# REDWOOD NATIONAL PARK STUDIES, DATA RELEASE NUMBER 1
# REDWOOD CREEK, HUMBOLDT COUNTY, CALIFORNIA
# SEPTEMBER 1, 1973 - APRIL 10, 1974



By Rick T. Iwatsubo, K. Michael Nolan, Deborah R. Harden,
G. Douglas Glysson, and Richard J. Janda

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U.S. GEOLOGICAL SURVEY

Open-File Report

Prepared in cooperation with the
National Park Service



Menlo Park, California
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## ILLUSTRATIONS



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## CONVERSION FACTORS

Factors for converting English units to the International System of Units (SI) are given below to four significant figures. However, in the text the metric equivalents are shown only to the number of significant figures consistent with the values for the English units.

| *English* | *Multiply by* | *Metric (SI)* |
|---|---|---|
| ft (feet) | $3.048 \times 10^{-1}$ | m (metres) |
| ft/mi (feet per mile) | $1.894 \times 10^{-1}$ | m/km (metres per kilometres) |
| $ft^2$ (square feet) | $9.290 \times 10^{-2}$ | $m^2$ (square metres) |
| $ft^3/s$ (cubic feet per second) | $2.832 \times 10^{-2}$ | $m^3/s$ (cubic metres per second) |
| in (inches) | $2.540 \times 10^{1}$ | mm (millimetres) |
| $in^2$ (square inches) | $6.452 \times 10^{2}$ | $mm^2$ (square millimetres) |
| mi (miles) | 1.609 | km (kilometres) |
| $mi^2$ (square miles) | 2.590 | $km^2$ (square kilometres) |
| ton | $9.072 \times 10^{2}$ | kg (kilograms) |

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## ABSTRACT

An interdisciplinary study has been undertaken in Redwood National Park to describe parts of the ecosystems and recent changes in the intensity of erosion and sedimentation, define processes that may alter the natural ecosystem, and assess the impact of recent road construction and timber harvest. This report is the first of a series that will present data collected in this study.

Stream-discharge and water-quality data were collected at 27 stations in the Redwood Creek drainage basin. Measurements included the following variables: Stream stage and discharge; turbidity; sediment; onsite water-quality determinations of temperature, pH, total alkalinity, specific conductance, and dissolved-oxygen concentration; chemical analyses of water samples for major dissolved solids, selected trace elements, nitrogen and phosphorus, and organic carbon; coliform bacteria; benthic invertebrates; and seston. Additional data include changes in geometry at 42 stream-channel cross sections along Redwood Creek, distribution of erosional landforms in the drainage areas of six tributaries to Redwood Creek, and quantity and chemical composition of rain.

## INTRODUCTION

Redwood National Park was created by Congress (Public Law 90-454) on October 2, 1968, to preserve examples of the intriguing terrestrial and aquatic ecosystems associated with coast redwood (*Sequoia sempervirens*) in northwestern California. The coast redwoods are the tallest trees on earth, and with their associated vegetation, streams, seashore, and wildlife, provide esthetic and recreational enjoyment for visitors. The coast redwood is also an important commercial resource providing a soft, strong, colorful wood that is resistant to decay and insect infestation. Nowhere else is the coast redwood found in such extensive dense stands.

The boundaries of Redwood National Park enclose a collage of virgin forest, prairies, and second-growth forest in former private timber and ranch land, small homesites, and three state parks (fig. 1). The park is an irregularly shaped entity, discontinuous at the Klamath River, that extends northward from a point about 28 miles north-northeast of Eureka to the Smith River in northern Del Norte County (fig. 1). In many places the park comprises small areas in the downstream parts of watersheds and no direct Federal control is exercised on land-management practices in headwater areas. The boundary configuration presents the National Park Service with many difficult management problems related mostly to the potential impact of road construction and timber harvest on mass movement, fluvial erosion and deposition, and water quality.

Land-use and related park-management problems probably are most acute in the half-mile-wide corridor that extends north-northwestward along Redwood Creek from the southern boundary of the park to a point near the mouth of Oscar Larsen Creek (fig. 2). The corridor is in the downstream end of a 278 $mi^2$ (720 $km^2$) drainage basin, the majority of which is naturally unstable terrain that has recently been undergoing intensive timber harvest. In the vicinity of the park, the dominant mode of logging in recent years has involved clearcutting of adjoining harvest units that are several hundred acres in size, and downhill tractor-yarding of the fallen timber. If the data in this report contain contain any implications concerning the impact of timber harvest on storm runoff, stream-sediment loads, and chemical quality of surface water, those implications are specific to the mode of logging practiced in this particular setting. Their transfer value to other areas and other modes of logging is unknown at this time.

While this study has been in progress, timber-harvest practices in the vicinity of the park have been modified to include smaller, staggered harvest units and uphill yarding by various cable systems. The study is being altered to document the change in environmental impact associated with these modified practices.

To gain information needed to decide upon the relative merits of various park management options, an interagency-interdisciplinary team assembled in February 1973 by the National Park Service, Western Region, proposed a study to: Delineate and describe particular parts of the terrestrial and aquatic ecosystems in the park; describe recent changes in the intensity of erosion and sedimentation; define, insofar as possible, processes that may alter the natural ecosystems; and assess the impact of recent road construction and timber harvest on those processes.

The study was begun by personnel of the Geological Survey in cooperation with the National Park Service on September 1, 1973. Data collected include physical, chemical, and biological measurements in Redwood Creek, selected tributary streams, and Mill Creek near Crescent City. Some data-collection activities were synoptic, in that data were collected simultaneously at several sites during selected winter storms; other data collected year-around were nonsynoptic.

The purpose of this report, the first of a series, is to present a tabulation of the data collected in the Redwood Creek drainage basin between September 1, 1973, and April 10, 1974, and to describe briefly the condition of the study area at this time of data collection. Data for this report were collected only during the low-flow period of autumn and throughout the winter storm-runoff period. Reports containing a more detailed description of the Redwood Creek basin, data collected prior to the 1974 water year, and interpretations of all available data are also being prepared.

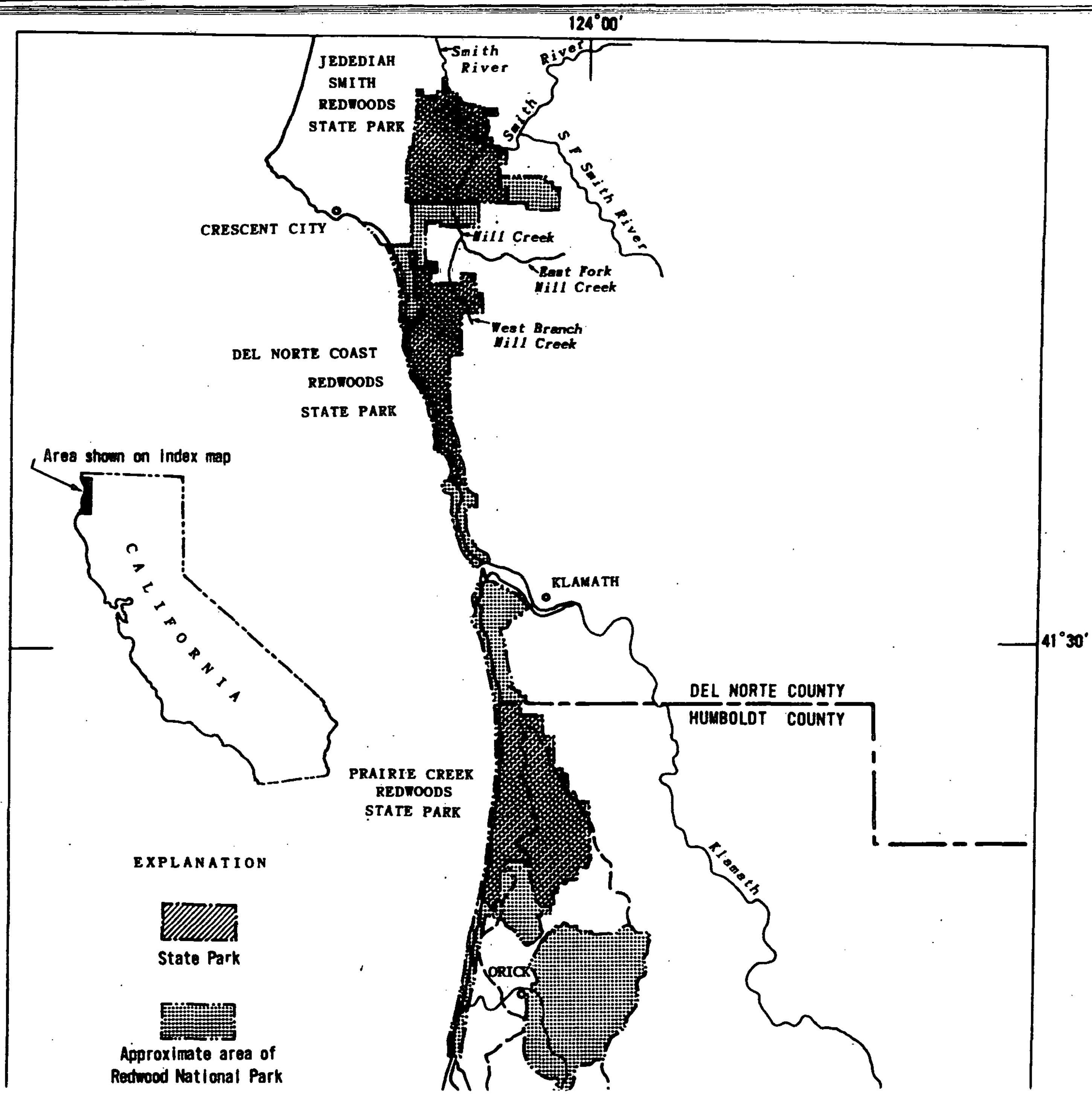
The scope of this report is limited to the presentation of: (1) Physical data which include stream-channel cross sections, maps of erosional landforms, rainfall quantity, water temperature, stream stage and discharge, turbidity, suspended-sediment concentration and particle-size distribution, and bedload discharge and particle-size distribution; (2) chemical data from analyses of rain and stream water which include pH, total alkalinity, specific conductance, dissolved-oxygen concentration, major dissolved solids, selected trace elements, nitrogen and phosphorus compounds and organic carbon; and (3) biological data which include coliform bacteria, benthic invertebrates, and seston.

## DESCRIPTION OF STUDY AREA

The drainage basin of Redwood Creek (fig. 2), in which all the data in this report were collected, consists of about 278 $mi^2$ (720 $km^2$) in the north Coast Ranges in California. The drainage basin is elongated north-northwesterly, and is about 56 mi (90 km) long, 4.5 to 6.9 mi (7 to 11 km) wide throughout most of the basin, and is roughly bisected by the straight to slightly sinuous main channel of Redwood Creek. The overall channel pattern is trellised but some individual tributary basins display a dendritic pattern.

The drainage basin is characterized by large relief, steep unstable slopes, and narrow valley bottoms. Basin relief is 5,300 ft (1,615 m) but the cross-sectional relief normal to the basin axis is about 2,000 ft (610 m) in the north and more than 3,000 ft (914 m) near the head of the basin. The relief of the individual tributary basins ranges from 1,320 ft (402 m) to 3,880 ft (1,183 m). All values less than 2,000 ft (610 m) are restricted to small northern tributary basins. Average gradients of hills range from 34 percent in the southern quarter of the basin to 31 percent in the northern quarter. The gradients of hills are generally steeper adjacent to the main channel than near the drainage divide. About 35 percent of the basin shows landforms suggestive of former mass movement (Colman, 1973). Flood plains are discontinuous and narrow, and widths in excess of 200 ft (61 m) are uncommon except for areas between Minor Creek and Mill Creek, near the mouth of Lacks Creek, and near Orick.

Redwood Creek has a concave upward profile with average gradients ranging from 550 ft/mi (104 m/km) above Smokehouse Creek to about 11 ft/mi (2.1 m/km) below Bridge Creek. The channel bed material is highly variable in grain size but generally becomes finer downstream. Cobbles and boulders are prevalent above Smokehouse Creek and sandy, pebble gravel below Bridge Creek. Stream-side berms of cobble gravel deposited by floodwater occur discontinuously throughout the basin. Tributary streams throughout the basin have steep longitudinal profiles caused by landslides and accumulations of tree trunks and other organic debris.


124°00'
JEDEDIAH
SMITH
REDWOODS
STATE PARK
Smith
River
River
Smith
S F Smith River
CRESCENT CITY
Mill Creek
East Fork
Mill Creek
West Branch
Mill Creek
DEL NORTE COAST
REDWOODS
STATE PARK
Area shown on index map
CALIFORNIA
KLAMATH
41°30'
DEL NORTE COUNTY
HUMBOLDT COUNTY
PRAIRIE CREEK
REDWOODS
STATE PARK
Klamath
ORICK
EXPLANATION
State Park
Approximate area of
Redwood National Park

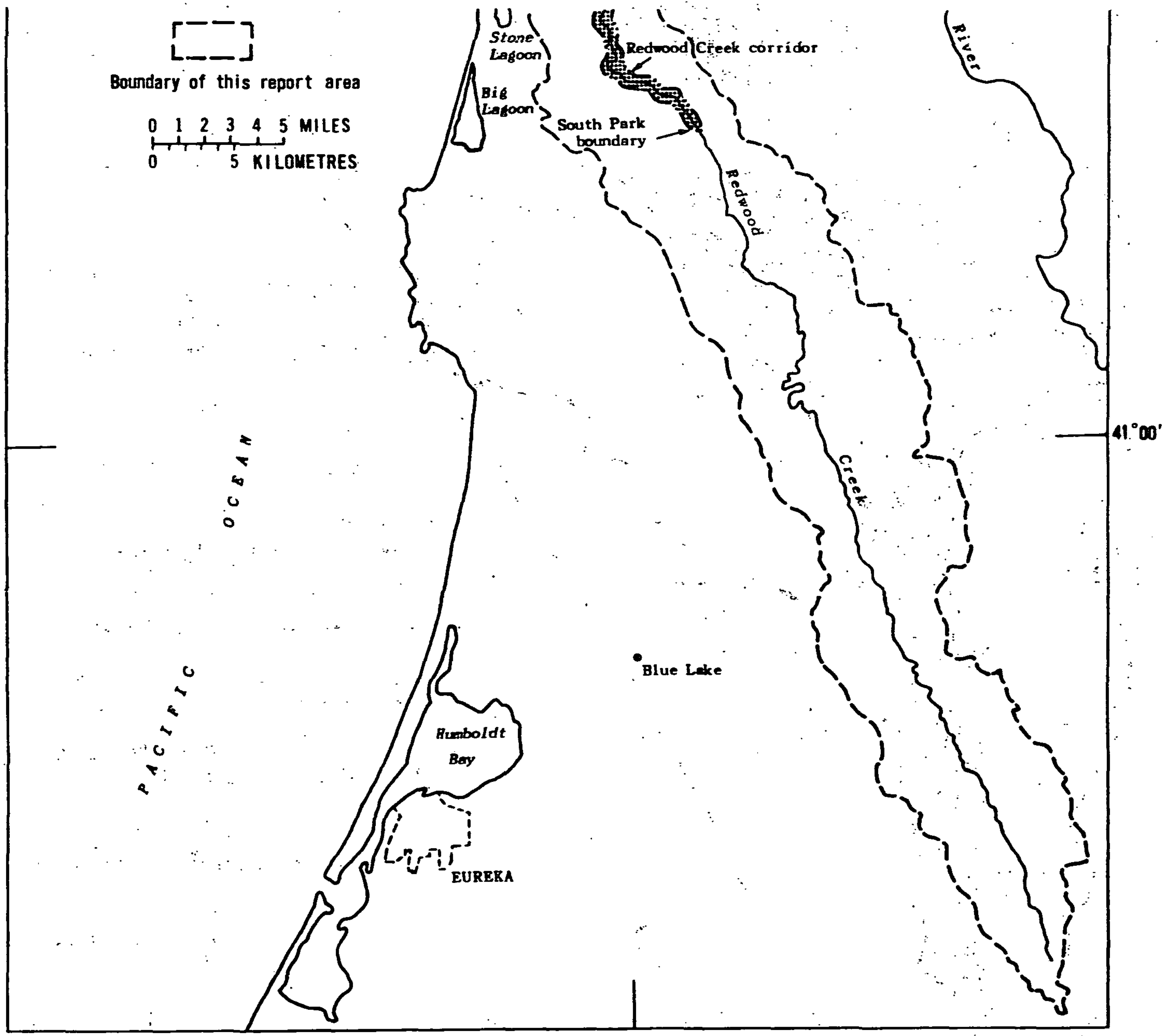



FIGURE 1.--Index map of Redwood National Park

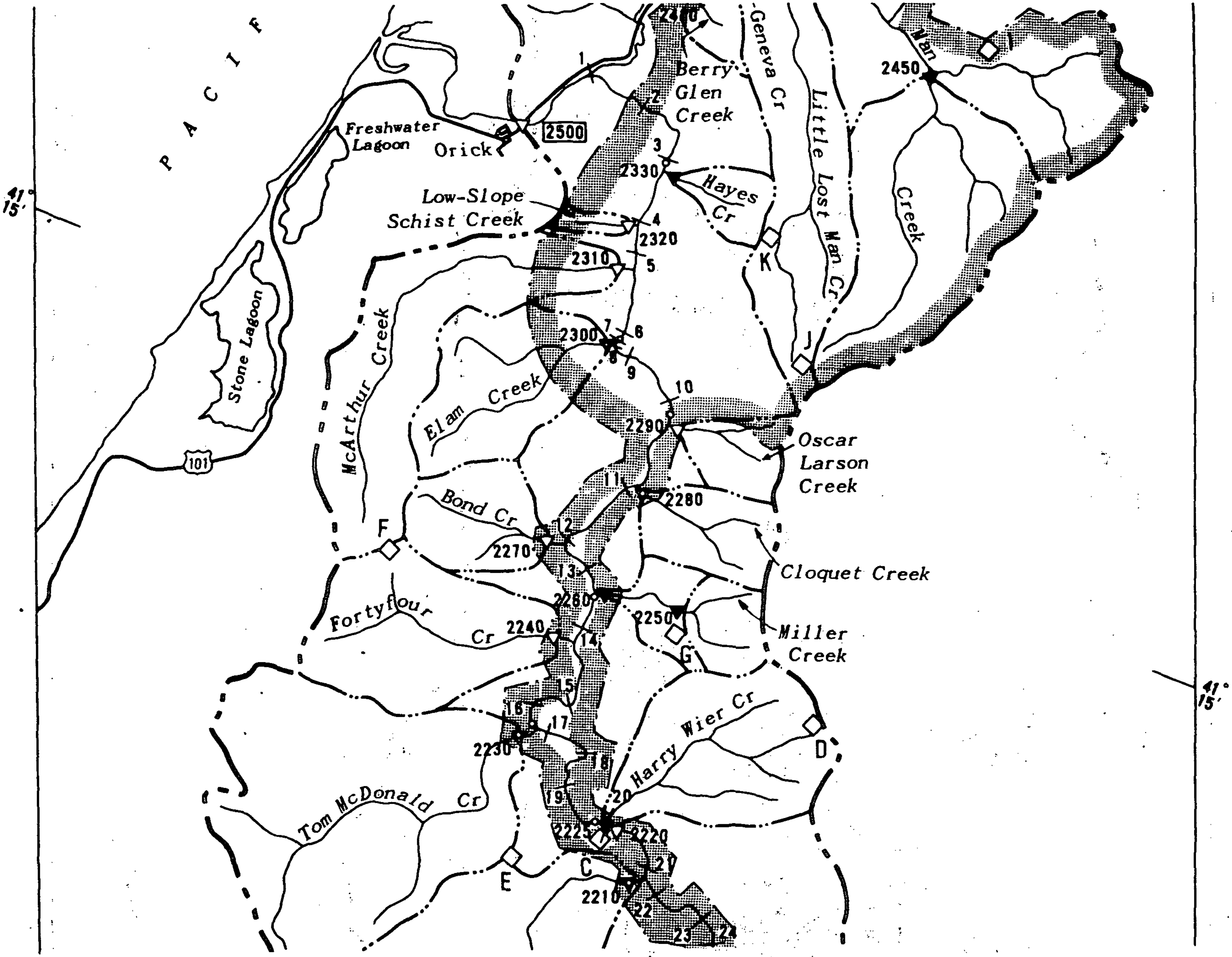
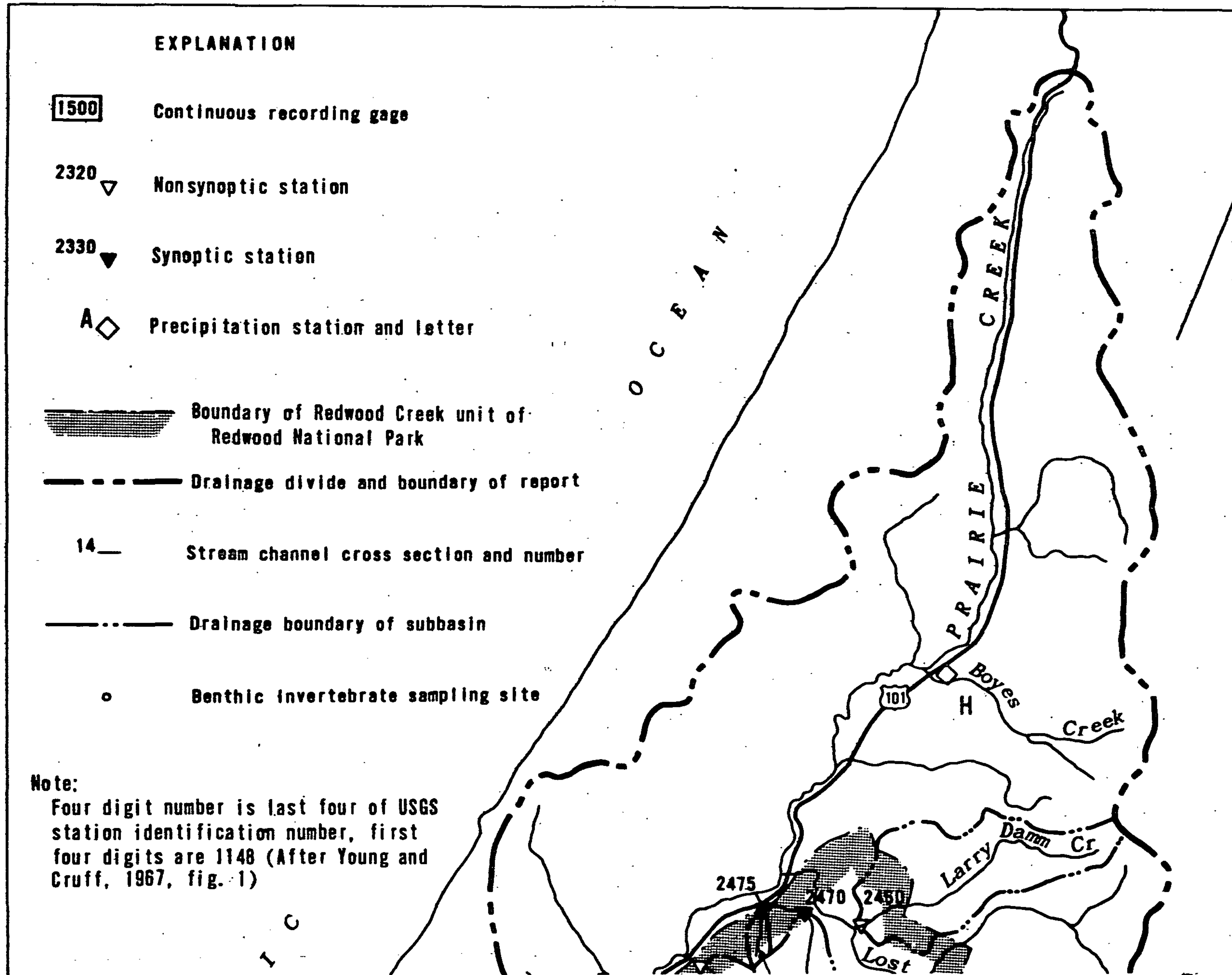
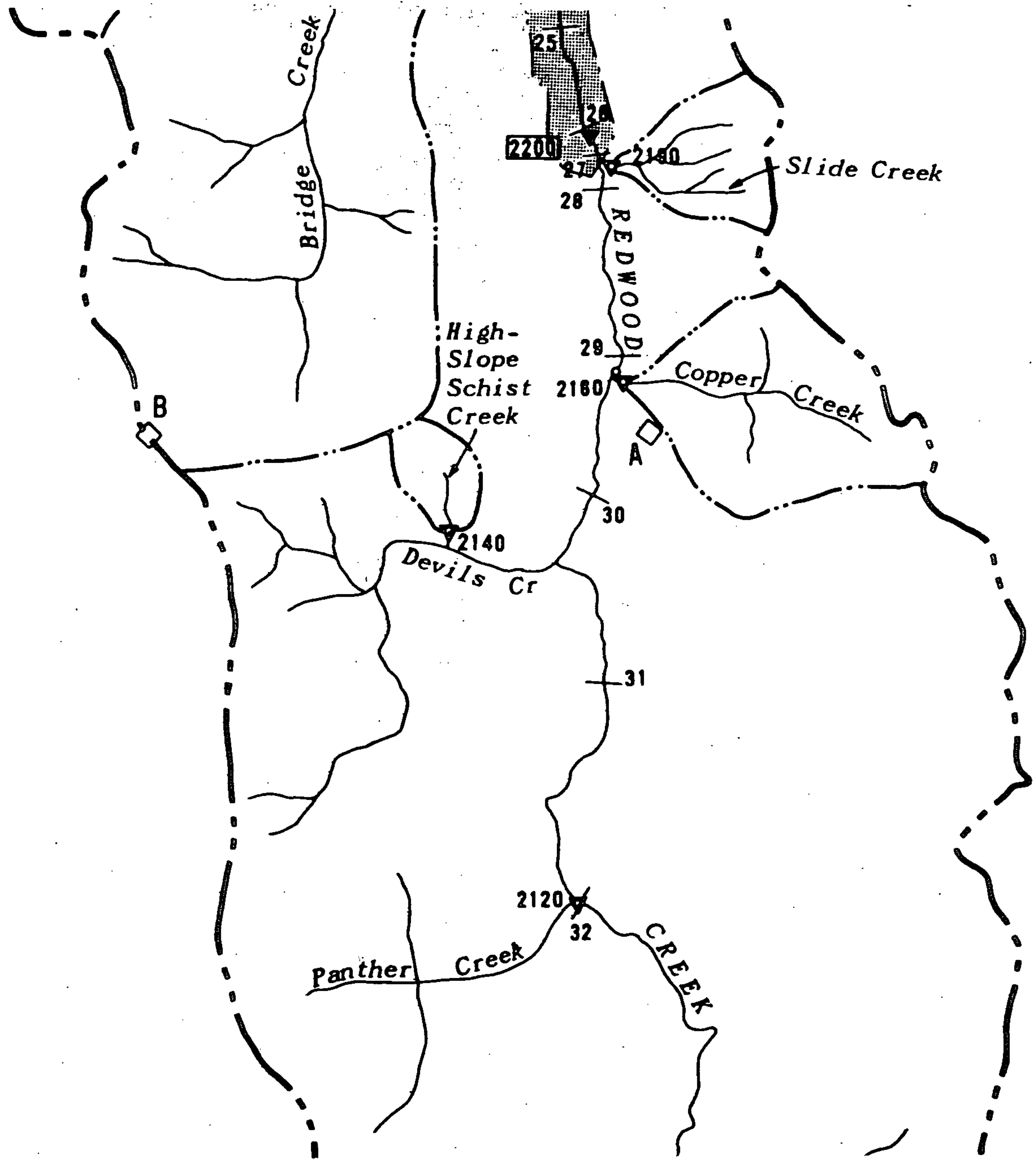



FIGURE 2.--Measurement sites (continued on following pages).



EXPLANATION
1500 Continuous recording gage
2320 Nonsynoptic station
2330 Synoptic station
A Precipitation station and letter
Boundary of Redwood Creek unit of Redwood National Park
Drainage divide and boundary of report
14 Stream channel cross section and number
Drainage boundary of subbasin
Benthic invertebrate sampling site
Note:
Four digit number is last four of USGS station identification number, first four digits are 1148 (After Young and Cruff, 1967, fig. 1)
OCEAN
PRAIRIE CREEK
Boyes Creek
H
101
Larry Damm Cr
Lost
2475
2470
2480
124°


Bridge Creek
25
26
2200
27
2180
28
Slide Creek
REDWOOD
High-Slope Schist Creek
29
2160
Copper Creek
A
B
30
2140
Devils Cr
31
2120
32
Panther Creek
CREEK

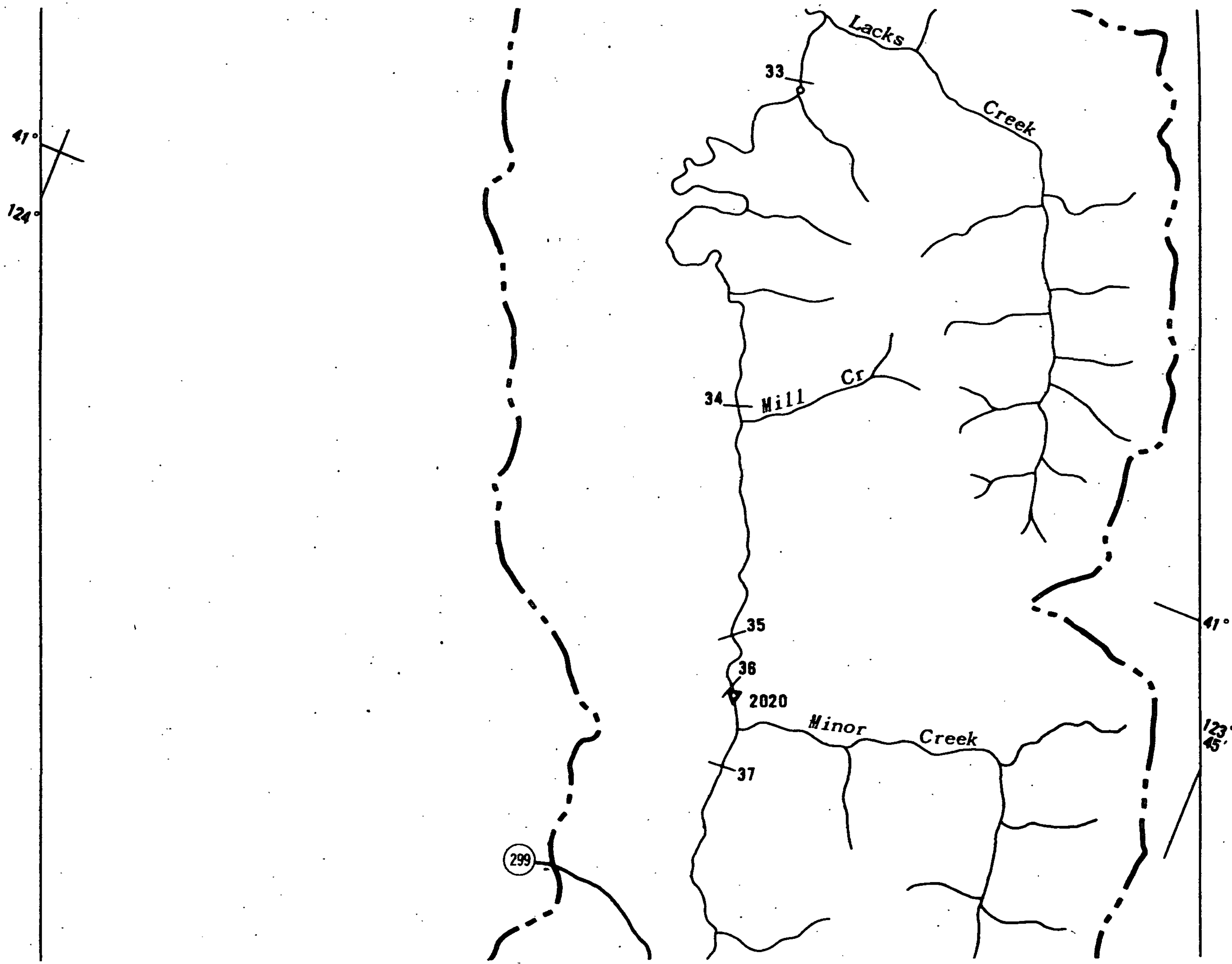
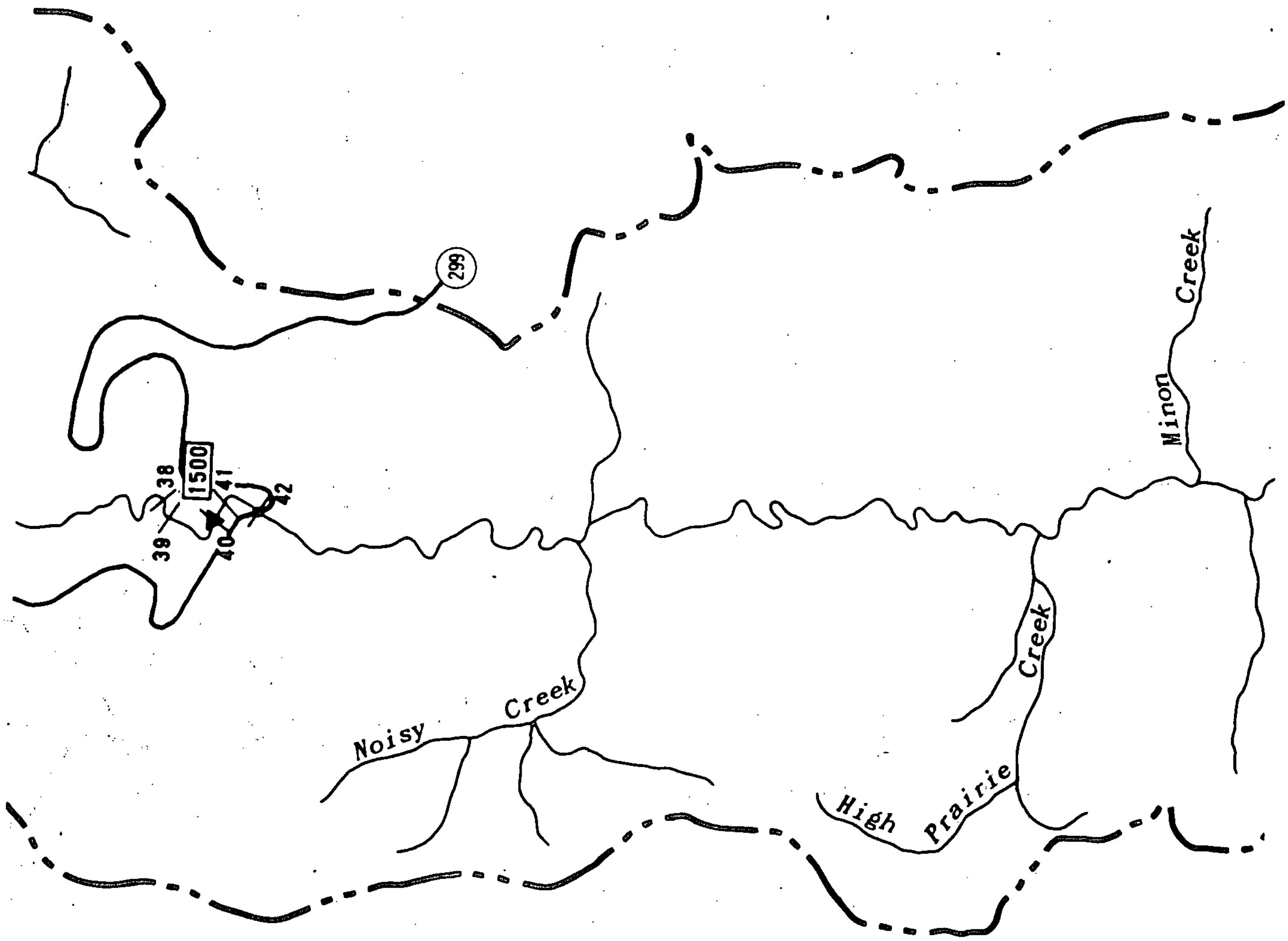



FIGURE 2.--Measurement sites (continued on following pages).


299
1500
38
39
40
41
42
Noisy Creek
High Prairie Creek
Minon Creek

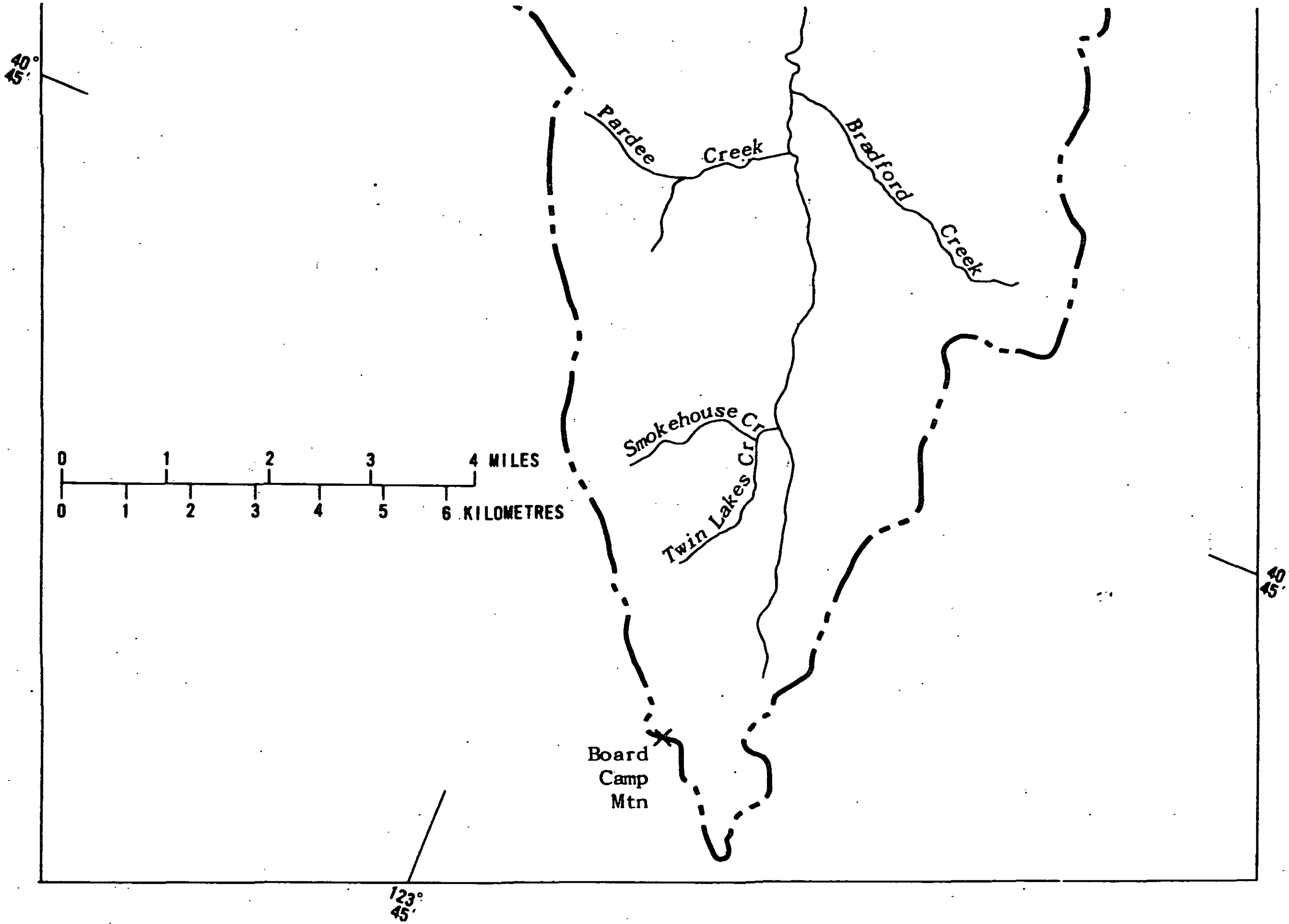



FIGURE 2.--Measurement sites in Redwood Creek area, Redwood National Park.

A small estuary occurs where Redwood Creek flows into the Pacific Ocean. During low flows of late summer and early autumn, the estuary usually is blocked by an emergent bar in the river mouth. The first winter freshet, however, usually opens the channel to the ocean.

The entire drainage basin upstream from Prairie Creek is underlain by rocks of the Franciscan Formation of late Jurassic and early Cretaceous age; texture zones 1, 2, and 3 of Blake and others (1967) are present. Volcanic and metavolcanic rocks are not common. Unmetamorphosed sedimentary rocks of texture zone 1 underlie most of the eastern side of the basin. The westerly part of the texture zone 1 rocks is composed mostly of complexly fractured siltstone and sandstone that locally resembles tracts of the Franciscan melange except that it lacks exotic blocks of amphibolite and volcanic rocks. The eastern part of the texture zone 1 rocks is less fractured and somewhat coarser grained than the western part. Phyllites and stretch-pebble conglomerates that are typical of texture zone 2 crop out along a narrow discontinuous belt between the unmetamorphosed sedimentary rocks of texture zone 1 and schist of texture zone 3. The rocks in texture zones 1 and 2 show similar types of soil profile development and commonly include the Hugo, Melbourne, Kneeland, Tyson, and Mendocino soil series. Texture zone 3, which has previously been mapped as the Kerr Ranch Schist of Manning and Ogle (1950, p. 13), crops out predominantly on the west side of the basin (Strand, 1962, 1963) and consists mostly of medium gray, well-foliated quartz-mica, quartz-mica-feldspar, and quartz-graphite schist. These schists have weathered mostly to the Orick, Masterson, and Sites soil series.

The contact between texture zones 2 and 3 and less metamorphosed rocks is the Grogan Fault (Strand, 1962, 1963), a complex shear zone of variable width. This fault is adjacent to or only slightly east of the main channel of Redwood Creek throughout most of the drainage basin. Comparable faults separating schist from less metamorphosed rocks occur near the eastern and western drainage divides (Strand, 1962, 1963). North-northwestward trending zones of sheared rocks also occur within texture zones 1 and 3 (for example, along Lacks Creek and Bridge Creek). The pervasively sheared rocks in these fault zones and others in the basin are the parent material for the Atwell soil series which is highly susceptible to landsliding. Where texture zone 2 rocks are present, they show a transitional contact with rocks of texture zone 1.

The northern part of Redwood Creek drainage basin is strongly influenced by its proximity to the Pacific Ocean and has a coastal Mediterranean climate characterized by mild winters and short, warm, dry summers with frequent fog. The southern part of the basin has an interior Mediterranean climate with mild winters, hot, dry summers, and infrequent fog. However, the estimated basinwide precipitation, 80 in (2,000 mm) per year (Rantz, 1969), is greater than that associated with Mediterranean climates. Measured average annual rainfall ranges from about 70 in (1,800 mm) at Orick to slightly more than 100 in (more than 2,500 mm) at Board Camp Mountain near the head of the basin. Rainfalls with durations of 6 hours and 24 hours, which can be expected to recur once every two years, produce 2.0 to 2.6 in (51 to 66 mm) and 4.5 to 6.0 in (114 to 152 mm) (Miller and others, 1973) of rain in the Redwood Creek drainage basin. Mean maximum temperatures in July range from 69°F (21°C) to 95°F (35°C), and mean minimum temperatures in January range from 32°F (0°C) to 37°F (3°C) (U.S. Weather Bureau, 1974).

Sitka spruce (*Picea sitchensis*) and shore pine (*Pinus contorta*) are the dominant trees on the lower flood plain of Redwood Creek near Orick and on windy sites near the estuary. Elsewhere the forests of the northern maritime part of the Redwood Creek drainage basin are dominated by redwoods and associated vegetation. The most commonly associated trees are Douglas-fir (*Pseudotsuga mensiesii*), hemlock (*Tsuga heterophylla*), tanoak (*Lithocarpus densiflorous*), and grand fir (*Abies grandis*). At higher, drier sites Douglas-fir becomes more abundant as does tanoak and madrone (*Arbutus menziesii*). In still more continental southern and southwestern parts of the basin, Douglas-fir is associated principally with white fir (*Abies concolor*), incense cedar (*Libocedrus decurrens*), and black oak (*Quercus kelloggii*). About 15 percent of the vegetation in the basin is prairie grass, brush, or grass-oak. The most expansive tracts of nonarboreal vegetation occur on south- and west-facing slopes carved from Franciscan rocks of texture zones 1 and 2.

Cut-over timberland makes up about 65 percent of the drainage basin of Redwood Creek, and timber harvest continues to be a major activity. Recent logging is concentrated in the northern part of the Redwood Creek basin that extends upstream to and includes the drainage basin of Lacks Creek.

## TYPES OF DATA COLLECTED

Data were collected on physical processes of erosion, stream runoff, and water quality. Two modes of data collection were used depending upon the type of data collected, frequency of collection, and season of collection. One mode was designated synoptic, and the other nonsynoptic.

### Synoptic

The synoptic studies were designed to collect similar types of data, at similar frequencies, simultaneously from selected streams (fig. 2) in the study area. Except for the station at Miller Creek near Orick, all synoptic studies were made within Redwood National Park. Synoptic studies were made during winter storms that occurred November 7-9, 1973, January 11-13, February 20-22, and February 28-March 3, 1974.

Ideally, measurements and sample collection should start at the beginning of storm runoff and continue until stream discharge returns to near the pre-storm level. In this study, however, because of logistic problems or erratic storm patterns, sampling throughout rise and fall of the stream was not always possible.

## Data Collected

Data collected during the synoptic studies include: Rainfall quantity, stream stage and discharge, water temperature, pH, total alkalinity, specific conductance, and dissolved-oxygen concentration. Samples of rain and stream water were collected and prepared for laboratory analysis of: Turbidity, suspended-sediment concentration and particle-size distribution, bedload particle-size distribution, concentrations of major dissolved solids, selected trace elements, plant nutrients (nitrogen, phosphorus, and organic carbon), coliform bacteria, and seston.

The frequency of collection varied for each group of constituents. A list of the synoptic stations and some of their features is presented in table 1.

## Physical Features

Drainage basins chosen for synoptic studies have some similarity in physical characteristics but are in different stages of the timber harvest and regeneration cycle (table 1). The small drainage basin of Geneva Creek was included in this study at the request of Arcata Redwood Company.

Drainage areas for the synoptic stations were measured on published 1:24,000 (where available) and 1:62,500 topographic maps, using a compensating polar planimeter. Drainage-basin aspect is the compass direction, downstream, of a straight line that passes through the stream sampling site and divides the basin into approximately equal parts.

Altitude was determined from topographic maps that had a 50-ft (15-m) contour interval. Relief is the difference in altitude (ft) between the highest and lowest points in the basin. Relief ratio (Schumm, 1956, p. 612) is the ratio of drainage-basin relief to the length of a straight line from the drainage-basin mouth to the highest point on the drainage divide.

Hypsometric curves indicate the proportions of a drainage basin at various altitudes above the mouth of the basin. These curves (not included in this report) are obtained by plotting the relative height (altitude of a given contour above the basin mouth divided by the total basin relief) against the relative area (area in basin above a given contour divided by total drainage area). Drainage basins characterized by large areas under their hypsometric curves tend to have low-gradient slopes adjacent to their drainage divides and steep slopes adjacent to their principal stream channels; conversely, drainage basins characterized by small areas under their curves tend to have low-gradient slopes adjacent to their principal stream channels. Scott and Williams (1974, p. 27) and Tatum (1965, p. 886) have used the relative height at the point on the hypsometric curve where the relative area equals 0.5 as a simple index of the distribution of land surface within a basin. This ratio is called the hypsometric analysis index.

Average ground slope was determined using the line-intersection method of Wentworth (1930) and then checking the results with the Finsterwalder method (Wentworth, 1930, p. 184). No large or systematic differences were detected between the two methods. The values obtained by the line-intersection method are the values presented in table 1, because they are considered the more reproducible values.

Drainage density is the quotient obtained by dividing the drainage area into the total length of all streams indicated by V-shaped inflections in contour lines as well as by blue lines on 1:62,500 scale topographic maps having a 50-ft (15-m) contour interval. Drainage densities for all tributary basins were determined by measuring the scale length of the streams with a map wheel and checking the results by the line-intersection method (Mark, 1974); no significant or systematic differences were noted between methods. Drainage densities for the Redwood Creek stations at South Park Boundary and at Orick were determined solely by the line-intersection method.

Average stream gradients were obtained by dividing the difference in altitude between the channel mouth and the highest recognizable point along the main channel by the distance between those points measured along the channel. The stream gradient upstream from the sampling station is the gradient of the downstream-most reach of uniform gradient in a semilog plot of stream profile (Hack, 1973, p. 421).

Stream orders were assigned according to the numbering system of Strahler (1957, p. 914). Using a map, on which all intermittent and perennial stream channels are shown, the smallest tributaries are assigned as first order. Where two first-order channels meet, a second-order channel is formed; where two second-order channels meet, a third-order channel is formed; and so forth. Given a sample of sufficient size on homogeneous terrain, stream order will on the average be directly proportional to the drainage area, channel dimensions, and stream discharge at that point.

The elongation ratio of a drainage basin is the ratio of the diameter of a circle of the same area as the basin to the maximum length of the basin measured in a downstream direction.

The numeric key and distinctive physical characteristics of soil series (table 2) are based on information from legends accompanying soil-vegetation maps (Alexander and others, 1959-1962). The land-use categories were determined by inspection of April 1974 black and white vertical aerial photographs, scale 1:24,000. No logging was carried out in the synoptic study basins during this study period.

The physical significance of these and similar parameters in determining flood discharges and sediment yields have recently been discussed by Anderson (1954, 1957, 1970), Wallis (1965), Lustig (1965), and Scott and Williams (1974).

Table 1.--*Station and drainage basin descriptions for synoptic sampling stations*

[See figure 2 for location of stations, and table 2 for physical properties of soil series]

| Station description | | | Drainage basin description | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area ($mi^2$) | Aspect (direction) | Altitude (ft) | | | Relief ratio (ft/ft) | Area under hypsometric curve ($in^2$) | Hypsometric analysis index | Average ground slope | |
| Number and name | Latitude | Longitude | | | Average | Range | Relief | | | | (degrees) | (ft/ft) |
| 11482200--Redwood Creek at South Park Boundary, near Orick | 41°10'19" | 123°56'55" | 185 | NNW | 2,310 | 230--5,190 | 4,960 | 0.03 | 6.55 | 0.27 | 14.0 | 0.240 |
| 11482225--Harry Wier Creek near Orick | 41°11'53" | 123°59'32" | 2.96 | SW | 1,390 | 120--2,650 | 2,530 | .19 | 8.23 | .52 | 15.9 | .284 |
| 11482250--Miller Creek near Orick | 41°13'54" | 123°59'30" | .67 | W | 1,520 | 930--2,150 | 1,220 | .25 | 9.48 | .62 | 17.3 | .312 |
| 11482260--Miller Creek at Mouth, near Orick | 41°13'46" | 124°00'36" | 1.36 | W | 1,370 | 80--2,150 | 2,070 | .21 | 9.63 | .63 | 17.0 | .306 |
| 11482330--Hayes Creek near Orick | 41°17'24" | 124°01'36" | .58 | W | 940 | 80--1,610 | 1,530 | .26 | 9.32 | .62 | 18.2 | .328 |
| 11482450--Lost Man Creek near Orick | 41°19'06" | 123°59'15" | 3.97 | NNW | 1,400 | 300--2,275 | 1,975 | .11 | 8.83 | .59 | 22.1 | .406 |
| 11482470--Little Lost Man Creek near Orick | 41°19'42" | 124°01'29" | 3.64 | NNW | 1,270 | 80--2,280 | 2,200 | .09 | 8.74 | .59 | 20.8 | .380 |
| 11482475--Geneva Creek near Orick | 41°19'36" | 124°01'53" | .08 | NNW | 520 | 70--880 | 810 | .28 | 10.29 | .70 | 14.8 | .260 |

Table 1.--*Station and drainage basin descriptions for synoptic sampling*--Continued

| Station number and name | Drainage density (mi/mi²) | Stream gradient: Average (ft/mi) | Stream gradient: Average (ft/ft) | Stream gradient: Immediately upstream from station (ft/mi) | Stream gradient: Immediately upstream from station (ft/ft) | Stream order | Elon-gation ratio | Soil Series (identification number and per-centage of area) | History of land use (percentage of area): Logged since establish-ing park | History of land use (percentage of area): Logged prior to establish-ing park | History of land use (percentage of area): Virgin and advanced second growth |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11482200--Redwood Creek at South Park Boundary near Orick | 4.8 | 100 | 0.02 | <50 | 0.00 | 6 | 0.43 | 821=30 823=3<br>812=20 835=3<br>849=8 840=3<br>813/821=4<br>816=4 849/823=2<br>700=3 Others=12<br>752=3<br>812/823=3<br>821/816=3 | <5 | 65 | >30 |
| 11482225--Harry Wier Creek near Orick | 7.9 | 750 | .14 | 400 | .08 | 4 | .72 | 812=62 821=5<br>814=12 840=4<br>812/814=10<br>835=6 813=1 | 39 | — | 61 |
| 11482250--Miller Creek near Orick | 5.3 | 1,100 | .21 | 600 | .11 | 3 | 1.02 | 812=86 835=6<br>814=8 | 90 | — | 10 |
| 11482260--Miller Creek at Mouth near Orick | 5.7 | 1,050 | .20 | 1,750 | .33 | 3 | .70 | 812=72 814=7<br>813=15 821=6 | 66 | — | 34 |
| 11482330--Hayes Creek near Orick | 7.6 | 1,250 | .24 | 800 | .15 | 3 | .78 | 812/814=64<br>814=31<br>813=5 | — | 04 | 96 |
| 11482450--Lost Man Creek near Orick | 6.5 | 550 | .10 | 50 | .01 | 4 | .68 | 812/814=51<br>812=27 814=10<br>915g=11 814/915g=1 | — | 87 | 13 |
| 11482470--Little Lost Man Creek near Orick | 5.3 | 350 | .07 | 300 | .06 | 4 | .46 | 812/814=64<br>814=33<br>915g=2<br>818=1 | — | 08 | 92 |
| 11482475--Geneva Creek near Orick | 5.9 | 1,300 | .24 | 1,750 | .33 | 2 | .61 | 814=90<br>812/814=10 | — | 100 | — |

Table 2.--*Physical properties*

[Soil series from Alexander and others (1959-62).

| Soil series Identi-fication number | Name | Depth Range (inches) | Color of Surface/Subsoil | Reaction of Surface/Subsoil |
|---|---|---|---|---|
| 700 | Miscellaneous land types including colluvium, rock outcrop, active alluvium, talus, | | | |
| 752 | Yorkville | 30-60 | Grayish brown/ gray | Slightly acid/ alkaline |
| 812 | Hugo | 30-60 | Grayish brown/ pale brown | Slightly acid/ strongly acid |
| 813 | Orick | 40-70 | Brown/ strong brown | Moderately acid/ strongly acid |
| 814 | Melbourne | 30-60 | Brown/ strong brown | Moderately acid/ strongly acid |
| 816 | Sites | 30-60 | Reddish brown/ red | Moderately acid/ strongly acid |
| 818 | Usal | 30-60 | Dark grayish brown/ light yellowish brown | Slightly acid/ strongly acid |
| 821 | Masterson | 30-60 | Brown/ light yellowish brown | Moderately acid/ strongly acid |
| 823 | Atwell | 36-72 | Dark grayish brown/ pale brown | Slightly acid/ strongly acid |
| 835 | Kneeland | 18-40 | Dark grayish brown/ pale brown | Strongly acid/ strongly acid |
| 840 | Wilder | 26-50 | Very dark grayish brown/ light yellowish brown | Very strongly acid/ very strongly acid |
| 849 | Tyson | 18-48 | Dark grayish brown/ pale brown | Slightly acid/ Moderately acid |
| 915 | Mendocino | 40-90 | Brown/ reddish yellow | Slightly acid/ strongly acid |
| 915g | Mendocino (conglomerate) | 60+ | Brown/ reddish brown | Moderately acid/ strongly acid |
| 920 | Empire | 40-70 | Brown/ yellowish brown | Moderately acid/ strongly acid |

*of soil series*

See table 1 for occurrence of soil series]

| Texture of Surface/Subsoil | Parent Material | General Drainage | Erosion Hazard | Estimated Suitability: Timber Production | Estimated Suitability: Extensive Range Use |
|---|---|---|---|---|---|
| and landslides with highly variable properties | | | | | |
| Clay loam/ clay | Metamorphosed rocks | Imperfect | Moderate | Unsuited | Medium to very high |
| Gravelly loam/ stony clay loam | Sandstone & shale | Good to excessive | Moderate to very high | Moderate to very high | Medium to low |
| Loam/ clay loam | Schistose sedimentary rocks | Good | Moderate | Medium to very high | Medium |
| Loam/ clay loam | Sandstone & shale | Good | Moderate | High to very high | Medium |
| Clay loam/ clay | Schistose sedimentary rocks | Good | Moderate | Variable | Medium |
| Loam/ clay loam | Sandstone & shale | Good | Moderate | High | Medium to high |
| Loam/ gravelly loam | Schistose sedimentary rock | Good to excessive | Moderate to very high | Medium to very high | Medium - low |
| Loam/ Gravelly clay loam | Sheared sedimentary rocks | Imperfect | Moderate to very high | High to very high | Medium |
| Clay loam/ clay loam | Sandstone & shale | Good | Moderate to high | Unsuited | High |
| Sandy loam/ gravelly sandy loam | Sandstone | Good to excessive | High to very high | Variable | Low to very low |
| Gravelly loam/ very gravelly loam | Sandstone & shale | Good to excessive | High to very high | Medium to low | Medium to very low |
| Loam/ clay | Soft sedimentary rocks | Good | Moderate | High | Medium |
| Loam/ clay loam | Soft sedimentary rocks | Good | Moderate | Variable | Medium |
| Loam/ clay loam | Soft sedimentary rock | Good | Moderate to high | High to very high | Medium |

## Nonsynoptic

To obtain data from drainage basins that show a wide range of physical characteristics and land use, nonsynoptic observations were made at 19 stations in the Redwood Creek drainage basin (fig. 2). Nonsynoptic data were collected whenever possible under a wide range of hydrologic conditions. While unrelated to specific short-term hydrologic events, nonsynoptic sampling was conducted during the low flows of autumn, the high flows of winter, and the receding flows of spring. Nonsynoptic measurements and data collections were also made at synoptic sampling stations.

