UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DATA FROM THE SURFACE-WATER HYDROLOGIC INVESTIGATIONS OF THE HAY CREEK STUDY AREA, MONTANA, AND THE WEST BRANCH ANTELOPE CREEK STUDY AREA, NORTH DAKOTA, OCTOBER 1976 THROUGH APRIL 1982

By Douglas G. Emerson, Steven W. Norbeck,
and Kelvin L. Boespflug

Open-File Report 83-136

Prepared in cooperation with the
U.S. BUREAU OF LAND MANAGEMENT

Bismarck, North Dakota
February 1983

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

District Chief
U.S. Geological Survey
821 East Interstate Avenue
Bismarck, ND 58501

For sale by:

Open-File Services Section
Branch of Distribution
U.S. Geological Survey
Box 25425, Federal Center
Denver, CO 80225

CONTENTS

ILLUSTRATIONS

TABLES

TABLES, Continued

SELECTED FACTORS FOR CONVERTING INCH-POUND UNITS TO THE INTERNATIONAL SYSTEM (SI) OF METRIC UNITS

For those readers who may prefer to use the International System (SI) of metric units rather than inch-pound units, the conversion factors for the terms used in this report are given below.

Multiply inch-pound unit	By	To obtain SI unit
Acre	0.4047	hectare
Acre-foot (acre-ft)	1,233	cubic meter
Cubic foot (ft^3)	0.02832	cubic meter
Cubic foot per second (ft^3/s)	0.02832	cubic meter per second
Cubic foot per second per day $(ft^3/s)/d$	0.02832	cubic meter per second per day
Foot (ft)	0.3048	meter
Foot per mile (ft/mi)	0.18943	meter per kilometer
Gallon (gal)	3.785	liter
	0.003785	cubic meter
Gallon per minute (gal/min)	0.06309	liter per second
Gallon per second (gal/s)	3.785	liter per second
Inch (in.)	25.40	millimeter
Mile (mi)	1.609	kilometer
Mile per hour (mi/h)	1.609	kilometer per hour
Square mile (mi^2)	2.590	square kilometer

DATA FROM THE SURFACE-WATER HYDROLOGIC INVESTIGATIONS OF THE HAY CREEK STUDY AREA, MONTANA, AND THE WEST BRANCH ANTELOPE CREEK STUDY AREA, NORTH DAKOTA, OCTOBER 1976 THROUGH APRIL 1982

By
Douglas G. Emerson, Steven W. Norbeck,
and Kelvin L. Boespflug

ABSTRACT

Data are provided for the Hay Creek study area near Wibaux, Mont., and the West Branch Antelope Creek study area near Beulah, N. Dak. The report contains data on the following: Air temperature, relative humidity, wind direction, wind run, solar radiation, precipitation, soil temperature, snowpack temperature, snowpack density and water content, streamflow, water quality, soil moisture, land use, and basin characteristics. Detailed descriptions of the location of the data-collection sites, instrumentation, and methods used to collect data are included.

INTRODUCTION

In response to the Department of the Interior's call for leasing nomination of Federal coal land, eligible tracts were submitted by mining concerns for consideration of their leasing potential. The U.S. Bureau of Land Management has the responsibility of evaluating the leasing applications for mining of Federal coal and preparing environmental impact statements. They must address environmental impacts, which include those of hydrology.

The U.S. Office of Surface Mining Reclamation and Enforcement (1977) provisions outline the impacts in terms of the probable hydrologic consequences of the mining and reclamation operations both on and off the proposed permit area, and the reasonable assessment of the probable cumulative impacts of mining. These impacts include changes in flow regimes, flood peaks and volumes, sediment yields, water quality, soil-water relationships, and water-balance relationship for basins before, during, and after mining.

The problem to be addressed in the Fort Union coal region investigation is the assessment of impacts of surface mining on the surface-water hydrology of mined and adjacent unmined areas.

This study is one of two studies funded by the U.S. Bureau of Land Management to collect and analyze hydrologic data for selected coal deposits in Montana and North Dakota and to develop techniques and technologies for use in making the required impact assessments. The purpose of the Fort Union coal region investigation is to provide a means for the U.S. Bureau of Land Management or others to assess the impacts due to changes in land use. The objectives are to (1) determine the premining hydrologic conditions in a small representative drainage basin and thus provide historical data with which to compare the magnitude of changes with mining, and (2) develop the capability of making reasonably accurate projections of hydrologic effects resulting from various land treatments imposed by surface mining.

The Hay Creek watershed near Wibaux, Mont., and the West Branch Antelope Creek watershed near Zap, N. Dak., were selected for comprehensive surface-water investigations. The two watersheds were selected because (1) the size of the drainage basins would allow intensive study, (2) the watersheds are hydrologically representative of the general area, and (3) the watersheds have potential of being mined for coal.

This report contains the data and the methods of collecting the data from October 1976 through April 1982. The report includes the necessary information about the data and the watersheds in order for the data to be used in data analysis and model development and testing. Most of these data are stored in the U.S. Geological Survey National Water Data Storage and Retrieval System (WATSTORE).

Acknowledgments

This report was prepared by the U.S. Geological Survey in cooperation with the U.S. Bureau of Land Management. Acknowledgment is made to the following North Dakota personnel who contributed significantly to the collection and(or) preparation of data for publication in this report: Garth E. Ghering, Carolyn S. Helgesen, Cathy R. Martin, Kathleen M. Rowland, and Laurie A. Schwappach. Recognition is due to the numerous private landowners for their cooperation and for allowing access to their property.

Definition of Terms

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

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 ft^3 or about 326,000 gallons.

Base discharge is a discharge above which all instantaneous peaks are published. The base discharge is chosen so that an average of three peaks a year will be published.

Color unit is produced by 1 mg/L (milligram per liter) of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Continuous-recording station is a specified site which meets one or more conditions as listed:

1. Water stage or elevation recorded hourly or more frequently.
2. Meteorological parameter recorded hourly or more frequently.

Control designates a feature downstream from a stream-gaging station that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (CFS, FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 ft^3 passing a given point during 1 second and is equivalent to approximately 7.48 gal/s or 448.8 gal/min.

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Drainage area of a stream at the specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

Gage height is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site where systematic observations of data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Instantaneous discharge is the discharge at a particular instant of time.

Land use is a term which relates to both the physical characteristics of the land surface and the human activities associated with the land surface.

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

Micrograms per gram (UG/G, ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level."

Particle size is the diameter, in millimeters (MM, mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size distribution in this report uses the classification recommended made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024-0.004	Sedimentation
Silt	.004-.062	Sedimentation
Sand	.062-2.0	Sedimentation or sieve
Gravel	2.0-64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

pH indicates the degree of acidity of alkalinity of water and is expressed in terms of pH units. The pH value of a solution is the negative logarithm of the concentration of hydrogen ions, in moles per liter. A pH of 7.0 indicates that the water is neither acid nor alkaline. pH readings progressively lower than 7.0 denote increasing acidity and those progressively higher than 7.0 denote increasing alkalinity. The pH of most natural surface waters ranges between 6 and 8.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus.

Sodium-adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C (Celsius). Specific conductance is

related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage is the height of a water surface above an established datum plane; also gage height.

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

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

Suspended sediment is the sediment that, at any given time, is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture.

Suspended-sediment discharge is the rate at which a dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. Suspended-sediment discharge expressed in tons per day is computed by multiplying discharge times milligrams per liter times 0.0027.

Turbidity is the reduction of transparency due to the presence of suspended particulate matter measured in JTU (Jackson Turbidity Units).

Water year (WTR YR) in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period from October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1979, is called the "1979 water year."

Numbering Systems for Stations

Since October 1, 1950, the order of listing hydrologic-station records in U.S. Geological Survey reports is in a downstream direction along the mainstream by using an eight-digit downstream order station number. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries.

The eight-digit downstream order station numbers are not assigned to meteorological and miscellaneous sites where periodic data are collected. The meteorological and miscellaneous sites numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude (fig. 1). The system provides the geographic location of the meteorological or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude; the next seven digits denote degrees, minutes, and seconds of longitude; and the last two digits identify the sites within a 1-second grid.

For convenience in locating sites, the landline locations are included along with the latitude and longitude in site descriptions.

GENERAL DESCRIPTION OF THE STUDY AREAS

The two areas being studied (fig. 2) in the Fort Union coal region investigation are Hay Creek study area in Wibaux County, east-central Montana, and West Branch Antelope Creek study area in Mercer County, west-central North Dakota.

Hay Creek Study Area

The Hay Creek study area is a 15.3-mi^2 basin. The outlet of the basin is about 4 miles northeast of the city of Wibaux. About 5 miles north of Wibaux, Hay Creek flows into Beaver Creek which, in turn, flows into the Little Missouri River about 30 miles north of Medora, N. Dak.

The headwaters of the basin have an altitude of about 2,840 feet above National Geodetic Vertical Datum of 1929, and the outlet has an altitude of about 2,640 feet. The basin has an average slope of 26.7 ft/mi and a northwesterly aspect.

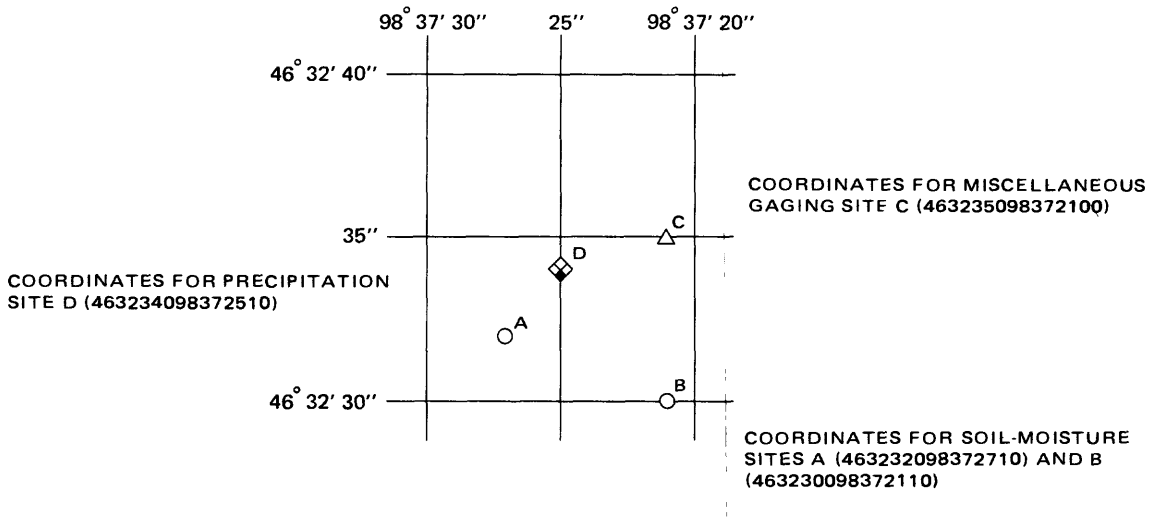
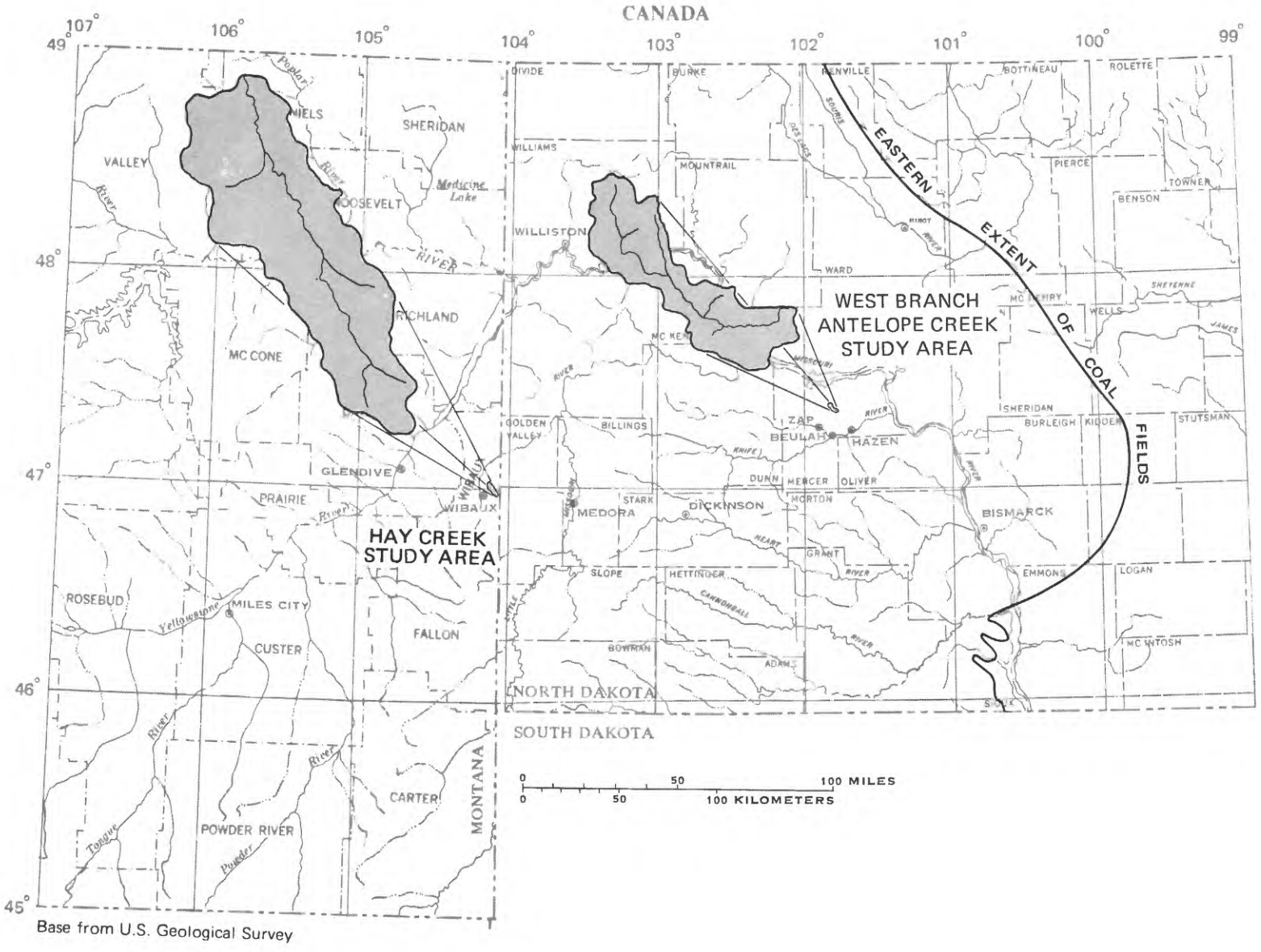


FIGURE 1.–System for numbering data-collection sites (latitude and longitude).



Base from U.S. Geological Survey

FIGURE 2.—Locations of study areas.

The study area lies within the unglaciated area of the northern Great Plains and has a rolling topography. The land is devoted largely to agriculture which includes the production of small grains, corn, hay, and cattle. Lignite coal underlies much of the area and has the potential of being strip mined for the production of electrical power or coal gasification.

West Branch Antelope Creek Study Area

The West Branch Antelope Creek study area is an 8.5-mi^2 basin. The outlet of the basin is about 6.5 miles northwest of Beulah. About 3 miles northwest of Hazen, West Branch Antelope Creek flows into Antelope Creek which, in turn, flows into the Knife River about 1.5 miles northeast of Hazen.

The headwaters of the basin have an altitude of about 2,320 feet, and the outlet has an altitude of about 1,960 feet. The basin has an average slope of 32.2 ft/mi and a southeasterly and easterly aspect.

The study area lies within the glaciated area of the northern Great Plains and has a rolling topography. The land is devoted largely to agriculture which includes the products of small grains, corn, hay, and cattle. Lignite coal underlies the study area and is being strip mined in adjacent areas for the production of electrical power and coal gasification.

DATA COLLECTION

Meteorological Data

Meteorological data were collected at complete weather stations, temperature stations, and precipitation stations, and by snow surveys. For the Hay Creek study area, the locations of the complete weather station and precipitation stations are shown in figure 3. For the West Branch Antelope Creek study area, the locations of the complete weather station, temperature stations, and precipitation stations, and combined precipitation and temperature stations are shown in figure 4.

Data for the Hay Creek and the West Branch Antelope Creek weather stations are given in table 1. The data include a description of the station and tabulations of the daily and monthly data.

The data collected at the complete weather station include (1) air temperature, (2) precipitation, (3) relative humidity,

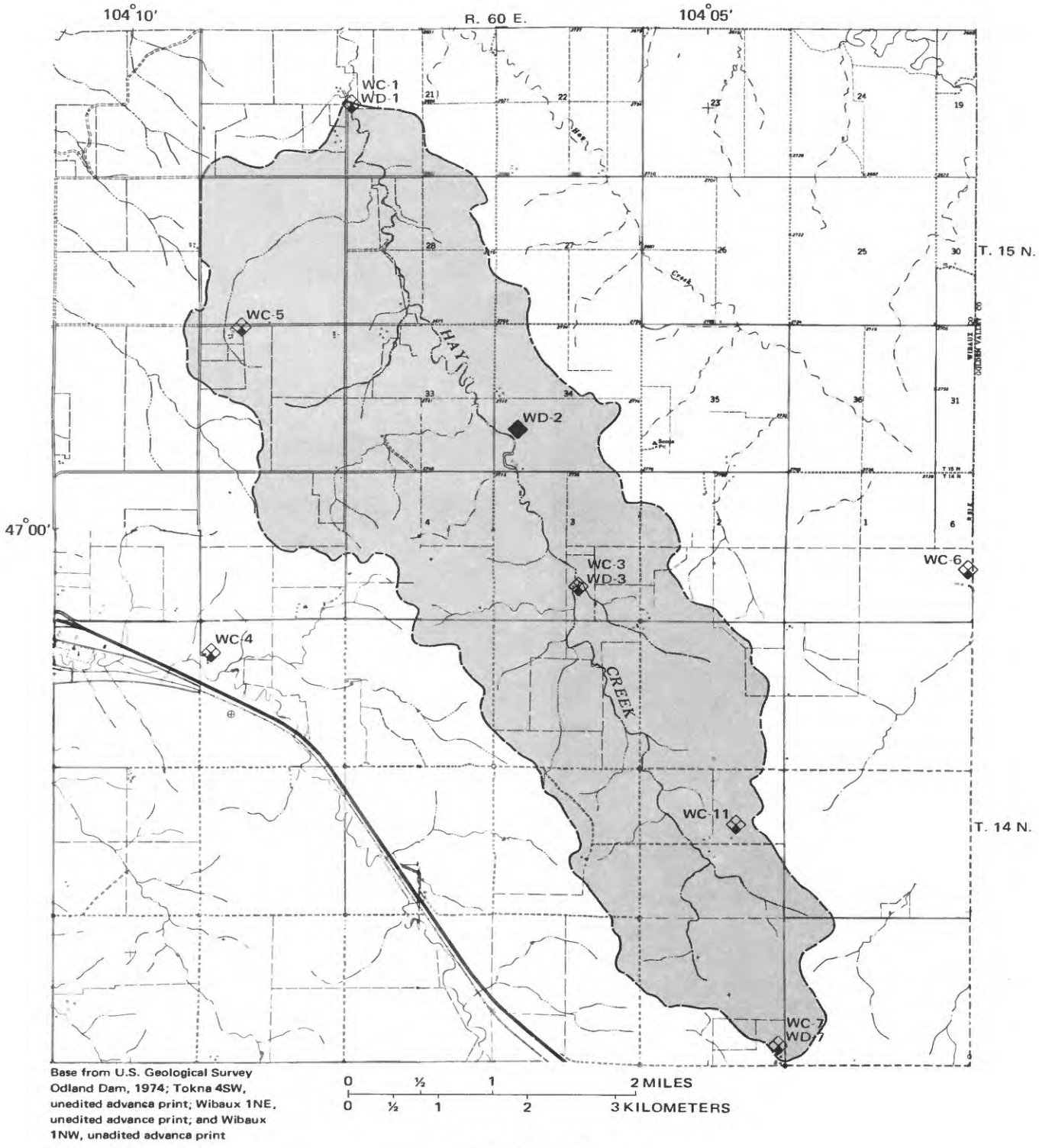


FIGURE 3.—Meteorological data-collection stations in the Hay Creek study area, Montana.

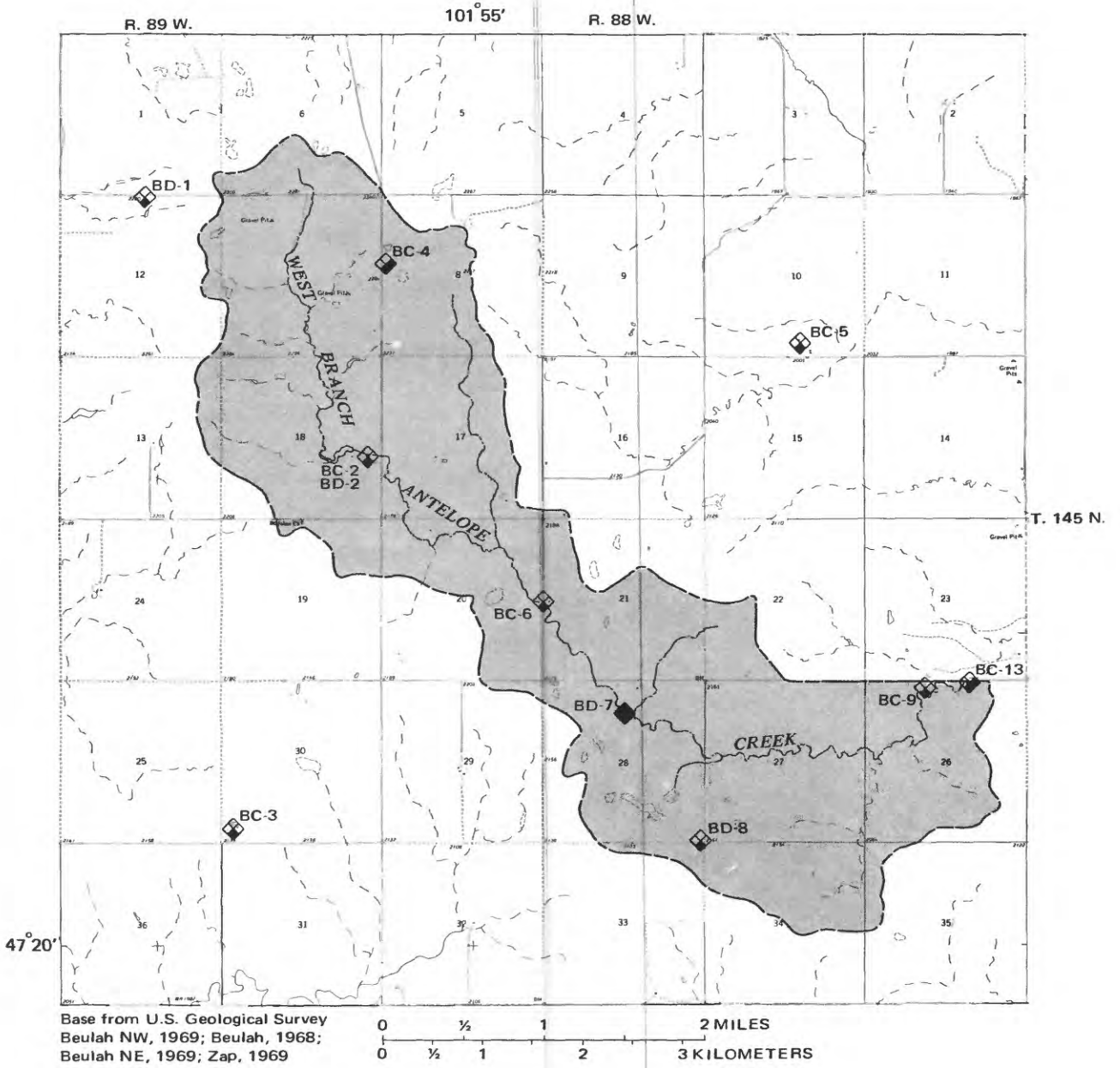


FIGURE 4.—Meteorological data-collection stations in the West Branch Antelope Creek study area, North Dakota.

(4) solar radiation, (5) wind direction, (6) wind run, (7) soil temperature, and (8) snowpack temperature. Except for a backup hygrothermograph recorder, all the data were recorded by data-logging microcomputer and stored on cassette tapes. Missing record was primarily caused by the failure of the sensor to operate properly or by the failure of the datalogger. The relative humidity and wind sensors failed most often and usually required replacement of the sensor. Failure of the microcomputer was caused by power outage or by static interference from nearby lightning strikes. The soil temperature and snowpack temperature were measured at 0.4-foot intervals at two different locations. One location was designed to collect temperature data for a deep snowpack, and the other location was designed to collect temperatures for a shallow snowpack. At the deep snowpack location, a total distance of 4.0 feet above and 3.2 feet below ground level was monitored. At the shallow snowpack location, a total distance of 2.0 feet above and 2.0 feet below ground level was monitored.

The data for the precipitation gages other than those located at complete weather stations are given in table 2. Table 2 includes a description of the station (including location, period of record, and type of instrumentation) and a tabulation of the data. The U.S. Geological Survey highway-type II rain gages were not maintained during the winter months because the gages are not designed to collect snowfall. Some of the Belfort Universal[1/] rain gages also were not maintained

---

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

---

during the winter months because the snow falls spacially and temporally more uniform than rain over the basins. Missing data were mainly the result of clock stoppage or ink evaporation.

Snow surveys were conducted periodically to determine snow depth, density, and distribution characteristics in the basin. Water content for various snow depths was measured. The snow surveys used a stratified sampling technique based on land use and terrain type (Steppuhn and Dyck, 1974; and Steppuhn, 1976). For each land-use/terrain type, a mean snow depth was determined. The land uses and terrain types used in the stratified sampling are described in table 3 along with the summaries of the snow survey data. No snow surveys were made because of lack of snow during the winter of 1979-80.

Air temperature data were collected at two stations in the West Branch Antelope Creek study area in addition to the weather station (fig. 4). The data were collected by Belfort

hygrothermograph recorders housed in standard, cotton-region shelters. The locations and data for the two stations are listed in table 4.

Surface-Water Data

Surface-water data were collected at gaging stations and at miscellaneous sites. For the Hay Creek basin, there were two gaging stations--06336510 (Hay Creek No. 2 near Wibaux, Mont.) and 06336515 (Hay Creek near Wibaux, Mont.)--and three miscellaneous sites--470019104063600 (Hay Creek No. 3 near Wibaux, Mont.), 470033104064800 (Hay Creek No. 4 near Wibaux, Mont.), and 470113104072500 (Hay Creek No. 5 near Wibaux, Mont.). The locations of these sites are shown in figure 5. For the West Branch Antelope Creek basin, there were two gaging stations--06340524 (West Branch Antelope Creek No. 5 near Zap, N. Dak.) and 06340528 (West Branch Antelope Creek No. 4 near Zap, N. Dak.)--and five miscellaneous sites--472312101555200 (West Branch Antelope Creek Tributary No. 7 near Zap), 472233101555200 (West Branch Antelope Creek No. 8 near Zap), 472213101545500 (West Branch Antelope Creek Tributary No. 11 near Zap), 472121101533900 (West Branch Antelope Creek Tributary No. 13 near Zap), and 472309101561300 (West Branch Antelope Creek No. 20 near Zap). The locations of these sites are shown in figure 6.

Streamflow Data

The data collected at stream-gaging stations consisted of continuous stage records and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information were used to supplement the data in determining the daily flow. Records of stage were obtained from a digital punch water-stage recorder and were supplemented as necessary by direct readings on a nonrecording gage. Measurements of discharge were made with a current meter, flume, or volume container using the general methods adopted by the U.S. Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage were prepared from stage-discharge relation curves. The daily mean discharge was computed from gage heights and rating tables. If the stage-discharge relation was subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge was computed by the shifting-control method, in which correction

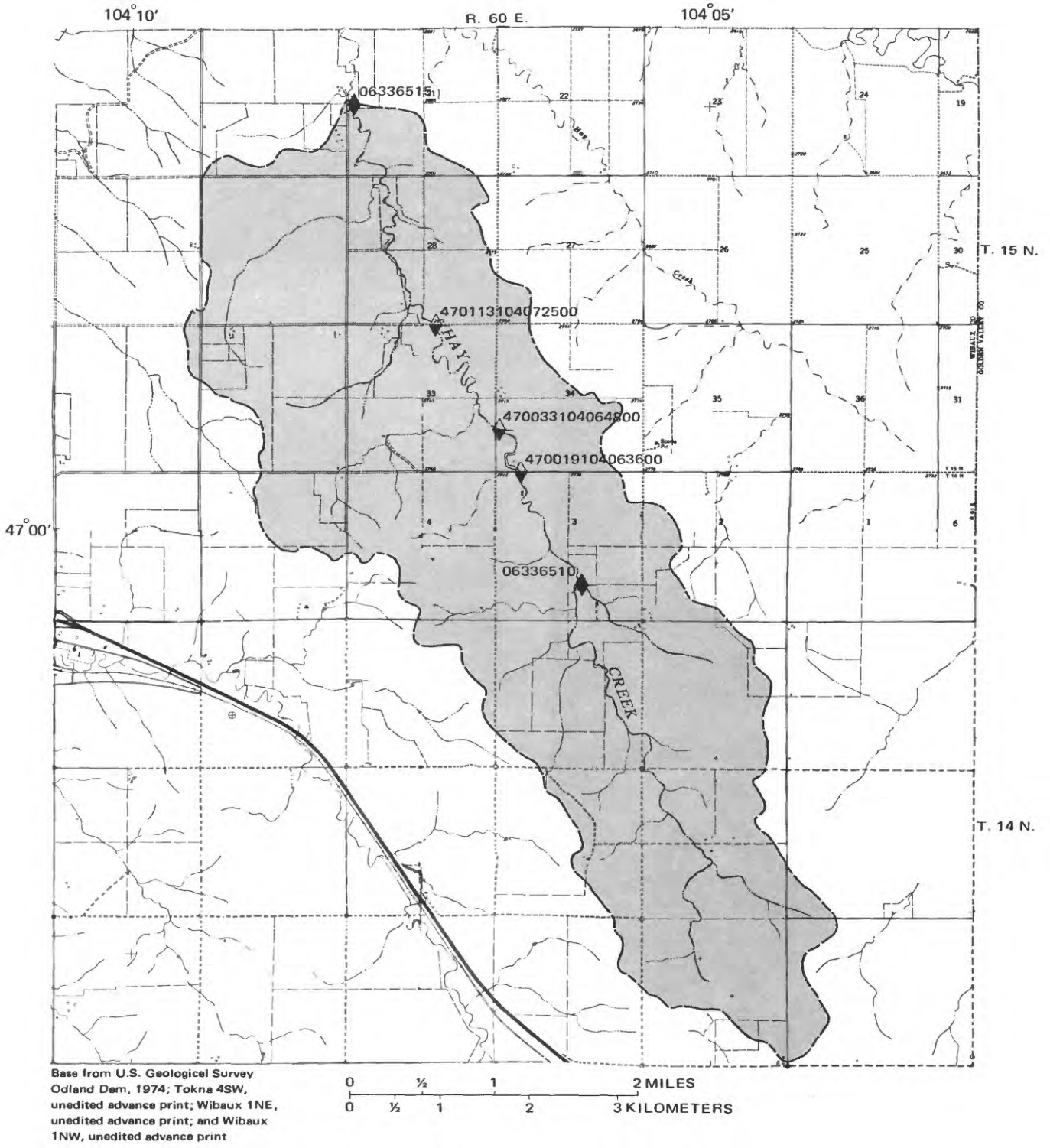


FIGURE 5.—Surface-water data-collection sites in the Hay Creek study area, Montana.

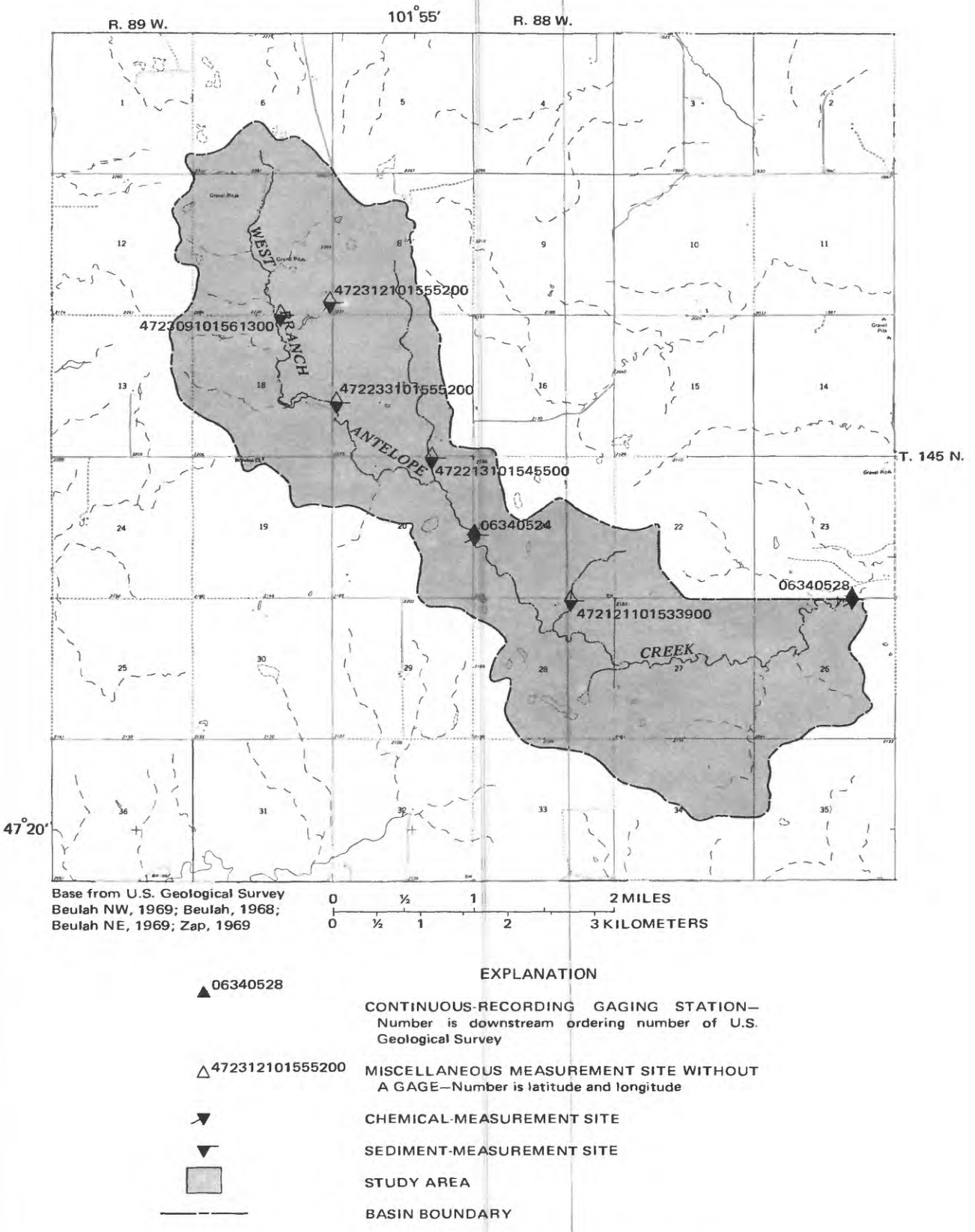


FIGURE 6.—Surface-water data-collection sites in the West Branch Antelope Creek study area, North Dakota.

factors based on individual discharge measurements and notes by hydrographers and observers were used in applying the gage heights to the rating tables. If the stage-discharge relation for a station was temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge was computed by what is basically the shifting-control method.

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

For some gaging stations, there were periods when no gage-height record was obtained, or the recorded gage height was so faulty that it could not be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, or for various other reasons. For such periods, the daily discharges were estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins.

The data for the gaging stations are given in table 5. The data include a description of the station and tabulation of the daily, monthly, and yearly discharges. The description of the gaging station gives the location, drainage area, period of record, type and history of gage, general remarks, and extremes of discharge. The type of gage currently in use is given under "GAGE." Information pertaining to conditions which affect the natural flow at the gaging station is given under "REMARKS."

The extremes for each period or water year are given under "EXTREMES." Unless otherwise qualified, the maximum discharge for the period of record corresponds to the crest stage obtained by use of a water-stage recorder. If the maximum gage height did not occur on the same day as the maximum discharge, the maximum gage height is given separately. The minimum is the instantaneous minimum unless otherwise qualified. For years with more than one peak above the selected base discharge, the peaks, time of occurrence, and corresponding gage height are published in tabular format. The base discharge is selected so that an average of about three peaks a year will be presented.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries.

Discharge measurements were made at sites other than gaging stations to supplement the information on streamflow. These data are listed in table 6.

Water-Quality Data

Analyses of surface-water samples that were collected at or near gaging stations are given in table 5 immediately following the discharge records at these stations. The descriptive heading for the water-quality data gives the period of record for all water-quality data. In most of the column headings of these tables, the names of the constituents or properties for which data are given are followed by five-digit codes which appear in parentheses. These codes, called parameter codes, are identical to those introduced or approved by the U.S. Environmental Protection Agency and are widely used by Federal and state agencies. The codes indicate, to persons having a complete reference, more precisely than the verbal column headings can, the constituents or properties being reported. Data listed under a given code in this report should be comparable to those listed under the same code by other agencies.

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations (1-D1, 3-C1, 3-C2, 5-A2, and 5-C1).

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a

slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

Water temperatures and specific conductivities were measured at the time of discharge measurements. These measurements at gaging stations are listed in table 5 along with the analysis of the surface-water sample.

Suspended-sediment concentrations were determined from samples collected by using depth-integrating samplers. Samples usually were obtained at several verticals in the cross section to determine the mean concentration in the cross sections. During periods of rapidly changing flow or rapidly changing concentrations, samples may have been collected more frequently (twice daily or, in some instances, hourly).

At 06336515 (Hay Creek near Wibaux) and 06340528 (West Branch Antelope Creek No. 4 near Zap), sediment samples were collected automatically by PS-69 sediment samplers. Suspended-sediment concentrations that were determined from the automatic sediment samplers are fixed-point samples, and a coefficient has not been applied to determine the mean concentrations in the cross section. These concentrations are footnoted in the tables to indicate that they were collected by an automatic sediment sampler.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

Water temperature, suspended sediment concentrations, and specific conductivity measurements obtained at miscellaneous measurement sites are listed in table 6.

Soil-Moisture Data

A network of soil-moisture access tubes was established in each basin in September 1978. The sites, locations, land uses, and periods of record of soil-moisture measurements are listed in table 7. Soil moisture was measured with a Troxler Model 1255 neutron probe at depth intervals of 0.5 foot starting at a depth of 1.0 foot. The moisture content for the first half foot of depth was determined in the laboratory by the gravimetric method from a soil sample. The moisture content of most of the soil profiles was determined in the laboratory by the gravimetric method when the soil-moisture access tubes were installed. Soil-moisture data are listed in table 7.

Land-Use Data

How the land is used has an effect on several hydrologic processes, from evapotranspiration to snow distribution. In agricultural basins like the two being studied, the size of fields usually does not change, but the land use changes from year to year and from season to season. Therefore, a land-use map is made during early summer, and another is made during late fall. Base maps showing perennial land-use patterns (cultivated versus native pasture areas, for example) were prepared using topographic maps and aerial photographs. Seasonal land uses (such as fallow versus stubble), as determined by ground surveys, were recorded on the base maps. A summary of the land-use data is given in table 8.

Basin Characteristics

Although some basin characteristics have been included in other parts of the text, a complete list of basin characteristics is listed in table 9 for the Hay Creek and the West Branch Antelope Creek basins. The methods of computation are described in Water-Supply Paper 1580-B. Data for some of the characteristics were obtained from U.S. Weather Bureau Technical Papers 40, 50, and 37; U.S. Environmental Data Service, 1973; and the State Soil Conservation Service.

SELECTED REFERENCES

Benson, M. A., 1962, Factors influencing the occurrence of floods in a humid region of diverse terrain: U.S. Geological Survey Water-Supply Paper 1580-B, 64 p.

Benson, M. A., and Dalrymple, Tate, 1967, General field and office procedures for indirect discharge measurements: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A1, 30 p.

Bodhaine, G. L., 1968, Measurements of peak discharge at culverts by indirect methods: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A3, 60 p.

Buchanan, T. J., and Somers, W. P., 1968, Stage measurements at gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter 7A, 28 p.

____1969, Discharge measurements at gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A8, 65 p.

Carter, R. W., and Davidian, Jacob, 1968, General procedure for gaging streams: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6, 13 p.

Dalrymple, Tate, and Benson, M. A., 1967, Measurements of peak discharge by the slope-area method: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A2, 12 p.

Guy, H. P., 1969, Laboratory theory and methods for sediment analysis: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter C1, 58 p.

____1970, Fluvial sediment concepts: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C1, 55 p.

Guy, H. P., and Norman, V. W., 1970, Field methods for measurements of fluvial sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C2, 59 p.

Hulsing, Harry, 1967, Measurements of peak discharge at dams by indirect methods: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A5, 29 p.

Matthai, H. F., 1967, Measurement of peak discharge at width contractions by indirect methods: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A4, 44 p.

Steppuhn, Harold, 1976, A real-water equivalent for prairie snow cover by centralized sampling: Proceedings of 44th Annual Snow Conference, p. 63-68.

Steppuhn, Harold, and Dyck, G. E., 1974, Estimating true basin snow cover; Proceedings of symposium on advanced concepts and techniques in the study of snow and ice resources: U.S. National Academy of Sciences, Washington, D.C., p. 314-324.

Stevens, H. H., Jr., Ficke, J. F., and Smoot, G. F., 1975, Water temperature--Influential factors, field measurements, and data presentations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 1, Chapter D1, 65 p.

U.S. Environmental Data Service, 1973, Monthly normals of temperature, precipitation, and heating and cooling degree days, 1941-1970: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climatography of the United States, No. 81 (by State), North Dakota.

____1973, Monthly normals of temperature, precipitation, and heating and cooling degree days, 1941-1970: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climatography of the United States, No. 81 (by State), Montana.

U.S. Weather Bureau, 1955, Rainfall intensity-duration frequency curves: U.S. Weather Bureau Technical Paper No. 50, 24 p.

____1959, Evaporation maps for the United States: U.S. Weather Bureau Technical Paper No. 37, 13 p.

____1961, Rainfall frequency atlas of the United States: U.S. Weather Bureau Technical Paper No. 40, 115 p.

____1964, Frequency of maximum water equivalent of March snow cover in north-central United States: U.S. Weather Bureau Technical Paper No. 50, 24 p.

TABLE 1.--Weather station data

470029104063110 HAY CREEK WEATHER STATION NEAR WIBAUX, MONT. (WD-2)

LOCATION: Lat 47°00'29", long 104°06'31", in SE¼NW¼SW¼ sec. 34, T. 15 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, ¼ mile north of farmstead and 4 miles northeast of Wibaux.

PERIOD OF RECORD: The weather station was established in 1978 with collection of most parameters beginning in August 1978 and discontinuing in September 1981.

INSTRUMENTATION: A data acquisition system consisting of a group of sensors connected to a modular data-logging microcomputer.

AIR TEMPERATURE: Linear thermistor model 4480, Weathertronics, Inc.; accuracy, ±0.1°C; and range, -50° to +50°C.

ACCUMULATED PRECIPITATION: Fischer and Porter digital rain gage with Alter-type windshield; accuracy, ±0.1 inch; and range, 0 to 20 inches.

RELATIVE HUMIDITY: Solid state model 5120, Weathertronics, Inc.; accuracy, ±1 percent; and range, 0 to 100 percent.

SOLAR RADIATION: Epply precision spectral pyranometer; accuracy, ±1 percent; and range, 0.3 to 3.0 microns.

WIND DIRECTION: Wind vane model 2020, Weathertronics, Inc.; accuracy, ±2°; and range, 0° to 360°.

WIND RUN: Anemometer model 2030, Weathertronics, Inc.; accuracy, ±0.15 mi/h; and range, 0.5 to 100 mi/h.

PERIOD OF RECORD: October 1977 through September 1981.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1978.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	[1]11.5	[1]4.0		[1]9.0	[1]-3.0		[1]-3.5	[1]-15.5		[1]-14.5	[1]-23.5	
2	[1]14.5	[1]-1.0		[1]15.5	[1]-1.5		[1]-3.5	[1]-18.0		[1]-9.5	[1]-19.5	
3	[1]18.5	[1]-.5		[1]9.0	[1]-6.5		[1]-4.0	[1]-8.0		[1]-10.0	[1]-16.0	
4	[1]14.5	[1]-1.0		[1]16.5	[1]-4.5		[1]-.5	[1]-19.5		[1]-11.0	[1]-19.0	
5	[1]10.0	[1]-4.5		[1]13.0	[1]-5.0		[1]-18.0	[1]-28.5		[1]-14.0	[1]-19.0	
6	[1]9.5	[1]-3.5		[1]7.0	[1]-3.0		[1]-18.0	[1]-31.5		[1]-4.0	[1]-18.0	
7	[1]6.0	[1]-.5		[1]13.0	[1]-1.5		[1]-13.5	[1]-21.0		[1]-8.5	[1]-23.5	
8	[1]12.0	[1].5		[1]5.5	[1]-6.5		[1]-21.0	[1]-33.0		[1]-19.5	[1]-28.0	
9	[1]9.0	[1].0		[1]4.5	[1]-12.0		[1]-26.0	[1]-38.5		[1]-16.5	[1]-21.5	
10	[1]4.5	[1]-4.0		[1]4.5	[1]-10.5		[1]-14.5	[1]-26.5		[1]-16.0	[1]-23.5	
11	[1]6.0	[1]-11.0		[1]10.0	[1]-9.5		[1]5.5	[1]-16.5		[1]-11.0	[1]-24.0	
12	[1]18.5	[1]-2.0		[1]16.5	[1]-4.0		[1]5.0	[1]-.5		[1]-6.5	[1]-18.0	
13	[1]20.0	[1]4.5		[1]11.5	[1]-6.5		[1]4.0	[1]-6.5		[1]-13.5	[1]-26.0	
14	[1]15.0	[1]2.0		[1]10.5	[1]-2.0		[1]6.0	[1]-5.5		[1]-10.5	[1]-20.5	
15	[1]15.5	[1]-4.5		[1]7.0	[1]-3.0		[1]3.5	[1]-4.0		[1]-13.5	[1]-28.0	
16	[1]23.0	[1]-4.0		[1]6.5	[1]-5.5		[1]1.0	[1]-3.5		[1]-16.5	[1]-31.5	
17	[1]15.5	[1]-1.0		[1]5.0	[1]-9.0		[1]-2.0	[1]-6.5		[1]-11.0	[1]-21.0	
18	[1]21.0	[1]-2.0		[1]-2.0	[1]-14.0		[1]-6.5	[1]-8.5		[1]-12.0	[1]-29.0	
19	[1]24.5	[1]2.0		[1]-4.0	[1]-9.5		[1]-8.0	[1]-13.5		[1]-16.5	[1]-31.0	
20	[1]16.5	[1]-.5		[1]-8.0	[1]-19.0		[1]-9.0	[1]-18.0		[1]-13.5	[1]-24.0	
21	[1]13.5	[1]-1.0		[1]-15.0	[1]-27.0		[1]-1.5	[1]-16.0		[1]-5.5	[1]-20.5	
22	[1]16.5	[1]3.5		[1]-14.5	[1]-26.5		[1]-2.0	[1]-11.5		[1]-1.5	[1]-12.0	
23	[1]16.5	[1]-1.0		[1]-12.0	[1]-18.5		[1]-6.5	[1]-13.5		[1]-3.0	[1]-11.0	
24	[1]18.5	[1]1.5		[1]-16.5	[1]-28.0		[1]-13.5	[1]-18.0		[1]-3.5	[1]-12.0	
25	[1]22.0	[1]4.5		[1]-14.5	[1]-29.5		[1]-13.0	[1]-15.5		[1]-12.0	[1]-27.0	
26	[1]17.0	[1]5.0		[1]5.0	[1]-18.0		[1]-11.0	[1]-18.0		[1]-13.5	[1]-28.0	
27	[1]16.5	[1]-5.5		[1].0	[1]-12.0		[1]-8.5	[1]-24.5		[1]-10.0	[1]-21.0	
28	[1]21.0	[1]3.5		[1]3.5	[1]-12.0		[1]-5.5	[1]-19.5		[1]-15.5	[1]-30.0	
29	[1]20.5	[1]4.5		[1]5.5	[1]-6.5		[1]-4.5	[1]-14.0		[1]-13.5	[1]-28.0	
30	[1]11.5	[1]1.5		[1]3.0	[1]-5.5		[1]-1.0	[1]-18.0		[1]-15.0	[1]-24.5	
31	[1]11.0	[1].0		---	---		[1]-14.5	[1]-23.5		[1]-19.0	[1]-30.0	
MONTH	[1]24.5	[1]-11.0		[1]16.5	[1]-29.5		[1]6.0	[1]-38.5		[1]-1.5	[1]-31.5	

[1]Data obtained from the National Weather Service station at Wibaux, Mont.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1978--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	[1]-18.5	[1]-30.5		[1]-11.0	[1]-21.5		[1]1.5	[1]1.0		[1]18.0	[1]4.5	
2	[1]-16.0	[1]-31.5		[1]-12.0	[1]-23.5		[1]11.5	[1]-2.0		[1]20.0	[1].5	
3	[1]5.0	[1]-20.5		[1]-13.5	[1]-30.0		[1]11.5	[1]-1.0		[1]15.5	[1]3.5	
4	[1]-3.0	[1]-20.5		[1]-9.0	[1]-29.0		[1]15.5	[1]-4.0		[1]10.0	[1]4.0	
5	[1]-12.0	[1]-19.0		[1]-3.5	[1]-24.5		[1]14.5	[1]1.5		[1]14.5	[1]1.0	
6	[1]-11.0	[1]-18.0		[1]-2.0	[1]-10.0		[1]11.5	[1]-.5		[1]15.5	[1]1.5	
7	[1]-12.0	[1]-15.0		[1]1.0	[1]-9.0		[1]9.0	[1]-2.0		[1]10.5	[1]2.0	
8	[1]-11.0	[1]-20.5		[1]6.0	[1]-11.0		[1]14.5	[1]-2.0		[1]13.5	[1]1.0	
9	[1]-10.0	[1]-16.0		[1]8.5	[1].0		[1]10.5	[1]-.5		[1]21.0	[1]1.5	
10	[1]-8.0	[1]-23.5		[1]3.0	[1]-2.0		[1]12.0	[1]-1.0		[1]21.5	[1]6.0	
11	[1]-11.0	[1]-15.5		[1]4.5	[1]-5.5		[1]15.5	[1]-3.5		[1]17.0	[1]4.5	
12	[1]-12.0	[1]-15.0		[1]1.0	[1]-9.5		[1]8.5	[1]-1.5		[1]15.0	[1]3.5	
13	[1]-8.0	[1]-16.0		[1]1.5	[1]-5.5		[1]9.5	[1]-5.0		[1]20.0	[1].0	
14	[1]-10.5	[1]-29.0		[1].5	[1]-6.5		[1]13.0	[1]1.0		[1]24.0	[1]3.5	
15	[1]-10.5	[1]-29.5		[1].5	[1]-9.5		[1]8.5	[1].0		[1]29.5	[1]6.0	
16	[1]-12.0	[1]-29.5		[1]-3.0	[1]-13.5		[1]5.5	[1].0		[1]22.0	[1]9.5	
17	[1]-11.5	[1]-28.0		[1]6.0	[1]-12.0		[1]9.5	[1]4.0		[1]18.0	[1]10.0	
18	[1]-6.5	[1]-13.5		[1]5.0	[1]-2.0		[1]5.0	[1].0		[1]18.0	[1]5.5	
19	[1]-1.5	[1]-12.0		[1]4.5	[1]-8.0		[1]5.5	[1]-3.0		[1]14.5	[1]4.5	
20	[1]-5.5	[1]-20.5		[1]7.0	[1]-2.0		[1]11.0	[1]-8.0		[1]20.0	[1].5	
21	[1]4.5	[1]-11.0		[1]10.0	[1]-2.0		[1]11.5	[1]-2.0		[1]25.0	[1]6.0	
22	[1]1.5	[1]-6.5		[1]4.5	[1]-5.5		[1]9.0	[1]1.5		[1]29.0	[1]7.0	
23	[1]3.0	[1]-10.5		[1].5	[1]-6.0		[1]12.0	[1].5		[1]26.5	[1]6.0	
24	[1]1.5	[1]-12.0		[1]6.0	[1]-8.5		[1]14.5	[1]1.5		[1]29.5	[1]14.0	
25	[1]-3.5	[1]-19.0		[1]11.5	[1]-1.0		[1]16.5	[1]-1.0		[1]24.0	[1]3.5	
26	[1]-6.0	[1]-21.5		[1]16.5	[1]-3.0		[1]19.5	[1]1.5		[1]21.0	[1]3.0	
27	[1]-9.0	[1]-25.5		[1]13.5	[1]1.5		[1]18.5	[1]7.0		[1]22.0	[1]3.5	
28	[1]-10.5	[1]-21.5		[1]8.5	[1].0		[1]14.0	[1]6.5		[1]25.5	[1]3.5	
29	---	---		[1]23.0	[1].5		[1]15.5	[1]6.5		[1]20.0	[1]3.0	
30	---	---		[1]24.5	[1].0		[1]17.0	[1]1.0		[1]14.5	[1]1.5	
31	---	---		[1]15.5	[1].5		---	---		[1]10.0	[1]3.0	
MONTH	[1]4.5	[1]-31.5		[1]24.5	[1]-30.0		[1]19.5	[1]-8.0		[1]29.5	[1].0	

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	[1]12.0	[1]4.5		[1]28.0	[1]10.0		[1]24.5	[1]11.0		[1]30.5	[1]11.0	---
2	[1]18.5	[1]4.5		[1]28.0	[1]10.0		[1]19.0	[1]4.5		[1]34.5	[1]6.0	---
3	[1]23.5	[1]3.5		[1]29.5	[1]10.5		[1]22.0	[1].0		[1]38.5	[1]9.0	---
4	[1]23.5	[1]7.0		[1]29.0	[1]11.5		[1]28.0	[1]4.5		[1]37.0	[1]11.0	---
5	[1]25.0	[1]3.5		[1]25.5	[1]9.0		[1]31.0	[1]4.5		[1]39.0	[1]11.0	---
6	[1]24.5	[1]9.0		[1]24.5	[1]10.5		[1]35.0	[1]10.0		[1]34.0	[1]10.5	---
7	[1]18.5	[1]3.5		[1]25.5	[1]9.0		[1]32.0	[1]11.0		[1]31.0	[1]11.0	---
8	[1]24.0	[1]6.0		[1]22.0	[1]11.0		[1]33.5	[1]7.0		[1]29.5	[1]10.5	---
9	[1]30.5	[1]10.5		[1]22.0	[1]2.0		[1]31.5	[1]7.0		[1]30.0	[1]1.5	---
10	[1]21.0	[1]4.5		[1]26.0	[1]6.5		[1]35.5	[1]13.0		[1]34.5	[1]5.5	---
11	[1]19.0	[1]5.5		[1]31.0	[1]10.0		[1]34.5	[1]11.5		[1]28.5	[1]10.0	---
12	[1]24.0	[1]1.5		[1]23.5	[1]11.0		[1]36.5	[1]11.0		[1]12.0	[1]7.0	---
13	[1]28.5	[1]7.0		[1]29.5	[1]6.5		[1]33.5	[1]15.0		[1]10.0	[1]4.5	---
14	[1]29.5	[1]8.5		[1]29.5	[1]6.5		[1]28.5	[1]10.5		[1]14.5	[1]4.5	---
15	[1]25.5	[1]10.5		[1]33.0	[1]8.0		[1]26.5	[1]8.5		[1]25.0	[1]1.5	---
16	[1]21.0	[1]5.5		[1]35.0	[1]11.5		[1]31.0	[1]9.0		[1]23.0	[1]5.5	---
17	[1]21.0	[1]6.0		[1]29.5	[1]13.5		[1]28.5	[1]6.5		[1]15.5	[1]3.0	---
18	[1]28.5	[1]9.0		[1]25.5	[1]11.5		[1]23.0	[1]5.5		[1]11.5	[1]4.5	---
19	[1]19.5	[1]6.5		[1]20.0	[1]10.0		[1]29.5	[1]3.5		[1]11.5	[1].5	---
20	[1]20.5	[1]2.0		[1]18.5	[1]9.0		[1]31.5	[1]9.5		[1]14.0	[1]-1.0	---
21	[1]26.5	[1]3.5		[1]22.0	[1]8.0		[1]28.0	[1]9.0		18.5	2.0	10.0
22	[1]25.5	[1]10.0		[1]25.5	[1]9.0		[1]22.0	[1]13.0		23.5	6.5	14.0
23	[1]30.0	[1]6.0		[1]30.0	[1]9.5		[1]25.5	[1]10.0		23.5	10.0	16.0
24	[1]29.5	[1]12.0		[1]33.5	[1]13.0		[1]32.0	[1]11.5		22.5	7.0	15.0
25	[1]24.0	[1]10.0		[1]32.0	[1]18.5		[1]34.5	[1]14.0		27.0	7.5	17.5
26	[1]23.5	[1]12.0		[1]31.0	[1]9.0		[1]31.0	[1]7.0		18.0	6.0	13.5
27	[1]28.5	[1]8.5		[1]31.5	[1]10.0		[1]28.5	[1]8.5		22.5	4.0	13.5
28	[1]29.5	[1]9.0		[1]27.0	[1]13.5		[1]29.0	[1]5.0		20.5	11.0	15.5
29	[1]23.5	[1]12.0		[1]25.0	[1]10.5		[1]27.0	[1]4.5		17.0	7.5	11.5
30	[1]28.5	[1]13.0		[1]26.5	[1]10.0		[1]24.0	[1]3.5		23.0	5.5	14.0
31	---	---		[1]24.5	[1]8.0		[1]30.0	[1]9.0		---	---	---
MONTH	[1]30.5	[1]1.5		[1]35.0	[1]2.0		[1]36.5	[1].0		[1]39.0	[1]-1.0	14.0

