | 3.0 |
| NOV. | | | | | | | | | | | |
| 09... | 5320 | 5.3 | 30 | 8.0 | .4 | .9 | .8 | 25 | 0 | 21 | 4.0 |
| FEB., 1963 | | | | | | | | | | | |
| 07... | 6000 | 3.9 | 140 | 4.5 | .7 | .6 | .3 | 16 | 0 | 13 | 2.2 |
| MAY | | | | | | | | | | | |
| 02... | 5340 | 5.4 | 20 | 9.5 | .9 | .9 | .6 | 31 | 0 | 25 | 4.6 |
| AUG. | | | | | | | | | | | |
| 14... | 7410 | 4.5 | 230 | 7.0 | .4 | .8 | .6 | 23 | 0 | 19 | 3.4 |
| NOV. | | | | | | | | | | | |
| 13... | 6580 | 4.5 | 90 | 7.0 | .6 | .9 | .5 | 23 | 0 | 19 | 4.0 |
| FEB., 1964 | | | | | | | | | | | |
| 20... | 6000 | 6.2 | 40 | 10 | 1.3 | 1.2 | .9 | 35 | 0 | 29 | 5.2 |
| JUNE | | | | | | | | | | | |
| 01... | 10600 | 3.7 | 140 | 5.5 | .9 | .8 | .3 | 20 | 0 | 16 | 2.4 |
| AUG. | | | | | | | | | | | |
| 25... | 4740 | 3.9 | 90 | 7.0 | .6 | .8 | .4 | 24 | 0 | 20 | 3.4 |
| NOV. | | | | | | | | | | | |
| 24... | 5880 | 3.6 | 90 | 6.0 | .7 | .8 | .4 | 20 | 0 | 16 | 3.4 |
| FEB., 1965 | | | | | | | | | | | |
| 19... | 5130 | 4.8 | 30 | 7.6 | 1.2 | 1.1 | .7 | 29 | 0 | 24 | 3.6 |
| MAY | | | | | | | | | | | |
| 11... | 4730 | 4.8 | 30 | 7.6 | 1.2 | 1.0 | .3 | 26 | 0 | 21 | 3.8 |
| AUG. | | | | | | | | | | | |
| 09... | 5830 | 4.4 | 0 | 6.4 | 1.2 | .8 | .4 | 23 | 0 | 19 | 3.6 |
| DEC. | | | | | | | | | | | |
| 15... | 6750 | 5.6 | -- | 9.2 | 1.2 | 1.1 | .5 | 32 | 0 | 26 | 4.6 |
| MAR., 1966 | | | | | | | | | | | |
| 15... | 6110 | 5.1 | -- | 9.2 | 1.1 | 1.0 | .4 | 31 | 0 | 25 | 4.8 |
| JUNE | | | | | | | | | | | |
| 16... | 5240 | 3.0 | -- | 4.0 | .6 | .6 | .2 | 15 | 0 | 12 | 2.4 |
| SEP. | | | | | | | | | | | |
| 13... | 3500 | 4.1 | -- | 7.1 | .9 | .9 | .6 | 23 | 0 | 19 | 4.0 |
| DEC. | | | | | | | | | | | |
| 28... | 6030 | 5.0 | -- | 8.0 | .9 | 1.1 | .4 | 28 | 0 | 23 | 5.0 |
| MAR., 1967 | | | | | | | | | | | |
| 28... | 5500 | 5.6 | -- | 9.7 | 1.5 | 1.0 | .7 | 34 | 0 | 28 | 4.8 |
| JUNE | | | | | | | | | | | |
| 13... | 8970 | 4.0 | -- | 6.0 | .5 | .9 | .6 | 22 | 0 | 18 | 3.0 |
| SEP. | | | | | | | | | | | |
| 19... | 5240 | 4.2 | -- | 7.1 | .9 | .8 | .6 | 26 | 0 | 21 | 3.4 |

## TABLE C3.--Chemical quality of surface water--Continued

121N1000 - SKAGIT RIVER AT MARBLEMOUNT, WASH.

WATER QUALITY DATA

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG., 1962 | | | | | | | | | | | |
| 15... | .0 | .0 | .07 | .30 | -- | .01 | 30 | 28 | 20 | 0 | 45 |
| NOV. | | | | | | | | | | | |
| 09... | .5 | .1 | .02 | .10 | -- | .00 | 36 | 32 | 22 | 2 | 50 |
| FEB., 1963 | | | | | | | | | | | |
| 07... | .0 | .1 | .09 | .40 | -- | .01 | 24 | 21 | 14 | 1 | 32 |
| MAY | | | | | | | | | | | |
| 02... | .2 | .1 | .07 | .30 | -- | .00 | 41 | 38 | 27 | 2 | 61 |
| AUG. | | | | | | | | | | | |
| 14... | .0 | .1 | .05 | .20 | -- | .02 | 26 | 28 | 19 | 0 | 43 |
| NOV. | | | | | | | | | | | |
| 13... | .0 | .0 | .07 | .30 | -- | .01 | 32 | 29 | 20 | 1 | 45 |
| FEB., 1964 | | | | | | | | | | | |
| 20... | .5 | .1 | .05 | .20 | -- | .00 | 44 | 43 | 30 | 2 | 67 |
| JUNE | | | | | | | | | | | |
| 01... | .0 | .0 | .09 | .40 | -- | .08 | 25 | 24 | 17 | 0 | 38 |
| AUG. | | | | | | | | | | | |
| 25... | .5 | .0 | .07 | .30 | -- | .01 | 28 | 29 | 20 | 0 | 46 |
| NOV. | | | | | | | | | | | |
| 24... | .0 | .1 | .00 | .00 | .01 | -- | 27 | 25 | 18 | 2 | 41 |
| FEB., 1965 | | | | | | | | | | | |
| 19... | .0 | .1 | .09 | .40 | .01 | -- | 32 | 34 | 24 | 0 | 54 |
| MAY | | | | | | | | | | | |
| 11... | .2 | .0 | .07 | .30 | .01 | -- | 32 | 32 | 24 | 2 | 52 |
| AUG. | | | | | | | | | | | |
| 09... | .2 | .1 | .05 | .20 | .01 | -- | 31 | 29 | 21 | 2 | 46 |
| DEC. | | | | | | | | | | | |
| 15... | .0 | .1 | .07 | .30 | -- | -- | 39 | 38 | 28 | 2 | 62 |
| MAR., 1966 | | | | | | | | | | | |
| 15... | .0 | .0 | .07 | .30 | -- | -- | 37 | 37 | 28 | 2 | 62 |
| JUNE | | | | | | | | | | | |
| 16... | .0 | .1 | .05 | .20 | -- | -- | 18 | 18 | 12 | 0 | 30 |
| SEP. | | | | | | | | | | | |
| 13... | .0 | .1 | .07 | .30 | -- | -- | 29 | 29 | 21 | 2 | 46 |
| DEC. | | | | | | | | | | | |
| 28... | .0 | .0 | .09 | .40 | -- | -- | 35 | 35 | 24 | 1 | 55 |
| MAR., 1967 | | | | | | | | | | | |
| 28... | .0 | .1 | .07 | .30 | -- | -- | 42 | 40 | 30 | 2 | 67 |
| JUNE | | | | | | | | | | | |
| 13... | .0 | .0 | .02 | .10 | -- | -- | 28 | 26 | 17 | 0 | 40 |
| SEP. | | | | | | | | | | | |
| 19... | .0 | .1 | .02 | .10 | -- | -- | 30 | 30 | 21 | 0 | 48 |

| DATE | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | DIS-SOLVED OXYGEN (MG/L) | COM-PLETE COLI-FORM (MPN) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG., 1962 | | | | | | | | | | |
| 15... | 7.6 | 10.2 | 5 | 9.7 | 0 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 09... | 7.3 | 8.5 | 5 | 10.5 | 30 | 0 | -- | 10 | 0 | 0 |
| FEB., 1963 | | | | | | | | | | |
| 07... | 6.8 | 4.3 | 5 | 12.1 | 0 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | 7.2 | 6.3 | 5 | 12.2 | 0 | 0 | 20 | 0 | 0 | 0 |
| AUG. | | | | | | | | | | |
| 14... | 7.4 | 12.2 | 5 | 10.7 | 36 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 13... | 7.0 | 8.4 | 5 | 12.1 | 91 | 0 | 20 | 0 | 0 | 0 |
| FEB., 1964 | | | | | | | | | | |
| 20... | 7.0 | 6.0 | 5 | 13.1 | 0 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 01... | 7.1 | 8.5 | 5 | 12.1 | 0 | 0 | 0 | 20 | 0 | 0 |
| AUG. | | | | | | | | | | |
| 25... | 7.3 | 11.0 | 0 | 10.4 | 91 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 24... | 7.1 | 5.5 | 5 | 11.9 | 91 | 0 | 40 | 0 | 60 | 0 |
| FEB., 1965 | | | | | | | | | | |
| 19... | 7.3 | 4.2 | 5 | 12.6 | 230 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 11... | 7.1 | 10.0 | 0 | 11.5 | 36 | 0 | 10 | 0 | 10 | 0 |
| AUG. | | | | | | | | | | |
| 09... | 7.4 | 11.6 | 0 | 11.1 | 91 | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 15... | 7.1 | 6.5 | 5 | 11.8 | 36 | -- | -- | -- | -- | -- |
| MAR., 1966 | | | | | | | | | | |
| 15... | 7.2 | 4.7 | 5 | 12.7 | 0 | 0 | 0 | 10 | 10 | 0 |
| JUNE | | | | | | | | | | |
| 16... | 6.9 | 11.9 | 5 | 11.3 | 0 | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 13... | 6.8 | 13.1 | 0 | 13.3 | 0 | 0 | 10 | 10 | 10 | 0 |
| DEC. | | | | | | | | | | |
| 28... | 7.5 | -- | 5 | -- | -- | -- | -- | -- | -- | -- |
| MAR., 1967 | | | | | | | | | | |
| 28... | 7.4 | 5.4 | 5 | 12.6 | 0 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 13... | 7.4 | 10.4 | 5 | 12.5 | 36 | 10 | 50 | 0 | 0 | 10 |
| SEP. | | | | | | | | | | |
| 19... | 7.3 | 12.8 | 5 | 11.8 | 0 | -- | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12181000 - SKAGIT RIVER AT MARBLEMOUNT, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN., 1968 | | | | | | | | | | | |
| 23... | 6650 | 4.4 | 6.9 | 1.0 | 1.0 | .5 | 24 | 0 | 20 | 3.6 | .2 |
| MAR. | | | | | | | | | | | |
| 19... | 6810 | 5.3 | 9.1 | 1.3 | 1.1 | .4 | 34 | 0 | 28 | 4.0 | .2 |
| JUNE | | | | | | | | | | | |
| 04... | 6930 | 3.7 | 5.1 | .7 | .8 | .6 | 20 | 0 | 16 | 2.6 | .1 |
| SEP. | | | | | | | | | | | |
| 10... | 3620 | 4.1 | 6.6 | .9 | .4 | .4 | 23 | 0 | 19 | 3.4 | .0 |
| DEC. | | | | | | | | | | | |
| 04... | 8850 | 4.8 | 6.8 | 1.0 | .8 | .4 | 25 | 0 | 20 | 4.0 | .1 |
| MAR., 1969 | | | | | | | | | | | |
| 19... | 4600 | 6.2 | 9.1 | 1.2 | .8 | .5 | 32 | 0 | 26 | 4.7 | .1 |
| JUNE | | | | | | | | | | | |
| 17... | 13900 | 4.0 | 5.3 | .8 | .7 | .7 | 22 | 0 | 18 | 2.8 | .1 |
| SEP. | | | | | | | | | | | |
| 16... | 3480 | 4.5 | 6.5 | .9 | .7 | .4 | 24 | 0 | 20 | 3.6 | .2 |
| DEC. | | | | | | | | | | | |
| 10... | 5950 | 5.3 | 8.8 | 1.1 | .6 | .5 | 30 | 0 | 25 | 4.2 | .2 |
| MAR., 1970 | | | | | | | | | | | |
| 10... | 5250 | 5.3 | 9.3 | 1.3 | 1.2 | .6 | 33 | 0 | 27 | 4.8 | .2 |
| JUNE | | | | | | | | | | | |
| 09... | 3430 | 3.4 | 3.8 | .6 | .6 | .5 | 15 | 0 | 12 | 1.6 | .2 |
| SEP. | | | | | | | | | | | |
| 09... | 3410 | 4.1 | 6.4 | .9 | .9 | .4 | 24 | 0 | 20 | 3.2 | .2 |

| DATE | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS_ SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN., 1968 | | | | | | | | | | | |
| 23... | .1 | .02 | .10 | 29 | 30 | 21 | 2 | 44 | 7.2 | 6.0 | 5 |
| MAR. | | | | | | | | | | | |
| 19... | .1 | .02 | .10 | 42 | 38 | 28 | 0 | 62 | 7.6 | 6.0 | 5 |
| JUNE | | | | | | | | | | | |
| 04... | .1 | .07 | .30 | 23 | 24 | 16 | 0 | 36 | 7.2 | 10.0 | 5 |
| SEP. | | | | | | | | | | | |
| 10... | .0 | .05 | .20 | 34 | 27 | 20 | 1 | 44 | 7.4 | 12.0 | 5 |
| DEC. | | | | | | | | | | | |
| 04... | .1 | .07 | .30 | 28 | 31 | 21 | 1 | 48 | 7.1 | 6.0 | 5 |
| MAR., 1969 | | | | | | | | | | | |
| 19... | .1 | .05 | .20 | 36 | 39 | 28 | 2 | 63 | 7.7 | 5.0 | 0 |
| JUNE | | | | | | | | | | | |
| 17... | .1 | .07 | .30 | 30 | 26 | 17 | 0 | 39 | 7.3 | 12.5 | 0 |
| SEP. | | | | | | | | | | | |
| 16... | .1 | .05 | .20 | 31 | 29 | 20 | 0 | 46 | 7.2 | 10.0 | 0 |
| DEC. | | | | | | | | | | | |
| 10... | .1 | .05 | .20 | 40 | 36 | 27 | 2 | 60 | 7.4 | 7.1 | 5 |
| MAR., 1970 | | | | | | | | | | | |
| 10... | .1 | .09 | .40 | 38 | 39 | 29 | 2 | 65 | 7.3 | 5.7 | 0 |
| JUNE | | | | | | | | | | | |
| 09... | .1 | .09 | .40 | 21 | 19 | 12 | 0 | 29 | 7.2 | 8.9 | 5 |
| SEP. | | | | | | | | | | | |
| 09... | .0 | .05 | .20 | 31 | 28 | 20 | 0 | 46 | 7.4 | 9.5 | 0 |

| DATE | DIS-SOLVED OXYGEN (MG/L) | IMME-DIATE COLI-FORM (COL. PER 100 ML) | COM-PLETE COLI-FORM (MPN) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | TOTAL CHRO-MIUM (CR) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED LITHIUM (LI) (UG/L) | DIS-SOLVED STRON-TIUM (SR) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN., 1968 | | | | | | | | | | | |
| 23... | 12.4 | -- | 4600 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| MAR. | | | | | | | | | | | |
| 19... | 13.0 | -- | 0 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | | |
| 04... | 11.6 | 30 | -- | 0 | -- | 0 | 0 | 0 | 0 | 0 | 0 |
| SEP. | | | | | | | | | | | |
| 10... | 11.9 | 43 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | | |
| 04... | 11.5 | 29 | -- | -- | 10 | 0 | 0 | 0 | -- | -- | 0 |
| MAR., 1969 | | | | | | | | | | | |
| 19... | 12.7 | 27 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | | |
| 17... | 11.3 | 32 | -- | -- | -- | 0 | 0 | 0 | -- | -- | 0 |
| SEP. | | | | | | | | | | | |
| 16... | 11.1 | 140 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | | |
| 10... | 11.5 | 30 | -- | -- | -- | 0 | 0 | 0 | -- | -- | 0 |
| MAR., 1970 | | | | | | | | | | | |
| 10... | 13.2 | 49 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | | |
| 09... | 11.7 | 112 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | | |
| 09... | 11.4 | 130 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12187500 - SAUK RIVER AT DARRINGTON, WASH.

WATER QUALITY DATA

| DATE | DIS-SOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) |
|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | |
| 15... | 5.6 | 140 | 4.0 | .4 | .7 | .4 | 14 | 0 |
| AUG. | | | | | | | | |
| 20... | 8.0 | 50 | 4.5 | .9 | 1.5 | .9 | 19 | 0 |
| SEP. | | | | | | | | |
| 29... | 7.1 | 80 | 5.0 | .8 | 1.1 | .6 | 18 | 0 |
| OCT. | | | | | | | | |
| 21... | 6.5 | 90 | 4.5 | .8 | 1.1 | .7 | 18 | 0 |
| NOV. | | | | | | | | |
| 19... | 5.5 | 280 | 3.0 | 1.1 | .8 | .3 | 13 | 0 |
| DEC. | | | | | | | | |
| 22... | 9.3 | 130 | 5.0 | 1.7 | 1.3 | .6 | 22 | 0 |
| JAN., 1960 | | | | | | | | |
| 20... | 13 | 30 | 7.0 | 1.7 | 1.9 | .7 | 28 | 0 |
| FEB. | | | | | | | | |
| 17... | 8.3 | 110 | 6.0 | 1.0 | 1.2 | .4 | 23 | 0 |
| MAR. | | | | | | | | |
| 16... | 11 | 80 | 7.0 | 1.1 | 1.9 | .4 | 27 | 0 |
| APR. | | | | | | | | |
| 19... | 8.5 | 90 | 5.0 | 1.0 | 1.1 | .3 | 20 | 0 |
| MAY | | | | | | | | |
| 16... | 6.6 | 90 | 4.0 | 1.1 | 1.0 | .4 | 18 | 0 |
| JUNE | | | | | | | | |
| 08... | 6.2 | 70 | 4.0 | .9 | 1.1 | .4 | 17 | 0 |
| JULY | | | | | | | | |
| 22... | 6.2 | 60 | 4.0 | .5 | 1.1 | .7 | 16 | 0 |
| SEP. | | | | | | | | |
| 08... | -- | 40 | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | |
| 05... | 11 | 40 | 7.0 | 1.5 | 2.8 | .8 | 29 | 0 |
| JAN., 1961 | | | | | | | | |
| 03... | 10 | 10 | 7.0 | 1.3 | 1.9 | .4 | 28 | 0 |
| APR. | | | | | | | | |
| 20... | 8.0 | 20 | 6.0 | .9 | 1.5 | .4 | 23 | 0 |
| JULY | | | | | | | | |
| 06... | 5.2 | 130 | 4.0 | .2 | .9 | .4 | 14 | 0 |

| DATE | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | |
| 16... | 11 | 2.3 | .2 | .1 | .00 | .00 | .02 | 18 | 21 |
| AUG. | | | | | | | | | |
| 20... | 16 | 4.1 | 1.0 | .1 | .00 | .00 | .01 | 29 | 30 |
| SEP. | | | | | | | | | |
| 29... | 15 | 3.5 | .2 | .1 | .09 | .40 | .01 | 29 | 28 |
| OCT. | | | | | | | | | |
| 21... | 15 | 3.0 | .5 | .2 | .05 | .20 | .00 | 28 | 26 |
| NOV. | | | | | | | | | |
| 19... | 11 | .9 | .0 | .1 | .07 | .30 | .01 | 31 | 18 |
| DEC. | | | | | | | | | |
| 22... | 18 | 3.8 | 1.0 | .1 | .07 | .30 | .02 | 33 | 34 |
| JAN., 1960 | | | | | | | | | |
| 20... | 23 | 6.1 | 1.2 | .0 | .02 | .10 | .04 | 42 | 45 |
| FEB. | | | | | | | | | |
| 17... | 19 | 3.3 | .5 | .0 | .20 | .90 | .08 | 34 | 33 |
| MAR. | | | | | | | | | |
| 16... | 22 | 5.0 | 1.2 | .1 | .07 | .30 | .01 | 41 | 41 |
| APR. | | | | | | | | | |
| 19... | 16 | 3.4 | .2 | .1 | .02 | .10 | .00 | 30 | 30 |
| MAY | | | | | | | | | |
| 16... | 15 | 3.0 | .8 | .0 | .02 | .10 | .40 | 26 | 26 |
| JUNE | | | | | | | | | |
| 08... | 14 | 3.2 | .5 | .0 | .02 | .10 | .01 | 24 | 25 |
| JULY | | | | | | | | | |
| 22... | 13 | 3.0 | .5 | .0 | .00 | .00 | .02 | 25 | 24 |
| SEP. | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | |
| 05... | 24 | 7.0 | 1.8 | .1 | .05 | .20 | .02 | 52 | 46 |
| JAN., 1961 | | | | | | | | | |
| 03... | 23 | 5.2 | 1.5 | .0 | .05 | .20 | .02 | 47 | 41 |
| APR. | | | | | | | | | |
| 20... | 19 | 3.6 | 1.0 | .0 | .02 | .10 | .01 | 34 | 33 |
| JULY | | | | | | | | | |
| 06... | 11 | 2.4 | .2 | .0 | .02 | .10 | .02 | 22 | 20 |

TABLE C3.--Chemical quality of surface water--Continued

12187500 - SAUK RIVER AT DARRINGTON, WASH.

WATER QUALITY DATA

| DATE | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) |
|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | |
| 15... | 12 | 1 | 30 | 6.3 | -- | -- | -- | -- |
| AUG. | | | | | | | | |
| 20... | 15 | 0 | 43 | 7.2 | -- | -- | -- | -- |
| SEP. | | | | | | | | |
| 29... | 16 | 1 | 40 | 7.0 | -- | -- | -- | -- |
| OCT. | | | | | | | | |
| 21... | 14 | 0 | 38 | 7.0 | -- | -- | -- | -- |
| NOV. | | | | | | | | |
| 19... | 12 | 1 | 30 | 5.7 | 0 | -- | 0 | 30 |
| DEC. | | | | | | | | |
| 22... | 20 | 2 | 48 | 7.3 | -- | -- | -- | -- |
| JAN., 1960 | | | | | | | | |
| 20... | 24 | 1 | 66 | 7.9 | -- | -- | -- | -- |
| FEB. | | | | | | | | |
| 17... | 19 | 0 | 49 | 7.6 | -- | -- | -- | -- |
| MAR. | | | | | | | | |
| 16... | 22 | 0 | 60 | 7.3 | -- | -- | -- | -- |
| APR. | | | | | | | | |
| 19... | 17 | 1 | 45 | 7.1 | 0 | 20 | 0 | 10 |
| MAY | | | | | | | | |
| 16... | 14 | 0 | 37 | 7.4 | -- | -- | -- | -- |
| JUNE | | | | | | | | |
| 08... | 14 | 0 | 35 | 7.1 | -- | -- | -- | -- |
| JULY | | | | | | | | |
| 22... | 12 | 0 | 33 | 7.2 | -- | -- | -- | -- |
| SEP. | | | | | | | | |
| 08... | -- | -- | -- | -- | 0 | -- | 20 | 0 |
| OCT. | | | | | | | | |
| 05... | 24 | 0 | 65 | 7.5 | -- | -- | -- | -- |
| JAN., 1961 | | | | | | | | |
| 03... | 23 | 0 | 59 | 7.3 | 0 | 0 | 20 | 0 |
| APR. | | | | | | | | |
| 20... | 18 | 0 | 48 | 7.1 | -- | -- | -- | -- |
| JULY | | | | | | | | |
| 06... | 11 | 0 | 28 | 7.3 | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12193500 - BAKER RIVER AT CONCRETE, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV., 1961 | | | | | | | | | | | |
| 02... | 1600 | 6.6 | 240 | 6.0 | .6 | 1.5 | .6 | 17 | 0 | 14 | 7.2 |
| FEB., 1962 | | | | | | | | | | | |
| 08... | 2990 | 8.4 | 190 | 6.0 | 1.2 | 1.4 | .7 | 18 | 0 | 15 | 7.8 |
| MAY | | | | | | | | | | | |
| 03... | 636 | 8.3 | 160 | 7.5 | 1.2 | 2.4 | .7 | 25 | 0 | 21 | 7.6 |
| AUG. | | | | | | | | | | | |
| 15... | 1620 | 6.2 | 0 | 6.0 | .5 | 1.2 | .8 | 18 | 0 | 15 | 6.8 |
| NOV. | | | | | | | | | | | |
| 09... | 2510 | 7.2 | 150 | 6.0 | .6 | 1.8 | .5 | 18 | 0 | 15 | 7.6 |
| FEB., 1963 | | | | | | | | | | | |
| 07... | 3400 | 8.0 | 320 | 6.5 | .8 | 1.3 | .3 | 19 | 0 | 16 | 7.4 |
| MAY | | | | | | | | | | | |
| 02... | 332 | 7.0 | 250 | 11 | 1.8 | 1.6 | .7 | 37 | 0 | 30 | 7.8 |
| AUG. | | | | | | | | | | | |
| 14... | 2280 | 6.2 | 90 | 5.5 | .7 | 1.4 | .6 | 18 | 0 | 15 | 5.6 |
| NOV. | | | | | | | | | | | |
| 13... | 5770 | 6.4 | 330 | 6.5 | .8 | 1.7 | .6 | 18 | 0 | 15 | 7.6 |
| FEB., 1964 | | | | | | | | | | | |
| 20... | 686 | 7.2 | 230 | 7.0 | .9 | 1.7 | .7 | 20 | 0 | 16 | 7.4 |
| JUNE | | | | | | | | | | | |
| 01... | 1150 | 7.5 | 430 | 10 | 1.7 | 2.0 | .7 | 32 | 0 | 26 | 9.8 |
| AUG. | | | | | | | | | | | |
| 25... | 2710 | 4.7 | 90 | 4.5 | .6 | 1.1 | .3 | 15 | 0 | 12 | 5.0 |
| NOV. | | | | | | | | | | | |
| 24... | 2580 | 5.7 | 110 | 6.0 | 1.0 | 1.5 | .6 | 19 | 0 | 16 | 6.8 |
| FEB., 1965 | | | | | | | | | | | |
| 19... | 4170 | 6.8 | 810 | 6.4 | 1.2 | 1.5 | .3 | 21 | 0 | 17 | 6.8 |
| MAY | | | | | | | | | | | |
| 11... | 3140 | 6.8 | 250 | 7.2 | 1.1 | 1.7 | .7 | 21 | 0 | 17 | 7.2 |
| AUG. | | | | | | | | | | | |
| 09... | 2040 | 5.7 | -- | 5.2 | .9 | 1.2 | .4 | 17 | 0 | 14 | 6.2 |

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS_SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV., 1961 | | | | | | | | | | | |
| 02... | .8 | .1 | .07 | .30 | .00 | 3 | 32 | 18 | 4 | 47 | 6.9 |
| FEB., 1962 | | | | | | | | | | | |
| 08... | .5 | .1 | .09 | .40 | .02 | 40 | 35 | 20 | 5 | 53 | 7.0 |
| MAY | | | | | | | | | | | |
| 03... | .5 | .0 | .07 | .30 | .01 | 41 | 41 | 24 | 0 | 62 | 7.0 |
| AUG. | | | | | | | | | | | |
| 15... | .2 | .0 | .07 | .30 | .01 | 28 | 31 | 17 | 2 | 43 | 7.0 |
| NOV. | | | | | | | | | | | |
| 09... | .5 | .1 | .05 | .20 | .01 | 35 | 33 | 18 | 2 | 46 | 7.0 |
| FEB., 1963 | | | | | | | | | | | |
| 07... | .5 | .1 | .09 | .40 | .01 | 37 | 35 | 20 | 4 | 48 | 6.9 |
| MAY | | | | | | | | | | | |
| 02... | .5 | .1 | .09 | .40 | .02 | 55 | 49 | 35 | 4 | 81 | 7.3 |
| AUG. | | | | | | | | | | | |
| 14... | .2 | .0 | .05 | .20 | .00 | 32 | 29 | 17 | 2 | 44 | 6.9 |
| NOV. | | | | | | | | | | | |
| 13... | .8 | .1 | .07 | .30 | .01 | 40 | 34 | 20 | 4 | 49 | 6.9 |
| FEB., 1964 | | | | | | | | | | | |
| 20... | .5 | .1 | .09 | .40 | .02 | 42 | 36 | 22 | 5 | 52 | 7.0 |
| JUNE | | | | | | | | | | | |
| 01... | .5 | .0 | .11 | .50 | .01 | 50 | 49 | 32 | 6 | 73 | 7.0 |
| AUG. | | | | | | | | | | | |
| 25... | .2 | .1 | .02 | .10 | .01 | 24 | 24 | 14 | 1 | 36 | 7.2 |
| NOV. | | | | | | | | | | | |
| 24... | .2 | .1 | .05 | .20 | .02 | 35 | 32 | 19 | 4 | 48 | 7.5 |
| FEB., 1965 | | | | | | | | | | | |
| 19... | 1.0 | .1 | .09 | .40 | .01 | 38 | 35 | 21 | 4 | 52 | 7.0 |
| MAY | | | | | | | | | | | |
| 11... | .2 | .1 | .05 | .20 | .03 | 38 | 36 | 22 | 6 | 55 | 7.2 |
| AUG. | | | | | | | | | | | |
| 09... | .2 | .1 | .05 | .20 | .01 | 29 | 28 | 17 | 3 | 42 | 6.9 |

## TABLE C3.--Chemical quality of surface water--Continued

12193500 - BAKER RIVER AT CONCRETE, WASH.

WATER QUALITY DATA

| DATE | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | DISSOLVED OXYGEN (MG/L) | COMPLETE COLIFORM (MPN) | DISSOLVED ARSENIC (AS) (UG/L) | DISSOLVED BORON (B) (UG/L) | DISSOLVED CHROMIUM (CR) (UG/L) | HEXAVALENT CHROMIUM (CR6) (UG/L) | DISSOLVED COPPER (CU) (UG/L) | DISSOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV., 1961 | | | | | | | | | | |
| 02... | 11.0 | 5 | 11.0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 |
| FEB., 1962 | | | | | | | | | | |
| 08... | 4.0 | 5 | 11.8 | 0 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 03... | 6.1 | 5 | 11.4 | -- | 0 | 0 | 0 | 0 | 10 | 0 |
| AUG. | | | | | | | | | | |
| 15... | 12.6 | 5 | 10.8 | 0 | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 09... | 11.2 | 5 | 9.6 | 30 | 0 | 20 | 10 | 0 | 0 | 0 |
| FEB., 1963 | | | | | | | | | | |
| 07... | 3.9 | 5 | 12.0 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | 7.2 | 5 | 12.2 | 36 | 0 | 10 | 10 | 10 | 20 | 0 |
| AUG. | | | | | | | | | | |
| 14... | 13.3 | 5 | 10.0 | 0 | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 13... | 10.2 | 15 | 9.9 | 0 | 0 | 40 | 10 | 10 | 0 | 0 |
| FEB., 1964 | | | | | | | | | | |
| 20... | 5.8 | 5 | 13.8 | 0 | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 01... | 8.8 | 5 | 12.4 | 0 | 0 | 10 | 20 | 0 | 10 | 0 |
| AUG. | | | | | | | | | | |
| 25... | 12.2 | 5 | 11.7 | 0 | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 24... | 8.5 | 5 | 11.3 | 0 | 0 | 40 | 0 | 0 | 10 | 0 |
| FEB., 1965 | | | | | | | | | | |
| 19... | 5.0 | 5 | 12.7 | 930 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 11... | 14.0 | 5 | 11.0 | 0 | 0 | 20 | 0 | 0 | 20 | 0 |
| AUG. | | | | | | | | | | |
| 09... | 16.7 | 0 | 10.4 | 91 | -- | -- | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12194000 - SKAGIT RIVER NEAR CONCRETE, WASH.

WATER QUALITY DATA

| DATE | TIME | DIS-CHARGE (CFS) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED NITRITE (N) (MG/L) | AMMONIA NITRO-GEN (N) (MG/L) | TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L) | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC., 1970 | | | | | | | | | | | | |
| 01... | 1230 | 11400 | .41 | 1.8 | .00 | .07 | .02 | .00 | .01 | .00 | 60 | 7.1 |
| 15... | 1050 | 12900 | .09 | .40 | .00 | .04 | .08 | .01 | .03 | .01 | 61 | 7.3 |
| JAN., 1971 | | | | | | | | | | | | |
| 05... | 1225 | 13000 | .05 | .20 | .00 | .00 | .00 | .02 | .01 | .00 | 65 | 7.2 |
| 19... | 1120 | 34100 | .14 | .60 | .00 | .00 | .07 | .02 | .03 | .01 | 38 | 7.1 |
| FEB. | | | | | | | | | | | | |
| 02... | 1100 | 31100 | .14 | .60 | .00 | .00 | .02 | .06 | .03 | .01 | 46 | 6.8 |
| 16... | 1020 | 26600 | .16 | .70 | .00 | .00 | .01 | .07 | .18 | .06 | 31 | 7.0 |
| MAR. | | | | | | | | | | | | |
| 02... | 1100 | 14800 | .14 | .60 | .00 | .09 | .06 | .01 | .00 | .00 | 61 | 7.1 |
| 16... | 1135 | 12800 | .07 | .30 | .00 | .03 | .24 | .04 | .09 | .03 | 64 | 7.1 |
| APR. | | | | | | | | | | | | |
| 13... | 1050 | 9350 | .16 | .70 | .00 | .02 | .16 | .04 | -- | -- | 60 | 7.2 |
| 27... | 0910 | 12400 | .02 | .10 | .00 | .00 | .13 | .04 | .06 | .02 | 49 | 7.2 |
| MAY | | | | | | | | | | | | |
| 11... | 1030 | 26900 | .09 | .40 | .00 | .02 | .08 | .04 | .06 | .02 | 43 | 7.1 |
| 25... | 1100 | 27000 | .09 | .40 | .00 | .02 | .17 | .03 | .03 | .01 | 40 | 6.9 |
| JUNE | | | | | | | | | | | | |
| 08... | 1100 | 34800 | .02 | .10 | .00 | .04 | .18 | .04 | .06 | .02 | 47 | 7.1 |
| 22... | 1025 | 40000 | .05 | .20 | .00 | .00 | .02 | .01 | .03 | .01 | 32 | 7.1 |
| JULY | | | | | | | | | | | | |
| 13... | 1115 | 28600 | .13 | .60 | .01 | .01 | .01 | .01 | .00 | .00 | 42 | 6.9 |
| 27... | 1045 | 41000 | .37 | 1.6 | .00 | .07 | .07 | .01 | .00 | .00 | 45 | 7.0 |
| AUG. | | | | | | | | | | | | |
| 10... | 1035 | 20300 | .13 | .60 | .01 | .00 | .07 | .04 | .12 | .04 | 36 | 7.1 |
| 24... | 1050 | 13700 | .07 | .30 | .00 | .07 | .12 | .01 | .03 | .01 | 44 | 7.0 |
| SEP. | | | | | | | | | | | | |
| 14... | 1110 | 10800 | .30 | 1.3 | .00 | .00 | .13 | .01 | .00 | .00 | 44 | 7.3 |
| 28... | 1110 | 6180 | .09 | .40 | .00 | .07 | .18 | .02 | .00 | .00 | 51 | 7.1 |

| DATE | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (JTU) | DIS-SOLVED OXYGEN (MG/L) | IMME-DIATE COLI-FORM (COL. PER 100 ML) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | DIS-SOLVED LITHIUM (LI) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED STRON-TIUM (SR) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC., 1970 | | | | | | | | | | | | |
| 01... | 6.0 | 14 | 3 | 12.0 | 60 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| 15... | 5.5 | 0 | 5 | 12.4 | 60 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| JAN., 1971 | | | | | | | | | | | | |
| 05... | 3.7 | 0 | 3 | 13.1 | 80 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| 19... | 4.0 | 50 | 40 | 12.8 | 600 | 0 | 0 | 0 | 0 | .1 | 0 | 0 |
| FEB. | | | | | | | | | | | | |
| 02... | 4.6 | 26 | 15 | 12.3 | 80 | 0 | 0 | 0 | 0 | .1 | 0 | 0 |
| 16... | 4.7 | 24 | 10 | 12.8 | 160 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| MAR. | | | | | | | | | | | | |
| 02... | 2.6 | 31 | 2 | 13.2 | <40 | -- | -- | -- | -- | -- | -- | -- |
| 16... | 4.8 | 30 | 4 | 12.9 | <20 | 0 | 0 | 0 | 0 | .0 | 50 | 14 |
| APR. | | | | | | | | | | | | |
| 13... | 6.6 | 9 | 1 | 12.4 | 50 | 1 | 0 | 3 | 4 | 2.6 | 350 | 0 |
| 27... | 8.3 | 16 | 3 | 12.0 | 100 | 0 | 0 | 1 | 4 | .1 | 20 | 0 |
| MAY | | | | | | | | | | | | |
| 11... | 8.3 | 16 | 2 | 12.6 | 80 | 0 | 0 | 1 | 0 | .1 | 10 | 0 |
| 25... | 8.3 | 14 | 6 | 12.0 | 200 | 2 | 8 | 410 | 0 | 3.6 | 110 | 20 |
| JUNE | | | | | | | | | | | | |
| 08... | 7.6 | 13 | 5 | 12.2 | 250 | 1 | 15 | 620 | 14 | .4 | 100 | 70 |
| 22... | 9.4 | 16 | 20 | 11.8 | 320 | 0 | 2 | 0 | 29 | .3 | 60 | 0 |
| JULY | | | | | | | | | | | | |
| 13... | 10.3 | 11 | 2 | 11.2 | 160 | 0 | 0 | 0 | 9 | .2 | 250 | 0 |
| 27... | 12.2 | 18 | 10 | 10.7 | 200 | 0 | 14 | 570 | 0 | 8.0 | 4 | 40 |
| AUG. | | | | | | | | | | | | |
| 10... | 13.0 | 14 | 9 | 10.6 | 100 | 0 | 2 | 3 | 3 | .1 | 0 | 0 |
| 24... | 12.1 | 12 | 5 | 10.9 | 120 | 1 | 17 | 500 | 3 | 3.3 | 40 | 30 |
| SEP. | | | | | | | | | | | | |
| 14... | 11.0 | 10 | 4 | 11.0 | 100 | 0 | 2 | 2 | 0 | .1 | 50 | 0 |
| 28... | 10.9 | 10 | 10 | 10.9 | 230 | 6 | 35 | 540 | 14 | 2.8 | 100 | 70 |

TABLE C3.--Chemical quality of surface water--Continued

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY
12196170 - DAY LAKE NR LYMAN

WATER QUALITY DATA

| DATE | TIME | DEPTH (FT) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| MAR . 1973 | | | | | | | | | |
| 19... | 1505 | 3.0 | 3.9 | 170 | 3.7 | .9 | .7 | .2 | 13 |
| 19... | 1515 | 38 | 3.9 | 130 | -- | -- | -- | -- | 13 |
| MAY | | | | | | | | | |
| 17... | 1150 | 3.0 | 3.8 | 130 | -- | -- | -- | -- | 15 |
| 17... | 1200 | 40 | 3.8 | 200 | -- | -- | -- | -- | 15 |
| JUL | | | | | | | | | |
| 02... | 1255 | 3.0 | 4.3 | 200 | -- | -- | -- | -- | 23 |
| 02... | 1300 | 40 | 4.1 | 460 | -- | -- | -- | -- | 21 |
| SEP | | | | | | | | | |
| 20... | 1245 | 3.0 | 4.1 | 280 | 5.3 | 1.5 | 1.1 | 1.4 | 28 |
| 20... | 1250 | 33 | 4.6 | 790 | -- | -- | -- | -- | 26 |

| DATE | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | TOTAL NITRATE (N) (MG/L) | TOTAL NITRITE (N) (MG/L) | TOTAL AMMONIA NITRO-GEN (N) (MG/L) | TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L) | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| MAR . 1973 | | | | | | | | | |
| 19... | 11 | 3.2 | 1.2 | .02 | .00 | .05 | .24 | .03 | .01 |
| 19... | 11 | -- | -- | .20 | .00 | .07 | .23 | .02 | .00 |
| MAY | | | | | | | | | |
| 17... | 12 | -- | -- | .13 | .00 | .06 | .10 | .05 | .11 |
| 17... | 12 | -- | -- | .16 | .00 | .07 | .11 | .00 | .01 |
| JUL | | | | | | | | | |
| 02... | 19 | -- | -- | .07 | .00 | .06 | .09 | .01 | .01 |
| 02... | 17 | -- | -- | .12 | .00 | .07 | .08 | .01 | .01 |
| SEP | | | | | | | | | |
| 20... | 23 | 3.7 | .8 | .02 | .00 | .04 | .15 | .00 | .01 |
| 20... | 21 | -- | -- | .16 | .00 | .05 | .16 | .01 | .01 |

| DATE | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA+MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TOTAL ORGANIC CARBON (C) (MG/L) |
|---|---|---|---|---|---|---|---|---|
| MAR . 1973 | | | | | | | | |
| 19... | .00 | 20 | 13 | 2 | 29 | 3.8 | 10 | 4.0 |
| 19... | .00 | -- | -- | -- | -- | 3.5 | 10 | -- |
| MAY | | | | | | | | |
| 17... | .03 | -- | -- | -- | 32 | 14.6 | 15 | 7.5 |
| 17... | .00 | -- | -- | -- | 29 | 6.7 | 20 | -- |
| JUL | | | | | | | | |
| 02... | .00 | -- | -- | -- | 36 | 15.5 | 40 | 5.5 |
| 02... | .00 | -- | -- | -- | 31 | 8.1 | 40 | -- |
| SEP | | | | | | | | |
| 20... | .00 | 32 | 14 | 0 | 40 | 14.9 | 0 | 3.0 |
| 20... | .00 | -- | -- | -- | 33 | 9.0 | 30 | -- |

TABLE C3.--Chemical quality of surface water--Continued

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY
12199200 - MCMURRAY LAKE AT MCMURRAY

WATER QUALITY DATA

| DATE | TIME | DEPTH (FT) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| MAR , 1973 | | | | | | | | | |
| 20... | 1430 | 3.0 | 8.2 | 220 | 7.4 | 2.7 | 6.1 | .7 | 30 |
| 20... | 1440 | 44 | 8.4 | 262 | -- | -- | -- | -- | 31 |
| MAY | | | | | | | | | |
| 18... | 1240 | 3.0 | 2.5 | 110 | -- | -- | -- | -- | 32 |
| 18... | 1245 | 45 | 9.8 | 990 | -- | -- | -- | -- | 33 |
| JUL | | | | | | | | | |
| 03... | 1215 | 3.0 | 1.4 | 50 | -- | -- | -- | -- | 38 |
| 03... | 1220 | 44 | 12 | 12000 | -- | -- | -- | -- | 48 |
| SEP | | | | | | | | | |
| 22... | 1140 | 3.0 | 2.5 | 120 | 6.6 | 2.9 | 6.5 | 1.6 | 42 |
| 22... | 1145 | 42 | 13 | 8600 | -- | -- | -- | -- | 62 |

| DATE | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | TOTAL NITRATE (N) (MG/L) | TOTAL NITRITE (N) (MG/L) | TOTAL AMMONIA NITRO-GEN (N) (MG/L) | TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L) | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| MAR , 1973 | | | | | | | | | |
| 20... | 25 | 7.9 | 4.0 | .77 | .04 | .14 | .40 | .04 | .01 |
| 20... | 25 | -- | -- | .75 | .04 | .15 | .52 | .03 | .01 |
| MAY | | | | | | | | | |
| 18... | 26 | -- | -- | .59 | .01 | .09 | .19 | .01 | .01 |
| 18... | 27 | -- | -- | .78 | .00 | .14 | .24 | .03 | .02 |
| JUL | | | | | | | | | |
| 03... | 31 | -- | -- | .42 | .01 | .04 | .08 | .01 | .01 |
| 03... | 39 | -- | -- | .14 | .00 | .82 | .90 | .17 | .24 |
| SEP | | | | | | | | | |
| 22... | 34 | 7.6 | 3.4 | .01 | .00 | .05 | .37 | .01 | .00 |
| 22... | 51 | -- | -- | .01 | .00 | 1.6 | 2.7 | .39 | 1.0 |

| DATE | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TOTAL ORGANIC CARBON (C) (MG/L) |
|---|---|---|---|---|---|---|---|---|
| MAR , 1973 | | | | | | | | |
| 20... | .00 | 52 | 30 | 5 | 82 | 6.8 | 25 | 8.5 |
| 20... | .00 | -- | -- | -- | 82 | 5.9 | 25 | -- |
| MAY | | | | | | | | |
| 18... | .00 | -- | -- | -- | 86 | 18.7 | 15 | 6.0 |
| 18... | .00 | -- | -- | -- | 84 | 6.2 | 20 | -- |
| JUL | | | | | | | | |
| 03... | .00 | -- | -- | -- | 84 | 19.5 | 0 | 6.0 |
| 03... | .07 | -- | -- | -- | 110 | 6.4 | 15 | -- |
| SEP | | | | | | | | |
| 22... | .00 | 52 | 28 | 0 | 92 | 17.0 | 0 | 4.0 |
| 22... | .34 | -- | -- | -- | -- | 6.8 | 80 | -- |

TABLE C3.--Chemical quality of surface water--Continued

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY
12200020 - CLEAR LAKE AT CLEAR LAKE

WATER QUALITY DATA

| DATE | TIME | DEPTH (FT) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| MAR . 1973 | | | | | | | | | |
| 20... | 0915 | 3.0 | 3.9 | 240 | 9.9 | 2.7 | 3.9 | 1.5 | 38 |
| 20... | 0930 | 37 | 4.0 | 270 | -- | -- | -- | -- | 39 |
| MAY | | | | | | | | | |
| 18... | 0930 | 3.0 | .1 | 120 | -- | -- | -- | -- | 41 |
| 18... | 0935 | 37 | 5.7 | 260 | -- | -- | -- | -- | 39 |
| JUL | | | | | | | | | |
| 03... | 0945 | 3.0 | .4 | 90 | -- | -- | -- | -- | 44 |
| 03... | 0950 | 36 | 6.9 | 580 | -- | -- | -- | -- | 50 |
| SEP | | | | | | | | | |
| 22... | 0900 | 3.0 | 1.5 | -- | 8.9 | 2.9 | 4.5 | 2.0 | 46 |
| 22... | 0905 | 33 | -- | -- | -- | -- | -- | -- | 59 |

| DATE | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | TOTAL NITRATE (N) (MG/L) | TOTAL NITRITE (N) (MG/L) | TOTAL AMMONIA NITRO-GEN (N) (MG/L) | TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L) | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| MAR . 1973 | | | | | | | | | |
| 20... | 31 | 4.5 | 4.8 | .22 | .00 | .11 | .36 | .03 | .00 |
| 20... | 32 | -- | -- | .21 | .00 | .11 | .32 | .03 | .01 |
| MAY | | | | | | | | | |
| 18... | 34 | -- | -- | .02 | .00 | .07 | .17 | .00 | .01 |
| 18... | 32 | -- | -- | .21 | .00 | .13 | .19 | .01 | .01 |
| JUL | | | | | | | | | |
| 03... | 36 | -- | -- | .01 | .00 | .03 | .09 | .00 | .01 |
| 03... | 41 | -- | -- | .13 | .00 | .10 | .10 | .01 | .01 |
| SEP | | | | | | | | | |
| 22... | 38 | 4.6 | 4.3 | .01 | .00 | .04 | .24 | .01 | .00 |
| 22... | 48 | -- | -- | .01 | .00 | .10 | .39 | .01 | .00 |

| DATE | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TOTAL ORGANIC CARBON (C) (MG/L) |
|---|---|---|---|---|---|---|---|---|
| MAR . 1973 | | | | | | | | |
| 20... | .00 | 50 | 36 | 5 | 85 | 7.0 | 20 | 5.5 |
| 20... | .00 | -- | -- | -- | 85 | 6.7 | 20 | -- |
| MAY | | | | | | | | |
| 18... | .00 | -- | -- | -- | 89 | 19.0 | 10 | 6.0 |
| 18... | .00 | -- | -- | -- | 85 | 7.8 | 10 | -- |
| JUL | | | | | | | | |
| 03... | .00 | -- | -- | -- | 87 | 19.3 | 0 | 5.5 |
| 03... | .00 | -- | -- | -- | 94 | 8.5 | 0 | -- |
| SEP | | | | | | | | |
| 22... | .00 | 51 | 34 | 0 | 88 | 17.0 | 0 | 4.0 |
| 22... | .00 | -- | -- | -- | 109 | 9.8 | 25 | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | | | |
| 15... | 28200 | 5.3 | 150 | 5.5 | .4 | .7 | .4 | 20 | 0 | 16 | 3.1 |
| AUG. | | | | | | | | | | | |
| 20... | 11000 | 6.3 | 100 | 7.0 | .3 | .9 | .9 | 23 | 0 | 19 | 3.8 |
| SEP. | | | | | | | | | | | |
| 29... | 18500 | 6.2 | 170 | 6.0 | .8 | .8 | .6 | 22 | 0 | 18 | 3.5 |
| OCT. | | | | | | | | | | | |
| 21... | 21100 | 6.8 | 90 | 7.5 | 1.1 | 1.0 | .8 | 27 | 0 | 22 | 2.6 |
| NOV. | | | | | | | | | | | |
| 19... | 32500 | 5.5 | 770 | 5.5 | .5 | .7 | .3 | 19 | 0 | 16 | 3.1 |
| DEC. | | | | | | | | | | | |
| 22... | 18700 | 8.3 | 510 | 8.5 | .8 | 1.3 | .7 | 28 | 0 | 23 | 4.0 |
| JAN., 1960 | | | | | | | | | | | |
| 20... | 11700 | 8.6 | 60 | 9.0 | 1.7 | 1.1 | .6 | 34 | 0 | 28 | 5.6 |
| FEB. | | | | | | | | | | | |
| 17... | 19100 | 8.2 | 300 | 7.5 | 1.5 | 1.1 | .4 | 26 | 0 | 21 | 4.6 |
| MAR. | | | | | | | | | | | |
| 15... | 11400 | 7.8 | 40 | 9.5 | 1.3 | 1.3 | .4 | 34 | 0 | 28 | 5.0 |
| APR. | | | | | | | | | | | |
| 19... | 15600 | 7.6 | 240 | 8.0 | 1.2 | 1.1 | .4 | 30 | 0 | 25 | 4.0 |
| MAY | | | | | | | | | | | |
| 16... | 22000 | 6.8 | 200 | 6.0 | 1.3 | 1.0 | .4 | 23 | 0 | 19 | 3.2 |
| JUNE | | | | | | | | | | | |
| 09... | 20100 | 6.0 | 180 | 6.0 | 1.0 | 1.0 | .4 | 22 | 0 | 18 | 3.4 |
| JULY | | | | | | | | | | | |
| 21... | 21000 | 5.3 | 60 | 5.5 | 1.0 | 1.0 | .5 | 21 | 0 | 17 | 3.2 |
| AUG. | | | | | | | | | | | |
| 02... | 13500 | 5.0 | 120 | 6.5 | .3 | 1.0 | .9 | 21 | 0 | 17 | 3.4 |
| SEP. | | | | | | | | | | | |
| 07... | 10900 | 6.1 | 150 | 6.0 | 1.1 | 1.2 | .5 | 23 | 0 | 19 | 3.6 |
| OCT. | | | | | | | | | | | |
| 04... | 8030 | 6.2 | 150 | 7.0 | 1.0 | 1.2 | .2 | 24 | 0 | 20 | 4.8 |
| NOV. | | | | | | | | | | | |
| 04... | 16000 | 6.5 | 90 | 7.5 | .8 | 1.1 | .4 | 26 | 0 | 21 | 4.4 |
| 30... | 15300 | 7.7 | 0 | 8.0 | 1.6 | 1.3 | .4 | 30 | 0 | 25 | 5.4 |
| JAN., 1961 | | | | | | | | | | | |
| 04... | 13200 | 7.6 | 80 | 8.0 | 1.4 | 1.3 | .5 | 29 | 0 | 24 | 5.2 |
| FEB. | | | | | | | | | | | |
| 02... | 21400 | 6.6 | 390 | 7.0 | 1.3 | 1.0 | .3 | 27 | 0 | 22 | 3.0 |
| MAR. | | | | | | | | | | | |
| 06... | 13900 | 9.0 | 400 | 8.5 | 1.5 | 1.5 | .5 | 32 | 0 | 26 | 4.8 |

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS_SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) |
|---|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | | |
| 15... | .0 | .1 | .05 | .20 | .00 | 23 | 26 | 15 | 0 | 39 |
| AUG. | | | | | | | | | | |
| 20... | .2 | .1 | .00 | .00 | .01 | 30 | 31 | 19 | 0 | 47 |
| SEP. | | | | | | | | | | |
| 29... | .0 | .2 | .09 | .40 | .01 | 30 | 30 | 18 | 0 | 44 |
| OCT. | | | | | | | | | | |
| 21... | .5 | .1 | .05 | .20 | .00 | 38 | 34 | 23 | 1 | 53 |
| NOV. | | | | | | | | | | |
| 19... | .0 | .1 | .34 | 1.5 | .07 | 30 | 27 | 16 | 0 | 41 |
| DEC. | | | | | | | | | | |
| 22... | 1.0 | .1 | .11 | .50 | .06 | 41 | 39 | 24 | 2 | 60 |
| JAN., 1960 | | | | | | | | | | |
| 20... | .2 | .1 | .07 | .30 | .04 | 41 | 44 | 30 | 20 | 68 |
| FEB. | | | | | | | | | | |
| 17... | .5 | .1 | .09 | .40 | .03 | 38 | 37 | 24 | 3 | 59 |
| MAR. | | | | | | | | | | |
| 15... | .5 | .1 | .07 | .30 | .00 | 46 | 43 | 29 | 1 | 67 |
| APR. | | | | | | | | | | |
| 19... | .5 | .0 | .07 | .30 | .00 | 41 | 38 | 25 | 0 | 59 |
| MAY | | | | | | | | | | |
| 16... | .5 | .0 | .05 | .20 | .01 | 32 | 31 | 20 | 1 | 48 |
| JUNE | | | | | | | | | | |
| 09... | .5 | .1 | .05 | .20 | .02 | 30 | 29 | 19 | 1 | 46 |
| JULY | | | | | | | | | | |
| 21... | .2 | .1 | .02 | .10 | .03 | 26 | 27 | 18 | 1 | 43 |
| AUG. | | | | | | | | | | |
| 02... | .5 | .0 | .00 | .00 | .02 | 32 | 28 | 18 | 0 | 42 |
| SEP. | | | | | | | | | | |
| 07... | .5 | .0 | .07 | .30 | .01 | 33 | 31 | 20 | 0 | 48 |
| OCT. | | | | | | | | | | |
| 04... | .2 | .1 | .05 | .20 | .02 | 34 | 33 | 22 | 2 | 52 |
| NOV. | | | | | | | | | | |
| 04... | .2 | .0 | .09 | .40 | .01 | 39 | 34 | 22 | 0 | 53 |
| 30... | .8 | .0 | .11 | .50 | .04 | 45 | 41 | 26 | 2 | 63 |
| JAN., 1961 | | | | | | | | | | |
| 04... | .2 | .0 | .07 | .30 | .01 | 48 | 39 | 26 | 2 | 62 |
| FEB. | | | | | | | | | | |
| 02... | .0 | .1 | .09 | .40 | .03 | 35 | 33 | 23 | 1 | 52 |
| MAR. | | | | | | | | | | |
| 06... | 1.0 | .1 | .09 | .40 | .03 | 44 | 43 | 27 | 1 | 64 |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | DISSOLVED OXYGEN (MG/L) | COMPLETE COLIFORM (MPN) | DISSOLVED ARSENIC (AS) (UG/L) | DISSOLVED BORON (B) (UG/L) | DISSOLVED CHROMIUM (CR) (UG/L) | HEXAVALENT CHROMIUM (CR6) (UG/L) | DISSOLVED COPPER (CU) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| JULY, 1959 | | | | | | | | | | |
| 15... | 6.9 | 12.8 | 5 | -- | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 20... | 7.0 | -- | 5 | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 29... | 7.0 | 10.0 | 10 | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 21... | 7.2 | 11.2 | 5 | 10.4 | 750 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 19... | 6.9 | 6.0 | 15 | 11.8 | 2400 | 0 | -- | 0 | 0 | 70 |
| DEC. | | | | | | | | | | |
| 22... | 7.1 | 4.3 | 15 | 11.9 | 230 | -- | -- | -- | -- | -- |
| JAN., 1960 | | | | | | | | | | |
| 20... | 6.1 | 4.0 | 5 | 12.9 | 30 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 17... | 7.0 | 4.4 | 5 | 12.4 | 0 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 15... | 7.4 | 5.5 | 5 | 12.6 | 2400 | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 19... | 7.3 | 6.4 | 5 | 11.7 | 430 | 0 | 10 | 0 | 0 | 0 |
| MAY | | | | | | | | | | |
| 16... | 7.1 | 7.6 | 5 | 9.3 | 230 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 09... | 7.2 | 12.1 | 0 | 9.6 | 36 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 21... | 7.2 | 14.5 | 5 | 10.4 | 2400 | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 02... | 7.2 | 13.3 | 5 | 10.5 | 4600 | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 07... | 7.1 | 13.5 | 5 | 10.3 | 930 | 0 | -- | 10 | 0 | 340 |
| OCT. | | | | | | | | | | |
| 04... | 7.2 | 13.5 | 5 | 10.4 | 4600 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 04... | 7.3 | 8.0 | 5 | 11.3 | 150 | -- | -- | -- | -- | -- |
| 30... | 7.4 | 6.9 | 10 | 11.5 | 230 | -- | -- | -- | -- | -- |
| JAN., 1961 | | | | | | | | | | |
| 04... | 7.1 | 5.2 | 10 | 12.3 | 430 | 0 | 0 | 10 | 10 | 10 |
| FEB. | | | | | | | | | | |
| 02... | 7.3 | 6.0 | 10 | 12.1 | 150 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 06... | 7.1 | 5.0 | 5 | 11.8 | 430 | -- | -- | -- | -- | -- |

| DATE | DISCHARGE (CFS) | DISSOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DISSOLVED CALCIUM (CA) (MG/L) | DISSOLVED MAGNESIUM (MG) (MG/L) | DISSOLVED SODIUM (NA) (MG/L) | DISSOLVED POTASSIUM (K) (MG/L) | BICARBONATE (HCO3) (MG/L) | CARBONATE (CO3) (MG/L) | ALKALINITY AS CACO3 (MG/L) | DISSOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR., 1961 | | | | | | | | | | | |
| 19... | 15100 | 8.1 | 60 | 8.0 | 1.5 | 1.6 | .4 | 31 | 0 | 25 | 4.4 |
| MAY | | | | | | | | | | | |
| 03... | 22500 | 6.3 | 240 | 7.0 | .9 | 1.1 | .6 | 25 | 0 | 21 | 4.0 |
| JUNE | | | | | | | | | | | |
| 05... | 52400 | 5.0 | 280 | 5.0 | 1.0 | .8 | .5 | 20 | 0 | 16 | 3.6 |
| JULY | | | | | | | | | | | |
| 06... | 23000 | 5.6 | 460 | 5.5 | .7 | .8 | .5 | 20 | 0 | 16 | 2.8 |
| AUG. | | | | | | | | | | | |
| 03... | 13000 | 5.1 | 0 | 5.5 | 1.2 | 1.1 | .5 | 21 | 0 | 17 | 4.4 |
| SEP. | | | | | | | | | | | |
| 06... | 11900 | 5.5 | 360 | 5.5 | .9 | 1.1 | .6 | 21 | 0 | 17 | 4.2 |
| OCT. | | | | | | | | | | | |
| 19... | 12400 | 7.0 | 210 | 7.0 | .9 | 1.3 | .5 | 24 | 0 | 20 | 5.4 |
| NOV. | | | | | | | | | | | |
| 02... | 12200 | 6.8 | 0 | 7.0 | 1.1 | 1.4 | .5 | 24 | 0 | 20 | 5.0 |
| DEC. | | | | | | | | | | | |
| 05... | 20200 | 6.5 | 250 | 6.5 | 1.2 | 1.0 | .4 | 24 | 0 | 20 | 4.4 |
| JAN., 1962 | | | | | | | | | | | |
| 09... | 44500 | 6.6 | 0 | 5.5 | 1.2 | 1.1 | .6 | 20 | 0 | 16 | 4.2 |
| FEB. | | | | | | | | | | | |
| 07... | 17600 | 6.8 | 100 | 7.5 | 1.1 | 1.1 | .8 | 28 | 0 | 23 | 4.0 |
| MAR. | | | | | | | | | | | |
| 08... | 11100 | 7.7 | 240 | 9.0 | 1.4 | 1.6 | .8 | 34 | 0 | 28 | 4.8 |
| APR. | | | | | | | | | | | |
| 02... | 10200 | 8.3 | 140 | 8.0 | 1.5 | 1.6 | .9 | 31 | 0 | 25 | 3.6 |
| MAY | | | | | | | | | | | |
| 04... | 17600 | 6.5 | 240 | 6.5 | 1.0 | 1.2 | .6 | 24 | 0 | 20 | 3.4 |
| JUNE | | | | | | | | | | | |
| 13... | 17500 | 6.0 | 160 | 6.0 | .8 | 1.1 | .6 | 22 | 0 | 18 | 3.8 |
| JULY | | | | | | | | | | | |
| 09... | 16000 | 5.3 | 140 | 5.0 | .8 | 1.0 | .6 | 20 | 0 | 16 | 3.2 |
| AUG. | | | | | | | | | | | |
| 14... | 12300 | 5.9 | 80 | 6.5 | .7 | 1.2 | .6 | 23 | 0 | 19 | 4.4 |
| SEP. | | | | | | | | | | | |
| 05... | 8070 | 7.3 | 150 | 7.0 | 1.0 | 1.2 | .5 | 25 | 0 | 21 | 3.8 |
| OCT. | | | | | | | | | | | |
| 08... | 11100 | 6.6 | 210 | 6.5 | 1.4 | 1.5 | .6 | 25 | 0 | 21 | 5.0 |
| NOV. | | | | | | | | | | | |
| 09... | 14600 | 6.4 | 130 | 7.0 | 1.0 | 1.4 | .7 | 25 | 0 | 21 | 4.6 |
| DEC. | | | | | | | | | | | |
| 06... | 29000 | 6.3 | 1400 | 6.5 | .9 | 1.0 | .4 | 22 | 0 | 18 | 4.6 |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR., 1961 | | | | | | | | | | | |
| 19... | .5 | .1 | .07 | .30 | .02 | 44 | 40 | 26 | 0 | 64 | 7.2 |
| MAY | | | | | | | | | | | |
| 03... | .5 | .1 | .07 | .30 | .01 | 33 | 33 | 21 | 0 | 51 | 7.5 |
| JUNE | | | | | | | | | | | |
| 05... | .2 | .0 | .07 | .30 | .01 | 29 | 26 | 16 | 0 | 40 | 7.0 |
| JULY | | | | | | | | | | | |
| 06... | .0 | .1 | .05 | .20 | .02 | 32 | 26 | 16 | 0 | 40 | 7.2 |
| AUG. | | | | | | | | | | | |
| 03... | .5 | .1 | .02 | .10 | .02 | 32 | 29 | 18 | 2 | 44 | 7.0 |
| SEP. | | | | | | | | | | | |
| 06... | .5 | .1 | .02 | .10 | .02 | 32 | 29 | 18 | 0 | 42 | 7.0 |
| OCT. | | | | | | | | | | | |
| 19... | .2 | .1 | .07 | .30 | .06 | 36 | 35 | 21 | 2 | 51 | 7.0 |
| NOV. | | | | | | | | | | | |
| 02... | .5 | .0 | .09 | .40 | .02 | 37 | 35 | 22 | 2 | 53 | 7.2 |
| DEC. | | | | | | | | | | | |
| 05... | .5 | .1 | .11 | .50 | .00 | 37 | 33 | 21 | 2 | 52 | 7.1 |
| JAN., 1962 | | | | | | | | | | | |
| 09... | .5 | .1 | .16 | .70 | .00 | 32 | 30 | 18 | 2 | 46 | 7.0 |
| FEB. | | | | | | | | | | | |
| 07... | .2 | .1 | .00 | .00 | .01 | 39 | 35 | 23 | 0 | 55 | 7.1 |
| MAR. | | | | | | | | | | | |
| 08... | .8 | .1 | .11 | .50 | .02 | 46 | 43 | 28 | 0 | 67 | 7.0 |
| APR. | | | | | | | | | | | |
| 02... | 1.2 | .1 | .07 | .30 | .02 | 48 | 41 | 26 | 0 | 63 | 7.3 |
| MAY | | | | | | | | | | | |
| 04... | .5 | .1 | .05 | .20 | .00 | 33 | 32 | 20 | 0 | 49 | 7.1 |
| JUNE | | | | | | | | | | | |
| 13... | .2 | .1 | .05 | .20 | .02 | 35 | 30 | 18 | 0 | 46 | 7.1 |
| JULY | | | | | | | | | | | |
| 09... | .2 | .1 | .02 | .10 | .02 | 28 | 26 | 16 | 0 | 40 | 7.0 |
| AUG. | | | | | | | | | | | |
| 14... | .2 | .0 | .07 | .30 | .01 | 32 | 31 | 19 | 0 | 47 | 7.2 |
| SEP. | | | | | | | | | | | |
| 05... | .5 | .1 | .05 | .20 | .02 | 39 | 34 | 22 | 1 | 53 | 7.2 |
| OCT. | | | | | | | | | | | |
| 08... | .5 | .1 | .07 | .30 | .02 | 38 | 35 | 22 | 2 | 53 | 7.3 |
| NOV. | | | | | | | | | | | |
| 09... | .5 | .0 | .07 | .30 | .04 | 36 | 34 | 22 | 1 | 51 | 7.1 |
| DEC. | | | | | | | | | | | |
| 06... | .5 | .1 | .07 | .30 | .02 | 38 | 31 | 20 | 2 | 46 | 6.9 |

| DATE | TEMPER-ATURE (DEG C) | COLOR (PLATI-NUM-COBALT UNITS) | DIS-SOLVED OXYGEN (MG/L) | COM-PLETE COLI-FORM (MPN) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | HEXA-VALENT CHRO-MIUM (CR6) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR., 1961 | | | | | | | | | | |
| 19... | 7.6 | 5 | 11.9 | 150 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 03... | 8.1 | 5 | 11.3 | 91 | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 05... | 12.0 | 5 | 10.9 | -- | -- | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 06... | 12.0 | 5 | 10.6 | 750 | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 03... | 17.8 | 5 | 10.0 | 11000 | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 06... | 14.5 | 5 | 9.3 | 4600 | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 19... | 10.1 | 5 | 10.7 | 4600 | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 02... | 6.5 | 5 | 11.8 | 91 | 10 | 30 | 10 | 10 | 20 | <50 |
| DEC. | | | | | | | | | | |
| 05... | 6.0 | 10 | 10.5 | 230 | -- | -- | -- | -- | -- | -- |
| JAN., 1962 | | | | | | | | | | |
| 09... | 6.3 | 10 | 12.1 | 36 | -- | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 07... | 6.7 | 5 | 11.8 | 230 | -- | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 08... | 6.4 | 5 | 11.9 | 2400 | -- | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 02... | -- | 5 | 11.5 | 2400 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 04... | 6.2 | 5 | 11.6 | 36 | 0 | 20 | 0 | 0 | 30 | <50 |
| JUNE | | | | | | | | | | |
| 13... | 12.0 | 5 | 10.6 | 3 | -- | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 09... | 13.2 | 5 | 10.1 | 11000 | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 14... | 15.4 | 5 | 9.6 | 0 | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 05... | 13.8 | 5 | 9.7 | 300 | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 08... | 9.8 | 10 | 10.9 | 930 | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 09... | 10.2 | 5 | 10.4 | 11000 | 0 | 0 | 0 | 0 | 0 | <50 |
| DEC. | | | | | | | | | | |
| 06... | 6.8 | 10 | 13.7 | 91 | -- | -- | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN., 1963 | | | | | | | | | | | |
| 03... | 48800 | 6.1 | 1700 | 6.0 | .7 | 1.0 | .7 | 24 | 0 | 20 | 2.0 |
| FEB. | | | | | | | | | | | |
| 07... | 29000 | 5.9 | 820 | 6.0 | .8 | .9 | .3 | 21 | 0 | 17 | 2.8 |
| MAR. | | | | | | | | | | | |
| 06... | 11300 | 7.8 | 60 | 8.5 | 1.2 | 1.4 | .5 | 32 | 0 | 26 | 3.8 |
| APR. | | | | | | | | | | | |
| 01... | 10100 | 8.0 | 130 | 9.0 | 1.2 | 1.3 | .6 | 32 | 0 | 26 | 4.4 |
| MAY | | | | | | | | | | | |
| 02... | 14700 | 6.4 | 300 | 8.0 | 1.5 | 1.2 | .9 | 30 | 0 | 25 | 4.6 |
| JUNE | | | | | | | | | | | |
| 12... | 24500 | 5.2 | 220 | 6.0 | 1.1 | 1.0 | .4 | 22 | 0 | 18 | 3.6 |
| JULY | | | | | | | | | | | |
| 09... | 19400 | 5.4 | 200 | 6.0 | 1.0 | .8 | .6 | 24 | 0 | 20 | 3.6 |
| AUG. | | | | | | | | | | | |
| 14... | 18200 | 4.8 | 2000 | 5.5 | 1.1 | 1.1 | .8 | 20 | 0 | 16 | 3.4 |
| SEP. | | | | | | | | | | | |
| 03... | 8070 | 7.0 | 410 | 6.5 | 1.1 | 1.5 | .7 | 24 | 0 | 20 | 4.0 |
| OCT. | | | | | | | | | | | |
| 30... | 20200 | 6.6 | 630 | 7.0 | 1.2 | 1.3 | .6 | 25 | 0 | 21 | 5.0 |
| DEC. | | | | | | | | | | | |
| 09... | 16100 | 7.4 | 270 | 8.0 | 1.3 | 1.9 | .6 | 29 | 0 | 24 | 4.8 |
| JAN., 1964 | | | | | | | | | | | |
| 14... | 16600 | 6.8 | 250 | 8.0 | 1.5 | 1.5 | .5 | 30 | 0 | 25 | 5.2 |
| FEB. | | | | | | | | | | | |
| 20... | 12400 | 7.6 | 120 | 10 | 1.1 | 1.6 | .6 | 34 | 0 | 28 | 4.6 |
| MAR. | | | | | | | | | | | |
| 27... | 14200 | 8.1 | 180 | 8.5 | 1.7 | 1.6 | .6 | 32 | 0 | 26 | 5.8 |
| APR. | | | | | | | | | | | |
| 24... | 13600 | 7.3 | 120 | 9.0 | 1.9 | 1.2 | .3 | 35 | 0 | 29 | 4.4 |
| JUNE | | | | | | | | | | | |
| 06... | 43600 | 4.4 | 1100 | 4.5 | 1.0 | 1.0 | .3 | 18 | 0 | 15 | 2.6 |
| 30... | 26100 | 4.9 | 380 | 5.5 | 1.4 | 1.2 | .8 | 22 | 0 | 18 | 3.0 |
| JULY | | | | | | | | | | | |
| 14... | 50800 | 4.2 | 730 | 5.0 | .7 | 1.0 | .3 | 19 | 0 | 16 | 3.4 |
| AUG. | | | | | | | | | | | |
| 25... | 15000 | 4.9 | 130 | 5.5 | .7 | 1.0 | .7 | 20 | 0 | 16 | 3.8 |
| SEP. | | | | | | | | | | | |
| 28... | 8730 | 6.5 | 190 | 7.0 | 1.4 | 1.6 | .9 | 28 | 0 | 23 | 3.8 |
| OCT. | | | | | | | | | | | |
| 28... | 11300 | 5.8 | 130 | 7.5 | 1.3 | 1.4 | .9 | 28 | 0 | 23 | 5.0 |

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) |
|---|---|---|---|---|---|---|---|---|---|---|
| JAN., 1963 | | | | | | | | | | |
| 03... | .0 | .1 | .07 | .30 | .02 | 37 | 29 | 18 | 0 | 47 |
| FEB. | | | | | | | | | | |
| 07... | .2 | .0 | .09 | .40 | .01 | 32 | 28 | 18 | 2 | 42 |
| MAR. | | | | | | | | | | |
| 06... | .2 | .1 | .09 | .40 | .00 | 44 | 40 | 26 | 0 | 60 |
| APR. | | | | | | | | | | |
| 01... | .8 | .0 | .11 | .50 | .02 | 44 | 42 | 28 | 2 | 62 |
| MAY | | | | | | | | | | |
| 02... | .2 | .0 | .09 | .40 | .01 | 41 | 38 | 26 | 2 | 57 |
| JUNE | | | | | | | | | | |
| 12... | .0 | .0 | .05 | .20 | .00 | 30 | 28 | 20 | 2 | 45 |
| JULY | | | | | | | | | | |
| 09... | .0 | .1 | .07 | .30 | .01 | 30 | 30 | 19 | 0 | 45 |
| AUG. | | | | | | | | | | |
| 14... | .5 | .0 | .07 | .30 | .01 | 33 | 27 | 18 | 2 | 42 |
| SEP. | | | | | | | | | | |
| 03... | .5 | .2 | .02 | .10 | .01 | 34 | 33 | 20 | 1 | 50 |
| OCT. | | | | | | | | | | |
| 30... | .2 | .1 | -- | -- | .01 | 42 | 35 | 22 | 2 | 52 |
| DEC. | | | | | | | | | | |
| 09... | .5 | .1 | .20 | .90 | .01 | 45 | 40 | 25 | 1 | 59 |
| JAN., 1964 | | | | | | | | | | |
| 14... | .5 | .0 | .16 | .70 | .01 | 41 | 39 | 26 | 2 | 60 |
| FEB. | | | | | | | | | | |
| 20... | .5 | .1 | .14 | .60 | .01 | 52 | 43 | 30 | 2 | 67 |
| MAR. | | | | | | | | | | |
| 27... | .5 | .1 | .14 | .60 | .01 | 43 | 43 | 28 | 2 | 66 |
| APR. | | | | | | | | | | |
| 24... | .5 | .1 | .09 | .40 | .01 | 42 | 42 | 30 | 2 | 70 |
| JUNE | | | | | | | | | | |
| 06... | .5 | .0 | -- | -- | .00 | 23 | 24 | 15 | 0 | 36 |
| 30... | .2 | .1 | -- | -- | .01 | 27 | 28 | 20 | 2 | 45 |
| JULY | | | | | | | | | | |
| 14... | .0 | .1 | .07 | .30 | .00 | 22 | 24 | 15 | 0 | 36 |
| AUG. | | | | | | | | | | |
| 25... | .5 | .0 | .05 | .20 | .01 | 25 | 27 | 16 | 0 | 40 |
| SEP. | | | | | | | | | | |
| 28... | .5 | .0 | .11 | .50 | .01 | 34 | 36 | 24 | 0 | 55 |
| OCT. | | | | | | | | | | |
| 28... | .5 | .1 | .07 | .30 | .00 | 37 | 37 | 24 | 1 | 56 |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | DISSOLVED OXYGEN (MG/L) | COMPLETE COLIFORM (MPN) | DISSOLVED ARSENIC (AS) (UG/L) | DISSOLVED BORON (B) (UG/L) | DISSOLVED CHROMIUM (CR) (UG/L) | DISSOLVED COPPER (CU) (UG/L) | DISSOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| JAN., 1963 | | | | | | | | | | |
| 03... | 6.3 | 6.5 | 20 | 11.4 | 91 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 07... | 7.2 | 6.0 | 5 | 12.0 | 430 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 04... | 7.2 | 6.8 | 5 | 12.1 | 0 | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 01... | 7.4 | 7.0 | 5 | 11.8 | 0 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | 7.6 | 7.8 | 10 | 11.4 | 36 | 0 | 10 | 0 | 70 | <50 |
| JUNE | | | | | | | | | | |
| 12... | 7.1 | 12.8 | 5 | 10.7 | 930 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 09... | 7.0 | 13.3 | 5 | 10.6 | 11000 | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 14... | 7.0 | 15.0 | 5 | 9.8 | 2400 | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 03... | 7.1 | 14.0 | 5 | 9.5 | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 30... | 7.1 | 9.0 | 5 | 10.9 | 230 | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 09... | 6.9 | 5.6 | 5 | 11.5 | 230 | -- | -- | -- | -- | -- |
| JAN., 1964 | | | | | | | | | | |
| 16... | 7.3 | 5.2 | 5 | 12.0 | 430 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 20... | 7.1 | 6.0 | 5 | 13.1 | 36 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 27... | 7.5 | 5.4 | 5 | 12.3 | 150 | 0 | 50 | 0 | 0 | <50 |
| APR. | | | | | | | | | | |
| 24... | 7.3 | 10.0 | 5 | 11.4 | 36 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 04... | 7.0 | 8.7 | 5 | 11.8 | 230 | -- | -- | -- | -- | -- |
| 30... | 7.1 | 12.5 | 5 | 10.8 | 73 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 14... | 7.5 | 13.0 | 5 | 13.0 | 4600 | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 25... | 7.1 | 12.5 | 0 | 11.2 | 91 | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 28... | 7.0 | 11.4 | 5 | 10.8 | 930 | 0 | 20 | 0 | 70 | <50 |
| OCT. | | | | | | | | | | |
| 28... | 7.3 | 10.0 | 0 | 11.5 | 11000 | -- | -- | -- | -- | -- |

| DATE | DISCHARGE (CFS) | DISSOLVED SILICA (SIO2) (MG/L) | TOTAL IRON (FE) (UG/L) | DISSOLVED CALCIUM (CA) (MG/L) | DISSOLVED MAGNESIUM (MG) (MG/L) | DISSOLVED SODIUM (NA) (MG/L) | DISSOLVED POTASSIUM (K) (MG/L) | BICARBONATE (HCO3) (MG/L) | CARBONATE (CO3) (MG/L) | ALKALINITY AS CACO3 (MG/L) | DISSOLVED SULFATE (SO4) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV., 1964 | | | | | | | | | | | |
| 24... | 22200 | 5.0 | 780 | 6.0 | 1.3 | 1.2 | .4 | 24 | 0 | 20 | 4.0 |
| DEC. | | | | | | | | | | | |
| 08... | 17200 | 6.4 | 190 | 7.5 | 1.5 | 1.6 | .8 | 28 | 0 | 23 | 5.0 |
| JAN., 1965 | | | | | | | | | | | |
| 11... | 7850 | 8.4 | 260 | 9.5 | 2.2 | 2.0 | 1.0 | 38 | 0 | 31 | 5.2 |
| FEB. | | | | | | | | | | | |
| 14... | 19900 | 6.0 | 48 | 7.6 | 1.5 | 1.4 | .5 | 28 | 0 | 23 | 4.2 |
| MAR. | | | | | | | | | | | |
| 29... | 8460 | 8.5 | 190 | 9.2 | 1.8 | 1.8 | .7 | 36 | 0 | 30 | 4.8 |
| APR. | | | | | | | | | | | |
| 14... | 12500 | 7.7 | 130 | 8.4 | 1.5 | 1.8 | .4 | 32 | 0 | 26 | 5.4 |
| MAY | | | | | | | | | | | |
| 12... | 18600 | 6.0 | 50 | 6.4 | 1.3 | 1.3 | .4 | 24 | 0 | 20 | 4.0 |
| JUNE | | | | | | | | | | | |
| 21... | 24900 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | | |
| 12... | 16900 | 5.1 | 160 | 5.6 | 1.1 | 1.0 | .5 | 22 | 0 | 18 | 3.2 |
| AUG. | | | | | | | | | | | |
| 09... | 12700 | 5.7 | 290 | 6.0 | .9 | 1.5 | .7 | 22 | 0 | 18 | 4.2 |
| SEP. | | | | | | | | | | | |
| 07... | 5100 | 7.4 | 260 | 7.6 | 1.6 | 1.8 | .8 | 30 | 0 | 25 | 4.4 |
| OCT. | | | | | | | | | | | |
| 04... | 4480 | 8.3 | -- | 8.0 | 1.7 | 1.7 | .5 | 32 | 0 | 26 | 4.8 |
| NOV. | | | | | | | | | | | |
| 03... | 16000 | 5.6 | -- | 6.4 | 1.0 | 1.1 | .6 | 22 | 0 | 18 | 5.2 |
| DEC. | | | | | | | | | | | |
| 15... | 13900 | 6.4 | -- | 8.4 | 1.4 | 1.4 | .8 | 30 | 0 | 25 | 5.2 |
| JAN., 1966 | | | | | | | | | | | |
| 12... | 18400 | 6.5 | -- | 8.0 | 1.5 | 1.3 | .5 | 29 | 0 | 24 | 5.0 |
| FEB. | | | | | | | | | | | |
| 01... | 13900 | 6.8 | -- | 9.6 | 1.0 | 1.4 | .7 | 32 | 0 | 26 | 5.4 |
| MAR. | | | | | | | | | | | |
| 16... | 14200 | 6.1 | -- | 7.2 | 1.6 | 1.3 | .6 | 28 | 0 | 23 | 4.8 |
| APR. | | | | | | | | | | | |
| 12... | 22200 | 5.5 | -- | 6.0 | 1.3 | 1.1 | .5 | 24 | 0 | 20 | 4.0 |
| MAY | | | | | | | | | | | |
| 10... | 29700 | 5.2 | -- | 5.0 | 1.0 | 1.0 | .5 | 20 | 0 | 16 | 3.4 |
| JUNE | | | | | | | | | | | |
| 16... | 24600 | 4.4 | -- | 4.8 | .3 | 1.0 | .4 | 16 | 0 | 13 | 2.8 |
| JULY | | | | | | | | | | | |
| 12... | 20200 | 4.5 | -- | 4.8 | .9 | .9 | .5 | 18 | 0 | 15 | 3.2 |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV., 1964 | | | | | | | | | | |
| 24... | .2 | .1 | .16 | .70 | .01 | 35 | 31 | 20 | 1 | 48 |
| DEC. | | | | | | | | | | |
| 08... | .2 | .2 | .11 | .50 | .03 | 40 | 38 | 24 | 2 | 58 |
| JAN., 1965 | | | | | | | | | | |
| 11... | .8 | .1 | .16 | .70 | .04 | 52 | 49 | 32 | 2 | 76 |
| FEB. | | | | | | | | | | |
| 18... | 1.0 | .0 | .14 | .60 | .01 | 38 | 37 | 25 | 2 | 58 |
| MAR. | | | | | | | | | | |
| 29... | 1.5 | .1 | .11 | .50 | .02 | 47 | 47 | 30 | 1 | 72 |
| APR. | | | | | | | | | | |
| 14... | .8 | .0 | .16 | .70 | .00 | 43 | 43 | 28 | 2 | 65 |
| MAY | | | | | | | | | | |
| 12... | .5 | .1 | .07 | .30 | .01 | 32 | 32 | 21 | 2 | 50 |
| JUNE | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 12... | .0 | .0 | .00 | .00 | .01 | 28 | 27 | 18 | 0 | 44 |
| AUG. | | | | | | | | | | |
| 09... | .5 | .0 | .05 | .20 | .02 | 30 | 31 | 19 | 1 | 46 |
| SEP. | | | | | | | | | | |
| 07... | .5 | .1 | .05 | .20 | .01 | 39 | 39 | 26 | 1 | 61 |
| OCT. | | | | | | | | | | |
| 04... | .8 | .0 | .05 | .20 | -- | 42 | 42 | 27 | 1 | 67 |
| NOV. | | | | | | | | | | |
| 03... | .5 | .1 | .09 | .40 | -- | 32 | 32 | 20 | 2 | 51 |
| DEC. | | | | | | | | | | |
| 15... | .5 | .1 | .07 | .30 | -- | 40 | 39 | 26 | 2 | 63 |
| JAN., 1966 | | | | | | | | | | |
| 12... | .2 | .1 | .14 | .60 | -- | 40 | 38 | 26 | 2 | 62 |
| FEB. | | | | | | | | | | |
| 01... | .5 | .1 | .07 | .30 | -- | 44 | 42 | 28 | 2 | 65 |
| MAR. | | | | | | | | | | |
| 16... | .5 | .1 | .09 | .40 | -- | 38 | 36 | 24 | 2 | 58 |
| APR. | | | | | | | | | | |
| 12... | .2 | .1 | .09 | .40 | -- | 32 | 31 | 20 | 1 | 50 |
| MAY | | | | | | | | | | |
| 10... | .2 | .1 | .07 | .30 | -- | 29 | 27 | 16 | 0 | 43 |
| JUNE | | | | | | | | | | |
| 16... | .5 | .1 | .05 | .20 | -- | 22 | 22 | 13 | 0 | 35 |
| JULY | | | | | | | | | | |
| 12... | .0 | .1 | .05 | .20 | -- | 26 | 24 | 16 | 1 | 39 |

| DATE | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | DIS-SOLVED OXYGEN (MG/L) | COM-PLETE COLI-FORM (MPN) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV., 1964 | | | | | | | | | | |
| 24... | 7.0 | 7.0 | 20 | 11.6 | 2400 | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 08... | 7.1 | 6.7 | 5 | 11.8 | 91 | -- | -- | -- | -- | -- |
| JAN., 1965 | | | | | | | | | | |
| 11... | 7.8 | 4.0 | 5 | 12.5 | 930 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 18... | 6.8 | 6.3 | 5 | 12.5 | 750 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 29... | 7.6 | 6.0 | 0 | 12.5 | 230 | 0 | 30 | 0 | 20 | <50 |
| APR. | | | | | | | | | | |
| 14... | 7.3 | 8.2 | 0 | 11.4 | 430 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 12... | 7.1 | 9.5 | 5 | 10.7 | 230 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 21... | -- | -- | -- | 10.7 | 430 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 12... | 7.1 | 13.5 | 5 | 10.0 | 4600 | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 09... | 7.1 | 14.7 | 5 | 9.5 | 11000 | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 07... | 7.2 | 14.3 | 0 | 9.6 | 930 | 0 | 10 | 10 | 50 | <50 |
| OCT. | | | | | | | | | | |
| 04... | 7.2 | 12.1 | 5 | 10.0 | 24000 | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 03... | 7.0 | 9.5 | 5 | 10.8 | 930 | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 15... | 7.0 | 4.5 | 5 | 12.1 | 430 | -- | -- | -- | -- | -- |
| JAN., 1966 | | | | | | | | | | |
| 12... | 7.2 | 5.2 | 5 | 12.1 | 430 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 01... | 7.2 | 5.2 | 5 | 12.5 | 36 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 16... | 7.0 | 4.7 | 5 | 11.2 | 430 | 0 | 20 | 0 | 30 | <50 |
| APR. | | | | | | | | | | |
| 12... | 7.1 | 5.3 | 5 | 12.1 | 91 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 10... | 7.0 | 8.3 | 0 | 11.6 | 91 | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 16... | 6.7 | 12.3 | 5 | 10.6 | 430 | -- | -- | -- | -- | -- |
| JULY | | | | | | | | | | |
| 12... | 6.9 | 13.2 | 0 | 10.5 | 4600 | -- | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG., 1966 | | | | | | | | | | | |
| 16... | 10900 | 5.0 | 5.7 | 1.1 | 1.3 | .7 | 22 | 0 | 18 | 3.6 | 1.0 |
| SEP. | | | | | | | | | | | |
| 14... | 7530 | 10 | 7.4 | 1.4 | 1.4 | .6 | 30 | 0 | 25 | 4.4 | .5 |
| OCT. | | | | | | | | | | | |
| 30... | 20200 | 6.6 | 7.0 | 1.2 | 1.3 | .6 | 25 | 0 | 21 | 5.0 | .2 |
| NOV. | | | | | | | | | | | |
| 02... | 12200 | 6.3 | 6.5 | 1.2 | 1.2 | .5 | 25 | 0 | 21 | 4.6 | .5 |
| 16... | 17200 | 5.3 | 7.0 | 1.1 | 1.1 | .8 | 24 | 0 | 20 | 4.4 | .2 |
| DEC. | | | | | | | | | | | |
| 27... | 17600 | 7.7 | 8.0 | 1.1 | 1.4 | .5 | 29 | 0 | 24 | 4.6 | .5 |
| JAN., 1967 | | | | | | | | | | | |
| 24... | 18900 | 6.9 | 8.4 | 1.7 | 1.3 | .6 | 30 | 0 | 25 | 5.6 | 1.0 |
| FEB. | | | | | | | | | | | |
| 22... | 13600 | 7.9 | 8.9 | 1.8 | 1.4 | .7 | 32 | 0 | 26 | 5.2 | 1.0 |
| MAR. | | | | | | | | | | | |
| 28... | 15600 | 7.0 | 8.0 | 1.5 | 1.4 | .6 | 30 | 0 | 25 | 4.8 | .5 |
| APR. | | | | | | | | | | | |
| 25... | 12000 | 7.5 | 9.0 | 1.6 | 1.6 | .9 | 34 | 0 | 28 | 4.8 | 1.0 |
| MAY | | | | | | | | | | | |
| 23... | 28880 | 5.0 | 4.8 | .9 | .9 | .6 | 18 | 0 | 15 | 3.0 | .0 |
| JUNE | | | | | | | | | | | |
| 13... | 28300 | 5.1 | 5.5 | .9 | 1.2 | .7 | 22 | 0 | 18 | 3.4 | .5 |
| JULY | | | | | | | | | | | |
| 20... | 18700 | 5.1 | 5.0 | 1.1 | 1.1 | .6 | 21 | 0 | 17 | 3.4 | .2 |
| AUG. | | | | | | | | | | | |
| 15... | 13700 | 5.1 | 5.3 | 1.0 | 1.1 | .8 | 20 | 0 | 16 | 3.4 | .0 |
| SEP. | | | | | | | | | | | |
| 19... | 8110 | 6.3 | 6.5 | 1.2 | 1.3 | .4 | 26 | 0 | 21 | 4.0 | .5 |
| OCT. | | | | | | | | | | | |
| 17... | 6490 | 5.3 | 6.0 | 1.1 | 1.0 | .4 | 22 | 0 | 18 | 4.0 | .5 |
| NOV. | | | | | | | | | | | |
| 14... | 19400 | 7.2 | 7.0 | 1.2 | 1.1 | .6 | 26 | 0 | 21 | 4.0 | .2 |
| JAN., 1968 | | | | | | | | | | | |
| 09... | 13000 | 8.4 | 8.4 | 1.7 | 2.0 | .6 | 32 | 0 | 26 | 4.6 | .9 |
| 23... | 36100 | 5.7 | 5.7 | 1.2 | 1.1 | .5 | 22 | 0 | 18 | 4.2 | .7 |
| FEB. | | | | | | | | | | | |
| 08... | 19300 | 6.6 | 7.2 | 1.4 | 1.4 | .6 | 28 | 0 | 23 | 3.8 | .5 |
| MAR. | | | | | | | | | | | |
| 19... | 16500 | 6.4 | 7.9 | 1.8 | 1.3 | .5 | 32 | 0 | 26 | 4.0 | .4 |
| APR. | | | | | | | | | | | |
| 22... | 12200 | 7.0 | 8.5 | 1.6 | 1.5 | .6 | 34 | 0 | 28 | 4.0 | .5 |

| DATE | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG., 1966 | | | | | | | | | | | |
| 16... | .0 | .05 | .20 | 30 | 29 | 19 | 1 | 40 | 6.9 | 14.4 | 5 |
| SEP. | | | | | | | | | | | |
| 14... | .0 | .05 | .20 | 41 | 41 | 24 | 0 | 53 | 7.3 | 13.1 | 5 |
| OCT. | | | | | | | | | | | |
| 30... | .1 | .16 | .70 | 42 | 35 | 22 | 2 | 52 | 7.1 | 9.0 | 5 |
| NOV. | | | | | | | | | | | |
| 02... | .1 | .05 | .20 | 34 | 33 | 21 | 0 | 51 | 7.4 | 8.7 | 5 |
| 16... | .2 | .11 | .50 | 32 | 32 | 22 | 3 | 50 | 7.5 | 7.7 | 10 |
| DEC. | | | | | | | | | | | |
| 27... | .1 | .11 | .50 | 44 | 39 | 25 | 1 | 57 | 7.3 | -- | 5 |
| JAN., 1967 | | | | | | | | | | | |
| 24... | .0 | .16 | .70 | 41 | 41 | 28 | 4 | 63 | 7.2 | 4.4 | 5 |
| FEB. | | | | | | | | | | | |
| 22... | .1 | .11 | .50 | 47 | 43 | 30 | 4 | 66 | 7.1 | 5.6 | 5 |
| MAR. | | | | | | | | | | | |
| 28... | .1 | .09 | .40 | 38 | 39 | 26 | 2 | 65 | 7.3 | 5.8 | 5 |
| APR. | | | | | | | | | | | |
| 25... | .1 | .09 | .40 | 45 | 44 | 29 | 1 | 69 | 7.3 | 8.4 | 0 |
| MAY | | | | | | | | | | | |
| 23... | .1 | .09 | .40 | 26 | 25 | 16 | 0 | 39 | 7.0 | 6.5 | 0 |
| JUNE | | | | | | | | | | | |
| 13... | .0 | .02 | .10 | 30 | 28 | 17 | 0 | 42 | 7.3 | 10.7 | 5 |
| JULY | | | | | | | | | | | |
| 20... | .1 | .02 | .10 | 30 | 27 | 17 | 0 | 41 | 7.2 | 12.4 | 5 |
| AUG. | | | | | | | | | | | |
| 15... | .0 | .02 | .10 | 26 | 27 | 17 | 1 | 41 | 7.2 | 15.9 | 5 |
| SEP. | | | | | | | | | | | |
| 19... | .1 | .07 | .30 | 36 | 33 | 21 | 0 | 52 | 7.2 | 14.2 | 5 |
| OCT. | | | | | | | | | | | |
| 17... | .1 | .07 | .30 | 30 | 30 | 20 | 2 | 45 | 7.2 | 10.4 | 10 |
| NOV. | | | | | | | | | | | |
| 14... | .1 | .05 | .20 | 41 | 34 | 23 | 1 | 51 | 7.4 | 9.2 | 10 |
| JAN., 1968 | | | | | | | | | | | |
| 09... | .1 | .02 | .10 | 48 | 43 | 28 | 2 | 64 | 7.3 | 4.0 | 5 |
| 23... | .1 | .05 | .20 | 33 | 30 | 19 | 1 | 45 | 7.2 | 6.0 | 5 |
| FEB. | | | | | | | | | | | |
| 08... | .1 | .05 | .20 | 38 | 36 | 24 | 1 | 56 | 7.1 | 4.1 | 10 |
| MAR. | | | | | | | | | | | |
| 19... | .1 | .05 | .20 | 41 | 38 | 27 | 1 | 59 | 7.3 | 6.0 | 5 |
| APR. | | | | | | | | | | | |
| 22... | .0 | .02 | .10 | 42 | 41 | 28 | 0 | 66 | 7.2 | 9.0 | 5 |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-SOLVED OXYGEN (MG/L) | IMMEDIATE COLI-FORM (COL. PER 100 ML) | COM-PLETE COLI-FORM (NPN) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | HEXA-VALENT CHRO-MIUM (CR6) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED LITHIUM (LI) (UG/L) | DIS-SOLVED STRON-TIUM (SR) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG., 1966 | | | | | | | | | | | |
| 16... | 10.6 | -- | 2400 | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | | |
| 14... | 11.8 | -- | 36 | 0 | 0 | 10 | 10 | 60 | -- | -- | 0 |
| OCT. | | | | | | | | | | | |
| 30... | 10.9 | -- | 230 | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | | |
| 02... | 11.4 | -- | 200 | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 11.3 | -- | 430 | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | | |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN., 1967 | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | | |
| 22... | 12.4 | -- | 36 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | | |
| 24... | 12.2 | -- | 91 | -- | -- | -- | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | | |
| 25... | 12.6 | -- | 91 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 23... | 11.8 | -- | 430 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | | |
| 13... | 10.8 | -- | 36 | 0 | 20 | 0 | -- | 0 | -- | -- | 0 |
| JULY | | | | | | | | | | | |
| 20... | 10.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | | |
| 15... | 10.1 | -- | 1500 | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | | |
| 19... | 10.2 | -- | 1500 | -- | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | | |
| 17... | 11.0 | -- | 2400 | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | | |
| 14... | 11.3 | -- | 24000 | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN., 1968 | | | | | | | | | | | |
| 04... | 12.3 | -- | 11000 | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 12.2 | -- | 290 | 0 | 0 | 0 | -- | 10 | 0 | 30 | 0 |
| FEB. | | | | | | | | | | | |
| 08... | 12.5 | -- | 2400 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | | |
| 19... | 12.4 | -- | 70 | -- | -- | -- | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | | |
| 22... | 12.5 | 63 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY, 1968 | | | | | | | | | | | |
| 06... | 18700 | 7.4 | 7.1 | 1.3 | 1.3 | .5 | 27 | 0 | 22 | 4.8 | .4 |
| JUNE | | | | | | | | | | | |
| 04... | 37300 | 4.9 | 4.6 | .9 | 1.0 | .6 | 19 | 0 | 16 | 2.6 | .3 |
| JULY | | | | | | | | | | | |
| 16... | 23500 | 5.0 | 5.5 | .9 | 1.0 | .4 | 21 | 0 | 17 | 3.6 | .2 |
| AUG. | | | | | | | | | | | |
| 06... | 13600 | 4.9 | 5.4 | 1.0 | 1.4 | .6 | 22 | 0 | 18 | 4.0 | .7 |
| SEP. | | | | | | | | | | | |
| 10... | 9590 | 5.8 | 6.1 | 1.3 | 1.4 | .6 | 24 | 0 | 20 | 4.8 | .3 |
| OCT. | | | | | | | | | | | |
| 08... | 14000 | 5.2 | 6.5 | 1.2 | 1.2 | .5 | 24 | 0 | 20 | 4.6 | .4 |
| NOV. | | | | | | | | | | | |
| 19... | 21700 | 5.5 | 6.1 | 1.4 | 1.2 | .5 | 23 | 0 | 19 | 4.0 | .3 |
| DEC. | | | | | | | | | | | |
| 03... | 24800 | 5.9 | 7.2 | 1.3 | 1.2 | .5 | 27 | 0 | 22 | 4.8 | .3 |
| JAN., 1969 | | | | | | | | | | | |
| 14... | 18100 | 7.1 | 7.8 | 1.5 | 1.3 | .5 | 30 | 0 | 25 | 4.8 | .4 |
| FEB. | | | | | | | | | | | |
| 11... | 12000 | 7.4 | 8.5 | 1.7 | 1.6 | .7 | 32 | 0 | 26 | 5.0 | 1.0 |
| MAR. | | | | | | | | | | | |
| 18... | 17400 | 5.8 | 7.0 | 1.5 | 1.0 | .5 | 27 | 0 | 22 | 4.0 | .6 |
| APR. | | | | | | | | | | | |
| 09... | 12400 | 6.5 | 9.0 | 1.6 | 1.4 | .6 | 34 | 0 | 28 | 4.3 | .5 |
| MAY | | | | | | | | | | | |
| 12... | 29300 | 4.9 | 4.6 | .8 | .8 | .5 | 18 | 0 | 15 | 2.9 | .3 |
| JUNE | | | | | | | | | | | |
| 17... | 24600 | 4.4 | 4.5 | .8 | .8 | .4 | 17 | 0 | 14 | 2.8 | .1 |
| JULY | | | | | | | | | | | |
| 15... | 12800 | 5.5 | 5.8 | 1.0 | 1.0 | .5 | 22 | 0 | 18 | 3.6 | .5 |
| AUG. | | | | | | | | | | | |
| 11... | 7120 | 6.5 | 6.3 | 1.3 | 1.7 | .7 | 26 | 0 | 21 | 4.2 | 1.0 |
| SEP. | | | | | | | | | | | |
| 15... | 6780 | 6.4 | 6.2 | 1.3 | 1.4 | .7 | 24 | 0 | 20 | 4.6 | .5 |
| OCT. | | | | | | | | | | | |
| 14... | 11700 | 6.1 | 6.4 | 1.2 | 1.0 | .6 | 23 | 0 | 19 | 4.6 | .7 |
| NOV. | | | | | | | | | | | |
| 11... | 12900 | 6.2 | 7.0 | 1.3 | 1.2 | .6 | 26 | 0 | 21 | 4.6 | .5 |
| DEC. | | | | | | | | | | | |
| 09... | 10600 | 6.6 | 8.0 | 1.3 | 1.4 | .6 | 29 | 0 | 24 | 5.4 | .6 |
| JAN., 1970 | | | | | | | | | | | |
| 12... | 11200 | 7.3 | 8.4 | 1.5 | 1.5 | .6 | 31 | 0 | 25 | 6.0 | .6 |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-SOLVED FLUO-RIDE (F) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY , 1968 | | | | | | | | | | |
| 06... | .1 | .05 | .20 | 37 | 36 | 23 | 1 | 54 | 7.3 | 7.2 |
| JUNE | | | | | | | | | | |
| 04... | .0 | .07 | .30 | 25 | 25 | 15 | 0 | 36 | 7.1 | 10.1 |
| JULY | | | | | | | | | | |
| 16... | .1 | .05 | .20 | 29 | 27 | 17 | 0 | 41 | 7.1 | 13.0 |
| AUG. | | | | | | | | | | |
| 06... | .0 | .07 | .30 | 30 | 29 | 18 | 0 | 45 | 7.1 | 13.0 |
| SEP. | | | | | | | | | | |
| 10... | .0 | .02 | .10 | 32 | 32 | 21 | 1 | 48 | 7.2 | 13.0 |
| OCT. | | | | | | | | | | |
| 08... | .1 | .07 | .30 | 38 | 32 | 21 | 2 | 49 | 7.0 | 10.0 |
| NOV. | | | | | | | | | | |
| 19... | .1 | .09 | .40 | 32 | 31 | 21 | 2 | 48 | 7.1 | 7.2 |
| DEC. | | | | | | | | | | |
| 03... | .1 | .11 | .50 | 42 | 35 | 24 | 2 | 54 | 7.2 | 5.0 |
| JAN., 1969 | | | | | | | | | | |
| 14... | .1 | .11 | .50 | 31 | 39 | 26 | 1 | 60 | 7.4 | 2.5 |
| FEB. | | | | | | | | | | |
| 11... | .1 | .14 | .60 | 36 | 43 | 28 | 2 | 67 | 7.3 | 3.4 |
| MAR. | | | | | | | | | | |
| 18... | .0 | .16 | .70 | 38 | 34 | 24 | 2 | 54 | 7.3 | 6.5 |
| APR. | | | | | | | | | | |
| 09... | .2 | .09 | .40 | 44 | 41 | 26 | 0 | 67 | 7.0 | 10.0 |
| MAY | | | | | | | | | | |
| 12... | .1 | .07 | .30 | 31 | 24 | 15 | 0 | 36 | 7.0 | 12.0 |
| JUNE | | | | | | | | | | |
| 17... | .0 | .07 | .30 | 15 | 22 | 15 | 1 | 35 | 7.3 | 15.0 |
| JULY | | | | | | | | | | |
| 15... | .1 | .02 | .10 | 30 | 24 | 19 | 1 | 44 | 7.2 | 14.2 |
| AUG. | | | | | | | | | | |
| 11... | .0 | .09 | .40 | 32 | 35 | 21 | 0 | 54 | 7.1 | 16.0 |
| SEP. | | | | | | | | | | |
| 15... | .1 | .05 | .20 | 34 | 33 | 21 | 2 | 52 | 6.0 | 13.0 |
| OCT. | | | | | | | | | | |
| 14... | .1 | .09 | .40 | 29 | 32 | 21 | 2 | 51 | 7.3 | 7.6 |
| NOV. | | | | | | | | | | |
| 11... | .1 | .09 | .40 | 42 | 35 | 23 | 2 | 55 | 7.2 | 8.8 |
| DEC. | | | | | | | | | | |
| 09... | .1 | .09 | .40 | 43 | 38 | 26 | 2 | 62 | 7.7 | 7.1 |
| JAN., 1970 | | | | | | | | | | |
| 12... | .1 | .11 | .50 | 34 | 42 | 27 | 2 | 66 | 7.2 | 5.0 |

| DATE | COLOR (PLAT-INUM-COBALT UNITS) | DIS-SOLVED OXYGEN (MG/L) | IMME-DIATE COLI-FORM (COL. PER 100 ML) | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BORON (B) (UG/L) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED LITHIUM (LI) (UG/L) | DIS-SOLVED STRON-TIUM (SR) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY , 1968 | | | | | | | | | | |
| 06... | 5 | 12.2 | 430 | -- | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 04... | 10 | 11.1 | 270 | 0 | -- | 0 | 0 | 0 | 20 | 0 |
| JULY | | | | | | | | | | |
| 16... | 5 | 11.0 | 4100 | -- | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 06... | 5 | 10.2 | 9500 | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 10... | 0 | 10.8 | 130 | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 08... | 5 | 10.5 | 780 | -- | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 19... | 5 | 11.6 | 90 | -- | -- | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 03... | 5 | 11.7 | 78 | -- | 10 | 0 | 0 | -- | -- | 0 |
| JAN., 1969 | | | | | | | | | | |
| 14... | 5 | 11.6 | 330 | -- | -- | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 11... | 10 | 13.1 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 18... | 5 | 12.4 | 170 | -- | -- | -- | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 09... | 5 | 11.8 | 56 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 12... | 5 | 11.4 | 58 | -- | -- | -- | -- | -- | -- | -- |
| JUNE | | | | | | | | | | |
| 17... | 0 | 10.6 | 340 | -- | -- | 0 | 0 | -- | -- | 0 |
| JULY | | | | | | | | | | |
| 15... | 0 | 10.5 | 3600 | -- | -- | -- | -- | -- | -- | -- |
| AUG. | | | | | | | | | | |
| 11... | 0 | 9.4 | 19000 | -- | -- | -- | -- | -- | -- | -- |
| SEP. | | | | | | | | | | |
| 15... | 0 | 10.3 | 2400 | -- | -- | -- | -- | -- | -- | -- |
| OCT. | | | | | | | | | | |
| 14... | 0 | 11.7 | 80 | -- | -- | -- | -- | -- | -- | -- |
| NOV. | | | | | | | | | | |
| 11... | 0 | 11.0 | 2400 | -- | -- | -- | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 09... | 0 | 11.3 | 1000 | -- | -- | 0 | 0 | -- | -- | 0 |
| JAN., 1970 | | | | | | | | | | |
| 12... | 5 | 12.1 | 3000 | -- | -- | -- | -- | -- | -- | -- |

## TABLE C3.--Chemical quality of surface water--Continued

12200500 - SKAGIT RIVER NEAR MOUNT VERNON, WASH.