### Data Collected

Data measurements and sample collections for nonsynoptic studies included: Stream stage and discharge; turbidity; suspended-sediment concentration and particle-size distribution; bedload discharge and particle-size distribution (when applicable); the onsite water-quality measurements of temperature, pH, total alkalinity, specific conductance, and dissolved-oxygen concentration; the collection and filtration of water samples for laboratory analysis of major dissolved solids, selected trace elements, and plant nutrients (nitrogen, phosphorus, and organic carbon); benthic invertebrates; and seston. The frequency of data collection varied for each parameter and for each station.

### Physical Features

The physical features of the drainage basin selected for nonsynoptic observations (table 3) were determined in the same way as for the synoptic basins except that the channel gradients immediately upstream from stations along Redwood Creek were determined from only the contour intersection closest to the station. A large uncertainty is associated with these gradients because of the large contour interval and recent channel aggradation and(or) scour.

Table 3.--*Station and drainage basin descriptions for nonsynoptic sampling stations*

[See figure 2 for location of stations, and table 2 for physical properties of soil series]

| Station description | | | Drainage basin description | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area ($mi^2$) | Aspect (direction) | Altitude | | | Relief ratio (ft/ft) | Area under hypsometric curve ($in^2$) | Hypsometric analysis index | Average ground slope | |
| Number and name | Latitude | Longitude | | | Average | Range | Relief | | | | (degrees) | (ft/ft) |
| 11481500--Redwood Creek near Blue Lake | 40°54'22" | 123°48'51" | 67.6 | NNW | 3,030 | 860–5,190 | 4,330 | 0.05 | 7.54 | 0.47 | 12.4 | 0.22 |
| 11482020--Redwood Creek at Redwood Valley Bridge, near Blue Lake | 40°57'48" | 123°50'20" | 95.9 | NNW | 2,780 | 725–5,190 | 4,465 | .04 | 6.95 | .43 | 14.0 | .25 |
| 11482120--Redwood Creek above Panther Creek, near Orick | 41°05'21" | 123°54'23" | 150 | NNW | 2,500 | 390–5,190 | 4,800 | .03 | 6.56 | .41 | 16.2 | .29 |
| 11482140--High-Slope Schist Creek near Orick | 41°07'25" | 123°56'51" | .53 | SE | 1,720 | 750–2,645 | 1,895 | .36 | 7.74 | .50 | 20.8 | .38 |
| 11482160--Copper Creek near Orick | 41°08'58" | 123°55'53" | 2.78 | W | 1,920 | 290–3,090 | 2,800 | .19 | 8.33 | .57 | 18.8 | .34 |
| 11482190--Slide Creek near Orick | 41°10'19" | 123°56'49" | 1.16 | WSW | 1,810 | 225–2,510 | 2,285 | .29 | 9.80 | .69 | 21.3 | .39 |
| 11482210--Bridge Creek near Orick | 41°11'32" | 123°58'52" | 11.6 | N | 1,520 | 140–2,820 | 2,680 | .08 | 7.70 | .50 | 18.3 | .33 |
| 11482220--Redwood Creek above Harry Wier Creek, near Orick | 41°11'50" | 123°59'30" | 202 | NNW | 2,250 | 125–5,190 | 5,065 | .03 | 5.31 | .38 | 14.0 | .25 |
| 11482230--Tom McDonald Creek near Orick | 41°12'16" | 124°00'53" | 6.86 | NE | 1,360 | 120–2,820 | 2,700 | .16 | 6.94 | .45 | 18.8 | .34 |
| 11482240--Fortyfour Creek near Orick | 41°13'15" | 124°00'44" | 3.09 | ENE | 920 | 90–1,825 | 1,735 | .11 | 7.40 | .46 | 18.8 | .34 |
| 11482270--Bond Creek near Orick | 41°14'02" | 124°01'14" | 1.37 | E | 920 | 80–1,400 | 1,320 | .15 | 9.42 | .62 | 15.6 | .28 |
| 11482280--Cloquet Creek near Orick | 41°14'42" | 124°00'37" | 1.14 | W | 1,250 | 80–2,050 | 1,970 | .24 | 8.87 | .59 | 20.3 | .37 |
| 11482290--Oscar Larson Creek near Orick | 41°15'23" | 124°00'30" | .69 | W | 1,280 | 70–1,950 | 1,880 | .29 | 9.80 | .64 | 18.8 | .34 |
| 11482300--Elam Creek near Orick | 41°15'49" | 124°01'29" | 2.49 | NE | 1,040 | 60–1,400 | 1,340 | .10 | 10.49 | .74 | 13.5 | .24 |
| 11482310--McArthur Creek near Orick | 41°16'31" | 124°01'42" | 3.73 | NE | 950 | 50–1,500 | 1,450 | .06 | 9.47 | .62 | 15.6 | .28 |
| 11482320--Low-Slope Schist Creek near Orick | 41°16'53" | 124°01'49" | .19 | ENE | 875 | 50–1,180 | 1,130 | .24 | 10.45 | .73 | 13.5 | .24 |
| 11482460--Larry Damm Creek near Orick | 41°19'46" | 124°00'46" | 1.87 | SW | 470 | 70–1,575 | 1,505 | .10 | 4.67 | .23 | 14.0 | .25 |
| 11482480--Berry Glen Creek near Orick | 41°18'59" | 124°02'17" | .40 | NW | 710 | 80–1,250 | 1,170 | .26 | 7.84 | .50 | 19.3 | .35 |
| 11482500--Redwood Creek at Orick | 41°17'18" | 124°03'27" | 278 | NNW | 1,810 | 30–5,190 | 5,160 | .02 | 5.37 | .31 | 14.4 | .26 |

Table 3.--*Station and drainage basin descriptions for nonsynoptic sampling stations*--Continued

| Station description | | Drainage density (mi/mi²) | Stream gradient | | | | Stream order | Elongation ratio | Soil series (identification number and percentage of area) | History of land use (percentage of area) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Average | | Immediately upstream from station | | | | | | | |
| Number | Name | | (ft/mi) | (ft/ft) | (ft/mi) | (ft/ft) | | | | Logged since establishing park | Logged prior to establishing park | Virgin and advanced second growth |
| 11481500 | Redwood Creek near Blue Lake | 8.8 | 150 | 0.03 | <50 | 0.05 | 5 | 0.60 | 821-45 816-5<br>812-13 849/823-2<br>849-11 816/821-2<br>840-5 other-17 | <5 | 60 | 40 |
| 11482020 | Redwood Creek at Redwood Valley Bridge, near Blue Lake | 8.6 | 150 | .03 | <50 | .05 | 5 | .53 | 821-37 823-3<br>812-16 849/823-2<br>849-10 821/816-2<br>840-4 other-21<br>816-5 | <5 | 65 | 35 |
| 11482120 | Redwood Creek above Panther Creek, near Orick | 8.5 | 100 | .02 | <50 | .04 | 6 | .46 | 821-31 840-3<br>812-22 813-3<br>849-7 752-3<br>816-4 835-2<br>823-4 700-2<br>812/823-4 other-15 | <5 | 65 | 35 |
| 11482140 | High-Slope Schist Creek near Orick | 7.3 | 1,550 | .29 | 2,000 | .38 | 2 | .38 | 821-71<br>813/821-22<br>821/813-7 | -- | -- | 100 |
| 11482160 | Copper Creek near Orick | 7.8 | 950 | .18 | 400 | .08 | 4 | .67 | 821-57 812/823-7<br>835/855-9 835-4<br>840/835-9 849/823-3<br>849-8 other-3 | 20 | 30 | 45 |
| 11482190 | Slide Creek near Orick | 7.3 | 1,350 | .26 | 400 | .08 | 3 | .77 | 812-74 840-2<br>835-11 812/823-2<br>823-8 835/855-1<br>840/835-2 | 30 | 40 | 30 |
| 11482210 | Bridge Creek near Orick | 4.8 | 300 | .06 | 100 | .04 | 4 | .72 | 821-44 813/816-5<br>813-23 813/821-4<br>821/813-14 other-4<br>816-6 | 20 | 55 | 25 |
| 11482220 | Redwood Creek above Harry Wier Creek, near Orick | 8.0 | 100 | .02 | <50 | .03 | 6 | .42 | 821-30 835-3<br>812-20 752-3<br>849-6 812/823-3<br>813-6 840-2<br>816-4 813/821-2<br>823-4 other-13<br>821/813-4 | 5 | 60 | 35 |
| 11482230 | Tom McDonald Creek near Orick | 4.8 | 350 | .07 | 100 | .02 | 4 | .79 | 813-28 813/821-14<br>821-20 816/813-5<br>821/813-16 816-2<br>813/816-15 | 5 | 80 | 15 |

Table 3.--*Station and drainage basin descriptions for nonsynoptic sampling stations*--Continued

| Station description | | | Stream gradient | | | | | | | History of land use (percentage of area) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number | Name | Drainage density (mi/mi²) | Average (ft/mi) | Average (ft/ft) | Immediately upstream from station (ft/mi) | Immediately upstream from station (ft/ft) | Stream order | Elongation ratio | Soil series (identification number and percentage of area) | Logged since establishing park | Logged prior to establishing park | Virgin and advanced second growth |
| 11482240 | Fortyfour Creek near Orick | 6.6 | 550 | 0.10 | 150 | 0.03 | 3 | 0.67 | 813/821=55 823=2<br>813=38 816=1<br>821=4 | 20 | 75 | 5 |
| 11482270 | Bond Creek near Orick | 7.5 | 750 | .14 | 800 | .15 | 3 | .79 | 813-67 813/816=2<br>813/821=16 914/813=2<br>813/914=7 816=2<br>821=4 | 25 | 55 | 20 |
| 11482280 | Cloquet Creek near Orick | 6.1 | 1,150 | .22 | 500 | .09 | 2 | .74 | 812=54 813=20<br>814=22 other=4 | 55 | — | 45 |
| 11482290 | Oscar Larson Creek near Orick | 8.9 | 1,500 | .28 | 1,200 | .23 | 3 | .68 | 812=80 814/812=1<br>813=19 | 15 | — | 85 |
| 11482300 | Elam Creek near Orick | 7.2 | 450 | .09 | 400 | .08 | 3 | .78 | 813=78 914/813=3<br>813/914=17 813/816=2 | 40 | 30 | 30 |
| 11482310 | McArthur Creek near Orick | 7.3 | 250 | .05 | 3,000 | .57 | 3 | .51 | 813=82 821=3<br>813/914=8 other=2<br>200=5 | 30 | 45 | 25 |
| 11482320 | Low-Slope Schist Creek near Orick | 5.2 | 1,300 | .24 | 800 | .15 | 2 | .52 | 813=100 | — | — | 100 |
| 11482460 | Larry Damm Creek near Orick | 8.1 | 500 | .09 | 100 | .02 | 3 | .55 | 920=70 other=1<br>814/812=27<br>915=2 | — | 70 | 30 |
| 11482480 | Berry Glen Creek near Orick | 10.0 | 1,400 | .26 | 400 | .02 | 2 | .76 | 814=59 821/823=2<br>823=27<br>813/812/814=12 | — | 100 | — |
| 11482500 | Redwood Creek at Orick | 7.7 | 71 | .01 | <50 | .02 | 6 | [1].38<br>.34 | 821=22 814=2<br>812=18 840=2<br>813=11 835=2<br>920=5 915=2<br>849=4 814/812=2<br>816=3 821/813=2<br>823=3 813/816=2<br>813/821=3 other=14<br>812/823=3 | 10 | 50 | 40 |

[1]Ratio excluding Prairie Creek.

## SUMMARY OF DATA COLLECTION

Data represented by the various physical, chemical, and biological measurements and analyses were selected because of their significance in evaluation of the ecosystem. Methods of data collection are those of the Geological Survey or other established procedures. These methods were adapted where necessary to accommodate circumstances. Summaries of data collection are presented in graphic or tabular form.

### Physical Data

#### Channel Cross Sections

Changes in stream-channel morphology provide a simple direct measure of channel scour, aggradation and stream-bank erosion (Emmett, 1974). This information is particularly useful along Redwood Creek because it helps assess the potential to topple or bury riparian vegetation, and the stability of aquatic environments. Some changes in stream-channel morphology accompany natural changes in type of alluvial bedforms and lateral channel migration. The dominant channel dimensions in alluvial reaches, however, are closely adjusted to prevailing stream discharge and sediment load (Leopold and others, 1964). The low erosional resistance of the bedrock underlying most of the Redwood Creek basin allows the stream-channel morphology of many rock-defended reaches to mimic closely the gross stream-channel geometry of alluvial reaches. Major modifications in cross-sectional area, width-depth ratio, or streambed altitude usually result from changes in runoff regime or sediment load. These changes in turn may reflect altered watershed conditions due to major floods or land-use changes.

All surveyed stream-channel cross sections are monumented with 4.0-ft (1.2-m) lengths of 3/8-in (9.5-mm) steel bars or by reference marks on concrete bridge abutments. Steel monuments were driven 3 to 3.5 ft (0.9 to 1.1 m) into the ground and were referenced to at least two other triangulation points (Emmett, 1974). Triangulation was by tape and compass. A self-leveling level was used to establish relative altitudes. Three stream-channel cross sections are at cableways of stream-gaging stations of the Geological Survey, and auxiliary data on stream-channel geometry are obtained from cross sections made while measuring stream discharge. Photographs and information on bedforms, grain-size of streambed material, and specific erosional and depositional features were obtained while surveying, to assist in the interpretation of any observed cross-sectional changes.

Changes in topographic profiles between monumented end points of 42 stream-channel cross sections along Redwood Creek have been determined by repeated surveys. The results of repetitive stream-channel cross-section surveys through May 1974[1] are summarized in table 4 and figure 3. The net changes are those associated with the 1973-74 storm season. Cross-section locations are indicated on the location map (fig. 2) by use of their field identification number. Cross section 27 is near the southern boundary of Redwood National Park.

## Erosional Landforms

The erosional landform maps (fig. 4) and related data (table 1) were compiled to summarize and compare the erosional characteristics of the drainage basins selected for synoptic stream sampling. These erosional landforms are major sources of stream-sediment loads. Smaller landforms like rills, roadside ditches, small individual slumps, and eroding streambanks were not mapped although they also are major sources of stream sediment. Eroding streambanks occur throughout all the basins selected for synoptic sampling. Other forms of small-scale fluvial erosion are more prevalent in recently logged areas than in the uncut forest.

The erosional landforms (fig. 4) were identified using a magnifying stereoscope on 1:12,000 black and white vertical aerial photographs taken in July 1974. Identified erosional landforms were transferred to 1:24,000 topographic base maps using the topography and scaled distances from known reference points. Scale limitations restrict graphic portrayal to large mass movement features and large gullies. Where published topographic maps are at a scale of 1:62,500, base maps were compiled from enlargements of the published maps. Recognition of erosional landforms, especially in forested areas, was aided by stereoscopic examination of 1:24,000 aerial infrared photographs.

The mass-movement nomenclature is that used and explained by Colman (1973). Gullies and debris avalanches are categorized as to whether or not they are related to road construction or other man-related activity. In figure 4, the category "actively eroding streambanks" includes the "unstable streambanks" of Colman (1973), plus all other unvegetated streambanks. Steep rapidly eroding ephemeral-stream channels are categorized as "gullies." Some of the gullies shown on these maps were considered by Colman to be debris avalanche tracks.

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[1]This date extends past April 10, 1974, the terminal date of this report; however, due to flow conditions of Redwood Creek, resurvey of cross sections was not completed until May 1974. Two cross sections were not resurveyed because discharge in the stream was still too large to allow wading.

Table 4.--*Summary of changes in Redwood Creek stream channel at cross sections*

[See figure 2 for location of cross sections and figure 3 for explanation of symbols]

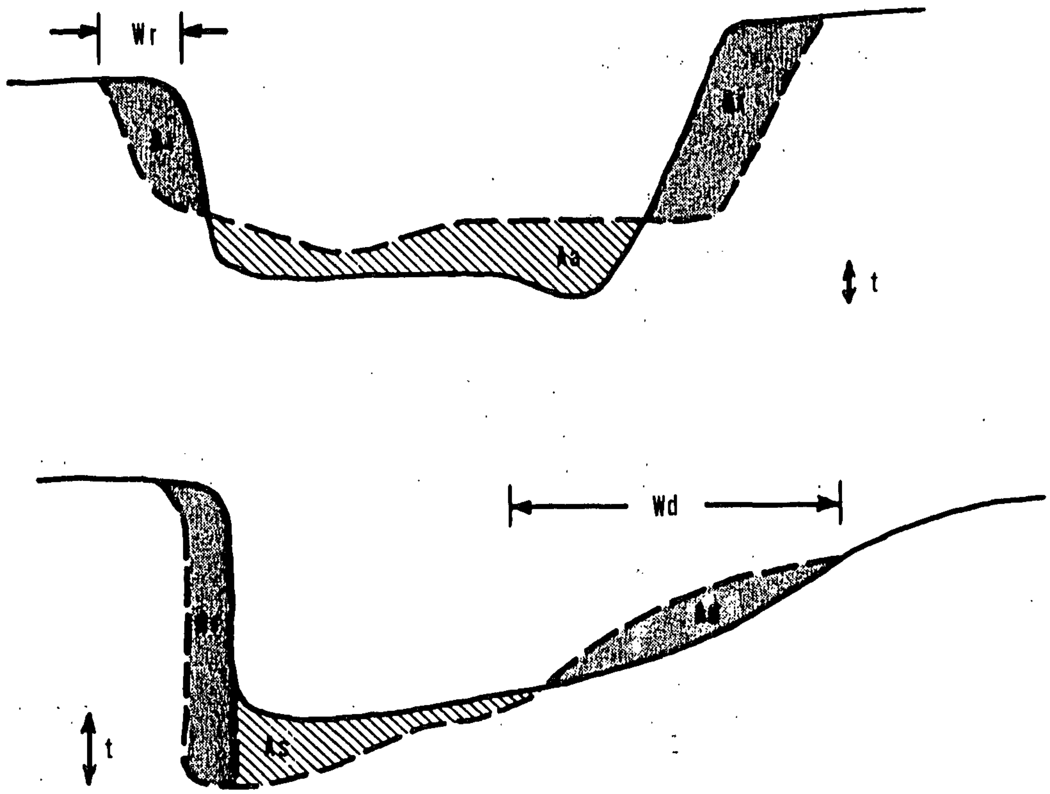
| Measurement | Cross-section identification numbers | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Change in altitude of thalweg (ft) | | | | | | | | | | | | | | | |
| Aggradation | 0 | 1.0 | 2.4 | 0.9 | | 0.8 | 0 | 1.0 | | 0.5 | 3.9 | | 1.2 | 0.8 | 0.4 |
| Scour | 0 | | | | 2.3 | | 0 | | 2.0 | | | 0.8 | | | |
| Change in cross-sectional area ($ft^2$) associated with changing streambed altitude | | | | | | | | | | | | | | | |
| Aggradation (Aa) | 0 | 169 | 145 | 0 | 0 | 416.5 | 106 | 162 | 68 | 8.5 | 223 | 58 | 211.1 | 120 | 230 |
| Scour (As) | 365 | 0 | 0 | 199 | 440 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| At left bank | | | | | | | | | | | | | | | |
| Change in width (ft) | | | | | | | | | | | | | | | |
| Deposition (Wd) | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Recession (Wr) | 8 | 4 | 20 | 15 | 0 | 0 | 0 | 9 | 18 | 0 | 0 | 5 | 6 | 5 | 10 |
| Change in area ($ft^2$) | | | | | | | | | | | | | | | |
| Deposition (Ad) | 0 | 0 | 0 | 0 | 0 | 0 | 12.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Recession (Ar) | 24 | 16 | 290 | 126 | 0 | 0 | 0 | 85.5 | 95 | 0 | 0 | 6 | 21 | 3 | 33 |
| At right bank | | | | | | | | | | | | | | | |
| Change in width (ft) | | | | | | | | | | | | | | | |
| Deposition (Wd) | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| Recession (Wr) | 5 | 78 | 30 | 0 | 6 | 0 | 25 | 20 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |
| Change in area ($ft^2$) | | | | | | | | | | | | | | | |
| Deposition (Ad) | 0 | 0 | 0 | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 |
| Recession (Ar) | 4.5 | 280 | 155 | 0 | 30 | 0 | 60.5 | 70 | 0 | 0 | 0 | 20 | 2.5 | 0 | 0 |
| Net change in area ($ft^2$) | +393.5 | +127 | +300 | +238 | +470 | -416.5 | -58 | -6.5 | +27 | -8.5 | -243 | -32 | -187.6 | -117 | -197 |
| Sequential information available | yes | no | no | no | yes | no | no | no | no | no | no | no | no | no | no |
| Number of surveys | 4 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

Table 4.--*Summary of changes in Redwood Creek stream channel at cross sections*--Continued

| Measurement | Cross-section identification numbers | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Change in altitude of thalweg (ft) | | | | | | | | | | | | | | | |
| Aggradation | 1.5 | | 0.7 | 0.8 | 0.9 | | | | | | | | | | |
| Scour | | 1.3 | | | | 0.2 | 1.0 | 0.2 | 2.5 | 2.0 | Not wadeable | | 0.3 | 1.1 | 0.8 |
| Change in cross-sectional area (ft$^2$) associated with changing streambed altitude | | | | | | | | | | | | | | | |
| Aggradation (Aa) | 38 | 115 | 50 | 85 | 13 | 131 | 0 | 0 | 0 | 0 | 77.5 | 0 | 13 | 0 | 0 |
| Scour (As) | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 55 | 600 | 215 | 0 | 15 | 0 | 75 | 5 |
| At left bank | | | | | | | | | | | | | | | |
| Change in width (ft) | | | | | | | | | | | | | | | |
| Deposition (Wd) | 5 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| Recession (Wr) | 0 | 0 | 45 | 5 | 0 | 0 | 0 | 15 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Change in area (ft$^2$) | | | | | | | | | | | | | | | |
| Deposition (Ad) | 40 | 8 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 60 | 0 | 0 | 0 | 0 |
| Recession (Ar) | 0 | 0 | 100 | 10 | 0 | 0 | 0 | 75 | 20 | 0 | 0 | 7 | 0 | 0 | 0 |
| At right bank | | | | | | | | | | | | | | | |
| Change in width (ft) | | | | | | | | | | | | | | | |
| Deposition (Wd) | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 2 | 5 | 0 |
| Recession (Wr) | 5 | 0 | 0 | 10 | 0 | 8 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 5 |
| Change in area (ft$^2$) | | | | | | | | | | | | | | | |
| Deposition (Ad) | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 15 | 0 | 5 | 0 | 0 | 3 | 13 | 0 |
| Recession (Ar) | 65 | 0 | 0 | 30 | 0 | 43 | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 10 |
| Net change in area (ft$^2$) | -13 | -123 | +25 | -45 | -13 | -88 | +78 | +115 | +695 | +208 | -137.5 | +22 | -16 | +62 | +15 |
| Sequential information available | no | yes | no | no | yes | no | no | no | no | no | yes | no | no | no | yes |
| Number of surveys | 2 | 7 | 2 | 2 | Discharge meas. | 2 | 2 | 2 | 2 | 2 | Discharge meas. | 2 | 2 | 2 | 3 |

Table 4.--*Summary of changes in Redwood Creek stream channel at cross sections*--Continued

| Measurement | Cross-section identification numbers | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| Change in altitude of thalweg (ft) | | | | | | | | | | | | |
| Aggradation | | | | | | | | | | | | |
| Scour | 0.7 | 2.2 | 1.0 | 0.4 | 0.4 | 1.9 | 2.2 | 0.3 | 0.2 | 1.7 | 2.1 | 0.7 |
| Change in cross-sectional area ($ft^2$) associated with changing streambed altitude | | | | | | | | | | | | |
| Aggradation (Aa) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 |
| Scour (As) | 35 | 98 | 118 | 55 | 35 | 113 | 118 | 23 | 0 | 108 | 123 | 38 |
| At left bank | | | | | | | | | | | | |
| Change in width (ft) | | | | | | | | | | | | |
| Deposition (Wd) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 |
| Recession (Wr) | 0 | 3 | 0 | 0 | 0 | | 5 | | 3 | 0 | 0 | 0 |
| Change in area ($ft^2$) | | | | | | | | | | | | |
| Deposition (Ad) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 |
| Recession (Ar) | 0 | 10 | 0 | 0 | 0 | | 8 | | 13 | 0 | 0 | 0 |
| At right bank | | | | | | Bridge site | | Bridge site | | | | |
| Change in width (ft) | | | | | | | | | | | | |
| Deposition (Wd) | 2 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 |
| Recession (Wr) | 0 | 0 | 0 | 5 | 3 | | 0 | | 0 | 0 | 0 | 3 |
| Change in area ($ft^2$) | | | | | | | | | | | | |
| Deposition (Ad) | 2 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 |
| Recession (Ar) | 0 | 0 | 0 | 3 | 5 | | 0 | | 0 | 0 | 0 | 3 |
| Net change in area ($ft^2$) | +33 | +108 | +118 | +58 | +40 | +113 | +126 | +23 | -12 | +108 | +123 | +41 |
| Sequential information available | no | no | yes | yes | yes | yes | no | no | yes | yes | no | no |
| Number of surveys | 2 | 2 | 3 | 4 | 3 | 3 | 2 | 2 | 3 | Discharge meas. | 2 | 2 |




- Land-surface profile at time of initial survey
- Land-surface profile at time of resurvey
- Wr — Change in width associated with bank recession (erosion)
- Wd — Change in width associated with deposition (lateral accretion)
- t — Change in altitude of thalweg
- Aa / As — Change in cross-sectional area associated with changing streambed altitude. Aa indicates aggradation. As indicates scour
- Ar / Ad — Change in cross-sectional area associated with erosion or deposition on streambanks. Ar indicates bank recession (erosion). Ad indicates bank deposition

FIGURE 3.--Changes in stream channel.

EXPLANATION

 DRAINAGE DIVIDE

 MAJOR STREAM CHANNELS

 SYNOPTIC STREAM SAMPLING STATIONS

GULLIES — Some smaller features are portrayed at slightly larger than true scale.

 Natural

 Man-caused

DEBRIS AVALANCHES — Some smaller features are portrayed at slightly larger than true scale.

 Natural

 Man-caused

 AREAS CHARACTERIZED BY ACTIVELY ERODING STREAMBANKS AND ADJACENT HILLSLOPES — Small-scale slides, slumps, debris avalanches, and gullies are abundant

 SLIDES — Mostly debris slides, but some block slides, rock falls, slumps, and slump-flows are included in this unit. Some smaller features are portrayed at slightly larger than true scale

 COMPOUND EARTHFLOWS — Denser pattern indicates the more active parts of these features

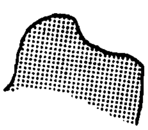
 OLD SLIDES THAT APPEAR TO BE DORMANT AND AREAS OF UNCERTAIN SLOPE STABILITY

FIGURE 4.--Erosional landforms.

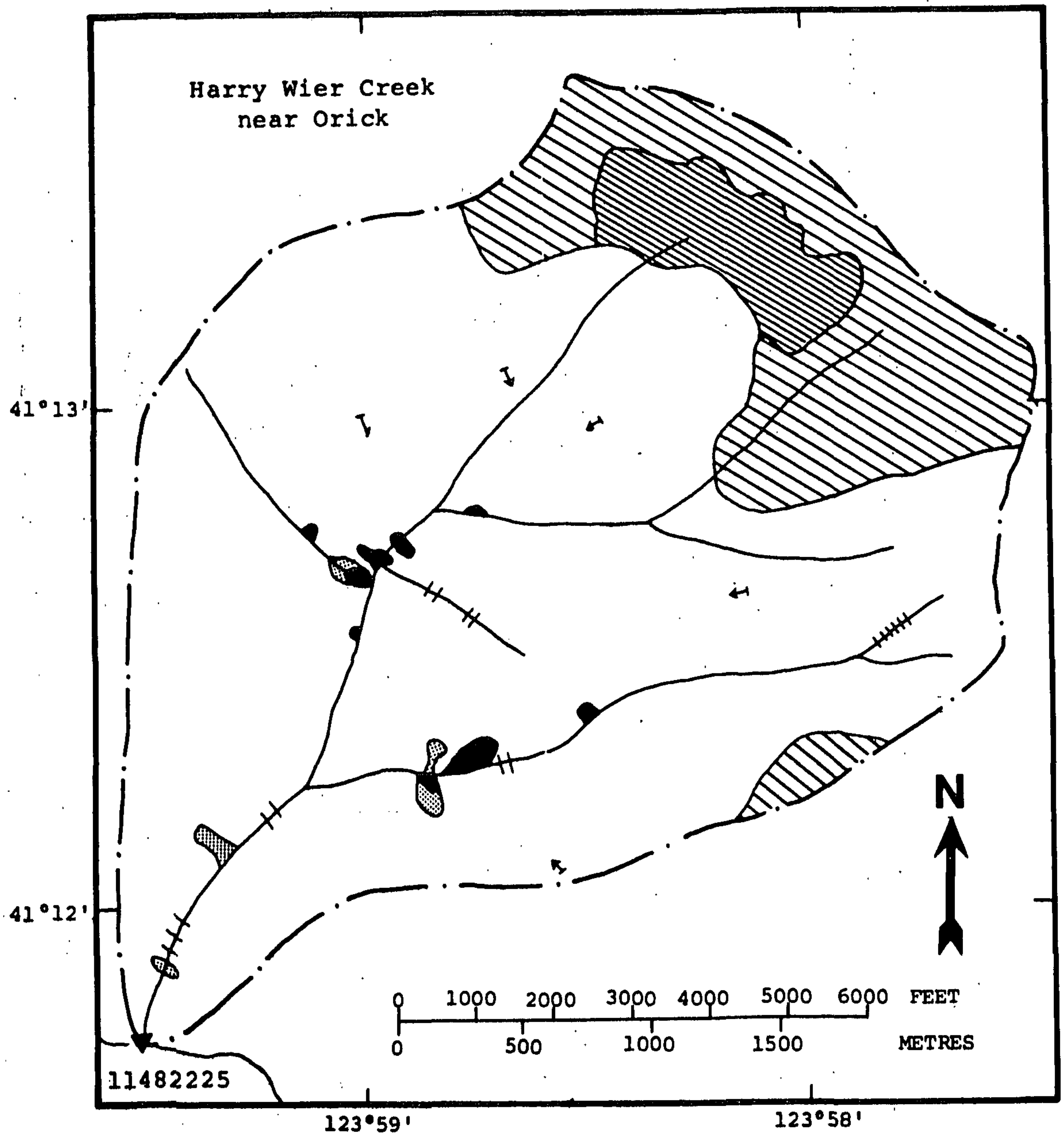
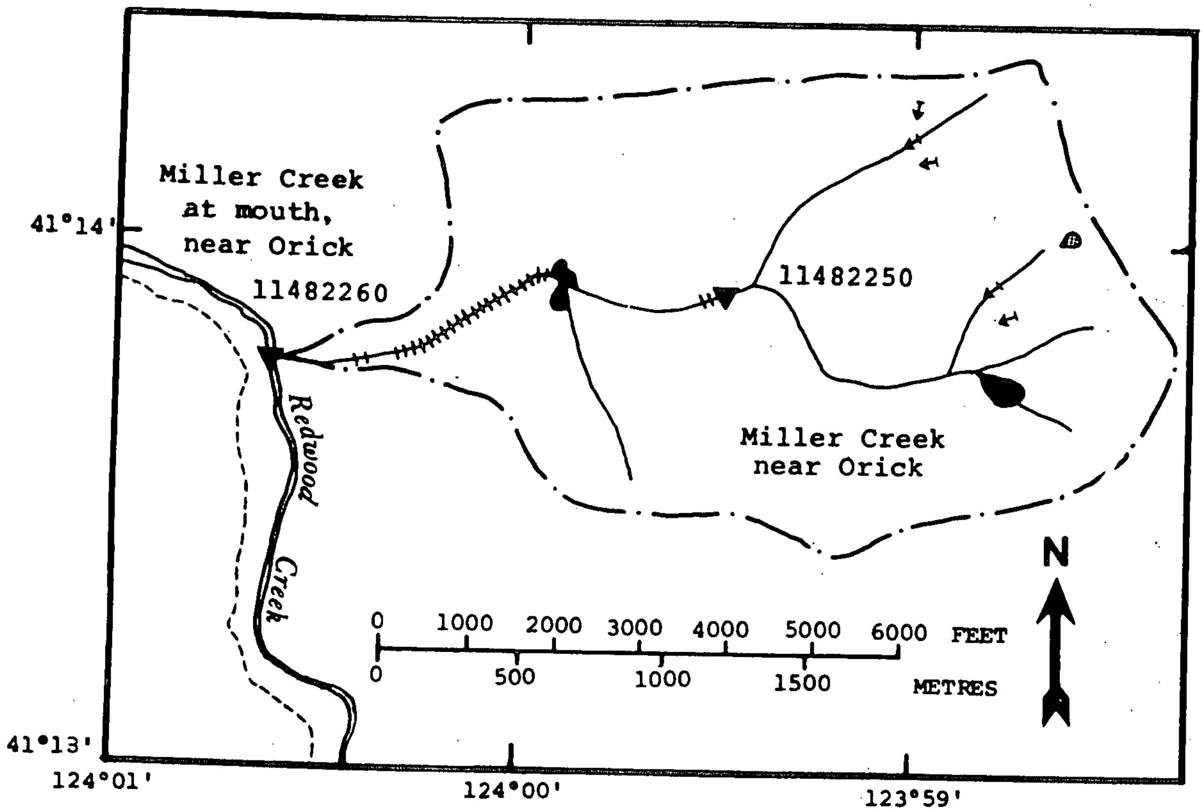



FIGURE 4.--Erosional landforms (Continued).



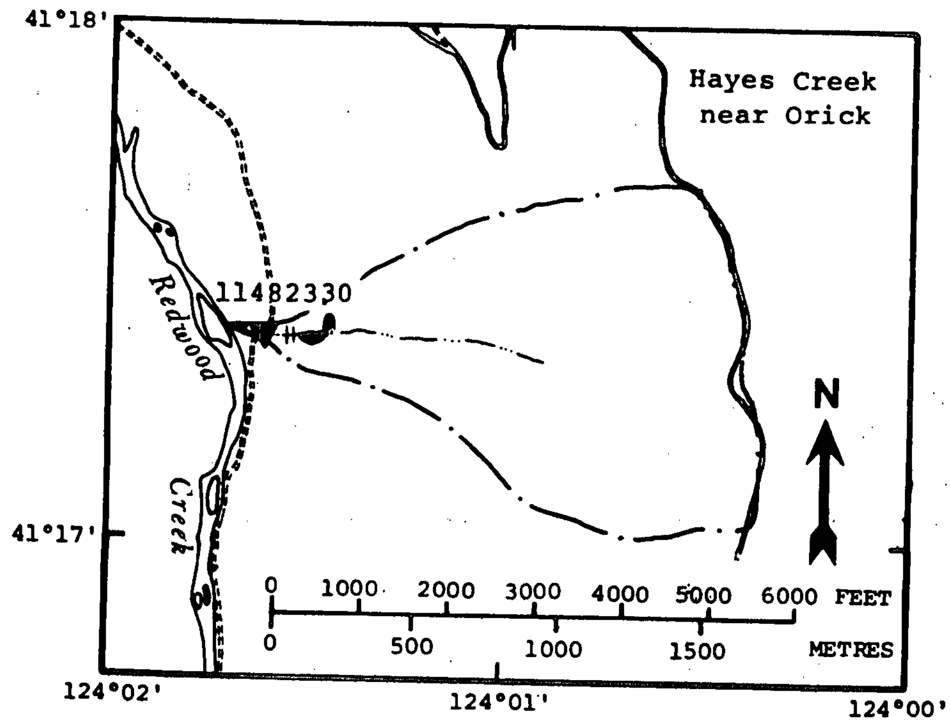




FIGURE 4.--Erosional landforms (Continued).

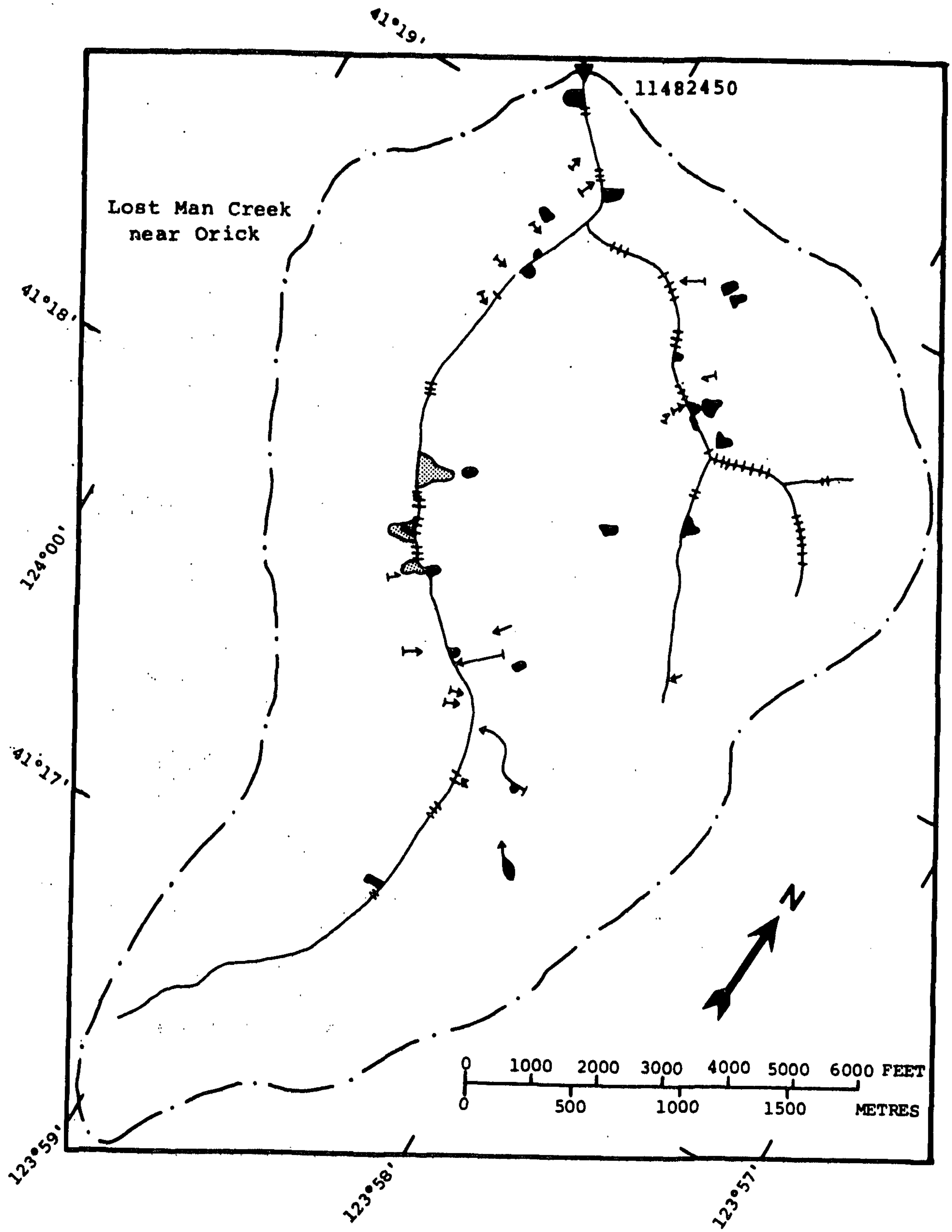



FIGURE 4.--Erosional landforms (Continued).

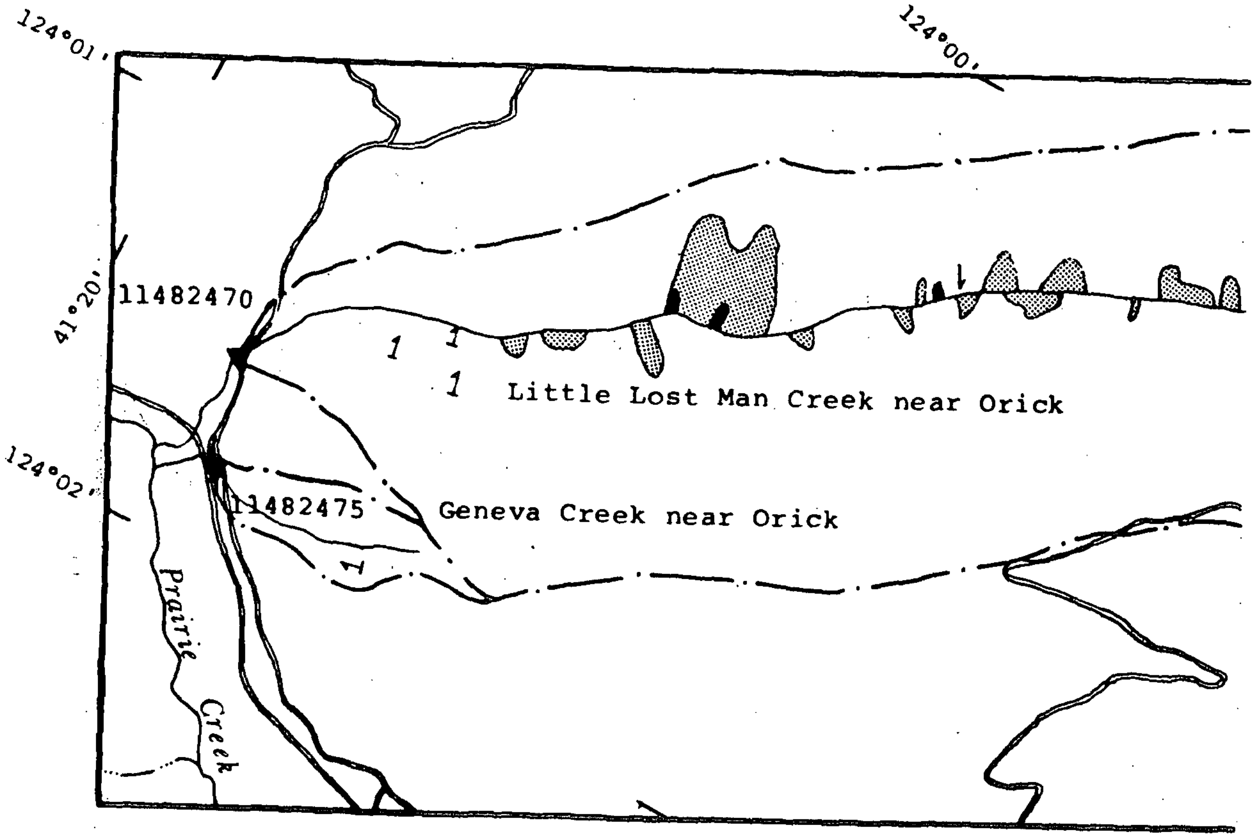
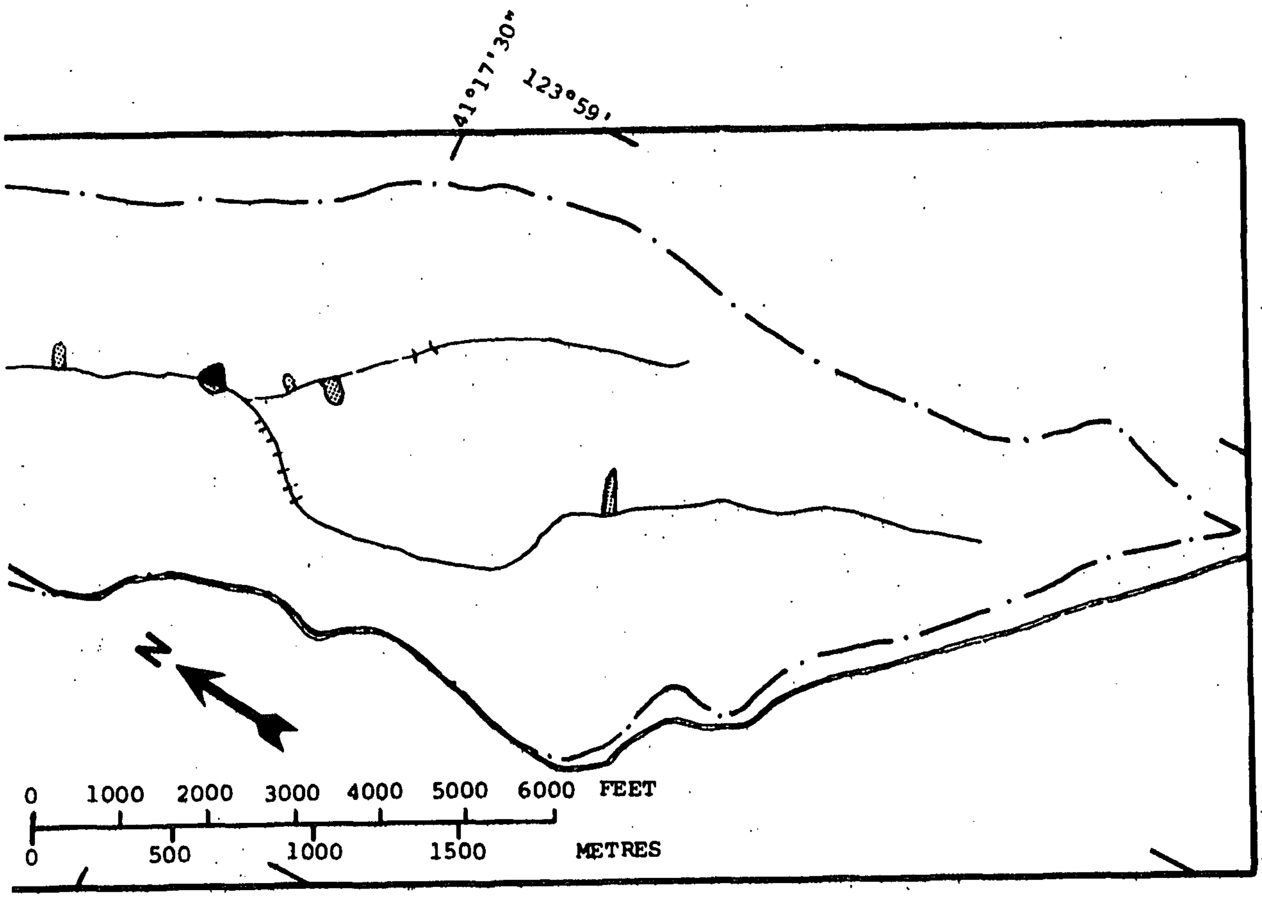



FIGURE 4.--Erosional




landforms.(Continued).

## Rainfall

The amount, intensity, and seasonal distribution of rainfall within a given drainage basin are prominent factors in determining the type and density of vegetal cover, and the types and rates of weathering and erosional processes. Among the factors that determine the quantity and rate of stream runoff during individual storms are antecedent rainfall and the amount and intensity of rainfall during the storm itself. In intricately dissected, high-relief terrain like the drainage basin of Redwood Creek, rainfall amounts and intensities show large lateral variability. The rainfall-sampling program was designed to provide information about the rainfall-runoff relations during periods when synoptic samples were collected, and about orographic controls on precipitation in the lower half of the Redwood Creek drainage basin.

Rainfall was collected in fifteen 11-in (279-mm) capacity Fisher Scientific "clear-vu" storage rain gages[1] and one recording float-type 24-in (610-mm) capacity rain gage. The 15 storage rain gages were mounted vertically without wind shields and in the open except for Harry Wier Creek, Miller Creek, Miller Creek at Mouth, and Lost Man Creek. These exceptions were located within old growth redwood forest. In addition, published daily rainfall values from the standard storage rain gage operated by the U.S. National Oceanic and Atmospheric Administration (1973-74) at Prairie Creek Redwoods State Park were utilized. All 15 storage rain gages were read at least twice a month. Gages at synoptic stream-sampling stations were read approximately hourly during periods of intensive sampling. The limited capacity of the gages, and infrequent servicing of gages at remote stations resulted in some gages overflowing during periods of exceptionally intense rainfall. Some gages were equipped with overflow collection vessels to prevent loss of record from overflow.

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[1]The use of product names in this report is for identification only and does not imply endorsement by the U.S. Geological Survey.

Storage rain gages were rarely read on the same day, rendering comparisons between gages difficult. The rainfall amounts shown in table 5[1] indicate the accumulated rainfall stored in the gages since the preceding measurement. To simplify comparison, monthly totals have been computed by estimating the quantity of rain that fell between observations and the end of the month. These estimates are based upon correlations with rainfall records from the recording gage at Elk Camp and the storage gage at Prairie Creek Redwoods State Park. The percentage of the monthly total rainfall based upon these correlations provides an indication of the reliability of these values.

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[1]Rainfall data listed in this table extend past April 10, 1974, the terminal date of this report, in order to provide the total quantity of rainfall during the 1973-74 rain season.