[1]Data obtained from the National Weather Service station at Hibaux, Mont.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1979.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	8.5	14.0	18.0	3.0	9.5	-15.5	-23.5	-19.5	-20.5	-27.5	-23.5
2	9.0	5.0	7.0	20.0	5.0	11.5	-15.0	-23.5	-21.0	-20.5	-26.0	-24.0
3	14.0	2.5	9.0	12.5	2.0	8.0	-1.5	-22.5	-13.0	-19.5	-28.0	-23.0
4	12.0	4.0	8.5	19.0	2.0	9.0	.0	-7.5	-3.0	-25.0	-29.5	-27.5
5	9.0	.5	5.0	4.5	-4.0	.5	-6.5	-23.0	-13.5	-13.0	-28.0	-20.5
6	13.0	-.5	5.5	9.5	-6.5	2.0	-16.5	-24.5	-19.5	-15.5	-21.5	-18.0
7	20.0	.0	9.0	19.5	3.0	10.5	-13.5	-24.5	-18.5	-18.5	-21.0	-19.5
8	18.5	6.0	12.0	17.0	.5	10.0	-12.5	-20.5	-15.5	-10.5	-19.5	-14.0
9	20.0	4.5	11.5	1.0	-6.0	-2.0	-1.5	-21.5	-10.5	-12.0	-21.5	-15.5
10	23.0	6.5	15.0	-6.5	-9.0	-7.5	.0	-9.5	---	-17.0	-25.0	-21.5
11	15.0	5.5	10.0	-8.5	-10.0	-9.5	[1]3.0	[1]-13.0	---	-16.0	-24.5	-19.5
12	9.0	.5	5.0	-6.5	-9.5	-7.5	3.0	-8.0	---	-23.5	-29.0	-26.0
13	11.5	-1.0	3.5	-7.0	-8.5	-8.0	-5.0	-10.5	-7.5	-25.0	-30.5	-27.5
14	15.0	-3.0	6.5	-7.5	-12.0	-9.5	1.5	-5.5	-2.0	-20.5	-30.5	-26.5
15	13.0	1.0	6.5	-6.5	-15.0	-11.0	-1.0	-5.5	-3.5	-18.0	-28.0	-21.5
16	18.5	.0	8.5	-3.0	-12.5	-7.0	-4.5	-9.0	-6.5	-13.5	-21.5	-17.0
17	11.5	4.5	7.5	-4.0	-10.5	-7.0	-7.0	-15.5	-10.5	-6.5	-13.5	-10.0
18	13.5	.0	7.0	-12.0	-19.5	-17.5	-7.0	-15.5	-11.0	-6.0	-13.5	-9.0
19	22.0	6.0	12.5	-18.5	-25.5	-20.5	-10.5	-18.0	-13.5	-5.5	-8.5	-7.0
20	21.0	10.0	14.5	-17.0	-25.0	-21.0	-5.0	-18.0	-10.0	-5.0	-9.0	-7.0
21	9.5	-.5	6.0	-12.0	-24.0	-16.5	-.5	-9.5	-4.0	.0	-10.5	-4.0
22	9.5	*4.0	1.5	-6.0	-15.5	-10.5	-1.5	-12.0	-5.0	-10.5	-24.0	-14.5
23	17.0	.5	9.0	-5.0	-14.5	-9.0	-5.0	-18.0	-13.0	-10.5	-26.0	-18.0
24	17.0	4.0	10.0	-2.0	-7.0	-4.0	-3.0	-6.5	-4.0	-1.5	-11.0	-6.5
25	9.0	-1.5	4.0	-5.0	-12.5	-8.0	-6.0	-10.0	-8.0	-8.0	-25.5	-13.0
26	15.0	-3.5	5.0	-4.5	-8.0	-6.5	-9.0	-18.0	-13.0	-12.0	-16.5	-14.0
27	11.0	-2.5	4.5	-7.5	-17.0	-13.5	-10.5	-18.0	-13.5	-16.0	-23.5	-19.0
28	14.5	1.5	6.5	1.5	-9.0	-1.5	-15.0	-24.5	-20.5	-17.5	-26.5	-22.5
29	14.0	2.0	7.0	-5.5	-15.5	-13.0	-21.5	-29.5	-24.5	-18.5	-27.5	-22.0
30	8.0	-4.0	2.0	-7.0	-15.5	-11.5	-23.0	-30.5	-28.0	-18.5	-27.5	-23.5
31	12.5	-2.0	4.0	---	---	---	-25.0	-30.5	-28.0	-14.0	-26.5	-21.5
MONTH	23.0	-4.0	7.5	20.0	-25.5	-5.5	[1]3.0	-30.5	-13.0	.0	-30.5	-18.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-16.0	-30.0	---	-9.5	-15.0	-13.5	-3.5	-13.5	-8.0	10.5	-3.0	5.0
2	-15.0	-27.0	-20.5	-12.5	-19.0	-15.0	-1.0	-8.0	-4.5	8.0	-4.5	2.5
3	-14.5	-25.0	-21.0	-3.5	-18.5	-12.0	3.0	-8.5	-2.5	12.5	-3.0	4.5
4	-11.5	-22.0	-18.0	-3.5	-12.0	-7.0	-1.0	-11.0	-3.5	10.5	-2.5	4.5
5	1.5	-15.0	-5.0	3.0	-4.0	.0	-9.0	-16.5	-11.5	11.5	.5	6.5
6	-2.0	-24.5	---	4.5	-5.5	-.5	10.0	-9.0	1.5	11.5	3.5	7.0
7	[1]-13.5	[1]-20.5	---	5.0	-6.0	.0	6.0	-2.5	1.0	4.0	-1.5	2.0
8	[1]-18.0	[1]-25.5	---	1.5	-2.0	.0	11.0	-2.5	3.5	6.5	-1.5	2.5
9	[1]1.5	[1]-25.5	---	-4.5	-18.0	-14.5	12.5	.0	5.0	4.0	-1.5	1.0
10	[1]1.5	[1]-16.0	---	1.5	-18.5	-5.5	10.5	.0	4.5	4.0	-2.5	.0
11	[1]-12.0	[1]-28.5	---	7.5	-3.5	1.0	2.5	-2.0	-.5	11.0	-4.5	4.5
12	[1]-13.5	[1]-28.5	---	6.0	-6.0	2.0	-1.0	-2.5	-2.0	14.5	2.0	9.5
13	[1]4.5	[1]-19.5	---	.0	-7.5	-3.5	.0	-4.0	-2.0	14.5	2.5	9.5
14	[1]5.0	[1]-24.0	---	-1.5	-7.5	-4.5	5.5	-2.5	.5	16.5	3.0	10.0
15	[1]-20.5	[1]-34.5	---	5.5	-6.5	.0	10.0	-1.5	3.5	24.5	3.5	15.5
16	[1]-22.0	[1]-36.5	---	6.5	-3.0	2.0	15.5	1.0	8.5	30.0	11.0	19.5
17	[1]-11.0	[1]-33.5	---	.5	-2.0	.0	19.0	8.0	13.0	12.0	5.5	9.0
18	[1]1.5	[1]-20.5	---	-1.0	-4.0	-3.0	24.5	6.0	13.5	17.0	2.5	9.5
19	[1]4.5	[1]-23.5	---	-.5	-4.5	-2.5	5.5	1.0	4.0	12.0	4.5	8.5
20	[1]-2.0	[1]-13.5	---	2.5	-6.5	-2.0	13.5	.5	6.0	17.0	3.0	9.5
21	[1]-6.5	[1]-13.5	---	3.5	-6.5	-2.0	13.5	-.5	7.0	22.0	6.5	14.5
22	-11.5	-14.5	-12.5	4.0	-7.0	-1.0	12.5	-1.0	6.5	13.5	2.5	9.0
23	-15.5	-24.5	-20.5	3.0	-4.5	-1.5	4.5	1.0	2.0	20.5	1.5	12.0
24	-9.0	-24.5	-17.5	8.0	-3.5	2.5	3.5	-.5	1.0	26.0	6.5	17.5
25	1.5	-10.5	-3.0	.5	-10.5	-7.0	9.5	-1.0	4.5	23.5	12.0	18.0
26	5.0	-3.5	.5	-4.0	-13.5	-8.0	5.5	-1.5	2.0	24.5	10.5	18.5
27	-4.5	-12.5	-10.5	1.0	-9.5	-4.5	12.0	-2.5	5.0	29.0	10.5	20.5
28	-7.5	-11.5	-10.0	-4.5	-12.5	-8.0	6.5	-2.5	3.0	19.0	8.5	13.5
29	---	---	---	5.0	-7.0	-2.0	7.5	-3.5	2.0	11.5	7.5	9.0
30	---	---	---	3.5	-6.5	-1.5	14.5	-2.5	7.0	16.0	6.0	11.0
31	---	---	---	3.0	-8.5	-2.5	---	---	---	14.0	5.5	9.5
MONTH	[1]5.0	[1]-36.5	-12.5	8.0	-19.0	-3.5	24.5	-16.5	2.5	30.0	-4.5	9.5

[1]Data obtained from the National Weather Service station at Wibaux, Mont.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1979--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.5	2.5	11.0	26.0	13.5	20.0	29.0	13.0	---	25.5	12.5	18.5
2	25.0	8.5	17.0	30.0	17.5	23.5	29.5	14.0	---	30.0	9.5	21.0
3	28.0	12.5	19.0	32.5	15.5	24.5	31.0	15.5	22.5	36.0	15.5	24.5
4	24.5	7.0	17.5	23.0	17.5	20.0	26.0	15.5	20.0	25.0	13.0	19.5
5	26.5	13.5	20.5	27.5	15.5	21.0	29.5	16.5	22.5	24.5	12.0	18.0
6	19.5	10.5	15.5	27.5	15.5	20.5	31.5	18.0	24.5	25.0	6.0	16.5
7	15.0	4.5	---	31.5	13.5	21.5	28.5	16.0	22.5	29.0	11.0	19.0
8	15.5	2.0	9.5	34.5	15.0	24.5	28.5	14.0	21.5	32.0	11.0	22.0
9	19.5	7.5	13.5	28.0	15.5	21.5	21.5	13.0	17.5	28.0	13.5	20.5
10	26.5	8.0	19.0	33.5	13.5	24.0	23.5	8.5	16.5	14.5	8.0	12.5
11	31.0	13.0	22.5	26.5	15.5	21.0	31.0	11.0	21.5	20.0	6.0	11.5
12	33.0	13.5	24.0	23.0	14.0	18.0	23.0	13.0	18.5	13.0	5.0	9.5
13	37.5	16.0	27.0	24.0	14.0	18.0	18.5	9.0	14.0	14.0	4.0	9.0
14	19.5	11.5	18.0	24.5	11.5	18.5	15.5	8.5	12.5	22.5	3.0	13.5
15	21.0	9.0	16.5	21.5	9.5	16.0	27.0	10.5	18.5	30.0	8.5	19.5
16	24.5	10.0	18.0	25.0	8.5	17.5	31.0	12.5	22.0	35.0	14.0	24.0
17	22.5	13.0	17.5	28.5	12.0	20.5	31.0	17.0	23.5	23.0	10.0	17.5
18	20.5	13.0	16.5	30.0	14.0	23.0	31.0	13.0	23.0	25.5	6.5	17.0
19	19.0	13.5	16.0	34.5	16.0	25.5	30.5	15.0	23.5	26.5	10.0	18.0
20	23.5	12.0	18.0	34.0	16.5	26.5	20.5	12.0	---	18.0	5.5	12.0
21	24.5	10.0	18.0	36.0	17.5	26.5	20.0	8.5	---	27.5	7.0	17.0
22	19.0	11.0	15.0	36.0	16.5	24.5	20.0	6.5	---	20.5	7.5	15.5
23	26.0	8.0	17.5	29.0	17.5	22.5	25.0	6.0	---	22.5	4.5	13.5
24	31.0	13.0	22.5	24.0	15.5	19.0	26.5	7.5	18.5	24.5	6.0	15.5
25	21.0	13.5	17.0	23.5	13.0	17.5	18.0	10.5	15.0	27.5	.0	---
26	26.5	9.5	19.5	24.0	12.5	18.0	24.0	12.0	17.0	16.0	2.0	---
27	26.0	13.0	20.0	25.0	15.0	19.5	20.5	10.5	15.0	21.5	10.5	---
28	25.0	12.0	19.0	30.5	14.0	22.0	27.5	13.0	20.0	28.0	8.5	18.0
29	30.0	11.0	21.5	26.0	15.5	20.5	29.0	11.0	20.5	21.0	6.0	13.5
30	30.5	16.0	24.0	22.0	14.5	17.5	30.0	13.0	21.5	22.5	7.5	15.0
31	---	---	---	28.5	11.0	20.5	27.5	13.5	22.0	---	---	---
MONTH	37.5	2.0	18.5	36.0	8.5	21.0	31.5	6.0	20.0	36.0	.0	16.5

AIR TEMPERATURE (DEGREES C)

PERIDD: Water year 1980.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	5.0	12.5	3.0	-6.5	---	1.0	-11.5	-5.5	7.0	-7.5	-1.0
2	17.0	10.0	13.0	4.5	-9.5	---	5.5	-5.5	1.0	-7.5	-13.5	-10.5
3	14.5	3.0	9.0	[1]5.0	[1]-12.0	---	5.0	-.5	2.0	3.0	-13.0	-5.0
4	25.0	1.0	14.5	[1]3.5	[1]-5.5	---	16.0	.5	7.5	-5.5	-11.0	-8.0
5	18.0	7.5	13.5	2.0	-9.0	---	3.5	-1.0	1.0	-5.0	-11.5	-8.0
6	21.0	4.5	13.0	2.0	-12.0	---	7.0	-.5	4.0	-12.0	-27.5	-21.0
7	24.0	7.0	14.5	-2.0	-10.0	---	-2.0	-10.5	-6.0	-21.5	-27.5	-25.5
8	9.0	4.5	6.5	.5	-8.5	---	8.5	-7.5	1.5	-27.0	-31.0	-29.5
9	10.0	-.5	---	[1]5.5	[1]-12.0	---	13.5	2.0	7.5	-19.0	-30.5	-24.0
10	24.0	7.5	---	[1]1.0	[1]-9.5	---	10.0	-18.0	-2.0	-19.0	-26.0	-21.5
11	18.5	8.5	---	[1].0	[1]-6.0	---	-9.0	-22.5	-16.5	-16.5	-27.0	-22.5
12	7.5	-2.5	---	5.5	-8.5	---	1.0	-12.5	-5.5	8.0	-17.5	-3.5
13	17.0	-3.0	---	6.5	-4.5	---	-1.5	-15.5	-7.5	5.5	-5.5	.0
14	25.5	3.5	---	12.0	-1.5	4.5	8.0	-9.0	1.0	4.0	-5.5	-2.0
15	23.5	9.5	---	16.0	3.0	7.5	-9.0	-28.0	---	5.5	-5.0	.0
16	12.0	2.0	---	16.0	3.0	8.0	-8.0	-29.0	---	5.0	-5.5	-1.5
17	18.0	4.5	---	17.5	4.0	8.5	6.5	-6.5	---	7.5	-6.5	-.5
18	13.5	2.5	---	10.5	-.5	5.5	13.5	2.5	---	-4.0	-13.5	-7.5
19	19.0	6.0	---	3.5	-4.0	-.5	11.5	-.5	---	-4.0	-16.0	-11.0
20	7.5	1.0	---	.5	-8.0	-4.5	7.0	.5	---	-1.5	-11.5	-6.0
21	3.5	-1.0	---	2.5	-11.0	-5.5	8.5	-2.0	---	-2.0	-5.5	-3.5
22	10.5	-2.0	---	4.0	-7.5	-3.5	4.0	-5.5	---	-.5	-10.0	-5.0
23	16.5	-.5	---	1.0	-12.0	-4.5	-3.0	-7.0	---	6.5	-3.0	.5
24	15.0	4.0	---	2.0	-12.5	-4.5	1.5	-10.5	---	3.5	-14.5	-1.5
25	16.5	6.5	---	.0	-3.5	-2.0	[1]5.5	[1]-6.5	---	-15.0	-22.0	-18.0
26	14.0	6.0	---	[1]-1.0	[1]-10.5	---	[1]6.0	[1]-9.5	---	-20.0	-24.5	-22.5
27	15.5	2.5	---	-2.0	-15.0	---	[1]5.5	[1]-12.0	-.5	-20.0	-26.0	-23.5
28	13.0	4.0	---	-10.5	-16.0	-13.0	7.0	-6.0	-1.5	-19.5	-28.0	-24.5
29	9.5	-1.5	---	-6.5	-16.5	-10.5	7.0	-9.5	-3.5	-15.5	-27.5	-21.5
30	8.0	-5.5	---	-1.5	-9.5	-6.5	-1.5	-10.5	-6.5	-11.5	-25.0	-18.5
31	5.0	-7.0	---	---	---	---	4.0	-12.0	-5.0	-4.0	-16.5	-11.5
MONTH	25.5	-7.0	12.0	17.5	-16.5	-1.5	16.0	-29.0	-2.0	8.0	-31.0	-11.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-1.0	-13.0	-6.0	-1.0	-20.0	-9.5	6.0	-1.0	2.5	22.0	8.0	15.5
2	2.5	-7.5	-2.0	9.5	-8.0	.5	6.0	-1.0	2.0	24.5	8.5	16.5
3	4.5	-7.5	.0	-1.5	-17.5	-9.5	5.0	-4.0	1.0	26.0	9.0	18.5
4	3.0	-1.0	1.5	-15.5	-20.0	-18.0	14.0	-4.5	5.0	24.5	7.5	17.0
5	2.5	-6.0	-2.0	-9.5	-22.0	-15.5	18.0	-.5	10.0	23.0	5.0	15.0
6	2.0	-9.5	-4.5	-6.5	-16.5	-11.5	14.0	1.5	7.5	14.5	2.0	9.5
7	-8.0	-12.0	-10.0	-1.5	-17.0	-8.5	5.0	.0	2.5	11.5	-4.0	4.5
8	1.5	-9.5	-5.0	1.0	-14.0	-5.0	8.5	-3.0	2.0	18.0	-3.5	8.5
9	2.5	-8.5	-4.0	4.5	-14.5	-3.5	15.5	-4.5	6.5	20.0	4.5	12.5
10	-6.5	-13.0	-9.5	-5.0	-18.5	-10.5	10.0	-1.5	5.5	13.0	2.0	9.0
11	-8.0	-15.0	-12.5	6.0	-5.0	.5	8.5	-7.0	2.0	15.5	-1.5	8.5
12	-5.0	-12.5	-8.0	1.5	-6.5	-3.5	11.5	-1.0	5.0	16.0	.0	9.0
13	-9.5	-16.5	-12.5	6.0	-5.5	.0	16.5	-1.5	7.5	14.0	-2.0	5.0
14	-15.5	-20.0	-18.0	12.0	-2.5	4.5	21.0	.5	10.0	17.0	-2.5	9.0
15	-12.5	-21.0	-17.5	6.0	-5.0	1.0	13.5	1.0	8.0	22.0	4.0	13.0
16	-8.0	-21.5	-16.0	1.5	-10.5	-4.0	17.5	3.0	10.5	22.0	10.0	14.5
17	4.0	-17.0	-6.5	6.5	-4.5	.5	23.5	4.0	14.0	22.0	3.5	14.0
18	6.0	-6.5	-1.0	10.5	-2.5	4.0	25.5	4.0	16.0	24.5	4.5	16.5
19	5.0	-4.5	-.5	5.5	-3.0	1.5	28.5	5.0	17.5	26.5	8.0	18.5
20	.0	-7.0	-4.0	4.5	-5.0	-1.0	32.0	9.0	21.5	28.0	15.5	22.0
21	-2.5	-7.0	-4.0	6.0	-6.0	1.0	31.0	10.0	21.5	34.5	15.0	26.0
22	-5.5	-8.5	-7.5	3.5	-5.0	-1.0	16.0	6.0	10.5	36.5	17.5	28.0
23	1.5	-7.5	-4.0	11.5	-5.5	2.5	19.0	3.5	11.0	31.0	17.5	25.0
24	-3.0	-14.0	-7.0	6.5	-3.0	.5	19.0	3.0	11.0	28.5	17.0	23.0
25	3.0	-19.0	-6.5	5.0	-2.5	1.0	18.0	-.5	10.5	23.5	14.5	20.0
26	6.5	-3.0	1.0	3.0	-4.5	-1.0	17.5	4.0	11.5	24.5	9.5	17.5
27	13.5	-4.0	3.5	9.5	-5.0	2.5	20.5	2.5	12.5	28.5	5.5	18.0
28	-4.5	-17.0	-10.5	7.5	-3.0	1.5	24.0	4.0	15.0	25.5	12.0	17.0
29	-11.0	-21.0	-16.5	12.5	-3.5	5.0	25.0	7.5	15.0	20.5	8.5	15.0
30	---	---	---	12.0	-2.0	5.0	24.0	8.5	17.0	19.5	9.5	13.0
31	---	---	---	7.5	-2.5	3.0	---	---	---	19.5	7.5	14.0
MONTH	13.5	-21.5	-6.5	12.5	-22.0	-2.0	32.0	-7.0	9.5	36.5	-4.0	15.5

[1]Data obtained from the National Weather Service station at Wibaux, Mont.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1980--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	8.0	15.5	29.0	7.0		25.0	8.0		[1]25.5	[1]9.5	---
2	23.5	9.0	16.5	32.5	10.0		29.0	12.0		[1]26.5	[1]9.5	---
3	29.5	11.0	19.5	34.0	11.5		[1]25.5	[1]11.5		[1]18.5	[1]9.5	---
4	25.0	14.0	19.0	33.5	12.0		[1]18.5	[1]8.0		[1]22.0	[1]9.0	---
5	22.5	12.5	17.5	36.0	13.5		[1]30.5	[1]7.0		26.5	8.0	---
6	13.5	8.5	11.0	35.5	15.5		[1]32.0	[1]11.0		32.0	9.5	---
7	16.5	7.0	11.0	30.5	13.5		[1]26.0	[1]10.5		34.0	15.5	---
8	23.0	5.5	15.0	26.5	13.0		[1]28.0	[1]4.5		19.5	5.0	---
9	27.5	8.5	19.0	35.0	10.0		21.5	10.0		20.0	1.5	---
10	31.0	12.0	20.5	41.0	10.5		19.5	11.0		24.0	5.5	---
11	32.5	16.0	23.5	32.0	14.5		26.0	8.5		16.0	9.0	---
12	27.0	12.5	20.5	34.0	10.0		19.0	12.0		15.5	6.0	---
13	25.5	12.5	19.0	34.0	13.5		20.0	8.0		18.0	4.0	---
14	25.5	11.5	18.5	30.5	10.0		23.0	9.5		15.5	9.0	---
15	15.0	11.0	13.5	28.5	10.5		16.5	12.0		13.5	2.0	---
16	25.0	10.0	18.0	31.0	8.0		12.0	9.0		[1]14.5	[1]-1.0	---
17	29.5	11.5	21.0	26.5	11.5		25.5	7.0		[1]18.5	[1]7.0	---
18	19.0	12.5	16.0	29.0	7.0		28.0	13.0		[1]15.5	[1]7.0	---
19	20.5	10.5	14.5	25.5	12.0		22.0	11.0		[1]21.0	[1]7.0	---
20	27.5	10.0	19.5	24.5	10.0		21.5	10.5		[1]25.0	[1]4.5	---
21	30.0	16.0	22.5	28.5	3.5		20.0	8.5		[1]18.0	[1]7.0	---
22	31.0	16.0	---	35.0	9.5		20.0	9.0		[1]15.0	[1]1.0	---
23	36.0	15.5	---	36.5	16.0		24.0	6.5		14.5	5.0	---
24	28.0	10.0	---	26.5	11.0		29.5	13.5		8.5	1.0	---
25	30.0	7.0	---	25.0	8.0		16.0	7.0		12.0	.0	---
26	23.5	11.5	---	29.5	11.5		11.0	6.5		17.5	3.5	10.0
27	21.0	10.0	---	29.5	11.5		21.5	5.5		21.5	4.5	12.5
28	24.5	11.0	---	33.0	10.0		22.0	10.5		29.0	6.5	18.5
29	33.5	2.0	---	31.5	13.5		17.0	5.5		22.5	11.0	16.0
30	31.0	11.5	---	28.5	6.5		19.5	4.5		28.0	8.5	16.5
31	---	---	---	28.0	14.5		[1]20.5	[1]8.5		---	---	---
MONTH	36.0	2.0	17.5	41.0	3.5		[1]32.0	[1]4.5		34.0	[1]-1.0	14.5

[1]Data obtained from the National Weather Service station at Wibaux, Mont.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1981.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.5	7.0	11.5	18.0	1.5	9.0	-10.0	-20.5	-18.5	0.5	-8.0	-5.0
2	14.5	2.0	8.5	14.0	5.0	9.5	---	---	---	-.5	-11.5	-6.0
3	20.5	7.0	13.0	11.5	1.0	6.0	-1.5	-10.0	-5.0	1.0	-12.0	-5.5
4	26.0	7.5	16.5	13.5	.5	5.0	-4.0	-13.5	-8.0	4.0	-11.5	-5.5
5	24.0	10.0	16.5	17.5	2.0	9.5	-13.5	-17.5	-15.0	2.0	-6.0	-2.0
6	27.5	10.0	18.0	16.5	6.0	11.0	-15.5	-19.5	-17.5	-1.5	-6.5	-3.5
7	27.5	11.5	17.0	15.5	2.0	9.5	-13.5	-18.0	-15.5	.0	-5.0	-2.0
8	27.5	12.5	18.5	12.5	6.0	8.5	-3.0	-14.0	-7.5	-4.0	-9.5	-5.5
9	15.5	7.0	11.5	8.5	-1.5	2.0	-4.0	-19.5	-11.5	-5.5	-11.5	-8.0
10	14.0	2.0	8.0	3.5	-3.0	.0	-8.5	-19.0	-15.0	-3.5	-7.0	-5.5
11	15.5	-2.0	7.5	3.0	-1.0	1.0	9.0	-5.0	4.0	4.5	-7.5	-2.0
12	13.0	1.5	7.0	-1.0	-3.0	-2.0	7.5	-3.5	1.5	4.5	-4.5	1.0
13	16.0	2.5	9.0	-1.0	-7.0	-3.5	6.5	-5.0	.0	5.5	-5.0	-1.0
14	17.5	.0	7.5	1.5	-8.5	-4.5	2.5	-7.0	-1.0	1.5	-5.5	-2.5
15	6.5	.5	3.5	2.0	-9.0	-4.0	10.0	3.0	6.0	-4.5	-8.0	-6.5
16	.0	-.5	-.5	-.5	-6.5	-3.0	10.5	3.0	6.0	-4.0	-11.5	-7.5
17	.5	-3.0	-.5	4.5	-7.5	-1.5	6.0	-8.5	-1.0	4.0	-9.5	-4.5
18	8.0	-4.0	3.0	6.0	-2.5	.5	-9.0	-22.5	-16.0	6.5	-8.0	-1.0
19	15.0	4.5	9.0	7.0	-1.5	1.5	-17.5	-25.0	-21.5	4.5	-12.0	-3.0
20	14.0	5.0	8.5	4.5	-4.0	.5	-13.5	-20.0	-16.0	4.0	-14.0	-5.5
21	10.5	2.5	6.0	11.0	.5	5.0	-6.0	-13.5	-9.5	9.5	-2.0	2.5
22	4.0	-2.0	1.5	5.5	-6.5	.0	-5.0	-13.0	-9.0	12.0	1.5	5.5
23	4.5	-2.5	--.5	.5	-9.0	-5.5	-13.5	-25.5	-18.5	13.5	.5	6.5
24	4.0	-3.0	.0	1.0	-10.0	-4.5	-12.5	-32.5	-23.5	11.0	-.5	4.0
25	1.5	-7.0	-2.5	4.0	-9.0	-1.5	-4.5	-11.5	-7.0	-.5	-3.0	-2.0
26	.5	-3.5	-1.5	4.5	-6.0	-.5	6.5	-10.0	-.5	-3.5	-9.0	-5.0
27	1.0	-3.5	-1.5	5.0	-8.0	-.5	10.0	3.5	7.0	-4.0	-11.0	-7.5
28	---	---	---	6.0	-4.0	2.0	7.5	-.5	3.0	---	---	---
29	---	---	---	6.0	-7.0	.0	7.0	-1.5	3.0	---	---	---
30	11.5	.5	4.5	2.0	-17.0	-6.0	6.0	-1.5	2.5	---	---	---
31	13.0	-1.0	5.5	---	---	---	4.5	-5.5	-.5	---	---	---
MONTH	27.5	-7.0	7.0	18.0	-17.0	1.5	10.5	-32.5	-7.0	13.5	-14.0	-3.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	4.0	-6.5	-2.0	18.0	-2.5	9.5	28.0	3.0	15.5
2	---	---	---	8.5	-7.5	-.5	11.0	2.5	6.5	19.5	10.0	14.0
3	---	---	---	8.0	-4.5	1.5	9.0	-2.5	3.5	15.0	4.0	10.5
4	---	---	---	9.5	-4.5	2.0	8.0	-5.5	1.5	16.0	1.5	10.0
5	-4.5	-13.0	-7.5	9.5	-6.5	.5	13.5	-4.5	5.5	17.5	4.0	13.5
6	-5.5	-13.0	-9.0	2.0	-8.0	-4.0	10.5	-.5	6.0	16.5	7.5	11.5
7	-14.5	-25.0	-21.0	8.0	-8.5	-1.5	8.5	-5.0	1.5	13.5	4.0	8.0
8	-14.0	-22.0	-19.0	5.5	-6.0	-1.0	9.5	-4.0	2.5	8.5	2.5	6.5
9	-19.0	-27.0	-22.0	5.5	-8.0	-2.0	15.5	-4.5	5.5	11.0	-3.0	4.5
10	-20.0	-30.5	-24.5	7.5	-7.0	-.5	12.0	-2.5	6.0	14.0	3.0	8.5
11	-12.0	-26.5	-18.0	13.5	-5.0	4.0	6.5	-.5	2.5	13.5	.0	6.5
12	-2.5	-18.0	-9.0	9.5	-6.0	1.5	14.5	-1.0	7.0	12.5	3.5	8.0
13	7.0	-5.0	1.5	13.0	-8.0	3.0	4.0	-6.5	-.5	16.0	3.5	9.5
14	11.0	1.0	5.5	12.0	-1.0	5.5	15.0	-8.5	5.5	21.0	1.5	12.0
15	10.0	-.5	3.5	10.5	-3.5	3.0	25.0	.5	14.0	20.5	8.5	14.5
16	12.5	1.5	6.0	18.0	-1.0	8.5	22.0	6.0	14.5	12.5	8.5	10.5
17	11.0	3.0	6.5	4.5	-6.5	-.5	15.0	2.0	8.0	16.0	5.0	11.5
18	10.0	.0	4.5	3.0	-7.0	-2.0	20.5	2.0	11.5	19.0	2.5	11.5
19	10.5	-.5	4.5	5.0	-8.0	-1.5	11.5	-2.5	4.5	21.5	6.0	14.5
20	7.0	-1.0	3.5	5.5	-6.5	-.5	22.0	.0	11.0	21.5	8.5	17.0
21	7.5	-2.0	2.0	1.0	-10.5	-5.5	13.0	4.5	7.5	24.5	12.0	18.0
22	9.0	-.5	3.0	13.5	-8.0	2.5	13.5	4.0	8.5	16.5	7.0	12.0
23	12.0	-.5	4.5	10.0	.0	4.5	21.5	4.5	13.5	12.0	4.5	7.0
24	6.0	-5.0	-.5	12.0	-1.0	4.0	27.0	6.0	17.0	11.0	3.5	6.5
25	3.5	-6.0	-1.5	8.5	-3.5	2.0	15.5	7.0	12.0	17.5	7.5	11.5
26	10.0	-4.0	2.0	11.0	-3.0	4.0	19.0	6.0	13.0	17.5	6.5	12.0
27	-2.0	-3.5	-3.0	8.0	1.0	4.0	11.0	7.0	9.0	13.5	9.5	11.5
28	1.5	-5.5	-2.5	6.5	-3.0	1.0	17.0	4.5	10.5	24.0	8.5	16.5
29	---	---	---	14.5	-3.0	6.0	16.5	6.0	11.5	21.0	11.0	14.5
30	---	---	---	8.5	-1.0	4.0	16.5	4.5	10.5	24.5	6.0	17.0
31	---	---	---	10.5	-2.5	4.5	---	---	---	24.5	9.5	16.0
MONTH	12.5	-30.5	-4.0	18.0	-10.5	1.5	27.0	-8.5	8.0	28.0	-3.0	11.5

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1981--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	8.5	13.0	34.0	20.5	26.5	31.5	13.0	20.5	29.0	5.5	17.5
2	20.0	9.5	13.5	26.5	13.0	19.5	30.5	13.0	21.5	23.0	8.0	17.0
3	24.5	7.0	15.5	30.0	11.0	22.0	28.5	12.0	21.0	20.5	3.0	12.0
4	21.0	12.0	15.5	36.0	15.0	27.0	29.0	14.5	21.5	28.0	12.0	19.0
5	22.5	10.0	16.5	37.5	16.0	27.5	26.0	14.0	19.5	28.0	14.0	21.0
6	26.5	9.0	18.0	40.0	18.5	29.5	25.0	12.5	19.0	24.0	12.5	17.0
7	20.5	10.0	15.0	38.0	16.0	27.0	28.5	14.0	21.5	26.5	11.0	18.5
8	20.0	11.0	15.5	24.0	11.5	17.5	26.0	15.0	19.0	31.0	11.0	20.5
9	19.0	7.5	13.5	34.5	9.0	21.0	23.5	13.0	18.5	33.5	16.0	23.5
10	21.5	7.0	14.5	32.0	17.5	24.5	27.0	12.0	20.0	29.5	13.0	20.5
11	20.5	7.0	14.0	31.0	16.0	23.5	31.5	15.0	23.5	28.5	9.5	19.0
12	20.0	10.0	14.5	31.5	18.0	24.5	32.5	15.0	24.5	33.0	14.0	23.0
13	16.5	9.5	13.5	27.5	17.5	22.0	33.5	17.0	24.5	27.5	10.0	19.0
14	16.5	5.5	11.0	27.5	16.5	21.5	30.0	14.0	22.5	20.5	8.5	16.0
15	9.5	7.0	9.0	27.5	13.0	20.5	33.0	17.0	22.5	18.0	5.5	12.0
16	25.5	7.0	16.5	28.0	10.0	20.0	26.0	15.0	20.0	19.0	1.0	10.5
17	15.5	7.5	11.5	26.0	11.5	19.5	29.5	13.0	21.0	24.5	3.5	13.5
18	17.5	4.5	11.5	29.0	14.0	20.5	33.5	15.5	24.5	29.0	4.5	16.5
19	19.0	8.0	13.5	27.0	14.0	18.5	32.5	15.0	24.0	30.5	7.5	19.5
20	21.5	9.0	15.0	31.5	14.0	23.0	33.0	16.5	24.5	17.5	7.5	13.5
21	20.5	8.0	14.0	31.5	14.5	22.0	28.5	16.5	21.5	22.5	6.0	15.0
22	22.5	11.5	17.0	29.0	12.0	21.0	29.0	15.0	21.5	19.0	5.0	13.0
23	21.0	10.5	16.5	28.5	13.0	20.5	26.0	11.5	19.0	19.5	6.5	13.0
24	22.0	10.0	16.5	24.0	12.5	18.5	24.5	14.0	19.0	17.0	6.0	11.0
25	26.0	9.5	18.5	19.0	10.0	14.5	26.0	12.5	19.0	18.0	6.5	11.0
26	35.5	13.5	23.5	20.0	12.5	15.5	26.0	10.0	19.0	12.0	2.5	7.5
27	29.0	17.0	23.5	21.5	12.0	16.0	26.5	12.0	19.5	14.5	-1.0	8.0
28	20.0	9.5	14.5	32.5	10.0	21.5	29.0	12.0	21.0	21.0	6.5	13.5
29	24.5	6.5	16.5	33.5	14.5	24.0	35.5	13.5	24.5	15.5	7.0	10.5
30	34.0	13.5	24.5	29.0	14.5	23.5	33.5	13.5	23.0	14.0	1.5	8.5
31	---	---	---	27.5	12.0	20.0	19.0	6.0	12.5	---	---	---
MONTH	35.5	4.5	15.5	40.0	9.0	21.5	35.5	6.0	21.0	33.5	-1.0	15.5

PERIOD OF RECORD: April 1978 through September 1981.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: April 25, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.00	0.00	---	0.00
2							---	.00	.00	.00	0.00	.00
3							---	.40	.00	.00	.00	.00
4							---	.20	.00	.40	.00	.00
5							---	.20	.00	.00	.00	.00
6							---	.00	.00	.00	.00	.00
7							---	.40	.00	.00	.00	.00
8							---	.40	.00	.10	.00	.00
9							---	.00	.00	.00	.00	.00
10							---	.00	.00	.00	.20	.00
11							---	.30	.10	.00	.00	.50
12							---	.10	.00	.00	.00	.20
13							---	.00	.00	.00	.00	.00
14							---	.00	.20	.00	.00	.00
15							---	.00	.00	.00	.00	.00
16							---	.00	.00	.00	.00	.00
17							---	.00	.00	.00	.00	.00
18							---	.00	.00	.90	.00	1.10
19							---	.20	.00	.00	.00	.10
20							---	.00	.00	.10	.00	.00
21							---	.00	.00	.00	.20	.00
22							---	.00	.00	.00	.00	.00
23							---	.00	.10	.00	.00	.00
24							---	.00	.40	.00	.00	.00
25							0.00	.00	.30	.00	.00	.00
26							.00	.00	.00	.00	.00	.00
27							.00	.00	.00	.00	.00	.00
28							.00	.00	.00	---	.00	.00
29							.00	.10	1.60	---	.00	.00
30							.00	2.00	.00	---	.00	.00
31							---	.90	---	---	.00	---
TOTAL							0.00	5.20	2.70	1.50	0.40	1.90

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
2	.20	---	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
3	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	---	.00	.00	.10	.00	.00	.10	.10	.00	.00	.00
6	.00	---	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
7	.00	---	.00	.00	.10	.10	.00	.00	.00	.00	.00	.00
8	.00	---	.00	.00	.10	.10	.00	.00	.00	.00	.00	.00
9	.00	---	.00	---	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	---	.00	---	.00	.00	.00	.00	.00	.20	.00	.20
11	.00	---	.10	---	.10	.00	.40	.00	.00	.00	.00	.00
12	.00	---	.00	---	.00	.00	.10	.00	.00	.00	.00	.00
13	.00	---	.00	---	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	---	.00	---	.20	.00	.00	.00	.00	.00	.00	.00
15	.00	0.00	.00	---	---	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	---	---	.00	.00	.00	.00	.001	.00	.00
17	.00	.00	.00	---	---	.00	.00	.00	.00	.00	.00	.00
18	.10	.00	.00	.00	---	.00	.00	.20	.00	.00	.00	.00
19	.00	.00	.00	.00	---	.00	.10	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
22	.00	.00	.00	.00	.20	.00	.00	.00	.00	---	.00	.00
23	.00	.00	.00	.00	.00	.00	---	.00	.00	---	.00	.00
24	.00	.00	.00	.00	.00	.00	---	.00	.00	---	.00	.00
25	.10	.00	.00	.00	.00	.00	---	.00	.00	.50	.00	.00
26	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.10	.00	.10	.00	.00	.10	.00	.00
28	.00	.20	.00	.00	.00	.10	.00	.10	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.30	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	---	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.40	0.20	0.10	0.00	0.90	0.40	0.80	0.80	0.10	0.80	0.00	0.30

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00
11	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.70	.20	.00	.00
14	.00	.00	.10	.00	.00	.00	.00	.00	.20	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.60	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.60	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.10	.10	.00	.00	.00	.00	.00	.00	.10	.20	.00	.00
20	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.30
22	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00	.20
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00
27	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.10	0.20	0.20	0.70	0.30	0.20	0.00	0.00	1.00	0.40	3.20	0.60

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.60	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.20	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.10	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00
8	.00	.10	.00	.00	.00	.00	.00	.10	.10	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.20	.10	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00
15	1.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00
16	.30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.10	.00	.00	.00	.00	.00	.00	.00	.10	.20	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.10	.10	.00	.00
21	.10	.00	.00	.00	.00	.00	.10	.00	.10	.00	.00	.00
22	1.20	.00	.10	.00	.00	.00	.10	.40	.00	.00	.00	.00
23	.00	.00	.10	.00	.00	.00	.00	.10	.00	.00	.00	.00
24	.00	.00	.10	.00	.00	.00	.10	.10	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.20	.10	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.20	.10	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.10
31	.00	---	.00	.00	---	.00	---	.20	---	.00	.00	---
TOTAL	2.70	0.20	0.30	0.00	0.00	0.00	0.90	1.10	1.80	0.60	1.40	0.10

PERIOD OF RECORD: August 1978 through September 1981.

RELATIVE HUMIDITY (PERCENT)

PERIOD: August 15, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	42.0
2											---	35.4
3											---	32.6
4											---	27.4
5											---	32.6
6											---	58.8
7											---	63.5
8											---	43.5
9											---	36.3
10											---	49.0
11											---	---
12											---	---
13											---	---
14											---	83.0
15											44.1	50.0
16											45.4	56.5
17											63.5	63.0
18											52.6	95.0
19											36.1	80.0
20											35.8	67.0
21											50.7	56.5
22											65.4	45.5
23											61.2	47.5
24											58.3	54.7
25											49.2	52.9
26											61.4	61.7
27											55.5	58.2
28											54.9	56.6
29											40.5	68.0
30											56.8	52.2
31											56.1	---
MEAN											52.2	54.4

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.7	33.3	79.5	79.6	76.8	85.6	80.2	73.4	62.2	58.8	74.0	76.0
2	91.2	38.1	75.1	78.9	73.8	83.6	80.9	64.1	50.4	68.8	---	60.5
3	71.7	44.8	74.5	79.6	74.6	79.9	87.5	62.3	50.2	68.9	59.5	50.2
4	65.2	44.1	78.2	74.9	75.0	70.8	74.4	76.4	61.1	81.2	76.4	50.4
5	66.1	51.6	81.7	77.8	81.0	82.3	58.5	85.3	50.6	79.2	75.9	40.7
6	62.2	45.6	78.3	81.0	---	90.1	73.3	96.8	50.9	77.7	54.2	51.7
7	52.1	39.4	82.3	79.0	---	93.9	93.6	87.3	---	73.9	57.2	57.2
8	46.6	61.0	84.5	74.3	---	91.3	73.9	75.6	64.6	55.1	72.1	60.8
9	53.4	---	86.7	83.9	---	85.0	69.0	79.8	53.7	72.1	---	74.6
10	41.6	96.7	---	81.1	---	79.5	81.6	74.9	41.8	66.7	56.1	93.0
11	57.5	91.1	---	82.0	---	79.2	106	72.3	41.2	65.5	50.1	74.0
12	74.8	96.1	---	75.8	---	76.6	105	61.4	43.2	81.7	58.7	74.3
13	62.6	94.9	71.6	74.2	---	86.0	94.1	64.2	33.8	66.6	53.8	67.0
14	53.2	82.8	70.7	72.6	---	83.1	87.9	58.5	37.6	47.5	54.0	49.9
15	61.4	77.2	---	73.8	---	80.1	92.7	51.6	47.0	72.5	56.6	34.0
16	56.7	73.1	69.9	78.3	---	82.0	82.2	57.9	51.5	70.9	57.3	25.4
17	55.3	91.0	73.0	69.4	---	96.3	87.6	64.4	55.1	64.5	42.9	41.2
18	68.5	81.9	83.6	78.8	---	96.2	78.8	75.0	71.3	55.8	43.7	44.0
19	54.6	78.6	87.0	84.7	---	90.7	100.0	76.5	93.3	42.5	49.0	47.8
20	39.4	78.9	84.2	83.5	---	93.2	72.9	62.6	63.9	42.5	75.0	49.7
21	67.3	84.5	75.6	83.9	---	93.9	57.0	49.3	52.1	44.4	66.0	40.8
22	58.5	89.7	---	86.8	89.4	89.5	68.7	72.3	90.9	65.4	60.0	57.8
23	44.4	83.3	87.8	79.8	78.4	86.3	101	58.9	73.4	81.4	57.0	68.4
24	48.9	82.2	---	75.5	77.6	78.7	103	44.5	54.7	92.6	56.9	51.2
25	70.1	94.4	86.9	88.5	71.9	73.5	79.5	63.7	65.0	73.0	70.6	---
26	55.6	96.4	88.7	86.0	71.7	70.8	92.4	47.6	50.1	80.0	67.6	---
27	51.6	85.8	89.6	82.9	88.1	85.3	68.0	43.0	58.5	73.4	90.0	---
28	49.3	---	82.9	78.2	93.2	82.9	76.3	80.6	64.2	68.8	63.9	49.4
29	56.7	86.2	78.3	77.1	---	86.6	64.4	94.9	45.4	78.1	52.8	40.7
30	66.8	90.7	74.6	77.0	---	77.5	60.1	62.1	48.0	89.9	67.1	36.8
31	43.4	---	74.5	74.8	---	90.7	---	74.7	---	71.3	51.4	---
MEAN	57.9	74.8	80.0	79.1	79.3	84.5	81.7	68.1	56.1	68.7	61.0	54.3

RELATIVE HUMIDITY (PERCENT)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.5	---	79.6	74.1	85.0	76.0	72.0	50.7	63.9	---	61.0	---
2	40.7	---	72.7	94.1	97.0	81.0	80.9	52.0	70.2	---	48.0	---
3	47.8	---	86.1	95.3	92.0	95.0	71.2	42.0	67.9	---	---	---
4	36.4	---	62.7	96.2	97.0	83.0	55.7	45.8	75.0	---	---	---
5	31.7	---	73.3	101	88.0	78.0	39.8	32.0	61.3	---	---	48.0
6	37.3	---	70.2	89.7	89.0	84.0	62.2	29.7	85.2	---	---	67.0
7	46.5	---	78.3	79.9	100.0	83.0	81.6	43.2	80.3	---	---	79.0
8	83.8	---	73.7	74.1	85.0	80.0	71.3	36.7	47.9	---	---	68.0
9	74.7	---	58.9	81.5	80.0	79.0	48.0	40.8	39.1	---	70.0	58.0
10	70.0	---	77.7	86.4	69.0	71.0	56.7	43.4	39.0	---	65.0	64.0
11	83.0	---	83.9	72.7	81.0	85.0	59.0	34.0	55.9	---	60.0	86.0
12	63.0	---	76.4	76.5	88.0	90.0	50.9	39.7	69.9	---	70.0	79.0
13	59.0	---	83.6	74.8	92.0	77.0	41.0	49.7	73.1	---	68.0	48.0
14	67.0	53.9	70.8	90.5	83.0	70.0	44.0	37.4	76.5	---	59.0	44.0
15	---	39.2	---	87.5	85.0	90.0	61.0	45.7	100.0	---	74.0	73.0
16	---	33.9	---	91.7	83.0	89.0	49.0	57.8	72.8	---	91.0	67.0
17	---	35.7	---	86.8	78.0	72.0	32.1	44.5	53.0	---	71.0	---
18	62.0	49.9	---	93.2	89.0	68.0	33.4	31.7	73.7	---	65.0	---
19	72.0	86.9	57.0	80.5	105	84.0	32.0	38.2	85.2	---	66.0	---
20	---	84.0	69.0	75.2	107	74.0	25.4	32.7	73.7	---	62.0	---
21	---	76.4	87.0	92.7	106	64.0	29.5	26.8	62.8	---	68.0	---
22	---	68.7	---	85.9	104	80.0	40.5	30.7	64.7	---	74.0	---
23	---	77.1	---	75.0	95.0	66.0	32.2	36.5	---	44.0	66.0	67.0
24	---	88.3	---	97.0	93.0	74.2	31.6	48.6	---	49.0	60.0	78.0
25	---	102	---	84.0	79.0	69.1	38.4	39.4	---	61.0	66.0	70.0
26	---	---	---	82.0	80.0	89.1	44.5	26.7	---	60.0	81.0	56.7
27	---	---	---	81.0	88.0	69.0	49.7	39.3	---	59.0	70.0	55.2
28	---	92.6	68.5	81.0	90.0	69.3	39.9	52.7	---	61.0	60.0	44.6
29	---	91.3	77.1	81.0	66.0	53.5	27.2	55.3	---	61.0	65.0	43.9
30	---	73.3	86.7	80.0	---	58.9	30.7	68.2	---	40.0	72.0	39.1
31	---	---	79.8	68.0	---	78.1	---	74.6	---	48.0	---	---
MEAN	57.5	70.2	74.9	84.2	88.8	76.8	47.7	42.8	67.8	53.7	67.2	61.8

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.0	52.5	62.9	77.0	---	73.3	41.5	40.0	79.3	45.4	63.0	38.4
2	49.7	49.5	58.7	79.9	---	65.6	44.5	56.9	68.3	46.2	71.7	45.0
3	42.7	65.7	77.4	78.0	---	54.2	46.3	44.8	63.8	46.8	65.9	58.5
4	39.5	64.3	83.9	78.9	---	47.6	66.0	42.9	77.4	35.9	69.4	49.5
5	40.2	62.6	76.6	78.4	81.8	52.5	48.9	43.2	48.1	29.1	74.6	55.8
6	35.6	53.1	76.7	90.3	82.6	58.6	32.2	44.7	51.4	31.1	61.9	55.3
7	32.0	58.5	75.7	80.4	73.2	53.6	41.5	79.8	59.1	37.6	50.9	42.8
8	29.9	64.1	70.8	85.0	75.3	56.8	35.6	84.3	61.8	24.8	63.1	42.6
9	35.5	81.9	75.6	84.7	71.0	67.6	34.7	51.4	57.0	26.9	61.8	31.0
10	40.3	89.0	77.9	87.9	62.2	56.2	28.4	56.9	49.5	40.5	59.1	34.4
11	41.1	87.7	59.9	75.1	64.2	37.6	82.7	74.2	55.8	60.7	42.0	35.7
12	43.9	94.1	61.7	52.9	69.4	37.2	57.2	55.3	70.7	60.6	38.6	30.7
13	47.4	88.3	65.3	66.7	72.4	35.3	55.2	64.9	82.5	75.1	47.8	39.0
14	49.1	80.0	69.2	77.4	61.8	37.6	44.9	44.2	62.5	74.1	55.0	48.0
15	81.6	79.5	64.1	85.1	61.2	46.1	32.2	38.8	80.6	54.5	63.2	51.0
16	97.6	83.8	63.9	77.2	55.8	31.5	28.0	75.3	57.0	49.4	68.2	45.6
17	92.0	63.7	69.1	66.9	55.6	50.8	36.4	67.0	76.1	59.0	68.7	39.4
18	87.2	63.6	64.7	62.7	56.5	62.0	32.4	58.9	61.9	64.6	56.1	33.7
19	70.5	67.0	66.2	70.0	54.2	47.3	43.5	40.5	65.1	73.5	49.7	31.6
20	69.9	67.0	70.8	69.8	68.3	59.7	36.7	40.8	66.7	47.4	49.8	55.4
21	76.4	47.1	77.9	59.7	58.5	70.1	68.0	46.2	58.3	52.3	63.0	42.3
22	90.0	66.8	84.2	51.2	57.6	59.7	62.0	83.2	47.7	54.0	54.7	43.8
23	85.6	68.2	75.9	45.3	51.0	70.4	43.8	80.9	55.4	55.2	55.7	35.5
24	80.7	67.0	71.2	56.4	57.7	65.8	45.1	92.3	40.9	62.5	66.1	55.4
25	77.3	57.3	80.2	81.6	63.0	53.1	52.0	82.2	38.0	71.7	70.0	82.4
26	73.2	60.5	78.2	85.0	61.1	50.2	51.3	78.2	41.4	69.0	69.4	65.9
27	77.0	52.8	64.1	---	90.6	71.7	86.0	91.2	45.5	70.4	62.2	57.4
28	---	55.2	67.7	---	86.3	88.5	64.1	61.0	73.2	54.1	49.1	43.8
29	---	50.4	64.4	---	---	60.9	44.4	54.9	54.3	54.0	40.7	69.3
30	57.2	71.6	68.8	---	---	58.1	39.0	48.6	45.4	50.4	39.7	88.9
31	60.5	---	74.0	---	---	60.2	---	65.5	---	45.0	56.0	---
MEAN	60.3	67.1	70.9	73.2	66.3	56.1	47.5	60.9	59.8	52.3	58.3	48.3

PERIOD OF RECORD: August 1978 through September 1981.

SOLAR RADIATION (LANGLEYS)

PERIOD: August 15, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	520
2											---	522
3											---	458
4											---	502
5											---	464
6											---	498
7											---	478
8											---	398
9											---	495
10											---	451
11											---	68
12											---	131
13											---	11
14											---	266
15											84	470
16											471	470
17											480	134
18											562	76
19											588	230
20											595	395
21											578	454
22											302	443
23											573	427
24											508	404
25											562	387
26											544	410
27											377	381
28											515	406
29											517	340
30											300	385
31											436	---
TOTAL											7992	11074

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	256	215	97	209	249	391	494	701	691	---	476
2	101	242	192	139	274	274	340	593	605	487	---	548
3	372	197	190	136	200	413	332	433	571	673	659	536
4	235	89	110	200	220	384	253	305	658	274	319	484
5	247	239	156	193	154	338	473	398	552	578	537	532
6	371	182	113	167	---	289	505	194	665	640	629	521
7	370	179	185	217	---	324	81	323	427	506	396	485
8	270	86	118	142	---	179	498	412	567	571	507	491
9	355	59	104	109	---	360	535	226	589	604	435	503
10	320	164	---	151	---	442	299	212	683	686	597	119
11	222	128	---	157	---	405	162	478	695	458	624	464
12	176	71	---	168	---	365	285	547	722	443	553	197
13	229	119	155	173	---	316	407	352	656	455	515	433
14	280	215	129	202	---	415	569	583	415	592	224	495
15	328	225	145	154	---	442	449	661	582	598	580	494
16	292	221	151	202	---	382	507	619	490	622	584	484
17	209	134	115	180	---	170	371	312	631	724	600	463
18	274	190	86	131	---	181	514	464	498	712	517	460
19	302	124	106	133	---	154	103	425	223	673	595	447
20	248	147	134	194	---	382	537	625	575	688	---	434
21	173	143	80	135	---	361	514	534	550	673	---	424
22	308	118	70	166	---	311	466	528	417	559	---	429
23	250	196	193	172	231	318	59	707	688	511	---	406
24	119	133	102	142	212	470	127	704	695	419	568	418
25	194	125	128	188	283	302	281	530	336	536	188	---
26	273	102	125	96	290	468	334	694	662	532	526	---
27	219	148	109	130	245	260	559	672	417	687	268	245
28	218	89	98	130	287	490	292	299	693	644	552	396
29	182	91	175	111	---	423	634	152	730	468	525	394
30	197	112	191	85	---	465	414	487	602	420	490	259
31	253	---	199	185	---	218	---	507	---	655	408	---
TOTAL	7921	4524	3874	4785	2605	10550	11291	14470	17295	17779	12396	12037

SOLAR RADIATION (LANGLEYS)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	191	157	135	100	323	228	394	562			---
2	340	268	92	76	196	325	257	407	619			---
3	353	---	82	85	121	103	283	496	608			---
4	386	---	94	77	175	354	513	591	555			---
5	347	103	90	54	230	345	456	607	649			---
6	359	157	29	103	259	401	239	618	166			---
7	296	94	128	173	89	406	153	680	481			---
8	133	142	134	155	264	352	333	659	730			---
9	212	---	128	94	133	208	478	438	737			---
10	320	---	53	75	245	375	277	641	604			---
11	100	---	197	163	185	282	493	683	403			---
12	236	202	81	133	58	132	395	625	677			---
13	329	207	154	159	133	303	567	579	717			---
14	277	186	122	102	173	364	562	681	605			---
15	226	195	84	170	209	202	277	407	218			---
16	286	202	---	110	322	497	554	385	632			---
17	254	168	---	181	274	348	581	600	683			---
18	293	143	---	52	183	270	559	666	672			---
19	182	145	---	216	157	245	541	599	364			---
20	287	167	---	188	50	433	581	445	624			---
21	94	206	---	59	124	280	546	649	556			---
22	291	159	---	206	109	421	485	663	---			---
23	250	133	---	36	317	391	589	674	---			---
24	284	194	---	73	181	218	630	550	---			---
25	164	91	---	193	234	279	616	606	---			---
26	153	---	---	199	312	182	536	715	---			418
27	282	---	---	211	254	500	620	527	---			410
28	194	149	139	260	163	349	629	630	---			374
29	203	162	139	230	357	478	622	380	---			391
30	244	157	137	256	---	311	641	298	---			293
31	245	---	161	224	---	223	---	521	---			---
TOTAL	7967	3821	2201	4448	5607	9900	14241	17414	11862			1886

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	363	226	113	191	---	346	482	560	392	640	559	501
2	297	144	---	99	---	338	389	393	---	658	508	511
3	384	223	86	134	---	331	369	478	578	659	652	437
4	382	168	92	157	---	217	337	551	480	652	521	486
5	369	137	71	103	155	340	469	580	724	661	633	422
6	373	155	86	58	104	275	448	391	517	638	601	360
7	205	196	132	50	161	335	360	172	499	638	577	501
8	359	145	142	74	102	369	453	144	568	670	514	452
9	330	187	143	78	164	309	335	639	---	391	610	496
10	353	106	67	38	284	403	554	347	566	350	556	433
11	325	86	107	175	233	385	292	246	420	410	620	476
12	239	83	99	129	198	374	524	272	334	546	612	467
13	288	90	139	161	230	402	415	451	320	374	551	446
14	259	225	85	155	208	399	581	595	607	498	542	404
15	31	249	69	53	220	409	558	533	206	616	540	327
16	99	98	106	131	188	390	503	109	618	578	579	428
17	89	208	26	177	173	246	561	308	475	337	591	449
18	215	147	130	167	206	235	552	590	530	461	591	419
19	289	155	158	175	209	445	545	647	458	346	580	430
20	290	179	102	211	170	362	493	490	505	596	488	398
21	246	158	59	177	243	296	362	574	609	448	424	386
22	136	49	67	176	260	337	502	252	647	539	461	398
23	208	193	78	180	302	197	543	317	573	412	515	403
24	245	145	141	139	293	354	500	214	675	533	367	241
25	245	139	89	93	282	449	311	313	676	314	542	151
26	139	166	92	80	283	394	308	401	620	265	530	298
27	119	131	67	---	37	95	183	154	556	403	510	356
28	---	101	139	---	144	128	282	610	340	648	542	349
29	---	106	131	---	---	469	448	547	671	652	491	224
30	273	37	89	---	---	200	433	667	619	611	406	266
31	257	---	142	---	---	400	---	514	---	654	464	---
TOTAL	7407	4412	3047	3361	4849	10229	13092	13059	14783	16198	16677	11915

PERIOD OF RECORD: August 1978 through September 1981.

WIND DIRECTION (DEGREES FROM TRUE NORTH, CLOCKWISE)

PERIOD: August 16, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	237
2											---	176
3											---	147
4											---	225
5											---	200
6											---	236
7											---	78
8											---	223
9											---	130
10											---	117
11											---	163
12											---	153
13											---	---
14											---	---
15											---	111
16											189	246
17											243	156
18											254	92
19											168	265
20											104	213
21											223	192
22											76	182
23											287	243
24											129	120
25											219	167
26											294	---
27											332	---
28											259	---
29											221	---
30											88	---
31											152	---
MEAN											202	177

PERIOD: February 2, 1979, through September 30, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	107	213	175	295	204	---	287
2					293	158	149	254	274	185	---	152
3					118	182	201	134	280	72	103	188
4					275	235	255	156	264	140	94	288
5					6	265	52	119	260	156	146	278
6					---	263	169	206	309	164	199	127
7					---	219	279	303	322	177	134	142
8					---	311	228	194	261	230	167	147
9					---	333	155	76	273	224	285	198
10					---	246	124	49	241	142	206	214
11					---	230	94	---	216	250	161	277
12					---	270	314	302	213	153	322	305
13					---	305	296	251	245	272	73	280
14					---	182	158	266	36	271	140	230
15					---	177	129	158	155	254	168	195
16					---	172	141	243	111	126	223	235
17					---	290	156	300	138	168	230	329
18					---	10	254	214	161	230	138	163
19					---	337	324	299	289	243	---	292
20					---	321	268	264	317	171	---	195
21					---	141	299	200	266	164	---	186
22					10	311	95	197	101	206	---	247
23					128	303	86	191	159	113	---	245
24					172	207	247	172	263	144	303	181
25					214	330	290	326	104	51	94	---
26					253	108	341	170	133	80	234	---
27					129	90	276	182	203	55	161	255
28					156	189	288	280	257	161	283	243
29					---	194	101	168	137	269	130	247
30					---	218	165	322	153	276	135	278
31					---	293	---	289	---	183	262	---
MEAN					159	226	205	215	215	179	184	229

WIND DIRECTION (DEGREES FROM TRUE NORTH, CLOCKWISE)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	---	230	222	182	187	112	170	113			---
2	301	---	223	134	238	212	100	171	133			---
3	300	---	251	234	187	189	55	172	131			---
4	239	---	261	265	302	328	235	60	23			---
5	334	---	292	120	289	236	216	64	322			---
6	273	---	301	318	124	256	265	39	325			---
7	194	---	227	294	135	252	324	97	20			---
8	259	---	241	290	239	262	283	160	259			---
9	---	---	242	146	296	302	178	105	327			---
10	---	---	302	198	320	250	131	50	166			---
11	---	---	236	231	283	167	178	212	130			---
12	---	---	260	208	286	307	272	77	175			---
13	---	237	221	227	336	248	202	71	250			---
14	---	264	253	194	343	178	146	107	148			---
15	---	248	---	245	307	310	177	145	112			---
16	---	247	---	168	234	319	316	152	220			---
17	---	213	---	230	204	238	208	123	241			---
18	---	298	---	346	130	234	269	163	106			---
19	---	317	---	250	182	308	200	208	164			---
20	---	293	---	254	109	276	179	213	101			---
21	---	269	---	311	264	153	276	192	154			---
22	---	259	---	294	325	264	69	185	---			---
23	---	279	---	285	298	170	152	164	---			---
24	---	215	---	319	319	171	135	157	---			---
25	---	288	---	350	210	108	127	171	---			---
26	---	---	---	300	262	173	131	237	---			100
27	---	---	---	286	277	158	160	137	---			101
28	---	314	171	254	108	165	161	257	---			138
29	---	276	173	145	149	212	149	358	---			176
30	---	271	253	189	---	146	137	8	---			183
31	---	---	214	201	---	150	---	331	---			---
MEAN	267	268	242	242	239	223	185	153	172			140

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	173	49	195	---					---	130	170
2	188	204	130	304	---					---	1	301
3	197	231	96	179	---					---	27	112
4	137	273	268	156	---					---	343	152
5	193	191	8	240	224					---	284	67
6	145	213	43	345	217					---	314	333
7	184	---	269	261	266					---	294	257
8	186	---	198	5	---					---	325	182
9	225	71	266	109	---					---	138	330
10	268	---	102	251	217					---	228	278
11	130	2	200	173	183					---	243	201
12	121	---	252	203	169					---	162	255
13	268	273	165	249	178					---	152	64
14	129	---	182	307	184					---	65	119
15	70	---	233	80	202					---	299	99
16	29	---	205	176	189					---	159	150
17	299	---	347	150	207					---	160	169
18	209	203	324	193	209					---	192	338
19	220	212	190	300	175					---	130	163
20	305	201	122	162	230					---	249	288
21	110	188	137	190	237					---	4	170
22	111	271	31	192	---					---	305	157
23	286	186	12	175	---					---	16	355
24	266	189	171	200	---					---	7	148
25	118	184	317	263	---					---	86	207
26	111	236	160	287	---					---	93	293
27	153	161	198	---	---					---	143	199
28	---	236	210	---	---					198	159	293
29	---	174	180	---	---					198	186	305
30	11	346	222	---	---					262	231	315
31	123	---	280	---	---					337	351	---
MEAN	172	201	180	206	206					249	177	216

PERIOD OF RECORD: August 1978 through September 1981.