WATER QUALITY DATA

| DATE | DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SIO2) (MG/L) | DIS-SOLVED CAL-CIUM (CA) (MG/L) | DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED PO-TAS-SIUM (K) (MG/L) | BICAR-BONATE (HCO3) (MG/L) | CAR-BONATE (CO3) (MG/L) | ALKA-LINITY AS CACO3 (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB... 1970 | | | | | | | | | | | | |
| 09... MAR. | 14100 | 7.2 | 7.8 | 1.6 | 1.3 | .7 | 29 | 0 | 24 | 5.4 | .6 | .0 |
| 10... APR. | 11800 | 7.0 | 8.0 | 1.4 | 1.6 | .7 | 30 | 0 | 25 | 5.4 | .3 | .1 |
| 06... MAY | 17500 | 5.1 | 6.2 | 1.3 | 1.1 | .6 | 25 | 0 | 20 | 3.8 | .4 | .0 |
| 11... JUNE | 11000 | 5.2 | 3.7 | .8 | 1.4 | .5 | 14 | 0 | 11 | 2.6 | .8 | .1 |
| 08... JULY | 21200 | 4.8 | 4.0 | .7 | .9 | .6 | 17 | 0 | 14 | 2.0 | .3 | .1 |
| 21... AUG. | 14000 | 5.6 | 5.3 | .9 | 1.2 | .6 | 20 | 0 | 16 | 3.4 | .6 | .1 |
| 10... SEP. | 7820 | 6.0 | 6.5 | 1.3 | 1.7 | .7 | 26 | 0 | 21 | 3.8 | .9 | .1 |
| 04... | 12400 | 5.3 | 5.5 | 1.1 | 1.1 | .5 | 20 | 0 | 16 | 3.8 | .6 | .0 |

| DATE | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (NO3) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | DIS-SOLVED OXYGEN (MG/L) | IMME-DIATE COLI-FORM (COL. PER 100 ML) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB... 1970 | | | | | | | | | | | | |
| 09... MAR. | .11 | .50 | 39 | 39 | 26 | 2 | 64 | 7.1 | 6.0 | 5 | 12.4 | 100 |
| 10... APR. | .11 | .50 | 42 | 40 | 26 | 2 | 63 | 7.3 | 5.1 | 0 | 12.8 | 110 |
| 06... MAY | .14 | .60 | 35 | 31 | 21 | 1 | 50 | 6.9 | 6.0 | 20 | 11.8 | 820 |
| 11... JUNE | .14 | .60 | 31 | 23 | 13 | 1 | 35 | 6.9 | 9.5 | 10 | 11.7 | 2400 |
| 08... JULY | .07 | .30 | 28 | 22 | 13 | 0 | 33 | 7.1 | 12.3 | 5 | 10.7 | 135 |
| 21... AUG. | .05 | .20 | 35 | 28 | 17 | 0 | 43 | 7.3 | 13.4 | 5 | 10.4 | 1800 |
| 10... SEP. | .00 | .00 | 36 | 34 | 22 | 0 | 56 | 7.1 | 15.7 | 5 | 10.1 | 3000 |
| 04... | .11 | .50 | 31 | 28 | 18 | 2 | 45 | 7.5 | 14.1 | 5 | 10.4 | 700 |

## TABLE C3.--Chemical quality of surface water--Continued

12200675 - S F SKAGIT R AT CONWAY

WATER QUALITY DATA

| DATE | TIME | DIS-CHARGE (CFS) | TOTAL NITRATE (N) (MG/L) | TOTAL NITRITE (N) (MG/L) | AMMONIA NITRO-GEN (N) (MG/L) | TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L) | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L) | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC., 1970 | | | | | | | | | | | | |
| 02... | 1055 | 5000 | .16 | .00 | .00 | .02 | .01 | .00 | .00 | 64 | 7.3 | 5.5 |
| 16... | 1010 | 6400 | .16 | .00 | .00 | .29 | .02 | .00 | .00 | 67 | 7.9 | 5.6 |
| JAN., 1971 | | | | | | | | | | | | |
| 06... | 1100 | 5200 | .11 | .00 | .00 | .00 | .02 | .03 | .01 | 69 | 7.3 | 3.4 |
| 20... | 0920 | 18000 | .16 | .00 | .00 | .07 | .03 | .06 | .02 | 37 | 6.9 | 3.5 |
| FEB. | | | | | | | | | | | | |
| 03... | 0930 | 13200 | .18 | .00 | .00 | .04 | .18 | .06 | .02 | 51 | 7.0 | 4.1 |
| 17... | 0945 | 10100 | .25 | .00 | .00 | .02 | .04 | .09 | .03 | 51 | 7.2 | 4.7 |
| MAR. | | | | | | | | | | | | |
| 03... | 1005 | 5600 | .20 | .00 | .11 | .08 | .01 | .00 | .00 | 62 | 7.2 | 3.0 |
| 17... | 0950 | 4100 | .11 | .00 | .05 | .20 | .05 | .09 | .03 | 66 | 7.2 | 5.1 |
| APR. | | | | | | | | | | | | |
| 14... | 1025 | 3900 | .27 | .00 | .04 | .13 | .04 | -- | -- | 66 | 7.1 | 8.0 |
| 28... | 0830 | 6100 | .05 | .00 | .00 | .08 | .05 | .03 | .01 | 50 | 7.2 | 7.6 |
| MAY | | | | | | | | | | | | |
| 12... | 1020 | 13000 | .09 | .00 | .00 | .07 | .04 | .06 | .02 | 40 | 7.2 | 9.6 |
| 26... | 0930 | 11200 | .09 | .00 | .00 | .18 | .03 | -- | -- | 38 | 6.9 | 8.7 |
| JUNE | | | | | | | | | | | | |
| 09... | 0925 | 14400 | .07 | .00 | .10 | .16 | .04 | .09 | .03 | 53 | 7.0 | 8.7 |
| 23... | 0945 | 18800 | .02 | .00 | .00 | .02 | .02 | .03 | .01 | 36 | 6.8 | 9.3 |
| JULY | | | | | | | | | | | | |
| 14... | 0920 | 10600 | .16 | .00 | .01 | .01 | .01 | .03 | .01 | 45 | 7.1 | 11.6 |
| 28... | 0935 | 15700 | .12 | .00 | .07 | .14 | .02 | .00 | .00 | 49 | 7.3 | 12.9 |
| AUG. | | | | | | | | | | | | |
| 11... | 0930 | 7500 | .11 | .00 | .01 | .07 | .04 | .00 | .00 | 40 | 7.3 | 14.6 |
| 25... | 0940 | 3600 | .11 | .00 | .07 | .12 | .03 | .03 | .01 | 50 | 7.0 | 13.7 |
| SEP. | | | | | | | | | | | | |
| 15... | 1000 | 2800 | .21 | .00 | .00 | .16 | .01 | .00 | .00 | 50 | 7.4 | 11.9 |
| 29... | 0930 | 4000 | .27 | .00 | .07 | .18 | .02 | .00 | .00 | 52 | 7.6 | 10.5 |

| DATE | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (JTU) | DIS-SOLVED OXYGEN (MG/L) | IMME-DIATE COLI-FORM (COLS. PER 100 ML) | DIS-SOLVED CHRO-MIUM (CR) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | DIS-SOLVED LITHIUM (LI) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED STRON-TIUM (SR) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC., 1970 | | | | | | | | | | | |
| 02... | 6 | 3 | 12.1 | 600 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| 16... | 12 | 2 | 12.1 | 1500 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| JAN., 1971 | | | | | | | | | | | |
| 06... | 10 | 4 | 13.2 | 2700 | 0 | 0 | 0 | 0 | .0 | 50 | 0 |
| 20... | 45 | 50 | 12.9 | 600 | 0 | 0 | 0 | 0 | .3 | 0 | 0 |
| FEB. | | | | | | | | | | | |
| 03... | 37 | 25 | 12.3 | 300 | 0 | 0 | 0 | 0 | .2 | 0 | 0 |
| 17... | 31 | 15 | 12.4 | 460 | 0 | 0 | 0 | 0 | .0 | 0 | 0 |
| MAR. | | | | | | | | | | | |
| 03... | 13 | 6 | 12.6 | 400 | 0 | 0 | 6 | 5 | .0 | 40 | 10 |
| 17... | 21 | 5 | 12.6 | 320 | 2 | 0 | 5 | 0 | .0 | 80 | 78 |
| APR. | | | | | | | | | | | |
| 14... | 15 | 2 | 11.5 | 500 | 0 | 0 | 0 | 0 | .0 | 380 | 18 |
| 28... | 21 | 4 | 11.8 | 1600 | 0 | 0 | 3 | 2 | .2 | 30 | 0 |
| MAY | | | | | | | | | | | |
| 12... | 21 | 6 | 11.7 | 3000 | 0 | 0 | 0 | 6 | .2 | 6 | 4 |
| 26... | 20 | 8 | 11.6 | 1600 | 0 | 6 | 310 | 0 | 5.9 | 200 | 20 |
| JUNE | | | | | | | | | | | |
| 09... | 14 | 8 | 12.1 | 3000 | 1 | 16 | 660 | 0 | .5 | 60 | 30 |
| 23... | 12 | 8 | 11.0 | 2000 | 0 | 1 | 0 | 37 | .3 | 30 | 0 |
| JULY | | | | | | | | | | | |
| 14... | 14 | 4 | 10.9 | 5000 | 0 | 0 | 0 | 0 | .3 | 710 | 0 |
| 28... | 14 | 9 | 10.8 | 8000 | 0 | 13 | 320 | 0 | 2.5 | 90 | 20 |
| AUG. | | | | | | | | | | | |
| 11... | 16 | 20 | 10.0 | 12000 | 0 | 1 | 3 | 0 | .0 | 50 | 0 |
| 25... | 10 | 3 | 10.5 | 20000 | 1 | 7 | 1100 | 0 | 30 | 6 | 20 |
| SEP. | | | | | | | | | | | |
| 15... | 12 | 4 | 10.7 | 9000 | 0 | 3 | 4 | 0 | .0 | 40 | 20 |
| 29... | 25 | 10 | 10.8 | 5000 | 7 | 23 | 440 | 19 | 3.6 | 70 | 20 |

TABLE C3.--Chemical quality of surface water--Continued

*Mineral analyses of water from Skagit River at Sedro Woolley, 1910-11.*

[Parts per million unless otherwise stated.]

| Date. From— | Date. To— | Turbidity. | Suspended matter. | Coefficient of fineness. | Silica ($SiO_2$). | Iron (Fe). | Calcium (Ca). | Magnesium (Mg). | Sodium and potassium (Na+K). | Carbonate radicle ($CO_3$). | Bicarbonate radicle ($HCO_3$). | Sulphate radicle ($SO_4$). | Nitrate radicle ($NO_3$). | Chlorine (Cl). | Dissolved solids. | Mean gage height (feet). | Mean discharge (second-feet). | Suspended matter (tons per day). | Dissolved matter (tons per day). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Feb. 1 | Feb. 10 | 4 | 4.2 | 1.05 | 15 | 0.30 | 9.4 | 2.7 | 3.2 | 0.0 | 39 | 11 | 0.63 | 0.5 | 65 | 38.64 | 10,386 | 118 | 1,820 |
| 11 | 20 | 3 | 3.2 | 1.07 | 15 | .90 | 11 | 2.2 | 5.7 | .0 | 41 | 12 | .12 | 1.5 | 68 | 37.72 | 7,997 | 69 | 1,470 |
| 21 | Mar. 2 | 15 | 18 | 1.20 | 15 | .10 | 12 | 3.0 | 6.5 | .0 | 49 | 8.3 | .12 | .7 | 69 | 38.48 | 10,085 | 490 | 1,880 |
| Mar. 3 | 12 | 10 | 15 | 1.50 | 8.7 | .05 | 8.4 | 2.6 | 3.1 | .0 | 26 | 14 | .50 | .5 | 59 | 39.97 | 14,430 | 585 | 2,300 |
| 13 | 22 | 15 | 30 | 2.00 | 13 | .08 | 7.4 | 2.4 | 3.6 | .0 | 31 | 7.2 | .30 | .3 | 54 | 41.41 | 19,310 | 1,560 | 2,820 |
| 23 | Apr. 1 | 9 | 9.1 | 1.01 | 7.2 | .03 | 8.3 | 2.0 | 4.4 | .0 | 38 | 8.5 | .30 | .5 | 49 | 40.24 | 15,220 | 374 | 2,010 |
| Apr. 2 | 11 | 20 | 12 | .60 | 14 | Trace. | 10 | 3.5 | 8.2 | .0 | 48 | 6.9 | ..... | 2.0 | 79 | 39.90 | 14,110 | 458 | 3,010 |
| 12 | 21 | 8 | 6.4 | .80 | 18 | .30 | 9.2 | 2.0 | 4.9 | .0 | 34 | 9.2 | .30 | .5 | 63 | 40.45 | 15,920 | 275 | 2,710 |
| 22 | May 1 | 50 | 68 | 1.36 | 9.6 | .01 | 7.6 | 3.0 | 4.7 | .0 | 32 | 5.3 | Trace. | .7 | 46 | 43.27 | 26,760 | 4,910 | 3,320 |
| May 2 | 11 | 20 | 35 | 1.75 | 14 | .06 | 7.6 | 1.5 | 5.8 | .0 | 31 | 6.7 | .00 | .4 | 55 | 43.19 | 26,670 | 2,520 | 3,960 |
| 12 | 21 | 15 | 26 | 1.73 | 14 | .05 | 7.6 | 1.6 | 3.9 | .0 | 29 | 10 | .00 | .4 | 54 | 43.46 | 27,430 | 1,930 | 4,000 |
| 22 | 31 | 20 | 42 | 2.10 | 15 | .05 | 6.8 | 1.4 | 4.1 | .0 | 21 | 15 | .00 | .1 | 67 | 43.87 | 29,080 | 3,300 | 5,250 |
| June 1 | June 10 | 10 | 14 | 1.40 | 7.1 | .04 | 7.5 | 1.2 | 3.5 | .0 | 26 | 8.0 | .00 | .1 | 41 | 42.13 | 21,940 | 830 | 2,430 |
| 11 | 20 | 10 | 22 | 2.20 | 14 | .04 | 7.4 | 1.3 | 3.1 | .0 | 27 | 5.2 | .00 | .5 | 47 | 42.24 | 22,560 | 1,340 | 2,860 |
| 21 | 30 | 5 | ..... | ..... | 7.6 | .03 | 6.1 | 1.5 | 3.0 | .0 | 21 | 6.8 | .00 | .5 | 38 | 40.58 | 16,260 | 847 | 1,670 |
| July 1 | July 10 | 5 | 7.5 | 1.50 | 6.7 | .05 | 6.0 | 1.3 | 2.9 | .0 | 20 | 4.9 | .00 | .4 | 33 | 40.95 | 17,540 | 355 | 1,560 |
| 11 | 20 | 18 | 19 | 1.06 | 6.2 | .04 | 5.2 | 1.3 | 3.6 | .0 | 21 | 5.2 | .00 | .8 | 32 | 41.33 | 19,010 | 975 | 1,640 |
| 21 | 30 | 10 | 10 | 1.00 | 3.9 | .03 | 6.3 | 1.3 | 3.3 | .0 | 22 | 5.8 | ..... | .9 | 34 | 39.85 | 13,860 | 374 | 1,270 |
| 31 | Aug. 9 | 5 | 4.2 | .84 | 6.5 | .04 | 7.7 | 1.4 | 2.9 | .0 | 28 | 5.4 | ..... | 1.4 | 41 | 39.20 | 11,880 | 135 | 1,310 |
| Aug. 10 | 19 | 6 | 7.6 | 1.26 | 3.1 | .02 | 5.9 | 1.4 | 3.8 | .0 | 21 | 8.2 | .75 | 1.1 | 32 | 38.89 | 10,050 | 206 | 870 |
| 20 | 29 | 5 | 7.3 | 1.46 | 6.0 | .03 | 6.8 | 1.5 | 3.3 | .0 | 24 | 6.5 | .90 | 1.1 | 39 | 37.95 | 8,601 | 169 | 905 |
| 30 | Sept. 8 | 5 | 3.4 | .68 | 10 | .01 | 7.8 | 1.5 | 2.9 | .0 | 28 | 9.5 | .00 | .9 | 47 | 37.46 | 7,375 | 63 | 935 |
| Sept. 9 | 18 | 5 | 3.5 | .70 | 9.4 | .02 | 8.3 | 2.0 | 3.0 | .0 | 30 | 12 | .31 | .9 | 49 | 37.04 | 6,401 | 61 | 845 |
| 19 | 28 | 19 | 23 | 1.21 | 8.6 | .10 | 8.3 | 1.5 | 3.1 | .0 | 26 | 7.2 | .10 | 1.8 | 47 | 37.56 | 7,636 | 475 | 970 |
| 29 | Oct. 8 | 40 | 69 | 1.73 | 4.3 | .18 | 5.9 | 1.6 | 3.3 | .0 | 18 | 10 | .70 | 1.2 | 40 | 41.79 | 21,720 | 4,050 | 2,340 |
| Oct. 9 | 18 | 13 | 19 | 1.46 | 6.8 | .11 | 7.0 | 1.3 | 3.5 | .0 | 23 | 6.5 | 1.0 | 1.1 | 41 | 41.06 | 18,320 | 940 | 2,030 |
| 19 | 28 | 11 | 18 | 1.64 | 7.5 | .13 | 7.1 | 1.4 | 3.2 | .0 | 26 | 6.8 | .85 | 1.5 | 41 | 40.87 | 18,278 | 887 | 2,020 |
| 29 | Nov. 7 | 7 | 5.8 | .83 | 7.1 | .06 | 7.2 | .7 | 2.9 | .0 | 26 | ..... | .70 | 1.7 | 41 | 39.70 | 13,630 | 214 | 1,510 |
| Nov. 8 | 17 | 18 | 37 | 2.06 | 6.9 | .05 | 7.5 | .7 | 2.7 | .0 | 25 | 8.3 | .50 | 1.0 | 43 | 42.81 | 25,380 | 253 | 2,940 |
| 18 | 27 | 50 | 83 | 1.66 | 6.3 | .06 | 6.8 | .9 | 2.2 | .0 | 22 | 7.6 | Trace. | .8 | 42 | 43.54 | 29,340 | 6,570 | 3,330 |
| 28 | Dec. 7 | 5 | 7.8 | 1.56 | 7.2 | .02 | 7.6 | 1.4 | 2.8 | .0 | 26 | 8.5 | Trace. | .3 | 44 | 40.36 | 15,530 | 327 | 1,850 |
| Dec. 8 | 17 | 5 | 5.8 | 1.16 | 7.5 | .01 | 8.1 | 1.8 | 2.8 | .0 | 29 | 8.2 | .10 | .5 | 46 | 39.52 | 12,910 | 202 | 1,600 |
| 18 | 27 | 6 | 5.4 | .90 | 7.9 | .01 | 8.2 | 1.1 | 2.8 | .0 | 28 | 7.9 | Trace. | .5 | 46 | 39.51 | 13,078 | 190 | 1,620 |
| 28 | Jan. 6 | 3 | 4.1 | 1.37 | 9.5 | .01 | 8.2 | ..... | 3.6 | .0 | 29 | 6.6 | Trace. | 1.0 | 51 | 38.85 | 10,928 | 118 | 1,510 |
| Jan. 7 | 16 | 3 | 3.5 | 1.17 | 9.4 | Trace. | 9.6 | 1.9 | 2.4 | .0 | 31 | 7.9 | .10 | 1.3 | 47 | 39.17 | 11,860 | 112 | 1,500 |
| 17 | 26 | 1 | ..... | ..... | 10 | .03 | 10 | 1.8 | 2.8 | .0 | 32 | 9.5 | Trace. | 1.3 | 50 | 37.76 | 8,114 | 64 | 1,090 |
| 27 | 31 | 1 | 1.0 | 1.00 | 9.5 | .03 | 11 | 2.0 | 2.9 | .0 | 35 | 9.3 | Trace. | 1.8 | 52 | 37.08 | 6,486 | 17 | 910 |
| Mean | | 12 | 19 | 1.31 | 9.4 | .08 | 7.9 | 1.7 | 3.6 | .0 | 29 | 8.2 | .24 | .9 | 48 | ..... | 15,840 | [a] 363,550 | [a] 756,100 |
| Percentage of anhydrous residue | | | | | 20.3 | [b] .2 | 17.0 | 3.7 | 7.8 | 30.9 | ..... | 17.7 | .5 | 1.9 | ..... | ..... | ..... | ..... | ..... |

[a] Annual denudation.

[b] $Fe_2O_3$.

TABLE C4.--Sediment discharge data

| Date | Temperature (°C) | Concentration (mg/L) | Discharge (tons/day) |
|---|---|---|---|
| 94. Sauk River above White Chuck River near Darrington (12186000) | | | |
| 11- 9-65 | 8.0 | 2 | 5 |
| 12-15-65 | .5 | 3 | 5 |
| 5- 4-66 | 4.0 | 16 | 89 |
| 6-13-66 | 6.0 | 10 | 57 |
| 118. Sauk River near Sauk (12189500) | | | |
| 11-11-65 | 6.5 | 6 | 41 |
| 12-15-65 | 1.0 | 4 | 23 |
| 2- 3-66 | -- | 4 | 21 |
| 3- 8-66 | 3.5 | 25 | 242 |
| 5- 4-66 | 6.0 | 27 | 499 |
| 6-17-66 | 8.5 | 248 | 7,630 |
| 209. Skagit River near Mount Vernon (12200500) | | | |
| 9-15-65 | 12.0 | 68 | 2,140 |
| 1-14-66 | 4.5 | 654 | 57,300 |
| 2- 9-66 | 5.0 | 27 | 994 |
| 3-23-66 | 5.5 | 19 | 650 |
| 5- 5-66 | 10.0 | 56 | 3,430 |
| 6-17-66 | 14.5 | 13 | 439 |
| 7-27-66 | 11.0 | 116 | 2,680 |

TABLE C5.--Temperature of surface water

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1952 TO SEPTEMBER 1953

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 4.0 |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 5.0 | 4.5 | 4.5 |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 5.5 | 5.0 | 4.5 |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 5.5 | 5.0 | 5.0 |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 5.5 | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 5.5 | --- | --- |
| 9 | --- | --- | --- | --- | --- | --- | 5.5 | 5.5 | 5.5 | 5.5 | 6.5 | 6.0 |
| 10 | --- | --- | --- | --- | --- | --- | 5.5 | 5.5 | 5.5 | 5.5 | 6.0 | 6.0 |
| 11 | --- | --- | --- | --- | --- | --- | 5.5 | 5.0 | 5.5 | 5.0 | 6.0 | 6.0 |
| 12 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 4.5 | 6.0 | 6.0 |
| 13 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 | 6.0 | 5.5 |
| 14 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 | 5.5 | 5.5 |
| 15 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 | 6.0 | 5.5 |
| 16 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 | 6.0 | 6.0 |
| 17 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.0 | 4.0 | 6.0 | 5.0 |
| 18 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 4.5 |
| 19 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 4.5 | 5.0 | 4.5 |
| 20 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 4.5 | 5.0 | 5.0 |
| 21 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 22 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.5 | 4.5 | 6.5 | 4.5 |
| 23 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 6.0 | 4.5 | 6.5 | 6.0 |
| 24 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| 25 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 4.5 | 6.0 | 5.5 |
| 26 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 27 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 28 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 29 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | --- | --- | 6.0 | 5.5 |
| 30 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | --- | --- | 6.0 | 5.5 |
| 31 | --- | --- | --- | --- | --- | --- | 5.0 | 5.0 | --- | --- | 5.5 | 5.5 |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | 6.0 | 4.0 | 6.5 | 4.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 5.5 | 6.5 | 6.5 | 8.0 | 8.0 | 9.0 | 8.5 | 10.0 | 10.0 | 10.0 | 10.0 |
| 2 | 6.0 | 5.5 | 8.0 | 6.5 | 8.0 | 8.0 | 9.5 | 8.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 3 | 5.5 | 5.5 | 8.0 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.5 | 10.0 |
| 4 | 5.5 | 5.5 | 8.0 | 6.5 | 8.0 | 8.0 | 9.5 | 8.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 5 | 6.0 | 5.5 | 7.0 | 6.0 | 8.5 | 8.0 | 10.0 | 8.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 6 | 6.0 | 5.5 | 6.5 | 6.0 | 8.0 | 8.0 | 9.5 | 9.0 | 10.0 | 10.0 | 10.5 | 10.0 |
| 7 | 5.5 | 5.5 | 6.5 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 10.0 | 10.0 | 10.5 | 10.5 |
| 8 | 5.5 | 5.5 | 6.5 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 10.0 | 9.5 | 10.5 | 10.5 |
| 9 | 5.5 | 5.5 | 6.5 | 6.0 | 8.5 | 8.0 | 10.0 | 9.0 | 10.0 | 9.5 | 10.5 | 10.5 |
| 10 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 10.5 | 10.0 |
| 11 | 5.5 | 5.5 | 7.0 | 6.0 | 8.5 | 8.0 | 10.5 | 10.5 | 10.5 | 10.0 | 10.5 | 10.0 |
| 12 | 5.5 | 5.5 | 8.0 | 6.5 | 8.5 | 8.0 | 10.5 | 10.5 | 10.5 | 10.0 | 11.0 | 10.0 |
| 13 | 5.5 | 5.5 | 8.0 | 6.5 | 8.0 | 7.0 | 10.5 | 10.5 | 10.5 | 10.0 | 11.0 | 10.5 |
| 14 | 5.5 | 5.5 | 7.0 | 6.5 | 8.0 | 7.0 | 10.5 | 10.5 | 10.5 | 10.0 | 10.5 | 10.5 |
| 15 | 5.5 | 5.5 | 7.0 | 7.0 | 8.0 | 8.0 | 10.5 | 10.5 | 10.5 | 10.0 | 11.0 | 10.0 |
| 16 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 10.5 | 10.0 | 10.0 | 10.0 | 10.5 | 10.5 |
| 17 | 5.5 | 5.5 | 7.0 | 7.0 | 9.0 | 8.0 | 10.5 | 10.0 | 10.5 | 10.0 | 10.5 | 10.0 |
| 18 | 6.0 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 10.5 | 10.0 | 10.5 | 10.0 | 10.5 | 10.5 |
| 19 | 7.0 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.5 | 10.0 | 10.5 | 10.0 | 11.0 | 10.5 |
| 20 | 6.5 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.5 | 10.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 21 | 6.0 | 5.5 | 7.0 | 6.5 | 8.5 | 8.5 | 10.5 | 10.5 | 10.5 | 10.0 | 11.0 | 10.5 |
| 22 | 6.0 | 6.0 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 11.0 | 11.0 |
| 23 | 6.0 | 6.0 | 8.5 | 7.0 | 8.5 | 8.0 | 10.5 | 10.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 24 | 7.0 | 6.0 | 8.0 | 7.0 | 8.5 | 8.0 | 10.5 | 10.0 | 10.0 | 10.0 | 10.5 | 10.5 |
| 25 | 6.5 | 6.0 | 8.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 26 | 6.5 | 6.0 | 8.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 27 | 6.5 | 6.0 | 8.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 28 | 6.0 | 6.0 | 8.5 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 29 | 7.0 | 6.0 | 8.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.0 | 10.5 | 10.0 | 10.0 | 9.5 |
| 30 | 6.5 | 6.0 | 8.0 | 7.0 | 9.0 | 8.5 | 10.0 | 10.0 | 10.5 | 10.0 | 10.0 | 9.5 |
| 31 | --- | --- | 8.0 | 7.0 | --- | --- | 10.0 | 10.0 | 10.5 | 10.0 | --- | --- |
| MONTH | 7.0 | 5.5 | 8.5 | 6.0 | 9.0 | 7.0 | 10.5 | 8.5 | 10.5 | 9.5 | 11.0 | 9.5 |
| YEAR | 11.0 | 4.0 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1953 TO SEPTEMBER 1954

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 2 | 9.5 | 9.5 | 9.0 | 9.0 | 6.5 | 6.5 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 3 | 9.5 | 9.5 | 9.0 | 8.5 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 4 | 10.0 | 9.5 | 8.5 | 7.0 | 6.5 | 6.5 | 5.5 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 5 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 6 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 7 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 8 | 10.5 | 10.0 | 8.5 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 9 | 10.5 | 10.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 10 | 10.5 | 10.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 11 | 10.5 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 3.5 | 3.5 | 3.5 |
| 12 | 10.0 | 9.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 3.5 | 3.5 | 3.5 |
| 13 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 3.5 | 3.5 | 3.5 |
| 14 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 15 | 10.0 | 10.0 | 8.5 | 8.0 | 6.0 | 6.0 | 5.0 | 4.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 16 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 17 | 10.0 | 10.0 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.0 | 3.5 | 3.5 |
| 18 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 19 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 20 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 5.0 | 4.5 | 4.0 | 3.5 | 3.0 | 3.5 | 3.5 |
| 21 | 10.0 | 9.5 | 8.5 | 8.5 | 5.5 | 5.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 22 | 10.0 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 23 | 10.0 | 9.5 | 8.5 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 24 | 10.0 | 9.5 | 8.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 25 | 10.0 | 10.0 | 8.0 | 7.0 | 5.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 26 | 10.0 | 10.0 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 27 | 10.0 | 9.5 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 28 | 9.5 | 9.5 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 3.5 |
| 29 | 9.5 | 9.5 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 4.0 | 4.0 |
| 30 | 9.5 | 9.5 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 4.0 | 4.0 |
| 31 | 9.5 | 9.0 | --- | --- | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 4.0 | 4.0 |
| MONTH | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 6.0 | 3.5 | 4.0 | 3.0 | 4.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | 6.0 | 5.0 | 8.0 | 8.0 | --- | --- | 10.0 | 9.5 | 9.5 | 9.5 |
| 2 | 4.0 | 4.0 | 5.5 | 5.5 | 9.0 | 8.0 | --- | --- | 10.0 | 10.0 | 10.0 | 9.5 |
| 3 | 4.0 | 4.0 | 6.0 | 5.5 | 9.0 | 8.5 | --- | --- | 9.5 | 9.5 | 9.5 | 9.5 |
| 4 | 4.0 | 4.0 | 5.5 | 5.5 | 9.0 | 8.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 5 | 4.0 | 4.0 | 6.0 | 5.5 | 8.5 | 8.5 | 10.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 6 | 4.0 | 4.0 | 6.5 | 5.5 | 8.5 | 8.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.0 |
| 7 | 4.0 | 4.0 | 6.5 | 5.5 | 9.0 | 8.5 | 9.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 8 | 4.0 | 4.0 | 6.5 | 5.5 | 9.0 | 8.5 | 10.0 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 9 | 4.0 | 4.0 | 6.0 | 6.0 | 8.5 | 8.5 | 10.0 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 10 | 4.5 | 4.0 | 6.5 | 6.0 | 9.5 | 8.5 | 9.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 11 | 4.5 | 4.5 | 6.0 | 6.0 | 8.5 | 8.5 | 10.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 12 | 4.5 | 4.5 | 6.5 | 6.0 | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 13 | 4.5 | 4.5 | 6.5 | 6.5 | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 14 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 15 | 4.5 | 4.5 | 6.5 | 6.5 | 9.5 | 8.5 | 10.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 16 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 8.5 | 10.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 17 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 18 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 9.0 | 10.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 19 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 9.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 20 | 4.5 | 4.5 | 7.0 | 7.0 | 9.5 | 9.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 21 | 4.5 | 4.5 | 7.0 | 6.5 | --- | --- | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 22 | 4.5 | 4.5 | 7.0 | 6.5 | --- | --- | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 23 | 5.0 | 4.5 | 7.0 | 7.0 | --- | --- | 10.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 24 | 5.0 | 5.0 | 7.0 | 7.0 | --- | --- | 10.5 | 9.5 | 9.5 | 9.5 | 10.0 | 9.5 |
| 25 | 5.0 | 5.0 | 7.0 | 7.0 | --- | --- | 11.0 | 10.0 | 9.5 | 9.5 | 10.0 | 9.5 |
| 26 | 5.0 | 5.0 | 7.0 | 7.0 | --- | --- | 10.0 | 10.0 | 9.5 | 9.5 | 10.0 | 9.5 |
| 27 | 5.0 | 5.0 | 7.0 | 7.0 | --- | --- | 10.0 | 10.0 | 9.5 | 9.0 | 10.0 | 9.5 |
| 28 | 5.0 | 5.0 | 8.0 | 7.0 | --- | --- | 10.0 | 9.5 | 9.5 | 9.0 | 10.0 | 9.5 |
| 29 | 5.0 | 5.0 | 9.0 | 8.0 | --- | --- | 10.0 | 9.5 | 9.5 | 9.0 | 10.0 | 9.5 |
| 30 | 5.5 | 5.0 | 8.0 | 8.0 | --- | --- | 10.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 31 | --- | --- | 8.0 | 8.0 | --- | --- | 10.5 | 9.5 | 9.5 | 9.5 | --- | --- |
| MONTH | 5.5 | 4.0 | 9.0 | 5.0 | --- | --- | 11.0 | 9.5 | 10.0 | 9.0 | 10.0 | 9.0 |
| YEAR | 11.0 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1954 TO SEPTEMBER 1955

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.5 | 8.0 | 7.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 3.5 |
| 2 | 9.5 | 9.5 | 8.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.0 | 5.0 | 5.0 | 4.0 | 3.5 |
| 3 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 | 3.5 |
| 4 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 5.0 | 3.5 | 3.5 |
| 5 | 9.5 | 9.5 | 7.0 | 6.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 |
| 6 | 10.0 | 9.5 | 6.5 | 6.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 4.5 | 3.5 | 3.5 |
| 7 | 10.0 | 10.0 | 6.5 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 8 | 10.0 | 10.0 | 6.5 | 6.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 9 | 10.0 | 10.0 | 6.5 | 6.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 10 | 10.0 | 10.0 | 6.5 | 6.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 11 | 10.0 | 9.0 | 6.5 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 12 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 13 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 14 | 9.0 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 15 | 9.0 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 16 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 17 | 9.0 | 8.5 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 |
| 18 | 8.5 | 8.5 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 3.5 |
| 19 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 20 | 8.5 | 8.0 | 6.5 | 6.0 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 21 | 8.0 | 8.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 22 | 8.0 | 8.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 23 | 8.0 | 8.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 24 | 8.0 | 8.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 3.5 |
| 25 | 8.0 | 7.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.5 | 5.0 | 4.5 | 4.5 | 3.5 | 3.5 |
| 26 | 7.0 | 7.0 | 6.5 | 6.5 | 5.0 | 4.5 | 5.5 | 5.0 | 4.5 | 4.0 | 3.5 | 3.5 |
| 27 | 7.0 | 7.0 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 3.5 | 4.0 | 3.5 |
| 28 | 7.0 | 7.0 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 3.5 | 4.0 | 4.0 |
| 29 | 7.0 | 7.0 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.0 | 4.0 |
| 30 | 7.0 | 7.0 | 6.5 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.0 | 4.0 |
| 31 | 7.0 | 7.0 | --- | --- | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.0 | 4.0 |
| MONTH | 10.0 | 7.0 | 8.0 | 5.5 | 6.0 | 4.5 | 5.5 | 4.0 | 5.0 | 3.5 | 4.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | 5.5 | 5.0 | 7.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 11.0 | 10.0 |
| 2 | 4.0 | 4.0 | 5.0 | 5.0 | 7.0 | 7.0 | 8.5 | 8.0 | 9.5 | 9.5 | 11.0 | 10.0 |
| 3 | 4.5 | 4.0 | 5.5 | 5.0 | 7.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.5 | 11.5 | 10.0 |
| 4 | 4.0 | 4.0 | 6.0 | 5.5 | 8.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.5 | 10.5 | 10.0 |
| 5 | 4.0 | 4.0 | 5.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.5 | 10.0 | 9.5 | 11.5 | 10.0 |
| 6 | 4.0 | 4.0 | 6.0 | 5.5 | 8.0 | 7.0 | 8.5 | 8.5 | 10.0 | 9.5 | 11.0 | 10.0 |
| 7 | 4.5 | 4.0 | 6.0 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.5 |
| 8 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 7.0 | 9.0 | 8.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 9 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.5 | 9.5 | 10.5 | 10.5 |
| 10 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.5 | 10.0 | 10.5 | 10.5 |
| 11 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.5 |
| 12 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 7.0 | 9.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.5 |
| 13 | 5.0 | 4.5 | 6.0 | 5.5 | 8.5 | 7.0 | 10.0 | 9.0 | 10.5 | 9.5 | 10.5 | 10.5 |
| 14 | 5.0 | 5.0 | 6.0 | 5.5 | 8.5 | 8.0 | 10.5 | 9.0 | 10.5 | 9.5 | 10.5 | 10.0 |
| 15 | 5.0 | 5.0 | 6.0 | 6.0 | 8.0 | 8.0 | 10.0 | 9.5 | 10.5 | 9.5 | 10.0 | 10.0 |
| 16 | 5.0 | 5.0 | 6.0 | 6.0 | 9.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.0 | 10.0 | 10.0 |
| 17 | 5.5 | 5.0 | 6.0 | 6.0 | 8.5 | 8.5 | 9.5 | 9.0 | 10.5 | 10.0 | 10.5 | 9.5 |
| 18 | 5.5 | 5.0 | 6.0 | 6.0 | 8.5 | 8.0 | 9.0 | 9.0 | 10.5 | 10.0 | 10.5 | 9.5 |
| 19 | 5.5 | 5.0 | 6.0 | 5.5 | 8.5 | 7.0 | 9.5 | 9.0 | 10.5 | 10.0 | 10.5 | 9.5 |
| 20 | 5.5 | 5.0 | 6.0 | 5.5 | 9.0 | 8.0 | 10.0 | 9.0 | 10.0 | 10.0 | 9.5 | 9.5 |
| 21 | 5.5 | 5.0 | 6.0 | 6.0 | 9.0 | 8.0 | 10.0 | 9.5 | 10.5 | 10.0 | 10.0 | 9.5 |
| 22 | 5.5 | 5.0 | 6.5 | 6.0 | 9.0 | 8.5 | 10.0 | 9.5 | 10.5 | 10.0 | 9.5 | 9.5 |
| 23 | 5.5 | 5.5 | 6.5 | 6.0 | 8.5 | 8.0 | 9.5 | 9.5 | 10.5 | 10.0 | 10.0 | 9.5 |
| 24 | 5.5 | 5.5 | 7.0 | 6.0 | 8.0 | 8.0 | 9.5 | 9.5 | 10.5 | 10.0 | 10.0 | 9.5 |
| 25 | 5.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.0 | 9.5 | 9.5 | 10.0 | 10.0 | 10.0 | 9.5 |
| 26 | 5.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.0 | 9.5 | 9.5 | 10.0 | 10.0 | 9.5 | 9.5 |
| 27 | 5.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.0 | 10.5 | 9.5 | 9.5 | 9.5 |
| 28 | 5.5 | 5.0 | 8.0 | 7.0 | 8.5 | 8.0 | 9.0 | 9.0 | 11.0 | 10.0 | 9.5 | 9.5 |
| 29 | 5.5 | 5.0 | 8.0 | 6.5 | 8.5 | 8.0 | 9.0 | 9.0 | 10.5 | 10.0 | 9.5 | 9.5 |
| 30 | 5.5 | 5.0 | 6.5 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 10.5 | 10.0 | 9.5 | 9.5 |
| 31 | --- | --- | 6.5 | 6.0 | --- | --- | 9.0 | 9.0 | 10.5 | 10.0 | --- | --- |
| MONTH | 5.5 | 4.0 | 8.0 | 5.0 | 9.0 | 6.5 | 10.5 | 8.0 | 11.0 | 9.0 | 11.5 | 9.5 |
| YEAR | 11.5 | 3.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER - WATER YEAR OCTOBER 1955 TO SEPTEMBER 1956

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 1.5 |
| 2 | 9.5 | 9.5 | 9.0 | 8.5 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| 3 | 9.5 | 9.5 | 8.5 | 6.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| 4 | 9.5 | 9.5 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| 5 | 9.5 | 9.5 | 8.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| 6 | 9.5 | 9.5 | 8.0 | 8.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| 7 | 9.5 | 9.5 | 8.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 2.0 |
| 8 | 9.5 | 9.0 | 8.0 | 8.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 2.0 |
| 9 | 9.0 | 8.5 | 8.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 2.0 |
| 10 | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 11 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 4.0 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 12 | 9.0 | 9.0 | 7.0 | 6.5 | 4.5 | 4.0 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 13 | 9.0 | 9.0 | 6.5 | 4.0 | 4.5 | 4.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 14 | 9.0 | 9.0 | 6.0 | 4.0 | 4.5 | 4.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 15 | 9.5 | 9.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 3.0 | 2.0 | 3.0 | 3.0 |
| 16 | 9.5 | 9.0 | 6.0 | 6.0 | 4.5 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 17 | 9.5 | 9.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.0 |
| 18 | 9.5 | 9.0 | 6.0 | 5.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 4.0 | 3.0 |
| 19 | 9.5 | 9.5 | 6.0 | 5.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 20 | 9.5 | 9.5 | 6.0 | 6.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 21 | 9.5 | 9.5 | 6.0 | 6.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 22 | 9.5 | 9.5 | 6.0 | 6.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 23 | 9.5 | 9.5 | 6.0 | 6.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 24 | 9.5 | 9.5 | 6.0 | 6.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 4.0 | 3.5 |
| 25 | 9.5 | 9.0 | 6.0 | 5.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 26 | 9.0 | 9.0 | 5.5 | 5.5 | 4.0 | 3.5 | 3.0 | 3.0 | 3.0 | 2.0 | 4.0 | 4.0 |
| 27 | 9.0 | 9.0 | 5.5 | 5.0 | 4.0 | 4.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 28 | 9.0 | 9.0 | 5.5 | 5.5 | 4.0 | 3.5 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 29 | 9.0 | 8.5 | 5.5 | 5.5 | 3.5 | 3.5 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 30 | 8.5 | 8.5 | 5.5 | 5.5 | 3.5 | 3.0 | 3.0 | 2.0 | --- | --- | 4.0 | 4.0 |
| 31 | 8.5 | 8.5 | --- | --- | 3.5 | 3.0 | 2.0 | 2.0 | --- | --- | 4.0 | 3.5 |
| MONTH | 9.5 | 8.5 | 9.0 | 4.0 | 5.5 | 3.0 | 3.5 | 2.0 | 3.0 | 2.0 | 4.0 | 1.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 3.5 | 5.0 | 5.0 | 7.0 | 7.0 | 8.5 | 8.0 | 10.0 | 9.5 | 11.0 | 10.0 |
| 2 | 4.0 | 3.5 | 5.0 | 5.0 | 7.0 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.0 |
| 3 | 4.0 | 3.5 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 11.0 | 10.0 |
| 4 | 4.0 | 3.5 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.5 | 9.5 |
| 5 | 4.0 | 3.5 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.0 | 10.0 |
| 6 | 4.0 | 3.5 | 6.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.5 | 10.0 |
| 7 | 4.0 | 3.5 | 6.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.0 | 9.5 |
| 8 | 4.0 | 4.0 | 6.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.0 | 9.5 |
| 9 | 4.0 | 4.0 | 6.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 10.0 | 9.5 | 9.5 |
| 10 | 4.0 | 4.0 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 10.0 | 9.5 | 9.5 |
| 11 | 4.5 | 4.0 | 6.0 | 5.5 | 7.0 | 6.5 | 9.0 | 8.0 | 10.5 | 10.0 | 9.5 | 9.5 |
| 12 | 4.5 | 4.0 | 6.0 | 5.5 | 7.0 | 7.0 | 9.5 | 8.5 | 10.0 | 10.0 | 9.5 | 9.5 |
| 13 | 4.5 | 4.0 | 6.0 | 5.5 | 7.0 | 7.0 | 9.5 | 8.5 | 10.5 | 10.0 | 9.5 | 9.5 |
| 14 | 5.0 | 4.0 | 6.5 | 5.5 | 8.0 | 7.0 | 9.0 | 9.0 | 10.5 | 10.0 | 9.5 | 9.0 |
| 15 | 4.0 | 4.0 | 7.0 | 5.5 | 7.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 9.5 | 9.0 |
| 16 | 4.0 | 4.0 | 7.0 | 6.0 | 7.0 | 7.0 | 9.0 | 9.0 | 10.5 | 10.0 | --- | --- |
| 17 | 4.5 | 4.0 | 7.0 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 10.5 | 10.0 | --- | --- |
| 18 | 4.5 | 4.0 | 7.0 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.5 | --- | --- |
| 19 | 4.5 | 4.0 | 6.5 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.5 | --- | --- |
| 20 | 5.0 | 4.5 | 6.5 | 6.0 | 7.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.5 | --- | --- |
| 21 | 5.0 | 4.5 | 7.0 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.5 | --- | --- |
| 22 | 5.0 | 4.5 | 7.0 | 6.5 | 8.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.5 | --- | --- |
| 23 | 5.5 | 4.5 | 7.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.5 | --- | --- |
| 24 | 5.0 | 5.0 | 6.5 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.5 | --- | --- |
| 25 | 5.5 | 5.0 | 8.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 11.0 | 10.5 | --- | --- |
| 26 | 5.0 | 5.0 | 7.0 | 6.5 | 8.5 | 8.0 | 9.5 | 9.5 | 10.5 | 10.5 | --- | --- |
| 27 | 5.0 | 5.0 | 7.0 | 6.5 | 8.5 | 8.0 | 9.5 | 9.5 | 10.5 | 10.5 | --- | --- |
| 28 | 5.5 | 4.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.5 | 9.5 | 11.0 | 10.0 | --- | --- |
| 29 | 5.5 | 5.0 | 7.0 | 6.5 | 8.0 | 8.0 | 10.0 | 9.5 | 10.0 | 10.0 | --- | --- |
| 30 | 5.0 | 5.0 | 8.0 | 7.0 | 8.5 | 8.0 | 10.0 | 10.0 | 10.5 | 10.0 | --- | --- |
| 31 | --- | --- | 7.0 | 7.0 | --- | --- | 10.0 | 10.0 | 10.0 | 10.0 | --- | --- |
| MONTH | 5.5 | 3.5 | 8.0 | 5.0 | 8.5 | 6.5 | 10.5 | 8.0 | 11.0 | 9.5 | --- | --- |
| YEAR | 11.0 | 1.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER : WATER YEAR OCTOBER 1956 TO SEPTEMBER 1957

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 2 | --- | --- | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 3 | --- | --- | 9.0 | 8.5 | 7.0 | 6.5 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 4 | --- | --- | 9.0 | 8.5 | 6.5 | 6.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 5 | --- | --- | 8.5 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 6 | --- | --- | 8.5 | 8.5 | 6.0 | 5.5 | 5.5 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 7 | --- | --- | 9.0 | 8.5 | 5.5 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 8 | --- | --- | 9.0 | 8.5 | 5.5 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 9 | --- | --- | 9.0 | 8.5 | 5.5 | 4.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 10 | 9.5 | 9.5 | 8.5 | 8.0 | 5.0 | 4.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 11 | 9.5 | 9.5 | 8.0 | 8.0 | 5.5 | 5.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 12 | 9.5 | 9.5 | 8.5 | 8.0 | 5.5 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 13 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 5.0 | 4.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 14 | 9.5 | 9.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 15 | 9.0 | 8.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 16 | 9.0 | 8.5 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 |
| 17 | 9.0 | 8.5 | 8.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 18 | 9.0 | 8.5 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.0 |
| 19 | 9.0 | 8.5 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.0 |
| 20 | 8.5 | 8.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 21 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 22 | 8.5 | 8.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 23 | 8.5 | 8.5 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 24 | 8.5 | 8.5 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 25 | 9.0 | 8.5 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 |
| 26 | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 27 | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 28 | 9.0 | 8.0 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 29 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 3.0 | --- | --- | 3.5 | 3.5 |
| 30 | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 3.0 | --- | --- | 3.5 | 3.5 |
| 31 | 9.0 | 8.5 | --- | --- | 5.5 | 5.5 | 3.0 | 3.0 | --- | --- | 3.5 | 3.5 |
| MONTH | --- | --- | 9.0 | 6.5 | 7.0 | 4.5 | 5.5 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 3.5 | 3.5 | 5.5 | 4.5 | 8.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 10.0 |
| 2 | 3.5 | 3.5 | 5.0 | 4.5 | 7.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 10.0 |
| 3 | 3.5 | 3.5 | 6.0 | 5.0 | 8.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 10.0 |
| 4 | 3.5 | 3.5 | 6.0 | 5.0 | 8.0 | 7.0 | 10.0 | 8.5 | 10.5 | 9.0 | 10.5 | 10.0 |
| 5 | 3.5 | 3.5 | 6.0 | 5.0 | 8.5 | 8.0 | 10.0 | 9.0 | 10.0 | 9.0 | 10.5 | 10.0 |
| 6 | 4.0 | 3.5 | 6.0 | 5.0 | 8.0 | 8.0 | 10.0 | 9.5 | 9.5 | 9.0 | 10.0 | 10.0 |
| 7 | 4.0 | 3.5 | 6.0 | 5.0 | 8.0 | 7.0 | 9.5 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 8 | 4.0 | 3.5 | 6.5 | 5.5 | 7.0 | 7.0 | 9.5 | 9.0 | 9.0 | 9.0 | 10.5 | 10.0 |
| 9 | 4.5 | 4.0 | 6.0 | 5.5 | 7.0 | 7.0 | 9.5 | 9.0 | 9.0 | 9.0 | 10.5 | 10.0 |
| 10 | 4.0 | 4.0 | 6.5 | 5.5 | 7.0 | 7.0 | 9.5 | 9.5 | 9.0 | 9.0 | 10.0 | 10.0 |
| 11 | 4.0 | 4.0 | 6.0 | 6.0 | 7.0 | 7.0 | 9.5 | 9.5 | 9.0 | 9.0 | 10.0 | 10.0 |
| 12 | 4.0 | 4.0 | 6.0 | 6.0 | 7.0 | 7.0 | 9.5 | 9.5 | 9.0 | 9.0 | 10.5 | 10.0 |
| 13 | 4.0 | 4.0 | 6.5 | 6.0 | 7.0 | 7.0 | 9.5 | 9.5 | 9.0 | 9.0 | 10.0 | 10.0 |
| 14 | 4.5 | 4.0 | 6.5 | 6.0 | 7.0 | 6.5 | 9.5 | 9.5 | 9.5 | 9.0 | 10.5 | 10.0 |
| 15 | 4.5 | 4.0 | 8.0 | 6.0 | 7.0 | 6.5 | 9.5 | 9.0 | 9.5 | 9.0 | 10.5 | 10.0 |
| 16 | 4.0 | 4.0 | 7.0 | 6.5 | 8.0 | 6.5 | 9.0 | 9.0 | 9.5 | 9.0 | 10.0 | 10.0 |
| 17 | 4.5 | 4.0 | 6.5 | 6.5 | 8.0 | 7.0 | 9.0 | 9.0 | 10.0 | 9.5 | 10.0 | 10.0 |
| 18 | 4.0 | 4.0 | 6.5 | 6.5 | 8.5 | 7.0 | 9.5 | 9.0 | 10.0 | 9.5 | 10.5 | 10.0 |
| 19 | 4.0 | 4.0 | 6.5 | 6.0 | 8.5 | 7.0 | 10.0 | 9.0 | 10.0 | 9.5 | 10.0 | 10.0 |
| 20 | 4.5 | 4.0 | 6.5 | 6.0 | 8.0 | 8.0 | 9.5 | 9.5 | 9.5 | 9.5 | 10.0 | 10.0 |
| 21 | 4.5 | 4.0 | 6.5 | 6.5 | 8.0 | 8.0 | 10.0 | 9.5 | 10.0 | 9.0 | 10.0 | 10.0 |
| 22 | 4.5 | 4.0 | 6.5 | 6.0 | 8.5 | 8.0 | 10.0 | 9.5 | 10.5 | 9.0 | 10.5 | 10.0 |
| 23 | 4.0 | 4.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 24 | 4.5 | 4.0 | 6.5 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.0 | 10.0 | 10.0 | 10.0 |
| 25 | 4.0 | 4.0 | 7.0 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.5 | 10.0 | 10.0 | 10.0 |
| 26 | 4.0 | 4.0 | 7.0 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.0 | 10.0 | 10.0 |
| 27 | 5.0 | 4.0 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 10.5 | 9.5 | 10.0 | 10.0 |
| 28 | 6.5 | 4.5 | 8.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 10.5 | 10.0 | 10.0 | 10.0 |
| 29 | 5.5 | 4.5 | 8.0 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.0 | 9.5 | 10.0 | 10.0 |
| 30 | 5.5 | 4.0 | 8.5 | 6.5 | 8.5 | 8.5 | 9.5 | 9.5 | 10.5 | 9.5 | 10.0 | 10.0 |
| 31 | --- | --- | 8.0 | 6.5 | --- | --- | 9.5 | 9.5 | 10.5 | 9.5 | --- | --- |
| MONTH | 6.5 | 3.5 | 8.5 | 4.5 | 9.0 | 6.5 | 10.0 | 8.5 | 10.5 | 9.0 | 11.0 | 10.0 |
| YEAR | 11.0 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1957 TO SEPTEMBER 1958

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 9.0 | 8.5 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 2 | 10.0 | 10.0 | 8.5 | 8.5 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 3 | 10.0 | 10.0 | 8.5 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 4 | 10.0 | 10.0 | 8.5 | 8.5 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 5 | 10.0 | 10.0 | 8.5 | 8.5 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 6 | 10.0 | 10.0 | 8.5 | 8.5 | 8.0 | 7.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 7 | 10.0 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 8 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 9 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 10 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 11 | 10.0 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 12 | 9.5 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 13 | 9.5 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 14 | 9.5 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 15 | 9.5 | 9.5 | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 16 | 9.5 | 9.5 | 9.0 | 8.5 | 7.0 | 7.0 | 5.5 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 17 | 9.5 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 18 | 9.5 | 9.5 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 19 | 9.5 | 9.5 | 8.5 | 8.5 | 7.0 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 20 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 21 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 22 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 23 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 24 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 25 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 26 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 27 | 9.5 | 9.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 28 | 9.5 | 9.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 29 | 9.0 | 9.0 | 8.5 | 8.0 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 6.0 | 5.5 |
| 30 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 6.0 | 5.5 |
| 31 | 9.0 | 9.0 | --- | --- | 6.0 | 6.0 | 5.0 | 5.0 | --- | --- | 5.5 | 5.5 |
| MONTH | 10.0 | 9.0 | 9.0 | 8.0 | 8.0 | 5.5 | 6.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 5.5 | 7.0 | 6.5 | 9.0 | 8.5 | 10.0 | 9.5 | 12.0 | 11.5 | 11.0 | 11.0 |
| 2 | 6.0 | 6.0 | 7.0 | 6.5 | 9.5 | 8.5 | 10.5 | 10.0 | 12.0 | 11.5 | 11.0 | 10.5 |
| 3 | 6.0 | 6.0 | 7.0 | 6.5 | 10.0 | 8.5 | 10.0 | 10.0 | 11.5 | 11.0 | 11.0 | 10.5 |
| 4 | 6.0 | 6.0 | 7.0 | 6.5 | 10.0 | 9.0 | 12.0 | 10.0 | 12.0 | 11.0 | 11.0 | 10.5 |
| 5 | 6.0 | 5.5 | 7.0 | 6.5 | 10.0 | 9.5 | 12.0 | 10.5 | 12.0 | 11.0 | 11.0 | 10.5 |
| 6 | 6.5 | 6.0 | 8.5 | 6.5 | 10.0 | 9.0 | 13.0 | 10.5 | 11.0 | 11.0 | 11.0 | 11.0 |
| 7 | 6.5 | 6.0 | 8.5 | 6.5 | 9.0 | 8.5 | 11.5 | 11.0 | 11.5 | 11.0 | 11.5 | 11.0 |
| 8 | 6.0 | 6.0 | 8.0 | 6.5 | 9.5 | 8.5 | 11.5 | 10.5 | 11.5 | 11.0 | 11.0 | 11.0 |
| 9 | 6.5 | 6.0 | 8.0 | 6.5 | 9.0 | 9.0 | 11.5 | 10.5 | 13.0 | 11.0 | 11.0 | 11.0 |
| 10 | 6.5 | 6.0 | 7.0 | 7.0 | 9.0 | 9.0 | 11.5 | 9.5 | 13.0 | 11.0 | 11.0 | 11.0 |
| 11 | 7.0 | 6.0 | 7.0 | 6.5 | 9.0 | 9.0 | 11.5 | 10.5 | 12.0 | 11.0 | 11.0 | 11.0 |
| 12 | 7.0 | 6.0 | 7.0 | 6.0 | 9.0 | 9.0 | 11.0 | 10.5 | 11.5 | 11.0 | 11.0 | 11.0 |
| 13 | 6.5 | 6.5 | 9.0 | 6.5 | 9.0 | 9.0 | 11.0 | 10.5 | 11.5 | 11.0 | 11.0 | 11.0 |
| 14 | 6.5 | 6.0 | 9.5 | 7.0 | 9.0 | 9.0 | 11.5 | 10.5 | 11.5 | 11.0 | 11.0 | 11.0 |
| 15 | 6.0 | 6.0 | 9.5 | 8.0 | 10.0 | 9.0 | 12.0 | 10.5 | 11.5 | 11.0 | 11.0 | 11.0 |
| 16 | 6.0 | 5.5 | 9.5 | 7.0 | 10.0 | 9.5 | 12.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.5 |
| 17 | 6.0 | 5.5 | 9.5 | 7.0 | 10.5 | 9.5 | 12.0 | 11.0 | 13.0 | 11.0 | 10.5 | 10.5 |
| 18 | 5.5 | 5.5 | 9.5 | 7.0 | 11.0 | 9.5 | 12.0 | 11.0 | 11.5 | 11.0 | 10.5 | 10.5 |
| 19 | 5.5 | 5.5 | 9.0 | 8.0 | 11.0 | 10.0 | 12.0 | 11.0 | 11.5 | 11.0 | 10.5 | 10.5 |
| 20 | 5.5 | 5.5 | 10.0 | 8.0 | 11.0 | 9.5 | 12.0 | 11.0 | 11.5 | 11.0 | 10.5 | 10.0 |
| 21 | 5.5 | 5.5 | 10.0 | 8.5 | 11.5 | 10.0 | 13.0 | 11.5 | 11.5 | 11.0 | 10.0 | 10.0 |
| 22 | 6.0 | 5.5 | 10.0 | 8.5 | 10.5 | 10.0 | 12.0 | 11.5 | 11.5 | 11.0 | 10.0 | 10.0 |
| 23 | 6.5 | 5.5 | 10.0 | 8.5 | 10.0 | 9.5 | 12.0 | 11.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 24 | 6.5 | 6.0 | 10.0 | 8.5 | 10.0 | 9.0 | 12.0 | 11.0 | 12.0 | 11.0 | 10.0 | 10.0 |
| 25 | 6.0 | 6.0 | 10.0 | 8.5 | 9.5 | 9.0 | 12.0 | 11.0 | 12.0 | 11.5 | 10.0 | 10.0 |
| 26 | 7.0 | 6.0 | 10.0 | 8.5 | 10.0 | 9.5 | 12.0 | 11.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 27 | 7.0 | 6.0 | 10.0 | 8.5 | 10.0 | 9.5 | 12.0 | 11.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 28 | 7.0 | 6.0 | 9.0 | 9.0 | 9.5 | 9.0 | 12.0 | 11.5 | 11.5 | 11.5 | 11.0 | 10.0 |
| 29 | 8.0 | 6.0 | 9.0 | 9.0 | 9.5 | 9.0 | 12.0 | 11.5 | 11.5 | 11.0 | 10.5 | 10.5 |
| 30 | 7.0 | 6.5 | 9.0 | 9.0 | 9.5 | 9.5 | 12.0 | 11.5 | 11.0 | 11.0 | 10.5 | 10.0 |
| 31 | --- | --- | 9.0 | 8.5 | --- | --- | 12.0 | 11.5 | 11.0 | 11.0 | --- | --- |
| MONTH | 8.0 | 5.5 | 10.0 | 6.0 | 11.5 | 8.5 | 13.0 | 9.5 | 13.0 | 11.0 | 11.5 | 10.0 |
| YEAR | 13.0 | 5.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1958 TO SEPTEMBER 1959

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 10.0 | 10.0 | 7.0 | 7.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 3.5 |
| 2 | 10.0 | 10.0 | 10.0 | 10.0 | 7.0 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 3 | 10.0 | 10.0 | 10.0 | 10.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 4 | 10.0 | 10.0 | 10.0 | 10.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 5 | 10.0 | 10.0 | 10.0 | 10.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 6 | 10.0 | 10.0 | 10.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 7 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 8 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 9 | 10.0 | 9.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 10 | 9.5 | 9.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 11 | 9.5 | 9.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 12 | 9.5 | 9.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 13 | 9.5 | 9.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 14 | 9.5 | 9.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.0 | 4.5 | 4.0 |
| 15 | 9.5 | 9.5 | 9.0 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 16 | 9.5 | 9.5 | 8.5 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 9.5 | 9.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 18 | 9.5 | 9.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 19 | 9.5 | 9.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 20 | 9.5 | 9.5 | 8.5 | 6.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 21 | 9.5 | 9.5 | 7.0 | 6.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 3.5 | 4.5 | 4.5 |
| 22 | 9.5 | 9.5 | 8.0 | 7.0 | 6.0 | 6.0 | 5.0 | 5.0 | 3.5 | 3.5 | 4.5 | 4.5 |
| 23 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 4.5 | 3.5 | 3.5 | 4.5 | 4.5 |
| 24 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.5 | 4.5 |
| 25 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.5 | 4.5 |
| 26 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.5 | 4.5 |
| 27 | 9.5 | 9.5 | 8.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.5 | 4.5 |
| 28 | 9.5 | 9.5 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.5 | 4.5 |
| 29 | 9.5 | 9.5 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| 30 | 9.5 | 9.5 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| 31 | 10.0 | 9.5 | --- | --- | 6.0 | 5.5 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| MONTH | 10.0 | 9.0 | 10.0 | 6.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 3.5 | 4.5 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 4.5 | 6.0 | 5.5 | 9.0 | 8.0 | 9.0 | 8.5 | 11.5 | 10.5 | 11.0 | 10.5 |
| 2 | 4.5 | 4.5 | 6.0 | 6.0 | 9.0 | 8.5 | 8.5 | 8.5 | 11.5 | 11.0 | 11.0 | 10.5 |
| 3 | 4.5 | 4.5 | 6.0 | 6.0 | 9.0 | 8.5 | 8.5 | 8.5 | 11.5 | 11.5 | 10.5 | 10.5 |
| 4 | 5.0 | 4.5 | 6.0 | 6.0 | 8.5 | 8.5 | 9.0 | 8.5 | 11.5 | 11.5 | 10.5 | 10.5 |
| 5 | 5.0 | 5.0 | 6.0 | 6.0 | 9.0 | 8.0 | 8.5 | 8.5 | 12.0 | 11.0 | 10.5 | 10.5 |
| 6 | 5.0 | 5.0 | 6.0 | 6.0 | 8.5 | 8.5 | 8.5 | 8.5 | 13.0 | 11.5 | 10.5 | 10.0 |
| 7 | 5.0 | 5.0 | 6.5 | 6.0 | 8.5 | 8.5 | 8.5 | 8.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 8 | 5.0 | 5.0 | 6.5 | 6.5 | 9.0 | 8.5 | 9.0 | 8.5 | 12.0 | 11.5 | 10.0 | 9.5 |
| 9 | 5.0 | 5.0 | 6.5 | 6.0 | 9.0 | 8.5 | 9.5 | 9.0 | 11.5 | 11.0 | 10.0 | 9.5 |
| 10 | 5.0 | 5.0 | 6.5 | 6.0 | 9.0 | 8.5 | 10.0 | 9.0 | 11.5 | 11.5 | 10.0 | 10.0 |
| 11 | 5.0 | 5.0 | 7.0 | 6.5 | 9.0 | 9.0 | 10.0 | 9.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 12 | 5.0 | 5.0 | 7.0 | 6.5 | 9.0 | 8.5 | 10.0 | 9.5 | 11.5 | 11.5 | 10.0 | 10.0 |
| 13 | 5.0 | 5.0 | 8.0 | 6.5 | 9.0 | 8.5 | 10.5 | 10.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 14 | 5.5 | 5.0 | 7.0 | 7.0 | 9.0 | 8.5 | 10.5 | 10.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 15 | 5.5 | 5.5 | 7.0 | 7.0 | 9.5 | 8.5 | 11.0 | 10.5 | 11.5 | 11.0 | 10.0 | 10.0 |
| 16 | 5.5 | 5.5 | 7.0 | 7.0 | 9.0 | 8.5 | 11.5 | 11.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 17 | 5.5 | 5.5 | 8.0 | 7.0 | 9.5 | 9.0 | 12.0 | 11.5 | 11.0 | 11.0 | 10.0 | 9.5 |
| 18 | 5.5 | 5.5 | 7.0 | 6.5 | 9.5 | 8.5 | 13.0 | 11.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 19 | 6.5 | 5.5 | 8.0 | 7.0 | 10.0 | 9.0 | 13.0 | 12.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 20 | 6.5 | 6.0 | 8.0 | 8.0 | 10.0 | 9.0 | 13.0 | 13.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 21 | 6.5 | 6.5 | 8.5 | 8.0 | 9.5 | 9.0 | 13.0 | 12.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 22 | 6.5 | 6.0 | 8.5 | 8.0 | 10.0 | 9.0 | 13.0 | 12.0 | 11.5 | 11.0 | 10.5 | 10.0 |
| 23 | 6.0 | 6.0 | 9.0 | 8.0 | 10.0 | 9.5 | 12.0 | 12.0 | 11.0 | 11.0 | 10.5 | 10.0 |
| 24 | 6.5 | 6.0 | 8.5 | 8.0 | 10.0 | 9.5 | 12.0 | 12.0 | 11.0 | 11.0 | 10.5 | 10.0 |
| 25 | 6.5 | 6.5 | 8.0 | 8.0 | 9.5 | 9.5 | 12.0 | 11.5 | 11.0 | 10.5 | 10.0 | 10.0 |
| 26 | 6.5 | 6.0 | 8.5 | 8.0 | 9.5 | 9.5 | 12.0 | 11.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 27 | 6.0 | 6.0 | 8.5 | 8.0 | 9.5 | 9.0 | 11.5 | 11.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 28 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 8.5 | 11.5 | 11.0 | 11.0 | 10.5 | 10.0 | 9.5 |
| 29 | 6.0 | 5.5 | 8.5 | 8.0 | 9.0 | 8.5 | 11.0 | 10.0 | 11.0 | 10.0 | 10.0 | 10.0 |
| 30 | 5.5 | 5.5 | 9.0 | 8.5 | 9.0 | 8.5 | 11.0 | 10.5 | 11.0 | 10.5 | 10.0 | 9.5 |
| 31 | --- | --- | 9.0 | 8.0 | --- | --- | 11.0 | 10.5 | 10.5 | 10.5 | --- | --- |
| MONTH | 6.5 | 4.5 | 9.0 | 5.5 | 10.0 | 8.0 | 13.0 | 8.5 | 13.0 | 10.0 | 11.0 | 9.5 |
| YEAR | 13.0 | 3.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1959 TO SEPTEMBER 1960

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 |
| 2 | 10.0 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 |
| 3 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 |
| 4 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 |
| 5 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 6 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 7 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 8 | 9.5 | 9.5 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 9 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 10 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 11 | 9.5 | 9.0 | 7.0 | 7.0 | 5.5 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 12 | 9.0 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 13 | 8.5 | 8.5 | 7.0 | 6.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 14 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 15 | 9.0 | 9.5 | 6.5 | 5.5 | 5.0 | 4.5 | 3.5 | 3.5 | 4.0 | 3.5 | 3.5 | 3.5 |
| 16 | 9.0 | 9.0 | 6.0 | 5.5 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 17 | 9.5 | 9.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 | 4.0 | 3.5 |
| 18 | 10.0 | 9.5 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 | 4.0 | 4.0 |
| 19 | 10.0 | 10.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| 20 | 10.0 | 10.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 4.0 | 5.5 | 4.5 |
| 21 | 10.0 | 10.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 22 | 10.0 | 9.0 | 6.0 | 5.5 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 23 | 9.0 | 9.0 | 5.5 | 5.5 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 24 | 9.0 | 8.5 | 5.5 | 5.5 | 4.5 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 25 | 8.5 | 8.5 | 5.5 | 5.0 | 4.0 | 4.0 | 3.5 | 3.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 26 | 8.5 | 8.5 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 3.5 | 5.5 | 5.5 |
| 27 | 9.0 | 8.5 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 5.5 | 5.0 |
| 28 | 9.0 | 9.0 | 5.5 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 |
| 29 | 9.0 | 9.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 5.0 | 5.0 |
| 30 | 9.0 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | --- | --- | 5.0 | 5.0 |
| 31 | 8.5 | 8.5 | --- | --- | 4.0 | 4.0 | 3.5 | 3.5 | --- | --- | 5.0 | 5.0 |
| MONTH | 10.0 | 8.5 | 8.5 | 5.0 | 5.5 | 4.0 | 4.0 | 3.0 | 4.0 | 3.0 | 5.5 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 5.0 | 7.0 | 6.5 | 7.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 2 | 5.0 | 5.0 | 6.5 | 6.5 | --- | --- | 9.5 | 9.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 3 | 5.5 | 5.0 | 6.5 | 6.5 | --- | --- | 10.0 | 9.0 | 10.0 | 10.0 | 10.5 | 10.0 |
| 4 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 7.0 | 10.5 | 9.0 | 10.0 | 10.0 | 10.5 | 10.5 |
| 5 | 5.0 | 5.0 | 7.0 | 6.5 | 8.5 | 8.0 | 10.0 | 9.0 | 10.0 | 10.0 | 10.5 | 10.0 |
| 6 | 5.5 | 5.0 | 6.5 | 6.5 | 8.0 | 8.0 | 10.0 | 9.5 | 10.5 | 10.0 | 10.5 | 10.0 |
| 7 | 5.5 | 5.5 | 6.5 | 6.5 | 8.0 | 7.0 | 10.0 | 9.5 | 11.5 | 10.0 | 10.5 | 10.0 |
| 8 | 5.5 | 5.5 | 7.0 | 6.0 | 8.5 | 8.0 | 10.0 | 9.5 | 11.0 | 10.5 | 10.5 | 10.0 |
| 9 | 5.5 | 5.0 | 7.0 | 6.5 | 9.0 | 8.0 | 10.0 | 9.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 10 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 10.0 | 9.0 | 10.0 | 10.0 | 10.5 | 10.5 |
| 11 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.0 | 11.0 | 10.5 |
| 12 | 5.5 | 5.5 | 6.5 | 6.5 | 9.5 | 8.0 | --- | --- | 10.5 | 10.5 | 10.5 | 10.5 |
| 13 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.0 | 10.5 | 9.5 | 10.5 | 10.0 | 10.5 | 10.5 |
| 14 | 6.0 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.5 | 10.0 | 10.5 | 10.5 |
| 15 | 6.0 | 6.0 | 7.0 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 16 | 6.0 | 6.0 | 7.0 | 6.5 | 8.0 | 8.0 | --- | --- | 10.0 | 10.0 | 11.0 | 10.5 |
| 17 | 6.0 | 6.0 | 7.0 | 6.5 | 8.0 | 8.0 | 10.0 | 9.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 18 | 6.0 | 6.0 | 6.5 | 6.5 | 8.5 | 8.0 | 9.5 | 8.5 | 10.5 | 10.0 | 11.0 | 10.5 |
| 19 | 6.0 | 6.0 | 6.5 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.5 | 11.0 | 11.0 |
| 20 | 6.0 | 5.5 | 6.5 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.0 | 11.0 | 11.0 |
| 21 | 6.0 | 5.5 | 6.5 | 6.5 | 8.0 | 8.0 | 10.0 | 9.0 | 10.5 | 10.0 | 11.0 | 10.5 |
| 22 | 6.0 | 6.0 | 7.0 | 6.5 | 9.5 | 8.0 | 10.0 | 9.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 23 | 6.0 | 6.0 | 8.0 | 6.5 | 10.0 | 8.5 | 10.0 | 9.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 24 | 6.0 | 6.0 | 6.5 | 6.5 | 9.0 | 8.5 | 11.0 | 9.5 | 10.0 | 10.0 | 11.0 | 11.0 |
| 25 | 6.0 | 6.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 10.0 | 10.0 | 10.0 | 11.5 | 11.0 |
| 26 | 6.0 | 6.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 27 | 7.0 | 6.0 | 6.5 | 6.5 | 9.5 | 8.5 | 9.5 | 9.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 28 | 7.0 | 6.5 | 8.5 | 6.5 | 10.0 | 8.5 | 10.0 | 9.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 29 | 7.0 | 6.0 | 7.0 | 6.5 | 10.0 | 9.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.5 | 10.5 |
| 30 | 7.0 | 6.5 | 7.0 | 7.0 | 9.0 | 9.0 | 10.0 | 9.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 31 | --- | --- | 7.0 | 7.0 | --- | --- | 10.0 | 9.5 | 10.0 | 10.0 | --- | --- |
| MONTH | 7.0 | 5.0 | 8.5 | 6.0 | 10.0 | 7.0 | 11.0 | 8.5 | 11.5 | 10.0 | 11.5 | 9.5 |
| YEAR | 11.5 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1960 TO SEPTEMBER 1961

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 |
| 2 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 |
| 3 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 |
| 4 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 3.5 |
| 5 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 6 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 7 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 8 | 10.5 | 10.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 9 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 10 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 11 | 10.0 | 10.0 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 4.5 | 4.0 | 4.0 | 4.5 | 4.0 |
| 12 | 10.0 | 10.0 | 8.5 | 8.0 | 6.5 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 13 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 14 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 15 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 4.5 | 4.0 | 4.0 | 4.5 | 4.0 |
| 16 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 18 | 10.0 | 10.0 | 8.5 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 19 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 3.5 | 4.5 | 4.5 |
| 20 | 10.0 | 10.0 | 8.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 5.0 | 4.5 |
| 21 | 10.0 | 10.0 | 8.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 5.0 | 5.0 |
| 22 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.0 | 3.5 | 3.5 | 5.0 | 5.0 |
| 23 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 3.5 | 5.0 | 5.0 |
| 24 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 |
| 25 | 10.0 | 10.0 | 8.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 5.0 |
| 26 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 5.5 |
| 27 | 10.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.5 |
| 28 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 29 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 5.0 | 5.0 |
| 30 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 5.0 | 5.0 |
| 31 | 9.0 | 9.0 | --- | --- | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 5.0 | 5.0 |
| MONTH | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 6.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 5.0 | 5.5 | 5.5 | 7.0 | 7.0 | 9.5 | 9.0 | 11.5 | 11.5 | 11.5 | 11.5 |
| 2 | 5.0 | 5.0 | 5.5 | 5.5 | 7.0 | 7.0 | 9.5 | 9.0 | 12.0 | 11.5 | 11.5 | 11.0 |
| 3 | 5.0 | 5.0 | 5.5 | 5.5 | 7.0 | 7.0 | 10.0 | 9.5 | 12.0 | 11.5 | 11.0 | 11.0 |
| 4 | 5.0 | 4.5 | 5.5 | 5.5 | 7.0 | 7.0 | 10.5 | 10.0 | 12.0 | 11.5 | 11.0 | 11.0 |
| 5 | 5.0 | 5.0 | 5.5 | 5.5 | 7.0 | 7.0 | 10.5 | 9.5 | 11.5 | 11.5 | 11.0 | 10.5 |
| 6 | 5.0 | 5.0 | 5.5 | 5.5 | 7.0 | 7.0 | 9.5 | 9.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 7 | 5.0 | 5.0 | 6.0 | 5.5 | 7.0 | 7.0 | 9.5 | 9.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 8 | 5.5 | 5.0 | 6.0 | 6.0 | 7.0 | 7.0 | 10.0 | 9.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 9 | 5.5 | 5.5 | 6.0 | 6.0 | 7.0 | 7.0 | 10.0 | 10.0 | 11.5 | 11.5 | 10.5 | 10.0 |
| 10 | 5.5 | 5.5 | 6.0 | 6.0 | 7.0 | 6.5 | 10.0 | 10.0 | 11.5 | 11.5 | 11.0 | 10.5 |
| 11 | 5.5 | 5.5 | 6.0 | 6.0 | 7.0 | 7.0 | 10.5 | 10.0 | 11.5 | 11.5 | 10.5 | 10.0 |
| 12 | 5.5 | 5.5 | 6.0 | 6.0 | 7.0 | 7.0 | 11.0 | 10.5 | 11.5 | 11.5 | 10.5 | 10.0 |
| 13 | 5.5 | 5.0 | 6.0 | 6.0 | 7.0 | 7.0 | 11.5 | 10.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 14 | 5.0 | 5.0 | 6.5 | 6.0 | 8.0 | 7.0 | 11.0 | 11.0 | 12.0 | 11.5 | 10.5 | 10.0 |
| 15 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 11.0 | 10.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 16 | 6.0 | 5.5 | 7.0 | 6.5 | 9.0 | 8.5 | 11.0 | 11.0 | 12.0 | 11.5 | 10.5 | 10.0 |
| 17 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 11.0 | 10.5 | 11.5 | 11.5 | 10.5 | 10.5 |
| 18 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 11.0 | 10.5 | 11.5 | 11.5 | 10.5 | 10.5 |
| 19 | 5.5 | 5.5 | 6.5 | 6.0 | 8.5 | 8.5 | 11.0 | 11.0 | 12.0 | 11.5 | 10.5 | 10.5 |
| 20 | 5.5 | 5.5 | 7.0 | 6.5 | 8.5 | 8.5 | 11.5 | 11.0 | 12.0 | 11.5 | 10.5 | 10.5 |
| 21 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 11.0 | 11.0 | 12.0 | 11.5 | 10.5 | 10.0 |
| 22 | 5.5 | 5.5 | 6.5 | 6.0 | 8.5 | 8.5 | 11.5 | 11.0 | 12.0 | 11.5 | 10.5 | 10.0 |
| 23 | 6.0 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 11.5 | 11.0 | 11.5 | 11.5 | 10.5 | 10.0 |
| 24 | 6.0 | 5.5 | 6.5 | 6.5 | 9.0 | 8.5 | 11.0 | 11.0 | 11.5 | 11.5 | 10.5 | 10.0 |
| 25 | 5.5 | 5.5 | 7.0 | 6.5 | 9.5 | 9.0 | 11.5 | 11.0 | 11.5 | 11.5 | 10.5 | 10.5 |
| 26 | 5.5 | 5.5 | 7.0 | 7.0 | 9.5 | 9.5 | 11.5 | 11.5 | 11.5 | 11.5 | 10.5 | 10.0 |
| 27 | 5.5 | 5.5 | 7.0 | 6.5 | 9.5 | 9.0 | 11.5 | 11.5 | 12.0 | 11.5 | 10.5 | 10.5 |
| 28 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 9.0 | 11.5 | 11.5 | 12.0 | 11.5 | 10.5 | 10.5 |
| 29 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 9.0 | 11.5 | 11.0 | 13.0 | 11.5 | 10.5 | 10.0 |
| 30 | 5.5 | 5.5 | 7.0 | 7.0 | 9.0 | 9.0 | 13.5 | 11.0 | 12.0 | 11.0 | 10.0 | 10.0 |
| 31 | --- | --- | 7.0 | 7.0 | --- | --- | 11.5 | 11.5 | 11.5 | 11.5 | --- | --- |
| MONTH | 6.0 | 4.5 | 7.0 | 5.5 | 9.5 | 6.5 | 13.5 | 9.0 | 13.0 | 11.0 | 11.5 | 10.0 |
| YEAR | 13.5 | 3.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1961 TO SEPTEMBER 1962

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.5 | 10.0 | 8.5 | 8.0 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 2 | 10.0 | 10.0 | 8.5 | 8.0 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 3 | 10.0 | 10.0 | 8.0 | 8.0 | 5.0 | 5.0 | 5.0 | 4.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 4 | 10.0 | 10.0 | 8.0 | 8.0 | 5.5 | 5.0 | 5.0 | 4.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 5 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 6 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 7 | 10.0 | 9.5 | 8.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 8 | 9.5 | 9.5 | 8.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 9 | 9.5 | 9.5 | 8.0 | 8.0 | 5.5 | 5.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 10 | 9.5 | 9.0 | 8.0 | 6.5 | 5.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 11 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 12 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 3.5 | 3.5 | 4.0 | 3.5 |
| 13 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 14 | 9.5 | 9.0 | 6.5 | 6.0 | 6.0 | 5.5 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 15 | 9.5 | 9.5 | 6.5 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 16 | 9.5 | 9.5 | 6.5 | 6.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 17 | 9.5 | 9.0 | 6.0 | 6.0 | 6.0 | 5.5 | 4.5 | 4.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 18 | 9.5 | 9.0 | 8.0 | 5.5 | 5.5 | 5.5 | 4.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 19 | 9.5 | 9.0 | 5.5 | 5.5 | 5.5 | 5.5 | 4.0 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 20 | 9.5 | 9.0 | 5.5 | 5.5 | 5.5 | 5.5 | 3.0 | 3.0 | 4.0 | 3.5 | 4.0 | 4.0 |
| 21 | 9.0 | 9.0 | 5.5 | 5.5 | 5.5 | 5.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 22 | 9.0 | 9.0 | 5.5 | 5.5 | 5.5 | 5.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.5 | 4.0 |
| 23 | 9.0 | 9.0 | 5.5 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 4.0 | 3.5 | 4.5 | 4.5 |
| 24 | 9.0 | 9.0 | 5.5 | 5.5 | 5.0 | 4.5 | 3.0 | 3.0 | 4.0 | 3.5 | 4.5 | 4.5 |
| 25 | 9.0 | 9.0 | 5.5 | 4.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.5 | 3.0 | 5.0 | 4.5 |
| 26 | 9.0 | 8.5 | 4.5 | 4.0 | 5.0 | 5.0 | 3.5 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 27 | 9.0 | 8.5 | 4.5 | 4.0 | 5.0 | 5.0 | 3.5 | 3.5 | 3.0 | 3.0 | 5.0 | 4.5 |
| 28 | 9.0 | 8.5 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | 3.0 | 3.0 | 5.0 | 4.0 |
| 29 | 8.5 | 8.0 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | --- | --- | 5.0 | 4.0 |
| 30 | 8.5 | 8.0 | 5.0 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | --- | --- | 4.5 | 4.5 |
| 31 | 8.5 | 8.0 | --- | --- | 5.0 | 5.0 | 3.5 | 3.5 | --- | --- | 4.5 | 4.5 |
| MONTH | 10.5 | 8.0 | 8.5 | 4.0 | 6.0 | 4.5 | 5.0 | 3.0 | 4.0 | 3.0 | 5.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 4.5 | 5.5 | 5.5 | 8.5 | 8.0 | 9.5 | 8.5 | 10.5 | 10.0 | 10.5 | 9.5 |
| 2 | 4.5 | 4.5 | 6.0 | 5.5 | 8.5 | 8.0 | 9.0 | 8.0 | 10.5 | 10.0 | 10.5 | 9.5 |
| 3 | 4.5 | 4.5 | 6.0 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 10.5 | 10.5 | 10.5 | 9.5 |
| 4 | 4.5 | 4.5 | 6.0 | 5.5 | 8.0 | 7.0 | 9.5 | 9.0 | 10.5 | 10.0 | 10.0 | 9.5 |
| 5 | 4.5 | 4.5 | 6.0 | 5.5 | 8.5 | 8.0 | 9.0 | 9.0 | 10.0 | 9.5 | 10.5 | 9.5 |
| 6 | 4.5 | 4.5 | 6.0 | 6.0 | 9.0 | 8.0 | 9.0 | 8.5 | 9.5 | 9.5 | 10.5 | 9.5 |
| 7 | 4.5 | 4.5 | 6.5 | 6.0 | 9.0 | 8.0 | 9.0 | 8.5 | 9.5 | 9.5 | 10.5 | 10.0 |
| 8 | 5.0 | 4.5 | 6.5 | 6.5 | 8.5 | 8.5 | 9.5 | 9.0 | 9.5 | 9.5 | 10.5 | 9.5 |
| 9 | 4.5 | 4.5 | 6.5 | 6.5 | 8.5 | 8.0 | 9.5 | 9.0 | 9.5 | 9.0 | 10.5 | 9.5 |
| 10 | 4.5 | 4.5 | 6.5 | 6.5 | 8.5 | 8.0 | 9.5 | 9.0 | 9.5 | 9.5 | 10.0 | 10.0 |
| 11 | 4.5 | 4.5 | 6.5 | 6.5 | 9.0 | 8.0 | 9.0 | 9.0 | 10.0 | 9.5 | 10.0 | 9.5 |
| 12 | 5.0 | 4.5 | 6.5 | 6.5 | 8.5 | 8.0 | 9.0 | 9.0 | 10.0 | 9.5 | 9.5 | 9.0 |
| 13 | 5.0 | 5.0 | 7.0 | 6.5 | 9.0 | 8.5 | 9.0 | 9.0 | 10.0 | 9.5 | 9.5 | 9.5 |
| 14 | 5.0 | 5.0 | 7.0 | 7.0 | 9.5 | 8.0 | 9.0 | 9.0 | 10.0 | 9.5 | 9.5 | 9.5 |
| 15 | 5.0 | 5.0 | 7.0 | 7.0 | 9.5 | 8.0 | 9.0 | 9.0 | 10.0 | 9.5 | 9.5 | 9.0 |
| 16 | 5.0 | 5.0 | 8.0 | 7.0 | 9.5 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 9.5 | 9.0 |
| 17 | 5.5 | 5.0 | 8.0 | 8.0 | 9.5 | 8.5 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 9.0 |
| 18 | 5.5 | 5.5 | 8.0 | 8.0 | 9.5 | 8.5 | 9.0 | 8.5 | 10.0 | 9.5 | 10.0 | 9.5 |
| 19 | 5.5 | 5.5 | 8.0 | 7.0 | 9.5 | 8.5 | 9.0 | 8.5 | 10.0 | 9.5 | 10.0 | 9.5 |
| 20 | 5.5 | 5.5 | 8.0 | 8.0 | 9.5 | 8.5 | 9.5 | 9.0 | 9.5 | 9.5 | 10.0 | 10.0 |
| 21 | 5.5 | 5.5 | 8.0 | 8.0 | 10.0 | 8.5 | 9.5 | 9.0 | 10.0 | 9.5 | 10.0 | 10.0 |
| 22 | 5.5 | 5.5 | 8.5 | 8.0 | 10.0 | 8.5 | 11.5 | 9.5 | 10.0 | 9.5 | 10.0 | 10.0 |
| 23 | 5.5 | 5.5 | 8.5 | 8.5 | 10.0 | 8.0 | 10.5 | 10.0 | 10.0 | 9.5 | 10.5 | 9.5 |
| 24 | 5.5 | 5.5 | 8.5 | 8.5 | 9.5 | 8.5 | 10.0 | 10.0 | 10.0 | 9.5 | 10.0 | 9.5 |
| 25 | 5.5 | 5.5 | 8.5 | 8.5 | 9.0 | 8.5 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 26 | 5.5 | 5.5 | 9.0 | 8.0 | 9.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 27 | 5.5 | 5.5 | 8.5 | 8.5 | 8.0 | 8.0 | 10.5 | 10.0 | 10.0 | 9.5 | 10.0 | 10.0 |
| 28 | 5.5 | 5.0 | 8.5 | 8.5 | 9.0 | 8.0 | 10.5 | 10.0 | 9.5 | 9.5 | 10.0 | 9.5 |
| 29 | 5.5 | 5.5 | 8.5 | 8.0 | 9.5 | 8.5 | 10.5 | 10.0 | 10.0 | 9.5 | 9.5 | 9.0 |
| 30 | 5.5 | 5.5 | 9.0 | 8.0 | 9.5 | 8.5 | 10.0 | 10.0 | 10.5 | 9.5 | 9.5 | 9.0 |
| 31 | --- | --- | 8.5 | 8.0 | --- | --- | 10.0 | 10.0 | 10.0 | 9.5 | --- | --- |
| MONTH | 5.5 | 4.5 | 9.0 | 5.5 | 10.0 | 7.0 | 11.5 | 8.0 | 10.5 | 9.0 | 10.5 | 9.0 |
| YEAR | 11.5 | 3.0 | | | | | | | | | | |

**TABLE C5.--Temperature of surface water--continued**

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12174000
SKAGIT RIVER ABV ALMA CK. NR MARBLEMOUNT. WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1962 TO SEPTEMBER 1963

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.0 | 7.0 | 7.0 | 6.5 | 6.5 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 |
| 2 | 9.5 | 9.5 | 7.0 | 6.5 | 6.5 | 6.5 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 |
| 3 | 9.5 | 9.5 | 6.5 | 6.5 | 6.5 | 6.5 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 |
| 4 | 9.5 | 9.5 | 6.5 | 6.5 | 6.5 | 6.5 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 |
| 5 | 9.5 | 9.0 | 6.5 | 6.5 | 6.5 | 6.0 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 |
| 6 | 9.5 | 9.0 | 6.5 | 6.5 | 6.0 | 5.5 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 |
| 7 | 9.5 | 9.5 | 6.5 | 6.0 | 6.0 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 8 | 9.5 | 9.0 | 6.5 | 6.0 | 6.0 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 9 | 9.0 | 9.0 | 6.5 | 6.5 | 6.0 | 5.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 10 | 9.0 | 8.0 | 7.0 | 6.5 | 6.5 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 11 | 8.5 | 8.5 | 6.5 | 6.5 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 4.5 | 4.5 |
| 12 | 8.5 | 8.5 | 6.5 | 6.5 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 4.5 | 4.5 |
| 13 | 8.5 | 8.5 | 6.5 | 6.5 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 4.5 | 4.5 |
| 14 | 8.5 | 8.0 | 6.5 | 6.5 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 4.5 | 4.5 |
| 15 | 8.5 | 8.5 | 6.5 | 6.5 | 6.5 | 6.0 | --- | --- | 4.0 | 4.0 | 4.5 | 4.5 |
| 16 | 8.5 | 8.5 | 6.5 | 6.5 | 6.0 | 6.0 | --- | --- | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 8.5 | 8.0 | 6.5 | 6.5 | 6.5 | 6.0 | --- | --- | 4.0 | 4.0 | 5.5 | 4.5 |
| 18 | 8.0 | 8.0 | 6.5 | 6.5 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 5.5 | 5.5 |
| 19 | 8.0 | 8.0 | 6.5 | 5.5 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 5.5 | 5.0 |
| 20 | 8.0 | 8.0 | 6.0 | 6.0 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 5.0 | 5.0 |
| 21 | 8.0 | 8.0 | 6.0 | 6.0 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 5.0 | 5.0 |
| 22 | 8.0 | 8.0 | 6.0 | 6.0 | 6.5 | 6.5 | --- | --- | 4.0 | 4.0 | 5.0 | 5.0 |
| 23 | 8.0 | 8.0 | 6.0 | 6.0 | 6.5 | 6.0 | --- | --- | 4.0 | 4.0 | 5.0 | 5.0 |
| 24 | 8.0 | 8.0 | 6.0 | 6.0 | 6.0 | 6.0 | --- | --- | 4.5 | 4.0 | 5.5 | 5.0 |
| 25 | 8.0 | 7.0 | 6.0 | 6.0 | 6.0 | 5.5 | --- | --- | 4.5 | 4.5 | 5.5 | 5.5 |
| 26 | 7.0 | 7.0 | 6.0 | 6.0 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 | 5.5 | 5.5 |
| 27 | 7.0 | 7.0 | 6.0 | 6.0 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 | 5.5 | 5.5 |
| 28 | 7.0 | 7.0 | 6.0 | 6.0 | 5.5 | 5.5 | --- | --- | 4.5 | 4.5 | 5.5 | 5.5 |
| 29 | 7.0 | 7.0 | 6.0 | 6.0 | 5.5 | 5.5 | --- | --- | --- | --- | 5.5 | 5.5 |
| 30 | 7.0 | 7.0 | 6.5 | 6.0 | 5.5 | 5.5 | --- | --- | --- | --- | 5.5 | 5.5 |
| 31 | 7.0 | 7.0 | --- | --- | 5.5 | 5.5 | --- | --- | --- | --- | 5.5 | 5.5 |
| MONTH | 9.5 | 7.0 | 7.0 | 5.5 | 6.5 | 5.5 | --- | --- | 4.5 | 4.0 | 5.5 | 4.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 5.5 | 6.0 | 6.0 | 8.5 | 8.5 | 9.0 | 8.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| 2 | 5.5 | 5.5 | 6.0 | 6.0 | 8.5 | 8.5 | 9.0 | 9.0 | 10.5 | 10.5 | 11.0 | 10.5 |
| 3 | 5.5 | 5.5 | 6.0 | 6.0 | 8.5 | 8.5 | 9.0 | 9.0 | 11.0 | 10.5 | 11.0 | 10.5 |
| 4 | 5.5 | 5.5 | 6.0 | 6.0 | 8.5 | 8.0 | 9.0 | 9.0 | 11.0 | 10.5 | 11.0 | 10.5 |
| 5 | 5.5 | 5.5 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 10.5 | 10.5 |
| 6 | 5.5 | 5.5 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.5 |
| 7 | 5.5 | 5.5 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.5 |
| 8 | 5.5 | 5.5 | 6.5 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.5 | 10.5 |
| 9 | 5.5 | 5.5 | 6.5 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 10 | 5.5 | 5.5 | 6.5 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 11 | 5.5 | 5.5 | 7.0 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.5 | 11.0 | 11.0 | 11.0 |
| 12 | 5.5 | 5.5 | 6.5 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.5 | 11.5 | 11.0 | 11.0 |
| 13 | 6.0 | 5.5 | 7.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 11.5 | 11.5 | 11.0 | 11.0 |
| 14 | 6.0 | 6.0 | 7.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.5 | 11.5 | 11.0 | 11.0 | 10.5 |
| 15 | 6.0 | 6.0 | 7.0 | 7.0 | 9.0 | 8.0 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 16 | 6.0 | 6.0 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 17 | 6.0 | 5.5 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 18 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 19 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 20 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 21 | 6.0 | 5.5 | 8.0 | 7.0 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 22 | 6.0 | 6.0 | 8.0 | 8.0 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 23 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 24 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.5 | 9.5 | 11.0 | 10.5 | 10.5 | 10.5 |
| 25 | 6.0 | 6.0 | 8.5 | 8.0 | 9.0 | 8.5 | 9.5 | 9.5 | 11.0 | 10.5 | 10.5 | 10.5 |
| 26 | 6.0 | 6.0 | 8.5 | 8.0 | 8.5 | 8.5 | 9.5 | 9.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| 27 | 6.0 | 6.0 | 8.5 | 8.0 | 8.5 | 8.5 | 10.5 | 9.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| 28 | 7.0 | 6.0 | 8.5 | 8.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| 29 | 6.0 | 6.0 | 8.5 | 8.0 | 8.5 | 8.5 | 10.5 | 10.5 | 12.0 | 10.5 | 11.0 | 10.5 |
| 30 | 6.0 | 6.0 | 9.0 | 8.0 | 9.0 | 8.5 | 10.5 | 10.5 | 11.0 | 10.5 | 10.5 | 10.5 |
| 31 | --- | --- | 9.0 | 8.5 | --- | --- | 10.5 | 10.5 | 11.0 | 10.5 | --- | --- |
| MONTH | 7.0 | 5.5 | 9.0 | 6.0 | 9.0 | 8.0 | 10.5 | 8.5 | 12.0 | 10.5 | 11.5 | 10.5 |
| YEAR | 12.0 | 4.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1963 TO SEPTEMBER 1964