[All rain gages are storage type. See figure 2 for location of stations. S, indicates start of record. T, indicates trace of rainfall. ≥, indicates rainfall exceeded storage capacity and gage overflowed. Solid line indicates missing record]

| Month | Accumulated rainfall, in inches (upper number, if entered, is time of measurement) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Day | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **STATION A COPPER CREEK** | | | | | | | | | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | S | -- | -- | -- |
| Nov. | -- | -- | -- | -- | -- | -- | -- | -- | -- | ≥11.45 | -- | -- | -- | -- | -- | -- |
| Dec. | -- | -- | -- | -- | 1800 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | 7.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | 1645 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 4.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Feb. | -- | -- | -- | -- | 1300 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | 3.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | -- | -- | 1100 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | 3.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Apr. | -- | -- | 1500 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 16.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| May | -- | 1120 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 2.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **STATION B SHOTGUN PASS** | | | | | | | | | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | | | | S |
| Nov. | -- | -- | -- | -- | -- | -- | -- | -- | 1700 | 0905 | -- | -- | -- | -- | -- | 0920 |
| | -- | -- | -- | -- | -- | -- | -- | -- | ≥11.45 | 1.65 | -- | -- | -- | -- | -- | 10.85 |
| Dec. | -- | -- | -- | 1800 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | 2.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2000 | -- | -- | -- |
| | -- | -- | 4.58 | ——— | ——— | ——— | ——— | ——— | ——— | ——— | ——— | ——— | 1.80 | -- | -- | -- |
| Feb. | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | 11.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | -- | 1145 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 1.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Apr. | -- | -- | 1015 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 12.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| May | -- | 1100 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 2.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **STATION C HARRY WIER CREEK LODGE** | | | | | | | | | | | | | | | | |
| Oct., 1973 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nov. | 1415 | -- | -- | -- | -- | -- | 2115 | 0645 | 1615 | -- | -- | -- | -- | -- | -- | -- |
| | 0.29 | -- | -- | -- | -- | -- | 9.02 | 1.65 | 1.22 | -- | -- | -- | -- | -- | -- | -- |
| Dec. | -- | -- | -- | -- | -- | -- | 1600 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | 3.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2315 | 1600 | 1800 | -- | -- | -- |
| | -- | -- | 1.37 | -- | -- | -- | -- | -- | -- | -- | 0.81 | 0.64 | .99 | -- | -- | -- |
| Feb. | -- | -- | -- | -- | 1850 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | ≥11.45 | -- | -- | -- | .21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | -- | 0830 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 1.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **STATION D ELK CAMP** | | | | | | | | | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | | | | S |
| Nov. | 0 | .06 | .45 | 1.80 | 2.95 | 2.62 | 1.62 | 1.56 | 1.95 | 1.52 | 2.19 | 2.14 | 1.61 | 1.25 | 0.94 | 1.56 |
| Dec. | .85 | .05 | .20 | 0 | .35 | .55 | 1.57 | 0 | 0 | 0 | .74 | 1.10 | 1.64 | .20 | 0 | .98 |
| Jan., 1974 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.65 | 1.12 | 3.50 | 3.10 | 2.66 |
| Feb. | .52 | .02 | 0 | .26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .38 | .01 | .10 | .66 | 1.02 |
| Mar. | .95 | .25 | .66 | .01 | .34 | .98 | 0 | 0 | 0 | .19 | .64 | 1.32 | .40 | .32 | 0 | 0 |
| Apr. | 3.94 | .44 | .14 | 0 | .75 | .13 | 0 | .44 | .32 | .05 | 0 | 0 | 0 | 0 | 0 | 0 |

| Accumulated rainfall, in inches (upper number, if entered, is time of measurement) | | | | | | | | | | | | | | | Monthly total | Percentage of monthly total based on correlation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | | | | | | | | | | | | | | | | |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | |
| STATION A COPPER CREEK--Continued | | | | | | | | | | | | | | | | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.20 | -- | -- | -- | -- | -- | ≥10 | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | ≥11.45 | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | 14.31 | -- | -- | -- | -- | -- | -- | -- | 20 | 7 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1105 | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12.64 | -- | 15 | 6 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 1500 | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.57 | -- | -- | -- | -- | -- | 11 | 24 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | 40 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7 | 60 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| STATION B SHOTGUN PASS--Continued | | | | | | | | | | | | | | | | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.5 | 12 | 14 |
| -- | 0920 | -- | 0915 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0910 | -- | -- | |
| -- | 1.74 | -- | 1.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.81 | -- | 40 | 8 |
| 1030 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8.61 | -- | -- | -- | -- | -- | -- | -- | -- | 6.52 | -- | -- | -- | -- | -- | 21 | 5 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | 1600 | -- | 1500 | -- | -- | -- | -- | -- | 1915 | -- | -- | -- | -- | |
| -- | -- | -- | 6.44 | -- | 1.12 | -- | -- | -- | -- | -- | 2.61 | -- | -- | -- | 11 | 6 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11 | 28 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6 | 52 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| STATION C HARRY WIER CREEK LODGE--Continued | | | | | | | | | | | | | | | | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.6 | ≥9 | -- |
| -- | 0955 | -- | 1235 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1400 | -- | -- | |
| -- | ≥11.45 | -- | 1.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.58 | -- | 34 | 3 |
| 1145 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1240 | -- | -- | -- | -- | |
| 6.18 | -- | -- | -- | 4.20 | -- | -- | -- | -- | -- | -- | 3.99 | -- | -- | -- | 19 | 4 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 17 | 2 |
| -- | -- | -- | 1700 | -- | 1500 | -- | -- | -- | -- | -- | 1810 | -- | -- | -- | -- | |
| -- | -- | -- | 6.50 | -- | 1.04 | -- | -- | -- | -- | -- | 3.02 | -- | -- | -- | 11 | 0 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| STATION D ELK CAMP--Continued | | | | | | | | | | | | | | | | |
| 0 | 0 | 0.26 | .63 | 2.10 | -- | 5.39 | .68 | 0 | 0 | 0 | .41 | 0 | 0 | .64 | ≥10 | -- |
| .80 | .17 | 0 | 1.38 | .60 | .23 | .11 | .88 | .14 | .59 | 1.04 | .39 | 2.09 | 3.11 | -- | 36 | 0 |
| 1.20 | 0 | .42 | 2.89 | 1.10 | .69 | .61 | 1.02 | .03 | .90 | 1.50 | .54 | 1.63 | 0 | 0 | 21 | 0 |
| 0 | 1.95 | .29 | 0 | 0 | 0 | 0 | 0 | .15 | .13 | 0 | .04 | .01 | .02 | 2.23 | 17 | 0 |
| .16 | 1.45 | -- | -- | 3.95 | .26 | 0 | 0 | .11 | .77 | .33 | 1.83 | -- | -- | -- | 12 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .34 | .33 | .98 | .28 | 4.91 | 1.61 | 1.20 | 16 | 0 |
| .05 | .28 | 0 | 0 | 0 | .11 | .08 | .06 | .14 | 0 | 0 | 0 | 0 | 0 | -- | 7 | 0 |

| Month | Accumulated rainfall, in inches (upper number, if entered, is time of measurement) — Day 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11482225 HARRY WIER CREEK NEAR ORICK** | | | | | | | | | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | | | | |
| Nov. | -- | -- | -- | -- | -- | -- | 2335 | 2400 | 1345 | -- | -- | -- | -- | -- | -- | -- |
| | 0.29 | -- | -- | -- | -- | -- | 10.36 | 2.19 | 1.20 | -- | -- | -- | -- | -- | -- | -- |
| Dec. | -- | -- | -- | -- | -- | -- | 1555 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | 4.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2400 | 2400 | 1745 | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.53 | 0.91 | 1.02 | -- | -- | -- |
| Feb. | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | 2400 | 2400 | 1030 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 1.17 | 0.49 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **STATION E M-LINE AND G-LINE** | | | | | | | | | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | | | | S |
| Nov. | -- | -- | -- | -- | -- | -- | 2015 | -- | -- | -- | -- | -- | -- | -- | -- | 0940 |
| | -- | -- | -- | -- | -- | -- | 10.74 | -- | -- | -- | -- | -- | -- | -- | -- | ≥11.45 |
| Dec. | -- | 1600 | -- | -- | -- | -- | 1500 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | ≥11.45 | -- | -- | -- | -- | 2.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | 1210 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1940 | -- | -- | -- |
| | -- | -- | 4.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.56 | 1.94 | | |
| Feb. | -- | -- | -- | -- | 1320 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | 4.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | -- | 1120 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 1.73 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Apr. | -- | 1500 | 1040 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 15.62 | .19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| May | -- | 1040 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | .37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **STATION F A-LINE** | | | | | | | | | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | | | | S |
| Nov. | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0740 | -- | -- | -- | -- | -- | 1620 |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | ≥11.45 | -- | -- | -- | -- | -- | 9.80 |
| Dec. | -- | 1730 | -- | 1800 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 9.86 | -- | 0.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | 1300 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2035 | -- | -- | -- |
| | -- | -- | 2.40 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.59 | -- | -- | -- |
| Feb. | -- | -- | -- | -- | 1445 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | 10.79 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | -- | 1150 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 1.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Apr. | -- | -- | 1338 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 14.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| May | -- | 0945 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 2.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **STATION G C-LINE NEAR MILLER CREEK** | | | | | | | | | | | | | | | | |
| Nov., 1973 | -- | -- | -- | -- | -- | -- | 1930 | 1030 | 1040 | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | 10.08 | .80 | .60 | | | | | | | |
| Jan., 1974 | -- | -- | 1545 | -- | -- | -- | -- | -- | -- | -- | 2320 | 2330 | 0915 | -- | -- | -- |
| | | | 1.70 | -- | -- | -- | -- | -- | -- | -- | .23 | .84 | .97 | | | |
| Feb. | -- | -- | -- | -- | 1300 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| Accumulated rainfall, in inches (upper number, if entered, is time of measurement) | | | | | | | | | | | | | | | | Percentage of monthly total based on correlation |
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| 11482325 HARRY WIER CREEK NEAR ORICK--Continued | | | | | | | | | | | | | | | | |
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| 11482250 MILLER CREEK NEAR ORICK--Continued | | | | | | | | | | | | | | | | |
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| **11482260 MILLER CREEK AT MOUTH NEAR ORICK** | | | | | | | | | | | | | | | | |
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| **11482330 HAYES CREEK NEAR ORICK** | | | | | | | | | | | | | | | | |
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| **11482450 LOST MAN CREEK NEAR ORICK** | | | | | | | | | | | | | | | | |
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| 1135 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| .38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.00 | -- | -- | 10 | 0 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | ≥11.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 30 | 5 |
| -- | -- | -- | -- | 1425 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | 9.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | | | | | | | | | | | | | | -- | |
| -- | -- | -- | 1700 | 2115 | 0900 | -- | -- | -- | 1100 | -- | 1900 | -- | -- | -- | -- | |
| -- | -- | -- | 16.10 | .78 | .23 | -- | -- | -- | .97 | -- | 1.92 | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 16 | 34 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6 | 72 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table 5.--

| Month | Accumulated rainfall, in inches (upper number, if entered, is time of measurement) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Day | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | STATION J HOLTER RIDGE | | | | | | | | |
| Oct., 1973 | | | | | | | | | | | | | S | -- | -- | -- |
| Nov. | -- | -- | -- | -- | -- | -- | 2045 | 1450 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | 9.38 | 1.35 | -- | -- | -- | -- | -- | -- | -- | -- |
| Dec. | -- | -- | 1415 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 6.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | 1520 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 5.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Feb. | -- | -- | -- | -- | 1200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | 2.70 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | -- | -- | 1600 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | 12.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Apr. | -- | -- | 1430 | -- | 1500 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 5.14 | -- | .76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | | | | STATION K UPPER LITTLE LOST MAN CREEK | | | | | | | | |
| Oct., 1973 | | | | | | | | S | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nov. | -- | -- | -- | -- | -- | -- | 2025 | 1225 | 1540 | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | 3.66 | 1.34 | 1.15 | -- | -- | -- | -- | -- | -- | -- |
| Dec. | -- | -- | 1400 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 5.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | 1450 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 4.87 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.70 | | | |
| Feb. | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | 1615 | 1225 | 1045 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 0.64 | 0.68 | .32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Apr. | -- | -- | 1415 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | 5.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| May | -- | 1600 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 1.97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | | | | 11482470 LITTLE LOST MAN CREEK NEAR ORICK | | | | | | | | |
| Oct., 1973 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1550 |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.35 |
| Nov. | -- | -- | -- | -- | -- | -- | -- | 1015 | 1135 | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | -- | 9.43 | .99 | -- | -- | -- | -- | -- | -- | -- |
| Dec. | 5.80 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Jan., 1974 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2200 | 2015 | 0510 | -- | -- | -- |
| | | | .04 | -- | -- | -- | -- | -- | -- | -- | 0.51 | 0.40 | .33 | | | |
| Feb. | -- | -- | -- | -- | 0950 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | .90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mar. | -- | 2200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | .86 | .62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Accumulated rainfall, in inches (upper number, if entered, is time of measurement) | | | | | | | | | | | | | | | | Percentage of monthly total based on correlation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | | | | | | | | | | | | | | | Monthly total | |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | |
| STATION J HOLTER RIDGE--Continued | | | | | | | | | | | | | | | | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.70 | -- | -- | -- | 11 | 9 |
| -- | 1135 | -- | -- | -- | -- | -- | -- | -- | -- | 1015 | -- | -- | -- | -- | -- | |
| -- | ≥11.45 | -- | -- | -- | -- | -- | -- | -- | -- | 5.92 | -- | -- | -- | -- | 33 | 19 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | ≥11.45 | -- | -- | -- | -- | -- | -- | -- | 21 | 44 |
| -- | -- | -- | -- | 1240 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | 13.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 15 | 10 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12 | 27 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1340 | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13.02 | -- | 16 | 15 |
| -- | 1650 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | 1.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7 | 5 |
| STATION K UPPER LITTLE LOST MAN CREEK--Continued | | | | | | | | | | | | | | | | |
| 1445 | -- | -- | -- | -- | -- | 1330 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 0.36 | -- | -- | -- | -- | -- | 7.54 | -- | -- | -- | -- | -- | -- | -- | -- | 9 | 15 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 1500 | -- | 1210 | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | ≥11.45 | -- | 1.91 | -- | -- | -- | 29 | 21 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | ≥11.45 | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | | | | | | | | | | | | | | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2200 | -- | -- | -- | -- | |
| | | | | | | | | | | | 3.23 | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1315 | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12.34 | -- | 14 | 3 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 5 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued | | | | | | | | | | | | | | | | |
| -- | -- | -- | -- | -- | -- | 1305 | -- | 1055 | -- | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | 5.89 | -- | 1.21 | -- | -- | -- | -- | -- | -- | -- | |
| -- | 1100 | -- | -- | -- | -- | -- | -- | -- | -- | 1100 | -- | -- | -- | -- | -- | |
| -- | 11.23 | -- | -- | -- | -- | -- | -- | -- | -- | 4.79 | -- | -- | -- | -- | 30 | 6 |
| -- | -- | -- | -- | 9.47 | | | | | | | | | | | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | | | | | | | | | | | | | | -- | |
| -- | -- | -- | 1605 | -- | 1130 | -- | -- | -- | 1200 | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | 5.27 | -- | 1.00 | -- | -- | -- | 1.15 | -- | -- | -- | -- | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1315 | -- | -- | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12.34 | -- | -- | |

## Water Temperature

Physical events, chemical reactions, and life processes are all influenced by the temperature of water. The viscosity of water is a physical phenomenon, inversely related to temperature, that influences the sediment-carrying capacity of water. A stream with higher water temperature will carry less suspended sediment than would a stream with lower water temperature, all other conditions being equal (Guy, 1970, p. 19). Chemical reactions such as the solubility of elements and compounds in water are, in part, temperature dependent. A well-known example is the inverse relation between the solubility of oxygen and the water temperature. Life processes or biochemical reactions are temperature controlled. Increasing water temperature causes the metabolic rate of most aquatic organisms to increase; in contrast, the increased water temperature decreases the quantity of dissolved oxygen available to meet the oxygen need of the organisms. Temperature extremes may be lethal to aquatic organisms.

Water temperature (table 6) was measured in the field using a hand-held mercury-filled thermometer calibrated to ±0.2°C (degrees Celsius). In recording the water temperature, each thermometer was submersed in the estimated centroid of flow of each stream for a 60-second stabilization period, and read to the nearest 0.5°C while still submersed.

## Stage

Stage (gage height) is the water-surface elevation referred to an arbitrary gage datum. Gage-height records are used in developing stage-discharge relations of streams. The significance of the stage-discharge relation will be described in the discussion of stream discharge.

Stages listed in table 6 were obtained, for the most part, from continuous recording gages, staff gages, and surveyed reference marks.

## Stream Discharge

Stream discharge is the volume of water (water plus suspended solids) that passes a given point in the channel within a given period of time. Stream discharge is usually expressed in cubic feet per second. Sediment transport of a stream is influenced, in part, by discharge. As stream discharge increases, the ability of the stream to transport suspended sediment and bedload increases. Changes in discharge may also profoundly affect the distribution and abundance of aquatic organisms.

Instantaneous discharge is the stream discharge at a particular instant of time. Instantaneous discharges listed in this report (tables 6-10) are of four types: (1) Actual discharge measurements (current-meter method); (2) estimated discharge measurements (float method); (3) stage-discharge relation; and (4) hydrographic synthesis. The current meter and float methods are onsite stream-discharge measurements made by the techniques outlined by Buchanan and Somers (1969). Stage-discharge relation and hydrographic synthesis techniques are office computations using discharge and gage-height data obtained from field measurements. The stage-discharge relation is expressed as a rating curve and is developed by plotting current-meter measurements versus gage heights obtained during the discharge measurement. Rating curves were developed for each site whenever sufficient data were collected. Techniques for developing a stage-discharge relation are outlined by Carter and Davidian (1965). Instantaneous discharges were obtained from the rating curves for times when gage heights from automatic stage recorders are known. Hydrographic synthesis consists of estimating hydrographs, continuous curves of discharge versus time, for sampling sites by using current-meter measurements and well-defined hydrographs from similar, nearby sampling sites. Discharges from current-meter measurements and discharges related to observed gage-heights are plotted on graph paper. A continuous curve (hydrograph) is drawn through these points, following the shape of known, concurrent, and complete hydrographs.

## Turbidity

Turbidity of a solution is a light-scattering phenomenon. The turbidity of a sample is the reduction of transparency due to the presence of particulate matter. Suspended materials such as clay, silt, microscopic organisms, and other finely divided organic and inorganic matter all cause turbidity. Turbidity affects esthetic properties, and light penetration through water, and the well-being of aquatic organisms.

Turbidity was measured in the laboratory from water samples collected for analysis of suspended sediment. A Hach model 2100A turbidity meter was used to measure turbidity (table 6) following the procedures and calculations described by Brown and others (1970, p. 156). All samples collected after November 9, 1973, were analyzed in the field laboratory in Eureka, Calif. Samples taken prior to November 9, 1973, were analyzed in the Geological Survey sediment laboratory in Sacramento, Calif. Due to a difference in analytical procedures, turbidity readings over 100 Jackson turbidity units (JTU) may be slightly low for those samples collected prior to November 9, 1973.

## Sediment

Sediment is solid material that originates mostly from disintegrated rock, but also includes organic material and chemical and biochemical precipitates that are transported or deposited by a stream. Suspended sediment is the particulate matter that at any given time is maintained in suspension by upward components of stream turbulence, or suspended as colloids. Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the zone between the water surface and about 0.3 ft (0.09 m) above the streambed, expressed as milligrams of dry sediment per litre of water-sediment mixture. Bedload is sediment that is transported by rolling, sliding, or bouncing along the streambed. Sediment discharge of both suspended sediment and bedload is expressed as the rate, in tons, of dry sediment transported per day past a given point.

The quantity and particle-size distribution of sediment are a function of the nature of the eroding materials and the erosional processes operating in a drainage basin. Physical and biological processes in the aquatic environment are influenced strongly by sediment. For example, if light penetration is obstructed by suspended sediment, photosynthesis may be inhibited. Sediment can also be deleterious to aquatic organisms because of direct burial, abrasive action on living tissue, and impeding percolation of oxygenated water into and through streambed gravel environments.

Suspended-sediment samples were collected manually using depth-integrating samplers or automatically by a single-stage sampler, according to methods described by Guy and Norman (1970). The results of the sediment analyses are listed in table 6. Depth-integrated samples were collected using either a D-49 or DH-48 sampler and either the equal-transit-rate (ETR) or the centroids-of-equal discharge increments (EDI) sampling methods.

Single-stage samples were collected at selected synoptic and nonsynoptic sites. The single-stage samplers collect samples of storm runoff that could not otherwise be sampled because of manpower limitations. Data collected by the single-stage samplers are useful in comparing suspended-sediment concentrations between different subbasins during storm events. The samplers are from the U-59B series as described by the Federal Inter-Agency Sedimentation Project of the Inter-Agency Committee on Water Resources (1961). Determining the date and time that single-stage samples were collected poses a problem because determining when the stream rose past any given sampler nozzle is often difficult. The date and time of the sample collection must be estimated unless someone was present at the moment the sample was collected or a stage recorder is in operation at that site. Dates and times assigned to the single-stage samples in this report were based on the gage-height records from nearby recording stations and are approximate values only. Single-stage samplers, under certain conditions, are susceptible to recirculation, which usually increases total concentration of suspended sediment and the percentage of sand. Those samples that were believed to be enriched by recirculation were not listed in this report. These unlisted data are in the files of the California District Chief, U.S. Geological Survey, Water Resources Division, Menlo Park, Calif., and are available upon request.

Bedload samples were collected using the Helley-Smith pressure-difference bedload sampler. ETR and EDI methods used in taking suspended-sediment samples were modified for bedload measurements according to procedures outlined by Helley and Smith (1971). All bedload rates listed in this report were computed directly from data obtained in the field and weights obtained in the laboratory. Suspended and bedload sediment samples were shipped to the Geological Survey sediment laboratory in Sacramento and analyzed using the procedures described by Guy (1969).

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*

[See figure 2 for location of stations. A, instantaneous discharge measured with current meter. C, preceding time of sample collection indicates that sample was collected automatically with a single-stage sampler. D, datum for single-stage sampler is different than datum for station. E, discharge estimated with a float, or estimated stage]

| DATE | TIME | TEMPERATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTANTANEOUS DISCHARGE ($FT^3/S$) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 02... | 1320 | -- | 5.17 | A11 | -- | -- | -- |
| NOV. | | | | | | | |
| 07... | 1545 | 12.0 | 7.30 | 770 | -- | 1250 | -- |
| 08... | 1540 | 12.0 | 7.48 | 915 | -- | 1470 | -- |
| 09... | 1455 | 13.0 | 7.44 | 882 | -- | 1550 | -- |
| 13... | 1250 | -- | 8.84 | A2220 | -- | -- | -- |
| 13... | 1450 | 9.0 | 8.63 | 2070 | -- | -- | 8800 |
| JAN., 1974 | | | | | | | |
| 12... | 0900 | -- | 6.10 | A271 | -- | -- | -- |
| 12... | 0940 | 5.0 | 6.00 | 218 | 50 | 70 | -- |
| 12... | 0945 | 5.0 | -- | 218 | -- | -- | 133 |
| 13... | 1200 | 8.0 | -- | 504 | 120 | 319 | -- |
| 13... | 1205 | 8.0 | -- | 504 | 125 | 341 | -- |
| 13... | 1600 | 8.0 | -- | 495 | 85 | 197 | -- |
| 13... | 1845 | -- | -- | -- | 55 | 132 | -- |
| 16... | 1400 | -- | 10.46 | A4700 | -- | -- | -- |
| 17... | 1150 | -- | 7.92 | A1600 | -- | -- | -- |
| 17... | 1330 | 8.0 | 7.82 | 1540 | -- | -- | 2630 |
| FEB. | | | | | | | |
| 21... | 0820 | 6.0 | 6.60 | 670 | 170 | 549 | -- |
| 21... | 0840 | -- | 6.62 | A684 | -- | -- | -- |
| 21... | 0855 | 6.0 | 6.60 | 670 | -- | -- | 675 |
| MAR. | | | | | | | |
| 03... | 0900 | 5.0 | 6.82 | 880 | 170 | 520 | -- |
| 03... | 1010 | -- | 6.81 | A862 | -- | -- | -- |
| 03... | 1110 | 5.0 | 6.80 | 860 | -- | -- | 1950 |
| APR. | | | | | | | |
| 03... | 1150 | -- | 6.79 | A1150 | -- | -- | -- |
| 03... | 1315 | 6.5 | 6.70 | 1090 | 370 | 1620 | -- |
| 03... | 1400 | 6.5 | 6.74 | 1120 | -- | -- | 6900 |
| **11482020 REDWOOD CREEK AT REDWOOD VALLEY BRIDGE, NEAR BLUE LAKE** | | | | | | | |
| NOV., 1973 | | | | | | | |
| 09... | 1420 | -- | -- | A1250 | -- | -- | -- |
| 09... | 1710 | 12.0 | -- | -- | -- | -- | 1430 |
| JAN., 1974 | | | | | | | |
| 12... | 1240 | -- | -- | A324 | -- | -- | -- |
| 12... | 1320 | 6.0 | -- | 322 | -- | 160 | -- |
| 12... | 1325 | 6.0 | -- | 322 | -- | -- | 310 |
| FEB. | | | | | | | |
| 20... | 1855 | -- | 9.63 | A2820 | -- | -- | -- |
| MAR. | | | | | | | |
| 02... | 1640 | -- | -- | A1570 | -- | -- | -- |
| 02... | 1720 | 6.5 | -- | -- | 290 | 1070 | -- |
| 02... | 1745 | 6.5 | -- | -- | -- | -- | 6100 |
| **11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK** | | | | | | | |
| NOV., 1973 | | | | | | | |
| 08... | 1030 | -- | -- | -- | 330 | -- | -- |
| 08... | 1220 | 12.0 | -- | A3990 | -- | -- | -- |
| 08... | 1400 | 12.0 | -- | -- | -- | 1900 | -- |
| 08... | 1500 | 12.0 | -- | -- | -- | -- | 5980 |
| MAR., 1974 | | | | | | | |
| 02... | 1005 | -- | -- | A2540 | -- | -- | -- |
| 02... | 1105 | 6.0 | -- | -- | 300 | 1240 | -- |
| 02... | 1130 | 6.0 | -- | -- | -- | -- | 4100 |
| **11482140 HIGH-SLOPE SCHIST CREEK NEAR ORICK** | | | | | | | |
| DEC., 1973 | | | | | | | |
| 20... | C1700 | -- | 3.41 | -- | 15 | 47 | -- |
| MAR., 1974 | | | | | | | |
| 30... | C1100 | -- | 3.41 | -- | 4 | -- | -- |
| APR. | | | | | | | |
| 01... | C0600 | -- | 3.41 | -- | -- | 95 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | 11482160 COPPER CREEK NEAR ORICK | | | | |
| DEC.. 1973 | | | | | | | |
| 05... | 1400 | -- | 2.61 | A22 | -- | -- | -- |
| 05... | 1415 | 10.0 | 2.42 | 22 | 90 | 164 | -- |
| 05... | 1430 | 10.0 | 2.42 | 23 | -- | -- | .27 |
| 20... | C1600 | -- | 3.41 | 57 | 600 | 2000 | -- |
| 20... | C1630 | -- | 5.21 | 130 | 1100 | 4560 | -- |
| 20... | C1700 | -- | 5.81 | 160 | 2400 | 10300 | -- |
| 24... | 1150 | -- | 2.50 | A29 | -- | -- | -- |
| 27... | C2100 | -- | 3.41 | 57 | 700 | 1060 | -- |
| 27... | C2130 | -- | 5.21 | 130 | 1700 | 7750 | -- |
| 27... | C2200 | -- | 5.81 | 160 | 1600 | 7410 | -- |
| JAN.. 1974 | | | | | | | |
| 30... | 1130 | 7.0 | 1.98 | 4.4 | 10 | 10 | -- |
| 30... | 1140 | -- | -- | A4.4 | -- | -- | -- |
| FEB. | | | | | | | |
| 18... | C2100 | -- | 5.21 | 130 | 1100 | 9480 | -- |
| 18... | C2130 | -- | 5.81 | 160 | 1100 | 5190 | -- |
| 26... | 1330 | 7.5 | 3.88 | 40 | 160 | 330 | -- |
| 26... | 1350 | -- | 2.85 | A37 | -- | -- | -- |
| 28... | C1400 | -- | 5.21 | 130 | -- | 7770 | -- |
| | | | 11482190 SLIDE CREEK NEAR ORICK | | | | |
| NOV.. 1973 | | | | | | | |
| 10... | 1120 | 11.0 | 3.10 | 75 | -- | 572 | -- |
| DEC. | | | | | | | |
| 05... | 1615 | -- | 2.55 | 12 | 30 | 50 | -- |
| 05... | 1620 | -- | 2.55 | 12 | -- | -- | 2.8 |
| 05... | 1700 | -- | 2.55 | A12 | -- | -- | -- |
| JAN.. 1974 | | | | | | | |
| 16... | C1600 | -- | 3.31 | 120 | 480 | 2110 | -- |
| FEB. | | | | | | | |
| 05... | 1430 | 7.0 | 2.45 | 5.6 | 10 | 11 | -- |
| 05... | 1540 | -- | 2.45 | A5.6 | -- | -- | -- |
| 19... | 1425 | -- | 2.88 | A37 | -- | -- | -- |
| 19... | 1450 | -- | 2.90 | 40 | 60 | 277 | -- |
| 21... | 1700 | 8.0 | 2.25 | A19 | 30 | 60 | -- |
| MAR. | | | | | | | |
| 30... | C1100 | -- | 3.31 | -- | 450 | -- | -- |
| | | | 11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK | | | | |
| NOV.. 1973 | | | | | | | |
| 07... | 1720 | 12.0 | 8.81 | 3000 | 170 | 1280 | -r |
| 07... | 1730 | 12.0 | 8.80 | 2990 | -- | -- | 4420 |
| 08... | 1030 | -- | 12.01 | A6190 | -- | -- | -- |
| 08... | 1155 | 12.5 | 11.65 | 5590 | 180 | 2150 | -- |
| 08... | 1210 | 12.5 | -- | -- | 170 | 2280 | -- |
| 08... | 1230 | 12.5 | 11.54 | 5460 | -- | -- | 16000 |
| 09... | 1345 | 12.5 | 9.49 | 3540 | 140 | 1170 | -- |
| 16... | 1240 | -- | 11.40 | A5340 | -- | -- | -- |
| 16... | 1335 | 11.0 | 11.58 | 5510 | 170 | 1520 | -- |
| 16... | 1420 | 11.0 | 11.40 | 5340 | -- | -- | 7120 |
| 30... | 1415 | -- | 14.82 | A10100 | -- | -- | -- |
| 30... | 1500 | -- | E14.81 | 10100 | -- | -- | 5110 |
| 30... | 1530 | -- | 14.55 | 9600 | 1000 | 3940 | -- |
| JAN.. 1974 | | | | | | | |
| 12... | 1500 | -- | 5.35 | A773 | -- | -- | -- |
| 12... | 1600 | 7.0 | 5.38 | 779 | 55 | 315 | -- |
| 12... | 1700 | 7.0 | 5.40 | 787 | -- | -- | 251 |
| 13... | 0200 | 7.5 | 5.48 | 820 | 70 | 475 | -- |
| 13... | 0830 | -- | 5.77 | A913 | -- | -- | -- |
| 13... | 1045 | 8.0 | 5.76 | 940 | 90 | 484 | -- |
| 13... | 1130 | 8.0 | 5.80 | 959 | -- | -- | 1500 |
| 17... | 1300 | -- | 11.40 | A4990 | -- | -- | -- |
| 17... | 1450 | 9.5 | 11.14 | 5040 | -- | -- | 10200 |
| 22... | 0945 | -- | 7.14 | A2240 | -- | -- | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK--Continued** | | | | | | | |
| FEB. | | | | | | | |
| 20... | 2100 | 8.0 | 8.26 | 2590 | 190 | 1070 | -- |
| 21... | 0500 | -- | 8.02 | 2400 | 180 | 893 | -- |
| 21... | 1015 | -- | 8.14 | A2590 | -- | -- | -- |
| 21... | 1210 | 8.0 | 8.24 | 2580 | 180 | 952 | -- |
| 21... | 1300 | 8.0 | 8.33 | 2440 | -- | -- | 1720 |
| 21... | 1810 | -- | 8.27 | A2530 | -- | -- | -- |
| 21... | 1930 | 8.0 | 8.29 | 2550 | 200 | 1130 | -- |
| 22... | 1110 | 6.0 | 7.72 | 2150 | 150 | 618 | -- |
| 22... | 1145 | 6.0 | 7.79 | 2140 | -- | -- | 1100 |
| MAR. | | | | | | | |
| 01... | 1625 | -- | 10.46 | A4750 | -- | -- | -- |
| 01... | 1730 | 7.5 | 10.39 | 4720 | 800 | 2840 | -- |
| 02... | 0330 | 7.0 | 9.62 | 3640 | 310 | 1320 | -- |
| 02... | 1045 | -- | 9.24 | A3310 | -- | -- | -- |
| 02... | 1200 | 6.5 | 9.14 | 3250 | 280 | 1150 | -- |
| 02... | 1215 | 6.5 | 9.11 | 3240 | -- | -- | 12700 |
| **11482210 BRIDGE CREEK NEAR ORICK** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 2.91 | 300 | 1600 | 5400 | -- |
| NOV. | | | | | | | |
| 08... | C0400 | -- | 4.61 | 720 | 1800 | 4170 | -- |
| DEC. | | | | | | | |
| 04... | 1310 | -- | 2.50 | 216 | 30 | 124 | -- |
| 04... | 1320 | -- | 2.50 | A216 | -- | -- | 100 |
| 28... | 1140 | -- | -- | A231 | -- | -- | -- |
| FEB., 1974 | | | | | | | |
| 01... | 1240 | 8.5 | 1.90 | 112 | 15 | 56 | -- |
| 01... | 1325 | -- | -- | A112 | -- | -- | -- |
| 21... | 1740 | -- | -- | A173 | -- | -- | -- |
| 21... | 1800 | -- | 2.15 | 173 | 20 | 74 | -- |
| MAR. | | | | | | | |
| 30... | C1100 | -- | 4.61 | -- | 1500 | 5560 | -- |
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK** | | | | | | | |
| NOV., 1973 | | | | | | | |
| 09... | 0850 | -- | 10.00 | A3640 | -- | -- | -- |
| 09... | 1000 | 10.5 | 10.00 | 3640 | -- | -- | 4300 |
| 09... | 1020 | 10.5 | 10.00 | 3640 | -- | 1510 | -- |
| JAN., 1974 | | | | | | | |
| 12... | 1215 | -- | 8.05 | A891 | -- | -- | -- |
| 12... | 1300 | -- | -- | 850 | 45 | 119 | -- |
| 13... | 1700 | -- | 8.39 | A1200 | -- | -- | -- |
| 13... | 1750 | 9.0 | 8.39 | 1200 | 140 | 373 | -- |
| FEB. | | | | | | | |
| 20... | 1840 | -- | 9.64 | 2790 | -- | -- | -- |
| 20... | 1945 | -- | 9.62 | -- | 180 | 843 | -- |
| 22... | 1015 | -- | 9.37 | A2450 | -- | -- | -- |
| 22... | 1230 | 6.0 | 9.35 | -- | 150 | 556 | -- |
| 22... | 1415 | -- | E9.35 | -- | -- | -- | 6620 |
| APR. | | | | | | | |
| 01... | 1600 | 9.5 | 15.30 | A13400 | -- | -- | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | 11482225 HARRY WIER CREEK NEAR ORICK | | | | |
| SEP., 1973 | | | | | | | |
| 18... | 1210 | 12.5 | .78 | -- | -- | 2890 | -- |
| 18... | 1523 | 11.5 | 2.32 | -- | -- | 16300 | -- |
| OCT. | | | | | | | |
| 23... | C1130 | -- | D4.11 | -- | -- | 6970 | -- |
| NOV. | | | | | | | |
| 05... | C1100 | -- | D2.71 | -- | -- | 1920 | -- |
| 05... | C1130 | -- | D4.11 | -- | -- | 2030 | -- |
| 07... | 1625 | 11.5 | 8.45 | 78 | -- | -- | 30 |
| 07... | 1630 | 11.5 | 8.45 | 78 | 100 | 225 | -- |
| 07... | 1805 | -- | 8.50 | A82 | -- | -- | -- |
| 07... | 1840 | 11.5 | 8.55 | 85 | 110 | 524 | -- |
| 07... | 2215 | 12.0 | 8.95 | 129 | 180 | 1260 | -- |
| 07... | 2230 | -- | 8.96 | A122 | -- | -- | -- |
| 07... | 2235 | 12.0 | 8.98 | 126 | 160 | 1470 | -- |
| 08... | 0020 | 12.0 | 9.12 | 136 | 130 | 731 | -- |
| 08... | 0205 | -- | 9.52 | A206 | -- | -- | -- |
| 08... | 0235 | 12.0 | 9.75 | 230 | 180 | 2070 | -- |
| 08... | 0330 | 12.0 | 10.11 | 278 | 190 | 1690 | -- |
| 08... | 0510 | -- | 10.44 | A217 | -- | -- | -- |
| 08... | 0530 | 12.0 | 10.34 | 212 | 140 | 901 | -- |
| 08... | 0550 | 12.0 | 10.30 | 210 | -- | -- | 77 |
| 08... | 0820 | -- | 9.88 | A148 | -- | -- | -- |
| 08... | 0850 | 11.5 | 9.84 | 145 | 110 | 646 | -- |
| 08... | 1220 | -- | 9.44 | A126 | -- | -- | -- |
| 08... | 1245 | 12.0 | 9.40 | 123 | 95 | 459 | -- |
| 08... | 1300 | 12.0 | 9.38 | 120 | -- | -- | 259 |
| 08... | 1400 | 11.5 | 9.34 | 112 | -- | -- | 85 |
| 08... | 1440 | -- | 9.34 | A108 | -- | -- | -- |
| 08... | 1500 | 12.0 | 9.34 | 105 | 95 | 396 | -- |
| 08... | 1730 | -- | 9.30 | 106 | -- | -- | -- |
| 08... | 1750 | 12.0 | E9.20 | 98 | 80 | 333 | -- |
| 08... | 2320 | -- | 9.12 | A95 | -- | -- | -- |
| 08... | 2350 | 12.0 | 9.10 | 95 | 70 | 245 | -- |
| 09... | 0840 | -- | 8.93 | A86 | -- | -- | -- |
| 09... | 0900 | 12.0 | 8.92 | 86 | 65 | 171 | -- |
| 09... | 1120 | -- | 9.00 | A82 | -- | -- | -- |
| 09... | 1145 | 12.0 | 9.00 | 79 | 70 | 183 | -- |
| 09... | 1315 | -- | 8.78 | A66 | -- | -- | -- |
| 30... | C1930 | -- | D4.11 | -- | -- | 2080 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2230 | -- | 8.16 | A8.4 | -- | -- | -- |
| 11... | 2255 | 6.5 | 8.17 | 8.6 | 20 | 33 | -- |
| 12... | 0045 | 6.5 | 8.20 | 10 | 30 | 42 | -- |
| 12... | 0130 | -- | 8.20 | A9.7 | -- | -- | -- |
| 12... | 0200 | 6.5 | 8.20 | 11 | 85 | 113 | -- |
| 12... | 0420 | -- | 8.20 | A10 | -- | -- | -- |
| 12... | 0435 | 6.5 | 8.20 | 10 | 65 | 57 | -- |
| 12... | 0805 | -- | 8.19 | A8.4 | -- | -- | -- |
| 12... | 0835 | 6.5 | 8.18 | 8.5 | 30 | 23 | -- |
| 12... | 1130 | 6.0 | 8.16 | 8.2 | 20 | 13 | -- |
| 12... | 1430 | 7.5 | 8.24 | 13 | 35 | 48 | -- |
| 12... | 1500 | -- | 8.28 | A13 | -- | -- | -- |
| 12... | 1630 | 7.5 | 8.28 | 14 | 95 | 140 | -- |
| 12... | 1815 | -- | 8.26 | A12 | -- | -- | -- |
| 12... | 2250 | -- | 8.22 | A10 | -- | -- | -- |
| 12... | 2315 | 7.0 | 8.22 | 11 | 20 | 15 | -- |
| 13... | 0115 | 8.5 | 8.32 | 17 | 45 | 78 | -- |
| 13... | 0915 | 8.5 | 8.58 | 39 | 160 | 215 | -- |
| 13... | 1020 | -- | 8.54 | A34 | -- | -- | -- |
| 13... | 1200 | 8.5 | 8.48 | 30 | 55 | 85 | -- |
| 13... | 1325 | -- | 8.46 | A29 | -- | -- | -- |
| 13... | 1345 | 9.0 | 8.44 | 28 | 40 | 62 | -- |
| 13... | 1445 | 9.0 | 8.44 | 27 | 35 | 56 | -- |
| 13... | 1830 | 9.0 | 8.40 | 23 | 20 | 44 | -- |
| 15... | C2100 | -- | D2.71 | -- | -- | 1430 | -- |
| 15... | C2130 | -- | D4.11 | -- | -- | 1740 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPERATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTANTANEOUS DISCHARGE (FT³/S) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | 11482225 HARRY WIER CREEK NEAR ORICK--Continued | | | | |
| FEB. | | | | | | | |
| 20... | 1745 | 8.0 | 8.54 | 38 | 20 | 36 | -- |
| 20... | 1835 | -- | 8.54 | A37 | -- | -- | -- |
| 20... | 2100 | 8.0 | 8.54 | 37 | 20 | 40 | -- |
| 20... | 2120 | -- | 8.54 | A37 | -- | -- | -- |
| 21... | 0100 | 8.0 | 8.52 | 35 | 15 | 34 | -- |
| 21... | 0245 | 8.0 | 8.50 | 34 | -- | -- | .63 |
| 21... | 0445 | 8.0 | 8.49 | 33 | 15 | 34 | -- |
| 21... | 0805 | -- | 8.60 | A41 | -- | -- | -- |
| 21... | 0840 | 8.0 | 8.60 | 48 | 30 | 108 | -- |
| 21... | 0850 | 8.0 | 8.60 | 50 | -- | -- | .94 |
| 21... | 1020 | 8.0 | 8.58 | 52 | 80 | 141 | -- |
| 21... | 1130 | -- | 8.52 | A50 | -- | -- | -- |
| 21... | 1200 | 8.0 | 8.53 | 49 | 45 | 74 | -- |
| 21... | 1400 | 8.0 | 8.51 | 46 | 20 | 46 | -- |
| 21... | 1535 | -- | 8.46 | A44 | -- | -- | -- |
| 21... | 1715 | 8.0 | 8.44 | 42 | 15 | 29 | -- |
| 21... | 1730 | 8.0 | 8.44 | 42 | -- | -- | 1.3 |
| 21... | 1900 | -- | 8.41 | A40 | -- | -- | -- |
| 21... | 2030 | 8.8 | 8.41 | 39 | 20 | 27 | -- |
| 21... | 2220 | -- | 8.41 | A37 | -- | -- | -- |
| 22... | 0030 | 7.0 | 8.40 | 36 | 15 | 31 | -- |
| 22... | 0335 | 7.0 | 8.39 | 34 | 15 | 24 | -- |
| 22... | 0500 | -- | 8.39 | A33 | -- | -- | -- |
| 22... | 0740 | 6.5 | 8.38 | 31 | 15 | 21 | -- |
| 22... | 0930 | 7.0 | 8.40 | 31 | 20 | 24 | -- |
| 22... | 1020 | -- | 8.38 | A28 | -- | -- | -- |
| 22... | 1045 | 7.0 | 8.38 | 29 | -- | -- | .47 |
| 22... | 1450 | -- | E8.36 | 26 | 10 | 21 | -- |
| 28... | C1400 | -- | D2.71 | -- | -- | 568 | -- |
| 28... | 1915 | 7.5 | 8.48 | 47 | 35 | 65 | -- |
| 28... | 1940 | -- | 8.44 | A46 | -- | -- | -- |
| 28... | 2215 | 8.0 | 8.28 | 44 | 25 | 55 | -- |
| 28... | 2315 | -- | 8.26 | A43 | -- | -- | -- |
| MAR. | | | | | | | |
| 01... | 0045 | 8.0 | 8.20 | 41 | -- | -- | 1.5 |
| 01... | 0150 | 8.0 | 8.19 | 40 | 20 | 68 | -- |
| 01... | 0300 | -- | 8.19 | A39 | -- | -- | -- |
| 01... | 0500 | 7.5 | 8.17 | 38 | 20 | 26 | -- |
| 01... | 0720 | 8.0 | 8.18 | 40 | 20 | 34 | -- |
| 01... | 0825 | 8.0 | 8.30 | 55 | 70 | 139 | -- |
| 01... | 0835 | 8.0 | 8.34 | 57 | -- | -- | 8.2 |
| 01... | 0910 | -- | 8.37 | A64 | -- | -- | -- |
| 01... | 0930 | 8.0 | 8.32 | 61 | 220 | 377 | -- |
| 01... | 1030 | 7.5 | 8.30 | 52 | 90 | 157 | -- |
| 01... | 1255 | -- | 8.27 | A44 | -- | -- | -- |
| 01... | 1400 | 8.0 | 8.24 | 45 | -- | -- | 4.9 |
| 01... | 1415 | 8.0 | 8.25 | 46 | 35 | 178 | -- |
| 01... | 1630 | -- | 8.39 | A58 | -- | -- | -- |
| 01... | 1700 | 7.5 | 8.40 | 57 | 40 | 57 | -- |
| MAR., 1974 | | | | | | | |
| 01... | 1910 | 7.0 | 8.37 | 51 | 65 | 105 | -- |
| 01... | 1930 | -- | 8.37 | A52 | -- | -- | -- |
| 01... | 2240 | 7.0 | 8.30 | 46 | 35 | 53 | -- |
| 01... | 2255 | -- | 8.30 | A45 | -- | -- | -- |
| 02... | 0305 | -- | 8.27 | A45 | -- | -- | -- |
| 02... | 0310 | 7.0 | 8.27 | 45 | 80 | 121 | -- |
| 02... | 0515 | -- | 8.24 | A42 | -- | -- | -- |
| 02... | 0525 | 7.0 | 8.24 | 43 | 20 | 37 | -- |
| 02... | 0805 | -- | 8.21 | A41 | -- | -- | -- |
| 02... | 0815 | 7.0 | 8.20 | 42 | 35 | 23 | -- |
| 02... | 1125 | -- | 8.20 | A45 | -- | -- | -- |
| 02... | 1140 | 7.0 | 8.20 | 41 | 15 | 25 | -- |
| 02... | 1440 | -- | 8.21 | A44 | -- | -- | -- |
| 02... | 1450 | 7.0 | E8.22 | 45 | 25 | 39 | -- |
| 02... | 1510 | -- | 8.22 | 45 | -- | -- | 2.1 |
| 02... | 1750 | -- | 8.21 | A44 | -- | -- | -- |
| 02... | 1800 | 7.0 | 8.21 | 43 | 25 | 36 | -- |
| 02... | 2200 | 7.0 | 8.20 | 43 | 20 | 44 | -- |
| 02... | 2330 | 7.0 | 8.19 | 43 | 15 | 29 | -- |
| 03... | 0110 | -- | 8.19 | A42 | -- | -- | -- |
| 03... | 0415 | -- | 8.18 | A41 | -- | -- | -- |
| 03... | 0430 | 7.0 | 8.18 | 40 | 15 | 22 | -- |
| 03... | 0755 | -- | 8.15 | A37 | -- | -- | -- |
| 03... | 0805 | 6.0 | 8.15 | 37 | 15 | 27 | .00 |
| 30... | C1100 | -- | D2.71 | -- | -- | 560 | -- |
| 30... | C1130 | -- | D4.11 | -- | -- | 1170 | -- |
| APR. | | | | | | | |
| 01... | 1515 | 10.0 | 13.24 | -- | 190 | 680 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPERATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTANTANEOUS DISCHARGE ($FT^3/S$) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | **11482230 TOM MCDONALD CREEK NEAR ORICK** | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 2.21 | 142 | -- | 1540 | -- |
| NOV. | | | | | | | |
| 06... | C1800 | -- | 2.21 | 142 | -- | 906 | -- |
| 08... | C0430 | -- | 3.91 | 640 | 270 | 848 | -- |
| 30... | C1800 | -- | 2.21 | 142 | 60 | 302 | -- |
| DEC. | | | | | | | |
| 04... | 1515 | -- | 2.21 | 142 | 30 | 153 | -- |
| 04... | 1540 | -- | 2.22 | A133 | -- | -- | -- |
| 04... | 1615 | -- | 2.21 | 142 | -- | -- | 33 |
| JAN., 1974 | | | | | | | |
| 15... | C2100 | -- | 2.21 | 142 | 340 | 1410 | -- |
| 28... | 1345 | 8.0 | 1.78 | 42 | 5 | 20 | -- |
| 28... | 1450 | -- | 1.78 | A42 | -- | -- | -- |
| 31... | 1325 | 9.0 | 1.89 | 65 | 50 | 128 | -- |
| 31... | 1355 | -- | 1.83 | A58 | -- | -- | -- |
| 31... | 1410 | 9.0 | 1.77 | 60 | 50 | 63 | -- |
| FEB. | | | | | | | |
| 18... | C2100 | -- | 2.21 | 142 | 130 | 518 | -- |
| 21... | 1120 | -- | 1.87 | A100 | -- | -- | -- |
| 21... | 1145 | -- | 1.87 | 100 | 50 | 113 | -- |
| 28... | 1110 | -- | 2.05 | A132 | -- | -- | -- |
| 28... | 1120 | -- | 2.02 | 130 | 65 | 228 | -- |
| MAR. | | | | | | | |
| 30... | C1100 | -- | 3.91 | 520 | 320 | 1140 | -- |
| APR. | | | | | | | |
| 02... | 1305 | -- | 3.00 | A241 | -- | -- | -- |
| 02... | 1315 | 9.0 | 2.99 | 240 | 55 | 274 | -- |
| 02... | 1325 | -- | 2.98 | 238 | -- | -- | 132 |
| | | | **11482240 FORTYFOUR CREEK NEAR ORICK** | | | | |
| NOV., 1973 | | | | | | | |
| 30... | C1800 | -- | 5.76 | 110 | 680 | 3110 | -- |
| DEC. | | | | | | | |
| 04... | 1530 | 10.0 | 4.25 | A53 | -- | -- | -- |
| 04... | 1600 | 10.0 | 4.25 | 53 | -- | -- | 4.9 |
| 04... | 1620 | 10.0 | 4.25 | 53 | 15 | 68 | -- |
| 26... | 1445 | -- | .95 | A50 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 28... | 1120 | 8.0 | 3.29 | 22 | 6 | 69 | -- |
| 28... | 1150 | -- | .29 | A22 | -- | -- | -- |
| FEB. | | | | | | | |
| 18... | C2100 | -- | 5.76 | 110 | 470 | 1770 | -- |
| 21... | 1320 | -- | 3.84 | 43 | 70 | 152 | -- |
| 21... | 1405 | -- | 3.84 | A39 | -- | -- | -- |
| 21... | 1445 | -- | 3.72 | 37 | 65 | 111 | -- |

*suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE (FT3/S) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | **11482250 MILLER CREEK NEAR ORICK** | | | | | |
| NOV., 1973 | | | | | | | |
| 07... | 1640 | -- | 20.40 | A19 | -- | -- | -- |
| 07... | 1700 | 12.0 | 20.41 | 19 | 90 | 200 | -- |
| 07... | 1701 | 12.0 | 20.41 | 19 | -- | 337 | -- |
| 07... | 1710 | 12.0 | 20.41 | 19 | -- | -- | .40 |
| 07... | 2000 | 12.0 | 20.45 | 25 | 110 | 468 | -- |
| 07... | 2001 | 12.0 | 20.45 | 25 | 110 | 821 | -- |
| 07... | 2010 | -- | 20.45 | A25 | -- | -- | -- |
| 07... | 2030 | 12.0 | 20.45 | 26 | -- | -- | 2.4 |
| 07... | 2310 | -- | 20.54 | A29 | -- | -- | -- |
| 07... | 2340 | 12.0 | 20.54 | 30 | 120 | 809 | -- |
| 08... | 0200 | -- | 20.72 | A42 | -- | -- | -- |
| 08... | 0220 | -- | 20.72 | 44 | 180 | 577 | -- |
| 08... | 0221 | -- | 20.72 | 44 | 160 | 556 | -- |
| 08... | 0300 | 12.0 | E20.72 | 48 | -- | -- | 22 |
| 08... | 0520 | -- | -- | A40 | -- | -- | -- |
| 08... | 0530 | 12.0 | 20.68 | 40 | 180 | 1170 | 34 |
| 08... | 0750 | -- | -- | A35 | -- | -- | -- |
| 08... | 0800 | 12.0 | 20.64 | 36 | 100 | 454 | 15 |
| 08... | 0801 | 12.0 | 20.64 | 36 | -- | 510 | -- |
| 08... | 1050 | -- | -- | A30 | -- | -- | -- |
| 08... | 1120 | 12.0 | 20.58 | 28 | 90 | 422 | 1.8 |
| 08... | 1121 | 12.0 | 20.58 | 28 | -- | 346 | -- |
| 08... | 1350 | -- | -- | A25 | -- | -- | -- |
| 08... | 1400 | 12.5 | 20.55 | 25 | 75 | 318 | 8.7 |
| 08... | 1401 | 12.5 | 20.55 | 25 | -- | 273 | -- |
| 08... | 1650 | -- | -- | A26 | -- | -- | -- |
| 08... | 1700 | 12.0 | 20.50 | 25 | 70 | 177 | -- |
| 08... | 1701 | 12.0 | 20.50 | 25 | -- | 226 | -- |
| 08... | 1710 | 12.0 | 20.50 | 25 | -- | -- | .50 |
| 08... | 1930 | 12.0 | E20.50 | 25 | 60 | 168 | -- |
| 08... | 1931 | 12.0 | E20.50 | 25 | -- | 189 | -- |
| 08... | 2030 | -- | 20.50 | A25 | -- | -- | -- |
| 08... | 2135 | 12.0 | E20.50 | 25 | -- | -- | 1.3 |
| 09... | 0420 | -- | -- | A25 | -- | -- | -- |
| 09... | 0430 | 12.0 | 20.48 | 25 | 70 | 169 | 1.2 |
| 09... | 0431 | 12.0 | 20.48 | 25 | -- | 191 | -- |
| 09... | 0745 | -- | -- | A23 | -- | -- | -- |
| 09... | 0755 | -- | 20.45 | 22 | 50 | 123 | 3.4 |
| 09... | 0756 | -- | 20.45 | 22 | -- | 166 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2050 | -- | 20.01 | A1.8 | -- | -- | -- |
| 11... | 2110 | 7.0 | E20.03 | 2.0 | 20 | 28 | -- |
| 11... | 2300 | -- | 20.10 | A2.8 | -- | -- | -- |
| 12... | 0025 | -- | 20.10 | 2.8 | 85 | 75 | -- |
| 12... | 0300 | -- | 20.09 | A2.4 | -- | -- | -- |
| 12... | 0310 | 7.0 | 20.09 | 2.4 | 30 | 23 | -- |
| 12... | 0600 | -- | 20.07 | A2.1 | 20 | 13 | -- |
| 12... | 0900 | -- | 20.05 | 2.1 | 15 | 11 | -- |
| 12... | 0925 | -- | 20.05 | A2.1 | -- | -- | -- |
| 12... | 1150 | -- | 20.07 | A2.2 | -- | -- | -- |
| 12... | 1200 | -- | 20.07 | 2.2 | 15 | 12 | -- |
| 12... | 1455 | -- | 20.15 | A3.8 | -- | -- | -- |
| 12... | 1500 | -- | 20.15 | 3.8 | 150 | 159 | -- |
| 12... | 1700 | 8.5 | 20.11 | A2.6 | -- | -- | -- |
| 12... | 1810 | -- | E20.11 | 2.5 | 25 | 12 | -- |
| 12... | 2055 | -- | 20.09 | A2.4 | -- | -- | -- |
| 12... | 2105 | -- | E20.09 | 2.4 | 20 | 8 | -- |
| 12... | 2400 | -- | 20.18 | A3.4 | -- | -- | -- |
| 13... | 0005 | -- | 20.18 | 3.4 | 35 | 32 | -- |
| 13... | 0940 | -- | 20.29 | A6.4 | -- | -- | -- |
| 13... | 0945 | -- | E20.29 | 6.3 | 50 | 53 | -- |
| FEB. | | | | | | | |
| 20... | 1840 | -- | 19.93 | A11 | -- | -- | -- |
| 20... | 1847 | 9.0 | 19.93 | 11 | 15 | 32 | .00 |
| 21... | 0515 | 8.0 | 19.93 | 11 | 15 | 35 | .00 |
| 21... | 0810 | -- | 19.97 | A11 | -- | -- | -- |
| 21... | 0825 | 7.5 | 19.97 | 13 | 65 | 111 | -- |
| 21... | 0830 | 7.5 | 19.97 | 13 | -- | -- | .37 |
| 21... | 1300 | 8.0 | 19.92 | 10 | -- | -- | .00 |
| 21... | 1310 | -- | 19.92 | A10 | -- | -- | -- |
| 21... | 1330 | 8.0 | 19.91 | 10 | 25 | 52 | -- |
| 21... | 1815 | 8.0 | 19.98 | 9.9 | -- | -- | .00 |
| 21... | 1830 | -- | 19.88 | A9.9 | -- | -- | -- |
| 21... | 1845 | 8.0 | 19.88 | 9.6 | 15 | 47 | -- |
| 22... | 0830 | -- | 19.87 | A9.4 | -- | -- | -- |
| 22... | 0845 | 7.0 | 19.87 | 8.3 | 10 | 19 | .00 |
| 28... | 2100 | 8.5 | 19.97 | A14 | -- | -- | -- |
| 28... | 2110 | -- | 19.97 | 14 | 25 | 22 | -- |
| MAR. | | | | | | | |
| 01... | 1510 | -- | 19.91 | A10 | -- | -- | -- |

| DATE | TIME | TEMPERATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTANTANEOUS DISCHARGE (FT³/S) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| **11482250 MILLER CREEK NEAR ORICK--Continued** | | | | | | | |
| MAR., 1974 | | | | | | | |
| 01... | 1515 | 8.0 | 19.91 | 10 | 30 | 44 | -- |
| 01... | 1530 | 8.0 | 19.91 | 10 | -- | -- | 3.9 |
| 01... | 1835 | -- | 19.91 | A12 | -- | -- | -- |
| 01... | 1845 | 8.0 | 19.91 | 12 | 30 | 56 | -- |
| 01... | 1855 | 8.0 | 19.91 | 12 | -- | -- | 3.3 |
| 01... | 2230 | 7.0 | 19.91 | 13 | 25 | 30 | -- |
| 02... | 0630 | 7.5 | 19.90 | A11 | 20 | 22 | .27 |
| 02... | 1100 | 8.0 | 19.89 | A10 | 15 | 29 | -- |
| 02... | 1110 | 7.5 | 19.89 | 11 | -- | -- | .26 |
| 02... | 1730 | -- | E19.89 | 12 | 20 | 31 | -- |
| 03... | 0230 | 7.0 | -- | A11 | -- | -- | -- |
| 03... | 0250 | 7.0 | -- | 11 | 15 | 24 | .00 |
| 03... | 0855 | -- | -- | 11 | -- | -- | .00 |
| 03... | 0935 | -- | -- | A11 | -- | -- | -- |
| 03... | 0955 | -- | -- | 11 | 15 | 20 | -- |
| 30... | 1515 | -- | 20.50 | A29 | -- | -- | -- |
| 30... | 1540 | 10.0 | 20.50 | -- | 100 | 287 | -- |
| **11482260 MILLER CREEK AT MOUTH, NEAR ORICK** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 9.56 | -- | -- | 4450 | -- |
| 23... | C1130 | -- | 11.16 | -- | -- | 3370 | -- |
| NOV. | | | | | | | |
| 01... | 1130 | -- | 6.89 | E4.0 | -- | -- | -- |
| 07... | 1455 | -- | 7.38 | A28 | -- | -- | -- |
| 07... | 1510 | 12.0 | 7.38 | 28 | 120 | 352 | -- |
| 07... | 1545 | 12.0 | 7.38 | 29 | -- | -- | 26 |
| 07... | 1820 | 12.0 | 7.40 | 36 | 140 | 390 | -- |
| 07... | 2030 | -- | 7.31 | A41 | -- | -- | -- |
| 07... | 2100 | 12.0 | 7.32 | 39 | 300 | 978 | -- |
| 07... | 2105 | 12.0 | 7.32 | 39 | 230 | 967 | -- |
| 07... | 2110 | 12.0 | 7.32 | 43 | -- | -- | 77 |
| 08... | 0320 | -- | 8.93 | A87 | -- | -- | -- |
| 08... | 0345 | 12.5 | 9.10 | 95 | 1100 | 2630 | -- |
| 08... | C0400 | -- | 9.56 | 103 | -- | 2730 | -- |
| 08... | 0410 | 12.5 | 9.30 | 105 | -- | -- | 15 |
| 08... | 0920 | -- | 9.01 | A50 | -- | -- | -- |
| 08... | 0940 | -- | 9.00 | A48 | -- | -- | -- |
| 08... | 0950 | 12.0 | 9.00 | 49 | 250 | 1670 | -- |
| 08... | 0955 | 12.0 | 8.98 | 49 | -- | -- | 249 |
| 08... | 1000 | 12.0 | 8.99 | 48 | 230 | 886 | -- |
| 08... | 1335 | -- | 8.48 | A44 | -- | -- | -- |
| 08... | 1400 | 12.0 | 8.48 | 43 | 160 | 557 | 72 |
| 08... | 1700 | 12.0 | 8.12 | 40 | 120 | 442 | -- |
| 08... | 2010 | -- | 7.56 | A39 | -- | -- | -- |
| 08... | 2020 | 12.0 | 7.56 | 38 | 120 | 442 | -- |
| 08... | 2025 | 12.0 | 7.56 | 38 | -- | -- | 70 |
| 09... | 0300 | 12.0 | 7.30 | 33 | 110 | 295 | -- |
| 09... | 1120 | 13.0 | E7.26 | 26 | 120 | 285 | -- |
| 09... | 1125 | 13.0 | 7.26 | 26 | -- | -- | 18 |
| 09... | 1210 | -- | 7.26 | A26 | -- | -- | -- |
| 19... | 1155 | 8.5 | 7.25 | E25 | -- | -- | -- |
| DEC. | | | | | | | |
| 20... | C1600 | -- | 9.56 | -- | 550 | 2830 | -- |
| 20... | C1630 | -- | 11.16 | -- | 600 | 7090 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 1855 | -- | 6.98 | A1.8 | -- | -- | -- |
| 11... | 1950 | 6.0 | E6.98 | 1.8 | 8 | 12 | -- |
| 11... | 2200 | 6.5 | 7.00 | 2.3 | 9 | 28 | -- |
| 12... | 0010 | -- | 7.06 | A4.0 | -- | -- | -- |
| 12... | 0025 | 6.5 | 7.06 | 4.0 | 35 | 47 | -- |
| 12... | 0400 | -- | 7.04 | A3.5 | -- | -- | -- |
| 12... | 0420 | 6.5 | 7.04 | 3.5 | 45 | 31 | -- |
| 12... | 0630 | 7.0 | 7.03 | 3.2 | 25 | 22 | -- |
| 12... | 0910 | 7.0 | 7.02 | 2.9 | 20 | 16 | -- |
| 12... | 1215 | -- | 7.02 | A3.5 | -- | -- | -- |
| 12... | 1230 | 7.5 | 7.03 | 3.1 | 15 | 10 | -- |
| 12... | 1455 | -- | 7.13 | A7.2 | -- | -- | -- |
| 12... | 1505 | 8.0 | 7.14 | 7.2 | 35 | 112 | -- |
| 12... | 1540 | 8.0 | 7.12 | 6.6 | 85 | 125 | -- |
| 12... | 1700 | 8.0 | 7.08 | 4.9 | 140 | 150 | -- |
| 12... | 1800 | 8.0 | 7.07 | 4.5 | 85 | 79 | -- |
| 13... | 0320 | 9.0 | 7.06 | 4.5 | 50 | 42 | -- |
| 13... | 0430 | 9.0 | 7.12 | 9.0 | 40 | 49 | -- |
| 13... | 0600 | -- | 7.31 | A20 | -- | -- | -- |
| 13... | 0615 | 9.0 | E7.31 | 21 | 700 | 1290 | -- |
| 13... | 0735 | 9.0 | 7.24 | 16 | 370 | 486 | -- |
| 13... | 0900 | 9.0 | 7.20 | 12 | 140 | 166 | -- |
| 13... | 1200 | 9.0 | 7.18 | A11 | 45 | 54 | -- |
| 15... | C2100 | -- | 9.56 | -- | 410 | 6040 | -- |
| 15... | C2130 | -- | 11.16 | -- | -- | 8400 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | 11482260 MILLER CREEK AT MOUTH, NEAR ORICK--Continued | | | | |
| FEB. 1974 | | | | | | | |
| 14... | 1335 | 7.5 | 6.68 | -- | 7 | 7 | -- |
| 18... | C2200 | -- | 9.56 | -- | 400 | 1350 | -- |
| 20... | 2020 | -- | 7.40 | A18 | -- | -- | -- |
| 20... | 2040 | 9.0 | 7.39 | 18 | 35 | 95 | -- |
| 20... | 2320 | -- | 7.37 | A17 | -- | -- | -- |
| 20... | 2345 | 8.0 | 7.36 | 17 | 30 | 54 | -- |
| 21... | 0225 | -- | 7.36 | A15 | -- | -- | -- |
| 21... | 0240 | 8.0 | 7.36 | 15 | 25 | 48 | -- |
| 21... | 0245 | 8.0 | 7.36 | 15 | -- | -- | 4.4 |
| 21... | 0525 | -- | 7.36 | A14 | -- | -- | -- |
| 21... | 0545 | 8.0 | 7.36 | 14 | 30 | 61 | -- |
| 21... | 0850 | -- | 7.43 | A24 | -- | -- | -- |
| 21... | 0930 | 8.0 | 7.46 | 25 | 120 | 277 | -- |
| 21... | 1110 | -- | 7.45 | A24 | -- | -- | -- |
| 21... | 1130 | 8.0 | 7.42 | 23 | 100 | 175 | -- |
| 21... | 1140 | 8.0 | 7.40 | 22 | -- | -- | 6.2 |
| 21... | 1450 | -- | 7.38 | A18 | -- | -- | -- |
| 21... | 1515 | 8.0 | 7.37 | 17 | 30 | 74 | -- |
| 21... | 1815 | -- | 7.35 | A16 | -- | -- | -- |
| 21... | 1835 | 8.0 | 7.35 | 16 | 25 | 49 | -- |
| 21... | 2115 | -- | 7.34 | A15 | -- | -- | -- |
| 21... | 2130 | 7.5 | 7.34 | 15 | 25 | 38 | -- |
| 22... | 0020 | -- | 7.33 | A15 | -- | -- | -- |
| 22... | 0035 | 7.5 | 7.33 | 15 | 25 | 39 | -- |
| 22... | 0320 | -- | 7.32 | A15 | -- | -- | -- |
| 22... | 0630 | -- | 7.31 | A15 | -- | -- | -- |
| 22... | 0740 | 7.0 | E7.31 | 15 | 20 | 33 | -- |
| 28... | 2130 | 8.0 | 7.30 | A24 | -- | -- | -- |
| 28... | 2150 | 8.0 | E7.30 | 26 | 40 | 110 | -- |
| 28... | 2155 | 8.0 | 7.30 | 26 | -- | -- | 8.6 |
| MAR. | | | | | | | |
| 01... | 0020 | -- | 7.28 | A25 | -- | -- | -- |
| 01... | 0045 | 8.0 | 7.28 | 23 | 35 | 98 | -- |
| 01... | 0050 | 8.0 | 7.28 | 23 | -- | -- | 21 |
| 01... | 0345 | -- | 7.26 | A21 | -- | -- | -- |
| 01... | 0410 | 8.0 | 7.26 | 21 | 30 | 64 | -- |
| 01... | 0930 | 8.0 | 7.30 | A24 | -- | -- | 7.0 |
| 01... | 0945 | 8.5 | 7.30 | 23 | 160 | 281 | -- |
| 01... | 1210 | 8.5 | 7.27 | 20 | 50 | 90 | -- |
| 01... | 1515 | -- | 7.29 | A19 | -- | -- | -- |
| 01... | 1530 | 8.5 | 7.29 | 20 | 50 | 93 | -- |
| 01... | 1535 | 8.5 | 7.28 | 20 | -- | -- | 7.7 |
| 01... | 1815 | 7.0 | 7.29 | 22 | 40 | 90 | -- |
| 01... | 2120 | -- | 7.30 | A23 | -- | -- | -- |
| 01... | 2135 | 7.5 | 7.30 | 23 | 55 | 111 | -- |
| 01... | 2140 | 7.5 | 7.30 | 23 | -- | -- | 13 |
| 02... | 0015 | 7.5 | 7.30 | 23 | 40 | 105 | -- |
| 02... | 0340 | -- | 7.30 | A22 | -- | -- | -- |
| 02... | 0415 | 7.5 | 7.30 | 21 | 35 | 64 | -- |
| 02... | 0430 | 7.5 | 7.29 | 21 | -- | -- | 2.7 |
| 02... | 0615 | 7.0 | 7.28 | 20 | 30 | 57 | -- |
| 02... | 0910 | -- | 7.27 | A19 | -- | -- | -- |
| 02... | 0925 | 7.5 | 7.27 | 19 | 25 | 49 | -- |
| 02... | 0930 | 7.5 | 7.27 | 19 | -- | -- | 8.7 |
| 02... | 1500 | 7.5 | 7.30 | 23 | 40 | 78 | -- |
| 02... | 1820 | -- | 7.29 | A21 | -- | -- | -- |
| 02... | 1830 | 7.5 | E7.29 | 22 | 35 | 47 | -- |
| 02... | 1835 | 7.5 | 7.29 | 22 | -- | -- | 5.1 |
| 02... | 2110 | 7.5 | 7.29 | 21 | 30 | 45 | -- |
| 03... | 0040 | -- | 7.27 | A20 | -- | -- | -- |
| 03... | 0100 | 7.0 | E7.27 | 19 | 25 | 41 | -- |
| 03... | 0110 | 7.0 | 7.26 | 19 | -- | -- | 6.8 |
| 03... | 0315 | 7.0 | E7.26 | 18 | 25 | 68 | -- |
| 03... | 0320 | -- | 7.26 | 18 | -- | -- | 4.0 |
| 03... | 0630 | -- | 7.26 | A17 | -- | -- | -- |
| 03... | 0645 | 6.5 | 7.26 | 17 | 20 | 38 | 3.8 |
| 03... | 0910 | 6.5 | E7.24 | 16 | 20 | 32 | -- |
| 03... | 0935 | -- | 7.24 | A16 | -- | -- | -- |
| 03... | 1000 | 6.5 | 7.24 | 16 | -- | -- | 1.6 |
| 27... | -- | 10.5 | -- | -- | -- | 8 | -- |
| 30... | C1100 | -- | 9.56 | -- | -- | 4320 | -- |
| 30... | C1130 | -- | 11.16 | -- | -- | 5600 | -- |
| 30... | C1200 | -- | 12.96 | -- | -- | 3120 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | **11482270 BOND CREEK NEAR ORICK** | | | | |
| DEC., 1973 | | | | | | | |
| 04... | 1255 | -- | 3.09 | A25 | -- | -- | -- |
| 04... | 1345 | 10.0 | 3.08 | 24 | -- | 33 | -- |
| 04... | 1400 | 10.0 | 3.09 | 24 | -- | -- | 2.8 |
| 29... | C1800 | -- | 3.21 | 30 | -- | 987 | -- |
| JAN., 1974 | | | | | | | |
| 24... | 1115 | 8.0 | 2.88 | 15 | -- | 13 | -- |
| 24... | 1200 | -- | 2.88 | A15 | -- | -- | -- |
| FEB. | | | | | | | |
| 18... | C2100 | -- | 3.21 | 30 | 600 | 2100 | -- |
| 21... | 1030 | -- | -- | A22 | -- | -- | -- |
| 21... | 1105 | 8.0 | 3.01 | 20 | 320 | 564 | -- |
| | | | **11482280 CLOQUET CREEK NEAR ORICK** | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 2.15 | -- | -- | 5240 | -- |
| NOV. | | | | | | | |
| 06... | C1800 | -- | 2.15 | -- | -- | 3740 | -- |
| 08... | C0400 | -- | 2.15 | -- | 1100 | 2910 | -- |
| 08... | C0430 | -- | 4.15 | -- | 400 | 1180 | -- |
| JAN., 1974 | | | | | | | |
| 24... | 1250 | 7.0 | 1.51 | 4.8 | 9 | 15 | -- |
| 24... | 1330 | -- | -- | A4.8 | -- | -- | -- |
| FEB. | | | | | | | |
| 18... | C2200 | -- | 2.06 | -- | 270 | 953 | -- |
| 27... | 1235 | 7.5 | 1.42 | 7.5 | 8 | 6 | -- |
| 27... | 1315 | -- | 1.41 | A7.5 | -- | -- | -- |
| MAR. | | | | | | | |
| 30... | C1100 | -- | 4.15 | -- | 500 | 1650 | -- |
| | | | **11482290 OSCAR LARSON CREEK NEAR ORICK** | | | | |
| JAN., 1974 | | | | | | | |
| 24... | 1405 | 7.5 | 2.52 | 2.6 | 7 | 6 | -- |
| 24... | 1430 | -- | 2.52 | A2.6 | -- | -- | -- |
| FEB. | | | | | | | |
| 27... | 1400 | 4.5 | 2.64 | 3.1 | 10 | 5 | -- |
| 27... | 1420 | -- | 2.64 | A3.1 | -- | -- | -- |
| | | | **11482300 ELAM CREEK NEAR ORICK** | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 3.96 | -- | -- | 744 | -- |
| 23... | C1130 | -- | 5.38 | -- | -- | 484 | -- |
| 23... | C1200 | -- | 6.79 | -- | -- | 603 | -- |
| NOV. | | | | | | | |
| 06... | C1800 | -- | 3.96 | -- | -- | 192 | -- |
| 08... | C0400 | -- | 5.38 | -- | 280 | 1750 | -- |
| 08... | C0430 | -- | 6.79 | -- | 75 | 337 | -- |
| 30... | C1800 | -- | 5.38 | -- | 35 | 48 | -- |
| 30... | C1830 | -- | 6.79 | -- | 25 | 141 | -- |
| JAN., 1974 | | | | | | | |
| 15... | C2100 | -- | 5.38 | -- | 550 | 4640 | -- |
| 15... | C2130 | -- | 6.79 | -- | 60 | 161 | -- |
| 24... | 1500 | 8.0 | 3.93 | -- | 3 | 9 | -- |
| 24... | 1605 | -- | 3.93 | A14 | -- | -- | -- |
| FEB. | | | | | | | |
| 18... | C2200 | -- | 3.96 | -- | 390 | 8920 | -- |
| 18... | C2230 | -- | 5.38 | -- | 40 | 532 | -- |
| 18... | C2300 | -- | 6.79 | -- | 55 | 129 | -- |
| MAR. | | | | | | | |
| 08... | 1315 | -- | 3.49 | A19 | -- | -- | -- |
| 08... | 1330 | -- | 3.49 | -- | 3 | 5 | -- |
| APR. | | | | | | | |
| 01... | C0600 | -- | 5.38 | -- | 45 | 592 | -- |
| 01... | C0610 | -- | 6.79 | -- | 70 | 182 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE (FT3/S) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| **11482310 MCARTHUR CREEK NEAR ORICK** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 3.41 | 24 | -- | 856 | -- |
| NOV. | | | | | | | |
| 01... | 1415 | -- | 2.79 | E8.0 | -- | -- | -- |
| 06... | C1830 | -- | 4.75 | 99 | -- | 182 | -- |
| 08... | C0400 | -- | 4.75 | 99 | 80 | 187 | -- |
| 19... | 1435 | 9.5 | 3.75 | E70 | -- | -- | -- |
| 30... | C1800 | -- | 4.75 | 99 | 65 | 209 | -- |
| DEC. | | | | | | | |
| 14... | 1535 | -- | 3.75 | A38 | -- | -- | -- |
| 20... | C1600 | -- | 4.75 | 99 | 50 | 245 | -- |
| JAN., 1974 | | | | | | | |
| 25... | 1100 | 8.0 | 3.32 | 22 | 4 | 3 | -- |
| 25... | 1200 | -- | 3.32 | A22 | -- | -- | -- |
| FEB. | | | | | | | |
| 21... | 1450 | -- | 3.70 | A34 | -- | -- | -- |
| 21... | 1455 | 8.5 | 3.70 | 34 | 7 | 6 | -- |
| **11482320 LOW-SLOPE SCHIST CREEK NEAR ORICK** | | | | | | | |
| DEC., 1973 | | | | | | | |
| 14... | 1620 | -- | 2.58 | A1.3 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 25... | 1300 | 9.0 | 2.58 | 1.2 | 1 | 2 | -- |
| 25... | 1330 | -- | 2.58 | A1.2 | -- | -- | -- |
| MAR. | | | | | | | |
| 08... | 1420 | 6.5 | 2.58 | .88 | 1 | 2 | -- |
| 08... | 1430 | -- | 2.58 | A.88 | -- | -- | -- |
| **11482330 HAYES CREEK NEAR ORICK** | | | | | | | |
| NOV., 1973 | | | | | | | |
| 01... | 1605 | 10.0 | 3.70 | E1.9 | -- | -- | -- |
| 08... | 0030 | 11.0 | 4.17 | A16 | -- | 456 | 5.0 |
| 08... | 0031 | 11.0 | 4.20 | 16 | -- | 353 | -- |
| 08... | 0820 | -- | 4.29 | A22 | -- | -- | -- |
| 08... | 0840 | 11.0 | 4.30 | 22 | -- | 393 | -- |
| 08... | 0845 | -- | 4.30 | 22 | -- | -- | 17 |
| 08... | 2245 | -- | 4.22 | A16 | -- | -- | -- |
| 08... | 2320 | 11.0 | 4.22 | 16 | -- | 332 | -- |
| 08... | 2350 | 11.0 | 4.20 | 15 | -- | -- | .70 |
| 09... | 0700 | 11.0 | 4.18 | 13 | -- | 208 | -- |
| 09... | 0800 | -- | 4.18 | 13 | -- | -- | 6.9 |
| 09... | 0900 | -- | 4.18 | A17 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2100 | 7.0 | 4.12 | A.92 | -- | -- | -- |
| 11... | 2145 | 7.0 | 4.12 | .89 | 5 | 10 | -- |
| 12... | 1325 | -- | 4.14 | A1.1 | -- | -- | -- |
| 12... | 1350 | 7.5 | 4.14 | 1.1 | 25 | 39 | -- |
| 12... | 1940 | -- | 4.13 | A.97 | -- | -- | -- |
| 12... | 2045 | 8.0 | 4.13 | .94 | 4 | 8 | -- |
| 12... | 2350 | 8.0 | 4.13 | .98 | 4 | 10 | -- |
| 13... | 0320 | -- | 4.14 | A1.0 | -- | -- | -- |
| 13... | 0445 | 8.5 | 4.14 | 1.2 | 7 | 27 | -- |
| 13... | 1010 | -- | 4.14 | A1.3 | -- | -- | -- |
| 13... | 1140 | 8.5 | 4.14 | 1.3 | 2 | 7 | -- |
| FEB. | | | | | | | |
| 21... | 0020 | 8.5 | 4.37 | 6.6 | 9 | 17 | -- |
| 21... | 0420 | -- | 4.36 | A6.2 | -- | -- | -- |
| 21... | 0430 | 8.5 | 4.36 | 6.2 | 7 | 16 | -- |
| 21... | 1025 | 8.5 | 4.36 | A6.1 | -- | -- | -- |
| 21... | 1030 | 8.5 | 4.37 | 6.5 | 6 | 18 | -- |
| 21... | 1420 | -- | 4.35 | A6.1 | -- | -- | -- |
| 21... | 1815 | -- | 4.32 | A6.0 | -- | -- | -- |
| 21... | 1910 | 8.5 | 4.30 | 5.5 | 8 | 14 | -- |
| 22... | 0240 | -- | 4.31 | A4.7 | -- | -- | -- |
| 22... | 0300 | 8.0 | 4.31 | 4.8 | 10 | 16 | -- |
| 22... | 0830 | 7.5 | 4.28 | 4.4 | 6 | 8 | -- |
| 28... | C1400 | -- | -- | -- | 180 | 3830 | -- |
| 28... | 2030 | 8.5 | 4.88 | 7.6 | -- | -- | .00 |
| 28... | 2100 | 8.5 | E4.38 | 7.5 | 11 | 24 | -- |
| 28... | 2350 | -- | 4.39 | A7.5 | -- | -- | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE (FT³/S) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | 11482330 HAYES CREEK NEAR ORICK--Continued | | | | |
| MAR., 1974 | | | | | | | |
| 01... | 0030 | 8.5 | 4.38 | 7.1 | 8 | 18 | -- |
| 01... | 0330 | 8.5 | 4.37 | 6.8 | 9 | 13 | -- |
| 01... | 0440 | -- | 4.37 | A7.4 | -- | -- | -- |
| 01... | 0650 | 8.5 | 4.37 | 6.6 | 8 | 14 | -- |
| 01... | 0850 | -- | -- | A6.4 | -- | -- | -- |
| 01... | 0910 | 9.0 | 4.39 | 7.5 | 17 | 32 | .00 |
| 01... | 1140 | 8.5 | 4.37 | 6.6 | 8 | 12 | -- |
| 01... | 1440 | -- | 4.36 | 6.4 | 7 | 13 | -- |
| 01... | 1620 | -- | 4.37 | A6.5 | -- | -- | -- |
| 01... | 1640 | 8.5 | 4.37 | 6.3 | 12 | 24 | -- |
| 01... | 1940 | 8.0 | 4.39 | 7.4 | 10 | 22 | -- |
| 01... | 2100 | -- | 4.39 | A6.7 | -- | -- | -- |
| 01... | 2225 | 8.0 | 4.38 | 6.8 | 8 | 13 | -- |
| 02... | 0200 | 8.0 | 4.38 | 6.7 | 8 | 11 | -- |
| 02... | 0515 | 8.0 | 4.37 | 6.5 | 8 | 10 | -- |
| 02... | 0840 | -- | 4.37 | A6.7 | -- | -- | -- |
| 02... | 0915 | 8.0 | 4.37 | 6.4 | 10 | 15 | -- |
| 02... | 1300 | 8.0 | 4.37 | 6.6 | 8 | 13 | -- |
| 02... | 1735 | 8.0 | 4.38 | 7.1 | 11 | 20 | -- |
| 02... | 2020 | -- | 4.38 | A6.9 | -- | -- | -- |
| 02... | 2045 | 8.0 | E4.38 | 6.9 | 8 | 15 | -- |
| 03... | 0015 | 8.0 | 4.38 | 6.8 | 7 | 9 | -- |
| 03... | 0440 | 7.0 | 4.38 | 6.5 | 6 | 8 | -- |
| 03... | 0825 | -- | 4.38 | 6.5 | -- | -- | -- |
| 03... | 0830 | 7.0 | 4.30 | 6.5 | 6 | 16 | -- |
| 29... | 1445 | -- | 4.45 | -- | -- | 202 | -- |
| 29... | 2135 | -- | 4.65 | A19 | -- | -- | -- |
| 29... | 2200 | 9.5 | 4.66 | -- | -- | 207 | -- |
| 29... | 2205 | -- | 4.66 | -- | -- | -- | .61 |
| 30... | C1100 | -- | 4.52 | -- | 350 | 3300 | -- |
| APR. | | | | | | | |
| 09... | 1320 | 9.0 | 4.94 | 2.9 | -- | 18 | -- |
| 09... | 1340 | -- | 4.94 | A2.9 | -- | -- | -- |
| | | | 11482450 LOST MAN CREEK NEAR ORICK | | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 7.94 | 190 | -- | 1790 | -- |
| NOV. | | | | | | | |
| 07... | 1915 | -- | 7.58 | A96 | -- | -- | -- |
| 07... | 1945 | 12.0 | 7.58 | 102 | -- | 126 | 3.9 |
| 08... | C0400 | -- | E7.94 | 220 | -- | 1350 | -- |
| 08... | 0730 | 11.5 | 8.00 | 210 | -- | 388 | -- |
| 08... | 1200 | 11.5 | 7.90 | 175 | -- | 188 | -- |
| 08... | 1215 | -- | 7.90 | 175 | -- | -- | 61 |
| 08... | 1615 | -- | 7.80 | A152 | -- | -- | -- |
| 08... | 1630 | 11.5 | E7.80 | 152 | -- | 219 | -- |
| 08... | 1700 | -- | 7.80 | 150 | -- | -- | 34 |
| 09... | 0340 | 12.0 | 7.60 | 106 | -- | 102 | -- |
| 09... | 0345 | -- | 7.60 | 105 | -- | -- | 7.4 |
| 09... | 1430 | -- | 7.55 | 95 | -- | 96 | -- |
| 09... | 1435 | -- | 7.55 | A107 | -- | -- | -- |
| 30... | C1800 | -- | 7.94 | 190 | 150 | 1270 | -- |
| DEC. | | | | | | | |
| 20... | C1600 | -- | 7.94 | 190 | -- | 385 | -- |
| 21... | 1350 | -- | 7.70 | 125 | -- | 54 | -- |
| 21... | 1415 | -- | 7.70 | 125 | 20 | 62 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2110 | -- | 6.75 | A11 | -- | -- | -- |
| 11... | 2135 | -- | 6.77 | -- | -- | -- | .00 |
| 11... | 2145 | 5.0 | 6.77 | 12 | 5 | 6 | -- |
| 12... | 0110 | -- | 6.81 | A13 | -- | -- | -- |
| 12... | 0130 | 5.0 | 6.81 | 13 | 9 | 15 | -- |
| 12... | 1630 | -- | 6.88 | A14 | -- | -- | -- |
| 12... | 1650 | 6.0 | 6.88 | 14 | 15 | 18 | -- |
| 13... | 0950 | -- | 7.01 | A22 | -- | -- | -- |
| 13... | 1015 | 7.5 | 7.01 | 22 | 9 | 21 | -- |
| 15... | C2100 | -- | 7.94 | 190 | 150 | 994 | -- |
| FEB. | | | | | | | |
| 20... | 1750 | -- | 7.33 | A62 | -- | -- | -- |
| 20... | 1830 | 7.0 | 7.32 | 58 | 10 | 27 | -- |
| 20... | 2310 | -- | 7.28 | A53 | -- | -- | -- |
| 21... | 0030 | 8.0 | 7.28 | 52 | 10 | 25 | -- |
| 21... | 0700 | -- | 7.25 | A52 | -- | -- | -- |
| 21... | 0720 | 6.5 | 7.24 | 51 | 10 | 19 | -- |
| 21... | 1230 | -- | 7.30 | A70 | -- | -- | -- |
| 21... | 1300 | 7.5 | 7.30 | 56 | 10 | 29 | -- |
| 21... | 1320 | 7.5 | 7.30 | 56 | -- | -- | .72 |
| 21... | 1700 | 7.5 | 7.30 | A59 | -- | -- | -- |
| 21... | 1720 | 8.0 | 7.28 | 56 | 8 | 24 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE (FT³/S) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | | **11482450 LOST MAN CREEK NEAR ORICK--Continued** | | | |
| FEB., 1974 | | | | | | | |
| 22... | 1100 | -- | 7.19 | A47 | -- | -- | -- |
| 22... | 1115 | 6.5 | 7.19 | 47 | 8 | 14 | -- |
| 22... | 1130 | 6.5 | 7.19 | 47 | -- | -- | .71 |
| 28... | 2330 | 7.5 | 7.53 | 85 | 15 | 41 | .00 |
| 28... | 2340 | -- | 7.53 | A85 | -- | -- | -- |
| MAR. | | | | | | | |
| 01... | 0820 | 8.0 | 7.44 | 75 | 25 | 55 | -- |
| 01... | 0845 | -- | 7.45 | A78 | -- | -- | -- |
| 01... | 1550 | -- | 7.40 | A71 | -- | -- | -- |
| 01... | 1600 | 8.0 | 7.40 | 70 | 10 | 32 | -- |
| 01... | 2110 | -- | 7.44 | A77 | -- | -- | -- |
| 01... | 2200 | 7.5 | 7.44 | 76 | 10 | 32 | -- |
| 02... | 1015 | 7.0 | 7.42 | 72 | 10 | 34 | -- |
| 02... | 1315 | 7.0 | 7.39 | 69 | 15 | 24 | -- |
| 02... | 1600 | 7.0 | 7.41 | 72 | 15 | 32 | -- |
| 02... | 1900 | 7.0 | 7.40 | 71 | 10 | 26 | -- |
| 03... | 0200 | 6.5 | 7.37 | 65 | 9 | 19 | -- |
| 03... | 0810 | -- | 7.33 | A60 | -- | -- | -- |
| 03... | 0820 | 5.0 | 7.33 | 60 | 8 | 17 | -- |
| APR. | | | | | | | |
| 05... | 1205 | -- | 7.26 | -- | 55 | -- | -- |
| 05... | 1231 | 9.0 | 7.26 | -- | -- | 310 | -- |
| 08... | 1240 | 9.0 | 7.10 | -- | 8 | 77 | -- |
| | | | | **11482460 LARRY DAMM CREEK NEAR ORICK** | | | |
| OCT., 1973 | | | | | | | |
| 23... | C1100 | -- | 3.18 | 43 | -- | 4790 | -- |
| DEC. | | | | | | | |
| 21... | 1540 | -- | 3.21 | A44 | -- | -- | -- |
| 21... | 1600 | -- | 3.21 | 44 | -- | 91 | -- |
| JAN., 1974 | | | | | | | |
| 21... | 1350 | -- | 2.51 | A12 | -- | -- | -- |
| 21... | 1420 | 8.5 | 2.51 | 12 | -- | 11 | -- |
| FEB. | | | | | | | |
| 22... | 0950 | -- | 2.61 | A16 | -- | -- | -- |
| 22... | 1005 | 7.5 | 2.62 | 16 | 6 | 17 | -- |
| MAR. | | | | | | | |
| 06... | 1040 | 8.5 | 2.81 | 28 | 40 | 106 | -- |
| 06... | 1100 | -- | 2.81 | A28 | -- | -- | -- |
| 30... | C1000 | -- | 3.18 | 43 | -- | 631 | -- |
| 30... | 1105 | 10.0 | 3.88 | 97 | 70 | 237 | -- |
| 30... | 1115 | 10.0 | 3.88 | 97 | -- | -- | 7.6 |
| 30... | 1120 | -- | 3.88 | A97 | -- | -- | -- |
| APR. | | | | | | | |
| 01... | C0600 | -- | 4.74 | 185 | -- | 2100 | -- |
| 05... | 1030 | 10.5 | 2.58 | 14 | 55 | 86 | -- |
| 05... | 1300 | 10.5 | 3.01 | -- | 120 | 1010 | -- |
| 08... | 1500 | -- | 2.39 | A8.7 | -- | -- | -- |
| 08... | 1515 | 11.0 | 2.38 | 8.7 | 8 | 6 | -- |

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE (FT3/S) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | | 11482470 LITTLE LOST MAN CREEK NEAR ORICK | | | | |
| NOV., 1973 | | | | | | | |
| 07... | 2245 | 11.0 | E6.25 | 115 | 25 | 51 | -- |
| 07... | 2320 | -- | 6.45 | A130 | -- | -- | -- |
| 08... | 0340 | 11.0 | E7.85 | 320 | 50 | 181 | -- |
| 08... | 0955 | -- | 7.26 | A235 | -- | -- | -- |
| 08... | 1230 | -- | 7.05 | A223 | -- | -- | -- |
| 08... | 1340 | 11.0 | 6.95 | 210 | -- | 78 | -- |
| 09... | 0035 | -- | 6.24 | A102 | -- | -- | -- |
| 09... | 0100 | 11.0 | 6.24 | 100 | 15 | 39 | -- |
| 09... | 0600 | -- | 5.21 | A96 | -- | -- | -- |
| 09... | 0625 | 11.0 | 5.22 | 92 | 13 | 21 | -- |
| DEC. | | | | | | | |
| 27... | C2100 | -- | 6.23 | -- | 45 | 252 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2200 | 6.5 | 3.37 | 6.2 | 5 | 11 | -- |
| 11... | 2330 | -- | 3.45 | A5.8 | -- | -- | -- |
| 12... | 0500 | -- | 3.46 | A6.8 | -- | -- | -- |
| 12... | 0545 | 6.5 | 3.42 | 6.6 | 3 | 3 | -- |
| 12... | 1445 | -- | 3.50 | A8.2 | -- | -- | -- |
| 12... | 2045 | -- | 3.53 | 9.0 | 3 | 4 | -- |
| 12... | 2150 | -- | 3.53 | A9.3 | -- | -- | -- |
| 13... | 0150 | -- | 3.53 | 9.0 | 3 | 5 | -- |
| 13... | 0510 | 8.0 | 3.58 | 11 | 3 | 6 | -- |
| 13... | 0920 | -- | 3.60 | A11 | -- | -- | -- |
| 13... | 0950 | 7.5 | 3.59 | 12 | 3 | 5 | -- |
| FEB. | | | | | | | |
| 20... | 1950 | -- | 4.52 | A43 | -- | -- | -- |
| 20... | 2020 | 8.0 | 4.52 | 38 | 7 | 27 | .00 |
| 21... | 0820 | -- | 4.40 | A48 | -- | -- | -- |
| 21... | 0945 | 8.0 | 4.40 | 43 | 7 | 12 | .00 |
| 22... | 0215 | -- | 4.24 | A36 | -- | -- | -- |
| 22... | 0350 | 7.5 | 4.24 | 36 | 6 | 12 | .00 |
| 22... | 0950 | -- | E4.24 | 33 | 6 | 10 | -- |
| 28... | 1915 | -- | 4.94 | A71 | -- | -- | -- |
| 28... | 2150 | 8.0 | 4.85 | 66 | 9 | 20 | .00 |
| MAR. | | | | | | | |
| 01... | 0825 | 8.5 | 4.67 | 57 | 8 | 12 | .00 |
| 01... | 1130 | 8.5 | 4.64 | 55 | 11 | 16 | -- |
| 01... | 1325 | -- | 4.61 | A50 | -- | -- | -- |
| 01... | 1430 | 8.5 | 4.59 | 53 | 7 | 10 | .00 |
| 01... | 1715 | 8.5 | 4.59 | 53 | 7 | 12 | .00 |
| 01... | 1940 | -- | 4.60 | A51 | -- | -- | -- |
| 01... | 1945 | 8.0 | 4.60 | 51 | 8 | 17 | .00 |
| 01... | 2310 | 8.0 | 4.60 | 53 | 7 | 16 | .00 |
| 02... | 0130 | 7.5 | 4.62 | 54 | 6 | 17 | -- |
| 02... | 0150 | -- | 4.62 | A54 | -- | -- | -- |
| 02... | 0200 | 7.5 | 4.62 | 54 | 7 | 11 | -- |
| 02... | 0600 | 7.0 | 4.61 | 53 | 6 | 9 | -- |
| 02... | 0855 | -- | 4.59 | A54 | -- | -- | -- |
| 02... | 0930 | 7.5 | 4.61 | 53 | 6 | 10 | -- |
| 02... | 1155 | 7.5 | E4.66 | 54 | 6 | 9 | -- |
| 02... | 1230 | 7.5 | 4.61 | 54 | 8 | 11 | -- |
| 02... | 1600 | 7.5 | 4.67 | 56 | 7 | 22 | -- |
| 02... | 1625 | -- | 4.67 | A57 | -- | -- | -- |
| 02... | 1630 | 7.5 | 4.67 | 57 | 8 | 18 | -- |
| 02... | 1900 | 7.5 | 4.67 | 57 | 7 | 9 | -- |
| 03... | 0345 | 6.5 | 4.61 | 54 | 6 | 10 | -- |
| 03... | 0745 | 6.5 | 4.55 | 51 | 5 | 8 | -- |
| 28... | 1420 | -- | 3.46 | A7.8 | -- | -- | -- |
| 28... | 1450 | -- | 3.46 | 7.8 | -- | 3 | -- |
| 29... | 1325 | -- | 4.75 | 51 | -- | 140 | -- |
| 29... | 1400 | -- | 5.00 | 62 | -- | 151 | -- |
| 29... | 1530 | -- | 5.70 | 93 | -- | 237 | -- |
| 29... | 1750 | 9.5 | 6.86 | 155 | -- | 258 | -- |
| 29... | 1805 | -- | 6.85 | A155 | -- | -- | -- |
| 29... | 1820 | 9.5 | 6.84 | 150 | 80 | 219 | -- |
| 29... | 1920 | -- | -- | A149 | -- | -- | -- |
| 30... | 0100 | 9.0 | 7.61 | 195 | 65 | 204 | -- |
| 30... | 0150 | 9.0 | 7.49 | 187 | 65 | 171 | -- |
| 30... | 0325 | 9.0 | 7.20 | 170 | 40 | 134 | -- |
| 30... | 0700 | 9.0 | 6.68 | 152 | 45 | 106 | -- |
| 30... | 1000 | 8.5 | 7.33 | 177 | 45 | 104 | -- |
| 30... | 1020 | -- | 7.30 | A194 | -- | -- | -- |
| APR., 1974 | | | | | | | |
| 01... | 1120 | 9.5 | 8.90 | 166 | 220 | 759 | -- |
| 01... | 1210 | -- | 8.83 | A166 | -- | -- | -- |
| 02... | 1015 | 9.0 | 6.48 | 115 | 35 | 105 | -- |
| 02... | 1030 | 9.0 | 6.46 | 113 | -- | -- | 1.5 |
| 02... | 1145 | -- | 6.45 | A113 | -- | -- | -- |
| 08... | 1310 | -- | 7.19 | A26 | -- | -- | -- |
| 09... | 1020 | 8.5 | 3.95 | 22 | 20 | 30 | -- |
| 09... | 1150 | -- | 3.94 | A22 | -- | -- | -- |
| 10... | 1515 | 10.0 | 3.86 | 19 | 8 | 11 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTAN-TANEOUS DIS-CHARGE (FT3/S) | TUR-BID-ITY (JTU) | SUS-PENDED SEDI-MENT (MG/L) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| | | 11482475 GENEVA CREEK NEAR ORICK | | | | | |
| NOV., 1973 | | | | | | | |
| 07... | 1815 | -- | 6.05 | A1.9 | -- | -- | -- |
| 07... | 1915 | 11.5 | 6.05 | 1.9 | -- | 17 | .00 |
| 08... | 0520 | -- | 6.75 | A5.9 | -- | -- | -- |
| 08... | 0546 | 11.5 | 6.79 | 6.3 | -- | 76 | -- |
| 08... | 0600 | 11.5 | 6.80 | 6.6 | -- | -- | 1.0 |
| 08... | 1055 | 11.5 | 6.43 | A3.2 | -- | 32 | -- |
| 08... | 1100 | 11.5 | 6.43 | 3.3 | -- | -- | .30 |
| 08... | 1540 | -- | 6.20 | A2.4 | -- | -- | -- |
| 08... | 1545 | 11.5 | 6.20 | 2.4 | -- | 15 | .00 |
| 08... | 2055 | -- | 6.20 | A2.6 | -- | -- | -- |
| 08... | 2105 | 11.5 | 6.20 | 2.3 | -- | 33 | -- |
| 08... | 2120 | -- | 6.20 | 2.3 | -- | -- | .20 |
| 09... | 1145 | 11.5 | 6.08 | 2.0 | -- | -- | .00 |
| JAN., 1974 | | | | | | | |
| 11... | 2045 | 7.5 | 7.20 | .16 | 5 | 2 | .00 |
| 11... | 2115 | -- | 7.20 | A.17 | -- | -- | -- |
| 12... | 0735 | 7.0 | E7.20 | .21 | 15 | 23 | -- |
| 12... | 0750 | 7.0 | E7.19 | .21 | -- | -- | .00 |
| 12... | 1710 | -- | 7.18 | A.24 | -- | -- | -- |
| 13... | 0025 | 8.0 | 7.17 | .22 | -- | 4 | .00 |
| 13... | 0405 | 8.0 | 7.19 | .24 | 10 | 3 | .00 |
| 13... | 0406 | 8.0 | 7.19 | 2.4 | -- | 17 | -- |
| 13... | 0610 | -- | -- | A.43 | -- | -- | -- |
| 13... | 0620 | 8.0 | 7.20 | .43 | 10 | 7 | .00 |
| FEB. | | | | | | | |
| 21... | 0050 | -- | 6.75 | A.86 | -- | -- | -- |
| 21... | 0100 | 9.0 | 6.75 | .86 | 45 | 1470 | .00 |
| 21... | 1215 | -- | 7.05 | A1.3 | -- | -- | -- |
| 21... | 1225 | 7.0 | 7.05 | 1.3 | 15 | 19 | .00 |
| 28... | 2210 | -- | 7.46 | A1.6 | -- | -- | -- |
| 28... | 2220 | 9.5 | 7.46 | 1.6 | 10 | 14 | .00 |
| MAR. | | | | | | | |
| 01... | 0700 | 8.5 | 7.36 | 1.2 | 9 | 11 | .00 |
| 01... | 1000 | 8.5 | 7.40 | 1.3 | 10 | 11 | .00 |
| 01... | 1300 | 8.5 | 7.36 | 1.2 | 9 | 6 | .00 |
| 01... | 1510 | -- | 7.35 | A1.2 | -- | -- | -- |
| 01... | 1610 | 8.5 | 7.35 | 1.2 | 9 | 11 | .00 |
| 01... | 1700 | 8.5 | 7.40 | 1.2 | 10 | 15 | -- |
| 01... | 2100 | 8.0 | 7.44 | 1.4 | 15 | 16 | .00 |
| 01... | 2125 | -- | 7.44 | A1.4 | -- | -- | -- |
| 02... | 0015 | 8.0 | 7.45 | 1.5 | 10 | 12 | -- |
| 02... | 0315 | 7.5 | 7.42 | 1.2 | 9 | 12 | .00 |
| 02... | 0325 | -- | 7.42 | A1.2 | -- | -- | -- |
| 02... | 0645 | 7.5 | 7.42 | 1.1 | 9 | 9 | .00 |
| 02... | 1140 | -- | 7.44 | A1.2 | -- | -- | -- |
| 02... | 1200 | 8.0 | 7.44 | 1.3 | 9 | 8 | -- |
| 02... | 1700 | 8.0 | 7.45 | 1.9 | -- | -- | .00 |
| 02... | 1715 | 8.0 | E7.45 | 2.0 | 10 | 28 | -- |
| 02... | 1725 | -- | 7.45 | A1.9 | -- | -- | -- |
| 02... | 2030 | 8.0 | 7.45 | 1.9 | 8 | 10 | .00 |
| 02... | 2330 | 7.5 | 7.41 | 1.5 | 8 | 6 | .00 |
| 03... | 0030 | -- | 7.40 | A1.4 | -- | -- | -- |
| 03... | 0325 | 6.5 | 7.39 | 1.3 | 8 | 6 | .00 |
| 03... | 0755 | 7.0 | 7.37 | 1.1 | 7 | 5 | -- |
| 29... | 1420 | -- | 8.50 | 6.3 | 75 | -- | -- |
| 30... | 0225 | 9.5 | 7.98 | 3.8 | 30 | 78 | -- |
| 30... | 0230 | -- | 7.97 | 3.7 | -- | -- | .30 |
| 30... | 0250 | -- | 8.04 | A4.1 | -- | -- | -- |
| 30... | 0305 | 9.5 | 7.92 | 3.5 | 30 | 69 | -- |
| 30... | 0730 | 9.0 | 8.03 | 4.0 | 30 | 72 | -- |
| APR. | | | | | | | |
| 09... | 0830 | -- | 7.46 | A.63 | -- | -- | -- |
| 09... | 0845 | 8.5 | 7.46 | -- | 10 | 8 | -- |

Table 6.--*Water temperature, stage, stream discharge, turbidity, suspended-sediment concentration, and bedload discharge*--Continued

| DATE | TIME | TEMPERATURE (DEG C) | STAGE (FT ABOVE DATUM) | INSTANTANEOUS DISCHARGE ($FT^3/S$) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) |
|---|---|---|---|---|---|---|---|
| **11482480 BERRY GLEN CREEK NEAR ORICK** | | | | | | | |
| FEB., 1974 | | | | | | | |
| 22... | 1050 | -- | -- | A3.5 | -- | -- | -- |
| 22... | 1100 | 10.0 | -- | -- | 30 | 99 | -- |
| 22... | 1700 | -- | -- | -- | -- | 107 | -- |
| MAR. | | | | | | | |
| 30... | 1205 | 9.5 | -- | -- | -- | -- | 23 |
| 30... | 1210 | 9.5 | 3.58 | -- | 410 | 2750 | -- |
| 30... | 1220 | -- | -- | A20 | -- | -- | -- |
| **11482500 REDWOOD CREEK AT ORICK** | | | | | | | |
| SEP., 1973 | | | | | | | |
| 11... | 1400 | 17.0 | -- | 13 | 1 | -- | -- |
| OCT. | | | | | | | |
| 04... | 1235 | -- | 5.00 | A54 | -- | -- | -- |
| NOV. | | | | | | | |
| 07... | 1320 | -- | 9.95 | A4680 | -- | -- | -- |
| 07... | 1445 | 12.0 | 9.85 | 4370 | -- | 991 | -- |
| 07... | 1525 | 12.0 | 9.80 | 4290 | -- | 1060 | -- |
| 07... | 1545 | 12.0 | 9.78 | 4260 | -- | 945 | -- |
| 07... | 1620 | 12.0 | 9.74 | 4200 | -- | -- | 752 |
| 07... | 1655 | 12.0 | 9.70 | 4140 | 300 | 1020 | -- |
| 08... | 1045 | 13.0 | 12.80 | 10900 | 800 | 3260 | -- |
| 09... | 1045 | 13.5 | 10.20 | 4960 | 280 | 936 | -- |
| 09... | 1630 | 12.0 | 10.08 | 4740 | 250 | 906 | -- |
| JAN., 1974 | | | | | | | |
| 12... | 1700 | 8.0 | 7.21 | 1120 | 45 | 174 | -- |
| 13... | 1000 | -- | 7.64 | A1530 | -- | -- | -- |
| 13... | 1120 | 8.0 | 7.65 | 1530 | 150 | 532 | -- |
| 13... | 1135 | 8.0 | 7.65 | 1530 | 150 | 480 | -- |
| 13... | 1145 | 8.0 | 7.65 | 1530 | 200 | 540 | -- |
| 13... | 1200 | 8.0 | 7.65 | 1530 | -- | -- | 342 |
| FEB. | | | | | | | |
| 20... | 1610 | 8.5 | 9.49 | 3830 | -- | 700 | -- |
| 21... | 1250 | 7.5 | 9.32 | 3580 | 190 | 616 | -- |
| 21... | 1430 | -- | 9.33 | A3580 | -- | -- | -- |
| 21... | 1620 | 7.5 | 9.36 | 3640 | 160 | 767 | -- |
| 21... | 1630 | 7.5 | 9.37 | 3660 | 170 | 598 | -- |
| 21... | 1655 | 7.5 | 9.38 | 3670 | -- | -- | 5250 |
| 21... | 1720 | 8.0 | 9.38 | 3670 | -- | 638 | -- |
| 22... | 1905 | 7.5 | 8.84 | 2930 | -- | 352 | -- |
| 28... | 1030 | 7.0 | 9.27 | 3520 | -- | 1140 | -- |
| 28... | 1800 | 7.5 | 11.02 | 6560 | -- | 3340 | -- |
| MAR. | | | | | | | |
| 01... | 1020 | 7.0 | 9.79 | 4270 | -- | 1030 | -- |
| 01... | 1205 | 7.5 | 9.88 | 4410 | 300 | 1080 | -- |
| 01... | 1220 | 7.5 | 9.96 | 4540 | 340 | 1390 | -- |
| 01... | 1245 | -- | 9.96 | 4540 | -- | 1390 | -- |
| 01... | 1250 | -- | 9.95 | A4320 | -- | -- | -- |
| 01... | 1310 | -- | 9.90 | 4440 | -- | 1360 | -- |
| 01... | 1320 | 7.5 | 9.99 | 4580 | 350 | 1160 | -- |
| 01... | 1350 | 7.5 | 10.04 | 4670 | -- | -- | 4980 |
| 01... | 1620 | 7.5 | 10.24 | 5030 | -- | 1260 | -- |
| 02... | 1035 | 6.5 | 9.99 | 4580 | -- | 860 | -- |
| APR. | | | | | | | |
| 01... | 1005 | -- | 16.56 | 22900 | -- | 5230 | -- |
| 01... | 1255 | 9.5 | 17.43 | 25900 | 1600 | 5470 | -- |
| 04... | 1025 | -- | -- | -- | 210 | -- | -- |
| 04... | 1120 | -- | 9.68 | A4030 | -- | -- | -- |
| 04... | 1240 | 10.0 | 9.63 | 4110 | 200 | 787 | -- |
| 04... | 1320 | 10.0 | 9.61 | 4000 | -- | -- | 3170 |

## Particle Size

Particle size is the diameter, in millimetres, of suspended sediment or bedload material. The size distribution of both suspended and bedload material is used in the computation of the total sediment transported by the stream.

Particle-size distribution was determined either by sieve or sedimentation methods. Sieve methods measure the mean diameter of the particle. Sedimentation methods determine the fall diameter of a particle in distilled water. The fall diameter of a particle is the diameter of a sphere with a specific gravity of 2.65 that would have the same standard fall velocity as the particle.

All sediment samples were shipped to the Geological Survey sediment laboratory in Sacramento, Calif. Selected samples were analyzed for particle-size distribution using procedures described by Guy (1969). The results of the particle-size analyses are listed in tables 7 and 8.