WIND RUN (MILES PER HOUR PER DAY)

PERIOD: August 16, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	225
2											---	129
3											---	202
4											---	137
5											---	175
6											---	148
7											---	284
8											---	292
9											---	243
10											---	233
11											---	186
12											---	369
13											---	---
14											---	---
15											---	149
16											236	380
17											458	198
18											330	355
19											193	443
20											135	211
21											202	180
22											378	85
23											155	179
24											190	195
25											249	83
26											214	212
27											197	249
28											169	401
29											121	257
30											214	186
31											234	---
TOTAL											3675	6386

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	338	112	573	86	199	190	225	260	234	---	286
2	428	312	95	217	234	182	164	102	225	182	---	243
3	210	251	373	451	286	182	243	278	277	251	305	234
4	564	547	582	364	278	312	254	312	182	321	342	295
5	269	382	443	521	477	443	321	286	364	347	504	234
6	95	260	243	399	---	173	373	347	321	382	282	208
7	260	399	356	399	---	304	425	460	318	199	226	304
8	234	327	356	443	---	573	182	260	104	278	365	286
9	138	356	312	240	---	362	425	164	208	199	281	295
10	278	321	---	251	---	312	347	173	112	286	146	251
11	330	369	---	191	---	147	231	86	156	164	250	226
12	286	330	---	138	---	529	443	338	217	156	288	286
13	269	.0	486	243	---	443	251	164	321	181	216	199
14	260	190	530	199	---	251	25	182	278	294	414	217
15	173	243	477	199	---	234	164	190	217	234	430	199
16	286	286	451	425	---	191	72	312	312	147	278	156
17	191	199	191	390	---	278	18	460	469	147	203	225
18	234	373	234	225	---	390	156	147	547	138	171	217
19	278	147	338	382	---	408	243	442	217	138	---	286
20	330	130	408	330	---	199	234	208	425	208	---	130
21	260	234	642	320	---	80	208	295	156	225	---	295
22	130	243	382	347	---	217	286	269	208	260	---	234
23	390	373	260	156	182	121	380	104	164	138	---	138
24	503	364	260	321	251	269	260	321	225	234	164	95
25	312	147	356	168	338	582	356	208	234	156	156	---
26	260	182	269	156	208	251	295	164	217	121	95	---
27	104	304	443	81	286	312	156	260	260	138	191	260
28	173	538	434	54	425	304	278	294	243	147	208	286
29	295	173	486	121	---	277	199	234	173	234	182	173
30	295	95	191	138	---	234	251	243	416	191	321	303
31	260	---	364	225	---	251	---	286	---	121	356	---
TOTAL	8400	8413.0	10074	8667	3051	9010	7430	7814	7826	6451	6374	6561

WIND RUN (MILES PER HOUR PER DAY)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	---	151	148	186	305	249	155	185			---
2	410	---	299	213	175	147	243	171	314			---
3	364	---	---	391	190	352	86	258	452			---
4	304	---	52	305	351	281	219	235	247			---
5	321	---	53	262	201	235	184	157	252			---
6	286	---	65	556	203	205	251	263	210			---
7	251	---	34	282	123	177	364	159	215			---
8	260	---	39	242	196	211	275	301	251			---
9	---	---	39	262	425	393	187	361	155			---
10	---	---	48	472	466	179	299	282	301			---
11	---	---	28	415	207	296	242	155	269			---
12	---	---	---	457	260	285	209	196	251			---
13	---	---	227	358	169	242	134	159	199			---
14	---	312	336	191	157	304	242	158	199			---
15	---	238	---	164	266	231	222	287	304			---
16	---	357	---	156	154	208	266	352	130			---
17	---	151	---	240	142	279	241	124	191			---
18	---	278	---	300	132	208	260	154	304			---
19	---	239	---	163	106	347	246	287	373			---
20	---	65	---	342	232	266	182	201	147			---
21	---	127	---	513	107	239	302	218	147			---
22	---	155	---	303	114	248	360	323	---			---
23	---	113	---	---	220	344	369	494	---			---
24	---	104	---	48	297	162	277	492	---			---
25	---	253	---	28	181	248	194	511	---			---
26	---	---	---	30	224	108	199	321	---			204
27	---	---	---	30	376	230	212	181	---			377
28	---	436	216	20	388	162	294	282	---			184
29	---	216	219	---	359	175	352	144	---			303
30	---	225	143	125	---	200	283	160	---			425
31	---	---	95	142	---	137	---	95	---			---
TOTAL	2369	3269	2044	7158	6607	7404	7443	7636	5096			1493

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	193	219	162	---					---	250	321
2	207	325	426	281	---					---	218	330
3	265	299	186	137	---					---	113	243
4	157	224	228	123	---					---	223	374
5	216	226	289	317	350					---	191	226
6	238	163	140	288	510					---	168	221
7	227	230	161	442	456					---	158	159
8	191	433	369	171	---					---	150	153
9	554	192	334	278	---					---	126	142
10	429	243	232	233	350					---	118	215
11	256	167	352	158	194					---	177	118
12	447	237	257	270	189					---	145	192
13	317	116	106	269	231					---	132	185
14	255	90	228	127	294					---	141	259
15	316	162	405	158	374					---	283	116
16	382	192	344	195	330					---	229	156
17	369	271	315	201	317					---	202	230
18	196	276	424	212	391					---	213	120
19	320	441	163	213	300					---	148	249
20	237	335	318	115	429					---	140	255
21	327	391	209	160	358					---	188	240
22	362	325	167	194	---					---	114	181
23	301	184	319	100	---					---	137	131
24	182	279	281	237	---					---	86	254
25	248	282	254	472	---					---	127	365
26	452	281	262	316	---					---	112	434
27	133	221	301	---	---					---	194	195
28	---	532	252	---	---					235	286	255
29	---	303	281	---	---					153	225	147
30	---	361	237	---	---					246	283	194
31	162	---	161	---	---					152	354	---
TOTAL	8148	7974	8220	5829	5073					786	5631	6660

472115101534810 WEST BRANCH ANTELOPE CREEK WEATHER STATION NEAR ZAP, N. DAK. (BD-7)

LOCATION: Lat 47°21'15", long 101°53'48", in SW¼NW¼NE¼, sec. 28, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, about 900 feet southwest of farmstead and 5 miles northeast of Zap.

PERIOD OF RECORD: The weather station was established in 1978 with collection of most parameters beginning in June 1978 and discontinuing in April 1982.

INSTRUMENTATION: A data acquisition system consisting of a group of sensors connected to a modular data-logging microcomputer.

AIR TEMPERATURE: Linear thermistor model 4480, Weathertronics, Inc,; accuracy, ±0.1°C; and range, -50° to +50°C.

ACCUMULATED PRECIPITATION: Fischer and Porter digital rain gage with Alter-type windshield; accuracy, ±0.1 inch; and range, 0 to 20 inches.

RELATIVE HUMIDITY: Solid state model 5120, Weathertronics, Inc.; accuracy, ±1 percent; and range, 0 to 100 percent.

SOIL TEMPERATURE: Series of copper-constantan thermocouple; accuracy, ±0.1°C; and range, -40° to +100°C.

SOLAR RADIATION: Epply precision spectral pyranometer; accuracy, ±1 percent; and range, 0.3 to 3.0 microns.

WIND DIRECTION: Wind vane model 2020, Weathertronics, Inc.; accuracy, ±2°; and range, 0° to 360°.

WIND RUN: Anemometer model 2030, Weathertronics, Inc.; accuracy, ±0.15 mi/h; and range, 0.5 to 100 mi/h.

PERIOD OF RECORD: October 1976 through April 1982.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1977.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	[2]30.5	[2]5.0		[2]16.5	[2]-6.0		[2]-5.0	[2]-19.0		[2]-18.0	[2]-31.0	
2	[2]25.5	[2]7.0		[2]20.0	[2]-2.0		[2].0	[2]-16.5		[2]-16.5	[2]-32.0	
3	[2]29.0	[2]13.0		[2]10.0	[2]-3.0		[2]1.5	[2]-15.5		[2]-15.0	[2]-33.5	
4	[2]25.0	[2]-2.0		[2]11.5	[2]-9.0		[2]-1.0	[2]-10.5		[2]-21.0	[2]-31.0	
5	[2]11.0	[2]-2.0		[2]12.0	[2].5		[2]-5.5	[2]-10.0		[2]-14.0	[2]-24.5	
6	[2]10.5	[2]-3.0		[2]7.0	[2]-.5		[2]-5.5	[2]-27.0		[2]-12.0	[2]-20.0	
7	[2]8.0	[2]-9.0		[2]7.0	[2]-11.5		[2]-11.5	[2]-24.0		[2]-11.0	[2]-18.0	
8	[2]14.0	[2]-9.0		[2]7.0	[2]-11.5		[2]-15.5	[2]-19.5		[2]-9.5	[2]-32.0	
9	[2]18.0	[2]-1.0		[2]14.0	[2]-1.0		[2]-11.5	[2]-15.5		[2]-23.5	[2]-36.5	
10	[2]25.0	[2]-2.0		[2]5.5	[2]-5.0		[2]-10.0	[2]-28.0		[2]-15.0	[2]-32.0	
11	[2]26.5	[2]1.5		[2]-1.0	[2]-15.0		[2].0	[2]-28.5		[2]-22.0	[2]-32.0	
12	[2]21.0	[2].5		[2]-4.5	[2]-17.0		[2]4.0	[2]-7.0		[2]-19.5	[2]-31.5	
13	[2]19.5	[2]-1.5		[2]-.5	[2]-17.0		[2]-5.5	[2]-12.0		[2]-13.5	[2]-31.5	
14	[2]21.0	[2]-1.5		[2]5.5	[2]-15.0		[2]4.0	[2]-11.5		[2]-9.0	[2]-15.5	
15	[2]10.5	[2]-2.0		[2]5.0	[2]-14.5		[2]3.0	[2]-4.5		[2]-15.0	[2]-26.5	
16	[2]6.5	[2]-11.5		[2]8.5	[2]-14.0		[2]1.5	[2]-4.0		[2]-18.0	[2]-33.5	
17	[2]5.5	[2]-11.5		[2]10.0	[2]-5.0		[2]5.5	[2]-8.5		[2]-18.0	[2]-33.5	
18	[2]7.0	[2]-2.0		[2]13.0	[2]-1.5		[2]7.0	[2]-7.0		[2]-20.0	[2]-29.0	
19	[2]4.5	[2]-2.0		[2]9.0	[2]-6.5		[2]5.0	[2]-7.0		[2]-1.5	[2]-27.0	
20	[2]9.5	[2]-2.0		[2]6.0	[2]-8.5		[2]-4.5	[2]-16.0		[2]-.5	[2]-13.0	
21	[2]7.0	[2]-6.5		[2]4.5	[2]-8.0		[2]-9.5	[2]-14.5		[2]-1.0	[2]-13.5	
22	[2]4.5	[2]-8.5		[2]2.0	[2]-18.0		[2]2.0	[2]-15.5		[2]-.5	[2]-5.5	
23	[2]5.5	[2]-7.0		[2]-6.0	[2]-18.5		[2]-3.5	[2]-19.5		[2]2.0	[2]-10.0	
24	[2]-3.0	[2]-3.5		[2]3.0	[2]-17.0		[2].5	[2]-18.5		[2].0	[2]-8.0	
25	[2].0	[2]-9.5		[2]6.0	[2]-.5		[2]-.5	[2]-11.0		[2]-3.0	[2]-10.0	
26	[2]-1.5	[2]-9.5		[2]1.0	[2]-13.0		[2]-1.5	[2]-13.0		[2]-1.0	[2]-15.5	
27	[2]-1.0	[2]-5.0		[2]-12.0	[2]-21.0		[2]6.5	[2]-13.0		[2]-7.0	[2]-10.5	
28	[2]5.0	[2]-1.0		[2]-18.0	[2]-22.0		[2].5	[2]-14.5		[2]-10.0	[2]-31.0	
29	[2]18.0	[2]-1.0		[2]-13.5	[2]-24.0		[2]-10.5	[2]-17.0		[2]-24.0	[2]-32.0	
30	[2]15.0	[2]1.0		[2]-9.5	[2]-23.5		[2]-13.5	[2]-27.0		[2]-13.5	[2]-29.5	
31	[2]11.0	[2]-6.0		---	---		[2]-11.5	[2]-27.0		[2]-15.0	[2]-25.0	
MONTH	[2]30.5	[2]-11.5		[2]20.0	[2]-24.0		[2]7.0	[2]-28.5		[2]2.0	[2]-36.5	

[2]Data obtained from the National Weather Service station at Beulah, N. Dak.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1977--Continued.

DAY	FEBRUARY MAX	FEBRUARY MIN	FEBRUARY MEAN	MARCH MAX	MARCH MIN	MARCH MEAN	APRIL MAX	APRIL MIN	APRIL MEAN	MAY MAX	MAY MIN	MAY MEAN
1	[2]-8.5	[2]-24.0		[2]0.0	[2]-11.5		[2]7.0	[2]-7.0		[2]29.5	[2]3.5	
2	[2]-1.5	[2]-25.0		[2]-.5	[2]-11.5		[2]8.5	[2]-8.5		[2]16.0	[2]3.5	
3	[2]-1.5	[2]-27.0		[2]1.0	[2]-9.0		[2]6.0	[2]-8.0		[2]21.5	[2]3.5	
4	[2]3.5	[2]-28.5		[2].0	[2]-10.5		[2].0	[2]-5.5		[2]30.5	[2]11.5	
5	[2]-.5	[2]-14.0		[2]3.5	[2]-11.0		[2]1.5	[2]-6.5		[2]25.5	[2]4.0	
6	[2]-11.0	[2]-23.0		[2]4.5	[2]-10.5		[2]8.5	[2]-5.5		[2]19.5	[2]1.0	
7	[2]-6.5	[2]-20.0		[2]11.5	[2]-9.0		[2]21.0	[2]-3.5		[2]15.0	[2]2.0	
8	[2].5	[2]-15.5		[2]15.0	[2]-1.0		[2]21.0	[2]-9.0		[2]24.0	[2]4.5	
9	[2]4.0	[2]-9.0		[2]17.0	[2]-1.0		[2]27.0	[2]3.5		[2]30.0	[2]9.5	
10	[2]5.5	[2]-8.5		[2]13.5	[2]-2.0		[2]33.5	[2]6.5		[2]33.0	[2]9.5	
11	[2]5.5	[2]-1.5		[2]10.5	[2]-1.5		[2]22.0	[2].5		[2]31.5	[2]15.0	
12	[2]6.0	[2]-1.0		[2]5.5	[2]-4.0		[2]19.0	[2].0		[2]29.0	[2]7.0	
13	[2]3.0	[2]-5.0		[2]6.0	[2]-3.5		[2]19.0	[2]-1.5		[2]33.0	[2]7.0	
14	[2].5	[2]-9.0		[2]7.0	[2]-1.5		[2]21.5	[2]4.0		[2]34.0	[2]13.5	
15	[2]-5.5	[2]-15.0		[2]8.0	[2]-5.0		[2]22.0	[2]7.0		[2]34.0	[2]10.5	
16	[2].0	[2]-12.0		[2]8.0	[2]-10.0		[2]22.0	[2]6.5		[2]29.5	[2]10.5	
17	[2]4.0	[2]-3.5		[2]11.5	[2]-10.0		[2]18.5	[2]8.0		[2]29.5	[2]10.5	
18	[2]4.0	[2]-3.0		[2]8.5	[2]-7.0		[2]18.5	[2]8.5		[2]29.0	[2]10.5	
19	[2]2.0	[2]-5.0		[2]5.5	[2]-8.5		[2]16.5	[2]4.5		[2]30.0	[2]10.0	
20	[2].0	[2]-5.5		[2]4.5	[2]-10.5		[2]13.0	[2]-3.0		[2]17.0	[2]5.5	
21	[2]5.5	[2]-5.0		[2].0	[2]-10.5		[2]16.5	[2]-4.0		[2]22.0	[2]5.0	
22	[2]10.5	[2]-4.0		[2]9.0	[2]-6.5		[2]17.0	[2]-1.0		[2]24.0	[2]6.0	
23	[2]4.0	[2]-4.5		[2]10.0	[2]-7.0		[2]23.0	[2]3.0		[2]24.5	[2]10.0	
24	[2]-1.0	[2]-3.0		[2]10.5	[2]-6.5		[2]18.0	[2]-5.0		[2]28.5	[2]11.0	
25	[2]-.5	[2]-2.0		[2]19.5	[2]-1.5		[2]19.5	[2]-3.5		[2]35.0	[2]20.0	
26	[2]-.5	[2]-13.0		[2]1.5	[2]-1.5		[2]27.0	[2]-.5		[2]30.0	[2]16.0	
27	[2]-1.5	[2]-12.0		[2]7.0	[2]-1.0		[2]30.0	[2]5.0		[2]26.5	[2]15.5	
28	[2]-.5	[2]-9.0		[2]20.0	[2].0		[2]21.5	[2]1.0		[2]20.5	[2]10.5	
29	---	---		[2]16.0	[2].0		[2]24.5	[2]1.0		[2]21.5	[2]8.0	
30	---	---		[2]1.5	[2]-6.0		[2]30.0	[2]2.0		[2]20.0	[2]5.0	
31	---	---		[2]6.0	[2]-8.0		---	---		[2]20.0	[2]5.0	
MONTH	[2]10.5	[2]-28.5		[2]20.0	[2]-11.5		[2]33.5	[2]-9.0		[2]35.0	[2]1.0	

DAY	JUNE MAX	JUNE MIN	JUNE MEAN	JULY MAX	JULY MIN	JULY MEAN	AUGUST MAX	AUGUST MIN	AUGUST MEAN	SEPTEMBER MAX	SEPTEMBER MIN	SEPTEMBER MEAN
1	[2]25.0	[2]6.0		[2]24.0	[2]7.0		[2]26.5	[2]9.0		[2]18.0	[2]6.5	
2	[2]26.5	[2]7.0		[2]29.0	[2]7.0		[2]26.5	[2]12.0		[2]14.5	[2]8.0	
3	[2]29.5	[2]14.0		[2]33.0	[2]14.0		[2]26.5	[2]9.0		[2]21.0	[2]8.5	
4	[2]25.5	[2]11.0		[2]31.0	[2]14.0		[2]23.5	[2]11.0		[2]22.0	[2]11.0	
5	[2]29.5	[2]11.0		[2]30.5	[2]14.0		[2]24.0	[2]6.5		[2]25.5	[2]12.0	
6	[2]27.0	[2]8.0		[2]31.0	[2]18.0		[2]24.5	[2]7.0		[2]30.0	[2]13.5	
7	[2]30.0	[2]8.0		[2]30.5	[2]14.0		[2]28.5	[2]9.5		[2]16.0	[2]11.5	
8	[2]35.0	[2]6.5		[2]26.0	[2]10.0		[2]23.0	[2]9.5		[2]28.5	[2]12.0	
9	[2]26.0	[2]13.0		[2]23.0	[2]10.5		[2]30.5	[2]9.5		[2]22.0	[2]6.5	
10	[2]28.5	[2]15.5		[2]27.0	[2]16.0		[2]31.0	[2]5.5		[2]19.0	[2]4.5	
11	[2]29.5	[2]15.0		[2]26.0	[2]13.5		[2]22.0	[2]2.0		[2]25.0	[2]4.5	
12	[2]21.0	[2]11.0		[2]19.5	[2]9.5		[2]29.5	[2]4.5		[2]22.0	[2]5.0	
13	[2]19.5	[2]11.0		[2]27.0	[2]11.0		[2]26.5	[2]4.5		[2]18.5	[2]6.0	
14	[2]18.0	[2]10.5		[2]28.0	[2]11.5		[2]21.5	[2]2.0		[2]23.5	[2]8.0	
15	[2]25.0	[2]13.0		[2]24.5	[2]12.0		[2]24.0	[2]12.0		[2]30.0	[2]9.5	
16	[2]26.5	[2]12.0		[2]30.5	[2]13.0		[2]23.0	[2]11.0		[2]28.0	[2]12.0	
17	[2]24.0	[2]12.0		[2]33.5	[2]15.5		[2]25.5	[2]4.0		[2]21.5	[2]9.0	
18	[2]23.5	[2]10.5		[2]40.5	[2]18.0		[2]25.5	[2]8.0		[2]19.0	[2]8.5	
19	[2]24.0	[2]10.5		[2]36.0	[2]19.5		[2]27.0	[2]8.0		[2]11.5	[2]5.0	
20	[2]21.5	[2]8.5		[2]29.0	[2]15.5		[2]28.5	[2]8.5		[2]17.0	[2]6.0	
21	[2]23.0	[2]9.0		[2]26.5	[2]11.5		[2]21.5	[2]8.5		[2]18.5	[2]8.5	
22	[2]20.5	[2]14.0		[2]30.5	[2]11.5		[2]25.0	[2]9.5		[2]13.0	[2]11.0	
23	[2]28.5	[2]14.5		[2]34.5	[2]15.5		[2]20.0	[2]11.0		[2]20.5	[2]13.0	
24	[2]28.5	[2]12.0		[2]37.0	[2]19.0		[2]18.5	[2]9.5		[2]13.5	[2]10.0	
25	[2]29.0	[2]13.5		[2]30.0	[2]10.0		[2]30.0	[2]11.0		[2]14.5	[2]10.5	
26	[2]35.0	[2]15.0		[2]26.5	[2]10.0		[2]28.0	[2]15.0		[2]18.0	[2]6.5	
27	[2]33.5	[2]13.5		[2]25.5	[2]16.0		[2]17.0	[2]12.0		[2]16.0	[2]2.0	
28	[2]30.5	[2]10.0		[2]26.5	[2]13.0		[2]20.0	[2]9.5		[2]21.5	[2]2.0	
29	[2]26.0	[2]11.0		[2]31.0	[2]13.0		[2]21.0	[2]10.0		[2]15.0	[2]7.0	
30	[2]30.0	[2]10.5		[2]35.0	[2]13.0		[2]29.0	[2]14.0		[2]14.0	[2]7.0	
31	---	---		[2]25.5	[2]9.0		[2]24.0	[2]11.5		---	---	
MONTH	[2]35.0	[2]6.0		[2]40.5	[2]7.0		[2]31.0	[2]2.0		[2]30.0	[2]2.0	

[2]Data obtained from the National Weather Service station at Beulah, N. Dak.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1978.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	[2]12.0	[2]4.0		[2]12.0	[2]0.0		2.5	-8.0		-11.0	-20.5	
2	[2]15.0	[2]-2.0		16.5	[2]-.5		-6.0	-8.5		[2]-11.0	[2]-16.5	
3	[2]16.0	[2]-2.0		7.0	-6.0		-7.0	-13.0		[2]-9.5	[2]-20.5	
4	[2]19.5	[2]5.5		12.0	-2.0		[2]-6.5	[2]-10.5		[2]-11.5	[2]-20.5	
5	[2]13.5	[2].5		11.0	1.0		[2]-8.5	[2]-25.0		-13.5	-18.5	
6	[2]9.5	[2]-4.0		[2]15.0	[2]4.5		[2]-19.0	[2]-26.0		[2]-12.5	[2]-16.5	
7	[2]9.5	[2]-5.0		[2]12.0	[2].5		[2]-12.0	[2]-25.5		[2]-14.0	[2]-20.0	
8	[2]5.0	[2].0		[2]16.0	[2]1.0		[2]-16.0	[2]-23.5		[2]-12.5	[2]-27.0	
9	[2]9.5	[2]2.0		[2]3.0	[2]-6.0		[2]-16.0	[2]-33.5		[2]-20.5	[2]-27.5	
10	[2]12.0	[2]-1.0		[2]4.5	[2]-11.0		[2]-25.5	[2]-34.0		[2]-28.5	[2]-36.0	
11	[2]6.5	[2]-1.0		[2]6.5	[2]-11.0		[2]-13.5	[2]-26.5		-20.0	-30.0	
12	[2]7.0	[2]1.0		[2]5.0	[2]-10.5		[2]1.5	[2]-13.5		-13.5	-23.5	
13	[2]20.0	[2]1.0		[2]9.5	[2]-4.5		[2]5.5	[2]-9.5		-20.0	-23.5	
14	[2]22.0	[2]5.0		[2]12.0	[2]-3.5		[2]-3.5	[2]-11.0		-14.5	-22.0	
15	[2]14.5	[2]-3.5		6.5	-4.5		[2]4.5	[2]-8.5		-14.5	-30.0	
16	[2]15.5	[2]-3.0		5.5	-4.5		[2]1.0	[2]-.5		-26.5	-37.0	
17	[2]25.5	[2]2.0		[2]13.0	[2]-5.0		[2].5	[2]-4.5		-19.5	-29.0	
18	[2]15.0	[2]-2.0		[2]4.5	[2]-10.5		[2]-4.0	[2]-9.5		-26.5	-30.0	
19	[2]20.0	[2]-.5		[2].0	[2]-10.5		[2]-5.5	[2]-10.5		-24.0	-35.5	
20	[2]26.5	[2]1.0		[2]-3.0	[2]-6.5		[2]-8.0	[2]-15.5		-21.0	-30.5	
21	[2]19.0	[2]2.0		[2]-6.5	[2]-23.5		[2]-13.0	[2]-18.5		-20.0	-26.5	
22	[2]14.0	[2]4.5		[2]-14.0	[2]-23.0		[2]-4.5	[2]-15.5		-9.0	-20.0	
23	[2]10.0	[2]1.5		[2]-10.0	[2]-22.0		[2]-4.0	[2]-13.5		-8.5	-15.5	
24	[2]13.5	[2]1.5		[2]-11.0	[2]-23.5		[2]-9.0	[2]-17.0		-8.0	-28.0	
25	[2]20.0	[2]8.0		[2]-18.5	[2]-24.0		[2]-13.5	[2]-16.0		-25.5	-30.0	
26	[2]25.5	[2]8.0		[2]-12.0	[2]-26.0		[2]-12.0	[2]-19.0		-25.5	-31.0	
27	[2]19.5	[2]2.0		[2]-.5	[2]-14.0		[2]-13.5	[2]-19.0		[2]-19.5	[2]-25.0	
28	[2]18.5	[2]2.0		[2]-3.0	[2]-11.5		[2]-5.0	[2]-13.5		[2]-19.0	[2]-24.5	
29	[2]19.5	[2]5.0		-4.5	-9.0		-5.5	-13.0		[2]-18.0	[2]-29.5	
30	[2]13.0	[2]-.5		2.0	-6.0		-10.5	-20.0		[2]-16.5	[2]-29.5	
31	[2]15.0	[2].5		---	---		-17.0	-23.5		[2]-13.0	[2]-28.5	
MONTH	[2]26.5	[2]-5.0		16.5	[2]-26.0		[2]5.5	[2]-34.0		-8.0	-37.0	

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	[2]-19.0	[2]-28.5		-15.5	-25.5		6.5	2.0		15.5	3.5	
2	[2]-12.0	[2]-28.0		-18.0	-25.5		6.0	3.0		16.5	2.0	
3	[2]-12.0	[2]-28.0		[2]-11.5	[2]-26.0		14.0	5.5		18.0	4.0	
4	[2]-9.0	[2]-19.0		[2]-14.0	[2]-28.0		15.5	4.0		15.0	6.5	
5	[2]-14.5	[2]-22.0		[2]-9.0	[2]-28.5		18.0	10.0		18.0	6.5	
6	[2]-14.0	[2]-22.0		[2]-10.5	[2]-25.0		14.5	4.0		18.0	6.5	
7	[2]-12.0	[2]-15.0		[2]-8.0	[2]-21.0		8.0	3.0		9.0	2.0	
8	[2]-10.0	[2]-15.0		[2].0	[2]-15.5		10.5	4.5		9.0	1.5	
9	[2]-10.5	[2]-15.0		[2]5.0	[2]-5.0		14.5	6.5		20.0	1.0	
10	[2]-8.0	[2]-13.0		[2]5.5	[2].0		14.5	3.5		23.0	6.5	
11	[2]-6.0	[2]-13.0		[2]5.5	[2]-3.0		14.5	-1.0		14.5	4.5	
12	[2]-11.5	[2]-17.0		-4.0	-8.5		-.5	-6.5		10.5	3.0	
13	[2]-10.0	[2]-16.0		-8.0	-11.5		1.5	-8.0		20.0	1.0	
14	[2]-8.5	[2]-18.5		-4.5	-10.0		5.5	-6.5		19.0	8.5	
15	[2]-11.0	[2]-17.0		-4.0	-14.5		1.5	-3.5		24.0	10.0	
16	[2]-11.0	[2]-20.5		-8.0	-17.0		2.0	-1.0		23.5	13.5	
17	[2]-11.5	[2]-22.0		-1.0	-16.5		2.0	-3.5		22.0	11.0	
18	[2]-11.5	[2]-20.5		1.0	-8.0		5.5	-5.5		20.0	8.5	
19	[2]-4.5	[2]-19.5		[2]6.0	[2]-5.5		1.0	-8.0		11.0	5.5	
20	[2]-3.5	[2]-19.0		[2]5.5	[2]-5.0		4.5	-9.0		18.0	3.0	
21	[2]-8.0	[2]-18.0		5.5	-3.0		6.5	-6.5		24.5	6.5	
22	[2]3.5	[2]-10.5		2.0	-4.5		5.5	.0		26.5	10.0	
23	[2]1.5	[2]-7.0		-1.0	-6.5		3.0	-1.0		25.0	11.0	
24	-3.0	-15.5		1.5	-4.5		7.0	-1.5		25.5	14.5	
25	-13.5	-21.5		8.5	-1.0		14.5	-1.5		21.0	8.0	
26	-10.5	-23.0		15.5	-1.0		18.5	2.0		19.0	9.5	
27	-14.5	-20.5		9.5	1.0		19.0	6.5		21.5	5.5	
28	[2]-10.0	[2]-15.5		[2]14.0	[2]1.5		13.5	8.0		23.5	9.0	
29	---	---		23.0	6.5		16.5	7.0		21.0	10.0	
30	---	---		26.5	7.5		16.5	5.5		13.5	5.5	
31	---	---		18.0	4.0		---	---		9.0	4.5	
MONTH	[2]3.5	[2]-28.5		26.5	[2]-28.5		19.0	-9.0		26.5	1.0	

[2]Data obtained from the National Weather Service station at Beulah, N. Dak.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1978--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.0	4.5	---	25.5	15.5	---	22.5	10.5	17.0	30.0	15.0	22.5
2	16.5	4.5	---	26.5	14.5	---	15.5	4.5	11.5	32.5	12.0	22.5
3	20.5	6.5	---	[2]30.0	[2]14.5	---	21.0	3.0	13.0	38.0	15.5	26.0
4	22.0	12.0	---	[2]32.0	[2]17.0	---	27.5	9.0	18.0	37.0	15.0	25.5
5	24.0	10.0	---	[2]28.5	[2]15.0	---	31.5	9.5	21.5	41.0	17.5	29.5
6	22.0	9.0	---	23.0	14.5	---	35.5	13.5	25.0	27.5	15.5	22.0
7	16.0	4.5	---	23.5	12.0	17.5	30.5	12.0	22.5	29.5	13.0	20.0
8	23.5	8.5	---	20.5	9.5	15.5	24.5	11.5	19.0	31.5	14.5	23.0
9	30.0	8.5	---	20.5	9.0	15.0	29.0	9.5	21.0	29.0	5.5	19.0
10	18.0	12.0	---	25.0	9.5	17.5	34.5	17.5	25.5	31.0	16.0	23.5
11	18.0	8.5	---	26.5	11.0	---	35.0	14.0	24.5	22.0	14.0	18.5
12	22.0	7.0	---	19.0	11.0	---	38.0	13.0	27.0	20.0	8.5	14.0
13	24.0	9.0	---	29.5	9.0	---	35.0	17.5	25.5	13.0	6.5	10.0
14	26.5	12.0	---	29.0	13.5	22.0	20.0	11.0	---	13.0	6.5	10.5
15	22.0	14.5	---	31.0	16.0	24.0	21.5	5.0	---	25.0	3.5	14.0
16	20.5	11.0	---	34.5	16.0	26.0	35.5	4.5	---	17.5	5.5	12.5
17	16.0	10.0	---	25.5	15.5	21.5	23.0	13.5	---	13.0	6.5	9.0
18	28.0	8.5	---	24.0	14.5	19.0	19.5	6.0	---	12.5	6.5	10.0
19	19.0	9.0	---	22.5	12.5	16.0	28.5	4.0	---	10.5	2.5	7.0
20	18.0	5.5	---	20.5	10.5	16.0	29.0	6.5	20.0	12.0	.5	5.5
21	24.5	6.5	---	21.5	10.0	17.0	23.0	12.0	16.5	19.5	2.0	10.5
22	23.5	9.5	---	25.0	12.0	18.5	21.0	13.0	16.0	24.0	6.5	14.5
23	29.5	10.5	---	28.5	10.5	21.0	25.0	11.5	17.0	23.0	8.5	15.5
24	27.5	15.5	22.0	33.0	15.5	24.5	30.5	9.5	21.5	20.0	5.5	13.5
25	23.0	15.0	---	30.0	15.0	23.0	34.0	17.0	25.0	28.0	7.5	17.0
26	20.5	13.5	---	26.0	13.0	20.0	29.5	15.0	23.0	17.5	3.5	11.5
27	27.0	11.5	---	27.0	11.5	20.5	24.5	15.5	19.5	20.0	.0	11.0
28	29.0	13.5	---	23.5	15.0	20.0	24.0	12.0	17.5	21.5	8.0	14.5
29	24.5	15.5	---	20.5	14.0	16.5	23.5	12.0	---	12.0	4.5	8.5
30	25.5	16.5	---	25.0	11.0	18.0	25.5	5.5	---	22.5	4.0	13.0
31	---	---	---	23.0	9.5	17.0	28.5	11.0	---	---	---	---
MONTH	30.0	4.5	22.0	34.5	9.0	19.5	38.0	3.0	20.5	41.0	.0	16.0

[2]Data obtained from the National Weather Service station at Beulah, N. Dak.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1979.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.0	6.5	13.5	19.0	-0.5	7.5	-16.0	-23.0	-19.5	-19.0	-31.0	-24.0
2	11.5	6.0	8.5	22.5	1.0	10.5	-17.0	-25.5	-21.5	-21.0	-25.5	-22.5
3	12.0	7.0	8.5	14.0	2.0	7.5	-2.5	-26.0	-16.5	-19.0	-25.5	-22.0
4	9.5	6.0	7.5	18.0	4.0	8.5	1.5	-6.5	-2.5	-24.5	-32.0	-27.5
5	7.5	-1.0	5.0	5.0	-7.5	1.0	-5.5	-23.0	-14.5	-14.0	-31.5	-22.0
6	11.0	-2.5	3.5	9.5	-7.5	.0	-16.5	-25.0	-21.5	-15.5	-22.0	-19.0
7	16.0	-.5	7.5	18.0	-2.0	8.0	-17.0	-26.5	-22.0	-18.5	-23.5	-21.5
8	18.5	2.0	10.5	16.0	3.5	10.5	-16.0	-25.0	-19.5	-10.0	-17.5	-13.5
9	18.0	5.0	11.0	3.0	-3.0	.5	-8.5	-26.0	-17.0	-13.0	-21.5	-17.0
10	24.5	5.5	14.0	-3.0	-8.0	-5.0	.0	-9.0	-3.5	-22.5	-31.0	-25.5
11	15.0	6.0	11.0	-6.5	-10.0	-8.5	.5	-12.5	-5.0	-18.0	-27.5	-23.0
12	10.0	2.0	5.0	-5.5	-8.5	-6.5	1.5	-6.0	-3.5	-22.5	-31.5	-25.5
13	8.5	-2.0	3.5	-5.0	-8.0	-6.5	-4.0	-11.5	-8.0	-25.0	-29.0	-27.5
14	15.0	-3.0	6.5	-5.0	-13.0	-9.0	1.5	-7.5	-2.5	-23.0	-30.0	-27.0
15	10.0	-2.0	5.5	-3.0	-15.0	-10.5	-1.0	-8.0	-4.5	-19.5	-30.5	-25.5
16	15.5	-4.0	6.0	-2.5	-15.5	-10.0	-4.5	-12.0	-8.0	-17.5	-23.0	-20.5
17	12.0	5.0	8.0	-6.0	-10.5	-7.5	-6.0	-17.5	-11.0	-7.0	-21.5	-13.0
18	14.0	-5.0	5.5	-8.0	-18.5	-15.5	-8.5	-16.5	-12.0	-8.0	-14.5	-10.5
19	23.5	5.5	13.0	-16.0	-20.5	-18.5	-8.0	-16.0	-10.0	-6.5	-10.5	-9.0
20	24.5	6.0	15.5	-17.0	-24.5	-20.5	-6.0	-15.5	-10.5	-4.5	-12.0	-8.0
21	11.0	-1.0	7.0	-11.5	-27.0	-16.5	1.5	-7.5	-4.0	-3.5	-11.0	-8.0
22	9.0	-4.5	1.5	-8.5	-11.5	-9.5	-6.0	-14.0	-9.0	-10.0	-16.5	-12.0
23	18.5	-2.0	8.5	-4.5	-13.5	-9.0	-10.0	-21.0	-16.5	-16.5	-23.0	-19.5
24	22.5	3.5	10.0	.0	-9.5	-2.0	-6.0	-15.0	-11.5	-5.5	-16.0	-10.0
25	7.0	.0	5.0	-3.0	-6.5	-5.5	-6.0	-12.0	-8.5	-6.0	-20.0	-11.5
26	15.5	-3.5	5.0	-4.0	-6.5	-5.5	-9.5	-15.5	-11.5	-12.5	-22.0	-16.5
27	11.0	-1.5	4.0	-6.5	-19.0	-14.5	-13.0	-22.5	-16.5	-17.0	-25.0	-20.0
28	13.5	-1.0	5.5	2.5	-17.0	-6.5	-18.5	-27.0	-22.0	-17.5	-25.5	-21.5
29	15.0	.0	6.5	-13.0	-24.5	-17.0	-21.5	-28.0	-24.0	-19.5	-29.5	-24.5
30	7.5	-3.5	3.5	-13.0	-25.0	-18.0	-24.0	-31.0	-28.0	-19.0	-29.0	-24.0
31	14.5	-3.5	4.0	---	---	---	-24.5	-33.0	-29.5	-19.0	-28.0	-23.5
MONTH	24.5	-5.0	7.5	22.5	-27.0	-5.5	1.5	-33.0	-13.5	-3.5	-32.0	-19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-20.0	-26.5	-23.5	-11.0	-14.5	-13.0	-10.0	-15.0	-12.0	12.0	0.0	6.0
2	-19.5	-29.5	-26.0	-13.0	-18.0	-14.5	-2.0	-15.5	-9.5	7.0	-4.5	1.5
3	-16.5	-28.0	-23.5	-9.0	-22.0	-14.5	.5	-15.0	-5.0	8.0	-5.5	1.0
4	-18.0	-33.0	-24.5	-4.0	-16.5	-10.0	.0	-10.5	-4.5	7.0	-7.0	1.5
5	.5	-20.5	-7.5	3.0	-9.0	-2.0	-12.0	-19.0	-15.5	3.0	.0	1.5
6	-15.0	-22.5	-20.5	2.0	-4.0	-1.0	2.0	-14.0	-4.5	5.0	2.0	3.5
7	-19.0	-26.0	-21.0	2.0	-11.5	-4.0	3.0	-5.0	-2.0	6.0	.0	3.5
8	-16.0	-26.0	-22.0	2.0	-13.0	-3.0	-.5	-6.5	-4.0	5.5	.0	2.5
9	-14.0	-21.5	-17.0	-13.5	-21.5	-17.0	2.5	-6.0	-1.5	.0	-2.0	-.5
10	-10.5	-18.0	-14.5	-1.0	-23.5	-11.5	3.5	-1.5	.5	.5	-3.0	-1.0
11	-18.5	-30.0	-22.5	3.0	-4.5	-.5	.5	-.5	-.5	10.0	-2.0	4.0
12	-14.0	-26.5	-21.0	4.0	-5.0	.0	.0	-2.5	-1.0	14.5	.5	8.0
13	-6.5	-22.5	-15.5	-.5	-10.0	-5.5	.5	-3.0	-1.0	15.0	5.0	10.5
14	-6.5	-22.0	-15.5	-1.0	-12.5	-9.0	2.0	-5.0	-.5	15.5	3.0	10.5
15	-22.5	-33.0	-28.0	2.0	-11.5	-3.5	3.0	-6.0	-.5	22.0	1.5	14.0
16	-23.0	-33.0	-28.0	4.0	-6.5	.5	8.0	-.5	3.5	31.0	11.0	20.5
17	-17.5	-25.0	-21.5	2.5	-1.0	.5	15.5	3.5	8.5	14.0	5.5	11.5
18	-5.5	-21.5	-13.0	-1.5	-3.5	-2.0	22.5	7.5	15.5	15.0	3.0	10.0
19	4.0	-12.0	-4.5	-1.0	-3.0	-2.0	7.5	.5	3.5	10.5	5.0	8.0
20	-6.5	-14.0	-11.5	.0	-3.0	-1.0	12.5	-.5	6.5	14.5	3.5	7.5
21	-10.5	-15.0	-13.0	2.0	-4.0	1.0	13.0	-1.0	6.0	23.0	5.5	13.5
22	-10.0	-14.0	-11.5	3.0	-4.0	-1.0	11.0	-2.0	5.0	10.5	2.0	7.5
23	-14.5	-27.0	-19.5	.0	-9.0	-4.5	4.0	1.0	3.0	19.5	.5	11.0
24	-16.0	-27.5	-22.0	1.5	-9.5	-2.5	1.5	.0	1.0	22.5	7.5	15.5
25	-.5	-22.0	-10.0	1.0	-13.0	-6.5	7.5	.0	4.0	23.0	11.0	16.5
26	1.5	-9.5	-3.5	-7.0	-17.0	-11.5	6.0	-1.5	2.5	23.5	9.0	17.0
27	-4.0	-12.0	-9.5	-2.0	-11.0	-6.5	9.0	-2.5	3.5	24.5	7.5	18.0
28	-12.5	-16.0	-15.0	-5.5	-11.0	-9.0	6.5	-1.0	3.0	27.5	12.0	19.0
29	---	---	---	.5	-11.5	-5.0	5.5	-4.5	.5	12.5	9.0	11.0
30	---	---	---	1.0	-9.5	-4.5	12.0	-3.5	5.5	17.5	4.0	11.5
31	---	---	---	-.5	-9.0	-3.5	---	---	---	15.5	2.5	9.0
MONTH	4.0	-33.0	-17.5	4.0	-23.5	-5.5	22.5	-19.0	.5	31.0	-7.0	9.0

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1979--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	5.5	11.5	25.0	16.5	20.5	29.0	12.5	---	24.0	11.5	18.0
2	23.5	8.0	16.5	31.5	16.0	23.5	25.5	14.5	---	27.0	8.0	18.0
3	27.5	12.5	19.5	27.0	17.5	22.5	25.5	14.5	---	32.0	13.5	22.5
4	21.0	10.0	---	21.5	17.0	19.5	21.5	14.0	---	26.5	14.5	21.0
5	26.0	11.5	---	26.0	13.5	20.5	22.0	13.5	---	24.5	12.5	18.0
6	19.5	10.0	16.0	24.5	11.5	18.5	30.0	13.5	---	19.5	3.5	12.5
7	12.5	6.5	9.5	26.5	14.0	19.5	24.5	11.5	---	21.5	7.0	14.0
8	18.5	4.0	11.0	34.0	15.0	24.5	27.0	14.5	---	27.0	7.0	16.0
9	20.0	7.5	14.0	29.0	16.5	22.5	21.0	12.0	18.0	23.0	14.0	17.5
10	25.5	7.5	18.0	31.0	14.5	24.0	22.0	11.5	16.0	15.5	10.0	13.5
11	29.5	12.5	21.5	30.0	17.0	24.0	28.5	8.5	20.0	20.5	7.5	11.5
12	32.5	13.5	23.0	26.5	15.5	21.0	22.5	13.0	18.0	13.5	8.5	10.5
13	39.0	17.0	27.5	24.5	13.5	18.5	17.0	8.5	13.0	13.0	3.0	9.5
14	24.0	10.0	18.5	20.5	5.5	12.5	17.5	.0	11.0	21.5	2.5	12.0
15	23.0	8.0	17.0	16.0	6.5	---	22.5	12.5	16.5	28.5	6.5	17.5
16	24.0	13.0	18.5	19.0	8.0	---	30.0	11.0	19.5	33.5	10.5	22.0
17	22.0	11.5	16.5	21.5	5.5	---	30.0	13.5	22.5	23.0	8.5	18.0
18	23.5	9.5	17.0	31.0	9.0	---	30.5	11.5	22.5	23.0	5.0	14.5
19	18.5	14.5	16.0	26.5	10.0	---	29.5	13.5	23.0	25.5	9.0	16.5
20	24.0	11.5	18.0	30.5	11.5	---	26.5	14.5	20.0	17.0	1.5	10.0
21	25.5	8.5	18.0	34.5	14.5	---	21.0	16.5	18.0	24.0	1.5	14.5
22	15.5	11.0	13.0	32.5	15.5	---	23.5	12.0	17.5	17.0	7.0	13.5
23	20.0	10.5	15.0	24.5	10.5	---	21.0	7.0	14.0	21.0	4.5	12.0
24	27.5	13.0	19.5	27.5	10.5	---	24.0	6.0	16.5	22.5	5.0	13.5
25	21.0	12.5	17.5	22.5	12.5	---	18.5	12.5	15.0	26.5	6.5	16.5
26	25.5	10.0	19.0	20.0	13.5	---	22.5	12.0	---	29.5	12.0	20.0
27	26.0	12.5	20.0	23.5	12.0	---	26.0	11.0	17.0	19.0	7.0	15.0
28	24.5	13.0	19.0	26.5	10.0	---	26.5	12.0	19.5	28.5	5.0	15.5
29	29.5	12.0	22.0	25.5	13.5	---	23.0	12.5	17.5	20.5	3.5	13.0
30	28.5	13.0	22.5	25.5	9.0	---	26.5	10.0	18.5	22.0	5.5	13.5
31	---	---	---	24.5	9.0	---	30.5	14.0	23.5	---	---	---
MONTH	39.0	4.0	17.5	34.5	5.5	21.0	30.5	.0	18.0	33.5	1.5	15.5

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1980.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.5	3.5	11.0	2.5	-6.0	-1.5	-6.0	-11.5	-9.0	-4.0	-13.0	-8.5
2	18.0	9.5	13.0	-.5	-11.0	-5.5	4.0	-10.0	-1.5	-11.0	-17.5	-14.5
3	12.5	-1.5	8.0	4.0	-9.0	-2.5	5.0	-6.0	-.5	-5.5	-17.5	-12.0
4	24.0	-1.5	12.5	4.0	-6.0	-1.0	15.5	-1.0	6.0	-4.0	-17.0	-9.5
5	15.5	5.0	12.5	-.5	-5.0	-2.5	3.5	-3.0	.5	-8.5	-18.0	-12.5
6	18.5	2.0	10.0	4.5	-8.5	-3.0	8.0	-2.5	3.5	-8.0	-24.5	-19.0
7	15.5	7.0	10.5	-1.0	-11.0	-5.0	-3.0	-16.0	-9.0	-22.5	-29.5	-26.0
8	11.0	3.5	7.0	.0	-11.0	-6.0	6.0	-13.5	-2.0	-27.0	-32.0	-30.0
9	10.5	1.0	6.5	-5.5	-9.0	-8.0	5.0	-3.5	1.5	-22.0	-33.0	-26.0
10	22.5	7.5	16.5	-3.5	-8.0	-6.5	8.5	-15.0	-3.0	-15.0	-23.0	-19.0
11	17.5	.5	10.5	-2.0	-9.0	-4.5	-14.5	-20.5	-17.5	-21.0	-26.5	-24.5
12	4.5	-6.0	.5	4.0	-7.5	-1.5	1.0	-14.5	-7.5	2.5	-22.0	-11.5
13	13.0	-7.5	3.0	.0	-6.0	-2.5	-6.5	-18.0	-11.5	5.5	-10.0	-4.0
14	21.0	.0	10.0	13.0	-6.5	2.5	6.5	-12.5	-2.5	-3.5	-12.5	-8.0
15	23.0	4.0	13.0	14.0	.5	6.5	-13.5	-25.5	-20.0	5.0	-12.5	-4.5
16	11.5	-2.5	7.0	15.5	-2.0	12.5	-11.5	-27.5	-19.0	-1.0	-12.5	-6.5
17	16.0	.5	9.0	15.0	-2.0	11.0	1.0	-12.5	-5.0	1.5	-8.5	-4.0
18	13.5	-2.5	7.5	12.0	-5.5	10.0	11.5	-.5	4.5	-1.5	-14.5	-6.0
19	14.0	1.5	8.0	2.0	-5.5	6.0	12.5	-1.0	4.0	-4.5	-19.5	-12.0
20	9.5	2.5	5.5	3.0	-10.0	---	8.0	-3.0	2.0	-1.0	-15.0	-7.0
21	2.5	.0	1.5	3.5	-8.0	-4.0	11.0	-5.5	-.5	-1.5	-8.0	-4.0
22	6.5	-4.5	1.0	3.0	-11.5	-4.5	3.5	-7.0	-2.0	-4.5	-13.5	-9.0
23	12.0	-5.5	3.0	.5	-12.5	-6.5	-4.0	-5.5	-5.0	5.5	-9.5	.0
24	12.0	1.5	6.0	-5.0	-12.5	-8.5	-4.5	-6.5	-5.5	3.0	-15.5	-1.5
25	10.0	1.0	5.0	-5.5	-14.0	-8.5	1.5	-5.5	-2.5	-16.0	-24.5	-21.0
26	14.0	3.0	8.5	.0	-6.5	-4.5	4.5	-5.5	.5	-19.5	-27.0	-23.5
27	17.5	3.5	9.0	-5.0	-11.0	-8.0	6.0	-7.0	-2.0	-19.0	-27.5	-24.0
28	13.0	1.0	6.5	-8.0	-13.0	-9.5	6.0	-6.0	-2.0	-21.0	-29.0	-25.5
29	7.0	1.5	4.5	-6.0	-15.5	-9.5	4.0	-10.5	-3.5	-18.0	-31.5	-24.0
30	9.0	-1.0	3.0	-3.0	-13.0	-7.0	1.5	-11.5	-6.0	-13.5	-28.0	-20.5
31	5.0	-1.5	1.5	---	---	---	.0	-14.0	-8.5	-6.5	-22.0	-16.0
MONTH	24.0	-7.5	7.5	15.5	-15.5	-2.5	15.5	-27.5	-4.0	5.5	-33.0	-14.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-7.5	-18.5	-12.0	-4.5	-26.0	-14.0	6.0	0.0	2.5	25.0	7.0	17.0
2	-6.0	-13.0	-9.0	1.5	-13.0	-6.0	7.5	-.5	2.5	27.5	7.5	19.0
3	-5.0	-7.0	-6.0	-6.0	-16.0	-11.0	7.0	-3.5	1.5	27.0	7.5	19.5
4	.5	-6.0	-3.0	-15.0	-21.5	-18.5	14.0	-2.5	4.5	26.5	12.0	19.0
5	.0	-13.5	-4.0	-11.0	-20.5	---	18.5	-3.0	9.0	21.0	6.5	15.0
6	-7.0	-16.0	-10.5	-8.0	-22.0	---	20.5	.0	10.0	14.0	-2.0	7.5
7	-6.0	-11.5	-9.0	-.5	-22.0	---	6.5	-1.5	.5	7.5	-6.0	1.5
8	-2.5	-10.5	-7.0	-3.0	-15.5	---	.0	-5.5	-2.0	15.0	-5.0	7.0
9	1.0	-12.0	-6.0	4.0	-17.5	---	9.0	-8.0	1.5	21.0	3.0	11.5
10	-9.5	-14.0	-11.5	-10.5	-21.0	---	7.5	-2.0	2.5	12.5	-2.0	7.5
11	-9.0	-19.5	-14.5	-2.5	-9.0	---	8.0	-4.5	1.5	16.0	-5.0	7.5
12	-6.0	-16.5	-11.0	-4.0	-12.0	---	10.0	-2.5	3.5	16.0	-2.0	9.0
13	-6.5	-17.0	-12.5	1.0	-14.0	---	12.5	-6.0	4.5	10.5	-1.0	5.5
14	-15.5	-20.5	-17.5	1.0	-8.0	-4.0	19.0	-.5	9.0	16.0	-5.0	8.0
15	-13.0	-20.5	-16.5	5.5	-3.0	.0	14.0	-5.5	7.5	20.5	5.5	14.0
16	-8.5	-20.5	-15.0	-3.0	-10.5	-7.0	17.5	3.5	10.5	21.5	8.0	15.5
17	.0	-22.0	-10.0	4.0	-11.5	-2.5	24.0	3.5	14.5	21.5	5.0	14.0
18	-2.0	-12.0	-6.5	11.0	-2.0	3.5	29.0	7.5	17.5	25.0	3.5	17.0
19	-2.0	-7.5	-5.0	3.5	-1.5	1.0	26.0	4.5	17.5	28.0	10.5	19.5
20	-3.5	-11.0	-6.5	1.0	-6.5	-2.0	31.0	11.0	22.5	30.0	13.0	22.0
21	-3.5	-11.0	-8.0	3.0	-7.5	-1.5	32.5	13.5	22.5	34.5	15.0	26.0
22	-6.5	-19.0	-11.5	.5	-3.5	-1.5	16.0	7.5	12.0	35.0	16.5	27.0
23	-1.0	-17.0	-6.5	-1.5	-7.0	-4.5	17.5	2.0	10.5	29.0	17.5	23.5
24	-3.0	-20.0	-11.5	5.5	-7.0	-1.5	16.5	.0	9.0	28.5	16.0	22.5
25	-2.0	-26.0	-12.5	5.0	-5.0	-.5	18.0	-1.5	10.0	29.0	13.0	21.5
26	.5	-10.0	-4.0	3.5	-4.0	-.5	18.5	4.0	13.0	28.5	7.5	19.0
27	4.0	-12.5	-6.0	8.0	-4.5	-1.0	21.5	2.5	13.0	31.5	7.0	21.5
28	-12.5	-25.5	-17.5	3.5	-4.0	-.5	24.5	2.5	15.0	29.0	15.0	20.0
29	-19.0	-30.0	-25.0	11.5	-3.0	3.5	24.0	3.5	15.5	21.5	12.5	17.0
30	---	---	---	10.5	-3.0	4.0	22.5	5.5	15.0	22.5	11.0	15.5
31	---	---	---	8.5	-2.0	3.5	---	---	---	20.5	9.0	14.5
MONTH	4.0	-30.0	-10.0	11.5	-26.0	-3.0	32.5	-8.0	9.0	35.0	-6.0	15.5

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1980--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.5	7.5	14.0	26.0	10.5	18.0	24.5	13.5		18.5	6.0	---
2	22.5	9.0	16.0	30.0	13.5	22.5	29.5	12.0		24.0	9.5	---
3	26.5	10.0	18.5	31.0	14.0	23.0	24.0	12.0		19.5	8.0	---
4	22.5	14.0	18.5	27.5	16.0	---	14.5	9.0		21.5	6.0	---
5	24.5	14.5	18.5	31.0	11.5	---	24.0	9.5		28.0	5.5	---
6	19.0	10.5	14.5	34.0	17.0	---	26.0	11.5		31.5	8.0	---
7	16.5	6.5	10.5	26.0	13.5	---	22.0	9.0		33.0	13.0	---
8	22.5	6.0	15.0	24.5	12.0	20.5	24.0	8.5		[2]35.0	[2]9.5	---
9	26.5	7.5	18.5	31.5	16.0	23.5	16.0	13.0		[2]22.0	[2]3.0	---
10	29.5	10.5	22.0	39.0	18.5	29.0	20.0	10.5		27.0	4.0	17.0
11	32.5	14.5	24.0	30.0	16.0	24.0	26.0	10.5		21.0	12.0	16.0
12	24.5	15.0	19.5	31.5	12.5	25.0	18.5	11.5		16.5	11.0	14.0
13	24.5	14.0	19.5	34.0	17.5	27.0	19.5	10.0		18.0	8.5	13.0
14	23.5	14.0	19.0	29.0	14.0	21.5	21.5	7.0		18.0	6.0	13.0
15	19.0	9.0	15.5	24.5	14.0	19.0	19.0	12.0		14.0	7.5	11.0
16	24.0	8.5	17.5	28.5	12.5	21.0	13.0	10.0		13.5	3.0	8.5
17	28.0	14.0	21.0	26.5	16.0	21.0	[2]14.0	[2]6.0		14.5	5.0	9.5
18	17.0	8.0	12.5	26.5	12.0	20.5	[2]23.5	[2]10.0		10.0	4.5	7.0
19	21.0	4.0	15.0	18.5	14.0	16.0	[2]34.0	[2]13.5		19.0	7.5	12.0
20	28.0	12.0	20.0	20.5	13.0	16.5	[2]31.5	[2]16.0		24.5	8.0	15.5
21	25.5	11.5	19.5	24.0	9.5	17.0	[2]23.0	[2]11.0		14.0	6.0	11.0
22	31.0	15.5	22.5	32.0	12.5	23.5	[2]24.0	[2]7.0		11.5	3.5	7.5
23	34.0	16.5	25.5	36.5	20.0	27.0	[2]24.5	[2]7.0		16.5	5.0	9.5
24	27.5	12.5	20.5	28.5	16.5	23.0	[2]25.5	[2]11.0		11.0	6.0	8.5
25	26.5	10.5	20.0	25.0	11.0	18.0	[2]34.5	[2]9.0		9.5	2.5	5.5
26	17.0	11.0	13.5	31.0	14.5	22.0	[2]20.0	[2]5.5		17.0	3.0	9.5
27	22.0	15.5	16.0	27.5	16.0	22.0	[2]15.0	[2]4.5		18.5	2.5	11.0
28	17.5	9.5	14.5	31.0	11.5	22.0	[2]23.5	[2]4.5		27.5	6.5	17.0
29	27.0	7.5	17.5	35.5	18.5	---	19.0	8.0		23.0	12.0	17.5
30	29.5	13.0	22.0	27.0	10.0	---	19.0	4.5		28.5	10.0	16.5
31	---	---	---	26.5	15.0	---	11.0	9.0		---	---	---
MONTH	34.0	4.0	18.0	39.0	9.5	22.0	[2]34.5	[2]4.5		[2]35.0	2.5	12.0

[2]Data obtained from the National Weather Service station at Beulah, N. Dak.