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 2 | 10.0 | 10.0 | 8.5 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 3 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 4 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 5 | 10.0 | 10.0 | 8.0 | 7.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 |
| 6 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 7 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 8 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 9 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 10 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 11 | 10.0 | 10.0 | 7.0 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 |
| 12 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 4.5 | 4.5 | 4.0 |
| 13 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 14 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 15 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 16 | 10.0 | 10.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 17 | 10.0 | 10.0 | 7.0 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 18 | 10.0 | 9.5 | 6.5 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 19 | 9.5 | 9.0 | 6.5 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 20 | 9.0 | 9.0 | 6.5 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 4.5 | 4.5 | 4.5 |
| 21 | 9.0 | 9.0 | 6.5 | 6.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 22 | 9.0 | 8.5 | 6.5 | 6.5 | 6.0 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 23 | 8.5 | 8.5 | 6.5 | 6.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 24 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 25 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 26 | 8.5 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 27 | 8.5 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 28 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 29 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 30 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| 31 | 8.5 | 8.5 | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| MONTH | 10.0 | 8.5 | 8.5 | 6.0 | 6.5 | 5.0 | 5.0 | 4.5 | 5.0 | 4.0 | 4.5 | 4.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 8.0 | 8.5 | 8.5 | 9.5 | 9.5 | 10.5 | 10.5 |
| 2 | 4.5 | 4.5 | 5.5 | 5.5 | 8.5 | 8.5 | 8.5 | 8.5 | 9.5 | 9.5 | 10.5 | 10.5 |
| 3 | 4.5 | 4.5 | 6.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.5 |
| 4 | 4.5 | 4.5 | 6.5 | 6.5 | 8.0 | 8.0 | 8.5 | 8.5 | 10.0 | 10.0 | 10.5 | 10.5 |
| 5 | 4.5 | 4.5 | 6.5 | 6.5 | 8.0 | 7.0 | 8.5 | 8.5 | 10.0 | 10.0 | 11.0 | 10.5 |
| 6 | 4.5 | 4.5 | 6.5 | 6.5 | 8.5 | 8.0 | 8.5 | 8.5 | 10.5 | 10.0 | 11.0 | 11.0 |
| 7 | 4.5 | 4.5 | 6.5 | 6.5 | 8.5 | 8.5 | 9.0 | 8.0 | 10.5 | 10.0 | 11.0 | 11.0 |
| 8 | 4.5 | 4.5 | 6.5 | 6.5 | 8.5 | 8.5 | 9.0 | 8.5 | 10.5 | 10.0 | 11.0 | 10.5 |
| 9 | 4.5 | 4.5 | 6.5 | 6.5 | 9.0 | 8.5 | 8.5 | 8.5 | 10.5 | 10.5 | 11.0 | 10.5 |
| 10 | 4.5 | 4.5 | 6.5 | 6.5 | 9.0 | 8.5 | 9.0 | 8.5 | 11.0 | 10.0 | 11.0 | 10.5 |
| 11 | 4.5 | 4.5 | 6.5 | 6.5 | 9.0 | 8.5 | 9.0 | 9.0 | 11.0 | 10.0 | 11.0 | 10.5 |
| 12 | 4.5 | 4.5 | 6.5 | 6.5 | 9.0 | 8.5 | 9.5 | 9.0 | 11.0 | 11.0 | 11.0 | 10.5 |
| 13 | 5.0 | 4.5 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 14 | 5.0 | 5.0 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 11.5 | 11.0 | 10.5 | 10.5 |
| 15 | 5.0 | 5.0 | 7.0 | 6.5 | 9.0 | 8.5 | 9.5 | 9.0 | 11.5 | 10.5 | 10.5 | 10.5 |
| 16 | 5.0 | 5.0 | 7.0 | 7.0 | 9.0 | 9.0 | 9.0 | 9.0 | 11.5 | 11.0 | 10.5 | 10.5 |
| 17 | 5.0 | 5.0 | 7.0 | 7.0 | 9.0 | 9.0 | 9.0 | 9.0 | 11.5 | 11.0 | 11.0 | 10.5 |
| 18 | 5.0 | 5.0 | 7.0 | 7.0 | 9.0 | 9.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 19 | 6.0 | 5.0 | 8.0 | 7.0 | 9.0 | 8.0 | 9.0 | 9.0 | 11.0 | 10.5 | 11.0 | 11.0 |
| 20 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 9.0 | 9.0 | 11.0 | 10.5 | 11.0 | 11.0 |
| 21 | 5.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.0 | 9.0 | 9.0 | 11.0 | 10.5 | 11.0 | 11.0 |
| 22 | 5.5 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 23 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.5 | 9.0 | 9.0 | 11.0 | 10.5 | 11.0 | 11.0 |
| 24 | 5.5 | 5.5 | 8.0 | 8.0 | 8.5 | 8.0 | 9.5 | 9.0 | 11.0 | 10.5 | 11.0 | 11.0 |
| 25 | 5.5 | 5.5 | 8.0 | 8.0 | 8.5 | 8.5 | 9.5 | 9.0 | 10.5 | 10.5 | 11.0 | 11.0 |
| 26 | 5.5 | 5.5 | 8.5 | 8.0 | 8.5 | 8.5 | 10.0 | 9.5 | 10.5 | 10.5 | 11.0 | 11.0 |
| 27 | 5.5 | 5.5 | 8.5 | 8.5 | 8.5 | 8.5 | 10.0 | 10.0 | 10.5 | 10.5 | 11.0 | 11.0 |
| 28 | 5.5 | 5.5 | 8.5 | 8.0 | 8.5 | 8.5 | 10.5 | 10.0 | 10.5 | 10.0 | 11.0 | 11.0 |
| 29 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 11.0 | 11.0 |
| 30 | 5.5 | 5.5 | 8.5 | 7.0 | 8.5 | 8.5 | 10.5 | 10.0 | 10.0 | 10.0 | 11.0 | 10.5 |
| 31 | --- | --- | 8.5 | 8.0 | --- | --- | 10.0 | 9.5 | 10.5 | 10.0 | --- | --- |
| MONTH | 6.0 | 4.5 | 8.5 | 5.5 | 9.0 | 7.0 | 10.5 | 8.0 | 11.5 | 9.5 | 11.0 | 10.5 |
| YEAR | 11.5 | 4.0 | | | | | | | | | | |

**TABLE C5.--Temperature of surface water--continued**

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.5 | 10.0 | 9.0 | 9.0 | 6.0 | 6.0 | 4.5 | 3.5 | 4.0 | 3.5 | 3.0 | 3.0 |
| 2 | 10.0 | 10.0 | 9.0 | 9.0 | 6.0 | 6.0 | 4.0 | 3.5 | 4.0 | 4.0 | 3.0 | 3.0 |
| 3 | 10.0 | 10.0 | 9.0 | 8.5 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| 4 | 10.0 | 9.5 | 8.5 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| 5 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| 6 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| 7 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.5 | 3.0 |
| 8 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| 9 | 9.5 | 9.5 | 8.0 | 8.0 | 6.5 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| 10 | 9.5 | 9.5 | 8.0 | 8.0 | 6.5 | 6.0 | 4.0 | 4.0 | 4.0 | 3.5 | 3.0 | 3.0 |
| 11 | 10.0 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 |
| 12 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 13 | 10.0 | 10.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 14 | 10.0 | 10.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 15 | 10.0 | 10.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.0 | 3.5 | 3.5 |
| 16 | 10.0 | 10.0 | 8.0 | 8.0 | --- | --- | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.5 |
| 17 | 10.0 | 10.0 | 8.0 | 8.0 | --- | --- | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.0 |
| 18 | 10.0 | 9.5 | 8.0 | 8.0 | --- | --- | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 19 | 9.5 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.0 |
| 20 | 9.0 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.5 |
| 21 | 9.0 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 22 | 9.0 | 9.0 | 8.0 | 7.0 | 5.0 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 23 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 24 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 25 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 26 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 27 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 28 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.5 |
| 29 | 9.0 | 9.0 | 7.0 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | 3.5 | 3.5 |
| 30 | 9.0 | 9.0 | 6.5 | 5.0 | 4.5 | 4.5 | 4.0 | 3.5 | --- | --- | 3.5 | 3.5 |
| 31 | 9.0 | 9.0 | --- | --- | 4.5 | 4.5 | 3.5 | 3.5 | --- | --- | 3.5 | 3.5 |
| MONTH | 10.5 | 9.0 | 9.0 | 5.0 | 6.5 | 4.5 | 4.5 | 3.5 | 4.0 | 3.0 | 4.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 3.5 | 3.5 | 6.0 | 6.0 | 9.0 | 8.5 | 9.5 | 9.5 | 11.5 | 10.5 | 10.0 | 9.5 |
| 2 | 4.0 | 3.5 | 6.0 | 6.0 | 9.0 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 10.0 | 10.0 |
| 3 | 4.0 | 3.5 | 6.0 | 6.0 | 9.0 | 8.5 | 10.0 | 9.5 | 11.5 | 11.5 | 10.0 | 10.0 |
| 4 | 5.0 | 4.0 | 6.0 | 6.0 | 9.0 | 8.5 | 10.5 | 10.0 | 11.5 | 11.0 | 10.0 | 9.5 |
| 5 | 4.5 | 4.5 | 6.0 | 6.0 | 9.5 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 9.5 |
| 6 | 4.5 | 4.5 | 6.0 | 6.0 | 9.5 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 7 | 4.5 | 4.5 | 6.0 | 6.0 | 9.0 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 8 | 4.5 | 4.5 | 7.0 | 6.0 | 9.0 | 8.5 | 10.5 | 10.0 | 11.5 | 11.0 | 10.0 | 10.0 |
| 9 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 9.0 | 10.0 | 10.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 10 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 8.5 | 10.0 | 10.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 11 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 9.0 | 10.0 | 10.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 12 | 4.5 | 4.5 | 7.0 | 7.0 | 9.0 | 8.5 | 10.5 | 10.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 13 | 4.5 | 4.5 | 7.0 | 6.5 | 8.5 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 14 | 4.5 | 4.5 | 7.0 | 6.5 | 8.5 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 15 | 4.5 | 4.5 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 11.5 | 11.0 | 10.0 | 10.0 |
| 16 | 4.5 | 4.5 | 7.0 | 6.5 | 9.0 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 17 | 4.5 | 4.5 | 6.5 | 6.0 | 9.0 | 9.0 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 18 | 4.5 | 4.5 | 7.0 | 6.0 | 9.0 | 8.5 | 10.5 | 10.5 | 11.0 | 10.0 | 10.0 | 9.5 |
| 19 | 4.5 | 4.5 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 10.0 | 10.0 |
| 20 | 5.0 | 4.5 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 21 | 5.0 | 5.0 | 7.0 | 6.5 | 8.5 | 8.5 | 10.0 | 10.0 | 10.5 | 10.0 | 10.0 | 9.5 |
| 22 | 5.0 | 5.0 | 8.0 | 7.0 | 8.5 | 8.5 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 23 | 5.5 | 5.0 | 8.0 | 8.0 | 9.0 | 8.5 | 10.5 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 24 | 5.5 | 5.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 25 | 6.5 | 5.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 10.5 | 10.0 | 10.0 | 10.0 | 9.5 |
| 26 | 6.0 | 6.0 | 8.5 | 8.0 | 9.5 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 27 | 6.0 | 6.0 | 8.5 | 8.0 | 9.0 | 9.0 | 11.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 28 | 6.0 | 6.0 | 8.5 | 8.0 | 9.0 | 9.0 | 10.5 | 10.5 | 10.0 | 10.0 | 10.0 | 9.5 |
| 29 | 6.0 | 6.0 | 8.5 | 8.0 | 9.5 | 9.0 | 10.5 | 10.5 | 10.0 | 10.0 | 10.0 | 9.5 |
| 30 | 6.0 | 6.0 | 8.5 | 8.0 | 10.0 | 9.5 | 10.5 | 10.5 | 10.0 | 9.5 | 10.0 | 10.0 |
| 31 | --- | --- | 8.5 | 8.0 | --- | --- | 10.5 | 10.5 | 10.0 | 9.5 | --- | --- |
| MONTH | 6.5 | 3.5 | 8.5 | 6.0 | 10.0 | 8.5 | 11.0 | 9.5 | 11.5 | 9.5 | 10.0 | 9.5 |
| YEAR | 11.5 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 9.5 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 2 | 10.0 | 9.5 | 9.0 | 9.0 | 7.0 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 3 | 10.0 | 9.5 | 9.0 | 9.0 | 7.0 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 4 | 9.5 | 9.5 | 9.0 | 9.0 | 7.0 | 6.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.0 |
| 5 | 9.5 | 9.5 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 6 | 9.5 | 9.5 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 7 | 9.5 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 8 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 9 | 9.5 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 10 | 9.5 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 11 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 12 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 13 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 14 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 15 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 16 | 9.0 | 8.5 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 9.0 | 8.5 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 18 | 9.0 | 8.5 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 19 | 9.0 | 8.5 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 20 | 9.0 | 8.5 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 4.5 |
| 21 | 9.0 | 8.5 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 |
| 22 | 9.0 | 8.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 |
| 23 | 8.5 | 8.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 |
| 24 | 8.5 | 8.5 | 8.0 | 8.0 | 6.0 | 5.5 | 4.5 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 |
| 25 | 8.5 | 8.5 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 |
| 26 | 9.0 | 8.5 | 8.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 27 | 9.5 | 9.0 | 7.0 | 7.0 | 5.5 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 28 | 9.5 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 29 | 9.5 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | --- | --- | 5.0 | 5.0 |
| 30 | 9.5 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | --- | --- | 5.0 | 5.0 |
| 31 | 9.5 | 9.0 | --- | --- | 5.0 | 5.0 | 4.0 | 4.0 | --- | --- | 5.0 | 5.0 |
| MONTH | 10.0 | 8.5 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.5 | 4.0 | 5.5 | 4.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 5.0 | 7.0 | 6.5 | 8.0 | 6.5 | 8.5 | 8.5 | 11.0 | 10.5 | 11.0 | 10.5 |
| 2 | 5.0 | 5.0 | 7.0 | 6.5 | 8.0 | 7.0 | 8.5 | 8.0 | 11.0 | 10.5 | 11.0 | 10.5 |
| 3 | 5.5 | 5.0 | 8.0 | 6.5 | 7.0 | 7.0 | 8.5 | 8.0 | 11.0 | 10.5 | 13.0 | 11.0 |
| 4 | 5.5 | 5.5 | 7.0 | 6.5 | 7.0 | 7.0 | 8.5 | 8.0 | 10.5 | 10.5 | 13.0 | 11.0 |
| 5 | 5.5 | 5.5 | 7.0 | 6.5 | 8.5 | 7.0 | 8.5 | 8.0 | 10.5 | 10.0 | 13.5 | 11.0 |
| 6 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 7.0 | 9.0 | 8.5 | 11.5 | 10.0 | 11.5 | 11.5 |
| 7 | 5.5 | 5.5 | 7.0 | 6.5 | 8.5 | 7.0 | 9.5 | 9.0 | 11.5 | 10.5 | 11.5 | 11.5 |
| 8 | 5.5 | 5.5 | 8.0 | 6.5 | 8.5 | 7.0 | 9.5 | 8.5 | 10.5 | 10.5 | 11.5 | 11.0 |
| 9 | 5.5 | 5.5 | 7.0 | 6.5 | 8.0 | 7.0 | 9.5 | 9.0 | 10.5 | 10.5 | 11.5 | 11.0 |
| 10 | 5.5 | 5.5 | 6.5 | 6.5 | 8.0 | 7.0 | 9.5 | 9.0 | 10.5 | 10.0 | 11.5 | 11.0 |
| 11 | 5.5 | 5.5 | 7.0 | 6.5 | 7.0 | 7.0 | 10.0 | 9.0 | 10.5 | 10.0 | 11.5 | 11.0 |
| 12 | 5.5 | 5.5 | 7.0 | 7.0 | 8.0 | 7.0 | 10.0 | 9.0 | 10.5 | 10.0 | 11.0 | 11.0 |
| 13 | 5.5 | 5.5 | 7.0 | 6.5 | 8.0 | 7.0 | 10.0 | 9.5 | 10.5 | 10.0 | 11.0 | 11.0 |
| 14 | 5.5 | 5.5 | 7.0 | 6.5 | 8.5 | 7.0 | 10.0 | 9.5 | 11.0 | 10.5 | 11.0 | 11.0 |
| 15 | 5.5 | 5.5 | 6.5 | 6.5 | 9.0 | 8.0 | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 10.5 |
| 16 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 8.0 | 10.0 | 10.0 | 11.0 | 11.0 | 10.5 | 10.5 |
| 17 | 6.0 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.0 | 10.0 | 11.0 | 10.5 | 10.5 | 10.5 |
| 18 | 6.0 | 5.5 | 8.0 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 11.5 | 10.5 | 11.0 | 10.5 |
| 19 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 9.5 | 9.5 | 11.0 | 10.5 | 10.5 | 10.0 |
| 20 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 9.5 | 9.5 | 11.0 | 10.5 | 10.5 | 10.0 |
| 21 | 5.5 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 10.0 | 9.5 | 11.5 | 10.5 | 10.5 | 10.0 |
| 22 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 8.0 | 10.0 | 9.5 | 11.0 | 10.5 | 10.5 | 10.5 |
| 23 | 6.0 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.0 | 9.5 | 11.0 | 10.5 | 10.5 | 10.5 |
| 24 | 6.5 | 6.0 | 8.0 | 7.0 | 8.5 | 8.0 | 10.0 | 10.0 | 11.0 | 10.5 | 10.5 | 10.5 |
| 25 | 6.5 | 6.0 | 8.5 | 7.0 | 9.0 | 8.0 | 10.0 | 9.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 26 | 6.0 | 6.0 | 7.0 | 6.5 | 9.0 | 8.5 | 10.0 | 9.0 | 11.0 | 11.0 | 10.5 | 10.5 |
| 27 | 6.0 | 6.0 | 7.0 | 6.0 | 8.5 | 8.5 | 11.5 | 9.5 | 11.5 | 10.5 | 10.5 | 10.5 |
| 28 | 6.0 | 6.0 | 8.0 | 6.0 | 8.5 | 8.0 | 10.0 | 10.0 | 11.5 | 10.5 | 10.5 | 10.5 |
| 29 | 6.5 | 6.0 | 8.5 | 6.5 | 8.5 | 7.0 | 10.5 | 10.0 | 11.0 | 10.5 | 10.5 | 10.5 |
| 30 | 6.5 | 6.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.5 | 10.0 | 11.0 | 10.5 | 10.5 | 10.0 |
| 31 | --- | --- | 7.0 | 6.5 | --- | --- | 11.5 | 10.0 | 11.5 | 10.5 | --- | --- |
| MONTH | 6.5 | 5.0 | 8.5 | 6.0 | 9.0 | 6.5 | 11.5 | 8.0 | 11.5 | 10.0 | 13.5 | 10.0 |
| YEAR | 13.5 | 4.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.5 | 10.0 | 8.5 | 8.5 | 7.0 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 2 | 10.5 | 10.0 | 8.5 | 8.5 | 7.0 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 3 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 4 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 5 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 6 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 7 | 10.0 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 8 | 10.5 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 9 | 10.5 | 10.0 | 8.5 | 8.5 | 7.0 | 7.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 10 | 10.5 | 10.0 | 8.5 | 8.5 | 7.0 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 11 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 12 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 13 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 14 | 10.0 | 10.0 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 15 | 10.0 | 10.0 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 16 | 10.0 | 9.5 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 10.0 | 9.5 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 18 | 9.5 | 9.5 | 8.5 | 8.0 | 6.0 | 5.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 19 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.0 | 4.5 | 4.0 | 4.5 | 4.5 |
| 20 | 9.5 | 9.0 | 8.5 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 21 | 9.0 | 9.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 22 | 9.0 | 9.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 23 | 9.0 | 7.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 24 | 8.0 | 8.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 25 | 8.5 | 8.0 | 8.5 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 26 | 8.5 | 8.5 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 27 | 8.5 | 8.5 | 8.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 28 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 29 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 30 | 8.5 | 8.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 31 | 8.5 | 8.5 | --- | --- | 5.5 | 5.0 | 4.5 | 4.0 | --- | --- | 4.5 | 4.5 |
| MONTH | 10.5 | 7.0 | 8.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.5 | 4.0 | 4.5 | 4.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 4.5 | 6.0 | 6.0 | 8.0 | 7.0 | 10.0 | 10.0 | 13.0 | 12.0 | 10.5 | 10.5 |
| 2 | 5.0 | 4.5 | 6.0 | 6.0 | 8.0 | 7.0 | 11.0 | 10.0 | 12.0 | 12.0 | 10.5 | 10.5 |
| 3 | 5.0 | 5.0 | 6.0 | 6.0 | 8.0 | 7.0 | 11.0 | 11.0 | 12.0 | 12.0 | 11.0 | 10.5 |
| 4 | 5.0 | 5.0 | 6.5 | 6.0 | 8.5 | 7.0 | 11.0 | 11.0 | 12.0 | 11.5 | 11.0 | 10.5 |
| 5 | 5.0 | 5.0 | 6.5 | 6.0 | 8.5 | 7.0 | 11.0 | 11.0 | 12.0 | 11.5 | 11.0 | 10.5 |
| 6 | 5.0 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 11.0 | 10.5 | 12.0 | 12.0 | 11.0 | 10.0 |
| 7 | 5.0 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 10.5 | 10.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 8 | 5.0 | 5.0 | 6.5 | 6.0 | 8.0 | 7.0 | 10.5 | 10.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 9 | 5.0 | 5.0 | 6.5 | 6.0 | 8.0 | 8.0 | 10.5 | 10.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 10 | 5.0 | 5.0 | 6.5 | 6.5 | 8.0 | 8.0 | 10.5 | 10.5 | 11.5 | 11.5 | 10.0 | 10.0 |
| 11 | 5.0 | 5.0 | 6.5 | 6.5 | 8.5 | 8.0 | 10.5 | 10.5 | 11.5 | 11.0 | 10.0 | 10.0 |
| 12 | 5.0 | 5.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 13 | 5.0 | 5.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.5 | 10.5 | 11.5 | 11.0 | 10.0 | 10.0 |
| 14 | 5.0 | 5.0 | 6.5 | 6.5 | 8.5 | 8.5 | 10.5 | 10.5 | 11.0 | 11.0 | 10.0 | 10.0 |
| 15 | 5.5 | 5.0 | 6.5 | 6.5 | 8.5 | 8.5 | 11.0 | 10.5 | 11.0 | 11.0 | 10.0 | 9.5 |
| 16 | 5.5 | 5.0 | 7.0 | 6.5 | 8.5 | 8.5 | 11.0 | 10.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 17 | 5.5 | 5.5 | 6.5 | 6.5 | 8.5 | 8.5 | 11.0 | 10.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 18 | 5.5 | 5.5 | 7.0 | 6.0 | 9.0 | 8.5 | 11.5 | 11.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 19 | 5.5 | 5.5 | 7.0 | 6.0 | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 20 | 5.5 | 5.5 | 8.0 | 6.5 | 9.5 | 9.0 | 11.0 | 11.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 21 | 5.5 | 5.5 | 7.0 | 6.5 | 9.5 | 9.0 | 11.5 | 11.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 22 | 5.5 | 5.5 | 8.0 | 6.5 | 9.0 | 9.0 | 11.5 | 11.5 | 11.0 | 10.5 | 10.5 | 10.0 |
| 23 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 9.0 | 12.0 | 11.5 | 11.5 | 10.5 | 10.5 | 10.0 |
| 24 | 5.5 | 5.5 | 7.0 | 6.5 | 9.0 | 9.0 | 12.0 | 12.0 | 11.0 | 10.5 | 10.5 | 10.0 |
| 25 | 5.5 | 5.5 | 8.0 | 6.5 | 9.5 | 9.0 | 12.0 | 12.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 26 | 5.5 | 5.5 | 8.0 | 7.0 | 9.5 | 9.0 | 12.0 | 12.0 | 11.5 | 10.5 | 10.5 | 10.0 |
| 27 | 5.5 | 5.5 | 8.0 | 7.0 | 10.0 | 9.5 | 12.0 | 12.0 | 11.5 | 10.5 | 10.5 | 10.0 |
| 28 | 5.5 | 5.5 | 8.0 | 7.0 | 10.0 | 10.0 | 12.0 | 12.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 29 | 6.0 | 5.5 | 7.0 | 6.5 | 10.0 | 10.0 | 13.0 | 12.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 30 | 6.0 | 6.0 | 7.0 | 7.0 | 10.0 | 10.0 | 13.0 | 12.0 | 11.0 | 10.5 | 10.0 | 10.0 |
| 31 | --- | --- | 8.0 | 7.0 | --- | --- | 13.0 | 12.0 | 11.0 | 10.5 | --- | --- |
| MONTH | 6.0 | 4.5 | 8.0 | 6.0 | 10.0 | 7.0 | 13.0 | 10.0 | 13.0 | 10.5 | 11.0 | 9.5 |
| YEAR | 13.0 | 4.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 2 | 10.0 | 10.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 3 | 10.0 | 10.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 4 | 10.0 | 10.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 5 | 10.0 | 10.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 6 | 10.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 7 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 8 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 9 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 10 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 11 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 12 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 13 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 14 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 15 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 16 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 17 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 18 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 19 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 20 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 21 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 22 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 6.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 23 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 24 | 8.0 | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 25 | 8.0 | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 26 | 8.0 | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 27 | 8.0 | 8.0 | 8.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 28 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 29 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| 30 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | --- | --- | 4.0 | 4.0 |
| 31 | 8.0 | 8.0 | --- | --- | 5.0 | 5.0 | 3.0 | 3.0 | --- | --- | 4.0 | 4.0 |
| MONTH | 10.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 4.0 | 3.0 | 5.0 | 4.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | 7.0 | 7.0 | 8.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 2 | 4.0 | 4.0 | 7.0 | 7.0 | 7.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 3 | 5.0 | 4.0 | 7.0 | 7.0 | 7.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 9.0 |
| 4 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 9.0 |
| 5 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 11.0 | 10.0 |
| 6 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 9.0 | 10.0 | 10.0 | 11.0 | 10.0 |
| 7 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 |
| 8 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 10.0 |
| 9 | 6.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 |
| 10 | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 |
| 11 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 11.0 | 10.0 | 11.0 | 11.0 |
| 12 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 |
| 13 | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 9.0 | 10.0 | 10.0 | 11.0 | 11.0 |
| 14 | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 |
| 15 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 10.0 | 9.0 | 10.0 | 9.0 | 11.0 | 10.0 |
| 16 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 17 | 6.0 | 6.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 18 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 9.0 | 10.0 | 10.0 |
| 19 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 20 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 9.0 | 10.0 | 10.0 |
| 21 | 6.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 22 | 6.0 | 6.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 23 | 6.0 | 6.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 24 | 6.0 | 6.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 25 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 26 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 27 | 6.0 | 6.0 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 9.0 | 9.0 | 9.0 | 10.0 | 10.0 |
| 28 | 6.0 | 6.0 | 8.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 9.0 | 9.0 | 10.0 | 9.0 |
| 29 | 7.0 | 6.0 | 8.0 | 7.0 | 9.0 | 8.0 | 10.0 | 10.0 | 10.0 | 9.0 | 10.0 | 9.0 |
| 30 | 7.0 | 7.0 | 8.0 | 7.0 | 9.0 | 8.0 | 10.0 | 10.0 | 10.0 | 9.0 | 10.0 | 9.0 |
| 31 | --- | --- | 8.0 | 7.0 | --- | --- | 11.0 | 10.0 | 10.0 | 9.0 | --- | --- |
| MONTH | 7.0 | 4.0 | 8.0 | 7.0 | 9.0 | 7.0 | 11.0 | 9.0 | 11.0 | 9.0 | 11.0 | 9.0 |
| YEAR | 11.0 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | --- | --- | 3.0 | 3.0 |
| 2 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | --- | --- | 3.0 | 3.0 |
| 3 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | --- | --- | 3.0 | 3.0 |
| 4 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | --- | --- | 3.0 | 3.0 |
| 5 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | --- | 2.0 | 3.0 | 3.0 |
| 6 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 7 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 8 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 9 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 10 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 11 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 12 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 13 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 14 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 15 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 16 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 2.0 | 2.0 | 3.0 | 3.0 |
| 17 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | 3.0 | 2.0 | 3.0 | 3.0 |
| 18 | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 | 6.0 | --- | --- | 3.0 | 3.0 | 3.0 | 3.0 |
| 19 | 9.0 | 9.0 | 8.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 3.0 | 3.0 |
| 20 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 3.0 | 3.0 |
| 21 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 4.0 | 3.0 |
| 22 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 |
| 23 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 |
| 24 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 4.0 | 3.0 |
| 25 | 9.0 | 8.0 | 7.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.0 | 3.0 | 4.0 | 3.0 |
| 26 | 8.0 | 8.0 | 7.0 | 7.0 | 6.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 |
| 27 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 |
| 28 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 |
| 29 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | --- | --- | --- | --- | 4.0 | 4.0 |
| 30 | 8.0 | 8.0 | 7.0 | 7.0 | --- | --- | --- | --- | --- | --- | 4.0 | 4.0 |
| 31 | 8.0 | 8.0 | --- | --- | --- | --- | --- | --- | --- | --- | 4.0 | 4.0 |
| MONTH | 9.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | --- | --- | 3.0 | 2.0 | 4.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 2 | 4.0 | 4.0 | --- | --- | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 3 | 4.0 | 4.0 | --- | --- | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 4 | 4.0 | 4.0 | --- | --- | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 5 | 4.0 | 4.0 | --- | --- | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 6 | 4.0 | 4.0 | --- | --- | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 10.0 | 9.0 |
| 7 | 4.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 10.0 | 9.0 |
| 8 | 4.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 10.0 | 9.0 |
| 9 | 4.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 10 | 4.0 | 4.0 | --- | --- | --- | --- | 10.0 | 10.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 11 | 4.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 12 | 4.0 | 4.0 | --- | --- | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 13 | 5.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 14 | 5.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 15 | 5.0 | 4.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 16 | 5.0 | 5.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 17 | 5.0 | 5.0 | --- | --- | --- | --- | 10.0 | 9.0 | 11.0 | 10.0 | 11.0 | 11.0 |
| 18 | 5.0 | 5.0 | --- | --- | 11.0 | 11.0 | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 19 | 5.0 | 5.0 | --- | --- | 11.0 | 11.0 | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 20 | 5.0 | 5.0 | --- | --- | 11.0 | 11.0 | 11.0 | 10.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 21 | 5.0 | 5.0 | --- | --- | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 22 | 5.0 | 5.0 | --- | --- | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 23 | 5.0 | 5.0 | --- | --- | 11.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 |
| 24 | 5.0 | 5.0 | --- | --- | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 25 | 5.0 | 5.0 | --- | --- | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 26 | 5.0 | 5.0 | --- | --- | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 27 | 5.0 | 5.0 | --- | --- | 10.0 | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 28 | 5.0 | 5.0 | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 29 | 5.0 | 5.0 | --- | --- | 9.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 30 | 5.0 | 5.0 | --- | --- | 10.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 |
| 31 | --- | --- | --- | --- | --- | --- | 11.0 | 11.0 | 11.0 | 10.0 | --- | --- |
| MONTH | 5.0 | 4.0 | --- | --- | --- | --- | 11.0 | 9.0 | 11.0 | 10.0 | 11.0 | 9.0 |
| YEAR | 11.0 | 2.0 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- |
| 2 | 10.0 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- |
| 3 | 10.0 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- |
| 4 | 9.5 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- |
| 5 | 10.0 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- |
| 6 | 10.0 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- |
| 7 | 9.5 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.0 | 4.5 | 4.5 | --- | --- |
| 8 | 9.5 | 9.5 | 9.0 | 9.0 | 7.5 | 7.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 9 | 9.5 | 9.5 | 9.0 | 9.0 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 10 | 9.5 | 9.5 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 11 | 9.5 | 9.5 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 12 | 9.5 | 9.5 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 13 | 9.5 | 9.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 4.5 | --- | --- |
| 14 | 9.5 | 9.0 | 9.0 | 8.5 | 7.0 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | --- | --- |
| 15 | 9.5 | 9.0 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 4.5 | --- | --- |
| 16 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 17 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 18 | 9.0 | 9.0 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 19 | 9.0 | 9.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 20 | 9.0 | 9.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 21 | 9.0 | 9.0 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 22 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 23 | 9.0 | 9.0 | 8.5 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 24 | 9.0 | 9.0 | 8.5 | 8.5 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- |
| 25 | 9.0 | 8.5 | 8.5 | 8.5 | 6.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | --- | --- |
| 26 | 9.0 | 8.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- |
| 27 | 9.0 | 8.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | --- | --- |
| 28 | 9.0 | 9.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | --- | --- |
| 29 | 9.0 | 9.0 | 8.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 5.0 | 5.0 |
| 30 | 9.0 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 5.0 | 4.5 |
| 31 | 9.0 | 9.0 | --- | --- | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| MONTH | 10.0 | 8.5 | 9.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 5.0 | 4.5 | --- | --- |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 4.5 | 7.5 | 6.5 | 10.0 | 7.5 | 10.0 | 9.5 | 12.0 | 11.0 | 11.5 | 11.5 |
| 2 | 4.5 | 4.5 | 9.0 | 6.5 | 9.5 | 7.5 | 10.5 | 9.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| 3 | 4.5 | 4.5 | 9.0 | 6.5 | 9.5 | 8.5 | 11.0 | 10.0 | 12.0 | 11.5 | 11.5 | 11.5 |
| 4 | 4.5 | 4.5 | 8.5 | 6.5 | 9.5 | 7.5 | 11.5 | 10.0 | 12.5 | 11.5 | 11.5 | 11.5 |
| 5 | 4.5 | 4.5 | 7.5 | 6.5 | 9.5 | 7.5 | 11.0 | 10.0 | 12.0 | 11.5 | 11.5 | 11.5 |
| 6 | 4.5 | 4.5 | 7.0 | 6.5 | 10.5 | 9.0 | 11.0 | 11.0 | 12.0 | 12.0 | 11.5 | 11.5 |
| 7 | 4.5 | 4.5 | 7.5 | 6.5 | 10.5 | 9.0 | 11.0 | 10.5 | 12.0 | 12.0 | 11.5 | 11.0 |
| 8 | 4.5 | 4.5 | 7.0 | 6.5 | 10.0 | 9.0 | 11.5 | 11.0 | 12.0 | 11.5 | 11.5 | 11.5 |
| 9 | 4.5 | 4.5 | 7.5 | 6.5 | 9.5 | 9.0 | 11.5 | 11.0 | 12.0 | 11.5 | 12.0 | 11.0 |
| 10 | 4.5 | 4.5 | 7.5 | 6.5 | 10.0 | 9.0 | 11.5 | 11.0 | 12.5 | 11.5 | 11.5 | 11.0 |
| 11 | 4.5 | 4.5 | 7.5 | 6.5 | 10.0 | 9.0 | 11.5 | 11.0 | 12.5 | 11.5 | 11.5 | 11.0 |
| 12 | 4.5 | 4.5 | 7.0 | 6.5 | 11.0 | 9.0 | 12.0 | 11.0 | 12.0 | 11.5 | 12.0 | 11.0 |
| 13 | 4.5 | 4.5 | 7.5 | 6.5 | 10.5 | 9.5 | 11.5 | 11.5 | 12.0 | 11.5 | 11.5 | 10.5 |
| 14 | 6.0 | 4.5 | 7.5 | 7.0 | 10.0 | 9.5 | 11.5 | 11.0 | 12.0 | 11.5 | 11.5 | 11.0 |
| 15 | 5.0 | 5.0 | 9.5 | 7.0 | 9.5 | 9.0 | 12.0 | 11.0 | 12.5 | 11.5 | 11.5 | 11.0 |
| 16 | 5.5 | 5.0 | 9.5 | 7.0 | 9.5 | 9.0 | 11.5 | 11.0 | 12.5 | 11.5 | 11.0 | 11.0 |
| 17 | 5.5 | 5.0 | 8.5 | 6.5 | 11.0 | 9.0 | 11.5 | 11.0 | 12.5 | 11.5 | 11.0 | 11.0 |
| 18 | 5.5 | 5.0 | 8.5 | 6.5 | 11.0 | 9.5 | 12.0 | 11.5 | 12.5 | 11.5 | 11.0 | 11.0 |
| 19 | 5.5 | 5.5 | 9.0 | 6.5 | 11.0 | 9.5 | 12.0 | 11.5 | 12.5 | 11.5 | 11.0 | 10.5 |
| 20 | 5.5 | 5.5 | 7.5 | 7.0 | 11.5 | 10.0 | 12.0 | 12.0 | 12.5 | 11.5 | 11.0 | 10.5 |
| 21 | 6.0 | 5.5 | 9.0 | 7.0 | 11.0 | 10.5 | 12.0 | 11.5 | 12.5 | 12.0 | 11.0 | 11.0 |
| 22 | 6.0 | 5.5 | 7.5 | 7.0 | 11.0 | 10.0 | 12.0 | 11.5 | 12.5 | 12.0 | 11.0 | 9.5 |
| 23 | 6.5 | 5.5 | 9.5 | 7.0 | 11.0 | 10.0 | 11.5 | 11.0 | 12.5 | 11.5 | 9.5 | 9.0 |
| 24 | 6.0 | 5.5 | 10.0 | 7.0 | 11.0 | 10.5 | 11.5 | 11.0 | 12.0 | 11.5 | 9.5 | 9.0 |
| 25 | 6.0 | 5.5 | 9.0 | 7.0 | 11.0 | 10.5 | 11.5 | 11.5 | 12.0 | 12.0 | 9.5 | 9.0 |
| 26 | 6.5 | 5.5 | 8.5 | 7.5 | 10.5 | 10.5 | 11.5 | 11.0 | 12.0 | 12.0 | 10.0 | 9.5 |
| 27 | 6.5 | 6.0 | 7.5 | 7.0 | 10.5 | 10.0 | 11.0 | 11.0 | 12.0 | 12.0 | 10.5 | 9.5 |
| 28 | 7.5 | 6.0 | 8.5 | 7.0 | 10.5 | 10.0 | 11.5 | 11.0 | 12.0 | 11.5 | 10.0 | 9.5 |
| 29 | 6.5 | 6.0 | 7.5 | 7.5 | 11.0 | 10.0 | 11.5 | 11.5 | 11.5 | 11.5 | 10.0 | 9.5 |
| 30 | 7.0 | 6.0 | 10.0 | 7.5 | 10.0 | 10.0 | 11.5 | 11.5 | 12.0 | 11.5 | 10.0 | 10.0 |
| 31 | --- | --- | 10.0 | 7.5 | --- | --- | 13.5 | 11.0 | 11.5 | 11.5 | --- | --- |
| MONTH | 7.5 | 4.5 | 10.0 | 6.5 | 11.5 | 7.5 | 13.5 | 9.5 | 12.5 | 11.0 | 12.0 | 9.0 |
| YEAR | 13.5 | 4.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 2 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 4.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 3 | 10.5 | 10.0 | 8.5 | 8.0 | 6.5 | 6.5 | 4.5 | 4.5 | 3.0 | 2.0 | 3.0 | 3.0 |
| 4 | 10.0 | 10.0 | 8.0 | 8.0 | 6.5 | 6.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 5 | 10.0 | 10.0 | 8.0 | 8.0 | 6.5 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 6 | 10.0 | 9.5 | 8.5 | 8.0 | 6.0 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.0 | 3.0 |
| 7 | 9.5 | 9.5 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.5 | 3.0 |
| 8 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.5 | 3.5 |
| 9 | 9.5 | 9.5 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.5 | 3.5 |
| 10 | 9.5 | 9.5 | 8.0 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.5 | 3.5 |
| 11 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 5.5 | 4.5 | 4.5 | 2.0 | 2.0 | 3.5 | 3.5 |
| 12 | 10.0 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 2.0 | 3.5 | 3.5 |
| 13 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 5.5 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 3.5 |
| 14 | 9.5 | 9.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.5 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 15 | 9.5 | 9.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.0 | 4.0 | 4.0 |
| 16 | 9.5 | 9.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 17 | 9.0 | 9.0 | 8.0 | 8.0 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 18 | 9.5 | 9.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 19 | 9.5 | 9.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 20 | 9.5 | 9.0 | 8.0 | 7.0 | 6.0 | 5.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 21 | 9.0 | 9.0 | 8.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 22 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 23 | 9.0 | 9.0 | 6.5 | 6.0 | 5.5 | 5.5 | 3.5 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 24 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 25 | 9.0 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 26 | 8.5 | 8.5 | 6.5 | 6.0 | 5.5 | 5.5 | 3.0 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 27 | 8.5 | 8.5 | 6.5 | 6.5 | 5.5 | 5.5 | 3.0 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 28 | 8.5 | 8.5 | 6.5 | 6.5 | 5.5 | 5.5 | 3.0 | 3.0 | 3.5 | 3.0 | 4.0 | 4.0 |
| 29 | 8.5 | 8.5 | 6.5 | 6.5 | 5.5 | 5.0 | 3.0 | 3.0 | --- | --- | 4.0 | 4.0 |
| 30 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 3.0 | 3.0 | --- | --- | 4.0 | 4.0 |
| 31 | 8.5 | 8.5 | --- | --- | 5.0 | 5.0 | 3.0 | 3.0 | --- | --- | 4.0 | 4.0 |
| MONTH | 10.5 | 8.5 | 8.5 | 6.0 | 6.5 | 5.0 | 5.0 | 3.0 | 3.5 | 2.0 | 4.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | 6.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.0 | 11.0 | 11.0 | 10.0 | 9.5 |
| 2 | 4.0 | 4.0 | 6.0 | 5.5 | 7.0 | 7.0 | 8.5 | 8.5 | 11.0 | 11.0 | 10.0 | 9.5 |
| 3 | 4.5 | 4.0 | 6.5 | 5.5 | 7.0 | 7.0 | 8.5 | 8.5 | 11.0 | 10.5 | 9.5 | 9.5 |
| 4 | 4.5 | 4.0 | 6.5 | 6.0 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 9.5 | 9.5 |
| 5 | 4.5 | 4.5 | 6.0 | 6.0 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.5 | 9.5 | 9.5 |
| 6 | 4.5 | 4.5 | 7.0 | 6.0 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.0 | 9.5 | 9.5 |
| 7 | 4.5 | 4.5 | 7.0 | 6.0 | 7.0 | 7.0 | 9.0 | 8.5 | 10.5 | 10.0 | 9.5 | 9.5 |
| 8 | 4.5 | 4.5 | 7.0 | 6.0 | 7.0 | 7.0 | 9.0 | 9.0 | 11.0 | 10.5 | 9.5 | 9.5 |
| 9 | 4.5 | 4.5 | 7.0 | 6.5 | 8.0 | 7.0 | 9.0 | 9.0 | 11.0 | 10.5 | 10.5 | 9.5 |
| 10 | 4.5 | 4.5 | 8.0 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 11.0 | 10.5 | 10.0 | 9.5 |
| 11 | 4.5 | 4.5 | 8.0 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 10.5 | 10.5 | 9.5 | 9.5 |
| 12 | 5.0 | 4.5 | 7.0 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 10.5 | 10.0 | 10.0 | 9.5 |
| 13 | 5.0 | 4.5 | 6.5 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 10.5 | 10.0 | 9.5 | 9.5 |
| 14 | 5.0 | 5.0 | 7.0 | 6.5 | 8.0 | 8.0 | 9.0 | 9.0 | 10.5 | 10.0 | 9.5 | 9.5 |
| 15 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 9.5 | 9.0 | 10.5 | 10.0 | 9.5 | 9.5 |
| 16 | 5.0 | 5.0 | 7.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.5 | 10.5 | 10.0 | 10.0 | 9.0 |
| 17 | 5.0 | 5.0 | 6.5 | 6.5 | 8.0 | 8.0 | 10.0 | 9.5 | 10.5 | 10.0 | 9.5 | 9.0 |
| 18 | 5.5 | 5.0 | 7.0 | 6.5 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.0 |
| 19 | 5.5 | 5.0 | 6.5 | 6.5 | 8.0 | 8.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 8.5 |
| 20 | 5.0 | 5.0 | 6.5 | 6.5 | 8.0 | 8.0 | 10.5 | 10.0 | 10.0 | 10.0 | 9.5 | 9.0 |
| 21 | 5.0 | 5.0 | 8.0 | 6.5 | 8.0 | 8.0 | 10.5 | 10.5 | 10.0 | 10.0 | 9.5 | 9.0 |
| 22 | 5.0 | 5.0 | 8.0 | 6.5 | 8.0 | 8.0 | 10.5 | 10.5 | 10.0 | 9.5 | 9.5 | 9.0 |
| 23 | 5.0 | 5.0 | 8.0 | 7.0 | 8.0 | 8.0 | 10.5 | 10.5 | 9.5 | 9.5 | 9.0 | 9.0 |
| 24 | 5.5 | 5.0 | 8.0 | 6.5 | 8.0 | 8.0 | 10.5 | 10.0 | 10.0 | 9.5 | 9.0 | 9.0 |
| 25 | 6.0 | 5.0 | 7.0 | 7.0 | 8.0 | 8.0 | 10.5 | 10.0 | 10.0 | 9.0 | 9.0 | 9.0 |
| 26 | 6.0 | 5.5 | 7.0 | 6.5 | 8.5 | 8.0 | 10.5 | 10.0 | 10.0 | 9.5 | 9.5 | 9.0 |
| 27 | 5.5 | 5.5 | 8.5 | 6.5 | 8.5 | 8.0 | 10.5 | 10.0 | 10.0 | 9.5 | 9.5 | 9.5 |
| 28 | 5.5 | 5.5 | 8.0 | 6.5 | 8.0 | 8.0 | 11.0 | 10.5 | 10.5 | 9.5 | 9.5 | 9.0 |
| 29 | 6.0 | 5.5 | 8.0 | 8.0 | 8.5 | 8.0 | 11.0 | 10.5 | 11.0 | 9.5 | 9.0 | 9.0 |
| 30 | 6.0 | 5.5 | 8.0 | 7.0 | 8.5 | 8.0 | 11.0 | 10.5 | 10.5 | 10.0 | 9.5 | 9.0 |
| 31 | --- | --- | 8.0 | 7.0 | --- | --- | 11.0 | 11.0 | 10.0 | 10.0 | --- | --- |
| MONTH | 6.0 | 4.0 | 8.5 | 5.5 | 8.5 | 7.0 | 11.0 | 8.0 | 11.0 | 9.0 | 10.5 | 8.5 |
| YEAR | 11.0 | 2.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.0 | 8.0 | 8.0 | 7.0 | 6.0 | 4.5 | 4.0 | 1.5 | 1.0 | 3.0 | 2.0 |
| 2 | 10.0 | 9.0 | 8.0 | 8.0 | 6.5 | 6.0 | 4.5 | 4.0 | 1.5 | 1.0 | 3.0 | 2.0 |
| 3 | 10.0 | 9.5 | 8.0 | 7.0 | 6.5 | 6.0 | 4.0 | 3.5 | 1.5 | 1.0 | 3.0 | 2.0 |
| 4 | 10.0 | 9.5 | 7.0 | 6.5 | 6.5 | 5.5 | 4.0 | 4.0 | 1.5 | 1.5 | 3.5 | 1.5 |
| 5 | 10.0 | 9.5 | 7.0 | 6.5 | 6.0 | 5.5 | 4.5 | 4.0 | 3.0 | 1.5 | 3.0 | 1.5 |
| 6 | 10.0 | 10.0 | 7.0 | 6.5 | 6.0 | 5.5 | 4.5 | 4.0 | --- | --- | 3.0 | 2.0 |
| 7 | 10.0 | 10.0 | 7.0 | 6.5 | 6.0 | 5.5 | 4.0 | 3.5 | --- | --- | 3.0 | 2.0 |
| 8 | 10.0 | 9.5 | 7.0 | 6.5 | 6.0 | 5.0 | 4.0 | 3.5 | --- | --- | 3.5 | 3.0 |
| 9 | 10.0 | 9.5 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.5 | --- | --- | 3.5 | 3.0 |
| 10 | 10.0 | 9.5 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.0 | --- | --- | 3.5 | 3.0 |
| 11 | 10.0 | 10.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.0 | --- | --- | 3.5 | 3.0 |
| 12 | 10.0 | 9.5 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.0 | --- | --- | 3.5 | 3.0 |
| 13 | 9.5 | 9.5 | 7.0 | 6.5 | 5.5 | 4.5 | 3.5 | 3.0 | --- | --- | 3.5 | 3.0 |
| 14 | 9.5 | 9.5 | 7.0 | 6.5 | 5.5 | 4.5 | 3.5 | 3.5 | --- | --- | 3.5 | 3.0 |
| 15 | 9.5 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 4.0 | 3.5 | --- | --- | 3.5 | 3.0 |
| 16 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.5 | --- | --- | 4.0 | 3.5 |
| 17 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.5 | 3.0 | 2.0 | 4.0 | 3.5 |
| 18 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.0 | 3.0 | 2.0 | 4.0 | 3.5 |
| 19 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.5 | 3.5 | 2.0 | 4.5 | 3.5 |
| 20 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.0 | 3.5 | 2.0 | 4.0 | 3.5 |
| 21 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.0 | 3.5 | 2.0 | 4.0 | 3.5 |
| 22 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.5 | 3.5 | 3.0 | 2.0 | 4.0 | 3.5 |
| 23 | 9.0 | 9.0 | 6.5 | 6.0 | 5.0 | 5.0 | 3.5 | 3.0 | 3.0 | 2.0 | 4.5 | 3.0 |
| 24 | 9.0 | 9.0 | 7.0 | 6.5 | 5.0 | 4.0 | 3.5 | 1.5 | 3.0 | 2.0 | 4.0 | 3.0 |
| 25 | 9.0 | 9.0 | 6.5 | 6.0 | 4.0 | 3.5 | 1.5 | 1.5 | 3.0 | 2.0 | 4.0 | 3.0 |
| 26 | 9.0 | 8.5 | 6.5 | 6.0 | 3.5 | 3.5 | 1.5 | 1.0 | 3.0 | 1.5 | 4.0 | 3.0 |
| 27 | 8.5 | 8.5 | 6.5 | 6.0 | 4.0 | 3.5 | 1.5 | 1.0 | 3.0 | 1.5 | 4.0 | 3.0 |
| 28 | 8.5 | 8.0 | 6.5 | 6.0 | 4.5 | 4.0 | 1.5 | 1.5 | 3.0 | 2.0 | 4.0 | 3.0 |
| 29 | 8.5 | 8.0 | 6.5 | 6.0 | 4.5 | 4.0 | 2.0 | 1.0 | 3.0 | 2.0 | 4.0 | 3.0 |
| 30 | 8.5 | 8.5 | 7.0 | 6.0 | 4.5 | 4.0 | 1.5 | 1.0 | --- | --- | 4.5 | 3.5 |
| 31 | 8.5 | 8.0 | --- | --- | 4.5 | 4.5 | 1.5 | 1.0 | --- | --- | 4.5 | 3.5 |
| MONTH | 10.0 | 8.0 | 8.0 | 6.0 | 7.0 | 3.5 | 4.5 | 1.0 | --- | --- | 4.5 | 1.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 3.0 | 5.5 | 4.0 | 7.0 | 6.0 | 8.5 | 7.0 | 9.0 | 8.5 | 10.0 | 9.0 |
| 2 | 4.5 | 3.0 | 6.5 | 4.5 | 7.0 | 6.0 | 9.0 | 8.0 | 10.0 | 8.5 | 11.0 | 9.0 |
| 3 | 4.5 | 3.5 | 7.0 | 4.5 | 8.0 | 6.5 | 10.0 | 8.5 | 10.0 | 8.5 | 11.0 | 9.0 |
| 4 | 4.5 | 4.0 | 7.0 | 4.5 | 8.0 | 6.5 | 10.0 | 9.0 | 10.0 | 9.0 | 10.5 | 9.0 |
| 5 | 4.5 | 3.5 | 6.5 | 5.0 | 8.5 | 7.0 | 10.0 | 9.0 | 10.0 | 8.5 | 10.0 | 9.0 |
| 6 | 4.5 | 3.5 | 5.5 | 4.5 | 8.0 | 7.0 | 9.5 | 9.0 | 10.0 | 9.0 | 9.5 | 9.0 |
| 7 | 4.5 | 3.5 | 6.5 | 4.5 | 8.5 | 7.0 | 9.5 | 8.5 | 10.5 | 9.0 | 10.0 | 8.5 |
| 8 | 4.5 | 3.5 | 5.5 | 4.5 | 8.5 | 7.0 | 9.0 | 8.0 | 10.5 | 9.0 | 9.0 | 8.5 |
| 9 | 4.5 | 3.5 | 6.0 | 4.5 | 8.5 | 7.0 | 8.5 | 8.0 | 10.0 | 9.0 | 9.5 | 9.0 |
| 10 | 4.5 | 3.5 | 6.0 | 4.5 | 7.0 | 6.5 | 8.5 | 8.0 | 9.5 | 9.0 | 10.5 | 8.5 |
| 11 | 4.5 | 4.0 | 6.5 | 4.5 | 7.0 | 6.5 | 8.5 | 8.0 | 9.5 | 8.5 | 9.5 | 8.0 |
| 12 | 4.5 | 4.0 | 7.0 | 5.0 | 6.5 | 6.0 | 8.0 | 7.0 | 9.5 | 8.5 | 10.0 | 8.5 |
| 13 | 4.5 | 4.0 | 6.5 | 5.0 | 7.0 | 6.5 | 8.5 | 7.0 | 10.0 | 8.5 | 11.0 | 8.5 |
| 14 | 4.5 | 4.0 | 6.5 | 5.0 | 7.0 | 6.5 | 8.5 | 7.0 | 9.5 | 8.5 | 10.5 | 8.5 |
| 15 | 5.0 | 3.5 | 5.5 | 4.5 | 7.0 | 6.5 | 9.0 | 8.0 | 9.5 | 8.5 | 10.5 | 8.5 |
| 16 | 5.0 | 3.5 | 6.5 | 4.5 | 8.0 | 6.5 | 9.5 | 8.5 | 10.0 | 8.5 | 9.5 | 9.0 |
| 17 | 5.0 | 3.5 | 6.0 | 5.0 | 8.0 | 6.5 | 10.0 | 9.0 | 9.5 | 8.5 | 9.5 | 8.5 |
| 18 | 4.5 | 3.5 | 7.0 | 5.0 | 8.0 | 6.5 | 10.0 | 9.0 | 9.5 | 8.5 | 9.5 | 8.5 |
| 19 | 4.5 | 3.5 | 7.0 | 5.0 | 8.0 | 6.5 | 10.0 | 9.5 | 10.0 | 8.5 | 9.5 | 8.5 |
| 20 | 5.0 | 4.0 | 8.0 | 5.5 | 8.0 | 7.0 | 10.0 | 9.5 | 10.0 | 8.5 | 9.0 | 8.5 |
| 21 | 4.5 | 4.0 | 5.5 | 5.0 | 8.5 | 7.0 | 10.0 | 9.0 | 10.0 | 9.0 | 9.0 | 7.0 |
| 22 | 5.0 | 4.0 | 6.0 | 5.5 | 8.5 | 7.0 | 9.5 | 9.0 | 9.5 | 8.5 | 8.0 | 7.0 |
| 23 | 5.5 | 4.0 | 6.5 | 5.5 | 8.0 | 7.0 | 9.5 | 8.5 | 10.0 | 8.5 | 8.5 | 7.0 |
| 24 | 5.5 | 4.0 | 6.5 | 5.5 | 8.5 | 7.0 | 9.5 | 8.5 | 10.0 | 8.5 | 8.5 | 7.0 |
| 25 | 5.0 | 4.0 | 6.5 | 5.5 | 8.0 | 7.0 | 9.5 | 8.5 | 10.0 | 9.0 | 9.0 | 7.0 |
| 26 | 5.5 | 4.0 | 7.0 | 6.0 | 8.0 | 7.0 | 10.0 | 8.5 | 10.0 | 9.0 | 8.5 | 7.0 |
| 27 | 6.0 | 4.0 | 7.0 | 6.0 | 8.0 | 7.0 | 9.0 | 8.5 | 10.5 | 9.0 | 9.0 | 6.5 |
| 28 | 5.0 | 4.0 | 8.0 | 6.0 | 8.5 | 7.0 | 9.0 | 8.5 | 10.5 | 9.0 | 9.0 | 7.0 |
| 29 | 6.0 | 4.0 | 7.0 | 6.0 | 8.5 | 7.0 | 9.5 | 8.0 | 10.5 | 9.0 | 9.0 | 7.0 |
| 30 | 5.5 | 4.0 | 6.5 | 5.5 | 8.5 | 7.0 | 9.5 | 8.5 | 10.0 | 9.0 | 10.0 | 8.0 |
| 31 | --- | --- | 7.0 | 6.0 | --- | --- | 9.5 | 8.5 | 10.0 | 9.0 | --- | --- |
| MONTH | 6.0 | 3.0 | 8.0 | 4.0 | 8.5 | 6.0 | 10.0 | 7.0 | 10.5 | 8.5 | 11.0 | 6.5 |
| YEAR | 11.0 | 1.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12179000
SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 8.5 | 8.5 | 8.0 | 7.0 | 6.0 | 4.0 | 4.0 | 3.5 | 3.0 | 4.0 | 3.5 |
| 2 | 10.0 | 8.0 | 8.5 | 8.0 | 6.5 | 6.0 | 4.0 | 4.0 | 3.5 | 3.0 | 4.0 | 3.5 |
| 3 | 9.5 | 8.5 | 8.5 | 8.0 | 6.0 | 5.0 | 4.0 | 2.0 | 3.0 | 3.0 | 4.0 | 3.5 |
| 4 | 9.5 | 8.0 | 8.0 | 7.0 | 5.5 | 5.0 | 3.5 | 3.0 | 3.5 | 3.0 | 4.5 | 3.5 |
| 5 | 9.0 | 8.0 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.0 | 3.0 | 2.0 | 4.0 | 3.5 |
| 6 | 9.5 | 8.0 | 8.0 | 6.5 | 5.5 | 5.0 | 3.0 | 3.0 | 3.0 | 2.0 | 4.0 | 3.5 |
| 7 | 9.5 | 8.0 | 8.0 | 7.0 | 5.0 | 5.0 | 3.0 | 2.0 | 3.0 | 2.0 | 4.5 | 3.5 |
| 8 | 10.0 | 8.0 | 8.0 | 7.0 | 5.0 | 5.0 | 3.0 | 2.0 | 3.0 | 1.5 | 4.5 | 3.5 |
| 9 | 8.5 | 8.0 | 8.0 | 7.0 | 5.5 | 5.0 | 3.0 | 2.0 | 3.0 | 2.0 | 4.5 | 3.5 |
| 10 | 8.5 | 7.0 | 8.0 | 7.0 | 5.5 | 5.0 | 3.0 | 2.0 | 3.0 | 2.0 | 4.0 | 3.5 |
| 11 | 9.0 | 7.0 | 7.0 | 6.5 | 5.5 | 5.0 | 3.0 | 2.0 | 3.0 | 2.0 | 4.5 | 3.5 |
| 12 | 9.0 | 7.0 | 6.5 | 6.0 | 5.5 | 4.5 | 3.5 | 3.0 | 3.0 | 2.0 | 4.0 | 3.5 |
| 13 | 9.0 | 8.0 | 8.0 | 6.0 | 5.0 | 4.5 | 3.5 | 3.0 | 3.0 | 2.0 | 4.0 | 3.5 |
| 14 | 9.0 | 8.0 | 8.0 | 6.5 | 5.0 | 4.5 | 3.5 | 3.0 | 3.5 | 2.0 | 4.0 | 3.5 |
| 15 | 9.0 | 7.0 | 8.0 | 7.0 | 5.0 | 4.5 | 3.5 | 3.0 | 3.5 | 3.0 | 4.5 | 3.5 |
| 16 | 9.0 | 7.0 | 8.0 | 7.0 | 5.0 | 4.5 | 3.5 | 3.0 | 4.0 | 3.0 | 4.0 | 3.5 |
| 17 | 9.0 | 7.0 | 8.0 | 7.0 | 4.5 | 4.5 | 3.5 | 3.0 | 4.0 | 3.5 | 4.0 | 3.5 |
| 18 | 9.0 | 7.0 | 7.0 | 7.0 | 5.0 | 4.5 | 3.5 | 3.0 | 4.5 | 3.0 | 4.0 | 3.5 |
| 19 | 9.0 | 8.0 | 7.0 | 6.5 | 4.5 | 4.0 | 3.5 | 3.0 | 4.0 | 3.0 | 4.5 | 3.5 |
| 20 | 9.0 | 8.0 | 7.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.0 | 4.0 | 3.0 | 4.0 | 3.5 |
| 21 | 9.0 | 8.5 | 7.0 | 6.0 | 4.5 | 4.5 | 3.5 | 3.0 | 4.0 | 3.0 | 4.5 | 3.5 |
| 22 | 9.5 | 8.5 | 7.0 | 6.5 | 4.5 | 4.5 | 3.5 | 3.0 | 3.5 | 3.0 | 5.0 | 3.5 |
| 23 | 9.0 | 8.0 | 7.0 | 6.5 | 4.5 | 4.5 | 3.5 | 3.0 | 4.0 | 3.0 | 4.5 | 3.5 |
| 24 | 9.0 | 7.0 | 7.0 | 6.5 | 4.5 | 4.5 | 3.5 | 3.0 | 4.0 | 3.0 | 5.0 | 3.5 |
| 25 | 8.5 | 8.0 | 7.0 | 6.5 | 4.5 | 4.0 | 3.5 | 3.0 | 4.0 | 3.5 | 5.0 | 4.0 |
| 26 | 8.5 | 8.0 | 6.5 | 6.0 | 4.5 | 4.0 | 3.0 | 3.0 | 4.0 | 3.5 | 5.0 | 4.0 |
| 27 | 8.5 | 8.0 | 7.0 | 6.0 | 4.5 | 4.0 | 3.5 | 2.0 | 4.0 | 3.5 | 4.5 | 4.0 |
| 28 | 8.5 | 7.0 | 6.5 | 6.0 | 4.5 | 4.0 | 3.5 | 3.0 | 4.0 | 3.5 | 4.5 | 3.5 |
| 29 | 8.5 | 6.5 | 7.0 | 6.0 | 4.0 | 4.0 | 3.5 | 2.0 | --- | --- | 5.0 | 4.0 |
| 30 | 8.0 | 7.0 | 7.0 | 6.5 | 4.0 | 4.0 | 3.5 | 3.0 | --- | --- | 5.0 | 4.0 |
| 31 | 8.5 | 7.0 | --- | --- | 4.5 | 4.0 | 3.5 | 3.0 | --- | --- | 5.0 | 4.0 |
| MONTH | 10.0 | 6.5 | 8.5 | 6.0 | 7.0 | 4.0 | 4.0 | 2.0 | 4.5 | 1.5 | 5.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 4.0 | 6.5 | 4.5 | 8.0 | 6.0 | 9.5 | 8.0 | 10.5 | 9.0 | 9.5 | 8.0 |
| 2 | 4.5 | 3.5 | 6.5 | 5.0 | 7.0 | 6.0 | 9.5 | 8.0 | 10.5 | 9.0 | 9.5 | 8.0 |
| 3 | 5.5 | 4.0 | 6.5 | 5.0 | --- | --- | 9.5 | 8.0 | 10.5 | 9.0 | 9.5 | 8.0 |
| 4 | 6.0 | 4.0 | 6.5 | 5.0 | --- | --- | 10.0 | 8.5 | 10.5 | 9.0 | 9.0 | 8.0 |
| 5 | 5.0 | 4.5 | 7.0 | 5.0 | --- | --- | 9.5 | 8.0 | 10.5 | 9.0 | 8.5 | 8.0 |
| 6 | 5.0 | 4.0 | 6.0 | 5.5 | --- | --- | 8.5 | 8.0 | --- | 9.5 | 9.5 | 8.0 |
| 7 | 5.5 | 3.5 | 6.0 | 5.0 | --- | --- | 9.0 | 8.0 | --- | --- | 9.5 | 9.0 |
| 8 | 5.0 | 4.0 | 5.5 | 5.0 | --- | --- | 10.0 | 8.0 | --- | --- | 10.5 | 9.0 |
| 9 | 6.0 | 4.5 | 5.5 | 5.0 | --- | --- | 9.5 | 7.0 | 10.5 | 9.5 | 11.5 | 8.5 |
| 10 | 6.0 | 4.5 | 6.5 | 5.0 | --- | --- | 10.0 | 8.0 | 10.0 | 9.0 | 11.0 | 9.0 |
| 11 | 6.0 | 4.5 | 6.5 | 5.0 | --- | --- | 9.5 | 8.0 | 10.5 | 9.0 | 11.0 | 9.0 |
| 12 | 6.5 | 4.0 | 7.0 | 5.5 | --- | --- | 9.5 | 8.0 | 13.0 | 9.0 | 11.0 | 9.0 |
| 13 | 6.0 | 4.0 | 8.5 | 6.0 | 9.0 | --- | 10.0 | 8.5 | 11.0 | 9.5 | 11.0 | 9.0 |
| 14 | 5.5 | 4.0 | 8.5 | 5.5 | 8.0 | 6.5 | 10.0 | 8.5 | 11.0 | 9.5 | 11.0 | 9.0 |
| 15 | 5.5 | 4.5 | 8.0 | 5.5 | 8.5 | 6.5 | 10.5 | 8.5 | 11.0 | 9.5 | 10.5 | 8.5 |
| 16 | 4.5 | 4.0 | 7.0 | 5.5 | 8.0 | 6.5 | 10.5 | 8.5 | 10.0 | 9.5 | 11.0 | 8.5 |
| 17 | 4.5 | 3.5 | 7.0 | 5.5 | 8.0 | 6.5 | 10.0 | 8.5 | 10.0 | 9.0 | 10.0 | 8.5 |
| 18 | 5.0 | 3.5 | 8.0 | 6.0 | 9.0 | 6.5 | 10.0 | 8.5 | 10.0 | 9.0 | 10.0 | 9.0 |
| 19 | 5.0 | 4.0 | 6.5 | 5.5 | 10.0 | 7.0 | 10.0 | 8.5 | 9.5 | 9.0 | 11.0 | 8.5 |
| 20 | 5.5 | 4.0 | 7.0 | 5.5 | 9.5 | 7.0 | 9.0 | 8.5 | 9.5 | 9.0 | 10.0 | 9.0 |
| 21 | 5.5 | 4.0 | 8.0 | 5.0 | 10.0 | 8.0 | 9.5 | 8.5 | 9.5 | 9.0 | 10.0 | 9.0 |
| 22 | 6.0 | 4.5 | 6.5 | 5.5 | 10.5 | 8.0 | 9.5 | 8.5 | 9.5 | 9.0 | 10.0 | 9.0 |
| 23 | 5.5 | 4.5 | 7.0 | 6.0 | 9.0 | 8.0 | 10.0 | 8.5 | 9.0 | 9.0 | 10.0 | 9.0 |
| 24 | 5.5 | 4.5 | 6.5 | 5.5 | 9.0 | 7.0 | 10.0 | 8.5 | 9.5 | 9.0 | 10.0 | 8.5 |
| 25 | 6.0 | 4.0 | 6.5 | 5.5 | 9.0 | 7.0 | 9.5 | 8.5 | 10.0 | 8.5 | 11.0 | 8.5 |
| 26 | 6.5 | 4.5 | 6.5 | 5.0 | 9.5 | 8.0 | 10.0 | 8.5 | 9.5 | 8.5 | 10.0 | 8.5 |
| 27 | 6.0 | 4.5 | 6.5 | 5.0 | 9.5 | 8.0 | 10.0 | 8.5 | 10.5 | 8.5 | 10.0 | 9.0 |
| 28 | 6.0 | 4.5 | 8.5 | 5.5 | 9.5 | 8.0 | 10.5 | 8.5 | 10.5 | 8.5 | 9.5 | 9.0 |
| 29 | 6.5 | 4.0 | 8.5 | 6.0 | 9.0 | 8.5 | 10.5 | 9.0 | 9.5 | 9.0 | 10.5 | 9.0 |
| 30 | 6.0 | 4.0 | 8.5 | 6.0 | 9.0 | 8.0 | 10.0 | 8.5 | 9.5 | 8.5 | 9.5 | 9.0 |
| 31 | --- | --- | 8.0 | 5.5 | --- | --- | 10.0 | 9.0 | 9.0 | 8.5 | --- | --- |
| MONTH | 6.5 | 3.5 | 8.5 | 4.5 | --- | --- | 10.5 | 7.0 | 13.0 | 8.5 | 11.5 | 8.0 |
| YEAR | 13.0 | 1.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1951 TO SEPTEMBER 1952

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | 10.0 | 8.5 | 10.0 | 9.0 | 13.5 | 11.0 | 12.0 | 10.5 |
| 2 | --- | --- | --- | --- | 10.5 | 8.5 | 10.5 | 9.0 | 14.0 | 11.0 | 13.0 | 11.0 |
| 3 | --- | --- | --- | --- | 10.0 | 9.0 | 13.0 | 9.5 | 14.0 | 11.5 | 13.0 | 11.5 |
| 4 | --- | --- | --- | --- | 9.0 | 8.5 | 11.5 | 10.0 | 14.0 | 11.5 | 12.0 | 10.5 |
| 5 | --- | --- | --- | --- | 9.0 | 8.0 | 10.5 | 9.5 | 14.0 | 11.5 | 11.5 | 10.0 |
| 6 | --- | --- | --- | --- | 10.5 | 8.5 | 11.5 | 8.5 | 13.0 | 11.5 | 11.0 | 11.0 |
| 7 | --- | --- | --- | --- | 10.5 | 8.5 | 12.0 | 9.5 | 12.0 | 11.0 | 11.0 | 10.5 |
| 8 | --- | --- | --- | --- | 11.0 | 8.5 | 13.5 | 10.5 | 13.5 | 11.5 | 10.5 | 10.0 |
| 9 | --- | --- | 9.5 | 7.0 | 10.5 | 8.5 | 14.0 | 10.5 | 14.0 | 11.5 | 10.5 | 10.0 |
| 10 | --- | --- | 8.5 | 6.5 | 10.0 | 8.5 | 13.5 | 11.0 | 14.0 | 12.0 | 11.0 | 10.5 |
| 11 | --- | --- | 7.0 | 6.5 | 8.5 | 8.0 | 14.0 | 11.0 | 14.0 | 11.5 | 11.0 | 10.5 |
| 12 | --- | --- | 8.5 | 6.5 | 8.5 | 8.0 | 14.0 | 11.0 | 14.0 | 12.0 | 11.5 | 11.0 |
| 13 | --- | --- | 7.0 | 6.0 | 10.0 | 7.0 | 14.0 | 11.0 | 14.0 | 12.0 | 11.0 | 9.5 |
| 14 | --- | --- | 6.0 | 6.0 | 10.5 | 8.5 | 14.0 | 11.0 | 13.5 | 11.5 | 10.5 | 9.5 |
| 15 | --- | --- | 9.0 | 6.0 | 10.0 | 9.0 | 13.5 | 11.0 | 13.0 | 11.5 | 10.5 | 9.5 |
| 16 | --- | --- | 10.0 | 7.0 | 9.0 | 8.5 | 13.0 | 10.5 | 13.5 | 11.0 | 11.0 | 10.0 |
| 17 | --- | --- | 9.0 | 7.0 | 11.5 | 8.5 | 13.0 | 10.5 | 13.5 | 11.0 | 11.5 | 10.5 |
| 18 | --- | --- | 9.0 | 7.0 | 11.5 | 9.0 | 12.0 | 10.5 | 13.0 | 11.0 | 11.0 | 10.0 |
| 19 | --- | --- | 8.0 | 8.0 | 11.5 | 9.5 | 13.0 | 10.5 | 11.0 | 10.5 | 11.5 | 10.5 |
| 20 | --- | --- | 8.0 | 7.0 | 10.5 | 9.5 | 12.0 | 10.5 | 13.0 | 10.5 | 11.0 | 10.5 |
| 21 | --- | --- | 8.0 | 7.0 | 9.5 | 9.0 | 11.5 | 10.0 | 13.0 | 11.0 | 11.0 | 10.5 |
| 22 | --- | --- | 9.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.0 | 11.5 | 11.0 | 11.0 | 10.0 |
| 23 | --- | --- | 10.0 | 8.0 | 11.0 | 8.5 | 10.0 | 10.0 | 12.0 | 11.0 | 11.0 | 10.0 |
| 24 | --- | --- | 10.0 | 8.0 | 10.5 | 9.5 | 10.0 | 10.0 | 11.5 | 10.5 | 11.0 | 10.0 |
| 25 | --- | --- | 10.0 | 8.0 | 11.5 | 9.5 | 12.0 | 9.5 | 10.5 | 10.5 | 11.0 | 10.5 |
| 26 | --- | --- | 10.0 | 7.0 | 12.0 | 10.0 | 13.0 | 10.5 | 12.0 | 10.0 | 11.0 | 11.0 |
| 27 | --- | --- | 10.0 | 8.0 | 11.5 | 10.0 | 13.0 | 10.5 | 13.0 | 10.5 | 11.0 | 10.5 |
| 28 | --- | --- | 9.5 | 8.5 | 10.0 | 9.5 | 13.5 | 11.0 | 12.0 | 10.5 | 10.5 | 10.0 |
| 29 | --- | --- | 8.5 | 8.0 | 9.5 | 9.5 | 14.0 | 11.5 | 13.0 | 11.0 | 10.0 | 10.0 |
| 30 | --- | --- | 9.5 | 7.0 | 9.5 | 9.0 | 14.0 | 11.5 | 12.0 | 10.5 | 10.5 | 10.0 |
| 31 | --- | --- | 9.5 | 8.5 | --- | --- | 14.0 | 11.5 | 12.0 | 11.0 | --- | --- |
| MONTH | --- | --- | --- | --- | 12.0 | 7.0 | 14.0 | 8.5 | 14.0 | 10.0 | 13.0 | 9.5 |
| YEAR | 14.0 | 6.0 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

**TABLE C5.--Temperature of surface water--continued**

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1952 TO SEPTEMBER 1953

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

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 4.5 | 6.5 | 6.0 | 6.5 | 6.0 | 9.5 | 7.0 | 11.5 | 9.0 | 11.5 | 10.5 |
| 2 | 5.5 | 4.5 | 8.0 | 6.0 | 6.5 | 6.0 | 10.0 | 7.0 | 11.5 | 9.5 | 11.0 | 10.0 |
| 3 | 5.5 | 5.5 | 9.0 | 6.5 | 7.0 | 6.0 | 9.5 | 7.0 | 11.0 | 10.0 | 11.0 | 9.5 |
| 4 | 5.5 | 5.5 | 8.0 | 6.0 | 7.0 | 6.5 | 9.0 | 7.0 | 11.5 | 10.5 | 11.0 | 9.5 |
| 5 | 6.0 | 5.5 | 9.0 | 6.0 | 8.5 | 6.0 | 10.0 | 7.0 | 11.5 | 10.0 | 11.5 | 10.0 |
| 6 | 6.0 | 5.5 | 6.5 | 5.5 | 8.5 | 6.5 | 10.5 | 8.0 | 11.5 | 10.5 | 11.5 | 10.5 |
| 7 | 6.5 | 5.5 | 6.0 | 5.5 | 7.0 | 6.0 | 10.5 | 8.0 | 11.5 | 10.5 | 11.0 | 11.0 |
| 8 | 6.5 | 6.0 | 5.5 | 5.0 | 7.0 | 6.0 | 9.5 | 8.0 | 10.5 | 10.0 | 11.5 | 10.5 |
| 9 | 6.5 | 6.0 | 5.5 | 5.0 | 9.0 | 6.0 | 10.0 | 7.0 | 11.0 | 9.5 | 11.5 | 10.5 |
| 10 | 6.5 | 5.5 | 6.0 | 5.0 | 9.0 | 6.0 | 11.0 | 8.0 | 11.5 | 9.5 | 11.0 | 10.0 |
| 11 | 6.5 | 5.5 | 8.0 | 5.0 | 8.5 | 6.0 | 11.0 | 8.0 | 12.0 | 10.0 | 11.5 | 10.0 |
| 12 | 5.5 | 5.0 | 8.5 | 5.5 | 7.0 | 6.5 | 10.0 | 8.5 | 12.0 | 10.0 | 12.0 | 11.0 |
| 13 | 5.0 | 4.5 | 8.5 | 5.5 | 6.5 | 6.0 | 10.0 | 9.0 | 11.5 | 10.0 | 11.5 | 10.5 |
| 14 | 6.0 | 4.5 | 8.5 | 6.0 | 7.0 | 5.5 | 9.5 | 9.0 | 12.0 | 10.0 | 11.0 | 10.0 |
| 15 | 7.0 | 5.5 | 6.5 | 6.0 | 7.0 | 6.5 | 9.5 | 8.5 | 12.0 | 10.5 | 11.0 | 10.0 |
| 16 | 6.5 | 5.5 | 6.5 | 6.0 | 9.5 | 6.5 | 10.5 | 8.0 | 12.0 | 11.0 | 11.0 | 10.0 |
| 17 | 6.5 | 6.5 | 7.0 | 6.0 | 8.5 | 7.0 | 11.5 | 9.0 | 11.0 | 10.0 | 10.5 | 9.5 |
| 18 | 7.0 | 6.0 | 7.0 | 6.0 | 8.0 | 6.5 | 11.0 | 9.5 | 12.0 | 10.0 | 10.0 | 10.0 |
| 19 | 8.0 | 6.5 | 6.5 | 5.5 | 7.0 | 6.5 | 10.0 | 9.0 | 13.0 | 11.0 | 11.5 | 10.0 |
| 20 | 8.0 | 6.5 | 6.5 | 5.5 | 8.0 | 6.5 | 10.5 | 9.0 | 13.0 | 11.0 | 10.5 | 9.5 |
| 21 | 6.5 | 6.0 | 6.5 | 5.0 | 8.5 | 7.0 | 11.0 | 9.0 | 11.5 | 11.0 | 10.5 | 10.0 |
| 22 | 6.5 | 6.0 | 6.5 | 5.5 | 8.0 | 7.0 | 10.5 | 9.5 | 10.5 | 10.0 | 10.5 | 10.5 |
| 23 | 6.5 | 6.0 | 8.0 | 5.5 | 7.0 | 6.5 | 10.5 | 9.0 | 10.5 | 10.0 | 10.5 | 10.0 |
| 24 | 8.0 | 5.5 | 8.0 | 6.5 | 7.0 | 6.5 | 11.0 | 9.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| 25 | 6.5 | 6.0 | 8.0 | 6.0 | 7.0 | 7.0 | 10.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.0 |
| 26 | 7.0 | 6.0 | 9.0 | 6.5 | 8.5 | 7.0 | 11.0 | 9.0 | 10.0 | 10.0 | 9.5 | 9.5 |
| 27 | 6.5 | 6.0 | 9.0 | 6.5 | 8.0 | 7.0 | 11.0 | 9.5 | 10.0 | 10.0 | 9.5 | 9.5 |
| 28 | 6.0 | 5.5 | 9.0 | 6.0 | 8.0 | 7.0 | 10.5 | 9.5 | 11.0 | 10.0 | 9.5 | 9.0 |
| 29 | 7.0 | 5.5 | 9.0 | 6.5 | 8.5 | 7.0 | 11.5 | 9.5 | 11.5 | 10.0 | 9.5 | 8.5 |
| 30 | 7.0 | 6.0 | 6.5 | 5.5 | 8.5 | 7.0 | 11.0 | 10.0 | 11.0 | 10.0 | 9.0 | 9.0 |
| 31 | --- | --- | 6.5 | 5.0 | --- | --- | 10.5 | 9.5 | 10.5 | 9.5 | --- | --- |
| MONTH | 8.0 | 4.5 | 9.0 | 5.0 | 9.5 | 5.5 | 11.5 | 7.0 | 13.0 | 9.0 | 12.0 | 8.5 |
| YEAR | 13.0 | 1.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER . WATER YEAR OCTOBER 1953 TO SEPTEMBER 1954

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

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 4.5 | 5.5 | 4.5 | 7.0 | 6.0 | 8.5 | 7.0 | 10.5 | 8.5 | 10.0 | 9.0 |
| 2 | 4.5 | 4.5 | 5.5 | 5.0 | 8.5 | 5.5 | 9.5 | 7.0 | 9.5 | 8.5 | 10.5 | 9.5 |
| 3 | 4.5 | 4.5 | 6.0 | 5.5 | 8.0 | 6.5 | 10.0 | 7.0 | 9.0 | 8.0 | 10.0 | 9.0 |
| 4 | 4.5 | 4.5 | 6.0 | 5.5 | 6.5 | 6.0 | 10.5 | 7.0 | 8.5 | 8.0 | 9.0 | 9.0 |
| 5 | 4.5 | 4.5 | 6.5 | 5.5 | 6.0 | 5.5 | 9.5 | 8.0 | 8.5 | 8.0 | 9.5 | 9.0 |
| 6 | 4.5 | 4.5 | 6.5 | 5.5 | 5.5 | 5.5 | 9.5 | 8.0 | 9.0 | 8.5 | 9.5 | 9.0 |
| 7 | 4.5 | 4.5 | 6.0 | 5.5 | 6.5 | 5.5 | 9.0 | 8.0 | 10.5 | 8.5 | 9.5 | 9.5 |
| 8 | 4.5 | 4.5 | 6.0 | 5.0 | 9.5 | 6.0 | 9.0 | 7.0 | 9.5 | 8.5 | 10.0 | 9.5 |
| 9 | 4.5 | 4.5 | 5.5 | 4.5 | 8.5 | 6.5 | 8.0 | 7.0 | 10.0 | 8.5 | 10.0 | 9.5 |
| 10 | 5.5 | 4.5 | 5.5 | 4.5 | 6.5 | 6.0 | 8.0 | 7.0 | 10.0 | 8.5 | 10.0 | 9.5 |
| 11 | 5.5 | 5.0 | 5.5 | 5.0 | 7.0 | 6.0 | 8.5 | 7.0 | 9.5 | 8.5 | 10.0 | 9.5 |
| 12 | 5.5 | 5.5 | 5.0 | 5.0 | 8.0 | 6.5 | 9.5 | 7.0 | 10.5 | 8.5 | 9.5 | 9.0 |
| 13 | 5.5 | 5.0 | 6.0 | 5.0 | 7.0 | 6.5 | 10.0 | 7.0 | 11.0 | 9.0 | 9.5 | 9.0 |
| 14 | 5.0 | 5.0 | 6.5 | 5.0 | 8.5 | 6.5 | 10.0 | 7.0 | 10.5 | 9.5 | 9.5 | 9.0 |
| 15 | 5.0 | 4.5 | 6.5 | 5.5 | 8.0 | 6.5 | 10.0 | 7.0 | 9.0 | 8.5 | 9.5 | 9.5 |
| 16 | 5.0 | 5.0 | 6.5 | 5.5 | 6.5 | 6.0 | 10.0 | 8.0 | 9.0 | 8.5 | 10.0 | 9.5 |
| 17 | 5.0 | 5.0 | 7.0 | 5.0 | 6.5 | 6.0 | 10.0 | 8.0 | 9.5 | 8.5 | 10.0 | 9.5 |
| 18 | 5.0 | 5.0 | 7.0 | 5.0 | 9.0 | 6.5 | 10.0 | 8.0 | 9.0 | 8.5 | 9.5 | 9.0 |
| 19 | 5.0 | 5.0 | 7.0 | 5.0 | 8.0 | 6.5 | 9.0 | 8.0 | 9.5 | 9.0 | 9.0 | 9.0 |
| 20 | 5.5 | 5.0 | 5.5 | 5.0 | 8.0 | 7.0 | 8.5 | 8.0 | 9.5 | 9.0 | 9.5 | 8.5 |
| 21 | 5.5 | 5.0 | 5.5 | 5.0 | 9.5 | 6.5 | 8.0 | 7.0 | 9.0 | 8.5 | 9.5 | 8.5 |
| 22 | 5.5 | 5.0 | 8.0 | 5.5 | 9.0 | 6.5 | 9.5 | 7.0 | 9.0 | 9.0 | 9.5 | 9.0 |
| 23 | 5.5 | 5.0 | 6.5 | 5.0 | 9.0 | 6.5 | 9.5 | 8.0 | 9.0 | 8.0 | 9.5 | 9.0 |
| 24 | 5.5 | 5.0 | 6.5 | 6.0 | 9.5 | 6.5 | 9.5 | 7.0 | 9.0 | 8.5 | 9.5 | 9.0 |
| 25 | 5.5 | 5.5 | 6.0 | 5.5 | 8.5 | 6.5 | 10.0 | 7.0 | 9.5 | 8.0 | 9.5 | 9.0 |
| 26 | 5.5 | 5.0 | 6.0 | 5.5 | 8.0 | 7.0 | 9.5 | 7.0 | 9.5 | 9.0 | 9.5 | 9.0 |
| 27 | 5.5 | 4.5 | 6.0 | 5.5 | 8.0 | 7.0 | 9.0 | 8.0 | 10.0 | 9.0 | 9.5 | 8.5 |
| 28 | 5.5 | 5.0 | 8.5 | 5.5 | 8.0 | 6.5 | 9.5 | 7.0 | 10.0 | 9.0 | 9.0 | 8.5 |
| 29 | 5.0 | 4.5 | 9.0 | 6.5 | 9.5 | 6.5 | 10.0 | 7.0 | 10.5 | 9.5 | 8.5 | 7.0 |
| 30 | 5.5 | 4.5 | 8.0 | 6.5 | 9.5 | 8.0 | 10.0 | 8.0 | 10.5 | 10.0 | 8.0 | 6.5 |
| 31 | --- | --- | 7.0 | 6.0 | --- | --- | 10.5 | 8.0 | 10.0 | 9.5 | --- | --- |
| MONTH | 5.5 | 4.5 | 9.0 | 4.5 | 9.5 | 5.5 | 10.5 | 7.0 | 11.0 | 8.0 | 10.5 | 6.5 |
| YEAR | 11.0 | 1.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1954 TO SEPTEMBER 1955

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.5 | 6.0 | 5.0 | 5.0 | 3.5 | 3.5 | 4.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.5 |
| 2 | 6.5 | 6.0 | 5.5 | 5.0 | 3.5 | 3.0 | 4.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.5 |
| 3 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.0 | 3.5 | 3.5 | 4.0 | 4.0 | 1.5 | 1.0 |
| 4 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.0 | 4.0 | 4.0 | 1.0 | 0.5 |
| 5 | 7.0 | 7.0 | 6.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 4.0 | 1.0 | 0.5 |
| 6 | 8.0 | 7.0 | 6.5 | 5.5 | 4.0 | 4.0 | 4.0 | 3.5 | 4.0 | 3.0 | 2.0 | 1.0 |
| 7 | 8.0 | 8.0 | 5.5 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 |
| 8 | 8.0 | 8.0 | 6.0 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 9 | 8.5 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 10 | 8.5 | 8.0 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 3.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| 11 | 8.0 | 6.5 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| 12 | 6.5 | 6.0 | 6.0 | 6.0 | 4.0 | 3.5 | 4.0 | 3.5 | 3.5 | 3.0 | 2.0 | 2.0 |
| 13 | 6.0 | 6.0 | 6.0 | 5.5 | 3.5 | 3.5 | 4.0 | 3.5 | 4.0 | 3.5 | 3.0 | 2.0 |
| 14 | 6.5 | 6.0 | 5.5 | 5.5 | 3.5 | 3.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 |
| 15 | 6.5 | 6.5 | 5.5 | 5.5 | 3.5 | 3.5 | 4.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 |
| 16 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.5 | 4.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 |
| 17 | 7.0 | 7.0 | 5.5 | 5.5 | 3.5 | 3.0 | 4.0 | 3.5 | 3.5 | 3.0 | 3.5 | 3.5 |
| 18 | 7.0 | 6.5 | 5.5 | 5.5 | 3.0 | 3.0 | 4.0 | 3.5 | 3.0 | 1.5 | 3.5 | 3.5 |
| 19 | 7.0 | 6.5 | 5.5 | 5.5 | 3.5 | 3.0 | 4.0 | 3.0 | 2.0 | 1.5 | 3.5 | 3.0 |
| 20 | 6.5 | 6.5 | 5.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 | 2.0 | 3.5 | 2.0 |
| 21 | 6.5 | 6.0 | 6.0 | 5.5 | 4.5 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 | 3.0 | 2.0 |
| 22 | 6.0 | 6.0 | 6.0 | 6.0 | 4.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 2.0 | 2.0 |
| 23 | 6.0 | 5.5 | 6.0 | 5.5 | 4.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 2.0 | 2.0 |
| 24 | 5.5 | 5.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.0 | 3.5 | 3.0 | 3.0 | 2.0 |
| 25 | 5.0 | 5.0 | 5.5 | 6.5 | 4.0 | 3.0 | 4.0 | 4.0 | 3.0 | 2.0 | 3.5 | 2.0 |
| 26 | 5.0 | 4.5 | 5.5 | 5.0 | 3.0 | 3.0 | 4.0 | 4.0 | 2.0 | 2.0 | 4.0 | 3.0 |
| 27 | 5.0 | 4.5 | 5.0 | 5.0 | 3.0 | 3.0 | 4.0 | 3.5 | 2.0 | 1.5 | 5.0 | 4.0 |
| 28 | 5.5 | 5.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.5 | 3.5 | 1.5 | 1.5 | 4.5 | 4.0 |
| 29 | 5.5 | 5.0 | 5.0 | 4.0 | 3.5 | 3.0 | 4.0 | 3.5 | --- | --- | 5.0 | 4.5 |
| 30 | 5.5 | 5.0 | 4.0 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.0 |
| 31 | 5.5 | 5.0 | --- | --- | 4.0 | 3.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.0 |
| MONTH | 8.5 | 4.5 | 6.5 | 3.5 | 4.5 | 3.0 | 4.0 | 3.0 | 4.0 | 1.5 | 5.0 | 0.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | 8.0 | 6.5 | 6.5 | 5.0 | --- | --- | --- | --- | 11.0 | 9.5 |
| 2 | 4.5 | 4.0 | 8.0 | 6.5 | 6.0 | 6.0 | --- | --- | 8.5 | 8.5 | 11.5 | 10.0 |
| 3 | 5.5 | 4.0 | 8.0 | 6.5 | 8.0 | 6.0 | --- | --- | 9.5 | 7.0 | 11.5 | 10.0 |
| 4 | 5.5 | 4.0 | 8.5 | 6.0 | 8.0 | 6.0 | --- | --- | 10.0 | 8.0 | 11.5 | 10.0 |
| 5 | 5.5 | 4.0 | 8.5 | 6.5 | 6.5 | 6.0 | --- | --- | 10.5 | 8.5 | 11.5 | 10.0 |
| 6 | 5.5 | 4.0 | 8.5 | 6.0 | 8.0 | 5.5 | --- | --- | 11.0 | 9.0 | 11.5 | 10.5 |
| 7 | 6.0 | 4.5 | 8.0 | 6.0 | 8.5 | 5.5 | --- | --- | 10.5 | 9.0 | 11.0 | 10.5 |
| 8 | 5.5 | 5.0 | 7.0 | 6.0 | 8.5 | 5.5 | --- | --- | 10.5 | 9.0 | 11.0 | 10.5 |
| 9 | 5.0 | 4.5 | 6.5 | 5.5 | 8.0 | 5.5 | --- | --- | 10.5 | 8.5 | 11.0 | 10.0 |
| 10 | 5.0 | 4.5 | 6.5 | 6.5 | 8.0 | 5.5 | --- | --- | 11.0 | 9.0 | 11.0 | 10.0 |
| 11 | 5.0 | 4.5 | 6.5 | 6.5 | 8.5 | 5.5 | --- | --- | 10.5 | 9.0 | 11.0 | 10.0 |
| 12 | 5.0 | 4.5 | 6.5 | 6.0 | 8.5 | 6.0 | --- | --- | 10.5 | 9.0 | 10.5 | 9.5 |
| 13 | 5.5 | 5.0 | 6.5 | 6.0 | 7.0 | 6.0 | --- | --- | 10.0 | 8.5 | 10.5 | 9.5 |
| 14 | 5.5 | 5.0 | 8.0 | 5.5 | 7.0 | 6.0 | --- | --- | 10.5 | 9.0 | 9.5 | 9.5 |
| 15 | 5.5 | 5.0 | 8.0 | 6.5 | 6.5 | 6.0 | --- | --- | 10.5 | 9.0 | 9.5 | 9.0 |
| 16 | 5.5 | 5.0 | 6.5 | 6.0 | 8.0 | 6.0 | --- | --- | 11.5 | 10.0 | 9.0 | 9.0 |
| 17 | 6.5 | 5.0 | 7.0 | 6.0 | 7.0 | 6.5 | --- | --- | 11.0 | 9.5 | 9.5 | 8.5 |
| 18 | 6.5 | 5.0 | 7.0 | 6.0 | 6.5 | 6.0 | --- | --- | 11.5 | 9.5 | 10.0 | 9.0 |
| 19 | 6.5 | 5.5 | 6.5 | 5.5 | 8.0 | 6.0 | --- | --- | 11.0 | 10.0 | 10.0 | 9.0 |
| 20 | 6.5 | 6.0 | 7.0 | 5.5 | 9.0 | 6.0 | --- | --- | 11.0 | 10.0 | 9.0 | 9.0 |
| 21 | 7.0 | 6.0 | 6.5 | 5.5 | 8.5 | 6.5 | --- | --- | 10.5 | 9.0 | 9.0 | 9.0 |
| 22 | 6.5 | 6.0 | 7.0 | 6.0 | 8.0 | 6.0 | --- | --- | 11.0 | 9.5 | 9.0 | 8.0 |
| 23 | 6.5 | 5.5 | 8.0 | 5.5 | 6.5 | 6.0 | --- | --- | 11.0 | 9.5 | 9.0 | 8.0 |
| 24 | 6.0 | 5.0 | 9.0 | 5.5 | 6.0 | 5.5 | --- | --- | 11.0 | 10.0 | 9.0 | 8.0 |
| 25 | 6.0 | 5.5 | 7.0 | 6.0 | 6.5 | 6.0 | --- | --- | 10.5 | 9.5 | 9.0 | 8.0 |
| 26 | 7.0 | 5.5 | 6.5 | 6.0 | 6.0 | 6.0 | --- | --- | 10.5 | 9.0 | 8.5 | 8.5 |
| 27 | 6.5 | 5.5 | 6.5 | 5.5 | 6.0 | 6.0 | --- | --- | 10.5 | 9.0 | 9.0 | 8.5 |
| 28 | 7.0 | 5.5 | 8.0 | 5.5 | --- | --- | --- | --- | 11.0 | 9.0 | 9.0 | 8.5 |
| 29 | 7.0 | 5.5 | 7.0 | 5.5 | --- | --- | --- | --- | 11.0 | 9.5 | 8.5 | 8.5 |
| 30 | 7.0 | 6.0 | 5.5 | 4.5 | --- | --- | --- | --- | 11.0 | 10.0 | 9.0 | 8.5 |
| 31 | --- | --- | 5.0 | 5.0 | --- | --- | --- | --- | 11.0 | 10.0 | --- | --- |
| MONTH | 7.0 | 4.0 | 9.0 | 4.5 | 9.0 | 5.0 | --- | --- | 11.5 | 7.0 | 11.5 | 8.0 |
| YEAR | 11.5 | 0.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12192500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1955 TO SEPTEMBER 1956