## Table 7.--*Particle-size distribution of suspended sediment*

[See figure 2 for location of stations. C, preceding time of sample collection indicates that sample was collected automatically with single-stage sampler. All samples had sieve diameter 100 percent finer than 4.00 mm.]

| DATE | TIME | TEMPER-ATURE (DEG C) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | SUS-PENDED SEDI-MENT (MG/L) | SUS. SED. FALL DIAM. % FINER THAN .002 MM | SUS. SED. FALL DIAM. % FINER THAN .004 MM | SUS. SED. FALL DIAM. % FINER THAN .008 MM | SUS. SED. FALL DIAM. % FINER THAN .016 MM | SUS. SED. FALL DIAM. % FINER THAN .031 MM | SUS. SED. FALL DIAM. % FINER THAN .062 MM | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE** | | | | | | | | | | | |
| JAN., 1974 | | | | | | | | | | | |
| 12... | 0940 | 5.0 | 218 | 70 | -- | -- | -- | -- | -- | -- | 82 |
| 13... | 1200 | 8.0 | 504 | 319 | 37 | 44 | 54 | 65 | 72 | 77 | -- |
| FEB. | | | | | | | | | | | |
| 21... | 0820 | 6.0 | 670 | 549 | 22 | 32 | 45 | 55 | 66 | 73 | -- |
| MAR. | | | | | | | | | | | |
| 03... | 0900 | 5.0 | 880 | 520 | 18 | 27 | 39 | 52 | 61 | 70 | -- |
| APR. | | | | | | | | | | | |
| 03... | 1315 | 6.5 | 1090 | 1620 | 22 | 30 | 41 | 50 | 59 | 66 | -- |
| **11482020 REDWOOD CREEK AT REDWOOD VALLEY BRIDGE, NEAR BLUE LAKE** | | | | | | | | | | | |
| JAN., 1974 | | | | | | | | | | | |
| 12... | 1320 | 6.0 | 322 | 160 | -- | -- | -- | -- | -- | 83 | -- |
| MAR. | | | | | | | | | | | |
| 02... | 1720 | 6.5 | -- | 1070 | 15 | 23 | 31 | 41 | 49 | 55 | -- |
| **11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 06... | 1400 | 12.0 | -- | 1900 | 14 | 20 | 27 | 35 | 43 | -- | 49 |
| MAR., 1974 | | | | | | | | | | | |
| 02... | 1105 | 6.0 | -- | 1240 | 16 | 23 | 33 | 42 | 51 | 57 | -- |
| **11482160 COPPER CREEK NEAR ORICK** | | | | | | | | | | | |
| DEC., 1973 | | | | | | | | | | | |
| 05... | 1415 | 10.0 | 22 | 164 | -- | -- | -- | -- | -- | -- | 91 |
| FEB., 1974 | | | | | | | | | | | |
| 18... | C2100 | -- | 130 | 9480 | 7 | 12 | 17 | 24 | 33 | 41 | -- |
| 18... | C2130 | -- | 160 | 5190 | 19 | 26 | 35 | 47 | 58 | 68 | -- |
| 26... | 1330 | 7.5 | 40 | 330 | 32 | 43 | 54 | 67 | 75 | -- | 82 |
| **11482190 SLIDE CREEK NEAR ORICK** | | | | | | | | | | | |
| JAN., 1974 | | | | | | | | | | | |
| 16... | C1600 | -- | 120 | 2110 | 20 | 28 | 40 | 53 | 65 | 85 | -- |
| FEB. | | | | | | | | | | | |
| 19... | 1450 | -- | 40 | 277 | -- | -- | -- | -- | -- | -- | 49 |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 07... | 1722 | 12.0 | 3000 | 1280 | 17 | 24 | 33 | 43 | 50 | 58 | -- |
| 08... | 1155 | 12.5 | 5590 | 2150 | 20 | 25 | 35 | 47 | 59 | 67 | -- |
| 09... | 1345 | 12.5 | 3540 | 1170 | 16 | 23 | 31 | 40 | 49 | 57 | -- |
| 16... | 1335 | 11.0 | 5510 | 1520 | 18 | 27 | 38 | 50 | 61 | 72 | -- |
| 30... | 1530 | -- | 9600 | 3940 | 19 | 23 | 34 | 44 | 57 | 66 | -- |
| JAN., 1974 | | | | | | | | | | | |
| 12... | 1600 | 7.0 | 779 | 315 | 17 | 20 | 27 | 33 | 40 | -- | 45 |
| 13... | 0200 | 7.5 | 820 | 475 | -- | -- | -- | -- | -- | -- | 29 |
| 13... | 1045 | 8.0 | 940 | 484 | 17 | 21 | 27 | 34 | 39 | -- | 42 |
| FEB. | | | | | | | | | | | |
| 21... | 1210 | 8.0 | 2580 | 952 | 13 | 19 | 25 | 33 | 39 | 44 | -- |
| 22... | 1110 | 6.0 | 2150 | 618 | 17 | 27 | 34 | 43 | 48 | 54 | -- |
| MAR. | | | | | | | | | | | |
| 01... | 1730 | 7.5 | 4320 | 2840 | 19 | 25 | 36 | 47 | 59 | 69 | -- |
| 02... | 1200 | 6.5 | 3250 | 1190 | 15 | 23 | 33 | 42 | 49 | 56 | -- |
| **11482210 BRIDGE CREEK NEAR ORICK** | | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | | |
| 21... | 1800 | -- | 173 | 74 | -- | -- | -- | -- | -- | -- | 58 |
| MAR. | | | | | | | | | | | |
| 30... | C1100 | -- | -- | 5560 | -- | -- | -- | -- | -- | 76 | -- |

## Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | SUS. SED. FALL DIAM. % FINER THAN .125 MM | SUS. SED. SIEVE DIAM. % FINER THAN .125 MM | SUS. SED. FALL DIAM. % FINER THAN .250 MM | SUS. SED. SIEVE DIAM. % FINER THAN .250 MM | SUS. SED. FALL DIAM. % FINER THAN .500 MM | SUS. SED. SIEVE DIAM. % FINER THAN .500 MM | SUS. SED. FALL DIAM. % FINER THAN 1.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM | SUS. SED. FALL DIAM. % FINER THAN 2.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE--Continued** | | | | | | | | | | |
| JAN., 1974 | | | | | | | | | | |
| 12... | -- | 87 | -- | 91 | -- | 96 | -- | 100 | -- | -- |
| 13... | 82 | -- | 90 | -- | 97 | -- | 100 | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 21... | 79 | -- | 87 | -- | 98 | -- | 100 | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 03... | 76 | -- | 84 | -- | 97 | -- | 100 | -- | -- | -- |
| APR. | | | | | | | | | | |
| 03... | 72 | -- | 79 | -- | 95 | -- | 100 | -- | -- | -- |
| **11482020 REDWOOD CREEK AT REDWOOD VALLEY BRIDGE, NEAR BLUE LAKE--Continued** | | | | | | | | | | |
| JAN., 1974 | | | | | | | | | | |
| 12... | 90 | -- | 95 | -- | 100 | -- | -- | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 02... | 61 | -- | 72 | -- | 95 | -- | 100 | -- | -- | -- |
| **11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK--Continued** | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 08... | -- | 57 | -- | 70 | -- | 83 | -- | 91 | -- | 97 |
| MAR., 1974 | | | | | | | | | | |
| 02... | 66 | -- | 78 | -- | 94 | -- | 100 | -- | -- | -- |
| **11482160 COPPER CREEK NEAR ORICK--Continued** | | | | | | | | | | |
| DEC., 1973 | | | | | | | | | | |
| 05... | -- | 95 | -- | 98 | -- | 100 | -- | -- | -- | -- |
| FEB., 1974 | | | | | | | | | | |
| 18... | 53 | -- | 72 | -- | 92 | -- | 100 | -- | -- | -- |
| 18... | 80 | -- | 93 | -- | 100 | -- | -- | -- | -- | -- |
| 26... | -- | 87 | -- | 91 | -- | 95 | -- | 99 | -- | 100 |
| **11482190 SLIDE CREEK NEAR ORICK--Continued** | | | | | | | | | | |
| JAN., 1974 | | | | | | | | | | |
| 16... | 91 | -- | 96 | -- | 99 | -- | 100 | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 19... | -- | 53 | -- | 60 | -- | 67 | -- | 73 | -- | 100 |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK--Continued** | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 07... | 66 | -- | 78 | -- | 95 | -- | 100 | -- | -- | -- |
| 08... | 78 | -- | 90 | -- | 99 | -- | 100 | -- | -- | -- |
| 09... | 65 | -- | 78 | -- | 91 | -- | 99 | -- | 100 | -- |
| 16... | 79 | -- | 88 | -- | 93 | -- | 100 | -- | -- | -- |
| 30... | 79 | -- | 90 | -- | 98 | -- | 100 | -- | -- | -- |
| JAN., 1974 | | | | | | | | | | |
| 12... | -- | 50 | -- | 54 | -- | 65 | -- | 74 | -- | 83 |
| 13... | -- | 40 | -- | 59 | -- | 76 | -- | 86 | -- | 100 |
| 13... | -- | 47 | -- | 53 | -- | 61 | -- | 72 | -- | 82 |
| FEB. | | | | | | | | | | |
| 21... | 52 | -- | 66 | -- | 79 | -- | 95 | -- | 100 | -- |
| 22... | 59 | -- | 68 | -- | 80 | -- | 98 | -- | 100 | -- |
| MAR. | | | | | | | | | | |
| 01... | 79 | -- | 89 | -- | 97 | -- | 100 | -- | -- | -- |
| 02... | 64 | -- | 76 | -- | 88 | -- | 98 | -- | 100 | -- |
| **11482210 BRIDGE CREEK NEAR ORICK--Continued** | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | |
| 21... | -- | 63 | -- | 70 | -- | 83 | -- | 100 | -- | -- |
| MAR. | | | | | | | | | | |
| 30... | 87 | -- | 97 | -- | 100 | -- | -- | -- | -- | -- |

Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | SUS-PENDED SEDI-MENT (MG/L) | SUS. SED. FALL DIAM. % FINER THAN .002 MM | SUS. SED. FALL DIAM. % FINER THAN .004 MM | SUS. SED. FALL DIAM. % FINER THAN .008 MM | SUS. SED. FALL DIAM. % FINER THAN .016 MM | SUS. SED. FALL DIAM. % FINER THAN .031 MM | SUS. SED. FALL DIAM. % FINER THAN .062 MM | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 09... | 1020 | 10.5 | 3640 | 1510 | 13 | 18 | 25 | 33 | 41 | 47 | -- |
| JAN., 1974 | | | | | | | | | | | |
| 12... | 1300 | -- | 850 | 119 | -- | -- | -- | -- | -- | 72 | -- |
| 13... | 1750 | 9.0 | 1200 | 373 | 34 | 42 | 54 | 66 | 75 | 81 | -- |
| FEB. | | | | | | | | | | | |
| 20... | 1945 | -- | -- | 843 | 15 | 23 | 30 | 38 | 49 | 52 | -- |
| 22... | 1230 | 6.0 | -- | 556 | 18 | 27 | 36 | 46 | 53 | 58 | -- |
| **11482225 HARRY WIER CREEK NEAR ORICK** | | | | | | | | | | | |
| SEP., 1973 | | | | | | | | | | | |
| 18... | 1523 | 11.5 | -- | 16300 | 22 | 27 | 30 | 48 | 60 | 72 | -- |
| NOV. | | | | | | | | | | | |
| 07... | 1630 | 11.5 | 78 | 225 | -- | -- | -- | -- | -- | -- | 82 |
| 08... | 0330 | 12.0 | 278 | 1690 | 21 | 29 | 39 | 51 | 65 | 72 | -- |
| 08... | 0530 | 12.0 | 212 | 901 | 30 | 31 | 42 | 54 | 64 | 72 | -- |
| 08... | 0850 | 11.5 | 145 | 646 | 30 | 31 | 41 | 50 | 59 | 64 | -- |
| 08... | 1500 | 12.0 | 105 | 396 | 25 | 35 | 43 | 53 | 62 | 68 | -- |
| 09... | 0900 | 12.0 | 86 | 171 | -- | -- | -- | -- | -- | -- | 80 |
| 09... | 1145 | 12.0 | 79 | 183 | -- | -- | -- | -- | -- | -- | 82 |
| JAN., 1974 | | | | | | | | | | | |
| 13... | 0915 | 8.5 | 39 | 215 | -- | -- | -- | -- | -- | -- | 91 |
| 15... | C2100 | -- | -- | 1430 | 17 | 23 | 30 | 38 | 45 | 51 | -- |
| 15... | C2130 | -- | -- | 1740 | 18 | 24 | 32 | 41 | 49 | 56 | -- |
| MAR. | | | | | | | | | | | |
| 01... | 0825 | 8.0 | 55 | 139 | -- | -- | -- | -- | -- | -- | 71 |
| 01... | 0930 | 8.0 | 61 | 377 | 44 | 59 | 71 | 83 | 88 | -- | 90 |
| 01... | 1700 | 7.5 | 57 | 57 | -- | -- | -- | -- | -- | -- | 83 |
| APR. | | | | | | | | | | | |
| 01... | 1515 | 10.0 | -- | 680 | 29 | 38 | 45 | 55 | 63 | -- | 67 |
| **11482230 TOM MCDONALD CREEK NEAR ORICK** | | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | | |
| 18... | C2100 | -- | 142 | 518 | -- | -- | -- | -- | -- | -- | 76 |
| 28... | 1120 | -- | 130 | 228 | -- | -- | -- | -- | -- | -- | 73 |
| **11482240 FORTYFOUR CREEK NEAR ORICK** | | | | | | | | | | | |
| DEC., 1973 | | | | | | | | | | | |
| 04... | 1620 | 10.0 | 53 | 68 | -- | -- | -- | -- | -- | -- | 55 |
| FEB., 1974 | | | | | | | | | | | |
| 18... | C2100 | -- | 110 | 1770 | -- | -- | -- | -- | -- | 74 | -- |
| **11482250 MILLER CREEK NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 07... | 1700 | 12.0 | 19 | 200 | -- | -- | -- | -- | -- | -- | 89 |
| 07... | 2000 | 12.0 | 25 | 468 | 22 | 31 | 42 | 55 | 66 | -- | 74 |
| 07... | 2001 | 12.0 | 25 | 821 | -- | -- | -- | -- | -- | -- | 63 |
| 07... | 2340 | 12.0 | 30 | 809 | 19 | 26 | 36 | 48 | 58 | 69 | -- |
| 08... | 0220 | -- | 44 | 577 | 34 | 47 | 62 | 77 | 88 | -- | 91 |
| 08... | 0530 | 12.0 | 40 | 1170 | 22 | 31 | 41 | 53 | 65 | -- | 72 |
| 08... | 0800 | 12.0 | 36 | 454 | 21 | 29 | 39 | 51 | 60 | 70 | -- |
| 08... | 1121 | 12.0 | 28 | 346 | 21 | 27 | 36 | 47 | 56 | -- | 62 |
| 08... | 1401 | 12.5 | 25 | 273 | -- | -- | -- | -- | -- | -- | 68 |
| 08... | 1700 | 12.0 | 25 | 177 | -- | -- | -- | -- | -- | -- | 72 |
| 08... | 1930 | 12.0 | 25 | 168 | -- | -- | -- | -- | -- | -- | 71 |
| 09... | 0430 | 12.0 | 25 | 169 | -- | -- | -- | -- | -- | -- | 80 |
| 09... | 0755 | -- | 22 | 123 | -- | -- | -- | -- | -- | -- | 78 |
| JAN., 1974 | | | | | | | | | | | |
| 12... | 0025 | -- | 2.8 | 75 | -- | -- | -- | -- | -- | -- | 98 |
| 12... | 1500 | -- | 3.8 | 159 | -- | -- | -- | -- | -- | -- | 95 |
| FEB. | | | | | | | | | | | |
| 21... | 0825 | 7.5 | 13 | 111 | -- | -- | -- | -- | -- | -- | 84 |
| 28... | 2110 | -- | 14 | 22 | -- | -- | -- | -- | -- | -- | 73 |
| MAR. | | | | | | | | | | | |
| 30... | 1540 | 10.0 | -- | 287 | -- | -- | -- | -- | -- | -- | 60 |
| **11482260 MILLER CREEK AT MOUTH, NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 08... | 0345 | 12.5 | 95 | 2630 | 33 | 40 | 55 | 69 | 80 | 87 | -- |
| 08... | 1400 | 12.0 | 43 | 557 | 30 | 37 | 48 | 61 | 70 | -- | 74 |
| 08... | 1700 | 12.0 | 40 | 442 | -- | -- | -- | -- | -- | 71 | -- |
| 08... | 2020 | 12.0 | 38 | 442 | 27 | 34 | 44 | 54 | 63 | -- | 66 |
| JAN., 1974 | | | | | | | | | | | |
| 13... | 0615 | 9.0 | 21 | 1290 | 55 | 58 | 72 | 82 | 89 | 92 | -- |
| FEB. | | | | | | | | | | | |
| 18... | C2200 | -- | -- | 1350 | 22 | 31 | 39 | 47 | 51 | -- | 69 |
| 21... | 1130 | 8.0 | 23 | 175 | -- | -- | -- | -- | -- | -- | 76 |
| MAR. | | | | | | | | | | | |
| 01... | 0945 | 8.5 | 23 | 281 | -- | -- | -- | -- | -- | -- | 90 |
| 30... | C1200 | -- | -- | 3120 | -- | -- | -- | -- | -- | 87 | -- |

Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | SUS. SED. FALL DIAM. % FINER THAN .125 MM | SUS. SED. SIEVE DIAM. % FINER THAN .125 MM | SUS. SED. FALL DIAM. % FINER THAN .250 MM | SUS. SED. SIEVE DIAM. % FINER THAN .250 MM | SUS. SED. FALL DIAM. % FINER THAN .500 MM | SUS. SED. SIEVE DIAM. % FINER THAN .500 MM | SUS. SED. FALL DIAM. % FINER THAN 1.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM | SUS. SED. FALL DIAM. % FINER THAN 2.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| 11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK--Continued | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 09... | 58 | -- | 78 | -- | 97 | -- | 100 | -- | -- | -- |
| JAN., 1974 | | | | | | | | | | |
| 12... | 80 | -- | 94 | -- | 100 | -- | -- | -- | -- | -- |
| 13... | 86 | -- | 94 | -- | 97 | -- | 100 | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 20... | 61 | -- | 75 | -- | 92 | -- | 100 | -- | -- | -- |
| 22... | 65 | -- | 76 | -- | 96 | -- | 100 | -- | -- | -- |
| 11482225 HARRY WIER CREEK NEAR ORICK--Continued | | | | | | | | | | |
| SEP., 1973 | | | | | | | | | | |
| 18... | 86 | -- | 93 | -- | 96 | -- | 99 | -- | 100 | -- |
| NOV. | | | | | | | | | | |
| 07... | -- | 87 | -- | 94 | -- | 100 | -- | -- | -- | -- |
| 08... | 81 | -- | 90 | -- | 99 | -- | 100 | -- | -- | -- |
| 08... | 81 | -- | 91 | -- | 99 | -- | 100 | -- | -- | -- |
| 08... | 71 | -- | 83 | -- | 97 | -- | 100 | -- | -- | -- |
| 08... | 76 | -- | 88 | -- | 99 | -- | 100 | -- | -- | -- |
| 09... | -- | 85 | -- | 91 | -- | 98 | -- | 100 | -- | -- |
| 09... | -- | 84 | -- | 87 | -- | 94 | -- | 100 | -- | -- |
| JAN., 1974 | | | | | | | | | | |
| 13... | -- | 94 | -- | 97 | -- | 99 | -- | 100 | -- | -- |
| 15... | 59 | -- | 74 | -- | 95 | -- | 100 | -- | -- | -- |
| 15... | 66 | -- | 82 | -- | 95 | -- | 100 | -- | -- | -- |
| MAR. | | | | | | | | | | |
| 01... | -- | 79 | -- | 90 | -- | 99 | -- | 100 | -- | -- |
| 01... | -- | 92 | -- | 95 | -- | 96 | -- | 98 | -- | 100 |
| 01... | -- | 85 | -- | 90 | -- | 100 | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 01... | -- | 75 | -- | 86 | -- | 95 | -- | 100 | -- | -- |
| 11482230 TOM MCDONALD CREEK NEAR ORICK--Continued | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | |
| 18... | -- | 88 | -- | 98 | -- | 99 | -- | 100 | -- | -- |
| 28... | -- | 78 | -- | 85 | -- | 94 | -- | 100 | -- | -- |
| 11482240 FORTYFOUR CREEK NEAR ORICK--Continued | | | | | | | | | | |
| DEC., 1973 | | | | | | | | | | |
| 04... | -- | 65 | -- | 72 | -- | 86 | -- | 100 | -- | -- |
| FEB., 1974 | | | | | | | | | | |
| 18... | 84 | -- | 96 | -- | 100 | -- | -- | -- | -- | -- |
| 11482250 MILLER CREEK NEAR ORICK--Continued | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 07... | -- | 92 | -- | 96 | -- | 100 | -- | -- | -- | -- |
| 07... | -- | 80 | -- | 84 | -- | 89 | -- | 93 | -- | 100 |
| 07... | -- | 70 | -- | 78 | -- | 87 | -- | 100 | -- | -- |
| 07... | 78 | -- | 85 | -- | 97 | -- | 100 | -- | -- | -- |
| 08... | -- | 94 | -- | 97 | -- | 100 | -- | -- | -- | -- |
| 08... | -- | 78 | -- | 84 | -- | 89 | -- | 94 | -- | 100 |
| 08... | 79 | -- | 87 | -- | 99 | -- | 100 | -- | -- | -- |
| 08... | -- | 67 | -- | 72 | -- | 79 | -- | 89 | -- | 100 |
| 08... | -- | 72 | -- | 80 | -- | 86 | -- | 94 | -- | 100 |
| 08... | -- | 79 | -- | 86 | -- | 92 | -- | 99 | -- | 100 |
| 08... | -- | 80 | -- | 87 | -- | 94 | -- | 100 | -- | -- |
| 09... | -- | 83 | -- | 86 | -- | 92 | -- | 100 | -- | -- |
| 09... | -- | 84 | -- | 89 | -- | 95 | -- | 100 | -- | -- |
| JAN., 1974 | | | | | | | | | | |
| 12... | -- | 98 | -- | 100 | -- | -- | -- | -- | -- | -- |
| 12... | -- | 96 | -- | 99 | -- | 100 | -- | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 21... | -- | 88 | -- | 94 | -- | 97 | -- | 100 | -- | -- |
| 28... | -- | 78 | -- | 88 | -- | 93 | -- | 100 | -- | -- |
| MAR. | | | | | | | | | | |
| 30... | -- | 66 | -- | 74 | -- | 84 | -- | 90 | -- | 100 |
| 11482260 MILLER CREEK AT MOUTH, NEAR ORICK--Continued | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 08... | 94 | -- | 98 | -- | 100 | -- | -- | -- | -- | -- |
| 08... | -- | 85 | -- | 93 | -- | 98 | -- | 99 | -- | 100 |
| 08... | 79 | -- | 91 | -- | 99 | -- | 100 | -- | -- | -- |
| 08... | -- | 75 | -- | 85 | -- | 95 | -- | 99 | -- | 100 |
| JAN., 1974 | | | | | | | | | | |
| 13... | 94 | -- | 96 | -- | 99 | -- | 100 | -- | -- | -- |
| FEB. | | | | | | | | | | |
| 18... | -- | 77 | -- | 88 | -- | 94 | -- | 97 | -- | 100 |
| 21... | -- | 81 | -- | 87 | -- | 92 | -- | 98 | -- | 100 |
| MAR. | | | | | | | | | | |
| 01... | -- | 83 | -- | 87 | -- | 90 | -- | 92 | -- | 100 |
| 30... | 94 | -- | 100 | -- | -- | -- | -- | -- | -- | -- |

Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | SUS-PENDED SEDI-MENT (MG/L) | SUS. SED. FALL DIAM. % FINER THAN .002 MM | SUS. SED. FALL DIAM. % FINER THAN .004 MM | SUS. SED. FALL DIAM. % FINER THAN .008 MM | SUS. SED. FALL DIAM. % FINER THAN .016 MM | SUS. SED. FALL DIAM. % FINER THAN .031 MM | SUS. SED. FALL DIAM. % FINER THAN .062 MM | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **11482270 BOND CREEK NEAR ORICK** | | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | | |
| 18... | C2100 | -- | 30 | 2100 | -- | -- | -- | -- | -- | 76 | -- |
| **11482280 CLOQUET CREEK NEAR ORICK** | | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | | |
| 18... | C2200 | -- | -- | 953 | 21 | 31 | 38 | 47 | 51 | -- | 71 |
| MAR. | | | | | | | | | | | |
| 30... | C1100 | -- | -- | 1650 | -- | -- | -- | -- | -- | 81 | -- |
| **11482300 ELAM CREEK NEAR ORICK** | | | | | | | | | | | |
| FEB., 1974 | | | | | | | | | | | |
| 18... | C2300 | -- | -- | 129 | -- | -- | -- | -- | -- | -- | 68 |
| APR. | | | | | | | | | | | |
| 01... | C0600 | -- | -- | 592 | -- | -- | -- | -- | -- | -- | 21 |
| 01... | C0630 | -- | -- | 182 | -- | -- | -- | -- | -- | -- | 85 |
| **11482330 HAYES CREEK NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 08... | 0840 | 11.0 | 22 | 393 | 21 | 27 | 33 | 40 | 46 | 49 | -- |
| 09... | 0700 | 11.0 | 13 | 208 | 27 | 36 | 44 | 54 | 61 | -- | 68 |
| MAR., 1974 | | | | | | | | | | | |
| 29... | 2200 | 9.5 | -- | 207 | -- | -- | -- | -- | -- | -- | 66 |
| 30... | 1100 | -- | -- | 3300 | -- | -- | -- | -- | -- | 41 | -- |
| **11482450 LOST MAN CREEK NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 08... | 1200 | 11.5 | 175 | 188 | -- | -- | -- | -- | -- | -- | 64 |
| 09... | 0340 | 12.0 | 106 | 102 | -- | -- | -- | -- | -- | -- | 66 |
| DEC. | | | | | | | | | | | |
| 20... | C1600 | -- | 190 | 385 | -- | -- | -- | -- | -- | 47 | -- |
| JAN., 1974 | | | | | | | | | | | |
| 15... | C2100 | -- | 190 | 994 | 14 | 19 | 24 | 31 | 35 | -- | 59 |
| APR. | | | | | | | | | | | |
| 05... | 1231 | 9.0 | -- | 310 | 45 | 61 | 70 | 81 | 88 | -- | 89 |
| **11482460 LARRY DAMM CREEK NEAR ORICK** | | | | | | | | | | | |
| MAR. | | | | | | | | | | | |
| 30... | 1105 | 10.0 | 97 | 237 | -- | -- | -- | -- | -- | -- | 51 |
| APR. | | | | | | | | | | | |
| 05... | 1300 | 10.5 | -- | 1010 | 13 | 20 | 26 | 34 | 42 | -- | 48 |
| **11482470 LITTLE LOST MAN CREEK NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 08... | 0340 | 11.0 | 320 | 181 | 39 | 43 | 59 | 75 | 89 | -- | 95 |
| 09... | 0625 | 11.0 | 92 | 21 | -- | -- | -- | -- | -- | -- | 78 |
| MAR., 1974 | | | | | | | | | | | |
| 29... | 1530 | -- | 93 | 237 | 20 | 30 | 40 | 53 | 63 | -- | 78 |
| 29... | 1750 | 9.5 | 155 | 258 | 29 | 39 | 50 | 63 | 75 | -- | 88 |
| 30... | 1000 | 8.5 | 177 | 104 | -- | -- | -- | -- | -- | -- | 72 |
| APR. | | | | | | | | | | | |
| 01... | 1120 | 9.5 | 166 | 759 | 28 | 40 | 50 | 64 | 76 | -- | 85 |
| **11482475 GENEVA CREEK NEAR ORICK** | | | | | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 08... | 0546 | 11.5 | 6.3 | 76 | -- | -- | -- | -- | -- | -- | 83 |
| 08... | 1545 | 11.5 | 2.4 | 15 | -- | -- | -- | -- | -- | -- | 79 |
| MAR., 1974 | | | | | | | | | | | |
| 30... | 0730 | 9.0 | 4.0 | 72 | -- | -- | -- | -- | -- | -- | 76 |

## Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | SUS. SED. FALL DIAM. % FINER THAN .125 MM | SUS. SED. SIEVE DIAM. % FINER THAN .125 MM | SUS. SED. FALL DIAM. % FINER THAN .250 MM | SUS. SED. SIEVE DIAM. % FINER THAN .250 MM | SUS. SED. FALL DIAM. % FINER THAN .500 MM | SUS. SED. SIEVE DIAM. % FINER THAN .500 MM | SUS. SED. FALL DIAM. % FINER THAN 1.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM | SUS. SED. FALL DIAM. % FINER THAN 2.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 11482270 BOND CREEK NEAR ORICK--Continued | | | | | | |
| FEB., 1974 | | | | | | | | | | |
| 18... | 89 | -- | 96 | -- | 98 | -- | 100 | -- | -- | -- |
| | | | | 11482280 CLOQUET CREEK NEAR ORICK--Continued | | | | | | |
| FEB., 1974 | | | | | | | | | | |
| 18... | -- | 81 | -- | 93 | -- | 98 | -- | 100 | -- | -- |
| MAR. | | | | | | | | | | |
| 30... | 91 | -- | 98 | -- | 100 | -- | -- | -- | -- | -- |
| | | | | 11482300 ELAM CREEK NEAR ORICK--Continued | | | | | | |
| FEB., 1974 | | | | | | | | | | |
| 18... | -- | 79 | -- | 93 | -- | 100 | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 01... | -- | 25 | -- | 34 | -- | 54 | -- | 75 | -- | 100 |
| 01... | -- | 90 | -- | 95 | -- | 100 | -- | -- | -- | -- |
| | | | | 11482330 HAYES CREEK NEAR ORICK--Continued | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 08... | 54 | -- | 64 | -- | 91 | -- | 100 | -- | -- | -- |
| 09... | -- | 76 | -- | 85 | -- | 91 | -- | 100 | -- | -- |
| MAR., 1974 | | | | | | | | | | |
| 29... | -- | 76 | -- | 88 | -- | 100 | -- | -- | -- | -- |
| 30... | 62 | -- | 81 | -- | 91 | -- | 97 | -- | 100 | -- |
| | | | | 11482450 LOST MAN CREEK NEAR ORICK--Continued | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 08... | -- | 74 | -- | 86 | -- | 100 | -- | -- | -- | -- |
| 09... | -- | 73 | -- | 81 | -- | 100 | -- | -- | -- | -- |
| DEC. | | | | | | | | | | |
| 20... | 60 | -- | 87 | -- | 98 | -- | 100 | -- | -- | -- |
| JAN., 1974 | | | | | | | | | | |
| 15... | -- | 71 | -- | 86 | -- | 97 | -- | 100 | -- | -- |
| APR. | | | | | | | | | | |
| 05... | -- | 93 | -- | 96 | -- | 100 | -- | -- | -- | -- |
| | | | | 11482460 LARRY DAMM CREEK NEAR ORICK--Continued | | | | | | |
| MAR. | | | | | | | | | | |
| 30... | -- | 62 | -- | 91 | -- | 99 | -- | 100 | -- | -- |
| APR. | | | | | | | | | | |
| 05... | -- | 59 | -- | 90 | -- | 97 | -- | 100 | -- | -- |
| | | | | 11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 08... | -- | 96 | -- | 99 | -- | 100 | -- | -- | -- | -- |
| 09... | -- | 80 | -- | 86 | -- | 100 | -- | -- | -- | -- |
| MAR., 1974 | | | | | | | | | | |
| 29... | -- | 89 | -- | 96 | -- | 99 | -- | 100 | -- | -- |
| 29... | -- | 90 | -- | 96 | -- | 100 | -- | -- | -- | -- |
| 30... | -- | 78 | -- | 92 | -- | 100 | -- | -- | -- | -- |
| APR. | | | | | | | | | | |
| 01... | -- | 92 | -- | 97 | -- | 99 | -- | 100 | -- | -- |
| | | | | 11482475 GENEVA CREEK NEAR ORICK--Continued | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 08... | -- | 89 | -- | 100 | -- | -- | -- | -- | -- | -- |
| 08... | -- | 100 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR., 1974 | | | | | | | | | | |
| 30... | -- | 84 | -- | 90 | -- | 100 | -- | -- | -- | -- |

Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | SUS-PENDED SEDI-MENT (MG/L) | SUS. SED. FALL DIAM. % FINER THAN .002 MM | SUS. SED. FALL DIAM. % FINER THAN .004 MM | SUS. SED. FALL DIAM. % FINER THAN .008 MM | SUS. SED. FALL DIAM. % FINER THAN .016 MM | SUS. SED. FALL DIAM. % FINER THAN .031 MM | SUS. SED. FALL DIAM. % FINER THAN .062 MM | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 11482480 BERRY GLEN CREEK NEAR ORICK | | | | | | | |
| MAR., 1974 | | | | | | | | | | | |
| 30... | 1210 | 9.5 | -- | 2750 | 11 | 15 | 19 | 24 | 28 | -- | 34 |
| | | | | 11482500 REDWOOD CREEK AT ORICK | | | | | | | |
| NOV., 1973 | | | | | | | | | | | |
| 07... | 1525 | 12.0 | 4290 | 1060 | 20 | 25 | 35 | 45 | 56 | 65 | -- |
| 09... | 1045 | 13.5 | 4960 | 936 | -- | -- | -- | -- | -- | 76 | -- |
| JAN., 1974 | | | | | | | | | | | |
| 13... | 1135 | 8.0 | 1530 | 480 | 27 | 36 | 46 | 59 | 69 | -- | 73 |
| FEB. | | | | | | | | | | | |
| 21... | 1620 | 7.5 | 3640 | 767 | 15 | 20 | 28 | 37 | 46 | 54 | -- |
| MAR. | | | | | | | | | | | |
| 01... | 1220 | 7.5 | 4540 | 1390 | 14 | 21 | 29 | 39 | 48 | 57 | -- |
| APR. | | | | | | | | | | | |
| 01... | 1005 | -- | 22900 | 5230 | 27 | 29 | 45 | 61 | 76 | 87 | -- |
| 01... | 1255 | 9.5 | 25900 | 5470 | 21 | 32 | 46 | 60 | 75 | 80 | -- |
| 04... | 1240 | 10.0 | 4110 | 787 | 20 | 25 | 35 | 46 | 58 | 66 | -- |

Table 7.--*Particle-size distribution of suspended sediment*--Continued

| DATE | SUS. SED. FALL DIAM. % FINER THAN .125 MM | SUS. SED. SIEVE DIAM. % FINER THAN .125 MM | SUS. SED. FALL DIAM. % FINER THAN .250 MM | SUS. SED. SIEVE DIAM. % FINER THAN .250 MM | SUS. SED. FALL DIAM. % FINER THAN .500 MM | SUS. SED. SIEVE DIAM. % FINER THAN .500 MM | SUS. SED. FALL DIAM. % FINER THAN 1.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM | SUS. SED. FALL DIAM. % FINER THAN 2.00 MM | SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 11482480 BERRY GLEN CREEK NEAR ORICK--Continued | | | | | | |
| MAR., 1974 | | | | | | | | | | |
| 30... | -- | 41 | -- | 51 | -- | 60 | -- | 71 | -- | 86 |
| | | | | 11482500 REDWOOD CREEK AT ORICK--Continued | | | | | | |
| NOV., 1973 | | | | | | | | | | |
| 07... | 75 | -- | 89 | -- | 99 | -- | 100 | -- | -- | |
| 09... | 88 | -- | 100 | -- | -- | -- | -- | -- | -- | |
| JAN., 1974 | | | | | | | | | | |
| 13... | -- | 85 | -- | 91 | -- | 98 | -- | 100 | -- | |
| FEB. | | | | | | | | | | |
| 21... | 63 | -- | 76 | -- | 94 | -- | 96 | -- | 100 | |
| MAR. | | | | | | | | | | |
| 01... | 65 | -- | 78 | -- | 91 | -- | 99 | -- | 100 | |
| APR. | | | | | | | | | | |
| 01... | 96 | -- | 99 | -- | 100 | -- | -- | -- | -- | |
| 01... | 92 | -- | 100 | -- | -- | -- | -- | -- | -- | |
| 04... | 75 | -- | 85 | -- | 99 | -- | 100 | -- | -- | |

## Table 8.--*Particle-size distribution of bedload*

[See figure 2 for location of stations. A, instantaneous discharge measured with current meter]

| DATE | TIME | TEMPERATURE (DEG C) | INSTANTANEOUS DISCHARGE (FT³/S) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) | SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM |
|---|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 13... | 1450 | 9.0 | 2070 | 8800 | -- | 1 | 2 | 8 |
| JAN., 1974 | | | | | | | | |
| 12... | 0945 | 5.0 | 218 | 133 | -- | -- | -- | 2 |
| 17... | 1330 | 8.0 | 1540 | 2630 | -- | 1 | 4 | 15 |
| FEB. | | | | | | | | |
| 21... | 0855 | 6.0 | 670 | 675 | -- | -- | 2 | 11 |
| MAR. | | | | | | | | |
| 03... | 1110 | 5.0 | 860 | 1950 | -- | -- | 1 | 4 |
| APR. | | | | | | | | |
| 03... | 1400 | 6.5 | 1120 | 6900 | -- | -- | 1 | 5 |
| **11482020 REDWOOD CREEK AT REDWOOD VALLEY BRIDGE, NEAR BLUE LAKE** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 09... | 1710 | 12.0 | -- | 1430 | -- | -- | 3 | 12 |
| JAN., 1974 | | | | | | | | |
| 12... | 1325 | 6.0 | 322 | 310 | -- | -- | 1 | 3 |
| MAR. | | | | | | | | |
| 02... | 1745 | 6.5 | -- | 6100 | -- | -- | 2 | 5 |
| **11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 08... | 1500 | 12.0 | -- | 5980 | -- | -- | 1 | 5 |
| MAR., 1974 | | | | | | | | |
| 03... | 1130 | -- | -- | -- | -- | -- | 2 | 5 |
| **11482160 COPPER CREEK NEAR ORICK** | | | | | | | | |
| DEC., 1973 | | | | | | | | |
| 05... | 1430 | 10.0 | 23 | .27 | 16 | 29 | 49 | 76 |
| **11482190 SLIDE CREEK NEAR ORICK** | | | | | | | | |
| DEC., 1973 | | | | | | | | |
| 05... | 1620 | -- | 12 | 2.8 | 4 | 5 | 8 | 13 |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 1730 | 12.0 | 2990 | 4420 | -- | -- | 1 | 7 |
| 08... | 1230 | 12.5 | 5460 | 16000 | -- | -- | 1 | 6 |
| 16... | 1420 | 11.0 | 5340 | 7120 | -- | -- | 1 | 5 |
| 30... | 1500 | -- | 10100 | 5110 | -- | 1 | 3 | 10 |
| JAN., 1974 | | | | | | | | |
| 12... | 1700 | 7.0 | 787 | 251 | -- | -- | 1 | 3 |
| 13... | 1130 | 8.0 | 959 | 1500 | -- | -- | 1 | 4 |
| 17... | 1450 | 9.5 | 5040 | 10200 | -- | -- | 2 | 9 |
| FEB. | | | | | | | | |
| 21... | 1300 | 8.0 | 2640 | 1720 | -- | -- | 3 | 8 |
| 22... | 1145 | 6.0 | 2140 | 1100 | -- | -- | 2 | 8 |
| MAR. | | | | | | | | |
| 02... | 1215 | 6.5 | 3240 | 12700 | -- | -- | 2 | 5 |
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 09... | 1000 | 10.5 | 3640 | 4300 | -- | -- | 3 | 13 |
| FEB., 1974 | | | | | | | | |
| 22... | 1415 | -- | -- | 6620 | -- | -- | 2 | 9 |

Table 8.--*Particle-size distribution of bedload*--Continued

| DATE | SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 76.0 MM |
|---|---|---|---|---|---|---|---|---|
| 11481500 REDWOOD CREEK NEAR BLUE LAKE--Continued | | | | | | | | |
| NOV.. 1973 | | | | | | | | |
| 13... | 16 | 28 | 43 | 60 | 91 | 100 | -- | -- |
| JAN.. 1974 | | | | | | | | |
| 12... | 9 | 40 | 76 | 93 | 100 | -- | -- | -- |
| 17... | 29 | 39 | 49 | 60 | 82 | 92 | 100 | -- |
| FEB. | | | | | | | | |
| 21... | 37 | 59 | 75 | 82 | 91 | 100 | -- | -- |
| MAR. | | | | | | | | |
| 03... | 13 | 18 | 26 | 39 | 84 | 100 | -- | -- |
| APR. | | | | | | | | |
| 03... | 12 | 22 | 36 | 49 | 68 | 91 | 91 | 100 |
| 11482020 REDWOOD CREEK AT REDWOOD VALLEY BRIDGE, NEAR BLUE LAKE--Continued | | | | | | | | |
| NOV.. 1973 | | | | | | | | |
| 09... | 20 | 31 | 51 | 86 | 92 | 100 | -- | -- |
| JAN.. 1974 | | | | | | | | |
| 12... | 13 | 34 | 58 | 76 | 100 | -- | -- | -- |
| MAR. | | | | | | | | |
| 02... | 17 | 33 | 51 | 69 | 97 | 100 | -- | -- |
| 11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK--Continued | | | | | | | | |
| NOV.. 1973 | | | | | | | | |
| 08... | 11 | 21 | 36 | 63 | 87 | 95 | 100 | -- |
| MAR.. 1974 | | | | | | | | |
| 03... | 13 | 27 | 45 | 62 | 93 | 97 | 100 | -- |
| 11482160 COPPER CREEK NEAR ORICK--Continued | | | | | | | | |
| DEC.. 1973 | | | | | | | | |
| 05... | 95 | 100 | -- | -- | -- | -- | -- | -- |
| 11482190 SLIDE CREEK NEAR ORICK--Continued | | | | | | | | |
| DEC.. 1973 | | | | | | | | |
| 05... | 21 | 31 | 44 | 60 | 90 | 100 | -- | -- |
| 11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK--Continued | | | | | | | | |
| NOV.. 1973 | | | | | | | | |
| 07... | 17 | 29 | 46 | 64 | 92 | 100 | -- | -- |
| 08... | 13 | 27 | 49 | 71 | 97 | 100 | -- | -- |
| 16... | 10 | 21 | 38 | 55 | 75 | 79 | 100 | -- |
| 30... | 27 | 48 | 59 | 70 | 96 | 100 | -- | -- |
| JAN.. 1974 | | | | | | | | |
| 12... | 13 | 39 | 69 | 90 | 100 | -- | -- | -- |
| 13... | 16 | 59 | 91 | 96 | 100 | -- | -- | -- |
| 17... | 20 | 35 | 57 | 67 | 89 | 100 | -- | -- |
| FEB. | | | | | | | | |
| 21... | 20 | 33 | 49 | 64 | 89 | 100 | -- | -- |
| 22... | 26 | 49 | 70 | 85 | 99 | 100 | -- | -- |
| MAR. | | | | | | | | |
| 02... | 13 | 25 | 45 | 65 | 90 | 100 | -- | -- |
| 11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK--Continued | | | | | | | | |
| NOV.. 1973 | | | | | | | | |
| 09... | 25 | 34 | 43 | 57 | 84 | 95 | 100 | -- |
| FEB.. 1974 | | | | | | | | |
| 22... | 23 | 39 | 54 | 67 | 99 | 100 | -- | -- |

Table 8.--*Particle-size distribution of bedload*--Continued

| DATE | TIME | TEMPER-ATURE (DEG C) | INSTAN-TANEOUS DIS-CHARGE (FT3/S) | SEDI-MENT BEDLOAD DIS-CHARGE (T/DAY) | SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM |
|---|---|---|---|---|---|---|---|---|
| | | | | 11482225 HARRY WIER CREEK NEAR ORICK | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 1625 | 11.5 | 78 | 30 | -- | 1 | 3 | 10 |
| 08... | 0550 | 12.0 | 210 | 77 | -- | 1 | 6 | 27 |
| 08... | 1300 | 12.0 | 120 | 259 | -- | -- | 2 | 9 |
| 08... | 1400 | 11.5 | 112 | 85 | -- | 1 | 3 | 10 |
| FEB., 1974 | | | | | | | | |
| 21... | 0245 | 8.0 | 34 | .63 | -- | -- | 7 | 22 |
| 21... | 0850 | 8.0 | 50 | .94 | -- | -- | 9 | 16 |
| 21... | 1730 | 8.0 | 42 | 1.3 | -- | -- | 13 | 22 |
| 22... | 1045 | 7.0 | 29 | .47 | -- | -- | 13 | 22 |
| MAR. | | | | | | | | |
| 01... | 0045 | 8.0 | 41 | 1.5 | -- | -- | 19 | 26 |
| 01... | 0835 | 8.0 | 57 | 8.2 | -- | 1 | 9 | 24 |
| 01... | 1400 | 8.0 | 45 | 4.9 | -- | -- | 6 | 14 |
| 02... | 1510 | -- | 45 | 2.1 | -- | -- | 3 | 10 |
| | | | | 11482230 TOM MCDONALD CREEK NEAR ORICK | | | | |
| APR., 1974 | | | | | | | | |
| 02... | 1325 | -- | 238 | 132 | -- | 1 | 3 | 9 |
| | | | | 11482250 MILLER CREEK NEAR ORICK | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 1710 | 12.0 | 19 | .40 | -- | -- | 3 | 11 |
| 07... | 2030 | 12.0 | 26 | 2.4 | 1 | 1 | 6 | 20 |
| 08... | 0300 | 12.0 | 48 | 22 | -- | -- | 2 | 7 |
| 08... | 0530 | 12.0 | 40 | 34 | -- | -- | 2 | 6 |
| 08... | 0800 | 12.0 | 36 | 15 | -- | -- | 2 | 11 |
| 08... | 1120 | 12.0 | 28 | 1.8 | 1 | 2 | 5 | 19 |
| 08... | 1400 | 12.5 | 25 | 8.7 | -- | -- | 2 | 10 |
| 08... | 1710 | 12.0 | 25 | .50 | 4 | 6 | 12 | 36 |
| 08... | 2135 | 12.0 | 25 | 1.3 | 2 | 3 | 6 | 23 |
| 09... | 0430 | 12.0 | 25 | 1.2 | -- | 1 | 3 | 16 |
| 09... | 0755 | -- | 22 | 3.4 | 1 | 1 | 2 | 5 |
| FEB., 1974 | | | | | | | | |
| 21... | 0830 | 7.5 | 13 | .37 | -- | -- | 8 | 35 |
| MAR. | | | | | | | | |
| 01... | 1530 | 8.0 | 10 | 3.9 | -- | -- | 5 | 6 |
| 01... | 1855 | 8.0 | 12 | 3.3 | -- | -- | 1 | 5 |
| 02... | 0630 | 7.5 | A11 | .27 | -- | -- | -- | 4 |
| 02... | 1110 | 7.5 | 11 | .26 | -- | -- | 1 | 8 |
| | | | | 11482260 MILLER CREEK AT MOUTH, NEAR ORICK | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 1545 | 12.0 | 29 | 26 | -- | 1 | 3 | 10 |
| 07... | 2110 | 12.0 | 43 | 77 | -- | 1 | 4 | 12 |
| 08... | 0410 | 12.5 | 105 | 15 | -- | 1 | 8 | 33 |
| 08... | 0955 | 12.0 | 49 | 249 | -- | -- | 2 | 6 |
| 08... | 1400 | 12.0 | 43 | 72 | -- | 1 | 4 | 14 |
| 08... | 2025 | 12.0 | 38 | 70 | -- | -- | 2 | 11 |
| 09... | 1125 | 13.0 | 26 | 18 | -- | -- | 3 | 13 |
| FEB., 1974 | | | | | | | | |
| 21... | 0245 | 8.0 | 15 | 4.4 | -- | -- | 2 | 7 |
| 21... | 1140 | 8.0 | 22 | 6.2 | -- | -- | 8 | 16 |
| 28... | 2155 | 8.0 | 26 | 8.6 | -- | -- | 5 | 9 |
| MAR. | | | | | | | | |
| 01... | 0050 | 8.0 | 23 | 21 | -- | -- | 3 | 8 |
| 01... | 0930 | 8.0 | A24 | 7.0 | -- | -- | 4 | 13 |
| 01... | 1535 | 8.5 | 20 | 7.7 | -- | -- | 5 | 11 |
| 01... | 2140 | 7.5 | 23 | 13 | -- | -- | 3 | 9 |
| 02... | 0430 | 7.5 | 21 | 2.7 | -- | -- | 6 | 12 |
| 02... | 0930 | 7.5 | 19 | 8.7 | -- | -- | 3 | 7 |
| 02... | 1835 | 7.5 | 22 | 5.1 | -- | -- | 6 | 15 |
| 03... | 0110 | 7.0 | 19 | 6.8 | -- | -- | 3 | 8 |
| 03... | 0320 | -- | 18 | 4.0 | -- | -- | 5 | 11 |
| 03... | 0645 | 6.5 | 17 | 3.8 | -- | -- | 4 | 21 |
| 03... | 1000 | 6.5 | 16 | 1.6 | -- | -- | 4 | 16 |

Table 8.--*Particle-size distribution of bedload*--Continued

| DATE | SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 76.0 MM |
|---|---|---|---|---|---|---|---|---|
| | 11482225 HARRY WIER CREEK NEAR ORICK--Continued | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 14 | 19 | 23 | 34 | 65 | 100 | -- | -- |
| 08... | 62 | 88 | 96 | 99 | 100 | -- | -- | -- |
| 08... | 21 | 42 | 61 | 73 | 90 | 100 | -- | -- |
| 08... | 19 | 30 | 43 | 61 | 79 | 100 | -- | -- |
| FEB., 1974 | | | | | | | | |
| 21... | 43 | 62 | 77 | 88 | 100 | -- | -- | -- |
| 21... | 30 | 44 | 58 | 75 | 100 | -- | -- | -- |
| 21... | 44 | 63 | 75 | 85 | 100 | -- | -- | -- |
| 22... | 41 | 62 | 85 | 97 | 100 | -- | -- | -- |
| MAR. | | | | | | | | |
| 01... | 41 | 62 | 85 | 97 | 100 | -- | -- | -- |
| 01... | 35 | 43 | 51 | 58 | 63 | 100 | -- | -- |
| 01... | 36 | 57 | 72 | 83 | 100 | -- | -- | -- |
| 02... | 23 | 41 | 72 | 88 | 100 | -- | -- | -- |
| | 11482230 TOM MCDONALD CREEK NEAR ORICK--Continued | | | | | | | |
| APR., 1974 | | | | | | | | |
| 02... | 13 | 26 | 47 | 71 | 96 | 100 | -- | -- |
| | 11482250 MILLER CREEK NEAR ORICK--Continued | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 32 | 63 | 83 | 96 | 100 | -- | -- | -- |
| 07... | 60 | 78 | 88 | 95 | 100 | -- | -- | -- |
| 08... | 13 | 21 | 31 | 48 | 88 | 100 | -- | -- |
| 08... | 14 | 26 | 44 | 68 | 97 | 100 | -- | -- |
| 08... | 23 | 35 | 49 | 66 | 100 | -- | -- | -- |
| 08... | 36 | 61 | 71 | 78 | 100 | -- | -- | -- |
| 08... | 21 | 35 | 50 | 72 | 100 | -- | -- | -- |
| 08... | 53 | 71 | 81 | 88 | 100 | -- | -- | -- |
| 08... | 46 | 64 | 73 | 82 | 100 | -- | -- | -- |
| 09... | 38 | 59 | 71 | 81 | 100 | -- | -- | -- |
| 09... | 20 | 52 | 79 | 95 | 100 | -- | -- | -- |
| FEB., 1974 | | | | | | | | |
| 21... | 58 | 74 | 85 | 100 | -- | -- | -- | -- |
| MAR. | | | | | | | | |
| 01... | 18 | 36 | 60 | 79 | 100 | -- | -- | -- |
| 01... | 13 | 27 | 46 | 66 | 100 | -- | -- | -- |
| 02... | 13 | 35 | 61 | 90 | 100 | -- | -- | -- |
| 02... | 26 | 52 | 67 | 89 | 100 | -- | -- | -- |
| | 11482260 MILLER CREEK AT MOUTH, NEAR ORICK--Continued | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 22 | 44 | 66 | 83 | 100 | -- | -- | -- |
| 07... | 24 | 41 | 56 | 72 | 93 | 100 | -- | -- |
| 08... | 54 | 71 | 86 | 98 | 100 | -- | -- | -- |
| 08... | 11 | 16 | 25 | 44 | 90 | 100 | -- | -- |
| 08... | 23 | 35 | 54 | 73 | 100 | -- | -- | -- |
| 08... | 29 | 50 | 66 | 82 | 100 | -- | -- | -- |
| 09... | 23 | 33 | 45 | 57 | 68 | 100 | -- | -- |
| FEB., 1974 | | | | | | | | |
| 21... | 19 | 42 | 68 | 87 | 100 | -- | -- | -- |
| 21... | 38 | 63 | 82 | 94 | 100 | -- | -- | -- |
| 28... | 22 | 41 | 67 | 82 | 100 | -- | -- | -- |
| MAR. | | | | | | | | |
| 01... | 25 | 46 | 67 | 84 | 100 | -- | -- | -- |
| 01... | 30 | 51 | 69 | 81 | 100 | -- | -- | -- |
| 01... | 30 | 60 | 84 | 93 | 100 | -- | -- | -- |
| 01... | 24 | 47 | 68 | 82 | 100 | -- | -- | -- |
| 02... | 33 | 63 | 84 | 97 | 100 | -- | -- | -- |
| 02... | 22 | 46 | 81 | 96 | 100 | -- | -- | -- |
| 02... | 32 | 48 | 63 | 81 | 100 | -- | -- | -- |
| 03... | 28 | 62 | 86 | 92 | 100 | -- | -- | -- |
| 03... | 32 | 61 | 86 | 96 | 100 | -- | -- | -- |
| 03... | 46 | 70 | 90 | 96 | 100 | -- | -- | -- |
| 03... | 34 | 55 | 76 | 97 | 100 | -- | -- | -- |

Table 8.—*Particle-size distribution of bedload*—Continued

| DATE | TIME | TEMPERATURE (DEG C) | INSTANTANEOUS DISCHARGE (FT3/S) | SEDIMENT BEDLOAD DISCHARGE (T/DAY) | SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM |
|---|---|---|---|---|---|---|---|---|
| **11482330 HAYES CREEK NEAR ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 08... | 0030 | 11.0 | A16 | 5.0 | 1 | 2 | 8 | 30 |
| 08... | 0845 | -- | 22 | 17 | -- | 1 | 2 | 11 |
| 08... | 2350 | 11.0 | 15 | .70 | 1 | 2 | 13 | 43 |
| 09... | 0800 | -- | 13 | 6.9 | 1 | 1 | 3 | 15 |
| MAR., 1974 | | | | | | | | |
| 29... | 2205 | -- | -- | .61 | 3 | 6 | 25 | 66 |
| **11482450 LOST MAN CREEK NEAR ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 1945 | 12.0 | 102 | 3.9 | 1 | 1 | 5 | 24 |
| 08... | 1215 | -- | 175 | 61 | 1 | 1 | 3 | 11 |
| 08... | 1700 | -- | 150 | 34 | -- | 1 | 3 | 14 |
| 09... | 0345 | -- | 105 | 7.4 | -- | -- | 1 | 4 |
| FEB., 1974 | | | | | | | | |
| 21... | 1320 | 7.5 | 56 | .73 | -- | -- | 7 | 10 |
| 22... | 1130 | 6.5 | 47 | .71 | -- | -- | 2 | 2 |
| **11482460 LARRY DAMM CREEK NEAR ORICK** | | | | | | | | |
| MAR., 1974 | | | | | | | | |
| 30... | 1115 | 10.0 | 97 | 7.6 | 1 | 2 | 16 | 43 |
| **11482470 LITTLE LOST MAN CREEK NEAR ORICK** | | | | | | | | |
| APR., 1974 | | | | | | | | |
| 02... | 1030 | 9.0 | 113 | 1.5 | -- | 1 | 5 | 21 |
| **11482475 GENEVA CREEK NEAR ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 08... | 0600 | 11.5 | 6.6 | 1.0 | 1 | 2 | 3 | 10 |
| 08... | 1100 | 11.5 | 3.3 | .30 | -- | 4 | 7 | 18 |
| 08... | 2120 | -- | 2.3 | .20 | 1 | 2 | 3 | 6 |
| MAR., 1974 | | | | | | | | |
| 30... | 0230 | -- | 3.7 | .30 | -- | 1 | 7 | 15 |
| **11482480 BERRY GLEN CREEK NEAR ORICK** | | | | | | | | |
| MAR., 1974 | | | | | | | | |
| 30... | 1205 | 9.5 | -- | 23 | -- | 1 | 6 | 16 |
| **11482500 REDWOOD CREEK AT ORICK** | | | | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 1620 | 12.0 | 4200 | 752 | -- | 1 | 3 | 19 |
| JAN., 1974 | | | | | | | | |
| 13... | 1200 | 8.0 | 1530 | 362 | -- | -- | 1 | 10 |
| FEB. | | | | | | | | |
| 21... | 1655 | 7.5 | 3670 | 5250 | -- | -- | 3 | 9 |
| MAR. | | | | | | | | |
| 01... | 1350 | 7.5 | 4670 | 4980 | -- | -- | 2 | 6 |
| APR. | | | | | | | | |
| 04... | 1320 | 10.0 | 4000 | 3170 | -- | -- | 1 | 12 |

Table 8.--*Particle-size distribution of bedload*--Continued

| DATE | SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM | SED. BEDLOAD SIEVE DIAM. % FINER THAN 76.0 MM |
|---|---|---|---|---|---|---|---|---|
| | | | 11482330 HAYES CREEK NEAR ORICK--Continued | | | | | |
| NOV., 1973 | | | | | | | | |
| 08... | 55 | 77 | 89 | 96 | 100 | -- | -- | -- |
| 08... | 25 | 42 | 60 | 81 | 100 | -- | -- | -- |
| 08... | 67 | 85 | 94 | 97 | 100 | -- | -- | -- |
| 09... | 32 | 53 | 73 | 89 | 100 | -- | -- | -- |
| MAR., 1974 | | | | | | | | |
| 29... | 90 | 96 | 98 | 99 | 100 | -- | -- | -- |
| | | | 11482450 LOST MAN CREEK NEAR ORICK--Continued | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 44 | 70 | 87 | 97 | 100 | -- | -- | -- |
| 08... | 26 | 53 | 80 | 96 | 100 | -- | -- | -- |
| 08... | 31 | 51 | 68 | 82 | 100 | -- | -- | -- |
| 09... | 8 | 16 | 38 | 88 | 100 | -- | -- | -- |
| FEB., 1974 | | | | | | | | |
| 21... | 24 | 46 | 74 | 100 | -- | -- | -- | -- |
| 22... | 6 | 15 | 35 | 62 | 100 | -- | -- | -- |
| | | | 11482460 LARRY DAMM CREEK NEAR ORICK--Continued | | | | | |
| MAR., 1974 | | | | | | | | |
| 30... | 66 | 82 | 93 | 97 | 100 | -- | -- | -- |
| | | | 11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued | | | | | |
| APR., 1974 | | | | | | | | |
| 02... | 47 | 77 | 94 | 99 | 100 | -- | -- | -- |
| | | | 11482475 GENEVA CREEK NEAR ORICK--Continued | | | | | |
| NOV., 1973 | | | | | | | | |
| 08... | 22 | 38 | 51 | 83 | 100 | -- | -- | -- |
| 08... | 32 | 47 | 61 | 79 | 100 | -- | -- | -- |
| 08... | 13 | 30 | 51 | 77 | 100 | -- | -- | -- |
| MAR., 1974 | | | | | | | | |
| 30... | 28 | 50 | 76 | 96 | 100 | -- | -- | -- |
| | | | 11482480 BERRY GLEN CREEK NEAR ORICK--Continued | | | | | |
| MAR., 1974 | | | | | | | | |
| 30... | 24 | 33 | 43 | 53 | 69 | 91 | 100 | -- |
| | | | 11482500 REDWOOD CREEK AT ORICK--Continued | | | | | |
| NOV., 1973 | | | | | | | | |
| 07... | 34 | 53 | 70 | 84 | 99 | 100 | -- | -- |
| JAN., 1974 | | | | | | | | |
| 13... | 28 | 44 | 67 | 90 | 100 | -- | -- | -- |
| FEB. | | | | | | | | |
| 21... | 26 | 48 | 69 | 83 | 98 | 100 | -- | -- |
| MAR. | | | | | | | | |
| 01... | 16 | 34 | 57 | 75 | 97 | 100 | -- | -- |
| APR. | | | | | | | | |
| 04... | 30 | 55 | 76 | 89 | 98 | 100 | -- | -- |

## pH

The pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with a pH less than 7 are termed acidic, and solutions with a pH greater than 7 are termed basic. Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. At pH values greater than 8.3, for example, carbon dioxide is, for practical purposes, absent, while at pH values less than 8.3, the carbonate ion is absent. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are influenced, in part, by the hydrogen-ion activity of water.