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1981.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	7.0	13.0	12.5	-0.5	5.5	-15.0	-20.0	-17.0	0.0	-8.0	-5.0
2	12.5	5.5	8.5	17.0	3.0	9.0	-12.5	-21.0	-16.0	-1.0	-18.5	-9.5
3	19.5	5.5	12.5	12.0	-.5	7.0	-2.5	-12.5	-7.0	-10.5	-18.5	-13.5
4	24.5	2.0	14.0	11.5	.0	4.5	2.0	-8.0	-3.5	-7.0	-12.0	-10.0
5	24.0	10.0	16.5	17.0	.0	8.0	-4.5	-14.5	-10.5	.5	-11.0	-4.0
6	29.5	9.5	18.0	15.0	8.0	10.5	-13.0	-14.5	-14.0	-1.5	-15.5	-8.5
7	27.0	8.0	16.5	9.0	2.5	6.0	-13.0	-20.5	-16.5	-10.0	-14.0	-12.5
8	27.5	7.5	16.5	11.5	2.0	7.0	-4.0	-16.5	-9.5	-5.5	-15.5	-9.0
9	16.5	8.5	13.0	2.0	-2.5	-1.0	-3.5	-18.5	-14.5	-11.5	-19.0	-14.5
10	14.0	2.5	10.0	5.0	-3.5	.0	-16.0	-19.5	-18.5	-11.0	-16.0	-12.5
11	13.5	-1.0	5.5	5.0	-1.0	1.5	5.5	-15.0	-6.5	2.0	-14.5	-5.0
12	10.0	-1.5	4.5	.5	-1.0	-.5	6.0	-12.5	-2.5	4.5	-6.5	-1.0
13	9.5	-1.0	4.5	.5	-6.0	-2.0	4.0	-12.0	-3.0	2.5	-6.0	-2.0
14	12.0	-3.0	3.5	.0	-10.0	-6.0	-2.5	-8.5	-5.5	-2.5	-6.5	-5.0
15	4.0	.5	2.5	2.0	-9.5	-4.5	5.5	-1.0	3.5	-5.0	-16.0	-10.5
16	3.5	1.0	3.0	.5	-9.0	-2.5	6.0	.0	4.0	-3.5	-17.5	-10.0
17	2.0	.5	1.0	4.0	-7.5	-2.0	4.5	-7.0	-.5	4.0	-9.5	-4.0
18	8.0	-4.0	2.5	5.0	-2.5	.5	-7.5	-20.0	-15.0	4.0	-11.0	-2.5
19	16.0	5.5	10.0	5.5	-3.0	1.5	-18.0	-22.5	-20.0	-.5	-10.5	-5.5
20	14.0	1.5	6.5	4.0	-2.5	.0	-12.5	-20.0	-16.0	1.5	-10.5	-5.5
21	7.0	4.5	5.5	11.5	-1.5	4.0	-8.0	-14.0	-11.0	6.5	-6.5	-1.5
22	4.5	-.5	1.0	4.5	-4.0	1.0	-7.5	-12.0	-9.0	9.0	-4.5	.5
23	2.0	-2.5	.0	-1.5	-7.5	-4.5	-12.0	-24.0	-16.5	12.5	-1.0	3.5
24	4.0	-4.0	-.5	3.5	-8.5	-2.5	-15.5	-31.5	-25.0	6.5	-2.5	2.0
25	1.5	-6.5	-3.0	3.0	-8.0	-1.5	-7.0	-15.0	-11.0	2.0	-2.0	-1.0
26	.0	-5.5	-2.5	4.5	-1.5	.5	.5	-13.5	-7.5	-1.5	-14.5	-5.5
27	2.0	-6.0	-1.5	3.5	-7.5	-1.0	9.5	1.0	5.0	-7.0	-17.0	-11.0
28	3.0	-6.5	-1.5	6.0	.0	3.5	6.5	-2.5	2.0	-10.0	-20.5	-14.5
29	10.0	-5.0	3.5	4.0	-6.5	-1.5	---	---	---	-11.0	-22.5	-16.0
30	10.0	-1.5	4.0	1.0	-14.5	-5.0	---	---	---	-3.5	-10.5	-6.5
31	9.0	-1.0	3.5	---	---	---	3.5	-4.5	.0	-5.5	-13.5	-9.5
MONTH	29.5	-6.5	6.0	17.0	-14.5	1.0	9.5	-31.5	-9.0	12.5	-22.5	-7.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-14.0	-19.0	-16.5	-0.5	-11.5	-4.5	19.0	-5.0	8.0	21.5	-0.5	13.0
2	-14.0	-20.5	-17.5	-.5	-13.5	-6.0	12.5	3.5	8.5	24.0	11.5	17.0
3	-11.0	-16.0	-13.5	4.0	-5.0	.0	9.0	-3.5	3.0	17.5	4.0	12.0
4	-1.5	-19.5	-9.5	2.0	-7.0	-2.0	9.0	-5.5	2.0	17.0	4.0	11.0
5	-4.0	-14.0	-7.0	-2.0	-8.0	-5.0	12.0	-2.0	5.5	19.5	3.5	12.0
6	-6.0	-11.5	-8.5	-4.0	-9.5	-7.0	13.5	1.0	7.5	17.5	6.0	11.5
7	-13.5	-24.5	-21.0	1.0	-10.0	-4.0	10.0	-5.5	2.5	13.0	6.5	9.5
8	-15.0	-24.0	-20.0	4.0	-5.5	-1.0	11.5	-6.0	4.0	11.5	-1.0	7.0
9	-20.5	-25.5	-22.5	7.5	-6.0	.0	17.5	-1.5	8.5	8.5	-6.0	2.0
10	-20.0	-29.5	-24.5	6.5	-4.5	.0	13.5	-1.5	6.5	16.5	.5	8.0
11	-15.5	-27.0	-20.0	14.0	-3.0	4.5	5.0	.0	2.0	16.5	3.5	9.5
12	-8.0	-24.0	-14.5	8.5	-2.5	2.5	16.5	.0	7.0	16.0	6.0	11.0
13	1.0	-10.5	-4.5	7.0	-3.5	.5	5.0	-4.0	.5	17.5	3.5	11.0
14	8.0	-2.5	3.0	12.5	-2.0	5.5	13.5	-9.0	4.0	19.5	3.0	13.5
15	8.0	.5	3.5	9.5	-2.5	3.0	24.5	4.0	14.0	20.0	6.5	14.0
16	11.5	.0	4.5	17.5	-1.5	6.5	26.5	5.0	16.0	14.5	8.5	11.0
17	9.0	1.5	5.5	1.5	-6.0	-2.0	13.0	3.0	7.5	18.0	6.0	13.5
18	9.5	.5	4.5	3.0	-7.5	-1.5	22.0	.0	10.0	20.0	1.5	13.0
19	11.5	.5	5.0	4.5	-6.5	-1.0	10.0	-1.5	3.5	15.5	4.5	14.5
20	7.5	2.5	5.0	4.5	-5.0	-.5	17.0	-4.0	8.5	26.5	9.0	18.5
21	6.0	-2.0	2.0	2.5	-6.5	-1.0	16.0	7.0	11.5	25.5	13.0	19.0
22	7.0	-2.0	1.5	8.0	-8.5	.5	14.0	-1.5	8.0	19.0	7.0	12.5
23	9.5	-2.0	2.5	16.0	-1.5	7.0	18.5	-3.5	9.5	8.0	3.0	5.5
24	3.0	-4.5	-1.0	13.5	-.5	6.0	26.5	5.0	17.5	8.0	2.5	6.0
25	2.0	-5.5	-2.0	6.5	-2.0	2.0	19.5	8.0	14.5	11.0	8.0	10.0
26	5.0	-3.5	1.0	8.5	-5.0	1.5	19.0	4.5	14.0	15.0	9.5	12.5
27	1.5	-3.0	-.5	11.5	-1.5	5.0	9.0	7.5	8.5	17.0	12.0	13.5
28	.0	-4.5	-2.0	6.5	-2.5	3.5	16.5	6.0	11.0	26.5	9.5	17.5
29	---	---	---	13.5	-1.5	6.0	16.0	5.0	9.5	21.5	9.5	14.5
30	---	---	---	14.0	1.0	7.0	15.0	1.5	9.5	23.0	8.5	16.0
31	---	---	---	6.5	-1.0	3.0	---	---	---	24.5	11.0	17.5
MONTH	11.5	-29.5	-6.0	17.5	-13.5	1.0	26.5	-9.0	8.0	26.5	-6.0	12.0

AIR TEMPERATURE (DEGREES C)

PERIOD: Water year 1981--Continued.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.5	12.0	13.0	34.5	20.5	26.0	30.0	12.5	22.0	23.5	1.5	13.5
2	19.0	9.0	14.0	24.0	14.5	19.0	28.5	12.5	20.5	24.5	10.0	17.5
3	23.5	4.5	15.5	28.0	13.5	21.5	28.5	15.0	21.5	18.0	7.0	12.5
4	23.0	13.0	18.0	34.0	15.5	24.5	27.5	16.5	22.0	24.5	9.5	17.0
5	22.0	9.5	16.5	36.0	16.5	27.0	26.5	16.0	20.0	20.0	16.0	18.0
6	25.0	10.0	19.0	38.5	20.0	30.0	24.0	13.5	18.5	22.5	10.0	16.5
7	20.0	11.0	15.0	40.0	20.0	28.0	28.5	13.0	21.5	24.5	9.0	17.0
8	20.5	10.5	15.5	18.0	15.0	18.0	26.0	14.0	20.5	29.5	11.0	20.0
9	16.5	8.5	12.0	33.0	7.5	22.5	23.5	11.5	17.5	32.0	14.5	22.5
10	21.5	8.0	15.0	28.5	14.0	22.0	27.5	12.5	20.0	31.5	12.5	21.5
11	22.0	6.0	15.5	28.0	17.5	23.0	32.5	15.0	23.5	27.0	11.5	18.5
12	22.0	10.5	15.5	32.0	18.0	24.5	26.5	13.5	24.5	33.5	12.5	22.0
13	19.5	10.0	15.5	24.0	18.0	21.0	33.5	14.5	24.5	24.5	11.5	17.5
14	17.5	8.5	12.5	22.5	15.5	18.0	28.0	16.0	21.5	19.0	8.5	13.5
15	14.0	6.5	10.0	26.0	14.0	19.5	26.0	13.5	18.5	17.5	3.0	12.0
16	25.5	8.5	17.5	26.0	11.5	20.0	25.5	12.5	18.5	17.5	.0	9.0
17	18.5	9.5	14.5	24.5	13.5	19.0	28.5	13.0	21.5	21.0	3.5	12.0
18	17.5	7.0	11.5	24.5	13.5	18.5	30.0	24.0	26.5	28.0	6.0	16.0
19	17.0	8.0	12.5	27.5	13.0	20.5	32.0	22.5	27.5	27.5	6.0	17.5
20	22.5	7.5	14.5	30.5	12.5	22.5	35.0	17.5	25.5	20.0	7.0	12.5
21	21.0	8.5	15.0	29.5	16.5	22.0	30.5	17.5	23.0	22.0	5.0	14.0
22	22.0	9.0	16.5	28.0	14.0	20.5	27.0	17.5	21.5	22.0	9.0	14.5
23	21.5	11.5	16.0	29.0	13.5	21.5	22.5	13.0	18.5	20.0	10.0	15.0
24	22.0	10.5	16.0	22.0	12.5	18.5	25.5	16.5	20.0	17.0	5.0	11.0
25	23.5	8.5	17.0	21.0	9.5	15.5	24.0	15.5	19.0	18.5	8.5	12.5
26	29.5	10.0	21.5	19.0	13.0	15.5	25.0	14.5	19.5	13.5	7.0	9.5
27	28.5	19.5	24.5	22.0	12.0	17.5	25.5	13.0	19.0	13.0	3.5	8.5
28	20.5	11.5	16.0	27.0	9.5	19.0	26.5	10.5	19.0	18.5	5.5	11.0
29	23.0	9.0	16.5	32.5	18.0	25.0	30.5	10.5	21.5	5.5	3.0	7.5
30	21.5	14.5	24.0	33.5	14.5	23.0	34.5	16.5	25.0	13.0	6.5	9.0
31	---	---	---	27.5	11.5	20.0	15.0	3.0	11.5	---	---	---
MONTH	29.5	4.5	16.0	40.0	7.5	21.5	35.0	3.0	21.0	33.5	.0	14.5

AIR TEMPERATURE (DEGREES C)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.5	3.5	7.0	18.0	2.5	9.0	-1.5	-11.5	-6.0	-16.5	-31.5	-22.5
2	18.5	3.5	10.5	16.0	-.5	7.5	1.5	-7.5	-1.5	-22.5	-30.0	-26.0
3	12.5	8.5	10.0	20.0	3.5	10.5	1.5	-10.0	-2.0	-22.0	-29.5	-25.5
4	10.5	7.0	8.5	17.5	4.0	9.0	-3.0	-14.5	-9.5	-18.5	-25.0	-21.0
5	11.0	.0	6.0	11.0	-3.5	3.5	1.5	-10.5	-4.0	-20.0	-29.5	-26.0
6	14.5	-.5	7.0	17.0	-2.5	6.0	5.5	.5	2.5	-24.5	-28.5	-26.5
7	19.5	5.5	12.0	16.0	-.5	6.0	2.5	-4.5	-1.5	-8.0	-26.5	-15.5
8	21.0	9.5	13.0	5.5	-7.0	-2.5	-1.5	-6.5	-4.5	-21.5	-25.5	-24.5
9	17.0	3.5	9.5	15.5	-6.0	4.0	-2.5	-5.5	-4.0	-22.5	-34.5	-28.0
10	21.5	1.5	11.5	13.5	1.5	6.0	-.5	-5.5	-3.0	-28.0	-35.0	-31.5
11	16.5	8.5	14.0	17.0	-.5	7.0	2.5	-6.5	-.5	-21.5	-31.0	-24.5
12	13.5	2.0	9.0	20.0	1.0	9.0	-5.0	-13.5	-8.0	-16.0	-26.0	-20.0
13	7.0	1.5	4.0	13.0	4.0	8.5	-7.0	-18.5	-12.5	-19.0	-27.5	-24.5
14	10.0	-1.5	3.0	11.5	-2.0	5.5	-11.5	-21.0	-15.5	.0	-18.0	-7.0
15	17.0	-.5	7.5	12.5	-1.5	6.0	-11.5	-23.0	-16.5	-18.0	-29.0	-26.0
16	19.0	2.0	10.5	12.5	-1.5	4.0	-14.5	-22.0	-16.5	-20.0	-31.0	-26.5
17	10.0	3.5	6.0	8.5	-2.5	2.0	-14.5	-29.0	-20.5	-6.5	-23.0	-15.5
18	10.0	1.5	5.0	-1.0	-5.5	-2.5	-10.5	-17.0	-13.5	-10.0	-24.0	-17.5
19	17.5	3.5	9.5	-6.0	-8.0	-7.0	-8.0	-17.0	-12.5	-21.5	-26.5	-24.5
20	8.5	-2.5	4.0	-7.5	-10.5	-8.5	3.0	-7.5	-1.0	-22.0	-28.0	-23.5
21	4.0	-5.0	-1.0	1.5	-8.5	-4.5	-.5	-9.0	-3.5	-23.5	-30.0	-26.5
22	-4.5	-7.5	-5.5	1.5	-9.5	-3.0	-5.5	-11.0	-8.5	-22.0	-24.0	-23.0
23	1.0	-13.5	-4.5	1.0	-2.5	-1.5	-7.0	-12.5	-10.5	-23.0	-30.0	-26.5
24	1.5	-3.0	-.5	.0	-3.0	-1.0	-8.0	-11.0	-9.5	-18.5	-31.0	-23.5
25	2.5	-12.0	-2.0	-.5	-4.5	-2.0	-9.5	-14.0	-11.5	-12.5	-25.5	-18.5
26	19.0	2.5	9.0	-3.5	-5.0	-4.0	-6.0	-12.0	-9.0	4.0	-15.0	-4.0
27	9.5	-2.0	3.5	-3.5	-7.5	-6.0	-10.5	-17.5	-13.0	2.5	-18.5	-9.0
28	17.0	-2.0	7.0	-4.0	-9.0	-5.5	-17.5	-26.5	-20.5	-11.5	-23.5	-17.0
29	20.0	3.0	10.0	-2.5	-14.0	-8.5	-21.5	-28.0	-25.0	-8.5	-20.0	-15.0
30	11.0	4.0	7.0	.0	-15.5	-6.5	-17.0	-26.0	-20.5	-19.5	-28.0	-24.0
31	14.5	-1.0	6.5	---	---	---	-16.5	-27.5	-20.5	-9.5	-22.0	-13.5
MONTH	21.5	-13.5	6.5	20.0	-15.5	1.5	5.5	-29.0	-10.0	4.0	-35.0	-21.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL	
1	-8.0	-20.0	-14.5	-10.5	-18.0	-14.0	3.5	-6.0	-1.0
2	-21.5	-33.0	-28.5	-15.5	-18.5	-16.5	-1.0	-14.5	-9.5
3	-25.0	-33.0	-29.5	-7.5	-21.0	-14.5	-8.5	-16.5	-12.0
4	-23.0	-33.5	-29.0	-13.0	-22.0	-16.5	-9.0	-13.0	-10.5
5	-20.5	-34.5	-28.0	-8.5	-24.0	-15.0	-5.5	-12.5	-9.5
6	-4.0	-27.5	-12.5	-11.0	-21.0	-15.0	-3.0	-12.0	-6.0
7	-13.0	-24.0	-18.0	-2.0	-18.0	-10.5	-2.5	-5.5	-4.0
8	-20.0	-26.0	-23.5	-14.0	-21.0	-17.5	-.5	-6.5	-3.0
9	-20.0	-26.5	-23.5	2.5	-15.0	-5.0	.0	-8.0	-3.0
10	-10.0	-27.0	-18.0	2.5	-13.5	-4.0	2.5	-11.5	-3.5
11	-11.5	-22.5	-17.5	2.0	-12.5	-3.0	13.0	-1.5	6.0
12	-12.5	-19.5	-15.5	1.5	-4.0	-.5	11.0	2.0	7.0
13	-11.0	-16.0	-13.5	4.0	-6.5	-1.0	16.0	.0	7.5
14	3.5	-12.0	-4.5	4.0	-3.0	1.0	21.5	4.5	11.0
15	-4.0	-12.0	-8.0	2.0	-1.0	.5	7.5	.0	3.5
16	-.5	-7.5	-4.0	.0	-1.0	-.5	7.5	-1.0	2.5
17	2.0	-3.0	.0	-1.0	-7.5	-2.5	13.0	-2.0	5.0
18	2.0	-5.5	-2.0	-6.5	-9.5	-8.0	14.0	-3.5	7.0
19	4.5	-2.0	1.0	-6.5	-9.0	-8.0	6.0	-2.0	2.0
20	4.5	-2.0	1.0	-6.5	-11.5	-9.5	5.0	-3.5	.5
21	7.5	-3.0	2.5	.5	-13.0	-6.5	9.5	-3.0	3.5
22	-3.0	-11.0	-7.0	1.0	-8.5	-3.0	19.0	.0	10.5
23	-11.0	-13.5	-12.5	1.0	-4.0	-1.0	25.0	5.0	15.0
24	-8.5	-26.0	-16.5	-1.0	-9.0	-4.5	21.0	5.0	12.5
25	-10.0	-25.5	-16.5	-.5	-12.0	-6.5	7.5	-3.5	4.0
26	-8.0	-15.5	-11.0	-5.0	-12.5	-8.0	12.0	-5.0	5.0
27	-5.0	-12.5	-9.5	1.0	-10.5	-5.5	14.0	1.0	8.5
28	-5.5	-14.0	-9.0	4.5	-4.5	1.0	14.5	3.0	8.5
29	---	---	---	6.0	.5	3.0	12.0	2.0	5.5
30	---	---	---	1.0	-2.5	-.5	18.5	.5	10.0
31	---	---	---	-.5	-5.0	-3.0	---	---	---
MONTH	7.5	-34.5	-13.0	6.0	-24.0	-6.0	25.0	-16.5	2.5

PERIOD OF RECORD: May 1978 through April 1982.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 7, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.10		---	0.00
2								---	.00		---	.00
3								---	.00		---	.00
4								---	.00		---	.00
5								---	.00		---	.00
6								---	.10		---	.00
7								0.70	.10		---	.00
8								.70	.00		---	.00
9								.00	.00		---	.10
10								.00	---		---	.20
11								.00	---		---	.60
12								.60	---		---	1.40
13								.00	---		---	.00
14								.00	---		---	.00
15								.00	---		---	.00
16								.00	---		0.00	.00
17								.00	---		.00	.10
18								.00	---		.00	.00
19								.10	---		.00	.00
20								.00	---		.00	.00
21								.00	---		.00	.00
22								.00	---		.00	.00
23								.00	---		.10	.00
24								.00	---		.00	.00
25								.00	---		.00	.00
26								.00	---		.00	.00
27								.00	---		.00	.00
28								.00	---		.00	.00
29								.00	---		.00	.00
30								.40	---		.00	.00
31								.60	---		.00	---
TOTAL								3.10	0.30		0.10	2.40

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.80	0.70	0.00
2	.30	.00	.00	.00	.00	.10	.00	.00	---	.00	.00	.00
3	.00	.00	.10	.00	.00	.00	.00	.00	---	.00	.20	.00
4	.10	.00	.00	.00	.00	.00	.00	.00	0.00	.00	.10	.00
5	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.10	.00	.00	.10	.00	.00	.00
8	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.20	.00	.00	.10	.00	.00	.00	.00	.20	.00	.00
10	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.80
11	.00	---	.00	.00	.20	.00	.10	.00	.10	.50	.00	.00
12	.20	---	.00	.00	.00	.00	.50	.00	.10	.10	.00	.00
13	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.40	.00	.50	.00	.00	.00
19	.00	.00	.00	.00	.00	.10	.10	.30	.20	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.60	.00
21	.00	.00	.00	.00	.60	.00	.00	.00	.00	.00	.70	.00
22	.00	.00	.10	.00	.40	.00	.00	.00	.80	.00	.00	.00
23	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00
25	.10	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00	.00
27	.00	.00	.00	.00	.00	.10	.00	---	.00	.30	.40	.00
28	.00	.00	.10	.00	.00	.00	.10	---	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	---	.00	.70	.00	.00
30	.00	.00	.00	.00	---	.00	.00	---	.00	.20	.00	.00
31	.00	---	.00	.00	---	.00	---	---	---	.00	.00	---
TOTAL	0.70	0.40	0.50	0.00	1.40	0.40	1.50	1.10	1.80	3.30	2.70	0.80

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.10	.00	---	.00	.30	.00	.00	.00
4	.00	.00	.00	.10	.00	.00	---	.00	.10	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
6	.00	.00	.00	.20	.00	.00	---	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	---	.00	.10	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.40	.00
10	.00	.00	.00	.10	.00	.00	0.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.60	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.70	.00	.00	.00
14	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.40	.00
16	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.50	.00
17	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
19	.30	.00	.00	.00	.00	---	.00	.00	.00	.70	.00	.00
20	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.10	.00
21	.00	.00	.00	.00	.10	---	.00	.00	.00	.00	.00	.50
22	.00	.00	.00	.10	.00	---	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	---	.00	.00	.10	.00	.00	.00
24	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
26	.00	.00	.10	.00	.00	---	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	---	.00	.20	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.40	.00
30	.00	.00	.00	.00	---	---	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	---	---	.00	---	.00	2.20	---
TOTAL	0.30	0.00	0.10	0.50	0.20	0.00	0.00	0.20	2.30	0.70	4.00	0.50

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.40	0.00	0.40	0.00
2	.00	.10	.00	.00	---	.00	.00	.00	.50	.80	.50	.00
3	.00	.10	.00	.00	---	.00	.00	.00	.00	.00	.10	.00
4	.00	.00	.00	.10	---	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.40	1.60
6	.00	.00	.10	.00	---	.00	.00	.00	---	.00	.00	.30
7	.00	.10	.00	.00	---	.00	.00	.00	---	.00	.00	.00
8	.00	.20	.00	.10	---	.00	.00	.00	---	.00	.00	.00
9	.00	.00	.00	.00	---	.00	.00	.00	---	.00	.00	.00
10	.00	.00	.00	.00	---	.00	.00	.00	---	.10	.00	.00
11	.00	.10	---	.00	0.00	.00	.00	.10	---	.00	.00	.00
12	.00	.40	---	.00	.00	.00	.00	.00	---	.10	.00	.00
13	.00	.00	---	.00	.00	.00	.00	.00	---	.40	.00	.00
14	.00	.00	---	.00	.00	.00	.00	.00	---	.00	.00	.00
15	.20	.10	---	.00	.00	.00	.00	.00	---	.70	.10	.00
16	1.70	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.10	.00	.10	.00	.00	.10
21	.00	.00	.10	.00	.00	.00	.00	.00	.10	.10	.00	.00
22	.50	.00	.10	.00	.00	.00	.10	.20	---	.00	.20	.00
23	.10	.00	.00	.00	.00	.00	.00	.10	---	.10	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.10	---	.00	.00	.00
25	.00	.00	.00	.10	.00	.00	.00	.00	---	.10	.00	.80
26	.00	.00	.00	.00	.00	.00	.20	.00	---	.00	.00	.00
27	.00	.00	.00	.00	.40	.00	.40	.20	---	.00	.00	.00
28	.00	.00	.00	.00	.00	.10	.00	.10	---	.00	.00	.00
29	.10	.00	.00	---	---	.00	.00	.00	---	.00	.00	.00
30	.00	.00	.00	---	---	.00	.00	.00	.00	.00	.00	.10
31	.00	---	.00	---	---	.00	---	.40	---	.00	.00	---
TOTAL	2.60	1.10	0.30	0.30	0.40	0.10	0.80	1.20	1.10	2.40	1.70	2.90

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.10	0.10	0.00	0.10	0.00	0.00					
2	.00	.00	.10	.00	.00	.00	.00					
3	.00	.00	.10	.00	.00	.10	.00					
4	.00	.10	.00	.10	.00	.00	.00					
5	.00	.10	.00	.00	.00	.00	.00					
6	.00	.10	.00	.10	.00	.00	.00					
7	.00	.10	.00	.00	.00	.00	.00					
8	.00	.00	.00	.00	.00	.00	.10					
9	.00	.00	.10	.00	.00	.00	.00					
10	.00	.00	.00	.00	.00	.00	.00					
11	.00	.00	.00	.00	.00	.10	.00					
12	.10	.00	.10	.00	.00	.00	.00					
13	.00	.00	.00	.00	.00	.00	.00					
14	.00	.00	.00	.00	.00	.00	.00					
15	.00	.10	.00	.00	.00	.10	.00					
16	.00	.10	.00	.00	.00	.30	.00					
17	.00	.10	.00	.10	.00	.00	.00					
18	.00	.30	.00	.00	.00	.00	.00					
19	.00	.00	.00	.00	.00	.30	.40					
20	.00	.00	.20	.00	.00	.00	.00					
21	.00	.00	.00	.00	.00	.00	.00					
22	.00	.30	.00	.10	.10	.00	.00					
23	.00	.00	.00	.00	.00	.00	.00					
24	.00	.00	.00	.10	.00	.00	.00					
25	.00	.20	.00	.00	.00	.00	.00					
26	.00	.00	.10	.00	.00	.00	.00					
27	.00	.00	.00	.00	.00	.00	.00					
28	.00	.00	.00	.00	.00	.00	.00					
29	.10	.00	.00	.10	---	.00	.00					
30	.00	.00	.00	.00	---	.10	.00					
31	.10	---	.00	.10	---	.00	---					
TOTAL	0.30	1.60	0.80	0.70	0.20	1.00	0.50					

PERIOD OF RECORD: June 1978 through April 1982.

RELATIVE HUMIDITY (PERCENT)

PERIOD: June 23, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	---	57.2	39.0
2									---	---	51.0	34.3
3									---	---	49.9	33.0
4									---	---	40.2	34.8
5									---	---	39.5	24.6
6									---	55.6	35.7	60.7
7									---	51.2	43.7	62.4
8									---	74.8	45.9	39.9
9									---	59.2	44.1	32.9
10									---	54.3	34.5	47.9
11									---	62.1	36.7	78.2
12									---	---	34.5	69.2
13									---	52.6	49.4	70.2
14									---	56.3	76.4	71.3
15									---	52.4	---	59.8
16									---	47.7	---	52.7
17									---	58.6	---	68.2
18									---	59.6	---	89.1
19									---	68.5	23.3	69.3
20									---	72.3	39.1	69.0
21									---	66.0	56.9	49.0
22									---	60.1	58.4	39.2
23									39.7	57.2	68.2	45.9
24									59.5	53.1	54.4	51.5
25									70.5	51.2	57.2	47.8
26									---	53.8	60.0	60.3
27									---	53.1	54.4	51.0
28									---	57.1	55.3	50.0
29									---	61.0	63.6	78.0
30									---	57.2	---	55.3
31									---	55.1	41.9	---
MEAN									56.6	58.0	48.9	54.5

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.0	31.3	63.6	67.0	63.7	72.6	73.9	52.4	56.7	77.1	---	74.0
2	72.6	34.8	59.7	66.8	63.0	71.8	72.5	54.1	46.9	71.5	---	67.3
3	67.1	43.3	61.2	65.5	63.6	69.6	77.5	65.5	45.7	69.3	---	62.5
4	72.3	40.7	61.1	60.0	62.2	67.8	72.9	67.8	64.5	78.7	---	58.1
5	71.0	43.4	64.9	62.4	72.2	72.0	60.3	91.0	46.6	56.5	---	43.7
6	71.2	40.5	63.7	64.9	61.9	77.6	66.6	95.9	45.4	62.6	---	62.2
7	58.2	41.9	66.0	64.3	66.4	84.5	77.3	75.9	62.1	74.2	---	60.9
8	49.0	47.3	67.5	63.7	65.5	77.3	77.0	66.2	54.7	56.0	---	60.7
9	60.3	74.1	69.0	68.7	68.3	65.6	79.0	77.8	45.3	59.7	74.6	82.8
10	47.0	74.2	75.7	63.4	70.0	67.6	82.7	80.0	40.1	60.1	68.5	94.7
11	41.9	71.2	70.0	66.7	65.0	73.3	89.1	59.1	38.9	54.9	54.2	76.1
12	66.7	77.6	73.5	63.9	67.1	71.7	85.5	58.9	51.1	69.9	61.6	74.5
13	71.6	79.4	64.1	61.8	70.4	72.8	79.6	51.7	37.4	64.7	55.7	68.5
14	56.7	70.3	61.8	60.0	70.2	65.1	72.7	47.0	36.1	---	55.6	56.7
15	55.1	69.2	71.5	61.1	61.4	72.3	79.9	44.5	42.0	---	51.6	44.2
16	54.2	70.7	63.6	65.7	60.6	77.0	82.9	49.6	43.8	---	63.9	33.6
17	47.3	78.0	64.1	64.9	65.6	83.0	71.4	54.3	49.4	---	52.2	43.8
18	54.8	71.8	76.5	68.6	67.9	87.3	70.0	54.6	61.7	---	50.3	54.7
19	49.7	67.8	73.3	71.4	67.8	86.3	87.6	82.6	90.1	---	48.5	52.2
20	35.3	65.8	70.0	72.2	77.2	83.2	66.1	65.5	67.5	---	63.8	56.5
21	59.5	71.7	67.9	70.0	72.8	84.2	59.8	49.4	63.6	---	89.6	44.2
22	57.9	80.2	71.9	73.9	76.5	83.0	64.2	77.0	90.0	---	73.7	62.1
23	38.6	74.4	72.6	66.4	66.2	71.1	82.5	54.5	77.1	---	71.3	76.0
24	45.6	74.0	75.6	68.7	66.1	75.7	91.4	41.6	68.8	---	61.2	56.2
25	56.1	82.7	76.7	70.7	66.6	69.2	69.2	48.5	68.0	---	74.0	45.0
26	51.1	82.2	73.1	68.6	67.1	67.3	71.1	41.3	49.0	---	66.1	45.3
27	49.3	73.7	73.8	68.3	74.3	79.7	62.3	45.4	54.5	---	80.4	62.2
28	47.7	75.5	69.3	67.3	69.9	74.6	74.1	49.1	63.6	---	69.5	61.4
29	53.6	67.5	67.4	63.5	---	78.0	63.2	76.5	47.2	---	62.1	43.0
30	56.4	69.4	62.0	64.7	---	68.9	47.3	47.2	50.3	---	69.5	41.9
31	44.6	---	59.9	65.7	---	78.7	---	64.8	---	---	60.8	---
MEAN	55.1	64.8	68.1	66.1	67.5	75.1	73.6	61.0	55.3	65.8	64.3	58.8

RELATIVE HUMIDITY (PERCENT)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.3	71.2	87.9	87.5	75.6	65.9	76.2	44.9	62.7	56.3		---
2	43.5	81.2	71.4	79.9	86.4	76.8	61.8	37.2	69.3	47.4		---
3	46.6	75.7	77.5	85.0	92.3	81.9	62.1	35.4	68.9	54.2		---
4	40.0	68.0	61.3	80.8	91.2	68.5	55.3	33.4	74.7	63.3		---
5	34.7	63.0	63.0	84.7	80.0	---	42.5	30.7	61.3	61.4		---
6	40.8	66.3	73.5	80.4	86.9	---	56.5	35.6	---	52.2		---
7	57.0	69.8	73.6	68.5	90.2	---	---	53.2	---	43.5		---
8	65.7	66.0	70.8	62.8	81.0	---	---	39.5	49.7	50.8		---
9	55.8	79.6	79.1	69.9	73.8	---	82.9	41.3	42.0	52.3		---
10	45.6	75.8	74.0	79.4	73.2	---	68.6	42.5	39.3	38.1		50.7
11	67.1	78.4	73.9	69.5	77.0	---	60.0	39.0	---	40.2		81.8
12	66.5	74.6	67.4	72.2	81.7	---	61.8	43.9	---	41.1		91.7
13	56.0	89.7	68.5	67.0	79.7	---	51.7	48.7	---	43.4		77.2
14	54.4	59.2	69.4	72.3	73.4	88.9	40.6	42.1	---	56.4		83.2
15	53.2	---	71.5	81.5	73.4	86.7	46.3	38.5	78.9	63.7		78.4
16	62.0	---	62.2	90.6	72.7	77.0	51.4	36.5	---	48.6		68.2
17	50.8	---	64.5	83.5	70.4	71.7	34.1	41.3	59.1	46.9		90.8
18	52.7	---	68.0	83.9	76.5	64.2	32.2	33.5	75.2	49.9		89.9
19	76.3	---	57.6	66.8	91.1	84.8	35.0	29.4	61.6	82.7		90.0
20	72.2	---	59.6	69.4	93.4	81.1	27.8	32.3	63.0	79.1		70.8
21	75.5	73.3	73.1	79.4	87.1	77.3	27.9	26.2	56.7	70.2		92.3
22	70.8	64.2	84.7	79.6	82.7	85.0	41.6	27.5	56.6	50.0		78.0
23	69.5	83.2	93.7	78.0	80.7	87.0	34.4	35.2	53.6	44.4		79.4
24	71.0	87.0	94.0	78.4	81.1	75.0	38.2	42.4	50.4	48.8		91.5
25	65.5	89.5	95.8	72.0	74.6	68.8	45.5	41.5	50.7	59.2		80.8
26	65.0	85.7	85.6	69.2	78.0	79.0	48.2	23.2	75.0	49.3		71.2
27	52.2	82.7	74.1	69.8	83.0	71.8	50.8	27.3	72.7	56.9		70.3
28	60.1	83.0	70.2	69.5	72.6	78.7	38.2	56.2	65.4	54.7		59.2
29	79.5	77.0	76.0	69.2	67.7	57.7	30.6	50.8	57.4	---		56.0
30	77.1	72.7	81.5	71.6	---	68.2	39.7	54.5	49.4	---		57.0
31	71.2	---	81.4	70.9	---	69.9	---	72.9	---	---		---
MEAN	59.7	75.7	74.3	75.6	80.2	75.7	47.9	39.9	60.6	53.7		76.6

PERIOD: October 1, 1980, through July 31, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.2	76.9	73.2	85.6	81.5	84.9	57.7	---	55.5	49.7		
2	63.0	65.6	58.6	85.3	78.7	83.9	---	---	42.7	57.7		
3	59.6	68.6	75.8	86.0	74.8	79.3	---	---	36.0	48.5		
4	64.9	77.4	87.7	89.9	81.3	84.0	---	---	52.6	48.1		
5	56.5	79.0	88.2	92.9	89.0	92.0	---	---	47.4	47.4		
6	52.0	72.4	87.1	85.3	90.4	91.0	---	---	46.1	37.2		
7	47.7	85.5	83.8	85.6	81.9	72.6	---	---	57.0	42.5		
8	53.9	90.4	81.8	87.4	78.9	67.7	---	---	54.3	50.1		
9	48.8	90.0	82.8	82.4	73.8	73.8	---	---	61.4	50.5		
10	49.5	90.7	82.2	84.7	67.1	80.2	---	---	52.1	71.8		
11	67.3	95.4	82.7	93.0	72.9	59.1	---	---	48.8	88.5		
12	70.5	112	77.2	77.0	78.1	58.6	---	---	59.5	81.3		
13	70.0	88.9	83.9	79.5	85.3	80.0	---	---	70.0	98.5		
14	84.0	94.9	97.6	94.2	81.4	53.8	---	---	59.7	98.2		
15	105	92.4	88.5	93.2	80.4	64.9	---	---	64.9	86.8		
16	110	95.5	90.1	87.5	74.1	53.6	---	---	50.0	78.1		
17	97.1	84.0	72.0	73.6	77.4	73.2	---	---	54.0	83.0		
18	87.5	80.1	60.8	78.7	75.9	71.4	---	---	57.7	91.8		
19	77.0	83.0	74.7	85.5	65.0	61.2	---	---	62.1	88.1		
20	73.8	81.3	74.2	84.5	68.7	67.8	---	26.5	62.3	74.0		
21	88.2	63.9	88.7	82.5	75.5	66.4	---	29.9	60.2	74.5		
22	111	80.5	92.3	87.5	79.2	62.4	---	47.4	52.2	62.0		
23	109	84.9	83.9	77.4	76.8	64.9	---	49.5	57.5	61.5		
24	95.0	76.3	74.8	86.0	71.1	73.7	---	52.4	51.4	68.1		
25	90.2	71.6	83.6	108	81.5	75.9	---	53.1	49.6	69.2		
26	86.1	72.5	92.5	93.0	81.3	74.5	---	50.5	47.5	71.0		
27	80.9	68.3	82.2	90.3	102	80.8	---	51.5	49.0	61.5		
28	90.4	58.5	86.7	84.5	87.2	98.0	---	41.6	58.7	63.1		
29	85.6	60.3	---	85.8	---	69.2	---	38.4	52.8	58.7		
30	71.6	79.6	---	85.6	---	68.7	---	40.0	45.2	67.5		
31	72.5	---	79.4	89.8	---	77.9	---	40.0	---	54.2		
MEAN	76.5	80.7	81.6	86.5	79.0	73.1	57.7	43.4	53.9	67.2		

RELATIVE HUMIDITY (PERCENT)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80.0	74.0	68.0	68.0	---	80.0	85.4					
2	68.0	76.0	70.0	---	---	81.1	85.6					
3	87.0	59.0	69.0	---	---	78.0	75.1					
4	87.0	66.0	66.0	---	---	77.1	84.2					
5	84.0	57.0	70.0	---	---	74.9	78.0					
6	63.0	56.0	---	---	---	72.4	82.5					
7	65.0	---	---	---	---	78.7	87.2					
8	77.0	---	---	62.0	---	74.0	81.4					
9	68.0	---	---	61.0	---	77.2	78.5					
10	---	---	---	55.0	---	88.9	76.0					
11	---	---	73.0	60.0	---	86.2	70.8					
12	---	---	75.0	64.0	---	71.5	72.3					
13	---	---	70.0	63.0	---	71.1	73.0					
14	---	64.0	70.0	70.0	---	78.2	58.7					
15	---	49.0	69.0	---	---	97.0	80.2					
16	65.0	48.0	68.0	---	---	106	70.0					
17	78.0	70.0	66.0	---	---	109	58.5					
18	63.0	80.0	71.0	---	86.3	96.7	53.5					
19	61.0	71.0	69.0	---	79.5	97.3	75.2					
20	68.0	78.0	70.0	---	80.4	77.6	71.2					
21	76.0	78.0	---	---	78.5	79.7	57.2					
22	74.0	81.0	---	---	86.0	82.2	47.8					
23	68.0	76.0	---	---	85.6	79.2	41.5					
24	81.0	---	71.0	---	75.6	77.8	46.3					
25	68.0	---	75.0	---	79.2	79.5	59.9					
26	---	72.0	75.0	---	87.7	87.7	50.4					
27	---	74.0	75.0	---	90.5	84.8	50.7					
28	78.0	75.0	70.0	---	77.9	87.8	72.1					
29	72.0	72.0	65.0	---	---	91.0	67.0					
30	74.0	69.0	69.0	---	---	97.2	45.5					
31	58.0	---	67.0	---	---	79.7	---					
MEAN	72.3	68.8	70.0	62.9	82.4	83.8	67.9					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 0.0 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.5	2.1	-5.1	-5.9	-9.8	-11.7	4.4					
2	14.3	.4	-3.0	-7.6	-7.7	-5.7	4.8					
3	11.0	.2	-.7	-9.1	-6.0	-6.1	5.6					
4	12.4	1.4	2.4	-6.2	-4.4	-8.8	6.8					
5	13.5	.5	1.1	-6.7	-3.7	---	8.3					
6	11.7	.0	2.0	-4.2	-6.1	---	9.9					
7	11.9	-1.4	-2.0	-11.4	-5.5	---	4.6					
8	9.4	-2.5	-2.2	-13.8	-4.4	---	2.3					
9	8.2	-2.5	-.2	-14.3	-5.1	---	4.2					
10	13.4	-2.0	.1	-12.3	-8.1	---	4.9					
11	12.2	-1.7	-4.5	-13.5	-6.8	---	3.7					
12	7.2	-.6	-4.3	-11.8	-7.6	---	4.5					
13	6.6	-.9	-5.5	-6.8	-6.5	---	6.8					
14	10.4	.9	-2.8	-7.1	-9.8	-2.2	8.9					
15	12.3	---	-10.5	-5.5	-11.1	-.4	8.9					
16	10.8	---	-12.1	-5.7	-11.0	-.1	10.6					
17	9.3	---	-6.8	-5.0	-8.9	-.5	11.7					
18	10.0	---	-.9	-5.1	-5.7	.9	13.9					
19	8.3	---	.3	-9.2	-4.1	1.4	15.1					
20	7.3	---	.0	-7.2	-4.2	1.2	18.3					
21	4.7	-2.0	-.3	-4.5	-5.1	.7	18.3					
22	5.2	-2.0	-1.8	-5.6	-4.9	.3	14.4					
23	4.9	-3.5	-5.0	-3.0	-5.1	-.2	13.7					
24	6.8	-3.9	-3.1	-.1	-5.3	.1	13.1					
25	6.0	-4.4	-1.9	-5.4	-6.7	1.8	13.0					
26	7.5	-2.7	.0	-10.3	-4.2	2.0	14.6					
27	8.1	-4.0	-1.8	-12.1	-4.0	2.2	16.1					
28	6.7	-4.6	-2.6	-13.9	-8.0	2.0	16.7					
29	5.7	-5.4	-3.3	-13.5	-13.4	4.4	16.8					
30	5.1	-4.2	-4.0	-12.3	---	5.4	17.0					
31	3.4	---	-5.5	-11.4	---	5.6	---					
MEAN	8.9	-1.8	-2.7	-8.5	-6.7	-0.4	10.4					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-4.5	-0.2						
2				---	-6.2	-1.2						
3				---	-6.6	-.4						
4				---	-6.6	.0						
5				---	-5.1	-.3						
6				---	-5.2	-1.6						
7				---	-6.1	-1.5						
8				---	-7.6	-.4						
9				---	-8.1	-.2						
10				---	-9.8	.3						
11				---	-10.1	.7						
12				---	-9.5	.9						
13				---	-7.6	1.0						
14				---	-4.7	1.6						
15				---	-1.8	2.1						
16				---	-.9	3.5						
17				---	.0	1.1						
18				---	.1	.4						
19				---	.5	1.3						
20				---	.6	.4						
21				---	.5	.8						
22				---	.5	1.5						
23				---	.6	4.1						
24				---	.4	4.4						
25				---	.1	---						
26				---	.3	---						
27				---	.3	---						
28				-3.2	.0	---						
29				-5.5	---	---						
30				-4.4	---	---						
31				-3.5	---	---						
MEAN				-4.2	-3.5	.8						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 0.0 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	-0.4	-6.3	-10.3	-3.0	-2.5					
2		---	.0	-5.8	-10.5	-3.2	-3.7					
3		---	.0	-4.9	-11.7	-5.3	-5.5					
4		---	-.4	-4.5	-12.0	-7.3	-5.1					
5		---	-.4	-8.9	-12.2	-8.1	-4.2					
6		---	.1	-10.1	-12.2	-8.0	-4.4					
7		---	.3	-9.1	-11.3	-7.3	-3.7					
8		---	.3	-7.3	-11.8	-7.5	-3.2					
9		---	.2	-8.3	-11.9	-8.2	-3.4					
10		---	.1	-9.3	-12.4	-6.2	-3.8					
11		---	.2	-9.2	-11.5	-5.9	-2.3					
12		---	.1	-8.8	-10.9	-5.3	-1.8					
13		---	-.8	-8.9	-10.8	-4.2	-.7					
14		5.6	-1.9	-8.7	-10.4	-3.0	4.4					
15		5.8	-1.6	-9.4	-9.8	-2.6	4.0					
16		5.0	-1.7	-10.8	-9.1	-2.4	4.4					
17		4.5	-2.7	-10.1	-6.5	-2.4	5.1					
18		3.3	-2.6	-9.2	-4.6	-2.3	6.9					
19		2.5	-3.8	-11.0	-3.5	-3.0	5.1					
20		.8	-1.2	-12.5	-1.4	-2.9	4.3					
21		.8	-1.4	-12.4	-.5	-3.2	6.8					
22		.8	-3.0	-13.0	.0	-3.3	8.6					
23		1.5	-4.3	-13.7	-.5	-3.2	11.4					
24		1.7	-3.8	-12.9	-1.2	-3.3	11.9					
25		1.7	-3.4	-12.3	-1.8	-3.4	9.2					
26		1.5	-3.4	-11.8	-2.1	-3.7	9.3					
27		1.1	-3.3	-10.6	-2.6	-4.2	9.3					
28		.8	-3.9	-10.4	-2.9	-2.2	---					
29		.0	-4.5	-10.4	---	-2.3	---					
30		-.2	-5.1	-10.1	---	-2.4	---					
31		---	-5.0	-10.4	---	-2.5	---					
MEAN		2.2	-1.9	-9.7	-7.4	-4.3	2.1					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 0.4 FOOT

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	4.9	-2.5	-4.1	-8.9	-9.7	4.2					
2	14.5	3.8	-2.4	-4.8	-7.7	-6.8	4.0					
3	13.3	2.6	-.6	-6.6	-6.4	-5.1	4.7					
4	12.3	3.2	.5	-5.4	-5.2	-6.5	5.5					
5	13.7	2.8	1.5	-5.3	-4.3	---	6.5					
6	12.6	2.3	1.5	-5.7	-5.0	---	7.7					
7	12.5	1.7	.8	-7.8	-5.0	---	6.2					
8	11.7	.5	-.7	-9.6	-4.6	---	3.3					
9	10.1	.3	.2	-10.9	-4.5	---	3.5					
10	11.6	.3	.8	-10.3	-5.9	---	4.6					
11	12.9	.4	-.9	-10.7	-6.7	---	4.2					
12	10.6	.5	-2.0	-10.6	-6.7	---	4.2					
13	8.5	1.0	-2.4	-7.5	-5.8	---	5.3					
14	9.9	1.0	-2.1	-6.6	-7.1	-3.2	7.1					
15	11.3	---	-4.0	-6.0	-8.4	-1.8	7.7					
16	12.0	---	-7.1	-5.3	-8.9	-.8	8.9					
17	10.2	---	-5.9	-5.2	-8.4	-.9	9.4					
18	10.9	---	-3.0	-4.3	-6.3	-.4	11.0					
19	9.5	---	-.6	-6.7	-4.9	.2	12.1					
20	9.1	---	-.3	-6.6	-4.2	.5	14.0					
21	7.5	.8	-.2	-4.9	-4.7	.4	14.7					
22	6.9	.3	-.8	-4.6	-4.4	.2	14.1					
23	6.4	-.5	-1.5	-4.2	-4.7	.0	12.8					
24	7.2	-.7	-1.8	-1.7	-4.5	.1	12.4					
25	7.2	-1.7	-1.6	-2.6	-5.5	.8	12.4					
26	7.6	-1.2	-.3	-5.7	-4.4	1.3	12.8					
27	8.1	-1.2	-.9	-7.9	-4.0	1.6	13.8					
28	7.8	-1.8	-1.5	-9.5	-4.9	1.7	14.3					
29	7.2	-2.5	-2.2	-10.3	-8.6	2.7	14.5					
30	6.6	-2.1	-2.5	-10.0	---	4.0	14.9					
31	5.7	---	-3.6	-9.7	---	4.6	---					
MEAN	10.0	.6	-1.5	-6.8	-5.9	-0.8	9.0					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-3.6	0.0						
2				---	-4.8	-.3						
3				---	-5.3	-.4						
4				---	-5.8	-.2						
5				---	-4.9	-.2						
6				---	-4.8	-.5						
7				---	-5.1	-1.1						
8				---	-6.3	-.6						
9				---	-6.9	-.5						
10				---	-8.2	-.1						
11				---	-8.9	.0						
12				---	-8.7	.0						
13				---	-7.6	.0						
14				---	-5.8	.2						
15				---	-3.5	.4						
16				---	-2.2	.7						
17				---	-1.3	.6						
18				---	-1.0	.4						
19				---	-.7	.7						
20				---	-.5	.5						
21				---	-.3	.5						
22				---	-.2	.7						
23				---	.0	1.6						
24				---	.0	2.3						
25				---	.0	---						
26				---	.0	---						
27				---	.0	---						
28				-2.2	.0	---						
29				-3.6	---	---						
30				-3.7	---	---						
31				-3.2	---	---						
MEAN				-3.2	-3.4	.2						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 0.4 FOOT

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1.0	-4.7	-9.7	-2.7	-2.6					
2		---	.9	-4.7	-9.9	-3.1	-2.9					
3		---	1.0	-4.3	-10.6	-4.8	-4.1					
4		---	.9	-4.0	-11.0	-6.3	-4.3					
5		---	.7	-5.8	-11.3	-7.0	-3.9					
6		---	.8	-7.6	-11.4	-7.3	-4.0					
7		---	1.0	-7.4	-10.8	-6.8	-3.7					
8		---	1.1	-6.3	-11.0	-6.9	-3.3					
9		---	1.2	-6.8	-11.0	-7.3	-3.3					
10		---	1.1	-7.7	-11.3	-6.5	-3.5					
11		---	1.0	-8.2	-11.0	-5.8	-2.8					
12		---	1.2	-7.8	-10.5	-5.6	-2.5					
13		---	.7	-7.9	-10.4	-4.8	-2.2					
14		6.3	.2	-7.9	-10.2	-3.8	.1					
15		6.5	-.2	-8.0	-9.7	-3.5	2.6					
16		5.9	-.6	-9.4	-9.1	-3.1	3.0					
17		5.5	-.9	-9.0	-6.6	-3.0	3.7					
18		5.0	-1.2	-8.5	-5.0	-2.8	4.9					
19		4.3	-1.9	-10.1	-3.9	-2.9	5.2					
20		3.3	-1.4	-11.6	-2.5	-2.9	4.2					
21		2.7	-.9	-11.7	-1.5	-2.9	5.0					
22		2.5	-1.6	-11.9	-.9	-3.0	6.6					
23		2.6	-2.2	-12.4	-.9	-3.3	8.6					
24		2.7	-2.6	-12.1	-1.2	-3.3	9.8					
25		2.9	-2.4	-11.6	-1.5	-3.1	9.1					
26		2.8	-2.3	-11.5	-1.9	-3.5	8.3					
27		2.4	-2.6	-10.5	-2.3	-4.1	8.5					
28		2.2	-2.8	-9.9	-2.6	-2.8	---					
29		1.8	-3.2	-10.0	---	-2.8	---					
30		1.3	-3.6	-9.8	---	-2.8	---					
31		---	-3.8	-9.9	---	-2.6	---					
MEAN		3.6	-0.7	-8.7	-7.1	-4.2	1.4					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 0.8 FOOT

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.5	6.6	-0.7	-2.4	-7.6	-7.0	3.3					
2	14.5	5.8	-.9	-2.8	-7.0	-6.3	3.1					
3	14.0	4.8	-.1	-3.9	-6.2	-4.9	3.5					
4	13.0	4.7	.5	-4.0	-5.4	-5.2	4.0					
5	13.6	4.5	1.5	-3.8	-4.6	---	4.8					
6	13.2	4.1	1.7	-3.9	-4.4	---	5.7					
7	13.0	3.7	1.7	-4.9	-4.5	---	5.8					
8	12.6	2.9	.8	-6.2	-4.3	---	3.9					
9	11.6	2.4	.9	-7.5	-4.1	---	3.2					
10	11.6	2.2	1.2	-7.8	-4.5	---	3.9					
11	12.6	2.1	.8	-8.0	-5.2	---	4.0					
12	11.9	2.0	-.1	-8.3	-5.5	---	3.8					
13	10.4	2.3	-.5	-7.1	-5.1	---	4.2					
14	10.3	2.1	-.8	-6.1	-5.4	-3.9	5.5					
15	11.1	---	-1.2	-5.6	-6.3	-2.8	6.4					
16	11.8	---	-3.3	-4.9	-6.9	-1.9	7.2					
17	11.0	---	-3.8	-4.7	-7.0	-1.6	7.7					
18	11.1	---	-2.7	-4.0	-6.1	-1.3	8.8					
19	10.6	---	-.9	-4.7	-5.1	-.7	9.8					
20	10.2	---	-.2	-5.2	-4.4	-.4	11.1					
21	9.3	2.7	.0	-4.6	-4.3	-.2	12.2					
22	8.4	2.1	-.1	-4.0	-4.2	-.1	12.5					
23	7.9	1.5	-.4	-3.9	-4.2	-.2	11.6					
24	8.0	1.2	-.7	-2.7	-4.1	-.2	11.3					
25	8.2	.5	-.8	-2.2	-4.5	.0	11.2					
26	8.2	.3	-.2	-3.4	-4.2	.4	11.4					
27	8.4	.4	-.1	-5.0	-3.9	.8	11.9					
28	8.5	.0	-.5	-6.3	-3.9	1.0	12.4					
29	8.1	-.4	-.9	-7.4	-5.5	1.4	12.7					
30	7.7	-.5	-1.3	-7.7	---	2.4	13.0					
31	7.2	---	-1.8	-7.8	---	3.1	---					
MEAN	10.7	2.4	-0.4	-5.2	-5.1	-1.3	7.7					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-2.9	-0.2						
2				---	-3.6	-.2						
3				---	-4.4	-.3						
4				---	-4.8	-.3						
5				---	-4.4	-.2						
6				---	-4.1	-.3						
7				---	-4.5	-.7						
8				---	-5.1	-.6						
9				---	-5.9	-.5						
10				---	-6.7	-.4						
11				---	-7.4	-.2						
12				---	-7.7	-.1						
13				---	-7.3	-.1						
14				---	-6.1	.0						
15				---	-4.4	.0						
16				---	-3.1	.1						
17				---	-2.3	.1						
18				---	-1.7	.2						
19				---	-1.4	.3						
20				---	-1.1	.3						
21				---	-.9	.2						
22				---	-.7	.2						
23				---	-.6	.3						
24				---	-.5	.5						
25				---	-.3	---						
26				---	-.3	---						
27				---	-.2	---						
28				-1.6	-.2	---						
29				-2.4	---	---						
30				-3.0	---	---						
31				-2.8	---	---						
MEAN				-2.5	-3.3	.0						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 0.8 FOOT