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.0 | 8.5 | 6.0 | 6.0 | --- | --- | --- | --- | 0.0 | 0.0 | 2.0 | 1.5 |
| 2 | 9.0 | 9.0 | 6.0 | 5.5 | --- | --- | --- | --- | 1.0 | 0.0 | 3.0 | 2.0 |
| 3 | 9.0 | 9.0 | 5.5 | 5.5 | --- | --- | 3.0 | 3.0 | 2.0 | 1.0 | 3.0 | 2.0 |
| 4 | 9.0 | 8.5 | 6.5 | 5.5 | --- | --- | 3.5 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 |
| 5 | 8.5 | 8.0 | 6.0 | 6.0 | --- | --- | 3.5 | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 |
| 6 | 8.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.5 | 3.5 | 3.5 | 3.0 | 3.5 | 3.0 |
| 7 | 7.0 | 7.0 | 6.0 | 5.5 | --- | --- | 3.5 | 3.5 | 5.0 | 3.0 | 3.5 | 3.0 |
| 8 | 8.0 | 7.0 | 6.0 | 6.0 | --- | --- | 3.5 | 3.5 | 4.0 | 2.0 | 3.0 | 3.0 |
| 9 | 7.0 | 7.0 | 6.5 | 6.0 | --- | --- | 3.5 | 3.5 | 4.5 | 2.0 | 3.5 | 3.0 |
| 10 | 7.0 | 7.0 | 6.5 | 5.5 | --- | --- | 3.5 | 3.5 | 3.5 | 3.0 | 5.0 | 1.5 |
| 11 | 7.0 | 7.0 | 5.5 | 3.0 | --- | --- | 4.0 | 3.5 | 3.0 | 2.0 | 6.0 | 1.0 |
| 12 | 8.0 | 7.0 | 3.0 | 2.0 | --- | --- | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 1.5 |
| 13 | 8.0 | 7.0 | --- | --- | --- | --- | 4.0 | 4.0 | 3.0 | 2.0 | 7.0 | 2.0 |
| 14 | 8.0 | 8.0 | --- | --- | --- | --- | 4.0 | 4.0 | 2.0 | 1.0 | 8.5 | 3.0 |
| 15 | 8.5 | 8.0 | --- | --- | --- | --- | 4.0 | 4.0 | 1.0 | --- | 10.0 | 3.5 |
| 16 | 8.5 | 8.0 | --- | --- | --- | --- | 4.0 | 3.5 | --- | --- | 6.5 | 4.0 |
| 17 | 8.0 | 7.0 | --- | --- | --- | --- | 3.5 | 3.5 | 0.5 | --- | 10.5 | 4.0 |
| 18 | 8.0 | 8.0 | --- | --- | --- | --- | 3.5 | 3.5 | 0.5 | 0.0 | 7.0 | 4.0 |
| 19 | 8.5 | 8.0 | --- | --- | --- | --- | 3.5 | 3.5 | 2.0 | 0.5 | 5.0 | 4.5 |
| 20 | 8.5 | 8.0 | --- | --- | --- | --- | 3.5 | 3.5 | 4.5 | 1.5 | 5.0 | 4.5 |
| 21 | 8.0 | 8.0 | --- | --- | --- | --- | 3.5 | 3.5 | 3.5 | 1.5 | 5.0 | 5.0 |
| 22 | 8.0 | 8.0 | --- | --- | --- | --- | 3.5 | 3.5 | 3.0 | 1.5 | 5.0 | 4.5 |
| 23 | 8.0 | 6.5 | --- | --- | --- | --- | 3.5 | 3.5 | 4.0 | 1.5 | 5.0 | 4.5 |
| 24 | 8.5 | 7.0 | --- | --- | --- | --- | 3.5 | 3.5 | 4.0 | 1.5 | 5.0 | 4.5 |
| 25 | 9.0 | 7.0 | --- | --- | --- | --- | 3.5 | 2.0 | 3.5 | 1.5 | 5.0 | 5.0 |
| 26 | 7.0 | 7.0 | --- | --- | --- | --- | 2.0 | 1.5 | 4.0 | 1.5 | 5.5 | 5.0 |
| 27 | 7.0 | 6.5 | --- | --- | --- | --- | 1.5 | 1.0 | 3.0 | 1.0 | 6.0 | 5.0 |
| 28 | 6.5 | 6.5 | --- | --- | --- | --- | 1.5 | 1.5 | 2.0 | 2.0 | 6.0 | 5.5 |
| 29 | 6.5 | 6.5 | --- | --- | --- | --- | 1.5 | 1.0 | 3.0 | 2.0 | 5.5 | 5.5 |
| 30 | 6.5 | 6.0 | --- | --- | --- | --- | 1.0 | 0.5 | --- | --- | 5.5 | 5.5 |
| 31 | 6.0 | 6.0 | --- | --- | --- | --- | 0.5 | 0.5 | --- | --- | 5.5 | 5.5 |
| MONTH | 9.0 | 6.0 | --- | --- | --- | --- | 4.0 | 0.5 | 5.0 | 0.0 | 10.5 | 1.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 5.0 | 5.5 | 5.0 | 6.5 | 6.0 | 9.5 | 8.0 | 11.0 | 9.0 | 12.0 | 11.0 |
| 2 | 6.0 | 5.0 | 6.0 | 5.0 | 8.0 | 5.5 | 9.0 | 8.0 | 10.0 | 9.0 | 11.5 | 10.0 |
| 3 | 5.5 | 5.0 | 6.0 | 5.0 | 6.5 | 5.5 | 9.0 | 8.0 | 9.5 | 9.0 | 11.0 | 9.5 |
| 4 | 5.0 | 5.0 | 6.0 | 5.5 | 5.5 | 5.5 | 9.5 | 8.5 | 11.0 | 9.0 | 10.5 | 9.5 |
| 5 | 5.0 | 4.5 | 6.0 | 5.5 | 6.0 | 5.0 | 9.0 | 8.0 | 11.5 | 9.5 | 11.0 | 9.5 |
| 6 | 5.0 | 4.0 | 7.0 | 5.0 | 6.0 | 5.5 | 8.0 | 8.0 | 12.0 | 10.0 | 11.0 | 9.5 |
| 7 | 5.5 | 5.0 | 7.0 | 5.0 | 6.0 | 5.5 | 9.5 | 7.0 | 12.0 | 10.0 | 11.5 | 10.5 |
| 8 | 7.0 | 5.0 | 6.5 | 5.0 | 6.0 | 5.5 | 10.0 | 8.5 | 12.0 | 10.0 | 11.5 | 10.5 |
| 9 | 6.5 | 5.0 | 6.5 | 5.0 | 6.5 | 6.0 | 9.5 | 8.5 | 12.0 | 10.0 | 10.5 | 10.5 |
| 10 | 6.5 | 5.0 | 6.0 | 5.0 | 6.0 | 5.5 | 9.5 | 8.5 | 12.0 | 10.0 | 11.0 | 10.5 |
| 11 | 6.5 | 4.5 | 5.0 | 5.0 | 6.5 | 5.0 | 11.0 | 8.5 | 12.0 | 10.5 | 10.5 | 10.5 |
| 12 | 6.5 | 4.5 | 5.5 | 5.0 | 7.0 | 5.0 | 11.0 | 8.5 | 12.0 | 10.0 | 11.5 | 10.5 |
| 13 | 6.0 | 4.0 | 6.5 | 5.0 | 7.0 | 6.0 | 10.5 | 8.5 | 12.0 | 10.5 | 11.5 | 10.5 |
| 14 | 5.5 | 4.0 | 7.0 | 5.0 | 8.0 | 6.0 | 10.0 | 8.5 | 12.0 | 10.5 | 11.0 | 10.5 |
| 15 | 4.5 | 4.5 | 8.0 | 5.5 | 7.0 | 6.0 | 10.5 | 8.5 | 12.0 | 10.5 | 11.0 | 10.5 |
| 16 | 5.0 | 4.5 | 7.0 | 5.5 | 6.0 | 6.0 | 10.5 | 8.5 | 11.0 | 10.0 | 11.0 | 10.0 |
| 17 | 6.0 | 4.0 | 6.5 | 5.0 | 8.5 | 6.0 | 10.5 | 9.0 | 12.0 | 10.5 | 11.0 | 10.0 |
| 18 | 6.0 | 4.5 | 6.5 | 5.0 | 8.5 | 6.0 | 11.0 | 8.5 | 13.0 | 10.5 | 11.0 | 10.5 |
| 19 | 6.0 | 4.5 | 6.5 | 5.0 | 8.0 | 6.0 | 11.5 | 9.0 | 13.0 | 11.0 | 11.0 | 10.5 |
| 20 | 5.5 | 4.5 | 5.5 | 5.0 | 6.5 | 6.0 | 11.0 | 9.5 | 13.5 | 11.0 | 11.0 | 10.5 |
| 21 | 5.0 | 4.5 | 7.0 | 5.0 | 8.5 | 5.5 | 11.5 | 9.5 | 13.5 | 11.5 | 10.5 | 10.0 |
| 22 | 5.5 | 4.5 | 7.0 | 5.0 | 8.5 | 6.0 | 11.0 | 9.0 | 13.0 | 11.5 | 10.0 | 9.0 |
| 23 | 5.5 | 4.5 | 6.5 | 5.0 | 7.0 | 6.0 | 11.5 | 9.0 | 13.0 | 11.5 | 10.0 | 9.5 |
| 24 | 5.0 | 4.5 | 5.5 | 5.0 | 7.0 | 6.0 | 11.5 | 9.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 25 | 6.0 | 4.5 | 8.0 | 5.5 | 7.0 | 6.0 | 11.0 | 9.5 | 13.0 | 11.5 | 10.5 | 10.5 |
| 26 | 6.0 | 4.5 | 6.5 | 5.5 | 8.5 | 7.0 | 11.0 | 9.0 | 12.0 | 10.5 | 10.5 | 10.5 |
| 27 | 5.0 | 4.5 | 5.5 | 5.5 | 10.0 | 8.0 | 10.5 | 9.5 | 10.5 | 10.5 | 10.5 | 10.0 |
| 28 | 5.5 | 5.0 | 8.0 | 5.5 | 9.0 | 7.0 | 10.5 | 9.0 | 12.0 | 10.5 | 10.0 | 9.5 |
| 29 | 6.5 | 5.0 | 8.5 | 5.5 | 8.0 | 7.0 | 11.0 | 9.0 | 11.5 | 11.0 | 9.5 | 9.5 |
| 30 | 6.0 | 5.0 | 8.0 | 5.5 | 9.5 | 7.0 | 11.5 | 9.5 | 12.0 | 10.5 | 9.5 | 9.5 |
| 31 | --- | --- | 8.5 | 5.5 | --- | --- | 11.0 | 9.5 | 11.5 | 10.5 | --- | --- |
| MONTH | 7.0 | 4.0 | 8.5 | 5.0 | 10.0 | 5.0 | 11.5 | 7.0 | 13.5 | 9.0 | 12.0 | 9.0 |
| YEAR | 13.5 | 0.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1956 TO SEPTEMBER 1957

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.0 | 9.0 | 5.5 | 5.5 | 4.5 | 4.0 | 5.0 | 5.0 | --- | --- | 3.5 | 3.0 |
| 2 | 9.5 | 9.0 | 5.5 | 5.5 | 5.0 | 4.5 | 5.0 | 4.5 | --- | --- | 3.5 | 3.5 |
| 3 | 9.0 | 8.5 | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | --- | --- | 4.0 | 3.5 |
| 4 | 9.0 | 8.5 | 6.0 | 5.5 | 5.0 | 3.5 | 4.0 | 3.5 | --- | --- | 4.0 | 3.5 |
| 5 | 9.0 | 8.0 | 6.0 | 6.0 | 3.5 | 2.0 | 3.5 | 3.0 | --- | --- | 4.0 | 3.5 |
| 6 | 8.5 | 8.0 | 6.5 | 6.0 | 2.0 | 1.5 | 3.5 | 3.0 | --- | --- | 3.5 | 3.5 |
| 7 | 9.0 | 8.5 | 6.5 | 6.5 | 2.0 | 1.5 | 3.5 | 3.5 | --- | --- | 4.0 | 3.5 |
| 8 | 9.5 | 9.0 | 6.5 | 6.5 | 2.0 | 2.0 | 3.5 | 3.5 | --- | --- | 3.5 | 3.5 |
| 9 | 9.5 | 9.5 | 6.5 | 6.5 | 3.0 | 2.0 | 3.5 | 3.5 | --- | --- | 4.0 | 3.5 |
| 10 | 9.5 | 9.5 | 6.5 | 6.5 | 4.0 | 3.0 | 3.5 | 3.5 | --- | --- | 4.0 | 3.5 |
| 11 | 9.5 | 9.0 | 6.5 | 6.0 | 4.0 | 4.0 | 3.5 | 3.5 | --- | --- | 4.0 | 3.5 |
| 12 | 9.0 | 8.5 | 6.0 | 5.5 | 4.5 | 4.0 | 4.0 | 3.5 | --- | --- | 3.5 | 3.0 |
| 13 | 8.5 | 8.0 | 6.0 | 5.0 | 4.5 | 4.5 | 4.0 | 3.0 | --- | --- | 4.0 | 3.5 |
| 14 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 4.5 | 3.0 | 2.0 | --- | --- | 4.0 | 3.5 |
| 15 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 4.5 | 3.0 | 1.5 | --- | --- | 4.0 | 3.5 |
| 16 | 8.0 | 8.0 | 5.0 | 5.0 | 5.0 | 4.5 | 1.5 | 1.0 | --- | --- | 4.0 | 4.0 |
| 17 | 8.0 | 8.0 | 5.0 | 5.0 | 5.0 | 5.0 | 1.5 | 1.5 | --- | --- | 5.0 | 4.0 |
| 18 | 8.0 | 7.0 | 5.0 | 4.0 | 5.0 | 5.0 | 1.5 | 1.5 | --- | --- | 4.5 | 4.0 |
| 19 | 7.0 | 7.0 | 4.0 | 3.5 | 5.0 | 5.0 | 1.5 | 1.5 | --- | --- | 5.0 | 4.0 |
| 20 | 7.0 | 7.0 | 4.0 | 4.0 | 5.0 | 4.5 | 2.0 | 1.5 | --- | --- | 5.0 | 4.0 |
| 21 | 7.0 | 6.5 | 4.5 | 4.0 | 4.5 | 4.5 | 1.5 | 1.0 | --- | --- | 4.0 | 3.5 |
| 22 | 6.5 | 6.0 | 4.5 | 4.0 | 4.5 | 4.5 | 2.0 | 1.5 | --- | --- | 4.0 | 3.5 |
| 23 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 1.5 | 1.5 | --- | --- | 4.5 | 4.0 |
| 24 | 6.5 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | 1.0 | 0.5 | 4.5 | 4.0 |
| 25 | 6.5 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | 2.0 | 1.0 | 4.5 | 4.0 |
| 26 | 6.5 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | 2.0 | 2.0 | 4.5 | 4.0 |
| 27 | 6.5 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | 3.5 | 2.0 | 5.0 | 3.5 |
| 28 | 6.0 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | 3.5 | 3.0 | 4.5 | 3.5 |
| 29 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | --- | --- | 4.5 | 4.0 |
| 30 | 6.0 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | --- | --- | 5.5 | 4.5 |
| 31 | 6.0 | 5.5 | --- | --- | 5.0 | 4.5 | --- | --- | --- | --- | 5.5 | 4.5 |
| MONTH | 9.5 | 5.5 | 6.5 | 3.5 | 5.0 | 1.5 | --- | --- | --- | --- | 5.5 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 4.5 | 5.5 | 4.5 | 9.0 | 6.0 | 10.0 | 8.5 | 11.5 | 9.5 | 11.5 | 10.5 |
| 2 | 5.0 | 4.5 | 5.0 | 4.5 | 7.0 | 6.0 | 10.0 | 8.5 | 12.0 | 9.5 | 12.0 | 11.0 |
| 3 | 4.5 | 4.5 | 7.0 | 4.5 | 9.0 | 6.0 | 9.5 | 9.0 | 11.5 | 10.5 | 13.0 | 11.0 |
| 4 | 4.5 | 4.5 | 7.0 | 4.5 | 10.0 | 6.5 | 11.0 | 8.0 | 12.0 | 10.0 | 12.0 | 10.5 |
| 5 | 4.5 | 4.5 | 7.0 | 5.0 | 9.5 | 6.5 | 13.0 | 10.0 | 11.5 | 10.5 | 12.0 | 11.0 |
| 6 | 6.0 | 4.0 | 7.0 | 5.0 | 8.5 | 7.0 | 11.5 | 10.0 | 11.0 | 10.5 | 11.5 | 11.0 |
| 7 | 6.0 | 4.5 | 7.0 | 5.0 | 8.0 | 6.5 | 11.0 | 9.0 | 10.5 | 10.0 | 11.5 | 10.5 |
| 8 | 6.0 | 4.0 | 6.5 | 4.5 | 8.0 | 6.5 | 10.5 | 9.5 | 10.5 | 10.5 | 11.0 | 10.0 |
| 9 | 6.0 | 4.0 | 6.0 | 4.5 | 8.0 | 6.5 | 11.0 | 9.5 | 11.0 | 10.0 | 11.0 | 9.5 |
| 10 | 6.0 | 4.5 | 6.5 | 4.5 | 8.0 | 6.5 | 11.0 | 9.5 | 11.0 | 10.0 | 11.5 | 10.0 |
| 11 | 5.5 | 4.5 | 5.5 | 5.0 | 8.0 | 7.0 | 11.0 | 10.0 | 11.0 | 10.5 | 11.5 | 10.5 |
| 12 | 5.5 | 4.5 | 5.0 | 4.5 | 7.0 | 6.5 | 11.5 | 9.5 | 11.0 | 10.5 | 12.0 | 11.0 |
| 13 | 6.0 | 4.5 | 5.5 | 4.5 | 6.5 | 6.0 | 11.0 | 10.0 | 11.0 | 10.0 | 11.5 | 10.5 |
| 14 | 5.5 | 5.0 | 6.0 | 4.5 | 8.0 | 6.0 | 10.5 | 10.0 | 12.0 | 10.0 | 11.5 | 10.5 |
| 15 | 5.5 | 4.5 | 6.5 | 5.0 | 8.0 | 7.0 | 10.0 | 9.5 | 13.0 | 10.5 | 12.0 | 10.5 |
| 16 | 5.5 | 4.0 | 7.0 | 5.0 | 10.5 | 7.0 | 9.5 | 9.0 | 13.0 | 10.5 | 12.0 | 11.0 |
| 17 | 6.0 | 4.5 | 6.5 | 5.0 | 9.5 | 8.5 | 9.5 | 9.0 | 13.0 | 11.5 | 11.5 | 11.0 |
| 18 | 5.5 | 4.5 | 6.0 | 5.0 | 10.5 | 8.0 | 11.0 | 8.5 | 13.5 | 11.5 | 11.0 | 10.0 |
| 19 | 6.5 | 5.0 | 5.0 | 5.0 | 10.0 | 8.5 | 12.0 | 10.0 | 13.0 | 11.5 | 10.0 | 9.0 |
| 20 | 6.5 | 4.5 | 5.0 | 4.5 | 8.5 | 8.0 | 11.5 | 10.0 | 13.0 | 11.0 | 10.0 | 9.5 |
| 21 | 5.5 | 5.0 | 5.0 | 4.5 | 9.0 | 7.0 | 13.0 | 10.0 | 13.0 | 10.5 | 10.5 | 9.5 |
| 22 | 6.0 | 5.0 | 5.5 | 5.0 | 10.0 | 7.0 | 13.0 | 10.5 | 13.0 | 10.5 | 10.5 | 9.5 |
| 23 | 5.5 | 5.0 | 5.5 | 5.0 | 9.5 | 8.5 | 12.0 | 10.5 | 12.0 | 11.0 | 11.0 | 10.0 |
| 24 | 5.5 | 4.0 | 6.5 | 5.0 | 9.0 | 8.5 | 12.0 | 10.0 | 11.0 | 10.5 | 11.0 | 10.5 |
| 25 | 5.0 | 4.5 | 8.0 | 5.5 | 9.5 | 8.0 | 12.0 | 10.0 | 11.0 | 10.0 | 11.0 | 10.5 |
| 26 | 5.5 | 4.5 | 8.0 | 5.5 | 9.5 | 9.0 | 12.0 | 10.0 | 11.5 | 10.0 | 11.0 | 10.5 |
| 27 | 5.5 | 5.0 | 8.0 | 5.5 | 11.5 | 9.0 | 10.0 | 9.5 | 11.5 | 10.0 | 11.0 | 11.0 |
| 28 | 8.0 | 5.0 | 8.5 | 5.5 | 10.5 | 9.0 | 12.0 | 9.0 | 11.5 | 10.0 | 11.0 | 10.5 |
| 29 | 7.0 | 5.0 | 9.0 | 5.5 | 9.0 | 8.5 | 13.0 | 10.5 | 11.5 | 10.0 | 10.5 | 10.0 |
| 30 | 6.0 | 4.5 | 9.0 | 6.0 | 9.0 | 8.0 | 12.0 | 10.5 | 11.5 | 10.0 | 10.5 | 10.0 |
| 31 | --- | --- | 9.0 | 6.0 | --- | --- | 11.5 | 10.0 | 11.5 | 10.0 | --- | --- |
| MONTH | 8.0 | 4.0 | 9.0 | 4.5 | 11.5 | 6.0 | 13.0 | 8.0 | 13.5 | 9.5 | 13.0 | 9.0 |
| YEAR | 13.5 | 0.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER . WATER YEAR OCTOBER 1957 TO SEPTEMBER 1958

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.5 | 10.5 | 6.5 | 5.5 | 4.5 | 4.5 | 3.5 | 3.5 | 4.5 | 4.0 | 4.0 | 3.5 |
| 2 | 10.5 | 9.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | 3.5 | 4.5 | 4.0 | 4.5 | 4.0 |
| 3 | 9.5 | 9.0 | 5.0 | 4.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.0 |
| 4 | 9.0 | 8.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.0 |
| 5 | 8.5 | 8.0 | 5.0 | 4.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.0 |
| 6 | 8.5 | 8.5 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.5 | 4.5 | 4.0 |
| 7 | 8.5 | 8.5 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 | 4.0 | 5.0 | 4.5 | 4.0 | 4.0 |
| 8 | 9.0 | 8.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 |
| 9 | 9.5 | 9.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 |
| 10 | 9.5 | 9.0 | 6.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 |
| 11 | 9.5 | 9.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.0 | 5.0 | 4.5 | 4.0 | 3.5 |
| 12 | 9.5 | 9.5 | 6.0 | 6.0 | 5.0 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 | 4.0 | 4.0 |
| 13 | 9.5 | 9.0 | 6.0 | 6.0 | 5.0 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 3.5 |
| 14 | 9.5 | 9.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 | 4.0 | 3.5 |
| 15 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.0 | 4.5 | 4.5 | 5.0 | 4.5 | 4.0 | 3.0 |
| 16 | 8.0 | 7.0 | 6.0 | 5.5 | 4.5 | 4.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.0 |
| 17 | 7.0 | 7.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 3.5 |
| 18 | 7.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 |
| 19 | 6.5 | 6.0 | 5.5 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.5 | 4.5 |
| 20 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.0 | 4.5 | 4.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 21 | 6.0 | 5.5 | 4.0 | 3.5 | 4.0 | 4.0 | 4.5 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 22 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 | 5.5 | 4.5 |
| 23 | 5.5 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.5 | 6.0 | 5.0 |
| 24 | 6.5 | 5.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.0 | 5.5 | 5.0 | 6.0 | 5.0 |
| 25 | 6.5 | 6.5 | 5.5 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 | 5.0 | 4.5 | 5.5 | 5.0 |
| 26 | 7.0 | 6.5 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.0 | 4.5 | 4.5 | 5.5 | 5.0 |
| 27 | 7.0 | 6.5 | 5.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.0 | 4.5 | 4.5 | 5.5 | 4.0 |
| 28 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.0 | 5.5 | 4.5 |
| 29 | 7.0 | 6.5 | 4.5 | 4.0 | 4.0 | 4.0 | 4.5 | 4.5 | --- | --- | 5.5 | 4.5 |
| 30 | 8.0 | 7.0 | 4.5 | 4.0 | 4.0 | 3.5 | 4.5 | 4.0 | --- | --- | 5.5 | 5.0 |
| 31 | 7.0 | 6.5 | --- | --- | 3.5 | 3.5 | 4.5 | 4.0 | --- | --- | 5.5 | 4.5 |
| MONTH | 10.5 | 5.0 | 6.5 | 3.5 | 5.0 | 3.5 | 4.5 | 3.5 | 5.5 | 4.0 | 6.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 4.5 | 9.0 | 6.0 | 10.0 | 8.5 | 11.0 | 9.5 | 14.0 | 12.0 | 11.5 | 11.0 |
| 2 | 6.0 | 5.0 | 8.5 | 6.0 | 11.0 | 8.5 | 11.0 | 10.5 | 13.5 | 11.5 | 11.0 | 10.0 |
| 3 | 6.0 | 5.5 | 8.0 | 6.5 | 11.0 | 8.5 | 12.0 | 10.5 | 13.5 | 11.5 | 10.0 | 9.5 |
| 4 | 6.0 | 6.0 | 8.5 | 6.0 | 11.5 | 9.5 | 13.0 | 11.0 | 12.0 | 10.5 | 11.0 | 10.0 |
| 5 | 6.0 | 4.5 | 8.0 | 6.5 | 11.5 | 9.0 | 13.0 | 11.5 | 13.0 | 11.0 | 11.5 | 10.5 |
| 6 | 6.5 | 5.0 | 9.5 | 6.5 | 10.0 | 9.0 | 13.0 | 11.5 | 13.0 | 11.5 | 11.5 | 11.0 |
| 7 | 6.5 | 5.0 | 9.0 | 6.5 | 9.5 | 9.0 | 12.0 | 11.5 | 13.0 | 12.0 | 12.0 | 11.5 |
| 8 | 6.5 | 6.0 | 9.0 | 6.0 | 11.0 | 9.0 | 13.0 | 11.0 | 13.5 | 12.0 | 12.0 | 11.5 |
| 9 | 7.0 | 5.5 | 8.5 | 6.0 | 10.5 | 9.5 | 13.0 | 11.5 | 13.5 | 12.0 | 11.5 | 11.5 |
| 10 | 7.0 | 6.0 | 8.0 | 7.0 | 9.5 | 9.0 | 13.5 | 11.5 | 13.5 | 12.0 | 11.5 | 11.5 |
| 11 | 8.0 | 6.0 | 7.0 | 6.5 | 9.5 | 9.0 | 13.5 | 12.0 | 13.5 | 12.0 | 11.5 | 11.5 |
| 12 | 8.0 | 6.0 | 6.5 | 6.0 | 9.0 | 8.5 | 13.5 | 12.0 | 14.0 | 13.0 | 11.5 | 11.0 |
| 13 | 8.0 | 6.5 | 9.0 | 5.5 | 9.0 | 9.0 | 13.0 | 11.5 | 13.5 | 12.0 | 11.0 | 10.5 |
| 14 | 6.5 | 6.0 | 9.5 | 6.5 | 10.5 | 9.0 | 12.0 | 11.0 | 13.5 | 12.0 | 10.5 | 10.0 |
| 15 | 6.0 | 5.5 | 10.0 | 7.0 | 11.5 | 9.0 | 13.0 | 11.0 | 13.5 | 12.0 | 11.0 | 10.5 |
| 16 | 6.5 | 5.0 | 9.5 | 6.5 | 12.0 | 9.5 | 13.5 | 11.5 | 13.5 | 12.0 | 11.0 | 11.0 |
| 17 | 6.5 | 6.0 | 9.5 | 6.5 | 12.0 | 10.0 | 13.5 | 12.0 | 13.0 | 11.5 | 11.0 | 10.0 |
| 18 | 6.5 | 5.5 | 9.5 | 6.5 | 13.0 | 10.0 | 14.0 | 12.0 | 13.5 | 12.0 | 10.0 | 9.5 |
| 19 | 6.5 | 6.0 | 9.5 | 7.0 | 12.0 | 10.5 | 14.0 | 13.0 | 13.5 | 12.0 | 9.5 | 9.0 |
| 20 | 6.5 | 6.0 | 9.5 | 6.5 | 13.0 | 10.5 | 14.0 | 12.0 | 13.5 | 12.0 | 9.0 | 9.0 |
| 21 | 6.5 | 6.0 | 10.0 | 7.0 | 13.5 | 10.5 | 14.0 | 12.0 | 14.0 | 13.0 | 9.0 | 9.0 |
| 22 | 8.0 | 6.0 | 10.0 | 7.0 | 13.5 | 11.0 | 14.0 | 13.0 | 14.0 | 13.0 | 9.0 | 8.5 |
| 23 | 7.0 | 6.0 | 10.0 | 7.0 | 13.5 | 11.0 | 14.0 | 12.0 | 14.0 | 13.0 | 8.5 | 8.5 |
| 24 | 8.0 | 6.5 | 10.5 | 8.0 | 13.5 | 10.5 | 13.5 | 11.5 | 13.5 | 13.0 | 8.5 | 8.0 |
| 25 | 7.0 | 6.0 | 10.5 | 8.0 | 11.0 | 10.5 | 13.5 | 12.0 | 13.5 | 13.0 | 8.5 | 8.0 |
| 26 | 9.0 | 6.0 | 10.5 | 8.0 | 13.0 | 10.5 | 14.0 | 12.0 | 13.5 | 13.0 | 9.0 | 8.5 |
| 27 | 9.0 | 6.5 | 10.0 | 8.0 | 13.0 | 10.5 | 14.5 | 13.0 | 13.5 | 11.5 | 9.0 | 8.5 |
| 28 | 8.5 | 6.0 | 9.0 | 8.0 | 10.5 | 9.5 | 14.5 | 13.5 | 11.5 | 11.5 | 9.5 | 9.0 |
| 29 | 9.0 | 6.0 | 9.0 | 8.0 | 10.0 | 9.0 | 14.5 | 13.5 | 11.5 | 11.0 | 10.0 | 9.5 |
| 30 | 9.0 | 6.0 | 8.5 | 8.0 | 10.0 | 9.5 | 14.0 | 13.0 | 11.0 | 11.0 | 10.0 | 9.0 |
| 31 | --- | --- | 8.5 | 8.0 | --- | --- | 14.0 | 12.0 | 11.5 | 11.0 | --- | --- |
| MONTH | 9.0 | 4.5 | 10.5 | 5.5 | 13.5 | 8.5 | 14.5 | 9.5 | 14.0 | 10.5 | 12.0 | 8.0 |
| YEAR | 14.5 | 3.0 | | | | | | | | | | |

**TABLE C5.--Temperature of surface water--continued**

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1958 TO SEPTEMBER 1959

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.5 | 8.5 | 8.0 | 4.5 | 4.5 | 5.0 | 3.5 | 4.5 | 4.5 | 5.5 | 5.0 |
| 2 | 9.5 | 9.5 | 8.5 | 8.5 | 5.0 | 4.0 | 3.5 | 1.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 3 | 9.5 | 9.5 | 8.5 | 8.5 | 4.5 | 4.0 | 1.5 | 1.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 4 | 9.5 | 9.0 | 8.5 | 8.0 | 4.5 | 4.5 | 1.5 | 1.0 | 5.0 | 4.5 | 5.0 | 5.0 |
| 5 | 9.5 | 9.0 | 8.0 | 7.0 | 4.5 | 4.5 | 3.0 | 1.5 | 5.0 | 4.5 | 5.5 | 5.0 |
| 6 | 9.0 | 9.0 | 7.0 | 7.0 | 4.5 | 4.0 | 3.5 | 3.0 | 4.5 | 4.5 | 5.5 | 5.5 |
| 7 | 9.0 | 8.5 | 7.0 | 6.5 | 4.0 | 4.0 | 3.5 | 3.5 | 4.5 | 4.5 | 5.5 | 5.5 |
| 8 | 8.5 | 8.0 | 7.0 | 6.5 | 4.0 | 4.0 | 4.0 | 3.5 | 4.5 | 4.0 | 5.5 | 5.5 |
| 9 | 8.0 | 7.0 | 6.5 | 6.5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 10 | 8.0 | 7.0 | 6.5 | 6.0 | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 11 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 |
| 12 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 5.5 | 5.0 |
| 13 | 9.0 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 14 | 9.0 | 9.0 | 6.0 | 5.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.0 | 5.0 | 4.5 |
| 15 | 9.0 | 9.0 | 5.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 16 | 9.0 | 8.0 | 4.5 | 4.0 | 5.0 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 | 6.0 | 5.0 |
| 17 | 8.5 | 8.0 | 4.5 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 | 4.5 | 4.5 | 6.0 | 5.5 |
| 18 | 9.0 | 8.5 | 4.5 | 3.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.5 | 5.0 |
| 19 | 8.5 | 7.0 | 4.5 | 4.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 5.5 | 4.5 |
| 20 | 7.0 | 7.0 | 4.5 | 3.5 | 5.0 | 5.0 | 4.5 | 3.5 | 4.5 | 4.5 | 5.5 | 4.5 |
| 21 | 7.0 | 6.5 | 4.5 | 3.5 | 5.0 | 5.0 | 3.5 | 3.5 | 4.5 | 4.5 | 5.5 | 5.5 |
| 22 | 7.0 | 6.5 | 5.0 | 4.5 | 5.0 | 4.5 | 4.0 | 3.5 | 4.5 | 4.0 | 5.5 | 5.0 |
| 23 | 7.0 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 24 | 6.5 | 5.5 | 5.0 | 4.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 25 | 6.5 | 6.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 26 | 7.0 | 6.5 | 4.0 | 3.5 | 4.5 | 4.5 | 4.5 | 4.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 27 | 7.0 | 7.0 | 3.5 | 3.5 | 5.0 | 4.5 | 4.5 | 4.5 | 5.5 | 5.0 | 6.0 | 6.0 |
| 28 | 7.0 | 6.5 | 3.5 | 3.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.5 | 5.5 | 6.0 | 5.5 |
| 29 | 7.0 | 6.5 | 4.0 | 3.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- | 6.0 | 5.5 |
| 30 | 8.0 | 7.0 | 4.5 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 | --- | --- | 6.0 | 6.0 |
| 31 | 8.0 | 8.0 | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- | 6.0 | 5.5 |
| MONTH | 9.5 | 5.5 | 8.5 | 3.5 | 5.0 | 4.0 | 5.0 | 1.0 | 5.5 | 4.0 | 6.0 | 4.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 6.5 |
| 2 | 6.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 6.5 |
| 3 | 6.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 7.0 |
| 4 | 6.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 6.5 |
| 5 | 6.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 6.5 |
| 6 | 5.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 6.5 |
| 7 | 6.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 6.5 |
| 8 | 6.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 1.0 |
| 9 | 6.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 51.0 |
| 10 | 7.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 6.5 |
| 11 | 6.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 7.0 |
| 12 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.0 |
| 13 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.0 |
| 14 | 5.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 8.5 |
| 15 | 6.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.0 |
| 16 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 7.0 |
| 17 | 6.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 7.0 |
| 18 | 7.0 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 7.0 |
| 19 | 7.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 8.0 |
| 20 | 7.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 8.0 |
| 21 | 6.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 8.0 |
| 22 | 7.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.0 |
| 23 | 6.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.5 |
| 24 | 6.5 | 4.5 | --- | --- | --- | --- | --- | --- | 7.0 | 6.0 | 8.5 | 8.5 |
| 25 | 5.5 | 5.0 | --- | --- | --- | --- | --- | --- | 7.0 | 6.0 | 8.5 | 8.0 |
| 26 | 5.5 | 5.5 | --- | --- | --- | --- | --- | --- | 7.0 | 6.5 | 8.0 | 8.0 |
| 27 | 5.5 | 4.5 | --- | --- | --- | --- | --- | --- | 6.5 | 6.5 | 8.0 | 7.0 |
| 28 | 5.0 | 4.5 | --- | --- | --- | --- | --- | --- | 6.5 | 6.0 | 7.0 | 6.5 |
| 29 | 5.0 | 4.5 | --- | --- | --- | --- | --- | --- | 7.0 | 6.0 | 7.0 | 6.5 |
| 30 | 4.5 | 4.0 | --- | --- | --- | --- | --- | --- | 7.0 | 6.0 | 7.0 | 7.0 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 7.0 | --- | --- |
| MONTH | 7.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 1.0 |
| YEAR | 9.5 | 1.0 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1959 TO SEPTEMBER 1960

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 7.0 | 9.5 | 6.0 | 8.0 | 4.5 | 4.0 | 3.0 | 1.5 | 4.0 | 4.0 | 3.0 | 3.0 |
| 2 | 7.0 | 9.5 | 6.0 | 8.5 | 4.5 | 4.5 | 1.5 | 1.5 | 4.0 | 4.0 | 3.0 | 3.0 |
| 3 | 8.0 | 9.5 | 6.0 | 8.5 | 4.5 | 4.5 | 1.5 | 1.5 | 4.0 | 4.0 | 3.0 | 2.0 |
| 4 | 8.0 | 9.0 | 5.5 | 8.0 | 4.5 | 4.0 | 1.5 | 1.5 | 4.0 | 4.0 | 3.5 | 2.0 |
| 5 | 8.0 | 9.0 | 4.0 | 7.0 | 4.0 | 3.5 | 1.5 | 1.5 | 4.5 | 4.0 | 4.0 | 3.5 |
| 6 | 8.0 | 9.0 | 4.0 | 7.0 | 3.5 | 3.5 | 2.0 | 1.5 | 4.5 | 4.5 | 4.5 | 4.0 |
| 7 | 8.0 | 8.5 | 4.0 | 6.5 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 8 | 7.0 | 8.0 | 4.0 | 6.5 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 9 | 6.5 | 7.0 | 4.5 | 6.5 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 10 | 6.0 | 7.0 | 4.5 | 6.0 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 4.5 | 4.0 |
| 11 | 6.0 | 8.0 | 4.5 | 6.0 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.0 |
| 12 | 7.0 | 8.5 | 4.5 | 6.0 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 13 | 7.0 | 8.5 | 4.0 | 6.0 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 14 | 8.0 | 9.0 | 1.5 | 5.5 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 15 | 8.0 | 9.0 | 1.5 | 4.5 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 16 | 8.0 | 8.0 | 1.0 | 4.0 | 3.5 | 3.5 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 17 | 7.0 | 8.0 | 1.0 | 4.0 | 3.5 | 3.5 | 2.0 | 1.0 | 4.5 | 4.5 | 6.0 | 5.0 |
| 18 | 7.0 | 8.5 | 2.0 | 3.5 | 3.5 | 3.5 | 1.0 | 0.5 | 4.5 | 4.5 | 6.0 | 5.0 |
| 19 | 7.0 | 7.0 | 3.5 | 4.0 | 3.5 | 3.5 | 0.5 | 0.0 | 4.5 | 4.5 | 5.5 | 5.0 |
| 20 | 7.0 | 7.0 | 3.5 | 3.5 | 3.5 | 3.5 | 1.5 | 0.5 | 4.5 | 4.5 | 5.5 | 5.0 |
| 21 | 7.0 | 6.5 | 3.5 | 3.5 | 3.5 | 3.5 | 2.0 | 1.5 | 5.0 | 4.5 | 6.0 | 5.0 |
| 22 | 7.0 | 6.5 | 3.5 | 4.5 | 3.5 | 3.5 | 2.0 | 2.0 | 5.0 | 5.0 | 6.0 | 5.0 |
| 23 | 7.0 | 6.5 | 4.0 | 5.0 | 3.5 | 3.5 | 3.0 | 2.0 | 5.0 | 4.5 | 6.0 | 5.0 |
| 24 | 8.5 | 5.5 | 4.0 | 4.0 | 4.0 | 3.5 | 3.0 | 3.0 | 4.5 | 4.5 | 6.5 | 6.0 |
| 25 | 8.5 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.5 | 4.5 | 7.0 | 6.0 |
| 26 | 7.0 | 6.5 | 4.0 | 3.5 | 4.0 | 3.5 | 3.0 | 3.0 | 4.5 | 3.5 | 7.0 | 5.5 |
| 27 | 6.5 | 7.0 | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 3.0 | 3.5 | 3.0 | 6.0 | 5.5 |
| 28 | 6.5 | 6.5 | 4.0 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 29 | 6.5 | 6.5 | 4.0 | 3.5 | 3.5 | 3.5 | 4.0 | 4.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 30 | 5.5 | 7.0 | 4.0 | 4.0 | 3.5 | 3.5 | 4.0 | 4.0 | --- | --- | 6.0 | 5.0 |
| 31 | 6.0 | 8.0 | --- | --- | 3.5 | 3.0 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 |
| MONTH | 8.5 | 5.5 | 6.0 | 3.5 | 4.5 | 3.0 | 4.0 | 0.0 | 5.0 | 3.0 | 7.0 | 2.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 5.0 | 9.0 | 6.5 | 6.5 | 6.0 | 9.0 | 8.5 | 11.5 | 10.0 | 10.0 | 9.5 |
| 2 | 6.0 | 6.0 | 8.5 | 7.0 | 6.5 | 6.0 | 10.0 | 8.0 | 11.0 | 9.5 | 10.5 | 9.5 |
| 3 | 8.0 | 6.0 | 7.0 | 6.5 | 8.0 | 6.5 | 10.5 | 8.5 | 11.0 | 10.0 | 11.0 | 10.0 |
| 4 | 8.0 | 6.0 | 6.5 | 6.5 | 7.0 | 5.5 | 11.0 | 8.5 | 11.0 | 10.0 | 11.0 | 10.5 |
| 5 | 7.0 | 6.5 | 9.5 | 6.5 | 8.0 | 6.0 | 11.0 | 8.5 | 12.0 | 10.0 | 10.5 | 10.0 |
| 6 | 8.0 | 6.5 | 9.0 | 7.0 | 7.0 | 6.0 | 11.5 | 9.0 | 12.0 | 10.0 | 10.0 | 9.5 |
| 7 | 8.5 | 6.5 | 7.0 | 6.5 | 6.5 | 6.0 | 11.0 | 9.0 | 12.0 | 10.5 | 10.0 | 9.0 |
| 8 | 7.0 | 6.5 | 8.5 | 6.0 | 9.0 | 6.0 | 10.5 | 8.5 | 13.0 | 10.5 | 10.0 | 9.5 |
| 9 | 6.5 | 6.0 | 9.5 | 7.0 | 9.0 | 6.5 | 10.5 | 8.5 | 13.0 | 10.5 | 10.5 | 9.5 |
| 10 | 7.0 | 5.0 | 8.5 | 7.0 | 9.0 | 6.5 | 10.5 | 8.5 | 13.0 | 10.5 | 11.0 | 10.5 |
| 11 | 6.5 | 6.0 | 8.5 | 7.0 | 9.0 | 6.5 | 10.5 | 8.5 | 13.0 | 11.0 | 11.5 | 11.0 |
| 12 | 6.0 | 5.0 | 8.5 | 6.5 | 9.5 | 6.5 | 11.5 | 9.0 | 12.0 | 10.5 | 11.5 | 11.0 |
| 13 | 5.0 | 5.0 | 6.5 | 6.0 | 8.5 | 7.0 | 11.5 | 9.5 | 11.5 | 10.0 | 11.5 | 11.5 |
| 14 | 6.0 | 5.0 | 7.0 | 6.5 | 8.0 | 7.0 | 11.5 | 9.5 | 10.5 | 9.5 | 11.5 | 11.5 |
| 15 | 6.0 | 6.0 | 8.5 | 6.5 | 7.0 | 6.5 | 11.0 | 9.5 | 10.0 | 9.0 | 11.5 | 11.0 |
| 16 | 7.0 | 5.5 | 8.5 | 6.5 | 6.5 | 6.0 | 11.0 | 9.0 | 10.0 | 9.5 | 12.0 | 11.5 |
| 17 | 7.0 | 6.0 | 7.0 | 6.0 | 6.5 | 6.0 | 11.5 | 9.0 | 10.0 | 9.5 | 12.0 | 11.5 |
| 18 | 6.0 | 6.0 | 7.0 | 6.5 | 8.0 | 6.0 | 12.0 | 9.5 | 12.0 | 10.0 | 11.5 | 11.0 |
| 19 | 6.5 | 6.0 | 7.0 | 7.0 | 8.0 | 6.5 | 11.5 | 9.5 | 12.0 | 10.5 | 11.5 | 11.0 |
| 20 | 6.5 | 4.0 | 7.0 | 6.5 | 6.5 | 6.0 | 11.5 | 9.5 | 11.0 | 10.0 | 11.0 | 10.5 |
| 21 | 6.0 | 3.5 | 7.0 | 6.0 | 7.0 | 6.0 | 11.0 | 9.0 | 11.0 | 9.5 | 10.5 | 9.5 |
| 22 | 8.0 | 6.0 | 8.0 | 6.5 | 10.0 | 6.5 | 11.0 | 9.0 | 10.0 | 9.5 | 10.0 | 9.5 |
| 23 | 8.0 | 6.5 | 8.5 | 6.0 | 10.5 | 8.5 | 10.5 | 9.0 | 10.0 | 9.5 | 10.5 | 9.5 |
| 24 | 7.0 | 6.0 | 8.5 | 7.0 | 9.5 | 8.5 | 11.0 | 8.5 | 10.5 | 10.0 | 10.5 | 10.5 |
| 25 | 8.0 | 6.5 | 8.5 | 7.0 | 9.0 | 7.0 | 11.5 | 9.0 | 10.5 | 10.5 | 11.0 | 10.5 |
| 26 | 9.0 | 7.0 | 8.5 | 8.0 | 9.0 | 8.0 | 11.5 | 9.5 | 10.5 | 10.0 | 11.0 | 10.5 |
| 27 | 9.0 | 6.5 | 8.0 | 7.0 | 10.0 | 8.5 | 12.0 | 10.0 | 10.0 | 10.0 | 10.5 | 10.0 |
| 28 | 9.0 | 7.0 | 10.0 | 7.0 | 10.5 | 8.0 | 13.0 | 10.0 | 10.0 | 10.0 | 10.5 | 10.0 |
| 29 | 9.5 | 8.0 | 9.0 | 8.0 | 10.5 | 8.5 | 13.0 | 10.5 | 10.0 | 10.0 | 10.5 | 10.0 |
| 30 | 9.0 | 6.5 | 8.5 | 8.0 | 10.0 | 8.5 | 12.0 | 10.5 | 10.0 | 10.0 | 10.0 | 10.0 |
| 31 | --- | --- | 8.0 | 6.5 | --- | --- | 11.5 | 10.0 | 10.5 | 10.0 | --- | --- |
| MONTH | 9.5 | 3.5 | 10.0 | 6.0 | 10.5 | 5.5 | 13.0 | 8.0 | 13.0 | 9.0 | 12.0 | 9.0 |
| YEAR | 13.0 | 0.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1960 TO SEPTEMBER 1961

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 4.5 | 4.0 | 4.0 | 4.5 | 4.0 | 3.5 | 3.5 |
| 2 | 10.0 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.0 | 3.5 | 3.5 |
| 3 | 9.5 | 9.5 | 7.0 | 6.0 | 5.0 | 5.0 | 4.0 | 3.5 | 4.5 | 4.5 | 3.5 | 3.0 |
| 4 | 9.5 | 9.5 | 6.0 | 5.5 | 5.0 | 5.0 | 3.5 | 3.5 | 4.5 | 4.5 | 3.0 | 3.0 |
| 5 | 9.5 | 9.5 | 5.5 | 5.5 | 5.0 | 4.0 | 3.5 | 3.5 | 4.5 | 4.5 | 3.0 | 3.0 |
| 6 | 10.0 | 9.5 | 5.5 | 5.5 | 4.0 | 3.5 | 4.0 | 3.5 | 4.5 | 4.5 | 3.5 | 3.0 |
| 7 | 10.0 | 9.5 | 5.5 | 5.5 | 3.5 | 3.5 | 4.5 | 4.0 | 4.5 | 4.5 | 4.5 | 3.5 |
| 8 | 9.5 | 9.0 | 5.5 | 5.5 | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 9 | 9.0 | 8.5 | 5.5 | 5.5 | 4.0 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 10 | 8.5 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 11 | 8.5 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 12 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 5.0 | 4.5 | 4.0 | 4.5 | 4.0 |
| 13 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.0 |
| 14 | 8.5 | 8.5 | 5.5 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 15 | 9.0 | 8.5 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 16 | 9.0 | 9.0 | 5.5 | 5.0 | 4.0 | 3.5 | 5.0 | 4.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 9.0 | 9.0 | 5.5 | 5.5 | 4.5 | 3.5 | 5.0 | 4.5 | 4.0 | 3.5 | 5.0 | 4.5 |
| 18 | 9.0 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | 5.5 | 5.0 |
| 19 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.0 | 5.0 | 4.5 |
| 20 | 9.0 | 8.5 | 5.5 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.0 | 5.0 | 4.5 |
| 21 | 9.0 | 9.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 | 3.5 | 3.5 | 4.5 | 4.5 |
| 22 | 9.0 | 9.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 | 3.5 | 3.5 | 5.0 | 4.5 |
| 23 | 9.5 | 9.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | 5.0 | 5.0 |
| 24 | 9.5 | 9.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.5 | 3.0 | 5.5 | 5.0 |
| 25 | 9.0 | 8.5 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.0 | 3.5 | 3.0 | 5.5 | 4.5 |
| 26 | 8.5 | 8.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 3.5 | 3.5 | 5.0 | 5.0 |
| 27 | 8.0 | 7.0 | 4.5 | 4.0 | 4.5 | 4.5 | 4.0 | 3.5 | 3.5 | 3.5 | 5.5 | 4.5 |
| 28 | 7.0 | 7.0 | 4.0 | 4.0 | 4.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 6.0 | 5.5 |
| 29 | 7.0 | 6.5 | 4.5 | 4.0 | 4.0 | 4.0 | 3.5 | 3.5 | --- | --- | 6.5 | 5.5 |
| 30 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.0 | 3.5 | --- | --- | 6.0 | 5.0 |
| 31 | 7.0 | 6.5 | --- | --- | 4.0 | 4.0 | 4.0 | 4.0 | --- | --- | 6.0 | 6.0 |
| MONTH | 10.0 | 6.5 | 7.0 | 4.0 | 5.0 | 3.5 | 5.0 | 3.5 | 4.5 | 3.0 | 6.5 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 6.0 | --- | 6.0 | --- | --- | 10.0 | 8.5 | 14.5 | 12.0 | 11.0 | 10.0 |
| 2 | 6.0 | 6.0 | --- | --- | --- | --- | 11.5 | 9.5 | 14.5 | 12.0 | 10.5 | 10.0 |
| 3 | 6.0 | 5.0 | --- | --- | --- | --- | 11.5 | 9.5 | 14.5 | 13.0 | 10.5 | 10.5 |
| 4 | 5.5 | 4.5 | --- | --- | --- | --- | 12.0 | 10.0 | 14.5 | 13.0 | 12.0 | 10.5 |
| 5 | 6.0 | 5.0 | --- | --- | --- | --- | 11.5 | 10.5 | 13.5 | 13.0 | 12.0 | 11.0 |
| 6 | 6.5 | 5.0 | --- | --- | 8.5 | 7.0 | 10.5 | 9.5 | 13.5 | 11.5 | 11.0 | 9.0 |
| 7 | 6.5 | 5.0 | --- | --- | 8.5 | 6.5 | 10.5 | 9.5 | 14.0 | 11.5 | 10.5 | 9.5 |
| 8 | 6.5 | 6.0 | --- | --- | 8.5 | 6.5 | 11.5 | 9.5 | 14.0 | 12.0 | 10.5 | 9.0 |
| 9 | 6.0 | 6.0 | --- | --- | 8.5 | 7.0 | 12.0 | 10.0 | 14.0 | 12.0 | 10.5 | 9.0 |
| 10 | 6.0 | 6.0 | --- | --- | 8.5 | 6.5 | 13.0 | 10.5 | 14.0 | 12.0 | 10.5 | 9.5 |
| 11 | 6.0 | 6.0 | --- | --- | 8.5 | 7.0 | 13.5 | 10.5 | 14.0 | 12.0 | 10.5 | 9.5 |
| 12 | 6.0 | 6.0 | --- | --- | 9.0 | 7.0 | 13.5 | 11.0 | 14.0 | 13.0 | 10.0 | 9.0 |
| 13 | 6.0 | 5.0 | --- | --- | 9.5 | 6.5 | 13.5 | 11.0 | 14.0 | 13.0 | 10.0 | 9.0 |
| 14 | 5.5 | 4.5 | --- | --- | 10.0 | 7.0 | 13.0 | 11.0 | 14.5 | 13.0 | 10.0 | 9.0 |
| 15 | 5.5 | 5.0 | --- | --- | 11.0 | 8.5 | 13.5 | 10.5 | 14.5 | 13.5 | 10.5 | 9.5 |
| 16 | 6.5 | 5.5 | --- | --- | 11.0 | 8.5 | 13.0 | 11.0 | 14.5 | 12.0 | 10.5 | 10.0 |
| 17 | 6.5 | 5.5 | --- | --- | 10.5 | 9.0 | 13.0 | 10.0 | 13.5 | 11.5 | 11.0 | 10.0 |
| 18 | 5.5 | 5.0 | --- | --- | 11.0 | 8.5 | 13.0 | 10.5 | 14.0 | 11.5 | 11.0 | 10.5 |
| 19 | 5.0 | 4.5 | --- | --- | 10.5 | 8.5 | 13.5 | 11.0 | 14.5 | 13.0 | 11.0 | 9.5 |
| 20 | 5.5 | 4.0 | --- | --- | 10.0 | 8.5 | 13.5 | 11.0 | 14.5 | 13.0 | 10.0 | 9.5 |
| 21 | 6.5 | 5.0 | --- | --- | 10.0 | 8.0 | 13.5 | 11.5 | 14.5 | 12.0 | 9.5 | 8.5 |
| 22 | 6.5 | 5.5 | --- | --- | 11.0 | 8.5 | 14.0 | 11.5 | 14.0 | 12.0 | 9.0 | 8.5 |
| 23 | 6.5 | 6.0 | --- | --- | 11.0 | 9.0 | 14.0 | 11.0 | 13.5 | 11.5 | 9.0 | 8.5 |
| 24 | 6.5 | 6.0 | --- | --- | 11.0 | 9.0 | 11.0 | 11.0 | 13.5 | 12.0 | 9.0 | 8.0 |
| 25 | 6.5 | 6.0 | --- | --- | 11.5 | 9.0 | 13.5 | 10.5 | 13.0 | 11.0 | 9.5 | 9.0 |
| 26 | 6.5 | 6.0 | --- | --- | 10.5 | 9.0 | 13.5 | 11.5 | 12.0 | 11.0 | 9.5 | 8.5 |
| 27 | 6.5 | 6.0 | --- | --- | 10.5 | 8.5 | 13.5 | 11.5 | 13.0 | 11.0 | 9.0 | 9.0 |
| 28 | 6.5 | 6.0 | --- | --- | 10.5 | 9.0 | 13.0 | 11.0 | 13.0 | 11.0 | 9.0 | 8.5 |
| 29 | 6.5 | 6.0 | --- | --- | 10.0 | 9.0 | 13.0 | 10.5 | 13.5 | 11.5 | 8.5 | 8.0 |
| 30 | 6.5 | 5.5 | --- | --- | 10.0 | 8.0 | 13.5 | 11.0 | 13.5 | 11.5 | 8.5 | 8.0 |
| 31 | --- | --- | --- | --- | --- | --- | 14.0 | 12.0 | 11.5 | 11.0 | --- | --- |
| MONTH | 6.5 | 4.0 | --- | --- | 11.5 | 6.5 | 14.0 | 8.5 | 14.5 | 11.0 | 12.0 | 8.0 |
| YEAR | 14.5 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1961 TO SEPTEMBER 1962

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 8.5 | 8.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 4.5 | 4.5 | 4.0 | 3.0 | 2.0 |
| 2 | 8.5 | 8.0 | 5.5 | 5.0 | 5.0 | 4.5 | 5.0 | 4.5 | 4.5 | 4.5 | 3.5 | 3.0 |
| 3 | 9.0 | 8.5 | 5.0 | 5.0 | 5.0 | 4.5 | 5.0 | 4.0 | 4.5 | 4.5 | 3.5 | 1.5 |
| 4 | 9.0 | 8.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 4.5 | 4.5 | 4.5 | 2.0 | 2.0 |
| 5 | 9.0 | 9.0 | 5.0 | 4.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.0 | 4.0 | 1.5 |
| 6 | 9.0 | 8.0 | 5.0 | 4.0 | 5.0 | 4.5 | 5.0 | 5.0 | 4.5 | 4.0 | 4.5 | 3.5 |
| 7 | 8.0 | 7.0 | 5.0 | 5.0 | 5.0 | 4.5 | 5.0 | 4.5 | 5.0 | 4.5 | 4.5 | 3.5 |
| 8 | 8.0 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.5 | 5.0 | 4.5 | 4.0 |
| 9 | 7.0 | 7.0 | 5.5 | 5.0 | 4.5 | 3.5 | 4.5 | 4.0 | 5.5 | 5.0 | 4.0 | 3.5 |
| 10 | 7.0 | 7.0 | 5.5 | 5.5 | 3.5 | 2.0 | 4.0 | 4.0 | 5.5 | 5.5 | 4.0 | 3.5 |
| 11 | 7.0 | 7.0 | 5.5 | 5.5 | 3.0 | 2.0 | 4.0 | 4.0 | 5.5 | 5.0 | 4.0 | 3.5 |
| 12 | 7.0 | 7.0 | 6.0 | 5.5 | 3.5 | 3.0 | 4.0 | 4.0 | 5.5 | 5.0 | 4.5 | 3.5 |
| 13 | 8.5 | 7.0 | 5.5 | 5.5 | 4.0 | 3.5 | 4.0 | 4.0 | 5.5 | 5.0 | 4.0 | 3.0 |
| 14 | 9.0 | 8.5 | 5.5 | 5.5 | 4.5 | 4.0 | 4.0 | 3.5 | 5.5 | 5.5 | 4.5 | 3.5 |
| 15 | 9.0 | 9.0 | 5.5 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | 5.5 | 5.0 | 5.0 | 4.0 |
| 16 | 9.0 | 8.5 | 4.5 | 4.5 | 4.5 | 4.0 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 4.5 |
| 17 | 8.5 | 7.0 | 4.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 5.5 | 5.0 | 5.0 | 4.0 |
| 18 | 7.0 | 6.0 | 4.5 | 4.0 | 3.5 | 3.5 | 3.0 | 1.5 | 6.0 | 5.5 | 5.0 | 4.5 |
| 19 | 6.5 | 6.5 | 4.5 | 4.5 | 4.0 | 3.5 | 1.5 | 0.5 | 6.5 | 5.5 | 6.0 | 5.0 |
| 20 | 6.5 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | 0.5 | 0.5 | 5.5 | 4.5 | 5.5 | 4.0 |
| 21 | 6.0 | 6.0 | 4.5 | 3.5 | 4.0 | 4.0 | 0.5 | 0.5 | 4.5 | 4.0 | 4.0 | 3.0 |
| 22 | 6.0 | 6.0 | 3.5 | 3.5 | 4.0 | 4.0 | 1.0 | 0.5 | 5.0 | 4.5 | 4.5 | 3.5 |
| 23 | 6.0 | 6.0 | 4.0 | 3.5 | 4.5 | 4.0 | 2.0 | 1.0 | 5.0 | 4.0 | 4.5 | 4.0 |
| 24 | 6.0 | 5.5 | 4.0 | 3.5 | 4.5 | 4.5 | 3.0 | 2.0 | 4.0 | 3.0 | 4.0 | 3.5 |
| 25 | 5.5 | 5.5 | 3.5 | 3.0 | 4.5 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 4.5 | 3.5 |
| 26 | 6.0 | 5.5 | 3.5 | 3.0 | 4.0 | 4.0 | 3.5 | 3.0 | 2.0 | 1.0 | 5.0 | 4.5 |
| 27 | 6.0 | 6.0 | 4.0 | 3.5 | 4.0 | 4.0 | 4.0 | 3.5 | 2.0 | 1.0 | 5.0 | 4.5 |
| 28 | 6.0 | 6.0 | 4.5 | 4.0 | 4.5 | 4.0 | 4.0 | 3.5 | 2.0 | 2.0 | 4.5 | 3.0 |
| 29 | 6.0 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | --- | --- | 4.5 | 3.0 |
| 30 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 4.5 | 4.0 | 3.5 | --- | --- | 5.0 | 3.5 |
| 31 | 5.5 | 5.5 | --- | --- | 5.0 | 5.0 | 4.0 | 4.0 | --- | --- | 5.5 | 3.5 |
| MONTH | 9.0 | 5.5 | 6.0 | 3.0 | 5.0 | 2.0 | 5.0 | 0.5 | 6.5 | 1.0 | 6.0 | 1.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 4.0 | 6.0 | 5.5 | 8.5 | 6.0 | 8.5 | 6.5 | 12.0 | 10.0 | 12.0 | 10.0 |
| 2 | 5.5 | 4.5 | 6.0 | 5.5 | 8.5 | 6.0 | 8.5 | 5.5 | 11.5 | 10.0 | 11.5 | 10.5 |
| 3 | 6.0 | 4.5 | 6.0 | 5.0 | 6.0 | 5.0 | 9.5 | 6.0 | 11.0 | 10.0 | 11.0 | 9.5 |
| 4 | 6.0 | 5.0 | 5.5 | 4.0 | 7.0 | 5.5 | 9.0 | 6.5 | 10.0 | 9.5 | 11.5 | 9.5 |
| 5 | 6.0 | 5.0 | 5.5 | 4.5 | 7.0 | 6.0 | 7.0 | 7.0 | 9.5 | 9.0 | 11.5 | 10.0 |
| 6 | 6.0 | 4.0 | 5.5 | 5.5 | 9.5 | 6.0 | 7.0 | 6.5 | 10.0 | 9.0 | 11.5 | 10.0 |
| 7 | 4.5 | 4.0 | 7.0 | 5.0 | 10.0 | 6.5 | 10.0 | 6.5 | 10.0 | 9.5 | 11.5 | 10.5 |
| 8 | 5.5 | 4.0 | 7.0 | 6.0 | 9.5 | 7.0 | 10.5 | 7.0 | 10.0 | 9.0 | 10.5 | 9.0 |
| 9 | 5.0 | 4.5 | 6.5 | 6.0 | 8.5 | 6.5 | 10.5 | 8.0 | 10.5 | 9.0 | 10.5 | 9.0 |
| 10 | 5.0 | 4.5 | 6.5 | 6.0 | 8.0 | 6.0 | 10.0 | 8.0 | 11.5 | 9.5 | 10.5 | 10.0 |
| 11 | 5.5 | 4.5 | 6.5 | 6.0 | 9.0 | 6.0 | 10.5 | 8.0 | 11.5 | 10.0 | 10.0 | 9.0 |
| 12 | 6.0 | 5.0 | 6.5 | 5.5 | 8.5 | 6.5 | 9.5 | 8.0 | 11.0 | 10.0 | 9.5 | 8.5 |
| 13 | 6.5 | 6.0 | 7.0 | 6.5 | 9.5 | 6.5 | 9.0 | 8.0 | 11.5 | 9.5 | 9.5 | 9.0 |
| 14 | 6.5 | 6.0 | 7.0 | 6.5 | 9.5 | 6.5 | 9.5 | 7.0 | 11.5 | 9.5 | 9.5 | 9.0 |
| 15 | 6.5 | 5.0 | 8.0 | 6.5 | 10.0 | 6.5 | 9.5 | 8.0 | 12.0 | 9.5 | 10.0 | 9.0 |
| 16 | 6.0 | 4.5 | 9.0 | 7.0 | 9.5 | 6.5 | 9.0 | 8.0 | 11.5 | 10.5 | 10.0 | 8.5 |
| 17 | 6.5 | 5.0 | 8.5 | 7.0 | 8.5 | 6.5 | 8.5 | 7.0 | 10.5 | 10.0 | 10.5 | 9.0 |
| 18 | 7.0 | 5.5 | 7.0 | 6.5 | 9.5 | 6.5 | 7.0 | 6.5 | 10.0 | 10.0 | 10.5 | 9.0 |
| 19 | 7.0 | 6.0 | 7.0 | 6.5 | 9.5 | 6.5 | 9.5 | 7.0 | 11.0 | 10.0 | 10.5 | 10.0 |
| 20 | 6.0 | 5.5 | 7.0 | 6.5 | 9.5 | 6.5 | 10.5 | 8.0 | 11.0 | 10.5 | 11.0 | 10.0 |
| 21 | 6.5 | 6.0 | 8.0 | 6.5 | 9.5 | 6.5 | 11.0 | 8.5 | 11.0 | 10.5 | 10.5 | 10.0 |
| 22 | 8.0 | 6.0 | 6.5 | 6.5 | 10.0 | 6.5 | 11.5 | 8.5 | 11.5 | 9.5 | 10.5 | 10.0 |
| 23 | 8.0 | 6.5 | 7.0 | 6.5 | 10.0 | 6.0 | 11.5 | 9.0 | 12.0 | 10.0 | 10.5 | 10.0 |
| 24 | 7.0 | 6.0 | 6.5 | 6.5 | 9.0 | 6.5 | 12.0 | 9.0 | 12.0 | 10.0 | 10.5 | 9.5 |
| 25 | 6.0 | 5.5 | 8.0 | 6.5 | 8.5 | 6.5 | 12.0 | 9.0 | 12.0 | 10.5 | 10.5 | 9.5 |
| 26 | 6.0 | 5.0 | 8.0 | 6.5 | 8.0 | 6.0 | 12.0 | 9.0 | 11.5 | 10.0 | 10.0 | 10.0 |
| 27 | 5.0 | 5.0 | 7.0 | 6.0 | 6.5 | 6.0 | 12.0 | 9.5 | 10.0 | 9.5 | 10.0 | 10.0 |
| 28 | 5.0 | 4.5 | 7.0 | 6.0 | 9.5 | 6.0 | 12.0 | 9.5 | 11.0 | 9.5 | 10.0 | 9.0 |
| 29 | 5.0 | 4.5 | 6.5 | 5.5 | 10.0 | 7.0 | 12.0 | 9.5 | 11.0 | 9.5 | 9.0 | 8.5 |
| 30 | 5.5 | 5.0 | 8.5 | 5.0 | 9.0 | 6.5 | 13.0 | 10.0 | 11.5 | 9.5 | 9.5 | 8.5 |
| 31 | --- | --- | 8.0 | 6.0 | --- | --- | 13.0 | 10.0 | 11.5 | 10.0 | --- | --- |
| MONTH | 8.0 | 4.0 | 9.0 | 4.0 | 10.0 | 5.0 | 13.0 | 5.5 | 12.0 | 9.0 | 12.0 | 8.5 |
| YEAR | 13.0 | 0.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1962 TO SEPTEMBER 1963

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.5 | 9.0 | 6.5 | 6.0 | 4.5 | 4.5 | 4.5 | 4.5 | --- | --- | 5.0 | 4.5 |
| 2 | 10.0 | 9.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 4.5 | --- | --- | 4.5 | 4.5 |
| 3 | 10.0 | 9.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.5 | 3.5 |
| 4 | 9.0 | 8.5 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.5 | 3.5 |
| 5 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.5 | 4.0 |
| 6 | 8.5 | 8.0 | 6.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.5 | 3.5 |
| 7 | 8.0 | 7.0 | 5.5 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 4.5 | 3.5 |
| 8 | 7.0 | 7.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 5.0 | 3.5 |
| 9 | 7.0 | 7.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 5.0 | 3.5 |
| 10 | 7.0 | 6.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 4.5 | --- | --- | 5.0 | 4.5 |
| 11 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | --- | --- | --- | 5.0 | 4.5 |
| 12 | 7.0 | 7.0 | 5.5 | 5.0 | 4.5 | 4.5 | --- | --- | 4.5 | 4.0 | 5.5 | 4.5 |
| 13 | 8.0 | 7.0 | 5.5 | 5.0 | 4.5 | 4.5 | --- | --- | 4.5 | 3.5 | 5.0 | 4.0 |
| 14 | 7.0 | 5.5 | 6.0 | 5.5 | 5.0 | 4.5 | --- | --- | 5.0 | 4.5 | 5.0 | 4.5 |
| 15 | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 5.0 | 4.5 | 5.0 | 4.5 |
| 16 | 6.5 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | --- | --- | 5.0 | 4.5 | 5.5 | 4.5 |
| 17 | 6.0 | 5.5 | 5.0 | 4.5 | 5.0 | 5.0 | --- | --- | 5.0 | 5.0 | 5.5 | 4.0 |
| 18 | 7.0 | 6.0 | 4.5 | 4.5 | 5.5 | 5.0 | --- | --- | 5.5 | 5.0 | 5.0 | 4.5 |
| 19 | 7.0 | 7.0 | 5.5 | 4.5 | 5.0 | 5.0 | --- | --- | 5.5 | 5.0 | 5.0 | 4.5 |
| 20 | 7.0 | 7.0 | 5.5 | 5.0 | 5.0 | 5.0 | --- | --- | 5.0 | 4.5 | 5.5 | 4.5 |
| 21 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | --- | --- | 5.0 | 4.5 | 7.0 | 5.5 |
| 22 | 8.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | --- | --- | 5.0 | 4.5 | 7.0 | 6.0 |
| 23 | 7.0 | 6.0 | 5.0 | 4.5 | 5.0 | 4.5 | --- | --- | 5.0 | 4.5 | 6.5 | 5.5 |
| 24 | 6.5 | 6.0 | 4.5 | 4.5 | 4.5 | 4.0 | --- | --- | 5.0 | 4.0 | 6.5 | 5.0 |
| 25 | 6.5 | 6.0 | 4.5 | 4.5 | 4.0 | 3.5 | --- | --- | 5.5 | 5.0 | 6.0 | 5.5 |
| 26 | 7.0 | 6.5 | 4.5 | 4.5 | 3.5 | 3.5 | --- | --- | 5.5 | 4.5 | 6.0 | 6.0 |
| 27 | 7.0 | 6.0 | 4.5 | 4.5 | 4.0 | 3.5 | --- | --- | 5.5 | 4.5 | 6.5 | 5.5 |
| 28 | 6.5 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 | 6.5 | 5.5 |
| 29 | 6.5 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | --- | --- | 5.5 | 4.5 |
| 30 | 6.5 | 6.0 | 4.5 | 4.0 | 4.0 | 4.0 | --- | --- | --- | --- | 5.0 | 4.5 |
| 31 | 6.5 | 6.5 | --- | --- | 4.5 | 4.0 | --- | --- | --- | --- | 5.5 | 4.5 |
| MONTH | 10.0 | 5.5 | 6.5 | 4.0 | 5.5 | 3.5 | --- | --- | --- | --- | 7.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 4.5 | 6.5 | 4.5 | 8.5 | 7.0 | 11.5 | 8.0 | 11.5 | 9.5 | 12.0 | 11.0 |
| 2 | 6.5 | 4.5 | 6.5 | 5.5 | 8.0 | 7.0 | 10.0 | 9.0 | 13.0 | 10.0 | 11.5 | 11.0 |
| 3 | 6.0 | 4.5 | 7.0 | 5.0 | 7.0 | 6.5 | 11.5 | 8.5 | 13.5 | 10.5 | 12.0 | 10.5 |
| 4 | 6.0 | 5.5 | 8.0 | 5.0 | 7.0 | 7.0 | 10.5 | 9.0 | 13.5 | 10.5 | 13.0 | 10.5 |
| 5 | 6.0 | 5.5 | 8.0 | 6.5 | 7.0 | 6.5 | 10.5 | 8.5 | 13.5 | 10.5 | 13.0 | 11.0 |
| 6 | 6.0 | 5.5 | 6.5 | 6.0 | 9.0 | 6.5 | 10.0 | 9.0 | 14.0 | 11.0 | 13.0 | 11.0 |
| 7 | 6.0 | 5.0 | 7.0 | 6.0 | 8.5 | 7.0 | 10.5 | 9.0 | 14.0 | 11.0 | 13.0 | 11.0 |
| 8 | 6.5 | 5.0 | 8.0 | 5.5 | 7.0 | 6.5 | 10.0 | 9.0 | 14.0 | 11.0 | 13.0 | 11.0 |
| 9 | 7.0 | 5.5 | 7.0 | 5.5 | 7.0 | 6.5 | 9.0 | 8.5 | 13.0 | 11.0 | 13.5 | 11.5 |
| 10 | 7.0 | 5.5 | 8.0 | 5.5 | 10.5 | 6.5 | 9.0 | 8.5 | 13.5 | 11.0 | 13.0 | 11.0 |
| 11 | 8.0 | 5.5 | 9.0 | 5.5 | 9.0 | 7.0 | 9.0 | 8.5 | 14.0 | 12.0 | 13.0 | 11.0 |
| 12 | 7.0 | 6.0 | 8.5 | 6.5 | 8.5 | 7.0 | 9.5 | 8.5 | 14.5 | 12.0 | 12.0 | 11.0 |
| 13 | 6.5 | 5.5 | 9.5 | 6.0 | 10.0 | 8.5 | 11.5 | 9.0 | 14.5 | 12.0 | 12.0 | 10.5 |
| 14 | 6.5 | 6.5 | 9.0 | 6.5 | 10.5 | 7.0 | 11.0 | 9.5 | 12.0 | 11.5 | 10.5 | 10.0 |
| 15 | 6.5 | 5.5 | 8.5 | 7.0 | 11.0 | 8.0 | 9.5 | 9.0 | 13.5 | 11.0 | 10.0 | 9.5 |
| 16 | 6.0 | 5.0 | 9.5 | 5.5 | 11.0 | 8.0 | 11.5 | 8.5 | 13.5 | 11.0 | 10.0 | 10.0 |
| 17 | 7.0 | 5.5 | 10.0 | 6.5 | 11.0 | 8.0 | 11.0 | 10.0 | 14.0 | 11.0 | 11.0 | 9.5 |
| 18 | 7.0 | 6.0 | 10.0 | 6.5 | 10.5 | 8.0 | 12.0 | 10.0 | 13.0 | 11.5 | 10.5 | 9.5 |
| 19 | 7.0 | 6.0 | 10.0 | 6.5 | 9.5 | 8.5 | 13.0 | 9.5 | 11.5 | 11.0 | 11.0 | 9.5 |
| 20 | 7.0 | 6.0 | 10.0 | 6.5 | 8.5 | 8.0 | 11.5 | 10.0 | 11.5 | 10.5 | 11.5 | 10.0 |
| 21 | 8.5 | 6.0 | 10.0 | 6.5 | 8.0 | 7.0 | 11.0 | 10.0 | 11.5 | 11.0 | 11.5 | 10.5 |
| 22 | 8.5 | 7.0 | 8.5 | 6.5 | 8.0 | 7.0 | 10.0 | 9.5 | 13.0 | 10.5 | 11.5 | 11.0 |
| 23 | 8.0 | 6.5 | 9.0 | 6.5 | 10.5 | 7.0 | 10.5 | 8.5 | 13.0 | 11.0 | 11.5 | 10.5 |
| 24 | 8.0 | 6.0 | 8.5 | 6.5 | 9.5 | 8.0 | 10.0 | 9.5 | 12.0 | 10.5 | 10.5 | 10.0 |
| 25 | 8.5 | 6.5 | 9.5 | 6.5 | 9.0 | 7.0 | 11.0 | 9.5 | 11.0 | 10.0 | 11.0 | 10.0 |
| 26 | 8.0 | 7.0 | 8.0 | 6.5 | 8.5 | 7.0 | 13.0 | 9.5 | 12.0 | 10.0 | 11.0 | 10.0 |
| 27 | 8.0 | 7.0 | 10.0 | 7.0 | 8.5 | 7.0 | 13.0 | 10.0 | 12.0 | 10.0 | 11.5 | 10.5 |
| 28 | 9.5 | 6.5 | 10.0 | 6.5 | 8.5 | 7.0 | 13.0 | 10.0 | 13.0 | 10.5 | 13.0 | 11.0 |
| 29 | 9.0 | 7.0 | 10.5 | 7.0 | 8.0 | 7.0 | 12.0 | 10.5 | 13.0 | 10.5 | 13.0 | 11.5 |
| 30 | 7.0 | 6.5 | 10.0 | 7.0 | 9.5 | 7.0 | 12.0 | 10.0 | 13.5 | 10.5 | 12.0 | 11.0 |
| 31 | --- | --- | 9.0 | 8.0 | --- | --- | 10.5 | 9.5 | 13.5 | 11.0 | --- | --- |
| MONTH | 9.5 | 4.5 | 10.5 | 4.5 | 11.0 | 6.5 | 13.0 | 8.0 | 14.5 | 9.5 | 13.5 | 9.5 |
| YEAR | 14.5 | 3.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1963 TO SEPTEMBER 1964