The pH (tables 9 and 10) was measured onsite using a portable meter with a combination glass electrode and followed the techniques outlined by Brown and others (1970, p. 129). Prior to use, pH meters were calibrated using at least two buffer solutions; the meters were calibrated several times during extended periods of operation.

## Total Alkalinity

Total alkalinity is the amount of acid that a solution can absorb for a given change in pH. It is a measure of the buffering capacity of the water. In this report, total alkalinity is reported as an equivalent concentration of calcium carbonate.

Total alkalinity was measured in the field by titrating a measured volume of water with a 0.01639N solution of sulfuric acid to a pH of 4.5. A portable pH meter was used to determine the titration endpoint. Standardized procedures and calculations (American Public Health Association and others, 1971, p. 370; Brown and others, 1970, p. 41) were used in determining total alkalinity values (table 9).

## Specific Conductance

Specific conductance is a measure of the ability of a solution to conduct an electrical current and is expressed in micromhos per centimetre at 25°C. Specific conductance is used to estimate the concentration of major dissolved solids in water. The types and individual concentrations of the anions and cations cannot be determined by the measurement. The significance of major dissolved solids in water is discussed in another section.

Specific conductance was measured in the field and in the laboratory using a portable conductivity meter. Water samples for field determination of specific conductance were collected at the estimated centroid of flow at each sampling point; samples for laboratory determinations were taken from water collected for suspended-sediment analyses. Standardized techniques in Brown and others (1970, p. 148) were followed in determining the specific conductance values listed in tables 9 and 10.

## Dissolved oxygen

The dissolved-oxygen concentration in water is the quantity of free oxygen in solution. The corrosive action of water on metals and the solubility of many chemical elements and compounds are influenced, in part, by the dissolved-oxygen concentration. The low solubility of iron in an oxidizing environment is a well-known example. In addition, dissolved oxygen is essential for maintenance of life processes in aquatic organisms and is used as an indicator of biological productivity. Photosynthesis is an oxygen-producing process; whereas, respiration is an oxygen-consuming process.

Dissolved-oxygen concentrations were measured in the field using the Alsterberg azide modification of the Winkler method. Water samples were collected in glass-stoppered bottles. After adding the appropriate reagents, the dissolved-oxygen concentration of the sample was determined by titrating with 0.0250N phenylarsine oxide to a clear endpoint, using starch as an endpoint indicator. Standardized procedures (American Public Health Association and others, 1971, p. 477; Brown and others, 1970, p. 126) were followed in all dissolved-oxygen concentration determinations (table 9).

## Table 9.--*Onsite determinations of water quality*

[See figure 2 for location of stations. A, instantaneous discharge measured with current meter. C, preceding time of sample collection indicates that sample was collected automatically with a single-stage sampler. <, actual number is smaller than the number shown]

| DATE | TIME | INSTAN-TANEOUS DIS-CHARGE (FT³/S) | ALKA-LINITY AS CACO3 (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | DIS-SOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | | **11481500 REDWOOD CREEK NEAR BLUE LAKE** | | | | |
| OCT., 1973 | | | | | | | |
| 03... | 1230 | -- | -- | 260 | 8.0 | 14.5 | 10.2 |
| JAN., 1974 | | | | | | | |
| 12... | 0940 | 218 | -- | 71 | -- | 5.0 | -- |
| 12... | 0945 | 218 | 27 | 79 | -- | 5.0 | -- |
| 13... | 1200 | 504 | -- | -- | -- | 8.0 | -- |
| 13... | 1205 | 504 | -- | 71 | -- | 8.0 | -- |
| 13... | 1600 | 495 | -- | 66 | -- | 8.0 | -- |
| 13... | 1845 | -- | -- | 70 | -- | -- | -- |
| FEB. | | | | | | | |
| 21... | 0800 | 670 | 29 | 72 | 6.8 | 6.0 | 11.6 |
| 21... | 0820 | 670 | -- | 71 | -- | 6.0 | -- |
| MAR. | | | | | | | |
| 03... | 0900 | 880 | -- | 69 | -- | 5.0 | -- |
| 03... | 0915 | 839 | 28 | -- | 7.3 | 5.0 | 12.3 |
| APR. | | | | | | | |
| 03... | 1315 | 1090 | -- | 56 | -- | 6.5 | -- |
| | | | **11482020 REDWOOD CREEK AT REDWOOD VALLEY BRIDGE, NEAR BLUE LAKE** | | | | |
| OCT., 1973 | | | | | | | |
| 03... | 0900 | -- | -- | 280 | 7.0 | 7.5 | 10.1 |
| JAN., 1974 | | | | | | | |
| 12... | 1230 | 322 | -- | 78 | -- | 6.0 | -- |
| 12... | 1320 | 322 | -- | 82 | -- | 6.0 | -- |
| MAR. | | | | | | | |
| 02... | 1720 | -- | -- | 71 | -- | 6.5 | -- |
| 02... | 1830 | -- | 28 | 70 | 7.4 | 6.5 | 11.6 |
| | | | **11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK** | | | | |
| OCT., 1973 | | | | | | | |
| 01... | 1430 | -- | -- | -- | 8.0 | 17.0 | 9.2 |
| NOV. | | | | | | | |
| 08... | 1400 | -- | -- | 77 | -- | 12.0 | -- |
| MAR., 1974 | | | | | | | |
| 02... | 0815 | -- | 34 | 72 | 7.4 | 6.0 | 11.7 |
| 02... | 1105 | -- | -- | 69 | -- | 6.0 | -- |
| | | | **11482140 HIGH-SLOPE SCHIST CREEK NEAR ORICK** | | | | |
| OCT., 1973 | | | | | | | |
| 02... | 1330 | -- | -- | 135 | 7.1 | 11.0 | 10.4 |
| DEC. | | | | | | | |
| 28... | C1700 | -- | -- | 56 | -- | -- | -- |
| MAR., 1974 | | | | | | | |
| 30... | C1130 | -- | -- | 38 | -- | -- | -- |
| | | | **11482160 COPPER CREEK NEAR ORICK** | | | | |
| OCT., 1973 | | | | | | | |
| 02... | 1030 | -- | -- | 140 | 7.7 | 12.0 | 10.5 |
| DEC. | | | | | | | |
| 03... | 1015 | 22 | -- | 48 | -- | 10.0 | -- |
| 03... | 1020 | -- | -- | [illegible] | -- | -- | -- |
| 20... | C1600 | 57 | -- | [illegible] | -- | -- | -- |
| [illegible] | [illegible] | [illegible] | -- | [illegible] | -- | -- | -- |
| [illegible] | [illegible] | [illegible] | -- | [illegible] | -- | -- | -- |
| [illegible] | [illegible] | [illegible] | -- | [illegible] | -- | -- | -- |
| [illegible] | [illegible] | [illegible] | -- | [illegible] | -- | -- | -- |
| [illegible] | [illegible] | [illegible] | -- | [illegible] | -- | -- | -- |
| [illegible] | [illegible] | [illegible] | -- | [illegible] | -- | -- | -- |
| 31... | C2200 | 160 | -- | 34 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 30... | 1130 | 4.0 | -- | 62 | -- | 7.0 | -- |
| FEB. | | | | | | | |
| 18... | C2100 | 130 | -- | 50 | -- | -- | -- |
| 18... | C2130 | 160 | -- | 41 | -- | -- | -- |
| 20... | 1330 | 40 | 20 | 46 | 6.0 | 7.5 | 11.0 |

Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTAN-TANEOUS DIS-CHARGE (FT³/S) | ALKA-LINITY AS CACO3 (MG/L) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | DIS-SOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| **11482190 SLIDE CREEK NEAR ORICK** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 01... | 1240 | -- | -- | -- | 7.7 | 13.0 | 10.4 |
| DEC. | | | | | | | |
| 05... | 1615 | 12 | -- | 55 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 16... | C1600 | 120 | -- | 42 | -- | -- | -- |
| FEB. | | | | | | | |
| 05... | 1430 | 5.6 | 22 | 55 | 7.4 | 7.0 | 11.8 |
| 19... | 1300 | -- | 18 | -- | 7.4 | 9.0 | 11.5 |
| 19... | 1450 | 40 | -- | 49 | -- | -- | -- |
| 21... | 1700 | 819 | -- | 49 | -- | 8.0 | -- |
| MAR. | | | | | | | |
| 30... | C1130 | -- | -- | 41 | -- | -- | -- |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 01... | 1130 | -- | -- | -- | 8.0 | 15.0 | 9.8 |
| NOV. | | | | | | | |
| 07... | 1722 | 3000 | -- | 82 | -- | 12.0 | -- |
| 07... | 1840 | 3060 | -- | 70 | -- | 12.0 | 10.5 |
| 08... | 0245 | 6550 | 28 | 71 | 6.3 | 12.5 | 10.9 |
| 08... | 0815 | 6770 | 27 | 69 | -- | -- | -- |
| 08... | 1155 | 5590 | -- | 72 | -- | 12.5 | -- |
| 08... | 1400 | 5170 | 33 | 75 | 6.5 | 12.5 | 10.8 |
| 08... | 1530 | 5390 | -- | 68 | -- | -- | -- |
| 09... | 1345 | 3540 | -- | -- | -- | 12.5 | -- |
| 16... | 1335 | 5510 | -- | 70 | -- | 11.0 | -- |
| 30... | 1530 | 9600 | -- | 78 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 12... | 1600 | 779 | -- | 75 | -- | 7.0 | -- |
| 12... | 1745 | -- | 30 | -- | 6.8 | 7.0 | 11.7 |
| 13... | 0200 | 820 | -- | 77 | -- | 7.5 | -- |
| 13... | 0230 | -- | 30 | -- | 6.8 | 7.5 | 11.1 |
| 13... | 1045 | 940 | -- | 74 | -- | 8.0 | -- |
| 13... | 1230 | 966 | 29 | 80 | 6.8 | -- | 11.6 |
| FEB. | | | | | | | |
| 20... | 2100 | 2590 | 29 | 71 | 6.8 | 8.0 | -- |
| 20... | 2200 | 2600 | -- | 72 | -- | 8.0 | 11.8 |
| 21... | 0500 | 2400 | -- | 75 | -- | -- | 11.5 |
| 21... | 1210 | 2580 | -- | 72 | -- | 8.0 | 11.7 |
| 21... | 1530 | 2690 | 26 | 68 | -- | 8.0 | -- |
| 21... | 1930 | 2550 | -- | 70 | -- | 8.0 | 11.6 |
| 22... | 1110 | 2150 | -- | 71 | -- | 6.0 | -- |
| 22... | 1200 | 2130 | 28 | 71 | -- | 6.0 | -- |
| 22... | 1220 | 2110 | 28 | 75 | 6.8 | 6.0 | 11.9 |
| MAR. | | | | | | | |
| 01... | 1730 | 4320 | -- | 69 | -- | 7.5 | -- |
| 01... | 1745 | 4330 | 31 | 71 | 6.8 | 7.5 | 11.9 |
| 02... | 0330 | 3640 | 29 | -- | 6.9 | 7.0 | 11.3 |
| 02... | 1200 | 3250 | -- | 69 | -- | 6.5 | -- |
| 02... | 1218 | 3240 | 31 | 77 | 6.9 | 6.5 | 12.2 |
| 02... | 1615 | 3140 | 27 | 68 | -- | 7.0 | -- |
| **11482210 BRIDGE CREEK NEAR ORICK** | | | | | | | |
| SEP., 1973 | | | | | | | |
| 26... | 1130 | -- | -- | 181 | 7.5 | 14.0 | 10.2 |
| OCT. | | | | | | | |
| 23... | C1100 | 300 | -- | 104 | -- | -- | -- |
| NOV. | | | | | | | |
| 08... | C0400 | 720 | -- | 55 | -- | -- | -- |
| DEC. | | | | | | | |
| 04... | 1310 | 216 | -- | 52 | -- | -- | -- |
| FEB., 1974 | | | | | | | |
| 01... | 1240 | 112 | -- | 55 | -- | 8.5 | -- |
| 21... | 1800 | 173 | -- | 52 | -- | -- | -- |
| MAR. | | | | | | | |
| 30... | C1100 | -- | -- | 45 | -- | -- | -- |
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK** | | | | | | | |
| SEP., 1973 | | | | | | | |
| 26... | 1530 | -- | -- | 230 | 7.6 | 18.0 | 8.4 |
| NOV. | | | | | | | |
| 09... | 1020 | 3640 | -- | 76 | -- | 10.5 | -- |
| JAN., 1974 | | | | | | | |
| 12... | 1300 | 850 | -- | 75 | -- | -- | -- |
| 13... | 1750 | 1200 | -- | 75 | -- | 9.0 | -- |
| FEB. | | | | | | | |
| 20... | 1945 | -- | -- | 69 | -- | -- | -- |
| 22... | 1230 | -- | -- | 71 | -- | 6.0 | -- |
| 22... | 1240 | 2390 | 26 | 70 | -- | 6.0 | -- |

## Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT3/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | | 11482225 HARRY WIER CREEK NEAR ORICK | | | | |
| SEP., 1973 | | | | | | | |
| 26... | 1400 | -- | -- | 105 | 7.3 | 13.0 | 10.4 |
| OCT. | | | | | | | |
| 31... | 1040 | -- | -- | 70 | 7.1 | 10.6 | 11.2 |
| NOV. | | | | | | | |
| 07... | 1630 | 78 | -- | 46 | -- | 11.5 | -- |
| 07... | 1725 | 81 | -- | 75 | 7.1 | 11.5 | -- |
| 07... | 1900 | 86 | -- | 80 | 7.0 | 12.0 | 10.9 |
| 07... | 1945 | 96 | 16 | 70 | 7.1 | 12.5 | -- |
| 07... | 2020 | 99 | -- | 66 | 7.1 | 12.0 | -- |
| 07... | 2300 | 122 | 15 | 51 | 7.2 | 12.0 | -- |
| 07... | 2320 | -- | -- | -- | -- | 12.0 | 10.8 |
| 08... | 0115 | 170 | 12 | 77 | 7.1 | 12.0 | -- |
| 08... | 0330 | 278 | -- | 36 | -- | 12.0 | -- |
| 08... | 0530 | 212 | -- | 39 | -- | 12.0 | -- |
| 08... | 0600 | 205 | 11 | 62 | 7.2 | 12.0 | 10.7 |
| 08... | 0850 | 145 | -- | 42 | -- | 11.5 | -- |
| 08... | 0900 | 144 | 13 | 50 | -- | 11.5 | -- |
| 08... | 0901 | 144 | -- | 56 | 7.3 | 11.5 | -- |
| 08... | 1145 | 130 | -- | 58 | 7.2 | -- | 10.6 |
| 08... | 1405 | 111 | -- | 63 | 7.2 | -- | -- |
| 08... | 1500 | 105 | -- | 45 | -- | 12.0 | -- |
| 08... | 1750 | 98 | -- | 60 | -- | 12.0 | -- |
| 08... | 1815 | -- | 13 | -- | 7.3 | -- | 10.8 |
| 08... | 2355 | 95 | 13 | 70 | 7.1 | 12.0 | -- |
| 09... | 0800 | -- | -- | -- | 7.1 | 12.0 | -- |
| 09... | 0900 | 86 | -- | 45 | -- | 12.0 | -- |
| 09... | 0930 | -- | -- | -- | -- | -- | 10.7 |
| 09... | 1030 | -- | -- | -- | 7.1 | -- | -- |
| 09... | 1145 | 79 | -- | 43 | 7.1 | 12.0 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2255 | 8.9 | 15 | 55 | 6.8 | 6.5 | 12.4 |
| 12... | 0200 | 11 | -- | 55 | 7.2 | 6.5 | -- |
| 12... | 0435 | 10 | 18 | 60 | 7.3 | 6.5 | -- |
| 12... | 0505 | -- | -- | -- | -- | 6.5 | 12.4 |
| 12... | 0845 | 8.5 | 20 | 59 | 7.3 | 6.5 | -- |
| 12... | 0930 | -- | -- | -- | -- | 6.5 | 12.7 |
| 12... | 1315 | 9.5 | -- | 62 | 7.2 | -- | -- |
| 12... | 1515 | -- | -- | -- | 7.2 | 7.5 | -- |
| 12... | 1530 | 13 | 17 | 59 | -- | 7.5 | 11.6 |
| 12... | 1630 | 14 | 17 | 52 | 7.1 | 7.5 | -- |
| 12... | 1730 | -- | -- | -- | -- | 7.5 | 11.4 |
| 12... | 1800 | 12 | 16 | 52 | -- | 7.0 | -- |
| 12... | 2400 | 12 | -- | 63 | 7.2 | -- | -- |
| 13... | 0055 | 14 | 17 | 64 | 7.3 | 8.5 | 11.9 |
| 13... | 0915 | 39 | -- | 45 | -- | 8.5 | -- |
| 13... | 0930 | 38 | 14 | 43 | 7.1 | 8.5 | -- |
| 13... | 1200 | 30 | -- | 55 | 7.0 | 8.5 | -- |
| 13... | 1235 | 29 | 16 | -- | -- | 8.5 | -- |
| 13... | 1345 | 28 | 16 | 57 | 7.1 | 9.0 | 11.5 |
| 13... | 1530 | 26 | 15 | 60 | 7.2 | 9.0 | 11.4 |
| 13... | 1745 | 24 | -- | 60 | 7.2 | 9.0 | -- |
| FEB. | | | | | | | |
| 20... | 1745 | 38 | -- | 51 | -- | 8.0 | -- |
| 20... | 1905 | -- | 19 | -- | 7.5 | -- | -- |
| 20... | 2035 | 38 | -- | 51 | -- | 8.0 | -- |
| 20... | 2050 | -- | -- | -- | 7.1 | -- | -- |
| 21... | 0015 | 35 | 15 | 44 | -- | 8.0 | -- |
| 21... | 0110 | 35 | -- | 50 | 6.9 | 8.0 | -- |
| 21... | 0220 | -- | -- | -- | -- | -- | 11.7 |
| 21... | 0445 | 33 | 16 | 54 | 7.0 | 8.0 | 11.8 |
| 21... | 1035 | 51 | 16 | 45 | 6.9 | 8.0 | 11.7 |
| 21... | 1200 | 49 | 13 | 41 | -- | 8.0 | -- |
| 21... | 1225 | 48 | -- | 40 | 7.0 | 8.0 | -- |
| 21... | 1630 | 45 | 16 | 42 | 7.0 | 8.0 | 11.8 |
| 21... | 1745 | 41 | -- | 52 | 6.9 | 8.0 | 11.8 |
| 21... | 2030 | 39 | -- | -- | 6.9 | 8.0 | 12.0 |
| 22... | 0030 | 36 | 15 | 55 | 7.0 | 7.0 | -- |
| 22... | 0300 | 34 | -- | 55 | 6.9 | 7.0 | -- |
| 22... | 0615 | 31 | -- | 54 | 6.8 | 6.5 | 12.2 |
| 22... | 0930 | 31 | 15 | 48 | -- | 7.0 | -- |
| 28... | 2000 | 46 | -- | 54 | 6.6 | 7.5 | -- |
| 28... | 2120 | -- | -- | 54 | -- | 7.5 | 11.7 |
| MAR. | | | | | | | |
| 01... | 0010 | -- | 16 | -- | 6.7 | -- | -- |
| 01... | 0100 | 41 | -- | 56 | 6.7 | 7.5 | -- |
| 01... | 0150 | 40 | 15 | 59 | 6.7 | 8.0 | 11.8 |
| 01... | 0450 | -- | -- | 59 | 6.7 | 7.5 | -- |
| 01... | 0715 | -- | -- | 56 | 6.6 | 8.0 | -- |
| 01... | 0745 | -- | 16 | -- | 6.6 | 8.0 | 11.6 |
| 01... | 1100 | 49 | 13 | 50 | 6.6 | 9.0 | 11.8 |

## Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT3/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | **11482225 HARRY WIER CREEK NEAR ORICK--Continued** | | | | | |
| MAR., 1974 | | | | | | | |
| 01... | 1415 | 46 | 15 | 52 | 6.6 | 8.0 | -- |
| 01... | 1645 | 59 | 15 | 52 | 6.8 | 7.5 | -- |
| 01... | 1800 | -- | -- | -- | -- | -- | 11.3 |
| 01... | 1945 | 52 | -- | 52 | 6.7 | 7.0 | -- |
| 01... | 2320 | 45 | 14 | 54 | 6.6 | 7.0 | 11.3 |
| 02... | 0315 | 45 | -- | 52 | 6.6 | 7.0 | -- |
| 02... | 0520 | 43 | 14 | 54 | 6.6 | 7.0 | 11.7 |
| 02... | 0815 | 42 | -- | 53 | 6.3 | 7.0 | -- |
| 02... | 1145 | 41 | 15 | 53 | 6.8 | 7.0 | 11.5 |
| 02... | 1450 | 45 | -- | 43 | -- | 7.0 | -- |
| 02... | 1500 | 45 | -- | 53 | 6.6 | 7.0 | -- |
| 02... | 1800 | 43 | 14 | 52 | 6.6 | 7.0 | 11.9 |
| 02... | 2200 | 43 | -- | 54 | 6.7 | 7.0 | -- |
| 02... | 2315 | 43 | 15 | 54 | 6.7 | 7.0 | 12.0 |
| 02... | 2330 | 43 | -- | 42 | -- | 7.0 | -- |
| 03... | 0220 | 41 | 16 | 64 | 6.8 | 7.0 | 12.0 |
| 03... | 0430 | 40 | -- | 43 | -- | 7.0 | -- |
| 03... | 0520 | 39 | 16 | 53 | 6.9 | 7.0 | 11.9 |
| 03... | 0805 | 37 | -- | 43 | -- | 6.0 | -- |
| 03... | 0810 | 37 | 14 | 55 | 6.3 | 6.0 | 12.0 |
| 03... | 0930 | 36 | 16 | 44 | -- | 6.0 | -- |
| APR. | | | | | | | |
| 01... | 1515 | -- | -- | 30 | -- | 10.0 | -- |
| | | **11482230 TOM MCDONALD CREEK NEAR ORICK** | | | | | |
| SEP., 1973 | | | | | | | |
| 27... | 0900 | -- | -- | 79 | 7.0 | 11.5 | 10.3 |
| OCT. | | | | | | | |
| 31... | 1635 | -- | -- | 55 | 6.9 | 10.0 | 10.9 |
| NOV. | | | | | | | |
| 08... | C0400 | 142 | -- | 40 | -- | -- | -- |
| 08... | C0430 | 640 | -- | 32 | -- | -- | -- |
| 30... | C1800 | 142 | -- | 37 | -- | -- | -- |
| DEC. | | | | | | | |
| 04... | 1515 | 142 | -- | 39 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 15... | C2100 | 142 | -- | 31 | -- | -- | -- |
| 28... | 1345 | 42 | 8 | 35 | 6.0 | 8.0 | 11.4 |
| 31... | 1325 | 65 | -- | 34 | -- | 9.0 | -- |
| 31... | 1410 | 60 | -- | 35 | -- | 8.0 | -- |
| FEB. | | | | | | | |
| 18... | C2100 | 142 | -- | 33 | -- | -- | -- |
| 21... | 1145 | 100 | -- | 35 | -- | -- | -- |
| 28... | 1120 | 130 | -- | 35 | -- | -- | -- |
| MAR. | | | | | | | |
| 30... | C1100 | 520 | -- | 34 | -- | -- | -- |
| APR. | | | | | | | |
| 02... | 1315 | 240 | -- | 30 | -- | 9.0 | -- |
| 02... | 1330 | -- | 6 | -- | 7.0 | 9.0 | 11.5 |
| | | **11482240 FORTYFOUR CREEK NEAR ORICK** | | | | | |
| NOV., 1973 | | | | | | | |
| 30... | C1800 | 110 | -- | 17 | -- | -- | -- |
| DEC. | | | | | | | |
| 04... | 1620 | 53 | -- | 39 | -- | 10.0 | -- |
| JAN., 1974 | | | | | | | |
| 28... | 1120 | 22 | -- | 38 | -- | 8.0 | -- |
| 28... | 1135 | -- | 10 | -- | 6.9 | 8.0 | 11.3 |
| FEB. | | | | | | | |
| 18... | C2100 | 110 | -- | 29 | -- | -- | -- |
| 21... | 1320 | 43 | -- | 38 | -- | -- | -- |
| 21... | 1445 | 37 | -- | 37 | -- | -- | -- |

Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT3/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | 11482250 MILLER CREEK NEAR ORICK | | | | | |
| NOV., 1973 | | | | | | | |
| 02... | 1020 | -- | -- | 66 | 6.8 | 9.0 | 10.9 |
| 07... | 1630 | 18 | 16 | 43 | 7.1 | 12.0 | 10.8 |
| 07... | 1700 | 19 | -- | 46 | -- | 12.0 | -- |
| 07... | 1930 | -- | -- | 51 | 7.1 | 12.0 | -- |
| 07... | 2000 | 25 | -- | 41 | -- | 12.0 | -- |
| 07... | 2001 | 25 | -- | 42 | -- | 12.0 | -- |
| 07... | 2230 | -- | 13 | 45 | 7.1 | 12.0 | 10.7 |
| 07... | 2340 | 30 | -- | 41 | -- | 12.0 | -- |
| 08... | 0130 | -- | -- | 60 | 7.1 | 12.0 | -- |
| 08... | 0220 | 44 | -- | 44 | -- | -- | -- |
| 08... | 0430 | 50 | 13 | 45 | 7.1 | 12.0 | 10.8 |
| 08... | 0530 | 40 | 13 | 44 | -- | 12.0 | -- |
| 08... | 0730 | 36 | -- | 48 | 7.1 | 12.0 | -- |
| 08... | 0800 | 36 | -- | 45 | -- | 12.0 | -- |
| 08... | 1030 | 30 | 15 | 47 | 7.1 | 12.0 | 10.8 |
| 08... | 1120 | 28 | -- | 46 | -- | 12.0 | -- |
| 08... | 1121 | 28 | -- | 46 | -- | 12.0 | -- |
| 08... | 1330 | 25 | -- | -- | 7.1 | 12.5 | -- |
| 08... | 1630 | 25 | 17 | 46 | 7.1 | 12.0 | 10.8 |
| 08... | 1700 | 25 | -- | 53 | -- | 12.0 | -- |
| 08... | 1930 | 25 | -- | 49 | 7.0 | 12.0 | -- |
| 09... | 0430 | 25 | 14 | 47 | 7.1 | 12.0 | 10.8 |
| 09... | 0730 | 22 | -- | 51 | 7.1 | -- | -- |
| 09... | 0755 | 22 | -- | 47 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2030 | 1.8 | 18 | 74 | 6.8 | 7.0 | -- |
| 11... | 2110 | 2.0 | -- | 47 | -- | 7.0 | -- |
| 11... | 2320 | 2.7 | 18 | 67 | 6.8 | 7.0 | 11.6 |
| 12... | 0025 | 2.8 | -- | 47 | -- | -- | -- |
| 12... | 0230 | 2.5 | -- | 63 | 6.9 | 7.0 | -- |
| 12... | 0310 | 2.4 | -- | 45 | -- | 7.0 | -- |
| 12... | 0530 | 2.1 | 16 | 59 | 6.9 | 7.0 | -- |
| 12... | 0600 | A2.1 | -- | 48 | -- | -- | -- |
| 12... | 0830 | 2.1 | 18 | 67 | 7.1 | 7.0 | 12.1 |
| 12... | 0900 | 2.1 | -- | 50 | -- | -- | -- |
| 12... | 1130 | 2.2 | -- | 67 | 7.1 | 7.0 | -- |
| 12... | 1200 | 2.2 | -- | 50 | -- | -- | -- |
| 12... | 1430 | 3.9 | 11 | 57 | 7.1 | 7.5 | 11.0 |
| 12... | 1450 | 3.9 | 16 | 52 | -- | -- | -- |
| 12... | 1500 | 3.8 | -- | 47 | -- | -- | -- |
| 12... | 1730 | -- | 13 | -- | 6.6 | 8.5 | -- |
| 12... | 1810 | 2.5 | -- | 48 | -- | -- | -- |
| 12... | 2030 | 2.4 | 12 | 61 | 6.8 | 8.5 | 11.2 |
| 12... | 2105 | 2.4 | -- | 48 | -- | -- | -- |
| 12... | 2330 | 3.4 | -- | 61 | 7.4 | 9.0 | -- |
| 13... | 0005 | 3.4 | -- | 47 | -- | -- | -- |
| 13... | 0930 | 6.4 | 13 | 55 | 7.3 | 9.0 | 11.0 |
| 13... | 0945 | 6.3 | -- | 37 | -- | -- | -- |
| FEB. | | | | | | | |
| 20... | 1800 | 11 | -- | 46 | -- | 9.0 | 11.2 |
| 20... | 1847 | 11 | -- | 45 | -- | 9.0 | -- |
| 21... | 0515 | 11 | -- | 46 | 6.7 | 8.0 | 11.9 |
| 21... | 0800 | 11 | -- | 43 | 6.6 | 7.5 | -- |
| 21... | 0825 | 13 | -- | 36 | -- | 7.5 | -- |
| 21... | 1025 | 11 | 12 | 38 | -- | 8.0 | -- |
| 21... | 1300 | 10 | -- | 55 | 7.0 | 8.0 | 11.1 |
| 21... | 1330 | 10 | -- | 41 | -- | 8.0 | -- |
| 21... | 1815 | 9.9 | 16 | 57 | 6.8 | 8.0 | -- |
| 21... | 1845 | 9.6 | -- | 42 | -- | 8.0 | -- |
| 21... | 2140 | 9.6 | 13 | 57 | 6.8 | 8.0 | -- |
| 22... | 0800 | 9.2 | -- | 44 | -- | 7.0 | -- |
| 22... | 0845 | 8.3 | -- | 44 | -- | 7.0 | -- |
| 28... | 2100 | A14 | 15 | 44 | 7.2 | 8.5 | 11.5 |
| 28... | 2110 | 14 | -- | 41 | -- | -- | -- |
| MAR. | | | | | | | |
| 01... | 0130 | 12 | -- | 49 | -- | 8.0 | -- |
| 01... | 0930 | 12 | 12 | 41 | 7.0 | 8.0 | -- |
| 01... | 0931 | 12 | 12 | 39 | 7.0 | 8.0 | 11.2 |
| 01... | 1515 | 10 | -- | 41 | -- | 8.0 | -- |
| 01... | 1600 | 10 | 12 | 49 | 7.0 | 8.0 | 11.1 |
| 01... | 1830 | 12 | -- | -- | 7.0 | 8.0 | -- |
| 01... | 1845 | 12 | -- | 41 | -- | 8.0 | -- |
| 01... | 2225 | 13 | 13 | 43 | 7.1 | 7.0 | 11.3 |
| 01... | 2230 | 13 | -- | 41 | -- | 7.0 | -- |
| 02... | 0630 | A11 | 13 | 48 | 7.0 | 7.5 | 11.3 |
| 02... | 1030 | 10 | -- | 46 | 6.8 | 7.5 | -- |
| 02... | 1100 | A10 | -- | 43 | -- | 8.0 | -- |
| 02... | 1730 | 12 | 15 | 44 | 7.2 | -- | 11.1 |
| 03... | 0230 | A11 | -- | 44 | -- | 7.0 | 11.6 |
| 03... | 0250 | 11 | -- | 43 | -- | 7.0 | -- |
| 03... | 0945 | 10 | -- | 43 | -- | 7.0 | 11.7 |
| 03... | 0955 | 11 | -- | 43 | -- | -- | -- |
| 30... | 1540 | -- | -- | 36 | -- | 10.0 | -- |

Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT³/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| **11482260 MILLER CREEK AT MOUTH, NEAR ORICK** | | | | | | | |
| SEP., 1973 | | | | | | | |
| 27... | 1330 | -- | -- | 96 | 7.3 | 13.0 | 10.1 |
| OCT. | | | | | | | |
| 31... | 1435 | -- | -- | 74 | 7.1 | 11.0 | 10.8 |
| NOV. | | | | | | | |
| 07... | 1500 | 28 | 15 | 54 | 7.3 | 12.0 | 10.7 |
| 07... | 1820 | 36 | -- | 42 | 7.1 | 12.0 | -- |
| 07... | 2040 | 41 | 14 | 40 | 7.1 | 12.0 | 10.7 |
| 08... | 0005 | -- | -- | 38 | 7.0 | 12.5 | -- |
| 08... | 0330 | 87 | 12 | 35 | 7.0 | 12.5 | 10.6 |
| 08... | 0345 | 95 | -- | 40 | -- | 12.5 | -- |
| 08... | 0801 | 57 | 13 | 45 | 7.0 | 12.0 | 10.8 |
| 08... | 0900 | 51 | 14 | 47 | -- | 12.0 | -- |
| 08... | 1130 | 45 | -- | 49 | 7.1 | 12.0 | -- |
| 08... | 1400 | 43 | 13 | 48 | 7.2 | 12.0 | 10.6 |
| 08... | 1700 | 40 | -- | 56 | 7.2 | 12.0 | -- |
| 08... | 2000 | 39 | 14 | 60 | 7.1 | 12.0 | 10.7 |
| 08... | 2020 | 38 | -- | 51 | -- | 12.0 | -- |
| 09... | 0300 | 33 | -- | 63 | 7.3 | 12.0 | -- |
| 09... | 0800 | 29 | 14 | 70 | 7.1 | 12.0 | 10.6 |
| 09... | 1100 | 26 | 15 | 70 | 7.2 | 12.5 | 10.6 |
| JAN., 1974 | | | | | | | |
| 11... | 1920 | 1.8 | 18 | 60 | 7.2 | 6.0 | 12.0 |
| 11... | 2200 | 2.3 | -- | 58 | 7.4 | 6.5 | -- |
| 11... | 2400 | 4.5 | -- | 56 | 7.1 | 6.5 | 12.2 |
| 12... | 0300 | 3.5 | -- | 55 | -- | 6.5 | 12.2 |
| 12... | 0610 | 3.3 | -- | 55 | -- | 7.0 | 12.1 |
| 12... | 0900 | 2.9 | -- | 57 | -- | 7.0 | 11.9 |
| 12... | 1200 | 2.9 | -- | 57 | -- | 7.5 | 11.7 |
| 12... | 1340 | 4.2 | -- | 57 | -- | 7.5 | -- |
| 12... | 1516 | 7.2 | -- | 56 | -- | 8.0 | 11.6 |
| 12... | 1600 | 5.7 | -- | 55 | -- | 8.0 | -- |
| 12... | 1800 | 4.5 | -- | 55 | -- | 8.0 | -- |
| 12... | 2100 | 4.1 | -- | 55 | -- | 8.5 | 11.7 |
| 12... | 2300 | 4.1 | -- | 58 | -- | 8.5 | -- |
| 12... | 2400 | 4.5 | -- | 58 | -- | 8.5 | 11.6 |
| 13... | 0100 | 6.1 | -- | 58 | -- | 8.5 | -- |
| 13... | 0200 | 5.3 | -- | 57 | -- | 8.5 | -- |
| 13... | 0310 | 4.6 | -- | 52 | -- | 9.0 | 11.4 |
| 13... | 0430 | 9.0 | -- | 54 | -- | 9.0 | -- |
| 13... | 0615 | 21 | -- | 39 | -- | 9.0 | -- |
| 13... | 0620 | 20 | -- | 43 | -- | 9.0 | 11.3 |
| 13... | 0630 | 20 | 10 | 38 | -- | 9.0 | -- |
| 13... | 0730 | 16 | -- | 45 | -- | 9.0 | -- |
| 13... | 0900 | 12 | -- | 48 | -- | 9.0 | 11.4 |
| 13... | 1200 | A11 | -- | 52 | -- | 9.0 | 11.3 |
| FEB. | | | | | | | |
| 20... | 1930 | 19 | 12 | 45 | -- | 8.5 | -- |
| 20... | 2110 | 18 | 13 | 48 | 7.2 | 8.5 | 11.7 |
| 20... | 2400 | 16 | -- | 49 | 7.1 | 8.0 | -- |
| 21... | 0200 | 15 | 12 | 51 | 7.2 | 8.0 | 11.7 |
| 21... | 0600 | 14 | 13 | 52 | 7.2 | 8.0 | 11.7 |
| 21... | 1000 | 26 | -- | 42 | 7.0 | 8.0 | -- |
| 21... | 1050 | 25 | 11 | 39 | -- | 8.0 | -- |
| 21... | 1210 | 21 | 12 | 46 | 7.2 | 8.0 | 11.8 |
| 21... | 1410 | 18 | 13 | 49 | 7.2 | 8.0 | 11.8 |
| 21... | 1800 | 16 | -- | 48 | 7.2 | 8.0 | -- |
| 21... | 2130 | 15 | 13 | 48 | 7.2 | 7.5 | 11.9 |
| 22... | 0005 | 15 | -- | 48 | 7.2 | 7.5 | -- |
| 22... | 0330 | 15 | 13 | 48 | 7.3 | 7.0 | 12.2 |
| 22... | 0715 | 15 | -- | 45 | 7.1 | 7.0 | -- |
| 22... | 0930 | 14 | 13 | 46 | 7.1 | 7.0 | 12.2 |
| 22... | 1030 | 14 | 15 | 46 | -- | 7.0 | -- |
| 28... | 2130 | A24 | 16 | 42 | 7.2 | 8.0 | 11.5 |
| 28... | 2400 | 24 | -- | 43 | 7.2 | 8.0 | -- |
| MAR. | | | | | | | |
| 01... | 0300 | 21 | 15 | 43 | 7.1 | 8.0 | 11.6 |
| 01... | 0600 | 20 | 12 | 41 | 7.2 | 8.5 | 11.3 |
| 01... | 0900 | 24 | 11 | 32 | 7.2 | 8.5 | 11.4 |
| 01... | 0945 | 23 | -- | 42 | -- | 8.5 | -- |
| 01... | 1030 | 23 | 12 | 41 | -- | 8.5 | -- |
| 01... | 1200 | 20 | -- | 40 | 7.0 | 8.5 | -- |
| 01... | 1500 | 19 | 13 | 40 | 6.9 | 8.5 | 11.3 |
| 01... | 1800 | 22 | -- | 42 | 7.5 | 7.0 | -- |
| 01... | 2100 | 23 | -- | 38 | 6.9 | 7.5 | 11.6 |
| 01... | 2400 | 23 | -- | 38 | -- | 7.5 | -- |
| 02... | 0300 | 22 | -- | 38 | -- | 7.5 | 11.6 |
| 02... | 0600 | 20 | -- | 38 | -- | 7.0 | 11.7 |
| 02... | 0900 | 19 | -- | 41 | -- | 7.5 | 11.5 |
| 02... | 1200 | 20 | -- | 41 | -- | 7.5 | 11.7 |
| 02... | 1500 | 23 | -- | 41 | -- | 7.5 | -- |
| 02... | 1800 | 22 | -- | 39 | -- | 7.5 | 11.6 |
| 02... | 2100 | 21 | -- | 38 | -- | 7.5 | -- |
| 02... | 2400 | 19 | -- | 40 | -- | 7.0 | 11.7 |
| 03... | 0300 | 18 | -- | 40 | -- | 7.0 | -- |
| 03... | 0600 | 17 | -- | 39 | -- | 6.5 | -- |
| 30... | C1200 | -- | -- | 29 | -- | -- | -- |

Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE ($FT^3/S$) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| **11482270 BOND CREEK NEAR ORICK** | | | | | | | |
| JAN., 1974 | | | | | | | |
| 24... | 1145 | -- | 9 | -- | 6.6 | 8.0 | 11.6 |
| FEB. | | | | | | | |
| 18... | C2100 | 30 | -- | 29 | -- | -- | -- |
| 21... | 1015 | -- | 7 | -- | 6.3 | 8.0 | -- |
| 21... | 1105 | 20 | -- | 34 | -- | 8.0 | -- |
| **11482280 CLOQUET CREEK NEAR ORICK** | | | | | | | |
| SEP., 1973 | | | | | | | |
| 27... | 1630 | -- | -- | 110 | 7.4 | 13.0 | -- |
| NOV. | | | | | | | |
| 08... | C0400 | -- | -- | 32 | -- | -- | -- |
| 08... | C0430 | -- | -- | 34 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 24... | 1250 | 4.8 | 12 | 49 | 5.8 | 7.0 | 11.4 |
| FEB. | | | | | | | |
| 18... | C2200 | -- | -- | 42 | -- | -- | -- |
| 27... | 1235 | 7.5 | 15 | 48 | 6.8 | 7.5 | 11.4 |
| 28... | C1400 | -- | -- | 56 | -- | -- | -- |
| 28... | C1430 | -- | -- | 28 | -- | -- | -- |
| MAR. | | | | | | | |
| 30... | C1100 | -- | -- | 30 | -- | -- | -- |
| **11482290 OSCAR LARSON CREEK NEAR ORICK** | | | | | | | |
| JAN., 1974 | | | | | | | |
| 24... | 1405 | 2.6 | 14 | 59 | 6.2 | 7.5 | -- |
| FEB. | | | | | | | |
| 27... | 1400 | 3.1 | 18 | 61 | 6.5 | 4.5 | 11.7 |
| **11482300 ELAM CREEK NEAR ORICK** | | | | | | | |
| SEP., 1973 | | | | | | | |
| 28... | 1200 | -- | -- | -- | 7.6 | 12.5 | 9.9 |
| NOV. | | | | | | | |
| 08... | C0400 | -- | -- | 39 | -- | -- | -- |
| 08... | C0430 | -- | -- | 39 | -- | -- | -- |
| 30... | C1800 | -- | -- | 39 | -- | -- | -- |
| 30... | C1830 | -- | -- | 38 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 15... | C2100 | -- | -- | 33 | -- | -- | -- |
| 15... | C2130 | -- | -- | 29 | -- | -- | -- |
| 24... | 1500 | -- | 5 | 42 | 6.0 | 8.0 | 11.2 |
| FEB. | | | | | | | |
| 18... | C2200 | -- | -- | 52 | -- | -- | -- |
| 18... | C2230 | -- | -- | 36 | -- | -- | -- |
| 18... | C2300 | -- | -- | 39 | -- | -- | -- |
| MAR. | | | | | | | |
| 08... | 1230 | -- | 9 | -- | 6.8 | 6.5 | 12.0 |
| 08... | 1330 | -- | -- | 40 | -- | -- | -- |
| 30... | C1100 | -- | -- | 37 | -- | -- | -- |
| APR. | | | | | | | |
| 01... | C0600 | -- | -- | 40 | -- | -- | -- |
| 01... | C0630 | -- | -- | 32 | -- | -- | -- |
| **11482310 MCARTHUR CREEK NEAR ORICK** | | | | | | | |
| NOV., 1973 | | | | | | | |
| 06... | C1800 | 24 | -- | 32 | -- | -- | -- |
| 08... | C0400 | 99 | -- | 43 | -- | -- | -- |
| 30... | C1800 | 99 | -- | 42 | -- | -- | -- |
| DEC. | | | | | | | |
| 20... | C1600 | 99 | -- | 36 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 25... | 1100 | 22 | -- | 51 | -- | 8.0 | -- |
| 25... | 1110 | -- | 7 | -- | 6.6 | 8.0 | 11.4 |
| FEB. | | | | | | | |
| 21... | 1430 | -- | 9 | -- | 6.7 | 8.5 | 11.6 |
| 21... | 1455 | 34 | -- | 48 | -- | 8.5 | -- |
| MAR. | | | | | | | |
| 30... | C1100 | 24 | -- | 52 | -- | -- | -- |
| 30... | C1130 | 99 | -- | 36 | -- | -- | -- |
| **11482320 LOW-SLOPE SCHIST CREEK NEAR ORICK** | | | | | | | |
| JAN., 1974 | | | | | | | |
| 25... | 1300 | 1.2 | 3 | 43 | 6.1 | 9.0 | 11.0 |
| MAR. | | | | | | | |
| 08... | 1420 | .88 | 6 | 41 | 6.7 | 6.5 | 12.2 |

11482330 HAYES CREEK NEAR ORICK

| DATE | TIME | INSTANTANEOUS DISCHARGE ($FT^3/S$) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| SEP., 1973 | | | | | | | |
| 28... | 1530 | -- | -- | -- | 7.2 | 12.5 | 9.9 |
| NOV. | | | | | | | |
| 08... | 0030 | A16 | -- | 57 | -- | 11.0 | 10.7 |
| 08... | 0840 | 22 | -- | 55 | -- | 11.0 | 10.4 |
| 08... | 1600 | 18 | 12 | -- | 7.4 | 11.0 | 10.0 |
| 08... | 2005 | 16 | -- | 55 | -- | 11.0 | -- |
| 08... | 2350 | 15 | -- | 54 | -- | 11.0 | 9.8 |
| 09... | 0700 | 13 | -- | 60 | -- | 11.0 | -- |
| 09... | 0730 | 13 | -- | 49 | -- | 11.0 | 10.4 |
| 09... | 1155 | 12 | 14 | 63 | -- | 11.0 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2145 | .89 | -- | 59 | -- | 7.0 | -- |
| 12... | 0145 | .84 | -- | 65 | -- | -- | -- |
| 12... | 0200 | -- | 23 | -- | 6.6 | 7.0 | 11.7 |
| 12... | 1350 | 1.1 | -- | 59 | -- | 7.5 | -- |
| 12... | 1415 | -- | 19 | -- | 7.4 | 7.5 | 11.5 |
| 12... | 2000 | .95 | 17 | 64 | 7.0 | 8.0 | 11.2 |
| 12... | 2045 | .94 | -- | 59 | -- | 8.0 | -- |
| 12... | 2345 | .98 | 17 | 64 | 7.0 | 8.0 | 11.2 |
| 12... | 2350 | .98 | -- | 59 | -- | 8.0 | -- |
| 13... | 0015 | 1.0 | -- | 64 | 6.9 | 8.0 | -- |
| 13... | 0220 | 1.1 | -- | 63 | -- | 8.5 | -- |
| 13... | 0230 | -- | 18 | -- | 7.0 | 8.5 | -- |
| 13... | 0445 | 1.2 | -- | 60 | -- | 8.5 | -- |
| 13... | 0500 | 1.2 | -- | 63 | 6.8 | 8.5 | 11.2 |
| 13... | 0830 | -- | 17 | -- | 6.9 | 8.5 | -- |
| 13... | 0920 | 1.4 | 17 | 66 | -- | 8.5 | -- |
| 13... | 1050 | 1.3 | -- | 63 | -- | -- | 11.3 |
| 13... | 1120 | -- | 18 | -- | 7.1 | 8.5 | -- |
| 13... | 1140 | 1.3 | -- | 61 | -- | 8.5 | -- |
| FEB. | | | | | | | |
| 20... | 1930 | 7.0 | -- | 68 | -- | 8.5 | 11.2 |
| 20... | 2400 | -- | -- | -- | 6.9 | 8.5 | -- |
| 21... | 0020 | 6.6 | -- | 52 | -- | 8.5 | -- |
| 21... | 0350 | 6.2 | -- | 62 | -- | 8.5 | 11.3 |
| 21... | 0430 | 6.2 | -- | 52 | -- | 8.5 | -- |
| 21... | 0945 | 6.5 | 15 | 58 | 6.8 | 8.5 | 11.4 |
| 21... | 1030 | 6.5 | -- | 51 | -- | 8.5 | -- |
| 21... | 1300 | 6.2 | 15 | 58 | 6.9 | 8.5 | 11.4 |
| 21... | 1730 | 5.7 | -- | 59 | 7.0 | 8.5 | 11.6 |
| 21... | 1845 | 5.6 | 14 | 54 | -- | 8.5 | -- |
| 21... | 1846 | 5.6 | -- | 60 | 7.0 | 8.5 | -- |
| 21... | 1910 | 5.5 | -- | 54 | -- | 8.5 | -- |
| 21... | 2000 | 5.4 | -- | 61 | -- | 8.5 | -- |
| 21... | 2130 | 5.3 | -- | 60 | 7.2 | 8.0 | -- |
| 21... | 2230 | 5.2 | -- | 81 | -- | -- | -- |
| 21... | 2245 | -- | 15 | -- | 6.2 | 8.0 | -- |
| 21... | 2315 | 5.1 | -- | 86 | -- | 8.0 | -- |
| 22... | 0300 | 4.8 | -- | 54 | -- | 8.0 | -- |
| 22... | 0315 | 4.7 | -- | 60 | 6.6 | 8.0 | 11.4 |
| 22... | 0800 | 4.4 | 17 | 67 | 7.1 | 7.5 | 11.9 |
| 22... | 0830 | 4.4 | -- | 54 | -- | 7.5 | -- |
| 28... | C1400 | -- | -- | 63 | -- | -- | -- |
| 28... | 2100 | 7.5 | -- | 53 | -- | 8.5 | -- |
| 28... | 2130 | 7.5 | 14 | 60 | 7.4 | 8.5 | 11.3 |
| MAR. | | | | | | | |
| 01... | 0030 | 7.1 | 16 | 59 | 7.4 | 8.5 | 11.2 |
| 01... | 0330 | 6.8 | -- | 58 | 7.4 | 8.5 | -- |
| 01... | 0650 | 6.6 | -- | 54 | -- | 8.5 | -- |
| 01... | 0730 | -- | 15 | -- | 7.4 | 9.0 | 11.3 |
| 01... | 0910 | 7.5 | -- | 54 | -- | 9.0 | -- |
| 01... | 1055 | -- | 15 | -- | 7.4 | 8.8 | 11.3 |
| 01... | 1140 | 6.6 | -- | 54 | -- | 8.5 | -- |
| 01... | 1400 | 6.4 | 15 | 59 | 7.4 | 8.8 | 11.6 |
| 01... | 1440 | 6.4 | -- | 54 | -- | -- | -- |
| 01... | 1640 | 6.3 | -- | 54 | -- | 8.5 | -- |
| 01... | 1830 | 6.6 | -- | 56 | 7.4 | 8.5 | 11.6 |
| 01... | 1940 | 7.4 | -- | 54 | -- | 8.0 | -- |
| 01... | 2225 | 6.8 | -- | 54 | -- | 8.0 | -- |
| 01... | 2230 | 6.8 | 13 | 58 | 7.2 | 8.0 | 11.6 |
| 02... | 0130 | 6.7 | 15 | 58 | 7.2 | 8.0 | 11.6 |
| 02... | 0200 | 6.7 | -- | 54 | -- | 8.0 | -- |
| 02... | 0515 | 6.5 | 14 | 57 | 7.3 | 8.0 | 11.7 |
| 02... | 0915 | 6.4 | -- | 53 | -- | 8.0 | -- |
| 02... | 1300 | 6.6 | -- | 58 | 7.4 | 8.0 | 11.6 |
| 02... | 1600 | 7.0 | 14 | 53 | -- | 8.0 | -- |
| 02... | 1735 | 7.1 | -- | 53 | -- | 8.0 | -- |
| 02... | 1945 | 7.0 | 14 | 58 | 7.3 | 8.0 | -- |
| 02... | 2045 | 6.9 | -- | 54 | -- | 8.0 | -- |
| 03... | 0010 | 6.8 | -- | 58 | 7.7 | 8.0 | 11.8 |
| 03... | 0015 | 6.8 | -- | 54 | -- | 8.0 | -- |
| 03... | 0410 | 6.6 | 15 | 57 | 7.3 | 7.0 | 11.7 |
| 03... | 0440 | 6.5 | -- | 55 | -- | 7.0 | -- |
| 03... | 0830 | 6.5 | 14 | 57 | 7.3 | 7.0 | 11.7 |
| 29... | 2200 | -- | -- | 42 | -- | 9.5 | -- |
| 30... | C1100 | -- | -- | 50 | -- | -- | -- |
| APR. | | | | | | | |
| 09... | 1330 | 2.9 | 14 | 56 | 7.2 | 9.0 | 11.6 |