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	2.2	-3.0	-8.8	-2.6	-2.4					
2		---	2.0	-3.3	-8.9	-2.6	-2.5					
3		---	2.0	-3.3	-9.2	-3.9	-3.0					
4		---	2.0	-3.1	-9.6	-5.4	-3.2					
5		---	1.8	-3.6	-9.8	-5.8	-3.2					
6		---	1.7	-5.2	-10.1	-6.2	-3.4					
7		---	1.8	-5.6	-9.9	-5.9	-3.3					
8		---	1.9	-5.2	-9.8	-6.1	-3.0					
9		---	1.9	-5.4	-9.8	-6.2	-3.1					
10		---	1.8	-5.9	-9.9	-6.2	-2.9					
11		---	1.8	-6.4	-9.9	-5.5	-2.6					
12		---	1.9	-6.5	-9.6	-5.5	-2.5					
13		---	1.8	-6.5	-9.6	-4.7	-2.1					
14		6.7	1.2	-6.8	-9.3	-4.1	-.7					
15		6.7	1.1	-6.7	-9.1	-3.8	.3					
16		6.5	.9	-7.4	-8.6	-3.4	1.6					
17		6.2	.5	-7.9	-6.5	-3.3	2.6					
18		5.9	.0	-7.5	-4.9	-3.0	3.4					
19		5.3	-.3	-6.8	-4.4	-3.1	4.3					
20		4.8	-.5	-10.2	-3.4	-2.9	3.8					
21		4.1	-.4	-10.3	-2.4	-2.8	4.0					
22		3.8	-.4	-10.4	-1.8	-2.7	5.1					
23		3.7	-.7	-10.6	-1.5	-3.1	6.5					
24		3.7	-1.1	-10.7	-1.5	-3.1	7.9					
25		3.7	-1.2	-10.4	-1.7	-2.7	8.1					
26		3.6	-1.4	-10.3	-1.9	-3.1	7.6					
27		3.4	-1.2	-9.8	-2.1	-3.4	7.7					
28		3.2	-1.4	-9.3	-2.3	-2.8	---					
29		2.9	-1.9	-9.2	---	-2.8	---					
30		2.6	-2.4	-9.0	---	-2.9	---					
31		---	-2.5	-9.0	---	-2.6	---					
MEAN		4.5	.4	-7.3	-6.7	-3.9	.9					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 1.2 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.9	7.8	0.7	-1.1	-6.1	-5.0	2.5					
2	14.7	7.1	.4	-1.5	-5.9	-5.2	2.6					
3	14.4	6.4	.8	-2.1	-5.5	-4.5	2.8					
4	13.8	6.0	1.2	-2.6	-4.9	-4.3	3.2					
5	13.7	5.8	1.9	-2.6	-4.4	---	3.8					
6	13.6	5.4	2.1	-2.6	-4.0	---	4.5					
7	13.3	5.1	2.3	-3.1	-3.9	---	5.0					
8	13.1	4.5	1.9	-4.0	-3.8	---	4.1					
9	12.5	4.0	1.7	-5.0	-3.6	---	3.2					
10	12.1	3.7	1.8	-5.7	-3.6	---	3.5					
11	12.6	3.5	1.8	-6.0	-4.0	---	3.7					
12	12.4	3.4	1.2	-6.3	-4.3	---	3.6					
13	11.6	3.4	.8	-5.9	-4.3	---	3.7					
14	11.1	3.3	.4	-5.2	-4.3	-3.8	4.5					
15	11.3	---	.2	-4.8	-4.8	-5.1	5.3					
16	11.8	---	-1.0	-4.3	-5.3	-2.3	5.9					
17	11.6	---	-1.8	-4.1	-5.6	-1.9	6.5					
18	11.4	---	-1.6	-3.6	-5.3	-1.6	7.3					
19	11.2	---	-.6	-3.6	-4.7	-1.1	8.2					
20	10.9	---	.1	-4.0	-4.2	-.8	9.1					
21	10.3	4.0	.5	-3.9	-3.9	-.5	10.2					
22	9.6	3.4	.6	-3.5	-3.7	-.3	10.8					
23	9.2	3.0	.4	-3.3	-3.7	-.3	10.5					
24	8.9	2.6	.1	-2.8	-3.6	-.2	10.3					
25	9.0	2.1	.1	-2.2	-3.7	-.2	10.2					
26	8.9	1.7	.3	-2.4	-3.6	.1	10.3					
27	9.0	1.7	.5	-3.4	-3.5	.4	10.6					
28	9.1	1.4	.3	-4.4	-3.3	.6	11.0					
29	8.9	1.1	.0	-5.3	-3.9	.8	11.4					
30	8.6	.9	-.2	-5.9	---	1.5	11.7					
31	8.2	---	-.6	-6.2	---	2.1	---					
MEAN	11.4	3.8	.5	-3.9	-4.3	-1.4	6.7					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-2.3	-0.3						
2				---	-2.6	-.2						
3				---	-3.4	-.3						
4				---	-3.8	-.3						
5				---	-3.8	-.3						
6				---	-3.8	-.2						
7				---	-3.9	-.4						
8				---	-4.3	-.5						
9				---	-4.8	-.4						
10				---	-5.5	-.3						
11				---	-6.2	-.2						
12				---	-6.5	-.2						
13				---	-6.5	-.1						
14				---	-5.9	-.1						
15				---	-4.7	.0						
16				---	-3.7	.1						
17				---	-2.9	.1						
18				---	-2.3	.1						
19				---	-1.8	.2						
20				---	-1.5	.2						
21				---	-1.2	.1						
22				---	-1.0	.1						
23				---	-.8	.2						
24				---	-.8	.2						
25				---	-.7	---						
26				---	-.5	---						
27				---	-.3	---						
28				-1.2	-.3	---						
29				-1.6	---	---						
30				-2.1	---	---						
31				-2.2	---	---						
MEAN				-1.8	-3.1	-0.1						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 1.2 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	3.3	-1.6	-7.2	-2.2	-1.7					
2		---	2.9	-1.9	-7.3	-2.4	-1.7					
3		---	2.8	-2.1	-7.3	-3.4	-1.9					
4		---	2.7	-1.9	-7.6	-4.1	-1.9					
5		---	2.6	-2.2	-7.8	-4.3	-2.0					
6		---	2.5	-3.3	-8.1	-4.7	-2.2					
7		---	2.5	-3.9	-8.2	-4.5	-2.1					
8		---	2.6	-4.1	-7.9	-4.8	-2.0					
9		---	2.6	-4.2	-7.9	-4.8	-2.2					
10		---	2.6	-4.4	-8.1	-4.9	-1.8					
11		---	2.4	-4.9	-8.1	-4.5	-1.7					
12		---	2.7	-5.3	-8.0	-4.6	-1.7					
13		---	2.4	-5.3	-8.0	-3.9	-1.3					
14		6.9	2.1	-5.4	-7.8	-3.4	-.6					
15		7.0	1.9	-5.6	-7.7	-3.3	.0					
16		7.0	1.4	-5.9	-7.3	-2.9	.7					
17		6.8	1.1	-6.3	-5.8	-2.7	1.7					
18		6.4	1.0	-6.5	-4.7	-2.4	2.4					
19		6.2	.7	-7.3	-4.4	-2.6	3.4					
20		5.6	.1	-8.1	-3.6	-2.3	3.4					
21		5.1	.5	-8.3	-2.9	-1.9	3.4					
22		4.8	.2	-8.2	-2.2	-1.8	4.2					
23		4.6	.2	-8.4	-1.9	-2.1	5.2					
24		4.4	.0	-8.6	-1.7	-2.2	6.3					
25		4.3	-.3	-8.4	-1.7	-1.9	6.9					
26		4.4	-.3	-8.5	-1.8	-2.1	6.6					
27		4.3	-.5	-8.2	-1.9	-2.3	6.9					
28		4.0	-.5	-7.8	-2.2	-2.0	---					
29		3.8	-.7	-7.7	---	-2.0	---					
30		3.5	-1.0	-7.6	---	-2.1	---					
31		---	-1.2	-7.4	---	-1.8	---					
MEAN		5.2	1.3	-5.8	-5.7	-3.1	1.0					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 1.6 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.8	8.5	1.8	-0.2	-5.0	-3.8	1.7					
2	14.6	8.0	1.5	-.5	-5.0	-4.3	1.9					
3	14.4	7.4	1.6	-1.0	-4.9	-4.1	2.1					
4	14.0	6.9	1.8	-1.4	-4.5	-3.8	2.4					
5	13.7	6.7	2.5	-1.5	-4.1	---	2.8					
6	13.6	6.4	2.5	-1.6	-3.6	---	3.3					
7	13.4	6.0	2.7	-1.8	-3.5	---	3.9					
8	13.2	5.7	2.6	-2.4	-3.4	---	3.7					
9	12.8	5.1	2.4	-3.2	-3.3	---	3.1					
10	12.4	4.8	2.4	-3.9	-3.2	---	3.1					
11	12.6	4.5	2.5	-4.3	-3.3	---	3.3					
12	12.6	4.3	2.1	-4.7	-3.6	---	3.2					
13	12.1	4.2	1.8	-4.8	-3.7	---	3.3					
14	11.5	4.2	1.4	-4.4	-3.6	-3.7	3.7					
15	11.5	---	1.3	-4.1	-3.9	-3.2	4.3					
16	11.7	---	.6	-3.7	-4.3	-2.6	4.8					
17	11.7	---	-.2	-3.5	-4.6	-2.2	5.3					
18	11.6	---	-.5	-3.1	-4.6	-1.9	5.9					
19	11.4	---	-.1	-3.0	-4.3	-1.5	6.6					
20	11.2	---	.4	-3.2	-3.9	-1.1	7.3					
21	10.8	4.8	.7	-3.3	-3.6	-.9	8.2					
22	10.3	4.4	.9	-3.0	-3.4	-.7	9.0					
23	9.8	4.0	.9	-2.9	-3.3	-.6	9.1					
24	9.5	3.6	.7	-2.6	-3.2	-.5	9.1					
25	9.4	3.2	.6	-2.0	-3.3	-.5	9.0					
26	9.3	2.8	.7	-1.9	-3.5	-.2	9.1					
27	9.3	2.7	.9	-2.4	-3.2	.0	9.3					
28	9.3	2.5	.8	-3.1	-3.0	.1	9.6					
29	9.2	2.3	.6	-3.8	-3.1	.3	9.9					
30	9.0	2.0	.4	-4.5	---	.8	10.2					
31	8.8	---	.2	-4.9	---	1.3	---					
MEAN	11.6	4.8	1.2	-2.9	-3.8	-1.5	5.6					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-1.9	-0.4						
2				---	-2.1	-.3						
3				---	-2.5	-.3						
4				---	-3.1	-.3						
5				---	-3.3	-.2						
6				---	-3.2	-.2						
7				---	-3.3	-.2						
8				---	-3.6	-.3						
9				---	-4.0	-.4						
10				---	-4.6	-.3						
11				---	-5.2	-.2						
12				---	-5.8	-.2						
13				---	-5.9	-.2						
14				---	-5.7	-.2						
15				---	-4.8	-.1						
16				---	-3.9	.0						
17				---	-3.2	.0						
18				---	-2.6	.1						
19				---	-2.2	.2						
20				---	-1.8	.1						
21				---	-1.5	.0						
22				---	-1.3	.2						
23				---	-1.0	.2						
24				---	-.9	.1						
25				---	-.8	---						
26				---	-.7	---						
27				---	-.6	---						
28				-0.9	-.4	---						
29				-1.1	---	---						
30				-1.6	---	---						
31				-1.8	---	---						
MEAN				-1.4	-2.9	-0.1						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 1.6 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4.0	-0.4	-5.5	-2.1	-0.8					
2		---	3.9	-.8	-5.5	-2.3	-.8					
3		---	3.7	-1.1	-5.4	-2.2	-.7					
4		---	3.7	-1.1	-5.7	-2.8	-.7					
5		---	3.4	-1.2	-5.8	-2.8	-.7					
6		---	3.3	-1.6	-6.2	-3.2	-.9					
7		---	3.2	-2.4	-6.4	-3.2	-.9					
8		---	3.3	-2.7	-6.0	-3.3	-.9					
9		---	3.2	-3.0	-6.0	-3.4	-1.0					
10		---	3.3	-3.1	-6.2	-3.5	-.7					
11		---	3.2	-4.1	-6.4	-3.3	-.7					
12		---	3.1	-3.9	-6.3	-3.4	-.7					
13		---	3.1	-4.2	-6.3	-2.9	-.4					
14		7.3	2.9	-4.5	-6.2	-2.5	-.2					
15		7.3	2.5	-4.5	-6.1	-2.4	.0					
16		7.3	2.3	-4.8	-5.9	-2.1	.4					
17		7.1	2.2	-5.2	-5.0	-1.8	1.2					
18		7.0	1.8	-5.2	-4.5	-1.6	1.8					
19		6.8	1.4	-5.7	-4.2	-1.4	2.5					
20		6.4	1.3	-6.0	-3.7	-1.4	2.9					
21		6.0	1.0	-6.1	-3.1	-1.0	2.9					
22		5.6	1.0	-6.0	-2.5	-.8	3.3					
23		5.3	.9	-6.2	-2.1	-1.2	4.1					
24		5.2	1.0	-6.3	-2.0	-1.2	4.9					
25		5.1	.7	-6.4	-1.9	-.9	5.7					
26		5.0	.5	-6.5	-1.8	-1.1	5.9					
27		4.9	.3	-6.4	-1.9	-1.3	6.0					
28		4.8	.2	-6.1	-2.0	-1.0	---					
29		4.6	.2	-6.1	---	-1.1	---					
30		4.3	.1	-5.8	---	-1.2	---					
31		---	-.3	-5.7	---	-.9	---					
MEAN		5.9	2.1	-4.3	-4.7	-2.0	1.2					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 2.0 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.8	9.1	2.8	0.7	-3.8	-3.0	1.1					
2	14.6	8.7	2.6	.4	-3.9	-3.3	1.4					
3	14.4	8.3	2.5	.1	-3.9	-3.4	1.6					
4	14.2	7.9	2.6	-.2	-3.7	-3.3	1.8					
5	13.8	7.6	2.6	-.4	-3.5	---	2.2					
6	13.8	7.3	3.0	-.6	-3.2	---	2.5					
7	13.5	7.0	3.1	-.7	-3.0	---	3.0					
8	13.4	6.7	3.2	-1.2	-2.9	---	3.1					
9	13.1	6.2	3.1	-1.7	-2.8	---	2.9					
10	12.8	5.9	3.0	-2.3	-2.7	---	2.8					
11	12.7	5.6	3.0	-2.7	-2.7	---	2.9					
12	12.7	5.4	2.9	-3.1	-2.8	---	2.9					
13	12.5	5.3	2.6	-3.3	-3.0	---	3.0					
14	12.1	5.2	2.3	-3.2	-3.0	-3.3	3.2					
15	11.8	---	2.1	-3.1	-3.1	-3.0	3.6					
16	11.9	---	1.7	-2.8	-3.3	-2.5	4.0					
17	11.9	---	1.2	-2.7	-3.6	-2.2	4.5					
18	11.8	---	.8	-2.4	-3.8	-2.0	4.9					
19	11.7	---	.8	-2.3	-3.6	-1.7	5.4					
20	11.5	---	1.0	-2.3	-3.4	-1.3	6.1					
21	11.3	5.5	1.3	-2.4	-3.2	-1.1	6.8					
22	10.9	5.2	1.4	-2.3	-3.0	-.9	7.4					
23	10.5	4.9	1.5	-2.1	-2.9	-.8	7.8					
24	10.2	4.6	1.4	-2.0	-2.8	-.7	7.9					
25	10.0	4.3	1.3	-1.7	-2.8	-.6	8.0					
26	9.9	3.9	1.3	-1.5	-2.7	-.4	8.0					
27	9.8	3.7	1.4	-1.6	-2.7	-.2	8.2					
28	9.7	3.5	1.4	-2.1	-2.6	-.1	8.5					
29	9.6	3.3	1.3	-2.6	-2.6	.1	8.8					
30	9.5	3.1	1.2	-3.2	---	.4	9.0					
31	9.3	---	1.0	-3.5	---	.7	---					
MEAN	11.9	5.8	2.0	-1.9	-3.1	-1.5	4.8					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-1.5	-0.4						
2				---	-1.7	-.3						
3				---	-2.0	-.3						
4				---	-2.4	-.2						
5				---	-2.6	-.2						
6				---	-2.8	-.2						
7				---	-3.0	-.2						
8				---	-3.1	-.2						
9				---	-3.4	-.2						
10				---	-3.8	-.2						
11				---	-4.3	-.2						
12				---	-4.8	-.1						
13				---	-5.1	-.1						
14				---	-5.0	-.1						
15				---	-4.6	.0						
16				---	-3.8	.1						
17				---	-3.2	.0						
18				---	-2.7	.1						
19				---	-2.3	-.1						
20				---	-1.9	.1						
21				---	-1.6	.1						
22				---	-1.4	-.1						
23				---	-1.2	.2						
24				---	-1.0	.2						
25				---	-.8	---						
26				---	-.7	---						
27				---	-.5	---						
28				-0.8	-.5	---						
29				-.8	---	---						
30				-1.1	---	---						
31				-1.3	---	---						
MEAN				-1.0	-2.6	-0.1						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 2.0 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	5.0	0.6	-5.1	-2.0	-1.0					
2		---	4.7	.2	-5.0	-1.8	-1.0					
3		---	4.5	.0	-4.9	-2.4	-.9					
4		---	4.5	-.3	-5.1	-2.8	-.9					
5		---	4.3	-.3	-5.2	-2.8	-.8					
6		---	4.2	-.3	-5.5	-3.0	-1.0					
7		---	4.1	-.6	-5.7	-2.9	-1.1					
8		---	4.0	-1.4	-5.5	-3.1	-1.0					
9		---	4.0	-1.7	-5.4	-3.1	-1.2					
10		---	3.9	-1.8	-5.5	-3.3	-.8					
11		---	3.8	-2.1	-5.6	-3.1	-.7					
12		---	3.9	-2.5	-5.7	-3.4	-.8					
13		---	3.8	-2.9	-5.8	-2.9	-.5					
14		7.8	3.6	-3.1	-5.6	-2.6	-.2					
15		7.7	3.5	-3.4	-5.6	-2.5	.0					
16		7.7	3.3	-3.2	-5.3	-2.3	.4					
17		7.6	2.7	-3.6	-4.7	-2.1	.8					
18		7.5	2.5	-3.9	-4.1	-2.0	1.3					
19		7.3	2.4	-4.5	-3.8	-2.0	1.8					
20		7.2	2.2	-5.0	-3.5	-1.7	2.2					
21		6.7	2.2	-5.1	-3.1	-1.4	2.4					
22		6.4	1.9	-5.1	-2.8	-1.2	2.7					
23		6.2	1.8	-5.3	-2.5	-1.5	3.2					
24		6.0	1.7	-5.4	-2.1	-1.5	3.9					
25		5.9	1.7	-5.5	-1.8	-1.3	4.5					
26		5.8	1.4	-5.5	-1.8	-1.3	4.9					
27		5.7	1.4	-5.7	-1.8	-1.4	5.1					
28		5.5	1.3	-5.5	-1.8	-1.2	---					
29		5.4	1.2	-5.4	---	-1.2	---					
30		5.2	.8	-5.3	---	-1.4	---					
31		---	.8	-5.1	---	-1.2	---					
MEAN		6.6	2.9	-3.2	-4.3	-2.1	.8					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 2.4 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.7	9.5	3.7	1.4	-2.8	-2.4	0.7					
2	14.5	9.2	3.4	1.1	-3.0	-2.6	1.0					
3	14.3	8.9	3.3	.9	-3.1	-2.8	1.2					
4	14.1	8.5	3.3	.7	-2.9	-2.8	1.4					
5	13.9	8.2	3.3	.4	-2.8	---	1.7					
6	13.8	7.9	3.5	.2	-2.7	---	2.0					
7	13.6	7.6	3.6	.1	-2.5	---	2.3					
8	13.4	7.4	3.7	-.2	-2.3	---	2.6					
9	13.3	7.0	3.6	-.6	-2.3	---	2.6					
10	13.1	6.7	3.5	-1.1	-2.2	---	2.6					
11	12.8	6.4	3.5	-1.5	-2.2	---	2.6					
12	12.8	6.2	3.4	-1.8	-2.3	---	2.7					
13	12.6	6.0	3.3	-2.1	-2.4	---	2.7					
14	12.4	5.9	3.0	-2.2	-2.4	-2.9	2.9					
15	12.1	---	2.8	-2.2	-2.5	-2.7	3.1					
16	12.0	---	2.6	-2.0	-2.6	-2.4	3.5					
17	12.0	---	2.1	-1.9	-2.8	-2.1	3.9					
18	11.9	---	1.8	-1.8	-3.0	-1.9	4.3					
19	11.8	---	1.6	-1.6	-3.0	-1.7	4.7					
20	11.7	---	1.6	-1.6	-2.9	-1.4	5.2					
21	11.5	6.0	1.8	-1.7	-2.7	-1.2	5.7					
22	11.2	5.8	1.9	-1.7	-2.6	-1.0	6.2					
23	10.9	5.5	2.0	-1.5	-2.5	-.9	6.7					
24	10.6	5.3	1.9	-1.5	-2.4	-.8	6.9					
25	10.4	5.0	1.9	-1.3	-2.4	-.6	7.1					
26	10.3	4.7	1.8	-1.1	-2.3	-.5	7.2					
27	10.1	4.5	1.8	-1.1	-2.3	-.3	7.3					
28	10.1	4.3	1.8	-1.4	-2.3	-.2	7.6					
29	9.9	4.1	1.8	-1.7	-2.2	.0	7.8					
30	9.8	3.9	1.7	-2.2	---	.1	8.1					
31	9.6	---	1.6	-2.5	---	.4	---					
MEAN	12.1	6.4	2.6	-1.1	-2.6	-1.4	4.1					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-1.0	-0.4						
2				---	-1.2	-.3						
3				---	-1.5	-.2						
4				---	-1.7	-.2						
5				---	-2.0	-.1						
6				---	-2.2	-.1						
7				---	-2.3	-.1						
8				---	-2.3	-.1						
9				---	-2.5	-.1						
10				---	-3.0	-.1						
11				---	-3.4	.0						
12				---	-3.8	.0						
13				---	-4.3	.0						
14				---	-4.3	.0						
15				---	-4.1	.1						
16				---	-3.6	.2						
17				---	-3.1	.0						
18				---	-2.7	.2						
19				---	-2.3	.1						
20				---	-2.0	.1						
21				---	-1.7	.1						
22				---	-1.4	.2						
23				---	-1.2	.3						
24				---	-1.1	.2						
25				---	-.8	---						
26				---	-.7	---						
27				---	-.6	---						
28				-0.4	-.4	---						
29				-.5	---	---						
30				-.6	---	---						
31				-.9	---	---						
MEAN				-0.6	-2.2	.0						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 2.4 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	5.6	1.5	-4.0	-1.6	-0.6					
2		---	5.4	1.1	-3.9	-1.9	-.5					
3		---	5.2	1.1	-3.7	-1.8	-.4					
4		---	5.1	.8	-4.0	-2.1	-.5					
5		---	5.0	.6	-4.0	-2.1	-.4					
6		---	4.8	.6	-4.1	-2.2	-.4					
7		---	4.7	.1	-4.4	-2.2	-.5					
8		---	4.7	.0	-4.3	-2.3	-.2					
9		---	4.5	-.6	-4.2	-2.3	-.6					
10		---	4.5	-.6	-4.3	-2.5	-.1					
11		---	4.4	-.9	-4.3	-2.2	-.2					
12		---	4.4	-1.4	-4.4	-2.7	-.2					
13		---	4.4	-1.8	-4.5	-2.3	.0					
14		8.1	4.2	-2.1	-4.4	-2.1	.0					
15		8.0	4.1	-2.3	-4.3	-2.0	.0					
16		8.1	3.8	-2.0	-4.2	-1.9	.3					
17		7.9	3.9	-2.6	-3.9	-1.7	.7					
18		7.7	3.6	-2.7	-3.6	-1.6	1.1					
19		7.8	3.3	-3.0	-3.4	-1.4	1.5					
20		7.6	3.0	-3.4	-3.2	-1.4	1.7					
21		7.4	2.7	-3.6	-2.9	-1.0	2.1					
22		7.1	2.9	-3.6	-2.6	-.9	2.3					
23		6.8	2.9	-3.9	-2.4	-1.0	2.7					
24		6.6	2.5	-3.9	-2.1	-1.1	3.1					
25		6.4	2.3	-4.1	-2.0	-.9	3.6					
26		6.4	2.2	-4.1	-1.8	-.9	4.2					
27		6.2	1.9	-4.2	-1.7	-.8	4.3					
28		6.1	1.9	-4.0	-1.7	-.6	---					
29		6.0	1.9	-4.2	---	-.7	---					
30		5.8	1.7	-4.0	---	-.9	---					
31		---	1.4	-3.9	---	-.7	---					
MEAN		7.1	3.6	-2.0	-3.5	-1.6	.9					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 2.8 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.6	9.9	4.4	2.0	-1.9	-1.9	0.5					
2	14.4	9.7	4.2	1.8	-2.1	-2.1	.7					
3	14.3	9.4	4.0	1.6	-2.2	-2.3	1.0					
4	14.2	9.1	4.0	1.4	-2.2	-2.3	1.2					
5	13.9	8.8	3.7	1.2	-2.2	---	1.4					
6	13.8	8.6	4.0	1.0	-2.1	---	1.7					
7	13.7	8.3	4.0	.8	-2.0	---	1.9					
8	13.5	8.0	4.1	.6	-1.8	---	2.2					
9	13.4	7.7	4.1	.3	-1.8	---	2.3					
10	13.2	7.4	4.0	-.1	-1.8	---	2.3					
11	13.0	7.2	3.9	-.4	-1.7	---	2.3					
12	12.8	7.0	3.9	-.7	-1.7	---	2.5					
13	12.8	6.7	3.8	-1.0	-1.8	---	2.5					
14	12.6	6.6	3.6	-1.2	-1.9	-2.5	2.6					
15	12.4	---	3.4	-1.2	-1.9	-2.3	2.8					
16	12.2	---	3.2	-1.1	-2.0	-2.2	3.1					
17	12.2	---	2.9	-1.1	-2.1	-2.0	3.4					
18	12.1	---	2.6	-1.1	-2.3	-1.7	3.7					
19	12.0	---	2.4	-1.0	-2.4	-1.6	4.0					
20	11.9	---	2.3	-.9	-2.3	-1.4	4.5					
21	11.8	6.4	2.4	-1.0	-2.2	-1.2	4.9					
22	11.5	6.3	2.4	-1.0	-2.2	-1.0	5.3					
23	11.3	6.1	2.5	-1.0	-2.1	-.9	5.8					
24	11.0	5.8	2.5	-1.0	-2.0	-.7	6.1					
25	10.8	5.6	2.4	-.8	-2.0	-.6	6.3					
26	10.7	5.4	2.4	-.7	-1.9	-.5	6.4					
27	10.5	5.1	2.3	-.6	-1.9	-.4	6.6					
28	10.4	5.0	2.4	-.8	-1.8	-.2	6.8					
29	10.3	4.8	2.4	-1.0	-1.9	.0	7.1					
30	10.2	4.6	2.3	-1.3	---	.1	7.3					
31	10.0	---	2.2	-1.6	---	.2	---					
MEAN	12.3	7.1	3.2	-0.3	-2.0	-1.3	3.6					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-0.4	-0.3						
2				---	-.5	-.2						
3				---	-.7	-.1						
4				---	-1.0	-.1						
5				---	-1.2	-.1						
6				---	-1.4	.0						
7				---	-1.6	.1						
8				---	-1.6	.1						
9				---	-1.8	.1						
10				---	-2.2	.1						
11				---	-2.5	.1						
12				---	-2.8	.1						
13				---	-3.2	.2						
14				---	-3.3	.2						
15				---	-3.3	.2						
16				---	-3.1	.3						
17				---	-2.7	.2						
18				---	-2.4	.3						
19				---	-2.0	.3						
20				---	-1.8	.3						
21				---	-1.5	.4						
22				---	-1.3	.5						
23				---	-1.0	.6						
24				---	-.9	.5						
25				---	-.8	---						
26				---	-.5	---						
27				---	-.5	---						
28				-0.1	-.4	---						
29				.0	---	---						
30				-.1	---	---						
31				-.3	---	---						
MEAN				-0.1	-1.7	.2						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 2.8 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	6.3	2.1	-3.2	-1.6	-0.6					
2		---	6.1	2.0	-3.2	-1.5	-.6					
3		---	5.9	1.7	-3.1	-1.6	-.5					
4		---	5.8	1.7	-3.3	-2.0	-.4					
5		---	5.7	1.5	-3.2	-1.8	-.3					
6		---	5.5	1.6	-3.4	-1.9	-.3					
7		---	5.4	.9	-3.6	-1.8	-.4					
8		---	5.2	.9	-3.5	-1.9	-.4					
9		---	5.2	.4	-3.6	-2.0	-.5					
10		---	5.2	.4	-3.6	-2.1	.0					
11		---	5.0	.3	-3.5	-1.8	.0					
12		---	5.0	-.2	-3.6	-2.4	.0					
13		---	4.8	-.4	-3.7	-2.0	.0					
14		8.5	4.9	-.7	-3.6	-1.8	.1					
15		8.4	4.7	-1.2	-3.6	-1.8	.2					
16		8.4	4.6	-1.2	-3.5	-1.8	.3					
17		8.3	4.2	-1.5	-3.3	-1.7	.6					
18		8.2	4.2	-1.5	-3.0	-1.6	.9					
19		8.1	4.2	-1.8	-2.7	-1.5	1.2					
20		8.0	3.9	-2.4	-2.7	-1.4	1.6					
21		7.8	3.6	-2.6	-2.6	-1.0	1.9					
22		7.6	3.2	-2.6	-2.3	-.9	2.0					
23		7.4	3.2	-2.9	-2.1	-1.1	2.3					
24		7.2	3.2	-2.9	-2.0	-1.1	2.6					
25		7.1	3.2	-2.9	-1.8	-.8	3.0					
26		6.9	3.0	-3.0	-1.7	-.9	3.4					
27		6.8	2.9	-3.3	-1.6	-.7	3.8					
28		6.7	2.8	-3.1	-1.5	-.6	---					
29		6.6	2.5	-3.2	---	-.4	---					
30		6.4	2.6	-3.1	---	-.9	---					
31		---	2.5	-3.1	---	-.7	---					
MEAN		7.6	4.3	-1.0	-3.0	-1.5	.7					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 3.2 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.4	10.2	5.1	2.6	-1.1	-1.5	0.3					
2	14.3	10.0	4.9	2.4	-1.3	-1.6	.5					
3	14.1	9.8	4.7	2.3	-1.4	-1.8	.7					
4	14.1	9.6	4.6	2.1	-1.4	-1.9	1.0					
5	13.9	9.4	4.5	1.9	-1.5	---	1.2					
6	13.8	9.1	4.5	1.6	-1.5	---	1.4					
7	13.7	8.9	4.5	1.5	-1.4	---	1.6					
8	13.5	8.6	4.6	1.3	-1.3	---	1.8					
9	13.4	8.3	4.5	1.1	-1.3	---	2.0					
10	13.3	8.1	4.5	.8	-1.3	---	2.1					
11	13.1	7.8	4.4	.4	-1.3	---	2.1					
12	12.9	7.6	4.4	.3	-1.3	---	2.2					
13	12.9	7.4	4.3	.0	-1.3	---	2.3					
14	12.7	7.2	4.1	-.2	-1.3	-2.0	2.4					
15	12.5	---	4.0	-.4	-1.4	-1.9	2.5					
16	12.4	---	3.8	-.4	-1.5	-1.9	2.7					
17	12.3	---	3.6	-.4	-1.5	-1.7	3.0					
18	12.2	---	3.4	-.4	-1.7	-1.5	3.3					
19	12.1	---	3.1	-.3	-1.8	-1.4	3.5					
20	12.0	---	3.0	-.3	-1.7	-1.3	3.9					
21	11.9	6.8	3.0	-.4	-1.7	-1.1	4.2					
22	11.7	6.7	3.0	-.4	-1.7	-1.0	4.5					
23	11.6	6.6	3.0	-.4	-1.7	-.9	4.9					
24	11.3	6.4	3.0	-.4	-1.6	-.7	5.2					
25	11.1	6.2	2.9	-.3	-1.6	-.6	5.5					
26	11.0	6.0	2.9	-.3	-1.5	-.5	5.7					
27	10.8	5.7	2.8	-.2	-1.5	-.4	5.9					
28	10.7	5.6	2.8	-.2	-1.5	-.2	6.1					
29	10.6	5.4	2.8	-.4	-1.5	-.1	6.3					
30	10.4	5.2	2.8	-.6	---	.0	6.6					
31	10.3	---	2.7	-.8	---	.1	---					
MEAN	12.4	7.6	3.8	.4	-1.5	-1.1	3.2					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	0.0	-0.1						
2				---	.0	.0						
3				---	-.1	.0						
4				---	-.3	.1						
5				---	-.4	.2						
6				---	-.6	.2						
7				---	-.7	.2						
8				---	-.9	.2						
9				---	-1.1	.3						
10				---	-1.2	.2						
11				---	-1.4	.3						
12				---	-1.7	.3						
13				---	-2.1	.4						
14				---	-2.4	.4						
15				---	-2.5	.4						
16				---	-2.3	.4						
17				---	-2.2	.4						
18				---	-2.0	.5						
19				---	-1.6	.5						
20				---	-1.5	.6						
21				---	-1.2	.6						
22				---	-1.1	.6						
23				---	-.8	.6						
24				---	-.8	.6						
25				---	-.6	---						
26				---	-.3	---						
27				---	-.3	---						
28				0.3	-.3	---						
29				.4	---	---						
30				.3	---	---						
31				.2	---	---						
MEAN				.3	-1.1	.3						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 0.0; SAMPLING DEPTH 3.2 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	6.8	2.6	-2.2	-1.2	-0.6					
2		---	6.6	2.7	-2.2	-1.2	-.7					
3		---	6.4	2.6	-2.2	-1.5	-.5					
4		---	6.4	2.5	-2.4	-1.9	-.5					
5		---	6.3	2.4	-2.3	-1.6	-.3					
6		---	6.1	2.2	-2.4	-1.8	-.2					
7		---	6.0	2.1	-2.6	-1.6	-.3					
8		---	5.8	1.9	-2.6	-1.7	-.2					
9		---	5.8	1.7	-2.6	-1.7	-.6					
10		---	5.7	1.2	-2.6	-1.9	.0					
11		---	5.6	1.1	-2.6	-1.6	.0					
12		---	5.6	1.1	-2.7	-2.2	.0					
13		---	5.5	.9	-2.8	-1.8	.2					
14		8.8	5.3	.4	-2.8	-1.7	.2					
15		8.7	5.3	.0	-2.7	-1.8	.2					
16		8.7	5.1	.0	-2.6	-1.9	.5					
17		8.5	5.4	-.2	-2.6	-1.7	.6					
18		8.4	5.3	-.6	-2.5	-1.7	.7					
19		8.4	4.8	-.6	-2.5	-1.6	1.0					
20		8.4	4.3	-1.0	-2.4	-1.5	1.3					
21		8.3	4.3	-1.4	-2.1	-1.1	1.7					
22		8.1	4.3	-1.4	-2.2	-1.1	1.8					
23		7.9	4.0	-1.6	-1.9	-1.1	2.0					
24		7.8	3.9	-1.7	-1.8	-1.1	2.2					
25		7.5	3.5	-1.7	-1.5	-.9	2.7					
26		7.4	3.5	-1.8	-1.5	-1.0	3.0					
27		7.4	3.4	-2.1	-1.3	-.8	3.3					
28		7.2	3.3	-2.1	-1.3	-.5	---					
29		7.2	3.3	-2.2	---	-.5	---					
30		7.0	2.9	-2.2	---	-.9	---					
31		---	2.7	-2.0	---	-.8	---					
MEAN		8.0	4.9	.0	-2.3	-1.4	.7					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 0.0 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.7	-0.1	-6.9	-7.3	-10.3	-11.6	4.1					
2	12.8	-2.4	-3.2	-9.8	-7.9	-6.1	4.6					
3	8.7	-1.8	-1.7	-10.3	-6.0	-7.2	4.6					
4	11.5	-.4	2.7	-6.8	-4.5	-11.2	6.2					
5	12.4	-1.2	.5	-7.2	-4.2	---	8.6					
6	10.1	-2.3	2.3	-10.0	-6.9	---	10.1					
7	10.8	-3.4	-4.1	-14.3	-5.8	---	3.1					
8	7.7	-4.0	-2.5	-18.1	-5.4	---	1.1					
9	6.7	-4.9	-.5	-16.1	-5.5	---	3.2					
10	14.4	-4.2	-1.1	-13.3	-8.4	---	3.8					
11	11.4	-3.4	-7.1	-15.7	-8.8	---	2.5					
12	4.2	-1.9	-5.6	-11.7	-7.4	---	3.6					
13	4.1	-2.2	-7.6	-6.1	-6.8	---	6.3					
14	9.0	.1	-3.8	-7.2	-9.9	-2.3	8.6					
15	12.0	---	-11.9	-6.2	-11.2	-.6	8.2					
16	8.5	---	-12.4	-6.2	-11.3	-2.0	10.7					
17	7.4	---	-6.2	-5.7	-8.8	-1.9	12.8					
18	8.1	---	-.1	-5.5	-6.0	.8	15.4					
19	7.5	---	-.3	-10.2	-4.5	1.0	16.4					
20	5.6	---	-1.0	-8.0	-4.5	.2	20.1					
21	2.9	-4.2	-2.2	-4.3	-5.0	.3	20.1					
22	2.9	-3.8	-3.8	-6.5	-5.1	.0	14.3					
23	3.3	-5.4	-4.1	-2.8	-5.1	-1.0	13.7					
24	5.2	-5.7	-3.9	-.1	-6.0	-.2	12.7					
25	5.1	-5.8	-2.1	-7.1	-7.8	.9	12.6					
26	7.4	-3.7	-.5	-12.0	-4.5	1.6	14.6					
27	7.2	-6.0	-3.6	-13.7	-4.4	1.4	16.2					
28	5.7	-7.0	-4.6	-15.3	-9.3	1.7	17.0					
29	4.6	-7.5	-5.4	-14.9	-14.9	4.3	17.2					
30	3.6	-5.8	-6.3	-13.6	---	4.6	17.3					
31	2.0	---	-8.2	-12.9	---	5.2	---					
MEAN	7.6	-3.6	-3.7	-9.6	-7.1	-1.0	10.3					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-8.4	-1.8						
2				---	-10.4	-3.1						
3				---	-9.8	-1.1						
4				---	-8.2	-1.2						
5				---	-5.6	-1.7						
6				---	-6.2	-3.5						
7				---	-11.2	-2.7						
8				---	-11.2	-1.1						
9				---	-12.6	-1.0						
10				---	-15.3	-.2						
11				---	-13.6	.7						
12				---	-11.4	.7						
13				---	-7.3	1.3						
14				---	-2.2	2.0						
15				---	-.2	1.9						
16				---	.0	3.2						
17				---	1.1	.7						
18				---	1.2	.0						
19				---	1.5	.2						
20				---	1.9	.0						
21				---	1.1	.4						
22				---	.7	.8						
23				---	1.0	4.2						
24				---	.2	3.9						
25				---	.0	---						
26				---	.0	---						
27				---	.4	---						
28				-5.3	-.5	---						
29				-6.9	---	---						
30				-4.9	---	---						
31				-5.2	---	---						
MEAN				-5.6	-4.5	.1						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 0.0 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	-1.5	-6.0	-10.1	-5.2	0.1					
2		---	.0	-5.5	-11.5	-5.9	-2.0					
3		---	-.4	-5.8	-14.0	-6.4	-2.8					
4		---	-1.5	-6.0	-15.1	-8.0	-2.3					
5		---	-.5	-9.0	-15.4	-9.2	-1.2					
6		---	.2	-10.7	-13.6	-8.8	-1.7					
7		---	.0	-9.9	-12.2	-7.8	-1.2					
8		---	-.2	-10.8	-13.9	-9.2	-.8					
9		---	-.3	-13.4	-13.8	-7.0	-1.1					
10		---	-.5	-15.5	-14.1	-3.0	-1.3					
11		---	.1	-13.8	-13.2	-3.8	2.5					
12		---	-1.2	-12.4	-12.4	-1.6	5.4					
13		---	-2.9	-12.9	-11.2	-2.8	6.5					
14		4.6	-3.6	-9.9	-7.7	-1.1	10.2					
15		4.6	-3.7	-12.8	-7.8	-.4	5.6					
16		3.1	-3.5	-14.8	-6.1	-.4	4.6					
17		3.1	-5.2	-12.0	-3.9	-.6	5.4					
18		1.8	-3.7	-11.6	-2.6	-1.3	7.5					
19		1.4	-4.1	-13.4	-1.2	-2.3	4.7					
20		.8	-1.0	-13.2	-.7	-3.9	3.3					
21		.6	-1.9	-13.6	.0	-4.2	6.0					
22		.2	-3.0	-14.3	-2.1	-2.3	9.4					
23		.6	-3.8	-15.1	-4.4	-1.3	12.6					
24		.9	-4.2	-15.0	-4.2	-1.9	12.3					
25		1.4	-3.9	-13.6	-4.7	-2.3	8.5					
26		.8	-3.3	-11.5	-4.6	-2.4	9.7					
27		.2	-3.4	-9.1	-4.3	-2.6	10.3					
28		.0	-4.3	-12.0	-4.2	-.2	---					
29		-1.1	-4.6	-11.6	---	2.4	---					
30		-1.1	-5.1	-11.2	---	.1	---					
31		---	-5.1	-10.9	---	-.2	---					
MEAN		1.3	-2.5	-11.5	-8.2	-3.3	4.1					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 0.4 FOOT

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.7	3.3	-3.8	-6.2	-9.9	-10.1	3.9					
2	13.3	2.1	-3.6	-6.9	-8.2	-7.1	4.0					
3	11.8	.6	-1.9	-8.5	-6.7	-6.0	4.5					
4	10.8	1.4	-1.2	-6.3	-5.5	-8.0	4.9					
5	12.6	1.1	.3	-6.1	-4.6	---	6.2					
6	11.3	.3	.7	-6.9	-5.7	---	7.6					
7	11.5	-.2	.3	-9.9	-5.5	---	5.2					
8	10.4	-1.1	-1.3	-12.3	-5.0	---	2.4					
9	8.7	-1.3	-.7	-12.7	-5.0	---	2.6					
10	10.9	-1.4	-.1	-11.3	-6.4	---	3.7					
11	12.4	-1.3	-1.6	-12.2	-7.0	---	3.1					
12	9.4	-1.2	-2.6	-11.2	-6.9	---	3.1					
13	6.6	-.4	-3.3	-7.3	-6.0	---	4.4					
14	8.3	-.7	-3.0	-6.9	-7.2	-3.6	6.2					
15	10.1	---	-4.7	-6.6	-8.4	-2.3	6.7					
16	10.7	---	-6.9	-6.1	-9.0	-1.4	8.4					
17	8.6	---	-5.7	-5.9	-8.3	-2.1	9.3					
18	9.6	---	-3.1	-5.0	-6.6	-1.3	11.2					
19	8.4	---	-1.4	-7.8	-5.3	-.5	12.4					
20	7.7	---	-1.6	-7.6	-4.7	-.2	14.8					
21	5.9	-1.2	-1.5	-5.4	-4.9	-.1	15.7					
22	5.3	-1.8	-2.6	-5.4	-4.6	-.2	14.9					
23	4.7	-2.5	-3.1	-4.8	-4.9	-.2	13.2					
24	5.7	-2.5	-2.9	-2.0	-4.8	-.4	12.5					
25	5.8	-3.2	-2.6	-3.5	-6.4	-.1	12.7					
26	6.9	-2.8	-1.1	-7.1	-4.9	.6	12.9					
27	7.1	-2.6	-2.4	-9.3	-4.5	.8	14.1					
28	6.5	-3.2	-3.4	-10.8	-5.7	1.2	14.7					
29	6.1	-3.9	-4.3	-11.7	-9.6	2.5	14.9					
30	5.5	-3.3	-4.8	-11.3	---	3.2	15.2					
31	4.3	---	-6.2	-11.1	---	4.0	---					
MEAN	8.7	-1.1	-2.6	-7.9	-6.3	-1.4	8.9					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-5.8	-0.6						
2				---	-7.8	-1.7						
3				---	-8.0	-1.6						
4				---	-7.8	-1.3						
5				---	-5.7	-1.2						
6				---	-5.7	-2.2						
7				---	-8.0	-2.7						
8				---	-9.3	-1.6						
9				---	-10.1	-1.5						
10				---	-11.8	-.7						
11				---	-11.8	-.4						
12				---	-10.8	-.1						
13				---	-8.4	.0						
14				---	-5.1	.0						
15				---	-2.5	.2						
16				---	-1.8	.3						
17				---	-.9	.4						
18				---	-.5	.4						
19				---	-.3	.3						
20				---	-.2	.2						
21				---	.0	.3						
22				---	.0	.1						
23				---	.0	.3						
24				---	.0	1.0						
25				---	.0	---						
26				---	-.3	---						
27				---	-.1	---						
28				-3.6	-.1	---						
29				-4.8	---	---						
30				-4.5	---	---						
31				-4.1	---	---						
MEAN				-4.3	-4.4	-0.5						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 0.4 FOOT

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	0.6	-4.7	-10.1	-4.7	-0.9					
2		---	.6	-4.7	-10.6	-5.1	-1.0					
3		---	.7	-4.7	-12.3	-6.0	-1.1					
4		---	.5	-5.0	-13.3	-7.0	-1.4					
5		---	.5	-6.6	-13.9	-8.2	-1.3					
6		---	.6	-8.2	-13.4	-8.1	-1.3					
7		---	.6	-8.7	-11.9	-8.0	-1.4					
8		---	.7	-9.1	-12.9	-8.5	-1.2					
9		---	.6	-10.6	-13.0	-8.0	-1.2					
10		---	.6	-12.6	-13.4	-4.9	-1.4					
11		---	.7	-12.2	-12.7	-5.1	-1.0					
12		---	.6	-11.3	-12.2	-3.0	.7					
13		---	.3	-11.3	-11.4	-3.6	3.0					
14		5.0	-.4	-10.1	-9.7	-2.7	6.7					
15		5.1	-.8	-10.4	-8.4	-2.1	6.3					
16		4.0	-1.0	-12.6	-7.6	-1.8	4.6					
17		3.7	-1.7	-11.8	-5.6	-1.7	4.4					
18		3.5	-1.6	-10.9	-3.7	-1.8	5.5					
19		2.8	-2.1	-12.1	-2.8	-2.3	5.7					
20		2.7	-1.3	-12.5	-2.0	-2.9	4.0					
21		2.3	-1.0	-12.6	-1.3	-3.9	4.6					
22		1.8	-1.5	-13.2	-1.6	-2.9	6.8					
23		1.9	-2.2	-13.7	-3.5	-2.3	9.3					
24		1.9	-2.8	-14.0	-3.8	-2.0	10.4					
25		2.1	-2.9	-13.2	-4.2	-2.4	9.2					
26		2.0	-2.7	-12.1	-4.4	-2.2	8.5					
27		1.7	-2.5	-9.9	-4.2	-3.0	9.1					
28		1.5	-2.9	-11.0	-4.0	-1.9	---					
29		1.2	-3.7	-10.8	---	-1.3	---					
30		.9	-4.2	-10.7	---	-.8	---					
31		---	-4.2	-10.8	---	-.8	---					
MEAN		2.6	-1.0	-10.4	-8.1	-3.8	3.2					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 0.8 FOOT

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.5	5.3	-2.0	-4.4	-8.8	-7.8	2.8					
2	13.5	4.4	-2.2	-4.7	-7.7	-6.9	2.8					
3	13.0	3.1	-1.4	-5.9	-6.7	-5.6	3.3					
4	11.7	3.1	-1.0	-5.3	-5.8	-6.3	3.5					
5	12.7	3.0	.2	-4.9	-5.0	---	4.4					
6	12.1	2.4	.6	-5.0	-5.0	---	5.5					
7	12.0	1.9	1.0	-6.6	-5.1	---	5.4					
8	11.7	1.2	.0	-8.1	-4.8	---	3.0					
9	10.4	.8	.1	-9.3	-4.6	---	2.3					
10	10.7	.6	.4	-9.0	-5.0	---	3.0					
11	12.2	.5	.0	-9.2	-5.7	---	2.9					
12	11.0	.4	-.9	-9.4	-5.9	---	2.7					
13	8.9	.8	-1.3	-7.4	-5.5	---	3.3					
14	9.0	.7	-1.7	-6.5	-5.8	-4.4	4.7					
15	10.0	---	-2.0	-6.1	-6.5	-3.4	5.5					
16	10.9	---	-3.5	-5.6	-7.1	-2.5	6.6					
17	9.7	---	-3.9	-5.4	-7.2	-2.5	7.4					
18	10.1	---	-3.1	-4.8	-6.4	-2.2	8.9					
19	9.4	---	-1.8	-5.7	-5.5	-1.6	10.1					
20	9.1	---	-1.4	-6.4	-4.8	-1.2	11.7					
21	8.0	.9	-1.1	-5.4	-4.7	-.9	13.0					
22	7.1	.1	-1.5	-4.8	-4.5	-.8	13.3					
23	6.5	-.4	-1.8	-4.8	-4.5	-.8	12.0					
24	6.7	-.7	-2.0	-3.3	-4.4	-.8	11.6					
25	6.9	-1.2	-1.9	-3.0	-5.2	-.6	11.5					
26	7.3	-1.3	-1.3	-4.7	-4.8	-.4	11.7					
27	7.6	-1.1	-1.3	-6.4	-4.4	.0	12.2					
28	7.4	-1.3	-1.9	-7.7	-4.5	.3	12.9					
29	7.1	-1.8	-2.7	-8.9	-6.4	.9	13.3					
30	6.7	-1.8	-3.1	-9.2	---	1.7	13.6					
31	6.0	---	-3.9	-9.2	---	2.4	---					
MEAN	9.6	.8	-1.5	-6.4	-5.6	-2.0	7.5					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-4.3	-0.4						
2				---	-5.9	-1.0						
3				---	-6.3	-1.3						
4				---	-6.7	-1.2						
5				---	-5.5	-1.1						
6				---	-5.2	-1.6						
7				---	-6.1	-2.2						
8				---	-7.6	-1.6						
9				---	-8.2	-1.5						
10				---	-9.6	-1.0						
11				---	-10.2	-.7						
12				---	-9.8	-.5						
13				---	-8.5	-.3						
14				---	-6.4	-.2						
15				---	-4.1	.0						
16				---	-2.9	.0						
17				---	-2.1	.0						
18				---	-1.6	.0						
19				---	-1.2	.2						
20				---	-.9	.0						
21				---	-.8	.2						
22				---	-.5	.1						
23				---	-.5	.1						
24				---	-.3	.2						
25				---	-.3	---						
26				---	-.5	---						
27				---	-.4	---						
28				-2.5	-.3	---						
29				-3.5	---	---						
30				-3.8	---	---						
31				-3.5	---	---						
MEAN				-3.3	-4.2	-0.6						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 0.8 FOOT

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1.8	-3.4	-8.8	-4.2	-0.7					
2		---	1.6	-3.6	-8.7	-4.5	-.7					
3		---	1.6	-3.7	-9.9	-5.3	-.6					
4		---	1.6	-3.7	-10.7	-5.5	-.7					
5		---	1.4	-4.8	-11.4	-6.3	-.4					
6		---	1.5	-5.6	-11.5	-6.6	-.5					
7		---	1.5	-6.7	-10.4	-6.7	-.7					
8		---	1.4	-6.9	-10.9	-6.7	-.5					
9		---	1.5	-8.0	-11.0	-6.9	-.6					
10		---	1.4	-9.4	-11.3	-5.1	-.4					
11		---	1.4	-10.0	-11.0	-4.7	-.5					
12		---	1.5	-9.8	-10.6	-3.4	-.2					
13		---	1.2	-9.4	-10.2	-3.2	1.0					
14		5.3	1.0	-9.4	-9.4	-2.8	4.3					
15		5.5	.6	-8.6	-8.0	-2.3	5.4					
16		5.0	.3	-10.2	-7.3	-1.9	4.1					
17		4.5	.1	-10.3	-6.0	-1.7	3.7					
18		4.5	-.2	-9.7	-4.6	-1.5	4.2					
19		3.9	-.5	-10.1	-3.9	-1.5	5.0					
20		3.7	-.2	-10.4	-3.1	-1.8	3.9					
21		3.4	-.2	-10.4	-2.4	-2.6	3.7					
22		3.0	-.4	-10.9	-2.4	-2.3	5.0					
23		2.9	-.7	-11.2	-2.9	-1.9	6.9					
24		2.9	-1.2	-11.5	-3.5	-1.6	8.4					
25		2.9	-1.6	-11.2	-3.8	-1.6	8.3					
26		2.9	-1.7	-10.7	-4.0	-1.6	7.5					
27		2.7	-1.7	-9.3	-3.9	-1.9	8.0					
28		2.5	-1.9	-9.3	-3.8	-1.6	---					
29		2.3	-2.2	-9.3	---	-1.3	---					
30		2.1	-2.7	-9.1	---	-.9	---					
31		---	-2.9	-9.3	---	-.6	---					
MEAN		3.5	.1	-8.6	-7.3	-3.2	2.7					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 1.2 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	6.6	-0.5	-2.8	-7.4	-6.0	1.6					
2	13.8	6.0	-.7	-3.1	-6.9	-6.0	1.8					
3	13.5	5.1	-.5	-3.8	-6.3	-5.3	2.1					
4	12.6	4.6	-.1	-4.0	-5.6	-5.4	2.4					
5	12.8	4.5	.5	-3.8	-5.0	---	2.9					
6	12.6	4.1	.9	-3.7	-4.7	---	3.7					
7	12.4	3.6	1.3	-4.4	-4.7	---	4.2					
8	12.2	3.1	1.0	-5.4	-4.5	---	3.0					
9	11.5	2.6	.8	-6.4	-4.3	---	2.2					
10	11.1	2.3	1.0	-6.7	-4.3	---	2.2					
11	11.9	2.1	.9	-6.9	-4.7	---	2.4					
12	11.7	2.0	.4	-7.3	-5.0	---	2.2					
13	10.5	2.1	.0	-6.6	-4.9	---	2.4					
14	9.9	2.0	-.4	-5.8	-4.9	-4.5	3.3					
15	10.3	---	-.6	-5.4	-5.3	-3.9	4.1					
16	10.9	---	-1.3	-5.0	-5.7	-3.2	4.8					
17	10.5	---	-2.1	-4.8	-6.1	-2.9	5.5					
18	10.4	---	-2.1	-4.4	-5.8	-2.7	6.6					
19	10.2	---	-1.4	-4.5	-5.3	-2.3	7.6					
20	9.9	---	-1.0	-5.1	-4.7	-1.9	8.7					
21	9.2	2.4	-.7	-4.9	-4.5	-1.5	10.1					
22	8.5	1.7	-.7	-4.4	-4.3	-1.3	10.8					
23	7.9	1.2	-.9	-4.3	-4.2	-1.2	10.4					
24	7.7	.8	-1.1	-3.6	-4.1	-1.2	10.1					
25	7.7	.4	-1.1	-3.0	-4.4	-1.1	10.0					
26	7.8	.1	-.9	-3.5	-4.5	-.9	10.2					
27	8.1	.2	-.6	-4.5	-4.2	-.6	10.5					
28	8.1	.1	-1.0	-5.6	-4.0	-.4	11.0					
29	7.9	-.2	-1.4	-6.6	-4.7	-.1	11.4					
30	7.6	-.3	-1.8	-7.2	---	.5	11.8					
31	7.2	---	-2.3	-7.5	---	1.0	---					
MEAN	10.3	2.4	-0.5	-5.0	-5.0	-2.3	6.0					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-3.5	-0.5						
2				---	-4.4	-.7						
3				---	-5.2	-1.0						
4				---	-5.5	-1.1						
5				---	-5.1	-1.0						
6				---	-4.7	-1.2						
7				---	-5.0	-1.6						
8				---	-6.2	-1.6						
9				---	-6.8	-1.4						
10				---	-7.9	-1.2						
11				---	-8.7	-.9						
12				---	-8.7	-.7						
13				---	-8.1	-.6						
14				---	-6.7	-.4						
15				---	-4.9	-.3						
16				---	-3.7	-.3						
17				---	-2.8	-.1						
18				---	-2.3	-.1						
19				---	-1.8	.0						
20				---	-1.5	.0						
21				---	-1.3	.0						
22				---	-1.0	.0						
23				---	-.8	.0						
24				---	-.7	.1						
25				---	-.6	---						
26				---	-.7	---						
27				---	-.6	---						
28				-2.0	-.5	---						
29				-2.6	---	---						
30				-3.1	---	---						
31				-3.0	---	---						
MEAN				-2.7	-3.9	-0.6						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 1.2 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	2.8	-1.9	-7.0	-3.7	0.1					
2		---	2.7	-2.2	-6.8	-4.1	.0					
3		---	2.5	-2.7	-7.5	-4.1	.0					
4		---	2.4	-2.6	-8.2	-4.0	-.1					
5		---	2.4	-3.4	-8.7	-4.5	.2					
6		---	2.3	-3.5	-9.1	-4.8	.1					
7		---	2.3	-4.5	-8.6	-5.1	.0					
8		---	2.3	-4.8	-8.6	-5.0	.2					
9		---	2.2	-5.7	-8.8	-5.2	.3					
10		---	2.2	-6.6	-9.0	-4.4	.2					
11		---	2.2	-7.5	-9.0	-3.8	.2					
12		---	2.1	-7.6	-8.8	-3.1	.3					
13		---	2.1	-7.7	-8.4	-2.6	.5					
14		5.7	1.8	-7.7	-8.0	-2.3	2.2					
15		5.9	1.8	-7.1	-7.0	-1.9	3.4					
16		5.7	1.6	-8.1	-6.3	-1.5	3.1					
17		5.3	1.2	-8.7	-6.0	-1.3	2.7					
18		5.2	.8	-8.3	-5.3	-.9	3.0					
19		4.9	.6	-7.8	-4.6	-.9	3.7					
20		4.6	.4	-7.9	-3.8	-.9	3.3					
21		4.3	.5	-7.9	-3.4	-1.4	3.0					
22		4.1	.6	-8.3	-2.8	-1.4	3.7					
23		3.9	.2	-8.5	-2.9	-1.2	5.0					
24		3.8	.0	-8.7	-3.3	-1.0	6.4					
25		3.8	-.4	-8.8	-3.6	-.9	6.9					
26		3.7	-.7	-8.7	-3.7	-.8	6.5					
27		3.5	-.7	-7.8	-3.8	-.8	6.8					
28		3.4	-.9	-7.3	-3.7	-.8	---					
29		3.3	-1.1	-7.5	---	-.6	---					
30		3.0	-1.3	-7.4	---	-.3	---					
31		---	-1.8	-7.3	---	-.2	---					
MEAN		4.4	1.1	-6.6	-6.3	-2.4	2.3					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 1.6 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.2	7.4	0.5	-1.7	-6.2	-4.8	0.9					
2	13.9	6.9	.3	-2.0	-6.1	-5.2	1.1					
3	13.8	6.2	.3	-2.5	-5.6	-4.9	1.4					
4	13.2	5.7	.5	-2.8	-5.2	-4.8	1.7					
5	13.0	5.4	.9	-2.8	-4.7	---	2.1					
6	12.9	5.1	1.3	-2.7	-4.3	---	2.7					
7	12.7	4.6	1.6	-3.1	-4.3	---	3.3					
8	12.5	4.2	1.6	-3.7	-4.1	---	2.8					
9	12.1	3.8	1.4	-4.6	-3.9	---	2.1					
10	11.6	3.4	1.4	-5.0	-3.8	---	1.9					
11	12.0	3.2	1.5	-5.3	-4.1	---	2.1					
12	12.0	3.0	1.2	-5.7	-4.3	---	2.0					
13	11.3	3.0	.8	-5.5	-4.4	---	2.1					
14	10.6	2.9	.4	-5.0	-4.3	-4.3	2.6					
15	10.6	---	.3	-4.7	-4.5	-3.9	3.3					
16	11.0	---	-.2	-4.4	-4.8	-3.4	3.8					
17	10.9	---	-.8	-4.2	-5.2	-3.0	4.5					
18	10.7	---	-1.1	-3.9	-5.2	-2.8	5.3					
19	10.6	---	-.8	-3.8	-4.9	-2.5	6.2					
20	10.3	---	-.5	-4.2	-4.5	-2.2	7.2					
21	9.9	3.3	-.2	-4.2	-4.2	-1.8	8.3					
22	9.3	2.7	-.1	-3.9	-4.0	-1.6	9.2					
23	8.8	2.3	-.3	-3.8	-3.9	-1.5	9.3					
24	8.4	1.9	-.4	-3.4	-3.8	-1.4	9.2					
25	8.3	1.5	-.5	-2.9	-3.8	-1.2	9.1					
26	8.3	1.2	-.4	-2.9	-4.0	-1.1	9.2					
27	8.4	1.1	-.2	-3.5	-3.8	-.9	9.4					
28	8.4	1.1	-.3	-4.3	-3.7	-.7	9.9					
29	8.3	.9	-.7	-5.1	-3.9	-.5	10.3					
30	8.1	.6	-1.0	-5.7	---	-.1	10.7					
31	7.8	---	-1.3	-6.1	---	.3	---					
MEAN	10.8	3.4	.2	-4.0	-4.5	-2.4	5.1					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-3.0	-0.6						
2				---	-3.5	-.6						
3				---	-4.2	-.9						
4				---	-4.7	-1.0						
5				---	-4.5	-.9						
6				---	-4.2	-1.0						
7				---	-4.4	-1.3						
8				---	-5.1	-1.4						
9				---	-5.8	-1.2						
10				---	-6.4	-1.1						
11				---	-7.3	-.9						
12				---	-7.7	-.7						
13				---	-7.4	-.6						
14				---	-6.5	-.5						
15				---	-5.1	-.4						
16				---	-4.0	-.3						
17				---	-3.2	-.2						
18				---	-2.6	-.2						
19				---	-2.1	-.2						
20				---	-1.8	.0						
21				---	-1.5	.0						
22				---	-1.2	.0						
23				---	-1.1	.0						
24				---	-.9	.0						
25				---	-.8	---						
26				---	-.7	---						
27				---	-.7	---						
28				-1.7	-.6	---						
29				-2.0	---	---						
30				-2.5	---	---						
31				-2.6	---	---						
MEAN				-2.2	-3.6	-0.6						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 1.6 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	3.6	-0.7	-6.5	-3.5	-0.4					
2		---	3.4	-1.4	-6.3	-3.5	-.3					
3		---	3.2	-1.5	-6.6	-3.7	.0					
4		---	3.1	-1.7	-7.1	-3.6	-.2					
5		---	3.1	-2.1	-7.6	-3.9	-.2					
6		---	3.0	-2.4	-7.9	-4.3	.0					
7		---	2.9	-3.2	-7.8	-4.5	.0					
8		---	2.8	-3.5	-7.7	-4.6	.0					
9		---	2.8	-4.0	-7.9	-4.7	.0					
10		---	2.8	-4.5	-8.1	-4.4	.0					
11		---	2.7	-5.5	-8.1	-3.8	.0					
12		---	2.7	-6.0	-8.1	-3.3	.0					
13		---	2.6	-6.3	-7.8	-2.8	.2					
14		6.1	2.6	-6.2	-7.5	-2.5	.9					
15		6.2	2.3	-5.8	-6.8	-2.2	2.2					
16		6.2	2.1	-6.6	-6.2	-1.9	2.1					
17		5.9	2.1	-7.0	-5.9	-1.6	2.1					
18		5.8	1.7	-7.2	-5.3	-1.4	2.3					
19		5.6	1.3	-6.7	-4.9	-1.3	2.8					
20		5.3	1.2	-6.7	-4.2	-1.2	2.9					
21		5.2	1.1	-6.9	-3.6	-1.4	2.6					
22		4.8	1.0	-7.2	-3.2	-1.4	3.0					
23		4.6	1.0	-7.3	-3.2	-1.4	3.9					
24		4.5	.7	-7.4	-3.3	-1.2	5.0					
25		4.4	.5	-7.8	-3.3	-1.0	5.7					
26		4.3	.3	-7.7	-3.5	-1.0	5.8					
27		4.3	.0	-7.3	-3.5	-.9	5.9					
28		4.1	-.2	-6.8	-3.5	-1.0	---					
29		3.9	-.3	-6.7	---	-.8	---					
30		3.8	-.5	-6.7	---	-.7	---					
31		---	-.8	-6.6	---	-.5	---					
MEAN		5.0	1.8	-5.4	-5.9	-2.4	1.7					

PERIOD OF RECORD: October 1979 through April 1982.

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 2.0 FEET

PERIOD: October 1, 1979, through April 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.3	8.0	1.5	-0.9	-5.0	-3.9	0.1					
2	14.0	7.6	1.3	-1.2	-5.0	-4.3	.5					
3	13.8	7.1	1.2	-1.5	-4.9	-4.3	.8					
4	13.5	6.5	1.3	-1.7	-4.5	-4.2	1.0					
5	13.2	6.2	1.5	-1.8	-4.2	---	1.3					
6	13.1	5.9	1.8	-1.6	-3.9	---	1.8					
7	12.9	5.5	2.0	-2.0	-3.7	---	2.3					
8	12.8	5.2	2.1	-2.4	-3.6	---	2.2					
9	12.4	4.7	2.0	-3.0	-3.5	---	1.8					
10	12.0	4.4	2.0	-3.4	-3.4	---	1.7					
11	12.1	4.2	2.0	-3.8	-3.5	---	1.8					
12	12.2	4.0	1.9	-4.2	-3.6	---	1.8					
13	11.8	3.8	1.6	-4.3	-3.7	---	1.9					
14	11.2	3.7	1.2	-4.1	-3.7	-4.0	2.2					
15	11.0	---	1.0	-3.9	-3.8	-3.7	2.7					
16	11.1	---	.7	-3.7	-4.0	-3.3	3.1					
17	11.1	---	.2	-3.5	-4.3	-3.0	3.7					
18	11.0	---	-.1	-3.3	-4.4	-2.7	4.4					
19	10.9	---	-.2	-3.1	-4.3	-2.5	5.1					
20	10.7	---	.0	-3.3	-4.0	-2.2	5.9					
21	10.4	4.1	.2	-3.4	-3.8	-2.0	6.8					
22	9.9	3.6	.3	-3.3	-3.6	-1.8	7.7					
23	9.5	3.2	.2	-3.2	-3.5	-1.7	8.1					
24	9.1	2.9	.1	-3.0	-3.4	-1.5	8.2					
25	8.9	2.5	.0	-2.6	-3.4	-1.4	8.2					
26	8.8	2.3	.1	-2.4	-3.5	-1.3	8.2					
27	8.8	2.2	.2	-2.7	-3.4	-1.2	8.4					
28	8.8	2.0	.1	-3.2	-3.3	-1.0	8.8					
29	8.7	1.8	.0	-3.8	-3.3	-.8	9.1					
30	8.6	1.6	-.3	-4.4	---	-.5	9.5					
31	8.3	---	-.6	-4.8	---	-.2	---					
MEAN	11.1	4.3	.8	-3.0	-3.9	-2.3	4.3					

PERIOD: January 28, 1981, through March 24, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	-2.4	-0.7						
2				---	-2.8	-.7						
3				---	-3.4	-.8						
4				---	-3.8	-.9						
5				---	-4.0	-.9						
6				---	-4.0	-.9						
7				---	-3.9	-1.1						
8				---	-4.3	-1.2						
9				---	-5.0	-1.1						
10				---	-5.3	-1.1						
11				---	-6.2	-.9						
12				---	-6.6	-.8						
13				---	-6.7	-.7						
14				---	-6.2	-.6						
15				---	-5.2	-.5						
16				---	-4.2	-.3						
17				---	-3.5	-.3						
18				---	-2.9	-.3						
19				---	-2.4	-.2						
20				---	-2.1	-.2						
21				---	-1.7	.0						
22				---	-1.5	.0						
23				---	-1.3	.0						
24				---	-1.2	.0						
25				---	-1.0	---						
26				---	-.9	---						
27				---	-.9	---						
28				-1.4	-.8	---						
29				-1.7	---	---						
30				-2.0	---	---						
31				-2.2	---	---						
MEAN				-1.8	-3.4	-0.6						

SOIL TEMPERATURE (DEGREES C)

CROSS SECTION 2.0; SAMPLING DEPTH 2.0 FEET

PERIOD: November 14, 1981, through April 27, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4.3	0.1	-6.5	-3.3	-1.2					
2		---	4.0	-.5	-6.2	-3.5	-1.0					
3		---	3.9	-.5	-6.4	-3.6	-1.0					
4		---	3.7	-.8	-6.7	-3.8	-1.0					
5		---	3.6	-1.0	-7.1	-3.9	-.8					
6		---	3.5	-1.4	-7.3	-4.2	-.7					
7		---	3.5	-1.4	-7.5	-4.5	-.8					
8		---	3.4	-2.1	-7.5	-4.5	-.7					
9		---	3.3	-2.4	-7.5	-4.7	-.7					
10		---	3.3	-2.9	-7.8	-4.7	-.7					
11		---	3.2	-3.8	-7.8	-4.2	-.5					
12		---	2.8	-4.3	-7.7	-3.9	-.5					
13		---	3.1	-4.5	-7.7	-3.5	-.5					
14		6.4	3.1	-4.9	-7.4	-3.2	-.1					
15		6.5	2.8	-4.7	-7.0	-3.0	.8					
16		6.5	2.6	-5.0	-6.7	-2.7	1.3					
17		6.4	2.5	-5.6	-6.0	-2.5	1.4					
18		6.3	2.3	-5.7	-5.5	-2.3	1.5					
19		6.1	2.2	-6.1	-4.9	-2.0	1.9					
20		5.9	1.9	-6.1	-4.4	-2.0	2.1					
21		5.7	1.8	-6.3	-4.0	-1.9	2.0					
22		5.5	1.6	-6.6	-3.7	-2.1	2.4					
23		5.2	1.5	-6.6	-3.3	-2.0	2.9					
24		5.1	1.3	-6.8	-3.2	-1.9	3.8					
25		5.0	1.1	-7.3	-3.2	-1.8	4.5					
26		4.9	.8	-7.2	-3.3	-1.8	4.8					
27		4.7	.7	-7.0	-3.4	-1.5	5.0					
28		4.7	.7	-6.7	-3.4	-1.5	---					
29		4.6	.4	-6.7	---	-1.5	---					
30		4.4	.2	-6.5	---	-1.4	---					
31		---	.3	-6.4	---	-1.3	---					
MEAN		5.5	2.4	-4.4	-5.8	-2.9	.9					

PERIOD OF RECORD: June 1978 through April 1982.