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 11.5 | 11.0 | 6.0 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 11.0 | 10.0 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 11.0 | 10.5 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 10.5 | 10.5 | 6.5 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 10.5 | 10.0 | 6.5 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 10.0 | 10.0 | 6.0 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 10.0 | 9.5 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 10.0 | 10.0 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 10.5 | 10.0 | 6.0 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 10.5 | 10.0 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | 10.5 | 10.5 | 5.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 10.5 | 10.5 | 5.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 10.5 | 10.5 | 5.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | 10.5 | 10.5 | 5.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 10.5 | 10.0 | 5.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 10.0 | 9.5 | 5.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | 9.5 | 9.5 | 5.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 9.5 | 9.0 | 5.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | 9.0 | 7.0 | 4.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 8.0 | 8.0 | 4.5 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 8.5 | 8.0 | 4.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | 8.5 | 8.5 | 4.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 8.5 | 8.0 | 4.5 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | 8.0 | 7.0 | 5.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 7.0 | 6.5 | 5.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 6.5 | 6.5 | 5.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 6.5 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | 6.5 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | 5.5 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 6.0 | 5.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | 11.5 | 5.5 | 6.5 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.5 |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.5 | 9.0 |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.5 | 9.0 |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.5 | 9.0 |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.5 | 9.5 |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.5 |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.0 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 8.5 |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 8.5 |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 8.5 |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 8.5 |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 8.5 |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.0 |
| 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 9.0 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.5 |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 8.5 |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 8.5 |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.5 |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.5 |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 8.5 |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 8.5 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 9.0 |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.0 |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 9.0 |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 8.0 |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 8.0 |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 8.5 |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 9.0 |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.0 | 8.0 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.5 | 8.0 |
| YEAR | 11.5 | 4.0 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12192500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | 4.5 | 4.5 | 1.0 | 1.0 | 4.0 | 3.5 | --- | --- |
| 2 | --- | --- | --- | --- | 5.0 | 4.5 | 1.0 | 1.0 | 3.5 | 3.0 | --- | --- |
| 3 | --- | --- | 8.0 | 7.0 | 5.0 | 5.0 | 1.0 | 1.0 | 3.5 | 3.0 | --- | --- |
| 4 | --- | --- | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 | 1.0 | 3.5 | 3.5 | --- | --- |
| 5 | --- | --- | 8.0 | 8.0 | 5.0 | 4.5 | 1.0 | 0.0 | 4.5 | 3.5 | --- | --- |
| 6 | 9.0 | 8.5 | 8.0 | 7.0 | 4.5 | 4.5 | 2.0 | 0.5 | 4.5 | 4.5 | --- | --- |
| 7 | 9.0 | 8.5 | 8.0 | 7.0 | 4.5 | 4.5 | 3.0 | 2.0 | 4.5 | 4.0 | --- | --- |
| 8 | 9.5 | 9.0 | 8.0 | 8.0 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 3.5 | --- | --- |
| 9 | 10.0 | 9.0 | 8.0 | 7.0 | 4.5 | 4.0 | 3.0 | 3.0 | 3.5 | 3.5 | 4.5 | 4.0 |
| 10 | --- | --- | 7.0 | 6.5 | 4.0 | 4.0 | 3.5 | 3.0 | 3.5 | 3.5 | 4.5 | 4.5 |
| 11 | --- | --- | --- | --- | 4.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 4.5 | 4.5 |
| 12 | --- | --- | --- | --- | 4.0 | 3.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 13 | --- | --- | 6.5 | 6.0 | 3.5 | 3.0 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 14 | --- | --- | 6.5 | 6.5 | 3.0 | 2.0 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 15 | --- | --- | 7.0 | 6.5 | 2.0 | 1.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 16 | --- | --- | 7.0 | 7.0 | 1.5 | 1.0 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 17 | --- | --- | 7.0 | 6.5 | 1.5 | 1.0 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 |
| 18 | --- | --- | 6.5 | 6.0 | 1.5 | 1.5 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 |
| 19 | --- | --- | 6.5 | 6.5 | 2.0 | 1.5 | 4.0 | 4.0 | --- | --- | 4.5 | 4.5 |
| 20 | --- | --- | 6.5 | 6.5 | 2.0 | 2.0 | 4.0 | 4.0 | --- | --- | 4.5 | 4.0 |
| 21 | --- | --- | 6.5 | 6.0 | 3.0 | 2.0 | 4.0 | 4.0 | --- | --- | 4.5 | 4.0 |
| 22 | --- | --- | 6.0 | 5.5 | 3.0 | 2.0 | 4.0 | 4.0 | --- | --- | 4.5 | 3.5 |
| 23 | --- | --- | 5.5 | 5.0 | 2.0 | 2.0 | 4.0 | 3.5 | --- | --- | 5.5 | 4.0 |
| 24 | --- | --- | 5.0 | 5.0 | 2.0 | 2.0 | 3.5 | 3.0 | --- | --- | 6.0 | 4.5 |
| 25 | --- | --- | 5.0 | 5.0 | 2.0 | 2.0 | 3.5 | 3.0 | --- | --- | 5.5 | 4.5 |
| 26 | --- | --- | 5.0 | 4.5 | 2.0 | 2.0 | 4.0 | 3.5 | 4.5 | 4.5 | 5.5 | 4.5 |
| 27 | --- | --- | 4.5 | 4.5 | 2.0 | 2.0 | 4.0 | 4.0 | 4.5 | 3.5 | 5.5 | 4.5 |
| 28 | --- | --- | 4.5 | 4.5 | 2.0 | 1.0 | 4.0 | 4.0 | --- | --- | 5.5 | 4.5 |
| 29 | --- | --- | 4.5 | 4.5 | 2.0 | 1.0 | 4.0 | 4.0 | --- | --- | 5.5 | 4.5 |
| 30 | 10.0 | 9.0 | 4.5 | 4.5 | 2.0 | 1.0 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 |
| 31 | --- | --- | --- | --- | 1.5 | 1.0 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 |
| MONTH | --- | --- | 8.0 | 4.5 | 5.0 | 1.0 | 4.0 | 0.0 | --- | --- | --- | --- |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.5 | 4.5 | 8.5 | 6.0 | 9.5 | 7.0 | 8.5 | 8.0 | 11.5 | 10.0 | 10.0 | 9.5 |
| 2 | 5.5 | 4.5 | 8.5 | 6.0 | 8.5 | 7.0 | 8.0 | 8.0 | 11.5 | 10.0 | 10.0 | 10.0 |
| 3 | 6.0 | 5.0 | 8.5 | 6.0 | 7.0 | 7.0 | 8.0 | 7.0 | 12.0 | 10.0 | 10.5 | 9.5 |
| 4 | 6.0 | 5.0 | 8.5 | 6.0 | 7.0 | 7.0 | 9.0 | 7.0 | 12.0 | 10.0 | 10.5 | 9.5 |
| 5 | 6.0 | 5.0 | 8.0 | 6.0 | 10.5 | 7.0 | 9.0 | 8.0 | 11.5 | 10.0 | 10.5 | 10.0 |
| 6 | 6.0 | 5.0 | 6.5 | 6.0 | 10.0 | 8.0 | 9.5 | 8.0 | 11.0 | 9.5 | 10.5 | 10.0 |
| 7 | 6.0 | 5.0 | 8.0 | 6.0 | 10.0 | 8.0 | 10.5 | 8.5 | 11.5 | 10.0 | 10.0 | 9.5 |
| 8 | 6.0 | 5.0 | 8.0 | 6.0 | 10.0 | 8.0 | 10.5 | 8.5 | 11.0 | 10.0 | 10.5 | 10.0 |
| 9 | 6.0 | 5.5 | 6.5 | 6.0 | 9.0 | 8.5 | 10.5 | 8.5 | 11.0 | 10.0 | 10.5 | 10.0 |
| 10 | 5.5 | 5.0 | 6.5 | 6.0 | 8.5 | 8.0 | 10.0 | 8.5 | 10.0 | 9.5 | 10.5 | 10.0 |
| 11 | 5.0 | 5.0 | 8.0 | 5.5 | 8.0 | 8.0 | 10.0 | 8.5 | 10.5 | 9.0 | 10.0 | 10.0 |
| 12 | 5.0 | 4.0 | 7.0 | 6.5 | 9.0 | 8.0 | 10.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 |
| 13 | 5.5 | 4.5 | 6.5 | 6.0 | 8.5 | 8.0 | 10.5 | 8.5 | 10.5 | 10.0 | 11.0 | 9.5 |
| 14 | 5.5 | 5.0 | 6.0 | 5.5 | 11.0 | 8.0 | 10.0 | 9.0 | 10.5 | 9.5 | 11.0 | 10.5 |
| 15 | 6.5 | 5.0 | 6.0 | 6.0 | 11.0 | 8.5 | 10.0 | 9.5 | 11.5 | 10.0 | 10.5 | 10.0 |
| 16 | 6.0 | 5.0 | 6.0 | 5.0 | 9.5 | 8.0 | 9.5 | 9.0 | 11.0 | 10.0 | 10.0 | 10.0 |
| 17 | 6.0 | 5.0 | 8.5 | 5.5 | 9.0 | 8.0 | 9.5 | 9.0 | 11.0 | 9.5 | 10.0 | 10.0 |
| 18 | 6.0 | 4.5 | 9.0 | 5.5 | 8.5 | 7.0 | 10.0 | 8.5 | 11.0 | 9.5 | 10.0 | 10.0 |
| 19 | 5.5 | 4.5 | 9.0 | 6.5 | 8.5 | 8.0 | 9.5 | 9.0 | 10.5 | 9.5 | 10.0 | 9.0 |
| 20 | 5.5 | 5.0 | 8.0 | 6.5 | 8.0 | 7.0 | 10.5 | 8.5 | 10.5 | 9.0 | 9.5 | 9.0 |
| 21 | 6.0 | 5.0 | 8.0 | 6.5 | 8.0 | 7.0 | 10.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 |
| 22 | 5.5 | 5.5 | 7.0 | 6.5 | 9.5 | 7.0 | 10.5 | 9.0 | 10.5 | 9.5 | 11.0 | 10.0 |
| 23 | 6.0 | 5.5 | 8.0 | 6.5 | 8.5 | 7.0 | 10.5 | 9.5 | 11.0 | 9.5 | 11.0 | 10.0 |
| 24 | 6.0 | 6.0 | 10.0 | 7.0 | 8.0 | 7.0 | 10.5 | 9.5 | 11.5 | 10.5 | 10.0 | 9.5 |
| 25 | 6.0 | 6.0 | 10.5 | 8.0 | 9.5 | 7.0 | 9.5 | 8.5 | 11.5 | 10.5 | 9.5 | 9.5 |
| 26 | 6.0 | 5.0 | 8.5 | 7.0 | 9.5 | 8.5 | 10.5 | 8.5 | 10.5 | 10.0 | 9.5 | 9.0 |
| 27 | 6.5 | 5.5 | 8.0 | 6.0 | 8.5 | 8.5 | 11.0 | 9.5 | 10.0 | 10.0 | 9.5 | 9.5 |
| 28 | 6.5 | 5.5 | 9.0 | 6.5 | 8.5 | 8.0 | 11.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.5 |
| 29 | 7.0 | 6.0 | 9.5 | 6.5 | 8.5 | 7.0 | 11.5 | 10.0 | 10.0 | 9.5 | 10.0 | 9.5 |
| 30 | 7.0 | 6.0 | 8.5 | 7.0 | 8.5 | 7.0 | 11.5 | 10.0 | 9.5 | 9.5 | 9.5 | 9.0 |
| 31 | --- | --- | 7.0 | 7.0 | --- | --- | 11.0 | 9.5 | 10.0 | 9.0 | --- | --- |
| MONTH | 7.0 | 4.0 | 10.5 | 5.0 | 11.0 | 7.0 | 11.5 | 7.0 | 12.0 | 9.0 | 11.0 | 9.0 |
| YEAR | 12.0 | 0.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12192500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER - WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.0 | 8.5 | 6.5 | 6.0 | 5.0 | 5.0 | --- | --- | 3.5 | 3.5 | 4.0 | 4.0 |
| 2 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | --- | --- | 3.5 | 3.5 | 4.5 | 4.0 |
| 3 | 8.5 | 7.0 | 6.5 | 6.0 | 5.0 | 5.0 | --- | --- | 3.5 | 3.5 | 4.5 | 4.0 |
| 4 | 8.5 | 8.0 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 3.5 | 3.5 | 4.0 | 3.5 |
| 5 | 8.5 | 8.5 | 6.0 | 5.5 | 5.0 | 4.5 | --- | --- | 3.5 | 3.5 | 4.5 | 4.0 |
| 6 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.5 | --- | --- | 4.0 | 3.5 | 4.5 | 4.5 |
| 7 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 4.0 | 3.5 | 4.5 | 4.5 |
| 8 | 8.5 | 8.5 | 5.5 | 5.0 | 4.5 | 4.5 | --- | --- | 3.5 | 3.5 | 4.5 | 3.0 |
| 9 | 8.5 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | --- | --- | 4.0 | 3.5 | 4.0 | 3.0 |
| 10 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | 4.0 | 4.0 | 4.0 | 4.0 |
| 11 | 8.5 | 7.0 | 4.5 | 4.5 | 4.5 | 4.0 | --- | --- | 4.0 | 4.0 | 4.0 | 4.0 |
| 12 | 8.5 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | 4.0 | 3.0 | 4.5 | 4.0 |
| 13 | 9.5 | 6.0 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | 3.0 | 3.0 | 4.0 | 3.0 |
| 14 | 8.5 | 5.5 | 5.0 | 4.5 | 4.0 | 4.0 | --- | --- | 3.5 | 3.0 | 4.5 | 4.0 |
| 15 | 8.5 | 4.5 | 5.5 | 5.0 | 4.0 | 4.0 | --- | --- | 3.5 | 3.5 | 4.5 | 4.5 |
| 16 | 6.5 | 4.5 | 5.5 | 5.5 | 4.0 | 4.0 | --- | --- | 3.5 | 3.5 | 4.5 | 4.5 |
| 17 | 8.0 | 6.0 | 5.5 | 5.0 | 4.5 | 4.0 | --- | --- | 3.5 | 3.5 | 4.5 | 4.5 |
| 18 | 9.0 | 6.0 | 5.5 | 5.0 | 4.5 | 4.5 | --- | --- | 3.5 | 3.0 | 4.5 | 4.5 |
| 19 | 8.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.0 | 3.0 | 3.0 | 4.0 | 3.5 | 4.5 | 4.5 |
| 20 | 6.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | 3.0 | 3.0 | 4.0 | 3.5 | 4.5 | 4.5 |
| 21 | 5.5 | 5.5 | 5.0 | 5.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 22 | 5.5 | 5.5 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 23 | 5.5 | 5.5 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 | 4.5 | 4.0 |
| 24 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.0 | 4.0 | 4.5 | 4.0 |
| 25 | 6.5 | 6.0 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.5 | 4.0 | 4.5 | 4.0 |
| 26 | 6.5 | 6.5 | 5.0 | 5.0 | --- | --- | 3.0 | 3.0 | 4.5 | 4.0 | 4.5 | 4.5 |
| 27 | 6.5 | 6.0 | 5.0 | 4.5 | --- | --- | 3.5 | 3.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 28 | 6.0 | 5.5 | 5.0 | 4.5 | --- | --- | 3.5 | 3.5 | 4.5 | 4.0 | 5.0 | 4.5 |
| 29 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 3.5 | 3.5 | --- | --- | 4.5 | 4.5 |
| 30 | 6.0 | 6.0 | 5.0 | 5.0 | --- | --- | 4.0 | 3.5 | --- | --- | 5.0 | 4.0 |
| 31 | 6.0 | 6.0 | --- | --- | --- | --- | 3.5 | 3.5 | --- | --- | 5.0 | 4.5 |
| MONTH | 9.5 | 4.5 | 6.5 | 4.5 | --- | --- | --- | --- | 4.5 | 3.0 | 5.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 4.5 | --- | --- | 8.0 | 6.0 | 10.0 | 8.0 | 12.0 | 10.5 | 13.0 | 12.0 |
| 2 | 5.5 | 4.5 | --- | --- | 6.5 | 5.5 | 10.5 | 8.5 | 13.0 | 10.5 | 12.0 | 11.5 |
| 3 | 6.0 | 4.5 | --- | --- | 6.0 | 5.5 | 10.5 | 8.5 | 12.0 | 11.0 | 12.0 | 11.0 |
| 4 | 6.0 | 5.0 | --- | --- | 8.0 | 5.5 | 9.5 | 8.5 | 12.0 | 10.5 | 13.0 | 11.0 |
| 5 | 5.5 | 5.0 | --- | --- | 8.0 | 5.5 | 10.0 | 8.5 | 12.0 | 10.5 | 12.0 | 11.5 |
| 6 | 6.0 | 5.0 | --- | --- | 7.0 | 5.5 | 9.5 | 8.5 | 12.0 | 10.5 | 12.0 | 11.5 |
| 7 | 6.0 | 4.5 | --- | --- | 6.0 | 5.5 | 9.5 | 8.0 | 10.5 | 10.5 | 11.5 | 11.0 |
| 8 | 6.0 | 5.0 | --- | --- | 5.5 | 5.5 | 9.5 | 8.5 | 12.0 | 10.5 | 12.0 | 11.0 |
| 9 | 5.5 | 5.0 | --- | --- | 5.5 | 5.5 | 9.5 | 8.5 | 12.0 | 11.0 | 11.5 | 11.5 |
| 10 | 6.0 | 5.0 | --- | --- | 5.5 | 5.5 | 10.5 | 8.5 | 12.0 | 11.0 | 11.5 | 11.0 |
| 11 | 6.5 | 5.0 | --- | --- | 7.0 | 5.5 | 11.0 | 9.0 | 13.0 | 11.0 | 11.0 | 10.5 |
| 12 | 6.0 | 5.0 | --- | --- | 8.0 | 5.5 | 10.5 | 9.5 | 13.0 | 11.0 | 11.0 | 10.5 |
| 13 | 5.0 | 4.5 | --- | --- | 8.5 | 5.5 | 11.0 | 9.0 | 13.0 | 11.5 | 11.0 | 10.0 |
| 14 | 5.0 | 5.0 | --- | --- | 8.5 | 6.0 | 10.5 | 9.0 | 13.5 | 11.5 | 11.0 | 10.0 |
| 15 | 6.0 | 5.0 | --- | --- | 8.5 | 6.0 | 11.0 | 9.0 | 13.5 | 11.5 | 12.0 | 11.0 |
| 16 | 5.5 | 5.0 | --- | --- | 8.5 | 6.5 | 11.0 | 9.5 | 13.0 | 11.5 | 12.0 | 11.0 |
| 17 | 6.5 | 5.5 | --- | --- | 9.0 | 6.5 | 11.0 | 9.5 | 13.0 | 11.5 | 12.0 | 11.0 |
| 18 | 6.5 | 5.5 | 6.5 | 5.5 | 9.5 | 7.0 | 10.5 | 9.5 | 13.0 | 11.5 | 12.0 | 11.5 |
| 19 | 6.0 | 5.5 | 8.0 | 5.5 | 9.5 | 8.0 | 10.0 | 9.5 | 12.0 | 11.0 | 12.0 | 11.5 |
| 20 | 6.0 | 5.5 | 7.0 | 5.5 | 9.5 | 8.0 | 9.5 | 9.5 | 12.0 | 11.0 | 13.0 | 12.0 |
| 21 | 6.0 | 5.5 | 6.5 | 5.0 | 8.0 | 8.0 | 11.0 | 9.5 | 12.0 | 11.5 | 13.0 | 11.5 |
| 22 | 6.0 | 5.5 | 6.5 | 5.0 | 8.5 | 7.0 | 11.0 | 9.0 | 12.0 | 11.0 | 13.0 | 11.0 |
| 23 | 6.5 | 5.5 | 5.5 | 5.5 | 9.0 | 8.0 | 11.5 | 9.5 | 12.0 | 11.5 | 11.0 | 10.5 |
| 24 | 6.5 | 5.5 | 5.5 | 5.5 | 9.5 | 8.0 | 12.0 | 10.0 | 11.5 | 10.5 | 11.0 | 10.5 |
| 25 | 6.5 | 6.0 | 7.0 | 5.0 | 9.5 | 8.0 | 12.0 | 10.5 | 12.0 | 10.5 | 11.5 | 11.0 |
| 26 | 6.5 | 5.5 | 7.0 | 5.5 | 9.0 | 8.0 | 11.5 | 10.5 | 12.0 | 11.0 | 11.5 | 11.0 |
| 27 | 6.0 | 5.0 | 6.5 | 5.5 | 9.0 | 8.0 | 11.5 | 10.5 | 12.0 | 11.0 | 11.5 | 11.0 |
| 28 | --- | --- | 6.0 | 5.5 | 8.5 | 8.0 | 12.0 | 10.5 | 12.0 | 11.0 | 11.5 | 11.0 |
| 29 | --- | --- | 6.0 | 5.5 | 9.5 | 8.5 | 12.0 | 10.5 | 13.5 | 11.5 | 11.0 | 11.0 |
| 30 | --- | --- | 5.5 | 5.5 | 9.5 | 7.0 | 11.5 | 10.5 | 13.5 | 11.5 | 11.0 | 11.0 |
| 31 | --- | --- | 8.0 | 5.5 | --- | --- | 13.0 | 10.5 | 13.5 | 12.0 | --- | --- |
| MONTH | 6.5 | 4.5 | --- | --- | 9.5 | 5.5 | 13.0 | 8.0 | 13.5 | 10.5 | 13.0 | 10.0 |
| YEAR | 13.5 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12142500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 11.0 | 11.0 | 9.0 | 8.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 6.0 | 5.0 |
| 2 | 11.0 | 10.0 | 8.0 | 8.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 3 | 10.0 | 10.0 | 8.0 | 8.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 5.0 |
| 4 | 10.0 | 10.0 | --- | --- | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 5 | 10.0 | 10.0 | --- | --- | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 5.0 |
| 6 | 10.0 | 10.0 | --- | --- | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 7 | 10.0 | 10.0 | --- | --- | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 8 | 11.0 | 10.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 9 | 11.0 | 11.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 10 | 11.0 | 11.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 11 | 11.0 | 11.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 12 | 11.0 | 11.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 5.0 |
| 13 | 11.0 | 11.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 14 | 11.0 | 10.0 | 7.0 | 7.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 15 | 11.0 | 9.0 | 7.0 | 7.0 | 2.0 | 2.0 | 3.0 | 3.0 | 3.0 | 2.0 | 6.0 | 6.0 |
| 16 | 11.0 | 10.0 | 7.0 | 7.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 2.0 | 6.0 | 6.0 |
| 17 | 10.0 | 9.0 | 7.0 | 7.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 18 | 9.0 | 9.0 | 7.0 | 7.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 19 | 9.0 | 9.0 | 7.0 | 6.0 | 2.0 | 2.0 | 3.0 | 3.0 | 4.0 | 3.0 | 6.0 | 6.0 |
| 20 | 9.0 | 9.0 | 6.0 | 6.0 | 2.0 | 2.0 | 3.0 | 3.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 21 | 9.0 | 9.0 | 6.0 | 6.0 | 2.0 | 1.0 | 3.0 | 3.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 22 | 9.0 | 9.0 | 6.0 | 6.0 | 2.0 | 1.0 | 4.0 | 3.0 | 5.0 | 4.0 | 6.0 | 5.0 |
| 23 | 9.0 | 9.0 | 6.0 | 6.0 | 2.0 | 2.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| 24 | 9.0 | 9.0 | 6.0 | 5.0 | 3.0 | 2.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| 25 | 9.0 | 9.0 | 5.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| 26 | 9.0 | 9.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| 27 | 9.0 | 9.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 5.0 | 5.0 | 6.0 | 4.0 |
| 28 | 9.0 | 9.0 | 4.0 | 4.0 | 4.0 | 3.0 | 2.0 | 2.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| 29 | 9.0 | 9.0 | 4.0 | 4.0 | 4.0 | 4.0 | 2.0 | 2.0 | 6.0 | 5.0 | 4.0 | 4.0 |
| 30 | 9.0 | 9.0 | 4.0 | 4.0 | 4.0 | 3.0 | 2.0 | 2.0 | --- | --- | 6.0 | 4.0 |
| 31 | 9.0 | 9.0 | --- | --- | 3.0 | 3.0 | 2.0 | 2.0 | --- | --- | 6.0 | 5.0 |
| MONTH | 11.0 | 9.0 | 9.0 | 4.0 | 4.0 | 1.0 | 4.0 | 2.0 | 6.0 | 2.0 | 6.0 | 4.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 7.0 | 11.0 | 8.0 | 12.0 | 10.0 | 12.0 | 11.0 |
| 2 | 6.0 | 6.0 | 9.0 | 7.0 | 7.0 | 7.0 | 11.0 | 8.0 | 12.0 | 10.0 | 11.0 | 10.0 |
| 3 | 6.0 | 6.0 | 9.0 | 7.0 | 8.0 | 7.0 | 11.0 | 9.0 | 12.0 | 11.0 | 11.0 | 9.0 |
| 4 | 6.0 | 6.0 | 9.0 | 8.0 | 9.0 | 7.0 | 11.0 | 9.0 | 11.0 | 11.0 | 11.0 | 9.0 |
| 5 | 6.0 | 6.0 | 8.0 | 7.0 | 9.0 | 7.0 | 11.0 | 8.0 | 11.0 | 10.0 | 11.0 | 10.0 |
| 6 | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 7.0 | 11.0 | 8.0 | 11.0 | 10.0 | 11.0 | 11.0 |
| 7 | 6.0 | 6.0 | 10.0 | 7.0 | 8.0 | 8.0 | 11.0 | 9.0 | 11.0 | 9.0 | 11.0 | 11.0 |
| 8 | 6.0 | 6.0 | 9.0 | 8.0 | 8.0 | 7.0 | 11.0 | 9.0 | 11.0 | 9.0 | 11.0 | 9.0 |
| 9 | 8.0 | 6.0 | 10.0 | 8.0 | 9.0 | 7.0 | 11.0 | 9.0 | 12.0 | 10.0 | 11.0 | 10.0 |
| 10 | 7.0 | 6.0 | 9.0 | 7.0 | 9.0 | 8.0 | 11.0 | 9.0 | 12.0 | 11.0 | 11.0 | 11.0 |
| 11 | 7.0 | 6.0 | 9.0 | 7.0 | 8.0 | 8.0 | 10.0 | 9.0 | 12.0 | 10.0 | 11.0 | 11.0 |
| 12 | 6.0 | 5.0 | 8.0 | 7.0 | 8.0 | 7.0 | 9.0 | 9.0 | 11.0 | 10.0 | 11.0 | 11.0 |
| 13 | 6.0 | 5.0 | 7.0 | 7.0 | 8.0 | 7.0 | 10.0 | 8.0 | 11.0 | 10.0 | 11.0 | 10.0 |
| 14 | 5.0 | 5.0 | 7.0 | 7.0 | 8.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 9.0 |
| 15 | 6.0 | 5.0 | 9.0 | 7.0 | 9.0 | 7.0 | 9.0 | 8.0 | 10.0 | 9.0 | 9.0 | 9.0 |
| 16 | 7.0 | 6.0 | 9.0 | 7.0 | 8.0 | 7.0 | 10.0 | 8.0 | 10.0 | 9.0 | 9.0 | 9.0 |
| 17 | 7.0 | 6.0 | 9.0 | 7.0 | 9.0 | 7.0 | 10.0 | 9.0 | 10.0 | 10.0 | 9.0 | 9.0 |
| 18 | 7.0 | 7.0 | 9.0 | 7.0 | 9.0 | 7.0 | 11.0 | 9.0 | 10.0 | 10.0 | 9.0 | 8.0 |
| 19 | 7.0 | 6.0 | 8.0 | 7.0 | 9.0 | 8.0 | 11.0 | 9.0 | 10.0 | 10.0 | 8.0 | 8.0 |
| 20 | 7.0 | 6.0 | 7.0 | 7.0 | 9.0 | 7.0 | 9.0 | 9.0 | 11.0 | 10.0 | 8.0 | 8.0 |
| 21 | 8.0 | 6.0 | 7.0 | 6.0 | 8.0 | 7.0 | 9.0 | 9.0 | 11.0 | 10.0 | 9.0 | 8.0 |
| 22 | 8.0 | 6.0 | 7.0 | 7.0 | 8.0 | 7.0 | 11.0 | 9.0 | 10.0 | 10.0 | 9.0 | 8.0 |
| 23 | 8.0 | 7.0 | 8.0 | 7.0 | 10.0 | 8.0 | 11.0 | 9.0 | 10.0 | 10.0 | 9.0 | 8.0 |
| 24 | 7.0 | 7.0 | 9.0 | 7.0 | 10.0 | 8.0 | 11.0 | 9.0 | 10.0 | 10.0 | 9.0 | 9.0 |
| 25 | 7.0 | 7.0 | 8.0 | 7.0 | 10.0 | 8.0 | 11.0 | 10.0 | 10.0 | 10.0 | 9.0 | 9.0 |
| 26 | 8.0 | 7.0 | 8.0 | 7.0 | 9.0 | 8.0 | 12.0 | 10.0 | 11.0 | 10.0 | 9.0 | 9.0 |
| 27 | 8.0 | 7.0 | 8.0 | 7.0 | 8.0 | 8.0 | 12.0 | 10.0 | 11.0 | 10.0 | 9.0 | 9.0 |
| 28 | 9.0 | 7.0 | 8.0 | 7.0 | 8.0 | 7.0 | 12.0 | 10.0 | 10.0 | 10.0 | 9.0 | 8.0 |
| 29 | 9.0 | 7.0 | 8.0 | 7.0 | 7.0 | 7.0 | 12.0 | 10.0 | 11.0 | 10.0 | 9.0 | 8.0 |
| 30 | 9.0 | 7.0 | 8.0 | 7.0 | 10.0 | 7.0 | 11.0 | 10.0 | 12.0 | 10.0 | 9.0 | 8.0 |
| 31 | --- | --- | 8.0 | 7.0 | --- | --- | 12.0 | 10.0 | 12.0 | 11.0 | --- | --- |
| MONTH | 9.0 | 5.0 | 10.0 | 6.0 | 10.0 | 7.0 | 12.0 | 8.0 | 12.0 | 9.0 | 12.0 | 8.0 |
| YEAR | 12.0 | 1.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12192500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.0 | 8.0 | 7.0 | 6.0 | 6.0 | 6.0 | 2.0 | 2.0 | 1.0 | 0.0 | 6.0 | 4.0 |
| 2 | 8.0 | 7.0 | 7.0 | 6.0 | 6.0 | 5.0 | 3.0 | 2.0 | 1.0 | 1.0 | 7.0 | 4.0 |
| 3 | 8.0 | 7.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 1.0 | 1.0 | 5.0 | 4.0 |
| 4 | 8.0 | 8.0 | 7.0 | 6.0 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 1.0 | 5.0 | 4.0 |
| 5 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 4.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 6 | 8.0 | 8.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 2.0 | 1.0 | 5.0 | 4.0 |
| 7 | 8.0 | 8.0 | 7.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 1.0 | 1.0 | 5.0 | 4.0 |
| 8 | 8.0 | 8.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 2.0 | 1.0 | 6.0 | 4.0 |
| 9 | 8.0 | 7.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 6.0 | 3.0 |
| 10 | 8.0 | 7.0 | 7.0 | 7.0 | 5.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 3.0 |
| 11 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 7.0 | 3.0 |
| 12 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 7.0 | 3.0 |
| 13 | 8.0 | 8.0 | 7.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 7.0 | 3.0 |
| 14 | 8.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 3.0 |
| 15 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 16 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 17 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 18 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 5.0 | 4.0 |
| 19 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 6.0 | 5.0 |
| 20 | 7.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 6.0 | 5.0 |
| 21 | 7.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 2.0 | 6.0 | 5.0 |
| 22 | 8.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 | 6.0 | 5.0 |
| 23 | 8.0 | 8.0 | 6.0 | 6.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 | 6.0 | 5.0 |
| 24 | 8.0 | 8.0 | 6.0 | 6.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 3.0 | 6.0 | 5.0 |
| 25 | 8.0 | 8.0 | 6.0 | 6.0 | 3.0 | 3.0 | --- | --- | 4.0 | 3.0 | 6.0 | 5.0 |
| 26 | 8.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | --- | --- | 4.0 | 3.0 | 6.0 | 5.0 |
| 27 | 8.0 | 7.0 | 6.0 | 6.0 | 3.0 | 2.0 | --- | --- | 5.0 | 2.0 | 6.0 | 5.0 |
| 28 | 8.0 | 8.0 | 6.0 | 6.0 | 2.0 | 2.0 | --- | --- | 5.0 | 3.0 | 6.0 | 5.0 |
| 29 | 8.0 | 8.0 | 6.0 | 6.0 | 2.0 | 2.0 | 0.0 | 0.0 | --- | --- | 6.0 | 4.0 |
| 30 | 8.0 | 8.0 | 6.0 | 6.0 | 2.0 | 2.0 | 0.0 | 0.0 | --- | --- | 4.0 | 4.0 |
| 31 | 8.0 | 7.0 | --- | --- | 2.0 | 2.0 | 0.0 | 0.0 | --- | --- | 4.0 | 4.0 |
| MONTH | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | 2.0 | 3.0 | 0.0 | 5.0 | 0.0 | 7.0 | 3.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 4.0 | 6.0 | 5.0 | 9.0 | 7.0 | 11.0 | 9.0 | 11.0 | 10.0 | 11.0 | 10.0 |
| 2 | 4.0 | 4.0 | 6.0 | 6.0 | 9.0 | 7.0 | 11.0 | 9.0 | 11.0 | 10.0 | 11.0 | 11.0 |
| 3 | 4.0 | 4.0 | 7.0 | 6.0 | 9.0 | 7.0 | 9.0 | 9.0 | 11.0 | 9.0 | 11.0 | 9.0 |
| 4 | 5.0 | 4.0 | 8.0 | 6.0 | 9.0 | 7.0 | 9.0 | 9.0 | 11.0 | 9.0 | 9.0 | 9.0 |
| 5 | 5.0 | 4.0 | 8.0 | 6.0 | 9.0 | 7.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| 6 | 4.0 | 4.0 | 8.0 | 6.0 | 9.0 | 7.0 | 9.0 | 9.0 | 11.0 | 8.0 | 9.0 | 9.0 |
| 7 | 6.0 | 4.0 | 8.0 | 6.0 | 8.0 | 7.0 | 9.0 | 9.0 | 11.0 | 10.0 | 11.0 | 9.0 |
| 8 | 6.0 | 4.0 | 7.0 | 6.0 | 9.0 | 7.0 | 11.0 | 9.0 | 12.0 | 9.0 | 11.0 | 10.0 |
| 9 | 6.0 | 4.0 | 7.0 | 6.0 | 9.0 | 8.0 | 12.0 | 10.0 | 12.0 | 10.0 | 11.0 | 11.0 |
| 10 | 6.0 | 5.0 | 7.0 | 6.0 | 10.0 | 8.0 | 12.0 | 9.0 | 12.0 | 11.0 | 12.0 | 11.0 |
| 11 | 6.0 | 4.0 | 7.0 | 6.0 | 10.0 | 8.0 | 9.0 | 9.0 | 12.0 | 11.0 | 11.0 | 11.0 |
| 12 | 6.0 | 4.0 | 8.0 | 6.0 | 9.0 | 8.0 | 9.0 | 8.0 | 11.0 | 10.0 | 11.0 | 11.0 |
| 13 | 5.0 | 4.0 | 7.0 | 6.0 | 9.0 | 8.0 | 9.0 | 8.0 | 12.0 | 10.0 | 11.0 | 9.0 |
| 14 | 6.0 | 4.0 | 7.0 | 6.0 | 9.0 | 8.0 | 9.0 | 8.0 | 12.0 | 11.0 | 9.0 | 8.0 |
| 15 | 6.0 | 4.0 | 7.0 | 6.0 | 10.0 | 7.0 | 10.0 | 8.0 | 12.0 | 11.0 | 9.0 | 8.0 |
| 16 | 6.0 | 4.0 | 7.0 | 6.0 | 10.0 | 8.0 | 11.0 | 9.0 | 11.0 | 9.0 | 8.0 | 8.0 |
| 17 | 4.0 | 4.0 | 8.0 | 6.0 | 11.0 | 8.0 | 11.0 | 9.0 | 11.0 | 9.0 | 9.0 | 8.0 |
| 18 | 4.0 | 4.0 | 8.0 | 6.0 | 11.0 | 9.0 | 11.0 | 9.0 | 10.0 | 10.0 | 9.0 | 9.0 |
| 19 | 4.0 | 4.0 | 7.0 | 7.0 | 11.0 | 9.0 | 12.0 | 10.0 | 11.0 | 10.0 | 9.0 | 9.0 |
| 20 | 5.0 | 4.0 | 8.0 | 7.0 | 11.0 | 9.0 | 12.0 | 10.0 | 10.0 | 10.0 | 9.0 | 9.0 |
| 21 | 6.0 | 5.0 | 8.0 | 6.0 | 9.0 | 9.0 | 11.0 | 9.0 | 12.0 | 10.0 | 9.0 | 9.0 |
| 22 | 6.0 | 5.0 | 8.0 | 6.0 | 9.0 | 9.0 | 12.0 | 10.0 | 11.0 | 10.0 | 9.0 | 9.0 |
| 23 | 6.0 | 4.0 | 8.0 | 6.0 | 9.0 | 9.0 | 12.0 | 10.0 | 12.0 | 10.0 | 9.0 | 9.0 |
| 24 | 4.0 | 4.0 | 7.0 | 7.0 | 9.0 | 8.0 | 12.0 | 11.0 | 12.0 | 11.0 | 9.0 | 8.0 |
| 25 | 5.0 | 4.0 | 7.0 | 6.0 | 8.0 | 8.0 | 12.0 | 10.0 | 11.0 | 11.0 | 8.0 | 8.0 |
| 26 | 6.0 | 4.0 | 7.0 | 7.0 | 8.0 | 8.0 | 11.0 | 9.0 | 11.0 | 10.0 | 8.0 | 8.0 |
| 27 | 6.0 | 5.0 | 7.0 | 6.0 | 8.0 | 8.0 | 12.0 | 10.0 | 11.0 | 10.0 | 8.0 | 8.0 |
| 28 | 6.0 | 5.0 | 7.0 | 6.0 | 8.0 | 8.0 | 12.0 | 10.0 | 11.0 | 10.0 | 8.0 | 8.0 |
| 29 | 5.0 | 4.0 | 7.0 | 7.0 | 8.0 | 8.0 | 11.0 | 10.0 | 10.0 | 9.0 | 8.0 | 8.0 |
| 30 | 5.0 | 4.0 | 7.0 | 6.0 | 11.0 | 8.0 | 11.0 | 9.0 | 11.0 | 9.0 | 8.0 | 8.0 |
| 31 | --- | --- | 8.0 | 6.0 | --- | --- | 11.0 | 9.0 | 11.0 | 9.0 | --- | --- |
| MONTH | 6.0 | 4.0 | 8.0 | 5.0 | 11.0 | 7.0 | 12.0 | 8.0 | 12.0 | 8.0 | 12.0 | 8.0 |
| YEAR | 12.0 | 0.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12192500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER . WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | --- | --- | 4.0 | 4.0 | 4.0 | 3.5 |
| 2 | 8.5 | 7.5 | 6.5 | 6.5 | 4.5 | 4.0 | --- | --- | 4.5 | 4.0 | 3.5 | 3.5 |
| 3 | 7.5 | 7.0 | 7.0 | 6.5 | 4.0 | 4.0 | --- | --- | 5.0 | 4.5 | 4.0 | 3.5 |
| 4 | 7.0 | 6.5 | 7.0 | 6.5 | 4.5 | 4.0 | --- | --- | 5.0 | 5.0 | 4.0 | 3.5 |
| 5 | 7.0 | 6.5 | 6.5 | 6.5 | 4.5 | 4.5 | --- | --- | 5.0 | 5.0 | 4.0 | 3.5 |
| 6 | 7.5 | 7.0 | 6.5 | 6.5 | --- | --- | --- | --- | 5.0 | 4.5 | 4.5 | 4.0 |
| 7 | 7.5 | 7.5 | 6.5 | 6.5 | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 |
| 8 | 7.5 | 7.5 | 6.5 | 6.5 | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.5 |
| 9 | 7.5 | 7.0 | 6.5 | 6.5 | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 |
| 10 | 7.0 | 7.0 | 6.5 | 6.0 | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 |
| 11 | 7.0 | 6.5 | 6.0 | 6.0 | --- | --- | --- | --- | 5.0 | 5.0 | 4.5 | 4.0 |
| 12 | 6.5 | 6.0 | 6.0 | 6.0 | --- | --- | --- | --- | 5.5 | 5.0 | 4.5 | 4.5 |
| 13 | 6.0 | 5.5 | 6.0 | 6.0 | --- | --- | --- | --- | 5.5 | 5.5 | 5.5 | 4.5 |
| 14 | 5.5 | 5.0 | 6.0 | 6.0 | --- | --- | --- | --- | 5.5 | 5.5 | 5.5 | 5.5 |
| 15 | 5.5 | 5.5 | 6.0 | 6.0 | --- | --- | 3.5 | 3.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| 16 | 5.5 | 5.5 | 6.0 | 5.0 | --- | --- | 3.5 | 3.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| 17 | 5.5 | 5.5 | 5.0 | 4.5 | --- | --- | 3.5 | 3.5 | 5.5 | 5.5 | 5.5 | 5.0 |
| 18 | 5.5 | 5.0 | 5.0 | 4.5 | --- | --- | 3.5 | 3.5 | 5.5 | 5.5 | 5.0 | 4.5 |
| 19 | 5.5 | 5.0 | 5.0 | 5.0 | --- | --- | 3.5 | 3.5 | 5.5 | 5.5 | 5.0 | 4.5 |
| 20 | 6.0 | 5.5 | 5.0 | 5.0 | --- | --- | 4.0 | 3.5 | 5.5 | 5.0 | 5.0 | 4.5 |
| 21 | 6.5 | 6.0 | 5.0 | 5.0 | --- | --- | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 22 | 6.5 | 6.5 | 5.0 | 5.0 | --- | --- | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 23 | 6.5 | 6.5 | 5.0 | 5.0 | --- | --- | 4.5 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 24 | 6.5 | 6.5 | 5.0 | 5.0 | --- | --- | 4.5 | 4.5 | 5.0 | 4.5 | 6.0 | 5.0 |
| 25 | 6.5 | 6.5 | 5.0 | 4.5 | --- | --- | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 5.0 |
| 26 | 6.5 | 6.5 | 5.0 | 4.5 | --- | --- | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 5.0 |
| 27 | 6.5 | 6.5 | 4.5 | 4.5 | --- | --- | 4.5 | 4.0 | 4.5 | 4.5 | 6.0 | 5.0 |
| 28 | 6.5 | 6.5 | 4.5 | 4.5 | --- | --- | 4.0 | 4.0 | 4.5 | 4.0 | 6.0 | 5.0 |
| 29 | 6.5 | 6.5 | 4.5 | 4.5 | --- | --- | 4.0 | 4.0 | --- | --- | 6.0 | 5.5 |
| 30 | 6.5 | 6.5 | 4.5 | 4.5 | --- | --- | 4.0 | 4.0 | --- | --- | 6.0 | 5.0 |
| 31 | 6.5 | 6.5 | --- | --- | --- | --- | 4.0 | 4.0 | --- | --- | 6.0 | 4.5 |
| MONTH | 8.5 | 5.0 | 7.0 | 4.5 | --- | --- | --- | --- | 5.5 | 4.0 | 6.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 5.0 | 7.5 | 6.0 | 10.0 | 6.5 | 9.5 | 8.5 | 14.0 | 12.0 | 11.5 | 11.0 |
| 2 | 6.0 | 5.0 | 8.5 | 6.0 | 9.0 | 6.5 | 11.5 | 9.0 | 14.0 | 12.5 | 11.0 | 10.5 |
| 3 | 6.0 | 5.0 | 8.5 | 6.0 | 9.0 | 6.5 | 12.0 | 9.5 | 14.5 | 12.0 | 10.5 | 10.5 |
| 4 | 5.5 | 5.5 | 7.5 | 6.0 | 9.0 | 6.5 | 12.0 | 10.0 | 15.0 | 12.5 | 10.5 | 10.0 |
| 5 | 5.5 | 5.5 | 7.0 | 6.0 | 9.5 | 6.5 | 11.5 | 9.5 | 14.5 | 12.5 | 10.0 | 9.5 |
| 6 | 5.5 | 5.0 | 6.0 | 5.5 | 10.0 | 7.0 | 11.0 | 9.0 | 14.5 | 12.5 | 9.5 | 9.5 |
| 7 | 5.0 | 4.5 | 7.0 | 5.5 | 9.0 | 7.0 | 12.0 | 9.5 | 14.0 | 12.5 | 9.5 | 9.5 |
| 8 | 5.0 | 4.5 | 7.0 | 6.0 | 8.5 | 7.0 | 12.5 | 10.5 | 12.5 | 11.5 | 9.5 | 9.0 |
| 9 | 5.0 | 5.0 | 6.0 | 5.5 | 8.5 | 7.0 | 12.5 | 10.5 | 13.5 | 11.0 | 9.5 | 8.5 |
| 10 | 5.0 | 4.5 | 6.0 | 5.0 | 7.0 | 6.5 | 12.0 | 10.5 | 13.5 | 11.0 | 9.5 | 8.5 |
| 11 | 5.0 | 4.5 | 6.5 | 5.5 | 8.5 | 6.5 | 12.5 | 10.5 | 14.0 | 12.0 | 9.5 | 8.5 |
| 12 | 5.5 | 4.5 | 6.5 | 5.5 | 9.5 | 6.5 | 12.5 | 10.5 | 13.5 | 11.5 | 9.0 | 7.0 |
| 13 | 5.5 | 4.5 | 6.5 | 6.0 | 9.5 | 8.5 | 12.5 | 10.5 | 12.5 | 11.5 | 7.5 | 7.0 |
| 14 | 6.0 | 4.5 | 7.0 | 6.0 | 9.0 | 8.5 | 12.5 | 11.0 | 12.5 | 10.5 | 8.5 | 7.5 |
| 15 | 6.0 | 5.0 | 9.5 | 6.5 | 8.5 | 7.0 | 14.0 | 11.5 | 12.5 | 11.0 | 8.5 | 7.5 |
| 16 | 6.0 | 5.0 | 9.0 | 6.0 | 8.5 | 7.0 | 12.5 | 11.5 | 12.5 | 11.5 | 9.0 | 8.5 |
| 17 | 6.5 | 5.0 | 7.5 | 5.5 | 10.0 | 7.0 | 13.5 | 11.5 | 12.0 | 10.5 | 8.5 | 8.5 |
| 18 | 6.5 | 5.5 | 7.5 | 5.0 | 10.5 | 8.5 | 13.5 | 11.5 | 12.5 | 10.5 | 8.5 | 8.5 |
| 19 | 5.5 | 5.5 | 7.5 | 5.5 | 10.5 | 7.5 | 14.0 | 11.5 | 12.5 | 10.5 | 8.5 | 7.5 |
| 20 | 5.5 | 5.5 | 7.5 | 6.0 | 11.0 | 8.5 | 14.0 | 12.0 | 12.5 | 11.0 | 8.5 | 7.5 |
| 21 | 6.0 | 5.5 | 7.5 | 6.0 | 10.5 | 9.0 | 13.5 | 12.0 | 12.5 | 11.0 | 8.5 | 8.5 |
| 22 | 6.0 | 6.0 | 7.5 | 6.0 | 10.5 | 8.5 | 12.0 | 11.0 | 13.5 | 11.5 | 8.5 | 7.5 |
| 23 | 6.0 | 6.0 | 8.5 | 6.0 | 11.0 | 8.5 | 12.0 | 11.0 | 13.5 | 11.5 | 8.5 | 7.5 |
| 24 | 6.0 | 4.0 | 9.0 | 6.0 | 10.5 | 9.0 | 12.5 | 11.5 | 12.0 | 11.5 | 7.5 | 6.5 |
| 25 | 5.0 | 4.0 | 8.5 | 6.0 | 11.5 | 9.0 | 12.5 | 11.5 | 12.0 | 11.5 | 7.0 | 6.5 |
| 26 | 5.5 | 5.0 | 7.5 | 6.0 | 10.5 | 9.5 | 12.0 | 11.5 | 12.0 | 10.5 | 9.0 | 7.0 |
| 27 | 5.5 | 5.5 | 6.5 | 6.0 | 10.5 | 9.0 | 11.5 | 11.0 | 12.0 | 10.5 | 9.0 | 8.5 |
| 28 | 7.0 | 5.5 | 6.5 | 6.0 | 9.0 | 8.5 | 11.5 | 11.0 | 11.5 | 11.0 | 9.0 | 8.5 |
| 29 | 7.0 | 5.5 | 6.5 | 6.0 | 8.5 | 7.5 | 11.5 | 11.0 | 11.0 | 10.0 | 9.0 | 9.0 |
| 30 | 6.5 | 6.0 | 9.0 | 6.5 | 9.0 | 8.5 | 11.5 | 10.5 | 11.0 | 10.0 | 9.0 | 9.0 |
| 31 | --- | --- | 9.0 | 6.5 | --- | --- | 12.5 | 10.5 | 11.5 | 10.5 | --- | --- |
| MONTH | 7.0 | 4.0 | 9.5 | 5.0 | 11.5 | 6.5 | 14.0 | 8.5 | 15.0 | 10.0 | 11.5 | 6.5 |
| YEAR | 15.0 | 3.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 9.0 | 8.5 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 2.0 | 1.5 |
| 2 | 9.0 | 9.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.0 | 3.5 | 3.5 | 1.5 | 1.5 |
| 3 | 9.5 | 9.0 | 5.0 | 5.0 | 4.0 | 4.0 | 3.0 | 2.0 | 3.5 | 3.5 | 2.0 | 1.5 |
| 4 | 9.0 | 9.0 | 5.5 | 5.0 | 4.0 | 3.5 | 2.0 | 2.0 | 3.5 | 3.5 | 2.0 | 2.0 |
| 5 | 9.0 | 8.5 | 5.5 | 5.5 | 3.5 | 3.0 | 2.0 | 2.0 | 3.5 | 3.5 | 3.0 | 2.0 |
| 6 | 8.5 | 8.0 | 6.0 | 5.5 | 3.5 | 3.5 | 3.0 | 2.0 | 3.5 | 3.0 | 3.0 | 3.0 |
| 7 | 8.0 | 6.5 | 6.0 | 6.0 | 4.0 | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 8 | 6.5 | 6.5 | 6.0 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.0 |
| 9 | 7.0 | 6.5 | 6.5 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.5 | 3.0 | 3.5 | 3.5 |
| 10 | 8.0 | 7.0 | 6.5 | 6.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.5 | 3.5 | 3.5 |
| 11 | 8.0 | 8.0 | 6.5 | 6.0 | 4.0 | 4.0 | 3.0 | 2.0 | 4.0 | 4.0 | 3.5 | 3.5 |
| 12 | 8.0 | 8.0 | 6.5 | 6.0 | 4.0 | 4.0 | 2.0 | 1.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 13 | 8.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 1.5 | 1.5 | 4.0 | 4.0 | 4.0 | 3.5 |
| 14 | 7.0 | 6.0 | 6.0 | 5.5 | 4.0 | 4.0 | 1.5 | 1.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 15 | 6.0 | 6.0 | 6.0 | 5.5 | 4.5 | 4.0 | 1.5 | 1.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 16 | 6.0 | 6.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 1.5 | 4.0 | 4.0 | 3.5 | 3.5 |
| 17 | 6.5 | 6.0 | 6.0 | 6.0 | 4.5 | 4.5 | 3.0 | 3.0 | 4.0 | 4.0 | 3.5 | 3.0 |
| 18 | 7.0 | 6.5 | 6.0 | 5.5 | 4.5 | 4.0 | 3.5 | 3.0 | 4.0 | 4.0 | 3.5 | 3.0 |
| 19 | 7.0 | 7.0 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.0 | 4.0 | 4.0 | 3.5 | 3.0 |
| 20 | 7.0 | 7.0 | 5.5 | 4.5 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.0 | 3.5 |
| 21 | 7.0 | 6.5 | 4.5 | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.0 | 3.5 |
| 22 | 6.5 | 6.5 | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 2.0 | 4.0 | 4.0 | 4.0 | 3.5 |
| 23 | 6.5 | 6.5 | 3.5 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 | 4.0 | 4.0 | 4.0 | 3.5 |
| 24 | 6.5 | 5.5 | 4.0 | 3.5 | 3.5 | 3.0 | 2.0 | 1.5 | 4.0 | 3.5 | 4.0 | 4.0 |
| 25 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 2.0 | 1.5 | 3.5 | 3.5 | 4.5 | 4.0 |
| 26 | 5.5 | 5.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.0 | 2.0 | 3.5 | 3.0 | 4.5 | 4.0 |
| 27 | 5.5 | 4.5 | 4.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 28 | 5.0 | 4.5 | 4.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 2.0 | 4.0 | 4.0 |
| 29 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | --- | --- | 4.0 | 4.0 |
| 30 | 5.0 | 5.0 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 2.0 | --- | --- | 4.0 | 4.0 |
| 31 | 5.0 | 5.0 | --- | --- | 3.5 | 3.0 | 3.0 | 3.0 | --- | --- | 5.0 | 4.0 |
| MONTH | 9.5 | 4.5 | 6.5 | 2.0 | 4.5 | 2.0 | 3.5 | 1.5 | 4.0 | 2.0 | 5.0 | 1.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 4.5 | 8.0 | 6.0 | 6.5 | 6.0 | 7.0 | 6.5 | 11.0 | 9.5 | 10.5 | 9.5 |
| 2 | 5.5 | 5.0 | 7.0 | 5.5 | 6.5 | 6.5 | 8.5 | 6.0 | 11.0 | 9.5 | 9.5 | 9.5 |
| 3 | 5.5 | 4.5 | 7.0 | 5.0 | 6.5 | 6.5 | 8.5 | 5.5 | 10.5 | 9.5 | 9.5 | 9.5 |
| 4 | 6.0 | 4.5 | 6.0 | 5.5 | 6.5 | 6.5 | 8.0 | 6.5 | 11.5 | 9.5 | 10.5 | 9.5 |
| 5 | 6.0 | 4.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 11.5 | 10.0 | 10.5 | 10.5 |
| 6 | 6.0 | 5.0 | 8.0 | 5.5 | 8.5 | 6.0 | 6.5 | 6.0 | 11.5 | 10.5 | 10.5 | 10.0 |
| 7 | 5.5 | 5.0 | 8.0 | 5.5 | 8.0 | 6.5 | 8.5 | 5.5 | 13.0 | 10.0 | 10.0 | 9.5 |
| 8 | 5.0 | 5.0 | 8.0 | 5.5 | 6.5 | 6.5 | 8.5 | 6.5 | 12.0 | 10.5 | 10.0 | 9.5 |
| 9 | 5.0 | 5.0 | 7.0 | 6.0 | 8.5 | 6.0 | 7.0 | 7.0 | 11.5 | 10.5 | 11.0 | 10.0 |
| 10 | 5.0 | 5.0 | 8.0 | 5.5 | 8.0 | 6.5 | 7.0 | 6.5 | 12.0 | 10.5 | 11.0 | 10.0 |
| 11 | 5.5 | 5.0 | 8.0 | 5.5 | 7.0 | 6.5 | 7.0 | 6.0 | 12.0 | 10.5 | 10.0 | 10.0 |
| 12 | 6.0 | 4.5 | 6.5 | 5.5 | 8.5 | 6.5 | 9.5 | 7.0 | 12.0 | 10.5 | 10.5 | 9.5 |
| 13 | 6.5 | 5.0 | 6.0 | 5.5 | 8.0 | 6.5 | 9.5 | 7.0 | 12.0 | 10.5 | 10.5 | 10.0 |
| 14 | 6.5 | 5.0 | 6.0 | 4.5 | 6.5 | 6.5 | 10.0 | 7.0 | 11.5 | 11.0 | 10.0 | 9.0 |
| 15 | 6.0 | 5.0 | 6.0 | 5.5 | 6.5 | 6.5 | 10.0 | 7.0 | 11.5 | 10.5 | 9.5 | 9.0 |
| 16 | 5.5 | 4.5 | 6.0 | 5.5 | 8.0 | 6.5 | 9.5 | 7.0 | 11.5 | 10.5 | 9.5 | 9.0 |
| 17 | 6.0 | 4.5 | 6.5 | 5.5 | 8.5 | 6.5 | 10.0 | 8.0 | 11.0 | 9.5 | 9.5 | 8.5 |
| 18 | 6.0 | 5.0 | 7.0 | 5.5 | 8.5 | 7.0 | 10.5 | 8.0 | 11.5 | 10.5 | 9.5 | 9.0 |
| 19 | 7.0 | 5.0 | 6.5 | 6.0 | 8.0 | 7.0 | 10.0 | 8.5 | 11.5 | 10.0 | 10.0 | 9.0 |
| 20 | 7.0 | 5.5 | 6.0 | 5.5 | 7.0 | 6.5 | 10.5 | 8.5 | 11.5 | 10.5 | 10.0 | 9.5 |
| 21 | 5.5 | 5.0 | 8.5 | 5.5 | 9.0 | 6.5 | 10.5 | 8.5 | 11.0 | 10.0 | 10.0 | 9.0 |
| 22 | 5.5 | 5.0 | 9.0 | 6.0 | 8.0 | 6.5 | 10.5 | 8.5 | 10.5 | 10.5 | 9.0 | 8.5 |
| 23 | 6.0 | 5.5 | 8.5 | 6.0 | 6.5 | 6.5 | 10.5 | 8.5 | 11.0 | 10.0 | 9.0 | 8.5 |
| 24 | 6.0 | 5.5 | 8.0 | 6.0 | 6.5 | 5.5 | 10.5 | 9.0 | 11.5 | 10.0 | 9.0 | 9.0 |
| 25 | 8.0 | 5.5 | 7.0 | 6.5 | 6.0 | 5.5 | 10.5 | 9.0 | 11.5 | 10.5 | 9.0 | 9.0 |
| 26 | 8.0 | 5.5 | 6.5 | 6.0 | 8.0 | 6.0 | 11.0 | 9.0 | 11.5 | 10.5 | 9.0 | 9.0 |
| 27 | 6.5 | 5.5 | 8.5 | 6.0 | 7.0 | 6.5 | 11.0 | 9.0 | 11.5 | 10.0 | 9.0 | 8.5 |
| 28 | 6.0 | 5.5 | 8.5 | 6.0 | 6.5 | 6.0 | 11.0 | 9.0 | 11.0 | 10.5 | 8.5 | 8.5 |
| 29 | 6.5 | 5.5 | 6.5 | 6.0 | 7.0 | 6.0 | 11.5 | 9.5 | 11.5 | 10.5 | 8.5 | 8.0 |
| 30 | 8.0 | 5.5 | 6.5 | 6.0 | 7.0 | 6.0 | 11.5 | 9.5 | 11.5 | 11.0 | 8.5 | 8.0 |
| 31 | --- | --- | 6.0 | 6.0 | --- | --- | 11.5 | 9.5 | 11.0 | 10.5 | --- | --- |
| MONTH | 8.0 | 4.5 | 9.0 | 4.5 | 9.0 | 5.5 | 11.5 | 5.5 | 13.0 | 9.5 | 11.0 | 8.0 |
| YEAR | 13.0 | 1.5 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 8.5 | 8.0 | 4.0 | 4.0 | 5.0 | 4.5 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| 2 | 8.5 | 8.0 | 4.5 | 4.0 | 4.5 | 4.5 | 3.0 | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| 3 | 8.5 | 8.5 | 4.5 | 4.5 | 4.5 | 4.5 | 2.0 | 1.0 | 2.0 | 2.0 | 3.5 | 3.0 |
| 4 | 9.0 | 8.5 | 4.5 | 4.5 | 4.5 | 4.0 | 1.5 | 1.0 | 2.0 | 2.0 | 3.5 | 3.5 |
| 5 | 9.0 | 9.0 | 4.5 | 4.5 | 4.0 | 4.0 | 2.0 | 1.5 | 3.0 | 2.0 | 3.5 | 3.0 |
| 6 | 9.5 | 9.0 | 4.5 | 4.5 | 4.0 | 3.5 | 3.0 | 2.0 | 3.5 | 3.0 | 3.0 | 3.0 |
| 7 | 9.5 | 9.0 | 4.5 | 4.5 | 3.5 | 3.0 | 3.0 | 2.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 8 | 9.0 | 8.5 | 5.0 | 4.5 | 3.0 | 1.5 | 2.0 | 2.0 | 3.5 | 3.5 | 4.0 | 3.5 |
| 9 | 8.5 | 8.5 | 5.5 | 5.0 | 2.0 | 1.5 | 2.0 | 2.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 10 | 8.5 | 8.0 | 5.5 | 5.5 | 3.0 | 2.0 | 2.0 | 1.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 11 | 8.5 | 8.5 | 5.5 | 5.5 | 3.0 | 3.0 | 1.0 | 1.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 12 | 8.5 | 8.0 | 5.5 | 5.5 | 3.0 | 3.0 | 1.5 | 1.0 | 3.5 | 3.5 | 4.0 | 4.0 |
| 13 | 8.0 | 7.0 | 5.5 | 5.5 | 3.0 | 2.0 | 1.5 | 1.5 | 3.5 | 3.5 | 4.0 | 3.5 |
| 14 | 7.0 | 7.0 | 5.5 | 5.5 | 2.0 | 1.5 | 2.0 | 1.5 | 3.5 | 3.5 | 3.5 | 3.0 |
| 15 | 7.0 | 6.0 | 5.5 | 5.5 | 2.0 | 2.0 | 2.0 | 2.0 | 3.5 | 3.5 | 3.0 | 3.0 |
| 16 | 6.0 | 5.5 | 5.5 | 5.5 | 2.0 | 2.0 | 3.0 | 2.0 | 3.5 | 3.5 | 3.5 | 3.0 |
| 17 | 5.5 | 5.0 | 5.5 | 5.5 | 2.0 | 2.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 18 | 5.0 | 5.0 | 5.5 | 5.5 | 3.0 | 2.0 | 3.0 | 2.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| 19 | 5.5 | 5.0 | 5.5 | 5.5 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 3.5 | 3.5 | 3.5 |
| 20 | 5.5 | 5.0 | 6.0 | 5.5 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 3.0 | 4.0 | 3.5 |
| 21 | 5.5 | 5.0 | 6.0 | 5.5 | 3.0 | 3.0 | 3.0 | 2.0 | 3.5 | 3.0 | 3.5 | 3.5 |
| 22 | 5.5 | 5.0 | 5.5 | 5.5 | 3.5 | 3.0 | 3.5 | 3.0 | 3.5 | 3.0 | 3.5 | 3.5 |
| 23 | 6.0 | 5.5 | 5.5 | 5.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 24 | 6.0 | 6.0 | 5.5 | 5.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.5 | 3.0 | 3.5 | 3.0 |
| 25 | 6.0 | 6.0 | 5.5 | 5.0 | 3.5 | 3.0 | 3.0 | 2.0 | 3.5 | 3.5 | 3.5 | 2.0 |
| 26 | 6.0 | 4.5 | 5.0 | 5.0 | 3.0 | 2.0 | 2.0 | 2.0 | 3.5 | 3.0 | 3.0 | 3.0 |
| 27 | 4.5 | 4.0 | 5.0 | 5.0 | 2.0 | 1.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 28 | 4.0 | 3.5 | 5.0 | 5.0 | 1.0 | 1.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 |
| 29 | 4.0 | 3.5 | 5.0 | 5.0 | 1.5 | 1.0 | 3.0 | 2.0 | 3.0 | 3.0 | 4.0 | 3.5 |
| 30 | 4.0 | 4.0 | 5.0 | 5.0 | 1.5 | 1.5 | 2.0 | 2.0 | --- | --- | 4.0 | 3.5 |
| 31 | 4.0 | 4.0 | --- | --- | 3.0 | 1.5 | 2.0 | 2.0 | --- | --- | 4.0 | 3.5 |
| MONTH | 9.5 | 3.5 | 6.0 | 4.0 | 5.0 | 1.0 | 3.5 | 1.0 | 4.0 | 2.0 | 4.0 | 2.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 4.0 | 3.5 | 5.0 | 3.0 | 6.5 | 5.5 | 8.5 | 6.0 | 10.0 | 8.5 | 9.5 | 8.5 |
| 2 | 4.0 | 2.0 | 5.0 | 4.0 | 7.0 | 5.0 | 9.0 | 6.5 | 10.5 | 9.0 | 10.0 | 8.5 |
| 3 | 4.0 | 2.0 | 5.5 | 4.0 | 7.0 | 5.5 | 9.0 | 6.5 | 10.5 | 8.5 | 10.0 | 9.0 |
| 4 | 4.0 | 3.5 | 6.0 | 3.5 | 7.0 | 5.5 | 9.0 | 6.5 | 10.5 | 9.0 | 10.5 | 9.5 |
| 5 | 3.5 | 3.5 | 5.5 | 3.5 | 7.0 | 5.5 | 9.0 | 6.5 | 10.5 | 9.0 | 10.5 | 9.5 |
| 6 | 3.5 | 3.5 | 4.5 | 4.0 | 7.0 | 5.5 | 9.0 | 7.0 | 11.0 | 9.0 | 9.5 | 8.5 |
| 7 | 3.5 | 2.0 | 5.5 | 4.0 | 6.5 | 6.0 | 8.5 | 7.0 | 11.0 | 9.0 | 8.5 | 8.5 |
| 8 | 3.0 | 2.0 | 4.5 | 4.0 | 8.0 | 6.0 | 8.0 | 6.5 | 11.0 | 9.5 | 8.5 | 8.5 |
| 9 | 3.0 | 2.0 | 4.0 | 4.0 | 7.0 | 6.0 | 7.0 | 6.5 | 11.0 | 9.5 | 8.5 | 8.0 |
| 10 | 3.0 | 2.0 | 4.5 | 4.0 | 6.5 | 6.0 | 7.0 | 6.5 | 10.5 | 9.0 | 9.0 | 8.0 |
| 11 | 3.0 | 2.0 | 5.0 | 4.0 | 6.5 | 6.0 | 7.0 | 7.0 | 10.5 | 9.0 | 9.0 | 8.0 |
| 12 | 3.0 | 3.0 | 6.0 | 4.0 | 6.5 | 6.0 | 7.0 | 7.0 | 10.0 | 8.5 | 9.5 | 8.5 |
| 13 | 3.0 | 3.0 | 6.0 | 4.0 | 6.5 | 6.0 | 7.0 | 6.5 | 10.0 | 9.0 | 9.5 | 8.5 |
| 14 | 3.0 | 3.0 | 5.0 | 4.0 | 6.5 | 6.0 | 9.0 | 6.5 | 10.0 | 9.0 | 9.5 | 8.5 |
| 15 | 4.0 | 3.0 | 4.5 | 4.0 | 6.5 | 6.0 | 9.5 | 7.0 | 9.0 | 9.0 | 9.5 | 9.0 |
| 16 | 3.5 | 2.0 | 5.0 | 4.0 | 6.5 | 6.5 | 10.0 | 8.0 | 10.0 | 9.0 | 9.5 | 9.5 |
| 17 | 3.5 | 2.0 | 4.5 | 4.5 | 6.5 | 6.5 | 9.5 | 8.0 | 10.0 | 9.0 | 9.5 | 8.5 |
| 18 | 3.5 | 3.0 | 5.0 | 4.0 | 9.0 | 6.5 | 9.0 | 8.0 | 10.0 | 9.0 | 8.5 | 7.0 |
| 19 | 3.0 | 2.0 | 6.5 | 4.0 | 9.0 | 6.5 | 9.0 | 7.0 | 10.0 | 9.0 | 8.0 | 7.0 |
| 20 | 3.0 | 2.0 | 6.0 | 4.5 | 8.5 | 6.5 | 9.0 | 7.0 | 10.5 | 9.0 | 7.0 | 7.0 |
| 21 | 3.0 | 2.0 | 5.0 | 4.0 | 6.5 | 6.5 | 9.5 | 8.0 | 10.5 | 10.0 | 7.0 | 7.0 |
| 22 | 4.0 | 1.5 | 5.0 | 5.0 | 7.0 | 6.5 | 9.5 | 8.0 | 10.0 | 9.5 | 7.0 | 7.0 |
| 23 | 4.0 | 2.0 | 5.0 | 4.5 | 7.0 | 6.5 | 9.5 | 8.0 | 10.0 | 9.0 | 7.0 | 6.0 |
| 24 | 4.5 | 4.0 | 5.0 | 4.5 | 8.0 | 6.5 | 9.5 | 8.0 | 11.0 | 9.5 | 6.5 | 6.0 |
| 25 | 4.0 | 3.5 | 6.5 | 4.5 | 8.0 | 6.5 | 9.5 | 8.5 | 11.0 | 9.5 | 6.5 | 6.0 |
| 26 | 5.0 | 3.5 | 8.0 | 5.0 | 6.5 | 6.5 | 9.5 | 8.5 | 11.0 | 10.0 | 6.0 | 5.5 |
| 27 | 5.5 | 3.5 | 6.5 | 5.0 | 6.5 | 6.5 | 10.0 | 8.5 | 11.0 | 10.0 | 5.5 | 5.5 |
| 28 | 5.0 | 3.0 | 6.5 | 5.0 | 8.5 | 6.5 | 10.0 | 8.5 | 10.5 | 9.5 | 6.0 | 5.5 |
| 29 | 3.5 | 3.0 | 6.5 | 4.5 | 9.0 | 7.0 | 10.0 | 8.5 | 10.5 | 9.5 | 6.0 | 5.5 |
| 30 | 4.0 | 2.0 | 6.0 | 4.5 | 9.0 | 6.5 | 10.5 | 8.5 | 10.5 | 9.0 | 7.0 | 6.0 |
| 31 | --- | --- | 6.0 | 5.0 | --- | --- | 10.5 | 8.5 | 9.5 | 8.5 | --- | --- |
| MONTH | 5.5 | 1.5 | 8.0 | 3.0 | 9.0 | 5.0 | 10.5 | 6.0 | 11.0 | 8.5 | 10.5 | 5.5 |
| YEAR | 11.0 | 1.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12182500
CASCADE RIVER AT MARBLEMOUNT, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 7.0 | 7.0 | 5.0 | 4.5 | 5.0 | 4.5 | 3.5 | 3.0 | 3.0 | 3.0 | 4.5 | 4.5 |
| 2 | 7.0 | 6.5 | 5.5 | 5.0 | 5.0 | 4.5 | 3.5 | 3.0 | 3.5 | 3.0 | 4.5 | 4.0 |
| 3 | 8.0 | 7.0 | 6.0 | 5.5 | 4.5 | 3.0 | 3.5 | 1.5 | 3.5 | 3.5 | 4.0 | 4.0 |
| 4 | 8.0 | 6.5 | 6.0 | 5.5 | 3.0 | 2.0 | 1.5 | 1.0 | 3.5 | 3.0 | 4.5 | 4.0 |
| 5 | 6.5 | 5.5 | 6.0 | 6.0 | 2.0 | 2.0 | 1.0 | 1.0 | 3.0 | 2.0 | 4.5 | 4.5 |
| 6 | 6.5 | 6.0 | 6.0 | 5.5 | 2.0 | 1.5 | 1.0 | 0.5 | 2.0 | 2.0 | 4.5 | 4.5 |
| 7 | 7.0 | 6.0 | 5.5 | 5.5 | 1.5 | 0.5 | 0.5 | 0.5 | 2.0 | 1.5 | 4.5 | 4.5 |
| 8 | 7.0 | 7.0 | 5.5 | 5.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.5 | 1.5 | 4.5 | 4.5 |
| 9 | 8.0 | 6.5 | 5.5 | 5.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2.0 | 1.5 | 4.5 | 4.5 |
| 10 | 6.5 | 5.5 | 5.5 | 5.5 | 0.5 | 0.5 | 1.0 | 0.5 | 2.0 | 2.0 | 4.5 | 3.5 |
| 11 | 6.0 | 5.0 | 5.5 | 5.0 | 1.5 | 0.5 | 1.5 | 1.0 | 3.0 | 2.0 | 4.5 | 3.5 |
| 12 | 6.0 | 5.5 | 5.5 | 5.0 | 1.5 | 1.0 | 2.0 | 1.5 | 3.0 | 3.0 | 4.5 | 4.5 |
| 13 | 6.5 | 6.0 | 5.0 | 5.0 | 1.0 | 0.5 | 2.0 | 2.0 | 3.0 | 3.0 | 4.5 | 4.0 |
| 14 | 6.5 | 6.5 | 5.5 | 5.0 | 0.5 | 0.0 | 3.0 | 2.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 15 | 6.5 | 6.0 | 5.5 | 5.5 | 0.5 | 0.0 | 3.0 | 3.0 | 4.0 | 3.0 | 4.5 | 4.0 |
| 16 | 6.0 | 5.5 | 5.5 | 5.0 | 0.5 | 0.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 17 | 5.5 | 5.5 | 5.0 | 5.0 | 1.5 | 0.5 | 3.0 | 3.0 | 4.5 | 4.0 | 4.5 | 3.5 |
| 18 | 6.0 | 5.5 | 5.0 | 5.0 | 2.0 | 1.0 | 3.0 | 3.0 | 4.5 | 4.0 | 3.5 | 3.5 |
| 19 | 6.0 | 5.5 | 5.0 | 5.0 | 2.0 | 1.5 | 3.0 | 3.0 | 4.0 | 3.5 | 4.5 | 3.5 |
| 20 | 6.0 | 6.0 | 5.0 | 4.5 | 3.0 | 1.5 | 3.0 | 3.0 | 3.5 | 3.5 | 4.5 | 4.5 |
| 21 | 6.5 | 6.0 | 4.5 | 4.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.5 | 3.0 | 5.0 | 4.5 |
| 22 | 6.5 | 6.5 | 4.5 | 4.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.5 | 3.5 | 5.0 | 4.5 |
| 23 | 6.5 | 6.5 | 5.0 | 4.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | 5.0 | 4.5 |
| 24 | 6.5 | 6.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.5 | 5.0 | 4.5 |
| 25 | 6.0 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 |
| 26 | 5.5 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 2.0 | 4.5 | 4.0 | 4.5 | 4.5 |
| 27 | 6.0 | 5.5 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 28 | 5.5 | 5.5 | 5.0 | 4.5 | 3.0 | 3.0 | 3.0 | 2.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 29 | 5.5 | 5.0 | 4.5 | 4.5 | 3.5 | 3.0 | 3.0 | 3.0 | --- | --- | 5.0 | 4.5 |
| 30 | 5.0 | 4.5 | 4.5 | 4.5 | 3.0 | 3.0 | 3.0 | 3.0 | --- | --- | 5.0 | 4.5 |
| 31 | 4.5 | 4.5 | --- | --- | 3.5 | 3.0 | 3.0 | 3.0 | --- | --- | 5.0 | 5.0 |
| MONTH | 8.0 | 4.5 | 6.0 | 4.0 | 5.0 | 0.0 | 3.5 | 0.5 | 4.5 | 1.5 | 5.0 | 3.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.0 | 4.5 | 7.0 | 5.5 | 6.0 | 5.5 | 9.0 | 7.0 | 11.5 | 10.0 | 10.5 | 9.5 |
| 2 | 5.5 | 4.5 | 6.5 | 5.5 | 5.5 | 5.5 | 10.0 | 8.0 | 11.5 | 10.0 | 10.5 | 9.5 |
| 3 | 5.5 | 4.5 | 6.0 | 6.0 | 6.5 | 5.5 | 10.5 | 8.0 | 11.5 | 10.5 | 11.0 | 9.5 |
| 4 | 6.5 | 5.0 | 6.5 | 5.5 | 9.0 | 6.0 | 10.0 | 9.0 | 11.5 | 10.5 | 11.0 | 9.5 |
| 5 | 6.5 | 5.5 | 8.0 | 6.0 | 9.0 | 6.5 | 9.0 | 8.5 | 11.0 | 10.0 | 11.5 | 10.5 |
| 6 | 5.5 | 4.5 | 7.0 | 6.0 | 9.0 | 6.5 | 8.5 | 8.0 | 11.0 | 9.5 | 11.5 | 11.0 |
| 7 | 5.0 | 4.0 | 6.0 | 5.5 | 6.5 | 6.5 | 8.0 | 7.0 | 11.5 | 10.0 | 11.0 | 9.5 |
| 8 | 5.0 | 4.0 | 6.0 | 5.5 | 6.5 | 6.0 | 9.0 | 8.0 | 11.5 | 10.0 | 10.5 | 9.5 |
| 9 | 6.5 | 5.0 | 5.5 | 5.5 | 6.5 | 6.0 | 10.5 | 8.5 | 12.0 | 10.5 | 10.5 | 9.5 |
| 10 | 6.5 | 5.5 | 6.0 | 4.5 | 8.0 | 5.5 | 10.0 | 9.0 | 12.0 | 10.5 | 11.0 | 10.0 |
| 11 | 6.5 | 5.5 | 8.0 | 4.5 | 8.0 | 6.0 | 9.5 | 8.0 | 11.5 | 10.0 | 11.5 | 10.5 |
| 12 | 6.5 | 5.5 | 8.5 | 5.5 | 7.0 | 6.5 | 10.5 | 8.0 | 11.5 | 10.5 | 11.0 | 10.5 |
| 13 | 6.5 | 5.5 | 8.5 | 6.0 | 6.5 | 6.0 | 11.0 | 9.0 | 12.0 | 10.5 | 10.5 | 9.5 |
| 14 | 6.0 | 4.5 | 8.0 | 6.0 | 6.5 | 6.5 | 11.0 | 9.0 | 12.0 | 10.5 | 10.5 | 9.5 |
| 15 | 6.0 | 5.5 | 6.5 | 5.5 | 6.5 | 6.5 | 11.0 | 9.0 | 11.5 | 10.5 | 10.0 | 9.5 |
| 16 | 6.0 | 5.0 | 8.0 | 5.5 | 6.5 | 6.5 | 11.0 | 9.0 | 11.5 | 10.5 | 9.5 | 8.5 |
| 17 | 5.0 | 3.5 | 8.0 | 5.5 | 6.5 | 6.5 | 11.0 | 9.5 | 10.5 | 9.5 | 9.0 | 8.5 |
| 18 | 5.0 | 4.0 | 6.5 | 6.0 | 8.0 | 6.5 | 11.0 | 9.5 | 10.0 | 8.5 | 9.0 | 9.0 |
| 19 | 5.5 | 5.0 | 6.0 | 5.5 | 8.5 | 7.0 | 11.0 | 10.0 | 10.5 | 9.0 | 9.0 | 9.0 |
| 20 | 6.5 | 5.0 | 5.5 | 5.0 | 9.5 | 7.0 | 11.0 | 10.0 | 11.0 | 9.5 | 9.0 | 9.0 |
| 21 | 6.5 | 5.0 | 7.0 | 5.0 | 10.0 | 8.0 | 10.0 | 9.0 | 11.0 | 9.5 | 9.0 | 9.0 |
| 22 | 6.0 | 6.0 | 6.5 | 6.0 | 9.5 | 8.0 | 9.0 | 8.5 | 10.5 | 9.5 | 9.0 | 9.0 |
| 23 | 6.0 | 5.5 | 6.5 | 6.0 | 9.5 | 8.0 | 9.5 | 8.5 | 10.5 | 9.5 | 9.0 | 9.0 |
| 24 | 5.5 | 5.5 | 6.5 | 5.5 | 8.0 | 6.5 | 9.0 | 8.0 | 10.0 | 9.5 | 9.0 | 8.5 |
| 25 | 6.5 | 5.0 | 5.5 | 5.5 | 8.0 | 7.0 | 10.5 | 9.0 | 11.0 | 9.5 | 9.0 | 8.5 |
| 26 | 6.5 | 6.0 | 5.5 | 5.5 | 9.0 | 8.0 | 11.5 | 9.5 | 10.5 | 10.0 | 8.5 | 8.5 |
| 27 | 6.5 | 5.5 | 5.5 | 5.0 | 10.0 | 8.0 | 12.0 | 10.0 | 10.5 | 10.0 | 9.0 | 8.5 |
| 28 | 6.0 | 4.5 | 8.5 | 5.5 | 9.5 | 8.0 | 12.0 | 10.5 | 10.5 | 10.0 | 9.0 | 9.0 |
| 29 | 6.5 | 4.5 | 9.0 | 6.5 | 9.0 | 6.5 | 11.5 | 10.5 | 11.5 | 10.0 | 9.0 | 9.0 |
| 30 | 7.0 | 5.0 | 8.5 | 6.5 | 8.5 | 7.0 | 11.5 | 10.0 | 11.0 | 10.0 | 9.0 | 8.5 |
| 31 | --- | --- | 7.0 | 5.5 | --- | --- | 11.5 | 10.0 | 10.0 | 9.5 | --- | --- |
| MONTH | 7.0 | 3.5 | 9.0 | 4.5 | 10.0 | 5.5 | 12.0 | 7.0 | 12.0 | 8.5 | 11.5 | 8.5 |
| YEAR | 12.0 | 0.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12189500
SAUK RIVER NEAR SAUK, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.5 | --- |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.0 | 4.5 |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 5.0 |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 5.5 |
| 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.0 | 5.0 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 4.5 |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 4.0 |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 4.0 |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 4.0 |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.0 | 4.5 |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.0 | 5.5 |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.0 | 5.0 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.5 | 5.0 |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 5.0 |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 4.5 |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 5.5 |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.5 | 5.5 |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 5.5 |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.5 | 6.5 |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.0 | 5.0 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 5.0 |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.5 | 5.5 | 10.0 | 8.0 | 12.0 | 8.5 | 11.0 | 9.0 | 15.5 | 13.0 | 14.0 | 12.0 |
| 2 | 8.5 | 5.5 | 11.5 | 8.0 | 11.0 | 6.0 | 15.0 | 10.5 | 15.0 | 13.0 | 13.5 | 11.0 |
| 3 | 7.0 | 5.0 | 11.5 | 8.0 | 10.0 | 7.0 | 15.0 | 11.5 | 16.0 | 11.5 | 13.0 | 11.5 |
| 4 | 6.5 | 6.0 | 10.0 | 8.0 | 10.5 | 6.0 | 14.5 | 11.5 | 15.5 | 13.5 | 13.5 | 11.0 |
| 5 | 6.0 | 5.5 | 9.0 | 7.0 | 11.0 | 8.0 | 14.0 | 10.5 | 16.5 | 14.0 | 13.0 | 11.0 |
| 6 | 5.5 | 4.0 | 9.0 | 6.0 | 11.0 | 8.0 | 13.5 | 10.5 | 16.0 | 13.5 | 11.0 | 10.5 |
| 7 | 6.0 | 3.5 | 10.0 | 6.5 | 10.0 | 8.0 | 14.5 | 10.5 | 15.0 | 13.5 | 12.0 | 10.0 |
| 8 | 5.5 | 4.5 | 8.5 | 8.0 | 10.0 | 8.0 | 15.0 | 11.5 | 13.5 | 11.5 | 11.0 | 10.0 |
| 9 | 5.5 | 4.5 | 8.5 | 6.5 | 9.5 | 8.0 | 14.5 | 11.5 | 14.5 | 11.0 | 12.0 | 9.0 |
| 10 | 5.5 | 4.5 | 8.5 | 6.0 | 9.0 | 7.0 | 14.5 | 11.5 | 16.0 | 12.0 | 13.0 | 9.5 |
| 11 | 6.0 | 4.5 | --- | 6.0 | 9.5 | 7.0 | 14.5 | 11.0 | 16.5 | 13.5 | 12.0 | 10.0 |
| 12 | 8.0 | 4.5 | --- | --- | 12.0 | 8.0 | 14.5 | 11.0 | 16.5 | 13.5 | 11.0 | 8.5 |
| 13 | 7.0 | 4.5 | --- | --- | 11.5 | 9.0 | 14.5 | 11.0 | 15.5 | 14.0 | 10.5 | 7.0 |
| 14 | 8.5 | 5.0 | --- | --- | 10.0 | 8.5 | 15.5 | 11.5 | 15.5 | 12.0 | 11.0 | 8.0 |
| 15 | 8.5 | 5.5 | --- | --- | 8.5 | 8.0 | 16.0 | 13.0 | 16.0 | 13.0 | 11.5 | 8.5 |
| 16 | 8.5 | 5.5 | --- | --- | 9.0 | 7.0 | 15.0 | 13.5 | 15.5 | 13.5 | 12.0 | 9.5 |
| 17 | 9.0 | 5.5 | --- | --- | 11.5 | 8.0 | 15.5 | 12.0 | 14.5 | 11.5 | 11.5 | 10.5 |
| 18 | 8.0 | 6.5 | --- | --- | 13.0 | 9.0 | 16.0 | 12.0 | 15.0 | 11.0 | 10.5 | 10.0 |
| 19 | 8.0 | 6.5 | --- | --- | 12.0 | 9.0 | 16.0 | 13.5 | 15.5 | 11.5 | 10.5 | 9.5 |
| 20 | 7.0 | 6.0 | 9.0 | --- | 13.0 | 9.5 | 15.0 | 13.5 | 15.5 | 12.0 | 10.5 | 9.5 |
| 21 | 8.0 | 6.0 | 10.0 | 7.0 | 12.0 | 9.5 | 13.5 | 11.5 | 16.0 | 13.0 | 10.5 | 9.5 |
| 22 | 8.5 | 6.5 | 9.5 | 8.0 | 12.0 | 9.0 | 13.0 | 11.0 | 16.5 | 13.5 | 10.0 | 9.0 |
| 23 | 9.0 | 7.0 | 10.5 | 7.0 | 12.0 | 9.0 | 14.0 | 11.0 | 16.0 | 13.5 | 9.0 | 8.5 |
| 24 | 7.0 | 4.0 | 11.0 | 8.0 | 11.5 | 9.5 | 15.0 | 12.0 | 15.0 | 14.0 | 9.0 | 7.0 |
| 25 | 6.5 | 3.5 | 10.5 | 7.0 | 13.0 | 9.5 | 14.5 | 11.5 | 14.0 | 13.0 | 9.5 | 6.5 |
| 26 | 7.0 | 5.0 | 9.0 | 6.5 | 11.5 | 10.0 | 11.5 | 11.0 | 15.0 | 11.5 | 10.5 | 7.0 |
| 27 | 8.0 | 6.0 | 8.5 | 6.5 | 11.0 | 9.0 | 12.0 | 11.0 | 15.0 | 12.0 | 11.5 | 9.0 |
| 28 | 9.5 | 6.0 | 9.0 | 6.5 | 9.0 | 8.5 | 13.5 | 10.5 | 14.0 | 13.0 | 12.0 | 9.5 |
| 29 | 8.5 | 7.0 | 8.0 | 7.0 | 8.5 | 8.0 | 12.0 | 11.0 | 14.5 | 11.0 | 11.5 | 9.5 |
| 30 | 9.5 | 6.5 | 10.5 | 6.5 | 10.5 | 8.0 | 13.0 | 10.5 | 14.0 | 11.0 | 11.5 | 10.0 |
| 31 | --- | --- | 11.5 | 8.0 | --- | --- | 15.5 | 11.0 | 14.5 | 11.5 | --- | --- |
| MONTH | 9.5 | 3.5 | --- | --- | 13.0 | 7.0 | 16.0 | 9.0 | 16.5 | 11.0 | 14.0 | 6.5 |
| YEAR | 16.5 | 3.5 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12189500
SAUK RIVER NEAR SAUK, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 11.5 | 9.5 | 6.0 | 4.5 | 3.5 | 3.0 | 3.5 | 2.0 | 5.0 | 4.5 | 3.0 | 1.0 |
| 2 | 11.5 | 9.0 | 6.0 | 4.5 | 3.5 | 3.0 | 3.5 | 2.0 | 5.0 | 5.0 | 2.0 | 1.5 |
| 3 | 11.5 | 9.5 | 6.0 | 4.5 | 3.5 | 2.0 | 2.0 | 1.0 | 5.0 | 4.0 | 3.0 | 1.5 |
| 4 | 11.0 | 10.0 | 6.5 | 5.0 | 2.0 | 1.5 | 2.0 | 1.5 | 4.5 | 4.0 | 3.5 | 1.0 |
| 5 | 10.0 | 9.0 | 6.5 | 5.5 | 2.0 | 1.0 | 1.5 | 0.5 | 4.5 | 3.5 | 4.5 | 2.0 |
| 6 | 9.5 | 8.0 | 8.0 | 6.0 | 4.0 | 2.0 | 3.0 | 1.5 | 3.5 | 3.0 | 3.5 | 3.0 |
| 7 | 8.0 | 6.5 | 7.0 | 6.5 | 4.5 | 4.0 | 3.5 | 2.0 | 4.0 | 2.0 | 3.5 | 3.0 |
| 8 | 8.0 | 7.0 | 8.0 | 6.5 | 4.5 | 4.0 | 4.0 | 3.5 | 4.5 | 3.0 | 4.0 | 3.0 |
| 9 | 8.5 | 8.0 | 7.0 | 6.5 | 4.0 | 3.0 | 4.0 | 3.5 | 4.5 | 3.5 | 4.0 | 3.0 |
| 10 | 9.0 | 8.5 | 6.5 | 6.0 | 4.0 | 3.5 | 3.5 | 2.0 | 5.0 | 4.5 | 3.5 | 3.0 |
| 11 | 9.5 | 8.5 | 6.5 | 6.0 | 4.0 | 3.5 | 2.0 | 1.5 | 4.5 | 4.0 | 3.5 | 3.0 |
| 12 | 9.5 | 8.5 | 6.5 | 6.0 | 3.5 | 3.0 | 1.5 | 1.0 | 5.0 | 4.5 | 4.5 | 3.5 |
| 13 | 9.0 | 7.0 | 6.0 | 5.5 | 4.0 | 3.5 | 1.5 | 1.0 | 5.0 | 4.5 | 4.5 | 3.5 |
| 14 | 8.5 | 6.0 | 6.0 | 5.0 | 4.0 | 4.0 | 1.5 | 1.0 | 5.0 | 4.5 | 4.0 | 3.0 |
| 15 | 8.0 | 5.5 | 6.5 | 5.5 | 4.0 | 4.0 | 2.0 | 1.0 | 5.0 | 4.5 | 4.5 | 3.0 |
| 16 | 8.0 | 5.5 | 6.5 | 6.5 | --- | --- | 3.5 | 2.0 | 5.0 | 4.0 | 5.5 | 3.5 |
| 17 | 7.0 | 5.5 | 6.5 | 6.0 | --- | --- | 4.5 | 3.5 | 5.0 | 4.0 | 5.5 | 3.5 |
| 18 | 9.5 | 7.0 | 6.0 | 5.5 | --- | --- | 5.0 | 4.0 | 5.0 | 4.5 | 5.5 | 3.0 |
| 19 | 9.0 | 8.5 | 5.5 | 5.0 | --- | --- | 5.0 | 3.5 | 5.0 | 4.0 | 6.0 | 3.0 |
| 20 | 8.5 | 8.0 | 5.5 | 3.0 | --- | --- | 3.5 | 3.5 | 5.0 | 4.0 | 5.5 | 3.5 |
| 21 | 8.0 | 7.0 | 3.0 | 1.0 | --- | --- | 3.5 | 3.0 | 5.0 | 4.0 | 5.5 | 3.0 |
| 22 | 8.0 | 7.0 | 1.5 | 0.5 | 1.5 | 0.5 | 3.0 | 1.5 | 5.5 | 4.5 | 4.5 | 4.0 |
| 23 | 7.0 | 6.5 | 3.0 | 1.0 | 3.0 | 1.5 | 3.5 | 2.0 | 5.0 | 4.5 | 5.0 | 4.0 |
| 24 | 7.0 | 5.5 | 4.5 | 3.0 | 3.0 | 1.5 | 4.0 | 3.5 | 5.0 | 3.0 | 5.0 | 3.5 |
| 25 | 6.0 | 5.5 | 4.0 | 3.5 | 3.5 | 2.0 | 4.0 | 3.5 | 3.0 | 1.0 | 5.5 | 3.0 |
| 26 | 6.0 | 4.5 | 4.0 | 3.5 | 3.5 | 2.0 | 4.0 | 3.5 | 3.0 | 1.5 | 5.0 | 3.5 |
| 27 | 5.5 | 3.5 | 4.5 | 4.0 | 4.0 | 3.5 | 4.5 | 3.5 | 3.0 | 2.0 | 4.0 | 3.0 |
| 28 | 6.0 | 4.0 | 4.0 | 3.0 | 4.5 | 3.5 | 4.5 | 4.5 | 3.5 | 1.5 | 4.5 | 3.5 |
| 29 | 5.5 | 4.0 | 3.5 | 2.0 | 4.5 | 4.0 | 4.5 | 4.0 | --- | --- | 4.0 | 3.5 |
| 30 | 5.5 | 4.0 | 4.0 | 3.5 | 4.0 | 3.0 | 4.0 | 4.0 | --- | --- | 4.5 | 3.0 |
| 31 | 6.0 | 4.5 | --- | --- | 3.5 | 3.0 | 5.0 | 4.0 | --- | --- | 5.0 | 3.0 |
| MONTH | 11.5 | 3.5 | 8.0 | 0.5 | 4.5 | 0.5 | 5.0 | 0.5 | 5.5 | 1.0 | 6.0 | 1.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 5.5 | 3.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 6.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 6.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 7.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 7.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 6.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 6.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 5.5 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 5.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 5.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | 6.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 7.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 7.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | 6.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 6.0 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 5.5 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | 7.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 7.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | 8.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 8.0 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 6.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | 6.0 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 6.5 | 5.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| YEAR | 11.5 | 0.5 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1961 TO SEPTEMBER 1962

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | --- | --- | --- | --- | --- | --- | 12.0 | 11.0 | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | --- | --- | 12.0 | 11.0 | --- | --- | --- | --- |
| 5 | --- | --- | --- | --- | --- | --- | 11.0 | 11.0 | 12.0 | 11.5 | --- | --- |
| 6 | --- | --- | --- | --- | --- | --- | 11.0 | 10.5 | 11.5 | 11.0 | --- | --- |
| 7 | --- | --- | --- | --- | --- | --- | 12.0 | 10.5 | 11.5 | 11.0 | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | 13.5 | 12.0 | 12.0 | 11.5 | --- | --- |
| 9 | --- | --- | --- | --- | --- | --- | 13.0 | 12.0 | 13.0 | 12.0 | --- | --- |
| 10 | --- | --- | --- | --- | --- | --- | 12.0 | 12.0 | 14.0 | 13.0 | 14.0 | 12.0 |
| 11 | --- | --- | --- | --- | --- | --- | 13.0 | 11.5 | 14.0 | 13.5 | 12.0 | 12.0 |
| 12 | --- | --- | --- | --- | --- | --- | 13.0 | 13.0 | 14.0 | 13.5 | 12.0 | 11.5 |
| 13 | --- | --- | --- | --- | --- | --- | 13.0 | 11.5 | 14.5 | 13.5 | 13.0 | 12.0 |
| 14 | --- | --- | --- | --- | --- | --- | 11.5 | 11.0 | 14.5 | 13.5 | 12.0 | 11.5 |
| 15 | --- | --- | --- | --- | --- | --- | 12.0 | 11.5 | 15.5 | 14.0 | 13.0 | 11.5 |
| 16 | --- | --- | --- | --- | --- | --- | 12.0 | 12.0 | 14.5 | 14.0 | 13.0 | 11.5 |
| 17 | --- | --- | --- | --- | --- | --- | 13.0 | 11.5 | 14.5 | 13.5 | 13.5 | 11.5 |
| 18 | --- | --- | --- | --- | --- | --- | 11.5 | 11.0 | 14.0 | 13.5 | 14.0 | 13.0 |
| 19 | --- | --- | --- | --- | --- | --- | 13.0 | 11.5 | 13.5 | 13.5 | 14.0 | 13.5 |
| 20 | --- | --- | --- | --- | --- | --- | 14.5 | 13.0 | 14.5 | 13.5 | 14.0 | 13.5 |
| 21 | --- | --- | --- | --- | --- | --- | 15.0 | 14.0 | 14.0 | 13.0 | 13.5 | 13.5 |
| 22 | --- | --- | --- | --- | --- | --- | 15.5 | 14.0 | 14.0 | 13.0 | 13.5 | 13.5 |
| 23 | --- | --- | --- | --- | --- | --- | 15.5 | 14.5 | 14.0 | 13.5 | 13.5 | 13.5 |
| 24 | --- | --- | --- | --- | --- | --- | 15.5 | 14.5 | --- | --- | 14.0 | 13.5 |
| 25 | --- | --- | --- | --- | --- | --- | 15.5 | 14.5 | --- | --- | 14.0 | 13.5 |
| 26 | --- | --- | --- | --- | --- | --- | 15.5 | 14.5 | --- | --- | 14.0 | 13.5 |
| 27 | --- | --- | --- | --- | --- | --- | 15.0 | 14.5 | --- | --- | 13.5 | 13.0 |
| 28 | --- | --- | --- | --- | --- | --- | 15.5 | 14.5 | --- | --- | 13.0 | 12.0 |
| 29 | --- | --- | --- | --- | --- | --- | 15.5 | 15.0 | --- | --- | 12.0 | 11.5 |
| 30 | --- | --- | --- | --- | --- | --- | 15.5 | 15.0 | --- | --- | 11.5 | 11.5 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | --- | --- | --- | --- | --- | --- | 15.5 | 10.5 | --- | --- | --- | --- |
| YEAR | 15.5 | 10.5 | | | | | | | | | | |

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1962 TO SEPTEMBER 1963

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

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.5 | 5.5 | 8.0 | 7.0 | 11.5 | 11.0 | 13.5 | 12.0 | 13.5 | 13.0 | 15.0 | 15.0 |
| 2 | 6.5 | 6.0 | 8.0 | 7.0 | 11.0 | 10.5 | 13.5 | 13.0 | 15.0 | 13.5 | 15.0 | 14.5 |
| 3 | 6.5 | 6.0 | 8.0 | 7.0 | 11.0 | 10.0 | 13.5 | 11.5 | 15.5 | 14.5 | 16.0 | 15.0 |
| 4 | 6.0 | 5.5 | 8.0 | 7.0 | 10.5 | 10.0 | 13.5 | 13.0 | 15.5 | 15.0 | 16.0 | 15.0 |
| 5 | 6.0 | 5.5 | 8.5 | 8.0 | 10.5 | 10.0 | 13.5 | 12.0 | 15.5 | 15.5 | 16.0 | 15.5 |
| 6 | 6.0 | 6.0 | 8.5 | 8.0 | 11.5 | 10.0 | 13.0 | 12.0 | 15.5 | 15.0 | 16.0 | 15.5 |
| 7 | 6.0 | 5.5 | 9.0 | 8.0 | 11.5 | 11.0 | 13.5 | 12.0 | 15.5 | 15.0 | 16.0 | 15.5 |
| 8 | --- | --- | 10.0 | 9.0 | 11.0 | 10.0 | 13.5 | 13.0 | 16.5 | 15.5 | 16.0 | 15.5 |
| 9 | --- | --- | 10.0 | 9.0 | 10.5 | 10.0 | 13.0 | 12.0 | 16.5 | 16.0 | 16.0 | 15.5 |
| 10 | --- | --- | 10.0 | 9.0 | 11.0 | 10.0 | 12.0 | 11.5 | 16.0 | 14.5 | 16.0 | 14.5 |
| 11 | --- | --- | 10.0 | 9.5 | 11.0 | 10.5 | 12.0 | 11.5 | 15.5 | 15.0 | 15.0 | 14.5 |
| 12 | --- | --- | 10.0 | 10.0 | 10.5 | 10.0 | 13.0 | 11.5 | 16.0 | 15.0 | 15.0 | 15.0 |
| 13 | --- | --- | 10.5 | 9.5 | 10.5 | 10.0 | 13.5 | 12.0 | 16.0 | 15.0 | 15.0 | 14.5 |
| 14 | --- | --- | 11.0 | 10.5 | 11.5 | 10.5 | 13.5 | 13.5 | 15.0 | 14.0 | 14.5 | 14.0 |
| 15 | --- | --- | 11.0 | 10.5 | 12.0 | 11.5 | 13.5 | 12.0 | 15.0 | 14.0 | 14.0 | 14.0 |
| 16 | --- | --- | 11.0 | 9.5 | 13.0 | 12.0 | 13.5 | 11.5 | 15.5 | 14.5 | 14.0 | 13.5 |
| 17 | --- | --- | 11.5 | 10.5 | 13.5 | 13.0 | 14.5 | 13.5 | 15.5 | 14.5 | 13.5 | 13.0 |
| 18 | --- | --- | 12.0 | 11.0 | 13.0 | 12.0 | 14.5 | 14.0 | 15.5 | 15.0 | 13.5 | 13.0 |
| 19 | --- | --- | 12.0 | 11.5 | 12.0 | 12.0 | 14.5 | 14.0 | 15.0 | 14.0 | 13.5 | 13.0 |
| 20 | --- | --- | 11.5 | 11.0 | 12.0 | 11.5 | 14.5 | 14.0 | 14.0 | 13.5 | 13.5 | 13.0 |
| 21 | --- | --- | 11.0 | 11.0 | 11.5 | 10.5 | 14.0 | 13.5 | 14.0 | 14.0 | 13.5 | 13.5 |
| 22 | --- | --- | 11.0 | 10.5 | 10.5 | 10.5 | 13.5 | 13.0 | 14.5 | 14.0 | 13.5 | 13.5 |
| 23 | --- | --- | 11.0 | 10.0 | 11.0 | 10.5 | 13.5 | 12.0 | 15.5 | 14.5 | 13.5 | 13.0 |
| 24 | 7.0 | 7.0 | 11.0 | 10.5 | 12.0 | 11.0 | 13.5 | 12.0 | 15.0 | 15.0 | 13.0 | 12.0 |
| 25 | 8.5 | 7.0 | 11.5 | 10.5 | 11.5 | 11.0 | 12.0 | 11.5 | 15.0 | 14.5 | 13.0 | 12.0 |
| 26 | 8.5 | 8.0 | 12.0 | 11.0 | 11.5 | 11.0 | 13.5 | 12.0 | 15.5 | 14.5 | 13.0 | 12.0 |
| 27 | 8.0 | 8.0 | 12.0 | 11.0 | 11.5 | 11.0 | 14.5 | 13.5 | 15.5 | 15.0 | 13.0 | 12.0 |
| 28 | 9.5 | 8.0 | 12.0 | 11.5 | 11.0 | 11.0 | 15.5 | 14.5 | 15.5 | 15.0 | 13.5 | 13.0 |
| 29 | 9.5 | 9.5 | 13.0 | 11.5 | 11.5 | 11.0 | 15.5 | 14.5 | 16.0 | 15.0 | 14.0 | 13.5 |
| 30 | 9.5 | 8.0 | 12.0 | 11.5 | 12.0 | 11.0 | 14.5 | 14.0 | 16.5 | 15.5 | 14.0 | 13.5 |
| 31 | --- | --- | 12.0 | 11.5 | --- | --- | 14.0 | 13.5 | 16.5 | 15.0 | --- | --- |
| MONTH | --- | --- | 13.0 | 7.0 | 13.5 | 10.0 | 15.5 | 11.5 | 16.5 | 13.0 | 16.0 | 12.0 |
| YEAR | 16.5 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1963 TO SEPTEMBER 1964