## Table 9.-- *Onsite determinations of water quality*-- Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT³/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | 11482450 LOST MAN CREEK NEAR ORICK | | | | | |
| SEP., 1973 | | | | | | | |
| 25... | 1130 | -- | -- | 89 | 7.3 | 13.0 | 9.4 |
| NOV. | | | | | | | |
| 01... | 1525 | -- | -- | 65 | 5.8 | 10.0 | 10.9 |
| 07... | 1715 | -- | -- | -- | 5.7 | 12.0 | -- |
| 07... | 1720 | -- | -- | -- | -- | 12.0 | 10.0 |
| 08... | 0700 | -- | -- | -- | 5.9 | 11.5 | 10.5 |
| 08... | 0800 | 206 | 11 | 37 | -- | 11.5 | -- |
| 08... | 1045 | -- | -- | -- | 5.7 | 12.0 | -- |
| 08... | 1200 | 175 | -- | 36 | -- | 11.5 | -- |
| 08... | 1330 | 169 | -- | -- | 6.0 | 11.5 | -- |
| 08... | 1420 | -- | 13 | -- | -- | 11.5 | 10.6 |
| 08... | 1720 | 150 | -- | -- | 5.7 | 11.5 | -- |
| 08... | 2000 | 136 | 12 | 34 | 6.5 | 11.5 | 10.6 |
| 08... | 2230 | -- | 10 | -- | 6.1 | 11.5 | -- |
| 08... | 2330 | -- | -- | -- | -- | 11.5 | 10.6 |
| 09... | 0310 | 107 | -- | 46 | 6.0 | 12.0 | 10.5 |
| 09... | 0340 | 106 | -- | 37 | -- | 12.0 | -- |
| 09... | 0615 | 98 | 12 | -- | 6.2 | 12.0 | 10.6 |
| 09... | 0930 | -- | -- | -- | 6.5 | 12.0 | 10.7 |
| 09... | 1145 | -- | 12 | -- | 6.6 | 13.0 | 10.6 |
| 09... | 1530 | -- | -- | -- | -- | 12.0 | 10.5 |
| 30... | C1800 | 190 | -- | 37 | -- | -- | -- |
| DEC. | | | | | | | |
| 20... | C1600 | 190 | -- | 39 | -- | -- | -- |
| 21... | 1415 | 125 | -- | 37 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2045 | 11 | 14 | 38 | 6.5 | 5.0 | 11.3 |
| 11... | 2145 | 12 | -- | 43 | -- | 5.0 | -- |
| 12... | 0130 | 13 | -- | 37 | 6.7 | 5.0 | -- |
| 12... | 0430 | 13 | 13 | 38 | 7.3 | 5.0 | 11.0 |
| 12... | 0730 | 12 | 14 | 43 | 6.7 | 6.0 | 11.7 |
| 12... | 1030 | 11 | 14 | 40 | 6.8 | 6.0 | 12.0 |
| 12... | 1330 | 12 | -- | 48 | -- | 5.5 | -- |
| 12... | 1400 | -- | -- | -- | 7.5 | 6.5 | -- |
| 12... | 1420 | -- | -- | -- | 7.5 | 6.5 | -- |
| 12... | 1600 | 13 | 13 | 43 | 7.5 | 6.0 | 10.8 |
| 12... | 1650 | 14 | -- | 42 | -- | 6.0 | -- |
| 12... | 1910 | 14 | -- | 44 | 6.7 | 6.0 | -- |
| 12... | 2200 | 14 | 12 | 45 | 7.3 | 6.5 | 10.4 |
| 13... | 0100 | 14 | -- | 43 | 7.0 | 7.0 | -- |
| 13... | 0355 | 15 | 13 | 44 | -- | 7.5 | 11.6 |
| 13... | 0730 | -- | -- | 46 | 7.0 | 7.0 | -- |
| 13... | 0930 | 22 | 14 | 46 | -- | 7.5 | 11.7 |
| 13... | 1010 | 21 | 13 | 45 | 7.1 | 7.5 | 11.7 |
| 13... | 1015 | 22 | -- | 41 | -- | 7.5 | -- |
| 15... | C2100 | 190 | -- | 34 | -- | -- | -- |
| FEB. | | | | | | | |
| 20... | 1700 | 60 | 10 | 30 | 6.3 | 7.5 | 10.2 |
| 20... | 1830 | 58 | -- | 23 | -- | 7.0 | -- |
| 21... | 0030 | 52 | -- | 36 | -- | 8.0 | -- |
| 21... | 0055 | 51 | 11 | 33 | 7.0 | 8.0 | 12.1 |
| 21... | 0510 | 50 | 11 | 34 | 7.1 | 6.5 | 11.9 |
| 21... | 0720 | 51 | -- | 37 | -- | 6.5 | -- |
| 21... | 0800 | 53 | -- | 32 | 7.2 | 7.5 | -- |
| 21... | 1100 | 43 | -- | 32 | 7.2 | 7.5 | -- |
| 21... | 1300 | 56 | -- | 37 | -- | 7.5 | -- |
| 21... | 1400 | 56 | 11 | 36 | -- | 8.0 | -- |
| 21... | 1401 | 56 | 11 | 43 | 6.9 | 8.0 | -- |
| 21... | 1545 | -- | 11 | -- | 7.1 | -- | -- |
| 21... | 1700 | A59 | 10 | 44 | -- | 7.5 | -- |
| 21... | 1720 | 56 | -- | 36 | -- | 8.0 | -- |
| 21... | 2115 | 52 | -- | 40 | 7.2 | 7.5 | -- |
| 22... | 0010 | 51 | 12 | 46 | -- | 6.5 | 11.9 |
| 22... | 0315 | 51 | 12 | 39 | 7.2 | 7.0 | 12.1 |
| 22... | 0615 | 50 | 12 | 39 | 7.3 | -- | 12.2 |
| 22... | 0900 | 48 | 12 | 41 | 7.1 | 6.5 | 12.0 |
| 22... | 0950 | -- | 12 | -- | 7.0 | -- | 12.2 |
| 22... | 1115 | 47 | -- | 37 | -- | 6.5 | -- |
| 28... | 2115 | 92 | 11 | 30 | 7.1 | 7.5 | 11.8 |
| 28... | 2330 | 85 | -- | 37 | -- | 7.5 | -- |
| 28... | 2400 | 84 | 11 | 34 | 7.1 | 7.0 | 11.8 |
| MAR. | | | | | | | |
| 01... | 0320 | -- | 12 | -- | 7.1 | 7.0 | 11.3 |
| 01... | 0800 | 73 | 12 | 33 | 7.1 | 8.0 | 11.7 |
| 01... | 0820 | 75 | -- | 37 | -- | 8.0 | -- |
| 01... | 1105 | 76 | 12 | 35 | 7.2 | 7.5 | 11.7 |
| 01... | 1300 | 73 | 12 | 38 | 7.3 | 7.5 | 11.5 |
| 01... | 1600 | 70 | 12 | 37 | 7.2 | 8.0 | -- |
| 01... | 1630 | -- | -- | -- | -- | -- | 11.7 |
| 01... | 1900 | -- | 11 | -- | 7.1 | 7.5 | 11.7 |

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT³/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| **11482450 LOST MAN CREEK NEAR ORICK--Continued** | | | | | | | |
| MAR., 1974 | | | | | | | |
| 01... | 2200 | 76 | 11 | 37 | 7.1 | 7.5 | 10.4 |
| 01... | 2215 | -- | -- | -- | -- | -- | 10.6 |
| 02... | 0100 | -- | 12 | -- | 7.1 | 6.5 | 12.1 |
| 02... | 0400 | -- | 11 | -- | 7.2 | 6.5 | 12.0 |
| 02... | 0700 | -- | 12 | -- | 7.2 | 7.0 | 11.9 |
| 02... | 1000 | 72 | 11 | 37 | 7.1 | 7.0 | 11.5 |
| 02... | 1015 | 72 | -- | 37 | -- | 7.0 | -- |
| 02... | 1300 | 69 | 11 | 37 | 7.1 | 7.0 | 11.8 |
| 02... | 1315 | 69 | -- | 37 | -- | 7.0 | -- |
| 02... | 1600 | 72 | 11 | 36 | 7.1 | 7.0 | 11.1 |
| 02... | 1730 | 72 | -- | 38 | -- | 7.0 | -- |
| 02... | 1830 | 71 | 12 | 38 | 7.2 | 7.0 | 11.0 |
| 02... | 1900 | 71 | -- | 36 | -- | 7.0 | -- |
| 02... | 2000 | 70 | -- | 38 | -- | 7.0 | -- |
| 02... | 2300 | 68 | 12 | 33 | 7.2 | 7.0 | 12.1 |
| 03... | 0200 | 65 | 12 | 34 | 7.2 | 6.5 | 11.1 |
| 03... | 0500 | 63 | 12 | 34 | 7.2 | 5.0 | 11.5 |
| 03... | 0820 | 60 | 12 | 36 | 7.2 | 5.0 | 12.3 |
| APR. | | | | | | | |
| 05... | 1205 | -- | -- | 33 | -- | -- | -- |
| 05... | 1230 | -- | -- | 32 | -- | 9.0 | -- |
| 05... | 1231 | -- | -- | 30 | -- | 9.0 | -- |
| 08... | 1240 | -- | -- | 37 | -- | 9.0 | -- |
| 08... | 1300 | 26 | 13 | 38 | 7.4 | 9.0 | 11.2 |
| **11482460 LARRY DAMM CREEK NEAR ORICK** | | | | | | | |
| JAN., 1974 | | | | | | | |
| 21... | 1430 | -- | 14 | 47 | 6.6 | 8.5 | 11.1 |
| FEB. | | | | | | | |
| 18... | C2200 | 43 | -- | 36 | -- | -- | -- |
| 22... | 0940 | 15 | 17 | -- | 6.9 | 7.5 | 11.8 |
| 22... | 1005 | 16 | -- | 49 | -- | 7.5 | -- |
| MAR. | | | | | | | |
| 06... | 1040 | 28 | 13 | 40 | 6.4 | 8.5 | 11.4 |
| 30... | 1105 | 97 | -- | 36 | -- | 10.0 | -- |
| APR. | | | | | | | |
| 05... | 1030 | 14 | -- | 39 | -- | 10.5 | -- |
| 05... | 1300 | -- | -- | 34 | -- | 10.5 | -- |
| 08... | 1505 | -- | 17 | -- | 7.2 | 11.0 | 10.6 |
| 08... | 1515 | 8.7 | 15 | 54 | -- | 11.0 | -- |
| **11482470 LITTLE LOST MAN CREEK NEAR ORICK** | | | | | | | |
| OCT., 1973 | | | | | | | |
| 04... | 1240 | -- | -- | -- | 7.4 | 13.5 | 10.4 |
| NOV. | | | | | | | |
| 01... | 1330 | -- | -- | 62 | 6.4 | 10.5 | 10.9 |
| 07... | 2230 | 110 | -- | 48 | -- | 11.0 | 10.8 |
| 08... | 0340 | 320 | -- | 43 | -- | 11.0 | -- |
| 08... | 0430 | 350 | -- | 40 | -- | 11.0 | 10.0 |
| 08... | 1300 | -- | -- | 52 | -- | 11.5 | 10.2 |
| 08... | 1400 | -- | -- | -- | 6.9 | 11.0 | -- |
| 08... | 1900 | -- | -- | 42 | 6.8 | 11.0 | 10.2 |
| 09... | 0330 | 92 | -- | 44 | -- | 11.0 | 9.8 |
| 09... | 0625 | 92 | -- | 41 | -- | 11.0 | -- |
| 09... | 0915 | 92 | -- | 45 | -- | 11.5 | 10.4 |
| 09... | 1135 | 89 | 12 | 48 | -- | 11.0 | -- |
| DEC. | | | | | | | |
| 27... | C2100 | -- | -- | 46 | -- | -- | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2200 | 6.2 | -- | 47 | -- | 6.5 | -- |
| 12... | 0035 | 6.3 | 14 | 48 | 6.6 | 6.5 | 11.8 |
| 12... | 0545 | 6.6 | -- | 48 | -- | 6.5 | -- |
| 12... | 0550 | -- | -- | 49 | -- | -- | -- |
| 12... | 0600 | 6.6 | -- | 46 | 6.4 | 6.5 | -- |
| 12... | 0930 | 6.8 | 14 | 49 | 6.1 | 6.5 | 11.7 |
| 12... | 1430 | 8.2 | 14 | 49 | 6.9 | 7.0 | 11.5 |
| 12... | 2045 | 9.0 | -- | 48 | -- | -- | -- |
| 12... | 2215 | 9.0 | 12 | 46 | 6.1 | 7.5 | 11.4 |
| 13... | 0150 | 9.0 | -- | 47 | -- | -- | -- |
| 13... | 0205 | 9.1 | 15 | 47 | 6.8 | 7.0 | 11.4 |
| 13... | 0510 | 11 | -- | 47 | 5.9 | 8.0 | -- |
| 13... | 0840 | 11 | 11 | 48 | 6.3 | 7.5 | 11.0 |
| 13... | 0950 | 12 | -- | 48 | -- | 7.5 | -- |
| 13... | 1210 | 13 | 15 | -- | -- | 8.0 | -- |
| FEB. | | | | | | | |
| 10... | 1300 | -- | -- | 51 | -- | -- | -- |
| 10... | 1600 | -- | -- | 47 | -- | -- | -- |
| 10... | 1630 | -- | 14 | 40 | 6.7 | 8.5 | 11.6 |
| 10... | 1710 | -- | -- | 47 | -- | -- | -- |
| 20... | 2320 | 46 | 18 | 45 | 7.2 | 8.0 | -- |
| 21... | 1100 | 43 | 12 | 46 | 7.1 | 8.0 | -- |
| 21... | 1730 | -- | 13 | 48 | 6.9 | 8.0 | 11.4 |
| 21... | 2345 | -- | 13 | 47 | 6.9 | 7.5 | 11.6 |
| 22... | 0500 | -- | 13 | 46 | 7.0 | 7.0 | 11.5 |
| 22... | 1000 | 33 | 12 | 44 | 7.1 | 7.0 | -- |
| 28... | 2015 | -- | -- | -- | -- | 8.0 | 11.6 |
| 28... | 2045 | -- | 9 | -- | 6.8 | 8.0 | -- |
| 28... | 2150 | 66 | -- | 40 | -- | 8.0 | -- |

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT3/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | 11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued | | | | | |
| MAR. | | | | | | | |
| 01... | 0830 | 57 | 13 | 42 | 7.0 | 8.5 | 11.2 |
| 01... | 1130 | 55 | -- | 41 | 6.9 | 8.5 | -- |
| 01... | 1430 | 53 | 11 | 42 | 6.4 | 8.5 | 11.2 |
| 01... | 1715 | 53 | -- | 42 | 6.1 | 8.5 | -- |
| 01... | 1945 | 51 | 7 | 42 | 6.8 | 8.0 | 11.6 |
| 01... | 2300 | 53 | -- | 43 | 6.8 | 8.0 | -- |
| 02... | 0200 | 54 | 14 | 44 | 6.8 | 7.5 | 11.7 |
| 02... | 0400 | -- | -- | -- | 6.4 | 7.5 | -- |
| 02... | 0600 | 53 | -- | 43 | 6.3 | 7.0 | -- |
| 02... | 0825 | 52 | 14 | 43 | 6.9 | 7.5 | 11.0 |
| 02... | 0930 | 53 | -- | 43 | 7.0 | 7.5 | -- |
| 02... | 1230 | 54 | -- | 40 | 6.9 | 7.5 | -- |
| 02... | 1500 | 55 | 11 | 43 | -- | 7.5 | -- |
| 02... | 1501 | 55 | 12 | 41 | 6.6 | 7.5 | 11.5 |
| 02... | 1800 | 57 | 13 | 42 | 7.0 | 7.5 | -- |
| 02... | 2100 | 57 | 13 | 43 | 6.9 | 7.5 | 11.6 |
| 02... | 2330 | 56 | -- | 43 | 7.0 | 7.5 | -- |
| 03... | 0345 | 54 | 14 | 42 | 6.7 | 6.5 | 11.5 |
| 03... | 0745 | 51 | 13 | 43 | 6.4 | 6.5 | 11.9 |
| 29... | 1530 | 93 | -- | 42 | -- | -- | -- |
| 29... | 1750 | 155 | -- | 35 | -- | 9.5 | -- |
| 29... | 1820 | 150 | -- | 35 | -- | 9.5 | -- |
| 30... | 0100 | 195 | -- | 32 | -- | 9.0 | -- |
| 30... | 0150 | 187 | -- | 34 | -- | 9.0 | -- |
| 30... | 0325 | 170 | -- | 33 | -- | 9.0 | -- |
| 30... | 0700 | 152 | -- | 34 | -- | 9.0 | -- |
| 30... | 1000 | 177 | -- | 32 | -- | 8.5 | -- |
| APR. | | | | | | | |
| 01... | 1120 | 166 | -- | 27 | -- | 9.5 | -- |
| 02... | 1015 | 115 | -- | 36 | -- | 9.0 | -- |
| 09... | 1020 | 22 | 13 | 44 | 7.1 | 8.5 | 11.6 |
| 10... | 1400 | -- | -- | 50 | -- | 8.9 | -- |
| 10... | 1430 | -- | 11 | 48 | 7.4 | 8.9 | -- |
| 10... | 1515 | 19 | -- | 44 | -- | 10.0 | -- |
| 10... | 1530 | -- | 12 | 48 | 6.6 | 10.0 | -- |
| | | 11482475 GENEVA CREEK NEAR ORICK | | | | | |
| NOV., 1973 | | | | | | | |
| 07... | 1837 | 1.9 | -- | 50 | -- | 11.5 | 10.5 |
| 08... | 0510 | 5.9 | -- | 41 | -- | 11.5 | 9.6 |
| 08... | 0546 | 6.3 | -- | 44 | -- | 11.5 | -- |
| 08... | 1055 | A3.2 | -- | 43 | -- | 11.5 | 10.3 |
| 08... | 1300 | 2.6 | -- | 52 | -- | 11.5 | 10.2 |
| 08... | 1545 | 2.4 | -- | 42 | -- | 11.5 | -- |
| 08... | 1900 | 2.3 | -- | 42 | 6.8 | 11.0 | 10.2 |
| 08... | 2020 | 2.3 | 12 | 41 | 6.5 | 11.5 | 10.2 |
| 09... | 0230 | 2.2 | -- | 43 | -- | 11.5 | 10.2 |
| 09... | 0845 | 2.0 | -- | 46 | -- | 11.5 | 10.2 |
| 09... | 1145 | 2.0 | 11 | 47 | -- | 11.5 | -- |
| JAN., 1974 | | | | | | | |
| 11... | 2045 | .16 | -- | 45 | -- | 7.5 | -- |
| 12... | 0130 | .21 | 9 | 44 | 6.1 | 7.5 | 11.6 |
| 12... | 0735 | .21 | -- | 46 | -- | 7.0 | -- |
| 12... | 0750 | .21 | -- | 46 | 5.9 | 7.0 | -- |
| 12... | 1145 | .20 | 9 | 46 | 5.8 | 7.5 | 11.5 |
| 12... | 1655 | .24 | 10 | 45 | 6.6 | 7.5 | 11.4 |
| 13... | 0025 | .22 | 11 | 47 | 6.2 | 8.0 | 11.1 |
| 13... | 0405 | .24 | -- | 43 | -- | 8.0 | -- |
| 13... | 0410 | .24 | -- | 44 | 6.4 | 8.0 | -- |
| 13... | 0620 | .43 | -- | 45 | -- | 8.0 | -- |
| 13... | 0635 | .43 | 9 | 42 | 5.9 | 8.0 | 11.3 |
| 13... | 1030 | .42 | 12 | 50 | -- | 8.0 | -- |
| FEB. | | | | | | | |
| 21... | 0100 | .86 | -- | 45 | -- | 9.0 | -- |
| 21... | 1220 | 1.3 | 12 | 42 | 7.0 | 7.0 | 11.5 |
| 21... | 1225 | 1.3 | -- | 44 | -- | 7.0 | -- |
| 21... | 1830 | 1.1 | 13 | 42 | 6.9 | 8.5 | 11.3 |
| 22... | 0040 | .80 | 13 | 45 | 6.9 | 8.0 | 11.6 |
| 22... | 0555 | .60 | 12 | 42 | 6.8 | 7.0 | 11.4 |
| 28... | 2215 | -- | -- | 44 | -- | 9.5 | -- |
| 28... | 2220 | 1.6 | -- | 44 | -- | 9.5 | -- |
| MAR. | | | | | | | |
| 01... | 0015 | -- | 16 | 47 | 5.8 | 9.5 | 11.1 |
| 01... | 0700 | 1.2 | 15 | 43 | 6.9 | 8.5 | 11.4 |
| 01... | 1000 | 1.3 | -- | 45 | 6.8 | 8.5 | -- |
| 01... | 1300 | 1.2 | 12 | 42 | 6.6 | 8.5 | 11.2 |
| 01... | 1610 | 1.2 | -- | 44 | 6.8 | 8.5 | -- |
| 01... | 1700 | 1.2 | -- | 43 | 6.8 | 8.5 | -- |
| 01... | 2100 | 1.4 | 12 | 44 | 6.8 | 8.0 | 11.2 |
| 02... | 0015 | 1.5 | -- | 44 | 6.8 | 8.0 | -- |
| 02... | 0300 | -- | 13 | 45 | 6.8 | 7.5 | 11.6 |
| 02... | 0315 | 1.2 | -- | 43 | -- | 7.5 | -- |
| 02... | 0645 | 1.1 | -- | 43 | 6.7 | 7.5 | -- |
| 02... | 1000 | -- | -- | -- | -- | 7.5 | 11.2 |
| 02... | 1200 | 1.3 | 10 | 43 | 7.0 | 8.0 | -- |
| 02... | 1500 | -- | 13 | 42 | 6.9 | 8.0 | -- |
| 02... | 1700 | 1.9 | 14 | 43 | 7.1 | 8.0 | 11.5 |

Table 9.--*Onsite determinations of water quality*--Continued

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT³/S) | ALKALINITY AS CACO3 (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | DISSOLVED OXYGEN (MG/L) |
|---|---|---|---|---|---|---|---|
| | | **11482475 GENEVA CREEK NEAR ORICK --Continued** | | | | | |
| Mar. | | | | | | | |
| 02... | 1715 | 2.0 | 11 | 44 | -- | 8.0 | -- |
| 02... | 2000 | -- | -- | 43 | 6.9 | 8.0 | -- |
| 02... | 2030 | 1.9 | -- | 42 | -- | 8.0 | -- |
| 02... | 2330 | 1.5 | 14 | 42 | 7.0 | 7.5 | 11.4 |
| 03... | 0325 | 1.3 | -- | 44 | 6.5 | 6.5 | -- |
| 03... | 0755 | 1.1 | 11 | 42 | 6.2 | 7.0 | 11.9 |
| 29... | 1420 | 6.3 | -- | 37 | -- | -- | -- |
| 30... | 0225 | 3.8 | -- | 37 | -- | 9.5 | -- |
| 30... | 0305 | 3.5 | -- | 37 | -- | 9.5 | -- |
| 30... | 0730 | 4.0 | -- | 39 | -- | 9.0 | -- |
| APR. | | | | | | | |
| 09... | 0845 | -- | -- | 42 | -- | 8.5 | -- |
| 09... | 0850 | .63 | 11 | 43 | -- | 8.5 | -- |
| 09... | 0900 | .63 | 12 | -- | 7.3 | 8.5 | 11.4 |
| | | **11482480 BERRY GLEN CREEK NEAR ORICK** | | | | | |
| FEB., 1974 | | | | | | | |
| 22... | 1055 | -- | 17 | -- | 7.0 | 10.0 | 11.3 |
| 22... | 1100 | -- | -- | 65 | -- | 10.0 | -- |
| MAR. | | | | | | | |
| 30... | 1210 | -- | -- | 38 | -- | 9.5 | -- |
| | | **11482500 REDWOOD CREEK AT ORICK** | | | | | |
| SEP., 1973 | | | | | | | |
| 11... | 1400 | 13 | -- | 167 | 7.6 | 17.0 | 11.8 |
| NOV. | | | | | | | |
| 07... | 1525 | 4290 | -- | 89 | -- | 12.0 | -- |
| 07... | 1655 | 4140 | -- | 88 | -- | 12.0 | -- |
| 08... | 1045 | 10900 | -- | 77 | -- | 13.0 | -- |
| 09... | 1045 | 4960 | -- | 77 | -- | 13.5 | -- |
| 09... | 1630 | 4740 | -- | 78 | -- | 12.0 | -- |
| JAN., 1974 | | | | | | | |
| 12... | 1700 | 1120 | -- | 77 | -- | 8.0 | -- |
| 13... | 1120 | 1530 | -- | 73 | -- | 8.0 | -- |
| 13... | 1135 | 1530 | -- | 70 | -- | 8.0 | -- |
| 13... | 1145 | 1530 | -- | 70 | -- | 8.0 | -- |
| 13... | 1250 | 1150 | 28 | 79 | -- | 8.0 | -- |
| FEB. | | | | | | | |
| 21... | 1250 | 3580 | -- | 68 | -- | 7.5 | -- |
| 21... | 1300 | 3600 | 24 | 73 | 6.7 | 7.5 | 11.5 |
| 21... | 1620 | 3640 | -- | 68 | -- | 7.5 | -- |
| 21... | 1630 | 3660 | -- | 69 | -- | 7.5 | -- |
| MAR. | | | | | | | |
| 01... | 1205 | 4410 | -- | 69 | -- | 7.5 | -- |
| 01... | 1220 | 4540 | -- | 78 | -- | 7.5 | -- |
| 01... | 1320 | 4580 | -- | 69 | -- | 7.5 | -- |
| 01... | 1600 | 4380 | 29 | 73 | 7.2 | 7.5 | 11.9 |
| APR. | | | | | | | |
| 01... | 1005 | 22900 | -- | 58 | -- | -- | -- |
| 01... | 1255 | 25900 | -- | 52 | -- | 9.5 | -- |
| 04... | 1025 | -- | -- | 62 | -- | -- | -- |
| 04... | 1240 | 4110 | -- | 62 | -- | 10.0 | -- |

## Dissolved Solids

The major dissolved solids are electrically charged chemical elements or compounds. In fresh water, the major dissolved solids consist of the cations calcium, magnesium, sodium, and potassium, and the anions bicarbonate, carbonate, sulfate, chloride, and fluoride. Dissolved silica is also abundant in water but occurs partly in the nonionic form of silicon dioxide. In water-quality investigations, the concentrations of the major dissolved solids are determined to classify the water type and to provide information on water-quality changes. In addition, dissolved solids are a source of nutrients for aquatic plants and can influence their growth and production.

Water samples for major dissolved-solids determination (table 10) were collected at the estimated centroid of flow of each stream. Water samples for bicarbonate and carbonate analysis were neither filtered nor acidified. Water samples for the determination of remaining major dissolved solids were passed through 0.45-micrometre membrane filters and acidified with nitric acid. The samples were shipped to the Geological Survey Central Laboratory at Salt Lake City, Utah, for analysis using methods described by Brown and others (1970).

## Trace Elements

Trace elements are present in minute quantities in natural waters and are reported in micrograms per litre (μg/l). Most trace elements are essential to life but may be both limiting and lethal factors to aquatic organisms. For example, copper in small concentrations is an essential trace element required for growth of aquatic plants, but it is toxic to plants in larger concentrations.

The water samples for selected trace-element analyses were collected at the estimated centroid of flow of each stream and passed through 0.45-micrometre membrane filters. The filtrate was acidified with nitric acid, shipped to the Geological Survey Central Laboratory at Salt Lake City, and analyzed using the methods described by Brown and others (1970). In this study, the trace elements aluminum, cadmium, copper, iron, and zinc were determined (table 10). These elements were included in the study because of ease of analysis and because of their importance to aquatic biota (Day, 1963; Greeson, 1969).

## Nitrogen and Phosphorus

Nitrogen and phosphorus compounds are required by all organisms for growth and production. Although there are other essential plant nutrients, nitrogen and phosphorus are the most common nutrients in natural waters that can occur in growth-limiting concentrations. In contrast, nonlimiting quantities of nitrogen and phosphorus may result in rapid plant production and cause nuisance conditions.

Water samples for nitrogen and phosphorus determinations were collected at the estimated centroid of flow of each stream and passed through 0.45-micrometre membrane filters. The filtered water samples were placed in polyethylene bottles, packed in ice, shipped to the Geological Survey Central Laboratory at Salt Lake City, and analyzed for nitrogen and phosphorus using the methods described by Brown and others (1970). The compounds of nitrogen and phosphorus determined in this study (table 10) include nitrate, nitrite, Kjeldahl nitrogen which includes ammonia and organic nitrogen, phosphorus, and orthophosphorus.

## Organic Carbon

Carbonaceous material which has been a part of living tissue is classified as organic carbon. Organic carbon in water can be dissolved or suspended. Dissolved organic carbon consists primarily of proteins, carbohydrates, fats, and vitamins. Suspended organic carbon consists of living or dead material, either fragmented or whole. The organic-carbon concentration in water is determined to obtain an indication of the biological productivity and the amount of potential chemical energy transported by water.

Water samples for organic-carbon analysis were collected in a glass bottle at the estimated centroid of flow of each stream. A measured volume of water from each sample was passed through a 0.45-micrometre silver-membrane filter using a stainless steel filtering unit. The filtrate was collected in a glass septum bottle and the silver filter was placed in a polyethylene vial (written commun., Malcolm and McKinley, September 1, 1972). The filtrate and filter containers were iced, shipped to the Geological Survey Central Laboratory at Salt Lake City and analyzed (table 10) using the procedures described by Goerlitz and Brown (1972, p. 4).

[See figure 2 for location of stations]

| DATE | TIME | INSTANTANEOUS DISCHARGE (FT³/S) | DISSOLVED SILICA ($SIO_2$) (MG/L) | DISSOLVED ALUMINUM (AL) (UG/L) | DISSOLVED 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 ($HCO_3$) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE** | | | | | | | | | | |
| JAN. | | | | | | | | | | |
| 12... | 0545 | 218 | 6.7 | 20 | 50 | 11 | 1.3 | 2.4 | .5 | 33 |
| FEB. | | | | | | | | | | |
| 21... | 0800 | 670 | 6.2 | 90 | 120 | 9.8 | 1.5 | 1.9 | .5 | 35 |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK** | | | | | | | | | | |
| NOV. | | | | | | | | | | |
| 08... | 0815 | 6770 | 5.4 | 30 | 70 | 11 | 1.0 | 2.2 | .9 | 33 |
| JAN. | | | | | | | | | | |
| 13... | 1230 | 966 | 6.5 | -- | -- | -- | -- | -- | -- | 35 |
| FEB. | | | | | | | | | | |
| 20... | 2100 | 2590 | 6.0 | 40 | 30 | 8.5 | 1.0 | 2.6 | .5 | 33 |
| 21... | 1530 | 2690 | 5.6 | -- | 90 | 9.3 | 1.0 | 2.5 | .5 | 32 |
| 22... | 1200 | 2130 | 5.8 | 30 | 30 | 10 | 1.3 | 2.2 | .6 | 34 |
| MAR. | | | | | | | | | | |
| 02... | 1615 | 3140 | 6.3 | 40 | 40 | 9.6 | 1.3 | 2.4 | .5 | 33 |
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK** | | | | | | | | | | |
| FEB. | | | | | | | | | | |
| 22... | 1240 | 2390 | 5.9 | 20 | 60 | 27 | 1.4 | 2.5 | .6 | 32 |
| **11482225 HARRY WIER CREEK NEAR ORICK** | | | | | | | | | | |
| NOV. | | | | | | | | | | |
| 08... | 0900 | 144 | 5.9 | 110 | 80 | 4.5 | 1.1 | 3.5 | 1.1 | 16 |
| JAN. | | | | | | | | | | |
| 12... | 1800 | 12 | 6.9 | 40 | 200 | 5.0 | 1.1 | 4.2 | .6 | 20 |
| 13... | 1235 | 29 | 6.1 | 110 | 80 | 4.7 | 1.0 | 3.9 | .6 | 19 |
| FEB. | | | | | | | | | | |
| 21... | 0015 | 35 | 6.1 | 40 | 120 | 4.0 | .9 | 3.2 | .5 | 18 |
| 21... | 1200 | 49 | 5.8 | 40 | 230 | 5.8 | .8 | 3.7 | .5 | 16 |
| 22... | 0930 | 31 | 6.3 | 40 | 50 | 4.1 | 1.0 | 3.2 | .7 | 18 |
| MAR. | | | | | | | | | | |
| 03... | 0930 | 36 | 6.4 | 30 | 40 | 4.2 | 1.0 | 3.3 | .5 | 19 |
| **11482250 MILLER CREEK NEAR ORICK** | | | | | | | | | | |
| NOV. | | | | | | | | | | |
| 08... | 0530 | 40 | 6.2 | 30 | 40 | 3.2 | 1.0 | 3.8 | 1.1 | 16 |
| JAN. | | | | | | | | | | |
| 12... | 1450 | 3.9 | 7.3 | 10 | 10 | 3.4 | 1.1 | 4.2 | .9 | 19 |
| FEB. | | | | | | | | | | |
| 21... | 1025 | 11 | 5.5 | 120 | 100 | 4.2 | .9 | 3.1 | .7 | 15 |
| MAR. | | | | | | | | | | |
| 01... | 0930 | 12 | 6.0 | 60 | 20 | 2.7 | 1.0 | 3.2 | .7 | 15 |
| **11482260 MILLER CREEK AT MOUTH, NEAR ORICK** | | | | | | | | | | |
| NOV. | | | | | | | | | | |
| 08... | 0500 | 51 | 6.2 | 230 | 180 | 3.6 | 1.0 | 3.7 | .9 | 17 |
| JAN. | | | | | | | | | | |
| 13... | 0630 | 20 | 5.2 | 30 | 110 | 2.2 | .7 | 3.3 | .6 | 12 |
| FEB. | | | | | | | | | | |
| 20... | 1530 | 19 | 6.3 | 30 | 10 | 3.5 | .9 | 3.4 | .6 | 15 |
| 21... | 1050 | 25 | 5.4 | 30 | 40 | 3.2 | .9 | 3.0 | .6 | 14 |
| 22... | 1030 | 14 | 6.5 | 80 | 670 | 3.1 | 1.0 | 3.4 | .7 | 18 |
| MAR. | | | | | | | | | | |
| 01... | 1030 | 23 | 6.1 | 30 | 20 | 3.0 | 1.0 | 3.2 | .6 | 15 |

| DATE | 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) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRITE (N) (MG/L) | DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) | DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| | | | 11481500 REDWOOD CREEK NEAR BLUE LAKE--Continued | | | | | | |
| JAN. 12... | 0 | 27 | 6.7 | 2.0 | .1 | .02 | .00 | .02 | .14 |
| FEB. 21... | 0 | 29 | 4.9 | 1.6 | .1 | .03 | .00 | .03 | .27 |
| | | | 11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK--Continued | | | | | | |
| NOV. 08... | 0 | 27 | 5.5 | 2.2 | .1 | .07 | .00 | .07 | .19 |
| JAN. 13... | 0 | 29 | 6.3 | 2.6 | .1 | .02 | .00 | .02 | .47 |
| FEB. 20... | 0 | 29 | 5.0 | 2.7 | .1 | .09 | .00 | .09 | .24 |
| 21... | 0 | 26 | 5.2 | 2.6 | .1 | .09 | .01 | .10 | .25 |
| 22... | 0 | 28 | 4.7 | 2.1 | .1 | .02 | .00 | .02 | .16 |
| MAR. 02... | 0 | 27 | 5.7 | 2.9 | .1 | .06 | .00 | .06 | .15 |
| | | | 11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK--Continued | | | | | | |
| FEB. 22... | 0 | 26 | 5.4 | 3.2 | .1 | -- | .00 | -- | .21 |
| | | | 11482225 HARRY WIER CREEK NEAR ORICK--Continued | | | | | | |
| NOV. 08... | 0 | 13 | 3.6 | 5.2 | .1 | .04 | .02 | .06 | .16 |
| JAN. 12... | 0 | 16 | 3.2 | 3.3 | .1 | .03 | .00 | .03 | .03 |
| 13... | 0 | 16 | 2.5 | 4.3 | .1 | .09 | .00 | .09 | 1.5 |
| FEB. 21... | 0 | 15 | 2.5 | 4.7 | .1 | .09 | .00 | .09 | .23 |
| 21... | 0 | 13 | 2.5 | 4.4 | .1 | .17 | .01 | .18 | .14 |
| 22... | 0 | 15 | 2.7 | 4.4 | .1 | .38 | .00 | .38 | .21 |
| MAR. 03... | 0 | 16 | 2.5 | 3.7 | .0 | .03 | .00 | .03 | .66 |
| | | | 11482250 MILLER CREEK NEAR ORICK--Continued | | | | | | |
| NOV. 08... | 0 | 13 | 2.0 | 4.2 | .1 | .21 | .00 | .21 | .13 |
| JAN. 12... | 0 | 16 | 1.6 | 4.5 | .0 | .03 | .00 | .03 | .20 |
| FEB. 21... | 0 | 12 | 2.3 | 3.6 | .0 | .93 | .00 | .93 | .14 |
| MAR. 01... | 0 | 12 | 3.7 | 4.3 | .0 | .08 | .01 | .09 | .11 |
| | | | 11482260 MILLER CREEK AT MOUTH, NEAR ORICK--Continued | | | | | | |
| NOV. 08... | 0 | 14 | 2.1 | 4.6 | .1 | .16 | .00 | .16 | .24 |
| JAN. 13... | 0 | 10 | 2.3 | 4.2 | .1 | .03 | .00 | .03 | .16 |
| FEB. 20... | 0 | 12 | 2.0 | 4.2 | .0 | .09 | .00 | .09 | .09 |
| 21... | 0 | 11 | 2.3 | 3.7 | .0 | .03 | .00 | .03 | .05 |
| 22... | 0 | 15 | 2.3 | 4.4 | .0 | .09 | .00 | .09 | .75 |
| MAR. 01... | 0 | 12 | 4.0 | 4.9 | .0 | .07 | .00 | .07 | .07 |

Table 10.--*Chemical analyses*

| DATE | DIS-SOL-VED PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | DIS-SOLVED SOLIDS (TONS PER DAY) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO |
|---|---|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE--Continued** | | | | | | | | | |
| JAN. 12... | .01 | .01 | 47 | .06 | 27.7 | 33 | 6 | 14 | .2 |
| FEB. 21... | .01 | .00 | 44 | .06 | 79.6 | 31 | 2 | 12 | .2 |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK--Continued** | | | | | | | | | |
| NOV. 08... | .03 | .02 | 45 | .06 | 823 | 32 | 5 | 13 | .2 |
| JAN. 13... | .02 | .01 | -- | -- | -- | -- | -- | -- | -- |
| FEB. 20... | .01 | .00 | 43 | .06 | 301 | 25 | 0 | 18 | .2 |
| 21... | .01 | .00 | 43 | .06 | 312 | 27 | 1 | 16 | .2 |
| 22... | .02 | .00 | 44 | .06 | 253 | 30 | 2 | 13 | .2 |
| MAR. 02... | .19 | .17 | 46 | .06 | 390 | 29 | 2 | 15 | .2 |
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK--Continued** | | | | | | | | | |
| FEB. 22... | .02 | .02 | -- | -- | -- | 73 | 47 | 7 | .1 |
| **11482225 HARRY WIER CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. 08... | .04 | .03 | 33 | .04 | 12.8 | 16 | 3 | 31 | .4 |
| JAN. 12... | .02 | .00 | 35 | .05 | 1.13 | 17 | 1 | 34 | .4 |
| 13... | .02 | .00 | 33 | .04 | 2.58 | 16 | 0 | 34 | .4 |
| FEB. 21... | .01 | .01 | 31 | .04 | 2.93 | 14 | 0 | 33 | .4 |
| 21... | .01 | .00 | 33 | .04 | 4.37 | 18 | 5 | 30 | .4 |
| 22... | .02 | .02 | 33 | .04 | 2.76 | 14 | 0 | 31 | .4 |
| MAR. 03... | .02 | .00 | 31 | .04 | 3.01 | 15 | 0 | 32 | .4 |
| **11482250 MILLER CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. 08... | .02 | .02 | 31 | .04 | 3.35 | 12 | 0 | 38 | .5 |
| JAN. 12... | .01 | .00 | 33 | .04 | .35 | 13 | 0 | 39 | .5 |
| FEB. 21... | .02 | .00 | 32 | .04 | .95 | 14 | 2 | 31 | .4 |
| MAR. 01... | .08 | .07 | 30 | .04 | .97 | 11 | 0 | 37 | .4 |
| **11482260 MILLER CREEK AT MOUTH, NEAR ORICK--Continued** | | | | | | | | | |
| NOV. 08... | .03 | .02 | 32 | .04 | 4.41 | 14 | 0 | 35 | .4 |
| JAN. 13... | .00 | .00 | 25 | .03 | 1.35 | 8 | 0 | 44 | .5 |
| FEB. 20... | .01 | .00 | 29 | .04 | 1.69 | 12 | 0 | 36 | .4 |
| 21... | .01 | .00 | 26 | .04 | 1.76 | 12 | 0 | 34 | .4 |
| 22... | .01 | .00 | 31 | .04 | 1.17 | 12 | 0 | 37 | .4 |
| MAR. 01... | .11 | .10 | 31 | .04 | 1.93 | 12 | 0 | 36 | .4 |

| DATE | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | CARBON DIOXIDE (CO2) (MG/L) | DIS-SOL-VED ORGANIC CARBON (C) (MG/L) | SUS-PENDED ORGANIC CARBON (C) (MG/L) | DIS-SOLVED CAD-MIUM (CD) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|
| **11481500 REDWOOD CREEK NEAR BLUE LAKE--Continued** | | | | | | | | | |
| JAN. | | | | | | | | | |
| 12... | 79 | -- | 5.0 | -- | 2.0 | .1 | 1 | 2 | 10 |
| FEB. | | | | | | | | | |
| 21... | 72 | 6.8 | 6.0 | 8.8 | 1.2 | -- | 0 | 5 | 10 |
| **11482200 REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 08... | 69 | -- | -- | -- | 7.5 | -- | 2 | 6 | 30 |
| JAN. | | | | | | | | | |
| 13... | 80 | 6.8 | -- | 8.8 | -- | -- | -- | -- | -- |
| FEB. | | | | | | | | | |
| 20... | 71 | 6.8 | 8.0 | 8.3 | 1.6 | .5 | 0 | 4 | 20 |
| 21... | 68 | -- | 8.0 | -- | -- | -- | 0 | 9 | -- |
| 22... | 71 | -- | 6.0 | -- | .8 | -- | -- | -- | 10 |
| MAR. | | | | | | | | | |
| 02... | 68 | -- | 7.0 | -- | -- | .3 | 0 | 8 | 30 |
| **11482220 REDWOOD CREEK ABOVE HARRY WIER CREEK, NEAR ORICK--Continued** | | | | | | | | | |
| FEB. | | | | | | | | | |
| 22... | -- | -- | 6.0 | -- | -- | -- | 0 | 11 | 30 |
| **11482225 HARRY WIER CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 08... | 50 | -- | 11.5 | -- | 6.7 | .9 | 6 | 9 | 40 |
| JAN. | | | | | | | | | |
| 12... | 52 | -- | 7.0 | -- | 2.6 | .2 | 1 | 4 | 20 |
| 13... | -- | -- | 8.5 | -- | 4.0 | .2 | 1 | 5 | 10 |
| FEB. | | | | | | | | | |
| 21... | 44 | -- | 8.0 | -- | -- | -- | 1 | 6 | 10 |
| 21... | 41 | -- | 8.0 | -- | 4.0 | -- | 1 | 9 | 20 |
| 22... | 48 | -- | 7.0 | -- | 1.9 | -- | 1 | 8 | 40 |
| MAR. | | | | | | | | | |
| 03... | 44 | -- | 6.0 | -- | -- | .6 | 1 | 12 | 40 |
| **11482250 MILLER CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 08... | 44 | -- | 12.0 | -- | 2.8 | -- | -- | -- | 10 |
| JAN. | | | | | | | | | |
| 12... | 52 | -- | -- | -- | -- | .3 | 0 | 1 | 0 |
| FEB. | | | | | | | | | |
| 21... | 38 | -- | 8.0 | -- | 1.9 | -- | 0 | 10 | 30 |
| MAR. | | | | | | | | | |
| 01... | 41 | 7.0 | 8.0 | 2.4 | 3.2 | -- | 2 | 8 | 30 |
| **11482260 MILLER CREEK AT MOUTH, NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 08... | 47 | -- | 12.0 | -- | 4.4 | 1.3 | 0 | 9 | 10 |
| JAN. | | | | | | | | | |
| 13... | 38 | -- | 9.0 | -- | 6.7 | -- | 1 | 2 | 10 |
| FEB. | | | | | | | | | |
| 20... | 45 | -- | 8.5 | -- | 1.3 | -- | 0 | 3 | 20 |
| 21... | 39 | -- | 6.0 | -- | 2.9 | -- | 0 | 5 | 30 |
| 22... | 46 | -- | 7.0 | -- | 1.6 | -- | -- | -- | 30 |
| MAR. | | | | | | | | | |
| 01... | 41 | -- | 8.5 | -- | 2.0 | -- | 0 | 5 | 20 |

| DATE | TIME | INSTAN-TANEOUS DIS-CHARGE ($FT^3/S$) | DIS-SOLVED SILICA ($SIO_2$) (MG/L) | DIS-SOLVED ALUM-INUM (AL) (UG/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 ($HCO_3$) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | **11482330 HAYES CREEK NEAR ORICK** | | | | | | |
| NOV. 09... | 1155 | 12 | 7.0 | 60 | 50 | 5.0 | 1.5 | 5.6 | .7 | 17 |
| JAN. 13... | 0920 | 1.4 | 8.2 | 30 | 50 | 5.3 | 1.4 | 5.9 | .6 | 21 |
| FEB. 21... | 1845 | 5.6 | 7.1 | 50 | 40 | 3.3 | 1.1 | 5.1 | .5 | 17 |
| MAR. 02... | 1600 | 7.0 | 6.8 | 30 | 20 | 3.3 | 1.4 | 5.2 | .6 | 17 |
| APR. 09... | 1330 | 2.9 | 6.9 | 40 | 50 | 3.4 | 1.1 | 5.4 | .5 | 15 |
| | | | | **11482450 LOST MAN CREEK NEAR ORICK** | | | | | | |
| NOV. 08... | 0800 | 206 | 5.7 | 100 | 110 | 3.1 | .7 | 2.9 | .6 | 13 |
| JAN. 13... | 0930 | 22 | 7.9 | 40 | 100 | 3.4 | .8 | 3.5 | .5 | 17 |
| FEB. 21... | 1400 | 56 | 6.3 | 40 | 60 | 3.5 | .8 | 3.2 | .4 | 13 |
| MAR. 02... | 1000 | 72 | 6.3 | 140 | 60 | 3.0 | .9 | 3.7 | .5 | 13 |
| APR. 08... | 1300 | 26 | 6.9 | 50 | 100 | 2.9 | .8 | 3.7 | .4 | 13 |
| | | | | **11482460 LARRY DAMM CREEK NEAR ORICK** | | | | | | |
| APR. 08... | 1515 | 8.7 | 10 | 100 | 320 | 2.9 | 1.7 | 4.5 | .6 | 18 |
| | | | | **11482470 LITTLE LOST MAN CREEK NEAR ORICK** | | | | | | |
| NOV. 09... | 1135 | 89 | 6.8 | 20 | 60 | 3.2 | 1.1 | 4.5 | .6 | 15 |
| JAN. 13... | 1210 | 13 | 8.6 | 40 | 40 | 3.2 | 1.1 | 4.7 | .5 | 18 |
| FEB. 20... | 2320 | 46 | 7.0 | 250 | 230 | 2.9 | 1.0 | 4.1 | .4 | 14 |
| 21... | 1100 | 43 | 6.8 | 280 | 250 | 2.7 | 1.0 | 4.0 | .4 | 15 |
| 22... | 1000 | 33 | 7.0 | 30 | 40 | 3.7 | 1.0 | 4.2 | .4 | 15 |
| MAR. 02... | 1500 | 55 | 6.7 | 30 | 40 | 2.7 | 1.0 | 3.7 | .5 | 14 |
| APR. 09... | 1020 | 22 | 7.1 | 30 | 20 | 2.9 | .9 | 4.6 | .4 | 14 |
| 10... | 1400 | -- | 7.3 | -- | -- | 2.5 | 1.0 | -- | .5 | -- |
| 10... | 1430 | -- | 7.4 | -- | -- | 2.6 | 1.1 | -- | .4 | 14 |
| 10... | 1530 | -- | 7.4 | -- | -- | 2.5 | 1.0 | -- | .3 | 15 |
| | | | | **11482475 GENEVA CREEK NEAR ORICK** | | | | | | |
| NOV. 09... | 1145 | 2.0 | 6.8 | 150 | 130 | 2.4 | 1.1 | 5.4 | .7 | 13 |
| JAN. 13... | 1030 | .42 | 7.8 | 100 | 180 | 4.6 | 1.1 | 5.5 | .7 | 15 |
| FEB. 21... | 1220 | 1.3 | 6.1 | 20 | 30 | 2.1 | 1.2 | 4.7 | .5 | 16 |
| MAR. 02... | 1715 | 2.0 | 6.3 | 110 | 130 | 2.0 | 1.3 | 4.5 | .6 | 14 |
| APR. 09... | 0850 | .63 | 6.4 | 140 | 230 | 2.3 | 1.3 | 5.0 | .5 | 14 |
| | | | | **11482500 REDWOOD CREEK AT ORICK** | | | | | | |
| JAN. 13... | 1250 | 1150 | 6.4 | 10 | 140 | 11 | 1.3 | 3.0 | .5 | 34 |
| FEB. 21... | 1300 | 3600 | 5.8 | 40 | 50 | 9.1 | 1.1 | 2.6 | .5 | 31 |

| DATE | 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) | DIS-SOLVED NITRATE (N) (MG/L) | DIS-SOLVED NITRITE (N) (MG/L) | DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) | DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | **11482330 HAYES CREEK NEAR ORICK--Continued** | | | | | |
| NOV. | | | | | | | | | |
| 09... | 0 | 14 | 2.4 | 9.9 | .1 | .06 | .00 | .06 | .34 |
| JAN. | | | | | | | | | |
| 13... | 0 | 17 | 2.8 | 8.4 | .1 | .02 | .00 | .02 | .22 |
| FEB. | | | | | | | | | |
| 21... | 0 | 14 | 2.5 | 7.3 | .1 | .03 | .00 | .03 | .08 |
| MAR. | | | | | | | | | |
| 02... | 0 | 14 | 4.2 | 7.0 | .1 | .07 | .00 | .07 | .10 |
| APR. | | | | | | | | | |
| 09... | 0 | 14 | 2.3 | 6.0 | 1.0 | .04 | .00 | .04 | .09 |
| | | | | **11482450 LOST MAN CREEK NEAR ORICK--Continued** | | | | | |
| NOV. | | | | | | | | | |
| 08... | 0 | 11 | 3.2 | 4.1 | .1 | .01 | .00 | .01 | .09 |
| JAN. | | | | | | | | | |
| 13... | 0 | 14 | 2.5 | 3.7 | .1 | .01 | .00 | .01 | .57 |
| FEB. | | | | | | | | | |
| 21... | 0 | 11 | 2.3 | 3.4 | .0 | .00 | .00 | .00 | .07 |
| MAR. | | | | | | | | | |
| 02... | 0 | 11 | 2.8 | 3.4 | .0 | .00 | .01 | .00 | .08 |
| APR. | | | | | | | | | |
| 08... | 0 | 13 | 1.6 | 2.7 | .5 | .02 | .00 | .02 | .11 |
| | | | | **11482460 LARRY DAMM CREEK NEAR ORICK--Continued** | | | | | |
| APR. | | | | | | | | | |
| 08... | 0 | 15 | 2.5 | 3.8 | .8 | .47 | .00 | .47 | .20 |
| | | | | **11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued** | | | | | |
| NOV. | | | | | | | | | |
| 09... | 0 | 12 | 1.8 | 7.0 | .1 | .03 | .00 | .03 | .11 |
| JAN. | | | | | | | | | |
| 13... | 0 | 15 | 2.1 | 5.9 | .0 | .02 | .00 | .02 | .07 |
| FEB. | | | | | | | | | |
| 20... | 0 | 18 | 1.8 | 5.6 | .1 | .02 | .00 | .02 | .14 |
| 21... | 0 | 12 | 1.6 | 5.4 | .0 | .01 | .00 | .01 | .06 |
| 22... | 0 | 12 | 1.5 | 5.4 | .0 | .01 | .01 | .02 | .15 |
| MAR. | | | | | | | | | |
| 02... | 0 | 11 | 2.5 | 5.1 | .0 | .00 | .01 | .00 | .06 |
| APR. | | | | | | | | | |
| 09... | 0 | 13 | 2.9 | 5.1 | 1.0 | .03 | .00 | .03 | .31 |
| 10... | -- | -- | 3.3 | 5.9 | -- | .05 | .00 | .05 | .12 |
| 10... | -- | 11 | 1.8 | 5.1 | -- | .01 | .00 | .01 | .11 |
| 10... | -- | 12 | 2.6 | 4.6 | -- | .01 | .00 | .01 | .17 |
| | | | | **11482475 GENEVA CREEK NEAR ORICK--Continued** | | | | | |
| NOV. | | | | | | | | | |
| 09... | 0 | 11 | 4.3 | 6.2 | .1 | .03 | .00 | .03 | .36 |
| JAN. | | | | | | | | | |
| 13... | 0 | 12 | 3.6 | 5.8 | .1 | .01 | .01 | .02 | .25 |
| FEB. | | | | | | | | | |
| 21... | 0 | 12 | 3.5 | 5.7 | .1 | .35 | .01 | .36 | .09 |
| MAR. | | | | | | | | | |
| 02... | 0 | 11 | 4.1 | 4.9 | .1 | .10 | .01 | .11 | .14 |
| APR. | | | | | | | | | |
| 09... | 0 | 11 | 2.8 | 4.2 | .7 | .05 | .00 | .05 | .20 |
| | | | | **11482500 REDWOOD CREEK AT ORICK--Continued** | | | | | |
| JAN. | | | | | | | | | |
| 13... | 0 | 28 | 5.7 | 3.2 | .1 | .03 | .00 | .03 | .27 |
| FEB. | | | | | | | | | |
| 21... | 0 | 24 | 4.2 | 2.6 | .0 | 1.0 | .00 | 1.0 | .20 |