SOLAR RADIATION (LANGLEYS)

PERIOD: June 24, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	---	562	565
2									---	---	670	560
3									---	---	713	520
4									---	---	713	529
5									---	---	666	506
6									---	---	686	516
7									---	744	632	467
8									---	197	684	503
9									---	743	565	533
10									---	676	644	468
11									---	---	611	128
12									---	---	620	365
13									---	---	569	239
14									---	751	---	293
15									---	749	---	477
16									---	646	---	483
17									---	574	---	163
18									---	708	---	103
19									---	516	---	307
20									---	325	607	367
21									---	639	543	401
22									---	695	344	461
23									---	723	469	457
24									730	722	573	394
25									---	698	538	420
26									---	733	520	399
27									---	601	505	445
28									---	580	527	404
29									---	382	717	147
30									---	642	460	424
31									---	686	451	---
TOTAL									730	13730	14589	12044

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	277	231	125	273	269	517	545	615	410	---	418
2	248	265	173	190	203	244	429	657	675	544	---	544
3	253	185	194	118	260	406	471	405	644	736	---	539
4	158	103	157	164	244	379	482	403	379	328	---	533
5	182	254	170	159	159	371	562	91	590	626	---	551
6	356	194	206	157	243	383	519	57	635	742	---	545
7	400	166	213	210	147	199	278	350	386	445	---	373
8	284	192	181	121	210	274	384	364	677	717	---	454
9	383	100	176	94	140	414	587	150	607	563	503	371
10	376	139	114	231	213	424	187	172	733	724	531	107
11	353	143	96	190	187	404	138	678	649	639	635	400
12	303	70	129	161	189	381	371	459	727	578	451	248
13	227	109	183	214	173	350	458	611	698	436	569	350
14	302	226	158	230	198	431	538	596	614	---	573	504
15	337	209	181	153	281	436	408	674	695	---	590	502
16	334	253	171	146	329	439	511	630	642	---	488	493
17	296	119	131	181	223	282	358	385	541	---	618	404
18	312	210	94	103	283	137	530	627	692	---	565	473
19	329	188	134	120	258	247	143	377	199	---	536	463
20	314	210	149	184	151	306	379	538	614	---	387	476
21	282	146	118	168	267	237	381	521	722	---	177	444
22	307	94	98	141	142	363	546	151	214	---	495	438
23	263	151	209	233	380	327	73	708	614	---	587	399
24	199	164	130	149	287	464	81	632	670	---	560	433
25	128	125	128	171	292	273	352	540	306	---	311	425
26	282	120	106	161	288	516	440	719	662	---	497	383
27	294	173	79	197	246	165	568	681	591	---	254	314
28	213	113	80	224	285	470	308	644	689	---	460	406
29	176	173	192	292	---	306	520	167	743	---	537	404
30	256	158	209	275	---	508	550	678	560	---	506	242
31	270	---	232	297	---	296	---	383	---	---	433	---
TOTAL	8697	5029	4822	5559	6551	10701	12069	14593	17783	7488	11263	12636

SOLAR RADIATION (LANGLEYS)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	205	104	70	111	374	220	406	607	728		---
2	370	160	113	196	108	353	330	508	608	632		---
3	325	196	154	43	50	163	419	503	582	512		---
4	387	163	106	86	103	337	510	547	254	740		---
5	361	122	140	69	243	284	464	609	603	677		---
6	371	230	71	94	229	415	445	646	405	696		---
7	236	92	152	153	86	361	208	519	669	533		---
8	307	88	109	151	227	426	442	655	718	278		---
9	321	145	93	107	163	319	560	591	746	356		---
10	325	197	100	56	161	---	385	650	696	701		484
11	207	102	166	134	235	---	514	659	459	753		238
12	296	195	158	121	135	156	464	488	721	521		164
13	315	38	148	170	220	339	580	565	689	533		483
14	312	162	93	89	189	293	566	650	624	729		313
15	278	---	64	188	211	374	532	580	493	330		221
16	318	---	155	82	322	429	553	590	689	719		374
17	239	---	99	216	248	338	553	649	689	332		221
18	249	---	136	43	215	299	556	633	471	611		172
19	170	---	124	208	151	214	556	643	642	140		327
20	272	---	73	188	94	310	590	485	710	418		399
21	82	215	136	65	151	329	536	626	445	618		125
22	272	116	135	202	259	329	508	680	571	695		331
23	218	127	29	83	325	201	615	690	659	626		380
24	283	58	29	124	140	389	623	500	755	615		218
25	128	46	28	202	213	455	514	526	746	613		332
26	125	98	104	212	338	238	481	706	376	588		424
27	280	27	161	218	223	353	579	664	379	596		417
28	165	150	119	246	293	247	618	372	361	685		400
29	75	143	154	259	386	430	608	479	747	---		387
30	195	121	176	251	---	443	560	511	674	---		323
31	124	---	191	233	---	306	---	451	---	---		---
TOTAL	7976	3216	3620	4559	5829	9504	15089	17781	17788	15975		6733

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	160	113					---	233	667	613	467
2	321	212	76					---	740	736	500	455
3	427	243	134					---	496	795	612	505
4	383	203	136					---	694	781	535	480
5	364	212	58					---	725	775	595	121
6	367	192	69					---	576	785	479	302
7	364	199	161					195	512	591	598	502
8	353	205	171					202	566	690	466	499
9	238	106	136					718	432	676	598	503
10	359	200	62					356	740	417	542	484
11	352	91	91					532	525	519	568	487
12	283	91	116					536	406	552	528	475
13	236	159	151					513	360	181	558	443
14	254	272	59					521	453	299	565	262
15	63	255	65					471	414	555	404	375
16	40	134	---					188	748	604	544	447
17	70	239	---					369	548	488	496	460
18	305	122	---					681	558	332	589	433
19	290	146	---					630	369	565	430	431
20	231	190	---					722	581	592	561	280
21	74	146	---					691	652	535	403	433
22	46	65	---					406	683	447	376	364
23	248	179	---					246	632	475	437	421
24	187	162	---					169	795	520	373	219
25	175	152	---					171	807	374	315	68
26	172	166	---					284	770	281	402	310
27	269	169	---					267	699	467	523	405
28	75	139	---					647	408	629	555	376
29	247	99	---					656	795	593	548	220
30	266	59	---					655	681	410	469	161
31	239	---	---					682	---	613	320	---
TOTAL	7647	4967	1598					11508	17598	16944	15502	11388

SOLAR RADIATION (LANGLEYS)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	241	158	66	185	259	334					
2	370	236	142	191	286	215	125					
3	121	235	75	142	277	276	462					
4	103	219	157	138	284	374	238					
5	202	226	172	184	263	403	531					
6	356	221	112	166	211	383	259					
7	325	213	149	106	261	337	189					
8	220	220	59	80	289	430	401					
9	328	199	52	106	254	358	242					
10	337	194	41	160	226	241	526					
11	180	199	91	134	251	415	454					
12	254	194	129	122	278	270	523					
13	256	156	186	188	200	410	443					
14	275	84	72	101	203	341	433					
15	292	188	134	100	196	70	164					
16	296	172	143	170	142	218	457					
17	239	104	202	124	236	130	497					
18	272	59	82	182	279	278	513					
19	253	103	163	167	227	175	298					
20	235	94	113	100	281	455	444					
21	219	116	78	125	282	464	581					
22	136	68	56	83	113	446	580					
23	181	75	78	208	131	389	592					
24	98	93	104	90	331	432	595					
25	278	61	100	188	351	333	313					
26	229	64	71	143	205	252	610					
27	163	71	79	154	209	418	474					
28	257	84	124	166	317	465	486					
29	238	208	180	230	---	401	180					
30	135	89	149	196	---	137	576					
31	258	---	141	145	---	487	---					
TOTAL	7557	4484	3592	4455	6768	10482	12520					

PERIOD OF RECORD: July 1978 through April 1982.

WIND DIRECTION (DEGREES FROM TRUE NORTH, CLOCKWISE)

PERIOD: July 7, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	280	264
2										---	304	328
3										---	284	151
4										---	255	351
5										---	331	241
6										---	186	21
7										41	296	66
8										242	306	201
9										296	345	183
10										132	197	85
11										---	250	59
12										---	---	148
13										---	---	194
14										294	---	275
15										274	---	222
16										196	---	263
17										258	---	177
18										329	---	96
19										318	---	269
20										230	29	269
21										348	15	188
22										215	91	214
23										92	332	277
24										237	341	41
25										287	104	195
26										311	252	345
27										123	335	188
28										291	291	337
29										60	318	301
30										275	70	208
31										296	115	---
MEAN										235	232	205

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	247	---	249	285	243	123		---	295	---	290
2	281	241	---	250	224	279	122		---	119	---	178
3	257	302	---	251	286	182	---		---	89	---	138
4	270	184	---	232	204	174	---		---	109	---	250
5	305	279	285	210	184	154	---		---	139	---	286
6	329	208	269	245	285	181	---		300	140	---	37
7	145	240	240	268	91	104	---		306	151	---	122
8	241	292	281	194	200	198	---		340	313	---	128
9	294	34	193	168	112	270	---		294	23	287	51
10	224	7	152	148	252	191	---		334	182	331	144
11	281	84	122	34	22	138	---		246	257	172	274
12	283	93	156	309	88	123	---		167	335	297	290
13	288	299	139	276	127	161	---		227	284	350	308
14	259	---	141	258	354	97	---		328	---	141	255
15	349	---	135	255	304	107	---		323	---	138	223
16	145	---	128	201	103	91	---		85	---	189	218
17	327	---	73	193	145	147	---		118	---	298	311
18	255	---	92	90	168	197	---		131	---	161	202
19	242	---	157	135	202	185	---		46	---	30	249
20	246	---	204	153	268	165	---		313	---	132	316
21	284	---	100	96	20	98	303		371	---	82	176
22	276	---	63	280	13	194	24		91	---	315	33
23	206	---	98	340	340	166	47		129	---	338	300
24	264	---	110	118	124	107	334		157	---	301	294
25	288	---	124	164	143	179	271		300	---	156	7
26	260	---	106	223	139	127	306		59	---	295	181
27	284	---	55	252	272	129	340		202	---	170	332
28	159	---	336	286	86	316	331		300	---	272	161
29	200	---	227	237	---	106	313		244	---	364	286
30	267	---	206	230	---	113	---		72	---	110	252
31	225	---	215	207	---	101	---		---	---	216	---
MEAN	258	193	163	211	180	162	229		219	187	224	210

WIND DIRECTION (DEGREES FROM TRUE NORTH, CLOCKWISE)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	303	155	1	126	184	54	312	76	351		---
2	267	275	200	95	132	183	49	98	99	185		159
3	303	277	264	159	149	353	336	165	102	126		160
4	243	352	242	310	282	302	270	305	177	318		152
5	319	337	286	155	297	273	196	350	306	120		161
6	270	253	270	317	6	---	276	349	340	152		173
7	6	294	282	287	23	---	321	350	341	326		184
8	320	230	214	279	212	---	323	184	293	133		185
9	276	290	190	167	264	---	22	85	304	224		206
10	289	230	264	20	306	---	54	8	196	202		159
11	322	291	241	273	294	---	324	307	127	282		82
12	315	241	210	155	277	---	333	1	307	92		6
13	170	252	203	350	321	82	114	9	327	231		23
14	156	251	242	217	301	96	309	74	34	298		128
15	221	282	306	269	293	270	123	132	71	214		268
16	317	---	233	214	285	306	298	131	176	288		249
17	142	---	195	169	176	226	222	68	208	330		287
18	292	---	273	299	23	226	255	207	62	313		81
19	85	---	236	256	101	292	205	200	106	61		258
20	278	271	285	248	74	313	169	245	222	266		181
21	340	315	265	295	198	99	219	190	196	357		279
22	323	302	8	293	305	216	378	155	258	309		342
23	149	333	304	270	260	131	110	146	95	268		218
24	167	231	68	308	292	161	88	135	264	317		313
25	71	304	232	324	217	129	39	133	315	97		335
26	224	248	273	280	317	270	88	139	78	179		275
27	274	249	263	280	96	125	62	179	213	18		124
28	282	305	212	297	67	112	151	71	290	6		169
29	340	280	175	61	103	173	103	329	350	133		274
30	334	310	269	165	---	151	171	340	256	---		268
31	334	---	258	339	---	84	---	209	---	---		---
MEAN	248	281	230	231	201	198	189	181	206	214		197

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295		---	235	293	329	186	138	27	146	76	143
2	---		---	289	264	148	262	256	319	314	115	228
3	---		---	106	276	318	350	281	161	193	43	33
4	---		---	139	220	108	302	316	231	89	125	102
5	---		---	242	282	77	201	89	274	34	275	67
6	---		---	357	208	83	225	97	91	131	277	299
7	---		---	39	275	104	258	112	265	168	287	274
8	---		---	278	209	122	72	24	241	254	304	208
9	---		---	61	274	276	72	26	261	144	345	263
10	---		---	65	251	275	288	149	265	48	255	247
11	---		---	209	212	254	74	48	224	33	234	232
12	---		---	240	168	292	74	56	112	12	181	205
13	---		222	298	166	123	75	283	346	89	84	17
14	---		131	286	183	239	74	152	285	2	17	26
15	---		263	335	235	270	75	84	261	341	81	336
16	---		225	237	207	299	237	69	193	259	107	63
17	---		283	187	231	29	308	71	267	311	136	145
18	---		275	228	229	287	206	98	291	59	125	234
19	---		295	285	201	299	58	130	208	217	250	161
20	---		102	225	211	95	116	128	330	335	177	322
21	---		101	260	263	324	236	115	285	74	352	167
22	---		16	249	271	65	283	41	278	116	324	228
23	---		300	251	260	172	69	316	352	212	310	325
24	---		192	287	38	289	92	298	258	301	148	48
25	---		250	278	86	298	284	326	279	73	20	133
26	---		116	288	113	83	26	73	101	121	344	259
27	---		227	283	297	66	20	154	248	129	52	198
28	---		255	28	263	282	195	242	296	133	106	85
29	---		---	96	---	15	278	286	14	140	138	39
30	---		---	72	---	161	315	93	130	159	151	296
31	---		272	296	---	277	---	80	---	288	275	---
MEAN	295		207	217	221	195	177	149	230	159	184	179

WIND DIRECTION (DEGREES FROM TRUE NORTH, CLOCKWISE)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	258	223	20	255	22	72					
2	116	94	207	273	280	64	313					
3	338	154	266	79	238	173	326					
4	290	228	257	263	243	272	67					
5	281	252	161	265	238	230	75					
6	172	201	241	241	247	252	104					
7	105	239	252	242	255	173	61					
8	161	307	56	312	258	208	248					
9	235	189	115	287	236	181	259					
10	135	218	134	265	231	253	161					
11	108	162	217	294	170	129	165					
12	171	177	282	223	212	247	305					
13	248	260	264	226	71	212	135					
14	242	186	346	219	211	79	190					
15	228	244	164	280	59	98	294					
16	218	265	72	221	133	44	267					
17	285	70	189	196	232	54	231					
18	257	11	117	179	222	60	128					
19	255	296	135	353	218	26	0					
20	274	135	222	51	220	308	267					
21	262	225	249	39	257	265	270					
22	278	191	277	326	344	216	190					
23	190	232	264	276	60	266	232					
24	275	221	227	49	291	280	274					
25	63	354	84	214	123	267	316					
26	240	279	236	149	51	64	160					
27	71	90	295	262	96	130	129					
28	81	129	104	170	268	124	135					
29	118	166	231	290	---	103	177					
30	251	257	43	59	---	284	245					
31	216	---	217	100	---	316	---					
MEAN	200	203	198	207	204	174	193					

PERIOD OF RECORD: June 1978 through April 1982.

WIND RUN (MILES PER HOUR PER DAY)

PERIOD: June 24, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												
2									---	---	242	253
3									---	---	330	119
4									---	---	175	98
5									---	---	180	98
									---	---	104	168
6												
7									---	---	196	233
8									---	128	252	291
9									---	258	239	344
10									---	141	139	144
									---	278	231	274
11												
12									---	---	211	261
13									---	---	---	322
14									---	---	---	230
15									---	138	---	318
									---	154	---	147
16												
17									---	144	---	340
18									---	300	---	204
19									---	193	---	263
20									---	152	---	373
									---	92	188	119
21												
22									---	128	259	174
23									---	124	337	204
24									---	132	170	223
25									160	190	187	134
									---	266	293	174
26												
27									---	244	158	214
28									---	286	191	164
29									---	369	241	364
30									---	108	---	265
31									---	265	---	160
									---	125	---	---
TOTAL									160	4215	4323	6675

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	242			---	154	---	314	270	196	---	313
2	386	209			---	276	---	234	230	188	---	141
3	286	211			379	126	---	245	261	228	---	301
4	275	384			147	217	---	261	---	215	---	319
5	317	468			360	363	---	311	---	304	---	286
6	112	167			380	334	---	319	335	343	---	136
7	208	229			367	244	---	450	348	181	---	253
8	263	336			147	510	---	283	132	192	---	140
9	226	285			372	613	---	180	164	153	334	190
10	210	204			331	297	---	264	196	167	157	219
11	411	128			152	128	---	231	145	331	167	223
12	287	238			237	366	---	284	169	159	268	278
13	246	158			336	586	---	273	313	204	213	243
14	269	---			348	221	---	236	379	---	191	191
15	280	---			500	248	---	268	195	---	402	147
16	279	---			303	130	---	346	222	---	209	138
17	279	---			393	261	---	516	254	---	181	344
18	189	---			173	422	---	234	424	---	82	107
19	208	---			120	665	---	265	280	---	138	262
20	243	---			231	470	---	163	514	---	171	182
21	354	---			179	104	148	357	127	---	133	257
22	152	---			361	---	222	262	218	---	240	203
23	286	---			297	---	425	111	177	---	157	128
24	417	---			167	---	294	291	309	---	191	111
25	360	---			209	---	298	304	200	---	86	93
26	270	---			153	---	327	186	112	---	100	206
27	194	---			354	---	211	269	211	---	153	252
28	129	---			298	---	304	308	268	---	191	217
29	237	---			---	---	346	443	152	---	175	251
30	330	---			---	---	243	337	224	---	317	275
31	198	---			---	---	---	165	---	---	234	---
TOTAL	8146	3259			7294	6735	2818	8710	6829	2861	4490	6406

WIND RUN (MILES PER HOUR PER DAY)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	480	137	137	227	341	208	96	182	151		---
2	438	201	228	145	181	136	238	105	272	220		---
3	430	86	240	248	119	274	127	159	442	176		---
4	219	106	391	306	247	365	176	184	321	280		---
5	526	141	529	190	305	---	155	204	219	294		---
6	281	171	558	702	98	---	247	280	210	145		---
7	166	280	330	377	52	---	281	145	215	274		---
8	351	300	210	388	121	---	283	174	251	193		---
9	276	165	125	189	411	---	111	297	155	174		---
10	429	141	343	455	569	---	179	276	247	207		166
11	317	192	291	474	252	---	372	183	378	415		179
12	174	203	341	328	96	---	238	178	311	236		279
13	186	118	201	322	115	---	129	135	173	264		178
14	157	257	235	173	251	324	229	123	167	335		245
15	198	---	546	167	342	275	140	264	202	181		347
16	282	---	255	77	278	268	297	243	98	269		214
17	294	---	121	155	155	129	187	103	185	199		277
18	246	---	216	373	156	120	278	115	289	213		253
19	265	---	174	253	156	262	239	242	224	199		249
20	401	---	106	283	187	252	129	183	168	304		183
21	227	179	88	575	109	205	243	202	132	126		248
22	114	143	60	277	159	206	415	396	182	126		237
23	143	108	162	421	275	284	179	576	478	297		212
24	158	99	79	510	189	257	164	469	315	323		186
25	355	44	86	257	212	193	145	495	213	134		170
26	287	161	183	235	358	96	160	243	354	217		170
27	257	334	138	187	274	191	106	328	447	198		273
28	239	654	136	216	286	103	116	276	583	164		141
29	225	355	127	106	251	154	181	222	199	---		314
30	212	208	106	65	---	161	139	180	347	---		341
31	463	---	56	113	---	109	---	116	---	---		---
TOTAL	8507	5126	6798	8704	6431	4705	6111	7192	7959	6314		4862

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	471		---	258	536	206	201	345	188	363	212	264
2	---		---	272	375	262	277	309	197	219	138	346
3	---		---	242	406	214	190	279	198	90	121	218
4	---		---	324	245	184	188	196	276	170	163	465
5	---		---	296	363	228	279	341	259	126	265	226
6	---		---	292	368	180	431	394	208	327	251	254
7	---		---	221	661	183	270	392	248	294	227	208
8	---		---	178	306	121	17	282	213	347	185	140
9	---		---	216	308	87	19	153	186	223	112	165
10	---		---	183	404	194	19	287	254	240	164	222
11	---		---	152	186	281	20	300	104	194	201	172
12	---		---	219	147	266	24	298	222	100	103	141
13	---		128	384	190	174	23	158	225	194	78	116
14	---		194	246	190	406	25	160	149	145	152	154
15	---		341	122	291	298	26	348	413	174	250	148
16	---		216	187	203	167	322	369	264	148	145	76
17	---		425	188	242	243	365	282	497	113	120	145
18	---		664	227	268	265	393	182	270	149	207	97
19	---		297	270	272	198	349	337	94	91	152	143
20	---		212	149	396	245	493	449	108	114	137	154
21	---		248	155	305	243	391	336	258	188	160	122
22	---		148	89	202	176	334	281	159	149	152	136
23	---		405	139	207	146	126	454	229	125	156	140
24	---		291	130	239	126	209	350	340	241	87	152
25	---		298	526	363	327	268	216	204	85	153	301
26	---		287	306	337	249	173	129	303	128	122	595
27	---		284	216	202	288	203	151	233	190	134	243
28	---		198	129	254	207	221	236	225	270	196	295
29	---		---	262	---	110	361	355	179	143	168	158
30	---		---	273	---	271	351	206	296	275	315	254
31	---		391	458	---	469	---	300	---	189	434	---
TOTAL	471		5027	7309	8466	7014	6568	8875	6999	5804	5460	6250

WIND RUN (MILES PER HOUR PER DAY)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	189	146	264	285	252	411					
2	327	114	268	196	314	382	599					
3	259	205	651	130	275	167	385					
4	218	295	136	157	235	432	277					
5	167	291	175	448	171	332	158					
6	167	173	200	286	510	275	357					
7	357	339	203	351	402	168	268					
8	268	174	138	296	416	305	181					
9	207	205	150	541	300	250	516					
10	120	109	74	395	320	323	201					
11	452	157	111	110	131	303	190					
12	416	175	106	169	97	688	227					
13	333	148	162	314	254	248	177					
14	194	109	102	331	309	139	213					
15	233	311	85	748	292	299	261					
16	183	139	101	327	210	157	301					
17	602	241	60	299	282	162	222					
18	545	264	148	278	201	187	120					
19	291	251	328	237	245	310	283					
20	352	210	279	279	237	423	508					
21	351	107	483	277	264	227	185					
22	308	132	415	462	303	235	248					
23	216	215	413	344	358	432	208					
24	342	144	182	271	76	389	338					
25	218	135	205	100	67	201	227					
26	277	186	191	310	210	324	104					
27	247	98	274	542	310	436	308					
28	88	152	113	170	327	204	410					
29	186	167	145	200	---	334	335					
30	366	282	175	144	---	610	164					
31	223	---	156	253	---	326	---					
TOTAL	8571	5717	6375	9229	7407	9520	8188					

TABLE 2.--Precipitation data

470226104080410 (WC-1)

LOCATION: Lat 47°02'26", long 104°08'04", in SW¼SW¼NW¼ sec. 21, T. 15 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, at Hay Creek near Wibaux, Mont., stream-gaging station and 4.5 miles northeast of Wibaux.

PERIOD OF RECORD: March 1978 through September 1981.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: March 8, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	0.10	0.00	0.09	0.00	0.33	0.00
2						---	.25	.05	.00	.00	.00	.00
3						---	.00	.42	.00	.07	.00	.00
4						---	.00	.24	.00	.61	.00	.00
5						---	.00	.37	.00	.00	.00	.00
6						---	.00	.00	.19	.00	.00	.00
7						---	.00	.73	.00	.00	.00	.00
8						0.00	.00	.34	.00	.20	.00	.00
9						.12	.00	.00	.15	.00	.00	.00
10						.05	.00	.00	.00	.00	.00	.00
11						.00	.00	.58	.05	.07	.00	.60
12						.00	.00	.18	.00	.00	.00	.18
13						.05	.00	.00	.00	.00	.00	.25
14						.00	.00	.00	.56	.00	.00	.00
15						.03	.00	.00	.00	.00	.00	.00
16						.00	.00	.00	.00	.00	.04	.00
17						.00	.00	.15	.00	.00	.00	.00
18						.00	.36	.00	.00	1.37	.00	1.10
19						.00	.00	.28	.00	.01	.00	.00
20						.00	.00	.00	.00	.12	.00	.00
21						.00	.00	.00	.00	.00	.00	.00
22						.00	.00	.00	.17	.00	.22	.00
23						.00	.00	.00	.07	.00	.00	.00
24						.00	.00	.00	.70	.00	.00	.00
25						.00	.00	.00	.37	.00	.00	.00
26						.00	.00	.00	.12	.00	.00	.00
27						.00	.00	.00	.00	.00	.00	.00
28						.00	.00	.00	.00	.00	.00	.00
29						.00	.00	.13	.79	.16	.00	.00
30						.00	.00	2.67	.31	.00	.00	.00
31						.00	---	1.17	---	.00	.00	---
TOTAL						0.25	0.71	7.31	3.57	2.61	0.59	2.13

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
2	.21	.00	.00	.03	.00	.06	.00	.00	.00	.00	.00	.15
3	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.01	.00	.00	.01	.03	.00	.09	.00	.00	.00	.00
7	.00	.00	.00	.00	.09	.01	.02	.00	.04	.00	.00	.00
8	.00	.29	.00	.00	.01	---	.00	.00	.00	.34	.00	.00
9	.00	.47	.00	.00	.00	---	.00	.00	.00	.11	.00	.00
10	.00	.08	.00	.00	.04	.02	.00	.00	.00	.49	.00	.30
11	.02	.05	.00	.06	.17	.00	.58	.00	.00	.60	.00	.00
12	.08	.01	.00	.01	.03	.00	.11	.00	.00	.00	.00	.00
13	.00	.05	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.20	.02	.00	.00	.04	.00	.00	.00
15	.00	.00	.00	.00	---	.01	.00	.00	.00	.00	.00	.00
16	.03	.00	.00	.01	---	.01	.00	.00	.00	.00	.00	.00
17	.00	.05	.00	.01	---	.01	.00	.00	.00	.00	.00	.00
18	.00	.02	.01	.00	---	.01	.03	.16	.00	.00	.00	.00
19	.00	.14	.01	.00	---	.00	.10	.00	.00	.00	.00	.00
20	.00	.00	.02	.01	---	.00	.00	.00	.00	.00	.00	.00
21	.01	.00	.04	.05	---	.00	.00	.00	.19	.00	.10	.00
22	.00	.03	.04	.00	---	.02	.00	.00	.08	.00	.00	.00
23	.00	.01	.01	.00	---	.00	.05	.00	.00	.00	.00	.00
24	.02	.00	.14	.00	---	.00	.25	.00	.00	.56	.00	.00
25	.03	.00	.05	.00	---	.00	.02	.00	.00	.19	.00	.04
26	.00	.00	.00	.00	.03	.00	.13	.00	.00	.22	.00	.00
27	.00	.01	.05	.00	.02	.00	.00	.00	.00	.00	.00	.00
28	.00	.05	.27	.00	.03	.13	.00	.11	.00	.00	.00	.00
29	.00	.06	.00	.00	---	.00	.00	.33	.00	.00	.00	.00
30	.00	.02	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	---	---
TOTAL	0.40	1.55	0.64	0.21	0.63	0.34	1.13	0.69	0.35	2.31	0.10	0.49

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.01	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.03	.01	.00	.00	.00	.00	.00	---	.00
3	.00	.00	.00	.08	.00	.05	.00	.00	.00	.20	---	.09
4	.00	.00	.01	.02	.00	---	.00	.00	.18	.00	---	.00
5	.00	.02	.02	.37	.02	---	.00	.00	.00	.00	---	.00
6	.00	.00	.02	.06	.00	---	.00	---	.15	.00	---	.00
7	.00	.00	.05	.00	.02	---	.00	---	.00	.00	---	.00
8	.07	.00	.00	.00	.00	---	.00	---	.00	.00	.00	.00
9	.00	.00	.00	.03	.00	---	.00	---	.00	.00	.25	.00
10	.00	.01	.06	.00	.00	---	.00	---	.00	.00	.04	.00
11	.00	.08	.01	.00	.00	---	.00	---	.15	.00	.00	.04
12	.00	.00	.00	.02	.05	---	.00	---	.20	.00	.00	.10
13	.00	.00	.00	.01	.00	---	.00	.00	.48	.32	.00	.00
14	.00	.00	.00	.02	.00	---	.00	.00	.00	.02	.00	.00
15	.00	.00	.03	.00	.00	---	.03	.00	.06	.00	1.35	.00
16	.00	.00	.00	.00	.00	---	.00	.00	.00	.08	.47	.00
17	.00	.00	.00	.01	.00	---	.00	.00	.00	.08	.00	.02
18	.00	.00	.00	.03	---	---	.00	.00	.00	.00	.00	.00
19	.12	.07	.00	.00	---	.00	.01	.00	.15	.26	.00	.04
20	.00	.02	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.02	---	.00	.00	.06	.00	.00	.00	.30
22	.00	.00	.00	.03	---	.00	.00	.00	.27	.00	.00	.00
23	.00	.00	.00	.05	---	---	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.20	---	---	.00	.00	.00	.00	.00	.15
25	.01	.05	.00	.00	---	---	.00	.00	.00	.00	.00	.00
26	.01	.01	.00	.00	.00	---	.00	.00	.00	.06	.00	.00
27	.00	.05	.00	.00	.00	---	.00	.02	.00	.00	.14	.00
28	.00	.05	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.01	.00	---	.00	.00	.00	.00	.25	.00
30	.00	.00	.00	.00	---	---	.00	.20	.00	.00	.00	.00
31	.00	---	.00	.00	---	---	---	.00	---	.00	.00	---
TOTAL	0.21	0.36	0.21	0.99	0.14	0.05	0.04	0.28	1.64	1.02	2.50	0.74

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	1.10	0.04
2	.00	.02	.05	.00	.00	.00	.00	.00	.00	.01	.45	.02
3	.00	.05	.00	.00	.00	.00	.00	.00	.30	.02	.00	.02
4	.00	.00	.00	.00	.03	.00	.03	.00	.15	.01	.53	.02
5	.00	.00	.04	.05	.01	.00	.00	.00	.00	.04	.17	.04
6	.00	.00	.01	.05	.03	.00	.00	.00	.00	.04	.00	.03
7	.00	.15	.00	.00	.06	.00	.05	.05	.12	.00	.00	.02
8	.00	.10	.00	.00	.05	.00	.00	.07	.15	.02	.30	.05
9	.00	.00	.05	.00	.02	.03	.00	.02	.00	.02	.00	.03
10	.00	.00	.05	.00	.00	.00	.00	.16	.00	.01	.00	.02
11	.00	.00	.00	.00	.00	.02	.20	.05	.07	.02	.00	.01
12	.00	.18	.00	.00	.00	.03	.02	.00	.14	.01	.03	.02
13	.00	.05	.00	.00	.00	.01	.00	.00	.11	.55	.01	.01
14	.02	.00	.00	.00	.00	.00	.00	.00	.00	.04	.02	.04
15	.88	.00	.02	.04	.00	.00	.03	.00	.17	.00	.04	.02
16	.40	.00	.03	.00	.00	.00	.00	.10	.00	.00	.03	.02
17	.05	.00	.03	.00	.00	.00	.00	.00	.30	.03	.03	.03
18	.00	.03	.02	.00	.07	.00	.00	.00	.00	.00	.04	.01
19	.00	.02	.00	.00	.00	.02	.00	.00	.07	.32	.02	.00
20	.00	.02	.01	.00	.03	.01	.00	.00	.64	.01	.03	.01
21	.00	.02	.03	.00	.00	.07	.17	.00	.00	.02	.01	.01
22	1.25	.03	.09	.00	.00	.01	.06	.70	.00	.00	.02	.01
23	.00	.00	.06	.00	.00	.01	.00	.00	.00	.12	.04	.01
24	.00	.00	.00	.00	.00	.00	.05	.05	.00	.01	.03	.03
25	.00	.00	.00	.05	.00	.00	.03	.00	.00	.01	.03	.06
26	.00	.04	.00	.02	.00	.00	.20	.00	.00	.00	.03	.02
27	.00	.00	.00	.00	.00	.02	.33	.12	.00	.04	.02	.02
28	.00	.04	.00	.00	.02	.05	.00	.00	.30	.21	.01	.07
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.10	.03	.10
30	.00	.01	.00	.00	---	.00	.00	.00	.00	.01	.05	.12
31	.00	---	.00	.05	---	.00	---	.15	---	.01	.03	---
TOTAL	2.60	0.76	0.49	0.26	0.32	0.28	1.17	1.47	2.57	1.70	3.10	0.91

470226104080411 (WD-1)

LOCATION: Lat 47°02'26", long 104°08'04", in SW¼SW¼NW¼ sec. 21, T. 15 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, at Hay Creek near Wibaux, Mont., stream-gaging station and 4.5 miles northeast of Wibaux.

PERIOD OF RECORD: May 1978 through September 1981.

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 12, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.00	0.00	0.15	0.00
2								---	.00	.00	.00	.00
3								---	.00	.06	.00	.00
4								---	.00	.77	.00	.00
5								---	.00	.00	.00	.00
6								---	.15	.00	.00	.00
7								---	.00	.00	.00	.00
8								---	.00	.00	.00	.00
9								---	.00	.00	.00	.00
10								---	.00	.00	.00	.00
11								---	.00	.00	.00	.31
12								0.13	.00	.00	.00	.17
13								.00	.00	.00	.00	.17
14								.00	.24	.00	.00	.00
15								.00	.05	.00	.00	.00
16								.00	.00	.00	.00	.05
17								.05	.00	.00	.00	.00
18								.00	.00	.90	.00	.85
19								.19	.00	.00	.00	.03
20								.00	.00	.00	.00	.00
21								.00	.00	.00	.00	.00
22								.00	.00	.00	.00	.00
23								.00	.00	.00	.00	.00
24								.00	.21	.00	.00	.00
25								.00	.31	.00	.00	.00
26								.00	.10	.00	.00	.00
27								.00	.00	.00	.00	.00
28								.00	.00	.00	.00	.00
29								.10	.46	.00	.00	.00
30								1.24	.22	.00	.00	.00
31								.26	---	.00	.00	---
TOTAL								1.97	1.74	1.73	0.15	1.58

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through September 3, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00							---	0.00	0.00	0.00
2	.16	.00							---	.00	.00	.21
3	.00	.00							---	.00	.00	.00
4	.00	.00							---	.00	.00	---
5	.00	.00							---	.00	.00	---
6	.00	.00							0.00	.00	.00	---
7	.01	.00							.00	.00	.00	---
8	.00	.00							.00	.00	.00	---
9	.00	.06							.01	.00	.00	---
10	.00	.00							.00	.00	.00	---
11	.00	---							.00	.00	.00	---
12	.00	---							.00	.00	.00	---
13	.00	---							.00	---	.00	---
14	.00	---							.00	---	.00	---
15	.00	---							.00	---	.00	---
16	.00	---							.00	---	.00	---
17	.00	---							.00	---	.00	---
18	.00	---							.00	---	.00	---
19	.00	---							.00	---	.00	---
20	.00	---							.00	---	---	---
21	.00	---							.00	---	---	---
22	.00	---							.03	---	---	---
23	.00	---							.00	---	---	---
24	.00	---							.00	---	---	---
25	.00	---							.02	---	---	---
26	.00	---							.00	---	---	---
27	.00	---							.00	---	---	---
28	.00	---							.00	---	.00	---
29	.00	---							.00	---	.00	---
30	.00	---							.00	---	.00	---
31	.00	---							---	.00	.00	---
TOTAL	0.17	0.06							0.06	0.00	0.00	0.21

PERIOD: April 29, 1980, through September 4, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												
2							---	0.00	0.00	0.00	0.00	0.00
3							---	.00	.00	.16	.00	.00
4							---	.00	.00	.02	.00	.08
5							---	.00	.00	.00	.06	.00
6							---	.00	.00	.00	.00	---
7							---	.03	.00	.00	.00	---
8							---	.01	.00	.00	.00	---
9							---	.00	.00	.04	.00	---
10							---	.00	.00	.00	.22	---
11							---	.00	.00	.00	.04	---
12							---	.00	.05	.00	.00	---
13							---	.00	.00	.00	.00	---
14							---	.00	.51	.23	.00	---
15							---	.00	.02	.01	.00	---
16							---	.00	.00	.00	1.12	---
17							---	.00	.00	.00	.50	---
18							---	.00	.00	.02	.00	---
19							---	.00	.00	.01	.00	---
20							---	.00	.11	.35	.00	---
21							---	.00	.00	.00	.00	---
22							---	.06	.00	.00	.00	---
23							---	.00	.22	.00	.00	---
24							---	.00	.00	.00	.00	---
25							---	.00	.00	.00	.00	---
26							---	.00	.00	.00	.00	---
27							---	.00	.00	.03	.00	---
28							---	.02	.00	.00	.12	---
29							---	.00	.00	.00	.04	---
30							0.00	.00	.00	.00	.24	---
31							.00	.00	.00	.00	.00	---
TOTAL							---	.00	---	.00	.03	---
							0.00	0.12	0.91	0.87	2.37	0.08

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 28, 1981, through September 8, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.02	0.01	---	0.04
2								---	.02	.00	---	.02
3								---	.01	.01	---	.01
4								---	.01	.03	---	.03
5								---	.02	.04	---	.05
6								---	---	.03	---	.02
7								---	---	.04	---	.01
8								---	---	.00	---	.01
9								---	---	.03	---	---
10								---	---	.02	---	---
11								---	---	.00	0.00	---
12								---	---	.00	.04	---
13								---	---	---	.03	---
14								---	---	---	.03	---
15								---	.06	---	.04	---
16								---	.03	---	.03	---
17								---	.38	---	.03	---
18								---	.02	---	.04	---
19								---	.06	---	.02	---
20								---	.65	---	.03	---
21								---	.02	---	.02	---
22								---	.01	---	.03	---
23								---	.00	---	.03	---
24								---	.00	---	.01	---
25								---	.01	---	.02	---
26								---	.03	---	.03	---
27								---	.01	---	.02	---
28								0.00	.28	---	.03	---
29								.01	.01	---	.04	---
30								.02	.03	---	.04	---
31								.18	---	---	.02	---
TOTAL								0.21	1.68	0.21	0.58	0.19

465931104061210 (WC-3)

LOCATION: Lat 46°59'31", long 104°06'12", in NW¼SW¼SE¼ sec. 3, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, at Hay Creek No. 2 near Wibaux, Mont., stream-gaging station and 3.5 miles east of Wibaux.

PERIOD OF RECORD: May 1978 through September 1981.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 9, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	---	---	0.30	0.00
2								---	---	---	.00	.00
3								---	---	---	.00	.00
4								---	---	---	.00	.00
5								---	---	0.00	.00	.00
6								---	---	.00	.00	.00
7								---	---	.25	.00	.00
8								---	0.00	.00	.00	.00
9								0.00	.00	.00	.00	.00
10								.00	.00	.03	.00	.00
11								.55	.00	.01	.00	.70
12								.04	.00	.00	.00	.25
13								.00	.00	.00	.00	.00
14								.00	---	.00	.00	.00
15								.00	---	.00	.00	.03
16								.00	---	.00	.00	.04
17								.12	---	.00	.00	.01
18								---	---	1.36	.00	.95
19								---	---	.10	.00	.00
20								---	.00	.00	.00	.00
21								---	.00	.00	.00	.00
22								---	.00	.00	.00	.00
23								---	---	.00	.00	.00
24								---	---	.00	.00	.00
25								---	---	.00	.00	.00
26								---	---	.00	.00	.00
27								---	---	.00	.00	.00
28								---	---	.00	.02	.00
29								---	---	.13	.00	.00
30								---	---	.00	.00	.00
31								---	---	.00	.00	---
TOTAL								0.71	0.00	1.90	0.32	1.98

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00		---	---	---	---	---	0.00	0.00	0.00	0.00	0.09
2	.25		---	---	---	---	---	.00	.00	.00	.00	.00
3	.00		---	---	---	---	0.04	.00	.00	.00	.00	.00
4	.00		---	---	---	---	.00	.00	.00	.00	.00	.00
5	.00		---	---	---	---	.01	.00	.00	.00	.00	.00
6	.00		---	---	---	---	.00	.14	.00	.00	.00	.00
7	.00		---	---	---	---	.00	.00	.05	.00	.00	.00
8	.00		---	---	---	---	.01	.00	.00	.55	.00	.00
9	.00		---	0.04	---	---	.34	.02	.00	.05	.00	.00
10	.00		---	.18	---	---	.10	.00	.00	.07	.00	.35
11	.00		---	.12	---	---	.00	.00	.00	.02	.00	.00
12	.10		---	.00	---	---	.00	.00	.00	.00	.00	.00
13	---		---	.00	---	---	---	.00	.00	.04	.00	.00
14	---		---	.28	---	---	---	.00	.05	.00	.00	.00
15	---		---	.04	---	---	.00	.00	.00	.00	.00	.00
16	---		---	.05	---	---	.00	.00	.00	.00	.01	.00
17	.00		---	.00	---	---	.00	.00	.00	.00	.00	.00
18	.00		0.00	.00	---	---	.07	---	.00	.00	.01	.00
19	.00		.00	.03	---	---	.08	---	.00	.00	.01	.00
20	.00		.03	.01	0.00	0.04	.00	---	.00	.00	.03	.00
21	.00		.03	.11	.00	.00	.00	---	.05	.00	.08	.00
22	.00		.02	---	.00	.00	.00	---	.02	.25	.00	.00
23	---		.00	---	---	.00	.00	.00	.02	.00	.00	.00
24	---		.16	---	---	.00	.15	.00	.00	.31	.00	.00
25	---		.00	---	---	.00	.00	.00	.00	.34	.00	.02
26	---		.03	---	---	.00	.10	.00	.00	.00	.00	.00
27	---		.00	---	---	.00	.00	.00	.00	.19	.00	.00
28	---		---	---	---	---	.00	.16	.00	.00	.00	.00
29	---		---	---	---	---	.00	.07	.00	.00	.00	.00
30	---		---	---	---	---	.00	.00	.00	.00	.00	.00
31	---		---	---	---	---	---	---	---	.00	.00	---
TOTAL	0.35		0.27	0.86	0.00	0.04	0.90	0.39	0.19	1.82	0.14	0.46

PERIOD: October 1, 1979, through July 7, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	0.04	0.00	---	0.00	0.00	0.00	0.00	0.00		
2	.00	---	.00	.02	---	.00	.02	.00	.00	.00		
3	.00	---	.01	.05	---	.07	.00	.00	.00	.00		
4	.00	---	.00	.00	---	.03	.00	.00	.00	.00		
5	.00	---	.00	.25	---	.00	.00	.00	.14	.00		
6	.00	---	.01	.07	---	.00	.05	.00	.12	.00		
7	.00	---	.01	.00	---	.00	.01	.00	.10	.00		
8	.07	---	.00	.00	---	.00	.00	.00	.00	---		
9	.00	---	.00	.00	---	.00	.01	.02	.00	---		
10	.00	---	.05	.03	---	.00	.00	.00	.00	---		
11	.00	---	.00	.00	---	.00	.00	.00	.00	---		
12	.00	---	.00	.00	---	.00	.00	.00	.00	---		
13	.00	0.00	.00	---	---	.02	.00	.00	.63	---		
14	.00	.00	.00	---	---	.00	.00	.00	.00	---		
15	.00	.00	.00	---	---	.05	.02	.00	.05	---		
16	.00	.00	.00	---	---	.00	.00	.00	.00	---		
17	.00	.00	.00	---	---	.00	.00	.00	.00	---		
18	.00	.00	.00	---	---	.00	.00	.00	.00	---		
19	.08	.05	.00	---	---	.04	.00	.02	.12	---		
20	.02	.00	.00	---	---	.00	.00	.00	.00	---		
21	.00	.00	.00	---	---	.00	.00	.00	.00	---		
22	.00	.00	.00	---	---	.00	.02	.00	.18	---		
23	.00	.00	.00	---	---	.00	.00	.00	.00	---		
24	.00	.00	.00	---	---	.00	.00	.00	.00	---		
25	.01	.00	.00	---	0.00	.00	.00	.00	.00	---		
26	.00	.00	.00	---	.02	.00	.00	.00	.00	---		
27	.00	.04	.00	---	.02	.00	.00	.05	.00	---		
28	.00	.01	.00	---	.02	.00	.00	.00	.00	---		
29	.00	.00	.00	---	.00	.00	.00	.01	.00	---		
30	---	.00	.00	---	---	.00	.00	.21	.00	---		
31	---	---	.00	---	---	.00	---	.00	---	---		
TOTAL	0.18	0.10	0.12	0.42	0.06	0.21	0.11	0.31	1.34	0.00		

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.02	0.02	0.02	0.03	0.00	0.16	0.02	0.38	---
2	.00	.05	.00	.02	.00	.02	.01	.02	.01	.02	.94	---
3	.03	.03	.06	.00	.01	.03	.00	.01	.38	.01	.00	---
4	.02	.00	.00	.00	.03	.00	.00	.00	.09	.00	.55	---
5	.02	.00	.03	.03	.02	.00	.01	.00	.02	.00	.30	---
6	.03	.00	.02	.05	.00	.02	.03	.05	.02	.00	.00	---
7	.03	.25	.00	.02	.05	.03	.04	.06	.19	.03	.00	---
8	.03	.08	.00	.00	.03	.02	.00	.19	.13	.01	.08	---
9	.01	.00	.04	.00	.03	.03	.02	.00	.00	.01	.00	---
10	.00	.00	.04	.03	.00	.01	.00	.07	.00	.00	.00	---
11	.03	.00	.00	.00	.00	.03	.25	.04	.05	.00	.00	---
12	.02	.15	.00	.00	.00	.02	.00	.00	.20	.00	.00	---
13	.02	.02	.00	.01	.00	.02	.02	.00	.22	.20	.02	---
14	.01	.00	.00	.00	.00	.00	.01	.00	.02	.00	.05	---
15	.98	.00	.02	.02	.00	.02	.02	.00	.23	.00	.04	---
16	.29	.00	.00	.00	.00	.02	.02	.05	.02	.00	.03	---
17	.02	.00	.03	.01	.02	.03	.01	.02	.38	.00	.04	---
18	.00	.00	.03	.03	.07	.01	.02	.02	.00	.00	---	0.02
19	.00	.05	.00	.02	.00	.01	.01	.00	.08	.58	---	.02
20	.00	.00	.00	.01	.02	.00	.02	.01	.16	.06	---	.00
21	.00	.00	.02	.00	.00	.01	.27	.04	.00	.00	---	.00
22	1.10	.02	.10	.00	.00	.00	.07	.41	.00	.00	---	.00
23	.00	.02	.11	.00	.02	.07	.02	.04	.00	.05	---	.00
24	.00	.00	.00	.00	.00	.01	.16	.06	.00	.00	---	.00
25	.00	.00	.00	.04	.00	.02	.02	.00	.00	.00	---	.05
26	.00	.03	.00	.05	.02	.00	.15	.00	.00	.00	---	.00
27	.00	.00	.00	.03	.02	.03	.20	.07	.00	.00	---	.02
28	.00	.08	.00	.01	.00	.05	.00	.00	.30	.25	---	.07
29	.00	.00	.04	.01	---	.02	.01	.00	.00	.09	---	.10
30	.00	.00	.01	.00	---	.00	.02	.00	.00	.00	---	.02
31	.00	---	.01	.07	---	.00	---	.00	---	.00	---	---
TOTAL	2.64	0.78	0.56	0.48	0.36	0.55	1.44	1.16	2.66	1.13	2.41	0.30

465931104061211 (WD-3)

LOCATION: Lat 46°59'31", long 104°06'12", in NW¼SW¼SE¼ sec. 3, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, at Hay Creek No. 2 near Wibaux, Mont., stream-gaging station and 3.5 miles east of Wibaux.

PERIOD OF RECORD: April 1978 through August 1981.

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: April 25, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.00	0.00	0.21	0.00
2							---	.00	.00	.00	.00	.00
3							---	.01	.00	.00	---	.00
4							---	.22	.00	.57	---	.00
5							---	.19	.00	.00	---	.00
6							---	.00	.16	.00	---	.00
7							---	.40	.00	.00	---	.00
8							---	.27	---	.00	---	.00
9							---	.00	---	.00	---	.00
10							---	.00	---	.00	.17	.00
11							---	.27	---	.00	.02	.52
12							---	.00	---	.00	.00	.15
13							---	.00	---	.00	.00	.08
14							---	.00	.14	.00	.00	.00
15							---	.00	.04	.00	.00	.00
16							---	.00	.00	.00	.00	.00
17							---	.00	.03	.00	.00	.00
18							---	.03	.00	.42	.00	.92
19							---	.17	.00	.01	.00	.02
20							---	.00	.00	.04	.00	.00
21							---	.00	.00	.00	.00	.00
22							---	.00	.00	.00	.05	.00
23							---	.00	.17	.00	.00	.00
24							---	.03	.73	.00	.00	.00
25							0.00	.00	.29	.00	.00	.00
26							.00	.00	.00	.00	.00	.00
27							.00	.00	.00	.00	.00	.00
28							.00	.00	.00	.00	.00	.00
29							.00	.13	1.12	.00	.00	.00
30							.00	1.64	.00	.00	.00	.00
31							---	.68	---	.00	.00	---
TOTAL							0.00	4.04	2.68	1.04	0.45	1.69

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through September 11, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00							---	0.00	0.00	0.00
2	.20	.00							---	.00	.00	.00
3	.00	.00							---	.00	.00	.00
4	.00	.00							---	.00	.00	.00
5	.00	.00							---	.00	.00	.00
6	.00	.00							0.00	.00	.00	.00
7	.00	.00							.04	.00	.00	.00
8	.00	.10							.00	.00	.00	.00
9	.00	.06							.00	.05	.00	.00
10	.00	.00							.00	.17	.00	.32
11	.00	.00							.00	.03	.00	.00
12	.00	.00							.00	.00	.00	---
13	.00	.00							.00	.04	.00	---
14	.00	.00							.02	.00	.00	---
15	.00	---							.00	.00	.00	---
16	.00	---							.00	.00	.00	---
17	.00	---							.00	.00	.00	---
18	.00	---							.04	.00	.00	---
19	.00	---							.03	.00	.00	---
20	.00	---							.00	.00	.00	---
21	.00	---							.06	.00	.00	---
22	.00	---							.02	.19	.00	---
23	.00	---							.00	.00	.00	---
24	.00	---							.00	.45	.00	---
25	.00	---							.00	.35	.00	---
26	.00	---							.00	.00	.00	---
27	.00	---							.00	.18	.00	---
28	.00	---							.00	.00	.00	---
29	.00	---							.00	.00	.00	---
30	.00	---							.00	.00	.00	---
31	.00	---							---	.00	.00	---
TOTAL	0.20	0.16							0.21	1.46	0.00	0.32

PERIOD: April 29, 1980, through September 4, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.00	0.00	0.00	0.00
2							---	.00	.00	.00	.00	.00
3							---	.00	.00	.00	.04	.08
4							---	.00	.00	.00	.03	.00
5							---	.00	.14	.00	.00	---
6							---	.00	.11	.00	.00	---
7							---	.00	.10	.00	.00	---
8							---	.00	.00	.07	.00	---
9							---	.00	.00	.00	.23	---
10							---	.00	.00	.00	.35	---
11							---	.00	.06	.00	.00	---
12							---	.00	.00	.00	.00	---
13							---	.00	.54	.26	.00	---
14							---	.00	.01	.01	.00	---
15							---	.00	.00	.00	1.28	---
16							---	.00	.00	.00	.37	---
17							---	.00	.00	.00	.00	---
18							---	.00	.00	.02	.02	---
19							---	.00	.13	.15	.00	---
20							---	.00	.00	.00	.00	---
21							---	.00	.00	.00	.00	---
22							---	.00	.18	.00	.00	---
23							---	.00	.00	.00	.00	---
24							---	.00	.00	.00	.00	---
25							---	.00	.00	.00	.00	---
26							---	.00	.00	.09	.00	---
27							---	.00	.00	.00	.08	---
28							---	.00	.00	.00	.01	---
29							0.00	.00	.00	.00	.26	---
30							.00	.00	.00	.00	.00	---
31							---	.00	---	.00	.09	---
TOTAL							0.00	0.00	1.27	0.60	2.76	0.08

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: April 21, 1981, through August 25, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.00	0.01	0.00	
2							---	.00	.01	.01	.00	
3							---	.00	.01	.01	.01	
4							---	.00	.01	.01	.00	
5							---	.00	.01	.01	.01	
6							---	.17	.01	.01	.01	
7							---	.00	.01	.01	.01	
8							---	.00	.01	.01	.01	
9							---	.01	.01	.01	---	
10							---	.00	.01	.01	---	
11							---	.00	.01	.01	.00	
12							---	.00	.01	.01	.00	
13							---	.01	.01	.01	.00	
14							---	.01	.01	.01	.00	
15							---	.01	.01	.01	.00	
16							---	.00	.01	.01	.00	
17							---	.00	.01	.01	.00	
18							---	.01	.00	.01	.00	
19							---	.01	.00	.01	.00	
20							---	.01	.01	.01	.00	
21							0.00	.00	.01	.01	.00	
22							.00	.00	.00	.01	.00	
23							.00	.00	.01	.01	.00	
24							.00	.00	.01	.01	.00	
25							.00	.00	.01	.00	.00	
26							.00	.00	.01	.00	---	
27							.00	.00	.01	.01	---	
28							.00	.00	.01	.00	---	
29							.00	.00	.01	.00	---	
30							.00	.00	.00	.00	---	
31							---	.00	---	.00	---	
TOTAL							0.00	0.24	0.25	0.25	0.05	

465910104090010 (WC-4)

LOCATION: Lat 46°59'10", long 104°09'00", in SW¼NW¼NW¼ sec. 8, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, 200 feet east of farmstead and 1.0 mile east of Wibaux.

PERIOD OF RECORD: April 1978 through September 1979.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: April 26, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	---	0.11		---	0.00
2							---	---	.00		0.00	.00
3							---	---	.00		.00	.00
4							---	---	.05		.00	.00
5							---	---	.00		.00	.00
6							---	---	.22		.00	.00
7							---	---	.00		.00	.00
8							---	---	.00		.00	.00
9							---	---	.00		.00	.00
10							---	---	.00		---	.00
11							---	---	.00		---	.27
12							---	---	.00		---	.41
13							---	---	.00		---	.08
14							---	---	---		---	.00
15							---	0.00	---		---	.01
16							---	.00	---		---	.05
17							---	.15	---		---	.00
18							---	.00	---		---	.80
19							---	.18	---		---	.10
20							---	.00	.00		---	.00
21							---	.00	.00		---	.00
22							---	.00	.00		---	.00
23							---	.00	.23		.00	.00
24							---	.00	.51		.00	.00
25							---	.00	.30		.00	.00
26							0.00	.00	.00		.00	.00
27							.00	.00	.00		.00	.00
28							.00	.00	.00		.00	.00
29							.00	.18	.92		.00	.00
30							.00	1.90	---		.00	.00
31							---	.95	---		.00	---
TOTAL							0.00	3.36	2.34		0.00	1.72

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00				---	0.11	0.00	0.00	---	0.00	0.00	---
2	.25				---	.00	.00	.00	---	.00	.00	---
3	.00				---	---	.00	.00	---	.00	.00	---
4	.00				---	---	.00	.00	---	.00	.00	---
5	.00				---	---	---	.00	---	.00	.00	---
6	.00				---	---	---	.00	---	.00	.00	---
7	.00				---	---	---	.00	---	.00	.00	---
8	.00				---	---	---	.00	---	.65	.00	---
9	.00				---	---	---	.00	---	.05	.00	---
10	.00				---	---	---	.00	---	.00	.00	---
11	.00				---	---	---	.00	---	.00	.00	0.00
12	.00				---	---	---	.00	---	.00	.00	.00
13	---				---	---	---	.00	---	.00	.00	.00
14	---				---	.00	.00	.00	---	.00	.00	.00
15	---				---	.00	.00	.00	---	.00	.00	.00
16	.00				---	.00	.00	.00	---	.00	---	.00
17	.00				---	.00	.00	.00	---	.00	---	.00
18	.00				---	.00	.03	.00	---	.00	---	.00
19	.00				---	.00	.00	.00	---	.00	---	.00
20	.00				0.00	.00	.00	.00	---	.00	---	.00
21	.00				.00	.00	.00	.00	---	.00	---	.00
22	.00				.30	.00	.00	.00	0.07	.00	---	.00
23	.00				.01	.00	.00	.00	.00	.00	---	.00
24	---				.00	.00	.00	.00	.00	1.14	---	.00
25	---				.00	.00	.00	.00	.04	.00	---	.00
26	---				.01	.00	.00	.00	.00	.31	---	.00
27	---				.15	---	.01	.00	.00	.08	---	.00
28	---				.00	---	.00	.00	.00	.00	---	.00
29	---				---	.00	.00	.00	.00	.00	---	.00
30	---				---	.00	.00	.00	.00	.00	---	.00
31	---				---	.00	---	---	---	.00	---	---
TOTAL	0.25				0.47	0.11	0.04	0.00	0.11	2.23	0.00	0.00

LOCATION: Lat 47°01'10", long 104°08'40", in NE¼NW¼NW¼ sec. 32, T. 15 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, 500 feet east of farmstead and 3.0 miles northeast of Wibaux.