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 13.5 | 13.5 | 9.0 | 9.0 | 5.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 2 | 13.5 | 13.0 | 9.0 | 9.0 | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 3 | 13.0 | 13.0 | 9.0 | 8.5 | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 4 | 13.0 | 13.0 | 8.5 | 8.5 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 |
| 5 | 13.0 | 11.5 | 9.0 | 8.5 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 |
| 6 | 12.0 | 11.0 | 9.0 | 8.5 | 6.0 | 6.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 7 | 12.0 | 11.5 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.5 | 4.5 | 4.0 | 5.0 | 4.5 |
| 8 | 12.0 | 12.0 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 4.5 |
| 9 | 12.0 | 12.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 10 | 12.0 | 12.0 | 8.0 | 8.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 11 | 12.0 | 12.0 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 12 | 13.0 | 11.5 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 13 | 13.5 | 12.0 | 8.0 | 8.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 14 | 13.0 | 12.0 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 15 | 13.0 | 12.0 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 16 | 12.0 | 12.0 | 8.0 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 17 | 13.0 | 12.0 | 8.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 18 | 12.0 | 11.0 | 7.0 | 6.5 | 5.5 | 5.0 | 4.5 | 4.5 | 5.0 | 4.5 | 5.0 | 5.0 |
| 19 | 11.0 | 11.0 | 6.5 | 6.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 4.5 | 5.0 | 5.0 |
| 20 | 11.0 | 10.5 | 6.5 | 6.0 | 5.5 | 5.5 | 4.5 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 21 | 11.0 | 10.5 | 6.0 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 22 | 11.0 | 10.5 | 6.0 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 23 | 10.5 | 10.5 | 6.0 | 6.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 5.0 | 5.5 | 5.5 |
| 24 | 10.5 | 10.0 | 6.0 | 6.0 | 5.5 | 5.0 | 4.0 | 4.0 | 5.0 | 4.5 | 5.5 | 5.5 |
| 25 | 10.0 | 9.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 26 | 9.0 | 9.0 | 6.5 | 6.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 27 | 9.0 | 9.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 4.5 | 5.0 | 5.0 |
| 28 | 9.0 | 9.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 4.5 | 5.5 | 5.0 |
| 29 | 9.0 | 9.0 | 6.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 7.0 | 5.5 |
| 30 | 9.0 | 9.0 | 6.0 | 5.5 | 5.0 | 5.0 | 4.5 | 4.5 | --- | --- | 7.0 | 7.0 |
| 31 | 9.0 | 9.0 | --- | --- | 5.5 | 5.0 | 4.5 | 4.5 | --- | --- | 7.0 | 7.0 |
| MONTH | 13.5 | 9.0 | 9.0 | 5.5 | 6.0 | 5.0 | 5.5 | 4.0 | 5.0 | 4.0 | 7.0 | 4.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 7.0 | 6.5 | 7.0 | 7.0 | 9.0 | 6.5 | 10.5 | 10.5 | 11.0 | 11.0 | 11.0 | 11.0 |
| 2 | 6.5 | 6.0 | 7.0 | 6.5 | 8.0 | 6.5 | 10.5 | 9.5 | 11.0 | 11.0 | 11.5 | 11.0 |
| 3 | 6.0 | 6.0 | 8.0 | 6.5 | 8.0 | 8.0 | 9.5 | 9.0 | 11.5 | 11.0 | 12.0 | 11.0 |
| 4 | 6.0 | 6.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.5 | 9.0 | 11.5 | 11.5 | 13.0 | 11.5 |
| 5 | 6.0 | 6.0 | 8.0 | 6.5 | 8.0 | 7.0 | 9.5 | 9.5 | 13.0 | 11.5 | 13.0 | 12.0 |
| 6 | 7.0 | 6.0 | 8.0 | 7.0 | 8.0 | 8.0 | 9.5 | 9.5 | 13.0 | 12.0 | 13.0 | 13.0 |
| 7 | 8.0 | 7.0 | 8.0 | 8.0 | 8.0 | 8.0 | 10.5 | 9.5 | 13.5 | 13.0 | 13.0 | 12.0 |
| 8 | 8.0 | 7.0 | 8.0 | 8.0 | 8.0 | 7.0 | 10.5 | 10.0 | 13.5 | 12.0 | 12.0 | 11.0 |
| 9 | 7.0 | 6.5 | 8.0 | 8.0 | 9.0 | 7.0 | 10.0 | 10.0 | 12.0 | 12.0 | 12.0 | 11.5 |
| 10 | 6.5 | 6.5 | 8.0 | 7.0 | 9.0 | 9.0 | 10.5 | 10.0 | 13.0 | 11.5 | 12.0 | 11.5 |
| 11 | 6.5 | 6.0 | 8.0 | 7.0 | 9.0 | 8.0 | 11.0 | 10.5 | 13.5 | 13.0 | 12.0 | 11.5 |
| 12 | 6.0 | 6.0 | 8.0 | 8.0 | 8.5 | 8.0 | 11.0 | 11.0 | 13.5 | 13.0 | 11.5 | 11.0 |
| 13 | 6.0 | 6.0 | 8.0 | 7.0 | 8.5 | 8.5 | 11.0 | 11.0 | 13.0 | 12.0 | 11.5 | 11.0 |
| 14 | 6.0 | 6.0 | 8.0 | 7.0 | 8.5 | 8.5 | 11.0 | 10.5 | 13.0 | 12.0 | 11.5 | 11.0 |
| 15 | 6.0 | 6.0 | 8.5 | 8.0 | 9.0 | 8.5 | 10.5 | 10.5 | 13.0 | 12.0 | 11.5 | 11.0 |
| 16 | 6.0 | 5.5 | 9.0 | 8.5 | 9.5 | 9.0 | 10.5 | 10.0 | 13.5 | 13.0 | 11.0 | 11.0 |
| 17 | 6.5 | 5.5 | 9.0 | 8.5 | 9.0 | 8.5 | 10.5 | 10.0 | 13.5 | 13.0 | 11.0 | 11.0 |
| 18 | 7.0 | 6.5 | 8.5 | 8.0 | 8.5 | 8.5 | 10.5 | 10.5 | 13.5 | 13.5 | 11.0 | 11.0 |
| 19 | 8.0 | 7.0 | 9.0 | 8.5 | 8.5 | 8.5 | 11.5 | 10.5 | 13.5 | 12.0 | 11.0 | 10.5 |
| 20 | 8.0 | 8.0 | 9.0 | 6.5 | 9.5 | 8.5 | 11.5 | 11.0 | 12.0 | 11.5 | 10.5 | 10.0 |
| 21 | 8.0 | 6.5 | 6.5 | 6.5 | 9.5 | 9.0 | 11.0 | 10.5 | 13.5 | 12.0 | 10.0 | 10.0 |
| 22 | 6.5 | 6.5 | 7.0 | 6.5 | 9.5 | 9.5 | 11.0 | 10.5 | 14.0 | 13.5 | 10.0 | 10.0 |
| 23 | 6.5 | 6.0 | 7.0 | 7.0 | 10.0 | 9.5 | 11.5 | 10.5 | 14.5 | 14.0 | 11.0 | 10.0 |
| 24 | 8.0 | 6.5 | 8.0 | 7.0 | 10.0 | 10.0 | 13.0 | 11.5 | 14.5 | 14.0 | 11.5 | 11.0 |
| 25 | 8.0 | 8.0 | 8.5 | 7.0 | 10.0 | 10.0 | 13.0 | 12.0 | 14.0 | 13.0 | 11.5 | 11.0 |
| 26 | 8.0 | 6.5 | 9.5 | 8.5 | 10.0 | 10.0 | 13.0 | 12.0 | 13.0 | 11.5 | 11.5 | 11.0 |
| 27 | 7.0 | 7.0 | 10.0 | 9.5 | 10.0 | 9.5 | 13.0 | 12.0 | 11.5 | 11.0 | 11.0 | 11.0 |
| 28 | 7.0 | 6.5 | 10.0 | 9.5 | 9.5 | 9.0 | 13.0 | 13.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 29 | 7.0 | 7.0 | 9.5 | 9.0 | 10.0 | 9.0 | 13.0 | 13.0 | 11.0 | 11.0 | 11.0 | 10.5 |
| 30 | 7.0 | 6.5 | 9.0 | 9.0 | 10.5 | 10.0 | 13.0 | 11.5 | 11.0 | 11.0 | 10.5 | 10.5 |
| 31 | --- | --- | 9.0 | 8.5 | --- | --- | 11.5 | 11.0 | 11.0 | 11.0 | --- | --- |
| MONTH | 8.0 | 5.5 | 10.0 | 6.5 | 10.5 | 6.5 | 13.0 | 9.0 | 14.5 | 11.0 | 13.0 | 10.0 |
| YEAR | 14.5 | 4.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 10.5 | 9.5 | 10.5 | 10.0 | 7.0 | 6.5 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 |
| 2 | 10.0 | 9.5 | 10.5 | 10.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 |
| 3 | 10.0 | 9.0 | 10.0 | 9.5 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.5 | 5.0 |
| 4 | 9.0 | 9.0 | 9.5 | 9.5 | 7.0 | 7.0 | 4.5 | 4.5 | 4.5 | 4.0 | 5.5 | 5.5 |
| 5 | 9.5 | 9.0 | 9.5 | 9.5 | 7.0 | 6.5 | 4.5 | 4.0 | 4.5 | 4.5 | 5.5 | 5.5 |
| 6 | 9.5 | 9.5 | 9.5 | 9.5 | 6.5 | 6.0 | 4.0 | 4.0 | 4.5 | 4.0 | 5.5 | 5.5 |
| 7 | 10.0 | 9.5 | 9.5 | 9.5 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 5.5 |
| 8 | 10.0 | 10.0 | 9.5 | 9.0 | 6.5 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 5.5 |
| 9 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.5 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 5.5 |
| 10 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.5 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 11 | 10.0 | 10.0 | 9.0 | 9.0 | 6.5 | 6.0 | 4.0 | 4.0 | 4.5 | 4.0 | 6.0 | 6.0 |
| 12 | 10.0 | 10.0 | 9.0 | 9.0 | 6.0 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| 13 | 10.0 | 10.0 | 9.0 | 9.0 | 6.0 | 5.5 | 4.0 | 4.0 | 5.0 | 4.5 | 6.0 | 6.0 |
| 14 | 10.0 | 10.0 | 9.0 | 8.5 | 6.0 | 6.0 | 4.5 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| 15 | 10.0 | 10.0 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 6.0 | 6.0 |
| 16 | 10.0 | 9.5 | 8.5 | 8.0 | 5.5 | 3.5 | 4.5 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| 17 | 9.5 | 9.5 | 8.0 | 8.0 | 3.5 | 2.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 18 | 9.5 | 9.5 | 8.0 | 8.0 | 3.5 | 3.0 | 4.0 | 4.0 | 5.5 | 5.0 | 5.5 | 5.0 |
| 19 | 9.5 | 9.5 | 8.5 | 8.0 | 3.5 | 3.5 | 4.0 | 4.0 | 5.5 | 5.5 | 5.0 | 5.0 |
| 20 | 9.5 | 9.5 | 8.5 | 8.5 | 4.0 | 3.5 | 4.0 | 4.0 | 5.5 | 5.5 | 5.5 | 5.0 |
| 21 | 9.5 | 9.5 | 8.5 | 8.5 | 4.0 | 4.0 | 4.0 | 4.0 | 5.5 | 5.0 | 5.5 | 5.5 |
| 22 | 9.5 | 9.5 | 8.5 | 8.5 | 4.5 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.5 | 5.5 |
| 23 | 10.0 | 9.5 | 8.5 | 8.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 6.5 | 6.0 |
| 24 | 10.0 | 9.5 | 8.0 | 8.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 25 | 10.0 | 9.5 | 8.0 | 8.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.5 | 5.0 | 5.5 | 5.5 |
| 26 | 10.0 | 9.5 | 8.0 | 8.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.5 | 5.5 | 6.0 | 5.5 |
| 27 | 10.0 | 9.0 | 8.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.5 | 5.0 | 6.0 | 6.0 |
| 28 | 9.5 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | 5.0 | 4.5 | 6.0 | 5.5 |
| 29 | 9.5 | 9.0 | 7.0 | 7.0 | 4.5 | 4.5 | 4.0 | 4.0 | --- | --- | 5.5 | 5.5 |
| 30 | 9.5 | 9.5 | 7.0 | 6.5 | 4.5 | 4.5 | 4.5 | 4.0 | --- | --- | 6.5 | 5.5 |
| 31 | 10.0 | 9.5 | --- | --- | 4.5 | 4.5 | 4.5 | 4.0 | --- | --- | 6.5 | 6.5 |
| MONTH | 10.5 | 9.0 | 10.5 | 6.5 | 7.0 | 2.0 | 4.5 | 4.0 | 5.5 | 4.0 | 6.5 | 5.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.5 | 6.5 | 8.0 | 8.0 | 10.0 | 9.0 | 13.5 | 13.0 | 15.5 | 15.0 | 14.5 | 14.0 |
| 2 | 6.5 | 6.0 | 8.0 | 8.0 | 11.5 | 10.0 | 13.0 | 12.0 | 15.5 | 14.5 | 14.5 | 13.5 |
| 3 | 7.0 | 6.5 | 8.0 | 7.0 | 11.5 | 10.5 | 12.0 | 11.5 | 14.5 | 13.5 | 13.5 | 13.0 |
| 4 | 8.5 | 7.0 | 7.0 | 7.0 | 11.0 | 10.5 | 13.0 | 12.0 | 13.5 | 13.0 | 13.5 | 13.0 |
| 5 | 8.5 | 7.0 | 8.0 | 7.0 | 11.0 | 11.0 | 13.0 | 12.0 | 13.5 | 12.0 | 14.5 | 13.5 |
| 6 | 7.0 | 6.5 | 8.5 | 8.0 | 11.0 | 11.0 | 13.0 | 12.0 | 15.0 | 13.5 | --- | --- |
| 7 | 7.0 | 6.5 | 9.0 | 8.5 | 11.0 | 10.5 | 13.5 | 13.0 | 15.0 | 14.5 | --- | --- |
| 8 | 7.0 | 7.0 | 10.0 | 9.0 | 11.0 | 10.5 | 13.0 | 11.5 | 15.5 | 15.0 | 14.5 | 13.5 |
| 9 | 7.0 | 7.0 | 11.0 | 10.0 | 11.0 | 10.5 | 11.5 | 11.0 | 15.5 | 14.5 | 14.0 | 13.5 |
| 10 | 7.0 | 6.5 | 11.0 | 10.5 | 10.5 | 10.5 | 11.5 | 11.0 | 14.5 | 14.0 | 14.0 | 13.5 |
| 11 | 8.0 | 7.0 | 10.5 | 9.5 | 10.5 | 10.0 | 11.5 | 11.5 | 14.5 | 14.0 | 14.0 | 13.5 |
| 12 | 9.5 | 8.0 | 10.0 | 9.5 | 10.0 | 9.0 | 13.0 | 11.5 | 14.5 | 14.5 | 13.5 | 13.5 |
| 13 | 9.5 | 8.0 | 9.5 | 9.0 | 9.5 | 9.0 | 13.5 | 13.0 | 14.5 | 13.5 | 13.5 | 13.5 |
| 14 | 8.0 | 7.0 | 9.5 | 9.5 | 10.0 | 9.5 | 13.5 | 13.0 | 14.0 | 13.5 | 13.5 | 13.0 |
| 15 | 8.5 | 8.0 | 9.5 | 8.5 | 10.5 | 10.0 | 14.0 | 13.0 | 15.0 | 14.0 | 13.0 | 11.5 |
| 16 | 8.5 | 8.0 | 8.5 | 7.0 | 11.0 | 10.0 | 14.0 | 13.5 | 15.5 | 14.5 | 11.5 | 11.0 |
| 17 | 8.0 | 7.0 | 8.0 | 7.0 | 11.0 | 11.0 | 14.0 | 13.5 | 15.5 | 15.0 | 11.5 | 11.0 |
| 18 | 7.0 | 7.0 | 8.5 | 8.0 | 11.0 | 10.0 | 14.0 | 13.5 | 16.0 | 15.5 | 11.5 | 11.0 |
| 19 | 7.0 | 7.0 | 8.5 | 8.5 | 10.5 | 10.0 | 14.0 | 13.5 | 16.0 | 15.0 | 12.0 | 11.0 |
| 20 | --- | --- | 8.5 | 8.5 | 10.5 | 10.0 | 13.5 | 13.0 | 15.0 | 14.0 | 12.0 | 12.0 |
| 21 | 7.0 | 6.5 | 9.5 | 8.5 | 10.5 | 10.0 | 13.0 | 12.0 | 14.5 | 14.0 | 12.0 | 12.0 |
| 22 | 7.0 | 6.5 | 9.5 | 9.5 | 10.5 | 10.5 | 13.0 | 12.0 | 15.0 | 14.5 | 13.0 | 12.0 |
| 23 | 8.0 | 7.0 | 9.5 | 9.0 | 11.0 | 10.5 | 14.5 | 13.0 | 15.0 | 13.5 | 13.5 | 13.0 |
| 24 | 8.0 | 8.0 | 9.5 | 9.0 | 11.5 | 11.0 | 15.0 | 14.5 | 13.5 | 13.0 | 13.5 | 13.5 |
| 25 | 9.0 | 8.0 | 9.5 | 9.5 | 11.5 | 11.0 | 15.5 | 14.5 | 13.5 | 13.0 | 13.5 | 13.5 |
| 26 | 10.0 | 9.0 | 10.5 | 9.5 | 11.0 | 10.0 | 15.5 | 14.5 | 13.5 | 13.5 | 13.5 | 12.0 |
| 27 | 9.5 | 8.5 | 10.5 | 10.5 | 10.0 | 10.0 | 15.0 | 14.0 | 14.5 | 13.5 | --- | --- |
| 28 | 8.5 | 8.5 | 10.5 | 10.0 | 11.0 | 10.0 | 14.5 | 13.5 | 14.5 | 13.5 | --- | --- |
| 29 | 8.5 | 8.0 | 10.0 | 9.5 | 12.0 | 11.0 | 15.0 | 14.0 | 13.5 | 13.0 | --- | --- |
| 30 | 8.5 | 8.0 | 9.5 | 9.0 | 13.0 | 12.0 | 15.0 | 14.5 | 14.0 | 13.0 | --- | --- |
| 31 | --- | --- | 9.0 | 9.0 | --- | --- | 15.5 | 15.0 | 14.0 | 13.0 | --- | --- |
| MONTH | 10.0 | 6.0 | 11.0 | 7.0 | 13.0 | 9.0 | 15.5 | 11.0 | 16.0 | 12.0 | 14.5 | 11.0 |
| YEAR | 16.0 | 2.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | --- | --- | 10.0 | 10.0 | 7.0 | 7.0 | 4.5 | 4.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 2 | 10.5 | 10.0 | 10.0 | 10.0 | 7.0 | 7.0 | 4.0 | 4.0 | 5.0 | 4.5 | 5.0 | 4.5 |
| 3 | 11.0 | 10.0 | 10.0 | 9.5 | 7.0 | 7.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| 4 | --- | --- | 9.5 | 9.5 | 7.0 | 7.0 | 4.0 | 4.0 | 5.0 | 4.5 | 4.5 | 4.5 |
| 5 | 10.5 | 10.5 | 9.5 | 9.5 | 7.0 | 7.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 6 | 10.5 | 10.0 | 9.5 | 9.5 | 7.0 | 7.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 7 | 10.0 | 10.0 | 9.5 | 9.0 | 7.0 | 7.0 | 4.5 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 8 | 10.0 | 10.0 | 9.5 | 9.5 | 7.0 | 6.5 | 4.5 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 9 | 10.5 | 10.0 | 9.5 | 9.5 | 6.5 | 6.5 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 10 | 10.5 | 10.0 | 9.5 | 9.0 | 6.5 | 6.5 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 11 | 10.0 | 10.0 | 9.0 | 8.5 | 6.5 | 6.5 | 4.5 | 4.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 12 | 10.0 | 10.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 5.5 | 5.5 |
| 13 | 10.5 | 10.0 | 8.5 | 8.5 | 6.5 | 6.0 | 4.5 | 4.0 | 5.0 | 5.0 | 6.0 | 5.5 |
| 14 | 10.5 | 10.5 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.5 | 5.5 | 5.0 | 6.0 | 6.0 |
| 15 | 10.5 | 10.0 | 8.5 | 8.5 | 5.5 | 5.0 | 4.5 | 4.5 | 5.5 | 5.0 | 6.0 | 5.5 |
| 16 | 10.0 | 9.5 | 9.0 | 8.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 | 5.5 | 5.0 |
| 17 | 9.5 | 9.5 | 9.0 | 8.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.5 | 5.0 | 5.5 | 5.0 |
| 18 | 9.5 | 9.5 | 8.5 | 8.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.0 |
| 19 | 9.5 | 9.5 | 9.0 | 8.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.5 | 5.5 | 5.0 | 5.0 |
| 20 | 9.5 | 9.5 | 9.0 | 8.5 | 5.5 | 5.0 | 4.5 | 4.5 | 6.0 | 5.5 | 5.0 | 5.0 |
| 21 | 9.5 | 9.5 | 8.5 | 8.5 | 5.5 | 5.5 | 4.5 | 4.5 | 6.0 | 5.5 | 5.5 | 5.0 |
| 22 | 9.5 | 9.5 | 8.5 | 8.0 | 5.5 | 5.5 | 4.5 | 4.5 | 6.5 | 6.0 | 5.5 | 5.5 |
| 23 | 9.5 | 9.5 | 8.0 | 6.5 | 5.5 | 5.0 | 4.5 | 4.5 | 6.5 | 6.5 | 6.0 | 5.5 |
| 24 | 9.5 | 9.5 | 6.5 | 6.5 | 5.0 | 4.5 | 4.5 | 4.5 | 6.5 | 6.0 | 6.5 | 6.0 |
| 25 | 9.5 | 9.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 7.0 | 6.5 |
| 26 | 9.5 | 9.5 | 6.5 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 8.0 | 7.0 |
| 27 | 9.5 | 9.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 4.5 | 6.0 | 6.0 | 8.0 | 8.0 |
| 28 | 10.0 | 9.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 6.0 | 5.5 | 8.0 | 8.0 |
| 29 | 10.0 | 10.0 | 6.5 | 6.5 | 4.5 | 4.0 | 5.0 | 5.0 | --- | --- | 8.0 | 8.0 |
| 30 | 10.0 | 10.0 | 7.0 | 6.5 | 4.5 | 4.0 | 5.0 | 5.0 | --- | --- | 8.0 | 6.5 |
| 31 | 10.0 | 10.0 | --- | --- | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 6.5 | 6.0 |
| MONTH | 11.0 | 9.5 | 10.0 | 6.5 | 7.0 | 4.0 | 5.0 | 4.0 | 6.5 | 4.5 | 8.0 | 4.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.5 | 6.0 | 9.5 | 8.5 | 10.5 | 9.0 | 11.0 | 11.0 | 14.5 | 13.5 | 14.0 | 13.5 |
| 2 | 7.0 | 6.0 | 11.0 | 9.5 | 10.5 | 10.0 | 11.0 | 10.0 | 14.5 | 14.0 | 14.0 | 14.0 |
| 3 | 7.0 | 6.5 | 11.0 | 10.5 | 10.0 | 9.0 | 10.0 | 10.0 | 15.0 | 14.0 | 14.0 | 13.5 |
| 4 | 8.5 | 7.0 | 10.5 | 10.0 | 9.5 | 9.0 | 11.0 | 10.0 | 15.0 | 14.0 | 15.0 | 14.0 |
| 5 | 8.5 | 8.0 | 10.5 | 10.0 | 11.0 | 9.5 | 11.0 | 11.0 | 14.0 | 13.5 | 15.5 | 14.5 |
| 6 | 8.5 | 8.0 | 10.0 | 7.0 | 13.0 | 11.0 | 11.0 | 10.5 | 14.5 | 14.0 | 15.5 | 14.5 |
| 7 | 8.5 | 8.0 | 8.5 | 7.0 | 13.0 | 11.5 | 12.0 | 11.0 | 15.0 | 14.0 | 14.5 | 13.5 |
| 8 | 8.5 | 8.0 | 9.5 | 8.5 | 11.5 | 11.0 | 13.0 | 12.0 | 15.0 | 14.5 | 13.5 | 13.5 |
| 9 | 8.0 | 8.0 | 9.5 | 9.5 | 11.0 | 11.0 | 13.0 | 13.0 | 14.5 | 14.0 | 14.5 | 13.5 |
| 10 | 8.0 | 7.0 | 9.5 | 8.5 | 11.0 | 10.0 | 13.0 | 12.0 | 14.0 | 13.0 | 14.5 | 14.0 |
| 11 | 7.0 | 6.5 | 9.5 | 8.5 | 10.0 | 9.5 | 12.0 | 11.5 | 13.0 | 12.0 | 14.0 | 13.0 |
| 12 | 6.5 | 6.0 | 9.5 | 9.5 | 9.5 | 9.5 | 13.5 | 12.0 | 13.5 | 13.0 | 13.0 | 13.0 |
| 13 | 6.0 | 6.0 | 9.5 | 9.0 | 9.5 | 9.5 | 13.5 | 13.0 | 13.5 | 13.5 | 13.0 | 12.0 |
| 14 | 6.0 | 5.5 | 9.0 | 8.5 | 11.0 | 9.5 | 13.0 | 13.0 | 13.5 | 13.0 | 13.0 | 13.0 |
| 15 | 8.0 | 6.0 | 8.5 | 8.5 | 12.0 | 11.0 | 13.0 | 12.0 | 14.0 | 13.5 | 13.0 | 12.0 |
| 16 | 8.0 | 7.0 | 8.5 | 8.5 | 12.0 | 11.5 | 12.0 | 11.5 | 14.0 | 14.0 | 12.0 | 12.0 |
| 17 | 8.5 | 8.0 | 10.0 | 8.5 | 11.5 | 11.0 | 12.0 | 11.5 | 14.0 | 13.5 | 12.0 | 12.0 |
| 18 | 8.5 | 8.0 | 10.5 | 10.0 | 11.0 | 10.5 | 12.0 | 11.5 | 15.0 | 14.0 | 13.0 | 12.0 |
| 19 | 8.5 | 7.0 | 11.0 | 10.5 | 11.0 | 10.5 | 12.0 | 12.0 | 15.0 | 14.5 | 13.0 | 12.0 |
| 20 | 8.0 | 8.0 | 11.0 | 10.5 | 11.0 | 10.5 | 12.0 | 11.5 | 15.0 | 14.5 | 13.0 | 12.0 |
| 21 | 8.0 | 7.0 | 10.5 | 10.5 | 10.5 | 10.5 | 13.5 | 12.0 | 15.0 | 14.5 | 13.5 | 12.0 |
| 22 | 7.0 | 7.0 | 10.5 | 9.0 | 11.5 | 10.5 | 13.5 | 13.0 | 15.0 | 14.5 | 13.5 | 13.0 |
| 23 | 7.0 | 7.0 | 9.5 | 9.0 | 11.5 | 11.0 | 13.5 | 12.0 | 15.0 | 14.0 | 13.5 | 13.5 |
| 24 | 8.5 | 7.0 | 10.5 | 9.5 | 11.0 | 10.5 | 13.0 | 12.0 | 15.0 | 14.5 | 13.5 | 12.0 |
| 25 | 9.0 | 8.5 | 11.5 | 10.5 | 11.0 | 10.0 | 12.0 | 11.5 | 15.0 | 14.0 | 12.0 | 12.0 |
| 26 | 9.0 | 7.0 | 11.5 | 10.5 | 11.0 | 11.0 | 13.0 | 11.0 | 14.0 | 13.0 | 12.0 | 11.5 |
| 27 | 8.5 | 7.0 | 10.5 | 9.0 | 11.0 | 11.0 | 14.5 | 13.0 | 13.0 | 13.0 | 12.0 | 12.0 |
| 28 | 9.5 | 8.5 | 10.0 | 9.5 | 11.0 | 10.5 | 14.5 | 14.0 | 13.5 | 13.0 | 13.0 | 12.0 |
| 29 | 9.5 | 9.0 | 11.0 | 10.0 | 11.0 | 10.5 | 14.5 | 14.0 | 13.5 | 13.5 | 13.0 | 12.0 |
| 30 | 9.5 | 9.0 | 11.0 | 10.5 | 11.0 | 10.5 | 14.5 | 14.0 | 13.5 | 13.0 | 13.0 | 12.0 |
| 31 | --- | --- | 10.5 | 9.0 | --- | --- | 14.5 | 13.5 | 13.5 | 13.0 | --- | --- |
| MONTH | 9.5 | 5.5 | 11.5 | 7.0 | 13.0 | 9.0 | 14.5 | 10.0 | 15.0 | 12.0 | 15.5 | 11.5 |
| YEAR | 15.5 | 4.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 12.0 | 11.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 4.5 | 4.5 | 4.5 | 5.5 | 5.5 |
| 2 | 11.5 | 11.0 | 8.5 | 8.5 | 7.0 | 6.5 | 4.5 | 4.5 | 5.5 | 4.5 | 5.5 | 5.5 |
| 3 | 11.0 | 10.5 | 8.5 | 8.5 | 7.0 | 7.0 | 4.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| 4 | 11.0 | 10.5 | 9.0 | 8.5 | 7.0 | 7.0 | 4.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.0 |
| 5 | 11.5 | 11.0 | 8.5 | 8.5 | 7.0 | 6.5 | 4.5 | 4.0 | 5.5 | 5.5 | 5.0 | 5.0 |
| 6 | 11.5 | 11.0 | 8.5 | 8.5 | 6.5 | 6.5 | 4.0 | 4.0 | 5.5 | 5.5 | 5.0 | 5.0 |
| 7 | 11.0 | 10.5 | 8.5 | 8.5 | 6.5 | 6.0 | 4.0 | 4.0 | 5.5 | 5.5 | 5.0 | 5.0 |
| 8 | 10.5 | 10.5 | 8.5 | 7.5 | 6.0 | 5.5 | 4.5 | 4.0 | 5.5 | 5.5 | 5.0 | 5.0 |
| 9 | 10.5 | 10.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.5 | 5.5 | 5.0 | 5.0 |
| 10 | 10.0 | 10.0 | 7.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.5 | 5.5 | 5.5 | 5.0 | 5.0 |
| 11 | 10.0 | 10.0 | 7.5 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.5 | 5.5 | 5.0 | 4.5 |
| 12 | 10.0 | 10.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.5 | 5.5 | 5.0 | 4.5 |
| 13 | 10.0 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.5 | 5.0 | 5.0 | 5.0 |
| 14 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 |
| 15 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 |
| 16 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 17 | 9.5 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 18 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.0 |
| 19 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 5.5 | 5.0 |
| 20 | 9.0 | 7.5 | 7.5 | 7.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 5.5 | 5.5 |
| 21 | 7.5 | 7.5 | 7.5 | 7.5 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 5.5 | 5.5 |
| 22 | 7.5 | 7.5 | 7.5 | 7.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| 23 | 7.5 | 7.0 | 7.5 | 7.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.0 |
| 24 | 7.0 | 6.5 | 7.5 | 7.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.0 | 4.5 |
| 25 | 8.5 | 7.0 | 7.5 | 7.5 | 5.5 | 5.5 | 5.0 | 4.5 | 5.5 | 5.5 | 5.0 | 4.5 |
| 26 | 8.5 | 8.5 | 7.5 | 7.0 | 5.5 | 5.0 | 4.5 | 4.5 | 5.5 | 5.5 | 5.0 | 5.0 |
| 27 | 8.5 | 8.5 | 7.0 | 6.5 | 5.0 | 4.5 | 5.0 | 4.5 | 5.5 | 5.5 | 5.5 | 5.0 |
| 28 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| 29 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | --- | --- | 5.5 | 5.5 |
| 30 | 8.5 | 8.5 | 6.5 | 6.5 | 5.0 | 4.5 | 5.0 | 5.0 | --- | --- | 5.5 | 5.0 |
| 31 | 8.5 | 8.5 | --- | --- | 4.5 | 4.5 | 5.0 | 4.5 | --- | --- | 5.5 | 5.5 |
| MONTH | 12.0 | 6.5 | 9.0 | 6.5 | 7.0 | 4.5 | 5.0 | 4.0 | 5.5 | 4.5 | 5.5 | 4.5 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 6.5 | 5.5 | 8.5 | 8.5 | 11.0 | 10.0 | 11.5 | 11.0 | 14.0 | 14.0 | 14.5 | 14.0 |
| 2 | 7.0 | 6.5 | 8.5 | 8.5 | 11.0 | 8.5 | 11.5 | 11.5 | 14.0 | 14.0 | 14.0 | 14.0 |
| 3 | 7.5 | 6.5 | 8.5 | 8.5 | 9.0 | 8.5 | 12.0 | 11.5 | 14.5 | 14.0 | 14.0 | 13.5 |
| 4 | 7.5 | 7.5 | 9.5 | 8.5 | 10.0 | 9.0 | 12.0 | 11.5 | 14.5 | 14.0 | 14.5 | 13.5 |
| 5 | 7.5 | 6.5 | 9.5 | 9.0 | 10.5 | 10.0 | 12.0 | 11.5 | 14.5 | 14.0 | 14.5 | 14.0 |
| 6 | 7.0 | 6.5 | 9.5 | 8.5 | 10.5 | 10.0 | 12.0 | 11.5 | 14.0 | 14.0 | 14.5 | 14.0 |
| 7 | 7.5 | 7.0 | 8.5 | 7.5 | 10.0 | 9.0 | 11.5 | 11.5 | 14.0 | 12.5 | 14.0 | 13.5 |
| 8 | 7.5 | 6.5 | 7.5 | 7.5 | 9.5 | 8.5 | 11.5 | 11.5 | 14.0 | 12.5 | 14.0 | 13.5 |
| 9 | 6.5 | 6.5 | 7.5 | 7.0 | 9.5 | 9.0 | 11.5 | 11.0 | 15.0 | 14.0 | 14.0 | 13.5 |
| 10 | 7.0 | 6.5 | 7.5 | 7.5 | 9.5 | 9.0 | 12.0 | 11.5 | 15.0 | 15.0 | 13.5 | 13.5 |
| 11 | 7.0 | 6.5 | 7.5 | 7.5 | 10.0 | 8.5 | 13.5 | 12.0 | 15.0 | 15.0 | 13.5 | 12.0 |
| 12 | 7.0 | 6.5 | 7.5 | 7.5 | 11.0 | 10.0 | 13.5 | 12.5 | 15.0 | 15.0 | 12.0 | 11.5 |
| 13 | 6.5 | 6.0 | 9.0 | 7.5 | 11.0 | 10.5 | 12.5 | 12.0 | 15.0 | 15.0 | 12.5 | 11.5 |
| 14 | 6.5 | 6.0 | 9.0 | 9.0 | 11.0 | 10.5 | 12.5 | 12.0 | 15.0 | 15.0 | 12.5 | 12.0 |
| 15 | 6.5 | 6.0 | 10.0 | 9.0 | 11.0 | 10.5 | 13.5 | 12.5 | 15.5 | 15.0 | 13.5 | 12.5 |
| 16 | 6.5 | 6.5 | 10.5 | 10.0 | 10.5 | 10.5 | 14.0 | 12.5 | 15.5 | 15.0 | 14.0 | 13.5 |
| 17 | 7.0 | 6.0 | 10.5 | 10.0 | 10.5 | 10.5 | 14.0 | 13.5 | 15.5 | 15.0 | 14.0 | 13.5 |
| 18 | 6.5 | 6.5 | 10.0 | 8.5 | 10.5 | 10.5 | 13.5 | 12.0 | 15.0 | 15.0 | 13.5 | 12.5 |
| 19 | 6.5 | 6.0 | 9.5 | 9.0 | 11.0 | 10.5 | 12.0 | 11.5 | 15.0 | 15.0 | 14.0 | 12.5 |
| 20 | 6.5 | 6.5 | 10.0 | 9.5 | 11.0 | 11.0 | 11.5 | 11.5 | 15.0 | 15.0 | 14.0 | 14.0 |
| 21 | 6.5 | 6.5 | 10.0 | 9.0 | 11.0 | 10.5 | 11.5 | 11.0 | 15.0 | 15.0 | 14.0 | 14.0 |
| 22 | 6.5 | 6.5 | 9.0 | 9.0 | 10.5 | 9.5 | 13.5 | 11.5 | 15.0 | 14.5 | 14.0 | 14.0 |
| 23 | 7.0 | 6.5 | 9.0 | 7.5 | 10.5 | 10.0 | 13.5 | 12.5 | 15.0 | 14.5 | 14.0 | 13.5 |
| 24 | 8.5 | 7.0 | 8.5 | 7.5 | 11.0 | 10.5 | 13.5 | 13.5 | 14.5 | 14.0 | 13.5 | 13.5 |
| 25 | 8.5 | 7.0 | 9.5 | 7.5 | 11.5 | 11.0 | 13.5 | 13.5 | 14.5 | 14.0 | 13.5 | 13.5 |
| 26 | 7.0 | 7.0 | 10.0 | 9.5 | 11.5 | 11.0 | 13.5 | 12.5 | 15.0 | 14.5 | 13.5 | 13.5 |
| 27 | 7.0 | 7.0 | 10.0 | 10.0 | 11.0 | 11.0 | 13.5 | 12.5 | 15.5 | 15.0 | 14.0 | 13.5 |
| 28 | 7.0 | 7.0 | 10.0 | 9.5 | 11.0 | 11.0 | 13.5 | 12.5 | 15.0 | 14.5 | 14.0 | 13.5 |
| 29 | 7.5 | 7.0 | 9.5 | 9.0 | 11.0 | 11.0 | 14.0 | 13.5 | 15.0 | 15.0 | 13.5 | 13.5 |
| 30 | 8.5 | 7.5 | 9.0 | 8.5 | 11.0 | 11.0 | 14.0 | 13.5 | 15.0 | 14.5 | 13.5 | 12.0 |
| 31 | --- | --- | 10.0 | 8.5 | --- | --- | 14.0 | 14.0 | 15.0 | 14.5 | --- | --- |
| MONTH | 8.5 | 5.5 | 10.5 | 7.0 | 11.5 | 8.5 | 14.0 | 11.0 | 15.5 | 12.5 | 14.5 | 11.5 |
| YEAR | 15.5 | 4.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | 6.0 | 6.0 |
| 2 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 5.0 | 4.0 | 3.0 | 6.0 | 6.0 |
| 3 | 12.0 | 12.0 | 9.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 4 | 12.0 | 11.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 5 | 11.0 | 11.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 6 | 11.0 | 11.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 7 | 11.0 | 11.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 8 | 11.0 | 11.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.0 | 4.0 | 7.0 | 6.0 |
| 9 | 12.0 | 11.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 4.0 | 7.0 | 7.0 |
| 10 | 12.0 | 12.0 | 8.0 | 8.0 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | 7.0 | 7.0 |
| 11 | 12.0 | 12.0 | 8.0 | 8.0 | 7.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 7.0 | 7.0 |
| 12 | 12.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.0 | 7.0 | 7.0 |
| 13 | 11.0 | 11.0 | 9.0 | 8.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 7.0 | 7.0 |
| 14 | 11.0 | 11.0 | 9.0 | 9.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 7.0 | 7.0 |
| 15 | 11.0 | 11.0 | 9.0 | 9.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 7.0 | 7.0 |
| 16 | 11.0 | 11.0 | 9.0 | 9.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 7.0 | 7.0 |
| 17 | 11.0 | 11.0 | 9.0 | 8.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 7.0 | 7.0 |
| 18 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.0 | 7.0 | 7.0 |
| 19 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.0 | 7.0 | 7.0 |
| 20 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.0 | 7.0 | 7.0 |
| 21 | 11.0 | 10.0 | 8.0 | 8.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 6.0 | 7.0 | 7.0 |
| 22 | 10.0 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 6.0 | 5.0 | 6.0 | 6.0 | 7.0 | 7.0 |
| 23 | 9.0 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 |
| 24 | 9.0 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 |
| 25 | 9.0 | 9.0 | 8.0 | 8.0 | 5.0 | 5.0 | 6.0 | 4.0 | 6.0 | 6.0 | 8.0 | 7.0 |
| 26 | 9.0 | 9.0 | 8.0 | 7.0 | 6.0 | 5.0 | 4.0 | 4.0 | 6.0 | 6.0 | 8.0 | 7.0 |
| 27 | 9.0 | 9.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 4.0 | 6.0 | 6.0 | 7.0 | 7.0 |
| 28 | 9.0 | 8.0 | 7.0 | 7.0 | 6.0 | 6.0 | 4.0 | 3.0 | 6.0 | 6.0 | 7.0 | 6.0 |
| 29 | 8.0 | 8.0 | 7.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | 6.0 | 6.0 | 7.0 | 6.0 |
| 30 | 9.0 | 8.0 | 7.0 | 7.0 | 6.0 | 6.0 | 3.0 | 3.0 | --- | --- | 7.0 | 6.0 |
| 31 | 9.0 | 9.0 | --- | --- | 6.0 | 5.0 | 3.0 | 3.0 | --- | --- | 7.0 | 7.0 |
| MONTH | 12.0 | 8.0 | 9.0 | 7.0 | 7.0 | 5.0 | 6.0 | 3.0 | 6.0 | 3.0 | 8.0 | 6.0 |

| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 7.0 | 7.0 | 9.0 | 8.0 | 11.0 | 9.0 | 13.0 | 12.0 | 15.0 | 14.0 | 14.0 | 14.0 |
| 2 | 8.0 | 7.0 | 9.0 | 8.0 | 9.0 | 8.0 | 13.0 | 12.0 | 15.0 | 14.0 | 14.0 | 13.0 |
| 3 | 8.0 | 8.0 | 10.0 | 9.0 | 9.0 | 8.0 | 13.0 | 12.0 | 15.0 | 14.0 | 14.0 | 13.0 |
| 4 | 8.0 | 8.0 | 10.0 | 9.0 | 10.0 | 9.0 | 13.0 | 12.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 5 | 8.0 | 8.0 | 9.0 | 8.0 | 10.0 | 10.0 | 13.0 | 12.0 | 14.0 | 13.0 | 14.0 | 13.0 |
| 6 | 8.0 | 7.0 | 9.0 | 9.0 | 10.0 | 10.0 | 13.0 | 12.0 | 14.0 | 13.0 | 14.0 | 13.0 |
| 7 | 7.0 | 7.0 | 10.0 | 8.0 | 10.0 | 9.0 | 13.0 | 13.0 | 14.0 | 13.0 | 13.0 | 13.0 |
| 8 | 8.0 | 7.0 | 10.0 | 10.0 | 9.0 | 9.0 | 13.0 | 13.0 | 14.0 | 13.0 | 14.0 | 13.0 |
| 9 | 9.0 | 8.0 | 11.0 | 9.0 | 10.0 | 9.0 | 13.0 | 13.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 10 | 9.0 | 9.0 | 11.0 | 11.0 | 10.0 | 10.0 | 13.0 | 13.0 | 15.0 | 14.0 | 14.0 | 13.0 |
| 11 | 9.0 | 8.0 | 11.0 | 11.0 | 10.0 | 10.0 | 13.0 | 13.0 | 15.0 | 14.0 | 14.0 | 13.0 |
| 12 | 8.0 | 7.0 | 11.0 | 10.0 | 10.0 | 9.0 | 13.0 | 12.0 | 15.0 | 14.0 | 13.0 | 13.0 |
| 13 | 7.0 | 7.0 | 10.0 | 9.0 | 9.0 | 9.0 | 12.0 | 12.0 | 15.0 | 14.0 | 13.0 | 13.0 |
| 14 | 7.0 | 7.0 | 9.0 | 9.0 | 10.0 | 9.0 | 12.0 | 12.0 | 14.0 | 13.0 | 13.0 | 13.0 |
| 15 | 8.0 | 7.0 | 11.0 | 9.0 | 11.0 | 10.0 | 12.0 | 12.0 | 13.0 | 13.0 | 13.0 | 12.0 |
| 16 | 8.0 | 7.0 | 11.0 | 11.0 | 11.0 | 11.0 | 12.0 | 12.0 | 13.0 | 13.0 | 12.0 | 12.0 |
| 17 | 8.0 | 8.0 | 12.0 | 11.0 | 11.0 | 11.0 | 13.0 | 12.0 | 13.0 | 13.0 | 12.0 | 11.0 |
| 18 | 8.0 | 8.0 | 12.0 | 11.0 | 11.0 | 11.0 | 13.0 | 13.0 | 13.0 | 13.0 | 12.0 | 11.0 |
| 19 | 8.0 | 8.0 | 12.0 | 11.0 | 11.0 | 11.0 | 13.0 | 12.0 | 13.0 | 13.0 | 11.0 | 11.0 |
| 20 | 8.0 | 8.0 | 11.0 | 9.0 | 11.0 | 11.0 | 12.0 | 11.0 | 13.0 | 13.0 | 11.0 | 11.0 |
| 21 | 9.0 | 8.0 | 9.0 | 9.0 | 11.0 | 11.0 | 13.0 | 12.0 | 13.0 | 13.0 | 11.0 | 11.0 |
| 22 | 9.0 | 9.0 | 9.0 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 13.0 | 12.0 | 11.0 | 11.0 |
| 23 | 9.0 | 8.0 | 10.0 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 12.0 | 12.0 | 11.0 | 11.0 |
| 24 | 9.0 | 8.0 | 10.0 | 9.0 | 12.0 | 11.0 | 14.0 | 13.0 | 13.0 | 12.0 | 11.0 | 11.0 |
| 25 | 8.0 | 8.0 | 11.0 | 10.0 | 12.0 | 12.0 | 14.0 | 14.0 | 13.0 | 12.0 | 12.0 | 11.0 |
| 26 | 9.0 | 8.0 | 11.0 | 9.0 | 12.0 | 11.0 | 14.0 | 14.0 | 13.0 | 12.0 | 12.0 | 12.0 |
| 27 | 9.0 | 9.0 | 11.0 | 10.0 | 11.0 | 11.0 | 14.0 | 14.0 | 13.0 | 13.0 | 12.0 | 12.0 |
| 28 | 9.0 | 9.0 | 11.0 | 10.0 | 11.0 | 11.0 | 15.0 | 14.0 | 13.0 | 12.0 | 12.0 | 12.0 |
| 29 | 11.0 | 9.0 | 11.0 | 11.0 | 11.0 | 11.0 | 15.0 | 14.0 | 13.0 | 13.0 | 12.0 | 11.0 |
| 30 | 11.0 | 9.0 | 11.0 | 10.0 | 12.0 | 11.0 | 15.0 | 14.0 | 13.0 | 13.0 | 11.0 | 11.0 |
| 31 | --- | --- | 11.0 | 11.0 | --- | --- | 14.0 | 14.0 | 14.0 | 13.0 | --- | --- |
| MONTH | 11.0 | 7.0 | 12.0 | 8.0 | 12.0 | 8.0 | 15.0 | 11.0 | 15.0 | 12.0 | 14.0 | 11.0 |
| YEAR | 15.0 | 3.0 | | | | | | | | | | |

TABLE C5.--Temperature of surface water--continued

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

12200500
SKAGIT RIVER NEAR MOUNT VERNON, WASH.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| 1 | 11.0 | 11.0 | 8.0 | 7.0 | 6.0 | 6.0 | 2.0 | 2.0 | 2.0 | 1.0 | 3.0 | 3.0 |
| 2 | 11.0 | 11.0 | 7.0 | 7.0 | 6.0 | 5.0 | 3.0 | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| 3 | 11.0 | 11.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| 4 | 11.0 | 11.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| 5 | 11.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| 6 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 3.0 |
| 7 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 8 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 4.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 9 | 10.0 | 9.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 2.0 | 2.0 | 4.0 | 4.0 |
| 10 | 9.0 | 9.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 4.0 | 4.0 |
| 11 | 9.0 | 9.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |
| 12 | 9.0 | 9.0 | 7.0 | 7.0 | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 |

TABLE C6.--Monthly water content at snow-survey sites

Skagit River

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|
| S1 Beaver Creek Trail Altitude 2,100 ft. Lat 48°49'14", long. 121°11'26" | | | | | | | | |
| 1944 | | | 2-23 | 2.7 | 3-25 | 1.5 | | |
| 1945 | | | 2-28 | 0.0 | 3-30 | 3.2 | | |
| 1946 | | | 3-2 | 23.6 | 4-5 | 19.7 | | |
| 1947 | 2-2 | 14.3 | 3-1 | 13.2 | 3-31 | 5.2 | | |
| 1948 | 2-2 | 10.9 | 2-28 | 15.2 | 4-4 | 17.5 | 4-29 | 8.6 |
| 1949 | 1-30 | 17.6 | | | 3-31 | 25.2 | 4-29 | 10.6 |
| 1950 | | | 2-27 | 18.4 | 3-31 | 22.1 | 4-29 | 14.7 |
| 1951 | | | 2-26 | 20.4 | 4-2 | 20.0 | 5-1 | 5.7 |
| 1952 | | | 2-29 | 16.0 | 4-1 | 14.3 | 5-1 | 0.0 |
| 1953 | | | 2-27 | 14.1 | 4-1 | 10.8 | | |
| 1954 | | | 2-27 | 28.1 | 4-3 | 26.3 | 4-29 | 20.9 |
| 1955 | | | | | 3-31 | 14.8 | 5-2 | 8.7 |
| 1956 | | | | | 3-29 | 35.7 | 5-1 | 23.3 |
| 1957 | | | 2-28 | 13.9 | 4-1 | 13.2 | 4-28 | 1.3 |
| 1958 | | | 2-26 | 6.5 | 4-1 | 1.9 | 4-20 | 0.0 |
| 1959 | | | 2-27 | 10.4 | 3-29 | 8.7 | 5-1 | 0.0 |
| 1960 | | | 2-27 | 7.1 | 3-31 | 8.0 | 4-28 | 0.0 |
| 1961 | | | 2-27 | 9.7 | 3-29 | 6.9 | 4-27 | 0.0 |
| 1962 | | | 2-26 | 2.4 | 3-28 | 7.3 | 4-30 | 0.0 |
| 1963 | | | 2-25 | 1.0 | 3-27 | 0.0 | 4-26 | 0.0 |
| 1964 | | | 2-26 | 16.9 | 3-25 | 19.3 | 4-28 | 8.4 |
| 1965 | | | 2-24 | 17.3 | 3-31 | 15.3 | 4-26 | 4.8 |
| 1966 | | | 2-24 | 16.2 | 3-28 | 18.6 | 4-27 | 4.4 |
| 1967 | | | 3-2 | 14.0 | 3-28 | 16.7 | 4-26 | 7.3 |
| 1968 | | | 2-27 | 14.3 | 3-30 | 10.8 | 4-29 | 2.2 |
| 1969 | | | 2-24 | 22.8 | 3-27 | 22.1 | 4-30 | 9.0 |
| 1970 | 1-29 | 8.6 | 2-24 | 8.3 | 3-31 | 3.1 | 4-28 | 27.0 |
| 1971 | 1-28 | 22.2 | 3-5 | 23.4 | 4-1 | 31.1 | 4-27 | 24.3 |
| 1972 | 1-29 | 16.0 | 3-8 | 24.3 | 3-28 | 19.9 | 4-26 | 11.7 |
| 1973 | 1-29 | 6.6 | 2-24 | 8.0 | 3-28 | 3.6 | 4-26 | 0.0 |
| S2 Beaver Pass 3,620 ft. Lat. 48°52'48", long 121°15'10" | | | | | | | | |
| 1944 | | | 2-24 | 7.2 | 3-26 | 9.7 | | |
| 1945 | | | 3-1 | 10.7 | 3-29 | 22.9 | | |
| 1946 | | | | | 4-4 | 50.8 | | |
| 1947 | 2-1 | 23.5 | 2-28 | 29.7 | 3-30 | 30.0 | | |
| 1948 | 2-1 | 20.7 | 2-29 | 33.0 | 4-3 | 35.5 | 4-30 | 34.4 |
| 1949 | 1-31 | 29.8 | | | 3-30 | 47.7 | 4-30 | 41.0 |
| 1950 | | | 2-28 | 36.4 | 3-30 | 45.7 | 4-30 | 47.0 |
| 1951 | | | 2-27 | 39.8 | 4-1 | 45.9 | 5-2 | 38.2 |
| 1952 | | | 3-1 | 32.8 | 3-31 | 32.4 | 5-2 | 31.7 |
| 1953 | | | 2-28 | 33.8 | 3-31 | 37.1 | 5-1 | 37.5 |
| 1954 | | | 2-28 | 46.6 | 4-2 | 50.8 | 4-30 | 57.6 |
| 1955 | | | | | 4-1 | 31.1 | 5-1 | 36.3 |
| 1956 | | | | | 3-30 | 72.8 | 4-30 | 62.6 |
| 1957 | | | 3-1 | 23.0 | 4-1 | 33.2 | 4-29 | 26.7 |
| 1958 | | | 2-27 | 29.4 | 3-31 | 29.3 | 5-1 | 29.8 |
| 1959 | | | 2-28 | 27.4 | 3-28 | 31.4 | 4-30 | 34.1 |
| 1960 | | | 2-27 | 19.1 | 3-30 | 27.1 | 4-28 | 29.8 |
| 1961 | | | 2-26 | 26.0 | 3-28 | 33.8 | 4-27 | 31.4 |
| 1962 | | | 2-25 | 14.4 | 3-28 | 22.6 | 4-29 | 18.7 |
| 1963 | | | 2-25 | 11.2 | 3-27 | 12.2 | 4-28 | 13.7 |
| 1964 | | | 2-25 | 35.7 | 3-24 | 41.8 | 4-28 | 41.9 |
| 1965 | | | 2-24 | 27.6 | 3-31 | 29.8 | 4-27 | 29.3 |
| 1966 | | | 2-24 | 27.7 | 3-28 | 40.0 | 4-28 | 35.6 |
| 1967 | | | 3-1 | 31.2 | 3-28 | 40.3 | 4-25 | 40.6 |
| 1968 | | | 2-27 | 24.4 | 3-30 | 29.1 | 4-29 | 31.4 |
| 1969 | 2-5 | 32.2 | 2-24 | 40.9 | 3-27 | 41.3 | 4-30 | 36.8 |
| 1970 | 1-29 | 21.7 | 2-24 | 23.9 | 3-30 | 26.6 | 4-28 | 27.0 |
| 1971 | 1-28 | 36.3 | 3-1 | 37.1 | 4-1 | 50.6 | 4-27 | 59.9 |
| 1972 | 1-29 | 34.6 | 3-7 | 48.6 | 3-28 | 49.7 | 4-26 | 50.6 |
| 1973 | 1-28 | 14.0 | 2-24 | 16.7 | 3-29 | 19.0 | 4-26 | 16.4 |

TABLE C6.--Monthly water content at snow-survey sites (cont.)

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|
| S3 Brown Top 6,000 ft Lat. 48°36'12", long 121°12'10" | | | | | | | | |
| 1971 | 2-5 | 60.2 | | | 4-3 | 84.6 | 4-27 | 91.0 |
| 1972 | 1-28 | 63.5 | | | 3-28 | 97.2 | 4-27 | 104.4 |
| 1973 | 1-28 | 38.6 | 2-24 | 43.2 | 2-29 | 50.0 | 4-26 | 47.8 |
| S4 Devils Park 5,900 ft Lat 48°45'00", long 120°51'45" | | | | | | | | |
| 1950 | 1-31 | 40.1 | 2-28 | 47.7 | 3-29 | 56.9 | 4-29 | 60.1 |
| 1951 | 1-31 | 34.5 | 3-1 | 45.2 | 3-28 | 55.7 | 4-26 | 51.0 |
| 1952 | 2-6 | 27.9 | 2-28 | 31.2 | 4-1 | 33.1 | 5-1 | 21.3 |
| 1953 | | | 3-1 | 42.9 | 4-2 | 47.8 | 5-2 | 48.3 |
| 1954 | 2-1 | 40.8 | 3-1 | 59.1 | 3-29 | 64.6 | 4-30 | 71.0 |
| 1955 | 1-28 | 18.3 | | | 3-29 | 39.5 | 4-26 | 46.4 |
| 1956 | 1-29 | 37.3 | 3-6 | 52.7 | 3-28 | 58.7 | 4-27 | 57.0 |
| 1957 | 1-28 | 27.7 | 3-1 | 40.6 | 3-27 | 46.8 | 4-27 | 46.6 |
| 1958 | 1-29 | 28.2 | 2-27 | 32.5 | 3-28 | 35.3 | 4-27 | 42.0 |
| 1959 | 1-29 | 31.4 | 3-2 | 39.0 | 4-2 | 48.1 | 5-1 | 53.8 |
| 1960 | 1-30 | 23.2 | 2-26 | 33.4 | 3-31 | 37.8 | 4-28 | 45.8 |
| 1961 | 1-28 | 29.7 | 2-26 | 43.3 | 3-28 | 50.5 | 4-27 | 53.6 |
| 1962 | 1-28 | 30.3 | 2-25 | 30.2 | 3-28 | 37.2 | 4-30 | 39.5 |
| 1963 | 1-28 | 24.9 | 2-25 | 27.7 | 3-27 | 31.8 | 4-26 | 38.4 |
| 1964 | 1-28 | 36.0 | 2-25 | 42.9 | 3-24 | 52.2 | 4-30 | 55.3 |
| 1965 | 1-29 | 29.7 | 3-1 | 39.8 | 3-30 | 44.2 | 4-30 | 43.8 |
| 1966 | 1-27 | 26.5 | 2-25 | 31.4 | 3-29 | 39.7 | 4-27 | 39.4 |
| 1967 | 1-31 | 38.0 | 3-3 | 47.8 | 3-27 | 55.9 | 4-26 | 57.4 |
| 1968 | 2-3 | 34.8 | 2-26 | 42.9 | 3-30 | 46.1 | 4-29 | 51.6 |
| 1969 | 1-30 | 33.7 | 2-25 | 38.9 | 3-28 | 43.8 | 5-2 | 44.6 |
| 1970 | 1-30 | 24.3 | 2-25 | 28.6 | 3-31 | 34.4 | 4-29 | 41.5 |
| 1971 | 1-28 | 41.4 | 3-1 | 45.5 | 4-1 | 57.2 | 4-26 | 60.8 |
| 1972 | 1-27 | 45.9 | 3-8 | 68.6 | 3-27 | 69.9 | 4-26 | 74.8 |
| 1973 | 1-28 | 27.2 | 2-24 | 30.5 | 3-28 | 34.0 | 4-26 | 34.9 |
| S5 Freezeout Creek Trail 3,460 ft Lat 48°56'56" long 120°55'55" | | | | | | | | |
| 1944 | | | 2-28 | 3.8 | 4-2 | 3.8 | | |
| 1945 | | | 2-28 | 3.2 | 4-1 | 6.8 | | |
| 1946 | | | | | 3-29 | 17.6 | | |
| 1947 | 1-31 | 11.2 | 2-27 | 16.7 | 3-31 | 13.4 | | |
| 1948 | 2-1 | 7.9 | 2-28 | 18.9 | 4-1 | 20.3 | | |
| 1949 | | | | | 3-31 | 16.9 | 4-28 | 10.9 |
| 1950 | | | | | 4-1 | 18.1 | 4-30 | 14.0 |
| 1951 | | | 2-28 | 16.6 | 3-29 | 17.3 | | |
| 1952 | | | 2-27 | 12.8 | 4-1 | 13.1 | | |
| 1953 | | | 2-27 | 13.2 | 3-30 | 11.8 | 4-29 | 6.0 |
| 1954 | | | | | 4-2 | 25.7 | 4-28 | 25.9 |
| 1955 | | | 2-26 | 9.3 | 3-30 | 14.6 | 4-28 | 13.5 |
| 1956 | | | | | 3-29 | 26.2 | 5-2 | 16.7 |
| 1957 | | | 2-28 | 9.9 | 3-28 | 12.2 | 4-28 | 3.4 |
| 1958 | | | 2-28 | 9.8 | 3-28 | 9.2 | 4-30 | 3.2 |
| 1959 | | | 2-26 | 10.7 | 3-30 | 11.3 | 5-1 | 4.3 |
| 1960 | | | 2-26 | 8.8 | 3-30 | 9.2 | 4-28 | 4.7 |
| 1961 | | | 2-26 | 10.2 | 3-28 | 11.7 | 4-27 | 5.6 |
| 1962 | | | 2-25 | 5.4 | 3-28 | 6.7 | 4-30 | 0.4 |
| 1963 | | | 2-25 | 4.2 | 3-27 | 3.4 | 4-26 | 0.8 |
| 1964 | | | 2-25 | 13.1 | 3-24 | 15.4 | 4-28 | 13.4 |
| 1965 | | | 2-25 | 14.1 | 3-30 | 14.3 | 4-30 | 9.0 |
| 1966 | | | 2-24 | 10.9 | 3-28 | 13.6 | 4-28 | 4.8 |
| 1967 | | | 3-2 | 12.6 | 3-28 | 15.2 | 4-24 | 12.8 |
| 1968 | | | 2-27 | 8.7 | 3-31 | 8.0 | 4-29 | 6.0 |
| 1969 | 2-5 | 12.9 | 2-24 | 14.6 | 3-27 | 14.2 | 4-30 | 6.2 |
| 1970 | 1-29 | 9.4 | 2-24 | 10.0 | 3-30 | 10.7 | 4-28 | 10.1 |
| 1971 | 2-5 | 17.9 | 3-5 | 19.8 | 4-3 | 23.8 | 4-27 | 22.3 |
| 1972 | 1-28 | 18.2 | 3-7 | 24.2 | 3-28 | 21.3 | 4-27 | 19.0 |
| 1973 | 1-28 | 8.0 | 2-28 | 8.6 | 3-29 | 9.2 | 4-26 | 4.2 |

TABLE C6.--Monthly water content at snow-survey sites (cont.)

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|
| **S6 Freezeout Meadows 5,040 ft Lat 48°58'35", long 120°54'22"** | | | | | | | | |
| 1944 | | | 2-29 | 10.4 | 4-3 | 13.1 | | |
| 1945 | | | 2-27 | 11.7 | 3-31 | 18.8 | | |
| 1946 | | | | | 3-29 | 32.9 | | |
| 1947 | 1-31 | 35.6 | 2-28 | 39.3 | 3-30 | 37.7 | | |
| 1948 | 1-31 | 19.8 | 2-29 | 38.0 | 4-2 | 42.2 | | |
| 1949 | | | | | 4-1 | 44.7 | 4-28 | 34.8 |
| 1950 | | | | | 4-2 | 43.7 | 5-1 | 44.6 |
| 1951 | | | 3-1 | 35.1 | 3-30 | 41.5 | | |
| 1952 | | | 2-28 | 23.4 | 4-2 | 26.9 | | |
| 1953 | | | 2-28 | 27.7 | 3-31 | 29.3 | 4-30 | 27.0 |
| 1954 | | | | | 4-3 | 48.2 | 4-29 | 50.0 |
| 1955 | | | 2-26 | 16.9 | 3-30 | 31.4 | 4-28 | 34.3 |
| 1956 | | | | | 3-30 | 62.5 | 5-3 | 57.1 |
| 1957 | | | 2-28 | 26.5 | 3-28 | 31.9 | 4-27 | 28.3 |
| 1958 | | | 2-28 | 21.6 | 3-28 | 22.9 | 4-30 | 25.7 |
| 1959 | | | 2-26 | 23.2 | 4-2 | 32.9 | 5-1 | 31.4 |
| 1960 | | | 2-26 | 20.4 | 3-30 | 22.8 | 4-29 | 23.1 |
| 1961 | | | 2-26 | 28.0 | 3-28 | 30.7 | 4-28 | 29.5 |
| 1962 | | | 2-25 | 18.3 | 3-28 | 22.3 | 5-1 | 14.8 |
| 1963 | | | 2-24 | 13.9 | 3-27 | 16.1 | 4-26 | 17.2 |
| 1964 | | | 2-25 | 28.1 | 3-24 | 34.8 | 4-28 | 37.1 |
| 1965 | | | 2-25 | 34.9 | 3-30 | 34.2 | 4-27 | 33.2 |
| 1966 | | | 2-24 | 31.0 | 3-28 | 34.5 | 4-28 | 29.2 |
| 1967 | | | 3-2 | 29.3 | 3-28 | 34.7 | 4-24 | 35.9 |
| 1968 | | | 2-27 | 27.0 | 3-31 | 27.0 | 4-29 | 32.1 |
| 1969 | 2-5 | 22.9 | 2-24 | 25.4 | 3-27 | 26.4 | 4-30 | 26.0 |
| 1970 | 1-29 | 17.1 | 2-24 | 19.3 | 3-30 | 23.4 | 4-28 | 29.4 |
| 1971 | 2-5 | 31.3 | | | 4-3 | 58.0 | 4-27 | 61.0 |
| 1972 | | | | | | | 4-27 | 39.2 |
| 1973 | 1-28 | 17.4 | 2-28 | 19.9 | 3-29 | 23.7 | 4-26 | 20.9 |
| **S7 Granite Creek 3,650 ft Lat 48°36'12", long 120°48'47"** | | | | | | | | |
| 1971 | 1-28 | 21.2 | | | 4-1 | 29.4 | 4-26 | 27.4 |
| 1972 | 1-27 | 22.5 | | | 3-27 | 31.4 | 4-26 | 28.6 |
| 1973 | 1-27 | 10.4 | 2-24 | 11.6 | 3-28 | 11.4 | 4-27 | 4.6 |
| **S8 Lake Hozomeen 2,600 ft** | | | | | | | | |
| 1951 | | | 2-27 | 15.8 | 3-31 | 15.8 | | |
| 1952 | | | 2-26 | 10.9 | 4-3 | 11.2 | | |
| 1953 | | | 2-26 | 10.8 | 4-1 | 10.6 | 4-28 | 5.2 |
| 1954 | | | 2-27 | 19.1 | 4-4 | 21.7 | 4-27 | 18.4 |
| 1955 | | | 2-25 | 5.6 | 3-31 | 11.1 | 4-28 | 10.1 |
| 1956 | | | | | 3-28 | 24.1 | 5-4 | 16.9 |
| 1957 | | | | | 3-29 | 11.9 | 4-28 | 3.2 |
| 1958 | | | 3-1 | 5.9 | 3-29 | 5.4 | 4-29 | 0.0 |
| 1959 | | | 2-28 | 8.7 | 3-31 | 8.6 | 5-2 | 1.5 |
| 1960 | | | 2-28 | 5.6 | 3-31 | 6.2 | 4-30 | 1.6 |
| 1961 | | | 2-27 | 5.2 | 3-29 | 4.4 | 4-29 | 0.0 |
| 1962 | | | 2-26 | 3.6 | 3-29 | 5.6 | 4-30 | 0.0 |
| 1963 | | | 2-25 | 1.9 | 3-28 | 0.6 | 4-27 | 0.0 |
| 1964 | | | 2-26 | 9.6 | 3-24 | 13.8 | 4-28 | 10.4 |
| 1965 | | | 2-25 | 10.4 | 3-30 | 11.5 | 4-27 | 6.0 |
| 1966 | | | 2-24 | 10.8 | 3-28 | 12.2 | 4-28 | 7.6 |
| 1967 | | | 3-2 | 6.1 | 3-28 | 7.8 | 4-24 | 5.9 |
| 1968 | | | 2-27 | 8.2 | 3-31 | 6.9 | 4-29 | 3.9 |
| 1969 | | | 2-24 | 12.6 | 3-27 | 12.5 | 4-30 | 5.9 |
| 1970 | 1-29 | 6.6 | 2-24 | 6.9 | 3-30 | 6.5 | 4-28 | 4.0 |
| 1971 | 2-5 | 13.2 | 3-5 | 17.5 | 4-3 | 20.4 | 4-27 | 19.5 |
| 1972 | 1-28 | 12.5 | 3-7 | 15.5 | 3-28 | 13.4 | 4-27 | 9.9 |
| 1973 | 1-29 | 2.6 | 2-28 | 4.2 | 3-29 | 3.0 | 4-26 | 0.0 |

TABLE C6.--Monthly water content at snow-survey sites (cont.)

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|
| S9 Meadow Cabins 2,020 ft Lat 48°34'42", long 121°01'24" | | | | | | | | |
| 1945 | | | 2-23 | 1.0 | 4-4 | 0.3 | | |
| 1946 | | | 3-6 | 7.0 | 3-29 | 5.6 | | |
| 1947 | 2-1 | 12.2 | 2-27 | 12.8 | 3-30 | 7.8 | | |
| 1948 | 2-2 | 7.5 | 2-27 | 8.0 | 4-3 | 7.9 | | |
| 1949 | 1-30 | 12.0 | | | | | | |
| 1950 | | | | | | | | |
| 1951 | | | | | 4-2 | 11.9 | | |
| 1952 | | | | | | | | |
| 1953 | | | | | 3-28 | 5.4 | | |
| 1954 | | | 2-27 | 15.6 | 4-1 | 16.5 | 4-30 | 10.2 |
| 1955 | | | 2-25 | 5.9 | 4-1 | 11.7 | 4-27 | 7.4 |
| 1956 | | | 3-2 | 14.8 | 3-30 | 15.9 | 4-27 | 5.8 |
| 1957 | | | 2-28 | 9.2 | 3-31 | 8.2 | 4-27 | 0.0 |
| 1958 | | | 2-28 | 0.0 | 3-28 | 0.0 | 4-27 | 0.0 |
| 1959 | | | 2-27 | 8.6 | 4-1 | 8.1 | 4-29 | 0.0 |
| 1960 | | | 2-26 | 4.2 | 4-1 | 3.8 | 4-28 | 0.0 |
| 1961 | | | 2-27 | 5.0 | 3-28 | 3.1 | 4-27 | 0.0 |
| 1962 | | | 2-26 | 3.5 | 3-28 | 3.8 | 4-30 | 0.0 |
| 1963 | | | 2-27 | 0.3 | 3-31 | 0.0 | 4-26 | 0.0 |
| 1964 | | | 2-26 | 7.9 | 3-28 | 11.5 | 4-30 | 5.1 |
| 1965 | | | 3-1 | 15.1 | 3-30 | 12.4 | 4-30 | 0.0 |
| 1966 | | | 2-25 | 6.7 | 3-29 | 5.1 | 4-27 | 0.0 |
| 1967 | | | 3-2 | 6.0 | 3-27 | 6.3 | 4-26 | 0.0 |
| 1968 | | | 2-26 | 2.2 | 3-30 | 0.2 | 4-29 | 0.0 |
| 1969 | 1-30 | 10.5 | 2-25 | 11.2 | 3-28 | 9.8 | 5-2 | 0.0 |
| 1970 | 1-30 | 4.6 | 2-25 | 3.9 | 3-31 | 0.5 | 4-29 | 0.0 |
| 1971 | 1-27 | 11.0 | 3-1 | 10.4 | 4-1 | 11.4 | 4-26 | 6.4 |
| 1972 | 1-27 | 13.0 | 3-4 | 17.1 | 3-27 | 14.4 | 4-26 | 8.8 |
| 1973 | 1-27 | 2.8 | 3-1 | 2.5 | 3-28 | 1.0 | 4-28 | 0.0 |
| S10 New Lake Hozomeen 2,850 ft Lat 48°55'37", long 121°12'10" | | | | | | | | |
| 1969 | 2-5 | 13.7 | | | | | 4-30 | 7.0 |
| 1970 | | | | | | | | |
| 1971 | 2-5 | 17.7 | 3-5 | 21.2 | 4-3 | 25.8 | 4-27 | 24.5 |
| 1972 | 1-28 | 16.0 | 3-7 | 20.5 | 3-28 | 17.5 | 4-27 | 13.0 |
| 1973 | 1-29 | 4.8 | 2-28 | 7.0 | 3-29 | 6.7 | 4-26 | 0.0 |
| S11 Thunder Basin 4,300 ft Lat 48°31'47", long 120°59'28" | | | | | | | | |
| 1948 | 2-1 | 14.5 | 2-28 | 20.8 | 4-2 | 24.6 | | |
| 1949 | 1-31 | 22.8 | 2-27 | 41.0 | 4-3 | 40.8 | 5-5 | 43.9 |
| 1950 | 1-29 | 20.2 | 2-28 | 25.3 | 3-31 | 33.6 | 4-28 | 34.1 |
| 1951 | | | | | 4-2 | 29.6 | | |
| 1952 | | | | | 4-1 | 22.8 | | |
| 1953 | | | | | 3-28 | 24.3 | | |
| 1954 | | | 2-28 | 35.2 | 3-31 | 40.6 | 4-30 | 44.3 |
| 1955 | | | 2-25 | 14.9 | 4-1 | 24.0 | 4-28 | 27.7 |
| 1956 | | | 3-3 | 33.3 | 3-29 | 38.3 | 4-28 | 36.1 |
| 1957 | | | 2-28 | 22.4 | 3-31 | 28.2 | 4-27 | 28.6 |
| 1958 | | | 2-28 | 18.9 | 3-28 | 19.9 | 4-27 | 24.0 |
| 1959 | | | 2-26 | 18.5 | 4-2 | 28.1 | 5-1 | 25.8 |
| 1960 | | | 2-26 | 14.1 | 3-31 | 19.6 | 4-28 | 24.6 |
| 1961 | | | 2-27 | 21.9 | 3-28 | 28.2 | 4-27 | 26.7 |
| 1962 | | | 2-26 | 14.8 | 3-28 | 18.7 | 4-30 | 17.8 |
| 1963 | | | 2-27 | 8.8 | 3-31 | 12.9 | 4-26 | 14.1 |
| 1964 | | | 2-26 | 24.3 | 3-28 | 31.2 | 4-30 | 34.0 |
| 1965 | | | 3-1 | 22.8 | 3-30 | 24.5 | 4-30 | 25.5 |
| 1966 | | | 2-25 | 16.8 | 3-39 | 22.9 | 4-27 | 20.7 |
| 1967 | | | 3-2 | 21.8 | 3-27 | 25.6 | 4-26 | 28.4 |
| 1968 | | | 2-28 | 14.9 | 3-30 | 14.6 | 4-29 | 18.0 |
| 1969 | | | 2-25 | 25.2 | 3-28 | 25.6 | 5-2 | 26.8 |
| 1970 | | | 2-25 | 16.4 | 3-31 | 19.0 | 4-29 | 23.2 |
| 1971 | | | 3-1 | 24.2 | 4-1 | 32.0 | 4-26 | 38.1 |
| 1972 | | | 3-4 | 33.6 | 3-27 | 35.8 | 4-26 | 36.8 |
| 1973 | | | 3-1 | 13.4 | 3-28 | 15.5 | 4-28 | 14.3 |

TABLE C6. --Monthly water content at snow-survey sites (cont.)

Baker River

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) | June 1 Date | June 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|---|---|
| **S12 Dock Butte 4,100 ft Lat 48°37'13", long 121°48'54"** | | | | | | | | | | |
| 1959 | 1-31 | 44.0 | 3-4 | 53.0 | 4-2 | 77.0 | 5-3 | 75.5 | | |
| 1960 | 1-31 | 25.2 | 2-27 | 41.8 | 4-3 | 56.2 | 4-27 | 64.4 | | |
| 1961 | 1-28 | 34.2 | 3-4 | 60.4 | 3-29 | 68.2 | 4-28 | 81.0 | 6-1 | 50.5 |
| 1962 | 1-29 | 28.8 | 2-26 | 57.0 | 3-29 | 80.2 | 5-2 | 77.3 | 6-1 | 72.3 |
| 1963 | | | 2-27 | 54.5 | 4-1 | 68.7 | 4-28 | 79.8 | | |
| 1964 | | | 2-27 | 97.3 | 3-28 | 106.4 | 5-3 | 134.4 | 6-3 | 118.7 |
| 1965 | | | 2-28 | 79.8 | 3-31 | 82.6 | | | | |
| 1966 | | | 3-2 | 75.7 | 3-29 | 89.3 | 4-28 | 85.5 | 5-30 | 75.8 |
| 1967 | | | 2-27 | 82.0 | 3-30 | 104.3 | 4-26 | 110.2 | 6-1 | 96.4 |
| 1968 | | | 2-27 | 57.1 | 3-31 | 78.7 | 5-1 | 85.0 | 6-4 | 48.5 |
| 1969 | | | 2-27 | 67.2 | 3-29 | 86.3 | 5-3 | 88.3 | 6-2 | 63.2 |
| 1970 | | | 3-3 | 48.4 | 4-2 | 69.3 | 5-2 | 85.2 | | |
| 1971 | | | 2-28 | 86.4 | 4-4 | 117.7 | 4-29 | 113.7 | | |
| 1972 | | | 3-4 | 114.7 | 3-29 | 119.4 | 4-27 | 125.6 | | |
| 1973 | | | 3-6 | 56.8 | 4-1 | 61.7 | 4-28 | 66.5 | | |
| **S13 Easy Pass 5,350 ft Lat 48°51'36", long 121°26'10"** | | | | | | | | | | |
| 1959 | 1-30 | 59.2 | 3-4 | 60.0 | 4-2 | 70.0 | | | | |
| 1960 | 1-30 | 40.0 | 2-27 | 53.1 | 4-3 | 61.2 | 4-27 | 69.9 | | |
| 1961 | 1-28 | 56.4 | 3-3 | 84.3 | 3-29 | 95.1 | 4-28 | 100.0 | 6-1 | 80.7 |
| 1962 | 1-28 | 53.2 | 2-26 | 57.0 | 3-29 | 80.2 | 5-2 | 77.3 | 6-1 | 72.3 |
| 1963 | | | 2-27 | 54.5 | 4-1 | 68.7 | 4-28 | 79.8 | | |
| 1964 | | | 2-27 | 97.3 | 3-28 | 106.4 | 5-3 | 134.4 | 6-3 | 118.7 |
| 1965 | | | 2-28 | 79.8 | 3-31 | 82.6 | | | | |
| 1966 | | | 3-2 | 75.7 | 3-29 | 89.3 | 4-28 | 85.5 | 5-30 | 75.8 |
| 1967 | | | 2-27 | 82.0 | 3-30 | 104.3 | 4-26 | 110.2 | 6-1 | 96.4 |
| 1968 | | | 2-27 | 57.1 | 3-31 | 78.7 | 5-1 | 85.0 | 6-4 | 48.5 |
| 1969 | | | 2-27 | 67.2 | 3-29 | 86.3 | 5-3 | 88.3 | 6-2 | 63.2 |
| 1970 | | | 3-3 | 48.4 | 4-2 | 69.3 | 5-2 | 85.2 | | |
| 1971 | | | 2-28 | 86.4 | 4-4 | 117.7 | 4-29 | 113.7 | | |
| 1972 | | | 3-4 | 114.7 | 3-29 | 119.4 | 4-27 | 125.6 | | |
| 1973 | | | 3-6 | 56.8 | 4-1 | 61.7 | 4-28 | 66.5 | | |
| **S14 Jasper Pass 5,400 ft Lat 48°46'42", long 121°23'55"** | | | | | | | | | | |
| 1959 | 1-30 | 62.0 | 3-4 | 70.2 | 4-3 | 100.3 | 5-5 | 107.8 | | |
| 1960 | 1-30 | 38.6 | 2-27 | 53.8 | 4-1 | 69.2 | 4-27 | 82.2 | | |
| 1961 | 1-28 | 55.2 | 3-3 | 89.0 | 3-28 | 101.2 | 4-28 | 115.3 | 6-1 | 101.6 |
| 1962 | 1-28 | 59.8 | 2-26 | 62.0 | 3-28 | 75.6 | 5-2 | 82.2 | 6-1 | 77.6 |
| 1963 | 1-29 | 45.6 | 3-2 | 52.0 | 3-31 | 69.8 | 4-28 | 76.8 | | |
| 1964 | 2-5 | 77.4 | 2-26 | 92.0 | 3-28 | 107.2 | 5-3 | 122.0 | 6-3 | 110.2 |
| 1965 | | | | | 3-31 | 83.0 | 5-1 | 82.4 | | |
| 1966 | | | | | 3-29 | 94.0 | 4-28 | 97.8 | 5-30 | 85.8 |
| 1967 | | | | | 3-30 | 115.0 | 4-26 | 121.0 | 6-1 | 109.2 |
| 1968 | | | | | 3-31 | 92.0 | 4-30 | 98.8 | 6-4 | 84.2 |
| 1969 | | | | | 3-28 | 91.8 | 5-3 | 99.3 | 6-2 | 76.8 |
| 1970 | | | | | 4-2 | 63.6 | 5-2 | 81.4 | | |
| 1971 | | | | | 4-4 | 126.0 | 4-29 | 129.2 | | |
| 1972 | | | | | 3-29 | 112.3 | 4-27 | 134.0 | | |
| 1973 | | | | | 3-29 | 69.4 | 4-28 | 71.8 | | |

TABLE C6.--Monthly water content at snow-survey sites (cont.)

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) | June 1 Date | June 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|---|---|
| S15 Komo Kulshan 860 ft Lat 48°39'45", long 121°42'42" | | | | | | | | | | |
| 1960 | | | 2-28 | 1.2 | 4-3 | 0.0 | 4-29 | 0.0 | | |
| 1961 | 1-27 | 0.0 | 2-28 | 1.7 | 3-27 | 0.0 | 4-26 | 0.0 | | |
| 1962 | 1-31 | 7.2 | 2-27 | 3.6 | 3-31 | 3.1 | 5-1 | 0.0 | | |
| 1963 | 2-2 | 1.4 | 3-2 | 0.0 | 4-1 | 0.0 | 4-28 | 0.0 | | |
| 1964 | 2-3 | 6.5 | 2-27 | 7.0 | 3-29 | 8.2 | 5-1 | 0.0 | 6-3 | 0.0 |
| 1965 | | | | | 3-30 | 9.8 | 5-1 | 0.0 | | |
| 1966 | | | | | 3-31 | 12.7 | 4-29 | 0.0 | | |
| 1967 | | | | | 3-29 | 2.6 | 4-26 | 0.0 | | |
| 1968 | | | | | 3-31 | 0.0 | 5-1 | 0.0 | | |
| 1969 | | | | | 3-29 | 15.8 | 5-3 | 0.0 | | |
| 1970 | | | | | 4-2 | 0.0 | 5-2 | 0.0 | | |
| 1971 | | | | | 4-4 | 16.8 | 4-28 | 6.8 | | |
| 1972 | | | | | 3-29 | 15.8 | 4-28 | 3.8 | | |
| 1973 | | | | | 3-30 | 0.0 | 4-28 | 0.0 | | |
| S16 Marten Lake 3,640 ft Lat 48°45'56", long 121°43'02" | | | | | | | | | | |
| 1959 | 1-30 | 46.5 | 3-4 | 52.2 | 4-2 | 81.2 | 5-5 | 87.3 | | |
| 1960 | 1-31 | 27.5 | 2-27 | 45.5 | 4-3 | 62.8 | 4-27 | 72.6 | | |
| 1961 | 1-28 | 37.0 | 3-4 | 65.0 | 3-29 | 72.5 | 4-28 | 79.7 | 6-1 | 56.1 |
| 1962 | 1-29 | 50.5 | 2-27 | 50.2 | 3-29 | 62.8 | 5-2 | 67.4 | 6-1 | 60.5 |
| 1963 | 1-29 | 32.8 | 3-2 | 35.7 | 4-1 | 47.5 | 4-28 | 48.5 | | |
| 1964 | 2-5 | 64.5 | 2-27 | 77.8 | 3-29 | 103.3 | 5-2 | 115.8 | 6-3 | 104.8 |
| 1965 | | | | | 3-31 | 74.8 | 5-1 | 73.6 | | |
| 1966 | | | | | 3-29 | 89.3 | 4-28 | 86.2 | 5-30 | 72.2 |
| 1967 | | | | | 3-30 | 97.2 | 4-26 | 100.2 | 6-1 | 86.6 |
| 1968 | | | | | 3-31 | 59.2 | 5-1 | 64.7 | 6-4 | 41.8 |
| 1969 | | | | | 3-29 | 78.0 | 5-3 | 89.2 | 6-2 | 60.6 |
| 1970 | | | | | 4-2 | 55.8 | 5-2 | 69.5 | | |
| 1971 | | | | | 4-5 | 108.8 | 4-29 | 111.3 | | |
| 1972 | | | | | 3-29 | 110.8 | 5-1 | 118.5 | | |
| 1973 | | | | | 4-1 | 59.8 | 4-28 | 60.3 | | |
| S17 Rocky Creek 2,180 ft Lat 48°40'32", long 121°46'45" | | | | | | | | | | |
| 1959 | 1-30 | 7.0 | 3-3 | 12.4 | 3-28 | 17.9 | 4-27 | 15.9 | | |
| 1960 | 1-31 | 5.9 | 2-27 | 11.7 | 3-29 | 15.6 | 4-29 | 11.2 | | |
| 1961 | 1-27 | 3.9 | 2-28 | 11.8 | 3-27 | 15.9 | 4-28 | 7.4 | | |
| 1962 | 1-31 | 19.1 | 2-27 | 12.0 | 3-31 | 19.5 | 5-1 | 0.0 | | |
| 1963 | 1-29 | 6.0 | 3-2 | 1.3 | 4-1 | 5.3 | 4-28 | 0.0 | | |
| 1964 | 2-5 | 22.2 | 2-27 | 25.8 | 3-29 | 41.7 | 5-2 | 35.7 | 6-3 | 5.4 |
| 1965 | | | | | 3-30 | 36.2 | 5-1 | 16.0 | | |
| 1966 | | | | | 3-31 | 44.0 | 4-28 | 34.1 | 5-30 | 0.0 |
| 1967 | | | | | 3-29 | 42.6 | 4-27 | 39.8 | 6-1 | 6.7 |
| 1968 | | | | | 3-31 | 25.0 | 5-1 | 18.4 | 6-4 | 0.0 |
| 1969 | | | | | 3-29 | 41.1 | 5-2 | 33.7 | 6-2 | 0.0 |
| 1970 | | | | | 4-2 | 10.3 | 5-2 | 7.1 | | |
| 1971 | | | | | 4-3 | 57.9 | 4-28 | 56.0 | | |
| 1972 | | | | | 3-30 | 39.4 | 5-1 | 43.7 | | |
| 1973 | | | | | 3-30 | 16.9 | 4-28 | 8.7 | | |

TABLE C6.--Monthly water content at snow-survey sites (cont.)

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) | June 1 Date | June 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|---|---|
| S18 Schreibers Meadow 3,440 ft Lat 48°42'10", long 121°49'23" | | | | | | | | | | |
| 1959 | 1-30 | 33.4 | 3-4 | 44.4 | 4-3 | 64.6 | 5-3 | 61.8 | | |
| 1960 | 1-31 | 20.4 | 2-27 | 35.8 | 4-3 | 51.8 | 4-27 | 56.4 | | |
| 1961 | 1-28 | 30.0 | 3-4 | 55.0 | 3-29 | 64.6 | 4-28 | 60.0 | 6-1 | 42.3 |
| 1962 | 1-29 | 41.9 | 2-27 | 42.4 | 3-29 | 56.2 | 5-2 | 55.4 | 6-1 | 42.3 |
| 1963 | 1-29 | 24.6 | 3-2 | 28.4 | 4-1 | 37.8 | 4-28 | 37.6 | | |
| 1964 | 2-3 | 56.4 | 2-27 | 65.4 | 3-29 | 86.0 | 5-2 | 93.6 | 6-3 | 76.8 |
| 1965 | | | | | 3-31 | 60.6 | 5-1 | 57.1 | | |
| 1966 | | | | | 3-31 | 75.2 | 4-29 | 72.8 | 5-30 | 51.8 |
| 1967 | | | | | 3-29 | 83.0 | 4-27 | 83.3 | 6-1 | 65.0 |
| 1968 | | | | | 3-31 | 54.2 | 5-1 | 56.0 | 6-4 | 29.6 |
| 1969 | | | | | 3-29 | 69.4 | 5-3 | 73.2 | 6-2 | 46.9 |
| 1970 | | | | | 4-2 | 44.8 | 5-2 | 55.0 | | |
| 1971 | | | | | 4-5 | 94.2 | 4-28 | 101.8 | | |
| 1972 | | | | | 3-29 | 84.5 | 5-1 | 89.6 | | |
| 1973 | | | | | 3-31 | 47.2 | 4-28 | 45.4 | | |
| S19 South Fork Thunder Creek 2,100 ft Lat 48°35'43", long 121°39'40" | | | | | | | | | | |
| 1959 | 1-31 | 2.3 | 3-3 | 3.0 | 3-28 | 1.4 | 4-29 | 0.0 | | |
| 1960 | 1-29 | 1.1 | 2-27 | 3.0 | 3-28 | 0.6 | 4-26 | 0.0 | | |
| 1961 | 1-27 | 0.0 | 2-25 | 2.1 | 3-27 | 0.0 | 4-26 | 0.0 | | |
| 1962 | 1-31 | 0.0 | 2-28 | 0.3 | 3-30 | 1.7 | 5-1 | 0.0 | | |
| 1963 | 2-2 | 2.6 | 3-2 | 0.0 | 4-1 | 0.9 | 4-28 | 0.0 | | |
| 1964 | 2-3 | 8.4 | 2-27 | 8.2 | 3-28 | 15.6 | 5-1 | 6.1 | 6-3 | 0.0 |
| 1965 | 2-2 | 10.1 | 2-28 | 9.9 | 3-30 | 1.9 | 5-1 | 0.0 | | |
| 1966 | | | | | 3-31 | 8.9 | 4-29 | 0.0 | 5-30 | 0.0 |
| 1967 | | | | | 3-29 | 10.4 | 4-27 | 0.0 | | |
| 1968 | | | | | 4-1 | 0.0 | 5-1 | 0.0 | | |
| 1969 | | | | | 3-29 | 10.9 | 5-3 | 0.0 | | |
| 1970 | | | | | 4-2 | 0.0 | 5-2 | 0.0 | | |
| 1971 | | | | | 4-3 | 17.6 | 4-28 | 10.3 | | |
| 1972 | | | | | 3-30 | 9.1 | 5-1 | 0.0 | | |
| 1973 | | | | | 3-30 | 0.0 | 4-28 | 0.0 | | |
| S20 Sulphur Creek 1,580 ft Lat 48°40'26", long 121°44'23" | | | | | | | | | | |
| 1959 | 1-31 | 2.4 | 3-3 | 6.3 | 3-28 | 5.3 | 4-27 | 0.0 | | |
| 1960 | 1-29 | 3.0 | 2-27 | 5.3 | 3-29 | 6.4 | 4-29 | 0.0 | | |
| 1961 | 1-27 | 0.0 | 2-24 | 3.6 | 3-27 | 5.8 | 4-26 | 0.0 | | |
| 1962 | 1-31 | 9.5 | 2-27 | 6.9 | 3-31 | 10.4 | 5-2 | 0.0 | | |
| 1963 | 2-2 | 2.3 | 3-2 | 0.0 | 4-1 | 1.0 | 4-28 | 0.0 | | |
| 1964 | 2-3 | 12.0 | 2-27 | 14.1 | 3-29 | 23.1 | 5-2 | 14.1 | | |
| 1965 | | | | | 3-30 | 18.6 | 5-1 | 0.0 | | |
| 1966 | | | | | 3-31 | 21.6 | 4-29 | 10.0 | | |
| 1967 | | | | | 3-29 | 15.1 | 4-27 | 8.7 | | |
| 1968 | | | | | 3-31 | 5.9 | 5-1 | 0.0 | | |
| 1969 | | | | | 3-29 | 23.4 | 5-2 | 10.1 | | |
| 1970 | | | | | 4-2 | 0.0 | 5-2 | 0.0 | | |
| 1971 | | | | | 4-3 | 32.6 | 4-28 | 27.3 | | |
| 1972 | | | | | 3-30 | 22.7 | 5-1 | 19.9 | | |
| 1973 | | | | | 3-30 | 2.2 | 4-28 | 0.0 | | |

TABLE C6.--Monthly water content at snow-survey sites (cont.)

| Year | February 1 Date | February 1 Water Content (in.) | March 1 Date | March 1 Water Content (in.) | April 1 Date | April 1 Water Content (in.) | May 1 Date | May 1 Water Content (in.) | June 1 Date | June 1 Water Content (in.) |
|---|---|---|---|---|---|---|---|---|---|---|
| S21 Three Mile Creek 1,530 ft Lat 48°36'18", long 121°40'40" | | | | | | | | | | |
| 1959 | 1-31 | 0.4 | 3-3 | 0.0 | 3-28 | 0.0 | 4-27 | 0.0 | | |
| 1960 | 1-29 | 0.9 | 2-27 | 0.0 | 3-28 | 0.0 | 4-26 | 0.0 | | |
| 1961 | 1-27 | 0.0 | 2-25 | 1.0 | 3-27 | 0.0 | 4-26 | 0.0 | | |
| 1962 | 1-31 | 0.0 | 2-28 | 0.0 | 3-20 | 0.0 | 5-1 | 0.0 | | |
| 1963 | 2-2 | 1.9 | 3-2 | 0.0 | 4-1 | 0.0 | 4-28 | 0.0 | | |
| 1964 | | | 2-28 | 2.2 | 3-27 | 7.4 | 5-1 | 0.0 | 6-3 | 0.0 |
| 1965 | | | | | 3-30 | 0.0 | 5-1 | 0.0 | | |
| 1966 | | | | | 3-31 | 3.6 | 4-29 | 0.0 | | |
| 1967 | | | | | 3-30 | 0.7 | 4-27 | 0.0 | | |
| 1968 | | | | | 3-31 | 0.0 | 5-1 | 0.0 | | |
| 1969 | | | | | 3-29 | 5.3 | 5-3 | 0.0 | | |
| 1970 | | | | | 4-2 | 0.0 | 4-30 | 0.0 | | |
| 1971 | | | | | 4-3 | 6.3 | 4-28 | 0.0 | | |
| 1972 | | | | | 3-20 | 2.4 | 5-1 | 0.0 | | |
| 1973 | | | | | 3-30 | 0.0 | 4-28 | 0.0 | | |
| S22 Watson Lakes 4,500 ft Lat 48°39'58", long 121°35'13" | | | | | | | | | | |
| 1959 | 1-30 | 36.6 | 3-4 | 44.0 | 4-2 | 68.8 | 5-5 | 69.8 | | |
| 1960 | 1-31 | 22.6 | 2-27 | 39.0 | 4-3 | 57.4 | 4-27 | 63.6 | | |
| 1961 | 1-28 | 34.8 | 3-3 | 59.8 | 3-29 | 77.2 | 4-28 | 82.1 | 6-1 | 63.3 |
| 1962 | 1-28 | 40.6 | 2-27 | 41.0 | 3-29 | 57.8 | 5-2 | 58.6 | 6-1 | 49.1 |
| 1963 | 1-29 | 27.2 | 3-2 | 30.0 | 4-1 | 38.2 | 4-27 | 44.4 | | |
| 1964 | 2-5 | 57.4 | 2-27 | 67.0 | 3-29 | 89.6 | 5-3 | 102.6 | 6-3 | 88.5 |
| 1965 | | | | | 3-31 | 69.4 | 5-1 | 64.8 | | |
| 1966 | | | | | 3-29 | 74.4 | 4-28 | 78.2 | 5-30 | 65.8 |
| 1967 | | | | | 3-29 | 84.0 | 4-26 | 92.0 | 6-1 | 79.2 |
| 1968 | | | | | 3-31 | 63.0 | 5-1 | 63.5 | 6-4 | 27.0 |
| 1969 | | | | | 3-29 | 73.2 | 5-3 | 84.8 | 6-2 | 57.8 |
| 1970 | | | | | 4-2 | 46.0 | 5-2 | 60.6 | | |
| 1971 | | | | | 4-3 | 103.2 | 4-29 | 107.4 | | |
| 1972 | | | | | 3-29 | 103.5 | 5-1 | 114.4 | | |
| 1973 | | | | | 3-31 | 47.8 | 4-28 | 49.6 | | |

TABLE C7.--Yearly precipitation of storage-gage sites, 1962-73

| Water year | S18 Schreibers Meadow Lat 48°42'13", long 121°49'22" elevation 3,440 ft | S22 Watson Lakes Lat 48°39'58", long 121°35'13" elevation 4,500 ft | S2 Beaver Pass Lat 48°52'48, long 121°15'10" elevation 3,620 ft |
|---|---|---|---|
| | Total precipitation (inches) | Total precipitation (inches) | Total precipitation (inches) |
| 1962 | 131.4 | 112.9 | -- |
| 63 | 135.1 | 112.0 | -- |
| 64 | 167.1 | 127.2 | 69.8 |
| 65 | 110.7 | 107.7 | 70.2 |
| 66 | 127.1 | 95.7 | 72.6 |
| 67 | 179.2 | 134.3 | 67.7 |
| 68 | -- | 123.7 | 85.2 |
| 69 | 148.0 | 105.6 | 46.9 |
| 70 | 135.9 | 98.3 | 67.9 |
| 71 | 150.2 | -- | |
| 72 | -- | 103.9 | |
| 73 | -- | 87.8 | |

TABLE C8.--Records of selected wells

EXPLANATION

Local well number: Numbered by township, range, section, and 40-acre subdivision, as described on page 53.

Owner: Name of owner or tenant.

Use of water: The purpose for which water from the well is used: H, domestic; I, irrigation; N, industrial; P, public supply; S, stock; U, unused.

Well depth and water level: In feet below land surface, as measured by Geological Survey or other agencies, or as reported by well drillers or owners.

Altitude of LSD (ft): The altitude of the land-surface datum, in feet, relative to mean sea level. As obtained from USGS topographic maps.

Yield (gpm): The pumping discharge of well, in gallons per minute, as generally reported by drillers; the quantities are not necessarily the maximum obtainable nor the sustained yield from the well.

Drawdown (ft): The distance, in feet, that the water level was lowered by pumping at the stated yield rate. Length of the pumping period may vary from less than an hour to several days.

Log available: D, driller's log in table C9.

Washington State
Department of Ecology

Water Resources
Inventory Areas;