| DATE | DIS-SOLVED PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | DIS-SOLVED SOLIDS (TONS PER DAY) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 11482330 HAYES CREEK NEAR ORICK--Continued | | | | | |
| NOV. 09... | .04 | .03 | 41 | .06 | 1.33 | 19 | 5 | 38 | .6 |
| JAN. 13... | .01 | .00 | 43 | .06 | .16 | 19 | 2 | 39 | .6 |
| FEB. 21... | .02 | .02 | 36 | .05 | .54 | 13 | 0 | 45 | .6 |
| MAR. 02... | .02 | .00 | 37 | .05 | .70 | 14 | 0 | 43 | .6 |
| APR. 09... | .02 | .01 | 34 | .05 | .27 | 13 | 1 | 46 | .7 |
| | | | | 11482450 LOST MAN CREEK NEAR ORICK--Continued | | | | | |
| NOV. 08... | .02 | .02 | 27 | .04 | 15.0 | 11 | 0 | 36 | .4 |
| JAN. 13... | .01 | .00 | 31 | .04 | 1.84 | 12 | 0 | 38 | .4 |
| FEB. 21... | .02 | .02 | 27 | .04 | 4.08 | 12 | 1 | 36 | .4 |
| MAR. 02... | .02 | .00 | 27 | .04 | 5.25 | 11 | 1 | 41 | .5 |
| APR. 08... | .01 | .01 | 26 | .04 | 1.83 | 11 | 0 | 42 | .5 |
| | | | | 11482460 LARRY DAMM CREEK NEAR ORICK--Continued | | | | | |
| APR. 08... | .01 | .01 | 38 | .05 | .89 | 14 | 0 | 40 | .5 |
| | | | | 11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued | | | | | |
| NOV. 09... | .03 | .02 | 33 | .04 | 7.93 | 13 | 0 | 42 | .6 |
| JAN. 13... | .01 | .00 | 35 | .05 | 1.23 | 13 | 0 | 44 | .6 |
| FEB. 20... | .02 | .00 | 30 | .04 | 3.73 | 11 | 0 | 43 | .5 |
| 21... | .02 | .00 | 30 | .04 | 3.48 | 11 | 0 | 43 | .5 |
| 22... | .01 | .00 | 31 | .04 | 2.76 | 13 | 1 | 40 | .5 |
| MAR. 02... | .02 | .00 | 29 | .04 | 4.31 | 11 | 0 | 41 | .5 |
| APR. 09... | .02 | .02 | 32 | .04 | 1.90 | 11 | 0 | 47 | .6 |
| 10... | .02 | .03 | -- | -- | -- | 10 | -- | -- | -- |
| 10... | .02 | .02 | -- | -- | -- | 11 | 0 | -- | -- |
| 10... | .02 | .02 | -- | -- | -- | 10 | 0 | -- | -- |
| | | | | 11482475 GENEVA CREEK NEAR ORICK--Continued | | | | | |
| NOV. 09... | .02 | .02 | 34 | .05 | .18 | 11 | 0 | 51 | .7 |
| JAN. 13... | .01 | .00 | 37 | .05 | .04 | 16 | 4 | 41 | .6 |
| FEB. 21... | .02 | .03 | 34 | .05 | .12 | 10 | 0 | 49 | .6 |
| MAR. 02... | .01 | .00 | 31 | .04 | .17 | 10 | 0 | 47 | .6 |
| APR. 09... | .01 | .00 | 31 | .04 | .05 | 11 | 0 | 48 | .7 |
| | | | | 11482500 REDWOOD CREEK AT ORICK--Continued | | | | | |
| JAN. 13... | .01 | .00 | 48 | .07 | 149 | 33 | 5 | 16 | .2 |
| FEB. 21... | .01 | .01 | 46 | .06 | 447 | 27 | 2 | 17 | .2 |

| DATE | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | CARBON DIOXIDE (CO2) (MG/L) | DISSOLVED ORGANIC CARBON (C) (MG/L) | SUSPENDED ORGANIC CARBON (C) (MG/L) | DISSOLVED CADMIUM (CD) (UG/L) | DISSOLVED COPPER (CU) (UG/L) | DISSOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|
| **11482330 HAYES CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 09... | 63 | -- | 11.0 | -- | -- | -- | 1 | 3 | 10 |
| JAN. | | | | | | | | | |
| 13... | 46 | -- | 8.5 | -- | 2.0 | .1 | 1 | 4 | 10 |
| FEB. | | | | | | | | | |
| 21... | 54 | -- | 8.5 | -- | 1.8 | .2 | 0 | 3 | 20 |
| MAR. | | | | | | | | | |
| 02... | 53 | -- | 8.0 | -- | -- | .2 | 2 | 2 | 40 |
| APR. | | | | | | | | | |
| 09... | 56 | 7.2 | 9.0 | 1.5 | 3.5 | .1 | 0 | 2 | 10 |
| **11482450 LOST MAN CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 08... | 37 | -- | 11.5 | -- | 3.8 | .5 | 1 | 3 | 20 |
| JAN. | | | | | | | | | |
| 13... | 68 | -- | 7.5 | -- | 2.7 | .2 | 1 | 2 | 10 |
| FEB. | | | | | | | | | |
| 21... | 36 | -- | 8.0 | -- | -- | -- | 0 | 5 | 20 |
| MAR. | | | | | | | | | |
| 02... | 37 | 7.1 | 7.0 | 1.7 | 1.7 | .5 | 0 | 4 | 30 |
| APR. | | | | | | | | | |
| 08... | 38 | 7.4 | 9.0 | .8 | 5.2 | .1 | 0 | 5 | 60 |
| **11482460 LARRY DAMM CREEK NEAR ORICK--Continued** | | | | | | | | | |
| APR. | | | | | | | | | |
| 08... | 54 | -- | 11.0 | -- | 4.1 | .2 | 0 | 3 | 30 |
| **11482470 LITTLE LOST MAN CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 09... | 48 | -- | 11.0 | -- | -- | -- | 0 | 7 | 20 |
| JAN. | | | | | | | | | |
| 13... | -- | -- | 8.0 | -- | 2.5 | .1 | 1 | 6 | 20 |
| FEB. | | | | | | | | | |
| 20... | 45 | 7.2 | 8.0 | 1.4 | -- | -- | 1 | 5 | 10 |
| 21... | 46 | 7.1 | 8.0 | 1.9 | 3.4 | -- | 0 | 5 | 10 |
| 22... | 44 | 7.1 | 7.0 | 2.0 | -- | -- | 0 | 3 | 10 |
| MAR. | | | | | | | | | |
| 02... | 43 | -- | 7.5 | -- | 1.0 | .2 | 1 | 4 | 20 |
| APR. | | | | | | | | | |
| 09... | 44 | 7.1 | 8.5 | 1.8 | 7.0 | .1 | 0 | 2 | 10 |
| 10... | 50 | -- | 8.9 | -- | -- | -- | -- | -- | -- |
| 10... | 48 | 7.4 | 8.9 | .9 | -- | -- | -- | -- | -- |
| 10... | 48 | 6.6 | 10.0 | 6.0 | -- | -- | -- | -- | -- |
| **11482475 GENEVA CREEK NEAR ORICK--Continued** | | | | | | | | | |
| NOV. | | | | | | | | | |
| 09... | 47 | -- | 11.5 | -- | -- | -- | 1 | 3 | 10 |
| JAN. | | | | | | | | | |
| 13... | 50 | -- | 8.0 | -- | 5.4 | .2 | 0 | 2 | 20 |
| FEB. | | | | | | | | | |
| 21... | 42 | 7.0 | 7.0 | 2.6 | 5.1 | .2 | -- | -- | 0 |
| MAR. | | | | | | | | | |
| 02... | 44 | -- | 8.0 | -- | 4.7 | -- | 0 | 4 | 20 |
| APR. | | | | | | | | | |
| 09... | 43 | -- | 8.5 | -- | 4.8 | .2 | 0 | 2 | 20 |
| **11482500 REDWOOD CREEK AT ORICK--Continued** | | | | | | | | | |
| JAN. | | | | | | | | | |
| 13... | 79 | -- | 9.0 | -- | 1.8 | .3 | 1 | 4 | 10 |
| FEB. | | | | | | | | | |
| 21... | 73 | 6.7 | 7.5 | 9.9 | 1.2 | -- | 0 | 4 | 20 |

## Rainwater

The chemical composition of rainwater is complex and highly variable from area to area, from storm to storm, and even from shower to shower during a storm. The chemical constituents found in rainwater are derived from a variety of atmospheric, oceanic, and terrestrial sources. The types and concentrations of chemical constituents contained in rainwater can influence the water quality of surface water. Rainwater, for example, can be a source of chemical elements and compounds essential for plant growth and reproduction.

Rainwater for chemical analysis was collected at selected stations during two storms (table 11). The rainwater was collected with a funnel placed in a glass bottle. Cotton was inserted into the neck of the funnel to prevent the entrance of leaf litter and insects. The glass bottle was covered with aluminum foil to prevent the entrance of light and thus to reduce algal growth. Each bottle was placed in an open (nonforested) area with the exception of Miller Creek at Mouth and Lost Man Creek stations which were in old growth redwood forest. The collected rainwater represented a composite sample for each of two storms at each selected sampling station. Rainwater samples collected during the first storm (November 7-9, 1973) were analyzed for major dissolved solids, dissolved nitrogen and phosphorus compounds, and selected dissolved trace elements. The filtering, treating, and the analytical procedures used were previously discussed. Rainwater samples for the second storm (February 20-22, 1974) were analyzed for total nitrate, total nitrite, and total phosphorus. Unfiltered samples for these constituents were iced, shipped to the Geological Survey Central Laboratory at Salt Lake City, and analyzed following the procedures outlined by Brown and others (1970).

## Table 11.--*Chemical analyses of rainfall*

[See figure 2 for location of gages]

| DATE | TIME | DIS-SOLVED SILICA ($SIO_2$) (MG/L) | DIS-SOLVED ALUM-INUM (AL) (UG/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 ($HCO_3$) (MG/L) | CAR-BONATE ($CO_3$) (MG/L) | ALKA-LINITY AS $CACO_3$ (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STATION C - HARRY WIER CREEK LODGE | | | | | | | | | | | |
| NOV. 07-09 | -- | .0 | 0 | 10 | .1 | .7 | .3 | .1 | 4 | 0 | 3 |
| FEB. 20-22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| STATION G - C LINE NEAR MILLER CREEK | | | | | | | | | | | |
| NOV. 07-09 | -- | .1 | 0 | 10 | .7 | .0 | .6 | .1 | 3 | 0 | 2 |
| FEB. 20-22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11482260 MILLER CREEK AT MOUTH | | | | | | | | | | | |
| NOV. 07-09 | -- | 1.2 | 30 | 40 | 1.0 | .1 | 1.2 | .1 | 0 | 0 | 0 |
| 11482330 HAYES CREEK | | | | | | | | | | | |
| FEB. 20-22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11482450 LOST MAN CREEK | | | | | | | | | | | |
| NOV. 09... | -- | .3 | -- | 20 | 1.2 | .1 | 1.8 | .5 | 7 | 0 | 6 |
| STATION K - UPPER LITTLE LOST MAN | | | | | | | | | | | |
| NOV. 07-09 | -- | .1 | -- | 20 | .9 | .0 | 1.4 | .5 | -- | -- | -- |
| 11482470 LITTLE LOST MAN CREEK | | | | | | | | | | | |
| FEB. 20-22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table 11.--*Chemical analyses of rainfall*--Continued

| DATE | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLO-RIDE (CL) (MG/L) | DIS-SOLVED FLUO-RIDE (F) (MG/L) | TOTAL NITRATE (N) (MG/L) | DIS-SOLVED NITRATE (N) (MG/L) | TOTAL NITRITE (N) (MG/L) | DIS-SOLVED NITRITE (N) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) | DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | STATION C - HARRY WIER CREEK LODGE--Continued | | | | | | |
| NOV. 07-09 | .5 | .6 | .1 | -- | .02 | -- | .00 | -- | .02 | .04 |
| FEB. 20-22 | -- | -- | -- | .03 | -- | .00 | -- | .03 | -- | -- |
| | | | | STATION G - C LINE NEAR MILLER CREEK--Continued | | | | | | |
| NOV. 07-09 | .5 | .4 | .0 | -- | .01 | -- | .01 | -- | .02 | .02 |
| FEB. 20-22 | -- | -- | -- | .02 | -- | .00 | -- | .02 | -- | -- |
| | | | | 11482260 MILLER CREEK AT MOUTH--Continued | | | | | | |
| NOV. 07-09 | 1.8 | 1.1 | .0 | -- | 1.3 | -- | .00 | -- | 1.3 | .15 |
| | | | | 11482330 HAYES CREEK--Continued | | | | | | |
| FEB. 20-22 | -- | -- | -- | .04 | -- | .00 | -- | .04 | -- | -- |
| | | | | 11482450 LOST MAN CREEK--Continued | | | | | | |
| NOV. 09... | 2.0 | 2.0 | .0 | -- | -- | -- | -- | -- | .03 | -- |
| | | | | STATION K - UPPER LITTLE LOST MAN--Continued | | | | | | |
| NOV. 07-09 | .7 | 1.3 | .0 | -- | .03 | -- | .00 | -- | .03 | .53 |
| | | | | 11482470 LITTLE LOST MAN CREEK--Continued | | | | | | |
| FEB. 20-22 | -- | -- | -- | .05 | -- | .01 | -- | .06 | -- | -- |

Table 11.--*Chemical analyses of rainfall*--Continued

| DATE | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOL-VED-PHOS-PHORUS (P) (MG/L) | DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | DIS-SOLVED ZINC (ZN) (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | STATION C - HARRY WIER CREEK LODGE--Continued | | | | | | | |
| NOV. 07-09 | -- | .02 | .01 | 5 | .01 | 3 | 0 | 17 | .1 | 10 |
| FEB. 20-22 | .03 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | STATION G - C LINE NEAR MILLER CREEK--Continued | | | | | | | |
| NOV. 07-09 | -- | .02 | .01 | 4 | .01 | 2 | 0 | 41 | .2 | 30 |
| FEB. 20-22 | .01 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | 11482260 MILLER CREEK AT MOUTH--Continued | | | | | | | |
| NOV. 07-09 | -- | .02 | .01 | 12 | .02 | 3 | 3 | 46 | .3 | 70 |
| | | | 11482330 HAYES CREEK--Continued | | | | | | | |
| FEB. 20-22 | .03 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | 11482450 LOST MAN CREEK--Continued | | | | | | | |
| NOV. 09... | -- | -- | -- | 12 | .02 | 3 | 0 | 49 | .4 | -- |
| | | | STATION K - UPPER LITTLE LOST MAN--Continued | | | | | | | |
| NOV. 07-09 | -- | .02 | .00 | -- | -- | 2 | -- | 51 | .4 | -- |
| | | | 11482470 LITTLE LOST MAN CREEK--Continued | | | | | | | |
| FEB. 20-22 | .08 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## Coliform Bacteria

Coliform bacteria are used as biological indicators of the sanitary quality of water and its suitability for human use. Total coliform bacteria determination includes bacteria from water, soil, vegetation, and feces. Fecal coliform bacteria are that part of the coliform group present in the intestines and feces of warm-blooded animals.

The membrane filter incubation method was used in determining the total and fecal coliform bacterial colony counts. Water samples were collected in a sterilized glass bottle near the estimated centroid of flow of each stream, and filtered in the field. Membrane filters (0.45 micrometre) were used to retain the bacteria. The filters for total coliform were placed on M-Endo agar plates and incubated at 35°C for 24 hours; the filters for fecal coliform bacteria were placed on M-FC agar plates and incubated at 44.5°C for 24 hours (Slack and others, 1973). After the prescribed incubation period, the filters were removed from the incubator and the bacterial colonies were counted using the methods described by Slack and others (1973, p. 30). Total and fecal coliform bacterial colony counts were made only at Redwood Creek near Blue Lake, Redwood Creek at South Park Boundary, and Redwood Creek at Orick (table 12).

Table 12.--*Coliform bacteria analyses of water samples*

[All coliform bacteria counts were based on nonideal numbers of colonies in sample]

| Station identification | Station name | Date | Time | Total coliform (colonies per 100 ml) | Fecal coliform (colonies per 100 ml) |
|---|---|---|---|---|---|
| 11481500 | Redwood Creek near Blue Lake | 2-21-74 | 0800 | 32 | 28 |
| 11482200 | Redwood Creek at South Park Boundary, near Orick | 2-22-74 | 1200 | 8 | <1 |
| 11482500 | Redwood Creek at Orick | 2-21-74 | 1300 | 4 | 24 |

Benthic invertebrates represent the community of organisms without backbones that live in or on the bottom of lakes and streams. Because benthic invertebrates inhabit specific types of habitats and are sensitive to water-quality changes, they are often used as biological indicators of both the past and present environmental conditions.

Benthic invertebrates were collected with a Surber 1 $ft^2$ (0.09 $m^2$) sampler (Slack and others, 1973, p. 144). In the field, the material collected by the sampler was emptied into a bucket and washed onto a number 70 wire sieve (210 millimetre mesh opening). The benthic invertebrates were removed from the sieve with forceps and placed into glass vials containing 40 percent isopropyl alcohol. In the laboratory at Sacramento, Calif., the benthic invertebrates were identified and counted, using selected taxonomic references[1] and the methods described by Slack and others (1970, p. 126).

The benthic invertebrate data are listed in phylogenetic order based on the classification scheme of Borror and DeLong (1971). For this study the majority of benthic invertebrates (table 13) were classified to genus. All benthic invertebrate samples are being held in a reference file and are available for additional taxonomic classification.

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[1]Borror and DeLong (1971); Edmunds and others (1963); Gaufin and others (1972); Jewett (1960); Johannsen (1969); Mason (1973); Pennak (1953); Ross (1944); Usinger (1968); and Ward and Whipple (1959).

Table 13.--*Taxa and number*

[See figure 2 for location of sampling sites. Results are based on 3-ft$^2$ sample

| PHYLUM / CLASS / Order / Family / Subfamily / *Genus sp.* — Sampling site / Date | Redwood Cr. above Hwy. 299 Bridge 10-03-73 | Redwood Cr. near Blue Lake 10-03-73 | Redwood Cr. at Redwood Valley Bridge 10-03-73 | Redwood Cr. at Lower End, Redwood Valley 10-03-73 | Redwood Cr. above Panther Cr. 10-01-73 | High-Slope Schist Cr. 10-02-73 | Copper Cr. 10-04-73 | Redwood Cr. below Copper Cr. 10-04-73 | Slide Cr. 10-01-73 | Redwood Cr. at South Park Boundary 10-01-73 | Bridge Cr. 9-25-73 | Harry Wier Cr. 9-26-73 | 10-31-73 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PLATYHELMINTHES | | | | | | | | | | | | | |
| TURBELLARIA (free-living flatworms) | | | | 1 | | | | | 2 | | | | |
| ANNELIDA | | | | | | | | | | | | | |
| OLIGOCHAETA (aquatic earthworms) | | | | | | 1 | | 2 | | | | 1 | |
| HIRUDINEA (leeches) | | | | | | | | | | | | | |
| Piscicolidae | | | | | | | | | | | | | |
| ARTHROPODA | | | | | | | | | | | | | |
| ARACHNOIDEA | | | | | | | | | | | | | |
| Hydracarina (water mites) | 22 | 28 | 70 | 12 | 50 | 1 | 32 | 21 | 2 | 8 | 38 | | |
| INSECTA | | | | | | | | | | | | | |
| Collembola (spring tails) | | | | 1 | | | | | | | | | |
| Ephemeroptera (mayflies) | | | | | | | | | | | | | |
| Baetidae | | | | | | | | | | | | | |
| *Ameletus sp.* | | | | | | 3 | | | | | | | |
| *Baetis spp.* | 28 | 12 | 19 | 28 | 89 | 4 | 113 | 96 | 84 | 40 | 105 | 6 | 2 |
| *Ephemerella spp.* | | 1 | | | 3 | 1 | | 3 | 2 | 2 | 9 | | |
| *Paraleptophlebia spp.* | | 1 | | | 1 | 8 | 1 | | 1 | | | | |
| Heptageniidae | | | | | | | | | | | | | |
| *Cinygmula sp.* | | 15 | | | | 2 | | | | | | 9 | 4 |
| *Ironodes sp.* | 1 | | | | 1 | 4 | 1 | | 3 | | | | |
| *Rhithrogena sp.* | 17 | 30 | 16 | 11 | 16 | | 8 | 23 | 1 | 11 | 10 | 1 | |
| Odonata (dragonflies-damselflies) | | | | | | | | | | | | | |
| Gomphidae | | | | | | | | | | | | | |
| *Ophiogomphus sp.* | 2 | | | 1 | 1 | | | | | | | | |
| Coenagrionidae | | | | | | | | | | | | | |
| *Hyponeura sp.* | | | | | | | 1 | | | | | | |
| Plecoptera (stoneflies) | | | | | | | | | | | | | |
| Chloroperlidae | | | | | | | | | | | | | |
| *Alloperla spp.* | 1 | 9 | 9 | 1 | 2 | 3 | | 4 | 4 | 1 | 2 | 4 | 2 |
| Nemouridae | | | | | | | | | | | | | |
| *Capnia sp.* | | | | | | 1 | | | | | | | |
| *Leuctra sp.* | | | | | | | | | | | 1 | | |
| *Nemoura spp.* | 1 | | | | | 2 | 9 | | 8 | 1 | 3 | 5 | 1 |
| Unknown | | | | | | | | | | | | | |
| Peltoperlidae | | | | | | | | | | | | | |
| *Peltoperla sp.* | | | | | | 1 | | | | | | | |
| Perlidae | | | | | | | | | | | | | |
| *Acroneuria spp.* | 25 | 21 | 7 | 5 | 10 | 9 | | 5 | 11 | 1 | | 18 | 6 |
| Pteronarcidae | | | | | | | | | | | | | |
| *Pteronarcys sp.* | | | | | 1 | | | | | | | | |
| Hemiptera (true bugs) | | | | | | | | | | | | | |
| Corixidae | | | | | | | | | | | | | |
| Saldidae | | | | | | | | | | | | | |
| *Ioscytus sp.* | | | | | | | | | | | | | |

*of benthic invertebrates*

Second sampling date refers to resampling of site after first storm.]

| 9-26-73 Redwood Cr. below Harry Wier Cr. | 9-27-73 Tom McDonald Cr. | 10-31-73 Tom McDonald Cr. | 9-27-73 Redwood Cr. below Tom McDonald Cr. | 9-27-73 Redwood Cr. above Miller Cr. | 11-02-73 Miller Cr. (sampled after first storm) | 9-27-73 Miller Cr. at Mouth | 10-31-73 Miller Cr. at Mouth | 9-27-73 Cloquet Cr. | 9-28-73 Redwood Cr. below Oscar Larson Cr. | 9-28-73 Elam Cr. | 9-28-73 Redwood Cr. below Elam Cr. | 9-28-73 Hayes Cr. | 11-01-73 Hayes Cr. | 9-28-73 Redwood Cr. below Hayes Cr. | 9-25-73 Lost Man Cr. | 11-01-73 Lost Man Cr. | 10-04-73 Little Lost Man Creek | 11-01-73 Little Lost Man Creek |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 11 | 1 | 1 | | 2 | | | | | | |
| | | 1 | | | 1 | | 1 | 1 | | 1 | | 1 | 1 | | | | 1 | |
| | | 1 | | | | | | | | 1 | | | | | | | | |
| 7 | 6 | | | 27 | | | | 1 | 21 | | 10 | | | 63 | 9 | 1 | 82 | |
| | | | 1 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 15 | | | |
| 29 | 117 | 36 | 27 | 27 | 4 | 4 | 4 | 19 | 93 | 12 | 20 | 12 | 9 | 56 | 11 | 6 | 142 | 30 |
| | 4 | | | | | | | | | 1 | | | | | 1 | 1 | 23 | 1 |
| | | | | | 2 | | | 4 | | 8 | | 3 | | | | | 310 | 5 |
| | 19 | | | 2 | 2 | 2 | 1 | 32 | 1 | 27 | | 1 | 3 | | 12 | 5 | 12 | 3 |
| | | | | | 16 | | | 3 | | 5 | | 1 | | | | | 2 | |
| 1 | 7 | 5 | | | 2 | | | | | | | 1 | 3 | | | 1 | 65 | 3 |
| | | | | | | | | | | | | | | | 1 | | | |
| | 3 | 1 | 3 | | 4 | 3 | | | 4 | 2 | 1 | 2 | 2 | | 27 | 2 | 3 | |
| | 1 | | | | | | | 3 | | | | | | | | | | |
| | 6 | 1 | | | 3 | | 1 | 8 | 1 | 7 | | 5 | 2 | 1 | 1 | | 80 | 3 |
| | | | | | | | | | | | | | | | | | | 1 |
| | 8 | 1 | 1 | 1 | 4 | 4 | | 14 | | 4 | 1 | 7 | 2 | | 4 | | 9 | |
| | | | | 1 | | | | | | | | | | | | | | |
| | | | | | | | | | | | 1 | | | | | | | |

Table 13.--*Taxa and numbe*

| PHYLUM<br>CLASS<br>Order<br>Family<br>Subfamily<br>*Genus sp.* / Sampling site / Date | Redwood Cr. above Hwy. 299 Bridge<br>10-03-73 | Redwood Cr. near Blue Lake<br>10-03-73 | Redwood Cr. at Redwood Valley Bridge<br>10-03-73 | Redwood Cr. at Lower End, Redwood Valley<br>10-03-73 | Redwood Cr. above Panther Cr.<br>10-01-73 | High-Slope Schist Cr.<br>10-02-73 | Copper Cr.<br>10-04-73 | Redwood Cr. below Copper Cr.<br>10-04-73 | Slide Cr.<br>10-01-73 | Redwood Cr. at South Park Boundary<br>10-01-73 | Bridge Cr.<br>9-25-73 | Harry Wier Cr.<br>9-26-73 | Harry Wier Cr.<br>10-31-73 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARTHROPODA--continued | | | | | | | | | | | | | |
| INSECTA--continued | | | | | | | | | | | | | |
| Coleoptera (beetles) | | | | | | | | | | | | | |
| Dytiscidae | | | | | | | | | | | | | |
| *Bidessus sp.* | | | | | | | | | | | | | |
| *Oreodytes sp.* | | | | | | | | | | | | | |
| Elmidae | | | | | | | | | | | | | |
| *Ampumixis sp.* | | | | | | | | | | | | | 1 |
| *Heterlimnius sp.* | | 1 | | | | | | | 4 | | | 19 | 2 |
| *Optioservus spp.* | 171 | 149 | 641 | 107 | 570 | | 151 | 120 | 1 | 90 | 13 | | |
| *Ordobrevia sp.* | | | | | | | 4 | | | | | | |
| *Zaitzevia sp.* | 12 | 22 | 20 | 5 | 23 | | 17 | 6 | | 3 | | | |
| Unknown | | | | | | | | | | | | | |
| Hydraenidae | | | | | | | | | | | | | |
| *Hydraena sp.* | | | | | | | | | 2 | | | | |
| Hydrophilidae | | | | | | | | | | | | | |
| *Berosus sp.* | | | | | | | | | | | | | |
| *Cymbiodyta sp.* | | | | | | | | | | | | | |
| *Hydrochus sp.* | | | | | | | | | | | | | |
| *Laccobius sp.* | | | | | | | | | | | | | |
| Psephenidae | | | | | | | | | | | | | |
| *Eubrianax sp.* | | | 2 | 2 | 5 | | 124 | | 6 | | | 2 | |
| Staphylinidae | | | | | | | | | | | | | |
| *Emplenota sp.* | | | | | | | | | | 1 | | 1 | |
| Trichoptera (caddisflies) | | | | | | | | | | | | | |
| Beraeidae | | | | | | | | | | | | | |
| *Beraea sp.* | 1 | 5 | 34 | 3 | 27 | | 7 | 2 | | | | | |
| Hydropsychidae | | | | | | | | | | | | | |
| *Arctopsyche sp.* | | | | | | | | | | | | | |
| *Cheumatopsyche sp.* | 35 | 102 | 22 | 25 | 34 | | | 16 | | 3 | | | |
| *Hydropsyche spp.* | 34 | 79 | 7 | 11 | 25 | | 9 | 14 | 27 | 27 | 42 | 2 | 10 |
| *Parapsyche sp.* | | | | | | 1 | | | 1 | | | | 1 |
| Unknown | | | | 2 | | | | | | | | | |
| Hydroptilidae | | | | | | | | | | | | | |
| *Hydroptila sp.* | | | | | 1 | | | | | | | | |
| *Neotrichia sp.* | | | | | 1 | | | | | | | | |
| Unknown | | 1 | 4 | | 8 | | | | | | 1 | | |
| Goeridae | | | | | | | | | | | | 1 | |
| Lepidostomatidae | | | | | | | | | | | | | |
| *Lepidostoma spp.* | | | | | | | | | | | | | |
| Limnephilidae | | | | | | | | | | | | | |
| *Neothremma sp.* | | | | | | | | | | | | | |
| *Radema sp.* | | | | | | | | | | | | 2 | |
| Unknown | | | | | | 1 | | | | | | | |
| Philopotamidae | | | | | | | | | | | | | |
| *Wormaldia sp.* | | 3 | | | | | | | | | | | |

of *benthic invertebrates*--Continued

| | 9-26-73 Redwood Cr. below Harry Wier Cr. | 9-27-73 Tom McDonald Cr. | 10-31-73 Tom McDonald Cr. | 9-27-73 Redwood Cr. below Tom McDonald Cr. | 9-27-73 Redwood Cr. above Miller Cr. | 11-02-73 Miller Cr. (sampled after first storm) | 9-27-73 Miller Cr. at Mouth | 10-31-73 Miller Cr. at Mouth | 9-27-73 Cloquet Cr. | 9-28-73 Redwood Cr. below Oscar Larson Cr. | 9-28-73 Elam Cr. | 9-28-73 Redwood Cr. below Elam Cr. | 9-28-73 Hayes Cr. | 11-01-73 Hayes Cr. | 9-28-73 Redwood Cr. below Hayes Cr. | 9-25-73 Lost Man Cr. | 11-01-73 Lost Man Cr. | 10-04-73 Little Lost Man Creek | 11-01-73 Little Lost Man Creek |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | 1 | | | |
| | | | | | 1 | | | | | | | | | | | | | | |
| | | 3 | 2 | | | | | | | | | | | | | 1 | | | |
| | | 67 | 13 | | | | 2 | | 19 | | 11 | | | | | 2 | | 27 | 5 |
| | 54 | 2 | 1 | 47 | 33 | | | | 1 | 142 | 2 | 11 | | | 26 | 17 | 6 | 152 | 2 |
| | | | | | | | | | | | | | | | | | | 30 | |
| | 4 | | | 4 | | | | | | 1 | | | | | | 1 | | 58 | 2 |
| | | | | | | | | | | 1 | | | | | | | | | |
| | | | 1 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | 1 | | | | | | |
| | | | | | | | | | | 1 | | | | | | | | | |
| | | | | | 1 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 1 | | | |
| | | | | | | | | | | | | | | | | | | 29 | |
| | | | | | | | | 1 | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | |
| | | 44 | 11 | 1 | | 2 | 5 | 6 | 16 | 2 | | 1 | | 1 | 3 | 11 | 1 | 8 | 1 |
| | | | | | | 10 | | | | | | | | 1 | | | | | |
| | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 2 | | | | | | | | 51 | 1 |
| | | 3 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 7 | |
| | | | | | | | | | | | | | | | | | 1 | | |
| | | 9 | | | | | 1 | | | | | | | | | 4 | | 1 | |
| | | 2 | | | | | | | | 2 | | 1 | | | | | | | |

Table 13.--*Taxa and numbe*

| PHYLUM<br>CLASS<br>Order<br>Family<br>Subfamily<br>*Genus sp.* | Sampling site / Date | Redwood Cr. above Hwy. 299 Bridge | Redwood Cr. near Blue Lake | Redwood Cr. at Redwood Valley Bridge | Redwood Cr. at Lower End, Redwood Valley | Redwood Cr. above Panther Cr. | High-Slope Schist Cr. | Copper Cr. | Redwood Cr. below Copper Cr. | Slide Cr. | Redwood Cr. at South Park Boundary | Bridge Cr. | Harry Wier Cr. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10-03-73 | 10-03-73 | 10-03-73 | 10-03-73 | 10-01-73 | 10-02-73 | 10-04-73 | 10-04-73 | 10-01-73 | 10-01-73 | 9-25-73 | 9-26-73 | 10-31-73 |
| ARTHROPODA--continued | | | | | | | | | | | | | | |
| INSECTA--continued | | | | | | | | | | | | | | |
| Trichoptera--continued | | | | | | | | | | | | | | |
| Psychomyiidae | | | | | | | | | | | | | | |
| *Polycentropus spp.* | | | | | | | | | | | | | | |
| Rhyacophilidae | | | | | | | | | | | | | | |
| *Agapetus sp.* | | | | | | | | 1 | | | 1 | 1 | 1 | |
| *Glossosoma spp.* | | | 2 | | | | 1 | | | 1 | 2 | | 4 | 1 |
| *Protoptila sp.* | | 2 | | | | | | | | | | | 1 | |
| *Rhyacophila spp.* | | | 2 | | | 2 | 3 | 1 | 4 | 4 | | | 1 | |
| Unknown | | | 7 | | | | | 2 | 2 | | | | | |
| Diptera (two-winged flies) | | | | | | | | | | | | | | |
| Chironomidae | | | | | | | | | | | | | | |
| Chironominae | | | | | | | | | | | | | | |
| *Tanytarsini* (tribe) | | 4 | 3 | 1 | 1 | | | | 2 | | 1 | 11 | | |
| *Chironomini* (tribe) | | 1 | 2 | 1 | 1 | 4 | | | 1 | | | 3 | | |
| Orthocladiinae and Diamesinae | | 12 | 13 | 5 | 4 | 33 | 1 | 12 | 7 | 2 | 5 | 19 | 5 | |
| Tanypodinae | | | | | | | | | | | 1 | 5 | 1 | |
| Dixidae | | 1 | | | | | | | | | | | 3 | |
| Dolichopodidae | | | | | | | | | | | | | | |
| Empididae | | | 2 | 1 | 1 | 1 | 1 | | 2 | | | 1 | 1 | |
| Ceratopogonidae | | | | | | | | | | | | | | |
| *Atrichopogon sp.* | | | | | | | | | | | | | | |
| *Bezzia spp.* | | 1 | | | 1 | | | | 2 | | | | | |
| Unknown | | | | | | | | | | | | | | |
| Rhagionidae | | 15 | | 1 | | 1 | | | | | | | | |
| Simuliidae | | 1 | 1 | | | 11 | | 4 | 11 | 3 | 5 | 6 | 1 | |
| Stratiomyidae | | | | | | | | | | | | | | |
| *Euparyphus sp.* | | 4 | | 7 | 4 | 77 | | | 19 | | 1 | | | |
| Tabanidae | | | | | | | | | | | | 1 | | |
| Tipulidae | | | | | | | | | | | | | | |
| *Antocha sp.* | | | 1 | 1 | | | | 2 | | | 3 | | | |
| *Dicranota sp.* | | | | | | | | | | | | | | |
| *Hexatoma spp.* | | 3 | 12 | 12 | 5 | 3 | | | 4 | 1 | | | | |
| *Limnophila sp.* | | | | | | | | 3 | | | | | | |
| *Limonia sp.* | | | | | | 1 | | | | | | | | |
| *Ormosia sp.* | | | | | | | | | | | | | | |
| *Tipula sp.* | | | | | | | | | | | | | | |
| *Ulomorpha sp.* | | | 3 | | | | | | 1 | | | | | |
| Unknown | | | 1 | | | | | | | | | | | |
| MOLLUSCA | | | | | | | | | | | | | | |
| GASTROPODA (snails) | | | | | | | | | | | | | | |
| Bulimidae | | | | | | | | | | | | | | |
| Planorbidae | | | | | | | | | | | | | | |
| Total number of types | | 23 | 28 | 20 | 22 | 28 | 19 | 20 | 23 | 21 | 20 | 18 | 22 | 10 |
| Total number of organisms | | 394 | 528 | 880 | 232 | 1001 | 48 | 502 | 367 | 170 | 207 | 271 | 89 | 30 |

*of benthic invertebrates*--Continued

| | 9-26-73 Redwood Cr. below Harry Wier Cr. | 9-27-73 Tom McDonald Cr. | 10-31-73 Tom McDonald Cr. | 9-27-73 Redwood Cr. below Tom McDonald Cr. | 9-27-73 Redwood Cr. above Miller Cr. | 11-02-73 Miller Cr. (sampled after first storm) | 9-27-73 Miller Cr. at Mouth | 10-31-73 Miller Cr. at Mouth | 9-27-73 Cloquet Cr. | 9-28-73 Redwood Cr. below Oscar Larson Cr. | 9-28-73 Elam Cr. | 9-28-73 Redwood Cr. below Elam Cr. | 9-28-73 Hayes Cr. | 11-01-73 Hayes Cr. | 9-28-73 Redwood Cr. below Hayes Cr. | 9-25-73 Lost Man Cr. | 11-01-73 Lost Man Cr. | 10-04-73 Little Lost Man Creek | 11-01-73 Little Lost Man Creek |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | 4 | | | |
| | | 14 | | | | | | | | | | | | | | 7 | | | |
| | | 29 | 17 | 1 | | 2 | 1 | | 6 | 1 | 1 | | 1 | 1 | 1 | 4 | | 1 | |
| | | | | | | | | | | | | | | | 2 | | | | |
| | | 10 | 4 | 2 | 1 | 1 | | | 2 | 3 | 10 | | | 2 | 6 | 9 | | 17 | |
| | | | 1 | | 1 | | | | | | | | 1 | | 9 | | | | |
| | 1 | 18 | 1 | 3 | 1 | | | | 2 | | 4 | 1 | | | | | | | |
| | 4 | | | 2 | 4 | | | | | | 4 | | | | 2 | | | | |
| | 8 | 9 | | 4 | 6 | | 1 | | 1 | 2 | 8 | 7 | | 1 | 5 | 1 | | 3 | 1 |
| | 1 | 2 | | | 1 | | 2 | | | 2 | 1 | | 3 | | 1 | 2 | 1 | 29 | |
| | | | | | | | | | | | | | 1 | | | | | | |
| | | | | | | | | | | | | | | 1 | | | | 3 | |
| | 1 | | 1 | | | | | | | 4 | | | | | 1 | 1 | | | |
| | | | | | | | | | | | | | | | | | | 1 | |
| | | | | | | | | | 2 | 1 | | 1 | | | 6 | | | 2 | |
| | | | | | | 1 | | | | | | | | | | | | | |
| | 6 | | | 8 | 6 | | | | 1 | 11 | 11 | 13 | | 2 | 7 | 1 | | 1 | |
| | 2 | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 1 | |
| | | 14 | 3 | | 1 | | | | | | | 1 | | | 2 | | | 5 | 1 |
| | | 2 | 5 | | | | | | | | | | | | | | | 3 | |
| | 5 | | | 1 | 1 | | | | | 12 | | 13 | | 1 | 6 | | | | |
| | | | | | | 1 | | | | | | | | | | | | | |
| | | | | | 2 | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | 1 | |
| | | | | | 6 | 1 | | | | | | 7 | | | 2 | | | 62 | 20 |
| | | 1 | | | | | | | | 11 | | 2 | | | | | | | |
| | | | | | | | | | | | | | | | | | 2 | | |
| | 15 | 27 | 19 | 14 | 19 | 16 | 10 | 6 | 19 | 22 | 20 | 16 | 15 | 15 | 18 | 25 | 11 | 33 | 15 |
| | 125 | 402 | 106 | 105 | 123 | 56 | 25 | 14 | 146 | 319 | 121 | 91 | 42 | 32 | 199 | 148 | 27 | 1221 | 79 |

## Seston

Seston is the suspended organic and inorganic matter in water. The measurement of seston is important because the organic content is equivalent to suspended organic carbon and can indicate, in part, the biological productivity and potential chemical energy in the aquatic environment.

Water samples for seston analyses were point samples, collected in 2-litre polyethylene bottles near the estimated centroid of flow of each stream. A measured volume of water from each sample was passed through a tared Whatman GF/C grade glass membrane filter and dried at 75°C. The increase in the weight of the filter after drying was considered the total (organic and inorganic) dry weight of seston. After ashing the dry residue on the filter at 500°C, the difference between the total dry weight and ash weight of seston was assumed to be organic weight (lost as carbon dioxide) of seston. The percentage of the organic weight of seston for each sample was also calculated. Standardized procedures in Slack and others (1973, p. 54) were followed in determining the seston concentrations (table 14).

Table 14.--*Seston analyses of water samples*

[See figure 2 for location of stations]

| Station identification | | Date | Time | Seston | | |
|---|---|---|---|---|---|---|
| | | | | Weight (mg/l) | | Percentage organic weight |
| Number | Name | | | Total | Organic | |
| 11481500 | Redwood Creek near Blue Lake | 1-12-74 | 0945 | 60 | 3.0 | 5.0 |
| | | 2-21-74 | 0800 | 310 | 7.0 | 2.3 |
| 11482200 | Redwood Creek at South Park Boundary, near Orick | 11-8-73 | 0815 | 1,700 | 44 | 2.6 |
| | | 1-12-74 | 1230 | 92 | 4.5 | 4.9 |
| | | 2-20-74 | 2100 | 230 | 5.0 | 2.2 |
| | | 2-22-74 | 1200 | 320 | 4.0 | 1.2 |
| | | 3-2-74 | 1615 | 290 | 6.0 | 2.0 |
| 11482220 | Redwood Creek above Harry Wier Creek, near Orick | 2-22-74 | 1240 | 200 | 2.0 | 1.0 |
| 11482225 | Harry Wier Creek near Orick | 11-8-73 | 0900 | 150 | 5.0 | 3.2 |
| | | 1-12-74 | 1800 | 120 | 13 | 11 |
| | | 1-13-74 | 1235 | 20 | 3.3 | 16 |
| | | 2-21-74 | 0015 | 13 | 2.1 | 16 |
| | | 2-21-74 | 1200 | 38 | 3.6 | 9.6 |
| | | 2-22-74 | 0930 | 14 | .8 | 5.7 |
| | | 3-3-74 | 0930 | 8.4 | .0 | .0 |
| 11482250 | Miller Creek near Orick | 11-8-73 | 0530 | 370 | 5.0 | 1.4 |
| | | 1-12-74 | 1450 | 30 | 4.0 | 13 |
| | | 2-21-74 | 1025 | 100 | 6.5 | 6.4 |
| | | 3-1-74 | 0930 | 64 | 2.2 | 3.4 |
| 11482260 | Miller Creek at Mouth, near Orick | 11-8-73 | 0800 | 520 | 3.7 | .7 |
| | | 1-13-74 | 0630 | 1,400 | 100 | 7.0 |
| | | 2-20-74 | 1930 | 77 | 5.6 | 7.2 |
| | | 2-21-74 | 1050 | 200 | 12 | 5.8 |
| | | 2-22-74 | 1030 | 27 | .4 | 1.5 |
| | | 3-1-74 | 1030 | 120 | 7.9 | 6.3 |
| 11482330 | Hayes Creek near Orick | 11-9-73 | 1155 | 92 | .0 | .0 |
| | | 1-13-74 | 1300 | 3.3 | .6 | 18 |
| | | 2-21-74 | 1845 | 11 | .0 | .0 |
| | | 3-2-74 | 1600 | 15 | .4 | 2.6 |
| | | 4-9-74 | 1330 | 24 | .0 | .0 |
| 11482450 | Lost Man Creek near Orick | 11-8-73 | 0730 | 160 | .0 | .0 |
| | | 1-13-74 | 0930 | 20 | 2.0 | 9.8 |
| | | 2-21-74 | 1500 | 50 | 3.1 | 6.1 |
| | | 3-2-74 | 1000 | 26 | 1.6 | 6.2 |
| | | 4-8-74 | 1330 | 8.0 | .0 | .0 |
| 11482460 | Larry Damm Creek near Orick | 4-8-74 | 1515 | 7.5 | .0 | .0 |
| 11482470 | Little Lost Man Creek near Orick | 11-9-73 | 1135 | 9.7 | 4.2 | 43 |
| | | 1-13-74 | 1210 | 6.0 | .0 | .0 |
| | | 2-20-74 | 2330 | 10 | .0 | .0 |
| | | 2-21-74 | 1100 | 8.0 | .4 | 5.0 |
| | | 2-22-74 | 1000 | 6.2 | .8 | 13 |
| | | 3-2-74 | 1500 | 7.8 | .8 | 10 |
| | | 4-9-74 | 1020 | 23 | .8 | 3.5 |
| 11482475 | Geneva Creek near Orick | 11-9-73 | 1145 | 7.2 | 2.0 | 28 |
| | | 1-13-74 | 1030 | 13 | 1.6 | 13 |
| | | 2-21-74 | 1220 | 9.4 | .6 | 6.4 |
| | | 3-2-74 | 1715 | 3.8 | .0 | .0 |
| | | 4-9-74 | 0850 | 4.4 | 3.2 | 73 |
| 11482500 | Redwood Creek at Orick | 1-13-74 | 1250 | 250 | 13 | 5.3 |
| | | 2-21-74 | 1300 | 430 | 14 | 3.3 |

Alexander, E., Colwell, W., Delapp, J., Gladish, E., Nelson, R., Skoleman, R., Smith, B., 1959-62, Humboldt County soil-vegetation survey: U.S. Forest Service, Pacific Southwest Forest and Range Experiment Station, 16 maps, Scale 1:31,680.

American Public Health Association and others, 1971, Standard methods for the examination of water and wastewater [13th ed.]: New York, Am. Public Health Assoc., 874 p.

Anderson, H. W., 1954, Suspended sediment discharge as related to streamflow, topography, soil, and land use: Am. Geophys. Union Trans., v. 35, p. 268-281.

______1957, Relating sediment yield to watershed variables: Am. Geophys. Union Trans., v. 38, p. 921-924.

______1970, Principal components analysis of watershed variables affecting suspended sediment discharge after a major flood: Internatl. Assoc. Sci. Hydrol., repr., Pub. 96, p. 404-416.

Blake, M. C., Jr., Irwin, W. P., and Coleman, R. G., 1967, Upside-down metamorphism zonation, blueschist facies along a regional thrust fault in California and Oregon: U.S. Geol. Survey Prof. Paper 575-C, p. 1-9.

Borror, D. J., and DeLong, D. M., 1971, An introduction to the study of insects [3d ed.]: New York, Holt, Rinehart, and Winston, 812 p.

Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. A1, 160 p.

Buchanan, T. J., and Somers, W. P., 1969, Discharge measurements at gaging stations: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. A8, 65 p.

Carter, R. W., and Davidian, Jacob, 1965, Discharge ratings at gaging stations--Hydraulic measurement and computation: U.S. Geol. Survey Surface Water Techniques, book 1, chap. 12, 36 p.

Colman, S. M., 1973, The history of mass movement processes in the Redwood Creek basin, Humboldt County, California: Paper presented in lieu of M.S. thesis, Pennsylvania State Univ., Dept. Geosciences, University Park, 180 p.

Day, F. H., 1963, The chemical elements in nature: New York, Reinhold Pub. Corp., 372 p.

Edmunds, G. F., Jr., Allen, R. K., and Peters, W. L., 1963, An annoted key to the nymphs of the families and subfamilies of mayflies (Ephemeroptera): Univ. of Utah Biological Series, v. 13, no. 1, 49 p.

Emmett, W. W., 1974, Channel changes: Geology, v. 2, no. 6, p. 271-272.

Federal Inter-Agency Sedimentation Project of the Inter-Agency Committee on Water Resources, 1961, The single-stage sampler for suspended sediment: Minneapolis, Minn., Inter-Agency Rept. No. 13, p. 69.

Gaufin, A. R., Ricker, W. E., Miner, M., Milam, P., and Hayes, R. A., 1972, The stoneflies (Plecoptera) of Montana: Trans. Am. Entomol. Soc., v. 98, p. 1-159.

Goerlitz, D. F., and Brown, Eugene, 1972, Methods for analysis of organic substances in water: U.S. Geol. Survey Techniques Water-Resources Inv., book 5, chap. A3, 40 p.

Greeson, P. E., 1969, Lake eutrophication, a natural process: Water Resources Bull., v. 5, p. 16-30.

Guy, H. P., 1969, Laboratory theory and methods for sediment analysis: U.S. Geol. Survey Techniques Water-Resources Inv., book 5, chap. C1, 58 p.

______1970, Fluvial sediment concepts: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. C1, 55 p.

Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. C2, 59 p.

Hack, J. T., 1973, Stream-profile analysis and stream-gradient index: Jour. Research Geol. Survey, v. 1, no. 4, p. 421-429.

Helley, E. J., and Smith, Winchell, 1971, Development and calibration of a pressure-difference bedload sampler: U.S. Geol. Survey open-file rept., 18 p.

Jewett, S. G., Jr., 1960, The stoneflies (Plecoptera) of California: California Insect Survey, v. 6, no. 6, p. 125-177.

Johannsen, O. A., 1969, Aquatic diptera: Los Angeles, Entomological Reprint Specialists, 369 p.

Leopold, L. B., Wolman, M. G., and Miller, J. P., 1964, Fluvial processes in geomorphology: San Francisco, W. H. Freeman and Co., 522 p.

Lustig, L. H., 1965, Sediment yield of the Castaic watershed, western Los Angeles County, California--a quantitative geomorphic approach: U.S. Geol. Survey Prof. Paper 422-F, 23 p.

Manning, G. A., and Ogle, B. A., 1950, Geology of the Blue Lake Quadrangle, California: California Div. of Mines, Bull. 148, 36 p.

Mark, D. M., 1974, Line intersection method for estimating drainage density: Geology, v. 2, no. 5, p. 235-236.

Mason, W. T., Jr., 1973, An introduction--the identification of Chironomid larva: Cincinnati, Ohio, Analytical Quality Control Lab., Natl. Environmental Research Center, U.S. Environmental Protection Agency, 90 p.

Miller, J. F., Fredrick, R. H., and Tracey, R. J., 1973, National Oceanic and Atmospheric Administration Atlas 2--Precipitation frequency atlas of western United States, vol. XI--California: U.S. Dept. Commerce, 71 p.

Pennak, R. W., 1953, Fresh-water invertebrates of the United States: New York, The Ronald Press, 769 p.

Rantz, S. E., 1969, Mean annual precipitation in the California Region: U.S. Geol. Survey open-file rept., 5 p.

Ross, H. H., 1944, The caddis flies, or Tricoptera, of Illinois: Los Angeles Entomological Reprint Specialists, 326 p.

Schumm, S. A., 1956, Evolution of drainage system and slopes in badlands at Perth Amboy, New Jersey: Geol. Soc. America Bull., v. 67, p. 597-646.

Scott, K. M., and Williams, R. P., 1974, Erosion and sediment yields in mountain watersheds of the Transverse Ranges, Ventura and Los Angeles Counties, California--Analysis of rates and processes: U.S. Geol. Survey Water-Resources Inv. 47-73, 66 p.

Slack, K. V., Averett, R. C., Greeson, P. E., and Lipscomb, R. G., 1973, Methods for the collection and analysis of aquatic biological and microbiological samples: U.S. Geol. Survey Techniques Water-Resources Inv., book 5, chap. A4, 165 p.

Strahler, A. N., 1957, Quantitative analysis of watershed geomorphology: Am. Geophys. Union Trans., v. 38, p. 913-920.

Strand, R. G., 1962, Geologic map of California, Redding sheet: California Div. of Mines and Geology, 1 sheet.

______1963, Geologic map of California, Weed sheet: California Div. of Mines and Geology, 1 sheet.

Tatum, F. E., 1965, A new method of estimating debris-storage requirements for debris basins: Federal Inter-Agency Sedimentation Proc., U.S. Dept. Agriculture, Misc. Pub. 970, p. 886-897.

Usinger, R. L., 1968, Aquatic insects of California: Berkeley and Los Angeles, Univ. of California Press, 508 p.

U.S. National Oceanic and Atmospheric Administration, monthly 1973-74, Climatological data, California: v. 77-78.

U.S. Weather Bureau, 1974, The climate of Humboldt and Del Norte Counties: Humboldt and Del Norte Counties Agric. Ext. Service, Univ. of California, Eureka, 52 p.

Wallis, J. R., 1965, A factor analysis of soil erosion and stream sedimentation in northern California: Univ. of California unpub. Ph.D. thesis, 141 p.

Ward, H. B., and Whipple, G. C., 1959, Fresh-water biology [2d ed.]: New York, John Wiley and Sons, Inc., 1,248 p.

Wentworth, C. K., 1930, A simplified method of determining the average slope of land surfaces: Am. Jour. Sci., 5th Sci., v. 20, p. 184-194.

Young, L. E., and Cruff, R. W., 1967, Magnitude and frequency of floods in the United States: U.S. Geol. Survey Water-Supply Paper 1686, pt. 2, v. 2, 303 p.