PERIOD OF RECORD: May 1978 through September 1981.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 2, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.00	0.00	0.37	0.00
2								0.00	.00	.00	.00	.00
3								.00	.00	.00	.00	.00
4								.15	.00	---	.00	.00
5								.35	.00	---	.00	.00
6								.20	.20	.00	.00	.00
7								.05	.00	.00	.00	.00
8								.55	.00	.07	.00	.00
9								.10	.00	.00	.00	.00
10								.00	.00	.00	.45	.00
11								.36	.00	.00	.00	.54
12								.05	.00	.00	.00	.20
13								.00	.00	.00	.00	.12
14								.00	.35	.00	.00	.00
15								.00	.00	.00	.00	.00
16								.00	.00	.00	.00	.00
17								.17	.00	.00	.00	.00
18								.00	.00	.74	.00	.97
19								.00	.00	.00	.00	.00
20								.00	.00	.10	.00	.00
21								.00	.00	.00	.00	.00
22								.00	.00	.00	.23	.00
23								.00	.20	.00	.00	.00
24								.00	.70	.00	.00	.00
25								.00	.35	.00	.00	.00
26								.00	.10	.00	.00	.00
27								.00	.00	.00	.00	.00
28								.00	.00	.00	.00	.00
29								.10	1.33	.10	.00	.00
30								1.76	.00	.00	.00	.00
31								.85	---	.00	.00	---
TOTAL								4.69	3.23	1.01	1.05	1.83

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through October 15, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00											
2	.20											
3	.00											
4	.00											
5	.00											
6	.00											
7	.00											
8	.00											
9	.00											
10	.00											
11	.00											
12	.05											
13	.00											
14	.00											
15	.00											
16	---											
17	---											
18	---											
19	---											
20	---											
21	---											
22	---											
23	---											
24	---											
25	---											
26	---											
27	---											
28	---											
29	---											
30	---											
31	---											
TOTAL	0.25											

PERIOD: April 9, 1980, through September 30, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.00	0.00	0.02	0.00
2							---	.00	.00	.00	.00	.00
3							---	.00	.00	.00	.13	.07
4							---	.00	.00	.00	.00	.00
5							---	.00	.16	.00	.00	.00
6							---	.00	.13	.00	.00	.00
7							---	.00	.07	.00	.00	.00
8							---	.00	.00	.07	.00	.00
9							0.00	.00	.00	.00	.30	.00
10							.00	.00	.00	.00	.15	.00
11							.00	.00	.14	.00	.00	.00
12							.00	.00	.00	.00	.00	.02
13							.00	.00	.55	.30	.00	.00
14							.00	.00	.00	.00	.00	.00
15							.00	.00	.01	.00	1.25	.00
16							.00	.00	.01	.00	.72	.00
17							.00	.00	.00	.08	.03	.03
18							.00	.00	.00	.00	.00	.00
19							.00	.00	.20	.25	.03	.02
20							.00	.00	.00	.00	.00	.00
21							.00	.00	.00	.00	.00	.26
22							.00	.00	.25	.00	.00	.02
23							.00	.00	.00	.00	.00	.00
24							.00	.00	.00	.00	.00	.20
25							.00	.00	.00	.00	.00	.00
26							.00	.00	.00	.06	.03	.00
27							.00	.04	.00	.00	.08	.00
28							.00	.00	.00	.00	.00	.00
29							.00	.00	.00	.00	.35	.00
30							.00	.17	.00	.00	.00	.00
31							---	.02	---	.00	.06	---
TOTAL							0.00	0.23	1.52	0.76	3.15	0.62

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00						---	0.07	0.05	0.00	0.28	0.06
2	---						---	.08	.09	.00	.64	.06
3	---						---	.05	.19	.00	.07	.05
4	---						---	.04	.30	.02	.10	.07
5	---						---	.00	.07	.00	.31	.07
6	---						---	.00	.06	.02	.05	.06
7	---						---	.05	.05	.00	.04	.09
8	---						---	.00	.12	.00	.12	.04
9	---						---	.04	.02	.01	.05	.09
10	---						---	.08	.05	.04	.06	.06
11	---						---	.01	.06	.00	.06	.08
12	---						---	.04	.06	.02	.07	.08
13	---						---	.05	.38	.06	.06	.08
14	---						---	.03	.04	.34	.05	.07
15	---						---	.00	.05	.04	.06	.09
16	---						---	.00	.04	.03	.07	.08
17	---						---	.03	.20	.05	.06	.07
18	---						---	.05	.08	.04	.05	.09
19	---						---	.04	.07	.20	.06	.06
20	---						---	.05	.10	.03	.07	.07
21	---						0.00	.08	.05	.03	.05	.05
22	---						.05	.55	.08	.04	.09	.11
23	---						.08	.12	.01	.04	.06	.07
24	---						.05	.04	.03	.01	.05	.04
25	---						.05	.50	.00	.03	.03	.06
26	---						.08	.32	.00	.02	.06	.07
27	---						.04	.01	.01	.00	.04	.07
28	---						.06	.03	.13	.00	.07	.05
29	---						.04	.04	.00	.07	.06	.02
30	---						.06	.06	.00	.03	.07	.08
31	---						---	.07	---	.04	.06	---
TOTAL	0.00						0.51	2.53	2.39	1.21	2.97	2.04

465930104025010 (WC-6)

LOCATION: Lat 46°59'30", long 104°02'50", in NW¼SW¼SW¼ sec. 6, T. 14 N., R. 61 E., Wibaux County, Hydrologic Unit 10110204, 300 feet southeast of abandoned farm and 6.5 miles east of Wibaux.

PERIOD OF RECORD: April 1978 through October 1978.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: April 24, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.10	0.14	0.65	0.00
2							---	.00	.00	.00	.00	.00
3							---	.58	.00	.00	.00	.00
4							---	.26	.00	.76	.00	.00
5							---	.18	.00	.00	.00	.00
6							---	.00	.18	.00	.00	.00
7							---	.48	.00	---	.00	.00
8							---	.36	.00	---	.00	.00
9							---	.00	.00	---	.00	.00
10							---	.00	.00	---	.22	.00
11							---	.33	.00	---	.00	.52
12							---	.13	.00	.00	.00	.31
13							---	.00	.00	.00	.00	.14
14							---	.00	.50	.00	.00	.00
15							---	.00	.06	.00	.00	.00
16							---	.00	.00	.00	.00	.00
17							---	.00	.00	.00	.00	.00
18							---	.00	.00	.88	.00	.83
19							---	.05	.00	.00	.00	.07
20							---	.00	.00	.15	.00	.00
21							---	.00	.00	.00	.00	.00
22							---	.00	.00	.00	.00	.00
23							---	.00	.12	.00	.00	.00
24							0.00	.02	1.17	.00	.00	.00
25							.00	.00	.36	.00	.00	.00
26							.00	.00	.13	.00	.00	.00
27							.00	.01	.00	.00	.00	.00
28							.00	.00	.00	.00	.00	.00
29							.00	.00	2.00	.10	.00	.00
30							.00	2.29	.05	.00	.00	.00
31							---	.85	---	.00	.00	---
TOTAL							0.00	5.54	4.67	2.03	0.87	1.87

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through October 22, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00											
2	.31											
3	.00											
4	.00											
5	.00											
6	.00											
7	.00											
8	.00											
9	.00											
10	.00											
11	.04											
12	.06											
13	.00											
14	.00											
15	.00											
16	.00											
17	.00											
18	.00											
19	.00											
20	.00											
21	.00											
22	.00											
23	---											
24	---											
25	---											
26	---											
27	---											
28	---											
29	---											
30	---											
31	---											
TOTAL	0.41											

465650104042010 (WC-7)

LOCATION: Lat 46°56'50", long 104°04'20", in SE¼SE¼SE¼ sec. 23, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, 200 feet northeast of farmstead and 5.5 miles southeast of Wibaux.

PERIOD OF RECORD: May 1978 through September 1981.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATIDN (INCHES)

PERIOD: May 1, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0.00	---	---	0.52	0.00
2								.00	---	---	.00	.00
3								.29	---	---	.00	.00
4								.17	---	---	.00	.00
5								.20	---	---	.00	.00
6								.00	---	0.00	.00	.00
7								.45	0.00	.00	.00	.00
8								.26	.00	.06	.00	.00
9								.00	.00	.00	.00	.00
10								---	.00	.00	.13	.00
11								---	.08	.03	.00	.45
12								---	.00	.00	.00	.25
13								---	.00	.00	.00	.10
14								---	.00	.00	.00	.00
15								---	.00	.00	.00	.00
16								---	.00	.00	.00	.00
17								---	.00	.00	.00	.00
18								---	.00	.55	.00	.95
19								---	.00	.00	.00	.05
20								---	.00	.13	.00	.00
21								---	.00	.00	.00	.00
22								---	.00	.00	.10	.00
23								---	.05	.00	.00	.00
24								---	.74	.00	.00	.00
25								---	.41	.00	.00	.00
26								---	.09	.00	.00	.00
27								---	.00	.00	.00	.00
28								---	---	.00	.00	.00
29								---	---	.20	.00	.00
30								---	---	.00	.00	.00
31								---	---	.00	.00	---
TOTAL								1.37	1.37	0.97	0.75	1.80

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00		---	---	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.15
2	.25		---	---	.00	.01	.00.	.00	.00	.00	.00	.00
3	.00		---	---	.02	.00	.01	.00	.00	.00	.00	.00
4	.00		---	---	.00	---	.00	.00	.00	.00	.00	.00
5	.00		---	---	.05	---	.00	.10	.00	.00	.00	.00
6	.00		---	---	.00	---	.00	.16	.00	.00	.00	.00
7	.00		---	---	.10	---	.05	.00	.05	.00	.00	.00
8	.00		---	---	.01	---	.00	.00	.00	.16	.00	.00
9	.00		---	0.00	.02	.00	.00	.00	.00	.07	.00	.25
10	.01		---	.00	.02	.00	---	.00	.00	.18	.00	---
11	.01		---	.10	.08	.00	.22	.00	.00	.06	.00	.00
12	.08		0.00	.00	.03	.04	.33	.00	.00	.00	.00	.00
13	.00		.00	---	.02	.00	.06	.00	.00	.00	.00	.00
14	.00		.00	---	.08	.00	.00	.00	.00	.00	.00	.00
15	.00		.02	---	.20	.00	.00	.00	---	.00	.00	.00
16	.00		.00	.00	---	.00	.00	.00	---	.00	.00	.00
17	---		.00	.00	---	.00	.00	.00	---	.00	.00	.00
18	---		.01	.00	---	.00	.05	.16	---	.00	.00	.00
19	---		.01	.01	---	.03	.09	.00	---	.00	.00	.00
20	---		.01	.00	---	.03	.00	.00	---	.00	.00	.00
21	---		.05	.05	.07	.00	.00	.00	---	---	.15	.00
22	---		.06	.02	.13	.00	.00	.00	.05	---	.00	.00
23	---		.00	---	.01	.00	.00	.00	.01	---	.00	.00
24	---		.14	---	.00	.00	.09	.00	.00	.50	.00	.00
25	---		.03	.03	.00	.00	.00	.00	.00	.12	.00	.00
26	---		.00	.00	.00	.00	.00	.00	.00	.17	.00	.00
27	---		.15	.00	.00	.00	.00	.00	.01	.36	.05	.00
28	---		---	.00	.02	.00	.00	.10	.01	.00	.00	.00
29	---		---	.00	---	.00	.00	.25	.00	.00	.00	.00
30	---		---	.00	---	.00	.00	.00	.00	.00	.00	.00
31	---		---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	0.35		0.48	0.21	0.86	0.14	0.90	0.77	0.13	1.62	0.20	0.40

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.07	0.00	0.00	0.00
2	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.10	.00	.04	.00	.00	.00	.17	.50	.07
4	.00	.00	.00	.00	.02	.02	.00	.00	.25	.00	.00	.00
5	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.15	.00	.00	.08	.00	.09	.00	.00	.00
7	.00	.00	.00	.01	.00	.00	.00	.00	.16	.00	.00	.00
8	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.40	.00
10	.00	.03	.06	.02	.00	.00	.00	.00	.03	.00	.25	.00
11	.00	.12	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
12	.00	.00	.00	.03	.05	.00	.00	.00	.02	.00	.00	.00
13	.00	.04	.00	.00	.01	.01	.00	.00	.70	.16	.00	.00
14	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.01	.00	.04	.00	.00	.04	.00	1.30	.00
16	.00	.00	.00	.01	.00	.04	.00	.00	.00	.10	.73	.00
17	.00	.00	.00	.01	.00	.00	.00	.00	.00	.07	.00	.00
18	.06	.00	.02	.02	.06	.00	.00	.00	.00	.00	.00	.00
19	.14	.07	.01	.00	.00	.04	.00	.00	.20	.30	.00	.10
20	.00	.01	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.01	.05	.08	.00	.00	.00	.00	.00	.00	.50
22	.00	.00	.00	.03	.00	.03	.00	.00	.15	.00	.00	.01
23	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.04	.00	.21	.00	.00	.00	.00	.00	.00	.00	.22
25	.00	.07	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.05	.00	.01	.00	.00	.00	.00	.00	.10	.07	.00
27	.00	.05	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.37	.00
30	.00	.00	.00	.00	---	.00	.00	.49	.00	.03	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.07	---
TOTAL	0.29	0.48	0.12	1.09	0.31	0.22	0.08	0.56	1.73	0.93	3.69	0.90

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	D.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.02	D.56	0.00
2	.00	.05	.02	.01	.00	.03	.00	.04	.00	.02	.88	.03
3	.00	.04	.04	.01	.01	.01	.00	.00	.21	.02	.00	.03
4	.00	.03	.02	.00	.04	.01	.00	.00	.13	.03	.65	.05
5	.04	.00	.04	.04	.02	.02	.00	.00	.00	.03	.20	.03
6	.02	.00	.02	.08	.04	.02	.00	.00	.00	.02	.00	.07
7	.02	.00	.01	.00	.08	.02	.01	.09	.22	.02	.00	.01
8	.02	.35	.00	.00	.09	.01	.00	.28	.16	.02	.21	.01
9	.02	.02	.02	.02	.02	.00	.00	.01	.00	.02	.01	.01
10	.00	.00	.02	.01	.00	.00	.02	.04	.00	.02	.00	.00
11	.00	.00	.00	.00	.00	.00	.20	.02	.00	.02	.00	.00
12	.00	.13	.00	.00	.01	.00	.05	.00	.30	.01	.02	.00
13	.03	.00	.00	.00	.00	.00	.01	.03	.25	.30	.71	.00
14	.04	.02	.00	.00	.01	.00	.00	.00	.00	.02	.00	.01
15	.96	.02	.05	.04	.02	.02	.03	.00	.14	.00	.00	.00
16	.35	.01	.00	.03	.00	.01	.00	.10	.00	.03	.30	.02
17	.07	.00	.02	.02	.02	.03	.00	.03	.31	.03	.00	.03
18	.00	.02	.02	.03	.07	.00	.02	.02	.00	.02	.00	.00
19	.00	.03	.00	.03	.03	.01	.00	.02	.07	.87	.02	.00
20	.00	.01	.03	.01	.00	.00	.00	.00	.12	.02	.00	.01
21	.01	.00	.02	.00	.00	.01	.25	.06	.01	.00	.00	.01
22	.85	.04	.10	.01	.00	.02	.04	.74	.00	.00	.07	.00
23	.00	.02	.07	.00	.01	.10	.02	.02	.02	.05	.00	.00
24	.00	.01	.00	.00	.01	.01	.16	.05	.00	.00	.00	.01
25	.00	.00	.00	.03	.01	.00	.00	.00	.01	.01	.00	.01
26	.00	.02	.00	.05	.02	.00	.15	.00	.02	.01	.03	.00
27	.00	.00	.00	.03	.04	.02	.32	.08	.02	.00	.00	.00
28	.00	.05	.00	.01	.01	.09	.02	.01	.29	.39	.02	.06
29	.00	.00	.00	.01	---	.00	.00	.00	.01	.02	.16	.05
30	.02	.02	.01	.01	---	.00	.00	.02	.02	.00	.00	.08
31	.02	---	.03	.08	---	.02	---	.17	---	.00	.02	---
TOTAL	2.47	0.90	0.54	0.57	0.56	0.46	1.28	1.83	2.32	2.02	3.86	0.53

465650104042011 (WD-7)

LOCATION: Lat 46°56'50", long 104°04'20", in SE¼SE¼SE¼ sec. 23, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, 200 feet northeast of farmstead and 5.5 miles southeast of Wibaux.

PERIOD OF RECORD: April 1978 through September 1981.

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: April 25, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.08	0.03	0.45	---
2							---	.00	.05	.00	.00	---
3							---	.00	.00	.00	.00	---
4							---	.08	.00	.91	.00	---
5							---	.21	.00	.00	.00	---
6							---	.00	.19	.00	.00	---
7							---	.44	.00	---	.00	---
8							---	.28	.00	---	.00	---
9							---	.07	.00	---	.00	---
10							---	.00	.00	---	---	---
11							---	.30	.08	---	---	---
12							---	.10	.00	---	---	0.43
13							---	.00	---	---	---	.10
14							---	.00	.08	---	---	.00
15							---	.00	.05	---	---	.00
16							---	.00	.01	---	---	.02
17							---	.04	.00	---	---	.00
18							---	.05	.00	---	---	.94
19							---	.10	.01	---	---	.05
20							---	.00	.00	.05	---	.00
21							---	.00	.00	.00	---	.00
22							---	.00	.00	.00	---	.00
23							---	.00	.00	.00	---	.00
24							---	.00	.71	.00	---	.00
25							0 .00	.00	.42	.00	---	.00
26							.00	.00	.10	.00	---	.00
27							.00	.03	.00	.00	---	.00
28							.00	.00	.00	.00	---	.00
29							.00	.10	.03	.00	---	.00
30							.00	1.68	.07	.00	---	.00
31							---	.84	---	.00	---	---
TOTAL							0.00	4.32	1.88	0.99	0.45	1.54

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through July 25, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00								---	0.00		
2	.26								---	.00		
3	.00								---	.00		
4	.00								---	.00		
5	---								---	.00		
6	---								0.00	.00		
7	---								.00	.00		
8	---								.00	.13		
9	---								.00	.07		
10	---								.00	.17		
11	---								.00	.08		
12	---								.00	.00		
13	---								.00	.05		
14	---								.00	.00		
15	---								.00	.00		
16	---								.00	.00		
17	---								.00	.00		
18	---								.00	.00		
19	---								.00	.00		
20	---								.00	.00		
21	---								.00	.00		
22	---								.05	.52		
23	---								.00	.00		
24	---								.00	.82		
25	.00								.00	.02		
26	.00								.00	---		
27	.00								.00	---		
28	.00								.00	---		
29	.00								.00	---		
30	.00								.00	---		
31	---								---	---		
TOTAL	0.26								0.05	1.86		

PERIOD: October 30, 1979, through September 4, 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.00					---	0.00	0.05	0.00	0.00	0.00
2	---	.00					---	.00	.00	.00	.00	.00
3	---	.00					---	.00	.01	.46	.50	.07
4	---	.00					---	.00	.25	.00	.00	.00
5	---	.00					---	.00	.00	.00	.00	---
6	---	.00					---	.00	.09	.00	.00	---
7	---	.00					---	.00	.16	.00	.00	---
8	---	.00					---	.00	.00	.00	.00	---
9	---	.02					---	.00	.00	.00	.40	---
10	---	.00					---	.00	.03	.00	.25	---
11	---	.00					---	.00	.02	.00	.00	---
12	---	.00					---	.00	.02	.00	.00	---
13	---	.00					---	.00	.70	.16	.00	---
14	---	.00					---	.00	.00	.00	.00	---
15	---	---					---	.00	.04	.00	1.30	---
16	---	---					---	.00	.00	.10	.73	---
17	---	---					---	.00	.00	.07	.00	---
18	---	---					---	.00	.00	.00	.00	---
19	---	---					---	.00	.20	.30	.00	---
20	---	---					---	.00	.00	.00	.00	---
21	---	---					---	.00	.00	.00	.00	---
22	---	---					---	.00	.15	.00	.00	---
23	---	---					---	.00	.00	.00	.00	---
24	---	---					---	.00	.00	.00	.00	---
25	---	---					---	.00	.00	.00	.00	---
26	---	---					---	.00	.00	.10	.07	---
27	---	---					---	.00	.00	.00	.00	---
28	---	---					---	.00	.00	.00	.00	---
29	---	---					0.00	.00	.00	.00	.37	---
30	0.00	---					.00	.10	.00	.03	.00	---
31	.00	---					---	.00	---	.00	.07	---
TOTAL	0.00	0.02					0.00	0.10	1.72	1.22	3.69	0.07

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 4, 1981, through September 7, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	---	---	0.00	0.00
2								---	0.00	---	.01	.00
3								---	.20	---	.00	.01
4								0.00	.08	---	.00	.02
5								.00	.00	---	.00	.07
6								---	.00	---	.00	.00
7								---	.19	---	.00	.00
8								---	.17	---	.00	---
9								---	.00	---	.00	---
10								---	.00	---	.00	---
11								---	.01	---	.01	---
12								---	.18	---	.00	---
13								---	.19	0.22	.61	---
14								---	.03	.04	.03	---
15								---	.10	.01	.01	---
16								---	.03	.01	.31	---
17								---	---	.02	.01	---
18								---	---	.01	.00	---
19								---	---	.70	.02	---
20								.00	---	.00	.01	---
21								.01	---	.02	.00	---
22								.61	---	.00	.04	---
23								.02	---	.01	.00	---
24								.03	---	.00	.00	---
25								.00	---	.00	.00	---
26								.00	---	.00	.00	---
27								.06	---	.00	.00	---
28								.01	---	.00	.00	---
29								.00	---	.00	.09	---
30								.09	---	.00	.02	---
31								---	---	.01	.00	---
TOTAL								0.83	1.18	1.05	1.17	0.10

465813104044810 (WC-11)

LOCATION: Lat 46°58'13", long 104°04'48", in SE¼SW¼NE¼ sec. 14, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, 500 feet north of steel grain bin and 5.0 miles east of Wibaux.

PERIOD OF RECORD: August 1979 through September 1981.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: August 7, 1979, through September 30, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	0.20
2											---	.00
3											---	.00
4											---	.00
5											---	.04
6											---	.00
7											0.00	.04
8											.00	.00
9											.00	.00
10											.00	.46
11											.00	.00
12											.00	.00
13											.00	.00
14											.00	.00
15											.00	.00
16											.02	.00
17											.02	.00
18											.02	.00
19											.01	.00
20											.02	.00
21											.09	.00
22											.00	.00
23											.00	.00
24											.00	.00
25											.00	.00
26											.00	.00
27											.02	.00
28											.03	.00
29											.00	.00
30											.00	.00
31											.00	---
TOTAL											0.23	0.74

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00						---	0.00	0.00	---	0.00	0.00
2	.00						---	.00	.00	---	.00	.00
3	.00						---	.00	---	---	.10	.15
4	.00						---	.00	---	---	.00	.00
5	.00						---	.00	---	---	.00	.00
6	.00						---	.00	---	---	.00	.00
7	.00						---	.00	---	0.00	.00	.00
8	.07						---	.00	---	.05	.00	.00
9	.00						0.00	.00	---	.00	.33	.00
10	.00						.00	.00	---	.00	.47	.00
11	---						.00	.00	---	.02	.00	.13
12	---						.00	.00	---	.00	.00	.00
13	---						.00	.01	---	.33	.00	.00
14	---						.00	.00	---	.00	.00	.00
15	---						.00	.00	---	.00	1.59	.00
16	---						.00	---	---	.00	.82	.00
17	---						.00	---	---	.05	.00	.03
18	---						.00	---	.00	.00	.00	.00
19	---						.00	---	.10	.25	.00	.00
20	---						.00	---	.00	.00	.00	.00
21	---						.00	---	.00	.00	.00	.52
22	---						.00	---	.07	.00	.00	.00
23	---						.00	---	.00	.00	.00	.00
24	---						.00	---	.00	.00	.00	.30
25	---						.00	---	.00	.00	.00	.00
26	---						.00	---	.00	.17	.05	.00
27	---						.00	---	.00	.00	.00	.00
28	---						.00	.00	---	.00	.00	.00
29	---						.00	.00	---	.00	.35	.00
30	---						.00	.25	---	.00	.00	.00
31	---						---	.00	---	.00	.08	---
TOTAL	0.07						0.00	0.26	0.17	0.87	3.79	1.13

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00						---	0.00	0.09	0.00	0.57	0.03
2	---						---	.04	.05	.02	.56	.02
3	---						---	.00	.20	.02	.00	.05
4	---						---	.00	.15	.00	.65	.05
5	---						---	.02	.02	.00	.18	.02
6	---						---	.00	.01	.02	.00	.04
7	---						---	.01	.17	.03	.00	.00
8	---						---	.15	.20	.00	.06	.00
9	---						---	.00	.00	.00	.00	.00
10	---						---	.16	.01	.02	.00	.01
11	---						---	.03	.00	.01	.02	.00
12	---						---	.00	.21	.02	.00	.00
13	---						---	.01	.28	.10	.34	.00
14	---						---	.01	.02	.07	.02	.00
15	---						---	.00	.18	.02	.00	.00
16	---						---	.00	.00	.02	.07	.02
17	---						---	.03	.38	.00	.00	.00
18	---						---	.02	.00	.01	.00	.00
19	---						---	.00	.08	.79	.03	.00
20	---						---	.00	.03	.02	.00	.00
21	---						0.05	.07	.03	.00	.00	.00
22	---						.20	.38	.00	.00	.02	.00
23	---						.03	.03	.00	.07	.02	.00
24	---						.08	.04	.00	.00	.00	.03
25	---						.01	.00	.00	.00	.00	.00
26	---						.15	.00	.00	.00	.00	.02
27	---						.10	.00	.00	.00	.03	.00
28	---						.07	.00	.28	.75	.03	.02
29	---						.00	.00	.00	.05	.03	.00
30	---						.00	.00	.00	.00	.00	.05
31	---						---	.02	---	.02	.01	---
TOTAL	0.00						0.69	1.02	2.39	2.06	2.64	0.36

472358101573710 (BD-1)

LOCATION: Lat 47°23'58", long 101°57'37", in NW¼NW¼NE¼ sec. 34, T. 145 N., R. 89 W., Mercer County, Hydrologic Unit 10130301, 40 feet south of abandoned house and 8.0 miles north of Zap.

PERIOD OF RECORD: May 1978 through September 1981.

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 7, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.00	0.24		0.00
2								---	.00	.00		.00
3								---	.00	.01		.00
4								---	.00	.73		.00
5								---	.00	.01		.00
6								---	.00	.00		.00
7								0.54	.01	.00		.00
8								.75	.01	.52		.00
9								.00	.08	.01		.00
10								.00	.00	.00		.00
11								.00	.64	.00		.55
12								.98	.00	---		1.39
13								.00	.00	---		.00
14								.00	.00	---		.00
15								.00	.14	---		.01
16								.00	.00	---		.07
17								.00	.00	---		.05
18								.00	.00	.77		.17
19								.14	.02	.06		.01
20								.00	.00	.00		.00
21								.00	.00	.01		.00
22								.00	.00	.16		.00
23								.03	.00	.01		.00
24								.05	.00	.00		.00
25								.00	.80	.00		.00
26								.00	.01	.00		.00
27								.00	.00	.00		.00
28								.00	.00	.00		.00
29								.00	.68	.00		.00
30								.26	.01	.00		.00
31								.54	---	.00		---
TOTAL								3.29	2.40	2.53		2.25

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00							---	0.05	0.55	0.45	0.04
2	.05							---	.00	.00	.02	.00
3	.01							---	.03	.00	.31	.00
4	.09							---	.00	.00	.39	.00
5	.03							---	.03	.00	.00	.00
6	.01							---	.00	.00	.00	.00
7	.00							---	.17	.00	.00	.00
8	.00							---	.00	.16	.00	.00
9	.00							---	.00	.10	.00	.00
10	.00							---	.00	.00	.00	.82
11	---							---	.04	.24	.00	.02
12	---							---	.17	.00	.00	.00
13	---							---	.00	.00	.00	.00
14	---							---	.00	.00	.00	.00
15	---							---	.00	.05	.01	.00
16	---							---	.00	.00	.02	.00
17	---							---	.00	.00	.01	.00
18	---							0.00	.61	.00	.00	.00
19	---							.17	.04	.00	.00	.00
20	---							.06	.00	.00	.00	.00
21	---							.00	.00	.00	.55	.00
22	---							.00	.59	.05	.03	.00
23	---							.00	.00	.10	.00	.00
24	---							.00	.00	.03	.00	.00
25	---							.02	.00	.06	.04	.00
26	---							.00	.00	.35	.07	.00
27	---							.00	.00	.24	.26	.00
28	---							.05	.00	.00	.11	.00
29	---							.02	.00	1.09	.01	.00
30	---							.00	.00	.15	.00	.00
31	---							.21	---	.00	.00	---
TOTAL	0.19							0.53	1.73	3.17	2.28	0.88

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00							---	0.00	0.00	0.00	0.00
2	.00							---	.00	.00	.00	.00
3	.00							---	.35	.00	.11	.05
4	---							---	.07	.00	.05	.00
5	---							0.00	.09	.00	.00	.00
6	---							.00	.00	.00	.00	.00
7	---							.00	.18	.00	.00	.00
8	---							.00	.00	.00	.00	.00
9	---							.00	.00	.04	.28	.00
10	---							.00	.00	.00	.04	.00
11	---							.00	1.18	.00	.00	.12
12	---							.00	.38	.00	.00	.20
13	---							.00	.48	.00	.00	.00
14	---							.00	.14	.00	.00	.00
15	---							.00	.00	.13	.25	.00
16	---							.00	.00	.00	.49	.00
17	---							.00	.00	.00	.00	.02
18	---							.00	.00	.00	.00	.04
19	---							.00	.00	.83	.00	.03
20	---							.00	.00	.00	.06	.04
21	---							.00	.00	.00	.00	.53
22	---							.00	.00	.00	.00	.00
23	---							.00	.04	.20	.11	.00
24	---							.00	.00	.00	.00	.24
25	---							.00	.00	.00	.00	.11
26	---							.00	.00	.00	.00	.00
27	---							.00	.06	.02	.00	.00
28	---							.00	.00	.00	.00	.00
29	---							.00	.00	.00	.40	.00
30	---							.00	.00	.00	.00	.00
31	---							.00	---	.00	1.30	---
TOTAL	0.00							0.00	2.97	1.22	3.09	1.38

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00							---	0.27	0.02	0.63	0.00
2	.00							---	.34	.28	.36	.00
3	.00							---	.00	.00	.14	.00
4	.00							---	.03	.00	.00	.00
5	.00							---	.00	.00	.29	1.49
6	.00							0.00	.00	.00	.00	.35
7	.00							.00	.14	.00	.06	.00
8	.00							.00	.14	.02	.03	.00
9	.00							.00	.11	.00	.00	.00
10	.00							.12	.00	.05	.00	.00
11	.00							.07	.00	.00	.00	.00
12	.00							.00	.49	.00	.00	.00
13	.00							.00	.85	.18	.00	.00
14	.00							.00	.00	.02	.00	.00
15	.27							.00	.09	.43	.07	.00
16	1.13							.00	.00	.00	.00	.00
17	.00							.00	.06	.00	.00	.00
18	.00							.00	.05	.01	.00	.00
19	.00							.00	.05	.00	.00	.00
20	.00							.00	.19	.00	.00	.01
21	.00							.00	.24	.08	.01	.00
22	.00							.09	.00	.00	.29	.00
23	.00							.17	.09	.04	.03	.00
24	.00							.05	.00	.11	.03	.03
25	.00							.01	.00	.15	.00	1.17
26	.00							.00	.00	.03	.04	.00
27	.00							.18	.00	.00	.00	.00
28	.05							.04	.18	.00	.00	.00
29	.22							.00	.00	.00	.00	.00
30	.00							.00	.00	.00	.00	.32
31	---							.31	---	.00	.00	---
TOTAL	1.67							1.04	3.32	1.42	1.98	3.37

472239101560210 (BC-2)

LOCATION: Lat 47°22'39", long 101°56'02", in NW¼NE¼SE¼ sec. 18, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 300 feet southeast of farmstead and 6.3 miles north of Zap.

PERIOD OF RECORD: June 1977 through April 1982.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: June 30, 1977, through September 30, 1977.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	0.00	0.00	0.09
2									---	.00	.00	.00
3									---	.00	.20	.00
4									---	.40	.00	.00
5									---	.20	.00	.00
6									---	.08	.00	.07
7									---	.00	.00	.00
8									---	.00	.00	.16
9									---	.00	.00	.00
10									---	.27	.00	.00
11									---	.00	.00	.00
12									---	.00	.04	.00
13									---	.00	.00	.00
14									---	.00	.07	.00
15									---	.50	.13	.00
16									---	.00	.00	.00
17									---	.00	.00	.02
18									---	.00	.00	1.03
19									---	.00	.00	.00
20									---	.00	.00	.00
21									---	.00	.00	.61
22									---	.00	.25	.00
23									---	.00	.00	1.15
24									---	.00	.00	.72
25									---	.00	.21	.00
26									---	.00	.13	.00
27									---	.00	.07	.00
28									---	.00	.00	.02
29									---	.00	.00	.22
30									0.00	.00	.00	.01
31									---	.00	.34	---
TOTAL									0.00	1.45	1.44	4.10

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00					---	0.04	0.00	0.23	0.06	0.00
2	.00	.00					---	.00	.02	.00	.00	.00
3	.00	.00					---	.00	.00	.00	.00	.00
4	.00	.00					---	.08	.00	.60	.00	.00
5	.00	.00					---	.08	.00	.12	.00	.00
6	.00	.00					---	.00	.10	.00	.00	.00
7	.46	.00					---	.68	.05	.00	.00	.00
8	.00	.00					---	.75	---	.80	.00	.00
9	.00	.00					---	.00	---	.00	.00	.00
10	.00	.06					---	.00	---	.00	.00	.15
11	.00	.00					0.00	.00	---	.35	.00	.55
12	.00	.00					.12	.80	.00	.10	.00	1.42
13	.00	.00					.02	.00	.00	.00	.00	.00
14	.00	.00					.03	.00	.00	.00	.10	.00
15	.00	.00					.17	.00	.48	.00	.00	.02
16	.00	.00					.00	.00	---	.00	.03	.07
17	.00	.00					.30	.00	---	.00	.00	.10
18	.00	.00					.00	.05	---	.77	.00	.10
19	.00	---					.00	.12	---	.03	.00	.00
20	.00	---					---	.00	---	.00	.00	.00
21	.00	---					---	.00	.00	.00	.00	.00
22	.00	---					---	.00	.00	.21	.00	.00
23	.03	---					---	.00	.00	.00	.11	.00
24	.00	---					---	.10	.00	.00	.04	.00
25	.00	---					---	.00	.40	.00	.00	.00
26	.00	---					---	.00	.00	.00	.00	.00
27	.00	---					---	.00	.00	.00	.03	.00
28	.03	---					---	.00	.00	.00	.02	.00
29	.02	---					---	.00	.96	.00	.00	.00
30	.00	---					---	.40	.00	.00	.00	.00
31	.00	---					---	.68	---	.00	.00	---
TOTAL	0.54	0.06					0.64	3.78	2.01	3.21	0.39	2.41

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05	0.80	0.85	0.00
2	.30	.00	.00	.00	.00	.04	.00	.00	.00	.00	.07	.00
3	.03	.00	.00	---	.02	.00	.00	.00	.00	.00	.30	.00
4	.12	.00	.00	---	.00	.00	.00	.05	.00	.00	.20	.00
5	.00	.00	.00	---	.00	.00	.20	.00	.02	.00	.00	.00
6	.00	.00	.00	---	.00	.00	.00	.47	.00	.00	.00	.00
7	.00	.00	.00	---	.02	.12	.02	.02	.05	.00	.00	.00
8	.00	.14	.00	---	.00	.10	.00	.00	.00	.15	.00	.00
9	.00	.11	.00	---	.00	.02	.00	.00	.00	.09	.00	.00
10	.00	.15	.05	.00	.00	.00	.02	.00	.00	.00	.00	.83
11	.00	.00	.00	.00	.25	.00	.08	.00	.00	.39	.00	.00
12	.16	.22	.00	.00	.10	.00	.27	.00	.22	.03	.00	.00
13	.00	.13	.00	.00	.00	.20	.02	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.08	.00	.00	.00	.00	.38	.35	.59	.00	.00	.00
19	.00	.03	.02	.00	.00	.15	.18	.05	.12	.00	.00	.00
20	.00	.00	.00	.00	.00	.05	.00	.00	.02	.00	.00	.00
21	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.34	.00
22	.00	.00	.04	.00	.28	.00	.00	.00	.58	.00	.00	.00
23	.00	.00	.05	.00	.00	.00	---	.00	.01	.10	.00	.00
24	.00	.00	.05	.00	.00	.00	---	.00	.02	.00	.00	.00
25	.00	.03	.11	.00	.00	.00	.00	.00	.01	.00	.05	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35	.07	.00
27	.00	.05	.00	.00	.00	.00	.00	.00	.00	.15	.33	.00
28	.00	.07	.37	.00	.00	.05	.14	.00	.00	.00	.05	.00
29	.00	.00	.03	.00	---	.00	.00	.00	.00	.60	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.15	.00	.00
31	.00	---	.05	.00	---	.07	---	.22	---	.00	.00	---
TOTAL	0.61	1.16	0.77	0.00	0.97	0.82	1.31	1.16	1.69	2.94	2.26	0.83

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.00
3	.00	.00	.00	.07	.00	.00	.00	.00	---	.00	.07	.00
4	.00	.00	.00	.03	.00	.03	---	.00	---	.00	.00	.00
5	.00	.00	.00	.17	.00	.00	---	.00	---	.00	.00	.00
6	.00	.00	.00	.53	.00	.00	---	.00	0.04	.00	.00	.00
7	.05	.00	.00	.01	.00	.00	---	.00	.19	.00	.00	.00
8	.07	.00	.00	---	.00	.00	---	.00	.00	.00	.00	.00
9	.00	.03	.00	---	.00	.00	---	.00	---	.00	.29	.00
10	.00	.00	.10	---	.04	.00	---	.00	---	.00	.00	.00
11	.00	.00	.00	.00	.01	.00	---	.00	---	.00	.00	.16
12	.00	.00	.00	.05	.02	.00	.00	.00	---	.00	.00	.23
13	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.00
14	.00	.00	.02	.00	.00	.00	.00	.00	---	.00	.00	.00
15	.00	.00	.03	.00	.00	.08	.00	.00	---	.05	.30	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.48	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	---	.11	.00	.03
18	.05	.00	.00	.05	.01	.00	.00	.00	.01	.00	.00	.07
19	.20	.00	.00	.00	.00	.00	.00	.00	---	.75	.00	.00
20	.00	.00	.00	.00	.09	.00	.00	.00	---	.00	.11	.00
21	.00	.00	.00	.05	.10	.03	.00	.00	---	.00	.00	.57
22	.00	.00	.00	.00	.00	.19	.00	---	---	.00	.20	.00
23	.00	.00	.00	.00	.00	.00	.00	---	---	.07	.03	.02
24	.00	.00	.00	.03	.11	.00	.00	---	---	.00	.00	.23
25	.00	.00	.03	.00	.00	.00	.00	---	---	.00	.00	.09
26	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.03	.00
27	.00	.11	.00	.00	.00	.00	.00	---	.00	.02	.00	.00
28	.00	.24	.00	.00	.00	.00	.00	---	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.46	.00
30	.00	---	.00	.00	---	.57	.00	---	.00	.00	.00	.00
31	.00	---	.00	.00	---	.02	---	---	---	.00	1.55	---
TOTAL	0.37	0.38	0.18	0.99	0.38	0.92	0.00	0.00	0.24	1.00	3.52	1.40

PERIOD: October 17, 1980, through September 30, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	0.00	0.00	0.03	0.00	---	0.00	---	0.03	1.10	0.00
2	---	---	.00	.00	.00	.00	---	.00	---	.44	.57	.00
3	---	---	.04	.00	.00	.00	---	.00	---	---	.06	.00
4	---	---	.00	.00	.01	.00	---	.00	---	---	.06	.00
5	---	---	.03	.03	.03	.00	---	.00	---	---	.26	1.43
6	---	---	.03	.01	.00	.00	---	.00	---	---	.03	.27
7	---	---	.00	.02	.11	.00	0.00	.00	---	---	.00	.00
8	---	---	.00	.00	.05	.00	.00	.00	---	---	.00	.00
9	---	---	.05	.00	.00	.00	.00	.00	---	---	.00	.00
10	---	---	.06	.00	.00	.00	.00	.16	---	---	.00	.00
11	---	---	.00	.00	.00	.00	.02	.10	0.00	---	.00	.00
12	---	---	.00	.00	---	.00	.05	.00	.50	---	.00	.00
13	---	---	.00	.00	---	.00	.00	.00	.94	---	.00	.00
14	---	---	.00	.00	---	.00	.00	.00	.00	---	.00	.00
15	---	---	.03	.00	---	.00	---	.00	.07	---	.12	.00
16	---	---	.00	.00	---	---	---	.00	.00	.00	.00	.00
17	0.00	---	.00	.00	---	---	---	.00	---	.00	.00	.00
18	.00	---	.00	.00	---	---	.00	.00	---	.00	.00	.00
19	.00	0.00	.00	.00	---	---	---	.00	---	.00	.00	.00
20	.00	.00	.02	.00	---	---	---	.00	---	.00	.00	.07
21	.00	.00	.11	.00	---	---	.00	.00	---	.08	.08	.00
22	.50	.00	.14	.00	---	---	.00	.20	---	.00	.37	.00
23	.08	.00	.06	.00	---	---	.00	.07	---	.07	.02	.09
24	.00	.00	.00	.00	---	---	.01	.06	---	.09	.00	.00
25	---	.00	---	.07	.00	.00	.00	.02	.00	.18	.08	.91
26	---	.00	---	.00	.00	.00	.27	.00	.00	.05	.00	.00
27	---	.00	---	.00	.43	.02	.28	.24	.00	.00	.00	.00
28	---	.00	---	.00	.00	.00	.03	---	.15	.00	.00	.00
29	---	.00	---	.00	---	.00	.00	---	.01	.00	.00	.00
30	---	.00	.00	.00	---	---	.00	---	.00	.00	.01	.08
31	---	---	.00	.05	---	---	---	---	---	.00	.00	---
TOTAL	0.58	0.00	0.57	0.18	0.66	0.02	0.66	0.85	1.67	0.94	2.76	2.85

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	0.08	0.07	---	0.03	---					
2	.00	---	.02	.01	---	.07	0.06					
3	.05	---	.05	.00	---	.05	.00					
4	.00	---	.00	.00	---	.00	.06					
5	.00	---	.00	.03	---	.00	.01					
6	.00	---	.02	.00	---	.00	.00					
7	.00	---	.00	.00	---	.09	.00					
8	.00	---	.00	.05	---	.05	.00					
9	.00	---	.00	.08	---	.00	.00					
10	.00	---	.00	.00	---	.08	.00					
11	.00	---	.00	.00	---	.00	.01					
12	.28	---	.00	.01	---	.00	.00					
13	.00	---	.00	.00	---	---	.00					
14	.00	0.00	.04	.16	---	---	.00					
15	.00	.02	.00	.29	---	---	.05					
16	.00	.00	.00	.03	---	.25	.00					
17	.00	.02	.00	.17	---	.13	.00					
18	.00	.21	.00	.10	0.00	.00	.00					
19	.00	.00	.00	.00	.01	.14	.36					
20	.00	.00	.12	.03	.01	.00	.00					
21	.00	.00	.02	.05	.01	.00	.00					
22	.03	.29	.02	.12	.04	.00	.00					
23	.00	.00	.00	.07	.16	.00	.00					
24	.00	.00	.00	.25	.00	.00	.00					
25	.00	.07	.02	---	.00	.00	.00					
26	.00	.02	.02	---	.00	.00	.00					
27	---	.00	.02	---	.01	---	.08					
28	---	.00	.05	---	.00	---	.00					
29	---	.00	.00	---	---	---	.05					
30	---	.01	.00	---	---	---	.00					
31	---	---	.00	---	---	---	---					
TOTAL	0.36	0.64	0.48	1.52	0.24	0.89	0.68					

472239101560211 (BD-2)

LOCATION: Lat 47°22'39", long 101°56'02", in NW¼NE¼SE¼ sec. 18, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 300 feet southeast of farmstead and 6.3 miles north of Zap.

PERIOD OF RECORD: July 1978 through September 1981. (No data were available for water year 1980.)

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: July 5, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	0.00	0.00
2										---	---	.00
3										---	---	.00
4										---	---	.00
5										0.00	---	.00
6										.00	---	.00
7										.00	---	.00
8										.54	---	.00
9										.00	---	.00
10										.00	---	.07
11										.00	---	.48
12										---	---	1.34
13										.00	---	.00
14										.00	---	.00
15										.00	---	.01
16										.00	---	.06
17										.00	---	.08
18										.45	---	.10
19										.06	---	.01
20										.00	---	.00
21										.00	---	.00
22										.19	---	.00
23										.00	---	.00
24										.00	---	.00
25										.00	---	.00
26										.00	---	.00
27										.00	---	.00
28										.00	---	.00
29										.00	---	.00
30										.00	---	.00
31										.00	.00	---
TOTAL										1.24	0.00	2.15

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through July 23, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00							---	0.78		
2	.15	.00							---	.00		
3	.01	.00							---	.01		
4	.14	.00							---	.00		
5	.00	.00							---	.00		
6	.01	.00							---	.00		
7	.00	.00							---	.00		
8	.00	---							---	.15		
9	.00	---							---	.09		
10	.00	---							---	.00		
11	.09	---							---	.39		
12	.02	---							---	.03		
13	.00	---							---	.00		
14	.00	---							0.00	.00		
15	.00	---							.00	.13		
16	.00	---							.00	.00		
17	.00	---							.00	.00		
18	.00	---							.59	.00		
19	.00	---							.12	.00		
20	.00	---							.02	.00		
21	.00	---							.00	.00		
22	.00	---							.58	.05		
23	.00	---							.01	.05		
24	.00	---							.02	---		
25	.00	---							.01	---		
26	.00	---							.00	---		
27	.00	---							.00	---		
28	.00	---							.00	---		
29	.00	---							.00	---		
30	.00	---							.00	---		
31	.00	---							---	---		
TOTAL	0.42	0.00							1.35	1.68		

PERIOD: April 27, 1981, through September 30, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.57		---	0.00
2							---	.00	.54		---	.00
3							---	.00	.00		---	.00
4							---	.00	.00		---	.00
5							---	.00	.00		---	1.36
6							---	.00	.00		---	.35
7							---	.00	.11		---	.00
8							---	.00	.06		---	.00
9							---	.00	.11		---	.00
10							---	.12	.00		---	.00
11							---	.06	.00		---	.00
12							---	.00	.28		---	.00
13							---	.00	1.09		---	.00
14							---	.00	.00		---	.00
15							---	.00	.08		---	.00
16							---	.00	.00		---	.00
17							---	.00	.05		---	.00
18							---	.00	.03		---	.00
19							---	.00	.06		---	.00
20							---	.00	.18		0.00	.09
21							---	.00	.34		.07	.00
22							---	.10	.00		.36	.00
23							---	.08	.00		.01	.10
24							---	.01	.00		.00	.00
25							---	.01	.00		.04	.91
26							---	.00	.00		.00	.00
27							0.21	.19	.00		.00	.00
28							.04	.05	.14		.00	.00
29							.00	.00	---		.00	.00
30							.00	.00	---		.00	.05
31							---	.18	---		.00	---
TOTAL							0.25	0.80	3.64		0.48	2.86

472035101565910 (BC-3)

LOCATION: Lat 47°20'35", long 101°56'59", in SW¼SW¼SW¼ sec. 18, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 100 feet northwest of farmstead and 4.0 miles northwest of Zap.

PERIOD OF RECORD: June 1977 through September 1979.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: June 29, 1977, through September 30, 1977.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	0.00	0.00	0.12
2									---	.00	.00	.00
3									---	.00	.17	.00
4									---	.60	.00	.00
5									---	.13	.00	.00
6									---	.10	.00	.04
7									---	.00	.00	.00
8									---	.00	.00	.27
9									---	.00	.00	.00
10									---	.16	.00	.00
11									---	.05	.00	.00
12									---	.00	.03	.00
13									---	.00	.00	.00
14									---	.00	.08	.00
15									---	.69	.10	.00
16									---	.00	.00	.00
17									---	.00	.00	.37
18									---	.00	.00	.73
19									---	.00	.00	.00
20									---	.00	.00	.00
21									---	.00	.00	.76
22									---	.00	.22	.00
23									---	.00	.00	1.23
24									---	.00	.00	.78
25									---	.00	.13	.01
26									---	.00	.13	.00
27									---	.00	.11	.00
28									---	.00	.00	.04
29									0.00	.00	.00	.23
30									.00	.00	.00	.00
31									---	.00	.34	---
TOTAL									0.00	1.73	1.31	4.58

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00		---	0.00	---	0.00	0.00	---	0.00	0.06	0.00
2	.00	.00		---	.00	---	.28	.05	---	.00	.00	.00
3	.00	.00		---	.00	---	.35	.03	---	.01	.00	.00
4	.00	.00		0.00	---	---	.00	.03	---	.00	.00	.00
5	.00	.00		.01	---	---	.08	.05	---	---	.00	.00
6	.00	.00		.00	---	---	.00	.00	---	---	.00	.00
7	.70	.00		.15	---	---	.00	.95	---	---	.00	.00
8	.00	.00		.00	---	---	.00	.80	---	---	.00	.00
9	.00	.00		.00	---	---	.00	.00	---	---	.00	.00
10	.01	.00		.00	---	---	.00	.00	---	---	.00	.12
11	.00	.00		.00	---	---	.04	.00	---	---	.00	.63
12	.00	.00		.00	---	---	.08	.93	0.00	---	.00	.89
13	.00	.00		.02	---	---	.00	.00	.00	---	.00	.00
14	.00	.00		.00	---	---	.00	.00	.00	---	.12	.00
15	.00	.06		.01	---	---	.20	.00	.37	---	.00	.00
16	.00	.00		.01	---	0.00	.00	.00	.00	---	.00	.03
17	.00	.00		.00	---	.00	.35	.00	.00	---	.00	.04
18	.00	.00		.00	---	.10	.00	.10	.00	.65	.00	.10
19	.00	.16		.00	---	.00	.00	.10	.00	.23	.00	.00
20	.00	.02		.00	---	.00	.00	.00	.00	.00	.00	.00
21	.00	---		.00	---	.00	.00	.00	.00	.00	.00	.00
22	.00	---		.00	---	.00	.22	.00	.00	.21	.00	.00
23	.00	---		.00	---	.00	.10	.00	.00	.00	.10	.00
24	.00	---		.31	---	.00	.00	.06	.10	.00	.04	.00
25	.00	---		.41	---	.00	.00	.00	.40	.00	.00	.00
26	.00	---		.07	---	.00	---	.00	.00	.00	.00	.00
27	.00	---		.04	---	.00	---	.00	.00	.00	.00	.00
28	.00	---		.00	---	.00	---	.00	.00	.00	.00	.00
29	.00	---		.00	---	.00	---	.00	1.95	.00	.00	.03
30	.00	---		.06	---	.00	---	.38	.00	.00	.00	.00
31	.01	---		.00	---	.00	---	.70	---	.00	.00	---
TOTAL	0.72	0.24		1.09	0.00	0.10	1.70	4.18	2.82	1.10	0.32	1.84

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	0.00	0.00	0.00	---	0.85	1.07	0.07
2	---	.00	.00	---	---	.05	.00	.00	---	.00	.02	.00
3	---	.00	.00	---	---	.00	.00	.00	---	.00	.03	.00
4	---	.00	.00	---	---	.00	.00	.02	---	.00	.12	.00
5	---	.00	.00	---	0.00	.00	.05	.01	---	---	.00	.00
6	---	.00	.00	---	.00	.00	.00	.53	---	.00	.00	.00
7	---	.00	.00	---	.05	.12	.04	.00	0.03	.00	.00	.00
8	---	.14	.00	---	.00	.00	.01	.00	.00	.00	.00	.00
9	---	.10	.00	0.00	.00	.00	.00	.00	.00	.00	.00	.00
10	---	.15	.00	.00	.00	.00	.05	.00	.00	.00	.00	.93
11	.00	.00	.00	.00	.20	.00	.06	.00	.00	.55	.00	.00
12	.04	.16	.00	.00	.08	.00	.39	.00	.20	.00	.00	.00
13	.08	.20	---	.00	.00	.12	.02	.00	.00	.00	.00	.00
14	.00	.00	---	.00	.20	.00	.00	.00	.00	---	.00	.00
15	.00	.00	---	.00	.10	.00	.00	.00	.00	---	.00	.00
16	.00	.00	---	---	.00	.00	.00	.00	---	---	.00	.00
17	.00	.15	---	---	.00	.00	.00	---	---	---	.00	.00
18	.00	.04	---	---	.00	.00	.30	---	---	---	.00	.00
19	.00	.05	---	---	.00	.35	.15	---	---	---	.00	.00
20	.00	.00	---	---	.10	.05	.00	---	---	---	.00	.00
21	.00	.00	.00	---	.00	.00	.00	---	---	.00	.65	.00
22	.00	.00	.00	---	.30	.00	.00	---	---	.32	.00	.00
23	.00	.00	.04	---	.00	.00	.00	---	---	.00	.00	.00
24	.00	.00	.01	.00	.00	.00	.19	---	---	.03	.00	.00
25	.00	.00	.11	.00	.00	.00	.00	.00	---	.00	.05	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	---	.31	.05	.00
27	.00	.07	.00	.00	.00	.05	.00	.00	---	.22	.31	.00
28	.00	.13	.42	.00	.00	.08	.12	.00	.00	.01	.20	.00
29	.00	.00	---	.00	---	.00	.00	---	.00	.70	.00	.00
30	.00	.00	---	---	---	.00	.00	---	.00	.18	.00	.00
31	.00	---	---	---	---	.05	---	---	---	.00	.00	---
TOTAL	0.12	1.19	0.58	0.00	1.03	0.87	1.38	0.56	0.23	3.17	2.50	1.00

472338101554310 (BC-4)

LOCATION: Lat 47°23'38", long 101°55'43", in SW¼SW¼NW¼ sec. 8, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 220 feet southwest of farmstead and 7.6 miles north of Zap.

PERIOD OF RECORD: June 1977 through April 1982.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: June 29, 1977, through September 30, 1977.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	0.00	0.00	0.05
2									---	.00	.00	.00
3									---	.00	.20	.00
4									---	.26	.00	.00
5									---	.14	.00	.00
6									---	.26	.00	.05
7									---	.00	.00	.00
8									---	.00	.00	.17
9									---	.00	.00	.00
10									---	.13	.00	.00
11									---	.00	.00	.00
12									---	.00	.00	.00
13									---	.00	.00	.00
14									---	.00	.05	.00
15									---	.41	.10	.00
16									---	.00	.00	.00
17									---	.00	.00	.30
18									---	.00	.00	.68
19									---	.00	.00	.00
20									---	.00	.00	.00
21									---	.00	.00	.65
22									---	.00	.23	.03
23									---	.00	.00	1.12
24									---	.00	.00	.82
25									---	.00	.11	.02
26									---	.00	.08	.00
27									---	.00	.05	.00
28									---	.00	.03	.00
29									0.00	.00	.00	.25
30									.00	.00	.00	.04
31									---	.00	.35	---
TOTAL									0.00	1.20	1.20	4.18

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	0.22	---	---	---	0.00	---	0.02	0.00
2	.00	.00	---	---	.02	---	---	---	.00	---	.00	.00
3	.00	.00	---	---	.02	---	0.00	---	.00	---	.00	.00
4	.00	.00	---	0.00	.03	---	.00	---	.00	---	.00	.00
5	.00	.00	---	.00	.00	---	.03	---	.00	0.00	.00	.00
6	.00	.00	---	.00	.00	---	.00	---	.15	.00	.00	.00
7	.73	.00	---	.00	---	---	.00	---	.00	---	.00	.00
8	.00	.00	---	.00	---	---	.00	---	.00	---	.00	.00
9	.00	.00	---	.00	---	---	.00	0.00	---	---	.00	.00
10	.00	.00	---	.00	---	---	.00	.00	---	---	.00	.07
11	.00	.00	---	.00	---	0.00	.00	.00	---	---	.00	.55
12	.00	.00	---	---	---	.00	.02	.90	---	.00	.00	1.52
13	.00	.00	---	---	---	.02	.21	.00	.00	.00	.00	.00
14	.00	.00	---	---	---	.00	.03	.00	.00	.00	.07	.00
15	.00	.00	---	---	.00	.00	.17	.00	.50	.00	.00	.05
16	.00	.00	---	---	---	.00	.05	.00	.00	.00	.04	.00
17	.00	.00	---	---	---	.00	---	.00	.00	.00	.00	.08
18	.00	.00	---	.00	---	---	---	.07	.00	.40	.00	.00
19	.00	.25	---	.00	---	---	.00	.17	.00	.12	.00	.00
20	.00	.05	---	.00	---	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	---	.00	---	.00	---	.00	.00	.00	.00	.00
22	.00	---	---	.00	---	.00	---	.00	.00	.20	.00	.00
23	.02	---	---	.00	---	.00	---	.00	.00	.00	.10	.00
24	.01	---	---	.07	---	.00	---	.08	.18	.00	.00	.00
25	.00	---	---	.12	---	.00	---	.00	.00	.00	.00	.00
26	.00	---	---	.00	---	.00	---	.00	.00	.00	.00	.00
27	.00	---	---	.00	---	.00	---	.00	.00	.00	.00	.00
28	.02	---	0.00	.00	---	---	---	.00	.00	.00	.00	.00
29	.01	---	.00	.02	---	---	---	.00	---	.00	.00	.04
30	.00	---	.00	.03	---	---	---	.55	---	.00	.00	.00
31	.00	---	---	.00	---	---	---	.53	---	.00	.00	---
TOTAL	0.79	0.30	0.00	0.24	0.29	0.02	0.51	2.30	0.85	0.72	0.23	2.31

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.07	0.65	0.55	0.04
2	.35	.00	.00	---	.00	.02	.00	.00	.05	.00	.00	.00
3	.00	.00	.13	---	.16	.00	.00	.00	.00	.00	.30	.00
4	.17	.00	.00	---	.00	.00	.00	.01	.00	.00	.35	.00
5	.00	.00	.00	---	.00	.00	.04	.01	.00	.00	.00	.00
6	.00	.00	.00	---	.00	.00	.00	.42	.00	---	.00	.00
7	.00	.00	.00	---	.00	.00	.00	.07	.03	---	.00	.00
8	.00	.04	.03	---	.00	.13	.00	.00	.00	---	.00	.00
9	.00	.17	.00	---	.00	.02	.00	.00	.00	---	.00	.00
10	.00	.10	.02	0.00	.00	.00	.00	.00	.00	---	.00	.83
11	.00	.00	.00	.00	.07	.00	.02	.00	.00	---	.00	.00
12	.00	.15	.00	.00	.12	.00	.40	.00	.05	---	.00	.00
13	.00	.31	.00	.00	.11	.10	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	---	---	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	---	---	.00	.00	.00	---	.04	.00	.00
16	.00	.00	.00	.00	---	.00	.00	.00	---	.00	.00	.00
17	.00	.07	.00	.00	---	.00	.00	.00	---	.00	.00	.00
18	.00	.00	.00	.00	---	.00	.19	.10	---	.00	.00	.00
19	.00	.00	.05	.00	---	.00	.21	.02	---	.00	.00	.00
20	.00	.00	.00	.00	---	.00	.00	.21	---	.00	.00	.00
21	.00	.00	.00	.00	---	.00	.00	.00	---	.00	.17	.00
22	.00	.00	.03	.00	.16	.00	.00	.00	---	.00	.00	.00
23	.00	.00	.02	.00	.00	.00	.00	.00	---	.10	.00	.00
24	.00	.00	.05	.00	.00	.00	.05	.00	---	.05	.00	.00
25	.00	.00	.15	.00	.00	.00	.14	.00	.00	.00	.05	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35	.05	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.17	.39	.00
28	.00	.13	.07	.00	.00	.02	.15	.00	.00	.00	.02	.00
29	.00	.00	.15	.00	---	.03	.00	.00	.00	.74	.00	.00
30	.00	.00	---	.00	---	.00	.00	.00	.00	.23	.00	.00
31	.00	---	---	.00	---	.07	---	.06	---	.00	.00	---
TOTAL	0.52	0.97	0.70	0.00	0.62	0.39	1.20	0.90	0.20	2.33	1.88	0.87

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	---	0.00	0.00	---
2	.00	.00	.00	.00	.00	.00	---	.00	---	.00	.00	---
3	.00	.00	.00	.07	.02	.00	---	.00	---	.00	.00	---
4	.00	.00	.00	.00	.01	.00	---	.00	---	.00	.00	---
5	.00	.00	.00	.20	.00	.00	---	.00	---	.00	.00	---
6	.00	.00	.00	.23	.00	---	---	.00	0.02	.00	.00	---
7	.03	.00	.00	.02	.00	---	---	.00	.20	.00	.00	---
8	.09	.00	.00	---	.00	---	---	.00	.00	.00	.00	---
9	.00	.04	.00	---	.00	---	---	.00	---	.00	.29	---
10	.00	.00	.09	---	.00	---	---	.00	---	.00	.00	---
11	.00	.00	.00	---	.00	---	---	.00	---	.00	---	---
12	.00	.00	.00	---	.00	---	0.00	.00	---	.00	---	---
13	.00	.00	.04	---	.00	---	.00	.00	---	.00	---	---
14	.00	.00	.00	---	.00	---	.00	.00	---	.00	---	---
15	.00	.00	.00	---	.00	---	.00	.00	---	.00	---	---
16	.00	.00	.00	---	.00	---	.00	.00	---	.00	---	---
17	.00	.00	.00	---	.00	---	.00	.00	---	.06	---	---
18	.05	.00	.00	---	.00	---	.00	.00	---	.00	---	---
19	.19	.00	.00	---	.00	---	.00	.00	---	.75	---	---
20	.00	.00	.00	---	.15	---	.00	.00	---	.00	---	---
21	.00	.00	.00	---	.10	---	.00	.00	---	.00	---	---
22	.00	.00	.00	---	.00	.13	.00	---	---	.00	---	---
23	.00	.00	.00	---	.00	.00	.00	---	---	.08	---	---
24	.00	.00	.00	.04	.12	.00	.00	---	---	.00	---	---
25	.00	.00	.04	.00	.00	.00	.00	---	---	.00	---	0.10
26	.00	.00	.01	.00	.00	.00	.00	---	.00	.00	---	.00
27	.00	.05	.00	.00	.00	.00	.00	---	.00	.01	---	.00
28	.00	.10	.00	.02	.00	---	.00	---	.00	.00	---	.00
29	.00	.00	.00	.00	.00	---	.00	---	.00	.00	---	.00
30	.00	.00	.00	.00	---	---	.00	---	.00	.00	---	.00
31	.00	---	.00	.00	---	---	---	---	---	.00	---	---
TOTAL	0.36	0.19	0.18	0.58	0.38	0.13	0.00	0.00	0.22	0.90	0.29	0.10

PERIOD: October 17, 1980, through September 30, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.02	0.00	0.00	0.03	---	---	0.00	0.40	0.08	---	---
2	---	---	---	.00	.00	---	---	.00	.65	.33	---	0.00
3	---	---	---	.00	.00	---	---	.00	.00	.00	---	---
4	---	---	---	.01	.00	---	---	.00	---	.00	0.02	---
5	---	---	---	.04	.00	---	---	.00	---	.00	.23	---
6	---	---	---	.01	.00	---	---	.00	---	.00	.02	---
7	---	---	---	.02	.20	---	0.00	.00	---	.06	.00	---
8	---	---	---	.00	.10	---	.00	.00	---	---	.00	---
9	---	---	---	.00	.00	---	.00	.00	---	---	.00	---
10	---	---	---	.00	.00	0.00	.00	.13	---	---	---	---
11	---	---	.00	.00	.00	.00	---	.14	.00	---	---	---
12	---	---	.00	.00	.00	.00	---	.00	.33	---	---	---
13	---	---	.00	.00	.00	.00	---	.00	.82	---	---	---
14	---	---	.02	.00	.00	.00	---	.00	.00	---	---	---
15	---	---	.02	.00	.00	.00	---	.00	.06	---	---	.00
16	---	---	.00	.00	.00	.00	---	.00	.00	.00	---	.00
17	0.00	---	.00	.00	.00	.00	---	.00	.06	.00	---	.00
18	.00	---	---	.00	.00	.00	---	.00	.00	.03	---	.00
19	.00	.00	---	.00	.00	.00	---	.00	.04	.00	.00	.00
20	.00	.02	---	.00	.00	.00	---	.00	.15	.00	.00	.06
21	.00	.00	.06	.00	.00	.00	.00	.00	.19	.08	.11	.00
22	.65	.02	.13	.00	.00	.00	.00	.13	.00	.02	.15	.00
23	.26	.01	.05	---	.00	.00	.00	.18	.05	.06	.03	.09
24	.00	.02	.00	---	.00	.00	.00	.06	.00	.05	.00	.00
25	.00	.00	.00	---	.00	.00	.00	.03	.00	.15	.09	.99
26	.00	.00	.00	---	.00	.00	.25	.00	.00	.07	.00	.00
27	.00	.00	.00	.00	.61	.02	.34	.34	.02	.00	.00	---
28	.00	.00	.00	.00	.00	.02	.03	.00	.26	.00	---	---
29	.00	.00	.00	.00	---	.00	.00	.00	.02	.00	---	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	---	.07
31	.02	---	.00	.04	---	---	---	.42	---	.00	---	---
TOTAL	0.93	0.09	0.28	0.12	0.94	0.04	0.62	1.43	3.05	0.93	0.65	1.21

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	0.07	0.09	---	---	---					
2	.00	---	.10	.00	---	---	0.05					
3	.04	---	---	.00	---	---	.00					
4	.00	---	---	.01	---	0.00	.06					
5	.00	---	---	.01	---	.00	.05					
6	.00	---	.00	---	0.00	.00	.00					
7	.00	---	.01	---	---	.04	.00					
8	.00	---	.04	.05	---	.02	.00					
9	.00	---	.01	.05	---	.00	---					
10	.00	---	.00	.00	---	.07	---					
11	.00	---	.01	.00	---	---	---					
12	.27	---	.00	.00	---	---	---					
13	.00	---	.03	.00	---	---	---					
14	.00	0.00	.06	---	---	---	---					
15	.00	.02	.00	---	---	---	.04					
16	.00	.01	.00	---	---	---	.00					
17	---	.02	.00	---	---	---	.00					
18	---	.40	.00	---	.00	.00	.10					
19	---	.00	.00	---	.00	.38	---					
20	.00	.00	.21	.04	.02	.00	---					
21	.00	.00	.01	.06	.02	.00	---					
22	.00	.23	.02	.12	.06	.00	---					
23	.00	.00	.00	.03	.16	.00	---					
24	.00	.01	.00	.15	---	.00	---					
25	.00	.13	.03	---	---	---	---					
26	.00	.03	.03	---	---	---	---					
27	.00	.00	.02	---	---	---	---					
28	.00	.00	.05	---	---	---	---					
29	.02	.01	.00	---	---	---	.04					
30	.02	.00	.00	---	---	---	.00					
31	---	---	.00	---	---	---	---					
TOTAL	0.35	0.86	0.70	0.61	0.26	0.51	0.34					

472312101523210 (BC-5)

LOCATION: Lat 47°23'12", long 101°52'32", in SW¼SW¼SE¼ sec. 10, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 700 feet northwest of farmstead and 7.5 miles northeast of Zap.