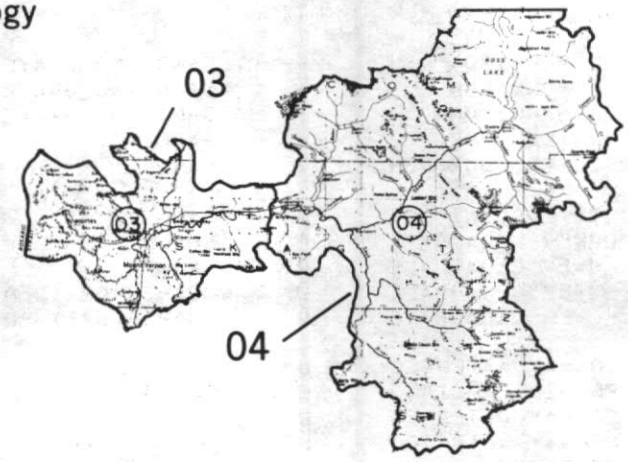


TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| | Water Resources Inventory Area 03 | | |
| 32N04E03D01 | JAMES COLOUZIS | H | SAND |
| 32N04E03D02 | JAMES COLOUZIS | U | SAND AND GRAVEL |
| 32N04E03M01 | JG ANDERSON | H | SAND |
| 32N04E04K01 | SN SORENSEN | H | SANDY CLAY |
| 32N04E05J01 | RL DAWSON | H | TILL |
| 32N04E05L01 | JOHN MALLEY | H | SAND |
| 32N04E05Q01 | ELMER NORGAARD | U | GRAVEL |
| 32N04E06D01 | GEORGE KEENAN | H | TILL |
| 32N04E06F01 | EL ERICKSEN | H | -- |
| 33N03E01A01 | AH DEXTER | H | -- |
| 33N03E05H01 | OSCAR DENTON | H | FINE GRAINED SAND |
| 33N03E05H02 | FRANCIE THEIN | H | SAND |
| 33N03E09F01 | LUCILLE OLIVER | H | SAND |
| 33N03E09H01 | AL SUMMERS | H | -- |
| 33N03E10J01 | CA MCCORMICK | I | SAND |
| 33N04E04C01 | CHARLES DANNER | H | SAND AND GRAVEL |
| 33N04E04C02 | DONALD SUNDEAN | H | SAND |
| 33N04E04E01 | RJ MANTHEY | H | GRAVEL |
| 33N04E04E02 | VICTOR BENSON | H | GRAVEL |
| 33N04E04N01 | UPPER CEDARDALE | P | SAND |
| 33N04E05B01 | EERKES BROTHERS | H | SAND AND GRAVEL |
| 33N04E05B02 | EERKES BROTHERS | H | COARSE GRAINED SAND |
| 33N04E05B03 | ROBERT EERKES | U | -- |
| 33N04E05B04 | ROBERT EERKES | I | -- |
| 33N04E05C01 | MINNIE BUCKNER | -- | -- |
| 33N04E06A01 | SAM ERICKSON | H | -- |
| 33N04E06B01 | CJ TIEMERSMA | H | -- |
| 33N04E06D01 | AB DEXTER | I | GRAVEL |
| 33N04E06D02 | JOHN VAN PELT | I | CLAYEY SAND |
| 33N04E06Q01 | CE WALTNER | I | SAND |
| 33N04E08C01 | RL MORRISON | -- | SAND AND GRAVEL |
| 33N04E08C02 | RL MORRISON | -- | SAND AND GRAVEL |
| 33N04E08C03 | RL MORRISON | -- | SAND AND GRAVEL |
| 33N04E08L01 | MYRTLE GROSS | -- | SAND |
| 33N04E08L02 | SELMER SJORGREN | I | SAND |
| 33N04E08M01 | JOE LACOUNT | -- | SAND |
| 33N04E09D01 | UPPER CEDARDALE | P | SHALE |
| 33N04E09N01 | LOWER CEDARDALE | P | SAND |
| 33N04E09N02 | LOWER CEDARDALE | U | COARSE GRAINED SAND |
| 33N04E09N03 | LOWER CEDARDALE | P | COARSE GRAINED SAND |
| 33N04E21D01 | CONWAY WATER CO | U | -- |
| 33N04E21F01 | FERMIN GARCIA | H | SANDSTONE |
| 33N04E21J01 | CONWAY WATER CO | U | -- |
| 33N04E21L01 | CONWAY WATER CO | U | -- |
| 33N04E25R01 | WT FOSTER | H | SAND AND GRAVEL |
| 33N04E28J01 | AB FELDT | H | COARSE GRAINED GRAVEL |
| 33N04E28J02 | RC SMOOTS | H | -- |
| 33N04E29N01 | CA BLACK | H | SAND AND GRAVEL |
| 33N04E32J01 | ROLF BRUNN | H | SAND |
| 33N04E32L01 | HW MALSTROM | H | CLAYEY SAND AND GRAVEL |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 15 | 320 | 60 | -- | 10 | 8-44 | -- | -- | -- |
| 60 | 340 | -- | -- | -- | -- | -- | -- | -- |
| 8 | 350 | -- | 6 | 5 | 8-44 | 6 | -- | -- |
| 33 | 295 | -- | -- | 26 | 7-44 | -- | -- | -- |
| 32 | 270 | -- | -- | 22 | 8-44 | -- | -- | -- |
| 142 | 235 | -- | -- | -- | -- | -- | -- | -- |
| 149 | 235 | 6 | -- | 128 | 10-46 | -- | -- | -- |
| 18 | 10 | 72 | -- | 0 | 8-44 | 5 | -- | -- |
| 6 | 15 | 60 | -- | 3 | 3-67 | -- | -- | -- |
| 95 | 15 | 6 | -- | 6 | 5-52 | -- | -- | -- |
| 112 | 90 | 4 | 90 | 90 | -46 | -- | -- | D |
| 107 | 80 | -- | 102 | 37 | 7-46 | 7 | 62 | D |
| 70 | 38 | 6 | 67 | 20 | 7-72 | 15 | 10 | D |
| 60 | 25 | 6 | -- | 14 | -44 | -- | 5 | -- |
| 25 | 6 | 8 | 17 | 4 | 4-53 | 100 | 6 | D |
| 36 | 70 | 6 | 28 | 10 | 10-49 | 13 | 15 | D |
| 110 | 52 | 6 | 80 | F | 6-71 | -- | -- | D |
| 29 | 8 | 36 | 26 | 4 | -54 | 200 | 12 | D |
| 55 | 14 | 6 | 50 | F | 10-72 | 20 | 1 | D |
| 19 | 20 | -- | 15 | F | 7-41 | -- | -- | D |
| 80 | 15 | 4 | -- | 10 | 5-52 | 50 | -- | -- |
| -- | 10 | -- | -- | -- | -- | 100 | -- | -- |
| 15 | 10 | 36 | -- | 3 | 1-68 | -- | -- | -- |
| 15 | 10 | 36 | -- | 6 | 6-69 | -- | -- | -- |
| 8 | 10 | 2 | -- | 4 | -- | -- | -- | -- |
| 40 | 8 | 2 | -- | -- | -- | -- | -- | -- |
| -- | 8 | -- | -- | -- | -- | -- | -- | -- |
| 40 | 10 | 8 | 32 | 5 | 5-52 | -- | -- | -- |
| 41 | 12 | 8 | -- | 15 | -- | 80 | 6 | -- |
| 20 | 5 | 36 | 3 | 3 | -- | -- | -- | D |
| 20 | 7 | 8 | -- | 8 | 6-54 | 190 | -- | D |
| 21 | 7 | 8 | -- | 8 | 6-54 | 190 | -- | D |
| 23 | 7 | 18 | -- | 8 | 6-54 | 190 | -- | D |
| 15 | 5 | 2 | 13 | 5 | 8-53 | 50 | 8 | D |
| 13 | 5 | 2 | -- | 6 | 6-50 | 64 | 4 | -- |
| 18 | 5 | 8 | -- | 4 | 4-52 | 110 | 5 | D |
| 19 | 20 | -- | 10 | -- | -- | 5 | -- | -- |
| 25 | 7 | 6 | 14 | 10 | 11-41 | 7 | -- | D |
| 52 | 7 | 6 | 12 | -- | -- | -- | -- | D |
| 24 | 7 | -- | 14 | 13 | 12-41 | -- | -- | D |
| 325 | 185 | -- | -- | -- | -- | -- | -- | D |
| 95 | 210 | 6 | 77 | 13 | 8-72 | 10 | 62 | D |
| 325 | 405 | 8 | -- | -- | -- | -- | -- | D |
| -- | 200 | 8 | -- | -- | -- | -- | -- | -- |
| 87 | 250 | 6 | 74 | 1 | 8-71 | 35 | 40 | D |
| 99 | 365 | 6 | 98 | -- | -- | 20 | -- | D |
| 92 | 370 | 6 | -- | -- | -- | -- | -- | -- |
| 70 | 50 | 6 | 64 | 7 | 7-73 | 16 | 12 | D |
| 153 | 240 | 6 | 145 | 129 | 9-71 | 20 | 12 | D |
| 107 | 195 | 6 | 60 | 60 | 9-69 | 20 | 25 | D |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 33N04E33A01 | C JOHNSON | -- | SAND |
| 33N04E33D01 | HA GALBRAITH | H | SAND |
| 33N04E34D01 | DON VOLLE | U | TILL |
| 33N04E34D02 | DON VOLLE | -- | SAND AND GRAVEL |
| 33N05E07A01 | WOODY WHITE | H | SAND |
| 33N05E30D01 | L ERIKSON REC A | P | MEDIUM GRAINED SAND |
| 34N03E12R01 | E BENNETT | H | SAND |
| 34N03E12N01 | SKAGIT PUD NO 1 | U | -- |
| 34N03E12Q01 | F EDMONDSON | H | -- |
| 34N03E12R01 | FINAR ALSKOG | S | SAND AND GRAVEL |
| 34N03E13D01 | SKAGIT PUD NO 1 | U | -- |
| 34N03E13F01 | E SANDNES | S | COARSE GRAINED SAND |
| 34N03E13F02 | ANACORTES | P | SAND AND GRAVEL |
| 34N03E13F03 | ANACORTES | P | SAND AND GRAVEL |
| 34N03E13K01 | LLOYD HARTMAN | S | SAND |
| 34N03E13P01 | FINAR ALSKOG | S | GRAVEL |
| 34N03E13P02 | RJ MCKAY | H | GRAVEL |
| 34N03E24A01 | AL BRYANT | I | -- |
| 34N03E25C01 | ART HAMBLIN | I | GRAVELLY SAND |
| 34N03E25H01 | SKAGIT PUD NO 1 | U | SAND |
| 34N03E25H02 | SKAGIT PUD NO 1 | U | VERY FINE GRAINED SAND |
| 34N03E25P01 | TNER MOE | -- | COARSE GRAINED SAND |
| 34N03E26J01 | H GRANDQUIST | I | SAND |
| 34N03E26L01 | OSCAR B HELDE | -- | GRAVEL |
| 34N03E34E01 | JOE NIDEROST | U | SAND |
| 34N03E35D01 | EA DEAN | I | GRAVEL |
| 34N03E35R01 | W YOUNGQUIST | H | FINE GRAINED SAND |
| 34N04E05A01 | AL STIERLEN | I | -- |
| 34N04E05D01 | DARIGOLD | U | SAND AND GRAVEL |
| 34N04E05D02 | DARIGOLD | N | SAND AND GRAVEL |
| 34N04E05J01 | RH NORRIS | I | MEDIUM GRAINED SAND AND GRAVEL |
| 34N04E05K01 | JOHN OWENS | I | COARSE GRAINED SAND |
| 34N04E05K02 | KENNETH OWENS | I | COARSE GRAINED SAND |
| 34N04E06D01 | RALPH MCKIBBEN | I | -- |
| 34N04E06G01 | WALT BECKER | I | -- |
| 34N04E06G02 | WL BECKER | I | COARSE GRAINED SAND AND GRAVEL |
| 34N04E06H01 | JO GRAFTON | I | -- |
| 34N04E06H02 | JO GRAFTON | S | -- |
| 34N04E06K01 | FRANK VERVAART | -- | CLAYEY SAND |
| 34N04E07D01 | PAUL TAYLOR | U | -- |
| 34N04E07G01 | A SAKUMA | I | SAND AND GRAVEL |
| 34N04E07G02 | AD ELLERBECK | -- | -- |
| 34N04E07H01 | EMIL HANSON | I | SAND AND GRAVEL |
| 34N04E07H02 | EL CHEDISTER | I | -- |
| 34N04E07K01 | W JEWETT | I | GRAVEL |
| 34N04E07L01 | IVAN COLVIN | I | SAND AND GRAVEL |
| 34N04E07L02 | EMIL HANSON | I | GRAVELLY SAND |
| 34N04E07M01 | ELMER HANSON | I | FINE GRAINED SAND |
| 34N04E07P01 | MRS N FORTIN SR | H | SAND AND GRAVEL |
| 34N04E07P02 | SKAGIT PUD NO 1 | U | SAND AND GRAVEL |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 110 | 315 | 6 | 45 | 6 | -- | 13 | 15 | D |
| 197 | 245 | 6 | 191 | 147 | -43 | 20 | -- | D |
| 403 | 345 | 6 | -- | -- | -- | 12 | -- | D |
| 16 | 340 | -- | 15 | -- | -- | -- | -- | D |
| 171 | 100 | 6 | 164 | 50 | 12-72 | -- | -- | D |
| 76 | 250 | 8 | 71 | 11 | 7-65 | 120 | 8 | D |
| 42 | 20 | 8 | 33 | 14 | 1-74 | 75 | 1 | D |
| 31 | 25 | -- | -- | -- | -- | -- | -- | D |
| 25 | 32 | -- | -- | -- | -- | -- | -- | -- |
| 22 | 25 | -- | 18 | -- | -- | -- | -- | -- |
| 63 | 30 | -- | -- | -- | -- | -- | -- | D |
| 23 | 28 | 1 | -- | 16 | 7-49 | -- | -- | -- |
| 30 | 25 | -- | -- | 14 | -- | 11000 | 12 | D |
| 28 | 25 | -- | -- | 14 | -- | 11000 | 10 | D |
| 28 | 27 | -- | -- | 8 | 9-49 | -- | -- | -- |
| 22 | 28 | -- | 18 | -- | -- | -- | -- | -- |
| 27 | 12 | 6 | 17 | 13 | 3-52 | 40 | 2 | D |
| 35 | 21 | 2 | -- | 16 | 3-53 | 25 | 2 | -- |
| 40 | 20 | 4 | 30 | 7 | 8-50 | 80 | 13 | D |
| 43 | 15 | -- | -- | 10 | 2-53 | -- | -- | D |
| 18 | 15 | -- | -- | -- | -- | -- | -- | D |
| 35 | 17 | 8 | -- | 12 | 7-53 | 92 | 3 | D |
| 43 | 15 | 8 | 20 | 9 | 8-53 | 140 | 6 | D |
| 32 | 15 | 8 | -- | 11 | 7-53 | 96 | 5 | D |
| 40 | 5 | 12 | -- | 6 | 6-49 | 100 | -- | -- |
| 30 | 12 | 30 | 20 | 14 | 6-46 | 150 | 18 | D |
| 65 | 12 | 5 | -- | 11 | -- | -- | -- | -- |
| 24 | 33 | 2 | -- | 14 | 7-50 | 75 | 8 | -- |
| 254 | 30 | 4 | 70 | -- | -- | 17 | 1 | D |
| 80 | 30 | 10 | 70 | 16 | -49 | 600 | 46 | D |
| 32 | 33 | 8 | 18 | 18 | 9-63 | 300 | 4 | D |
| 32 | 30 | 4 | 27 | 7 | 4-51 | 110 | 8 | D |
| 44 | 30 | 8 | 28 | 12 | 4-52 | 110 | 2 | D |
| 35 | 28 | 6 | -- | -- | -- | -- | -- | -- |
| 34 | 25 | 6 | -- | 11 | 5-52 | -- | -- | -- |
| 34 | 25 | 6 | 16 | 9 | 7-51 | 64 | 3 | D |
| 35 | 25 | 6 | -- | 14 | 5-52 | 64 | -- | -- |
| 24 | 25 | 2 | -- | -- | -- | -- | -- | -- |
| 26 | 25 | 36 | 18 | 7 | 8-56 | 80 | 19 | D |
| 120 | 25 | 6 | -- | -- | -- | -- | -- | D |
| 70 | 25 | 8 | 60 | 12 | 5-52 | 200 | 8 | D |
| 15 | 25 | 2 | -- | 10 | 7-58 | 100 | 1 | -- |
| 30 | 25 | 8 | -- | 14 | 5-51 | 108 | 3 | D |
| 21 | 29 | 2 | -- | 18 | -- | 20 | -- | -- |
| 31 | 25 | 8 | 16 | 10 | -- | 100 | 12 | D |
| 23 | 25 | 12 | 15 | 10 | 5-52 | 200 | 4 | D |
| 23 | 25 | 8 | 14 | 6 | -- | 280 | 7 | D |
| 38 | 25 | 12 | -- | 14 | 5-52 | -- | -- | D |
| 27 | 25 | 1 | 18 | -- | -- | -- | -- | -- |
| 41 | 30 | 18 | 13 | -- | -- | 625 | 12 | D |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 34N04E07P03 | SKAGIT PUD NO 1 | P | SANDY SILT OR LOESS |
| 34N04E07P04 | SKAGIT PUD NO 1 | U | -- |
| 34N04E07P05 | SKAGIT PUD NO 1 | U | GRAVEL |
| 34N04E07P06 | SKAGIT PUD NO 1 | U | GRAVEL |
| 34N04E07P07 | SKAGIT PUD NO 1 | U | GRAVEL |
| 34N04E07P08 | SKAGIT PUD NO 1 | U | COARSE GRAINED SAND |
| 34N04E07P09 | SKAGIT PUD NO 1 | U | GRAVEL |
| 34N04E07P10 | SKAGIT PUD NO 1 | U | -- |
| 34N04E07P11 | SKAGIT PUD NO 1 | U | -- |
| 34N04E07P12 | SKAGIT PUD NO 1 | U | GRAVEL |
| 34N04E07P13 | SKAGIT PUD NO 1 | U | -- |
| 34N04E07P14 | SKAGIT PUD NO 1 | U | -- |
| 34N04E07P15 | SKAGIT PUD NO 1 | U | -- |
| 34N04E08C01 | SKAGIT PUD NO 1 | U | SAND |
| 34N04E08C02 | SKAGIT PUD NO 1 | U | COARSE GRAINED SAND |
| 34N04E08F01 | ED PHILLIPS | -- | SAND |
| 34N04E08L01 | K NAGATANI | I | COARSE GRAINED SAND AND GRAVEL |
| 34N04E09A01 | E MAPSON | S | FINE GRAINED SAND |
| 34N04E09B01 | AXEL HELSTROM | U | SAND |
| 34N04E11F01 | AW GADBOIS | I | SAND AND GRAVEL |
| 34N04E11L01 | AW GADBOIS | H | SAND |
| 34N04E12N01 | ED FREDLUND | U | -- |
| 34N04E13Q01 | DAIRY VALLEY FM | P | GRAVEL |
| 34N04E14K01 | CD GREEN | H | SAND |
| 34N04E14K02 | MG HAUENSTEIN | -- | SAND |
| 34N04E14L01 | DS THOMPSON | I | COARSE GRAINED SAND |
| 34N04E15D01 | ROGER HAYES | H | SAND AND GRAVEL |
| 34N04E16F01 | MC TURLEY | H | SAND AND GRAVEL |
| 34N04E16F02 | ROGER COFFMAN | H | COARSE GRAINED GRAVEL |
| 34N04E17C01 | GA GROENEN | I | SAND AND GRAVEL |
| 34N04E17C02 | GA GROENEN | H | -- |
| 34N04E17C03 | SKAGIT PUD NO 1 | U | -- |
| 34N04E17D01 | SKAGIT PUD NO 1 | U | -- |
| 34N04E18D01 | M FORTIN | I | COARSE GRAINED SAND |
| 34N04E18D02 | BEN STREITZ | I | GRAVEL |
| 34N04E18E01 | HR KENEALY | I | SAND |
| 34N04E18H01 | H KENEALY | I | COARSE GRAINED SAND |
| 34N04E18H02 | H KENEALY | U | FINE GRAINED SAND |
| 34N04E18H03 | HR KENEALY | I | SAND |
| 34N04E18J01 | M FORTIN | I | SAND AND GRAVEL |
| 34N04E18J02 | ELMER HARRIS | I | COARSE GRAINED SAND |
| 34N04E18N01 | SKAGIT PUD NO 1 | U | SAND |
| 34N04E18R01 | SKAGIT PUD NO 1 | U | SAND |
| 34N04E19R01 | SKAGIT PUD NO 1 | U | SAND AND GRAVEL |
| 34N04E19R02 | SKAGIT PUD N01 | U | GRAVEL |
| 34N04E19E01 | CLAIR MOORES | I | -- |
| 34N04E19G01 | DAIRY VALLEY | H | SAND AND GRAVEL |
| 34N04E19H01 | CARNATION CO | U | COARSE GRAINED SAND |
| 34N04E19L01 | SKAGIT PUD NO 1 | U | -- |
| 34N04E21C01 | FL ELIASSEN | H | -- |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 41 | 25 | -- | -- | -- | -- | 3200 | 12 | D |
| -- | 31 | 4 | -- | 18 | 3-51 | -- | -- | -- |
| 29 | 30 | 4 | -- | 19 | 3-51 | -- | -- | -- |
| -- | 30 | 4 | -- | 18 | 3-51 | -- | -- | -- |
| 30 | 31 | 4 | -- | 18 | 3-51 | 18 | -- | -- |
| 13 | 31 | 8 | -- | 18 | 3-51 | 35 | -- | -- |
| 28 | 31 | 6 | 18 | 18 | 3-51 | -- | -- | -- |
| -- | 31 | 4 | -- | 18 | 3-51 | -- | -- | -- |
| -- | 30 | 4 | -- | 18 | 3-51 | -- | -- | -- |
| -- | 32 | 4 | -- | 20 | 3-51 | 18 | -- | -- |
| -- | 35 | -- | -- | 22 | 3-51 | -- | -- | -- |
| 34 | 30 | -- | -- | -- | -- | -- | -- | -- |
| 29 | 30 | 8 | -- | 19 | 10-52 | 42 | 2 | -- |
| 36 | 28 | -- | -- | -- | -- | -- | -- | D |
| 29 | 28 | -- | 27 | -- | -- | -- | -- | D |
| 66 | 28 | 6 | 23 | 10 | 5-53 | 120 | 15 | D |
| 72 | 28 | 10 | 65 | 11 | 7-51 | 275 | 9 | D |
| 48 | 135 | 54 | -- | 45 | -29 | -- | -- | D |
| 117 | 90 | 4 | 108 | -- | -- | -- | -- | D |
| 30 | 36 | 8 | 19 | 14 | 7-51 | 180 | 10 | D |
| 30 | 36 | 2 | 28 | 18 | -- | -- | -- | D |
| 56 | 50 | -- | -- | -- | -- | 0 | -- | D |
| 61 | 175 | 6 | 58 | 40 | 6-72 | -- | -- | D |
| 97 | 140 | 8 | 77 | +7 | 10-45 | 50 | 12 | D |
| 99 | 140 | 4 | 77 | F | 11-45 | -- | 12 | D |
| 34 | 142 | 6 | 30 | 13 | 1-53 | 15 | 3 | D |
| 97 | 80 | 6 | 94 | 78 | 10-72 | 10 | 1 | D |
| 135 | 75 | 4 | 80 | 1 | -47 | 34 | 31 | D |
| 155 | 85 | 6 | 152 | 14 | 10-72 | 20 | 1 | D |
| 57 | 25 | 6 | 43 | 12 | 7-50 | 50 | 25 | D |
| 25 | 25 | 1 | -- | -- | -- | -- | -- | -- |
| 16 | 50 | -- | -- | -- | -- | -- | -- | D |
| 24 | 40 | -- | -- | -- | -- | -- | -- | D |
| 34 | 27 | 6 | 24 | 15 | 9-49 | 150 | 6 | D |
| 31 | 21 | 8 | 16 | 9 | 10-49 | -- | -- | D |
| 28 | 19 | 8 | -- | 6 | 2-52 | 250 | 5 | D |
| 34 | 29 | 8 | -- | 14 | 10-49 | 250 | 10 | -- |
| 40 | 29 | -- | -- | -- | -- | -- | -- | D |
| 28 | 29 | 8 | 16 | 14 | 5-53 | 100 | 2 | D. |
| 30 | 26 | 6 | -- | 12 | 9-49 | -- | -- | -- |
| 30 | 25 | 6 | 25 | 7 | 6-49 | 100 | 10 | D |
| 41 | 30 | -- | -- | -- | -- | -- | -- | D |
| 44 | 25 | -- | -- | 9 | 1-53 | -- | -- | D |
| 34 | 10 | 3 | -- | 7 | 9-51 | 46 | 1 | D |
| 27 | 12 | 3 | -- | 7 | -51 | 67 | 1 | -- |
| 6 | 15 | 99 | -- | 4 | -- | -- | -- | -- |
| 37 | 25 | 6 | 34 | -- | -- | 45 | 20 | D |
| 500 | 28 | 10 | 53 | 21 | -46 | -- | -- | D |
| 46 | 20 | -- | -- | -- | -- | -- | -- | D |
| 35 | 92 | 42 | -- | 10 | 5-73 | -- | -- | -- |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 34N04E22D01 | MORRIS C HALD | -- | GRAVEL |
| 34N04E23P01 | BEN CHASE | H | TILL |
| 34N04E26G01 | WAYNE TINGLEY | H | SAND AND GRAVEL |
| 34N04E26G02 | ROBERT PETERSON | H | SAND |
| 34N04E26J01 | ME TINGLEY | H | SAND AND GRAVEL |
| 34N04E26L01 | GRACE A CHAPIN | H | FINE GRAINED SAND |
| 34N04E26P01 | HAZEL THORSON | H | SAND AND GRAVEL |
| 34N04E28F01 | GI HARMON | H | GRAVEL |
| 34N04E28P01 | AR GILLETTE | H | SAND |
| 34N04E29P01 | ARVID EKLUND | H | GRAVEL |
| 34N04E30J01 | SKAGIT PUD NO 1 | U | -- |
| 34N04E30M01 | OTTO RUNDGREN | I | -- |
| 34N04E30P01 | SKAGIT PUD NO 1 | U | SAND |
| 34N04E30Q01 | RE OLSON | -- | SAND AND GRAVEL |
| 34N04E31B01 | AL CHRISTIANSON | I | -- |
| 34N04E31K01 | G POPPE | H | -- |
| 34N04E31L01 | HM KARLSON | H | -- |
| 34N04E31N01 | FRANK CUPERUS | H | -- |
| 34N04E32A01 | BJ SKORDAHL | H | MEDIUM GRAINED SAND |
| 34N04E32C01 | W JORGENSEN | H | -- |
| 34N04E32D01 | AXEL EKLUND | H | SAND AND GRAVEL |
| 34N04E32M01 | JACK TANIS | -- | MEDIUM GRAINED GRAVEL |
| 34N04E32N01 | BARNET IMPLEMNT | H | SAND |
| 34N04E32P01 | RJ HILDEBRAND | H | -- |
| 34N04E32P02 | HILDA HANSON | H | -- |
| 34N04E32Q01 | PAUL VIKE | U | -- |
| 34N04E32Q02 | PAUL VIKE | U | -- |
| 34N04E33P01 | MC HOLMGREN | H | GRAVEL |
| 34N04E35G01 | HM HOUGHTALING | H | SAND |
| 34N04E36N01 | VERNE ELFSTROM | H | FINE GRAINED SAND |
| 34N05E19F01 | EL PASO NAT GAS | H | CLAYEY SAND AND GRAVEL |
| 34N05E19F02 | COMPRESSOR ST17 | U | GRAVEL |
| 34N05E19G01 | COMPRESSOR ST17 | U | SAND AND GRAVEL |
| 34N05E19K01 | MA EKMAN | -- | COARSE GRAINED SAND AND GRAVEL |
| 34N05E30N01 | DG MCINTYRE | H | -- |
| 34N05E31R01 | JIM SINCLAIR | H | JOINT OR FRACT SHALE |
| 35N04E12N01 | VERN SIMS | H | COARSE GRAINED SAND AND GRAVEL |
| 35N04E13P01 | MA ALLAN | I | FINE GRAINED SAND |
| 35N04E13R02 | ON ORTH | H | GRAVEL |
| 35N04E21H01 | WALTER M FRENCH | -- | COARSE GRAINED SAND AND GRAVEL |
| 35N04E21L01 | FR FREDRICKSON | I | GRAVEL |
| 35N04E22C01 | HUGO JOHNSON | I | GRAVEL |
| 35N04E22C02 | HUGO JOHNSON | H | GRAVEL |
| 35N04E22D01 | HAROLD HAMMOND | I | GRAVEL |
| 35N04E22G01 | KEN KAALAND | H | -- |
| 35N04E22G02 | KEN KAALAND | I | GRAVEL |
| 35N04E22L01 | KEN KAALAND | I | GRAVEL |
| 35N04E22L02 | RF RANDALL | I | SAND AND GRAVEL |
| 35N04E22M01 | JOHN JOHNSON | I | SAND |
| 35N04E23G01 | RA STEPHENS | I | COARSE GRAINED SAND AND GRAVEL |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 262 | 400 | 6 | 260 | 185 | -- | 20 | 15 | D |
| 305 | 170 | 6 | 33 | 4 | 5-74 | 12 | 20 | D |
| 214 | 445 | 6 | 206 | 179 | 10-73 | 12 | 5 | D |
| 214 | 445 | 6 | 158 | 125 | 12-73 | 7 | 10 | D |
| 176 | 422 | 6 | 170 | 140 | 9-73 | 15 | -- | D |
| 380 | 540 | 6 | 360 | 320 | 7-73 | 5 | 30 | D |
| 219 | 325 | 6 | 216 | 207 | 4-73 | 10 | 1 | D |
| 126 | 230 | 6 | 123 | 76 | -- | 10 | 1 | D |
| 9 | 360 | 48 | 8 | 0 | 10-51 | -- | -- | D |
| 74 | 15 | 2 | 65 | -- | -- | -- | -- | D |
| 36 | 15 | -- | -- | -- | -- | -- | -- | D |
| 19 | 14 | 4 | -- | 5 | 8-52 | 250 | 6 | -- |
| 30 | 20 | -- | -- | 14 | 11-52 | -- | -- | D |
| 34 | 15 | 7 | 23 | 1 | 2-53 | 200 | 5 | D |
| 75 | 15 | 1 | -- | -- | -- | -- | -- | -- |
| 80 | 12 | -- | -- | -- | -- | -- | -- | -- |
| 103 | 12 | 1 | -- | -- | -- | -- | -- | -- |
| 80 | 13 | -- | -- | 10 | 5-52 | -- | -- | -- |
| 149 | 125 | 4 | 149 | 94 | 9-50 | 6 | 1 | D |
| 14 | 16 | 2 | -- | -- | -- | -- | -- | -- |
| 53 | 14 | 2 | 45 | 6 | 5-52 | -- | -- | D |
| 15 | 8 | 8 | 4 | 3 | 7-53 | 80 | 11 | D |
| 95 | 8 | 6 | 80 | 1 | 8-73 | 15 | 15 | D |
| 54 | 13 | 2 | -- | -- | -- | -- | -- | -- |
| 82 | 13 | 2 | -- | -- | -- | -- | -- | -- |
| 192 | 50 | 5 | -- | 42 | 4-51 | 7 | -- | D |
| 118 | 70 | -- | -- | -- | -- | -- | -- | D |
| 103 | 65 | 4 | 100 | F | -- | 67 | -- | D |
| 140 | 340 | 4 | 40 | 17 | 10-49 | 2 | -- | D |
| 105 | 110 | 5 | 81 | +10 | 7-49 | 10 | 30 | D |
| 30 | 170 | 6 | 12 | 8 | 7-66 | 6 | 10 | D |
| 162 | 175 | -- | 19 | -- | -- | -- | -- | D |
| 103 | 100 | -- | 14 | 2 | -- | -- | -- | D |
| 70 | 160 | 5 | 68 | 0 | 8-66 | 4 | 6 | D |
| 15 | 205 | 72 | -- | -- | -- | -- | -- | -- |
| 26 | 240 | 6 | 19 | 4 | 12-72 | 6 | 16 | D |
| 97 | 300 | 6 | 96 | 48 | 5-74 | 16 | 32 | D |
| 18 | 80 | 2 | -- | 15 | 4-52 | -- | -- | D |
| 24 | 80 | 2 | 19 | 15 | 4-52 | -- | -- | -- |
| 40 | 40 | 8 | 24 | 8 | 2-55 | 192 | 4 | D |
| 24 | 35 | 4 | 15 | 9 | 6-47 | 100 | 14 | D |
| 34 | 40 | 4 | 25 | 9 | 5-52 | 300 | 4 | D |
| 20 | 40 | 1 | -- | 9 | 5-52 | -- | -- | -- |
| 38 | 38 | 8 | 30 | 8 | 6-56 | 16 | 12 | D |
| 20 | 42 | 2 | -- | -- | -- | -- | -- | -- |
| 29 | 42 | 8 | -- | 12 | 5-52 | 600 | -- | -- |
| 34 | 40 | 8 | 28 | 11 | 5-52 | 300 | -- | -- |
| 26 | 40 | 5 | 19 | 14 | 6-50 | 56 | 1 | D |
| 36 | 40 | 6 | -- | 7 | 5-52 | 96 | 4 | D |
| 45 | 50 | 4 | 32 | 17 | 6-52 | 50 | 5 | D |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 35N04E23L01 | AR OVENELL | U | COARSE GRAINED GRAVEL |
| 35N04E23L02 | AR OVERELL | I | GRAVEL |
| 35N04E23L03 | AR OVERELL | H | -- |
| 35N04E24A01 | MARVIN JENNINGS | I | SAND |
| 35N04E24A02 | MARVIN JENNINGS | I | SAND |
| 35N04E24A03 | MARVIN JENNINGS | I | SAND |
| 35N04E24A04 | MARVIN JENNINGS | I | SAND |
| 35N04E24E01 | IRA TODD | I | GRAVEL |
| 35N04E24F01 | HARRY RANDALL | H | FINE GRAINED GRAVEL |
| 35N04E24M01 | LEMLEY MORTUARY | I | -- |
| 35N04E24P01 | REX ROGERS | H | SAND |
| 35N04E25C01 | WILLIS-ROGERS | N | SAND AND GRAVEL |
| 35N04E25D01 | GOODYEAR NELSON | N | SAND AND GRAVEL |
| 35N04E25J01 | FRED PETERSON | H | GRAVEL |
| 35N04E25K01 | JOHN LENTZ | I | GRAVEL |
| 35N04E25K02 | JOHN LENTZ | H | -- |
| 35N04E25L01 | K VAN ZANTEN | I | GRAVEL |
| 35N04E25P01 | EMMA HART | S | GRAVEL |
| 35N04E25Q01 | CLAUDE WEST | H | GRAVEL |
| 35N04E26J01 | CURT HEIDER | I | COARSE GRAINED GRAVEL |
| 35N04E27D01 | HR KENEALY | I | SAND AND GRAVEL |
| 35N04E27J01 | TOM ELLISON | H | COARSE GRAINED SAND |
| 35N04E27J02 | VERNON SINSEL | -- | SAND AND GRAVEL |
| 35N04E27L01 | CW ABENROTH | I | COARSE GRAINED GRAVEL |
| 35N04E27N01 | JULIUS AMUNDSON | I | COARSE GRAINED GRAVEL |
| 35N04E27P01 | LARS YTGARD | S | GRAVEL |
| 35N04E27P02 | LARS YTGARD | H | -- |
| 35N04E27P03 | EARL DAVIS | H | GRAVEL |
| 35N04E28B01 | JESS GALBREATH | I | SAND AND GRAVEL |
| 35N04E28H01 | RUDY VRANA | I | SAND AND GRAVEL |
| 35N04E28L01 | STANLEY KAALAND | I | SAND |
| 35N04E28L02 | STANLEY KAALAND | U | -- |
| 35N04E28P01 | TED BRANDSTROM | I | GRAVEL |
| 35N04E28P02 | TED BRANDSTROM | H | -- |
| 35N04E28P03 | OLE JENSEN | I | -- |
| 35N04E28P04 | ALEX COUCH | I | -- |
| 35N04E28P05 | TED BRANDSTROM | I | SAND AND GRAVEL |
| 35N04E28R01 | R ARNTZEN | H | GRAVEL |
| 35N04E29E01 | DUANE DYKSTRA | I | SAND AND GRAVEL |
| 35N04E29N01 | R HUFFSTETTER | H | SAND AND GRAVEL |
| 35N04E30H01 | JAMES W JOLLY | H | GRAVEL |
| 35N04E30L01 | IVER KNUTZEN | I | -- |
| 35N04E31J01 | BURLINGTON SCHL | I | SAND AND GRAVEL |
| 35N04E32P01 | WATER REFIN INC | I | -- |
| 35N04E33R01 | LO LARSEN | H | -- |
| 35N04E33G01 | JOHN ERCHINGER | H | GRAVEL |
| 35N04E33G02 | JM ERCHINGER | -- | VERY COARSE GRAINED SAND |
| 35N04E33L01 | I NAGATANI | I | COARSE GRAINED GRAVEL |
| 35N04E33L02 | EDWARD WICKERT | I | FINE GRAINED GRAVEL |
| 35N04E34G01 | LW BROWN | H | -- |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 18 | 45 | 6 | 15 | 3 | 5-52 | 100 | 7 | D |
| 15 | 45 | 2 | -- | -- | -- | -- | -- | -- |
| 15 | 45 | 2 | -- | -- | -- | -- | -- | -- |
| 18 | 75 | 2 | -- | 10 | 4-52 | 40 | -- | D |
| 23 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 20 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 20 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 20 | 60 | 2 | 16 | -- | -- | -- | -- | -- |
| 14 | 60 | -- | -- | 6 | 4-52 | -- | -- | -- |
| 27 | 56 | 1 | -- | -- | -- | -- | -- | -- |
| 28 | 60 | 2 | -- | 18 | 4-52 | -- | -- | -- |
| 48 | 50 | 8 | 20 | 15 | 12-51 | 400 | 1 | D |
| 69 | 50 | 6 | 52 | 22 | -- | 250 | 6 | D |
| 18 | 40 | 2 | -- | -- | -- | -- | -- | -- |
| 29 | 40 | 8 | 20 | 13 | 4-52 | 150 | 15 | D |
| 23 | 40 | 2 | -- | -- | -- | -- | -- | -- |
| 36 | 45 | 8 | 22 | 12 | 8-73 | 60 | 12 | D |
| 20 | 40 | -- | -- | -- | -- | -- | -- | -- |
| 25 | 40 | 2 | -- | -- | -- | -- | -- | -- |
| 34 | 40 | 7 | 23 | 10 | 12-52 | 300 | 6 | D |
| -- | -- | -- | 14 | -- | -- | -- | -- | D |
| 18 | 30 | 1 | -- | 14 | 4-52 | -- | -- | -- |
| 84 | 30 | 4 | 45 | 12 | 7-47 | 17 | 1 | D |
| 58 | 40 | 6 | 52 | 15 | 8-73 | 25 | 1 | D |
| 40 | 36 | 8 | 15 | 13 | 5-53 | 200 | 4 | D |
| 19 | 36 | 2 | -- | 9 | 4-52 | -- | -- | -- |
| 23 | 36 | 2 | -- | 9 | 4-52 | -- | -- | -- |
| 18 | 36 | 2 | -- | 4 | 4-52 | -- | -- | -- |
| 33 | 45 | 5 | 25 | 10 | 6-63 | 130 | 2 | D |
| 27 | 40 | 8 | 18 | 2 | 8-47 | 350 | 19 | D |
| 63 | 40 | 6 | 55 | 12 | 5-52 | 130 | 8 | D |
| 52 | 40 | 6 | -- | -- | -- | -- | -- | D |
| 25 | 35 | 2 | 16 | 11 | 10-49 | 100 | -- | D |
| 25 | 35 | 1 | -- | 11 | 5-52 | -- | -- | -- |
| 23 | 30 | 2 | -- | -- | -- | -- | -- | -- |
| 24 | 35 | 2 | -- | 20 | 11-52 | 64 | 1 | -- |
| 18 | 32 | 2 | 12 | 12 | 9-49 | 100 | 1 | D |
| 26 | 40 | 1 | -- | 19 | 4-52 | -- | -- | -- |
| 38 | 25 | 8 | 23 | 6 | 6-74 | 400 | 10 | D |
| 76 | 24 | 6 | 75 | +2 | 8-73 | 10 | 20 | D |
| 25 | 21 | -- | 23 | -- | -- | -- | -- | -- |
| 80 | 23 | 8 | -- | -- | -- | -- | -- | -- |
| 64 | 25 | 8 | 57 | 8 | 5-71 | 200 | 16 | D |
| 45 | 30 | -- | -- | -- | -- | -- | -- | -- |
| 20 | 43 | 1 | -- | -- | -- | -- | -- | -- |
| 25 | 43 | 3 | -- | 8 | 4-52 | 500 | -- | -- |
| 48 | 43 | 6 | 39 | 8 | 6-56 | 160 | 6 | D |
| 90 | 36 | 7 | 76 | 11 | 6-53 | 350 | 8 | D |
| 26 | 36 | 4 | 23 | 18 | 7-52 | 56 | 2 | D |
| -- | 35 | -- | -- | -- | -- | -- | -- | -- |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 35N04E34K01 | HL HALVERSON | S | SAND |
| 35N04E34L01 | HL HALVERSON | H | GRAVEL |
| 35N05E06N01 | CF PITTS | -- | SAND |
| 35N05E07J01 | NORTHERN ST HSP | P | SAND AND GRAVEL |
| 35N05E07J02 | DEPT FINANCE | U | GRAVEL |
| 35N05E08D01 | DPT PUB INSTS | P | SAND |
| 35N05E08D02 | DEPT PUB INSTS | P | SAND |
| 35N05E08N01 | DEPT PUBL INSTS | P | GRAVEL |
| 35N05E09R01 | ROBERT DAVIE | H | COARSE GRAINED GRAVEL |
| 35N05E13A01 | JAMES PARKER | H | SAND AND GRAVEL |
| 35N05E14F01 | JE MORRISON | -- | COARSE GRAINED SAND AND GRAVEL |
| 35N05E14F01 | CD BUCHANAN | -- | COARSE GRAINED SAND AND GRAVEL |
| 35N05E15D01 | OSCAR NICHOLSON | I | COARSE GRAINED GRAVEL |
| 35N05E18M01 | ML NIECE | U | GRAVEL |
| 35N05E18Q01 | FB PATTEN | H | SAND AND GRAVEL |
| 35N05E19C01 | WF HARR | H | -- |
| 35N05E19C02 | GEORGE JONES | H | SAND |
| 35N05E19D01 | LEROY HOYT | H | SAND |
| 35N05E19E01 | GEORGE COFFMAN | H | -- |
| 35N05E19H01 | ROSS E DINKIN | H | COARSE GRAINED SAND |
| 35N05E19K01 | JC EBBESON | H | GRAVEL |
| 35N05E19M01 | EA GRIFFIN | I | SAND AND GRAVEL |
| 35N05E19Q01 | HL HOPKE MD | -- | COARSE GRAINED SAND AND GRAVEL |
| 35N05E19R01 | CLINTON HOLM | U | GRAVEL |
| 35N05E20E01 | JOHN A HARRIS | H | -- |
| 35N05E20G01 | JAKE SPOLSTRA | I | SAND AND GRAVEL |
| 35N05E21C01 | CS HANSEN | -- | COARSE GRAINED GRAVEL |
| 35N05E21J01 | JP MCKAY | I | VERY COARSE GRAINED GRAVEL |
| 35N05E21J02 | JAN MULDER | I | SAND AND GRAVEL |
| 35N05E22R01 | WE ZIEBEL | I | COARSE GRAINED SAND AND GRAVEL |
| 35N05E29D01 | TE TENNESON | H | -- |
| 35N05E29L01 | SS EATON | U | -- |
| 35N05E30R01 | A RADOSEVICH | H | -- |
| 35N05E30C01 | SAM E ANDREWS | I | -- |
| 35N05E30K01 | W VANDENBERG | I | -- |
| 35N05E30K02 | SKAGIT PUD NO 1 | -- | -- |
| 35N05E30K03 | SKAGIT PUD NO 1 | -- | VERY COARSE GRAINED GRAVEL |
| 35N05E30K04 | SKAGIT PUD NO 1 | -- | SAND AND GRAVEL |
| 35N05E30K05 | SKAGIT PUD NO 1 | -- | GRAVEL |
| 35N05E30K06 | SKAGIT PUD NO 1 | -- | -- |
| 35N05E30L01 | SKAGIT PUD NO 1 | -- | CLAYEY SAND |
| 35N05E30M01 | SKAGIT PUD 1 | U | GRAVEL |
| 35N05E30M02 | SEDRO WOOLLEY | P | -- |
| 35N05E30M03 | SEDRO WOOLLEY | U | SAND |
| 35N05E35B01 | CHET YARDCASTLE | H | SAND AND GRAVEL |
| 35N06E08B01 | GARY BUCKINGHAM | U | -- |
| 35N06E09Q01 | R FRIZZELL | H | SAND AND GRAVEL |
| 35N06E10K01 | RS DOWDLE | I | SAND AND GRAVEL |
| 35N06E10N01 | DR RM ANDERSON | H | SAND AND GRAVEL |
| 35N06E11L01 | GLADYS BUHROW | H | SILTY SAND |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 14 | 35 | 2 | -- | -- | -- | -- | -- | -- |
| 20 | 35 | 2 | -- | -- | -- | -- | -- | -- |
| 113 | 275 | 6 | 97 | 32 | 10-52 | 3 | -- | D |
| 90 | 130 | 10 | 28 | 20 | 12-45 | 620 | 29 | D |
| 79 | 130 | 12 | -- | 12 | 8-45 | 117 | 65 | D |
| 148 | 180 | 10 | 74 | + | 6-53 | 350 | 75 | D |
| 231 | 205 | 10 | 93 | + | 11-52 | 800 | 50 | D |
| 86 | 100 | 10 | -- | 8 | 11-45 | 400 | 65 | D |
| 82 | 125 | 6 | 82 | -- | -- | 12 | 12 | D |
| 44 | 90 | 6 | 39 | 26 | 9-72 | 15 | -- | D |
| 65 | 80 | 6 | 63 | 43 | 8-51 | 10 | 14 | D |
| 37 | 85 | 6 | 33 | 24 | 8-51 | 10 | 4 | D |
| 26 | 90 | 6 | 13 | 8 | 9-51 | 160 | 4 | D |
| 22 | 90 | 1 | 18 | 15 | 4-52 | -- | -- | -- |
| 22 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 15 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 24 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 15 | 75 | 2 | -- | -- | -- | -- | -- | -- |
| 28 | 70 | 2 | -- | -- | -- | -- | -- | -- |
| 19 | 55 | 36 | -- | 17 | 4-52 | -- | -- | -- |
| 30 | 65 | 2 | -- | -- | -- | -- | -- | -- |
| 35 | 65 | 2 | 26 | 15 | 4-52 | -- | -- | -- |
| 33 | 55 | 10 | 25 | -- | -- | -- | -- | D |
| 16 | 50 | 2 | -- | -- | -- | -- | -- | -- |
| 12 | 55 | 2 | -- | -- | -- | -- | -- | -- |
| 32 | 60 | 8 | 26 | 11 | 8-70 | 80 | 3 | D |
| 41 | 70 | 7 | 33 | 9 | 6-53 | 180 | 11 | D |
| 40 | 55 | 8 | 32 | 22 | 6-52 | 112 | 5 | D |
| 42 | 60 | 8 | 32 | 20 | 6-54 | 60 | 4 | D |
| 41 | 60 | 7 | 30 | 23 | 12-52 | 225 | 5 | D |
| 27 | 50 | 2 | -- | 20 | 4-52 | -- | -- | -- |
| 25 | 45 | 1 | -- | 18 | 5-52 | -- | -- | -- |
| 24 | 48 | -- | -- | -- | -- | -- | -- | -- |
| 28 | 52 | 2 | -- | 21 | -- | 32 | 1 | -- |
| 24 | 45 | -- | -- | 20 | 4-52 | -- | -- | -- |
| 49 | 45 | 2 | -- | 12 | 6-52 | 60 | -- | D |
| 41 | 45 | -- | 17 | 17 | 8-52 | -- | -- | D |
| 27 | 45 | -- | -- | 18 | 8-52 | -- | -- | D |
| 24 | 45 | -- | -- | 17 | 8-52 | -- | -- | D |
| 31 | 45 | -- | -- | -- | -- | -- | -- | D |
| 64 | 45 | 1 | 45 | 13 | 5-52 | -- | -- | D |
| 50 | 45 | 12 | 47 | 9 | -38 | 250 | 20 | D |
| 44 | 45 | 14 | -- | -- | -- | 750 | 8 | -- |
| 22 | 45 | 4 | -- | 8 | 4-42 | -- | -- | -- |
| 51 | 90 | 6 | 50 | 39 | 10-72 | 15 | 3 | D |
| 210 | 410 | 8 | -- | -- | -- | 0 | -- | D |
| 34 | 375 | 8 | 22 | 14 | 11-62 | -- | -- | -- |
| 23 | 120 | 5 | 14 | 8 | 3-53 | 75 | 1 | D |
| 22 | 95 | 6 | 16 | 12 | 10-73 | 15 | 1 | D |
| 88 | 150 | 6 | 70 | 67 | 7-74 | 10 | 7 | D |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 35N06E11P01 | RF BLANTON | H | COARSE GRAINED SAND AND GRAVEL |
| 35N06E13A01 | CH WILSON | I | SAND AND GRAVEL |
| 35N06E13F01 | CH ANDERSON | -- | SAND AND GRAVEL |
| 35N06E13K01 | CH WILSON | I | -- |
| 35N06E13M01 | JOHN REICHELT | I | -- |
| 35N06E13P01 | DEE HODGIN | I | SAND AND GRAVEL |
| 35N06E14H01 | GRT NRTHN RR CO | P | -- |
| 35N06E15H01 | CS PHILLIPS | I | COARSE GRAINED GRAVEL |
| 35N06E17F01 | SOUNDVIEW PULP | N | GRAVEL |
| 35N06E20N01 | DON WALKER | H | SAND AND GRAVEL |
| 35N06E20P01 | HOWARD SPURLING | H | SAND AND GRAVEL |
| 35N06E22F01 | MG JAUENSTEIN | I | COARSE GRAINED SAND AND GRAVEL |
| 35N06E29C01 | DAVE MANLEY | H | SAND |
| 35N07E16M01 | SKGT RVR WDS AS | U | SANDY GRAVEL |
| 35N07E17G01 | JOE PINELLI | -- | COARSE GRAINED GRAVEL |
| 35N07E18J01 | JM STEEN | -- | COARSE GRAINED SAND AND GRAVEL |
| 35N07E18L01 | WW PERRIGO | -- | MEDIUM GRAINED GRAVEL |
| 35N07E18L02 | CAMELOT FARMS | P | SAND AND GRAVEL |
| | Water Resources Inventory Area 04 | | |
| 32N09E13A01 | CLAYTON REECE | H | SAND |
| 32N09E13A02 | BILL SHANNAHAN | H | SAND AND GRAVEL |
| 32N09E13A03 | RAY MOORE CONST | H | GRAVEL |
| 32N09E13F01 | THREE RIVERS CO | N | SAND AND GRAVEL |
| 32N09E13F02 | 3 RIVERS MILL | N | SAND AND GRAVEL |
| 32N09E13M01 | SUMMITT LMBR CO | H | GRAVELLY SAND |
| 32N09E13M02 | SUMMITT LMBR CO | N | SAND AND GRAVEL |
| 32N09E14J01 | WH LARGE | N | SAND AND GRAVEL |
| 32N09E14J02 | US FOREST SRVCE | P | SAND AND GRAVEL |
| 32N09E14P01 | HJ BAKER | H | GRAVEL |
| 32N09E23C01 | DR NC RIDDLE | H | COARSE GRAINED SAND AND GRAVEL |
| 32N10E05M01 | JOHN POLLOCK | H | COARSE GRAINED SAND AND GRAVEL |
| 33N10E18P01 | NW CHRISTIAN CP | P | -- |
| 33N10E30H01 | MEL BENTON | H | GRAVEL |
| 33N10E31H01 | RE SHERRILL | H | GRAVEL |
| 33N10E33D01 | ROBERT GREEN | H | TILL |
| 33N10E33G02 | GARY CLOER | H | SAND AND GRAVEL |
| 34N10E19C01 | HAROLD ALLEN | H | GRAVEL |
| 34N10E30D01 | SAUK DAMSITE | U | -- |
| 34N10E30D02 | SAUK DAMSITE | U | -- |
| 34N10E30D03 | SAUK DAMSITE | U | -- |
| 34N10E30P01 | SAUK DAMSITE | U | -- |
| 35N07E10K01 | GRANDY CREEK IN | P | POORLY SORTED GRAVEL |
| 35N07E10L01 | VR BLANTON | H | COARSE GRAINED SAND AND GRAVEL |
| 35N07E13M01 | JAMES POWELL | -- | SAND |
| 35N07E14H01 | NJ SHELVER | -- | COARSE GRAINED GRAVEL |
| 35N07E15A01 | RALPH DICKERSON | -- | GRAVEL |
| 35N08E07M01 | TULLOCH DEVELOP | P | GRAVEL |
| 35N08E09F01 | G THEODORATUS | P | HARD GRAVEL |
| 35N08E10N01 | CONCRETE SCH DT | P | -- |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 63 | 130 | 6 | 56 | 53 | 1-73 | 15 | 1 | D |
| 35 | 105 | 8 | 25 | 15 | 6-64 | 350 | 5 | D |
| 25 | 100 | 8 | 17 | 7 | 5-53 | 150 | 5 | D |
| 23 | 90 | 10 | -- | 5 | -- | 400 | 2 | -- |
| 21 | 90 | 6 | -- | 9 | -- | 150 | 4 | -- |
| 18 | 95 | 6 | 10 | 9 | 4-53 | 50 | 1 | D |
| 13 | 95 | 12 | -- | 9 | -- | 120 | -- | -- |
| 30 | 80 | 8 | 19 | -- | -- | -- | -- | D |
| 39 | 80 | 26 | 35 | -- | -- | 1200 | 6 | D |
| 36 | 90 | 6 | 32 | 26 | 2-73 | 12 | -- | D |
| 44 | 100 | 6 | 43 | 31 | 10-72 | 15 | 5 | D |
| 39 | 85 | 8 | 13 | 12 | 6-53 | 200 | -- | D |
| 97 | 110 | 6 | 77 | 77 | 10-72 | 15 | 5 | D |
| 80 | 120 | 8 | 27 | 22 | 3-72 | 40 | 1 | D |
| 24 | 135 | 6 | 15 | 3 | -- | 200 | 6 | D |
| 27 | 100 | 6 | 18 | 7 | -- | 200 | 8 | D |
| 26 | 100 | 7 | 22 | 8 | -54 | 200 | 4 | D |
| 39 | 100 | 8 | 30 | 13 | 1-70 | 100 | 4 | D |
| 117 | 485 | 6 | 107 | 30 | 10-72 | 25 | 3 | D |
| 90 | 485 | 6 | 86 | 30 | 9-72 | 9 | 50 | D |
| 83 | 485 | 6 | 62 | -- | -- | 5 | -- | D |
| 87 | 505 | 12 | 74 | 27 | 8-59 | 125 | 60 | D |
| 45 | 505 | 6 | 36 | 35 | 9-46 | 10 | 5 | -- |
| 320 | 510 | 10 | 308 | 16 | 3-72 | 40 | 6 | D |
| 206 | 510 | 10 | 200 | 3 | 8-71 | 30 | 10 | D |
| 60 | 545 | 6 | -- | 26 | 8-44 | 7 | -- | -- |
| 90 | 550 | -- | -- | 26 | 8-44 | -- | -- | -- |
| 37 | 550 | 6 | 35 | 10 | 6-74 | 30 | -- | D |
| 224 | 558 | 8 | 203 | 80 | 9-62 | 190 | 1 | D |
| 39 | 430 | 6 | 36 | 21 | 9-72 | 20 | 5 | D |
| -- | 520 | -- | -- | -- | -- | -- | -- | -- |
| 50 | 400 | 6 | 37 | 24 | 3-74 | 30 | -- | D |
| 63 | 442 | 6 | 42 | 35 | 12-73 | 20 | 5 | D |
| 205 | 595 | 6 | 200 | 145 | 7-74 | 10 | 12 | D |
| 103 | 595 | 6 | 100 | 77 | 7-74 | 10 | 5 | D |
| 25 | 280 | 6 | 16 | 7 | 2-74 | 15 | 4 | D |
| 124 | 315 | -- | -- | -- | -- | -- | -- | D |
| 70 | 330 | -- | -- | -- | -- | -- | -- | D |
| 144 | 370 | -- | -- | -- | -- | -- | -- | D |
| 70 | 290 | -- | -- | -- | -- | -- | -- | D |
| 126 | 200 | 8 | 118 | 43 | 4-74 | 75 | 6 | D |
| 102 | 200 | 6 | 99 | 54 | -- | 15 | 6 | D |
| 52 | 130 | 5 | 49 | 9 | -51 | -- | -- | D |
| 30 | 135 | 8 | 24 | 7 | -- | 300 | 6 | D |
| 51 | 165 | 5 | 46 | 36 | 9-51 | -- | -- | D |
| 48 | 140 | 8 | 40 | 12 | -66 | 30 | 1 | D |
| 53 | 190 | 8 | 47 | 15 | 4-69 | 40 | 19 | D |
| 80 | 255 | 8 | -- | 35 | 6-59 | 62 | 40 | -- |

TABLE C8.--Records of selected wells--continued

| LOCAL WELL NUMBER | OWNER | USE OF WATER | WATER-BEARING MATERIAL OF MAJOR AQUIFER |
|---|---|---|---|
| 35N08E14F01 | TULLOCH DEVELOP | P | SAND AND GRAVEL |
| 35N08E15Q01 | RE ARNOLD | H | GRAVEL |
| 35N08E16A01 | BEN WEIR | -- | SAND AND GRAVEL |
| 35N09E19F01 | CHARLES YOUNG | H | GRAVEL |
| 35N09E19G01 | LOWER FABER DAM | U | -- |
| 35N09E19H01 | PM CAVALLARO | H | GRAVEL |
| 35N09E20R01 | ALLAN ARMSTRONG | -- | SAND AND GRAVEL |
| 35N09E33G01 | UPPER FABER DAM | U | -- |
| 35N09E34P01 | VM WALSH | H | GRAVEL |
| 35N10E12A01 | HARRY MARTIN | H | SAND AND GRAVEL |
| 35N10E12Q01 | STAN RIPLEY | -- | FINE GRAINED SAND AND GRAVEL |
| 35N10E13Q01 | ED STAFFORD | -- | SAND AND GRAVEL |
| 35N10E14Q01 | TO STAFFORD | -- | SAND AND GRAVEL |
| 35N10E32C01 | DEPT OF GAME | H | SAND AND GRAVEL |
| 35N11E06A01 | HOWARD BULLARD | H | SAND AND GRAVEL |
| 35N12E07F01 | CASCADE DAMSITE | U | -- |
| 35N12E07G01 | CASCADE DAMSITE | U | -- |
| 35N12E07L01 | CASCADE DAMSITE | U | -- |
| 36N08E27N01 | LANDS WEST INC | P | SAND AND GRAVEL |
| 37N12E21J01 | SEATTLE DPT LGT | P | SAND AND GRAVEL |
| 37N13E08C01 | SEATTLE DPT LGT | P | SAND |

| WELL DEPTH (FT) | ALTI-TUDE-OF LSD (FT) | CASING DIAM-ETER (IN) | DEPTH TO TOP OF AQUIFER (FEET) | WATER LEVEL (FT) | DATE WATER LEVEL MEASURED | YIELD (GPM) | DRAW DOWN (FT) | LOG AVAIL-ABLE |
|---|---|---|---|---|---|---|---|---|
| 74 | 225 | 8 | 63 | 39 | 5-68 | 30 | 3 | D |
| 69 | 240 | 6 | 64 | 40 | 5-73 | 30 | 5 | D |
| 42 | 200 | 4 | 38 | 22 | 2-52 | 10 | 6 | D |
| 57 | 210 | 6 | 54 | 25 | 6-74 | 20 | -- | D |
| 153 | 199 | -- | -- | -- | -- | -- | -- | D |
| 69 | 230 | 6 | 65 | 40 | 6-74 | 60 | 20 | D |
| 89 | 200 | 6 | 86 | 70 | 8-51 | 10 | 9 | D |
| 150 | 205 | -- | -- | -- | -- | -- | -- | D |
| 40 | 230 | 6 | -- | 22 | 12-73 | 30 | 3 | D |
| 67 | 355 | 6 | 58 | 14 | 9-51 | 13 | 1 | D |
| 26 | 320 | 6 | 21 | 13 | 11-50 | 8 | 1 | D |
| 30 | 310 | 6 | 14 | -- | -- | -- | -- | D |
| 27 | 290 | 5 | 21 | 17 | 11-50 | 17 | 2 | D |
| 30 | 238 | 6 | 12 | 8 | 11-65 | 18 | 1 | D |
| 25 | 325 | 6 | 17 | 10 | 6-73 | 25 | 1 | D |
| 135 | 878 | -- | -- | -- | -- | -- | -- | D |
| 92 | 950 | -- | -- | -- | -- | -- | -- | D |
| 97 | 877 | -- | -- | -- | -- | -- | -- | D |
| 212 | 900 | 8 | 197 | 114 | 11-73 | 243 | 4 | D |
| 157 | 514 | 16 | -- | 57 | 10-62 | 525 | 20 | D |
| 172 | 890 | 12 | -- | 16 | 10-56 | 703 | 18 | D |

TABLE C9.--Drillers' logs of wells

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| **32/9-13A1. Clayton Reese. Altitude 485 ft. Drilled by Hayes Well Drilling and Pumps Inc., October 1972. Cased 6 in. diam. to 117 ft; open end.** | | |
| Gravel | 1 | 1 |
| Sand, dry | 7 | 8 |
| Gravel and some clay, dry | 15 | 23 |
| Gravel, water-bearing | 8 | 31 |
| Clay, gray | 9 | 40 |
| Clay, sandy, gray, with wood | 28 | 68 |
| Clay, gray | 4 | 72 |
| Sand and gravel | 7 | 79 |
| Clay | 28 | 107 |
| Sand, water-bearing | 1 | 108 |
| Shale | 9 | 117 |
| **32/9-13A2. Bill Shannahan. Altitude 485 ft. Drilled by Hayes Well Drilling and Pumps Inc., September 1972. Cased 6 in. diam. to 90 ft; open end.** | | |
| Unknown | 26 | 26 |
| Clay, blue | 10 | 36 |
| Clay and gravel | 46 | 82 |
| Gravel | 1 | 83 |
| Sand, coarse, water-bearing | 3 | 86 |
| Gravel and sand, water-bearing | 4 | 90 |
| **32/9-13A3. Ray Moore Construction Co. Altitude 485 ft. Drilled by Hayes Well Drilling and Pumps Inc., August 1972. Cased 6 in. diam to 78 ft; screened 78-83 ft.** | | |
| Unknown | 20 | 20 |
| Gravel, water-bearing | 13 | 33 |
| Till | 2 | 35 |
| Clay, gray, with silt | 18 | 53 |
| Sand | 8 | 61 |
| Clay with gravel | 1 | 62 |
| Gravel, fine, water-bearing | 21 | 83 |
| **32/9-13E1. Three Rivers Plywood and Timber Co. Altitude 505 ft. Drilled by Bert A. Abram, August 1959. Cased 12 in. diam. to 77 ft; screened 77-87 ft.** | | |
| Sand | 10 | 10 |
| Gravel, sand, and rusty water | 20 | 30 |
| Clay, soft | 44 | 74 |
| Sand, coarse, and gravel, with fine sand and silt, water-bearing | 12 | 86 |
| **32/9-13M1. Summitt Lumber Co. Altitude 510 ft. Drilled by H. O. Meyer Drilling Co., March 1972. Cased 14 in. diam. to 20 ft., 10 in. diam. to 300 ft; screened 300-320 ft.** | | |
| Soil, gravel, and fill | 10 | 10 |
| Till | 10 | 20 |
| Gravel, coarse | 10 | 30 |
| Peat | 5 | 35 |
| Clay | 20 | 55 |
| Till | 3 | 58 |
| Clay with some fine gravel | 10 | 68 |
| Till with fine layers of clay | 7 | 75 |
| Till | 20 | 95 |
| Sand, coarse, and gravel | 9 | 104 |
| Till and gravel | 10 | 114 |
| Till, brown | 31 | 145 |
| Till, sandy and silty | 103 | 248 |
| Peat, with sand and gravel lenses | 20 | 268 |
| Sand, silty and till, with some gravel | 20 | 288 |
| Sand and till | 9 | 297 |
| Sand, fine to coarse | 11 | 308 |
| Sand and some gravel | 12 | 320 |
| Note: Almost all of the material was water-bearing. | | |
| **32/9-13M2. Summitt Lumber Co. Altitude 510 ft. Drilled by H. O. Meyer Drilling Co., August 1971 Cased 14 in. diam. to 20 ft., 10 in. diam. to 86 ft; screened 86 to 206 ft.** | | |
| Soil and sand | 5 | 5 |
| Gravel, coarse, with some water | 15 | 20 |
| Till | 10 | 30 |
| Sand and silt, gray | 10 | 40 |
| Clay and sand, gray | 30 | 70 |
| Clay, gray, sand and gravel | 15 | 85 |
| Till | 15 | 100 |
| Till and gravel | 30 | 130 |
| Till, with lenses of sand and gravel | 23 | 153 |
| Till, sand, and fine gravel, water-bearing | 42 | 195 |
| Till and gravel | 5 | 200 |
| Sand, and gravel | 5 | 205 |
| Sand, and gravel, with some clay | 5 | 210 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 32/9-14P1. Hinton J. Baker. Altitude 550 ft. Drilled by Hayes Well Drilling and Pumps Inc., June 1974. Cased 6 in. diam. to 37 ft; open end. | | |
| Gravel, tan, fine, dry | 15 | 15 |
| Gravel and sand, tan, some water 15-20 ft | 7 | 22 |
| Gravel and clay, brown, dry | 8 | 30 |
| Gravel, brown, dry | 3 | 33 |
| Clay and gravel, gray | 2 | 35 |
| Gravel, gray, water-bearing | 3 | 38 |
| Clay and gravel, gray | ? | ? |
| 32/9-23C1. Dr. N. C. Riddle. Altitude 558 ft. Drilled by Robert E. Freeman, September 1962. Cased 8 in. diam. to 224 ft; perforated 208-221 ft. | | |
| Unknown | 35 | 35 |
| Clay, blue | 105 | 140 |
| Clay, blue, with streaks of fine sand | 20 | 160 |
| Clay, blue, sticky | 21 | 181 |
| Clay with silt layers | 6 | 187 |
| Sand, medium | 8 | 195 |
| Clay, blue | 8 | 203 |
| Sand and gravel, coarse | 21 | 224 |
| 32/10-5M1. John Pollock. Altitude 430 ft. Drilled by Hayes Well Drilling and Pumps Inc., September 1972. Cased 6 in. diam. to 39 ft; open end. | | |
| Unknown | 16 | 16 |
| Sand and gravel, dry | 9 | 25 |
| Sand and gravel, water-bearing | 11 | 36 |
| Sand and gravel, coarse, water-bearing | 2 | 38 |
| Gravel, very coarse | 1 | 39 |
| 33/3-5H1. Oscar Denton. Altitude 90 ft. Drilled by M. C. Turley, 1946. Cased 4 in. diam. to 112 ft; perforated 92-112 ft. | | |
| Soil | ? | ? |
| Till | ? | 50 |
| Sand | 30 | 80 |
| Clay | 10 | 90 |
| Sand, fine, water-bearing | 22 | 112 |
| 33/3-5H2. Francie Thein. Altitude 80 ft. Drilled by Hilton Hayes, July 1946. Cased to 102 ft; screened 102-107 ft. | | |
| Gravel | 4 | 4 |
| Sand, yellow, cemented | 4 | 8 |
| Clay, blue | 52 | 60 |
| Clay, sandy, soft | 20 | 80 |
| Sand, fine, water-bearing | 8 | 88 |
| Sand, coarse | 8 | 96 |
| Till | 2 | 98 |
| Sand, soft | 2 | 100 |
| Sand, heaving | 2 | 102 |
| Sand | 5 | 107 |
| 33/3-9F1. Lucille Oliver. Altitude 38 ft. Drilled by Dahlman Pump and Drilling, July 1972. Cased 6 in. diam. to 68 ft; open end. | | |
| Clay, brown | 15 | 15 |
| Clay, blue | 52 | 67 |
| Sand | 3 | 70 |
| 33/3-10J1. C. A. McCormick. Altitude 6 ft. Drilled by Oliver H. Holmes, April 1953. Cased 8 in. diam. to 25 ft; perforated 17-25 ft. | | |
| Soil | 2 | 2 |
| Clay | 6 | 8 |
| Sand, black | 17 | 25 |
| 33/4-4C1. Charles Danner. Altitude 70 ft. Drilled by Hilton Hayes, October 1949. Cased 6 in. diam. to 35 ft; open end. | | |
| Soil | 2 | 2 |
| Clay, yellow | 10 | 12 |
| Clay, blue, sandy | 6 | 18 |
| Till, sandy | 2 | 20 |
| Sand and gravel, brown, dry | 8 | 28 |
| Sand and fine gravel, water-bearing | 6 | 34 |
| Sand and coarse gravel, water-bearing | 2 | 36 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 33/4-4C2. Donald Sundean. Altitude 52 ft. Drilled by Dahlman Pump and Drilling, June 1971. Cased 6 in. diam. to 82 ft; open end. | | |
| Sand, coarse | 27 | 27 |
| Sand, coarse, and gravel | 12 | 39 |
| Gravel, and brown clay | 6 | 45 |
| Gravel, fine | 8 | 53 |
| Till | 27 | 80 |
| Sand, water-bearing | 2 | 82 |
| Sand, fine | 28 | 110 |
| 33/4-4E1. R. J. Manthey. Altitude 8 ft. Dug by owner, August 1954. Cased 36 in. diam. to 26 ft; perforated 26-29 ft. | | |
| Peat soil | 12 | 12 |
| Clay | 14 | 26 |
| Gravel | 3 | 29 |
| 33/4-4E2. Victor Benson. Altitude 14 ft. Drilled by Dahlman Pump and Drilling, October 1972. Cased 6 in. diam. to 50 ft; screened 50-55 ft. | | |
| Topsoil | 11 | 11 |
| Gravel | 8 | 19 |
| Clay, blue | 31 | 50 |
| Gravel, water-bearing | 6 | 56 |
| 33/4-4N1. Upper Cedardale. Altitude 20 ft. Drilled by Hilton Hayes, July 1941. | | |
| Soil | 2 | 2 |
| Till | 6 | 8 |
| Gravel | 2 | 10 |
| Clay | 5 | 15 |
| Sand | 5 | 20 |
| 33/4-6Q1. C. E. Waltner. Altitude 5 ft. Drilled by G. Torie, 1956. Cased 36 in. diam. to 20 ft; perforated 10-20 ft. | | |
| Soil | 1 | 1 |
| Loam, sandy | 2 | 3 |
| Sand | 15 | 18 |
| Clay | 2 | 20 |
| 33/4-8C1. R. L. Morrison. Altitude 7 ft. Drilled by Carl Moody, August 1953. Cased 8 in. diam. to 20 ft; perforated 0-20 ft. | | |
| Soil | 6 | 6 |
| Sand and gravel | 14 | 20 |
| 33/4-8C2. R. L. Morrison. Altitude 7 ft. Drilled by Carl Moody, August 1953. Cased 8 in diam. to 21 ft; open end. | | |
| Soil | 6 | 6 |
| Sand and gravel | 15 | 21 |
| 33/4-8C3. R. L. Morrison. Altitude 7 ft. Drilled by Carl Moody, June 1954. Cased 18 in. diam. to 23 ft; perforated. | | |
| Soil | 6 | 6 |
| Sand and gravel | 17 | 23 |
| 33/4-8L1. Myrtle Gross. Altitude 5 ft. Driven by L. E. Gross, August 1953. Cased 2 in. diam. to 15 ft; perforated 12-15 ft. | | |
| Soil | 1 | 1 |
| Till | 1 | 2 |
| Sand | 13 | 15 |
| 33/4-8M1. Joe LaCount. Altitude 5 ft. Drilled by owner, April 1952. Cased 8 in. diam. to 18 ft; perforated 10-18 ft. | | |
| Soil | 2 | 2 |
| Sand, fine | 13 | 15 |
| Sand, coarse | 2 | 17 |
| Clay | 1 | 18 |
| 33/4-9N1. Lower Cedardale. Altitude 7 ft. Drilled by Hilton Hayes, November 1941. Cased 6 in. diam. to 24 ft. | | |
| Sand, brown | 4 | 4 |
| Boulders | 2 | 6 |
| Till, with boulders | 4 | 10 |
| Gravel | 1 | 11 |
| Sand, water-bearing | 14 | 25 |
| 33/4-9N2. Lower Cedardale. Altitude 7 ft. Drilled by Hilton Hayes, December 1941. Cased 6 in. diam. to 13 ft. | | |
| Sand and gravel | 6 | 6 |
| Gravel and till | 6 | 12 |
| Sand, coarse, water-bearing | 3 | 15 |
| Clay, blue, hard | 3 | 18 |
| Clay, till, and black sand | 12 | 30 |
| Shale, black | 7 | 37 |
| Conglomerate | 2 | 39 |
| Chert | 4 | 43 |
| Shale, brown | 9 | 52 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 33/4-9N3. Lower Cedardale. Altitude 7 ft. Drilled by Hilton Hayes, December 1941. Cased 6 in. diam. to 23 ft. | | |
| Sand, brown | 4 | 4 |
| Boulders | 6 | 10 |
| Till | 4 | 14 |
| Sand, coarse, water-bearing | 10 | 24 |
| Clay | ? | ? |
| 33/4-21D1. Conway Water Co. Altitude 185 ft. Drilled by A. G. Kounkle. | | |
| Unknown | 25 | 25 |
| Clay | 150 | 175 |
| Clay, blue | 150 | 325 |
| 33/4-21F1. Fermin Garcia. Altitude 210 ft. Drilled by Radke Well Drilling, August 1972. Cased 6 in. diam. to 75 ft. | | |
| Soil | 3 | 3 |
| Clay and silt | 37 | 40 |
| Till | 10 | 50 |
| Till and boulders | 25 | 75 |
| Shale, water-bearing | 2 | 77 |
| Sandstone, water-bearing | 18 | 95 |
| 33/4-21J1. Conway Water Co. Altitude 405 ft. Drilled by A. G. Kounkel, 1953. Cased 8 in. diam. | | |
| Silt and clay | 225 | 225 |
| Clay, blue | 100 | 325 |
| 33/4-25R1. W. T. Foster. Altitude 250 ft. Drilled by Dahlman Pump and Drilling, August 1971. Cased 6 in. diam. to 87 ft; open end. | | |
| Sand | 20 | 20 |
| Clay and gravel | 43 | 63 |
| Gravel, with some water | 2 | 65 |
| Clay and gravel | 9 | 74 |
| Sand and gravel | 13 | 87 |
| 33/4-28J1. A. B. Feldt. Altitude 365 ft. Drilled by J. J. Bell and Son, 1944. Cased 6 in. diam. to 98 ft; open end. | | |
| Soil | 6 | 6 |
| Till | 25 | 31 |
| Clay | 67 | 98 |
| Gravel, brown, coarse, cemented, and water-bearing | 1 | 99 |
| 33/4-29N1. C. A. Black. Altitude 50 ft. Drilled by Hayes Well Drilling and Pumps Inc., July 1973. Cased 6 in. diam. to 67 ft; screened 67-70 ft. | | |
| Loam, brown | 2 | 2 |
| Silt and sand, yellow | 6 | 8 |
| Clay, tan | 8 | 16 |
| Clay, gray | 4 | 20 |
| Clay, blue | 25 | 45 |
| Clay, blue, and sand | 19 | 64 |
| Sand and gravel, water-bearing | 6 | 70 |
| Gravel and till | ? | ? |
| 33/4-32J1. Rolf Brown. Altitude 240 ft. Drilled by Hayes Well Drilling and Pumps Inc. September 1971. Cased 6 in. diam. to 148 ft; screened 148-153 ft. | | |
| Loam and gravel | 2 | 2 |
| Clay, tan | 18 | 20 |
| Clay, gray | 45 | 65 |
| Till and gravel, gray | 75 | 140 |
| Gravel, gray, with sand and clay | 5 | 145 |
| Sand, water-bearing | 8 | 153 |
| Clay, gray | ? | ? |
| 33/4-32L1. H. W. Malstrom. Altitude 195 ft. Drilled by Dahlman Pump and Drilling, September 1969. Cased 6 in. diam. to 94 ft; screened 94-99 ft. | | |
| Till, with boulders | 30 | 30 |
| Clay and gravel | 30 | 60 |
| Sand and gravel, with some clay | 39 | 99 |
| Unknown | 8 | 107 |
| 33/4-33A1. Clarence Johnson. Altitude 315 ft. Drilled by Hilton Hayes. Cased 6 in. diam. to 48 ft; open end. | | |
| Loam and gravel | 2 | 2 |
| Sand and gravel | 7 | 9 |
| Till, brown | 6 | 15 |
| Till, blue | 7 | 22 |
| Clay, gray, hard, and sand | 10 | 32 |
| Clay, green, sandy | 13 | 45 |
| Sand, blue, water-bearing | 2 | 47 |
| Clay, blue | 9 | 56 |
| Sand, fine, some water | 2 | 58 |
| Clay, gray, sandy | 17 | 75 |
| Clay, green | 11 | 86 |
| Clay and silt, gray | 24 | 110 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 33/4-33D1. H. A. Galbraith. Altitude 245 ft. Drilled by J. J. Bell and Son, 1943. Cased 6 in. diam. to 193 ft; screened 193-197 ft. | | |
| Soil | 4 | 4 |
| Till, brown | 34 | 38 |
| Till, gray, with some water | 2 | 40 |
| Till, sandy | 22 | 62 |
| Clay, blue and green | 12 | 74 |
| Sand, brown | 21 | 95 |
| Clay, blue, and sand | 55 | 150 |
| Sand, blue | 41 | 191 |
| Sand, blue, water-bearing | 6 | 197 |
| 33/4-34D1. Don Volle. Altitude 345 ft. Drilled by J. J. Bell, 1946. Cased 6 in. diam. to 350 ft; perforated 45-55 ft with open end. | | |
| Til and silty clay | 220 | 220 |
| Sand, fine | 30 | 250 |
| Clay, blue | 95 | 345 |
| Clay, blue, hard | 58 | 403 |
| 33/4-34D2. Don Volle. Altitude 340 ft. Dug July 1959. No casing. | | |
| Loam | 1 | 1 |
| Peat | 14 | 15 |
| Sand and gravel | 1 | 16 |
| 33/5-7A1. Woody White. Altitude 100 ft. Drilled by Hayes Well Drilling and Pumps Inc., December 1972. Cased 6 in. diam. to 168 ft; screened 168-171 ft. | | |
| Unknown | 117 | 117 |
| Clay and fine sand | 47 | 164 |
| Sand, medium, water-bearing | 3 | 167 |
| Clay | 4 | 171 |
| 33/5-30D1. Leif Erickson Recreation Assoc. Inc. Altitude 250 ft. Drilled by Dahlman Pump and Drilling, July 1965. Cased 8 in. diam. to 66 ft; screened 66-76 ft. | | |
| Soil | 3 | 3 |
| Clay, yellow | 15 | 18 |
| Gravel | 7 | 25 |
| Till | 12 | 37 |
| Gravel, dry | 12 | 49 |
| Gravel and clay | 9 | 58 |
| Sand and gravel, water-bearing | 5 | 63 |
| Sand, medium, water-bearing | 3 | 66 |
| Sand and gravel, water-bearing | 5 | 71 |
| Sand, medium, water-bearing | 5 | 76 |
| 33/10-30H1. Mel Benton. Altitude 400 ft. Drilled by Hayes Well Drilling and Pumps, Inc., March 1974. Cased 6 in. diam. to 50 ft; open end. | | |
| Loam, sandy | 3 | 3 |
| Sand, brown | 25 | 28 |
| Gravel, coarse, little water | 9 | 37 |
| Gravel, water-bearing | 13 | 50 |
| 33/10-31H1. R. E. Sherill. Altitude 442 ft. Drilled by Ajax Well Drilling, December 1973. Cased 6 in. diam. to 60 ft; screened 60-63 ft. | | |
| Loam, sandy | 3 | 3 |
| Gravel, brown, dry | 15 | 18 |
| Gravel, brown, coarse | 24 | 42 |
| Gravel, water-bearing | 21 | 63 |
| 33/10-33Q1. Robert Green. Altitude 595 ft. Drilled by Ajax Well Drilling, July 1974. Cased 6 in. diam. to 200 t; screened 200-205 ft. | | |
| Till, gray | 24 | 24 |
| Till, blue | 32 | 56 |
| Gravel, brown, coarse | 6 | 62 |
| Till, brown | 24 | 86 |
| Till, blue | 38 | 124 |
| Clay, brown | 14 | 138 |
| Gravel and sand, some water | 26 | 164 |
| Till, gray, some water | 22 | 186 |
| Till, blue, some water | 14 | 200 |
| Till, blue, water-bearing | 5 | 205 |
| 33/10-33Q2. Gary Cloer. Altitude 595 ft. Drilled by Ajax Well Drilling, June 1974. Cased 6 in. diam. to 99 ft; screened 99-103 ft. | | |
| Soil | 3 | 3 |
| Till, blue | 43 | 46 |
| Sand and gravel | 21 | 67 |
| Till, blue | 16 | 83 |
| Sand and gravel | 17 | 100 |
| Sand and gravel, water-bearing | 3 | 103 |
| 34/3-12B1. E. Bennett. Altitude 20 ft. Drilled by Dahlman Pump and Drilling, January 1974. Cased 8 in. diam. to 36 ft; screened 36-41 ft. | | |
| Silt, sandy | 24 | 24 |
| Sand, coarse | 9 | 33 |
| Sand, medium to coarse | 9 | 42 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/3-12N1. Skagit PUD No. 1. Altitude 25 ft. Driven by Claude Dahlman, January 1953. Cased to 31 ft; sand point. | | |
| Soil and silt | 4 | 4 |
| Sand, very fine to fine | 5 | 9 |
| Sand, coarse, and fine gravel | 1 | 10 |
| Sand and gravel, coarse | 9 | 19 |
| Sand and gravel | 6 | 25 |
| Sand and gravel, with some fine sand | 4 | 29 |
| Clay | 2 | 31 |
| 34/3-13D1. Skagit PUD No. 1. Altitude 30 ft. Driven December 1952. Cased 63 ft; sand point. | | |
| Soil, silty, and fine sand | 7 | 7 |
| Sand, some fine | 12 | 19 |
| Sand, very fine | 4 | 23 |
| Sand, very fine, and clay | 6 | 29 |
| Unknown | 34 | 63 |
| 34/3-13F2. City of Anacortes. Altitude 25 ft. Dug by Ranney Method Western Corp. Horizontal Collector, 853 ft long. | | |
| Sand and gravel | 30 | 30 |
| 34/3-13F3. City of Anacortes. Altitude 25 ft. Dug by Ranney Method Western Corp. Horizontal Collector, 953 ft long. | | |
| Sand and gravel | 28 | 28 |
| 34/3-13R2. R. J. McKay. Altitude 12 ft. Drilled by Carl Moody, February 1952. Cased 6 in. diam. to 27 ft; perforated 17-27 ft. | | |
| Soil | ? | ? |
| Clay | ? | 17 |
| Gravel, water-bearing | 10 | 27 |
| 34/3-25C1. Art Hamblin. Altitude 20 ft. Drilled by L. V. Holmes, August 1950. Cased 4 in. diam. to 40 ft. | | |
| Soil | 3 | 3 |
| Silt and sand | 16 | 19 |
| Sand, coarse, with small amount of water | 11 | 30 |
| Sand, some gravel and clam shells, waterbearing | 10 | 40 |
| 34/3-25H1. Skagit PUD No. 1. Altitude 15 ft. Driven by Claude Dahlman, February 1953. Cased to 43 ft; sand point. | | |
| Soil, with some clay | 7 | 7 |
| Clay(?) | 18 | 25 |
| Sand, coarse, and some gravel | 3 | 28 |
| Gravel | 9 | 37 |
| Sand, medium to coarse | 3 | 40 |
| Sand, fine to medium | 3 | 43 |
| 34/3-25H2. Skagit PUD No. 1. Altitude 15 ft. Driven by Claude Dahlman, February 1953. Cased to 18 ft; sand point. | | |
| Soil, with some clay | 7 | 7 |
| Clay and sand | 2 | 9 |
| Sand, very fine, hard | 9 | 18 |
| 34/3-25P1. Iner Moe. Altitude 17 ft. Drilled July 1953. Cased 8 in. diam. to 35 ft; perforated 25-35 ft. | | |
| Sand, coarse | 35 | 35 |
| 34/3-26J1. H. Grandquist. Altitude 15 ft. Drilled April 1953. Cased 8 in. diam. | | |
| Clay and sand, some water | 20 | 20 |
| Sand | 23 | 43 |
| 34/3-26L1. O. B. Helde. Altitude 15 ft. Drilled by owner, July 1953. Cased 8 in. diam. to 32 ft; perforated 22-32 ft. | | |
| Clay, sandy | 4 | 4 |
| Gravel | 28 | 32 |
| 34/3-35D1. E. A. Dean. Altitude 12 ft. Dug by R. C. Libby, May 1946. Cased 30 in. diam. to 30 ft; perforated 20-30 ft. | | |
| Sand and clay | 20 | 20 |
| Gravel | 10 | 30 |
| 34/4-5D1. Darigold. Altitude 30 ft. Drilled by Hilton Hayes. Cased 6 in. diam. to ? ft, 4 in. diam. to 245 ft. | | |
| Sand, brown | 16 | 16 |
| Sand, gray, fine | 4 | 20 |
| Sand, gray, coarse, some water | 15 | 35 |

(continued)

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-5D1.--Continued | | |
| Sand and gravel, gray | 5 | 40 |
| Sand and gravel, coarse | 8 | 48 |
| Sand, fine | 17 | 65 |
| Sand, with scattered pebbles | 5 | 70 |
| Sand and gravel | 1 | 71 |
| Gravel and sand | 10 | 81 |
| Sand and gravel | 25 | 106 |
| Gravel, some rusty water | 4 | 110 |
| Sand, fine | 35 | 145 |
| Clay, sandy | 30 | 175 |
| Sand and clay, blue | 15 | 190 |
| Sand and clay, with white pebbles | 5 | 195 |
| Clay, sandy | 2 | 197 |
| Sand, with layered clay | 57 | 254 |
| 34/4-5J1. R. H. Norris. Altitude 33 ft. Drilled by Hayes Well Drilling, September 1963. Cased 8 in. diam. to 20 ft; screened 20-32 ft. | | |
| Sand, tan | 5 | 5 |
| Sand, coarse, and fine gravel, dry | 13 | 18 |
| Sand and medium gravel, water-bearing | 14 | 32 |
| Clay | ? | ? |
| 34/4-5K1. John Owens. Altitude 30 ft. Drilled by L. V. Holmes, March 1951. Cased 4 in. diam. to 32 ft; perforated 27-32 ft. | | |
| Soil | 3 | 3 |
| Sand, fine | 24 | 27 |
| Sand, coarse, and some gravel | 5 | 32 |
| 34/4-5K2. Kenneth Owens. Altitude 30 ft. Drilled by L. V. Holmes, April 1952. Cased 8 in. diam. to 44 ft; perforated 36-44 ft. | | |
| Soil | 4 | 4 |
| Sand, fine | 10 | 14 |
| Sand, coarse and fine | 14 | 28 |
| Sand, coarse, and large cobbles | 16 | 44 |
| 34/4-6G2. W. L. Becker. Altitude 25 ft. Drilled by Carl Moody, March 1950. Cased 6 in. diam. to 34 ft; perforated 22-34 ft. | | |
| Sand, fine, with clay streaks | 16 | 16 |
| Sand, coarse, and gravel | 18 | 34 |
| 34/4-6K1. Frank Vervaart. Altitude 25 ft. Dug by Gunvald Torie, August 1956. Cased 36 in. diam. to 26 ft; perforated 14-26 ft. | | |
| Soil | 2 | 2 |
| Clay | 16 | 18 |
| Sand and clay | 8 | 26 |
| 34/4-7D1. Paul Taylor. Altitude 25 ft. Drilled by Hayes Well Drilling and Pumps Inc., May 1973. Cased 6 in. diam. to 17 ft. | | |
| Soil | 2 | 2 |
| Clay, tan | 8 | 10 |
| Clay, black, hard-packed | 110 | 120 |
| 34/4-7G1. A. Sakuma. Altitude 25 ft. Drilled by Carl Moody, May 1952. Cased 8 in. diam. to 70 ft; perforated. | | |
| Soil | 6 | 6 |
| Sand | 14 | 20 |
| Sand, fine | 8 | 28 |
| Clay | 8 | 36 |
| Sand, fine | 20 | 56 |
| Clay | 4 | 60 |
| Gravel and sand | 10 | 70 |
| 34/4-7H1. Emil Hanson. Altitude 25 ft. Drilled by Carl Moody, May 1951. Cased 8 in. diam. to 30 ft. | | |
| Clay, sandy | 8 | 8 |
| Sand and gravel | 22 | 30 |
| 34/4-7K1. W. Jewett. Altitude 25 ft. Drilled by Carl Moody, April 1951. Cased 8 in. diam. to 31 ft. | | |
| Soil | 6 | 6 |
| Sand | 4 | 10 |
| Sand, coarse, and fine gravel | 6 | 16 |
| Gravel | 15 | 31 |
| 34/4-7L1. Ivan Colvin. Altitude 25 ft. Drilled by M.C. Turley, May 1952. Cased 12 in. diam. to 23 ft; perforated 8-23 ft. | | |
| Clay, sandy | 15 | 15 |
| Gravel and sand | 8 | 23 |
| 34/4-7L2. Emil Hanson. Altitude 25 ft. Drilled by Carl Moody, May 1950. Cased 8 in. diam. to 23 ft. | | |
| Sand, white | 6 | 6 |
| Sand, coarse, water-bearing | 8 | 14 |
| Sand, coarse, with some gravel, water-bearing | 9 | 23 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-7M1. Elmer Hanson. Altitude 25 ft. Drilled by M. C. Turley, May 1952. Cased 12 in. diam. to 38 ft; perforated 24-38 ft. | | |
| Sand, fine to medium | 38 | 38 |
| 34/4-7P2. Skagit PUD No. 1. Altitude 30 ft. Drilled by Carl Moody, February 1951. Cased 17½ in. diam. to 41 ft; perforated 8-37 ft. | | |
| Soil | 12 | 12 |
| Sand and fine gravel | 18 | 30 |
| Sand, coarse | 11 | 41 |
| 34/4-7P3. Skagit PUD No. 1. Altitude 25 ft. Drilled by Robinson and Roberts, April 1954. Cased 13 ft diam. to 41 ft; horizontal collector, 8 laterals each 8 in. diam. | | |
| Silt, sandy | 14 | 14 |
| Gravel and sand, brown | 7 | 21 |
| Sand, coarse, and fine gravel | 5 | 26 |
| Gravel and sand, some wood | 13 | 39 |
| Clay and sand | 2 | 41 |
| 34/4-8C1. Skagit PUD No. 1. Altitude 28 ft. Driven December 1952. Cased 36 ft; sand point. | | |
| Sand and gravel | 1 | 1 |
| Soil | 1 | 2 |
| Clay, soil, and silt | 7 | 9 |
| Sand, light gray, fine | 5 | 14 |
| Sand, fine to coarse | 4 | 18 |
| Sand, very fine to medium | 2 | 20 |
| Sand | 2 | 22 |
| Sand, fine to medium | 6 | 28 |
| Sand, coarse | 6 | 34 |
| Sand, coarse, with some clay | 2 | 36 |
| 34/4-8C2. Skagit PUD No. 1. Altitude 28 ft. Driven December 1952. Cased 29 ft; sand point. | | |
| Soil, gravel, and cobbles | 1 | 1 |
| Soil, red, with clay | 8 | 9 |
| Sand, fine to medium | 16 | 25 |
| Sand, with some clay | 2 | 27 |
| Sand, coarse | 2 | 29 |
| 34/4-8F1. Ed Phillips. Altitude 28 ft. Drilled by Hilton Hayes, May 1953. Cased 8 in. diam. to 54 ft, 6 in. diam. to 62 ft; perforated 54-62 ft. | | |
| Sand, light brown | 15 | 15 |
| Sand, brown and gray | 4 | 19 |

(continued)

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-8F1.--Continued | | |
| Cedar log | 4 | 23 |
| Sand, water-bearing | 17 | 40 |
| Sand, fine | 12 | 52 |
| Sand, fine, quartz | 10 | 62 |
| Clay and sand, some water | 4 | 66 |
| 34/4-8L1. K. Nagatani. Altitude 28 ft. Drilled by Carl Moody, July 1951. Cased 10 in. diam. to 72 ft. | | |
| Sand | 40 | 40 |
| Peat | 9 | 49 |
| Clay, blue | 5 | 54 |
| Clay, brown | 4 | 58 |
| Clay, blue, with sand streaks | 7 | 65 |
| Gravel and sand, coarse | 7 | 72 |
| 34/4-9A1. E. Mapson. Altitude 135 ft. Dug by owner, 1929. Cased 36 x 72 in. to 48 ft; open end. | | |
| Soil | 2 | 2 |
| Clay | 18 | 20 |
| Sand, fine, water-bearing | 25 | 45 |
| Till | 3 | 48 |
| 34/4-9B1. Axel Helstrom. Altitude 90 ft. Drilled by Hilton Hayes, May 1945. Cased 36 in. diam. to 30 ft, 4 in. diam to 36 ft; open end. | | |
| Unknown | 30 | 30 |
| Sand and gravel, coarse | 7 | 37 |
| Sand, cemented | 4 | 41 |
| Clay, blue, hard | 4 | 45 |
| Clay, blue | 60 | 105 |
| Sand, fine | 3 | 108 |
| Sand | 9 | 117 |
| 34/4-11F1. A. W. Gadbois. Altitude 36 ft. Drilled by L. V. Holmes, July 1951. Cased 8 in. diam. to 30 ft. | | |
| Soil | 4 | 4 |
| Loam, sandy | 14 | 18 |
| Clay | 1 | 19 |
| Sand and gravel | 11 | 30 |
| 34/4-11L1. A. W. Gadbois. Altitude 36 ft. Driven by owner, September 1936. Cased 1½ in. diam. to 30 ft. | | |
| Soil | 4 | 4 |
| Silt | 10 | 14 |
| Sand | 14 | 28 |
| Sand, water-bearing | 2 | 30 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-12N1. Ed Fredlund. Altitude 50 ft. Drilled by Hilton Hayes, July 1946. No casing; dry hole. | | |
| Soil | 2 | 2 |
| Sand, gravel, and clay | 6 | 8 |
| Gravel, cemented | 4 | 12 |
| Shale, blue | 44 | 56 |
| Shale | 1 | 57 |
| 34/4-13Q1. Dairy Valley Farms. Altitude 175 ft. Drilled by Dahlman Pump and Drilling, June 1972. Cased 6 in. diam. to 61 ft; open end. | | |
| Clay | 30 | 30 |
| Gravel | 5 | 35 |
| Clay and gravel | 23 | 58 |
| Gravel, water-bearing | 3 | 61 |
| 34/4-14K1. C. D. Green. Altitude 140 ft. Drilled by M. C. Turley, October 1945. Cased 8 in. diam. to 97 ft. | | |
| Clay, blue | 60 | 60 |
| Gravel, coarse | 10 | 70 |
| Till | 7 | 77 |
| Sand, water-bearing | 20 | 97 |
| Till | ? | ? |
| 34/4-14K2. M. G. Hauenstein. Altitude 140 ft. Drilled by M. C. Turley, November 1945. Cased 4 in. diam. to 99 ft. | | |
| Clay, blue | 60 | 60 |
| Gravel, coarse | 10 | 70 |
| Till | 7 | 77 |
| Sand, water-bearing | 20 | 97 |
| Till | 2 | 99 |
| 34/4-14L1. D. S. Thompson. Altitude 142 ft. Drilled by Carl Moody, December 1952. Cased 6 in. diam. to 34 ft. | | |
| Clay | 30 | 30 |
| Sand, coarse, water-bearing | 4 | 34 |
| 34/4-15D1. Roger Hayes. Altitude 80 ft. Drilled by Hayes Well Drilling and Pumps Inc., October 1972. Cased 6 in. diam. to 97 ft; open end. | | |
| Unknown | 48 | 48 |
| Sand, dry | 7 | 55 |
| Till | 18 | 73 |
| Clay, blue, sandy, with gravel | 21 | 94 |
| Sand and gravel, water-bearing | 3 | 97 |
| Clay, sandy, and coarse gravel | ? | ? |
| 34/4-16F1. M. C. Turley. Altitude 75 ft. Drilled by owner, 1947. Cased 4 in. diam. to 135 ft; perforated 115-135 ft. | | |
| Till | 10 | 10 |
| Clay, blue | 70 | 80 |
| Sand and gravel, water-bearing | 55 | 135 |
| 34/4-16F2. Roger Coffman. Altitude 85 ft. Drilled by Hayes Well Drilling and Pumps Inc., October 1972. Cased 6 in. diam. to 152 ft; screened 152-155 ft. | | |
| Soil | 3 | 3 |
| Clay, brown, with some gravel | 18 | 21 |
| Clay, blue | 49 | 70 |
| Clay, blue, sandy | 25 | 95 |
| Till, gray | 6 | 101 |
| Gravel and sand, water-bearing | 13 | 114 |
| Till, gray | 29 | 143 |
| Sand and gravel, coarse, water-bearing | 9 | 152 |
| Gravel, coarse, water-bearing | 1 | 153 |
| Clay, gray | 2 | 155 |
| 34/4-17C1. G. A. Groenen. Altitude 25 ft. Drilled by Hilton Hayes, July 1950. Cased 6 in. diam. to 57 ft. | | |
| Sand, brown | 10 | 10 |
| Sand, brown, coarse, water-bearing | 8 | 18 |
| Sand, gray, fine, water-bearing | 25 | 43 |
| Sand, gray, coarse, and fine gravel | 14 | 57 |
| 34/4-17C3. Skagit PUD No. 1. Altitude 50 ft. Driven November 1952. Cased 16 ft; sand point. | | |
| Soil | 6 | 6 |
| Gravel | 8 | 14 |
| Sand, fine | 1 | 15 |
| Till | 1 | 16 |
| 34/4-17D1. Skagit PUD No. 1. Altitude 40 ft. Driven November 1952. Cased 24 ft; sand point. | | |
| Soil | 6 | 6 |
| Sand, fine, hard | 7 | 13 |
| Sand, fine | 9 | 22 |
| Sand, very fine | 2 | 24 |
| 34/4-18D1. Michael Fortin. Altitude 27 ft. Drilled by owner, July 1949. Cased 6 in. diam. to 33 ft; perforated 22-33 ft. | | |
| Soil | 2 | 2 |
| Sand, fine | 15 | 17 |
| Sand, with wood | 11 | 28 |
| Sand, coarse with small amount of gravel | 6 | 34 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-18D2. Ben Streitz. Altitude 21 ft. Drilled by Lloyd Holmes, 1945. Cased 8 in. diam. to 30 ft; perforated 18-30 ft. | | |
| Silt and loam | 16 | 16 |
| Gravel | 15 | 31 |
| 34/4-18F1. H. R. Kenealy. Altitude 19 ft. Drilled by owner, February 1952. Cased 8 in. diam. to 28 ft; perforated 14-28 ft. | | |
| Clay | 5 | 5 |
| Sand, gray, water-bearing | 23 | 28 |
| 34/4-18H2. H. R. Kenealy. Altitude 29 ft. Drilled by L. Holmes. No casing, well destroyed. | | |
| Sand, fine and tight | 40 | 40 |
| 34/4-18H3. H. R. Kenealy. Altitude 29 ft. Drilled by Hilton Hayes, May 1953. Cased 8 in. diam. to 28 ft; perforated 17-28 ft. | | |
| Sand, light brown | 5 | 5 |
| Sand, brown, and quartz gravel | 11 | 16 |
| Sand, gray, and quartz gravel | 10 | 26 |
| Sand, gray | 2 | 28 |
| 34/4-18J2. Elmer Harris. Altitude 25 ft. Drilled by L. V. Hayes, June 1949. Cased 6 in. diam. to 30 ft; perforated 22-30 ft. | | |
| Soil | 2 | 2 |
| Sand, fine | 15 | 17 |
| Sand, and some wood | 8 | 25 |
| Sand, coarse, and some gravel | 5 | 30 |
| 34/4-18N1. Skagit PUD No. 1. Altitude 30 ft. Driven by Claude Dahlman, January 1953. Cased 41 ft; sand point. | | |
| Soil | 1 | 1 |
| Soil, fine sand, silt, and some clay | 13 | 14 |
| Sand, medium | 6 | 20 |
| Sand, medium, and some fine, white sand | 9 | 29 |
| Sand, with fine, black sand | 3 | 32 |
| Sand | 3 | 35 |
| Sand, very fine | 6 | 41 |
| 34/4-18R1. Skagit PUD No. 1. Altitude 25 ft. Driven by Claude Dahlman, January 1953. Cased 44 ft; sand point. | | |
| Soil, silt, and fine sand | 7 | 7 |
| Clay, with fine sand | 5 | 12 |
| Clay, blue | 12 | 24 |
| Sand, very fine | 10 | 34 |
| Sand, fine | 6 | 40 |
| Sand, black, fine | 2 | 42 |
| Sand, black | 2 | 44 |
| 34/4-19B1. Skagit PUD No. 1. Altitude 10 ft. Drilled September 1951. Casing pulled. | | |
| Sand | 17 | 17 |
| Gravel | 15 | 32 |
| 34/4-19G1. Dairy Valley. Altitude 25 ft. Drilled by Dahlman Pump and Drilling Inc., August 1974. Cased 6 in. diam. to 37 ft; open end. | | |
| Soil | 10 | 10 |
| Sand | 24 | 34 |
| Gravel and sand | 3 | 37 |
| 34/4-19H1. Carnation Co. Altitude 28 ft. Drilled by A. A. Durand and Son, 1946. Cased 10 in. diam. to 52 ft. | | |
| Ashes and tin cans | 3 | 3 |
| Gravel fill | 6 | 9 |
| Clay, sandy | 4 | 13 |
| Sand | 24 | 37 |
| Silt, black, oily | 3 | 40 |
| Clay, gray, sandy | 10 | 50 |
| Clay, gray, hard | 3 | 53 |
| Sand, coarse, and clay, water-bearing | 7 | 60 |
| Sand, gray, fine, water-bearing | 9 | 69 |
| Clay, gray | 11 | 80 |
| Sand, gray, fine | 19 | 99 |
| Clay, gray, hard, and shells | 11 | 110 |
| Clay, gray, hard | 10 | 120 |
| Clay, gray, sandy | 14 | 134 |
| Sand, dark gray | 20 | 154 |
| Clay, gray, hard | 43 | 197 |
| Clay, gray, sticky | 78 | 275 |
| Clay, gray, dry | 35 | 310 |
| Clay, gray | 155 | 465 |
| Clay, gray, hard | 15 | 480 |
| Clay, gray | 20 | 500 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-19L1. Skagit PUD No. 1. Altitude 20 ft. Driven December 1952. Cased 46 ft; sand point. | | |
| Sand, fine, and silt | 8 | 8 |
| Sand, medium to coarse | 1 | 9 |
| Sand, coarse | 3 | 12 |
| Sand, medium to coarse | 2 | 14 |
| Sand, fine to medium | 2 | 16 |
| Gravel and fine sand | 6 | 22 |
| Gravel, very coarse | 2 | 24 |
| Gravel | 14 | 38 |
| Clay | 8 | 46 |
| 34/4-22Q1. M. C. Hald. Altitude 400 ft. Drilled by P. E. Smith. Cased 6 in. diam to 262 ft. | | |
| Clay, brown, sandy | 10 | 10 |
| Clay, blue, sandy, and till | 14 | 24 |
| Till and blue clay | 144 | 168 |
| Sand and clay, in seams | 24 | 192 |
| Clay, blue, with some sand and gravel | 68 | 260 |
| Gravel | 2 | 262 |
| 34/4-23R1. Ben Chase. Altitude 170 ft. Drilled by Radke Well Drilling, May 1974. Cased 6 in. diam. to 280 ft; perforated 33-36 ft, with open end. | | |
| Soil | 1 | 1 |
| Till, brown | 9 | 10 |
| Till, gray | 13 | 23 |
| Gravel, dry | 4 | 27 |
| Till | 6 | 33 |
| Till and gravel, water-bearing | 3 | 36 |
| Till | 19 | 55 |
| Clay, blue | 118 | 173 |
| Till | 7 | 180 |
| Clay, blue | 8 | 188 |
| Till | 9 | 197 |
| Silt, black, very fine, water-bearing | 58 | 255 |
| Sand and clay | 5 | 260 |
| Clay and gravel | 20 | 280 |
| Clay, blue | 25 | 305 |
| 34/4-26G1. Wayne Tingley. Altitude 445 ft. Drilled by Hayes Well Drilling and Pumps Inc., October 1973. Cased 6 in. diam. to 212 ft; open end. | | |
| Soil | 2 | 2 |
| Clay, tan, and some gravel | 13 | 15 |
| Gravel, sand, and some clay | 10 | 25 |
| Gravel and sand | 65 | 90 |
| Sand, some gravel | 5 | 95 |
| Sand, brown | 37 | 132 |

(continued)

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-26G1.--Continued | | |
| Clay, gray | 14 | 146 |
| Sand, brown, and gravel | 4 | 150 |
| Clay, gray, and gravel | 8 | 158 |
| Sand, gray, water-bearing | 4 | 162 |
| Clay, gray | 14 | 176 |
| Sand, gray, fine | 9 | 185 |
| Clay, gray | 21 | 206 |
| Sand and gravel, water-bearing | 8 | 214 |
| Rock, dry | ? | ? |
| 34/4-26G2. Robert Peterson. Altitude 445 ft. Drilled by Hayes Well Drilling and Pumps Inc., October 1973. Cased 6 in. diam. to 158 ft; open end. | | |
| Soil | 2 | 2 |
| Clay, tan, and some gravel | 13 | 15 |
| Gravel, sand, and some clay | 10 | 25 |
| Gravel and sand | 65 | 90 |
| Sand, some gravel | 5 | 95 |
| Sand, brown | 37 | 132 |
| Clay, gray | 14 | 146 |
| Sand, brown, and gravel | 4 | 150 |
| Clay, gray, and gravel | 8 | 158 |
| Sand, gray, water-bearing | 4 | 162 |
| Clay, gray | 14 | 176 |
| Sand, gray, fine | 9 | 185 |
| Clay, gray | 21 | 206 |
| Sand and gravel, water-bearing | 8 | 214 |
| Rock, dry | ? | ? |
| 34/4-26J1. Millard E. Tingley. Altitude 422 ft. Drilled by Hayes Well Drilling and Pumps, Inc., September 1973. Cased 6 in. diam. to 176 ft; open end. | | |
| Loam, brown, gravelly | 3 | 3 |
| Till, gray, and gravel | 77 | 80 |
| Boulder | 1 | 81 |
| Clay, sandy, hard | 4 | 85 |
| Till, brown, and gravel | 20 | 105 |
| Till, gray, and gravel | 25 | 130 |
| Gravel, dry | 40 | 170 |
| Gravel, medium, with 25 percent sand, water-bearing | 6 | 176 |
| Sand and gravel, some water | 2 | 178 |
| 34/4-26L1. G. A. Chapin. Altitude 540 ft. Drilled by Dahlman Pump and Drilling, July 1973. Cased 6 in. diam. to 361 ft; screened 361-366 ft. | | |
| Clay, brown | 15 | 15 |
| Clay and gravel | 120 | 136 |
| Clay, sandy | 9 | 144 |

(continued)

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-26L1.--Continued | | |
| Clay and gravel | 36 | 180 |
| Sand and fine gravel | 41 | 221 |
| Clay, brown, silty | 8 | 229 |
| Clay, blue, silty | 19 | 248 |
| Clay, blue, and gravel | 104 | 352 |
| Clay, blue, with thin layers of fine sand | 6 | 358 |
| Clay, brown | 2 | 360 |
| Sand, fine, water-bearing | 7 | 367 |
| Clay, blue | 13 | 380 |
| 34/4-26R1. Hazel Thorson. Altitude 325 ft. Drilled by Hayes Well Drilling and Pumps Inc., April 1973. Cased 6 in. diam. to 219 ft; open end. | | |
| Loam, brown, with gravel | 2 | 2 |
| Till, brown, with gravel | 3 | 5 |
| Boulder | 2 | 7 |
| Till, tan, with gravel | 7 | 14 |
| Till, gray, with gravel | 8 | 22 |
| Gravel, fine, and coarse sand, some water | 11 | 33 |
| Till, gray, with gravel | 12 | 45 |
| Till, gray and white, with gravel | 85 | 130 |
| Till, gray and white | 86 | 216 |
| Sand and gravel, water-bearing | 3 | 219 |
| 34/4-28F1. G. I. Harmon. Altitude 230 ft. Drilled by Hilton Hayes. Cased 6 in. diam. to 126 ft; open end. | | |
| Loam and gravel, light brown | 2 | 2 |
| Sand, brown, gravel, and boulders | 16 | 18 |
| Sand, brown gravel, and clay | 4 | 22 |
| Sand, brown, and firm clay | 23 | 45 |
| Sand, medium, and firm clay | 5 | 50 |
| Sand and firm clay | 10 | 60 |
| Sand, gray, fine | 15 | 75 |
| Sand, gray, fine, water-bearing | 2 | 77 |
| Sand, gray | 41 | 118 |
| Sand and clay, gray | 5 | 123 |
| Gravel | 3 | 126 |
| 34/4-28P1. A. R. Gillette. Altitude 360 ft. Dug by Douglas S. Clausing, August 1951. Cased 48 in. diam. to 9 ft; open end. | | |
| Clay, blue | 2 | 2 |
| Till | 6 | 8 |
| Sand | 1 | 9 |
| 34/4-29P1. Arvid Eklund. Altitude 15 ft. Driven by owner. Cased 1½ in. diam. to 74 ft; sand point. | | |
| Sand | 50 | 50 |
| Till | 15 | 65 |
| Gravel | 9 | 74 |
| Till | ? | ? |
| 34/4-30J1. Skagit PUD No. 1. Altitude 15 ft. Driven by Claude Dahlman, January 1953. Cased to 36 ft; sand point. | | |
| Soil, clayey | 6 | 6 |
| Sand, very fine to medium | 2 | 8 |
| Sand, very fine | 4 | 12 |
| Sand, fine to medium | 6 | 18 |
| Sand, very fine | 6 | 24 |
| Clay | 3 | 27 |
| Clay and fine sand | 3 | 30 |
| Clay | 6 | 36 |
| 34/4-30P1. Skagit PUD No. 1. Altitude 20 ft. Driven by Claude Dahlman, November 1952. Cased 30 ft; sand point. | | |
| Soil and silt | 12 | 12 |
| Sand, fine to medium | 8 | 20 |
| Sand, very fine | 3 | 23 |
| Sand, very fine, with some clay | 2 | 25 |
| Sand | 5 | 30 |
| Log | ? | ? |
| 34/4-30Q1. R. E. Olson. Altitude 15 ft. Drilled by Hilton Hayes, February 1953. Cased 8 in. diam. to 25 ft; 7 in. diam. to 24 ft; screened 24-34 ft. | | |
| Clay | 2 | 2 |
| Clay, sandy | 6 | 8 |
| Sand, coarse, and clay | 15 | 23 |
| Sand, coarse, and gravel | 11 | 34 |
| Sand | ? | ? |
| 34/4-32A1. B. J. Skordahl. Altitude 125 ft. Drilled by Hilton Hayes, September 1950. Cased 6 in. diam. to 105 ft, 4 in. diam. to 149 ft. | | |
| Unknown | 20 | 20 |
| Sand, brown, cemented | 6 | 26 |
| Sand, brown | 4 | 30 |
| Sand, brown, cemented | 4 | 34 |

(continued)

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-32A1.--Continued | | |
| Sand, brown, cemented, and clay | 4 | 38 |
| Sand, brown, fine | 2 | 40 |
| Clay, gray, sandy | 10 | 50 |
| Sand, gray, dry | 4 | 54 |
| Sand, brown, cemented | 20 | 74 |
| Sand, brown | 6 | 80 |
| Sand, brown to blue | 10 | 90 |
| Sand, gray, fine, some water | 10 | 100 |
| Clay, gray, and fine sand, some water | 5 | 105 |
| Sand, fine, and soft, sandy clay | 11 | 116 |
| Clay, gray, soft, and fine sand | 9 | 125 |
| Clay, sandy, soft | 24 | 149 |
| Sand, medium | ? | ? |
| 34/4-32D1. Axel Eklund. Altitude 14 ft. Driven. Cased 1½ in. diam. to 53 ft; sand point. | | |
| Silt | 30 | 30 |
| Clay, blue | 15 | 45 |
| Gravel and sand | 8 | 53 |
| 34/4-32M1. Jack Tanis. Altitude 8 ft. Dug by owner, July 1953. Cased 8 in. diam. to 15 ft; perforated 11-15 ft. | | |
| Loam | 1 | 1 |
| Clay | 1 | 2 |
| Sand, fine | 2 | 4 |
| Gravel, fine to medium, water-bearing | 11 | 15 |
| 34/4-32N1. Barnet Implement. Altitude 8 ft. Drilled by Dahlman Pump and Drilling, August 1973. Cased 6 in. diam. to 81 ft; screened 81-86 ft. | | |
| Soil | ? | ? |
| Sand and clay | ? | 20 |
| Gravel, sandy | 8 | 28 |
| Clay | 7 | 35 |
| Clay and sand | 45 | 80 |
| Sand | 7 | 87 |
| Clay | 8 | 95 |
| 34/4-32Q1. Paul Vike. Altitude 50 ft. Drilled by Hilton Hayes, April 1951, deepened by Hayes, July 1951. Casing pulled. | | |
| Soil | 2 | 2 |
| Sand and gravel, dry | 8 | 10 |
| Sand, brown, and boulders | 6 | 16 |
| Sand, gray and brown, and boulders | 2 | 18 |
| (continued) | | |

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-32Q1.--Continued | | |
| Till, gray | 22 | 40 |
| Sand, gray, cemented | 7 | 47 |
| Gravel and clay | 6 | 53 |
| Clay, sand, and gravel | 10 | 63 |
| Clay, sandy, soft | 12 | 75 |
| Sand, cemented, and gravel | 9 | 84 |
| Clay, hard, sand and gravel | 10 | 94 |
| Gravel, water-bearing | 2 | 96 |
| Clay, blue and gray | 2 | 98 |
| Sand, hard, and gravel, dry | 2 | 100 |
| Sand, blue and black, fine | 12 | 112 |
| Clay, dark blue | 18 | 180 |
| Clay, blue, with layers of fine sand | 62 | 192 |
| 34/4-32Q2. Paul Vike. Altitude 70 ft. Drilled by Hilton Hayes, July 1951. Casing pulled? | | |
| Gravel and sand | 5 | 5 |
| Clay, yellow | 10 | 15 |
| Till and boulders | 7 | 22 |
| Till, gravel, and clay | 4 | 26 |
| Sand and clay | 3 | 29 |
| Sand, hard | 6 | 35 |
| Till and boulders | 10 | 45 |
| Till and cobbles | 30 | 75 |
| Gravel and blue, hard clay | 25 | 100 |
| Clay, blue | 18 | 118 |
| 34/4-33P1. M. C. Holmgren. Altitude 65 ft. Drilled by M. C. Turley. Cased 4 in. diam. to 103 ft. | | |
| Soil | ? | ? |
| Unknown | ? | 10 |
| Till | 10 | 20 |
| Clay, blue | 80 | 100 |
| Gravel | 3 | 103 |
| 34/4-35G1. H. M. Houghtaling. Altitude 340 ft. Drilled by Carl Moody, October 1949. Cased 6 in. diam. to 43 ft, 4 in. diam to 140 ft; perforated 35-43 ft. | | |
| Till | 40 | 40 |
| Sand, water-bearing | 5 | 45 |
| Clay, blue, and silt | 95 | 140 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/4-36N1. Verne Elfstrom. Altitude 110 ft. Drilled by Hilton Hayes, July 1949. Cased 5 in. diam. to 83 ft; open end. | | |
| Loam, with gravel | 2 | 2 |
| Clay, yellow | 8 | 10 |
| Clay, blue, sandy, with shells and bones | 10 | 20 |
| Clay, blue-gray | 35 | 55 |
| Sand, fine, artesian flow | 1 | 56 |
| Clay, sandy | 12 | 68 |
| Sand, fine | 2 | 70 |
| Clay, blue-gray | 11 | 81 |
| Sand, fine, artesian flow | 3 | 84 |
| Clay, blue, no water | 21 | 105 |
| 34/5-19F1. El Paso Natural Gas Co. Altitude 170 ft. Drilled by Hayes Well Drilling, July 1966. Cased 6 in. diam. to 28 ft; perforated 11-14 ft. | | |
| Loam, brown, with gravel | 1 | 1 |
| Clay, tan | 11 | 12 |
| Gravel, medium, clay and sand, water-bearing | 2 | 14 |
| Till, gray, sandy | 6 | 20 |
| Till, dark gray, sandy | 8 | 28 |
| Sand, dark gray, coarse, and fine gravel | 1 | 29 |
| Clay, dark brown | 1 | 30 |
| 34/5-19F2. Compressor Station No. 17, Skagit County. Altitude 175 ft. | | |
| Loam and gravel | 1 | 1 |
| Clay, tan | 10 | 11 |
| Till, tan, and boulders | 2 | 13 |
| Clay, some water | 1 | 14 |
| Till, gray | 5 | 19 |
| Gravel, some water | 3 | 22 |
| Clay, gray, and gravel | 3 | 25 |
| Gravel, dry | 5 | 30 |
| Peat, dark brown | 4 | 34 |
| Clay, gray, sand and gravel | 15 | 49 |
| Clay, some water | 1 | 50 |
| Clay, dark blue, and gravel | 77 | 127 |
| Clay, dark blue, shaley | 35 | 162 |
| Granite and serpentine | ? | ? |
| 34/5-19G1. Compressor Station No. 17, Skagit County. Altitude 100 ft. | | |
| Loam and gravel | 1 | 1 |
| Clay, tan | 9 | 10 |
| Clay, gray, sandy | 3 | 13 |
| Clay, dark gray | 1 | 14 |

(continued)

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/5-19G1.--Continued | | |
| Sand and gravel, with oily water | 1 | 15 |
| Clay and sand | 2 | 17 |
| Clay, blue, and sand | 8 | 25 |
| Clay, gray | 71 | 96 |
| Clay, dark gray | 4 | 100 |
| Clay, dark gray, with granite, shale, and serpentine cobbles | 3 | 103 |
| 34/5-19K1. M. A. Ekman. Altitude 160 ft. Drilled by Hayes Well Service, August 1966. Cased 6 in. diam. to 68 ft; open end. | | |
| Clay | 13 | 13 |
| Till, gray | 55 | 68 |
| Gravel and sand, coarse | 2 | 70 |
| 34/5-31R1. Jim Sinclair. Altitude 240 ft. Drilled by Hayes Well Drilling and Pumps, Inc., December 1972. Cased 6 in. diam. to 20 ft; open end. | | |
| Loam, with gravel | 3 | 3 |
| Gravel and clay | 16 | 19 |
| Shale, water-bearing | 7 | 26 |
| 34/10-19C1. Harold Allen. Altitude 280 ft. Drilled by Hayes Well Drilling and Pumps, Inc., February 1974. Cased 6 in. diam. to 25 ft; open end. | | |
| Clay sandy | 8 | 8 |
| Boulders | 4 | 12 |
| Gravel, coarse | 4 | 16 |
| Gravel, water-bearing | 9 | 25 |
| Clay, tan | ? | ? |
| 34/10-30Q1. Sauk Damsite. Altitude 315 ft. Drilled by U.S. Army Engineers. No casing, test hole. | | |
| Sand and gravel | 38 | 38 |
| Sand, gravel, and boulders | 12 | 50 |
| Sand and gravel | 12 | 62 |
| Sand and boulders | 21 | 83 |
| Gravel | 6 | 89 |
| Sand and gravel | 5 | 94 |
| Slate, black-gray and gray-green, with calcite bands | 7 | 101 |
| Schist, gray-green, with calcite bands | 7 | 108 |
| Schist, gray-green, and black slate, with calcite bands | 13 | 121 |
| Slate, black | 3 | 124 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 34/10-30Q2. Sauk Damsite. Altitude 330 ft. Drilled by U.S. Army Engineers. No casing, test hole. | | |
| Sand | 8 | 8 |
| Sand and gravel | 12 | 20 |
| Sand, gravel, and boulders | 10 | 30 |
| Sand and gravel | 10 | 40 |
| Basalt, gray | 30 | 70 |
| 34/10-30Q3. Sauk Damsite. Altitude 370 ft. Drilled by U.S. Army Engineers. No casing, test hole. | | |
| Sand | 2 | 2 |
| Loam and fine gravel | 2 | 4 |
| Gravel, fine | 10 | 14 |
| Gravel and boulders | 25 | 39 |
| Boulders | 7 | 46 |
| Gravel, coarse | 6 | 52 |
| Gravel and boulders | 18 | 70 |
| Sand, packed | 8 | 78 |
| Sand and gravel | 8 | 86 |
| Gravel | 7 | 93 |
| Sand and gravel, packed | 13 | 106 |
| Gravel and boulders | 8 | 114 |
| Schist | 30 | 144 |
| 34/10-30R1. Sauk Damsite. Altitude 290 ft. Drilled by U.S. Army Engineers. No casing, test hole. | | |
| Water | 3 | 3 |
| Sand | 2 | 5 |
| Boulders | 4 | 9 |
| Gravel | 4 | 13 |
| Sand and boulders | 7 | 20 |
| Sand and boulders, packed | 3 | 23 |
| Sand and boulders | 9 | 32 |
| Boulders | 4 | 36 |
| Schist, green, fine-grained | 6 | 42 |
| Quartzite | 3 | 45 |
| Schist, green | 1 | 46 |
| Slate, gray-black, soft | 24 | 70 |
| 35/4-12N1. Vern Sims. Altitude 300 ft. Drilled by Hayes Well Drilling and Pumps, Inc., May 1974. Cased 6 in. diam. to 97 ft; open end. | | |
| Clay, gray, with some coarse gravel | 5 | 5 |
| Clay, gray, and gravel | 10 | 15 |
| Gravel, brown, and some clay | 16 | 31 |
| Boulder, black | 3 | 34 |
| Gravel, and gray clay | 21 | 55 |
| Clay, gray, sandy | 3 | 58 |
| Till and gravel, gray | 20 | 78 |
| Sand, gray, with some gravel, water-bearing | 16 | 94 |
| Clay, gray | 2 | 96 |
| Gravel and sand, coarse, water-bearing | 1 | 97 |
| 35/4-13R1. M. A. Allan. Altitude 80 ft. Driven. Cased 1½ in. diam. to 18 ft; sand point. | | |
| Sand, fine | 18 | 18 |
| 35/4-21H1. W. M. French. Altitude 40 ft. Drilled by Carl Moody, February 1955. Cased 8 in. diam. to 40 ft; perforated 28-40 ft. | | |
| Soil and clay | 16 | 16 |
| Sand, water-bearing | 8 | 24 |
| Sand and gravel, coarse | 16 | 40 |
| 35/4-21L1. F. R. Fredrickson. Altitude 35 ft. Drilled by Lloyd Holmes, June 1947. Cased 4 in. diam. to 24 ft; perforated 18-24 ft. | | |
| Loam, sandy | 2 | 2 |
| Sand, coarse | 13 | 15 |
| Gravel | 9 | 24 |
| 35/4-22C1. Hugo Johnson. Altitude 40 ft. Drilled by Hilton Hayes, April 1952. Cased 8 in. diam. to 34 ft; perforated 26-34 ft. | | |
| Sand | 5 | 5 |
| Sand, light brown, fine, water-bearing | 10 | 15 |
| Sand, brown, coarse | 8 | 23 |
| Sand, gray-blue, coarse | 2 | 25 |
| Gravel, fine to coarse | 9 | 34 |
| 35/4-22D1. Harold Hammond. Altitude 38 ft. Drilled by Moody Drillers, June 1956. Cased 8 in. diam. to 38 ft; perforated 28-38 ft. | | |
| Soil | 10 | 10 |
| Sand, fine | 20 | 30 |
| Gravel | 8 | 38 |
| 35/4-22L2. R. F. Randall. Altitude 40 ft. Drilled by Carl Moody, June 1950. Cased 5 in. diam. to 26 ft; perforated 17-26 ft. | | |
| Soil | 9 | 9 |
| Soil and sand | 10 | 19 |
| Sand, coarse, and gravel, water-bearing | 7 | 26 |
| 35/4-22M1. John Johnson. Altitude 40 ft. Drilled by Carl Moody, July 1951. Cased 6 in. diam. to 36 ft. | | |
| Soil | 2 | 2 |
| Sand | 34 | 36 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/4-23G1. R. A. Stephens. Altitude 50 ft. Drilled by M. C. Turley, June 1952. Cased 4 in. diam. to 45 ft; perforated 30-45 ft. | | |
| Silt, very fine | 9 | 9 |
| Silt, very fine, water-bearing | 18 | 27 |
| Clay, blue | 5 | 32 |
| Gravel, coarse, and sand | 13 | 45 |
| 35/4-23L1. A. R. Ovenell. Altitude 45 ft. Drilled by L. V. Holmes, May 1947. Cased 6 in. diam. to 18 ft; perforated 13-18 ft. | | |
| Loam, black | 1 | 1 |
| Clay | 1 | 2 |
| Sand | 5 | 7 |
| Gravel, fine | 8 | 15 |
| Gravel, medium to coarse | 3 | 18 |
| 35/4-24A1. Marvin Jennings. Altitude 75 ft. Driven. Cased 1½ inches to 18 ft; sand point. | | |
| Sand | 18 | 18 |
| 35/4-25C1. Willis-Rogers. Altitude 50 ft. Drilled by Carl Moody, December 1951. Cased 8 in. diam. to 48 ft; perforated 28-48 ft. | | |
| Soil and sand | 20 | 20 |
| Sand and gravel, water-bearing | 22 | 42 |
| Gravel, coarse, dry | 6 | 48 |
| 35/4-25D1. Goodyear Nelson Hardwood Co., Inc. Altitude 50 ft. Drilled by A. G. Kounkle, November 1957. Cased 6 in. diam. to 69 ft; perforated 59-69 ft. | | |
| Sand | 30 | 30 |
| Sand, clayey | 13 | 43 |
| Gravel | 9 | 52 |
| Sand and gravel | 17 | 69 |
| 35/4-25K1. John Lentz. Altitude 40 ft. Drilled by John M. Eltron, June 1948. Cased 8 in. diam. to 29 ft. | | |
| Sand | 18 | 18 |
| Sand, fine | 2 | 20 |
| Gravel | 9 | 29 |
| 35/4-25L1. K. Van Zanten. Altitude 45 ft. Drilled by Dahlman Pump and Drilling, August 1973. Cased 8 in. diam. to 31 ft; screened 31-36 ft. | | |
| Soil and clay | 17 | 17 |
| Sand and gravel | 3 | 20 |
| Gravel and coarse sand | 2 | 22 |
| Gravel | 14 | 36 |
| 35/4-26J1. Curt Heider. Altitude 40 ft. Drilled by Hilton Hayes, December 1952. Cased 8 in. diam. to 22 ft, 7 in. diam. to 34 ft; perforated 22-34 ft. | | |
| Sand, light brown | 12 | 12 |
| Sand, light brown - gray, some water | 5 | 17 |
| Sand and gravel, water-bearing | 6 | 23 |
| Gravel, coarse, water-bearing | 11 | 34 |
| 35/4-27D1. H. R. Kenealy. Altitude 40 ft. Drilled by owner, January 1952. Cased 8 in. diam. to 35 ft; perforated 23-35 ft. | | |
| Clay and sand | 5 | 5 |
| Sand, gray, water-bearing | 9 | 14 |
| Gravel and sand, water-bearing | 21 | 35 |
| 35/4-27J2. Vernon Sinsel. Altitude 30 ft. Drilled by Hilton Hayes, July 1947. Cased 4 in. diam. to 84 ft. | | |
| Sand, brown, fine | 15 | 15 |
| Sand, gray, fine | 10 | 25 |
| Sand, gray, coarse | 14 | 39 |
| Sand and gravel, in alternating layers | 45 | 84 |
| 35/4-27L1. Carl W. Abenroth. Altitude 40 ft. Drilled by C + F Drilling Co., August 1973. Cased 6 in. diam. to 58 ft; open end. | | |
| Sand | 38 | 38 |
| Sand, clay, and wood | 14 | 52 |
| Gravel, coarse, water-bearing | 6 | 58 |
| 35/4-27N1. Julius Amundson. Altitude 36 ft. Drilled by Carl Moody, May 1953. Cased 8 in. diam. to 40 ft; perforated. | | |
| Soil | 3 | 3 |
| Clay | 10 | 13 |
| Sand, coarse | 2 | 15 |
| Gravel, coarse | 25 | 40 |
| Clay | 1 | 41 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/4-28B1. Jess Galbreath. Altitude 45 ft. Drilled by Moody Well Drillers, June 1963. Cased 6 in. diam. to 27 ft, 5 in. diam. to 33 ft; perforated 27-33 ft. | | |
| Soil, with some clay | 12 | 12 |
| Clay, sandy | 13 | 25 |
| Sand and gravel | 8 | 33 |
| 35/4-28H1. Rudy Vrana. Altitude 40 ft. Drilled, August 1947. Cased 8 in. diam. to 27 ft; perforated 17-27 ft. | | |
| Soil | 1 | 1 |
| Sand, fine | 9 | 10 |
| Clay, blue, some water | 8 | 18 |
| Sand and gravel | 9 | 27 |
| 35/4-28L1. Stanley Kaaland. Altitude 40 ft. Drilled by Hilton Hayes, May 1951. Cased 8 in. diam. to 63 ft; perforated 55-63 ft. | | |
| Sand, brown, dry | 10 | 10 |
| Clay, gray | 9 | 19 |
| Sand, fine, some water | 5 | 24 |
| Sand, medium to coarse | 8 | 32 |
| Sand and fine gravel | 15 | 47 |
| Sand, fine | 8 | 55 |
| Sand, fine to coarse | 8 | 63 |
| 35/4-28L2. Stanley Kaaland. Altitude 40 ft. Drilled by Hilton Hayes, May 1951. Cased 6 in. diam. to 52 ft. | | |
| Unknown | 18 | 18 |
| Clay | 34 | 52 |
| 35/4-28P1. Ted Brandstrom. Altitude 35 ft. Driven by owner, October 1949. Cased 2 in. diam. to 25 ft; sand point. | | |
| Sand, medium | 16 | 16 |
| Gravel | 9 | 25 |
| 35/4-28P5. Ted Brandstrom. Altitude 32 ft. Driven by owner, September 1949. Cased 2 in. diam. to 18 ft; sand point. | | |
| Soil, sandy | 12 | 12 |
| Gravel and sand, water-bearing | 9 | 21 |
| 35/4-29E1. Duane Dykstra. Altitude 25 ft. Drilled by Hayes Well Drilling and Pumps Inc., June 1974. Cased 8 in. diam. to 28 ft; screened 28-38 ft. | | |
| Loam, brown, sandy | 3 | 3 |
| Clay, brown | 8 | 11 |
| Clay, gray, sandy | 12 | 23 |
| Sand, coarse, and fine gravel, water-bearing | 15 | 38 |
| Clay, brown | ? | ? |
| 35/4-29N1. R. Huffstetter. Altitude 24 ft. Drilled by Hayes Well Drilling and Pumps, Inc., August 1973. Cased 6 in. diam. to 76 ft; open end. | | |
| Soil | 2 | 2 |
| Clay, brown | 14 | 16 |
| Clay, gray | 11 | 27 |
| Clay, gray, sandy, and gravel | 8 | 35 |
| Gravel, medium, artesian flow | 1 | 36 |
| Till, gray | 12 | 48 |
| Clay and gravel | 13 | 61 |
| Sand, gravel, and clay | 14 | 75 |
| Sand and gravel, water-bearing | 1 | 76 |
| 35/4-31J1. Burlington-Edison School. Altitude 25 ft. Drilled by Radke Well Drilling, May 1971. Cased 8 in. diam. to 54 ft; screened 54-64 ft. | | |
| Soil | 2 | 2 |
| Clay and sand | 4 | 6 |
| Clay, blue | 18 | 24 |
| Sand, fine | 6 | 30 |
| Clay | 12 | 42 |
| Till | 3 | 45 |
| Sand, fine, water-bearing | 7 | 52 |
| Sand, medium, water-bearing | 5 | 57 |
| Sand and gravel, water-bearing | 7 | 64 |
| 35/4-33G2. J. M. Erchinger. Altitude 43 ft. Drilled by Hilton Hayes, June 1956. Cased 6 in. diam. to 38 ft; screen 38-48 ft. | | |
| Sand, light brown, dry | 8 | 8 |
| Clay, hard, and sand | 8 | 16 |
| Silt, light brown, water-bearing | 18 | 34 |
| Sand, coarse, with small amount of fine gravel | 5 | 39 |
| Sand, very coarse, and medium gravel | 7 | 46 |
| Sand | 2 | 48 |
| Clay | ? | ? |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/4-33L1. I. Nagatani. Altitude 36 ft. Drilled by Carl Moody, June 1953. Cased 8 in. diam. to 67 ft, 7 in. diam. to 90 ft; perforated 67-90 ft. | | |
| Sand, fine | 40 | 40 |
| Clay | 20 | 60 |
| Sand | 16 | 76 |
| Gravel, medium to coarse | 14 | 90 |
| 35/4-33L2. Edward Wickert. Altitude 36 ft. Drilled by owner, October 1951. Cased 4 in. diam. to 26 ft. | | |
| Loam, sandy | 2 | 2 |
| Sand | 14 | 16 |
| Sand, coarse | 7 | 23 |
| Gravel, fine | 3 | 26 |
| 35/5-6N1. C. F. Pitts. Altitude 275 ft. Drilled October 1952. Cased 6 in. diam. to 109 ft; screened 109-113 ft. | | |
| Soil | 2 | 2 |
| Clay, yellow | 10 | 12 |
| Clay, blue | 35 | 47 |
| Till | 27 | 74 |
| Sand, fine | 23 | 97 |
| Sand, gray | 16 | 113 |
| 35/5-7J1. Dept. of Public Inst. Northern State Hospital. Altitude 130 ft. Drilled by N. C. Jannsen, December 1945. Cased 20 in. diam. to 20 ft, 12 in. diam. to 86 ft; perforated 16-70 ft, with open end. | | |
| Soil | 14 | 14 |
| Gravel | 2 | 16 |
| Silt | 12 | 28 |
| Sand and gravel, water-bearing | 37 | 65 |
| Sand, gravel, and boulders | 21 | 86 |
| Boulders and blue clay | 4 | 90 |
| Bedrock | ? | ? |
| 35/5-7J2. Dept. of Finance, Budget, and Business. Altitude 130 ft. Drilled by N. C. Jannsen Co., August 1945. Cased 12 in. diam. to 79 ft; perforated 70-79 ft. | | |
| Soil | 10 | 10 |
| Gravel, water-bearing | 10 | 20 |
| Till | 8 | 28 |
| Clay, blue | 44 | 72 |
| Gravel | 2 | 74 |
| Gravel and boulders | 2 | 76 |
| Bedrock | 3 | 79 |
| 35/5-8D1. Dept. of Public Institutions. Altitude 180 ft. Drilled by N. C. Jannsen Co., November 1952. Cased 10 in. diam. to 148 ft; perforated 93-143 ft. | | |
| Clay | 24 | 24 |
| Till | 50 | 74 |
| Sand, artesian flow | 74 | 148 |
| 35/5-8D2. Dept. of Public Institutions. Altitude 205 ft. Drilled by N. C. Jannsen Co. Cased 10 in. diam. to 231 ft; perforated 133-226 ft. | | |
| Clay, yellow | 12 | 12 |
| Clay, blue | 33 | 45 |
| Gravel, dry | 5 | 50 |
| Clay, blue | 25 | 75 |
| Till | 18 | 93 |
| Sand, water-bearing | 133 | 226 |
| Bedrock | 5 | 231 |
| 35/5-8N1. Dept. of Public Institutions. Altitude 100 ft. Drilled by N. C. Jannsen, November 1945. Cased 20 in. diam. to 20 ft, 12 in. diam. to 36 ft, 10 in. diam. to 86 ft; perforated? | | |
| Soil | 2 | 2 |
| Gravel, water-bearing | 18 | 20 |
| Silt, water-bearing | 4 | 24 |
| Gravel and boulders | 34 | 58 |
| Sand, gravel, and boulders | 2 | 60 |
| Clay, blue | 15 | 75 |
| Bedrock | 11 | 86 |
| 35/5-9R1. Robert Davie. Altitude 125 ft. Drilled by C. F. Drilling Co., March 1971. Cased 6 in. diam. to 72 ft; open end. | | |
| Soil | 14 | 14 |
| Gravel, fine | 8 | 22 |
| Clay, blue-gray | 17 | 39 |
| Till, blue-gray | 21 | 60 |
| Sand, fine, and gravel | 22 | 82 |
| Gravel, coarse | ? | ? |
| 35/5-13A1. James Parker. Altitude 90 ft. Drilled by Dahlman Pump and Drilling, September 1972. Cased 6 in. diam. to 40 ft; screened 40-44 ft. | | |
| Clay, sandy | 8 | 8 |
| Sand and gravel | 31 | 39 |
| Sand and gravel, water-bearing | 5 | 44 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/5-14E1. J. E. Morrison. Altitude 80 ft. Drilled by Hilton Hayes, August 1951. Cased 6 in. diam. to 65 ft; open end. | | |
| Unknown | 42 | 42 |
| Clay and yellow sand | 17 | 59 |
| Clay, blue | 4 | 63 |
| Sand and gravel, coarse | 2 | 65 |
| 35/5-14F1. C. D. Buchanan. Altitude 85 ft. Drilled by Hilton Hayes, August 1951. Cased 6 in. diam. to 37 ft; open end. | | |
| Sand, brown, and gravel | 5 | 5 |
| Gravel, brown | 22 | 27 |
| Sand, brown, fine, with some water | 3 | 30 |
| Sand, brown, coarse | 3 | 33 |
| Sand and gravel, brown, coarse, water-bearing | 4 | 37 |
| 35/5-15D1. Oscar Nicholson. Altitude 90 ft. Drilled by Lloyd V. Holmes, September 1951. Cased 6 in. diam. to 26 ft; perforated 18-26 ft. | | |
| Soil | 1 | 1 |
| Loam, sandy | 8 | 9 |
| Sand | 4 | 13 |
| Gravel, coarse | 13 | 26 |
| 35/5-19Q1. H. L. Hopke, M.D. Altitude 55 ft. Drilled by Moody Well Drillers, June 1962. Cased 10 in. diam. to 33 ft; perforated 23-33 ft. | | |
| Soil and clay | 17 | 17 |
| Gravel, fine, and sand | 8 | 25 |
| Gravel, coarse, and sand | 8 | 33 |
| Gravel, very coarse | ? | ? |
| 35/5-20G1. Jake Spolstra. Altitude 60 ft. Drilled by Hayes Well Drilling and Pumps Inc., July 1970. Cased 8 in. diam. to 32 ft; perforated 25-32 ft. | | |
| Loam, brown, sandy | 2 | 2 |
| Clay, gray, sandy, hard | 8 | 10 |
| Clay, gray | 14 | 24 |
| Gravel, water-bearing | 2 | 26 |
| Gravel and sand, firm | 6 | 32 |
| Clay, gray | ? | ? |
| 35/5-21C1. C. S. Hansen. Altitude 70 ft. Drilled by Hilton Hayes, June 1953. Cased 8 in. diam. to 33 ft, 7 in. diam. to 41 ft; perforated 32-41 ft. | | |
| Sand, light brown | 10 | 10 |
| Sand, gray, fine, and wood | 10 | 20 |

(continued)

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/5-21C1.--Continued | | |
| Sand, water-bearing | 11 | 31 |
| Sand and fine gravel | 2 | 33 |
| Gravel, medium to coarse, and sand | 8 | 41 |
| 35/5-21J1. J. P. McKay. Altitude 55 ft. Drilled by Carl Moody, June 1952. Cased 8 in. diam. to 40 ft; perforated 26-40 ft. | | |
| Soil | 8 | 8 |
| Sand, fine | 2 | 10 |
| Clay | 22 | 32 |
| Gravel, very coarse | 8 | 40 |
| 35/5-21J2. Jan Mulder. Altitude 60 ft. Drilled by Moody Well Drillers, June 1959. Cased 8 in. diam. to 32 ft; screened 32-42 ft. | | |
| Soil | 5 | 5 |
| Clay | 15 | 20 |
| Clay and sand | 12 | 32 |
| Gravel and sand | 10 | 42 |
| 35/5-22B1. W. E. Ziebel. Altitude 60 ft. Drilled by Hilton Hayes, December 1952. Cased 8 in. diam. to 31 ft, 7 in. diam. to 41 ft; perforated 31-41 ft. | | |
| Sand, light brown | 13 | 13 |
| Clay, gray, sandy, and wood | 3 | 16 |
| Clay, gray, sandy | 14 | 30 |
| Sand, coarse, and gravel, water-bearing | 11 | 41 |
| 35/5-30K2. Skagit PUD No. 1. Altitude 45 ft. Driven May 1952. Cased 49 ft; sand point. | | |
| Sand, fine, with silt | 5 | 5 |
| Gravel, coarse | 9 | 14 |
| Sand, coarse | 3 | 17 |
| Gravel, coarse | 1 | 18 |
| Sand, coarse | 2 | 20 |
| Gravel, fine, and coarse sand | 3 | 23 |
| Gravel, fine, with some silt | 1 | 24 |
| Gravel, coarse | 3 | 27 |
| Gravel, coarse, and sand | 2 | 29 |
| Sand, fine, with some clay | 5 | 34 |
| Clay, gray, and fine, black sand | 5 | 39 |
| Sand, very fine, with some clay | 5 | 44 |
| Clay, gray, and some black sand | 5 | 49 |
| 35/5-30K3. Skagit PUD No. 1. Altitude 45 ft. Driven August 1952. Cased 41 ft; sand point. | | |
| Sand, fine | 4 | 4 |
| Gravel | 13 | 17 |
| Gravel, very coarse, water-bearing | 4 | 21 |
| Gravel, coarse, water-bearing | 7 | 28 |

(continued)

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/5-30K3.--Continued | | |
| Clay | 1 | 29 |
| Sand, coarse | 7 | 36 |
| Sand, fine | 5 | 41 |
| 35/5-30K4. Skagit PUD No. 1. Altitude 45 ft. Driven August 1952. Cased 27 ft; sand point. | | |
| Sand, coarse | 9 | 9 |
| Gravel, very coarse | 5 | 14 |
| Gravel and sand | 8 | 22 |
| Gravel, coarse, and sand | 5 | 27 |
| 35/5-30K5. Skagit PUD No. 1. Altitude 45 ft. Driven August 1952. Cased 24 ft; sand point. | | |
| Sand, fine | 11 | 11 |
| Gravel, coarse | 13 | 24 |
| 35/5-30K6. Skagit PUD No. 1. Altitude 45 ft. Driven August 1952. Cased 31 ft; sand point. | | |
| Soil and fine sand | 5 | 5 |
| Sand, coarse | 1 | 6 |
| Gravel, coarse | 15 | 21 |
| Sand and gravel, coarse | 10 | 31 |
| 35/5-30L1. Skagit PUD No. 1. Altitude 45 ft. Driven May 1952. Cased 64 ft; perforated 61-64 ft. | | |
| Soil | 2 | 2 |
| Sand, silty, and clay | 8 | 10 |
| Sand, fine | 1 | 11 |
| Sand, fine, and clay | 1 | 12 |
| Sand, silty | 1 | 13 |
| Sand and red clay | 6 | 19 |
| Sand and gravel | 1 | 20 |
| Gravel, coarse, and black sand | 3 | 23 |
| Gravel, coarse | 3 | 26 |
| Sand | 1 | 27 |
| Sand, coarse | 1 | 28 |
| Sand | 3 | 31 |
| Sand, and red clay | 2 | 33 |
| Sand | 1 | 34 |
| Sand, black, with some clay | 4 | 38 |
| Sand, black | 2 | 40 |
| Sand | 5 | 45 |
| Sand and blue-black clay | 20 | 65 |
| 35/5-30M1. Skagit PUD No. 1. Altitude 45 ft. Drilled by N. C. Jannsen Co., 1935. Cased 12 in. diam. to 50 ft; perforated 46-48 ft. | | |
| Sand | 5 | 5 |
| Sand, fine | 7 | 12 |
| Log | 4 | 16 |
| Sand, with a little gravel | 2 | 18 |
| Sand | 4 | 22 |
| Gravel and sand, coarse | 4 | 26 |
| Sand, coarse, with a little fine gravel | 4 | 30 |
| Sand, fine, with a little wood | 8 | 38 |
| Sand, coarse | 2 | 40 |
| Sand, fine | 6 | 46 |
| Sand, coarse | 1 | 47 |
| Gravel, coarse | 3 | 50 |
| 35/5-35B1. Chet Yardcastle. Altitude 90 ft. Drilled by Radke Well Drilling, October 1972. Cased 6 in. diam. to 51 ft; open end. | | |
| Soil | 2 | 2 |
| Till | 12 | 14 |
| Clay | 22 | 36 |
| Till | 12 | 48 |
| Sand, fine, water-bearing | 2 | 50 |
| Sand and gravel, water-bearing | 1 | 51 |
| 35/6-8B1. Gary Buckingham. Altitude 410 ft. Drilled by Hayes Well Drilling and Pumps, Inc., June 1974. Cased 8 in. diam. to 210 ft; backfilled with concrete to surface. | | |
| Clay, tan, and coarse gravel | 16 | 16 |
| Gravel, dry | 2 | 18 |
| Shale, black | 192 | 210 |
| 35/6-10K1. R. S. Dowdle. Altitude 120 ft. Drilled by Hilton Hayes, March 1953. Cased 6 in. diam. to 14 ft, 5 in. diam. to 23 ft; perforated 14-23 ft. | | |
| Loam, brown, sandy | 2 | 2 |
| Clay, yellow | 4 | 6 |
| Till | 3 | 9 |
| Gravel and sand, brown, firm, water-bearing | 5 | 14 |
| Gravel and sand, brown, loose | 9 | 23 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/6-10N1. Dr. R. M. Anderson. Altitude 95 ft. Drilled by Hayes Well Drilling and Pumps, Inc., October 1973. Cased 6 in. diam. to 22 ft; open end. | | |
| Loam, brown, sandy | 2 | 2 |
| Sand, brown, gravel and clay | 5 | 7 |
| Till, gray | 6 | 13 |
| Gravel, medium, dry | 1 | 14 |
| Till, gray | 2 | 16 |
| Gravel and sand, water-bearing | 6 | 22 |
| Gravel, coarse | ? | ? |
| 35/6-11L1. Gladys Buhrow. Altitude 150 ft. Drilled by Dahlman Pump and Drilling, Inc., July 1974. Cased 6 in. diam. to 82 ft; screened 82-88 ft. | | |
| Soil | 4 | 4 |
| Clay, sand, and gravel | 66 | 70 |
| Sand, blue, silty, water-bearing | 18 | 88 |
| 35/6-11R1. R. E. Blanton. Altitude 130 ft. Drilled by Hayes Well Drilling and Pumps, Inc., January 1973. Cased 6 in. diam. to 63 ft; open end. | | |
| Soil | 4 | 4 |
| Clay, brown, sandy, and gravel | 17 | 21 |
| Till, brown | 22 | 43 |
| Sand and gravel, water-bearing | 1 | 44 |
| Sand and gravel, dry | 12 | 56 |
| Sand and gravel, coarse, water-bearing | 7 | 63 |
| 35/6-13A1. C. B. Wilson. Altitude 105 ft. Drilled by Dahlman Pump and Drilling, June 1964. Cased 8 in. diam. to 35 ft; perforated 15-35 ft. | | |
| Soil and sand | 8 | 8 |
| Sand and gravel, with a little water | 8 | 16 |
| Clay, blue | 9 | 25 |
| Sand, gravel, and cobbles | 9 | 34 |
| Sand, hard | 1 | 35 |
| 35/6-13F1. C. H. Anderson. Altitude 100 ft. Drilled by Hilton Hayes, May 1953. Cased 8 in. diam. to 17 ft, 7 in. diam. to 25 ft; perforated 17-25 ft. | | |
| Soil, sandy | 10 | 10 |
| Sand, hard, and peat | 7 | 17 |
| Sand and gravel, hard, water-bearing | 8 | 25 |
| 35/6-13P1. Dee Hodgin. Altitude 95 ft. Drilled by Hilton Hayes, April 1953. Cased 6 in. diam. to 18 ft; perforated 10-18 ft. | | |
| Sand and loam, gray-brown | 6 | 6 |
| Sand and gravel, dry | 4 | 10 |
| Sand and gravel, water-bearing | 8 | 18 |
| Gravel, coarse, very hard | ? | ? |
| 35/6-16H1. C. S. Phillips. Altitude 80 ft. Drilled by Carl Moody, December 1953. Cased 8 in. diam. to 30 ft; perforated 16-30 ft. | | |
| Soil | 14 | 14 |
| Sand | 5 | 19 |
| Gravel, coarse | 11 | 30 |
| 35/6-17F1. Soundview Pulp and Timber Co. Altitude 80 ft. Drilled by N. C. Jannesen, September 1935. Cased 26 in. diam. to 32 ft; perforated. | | |
| Unknown | 16 | 16 |
| Sand, gray, hard | 4 | 20 |
| Sand, cemented, and a little fine gravel | 3 | 23 |
| Sand, gray, and fine gravel | 2 | 25 |
| Gravel, coarse, with a little water | 3 | 28 |
| Gravel, fine | 2 | 30 |
| Gravel, coarse, with some water | 2 | 32 |
| Sand and coarse gravel | 3 | 35 |
| Gravel | 3 | 38 |
| Gravel, cemented | 1 | 39 |
| 35/6-20N1. Don Walker. Altitude 90 ft. Drilled by Hayes Well Drilling and Pumps, Inc., February 1973. Cased 6 in. diam. to 35 ft; open end. | | |
| Loam, brown | 4 | 4 |
| Clay, brown, sandy | 12 | 16 |
| Till, brown | 5 | 21 |
| Gravel | 11 | 32 |
| Sand and gravel, water-bearing | 4 | 36 |
| 35/6-20P1. Howard Spurling. Altitude 100 ft. Drilled by Hayes Well Drilling and Pumps, Inc., October 1972. Cased 6 in. diam. to 44 ft; open end. | | |
| Loam, sandy, and gravel | 15 | 15 |
| Till, light gray, with some gravel | 7 | 22 |
| Clay, light gray, gravel, and sand | 9 | 31 |

(continued)

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/6-20P1.--Continued | | |
| Sand, gravel, and clay, water-bearing | 1 | 32 |
| Sand, tan, clay, and gravel | 9 | 41 |
| Sand, tan, and gravel, with a little water | 2 | 43 |
| Gravel and sand, gray, water-bearing | 1 | 44 |
| Gravel and sand, water-bearing | ? | ? |
| 35/6-22E1. M. G. Jauenstein. Altitude 85 ft. Drilled by A. G. Kounkel, June 1953. Cased 8 in. diam. to 39 ft; perforated 15-36 ft. | | |
| Sand, clayey | 13 | 13 |
| Sand, coarse, and gravel | 26 | 39 |
| 35/6-29C1. Dave Manley. Altitude 110 ft. Drilled by Hayes Well Drilling and Pumps, Inc., October 1972. Cased 6 in. diam. to 44 ft; screened 44-47 ft. | | |
| Loam, brown, sandy | 3 | 3 |
| Clay, brown | 7 | 10 |
| Till, gray | 24 | 34 |
| Gravel, with some clay, a little water | 11 | 45 |
| Clay, blue, sandy | 32 | 77 |
| Sand, very fine, water-bearing | 13 | 90 |
| Clay, blue, sandy | 7 | 97 |
| 35/7-10K1. Grandy Creek, Inc. Altitude 200 ft. Drilled by Dahlman Pump and Drilling, April 1974. Cased 8 in. diam. to 118 ft; screened 118-123 ft. | | |
| Gravel and boulders | 16 | 16 |
| Clay, brown, and fine gravel | 30 | 46 |
| Gravel and sand | 7 | 53 |
| Sand | 5 | 58 |
| Boulder | 2 | 60 |
| Gravel and sand | 4 | 64 |
| Clay, gray, and gravel | 51 | 115 |
| Gravel, water-bearing | 3 | 118 |
| Clay and gravel | 8 | 126 |
| 35/7-10L1. V. R. Blanton. Altitude 200 ft. Drilled February 1958. Cased 6 in. diam. to 102 ft. | | |
| Clay, brown, and gravel | 22 | 22 |
| Clay, blue | 66 | 88 |
| Sand, blue, and gravel | 11 | 99 |
| Sand, coarse, and gravel | 3 | 102 |
| 35/7-13M1. James Powell. Altitude 130 ft. Drilled by Hilton Hayes, 1951. Cased 5 in. diam. to 52 ft. | | |
| Unknown | 32 | 32 |
| Sand, brown, and gravel | 4 | 36 |
| Sand and silt, gray | 6 | 42 |
| Sand, brown, hard, water-bearing | 7 | 49 |
| Sand, gray, hard, water-bearing | 3 | 52 |
| Shale, brown | ? | ? |
| 35/7-14H1. N. J. Shelver. Altitude 135 ft. Drilled by A. G. Kounkle, August 1958. Cased 8 in. diam. to 30 ft; perforated 20-30 ft. | | |
| Clay, sandy | 18 | 18 |
| Gravel, loose | 6 | 24 |
| Gravel, coarse, tight | 6 | 30 |
| 35/7-15A1. Ralph Dickerson. Altitude 165 ft. Drilled by Hilton Hayes, September 1951. Cased 5 in. diam. to 51 ft; perforated. | | |
| Unknown | 20 | 20 |
| Sand, brown | 5 | 25 |
| Sand and gravel, hard | 13 | 38 |
| Sand, yellow, hard, with very little water | 8 | 46 |
| Gravel | 5 | 51 |
| 35/7-16M1. Skagit River Woods Associates. Altitude 120 ft. Drilled by R. J. Rongey, March 1972. Cased 8 in. diam. to 50 ft; perforated 25-35 ft, screened 50-60 ft. | | |
| Loam, sandy | 2 | 2 |
| Sand and fine gravel | 25 | 27 |
| Gravel, sandy, water-bearing | 3 | 30 |
| Sand, gravel, and clay | 5 | 35 |
| Sand, some clay | 25 | 60 |
| Sand, silty | 10 | 70 |
| Clay, blue | 10 | 80 |
| 35/7-17G1. Joe Pinelli. Altitude 135 ft. Drilled by Hilton Hayes, July 1958. Cased 8 in. diam. to 18 ft, 6 in. diam. to 24 ft; perforated 17-24 ft. | | |
| Loam, with gravel | 2 | 2 |
| Gravel, hard, dry | 7 | 9 |
| Gravel, hard, and boulders, with very little water | 6 | 15 |
| Gravel, coarse, water-bearing | 9 | 24 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/7-18J1. J. M. Steen. Altitude 100 ft. Drilled by Hilton Hayes. Cased 8 in. diam. to 19 ft, 6 in. diam. to 27 ft; perforated 19-27 ft. | | |
| Sand and silt, light gray | 5 | 5 |
| Gravel, brown, and cobbles | 4 | 9 |
| Gravel, brown, with a little water | 4 | 13 |
| Gravel, brown, and sand, water-bearing | 2 | 15 |
| Gravel, gray, medium, and sand, water-bearing | 3 | 18 |
| Gravel, gray, coarse, and sand, water-bearing | 9 | 27 |
| 35/7-18L1. W. W. Perrigo. Altitude 100 ft. Drilled by Hilton Hayes, 1954. Cased 8 in. diam. to 18 ft, 7 in. diam. to 26 ft; perforated 18-26 ft. | | |
| Loam, with gravel | 1 | 1 |
| Gravel, medium | 1 | 2 |
| Clay, silt, and sand | 8 | 10 |
| Sand, hard, with very little water | 6 | 16 |
| Gravel, fine, water-bearing | 6 | 22 |
| Gravel, medium, water-bearing | 4 | 26 |
| 35/7-18L2. Camelot Farms, Inc. Altitude 100 ft. Drilled by Dahman Pump and Drilling, January 1970. Cased 8 in. diam. to 34 ft; screened 34-39 ft. | | |
| Sand | 16 | 16 |
| Sand and medium gravel | 10 | 26 |
| Gravel, fine | 4 | 30 |
| Gravel and sand | 9 | 39 |
| 35/8-7M1. Tulloch Development. Altitude 140 ft. Drilled by A. L. Nelson, 1966. Cased 8 in. diam. to 37 ft; screened 37-48 ft. | | |
| Sand | 27 | 27 |
| Clay, with some gravel | 13 | 40 |
| Gravel, fine, partially cemented | 8 | 48 |
| 35/8-9F1. George Theodoratus. Altitude 190 ft. Drilled by Hayes Well Service, April 1969. Cased 8 in. diam. to 48 ft; screened 48-53 ft. | | |
| Soil, brown | 3 | 3 |
| Clay, tan, sandy | 5 | 8 |
| Till, tan | 6 | 14 |
| Till, with packed gravel and clay, water-bearing | 6 | 20 |
| Gravel, dry | 2 | 22 |
| Till | 3 | 25 |
| Gravel, hard packed, and clay, water-bearing | 22 | 47 |
| Gravel, hard, water-bearing | 6 | 53 |
| Gravel, hard, a little water | ? | ? |
| 35/8-14F1. Tulloch Development. Altitude 225 ft. Drilled by A. L. Nelson, May 1968. Cased 8 in. diam. to 69 ft; screened 69-74 ft. | | |
| Gravel | 8 | 8 |
| Sand and gravel, water-bearing | 6 | 14 |
| Gravel | 43 | 57 |
| Sand, water-bearing | 4 | 61 |
| Clay | 2 | 63 |
| Sand and gravel, water-bearing | 11 | 74 |
| 35/8-15Q1. R. E. Arnold. Altitude 240 ft. Drilled by Dahlman Pump and Drilling, May 1973. Cased 6 in. diam. to 69 ft; open end. | | |
| Clay, silty | 4 | 4 |
| Gravel and clay | 44 | 48 |
| Gravel and clay, with a little water | 15 | 63 |
| Sand, gravel, and clay, water-bearing | 1 | 64 |
| Gravel | 5 | 69 |
| Clay and gravel | ? | ? |
| 35/8-16A1. Ben Weir. Altitude 200 ft. Drilled by Hilton Hayes, February 1952. Cased 4 in. diam. to 42 ft; open end. | | |
| Loam, with gravel | 5 | 5 |
| Sand and gravel, brown, hard | 5 | 10 |
| Sand and gravel, gray, hard | 5 | 15 |
| Sand and large boulders | 3 | 18 |
| Sand, brown, firm | 9 | 27 |
| Sand and gravel, brown | 3 | 30 |
| Sand and gravel, gray | 6 | 36 |
| Sand and cobbles, hard | 2 | 38 |
| Sand and gravel, gray, water-bearing | 4 | 42 |
| Clay | ? | ? |
| 35/9-19F1. Charles Young. Altitude 210 ft. Drilled by Hayes Well Drilling and Pumps, Inc., June 1974. Cased 6 in. diam. to 57 ft; open end. | | |
| Loam, brown, sandy | 2 | 2 |
| Sand, tan | 4 | 6 |
| Clay, tan, sandy | 4 | 10 |
| Boulders | 2 | 12 |
| Clay, tan, and gravel | 4 | 16 |
| Boulders | 4 | 20 |
| Gravel, coarse, dry | 10 | 30 |
| Sand, brown, and silt | 4 | 34 |
| Gravel, coarse, dry | 5 | 39 |
| Gravel, coarse, some water | 15 | 54 |
| Gravel, water-bearing | 4 | 58 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/9-19G1. Lower Faber Damsite. Altitude 199 ft. Drilled by U.S. Army Engineers. Test hole, no casing. | | |
| Loam | 9 | 9 |
| Sand | 18 | 27 |
| Boulders and gravel | 11 | 38 |
| Sand, packed | 3 | 41 |
| Gravel and sand | 3 | 44 |
| Sand, packed, with a little gravel | 3 | 47 |
| Sand | 9 | 56 |
| Sand and gravel | 2 | 58 |
| Sand, with a little gravel | 3 | 61 |
| Sand and gravel | 25 | 86 |
| Sand and blue clay | 4 | 90 |
| Sand and clay | 10 | 100 |
| Sand and very little clay | 9 | 109 |
| Sand and gravel | 2 | 111 |
| Sand and very little clay | 15 | 126 |
| Clay, with a little sand | 8 | 134 |
| Sand, packed, with a little clay | 11 | 145 |
| Clay, sandy | 8 | 153 |
| 35/9-19H1. Phillip M. Cavallaro. Altitude 230 ft. Drilled by Hayes Well Drilling and Pumps, Inc. Cased 6 in. diam. to 69 ft; open end. | | |
| Loam, brown, and gravel | 7 | 7 |
| Sand, brown, and gravel | 11 | 18 |
| Till, brown, and gravel, dry | 18 | 36 |
| Sand, brown, dry | 5 | 41 |
| Gravel, brown, some water | 9 | 50 |
| Sand, brown, silty, some water | 6 | 56 |
| Gravel, water-bearing | 13 | 69 |
| 35/9-20B1. Allan Armstrong. Altitude 200 ft. Drilled by Hilton Hayes, August 1951. Cased 6 in. diam. to 89 ft; open end. | | |
| Sand, brwon, and gravel | 5 | 5 |
| Clay, sand, and gravel | 25 | 30 |
| Till | 56 | 86 |
| Sand and gravel, water-bearing | 3 | 89 |
| Shale, yellow | ? | ? |
| 35/9-33G1. Upper Faber Damsite. Altitude 205 ft. Drilled by U.S. Army Engineers. Test hole, no casing. | | |
| Soil, sandy | 6 | 6 |
| Sand | 10 | 16 |
| Sand and gravel | 6 | 22 |
| Sand | 4 | 26 |

(continued)

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/9-33G1.--Continued | | |
| Sand and gravel | 5 | 31 |
| Boulders and gravel | 7 | 38 |
| Boulders and packed sand | 4 | 42 |
| Boulders and gravel | 14 | 56 |
| Sand | 23 | 79 |
| Sand and gravel | 3 | 82 |
| Clay | 41 | 123 |
| Sand | 4 | 127 |
| Gravel, hard packed | 1 | 128 |
| Sand, hard packed | 6 | 134 |
| Gravel, hard packed | 2 | 136 |
| Sand, hard packed | 4 | 140 |
| Sand, hard packed, with a little gravel | 10 | 150 |
| 35/9-34P1. V. M. Walsh. Altitude 230 ft. Drilled by Dahlman Pump and Drilling, December 1973. Cased 6 in. diam. to 39 ft; open end. | | |
| Sand | 20 | 20 |
| Gravel | 19 | 39 |
| Clay, blue | 1 | 40 |
| 35/10-12A1. Harry Martin. Altitude 355 ft. Drilled by Hilton Hayes, September 1951. Cased 6 in. diam. to 67 ft. | | |
| Loam, with cobbles | 1 | 1 |
| Sand, green, and clay | 13 | 14 |
| Sand and clay, green | 8 | 22 |
| Sand, brown, soft | 10 | 32 |
| Sand and gravel, brown, hard | 4 | 36 |
| Sand, with gravel streaks, brown | 22 | 58 |
| Sand and gravel, water-bearing | 9 | 67 |
| 35/10-12Q1. Stan Ripley. Altitude 320 ft. Drilled by Hilton Hayes, November 1950. Cased 6 in. diam. to 26 ft; open end. | | |
| Sand, brown | 7 | 7 |
| Sand, brown, hard, with cobbles | 5 | 12 |
| Sand, gravel, and clay, with very little water | 9 | 21 |
| Gravel, fine, and yellow sand | 5 | 26 |
| 35/10-13D1. Ed Stafford. Altitude 310 ft. Drilled by Hilton Hayes, September 1951. Cased 6 in. diam. to 30 ft; open end. | | |
| Sand, dark brown | 10 | 10 |
| Sand, light brown | 2 | 12 |
| Sand and gravel, brown, dry | 2 | 14 |
| Sand and gravel, water-bearing | 16 | 30 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 35/10-14Q1. T. D. Stafford. Altitude 290 ft. Drilled by Hilton Hayes, November 1950. Cased 5 in. diam. to 25 ft; open end. | | |
| Sand, brown | 7 | 7 |
| Boulders | 5 | 12 |
| Sand, brown, with boulders | 5 | 17 |
| Sand, brown, water-bearing | 4 | 21 |
| Sand and gravel, with boulders | 6 | 27 |
| 35/10-32C1. Department of Game. Altitude 238 ft. Drilled by Hilton Hayes, November 1965. Cased 6 in. diam. to 20 ft; screened 20-24 ft. | | |
| Soil, sandy | 8 | 8 |
| Till | 4 | 12 |
| Sand and gravel, water-bearing | 13 | 25 |
| Sand | 5 | 30 |
| 35/11-6A1. Howard Bullard. Altitude 325 ft. Drilled by Hayes Well Drilling and Pumps, Inc. June 1963. Cased 6 in. diam. to 25 ft; open end. | | |
| Sand and gravel, brown | 8 | 8 |
| Sand and gravel, tan, some water | 9 | 17 |
| Gravel, fine, and coarse sand, brown, water-bearing | 8 | 25 |
| 35/12-7P1. Cascade Damsite. Altitude 878 ft. Drilled by U.S. Army Engineers. Not cased, test hole. | | |
| Sand and clay | 15 | 15 |
| Gravel and boulders | 1 | 16 |
| Sand and boulders | 6 | 22 |
| Cobbles, green schist | 16 | 38 |
| Sand and clay | 4 | 42 |
| Cobbles | 3 | 45 |
| Sand and clay | 3 | 48 |
| Sand | 1 | 49 |
| Sand and clay | 8 | 57 |
| Sand, hard packed | 2 | 59 |
| Gravel and boulders | 2 | 61 |
| Sand and boulders | 3 | 64 |
| Sand, gravel, and boulders | 4 | 68 |
| Sand and gravel | 2 | 70 |
| Cobbles, green schist | 7 | 77 |
| Granite | 2 | 79 |
| Granite, decomposed | 10 | 89 |
| Schist, green | 46 | 135 |
| 35/12-7G1. Cascade Damsite. Altitude 950 ft. Drilled by U.S. Army Engineers. Not cased, test hole. | | |
| Cobbles, green schist | 38 | 38 |
| Schist, green | 35 | 73 |
| Marble | 1 | 74 |
| Schist, green | 18 | 92 |
| 35/12-7L1. Cascade Damsite. Altitude 877 ft. Drilled by U.S. Army Engineers. Not cased, test hole. | | |
| Boulders and fine gravel | 10 | 10 |
| Sand and boulders | 19 | 29 |
| Sand and gravel, hard packed | 3 | 32 |
| Sand and boulders | 8 | 40 |
| Sand, gravel, and boulders | 7 | 47 |
| Gravel and boulders | 5 | 52 |
| Schist | 45 | 97 |
| 36/8-27N1. Lands West, Inc. Altitude 900 ft. Drilled by Richardson Well Drilling Co., November 1973. Cased 8 in. diam. to 212 ft; perforated? | | |
| Sand | 3 | 3 |
| Sand and gravel | 33 | 36 |
| Till, yellow | 7 | 43 |
| Till, blue | 72 | 115 |
| Clay, blue, with sand and gravel | 6 | 121 |
| Sand, fine, some water | 4 | 125 |
| Clay, blue, and sand | 18 | 143 |
| Sand, fine, with some gravel and clay | 6 | 149 |
| Sand and gravel, clayey, and some water | 8 | 157 |
| Sand and gravel, water-bearing | 11 | 168 |
| Till, blue, with soft streaks | 2 | 170 |
| Till, with soft streaks | 27 | 197 |
| Sand and gravel, water-bearing | 12 | 209 |
| Sand and gravel, hard | 3 | 212 |

TABLE C9.--Drillers' logs of wells--Continued

| Material | Thickness (ft) | Depth (ft) |
|---|---|---|
| 37/12-21J1. City of Seattle, Dept. of Lighting. Altitude 514 ft. Drilled by H. O. Meyer Drilling Co., Inc., August 1962. Cased 20 in. diam. to 51 ft, 16 in. diam. to 130 ft; screened 130-157 ft. | | |
| Soil and boulders | 21 | 21 |
| Sand, gravel, and clay | 11 | 32 |
| Sand, gravel, clay, and cobbles | 35 | 67 |
| Sand, gravel, and clay | 20 | 87 |
| Sand, gravel, and cobbles | 9 | 96 |
| Sand, gravel, silt, and some clay | 21 | 117 |
| Sand and gravel, loose | 13 | 130 |
| Gravel, coarse | 4 | 134 |
| Gravel and cobbles, very loose | 9 | 143 |
| Sand and gravel, compacted, with some clay | 5 | 148 |
| Sand and gravel, loose | 2 | 150 |
| Sand and gravel, compacted | 7 | 157 |
| 37/13-8C1. City of Seattle, Dept. of Lighting. Altitude 890 ft. Drilled by L. R. Gaudio Well Drilling Co., May 1956. Cased 12 in. diam. to 142 ft; screened 142-161 ft. | | |
| Soil and sandy loam | 17 | 17 |
| Sand and gravel | 34 | 51 |
| Sand, with 5% fine gravel | 7 | 58 |
| Sand and gravel | 12 | 70 |
| Clay, sand, and gravel | 15 | 85 |
| Sand and gravel, with very little clay | 7 | 92 |
| Sand, with 10% fine gravel and some clay | 10 | 102 |
| Sand, fine to coarse, with little clay and gravel | 53 | 155 |
| Sand and clay | 6 | 161 |
| Sand, clay, and gravel | 9 | 170 |
| Bedrock | 2 | 172 |

TABLE C10.--Fluctuations of water levels in selected wells

## EXPLANATION

A — Well being pumped. B — Well pumped recently. C — Nearby well being pumped. D — Nearby well pumped recently. Where multiple water levels are recorded on the same date, measurements were taken at different times during that day.

32N04E05Q01 ELMER NORGAARD

ALTITUDE OF LAND SURFACE 235 FEET.

HIGHEST WATER LEVEL 123.77 BELOW LSD, DEC. 29, 1960.
LOWEST WATER LEVEL 133.93 BELOW LSD, NOV. 18, 1949.
RECORDS AVAILABLE 1946-61.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT. 2, 1946 | 128.25 | AUG. 28, 1953 | 127.08 | FEB. 29, 1956 | 127.27 | NOV. 25, 1958 | 127.53 |
| DEC. 10 | 128.90 | SEP. 16 | 127.24 | MAR. 30 | 126.60 | DEC. 29 | 126.03 |
| FEB. 12, 1947 | 128.36 | OCT. 20 | 127.70 | MAY 1 | 127.19 | JAN. 29, 1959 | 127.25 |
| APR. 17 | 128.35 | NOV. 30 | 127.22 | MAY 31 | 130.15 | FEB. 27 | 127.30 |
| JUNE 4 | 128.25 | FEB. 17, 1954 | 126.74 | AUG. 29 | 124.94 | MAR. 27 | 127.04 |
| AUG. 14 | 128.46 | MAR. 31 | 127.40 | OCT. 30 | 126.76 | APR. 28 | 126.76 |
| DEC. 19 | 128.39 | MAY 5 | 125.56 | MAR. 1, 1957 | 127.64 | MAY 29 | 127.18 |
| MAY 6, 1948 | 128.10 | JUNE 2 | 127.42 | MAR. 27 | 127.49 | JUNE 29 | 127.29 |
| JUNE 24 | 129.71 | JUNE 29 | 127.45 | APR. 30 | 126.83 | JULY 24 | 127.69 |
| SEP. 17 | 128.03 | JULY 29 | 127.23 | MAY 28 | 127.29 | AUG. 31 | 127.93 |
| MAR. 4, 1949 | 127.92 | SEP. 9 | 127.09 | JULY 1 | 127.02 | SEP. 29 | 127.98 |
| SEP. 8 | 128.27 | SEP. 30 | 127.31 | JULY 29 | 127.05 | OCT. 30 | 127.79 |
| NOV. 18 | 133.93 | OCT. 27 | 127.38 | AUG. 27 | 127.73 | DEC. 1 | 127.41 |
| DEC. 28 | 127.95 | NOV. 30 | 127.72 | SEP. 30 | 127.01 | DEC. 30 | 126.15 |
| APR. 20, 1950 | 128.17 | DEC. 30 | 126.25 | OCT. 28 | 127.27 | FEB. 1, 1960 | 126.22 |
| JUNE 27 | 128.11 | JAN. 27, 1955 | 127.56 | NOV. 26 | 127.27 | MAR. 2 | 126.15 |
| SEP. 18 | 130.70 | MAR. 1 | 126.72 | JAN. 2, 1958 | 127.41 | MAR. 30 | 126.27 |
| DEC. 7 | 127.66 | MAR. 30 | 127.10 | JAN. 31 | 126.87 | APR. 28 | 127.08 |
| MAR. 27, 1951 | 127.89 | MAY 3 | 127.49 | FEB. 24 | 126.40 | MAY 31 | 127.21 |
| JUNE 14 | 127.80 | MAY 31 | 127.10 | MAR. 26 | 129.87 | JUNE 24 | 131.23 |
| AUG. 16 | 127.61 | JUNE 26 | 126.84 | APR. 29 | 127.21 | JULY 28 | 133.51 |
| OCT. 12 | 127.66 | JULY 28 | 127.23 | MAY 28 | 127.26 | AUG. 29 | 127.02 |
| FEB. 29, 1952 | 127.35 | AUG. 22 | 127.13 | JUNE 30 | 127.41 | SEP. 30 | 126.05 |
| APR. 30 | 127.86 | SEP. 29 | 127.39 | JULY 23 | 126.68 | OCT. 31 | 126.84 |
| JULY 1 | 130.18 | OCT. 25 | 126.71 | AUG. 27 | 127.08 | NOV. 30 | 124.53 |
| AUG. 29 | 129.48 | NOV. 30 | 127.74 | SEP. 30 | 127.34 | DEC. 29 | 123.77 |
| NOV. 7 | 132.95 | DEC. 29 | 127.85 | OCT. 28 | 127.34 | OCT. 6, 1961 | 126.92 |
| JAN. 8, 1953 | 127.20 | JAN. 31, 1956 | 127.81 | | | | |

32N04E06D01 GEORGE KEENAN

ALTITUDE OF LAND SURFACE 10 FEET.

HIGHEST WATER LEVEL 0.28 BELOW LSD, MAY 21, 1946.
LOWEST WATER LEVEL 2.38 BELOW LSD, SEP. 13, 1945.
RECORDS AVAILABLE 1944-46.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| AUG. 3, 1944 | .45 | FEB. 27, 1946 | .45 | MAY 21, 1946 | .28 | OCT. 2, 1946 | 1.6 |
| SEP. 13, 1945 | 2.38 | APR. 16 | 1.03B | | | | |

TABLE C10.--Fluctuations of water levels in selected wells--continued

33N04E05B03 ROBERT EERKES

ALTITUDE OF LAND SURFACE 10 FEET.

HIGHEST WATER LEVEL 0.99 BELOW LSD, FEB. 7, 1969,
LOWEST WATER LEVEL 8.80 BELOW LSD, JULY 15, 1968.
RECORDS AVAILABLE 1968, 1969.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| JAN. 16, 1968 | 2.66 | SEP. 5, 1968 | 5.58 | DEC. 13, 1968 | 3.71 | MAR. 5, 1969 | 1.98 |
| MAY 19 | 3.19 | OCT. 7 | 5.82 | FEB. 7, 1969 | 0.99 | MAY 6 | 3.24 |
| JULY 15 | 8.80 | DEC. 4 | 4.64 | | | | |

33N04E05B04 ROBERT EERKES

ALTITUDE OF LAND SURFACE 10 FEET.

HIGHEST WATER LEVEL 1.54 BELOW LSD, FEB. 12, 1971,
LOWEST WATER LEVEL 13.70 BELOW LSD, AUG. 7, 1970.
RECORDS AVAILABLE 1969-73.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| JUNE 20, 1969 | 5.79 | JUNE 21, 1970 | 5.98 | JUNE 9, 1971 | 4.99 | AUG. 24, 1972 | 6.15 |
| JULY 3 | 6.02 | AUG. 7 | 13.70 | AUG. 2 | 5.97 | SEP. 26 | 6.47 |
| SEP. 22 | 7.35 | SEP. 16 | 7.53 | SEP. 13 | 7.15 | DEC. 7 | 6.16 |
| NOV. 24 | 7.20 | NOV. 20 | 7.31 | NOV. 4 | 7.24 | JAN. 22, 1973 | 5.28 |
| JAN. 5, 1970 | 6.69 | DEC. 18 | 6.05 | DEC. 14 | 5.48 | MAR. 16 | 4.78 |
| FEB. 11 | 5.54 | FEB. 12, 1971 | 1.54 | FEB. 9, 1972 | 2.73 | JULY 9 | 7.09 |
| APR. 6 | 5.47 | MAR. 15 | 2.60 | MAR. 27 | 3.97 | SEP. 24 | 7.06 |
| MAY 14 | 5.43 | APR. 29 | 3.54 | JUNE 27 | 5.77 | NOV. 26 | 6.40 |

34N04E07P02 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 30 FEET.

HIGHEST WATER LEVEL 15.58 BELOW LSD, APR. 16, 1951,
LOWEST WATER LEVEL 27.42 BELOW LSD, APR. 7, 1951, APR. 9, 1951,
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 27.00A | APR. 1, 1951 | 26.67A | APR. 10, 1951 | 26.92A | APR. 18, 1951 | 23.75A |
| MAR. 27 | 17.92B | APR. 6 | 16.33 | APR. 10 | 26.92A | APR. 20 | 26.08A |
| MAR. 27 | 27.00A | APR. 6 | 22.58A | APR. 11 | 25.83A | APR. 23 | 26.08A |
| MAR. 28 | 27.17A | APR. 6 | 26.50A | APR. 11 | 25.83A | APR. 24 | 26.42A |
| MAR. 28 | 27.08A | APR. 6 | 26.92A | APR. 12 | 26.58A | MAY 1 | 26.42A |
| MAR. 29 | 26.67A | APR. 7 | 27.33A | APR. 12 | 25.92A | MAY 2 | 27.00A |
| MAR. 29 | 18.17B | APR. 7 | 27.42A | APR. 13 | 16.08B | MAY 3 | 27.17A |
| MAR. 30 | 27.08A | APR. 8 | 27.33A | APR. 14 | 25.25A | MAY 4 | 27.00A |
| MAR. 31 | 26.33A | APR. 9 | 27.42A | APR. 15 | 25.00A | MAY 5 | 27.08A |
| MAR. 31 | 26.67A | APR. 9 | 27.42A | APR. 16 | 15.58B | MAY 7 | 15.92 |

TABLE C10.--Fluctuations of water levels in selected wells--continued

34N04E07P04 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 31 FEET.

HIGHEST WATER LEVEL 16.00 BELOW LSD, APR. 16, 1951,
LOWEST WATER LEVEL 19.00 BELOW LSD, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 18.42 | APR. 1, 1951 | 19.00C | APR. 10, 1951 | 18.00C | APR. 18, 1951 | 16.50C |
| MAR. 27 | 18.17 | APR. 6 | 16.92 | APR. 10 | 18.00C | APR. 20 | 17.00D |
| MAR. 27 | 18.50C | APR. 6 | 17.17C | APR. 11 | 17.75C | APR. 23 | 17.67C |
| MAR. 28 | 18.67C | APR. 6 | 17.42C | APR. 11 | 17.83C | APR. 24 | 17.50C |
| MAR. 28 | 18.75C | APR. 6 | 17.83C | APR. 12 | 17.83C | MAY 1 | 17.58C |
| MAR. 29 | 18.75C | APR. 7 | 18.42C | APR. 12 | 17.75C | MAY 2 | 17.92C |
| MAR. 29 | 18.42D | APR. 7 | 18.50C | APR. 13 | 16.58D | MAY 3 | 18.08C |
| MAR. 30 | 18.83C | APR. 8 | 18.58C | APR. 14 | 16.92C | MAY 4 | 18.17C |
| MAR. 31 | 18.83C | APR. 9 | 18.25C | APR. 15 | 17.00C | MAY 5 | 18.17C |
| MAR. 31 | 18.92C | APR. 9 | 18.17C | APR. 16 | 16.00D | MAY 7 | 16.67 |

34N04E07P05 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 30 FEET.

HIGHEST WATER LEVEL 15.17 BELOW LSD, APR. 16, 1951,
LOWEST WATER LEVEL 19.67 BELOW LSD, MAR. 30, 1951, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 19.17 | APR. 1, 1951 | 19.67C | APR. 10, 1951 | 18.83C | APR. 18, 1951 | 17.17C |
| MAR. 27 | 17.50 | APR. 6 | 15.92 | APR. 10 | 18.83C | APR. 20 | 18.00D |
| MAR. 27 | 19.33C | APR. 6 | 17.42C | APR. 11 | 18.58C | APR. 23 | 18.50C |
| MAR. 28 | 19.58C | APR. 6 | 18.33C | APR. 11 | 18.58C | APR. 24 | 18.42C |
| MAR. 28 | 19.58C | APR. 6 | 18.75C | APR. 12 | 18.67C | MAY 1 | 18.33C |
| MAR. 29 | 19.50C | APR. 7 | 19.33C | APR. 12 | 18.50C | MAY 2 | 18.83C |
| MAR. 29 | 17.75D | APR. 7 | 19.42C | APR. 13 | 15.67D | MAY 3 | 18.92C |
| MAR. 30 | 19.67C | APR. 8 | 19.42C | APR. 14 | 17.75C | MAY 4 | 19.00C |
| MAR. 31 | 19.50C | APR. 9 | 19.17C | APR. 15 | 17.75C | MAY 5 | 19.08C |
| MAR. 31 | 19.67C | APR. 9 | 19.17C | APR. 16 | 15.17D | MAY 7 | 15.75 |

34N04E07P06 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 30 FEET.

HIGHEST WATER LEVEL 15.00 BELOW LSD, APR. 16, 1951,
LOWEST WATER LEVEL 19.17 BELOW LSD, APR. 7, 1951, APR. 8, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 18.00 | APR. 1, 1951 | 18.58C | APR. 10, 1951 | 17.50C | APR. 18, 1951 | 15.92C |
| MAR. 27 | 17.42 | APR. 6 | 15.92 | APR. 10 | 17.58C | APR. 20 | 16.58D |
| MAR. 27 | 18.17C | APR. 6 | 16.58C | APR. 11 | 17.33C | APR. 23 | 17.17C |
| MAR. 28 | 18.33 | APR. 6 | 17.08 | APR. 11 | 17.33C | APR. 24 | 17.08C |
| MAR. 28 | 18.33C | APR. 6 | 17.50C | APR. 12 | 17.33C | MAY 1 | 17.08C |
| MAR. 29 | 18.42 | APR. 7 | 18.00 | APR. 12 | 17.25C | MAY 2 | 17.42C |
| MAR. 29 | 17.67D | APR. 7 | 19.17C | APR. 13 | 15.67D | MAY 3 | 17.67C |
| MAR. 30 | 18.50 | APR. 8 | 19.17C | APR. 14 | 16.42C | MAY 4 | 17.83C |
| MAR. 31 | 18.42C | APR. 9 | 17.83C | APR. 15 | 16.42C | MAY 5 | 17.67C |
| MAR. 31 | 18.58 | APR. 9 | 17.75C | APR. 16 | 15.00D | MAY 7 | 15.58 |

TABLE C10.--Fluctuations of water levels in selected wells--continued

34N04E07P07 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 31 FEET.

HIGHEST WATER LEVEL 15.42 BELOW LSD, APR. 16, 1951.
LOWEST WATER LEVEL 18.67 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 18.00 | APR. 1, 1951 | 18.67C | APR. 10, 1951 | 17.25C | APR. 18, 1951 | 15.75C |
| MAR. 27 | 17.92 | APR. 6 | 16.58 | APR. 10 | 17.33C | APR. 20 | 16.33D |
| MAR. 27 | 18.25C | APR. 6 | 16.83C | APR. 11 | 17.08C | APR. 23 | 16.92C |
| MAR. 28 | 18.33C | APR. 6 | 17.17C | APR. 11 | 17.17C | APR. 24 | 17.00C |
| MAR. 28 | 18.50C | APR. 6 | 17.42C | APR. 12 | 17.08C | MAY 1 | 16.92C |
| MAR. 29 | 18.50C | APR. 7 | 17.92C | APR. 12 | 17.08C | MAY 2 | 17.33C |
| MAR. 29 | 18.25D | APR. 7 | 18.00C | APR. 13 | 16.00D | MAY 3 | 17.50C |
| MAR. 30 | 18.50C | APR. 8 | 18.00C | APR. 14 | 16.08C | MAY 4 | 17.67C |
| MAR. 31 | 18.50C | APR. 9 | 18.50C | APR. 15 | 16.25C | MAY 5 | 17.50C |
| MAR. 31 | 18.67C | APR. 9 | 18.50C | APR. 16 | 15.42D | MAY 7 | 15.92 |

34N04E07P08 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 31 FEET.

HIGHEST WATER LEVEL 15.67 BELOW LSD, APR. 16, 1951.
LOWEST WATER LEVEL 18.92 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 18.25 | APR. 1, 1951 | 18.92C | APR. 10, 1951 | 17.42C | APR. 18, 1951 | 15.83C |
| MAR. 27 | 18.25 | APR. 6 | 17.00 | APR. 10 | 17.50C | APR. 20 | 16.42D |
| MAR. 27 | 18.50C | APR. 6 | 17.25C | APR. 11 | 17.25C | APR. 23 | 17.08C |
| MAR. 28 | 18.58C | APR. 6 | 17.42C | APR. 11 | 17.25C | APR. 24 | 17.17C |
| MAR. 28 | 18.75C | APR. 6 | 17.67C | APR. 12 | 17.25C | MAY 1 | 17.17C |
| MAR. 29 | 18.73C | APR. 7 | 18.08C | APR. 12 | 17.25C | MAY 2 | 17.50C |
| MAR. 29 | 18.58D | APR. 7 | 18.25C | APR. 13 | 16.25D | MAY 3 | 17.67C |
| MAR. 30 | 18.75C | APR. 8 | 18.25C | APR. 14 | 16.17C | MAY 4 | 17.83C |
| MAR. 31 | 18.75C | APR. 9 | 17.58C | APR. 15 | 16.33C | MAY 5 | 17.58C |
| MAR. 31 | 18.92C | APR. 9 | 17.58C | APR. 16 | 15.67D | MAY 7 | 16.17 |

34N04E07P09 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 31 FEET.

HIGHEST WATER LEVEL 15.50 BELOW LSD, APR. 16, 1951.
LOWEST WATER LEVEL 18.75 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 18.17 | APR. 1, 1951 | 18.75C | APR. 10, 1951 | 17.08C | APR. 18, 1951 | 15.58C |
| MAR. 27 | 18.17 | APR. 6 | 16.83 | APR. 10 | 17.17C | APR. 20 | 16.17D |
| MAR. 27 | 18.33C | APR. 6 | 17.08C | APR. 11 | 17.00C | APR. 23 | 16.75C |
| MAR. 28 | 18.50C | APR. 6 | 17.25C | APR. 11 | 17.00C | APR. 24 | 17.00C |
| MAR. 28 | 18.58C | APR. 6 | 17.50C | APR. 12 | 16.92C | MAY 1 | 16.92C |
| MAR. 29 | 18.50C | APR. 7 | 17.83C | APR. 12 | 17.00C | MAY 2 | 17.33C |
| MAR. 29 | 18.50D | APR. 7 | 18.00C | APR. 13 | 16.08D | MAY 3 | 17.42C |
| MAR. 30 | 18.50C | APR. 8 | 17.92C | APR. 14 | 15.92C | MAY 4 | 17.67C |
| MAR. 31 | 18.58C | APR. 9 | 17.25C | APR. 15 | 16.00C | MAY 5 | 17.33C |
| MAR. 31 | 18.75C | APR. 9 | 17.33C | APR. 16 | 15.50D | MAY 7 | 15.92 |

TABLE C10.--Fluctuations of water levels in selected wells--continued

34N04E07P10 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 31 FEET.

HIGHEST WATER LEVEL 15.75 BELOW LSD, APR. 18, 1951.
LOWEST WATER LEVEL 19.17 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 18.50 | APR. 1, 1951 | 19.17C | APR. 10, 1951 | 17.33C | APR. 18, 1951 | 15.75C |
| MAR. 27 | 18.67 | APR. 6 | 17.50 | APR. 10 | 17.42C | APR. 20 | 16.33D |
| MAR. 27 | 18.75C | APR. 6 | 17.67C | APR. 11 | 17.17C | APR. 23 | 16.92C |
| MAR. 28 | 18.75C | APR. 6 | 17.75C | APR. 11 | 17.25C | APR. 24 | 17.25C |
| MAR. 28 | 18.92C | APR. 6 | 17.92C | APR. 12 | 17.08C | MAY 1 | 17.25C |
| MAR. 29 | 18.92C | APR. 7 | 18.17C | APR. 12 | 17.17C | MAY 2 | 17.58C |
| MAR. 29 | 19.00D | APR. 7 | 18.33C | APR. 13 | 16.50D | MAY 3 | 17.67C |
| MAR. 30 | 18.83C | APR. 8 | 18.17C | APR. 14 | 16.00C | MAY 4 | 17.83C |
| MAR. 31 | 19.00C | APR. 9 | 17.42C | APR. 15 | 16.33C | MAY 5 | 17.42C |
| MAR. 31 | 19.17C | APR. 9 | 17.50C | APR. 16 | 15.92D | MAY 7 | 16.17 |

34N04E07P11 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 30 FEET.

HIGHEST WATER LEVEL 15.25 BELOW LSD, APR. 16, 1951.
LOWEST WATER LEVEL 18.58 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 17.92 | APR. 1, 1951 | 18.58C | APR. 10, 1951 | 17.17C | APR. 18, 1951 | 15.67C |
| MAR. 27 | 17.83 | APR. 6 | 16.42 | APR. 10 | 17.25C | APR. 20 | 16.25D |
| MAR. 27 | 18.17C | APR. 6 | 16.75C | APR. 11 | 17.00C | APR. 23 | 16.83C |
| MAR. 28 | 18.25C | APR. 6 | 17.00C | APR. 11 | 17.00C | APR. 24 | 16.83C |
| MAR. 28 | 18.33C | APR. 6 | 17.33C | APR. 12 | 16.92C | MAY 1 | 16.83C |
| MAR. 29 | 18.33C | APR. 7 | 17.83C | APR. 12 | 16.92C | MAY 2 | 17.25C |
| MAR. 29 | 18.17D | APR. 7 | 17.92C | APR. 13 | 15.83D | MAY 3 | 17.42C |
| MAR. 30 | 18.42C | APR. 8 | 17.92C | APR. 14 | 15.92C | MAY 4 | 17.50C |
| MAR. 31 | 18.42C | APR. 9 | 17.33C | APR. 15 | 16.00C | MAY 5 | 17.33C |
| MAR. 31 | 18.58C | APR. 9 | 17.33C | APR. 16 | 15.25D | MAY 7 | 15.75 |

34N04E07P12 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 32 FEET.

HIGHEST WATER LEVEL 17.00 BELOW LSD, APR. 16, 1951.
LOWEST WATER LEVEL 20.25 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 19.58 | APR. 1, 1951 | 20.25C | APR. 10, 1951 | 18.67C | APR. 18, 1951 | 17.17C |
| MAR. 27 | 19.58 | APR. 6 | 18.33 | APR. 10 | 18.83C | APR. 20 | 17.75D |
| MAR. 27 | 19.83C | APR. 6 | 18.50C | APR. 11 | 18.58C | APR. 23 | 18.33C |
| MAR. 28 | 19.92C | APR. 6 | 18.75C | APR. 11 | 18.58C | APR. 24 | 18.50C |
| MAR. 28 | 20.00C | APR. 6 | 19.00C | APR. 12 | 18.58C | MAY 1 | 18.50C |
| MAR. 29 | 20.00C | APR. 7 | 19.42C | APR. 12 | 18.50C | MAY 2 | 18.92C |
| MAR. 29 | 20.00D | APR. 7 | 19.58C | APR. 13 | 17.58D | MAY 3 | 19.08C |
| MAR. 30 | 20.00C | APR. 8 | 19.50C | APR. 14 | 17.50C | MAY 4 | 19.08C |
| MAR. 31 | 20.08C | APR. 9 | 18.83C | APR. 15 | 17.67C | MAY 5 | 18.83C |
| MAR. 31 | 20.25C | APR. 9 | 18.92C | APR. 16 | 17.00D | MAY 7 | 17.42 |

TABLE C10.--Fluctuations of water levels in selected wells--continued

34N04E07P13 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 35 FEET.

HIGHEST WATER LEVEL 19.58 BELOW LSD, APR. 14, 1951, APR. 16, 1951,
LOWEST WATER LEVEL 22.50 BELOW LSD, MAR. 31, 1951, APR. 1, 1951.
RECORDS AVAILABLE 1951.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR. 27, 1951 | 21.92 | MAR. 31, 1951 | 22.33C | APR. 7, 1951 | 21.75C | APR. 11, 1951 | 20.75C |
| MAR. 27 | 21.92 | MAR. 31 | 22.50C | APR. 8 | 21.67C | APR. 12 | 20.67C |
| MAR. 27 | 22.00C | APR. 1 | 22.50C | APR. 9 | 21.25C | APR. 12 | 20.75C |
| MAR. 28 | 22.17C | APR. 6 | 20.83 | APR. 9 | 21.17C | APR. 13 | 20.33D |
| MAR. 28 | 22.25C | APR. 6 | 20.83C | APR. 10 | 20.92C | APR. 14 | 19.58C |
| MAR. 29 | 22.33C | APR. 6 | 20.92C | APR. 10 | 20.92C | APR. 15 | 19.75C |
| MAR. 29 | 22.42D | APR. 6 | 21.08C | APR. 11 | 20.75C | APR. 16 | 19.58D |
| MAR. 30 | 22.33C | APR. 7 | 21.58C | | | | |

34N04E18D01 M FORTIN

ALTITUDE OF LAND SURFACE 27 FEET.

HIGHEST WATER LEVEL 8.33 BELOW LSD, DEC. 26, 1950,
LOWEST WATER LEVEL 17.23 BELOW LSD, NOV. 7, 1952.
RECORDS AVAILABLE 1949-61.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| SEP. 27, 1949 | 14.74 | OCT. 30, 1950 | 13.17 | MAR. 30, 1955 | 14.57 | JUNE 30, 1958 | 12.93 |
| OCT. 17 | 14.33 | NOV. 7 | 12.83 | MAY 3 | 14.29 | JULY 23 | 14.90 |
| OCT. 18 | 14.33 | NOV. 27 | 12.00 | MAY 31 | 12.38 | AUG. 27 | 16.53 |
| OCT. 18 | 14.37 | DEC. 7 | 11.34 | JUNE 26 | 9.90 | SEP. 30 | 17.04 |
| OCT. 18 | 14.38 | DEC. 13 | 10.58 | JULY 28 | 10.13 | OCT. 28 | 14.96 |
| OCT. 19 | 14.42 | DEC. 26 | 8.33 | AUG. 22 | 12.88 | NOV. 25 | 13.14 |
| NOV. 18 | 13.59 | JAN. 18, 1951 | 10.83 | SEP. 29 | 15.78 | DEC. 29 | 10.73 |
| NOV. 28 | 10.25 | MAR. 27 | 11.73 | OCT. 25 | 15.36 | JAN. 29, 1959 | 9.31 |
| NOV. 29 | 10.67 | JUNE 14 | 11.88 | NOV. 30 | 10.25 | FEB. 27 | 12.94 |
| NOV. 30 | 10.67 | AUG. 16 | 14.85 | DEC. 29 | 12.12 | MAR. 27 | 13.34 |
| DEC. 1 | 10.33 | OCT. 12 | 15.46 | JAN. 31, 1956 | 13.18 | APR. 28 | 12.69 |
| DEC. 2 | 10.25 | FEB. 29, 1952 | 14.62 | FEB. 29 | 14.89 | MAY 29 | 11.19 |
| DEC. 3 | 9.75 | APR. 30 | 14.17 | MAR. 28 | 14.74 | JUNE 29 | 10.33 |
| DEC. 5 | 9.75 | JULY 1 | 12.94 | MAY 1 | 13.20 | JULY 24 | 10.85 |
| DEC. 6 | 9.92 | AUG. 28 | 15.65 | MAY 31 | 10.40 | AUG. 31 | 14.44 |
| DEC. 7 | 10.08 | NOV. 7 | 17.23 | AUG. 1 | 11.78 | SEP. 28 | 13.33 |
| DEC. 8 | 10.12 | JAN. 8, 1953 | 14.90 | AUG. 29 | 14.52 | OCT. 31 | 11.97 |
| DEC. 9 | 10.33 | MAR. 26 | 13.42 | SEP. 27 | 15.67 | DEC. 1 | 8.72 |
| DEC. 10 | 10.50 | JUNE 11 | 12.39 | OCT. 30 | 12.84 | DEC. 30 | 9.91 |
| DEC. 12 | 11.00 | JULY 29 | 11.80 | NOV. 28 | 13.70 | FEB. 1, 1960 | 11.63 |
| DEC. 13 | 11.50 | AUG. 28 | 13.92 | DEC. 27 | 10.68 | MAR. 2 | 12.63 |
| DEC. 19 | 11.75 | SEP. 16 | 15.30 | MAR. 27, 1957 | 13.55 | MAR. 30 | 13.60 |
| DEC. 20 | 11.92 | OCT. 20 | 14.41 | APR. 30 | 13.85 | APR. 28 | 13.04 |
| DEC. 21 | 12.33 | NOV. 30 | 12.31 | MAY 28 | 11.84 | MAY 31 | 12.64 |
| DEC. 27 | 11.58 | FEB. 17, 1954 | 11.14 | JULY 1 | 12.70 | JUNE 24 | 12.14 |
| DEC. 28 | 11.25 | MAR. 31 | 12.54 | JULY 29 | 14.07 | JULY 28 | 13.01 |
| DEC. 29 | 10.25 | MAY 5 | 12.92 | AUG. 27 | 16.00 | AUG. 29 | 13.45 |
| DEC. 30 | 10.00 | JUNE 2 | 10.22 | SEP. 27 | 16.94 | SEP. 30 | 16.48 |
| APR. 20, 1950 | 10.90 | JUNE 29 | 9.16 | OCT. 28 | 17.20 | OCT. 31 | 15.03 |
| JUNE 27 | 8.50 | JULY 29 | 9.00 | NOV. 26 | 16.45 | NOV. 30 | 13.11 |
| SEP. 13 | 13.83 | SEP. 9 | 12.39 | JAN. 2, 1958 | 16.02 | DEC. 29 | 13.52 |
| SEP. 18 | 14.31 | SEP. 30 | 13.42 | JAN. 31 | 13.69 | JAN. 31, 1961 | 12.36 |
| SEP. 23 | 15.00 | OCT. 27 | 13.77 | FEB. 24 | 13.55 | MAR. 2 | 9.77 |
| SEP. 30 | 15.17 | DEC. 30 | 12.13 | MAR. 26 | 14.68 | MAR. 28 | 12.22 |
| OCT. 14 | 13.75 | JAN. 27, 1955 | 13.04 | APR. 29 | 15.06 | OCT. 5 | 10.70 |
| OCT. 23 | 13.33 | MAR. 1 | 13.45 | MAY 28 | 12.43 | | |

TABLE C10.--Fluctuations of water levels in selected wells--continued

34N04E18D02 BEN STREITZ

ALTITUDE OF LAND SURFACE 21 FEET.

HIGHEST WATER LEVEL 3.58 BELOW LSD, DEC. 26, 1950.
LOWEST WATER LEVEL 9.12 BELOW LSD, OCT. 13, 1949.
RECORDS AVAILABLE 1949-51.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT. 13, 1949 | 9.12 | DEC. 1, 1949 | 6.19 | DEC. 13, 1949 | 5.21 | SEP. 30, 1950 | 8.58 |
| OCT. 17 | 8.86 | DEC. 2 | 5.75 | DEC. 19 | 5.83 | OCT. 14 | 8.00 |
| OCT. 18 | 8.85 | DEC. 3 | 5.46 | DEC. 20 | 6.42 | OCT. 23 | 7.75 |
| OCT. 18 | 8.83 | DEC. 5 | 4.92 | DEC. 21 | 7.00 | OCT. 30 | 7.67 |
| OCT. 18 | 8.82 | DEC. 6 | 4.75 | DEC. 27 | 4.67 | NOV. 7 | 7.25 |
| OCT. 19 | 8.82 | DEC. 7 | 4.71 | DEC. 28 | 4.25 | NOV. 27 | 7.17 |
| NOV. 18 | 8.41 | DEC. 8 | 4.71 | DEC. 29 | 4.38 | DEC. 13 | 4.92 |
| NOV. 28 | 7.44 | DEC. 9 | 4.71 | DEC. 30 | 4.25 | DEC. 26 | 3.58 |
| NOV. 29 | 7.08 | DEC. 10 | 4.83 | SEP. 13, 1950 | 7.50 | JAN. 18, 1951 | 4.00 |
| NOV. 30 | 6.60 | DEC. 12 | 5.13 | SEP. 23 | 8.50 | | |

34N04E18J01 M FORTIN

ALTITUDE OF LAND SURFACE 26 FEET.

HIGHEST WATER LEVEL 7.06 BELOW LSD, APR. 20, 1950.
LOWEST WATER LEVEL 14.79 BELOW LSD, JAN. 8, 1953.
RECORDS AVAILABLE 1949-55.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| SEP. 28, 1949 | 12.21 | DEC. 6, 1949 | 12.38 | SEP. 23, 1950 | 9.83 | AUG. 28, 1952 | 12.00 |
| OCT. 10 | 12.58 | DEC. 7 | 12.29 | SEP. 30 | 10.25 | NOV. 7 | 14.06 |
| OCT. 12 | 12.64 | DEC. 8 | 12.21 | OCT. 14 | 10.58 | JAN. 8, 1953 | 14.79 |
| OCT. 13 | 12.66 | DEC. 9 | 12.17 | OCT. 23 | 10.83 | MAR. 26 | 11.86 |
| OCT. 17 | 12.72 | DEC. 10 | 12.08 | OCT. 30 | 10.67 | JUNE 11 | 11.15 |
| OCT. 17 | 12.73 | DEC. 12 | 11.96 | NOV. 7 | 10.75 | JULY 29 | 10.32 |
| OCT. 18 | 12.74 | DEC. 13 | 11.92 | NOV. 27 | 10.75 | AUG. 28 | 10.87 |
| OCT. 18 | 12.75 | DEC. 19 | 11.67 | DEC. 7 | 9.94 | SEP. 16 | 11.46 |
| OCT. 18 | 12.74 | DEC. 20 | 11.71 | DEC. 13 | 10.00 | OCT. 20 | 12.14 |
| OCT. 19 | 12.75 | DEC. 21 | 11.75 | DEC. 26 | 9.33 | NOV. 30 | 11.56 |
| NOV. 18 | 13.07 | DEC. 27 | 11.50 | JAN. 18, 1951 | 7.67 | SEP. 9, 1954 | 8.68 |
| NOV. 28 | 12.88 | DEC. 28 | 11.13 | MAR. 27 | 7.10 | SEP. 30 | 9.21 |
| NOV. 29 | 12.88 | DEC. 29 | 11.17 | MAR. 27 | 7.10 | OCT. 27 | 10.14 |
| NOV. 30 | 12.83 | DEC. 30 | 11.00 | JUNE 14 | 9.02 | NOV. 30 | 9.83 |
| DEC. 1 | 12.75 | APR. 20, 1950 | 7.06 | OCT. 12 | 12.69 | DEC. 30 | 9.15 |
| DEC. 2 | 12.71 | JUNE 27 | 8.02 | FEB. 29, 1952 | 11.80 | MAR. 1, 1955 | 8.77 |
| DEC. 3 | 12.63 | SEP. 13 | 9.25 | APR. 30 | 11.89 | MAY 3 | 9.80 |
| DEC. 5 | 12.46 | SEP. 18 | 9.49 | JULY 1 | 11.14 | MAY 30 | 10.01 |

TABLE C10.--Fluctuations of water levels in selected wells--continued

35N04E25K01 JOHN LENTZ

ALTITUDE OF LAND SURFACE 40 FEET.

HIGHEST WATER LEVEL 10.50 BELOW LSD, JUNE 20, 1948.
LOWEST WATER LEVEL 12.74 BELOW LSD, APR. 15, 1952.
RECORDS AVAILABLE 1948, 1952.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| JUNE 20, 1948 | 10.5 | MAY 2, 1952 | 11.64 | MAY 8, 1952 | 12.26 | MAY 13, 1952 | 11.90 |
| APR. 15, 1952 | 12.74 | MAY 6 | 12.06 | MAY 9 | 12.34 | | |

35N05E30M01 SKAGIT PUD NO 1

ALTITUDE OF LAND SURFACE 45 FEET.

HIGHEST WATER LEVEL 4.55 BELOW LSD, MAY 17, 1945.
LOWEST WATER LEVEL 9.00 BELOW LSD, JUNE 3, 1938.
RECORDS AVAILABLE 1938, 1942-45.

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| JUNE 3, 1938 | 9.00 | APR. 15, 1943 | 4.62 | APR. 25, 1944 | 7.43 | MAY 17, 1945 | 4.55 |
| APR. 6, 1942 | 7.70 | OCT. 20 | 7.92 | SEP. 25 | 7.94 | | |

TABLE C11.--Chemical quality of ground water from selected wells

| Well number | Depth (ft) | Date sample collected | Milligrams per liter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Silica ($SiO_2$) | Iron (Fe) | Calcium (Ca) | Magnesium (Mg) | Sodium (Na) | Potassium (K) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Sulfate ($SO_4$) | Chloride (Cl) |
| Snohomish County | | | | | | | | | | | | |
| 32/4-6D1 | 18 | 8- 3-44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5 |
| 32/9-13E1 | 87 | 8-10-59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14J1 | 60 | 8-11-44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14J2 | 90 | 8-11-44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 10-20-72 | 24 | 0.02 | 14 | 2.3 | 4.4 | 0.9 | 48 | 0 | 4.4 | 2.2 |
| 23C1 | 224 | 9-21-62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Skagit County | | | | | | | | | | | | |
| 33/3-1A1 | 95 | 5-13-52 | -- | .0 | -- | -- | -- | -- | -- | -- | -- | 91 |
| 5H1 | 112 | 11-21-49 | -- | .05 | -- | -- | 26 | -- | 358 | 0 | 20 | 34 |
| 33/4-5B1 | 80 | 5-13-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 12 |
| 6A1 | 40 | 5-13-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 6B1 | -- | 5-13-52 | -- | .0 | -- | -- | -- | -- | -- | -- | -- | 12 |
| 33D1 | 197 | 11-21-49 | -- | .03 | -- | -- | 13 | -- | 136 | 0 | 2.0 | 6 |
| 33/5-30D1 | 76 | 7-23-65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34/3-12N1 | 31 | 1-16-53 | -- | 3 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25H1 | 43 | 2-11-53 | -- | >5 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25H2 | 18 | 2-12-53 | -- | 5 | -- | -- | -- | -- | -- | -- | -- | -- |
| 34/4-6G1 | 34 | 5- 8-52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7 |
| 6H1 | 35 | 5- 7-52 | -- | >3.0 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 6H2 | 24 | 5- 7-52 | -- | .3 | -- | -- | -- | -- | -- | -- | -- | 8 |
| 6K1 | 26 | 8-21-56 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7G2 | 15 | 7-28-58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7L1 | 23 | 5- 8-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 7 |
| 7P1 | 27 | 11-21-49 | -- | .03 | -- | -- | 4.4 | -- | 60 | 0 | 9 | 13 |
| 7P2 | 41 | 8-31-51 | 45 | 1.6 | 11.0 | 8.6 | 16.8 | -- | 96.3 | -- | -- | 14.5 |
| 7P14 | 34 | 10- -52 | -- | 2.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 8C1 | 36 | 12-30-52 | -- | 2.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 8C2 | 29 | 12-31-52 | -- | 5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 11L1 | 30 | 2-20-74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16F1 | 135 | 11-21-49 | -- | .02 | -- | -- | 32.3 | -- | 649 | 45 | 52 | 78 |
| 17C2 | 25 | 5- 7-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 10 |
| 17D1 | 24 | 11-21-52 | -- | >5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 18N1 | 41 | 1-23-53 | -- | >5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 18R1 | 44 | 1- 6-53 | -- | >5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 19B2 | 27 | 10- 9-51 | -- | 3.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 10-11-51 | -- | 16.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 19L1 | 46 | 12-29-52 | -- | >5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29P1 | 74 | 5- 6-52 | -- | trace | -- | -- | -- | -- | -- | -- | -- | 13 |
| 30J1 | 36 | 1-28-53 | -- | 5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30P1 | 30 | 11- -52 | -- | 5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 31B1 | 75 | 5-13-52 | -- | >3 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 31K1 | 80 | 5-13-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 16 |
| 31L1 | 103 | 5-13-52 | -- | .5 | -- | -- | -- | -- | -- | -- | -- | 35 |
| 31N1 | 80 | 5-13-52 | -- | .0 | -- | -- | -- | -- | -- | -- | -- | 31 |
| 32C1 | 14 | 5- 6-52 | -- | 3 | -- | -- | -- | -- | -- | -- | -- | 7 |
| 32D1 | 53 | 5- 6-52 | -- | 2.0 | -- | -- | -- | -- | -- | -- | -- | 10 |
| 32P1 | 54 | 5-13-52 | -- | 1 | -- | -- | -- | -- | -- | -- | -- | 13 |
| 32P2 | 82 | 5-13-52 | -- | .3 | -- | -- | -- | -- | -- | -- | -- | 12 |
| 33P1 | 103 | 11-21-49 | -- | .03 | -- | -- | 23 | -- | 194 | 0 | 14 | 22 |
| 34/5-19K1 | 70 | 8- 6-66 | -- | 1.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| 35/4-13R1 | 18 | 4-16-52 | -- | 3.0 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 13R2 | 24 | 4-16-52 | -- | 1.0 | -- | -- | -- | -- | -- | -- | -- | 4 |
| 22C1 | 34 | 5- 5-52 | -- | >3.0 | -- | -- | -- | -- | -- | -- | -- | 8 |
| 22C2 | 20 | 5- 8-52 | -- | trace | -- | -- | -- | -- | -- | -- | -- | 19 |
| 22G1 | 20 | 5- 2-52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 19 |
| 22L1 | 34 | 5- 2-52 | -- | 3.0 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 22M1 | 36 | 5- 8-52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5 |

| Milligrams per liter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride (F) | Nitrate ($NO_3$), total as N | Phosphate ($PO_4$), total as P | Dissolved solids (residue at 180°C) | Hardness as $CaCO_3$: Calcium, Magnesium | Hardness as $CaCO_3$: Noncarbonate | Specific conductance (micromhos at 25°C) | pH (units) | Color (platinum-cobalt units) | Temperature (°C) |
| -- | -- | -- | -- | 75 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.0 |
| -- | -- | -- | -- | 50 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 30 | -- | -- | -- | -- | 5.0 |
| 0.0 | 1.2 | 0.04 | 72 | 39 | 5 | 100 | 6.8 | 0 | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 12.0 |
| -- | -- | -- | -- | 170 | -- | -- | -- | -- | -- |
| .2 | 18 | -- | -- | 320 | 190 | 708 | -- | -- | -- |
| -- | -- | -- | -- | 134 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 180 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 214 | -- | -- | -- | -- | -- |
| .2 | .0 | -- | -- | 94 | 0 | 233 | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.0 |
| -- | -- | -- | -- | 188 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 120 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 120 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 76 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 74 | -- | -- | -- | -- | 10.0 |
| -- | -- | -- | -- | 62 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.0 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.0 |
| -- | -- | -- | -- | 90 | -- | -- | -- | -- | -- |
| .2 | 20 | -- | -- | 84 | 35 | 237 | -- | -- | -- |
| -- | -- | -- | 153 | 629 | -- | -- | 6.5 | -- | -- |
| -- | -- | -- | -- | 86 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 51 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.0 |
| .6 | .2 | -- | -- | 32 | 0 | 1,320 | -- | -- | -- |
| -- | -- | -- | -- | 62 | 0 | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 51 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 51 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | 6.7 | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | 6.8 | -- | -- |
| -- | -- | -- | -- | 51 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 170 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 103 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 120 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 188 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 162 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 153 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 134 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 154 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 172 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 156 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 176 | -- | -- | -- | -- | -- |
| .2 | .0 | -- | -- | 154 | 0 | 385 | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | 7.2 | -- | -- |
| -- | -- | -- | -- | 56 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 30 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 160 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 84 | -- | -- | -- | -- | -- |

TABLE C11.--Chemical quality of ground water from selected wells--Continued

| Well number | Depth (ft) | Date sample collected | Milligrams per liter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Silica ($SiO_2$) | Iron (Fe) | Calcium (Ca) | Magnesium (Mg) | Sodium (Na) | Potassium (K) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Sulfate ($SO_4$) | Chloride (Cl) |
| 35/4-23L3 | 15 | 5- 6-52 | -- | 0.1 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 24F1 | 14 | 4-17-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 11 |
| 24P1 | 28 | 4-16-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 13 |
| 25C1 | 48 | 4-15-52 | -- | 3.0 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 25J1 | 18 | 4-15-52 | -- | .5 | -- | -- | -- | -- | -- | -- | -- | 9 |
| 25K1 | 29 | 4-15-52 | -- | 1.5 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 25K2 | 23 | 4-15-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 12 |
| 25P1 | 20 | 4-15-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 10 |
| 25Q1 | 25 | 4-15-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27J1 | 18 | 4-30-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 4 |
| 27P1 | 19 | 4-30-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 26 |
| 27P2 | 23 | 4-30-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 3 |
| 27P3 | 18 | 4-30-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 4 |
| 28L1 | 63 | 5- 7-52 | -- | >3.0 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 28P2 | 25 | 5- 6-52 | -- | trace | -- | -- | -- | -- | -- | -- | -- | 17 |
| 28P3 | 23 | 5- 7-52 | -- | .3 | -- | -- | -- | -- | -- | -- | -- | 10 |
| 28R1 | 26 | 4-30-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 4 |
| 30H1 | 25 | 4-15-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 32P1 | 45 | 12-17-59 | 59 | 35 | 9.0 | 9.6 | 37 | 3.1 | 144 | 0 | 0.5 | 29 |
| | | 5-18-60 | -- | -- | -- | -- | -- | -- | 131 | 0 | -- | -- |
| 33B1 | 20 | 4-30-52 | -- | >3 | -- | -- | -- | -- | -- | -- | -- | 11 |
| 33G1 | 25 | 4-30-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 34G1 | -- | 4-30-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 4 |
| 34K1 | 14 | 4-30-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 7 |
| 34L1 | 20 | 4-30-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 12 |
| 35/5-8D2 | 231 | 12-17-59 | 32 | .44 | 23 | 11 | 23 | 3.3 | 142 | 0 | .7 | 27 |
| | | 5-18-60 | -- | -- | -- | -- | -- | -- | 145 | 0 | -- | -- |
| 18Q1 | 22 | 4-16-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 19C1 | 15 | 4-16-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 19C2 | 24 | 4-16-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 4 |
| 19D1 | 15 | 4-16-52 | -- | 2.5 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 19E1 | 28 | 4-16-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 7 |
| 19H1 | 19 | 4-16-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 8 |
| 19K1 | 30 | 4-16-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 7 |
| 19M1 | 35 | 4-16-52 | -- | .0 | -- | -- | -- | -- | -- | -- | -- | 6 |
| 19R1 | 16 | 4-16-52 | -- | .4 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 20E1 | 12 | 4-16-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 29D1 | 27 | 4-15-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 30B1 | 24 | 4-15-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | 5 |
| 30K1 | 24 | 4-15-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | 10 |
| 30K2 | 49 | 5-29-52 | -- | >3 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 6- 5-52 | -- | <.1 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30K3 | 41 | 8-21-52 | -- | >3 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30K4 | 27 | 8-25-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30K5 | 24 | 8-25-52 | -- | .2 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30K6 | 31 | 8-27-52 | -- | .1 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30L1 | 64 | 5-22-52 | -- | >3 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30M1 | 50 | 6-29-51 | 55.2 | .09 | 12.7 | 7.7 | 3.3 | -- | 55.1 | -- | 8.2 | 11.9 |
| | | 4-18-52 | 43 | .02 | 14 | 8.3 | 8.0 | 3.1 | 75 | 0 | 10 | 7.3 |
| 35/6-9D1 | 34 | 11-12-62 | 29 | .11 | 8.0 | 2.4 | 3.1 | 3.9 | 38 | 0 | 4.0 | 2.8 |
| 13K1 | 23 | 1959 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14H1 | 13 | 4- -33 | -- | -- | -- | -- | -- | -- | -- | -- | 24 | -- |
| 35/7-14H1 | 30 | 8- -58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35/8-10N1 | 80 | 6- 3-59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Whatcom County | | | | | | | | | | | | |
| 37/12-21J1 | 157 | 10-29-62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

[c] Calculated

| Milligrams per liter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride (F) | Nitrate ($NO_3$), total as N | Phosphate ($PO_4$), total as P | Dissolved solids (residue at 180°C) | Hardness as $CaCO_3$: Calcium, Magnesium | Hardness as $CaCO_3$: Noncarbonate | Specific conductance (micromhos at 25°C) | pH (units) | Color (platinum-cobalt units) | Temperature (°C) |
| -- | -- | -- | -- | 32 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 104 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 78 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 50 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 180 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 66 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 86 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 102 | -- | -- | -- | -- | 9.5 |
| -- | -- | -- | -- | 34 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 42 | -- | -- | -- | -- | 10 |
| -- | -- | -- | -- | 119 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 56 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 34 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 36 | -- | -- | -- | -- | -- |
| 0.2 | 0.2 | 0.09 | 230 | 62 | -- | 318 | 6.3 | 35 | 10.0 |
| -- | -- | -- | -- | 65 | -- | 295 | 6.2 | -- | 11.0 |
| -- | -- | -- | -- | 102 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 51 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 17 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 85 | -- | -- | -- | -- | -- |
| .2 | .0 | .36 | 181 | 101 | -- | 315 | 7.7 | 5 | 11.0 |
| -- | -- | -- | -- | 104 | -- | 309 | 7.9 | -- | 10.5 |
| -- | -- | -- | -- | 48 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 50 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 34 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 32 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 56 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 62 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 32 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 36 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 44 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 70 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 84 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | 6.7 | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | 6.1 | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 51 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | 68 | -- | -- | 6.9 | -- | -- |
| 0 | .6 | 0 | [c]148 | 64 | 18 | -- | 6.4 | -- | -- |
| .1 | 8.2 | -- | 138 | 69 | -- | 176 | 7.0 | 2 | -- |
| .1 | 3.7 | .02 | [c]76 | 30 | 0 | 90 | 7.3 | -- | 11.5 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.0 |
| -- | -- | -- | -- | 753 | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.0 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.0 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.0 |