PERIOD OF RECORD: June 1977 through May 1979.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: June 29, 1977, through September 30, 1977.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	0.00	0.00	0.05
2									---	.00	.00	.00
3									---	.00	.20	.00
4									---	.39	.00	.00
5									---	.17	.00	.00
6									---	.13	.00	.07
7									---	.00	.00	.00
8									---	.00	.00	.17
9									---	.00	.00	.00
10									---	.26	.00	.00
11									---	.02	.00	.00
12									---	.00	.00	.00
13									---	.00	.00	.00
14									---	.00	.03	.00
15									---	.23	.10	.00
16									---	.00	.00	.00
17									---	.00	.00	.16
18									---	.00	.00	.62
19									---	.00	.00	.05
20									---	.00	.00	.00
21									---	.00	.00	.00
22									---	.00	.22	.00
23									---	.00	.03	.92
24									---	.00	.00	.81
25									---	.00	.18	.00
26									---	.00	.12	.00
27									---	.00	.09	.00
28									---	.00	.00	.00
29									0.00	.00	.00	.00
30									.00	.00	.00	.00
31									---	.00	.37	---
TOTAL									0.00	1.20	1.34	2.85

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---							---	0.02	0.00
2	.00	.00	---							---	.00	.00
3	.00	.00	---							---	.00	.00
4	.00	.00	---							---	.00	.00
5	.00	.00	---							0.00	.00	.00
6	.00	.00	---							.00	.00	.00
7	.00	.00	---							.00	.00	.00
8	.00	.00	---							.55	.00	.00
9	.00	.00	---							.00	.00	.00
10	.00	.00	---							.00	.00	.13
11	.00	.00	---							.36	.00	.87
12	.00	.00	---							.10	.00	1.07
13	.00	.00	---							.00	.00	.00
14	.00	.00	---							.00	.12	.00
15	.00	.05	---							.00	.00	.00
16	.00	.00	---							.00	.00	.05
17	.00	.00	---							.00	.00	.05
18	.00	.00	---							.71	.00	.11
19	.00	.20	---							.05	.00	.07
20	.00	.00	---							.00	.00	.00
21	.00	.00	---							.00	.00	.00
22	.00	---	---							.26	.00	.00
23	.00	---	---							.00	.10	.00
24	.00	---	---							.00	.04	.00
25	.00	---	---							.00	.00	.00
26	.00	---	---							.00	.00	.00
27	.00	---	---							.00	.00	.00
28	.00	---	---							.00	.03	.00
29	.00	---	0.00							.00	.00	.03
30	.00	---	---							.00	.00	.00
31	.00	---	---							.00	.00	---
TOTAL	0.00	0.25	0.00							2.03	0.31	2.38

PERIOD: October 1, 1978, through May 25, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	0.00	0.00	0.00				
2	.25	.00	---	---	---	.03	.00	.00				
3	.00	.00	---	---	---	.00	.00	.00				
4	.15	.00	0.00	---	---	.00	.00	.04				
5	.00	.00	.00	---	---	.00	---	.01				
6	.00	.00	.00	---	---	.00	---	.60				
7	.00	.00	.00	---	---	.14	---	.00				
8	.00	.12	.00	---	---	.00	---	.00				
9	.00	.08	.00	0.00	---	.00	---	.00				
10	.00	---	.02	.00	---	.00	---	.00				
11	.00	---	.00	.00	---	.00	---	.00				
12	.09	---	.00	.00	---	.00	---	.00				
13	.00	---	.00	.00	---	.00	---	.00				
14	.00	---	.00	.00	---	.00	---	.00				
15	.00	---	.00	.00	---	.00	---	.00				
16	.00	---	.06	.00	---	.00	---	.00				
17	.00	---	.00	.00	---	.00	---	.00				
18	.00	---	.00	.00	---	.00	---	.30				
19	.00	---	.00	.00	---	.00	---	.05				
20	.00	---	.00	.00	---	.00	---	.00				
21	.00	---	.00	.00	---	---	---	.00				
22	.00	---	.05	.00	---	---	---	.00				
23	.00	---	.02	.00	---	---	---	.00				
24	.00	---	.00	.00	---	---	---	.00				
25	.00	---	.09	.00	---	---	.00	.00				
26	.00	---	.02	.00	---	---	.00	---				
27	.00	---	.00	.00	0.00	---	.00	---				
28	.00	---	---	.00	.00	---	.15	---				
29	.00	---	---	.00	---	---	.00	---				
30	.00	---	---	---	---	---	.00	---				
31	.00	---	---	---	---	.05	---	---				
TOTAL	0.49	0.20	0.26	0.00	0.00	0.22	0.15	1.00				

472154101543610 (BC-6)

LOCATION: Lat 47°21'54", long 101°54'36", in SW¼SW¼NW¼ sec. 21, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 20 feet east of county road and 6.0 miles northeast of Zap.

PERIOD OF RECORD: May 1979 through September 1981.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 24, 1979, through September 30, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.05	---	0.65	0.04
2								---	.00	---	.05	.00
3								---	.00	---	.25	.00
4								---	.00	---	.10	.00
5								---	.05	---	.00	.00
6								---	.00	---	.00	.00
7								---	.05	---	.00	.00
8								---	.00	---	.00	.00
9								---	.00	---	.00	.00
10								---	.00	---	.00	.85
11								---	.00	0.60	.00	.00
12								---	.20	.02	.00	.00
13								---	---	.00	.00	.00
14								---	---	.00	.00	.00
15								---	---	.10	.00	.00
16								---	---	.00	.00	.00
17								---	---	.00	.00	.00
18								---	---	.00	.00	.00
19								---	---	.00	.00	.00
20								---	---	.00	.00	.00
21								---	---	.00	.65	.00
22								---	---	.00	.00	.00
23								---	---	.10	.00	.00
24								0.00	---	.00	.00	.00
25								.00	---	.00	.05	.00
26								.00	---	.40	.05	.00
27								.00	---	.26	.45	.00
28								.00	---	.00	.10	.00
29								.03	---	.75	.00	.00
30								.00	---	.20	.00	.00
31								.21	---	.00	.00	---
TOTAL								0.24	0.35	2.43	2.35	0.89

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00						---	0.00	---	0.00	---	0.00
2	.00						---	.00	---	.00	---	.00
3	.00						---	.00	---	.00	---	.00
4	---						---	.00	---	.00	---	---
5	---						---	.00	0.00	.00	---	---
6	---						---	.00	.03	.00	---	---
7	---						---	.00	.19	.00	0.00	---
8	---						---	.00	---	.00	.00	---
9	---						---	.00	---	.00	.30	---
10	---						---	.00	---	.00	.00	---
11	---						---	.00	---	.00	.00	.12
12	---						---	.00	---	.00	.00	.47
13	---						---	.00	---	.00	.00	.00
14	---						---	.00	---	.05	.00	.00
15	---						---	.00	---	.06	.42	.00
16	---						---	.00	---	.00	.48	.00
17	---						---	.00	.00	.00	.00	.02
18	---						---	.00	.00	.00	.00	.04
19	---						---	.00	.00	.73	.00	.00
20	---						---	.00	.00	---	.04	.00
21	---						---	.00	---	---	---	.52
22	---						0.00	---	---	---	---	.00
23	---						.00	---	---	---	.05	.04
24	---						.00	---	---	---	.00	.17
25	---						.02	---	---	---	.00	.05
26	---						.00	---	.00	---	.08	.00
27	---						.00	---	.01	---	.00	.00
28	---						.00	---	.00	---	.03	.00
29	---						.00	---	.00	---	.45	.00
30	---						---	---	.00	---	.00	.00
31	---						---	---	---	---	1.95	---
TOTAL	0.00						0.02	0.00	0.23	0.84	3.80	1.43

PERIOD: April 28, 1981, through September 30, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	0.00	0.48	0.02	0.58	0.00
2							---	.00	.49	.62	.42	.00
3							---	.00	.00	.00	.17	.00
4							---	.00	.00	.00	.00	.00
5							---	.00	.00	.00	.27	1.15
6							---	.00	.00	.00	.02	.36
7							---	.00	.10	.00	.00	.00
8							---	.00	.05	.00	.00	.00
9							---	.00	.08	.00	.00	.00
10							---	.08	.00	.03	.00	.00
11							---	.10	.00	.00	.00	.00
12							---	.00	.48	.00	.00	.00
13							---	.00	1.08	.33	.00	.00
14							---	.00	.00	.04	.00	.00
15							---	.00	.04	.59	.13	.00
16							---	.00	.00	.00	.00	.00
17							---	.00	.04	.00	.00	.00
18							---	.00	.00	.01	.00	.00
19							---	.00	.05	.00	.00	.00
20							---	.00	.14	.00	.00	.06
21							---	.00	.14	.08	.05	.00
22							---	.13	.00	.00	.14	.00
23							---	.07	.03	.10	.01	.04
24							---	.02	.00	.05	.00	.00
25							---	.00	.00	.13	.02	.86
26							---	.00	.00	.04	.00	.00
27							---	.22	.00	.00	.00	.00
28							0.03	.03	.09	.00	.00	.00
29							.00	.00	.00	.00	.00	.00
30							.00	.00	.00	.00	.02	.07
31							---	.45	---	.00	.00	---
TOTAL							0.03	1.10	3.29	2.04	1.83	2.54

472035101532010 (BD-8)

LOCATION: Lat 47°20'35", long 101°53'20", in SE¼SE¼SE¼ sec. 28, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, along section line and 4.0 miles northeast of Zap.

PERIOD OF RECORD: June 1979 through September 1981.

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: June 5, 1979, through September 30, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	0.84	0.58	0.04
2									---	.00	.00	.00
3									---	.00	.12	.00
4									---	.00	.13	.00
5									0.00	.00	.00	.00
6									.00	.00	.00	.00
7									.04	.00	.00	.00
8									.01	.06	.00	.00
9									.00	.11	.00	.00
10									.00	.00	.00	.85
11									.05	.55	.00	.01
12									.14	.02	.00	.00
13									.00	.02	.00	.00
14									.00	.00	.00	.00
15									.00	.16	.00	.00
16									.00	.00	.00	.00
17									.00	.00	.00	.00
18									.51	.00	.00	.00
19									.30	.00	.00	.00
20									.03	.00	.00	.00
21									.00	.00	.56	.00
22									.68	.04	.02	.00
23									.01	.06	.00	.00
24									.00	.01	.00	.00
25									.01	.00	.05	.00
26									.00	.34	.06	.00
27									.00	.34	.54	.00
28									.00	.00	.17	.00
29									.00	.86	.00	.00
30									.00	.23	.00	.00
31									---	.00	.00	---
TOTAL									1.78	3.64	2.23	0.90

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00						---	0.00	0.00	0.00	0.00	0.02
2	---						---	.00	.00	.01	.00	.00
3	---						---	.00	.33	.00	.06	.06
4	---						---	.00	.23	.00	.01	.00
5	---						---	.00	.03	.01	.00	.00
6	---						---	.00	.00	.05	.00	.00
7	---						---	.00	.01	.09	.00	.00
8	---						---	.00	.00	.36	.00	.00
9	---						---	.00	.00	.11	.45	.00
10	---						---	.00	.01	.96	.02	.00
11	---						---	.00	.15	.00	.00	.09
12	---						---	.00	.01	.00	.05	.35
13	---						---	.00	.02	.00	.00	.00
14	---						---	.00	.00	.00	.00	.00
15	---						0.00	.00	.00	.05	.54	.00
16	---						.00	.00	.00	.00	.38	.00
17	---						.00	.00	.01	.00	.00	.02
18	---						.00	.00	.00	.00	.00	.02
19	---						.00	.00	.00	.70	.00	.06
20	---						.00	.00	.00	.01	.11	.03
21	---						.00	.00	.00	.00	.00	.42
22	---						.00	.00	.02	.00	.00	.00
23	---						.00	.00	.07	.00	.05	.04
24	---						.00	.00	.00	.00	.00	.11
25	---						.00	.00	.00	.00	.00	.05
26	---						.00	.00	.00	.00	.06	.00
27	---						.00	.00	.01	.00	.00	.00
28	---						.00	.03	.00	.00	.00	.00
29	---						.00	.00	.00	.00	.44	.00
30	---						.00	.07	.00	.00	.00	.00
31	---						---	.01	---	.00	1.75	---
TOTAL	0.00						0.00	0.11	0.90	2.35	3.92	1.27

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00						---	0.00	0.41	0.00	0.51	0.00
2	.00						---	.00	.32	.94	.55	.00
3	---						---	.00	.00	.00	.18	.00
4	---						---	.00	.02	.00	.02	.00
5	---						---	.00	.00	.00	.75	---
6	---						---	.00	.00	.00	.01	---
7	---						---	.00	.14	.00	.00	---
8	---						---	.00	.06	.02	.00	---
9	---						---	.00	.14	.00	.00	---
10	---						---	.07	.00	.02	.00	---
11	---						---	.09	.00	.00	.00	---
12	---						---	.02	.54	.00	.00	---
13	---						---	.00	1.02	.33	.00	---
14	---						---	.00	.00	.07	.00	---
15	---						---	.00	.06	.42	.13	---
16	---						---	.00	.00	.00	.00	.00
17	---						---	.00	.00	.00	.00	.00
18	---						---	.00	.06	.00	.00	.00
19	---						---	.00	.10	.00	.00	.00
20	---						---	.00	.16	.00	.00	.08
21	---						0.00	.00	.16	.00	.04	.00
22	---						.00	.15	.00	.00	.34	.00
23	---						.00	.03	.05	.07	.00	.03
24	---						.00	.02	.00	.08	.00	.00
25	---						.00	.00	.00	.03	.05	.68
26	---						.22	.01	.00	.04	.00	.00
27	---						.23	.20	.00	.00	.00	.00
28	---						.07	.09	.13	.00	.00	.00
29	---						.00	.02	.00	.04	.00	.00
30	---						.00	.00	.00	.00	.22	.07
31	---						---	.55	---	.00	.00	---
TOTAL	0.00						0.52	1.25	3.37	2.06	2.80	0.86

472121101513510 (BC-9)

LOCATION: Lat 47°21'21", long 101°51'35", in NW¼NE¼NW¼ sec. 26, T. 146 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 50 feet south of farmstead and 6.0 miles northeast of Zap.

PERIOD OF RECORD: January 1977 through May 1979.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: January 4, 1977, through September 30, 1977.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---					---	0.00	0.00	0.09
2				---					---	.00	.00	.00
3				---					---	.00	.21	.00
4				0.00					---	.58	.00	.00
5				.01					---	.19	.00	.00
6				.00					---	.08	.00	.07
7				.15					---	.00	.00	.00
8				.00					---	.00	.00	.22
9				.00					---	.00	.00	.00
10				.00					---	.16	.00	.00
11				---					---	.09	.00	.00
12				---					---	.00	.03	.00
13				---					---	.00	.00	.00
14				---					---	.00	.06	.00
15				---					---	.33	.12	.00
16				---					---	.00	.00	.00
17				---					---	.00	.00	.35
18				---					---	.00	.00	.74
19				---					---	.00	.00	.00
20				---					---	.00	.00	.00
21				---					---	.00	.00	.76
22				---					---	.00	.25	.00
23				---					---	.00	.00	1.23
24				---					---	.00	.00	.80
25				---					---	.00	.22	.02
26				---					---	.00	.12	.00
27				---					---	.00	.09	.00
28				---					---	.00	.00	.02
29				---					0.00	.13	.00	.21
30				---					.00	.00	.00	.42
31				---					---	.00	.40	---
TOTAL				0.16					0.00	1.36	1.50	4.51

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00		---	0.00	0.00	0.00	0.08	0.04	0.00
2	.00	.00	.15	.00		---	.27	.00	.00	.00	.00	.00
3	.00	.00	.07	.00		---	.30	.00	.00	.00	.00	.00
4	.00	.00	.00	.00		---	.00	.00	.00	.61	.00	.00
5	.00	.00	.18	---		---	.06	.09	.00	.02	.00	.00
6	.00	.00	---	---		---	.00	.00	.13	.00	.00	.00
7	.63	.00	---	---		---	.00	.71	.00	.00	.00	.00
8	.00	.00	---	---		---	.00	.60	.00	.41	.00	.00
9	.00	.00	---	---		---	.00	.00	.00	.00	.00	.00
10	.00	.00	---	.00		---	.00	.00	.00	.00	.00	.15
11	.00	.00	---	.00		0.00	---	.00	.50	.00	.00	.60
12	.00	.00	---	.05		.00	---	.43	.00	---	.00	1.41
13	.00	.00	---	.04		.00	---	.00	.00	---	.00	.00
14	.00	.00	---	.00		.12	---	.00	.00	---	.08	.00
15	.00	.04	---	.00		.02	---	.00	.38	---	.00	.00
16	.00	.00	---	.00		.00	---	---	.00	---	.00	.05
17	.00	.00	---	.02		.00	---	---	.00	---	.00	.03
18	.00	.00	---	.01		.04	---	---	.00	.85	.00	.05
19	.00	.10	---	.00		.00	.00	---	.00	.08	.00	.00
20	.00	.13	---	.00		.00	.00	---	.00	.00	.00	.00
21	.00	.00	---	.00		.00	.00	---	.00	.00	.00	.00
22	.00	.00	---	.00		.00	.22	---	.00	.34	.00	.00
23	.00	---	---	.00		.00	.11	.00	.00	.00	.00	.00
24	.00	---	---	---		.00	.00	.05	.12	.00	.02	.00
25	.00	---	---	---		.00	.00	.00	.22	.00	.00	.00
26	.00	---	---	.00		.00	---	.00	.00	.00	.00	.00
27	.00	---	---	.00		.00	---	.00	.00	.00	.02	.00
28	.00	---	.00	.00		.00	---	.00	.00	.00	.08	.00
29	.00	.21	.00	.00		.00	---	.00	1.20	.00	.00	.01
30	.00	.03	.00	.05		.00	---	.21	.00	.00	.00	.00
31	.00	---	.00	.00		.00	---	.63	---	.00	.00	---
TOTAL	0.63	0.51	0.40	0.17		0.18	0.96	2.72	2.55	2.39	0.24	2.30

PERIOD: October 1, 1978, through May 22, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.09	0.00	0.02	0.00	0.00				
2	.33	.00	.00	.00	.00	.12	.00	.00				
3	.00	.00	.00	.00	.02	.00	.00	.00				
4	.34	.00	.00	.00	.00	.00	.00	.05				
5	.00	.00	.00	.00	.05	.00	.00	.01				
6	.00	.00	.00	.00	.00	.00	.00	.61				
7	.00	.00	.00	.00	.02	.14	.04	.00				
8	.00	.10	.00	.00	.00	.01	.00	.00				
9	.00	.15	.00	.00	.00	.02	.00	.00				
10	.00	.13	.02	.00	.00	.00	.05	.00				
11	.00	.00	.00	.04	.29	.00	.17	.00				
12	.12	.30	---	.00	.00	.00	.46	.00				
13	.00	.25	---	.00	.00	.04	.06	.00				
14	.00	.00	---	.00	.10	.00	.00	.00				
15	.00	.00	---	.03	.00	.00	.00	.00				
16	.00	.00	---	.00	.00	.00	.00	.00				
17	.00	.14	---	.00	.00	.00	.00	.00				
18	.00	.09	---	.00	.00	.00	.43	.00				
19	.00	.01	---	.00	.00	.30	.15	.26				
20	.00	.00	---	.02	.00	.00	.00	.05				
21	.00	.00	.00	.00	.44	.00	.00	.00				
22	.00	.00	.05	.05	.47	.00	.00	.00				
23	.00	.00	.01	.00	.00	.00	.00	---				
24	.00	.00	.03	.00	.00	.00	.19	---				
25	.00	.00	.10	.00	.00	.00	.00	---				
26	.00	.00	.00	.00	.00	.00	.00	---				
27	.00	.04	.01	.00	.00	.05	.00	---				
28	.00	.10	.16	.00	.00	.07	.12	---				
29	.00	.00	.00	.00	---	.00	.00	---				
30	.00	.00	.00	.00	---	.00	.00	---				
31	.00	---	.00	.00	---	.05	---	---				
TOTAL	0.79	1.31	0.38	0.23	1.39	0.82	1.67	0.98				

471917101524010 (BD-10)

LOCATION: Lat 47°19'17", long 101°52'40", in SE¼SW¼NE¼ sec. 6, T. 144 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 300 feet northeast of farmstead and 3.0 miles northeast of Zap.

PERIOD OF RECORD: May 1978 through December 1978.

INSTRUMENTATION: Highway type II gage with Stevens digital recorder.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 4, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.00	0.00	0.05	0.00
2								---	.05	.00	.00	.00
3								---	.00	.00	.00	.00
4								0.00	.00	.42	.00	.00
5								.00	.00	.06	.00	.00
6								.00	.08	.00	.00	.00
7								.41	.06	.00	.00	.00
8								.64	.00	.00	.00	.00
9								.07	.05	.00	.00	.00
10								.00	.01	.00	.01	.00
11								.00	.45	.83	.00	.38
12								.49	.01	.27	.00	.82
13								.00	.00	.00	.00	.00
14								.00	.00	.00	.11	.00
15								.00	.07	.00	.00	.01
16								.00	.01	.00	.01	.03
17								.00	.00	.00	.00	.04
18								.02	.00	.32	.00	.19
19								.10	.00	.34	.00	.00
20								.00	.00	.00	.00	.00
21								.00	.00	.01	.00	.00
22								.00	.00	.22	.00	.00
23								.00	.00	.01	.07	.00
24								.07	.00	.00	.06	.00
25								.00	.00	.00	.00	.00
26								.00	.00	.00	.00	.00
27								.00	.00	.00	.00	.00
28								.00	.00	.00	.00	.00
29								.00	.77	.00	.00	.00
30								.25	.00	.00	.00	.00
31								.35	---	.00	.00	---
TOTAL								2.40	1.56	2.48	0.36	1.78

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1978, through December 28, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00									
2	.17	.00	.00									
3	.01	.00	.00									
4	.14	.00	.00									
5	.01	.00	.00									
6	.01	.00	.00									
7	.00	.00	.00									
8	.00	---	.00									
9	.00	.04	.00									
10	.00	.00	.02									
11	---	.00	.00									
12	---	.00	.00									
13	---	.00	.00									
14	---	.00	.00									
15	---	.08	.00									
16	---	.02	.00									
17	---	.00	.00									
18	---	.00	.00									
19	---	.00	.00									
20	---	.00	.00									
21	---	.00	.00									
22	---	.00	.00									
23	---	.00	.00									
24	.00	.05	.00									
25	.00	.00	.00									
26	.00	.00	.00									
27	.00	.00	.00									
28	.00	.00	.00									
29	.00	.00	---									
30	.00	.00	---									
31	.00	---	---									
TOTAL	0.34	0.19	0.02									

472125101512210 (BC-13)

LOCATION: Lat 47°21'25", long 101°51'22", in NW¼NW¼NE¼ sec. 26, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 30 feet west of West Branch Antelope Creek No. 4 near Zap, N. Dak., stream-gaging station and 5.5 miles northeast of Zap.

PERIOD OF RECORD: May 1979 through April 1982.

INSTRUMENTATION: Belfort universal rain gage with Alter-type windshield.

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: May 24, 1979, through September 30, 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	0.03	0.42	0.60	0.00
2								---	.00	.00	.12	.00
3								---	.00	.00	.23	.00
4								---	.00	.00	.10	.00
5								---	.00	.00	.00	.00
6								---	.07	.00	.00	.00
7								---	.05	.00	.00	.00
8								---	.00	.07	.00	.00
9								---	.00	.08	.00	.00
10								---	.00	.00	.00	.77
11								---	.00	.43	.00	.00
12								---	.00	.00	.00	.00
13								---	.20	.00	.00	.00
14								---	.00	.00	.00	.00
15								---	.00	.05	.60	.00
16								---	.00	.00	.00	.00
17								---	.00	.00	.00	.00
18								---	.40	.00	.00	.00
19								---	.30	.00	.00	.00
20								---	.03	.00	.00	.00
21								---	.00	.00	.15	.00
22								---	.67	.00	.00	.00
23								---	.00	.08	.00	.00
24								0.00	.00	.00	.00	.00
25								.00	.00	.00	.03	.00
26								.00	.00	.44	.02	.00
27								.00	.00	.00	.55	.00
28								.00	.00	.00	.05	.00
29								.02	.00	.92	.00	.00
30								.00	.00	.16	.00	.00
31								.17	---	.00	.00	---
TOTAL								0.19	1.75	2.65	1.85	0.77

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	---	0.00	---	0.00
2	.00	.00	.00	.00	.00	.00	---	.00	---	.00	---	.00
3	.00	.00	.00	.13	.02	.00	---	.00	---	---	---	.00
4	.00	.00	.00	---	.00	.03	---	.00	---	.00	---	.00
5	.00	.00	.00	---	.00	.00	---	.00	---	.00	---	.00
6	.00	.00	.00	---	.00	.00	---	.00	0.00	.00	0.00	.00
7	.00	.00	.00	---	.00	.00	---	.00	.16	.00	.00	.00
8	.00	.00	.00	---	.00	.00	---	.00	---	.00	.00	.00
9	.00	.02	.00	---	.00	.00	0.00	.00	---	.00	.41	.00
10	.00	.00	.08	---	.01	.00	.00	.00	---	.00	.00	.40
11	.00	.00	.00	.15	.01	.00	.00	.00	---	.05	.00	.00
12	.00	.00	.00	.20	.00	.00	.00	.00	---	.00	.05	.00
13	.00	.00	.00	.00	.01	---	.00	.00	---	.00	.00	.00
14	.00	.00	.00	.00	.00	---	.00	.00	---	.00	.00	.00
15	.00	.00	.03	.00	.00	---	.00	.00	---	.25	.48	.00
16	.00	.00	.00	.00	.00	---	.00	.00	---	---	.42	.00
17	.00	.00	.00	.00	.00	---	.00	.00	---	---	.00	.02
18	.00	.00	.00	.00	.01	---	.00	.00	---	---	.00	.01
19	.27	.00	.00	.00	.00	---	.00	.00	---	.77	.00	.02
20	.00	.00	.00	.00	.10	---	.00	.00	---	.00	.10	.00
21	.00	.00	.00	.04	.13	---	.00	.00	---	.00	.00	.37
22	.00	.00	.00	.00	.00	---	.00	---	---	---	.00	.00
23	.00	.00	.00	.00	.00	---	.00	---	---	---	.03	.03
24	.00	.00	.00	.00	.10	---	.00	---	---	---	.00	.17
25	.00	.00	.02	.00	.00	---	.00	---	---	---	.00	.05
26	.00	.03	.00	.00	.00	---	.00	---	.00	---	.02	.00
27	.00	---	.00	.00	.00	---	.00	---	.00	---	.00	.00
28	.00	---	.00	.01	.00	---	.00	---	.00	---	.01	.00
29	.00	.00	.00	.01	.00	---	.00	---	.00	---	.45	.00
30	.00	.00	.00	.00	---	---	.00	---	.00	---	.00	.00
31	.00	---	.00	.00	---	---	---	---	---	---	1.97	---
TOTAL	0.27	0.05	0.13	0.54	0.39	0.03	0.00	0.00	0.16	1.07	3.94	1.07

PERIOD: October 2, 1980, through September 30, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	0.05	0.00	0.03	0.00	0.00	0.00	0.40	0.00	0.44	---
2	0.00	---	.00	.00	.00	.00	.00	.00	.32	.88	.63	---
3	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.03	---
4	.00	0.00	---	.00	.00	.00	.02	.00	.03	.00	.39	---
5	.00	.00	---	.00	.02	.00	.00	.00	.00	.00	.44	---
6	.00	.00	---	.03	.00	.00	.00	.00	.00	.00	.00	---
7	.00	---	---	.04	.16	.00	.00	.00	.13	.00	.00	---
8	.00	---	---	.00	.05	.00	.00	.00	.04	.01	.00	---
9	.00	---	---	.00	.00	.00	.00	.00	.14	.00	.00	---
10	.00	---	---	.00	.00	.00	.00	.08	.00	.02	.00	---
11	.00	---	.00	.00	---	.00	.01	.15	.00	.00	.00	---
12	.00	---	.00	.00	---	.00	.00	.00	.65	.00	.00	---
13	.00	---	.00	.00	---	.00	.00	.00	.84	.43	.00	---
14	.00	---	.00	.00	---	.00	.00	.00	.00	.04	.00	---
15	.25	---	.02	.00	---	.00	.00	.00	.08	.74	.08	0.00
16	1.32	---	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
17	.00	---	.00	.00	---	.00	.00	.00	.04	.00	.00	.00
18	.00	---	.00	.00	---	.00	.00	.00	.02	.00	.00	.00
19	.00	.00	.00	.02	---	.00	.00	.00	.06	.00	.00	.00
20	.00	.00	.03	.00	---	.00	.00	.00	.20	.00	.00	.07
21	.00	.00	.10	.00	---	---	.00	.02	.03	.08	.05	.00
22	---	.00	.15	.00	---	---	.00	.20	.00	.01	.64	.00
23	---	.00	.05	.00	---	---	.00	.05	.02	.11	.00	.03
24	---	.00	.00	.00	---	---	.00	.05	.00	.01	.00	.00
25	---	.00	.00	.11	---	.00	.00	.00	.00	.03	.04	.80
26	---	.00	.00	.00	.00	.00	.20	.00	.00	.04	.00	---
27	---	.00	.00	.00	.48	.23	.32	.21	.00	.00	.00	---
28	---	.00	.00	.00	.00	.01	.05	.07	.17	.00	.00	---
29	---	.00	.00	.00	---	.00	.00	.00	.00	.03	.00	.00
30	---	.02	.00	.00	---	.00	.00	.00	.00	.00	.21	.07
31	---	---	.00	.00	---	.00	---	.60	---	.00	---	---
TOTAL	1.57	0.02	0.40	0.20	0.74	0.24	0.60	1.43	3.17	2.43	2.95	0.97

ACCUMULATED PRECIPITATION (INCHES)

PERIOD: October 1, 1981, through April 15, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	0.08	0.19	---	---	---					
2	.00	---	.21	.01	---	---	0.00					
3	.00	---	.06	.01	---	---	---					
4	.00	---	.00	.02	---	0.00	---					
5	.00	---	.00	.02	---	.00	---					
6	---	---	.00	.00	0.04	.00	---					
7	---	---	.00	.00	.00	.02	---					
8	---	---	.02	.04	.04	.08	---					
9	---	---	.02	.06	.00	.00	---					
10	---	---	.00	.00	.00	.10	---					
11	---	---	.00	.00	.00	.00	---					
12	---	---	.00	.02	.00	---	---					
13	---	---	.00	.01	.00	---	---					
14	---	0.00	.07	.19	.00	---	---					
15	---	.01	.01	.25	.01	---	.05					
16	.00	.00	.00	.09	.01	---	---					
17	.00	.03	.00	.15	.00	---	---					
18	.00	.39	.00	.06	---	.00	---					
19	---	.00	.00	.00	---	.50	---					
20	---	.00	---	.06	---	.00	---					
21	---	.00	---	.05	---	.00	---					
22	---	.31	---	.43	---	.00	---					
23	---	.00	---	.03	---	.00	---					
24	---	.01	.00	.14	---	.03	---					
25	---	.10	.07	---	---	---	---					
26	---	.02	.01	---	---	---	---					
27	---	.00	.02	---	---	---	---					
28	.00	.00	.07	---	---	---	---					
29	.00	.00	.00	---	---	---	---					
30	---	.01	.02	---	---	---	---					
31	---	---	.02	---	---	---	---					
TOTAL	0.00	0.88	0.68	1.83	0.10	0.73	0.05					

TABLE 3.--Snow survey data

Land use	Description
Brush	Supports mostly shrubs or other similar foliage; may have some trees.
Ditch	Road ditch.
Fallow	Little or no surface vegetation; soil exposed prior to snowfall.
Grain stubble	Remains of grain crop.
Grassland	Hayfields that have not been cut; pastures that have not been grazed.
Hayfields	Grasslands and alfalfa fields that have been cut.
Pasture	Grasslands that have been grazed.

Terrain type	Description
Channel bottomland	Extensive plain near channel; flood plain.
Ditch	Road ditch.
Gentle northerly slope	Moderate slopes from west to northeast; susceptible to prevailing wind scour.
Gentle southerly slope	Moderate slopes from southwest to east; susceptible to prevailing wind deposition.
Hilltop	Ridges and hilltops; susceptible to wind scour.
Plain	Extensive plain; not necessarily flat but very little slope.
Steep northerly slope	Steep slopes from west to northeast; susceptible to prevailing wind scour.
Steep southerly slope	Steep slopes from southwest to east; susceptible to prevailing wind deposition.

Hay Creek Snow Survey, March 7-8, 1979

Snow density measurements		
Depth (inches)	Water content (inches)	Density (percent)
6.0	1.5	19
7.0	1.0	14
7.5	2.0	27
7.5	2.5	33
8.0	.5	6
8.0	1.5	19
8.0	1.5	19
8.0	2.0	25
8.0	2.5	31
8.0	2.5	31
8.5	0	0
8.5	1.0	12
8.5	2.5	29
11.5	3.5	30
11.5	5.0	43
12.5	3.5	28
14.0	3.5	25
14.5	4.0	28
15.0	4.5	30
15.5	5.0	32
15.5	6.0	39
19.0	3.0	16
19.5	4.5	23
19.5	4.5	23
20.0	3.0	15
20.0	5.0	24
21.0	8.0	38
22.0	13.0	59
26.5	10.0	38
29.0	10.0	34
30.0	9.5	33
30.0	10.0	32
33.5	8.0	24
34.0	9.5	28
35.0	11.0	31
37.0	10.5	28

Statistical summary of snow depth measurements			
Land use--Terrain type	Number of samples	Mean depth (feet)	Standard deviation
Fallow--Gentle northerly slope	64	0.42	0.19
Fallow--Gentle southerly slope	69	1.50	.90
Fallow--Hilltop	39	.22	.32
Fallow--Plain	107	.63	.29
Grain stubble--Gentle northerly slope	33	.83	.18
Grain stubble--Gentle southerly slope	132	1.36	.46
Grain stubble--Hilltop	34	.74	.23
Grain stubble--Plain	103	.99	.29
Grassland--Channel bottomland	68	1.96	.87
Grassland--Gentle northerly slope	33	1.71	.28
Hayfield--Gentle northerly slope	33	.74	.35
Hayfield--Hilltop	35	.69	.36
Hayfield--Plain	68	.73	.28
Pasture--Channel bottomland	30	2.77	.46
Pasture--Gentle northerly slope	111	1.03	.50
Pasture--Gentle southerly slope	61	2.19	.73
Pasture--Hilltop	30	.60	.08
Pasture--Plain	99	.97	.36
Pasture--Steep northerly slope	71	2.25	1.02
Pasture--Steep southerly slope	62	2.86	.97

West Branch Antelope Creek Snow Survey, January 30-31, 1979

Snow density measurements		
Depth (inches)	Water content (inches)	Density (percent)
6.D	1.5	19
1D.0	1.5	15
10.5	2.0	19
11.5	2.5	22
12.0	5.D	42
12.5	3.D	24
20.0	6.5	33
20.5	5.5	27
24.0	8.0	33
25.0	7.0	28
26.0	9.0	35
26.0	12.0	46
26.5	11.5	43
30.5	12.0	39
36.5	15.5	43
38.0	14.0	37
40.0	11.0	28

Statistical summary of snow depth measurements			
Land use--Terrain type	Number of samples	Mean depth (feet)	Standard deviation
Fallow--Gentle northerly slope	64	0.42	0.19
Brush--Channel bottomland	62	2.00	D.89
Brush--Steep northerly slope	36	1.20	.23
Ditch	61	2.26	.62
Fallow--Gentle northerly slope	32	.15	.14
Fallow--Gentle southerly slope	63	.57	.24
Fallow--Plain	75	.34	.15
Grain stubble--Gentle southerly slope	104	1.33	1.94
Grain stubble--Hilltop	30	.50	.09
Grain stubble--Plain	73	.80	.17
Grassland--Plain	90	1.10	.13
Hayfield--Channel bottomland	95	.95	.36
Hayfield--Plain	76	.81	.23
Pasture--Gentle northerly slope	35	.55	.19
Pasture--Hilltop	33	.35	.07

West Branch Antelope Creek Snow Survey, February 27-March 2, 1979

Snow density measurements		
Depth (inches)	Water content (inches)	Density (percent)
8.5	2.5	29
9.0	1.0	11
10.0	2.5	25
11.0	4.5	41
12.0	3.0	25
14.0	2.0	14
14.0	4.0	29
15.5	2.5	16
15.5	3.0	19
17.0	3.5	21
17.0	4.0	24
17.5	3.5	20
18.0	3.5	19
18.0	4.5	25
19.0	4.5	24
22.5	5.5	24
25.5	6.0	24
26.0	6.0	23
28.5	6.0	21
33.0	7.0	21
35.0	9.0	26
37.5	7.5	20
39.0	11.5	29
39.5	10.5	27
40.0	14.0	35
44.5	11.0	25
47.0	17.0	37
47.5	16.0	34
50.5	20.5	39
51.0	18.5	35
51.5	13.0	26
52.0	19.0	36
56.0	20.5	39

Statistical summary of snow depth measurements			
Land use--Terrain type	Number of samples	Mean depth (feet)	Standard deviation
Brush--Channel bottomland	93	2.87	1.04
Brush--Steep northerly slope	30	2.42	.55
Ditch	91	3.05	1.23
Fallow--Gentle northerly slope	32	.47	.21
Fallow--Gentle southerly slope	30	1.56	.29
Fallow--Plain	60	.64	.28
Grain stubble--Gentle southerly slope	90	1.21	.42
Grain stubble--Plain	120	1.45	.28
Grassland--Channel bottomland	60	1.65	.24
Grassland--Plain	60	1.83	.21
Grassland--Steep southerly slope	30	2.95	.62
Hayfield--Channel bottomland	62	.95	.33
Hayfield--Plain	30	1.47	.20
Pasture--Gentle northerly slope	60	1.15	.24
Pasture--Steep southerly slope	90	4.65	1.53

West Branch Antelope Creek Snow Survey, March 9, 1982

Snow density measurements		
Depth (inches)	Water content (inches)	Density (percent)
10.5	4.0	38
10.5	4.0	38
7.5	1.5	20
9.5	2.5	24
7.0	4.0	60
10.0	2.0	18
5.0	0.0	3
15.0	5.0	32
47.0	17.0	36
40.0	13.5	34
42.5	14.5	34
45.0	13.0	29
52.0	20.5	39
38.0	11.5	30
4.75	2.0	45
6.25	2.0	33
6.75	2.0	26
5.5	1.5	27
12.0	4.5	36
10.0	2.0	18
9.5	3.0	30
9.0	3.0	32
7.0	1.5	21
4.5	2.5	51
7.0	2.0	25
12.0	3.5	30
9.5	3.0	33
8.0	2.5	34
4.0	1.0	30
14.4	5.0	34
14.0	3.5	26
9.5	3.0	31
7.0	2.0	29

Statistical summary of snow depth measurements			
Land use--Terrain type	Number of samples	Mean depth (feet)	Standard deviation
Brush--Channel bottomland	22	2.25	0.62
Brush--Plain	14	1.64	.67
Brush--Steep northerly slope	45	2.50	.74
Fallow--Gentle northerly slope	145	.34	.23
Fallow--Gentle southerly slope	62	.47	.32
Fallow--Hilltop	93	.08	.09
Fallow--Plain	26	.34	.12
Grain stubble--Gentle northerly slope	27	.54	.18
Grain stubble--Gentle southerly slope	19	1.17	.50
Grain stubble--Hilltop	43	.57	.09
Grain stubble--Plain	47	.77	.17
Grassland--Channel bottomland	42	.80	.14
Grassland--Gentle northerly slope	38	.82	.17
Grassland--Gentle southerly slope	50	.75	.21
Grassland--Hilltop	80	.55	.42
Grassland--Plain	96	.76	.23
Grassland--Steep northerly slope	23	2.95	.96
Grassland--Steep southerly slope	25	4.70	1.47
Hayfield--Gentle northerly slope	22	1.34	.45
Hayfield--Gentle southerly slope	17	.63	.24
Hayfield--Hilltop	33	.18	.05
Hayfield--Plain	56	.48	.25
Hayfield--Steep northerly slope	33	.75	.22
Hayfield--Steep southerly slope	41	3.34	1.29
Pasture--Channel bottomland	31	1.74	.90
Pasture--Gentle northerly slope	65	.78	.29
Pasture--Gentle southerly slope	61	5.97	5.02
Pasture--Hilltop	71	.47	.16
Pasture--Plain	30	.86	.20
Pasture--Steep northerly slope	19	1.56	.84

TABLE 4.--Miscellaneous temperature data

472125101512210 145-088-26ABB (BC-13)

LOCATION: Lat 47°21'25", long 101°51'22", in NW¼NW¼NE¼ sec. 26, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 30 feet west of West Branch Antelope Creek No. 4 near Zap, N. Dak., stream-gaging station and 5.5 miles northeast of Zap.

PERIOD OF RECORD: October 1978 through September 1979.

INSTRUMENTATION: Belfort hygrothermograph recorder housed in a standard cotton-region shelter.

AIR TEMPERATURE (DEGREES C)

PERIOD: October 31, 1978, through September 30, 1979.

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	17.0	-6.5	-17.0	-24.5	---	---	-19.5	-28.5	-9.0	-14.5
2	---	---	20.5	-1.5	---	---	---	---	-18.5	-32.0	-12.5	-18.0
3	---	---	11.5	-6.0	---	---	---	---	-17.0	-28.5	-8.5	-22.0
4	---	---	14.5	.5	---	---	-24.5	-32.5	---	---	-4.0	-22.0
5	---	---	3.5	-10.5	-7.0	-24.0	-14.5	-32.0	---	---	3.0	-10.5
6	---	---	4.0	-11.5	---	---	-15.5	-22.5	-15.0	-22.0	2.0	-4.5
7	---	---	18.5	-5.0	---	---	-18.0	-24.0	-17.0	-26.5	2.5	-11.5
8	---	---	17.0	3.0	---	---	-9.0	-19.0	-15.5	-26.0	3.0	-13.0
9	---	---	3.0	-3.0	---	---	-15.0	-23.0	-14.0	-22.5	-13.0	-22.0
10	---	---	-3.0	-8.0	---	---	-23.0	-32.5	-10.0	-16.0	-.5	-24.5
11	---	---	-4.5	-14.5	---	---	-20.0	-29.5	-18.0	-31.0	4.0	-5.0
12	---	---	-5.0	-8.5	---	---	-24.5	-31.5	-15.5	-27.5	4.5	-6.5
13	---	---	-2.0	-12.0	-5.5	-12.5	-27.0	-32.5	-6.0	-22.0	.0	-9.5
14	---	---	-9.0	-22.0	-.5	-8.5	-24.5	-31.0	-7.0	-23.5	-1.0	-12.0
15	---	---	-6.0	-21.5	-2.5	-11.0	-19.5	-31.5	---	---	3.0	-13.0
16	---	---	-4.5	-24.5	-6.0	-12.5	-17.0	-26.0	---	---	7.0	-8.0
17	---	---	-7.5	-14.0	-8.5	-20.5	-6.5	-25.5	---	---	3.0	-3.5
18	---	---	-11.0	-22.0	---	---	-7.0	-19.0	---	---	-1.0	-2.5
19	---	---	-17.0	-25.0	---	---	-6.5	-11.5	---	---	-1.5	-3.0
20	---	---	---	---	---	---	-5.0	-12.5	---	---	.0	-3.5
21	---	---	---	---	.0	-9.5	-3.0	-14.0	---	---	5.0	-3.5
22	---	---	---	---	-6.5	-15.5	-10.0	-17.0	-8.5	-14.0	4.0	-4.0
23	---	---	---	---	---	---	-15.5	-24.5	-14.0	-31.0	-1.0	-9.5
24	---	---	---	---	---	---	-5.0	-19.0	-13.0	-32.5	2.5	-9.5
25	---	---	---	---	---	---	-6.5	-20.5	-.5	-24.5	.0	-11.5
26	---	---	---	---	---	---	-12.5	-22.0	3.5	-10.5	-4.0	-14.5
27	---	---	---	---	---	---	-17.5	-25.5	-3.0	-12.0	-.5	-11.5
28	---	---	---	---	---	---	-17.0	-25.5	-10.5	-15.0	-2.5	-11.0
29	---	---	---	---	---	---	-18.5	-29.5	---	---	1.0	-11.5
30	---	---	-13.5	-25.0	---	---	-18.5	-28.5	---	---	4.0	-8.5
31	12.0	-7.5	---	---	---	---	-16.0	-27.5	---	---	.0	-8.5
MONTH	12.0	-7.5	20.5	-25.0	.0	-24.5	-3.0	-32.5	3.5	-32.5	7.0	-24.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-8.5	-15.0	13.5	-1.0	18.5	6.5	25.0	15.5	29.5	14.5	23.0	10.0
2	-5.0	-14.0	8.5	-4.5	24.5	9.0	29.5	13.0	27.0	14.5	27.5	6.5
3	1.5	-12.5	10.5	-6.5	26.5	13.0	27.5	15.5	27.5	14.5	31.0	13.5
4	1.0	-9.5	7.0	-6.5	---	---	21.5	14.0	23.5	15.0	27.0	12.0
5	-7.5	-19.0	4.0	.0	---	---	20.5	10.0	24.5	14.0	25.0	12.0
6	2.0	-14.5	4.5	2.0	---	---	24.5	9.0	31.0	13.5	21.0	2.5
7	5.5	-5.0	7.0	.5	12.5	5.5	26.5	12.0	24.0	12.0	21.0	5.0
8	1.5	-6.5	6.5	-.5	17.0	3.0	33.5	11.0	28.0	11.5	28.0	4.5
9	5.0	-6.5	2.0	-1.5	19.5	7.5	28.5	14.0	22.0	12.5	23.5	13.0
10	5.5	-1.5	1.0	-2.5	25.0	7.5	30.5	12.0	22.0	7.0	15.5	8.0
11	1.5	-.5	11.5	-2.0	28.5	7.5	30.0	16.0	28.0	4.5	23.0	9.0
12	.5	-2.5	15.5	-1.0	30.5	11.5	27.5	14.0	22.5	12.0	14.0	8.0
13	1.0	-3.0	16.5	3.0	35.5	14.0	25.0	13.5	17.0	3.5	14.0	2.0
14	2.0	-4.5	16.0	1.0	23.5	10.0	20.5	6.0	17.0	-1.0	21.5	2.0
15	5.0	-6.5	22.0	-.5	22.5	6.0	17.5	7.5	22.5	12.0	29.0	7.5
16	9.5	-.5	26.0	11.0	23.5	10.5	19.0	2.5	28.5	9.0	34.0	7.5
17	14.5	2.0	15.0	7.0	22.0	6.5	20.5	4.0	29.5	12.5	23.5	10.0
18	21.0	7.0	17.5	4.0	25.0	7.5	23.0	6.5	29.0	9.0	23.0	4.5
19	7.5	.5	11.5	6.0	17.5	13.0	25.5	9.0	29.0	9.5	25.5	9.0
20	12.5	-1.0	15.0	4.0	23.0	12.0	30.0	6.5	26.5	10.0	17.0	1.5
21	---	---	23.0	6.5	24.5	6.5	32.5	11.5	22.0	16.5	23.5	-2.0
22	---	---	12.5	4.0	14.5	10.0	31.0	10.5	23.5	12.5	17.5	6.5
23	---	---	20.5	1.5	19.5	8.5	24.0	10.5	22.0	6.5	21.0	2.5
24	---	---	23.5	4.0	---	---	25.0	9.5	25.5	7.0	22.0	5.0
25	8.5	.0	23.5	11.5	---	---	22.5	12.5	20.0	12.5	20.5	6.0
26	7.5	-2.0	24.5	6.0	---	---	20.5	12.5	23.5	12.0	28.5	6.0
27	9.5	-2.0	26.0	4.5	---	---	25.5	12.0	23.0	9.0	21.0	3.0
28	7.0	-1.5	27.5	12.5	24.5	12.0	27.5	11.0	26.0	11.0	26.0	1.5
29	6.5	-3.5	14.0	9.5	28.0	11.0	27.5	15.0	23.5	10.5	20.0	2.5
30	13.0	-4.0	19.0	5.5	28.0	9.5	21.5	10.0	27.0	7.5	22.0	.5
31	---	---	17.5	5.5	---	---	25.5	10.0	29.0	12.0	---	---
MONTH	21.0	-19.0	27.5	-6.5	35.5	3.0	33.5	2.5	31.0	-1.0	34.0	-2.0

472338101554310 145-088-08BCC (BC-4)

LOCATION: Lat 47°23'38", long 101°55'43", in SW¼SW¼NW¼ sec. 8, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, 220 feet southwest of farmstead and 7.6 miles north of Zap.

PERIOD OF RECORD: January 1979 through September 1979.

INSTRUMENTATION: Belfort hygrothermograph recorder housed in a standard cotton-region shelter.

AIR TEMPERATURE (DEGREES C)

PERIOD: January 4, 1979, through September 30, 1979.

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1							---	---	-19.0	-25.5	-10.5	-14.0
2							---	---	-19.5	-28.0	-12.5	-15.0
3							---	---	-16.0	-27.0	-9.5	-16.5
4							-24.0	-30.0	-17.5	-28.5	-4.5	-14.0
5							-14.0	-29.5	1.0	-19.5	3.5	-9.0
6							-15.0	-21.0	-15.0	-22.5	1.5	-4.5
7							-18.0	-23.0	-19.0	-22.0	3.0	-11.0
8							-9.5	-21.0	-16.5	-22.5	2.5	-12.0
9							-13.5	-22.0	-14.0	-20.5	-12.0	-20.5
10							-22.0	-27.0	-10.0	-18.0	.5	-22.0
11							-17.0	-27.0	-17.0	-21.0	4.0	-1.5
12							-21.5	-28.0	-17.0	-23.0	5.5	-6.0
13							-24.0	-27.5	-6.0	-22.0	-.5	-9.5
14							-22.0	-29.0	-6.0	-22.0	-.5	-11.5
15							-19.5	-27.0	---	---	2.0	-11.0
16							-18.0	-23.0	---	---	4.5	-3.0
17							-8.0	-22.5	---	---	3.0	-1.0
18							-8.0	-13.0	---	---	-.5	-2.0
19							-7.0	-11.0	---	---	-.5	-2.0
20							-4.5	-12.0	---	---	.5	-3.0
21							-2.0	-11.5	---	---	1.5	-2.5
22							-9.5	-16.0	-9.5	-13.5	4.0	-3.0
23							-16.0	-23.0	-13.5	-24.0	-1.0	-6.0
24							-5.0	-16.5	-16.0	-25.0	2.0	-6.0
25							-6.0	-20.0	-1.5	-22.0	2.0	-12.5
26							-12.0	-20.5	.5	-6.5	-6.5	-14.5
27							-16.0	-23.0	-3.5	-12.0	-.5	-9.5
28							-17.0	-23.5	-12.0	-15.5	-3.5	-10.0
29							-16.0	-25.0	---	---	1.5	-10.0
30							-18.0	-25.5	---	---	.5	-9.5
31							-19.0	-25.0	---	---	-.5	-9.0
MONTH							-2.0	-30.0	1.0	-28.5	5.5	-22.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-9.0	-14.5	12.5	-0.5	18.0	6.0	26.5	17.0	31.5	15.0	24.0	11.0
2	-3.0	-14.5	7.0	-5.0	23.5	9.0	32.5	18.0	27.5	16.5	27.5	12.0
3	.5	-11.5	7.5	-3.5	27.0	12.0	27.5	18.0	27.0	15.0	33.0	12.5
4	1.5	-8.5	6.5	-6.0	---	---	22.0	17.5	22.5	14.5	27.0	13.0
5	-12.0	-20.0	3.0	-.5	---	---	27.5	15.0	22.5	14.0	24.5	11.0
6	1.0	-16.0	5.0	2.0	---	---	26.0	12.0	32.0	17.0	19.0	6.0
7	1.0	-6.0	6.0	1.5	12.5	5.5	27.5	14.0	24.5	17.0	21.0	5.0
8	-.5	-7.0	6.5	.5	16.5	3.0	34.5	16.5	28.0	17.5	27.5	7.0
9	1.0	-6.5	2.0	-5.0	20.0	9.0	29.0	17.0	21.5	13.5	23.0	14.0
10	2.0	-2.5	1.5	-2.0	25.5	8.5	31.5	18.5	21.5	10.0	14.5	8.5
11	-.5	-2.0	11.0	-1.5	29.0	13.0	30.5	17.0	28.0	9.5	18.0	6.0
12	-1.0	-3.5	14.5	1.5	31.0	15.0	27.5	16.5	22.0	13.5	11.0	5.5
13	.0	-4.0	16.0	4.0	37.5	15.0	24.5	13.0	17.0	8.5	11.0	3.5
14	1.5	-2.5	16.0	5.5	23.5	11.5	25.5	10.5	16.5	4.5	19.5	.5
15	3.5	-3.5	22.0	5.0	23.5	10.5	20.5	12.0	23.0	11.5	27.0	7.0
16	8.5	.5	28.5	10.5	25.0	13.5	23.0	11.0	29.0	9.5	32.0	9.5
17	14.5	3.0	14.5	5.5	22.5	11.5	26.0	11.5	30.0	15.0	23.5	11.0
18	22.0	7.0	16.5	3.0	24.5	9.5	30.0	14.0	30.5	16.0	23.0	7.0
19	7.0	.5	11.0	6.0	19.0	15.0	32.0	16.0	30.0	16.5	26.5	9.0
20	12.0	.0	13.5	4.0	25.0	15.5	---	---	25.5	14.0	17.0	6.0
21	13.5	2.5	22.5	6.0	26.0	13.0	---	---	21.5	16.0	24.5	3.5
22	10.5	.5	10.5	5.5	16.0	12.5	---	---	23.0	12.0	17.5	8.5
23	4.0	1.0	19.5	5.5	21.5	12.0	---	---	21.0	8.5	21.5	5.5
24	1.5	.0	23.0	7.0	28.5	14.0	---	---	25.0	7.5	23.0	8.0
25	7.0	-.5	23.0	11.0	---	---	---	---	18.0	11.5	27.0	10.0
26	6.5	-2.5	23.5	11.0	---	---	21.5	14.0	24.5	11.0	30.0	12.5
27	4.0	-2.5	26.0	9.5	---	---	25.0	14.0	23.5	10.0	21.0	7.0
28	7.0	-2.0	27.0	11.5	25.5	15.0	28.5	14.5	25.5	12.0	28.5	5.0
29	6.0	-3.0	15.0	4.0	30.0	14.0	27.5	15.0	22.5	11.0	21.5	5.0
30	12.0	-3.0	18.5	7.5	30.0	17.5	21.0	15.0	27.0	9.5	23.0	7.0
31	---	---	16.0	5.5	---	---	25.5	13.0	30.0	12.0	---	---
MONTH	22.0	-20.0	28.5	-6.0	37.5	3.0	34.5	10.5	32.0	4.5	33.0	.5

TABLE 5.--Surface-water data for gaging stations

LITTLE MISSOURI RIVER BASIN

06336510 HAY CREEK NO. 2 NEAR WIBAUX, MONT.

LOCATION: Lat 46°59'31", long 104°06'12", in NW¼SW¼SE¼ sec. 3, T. 14 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, on the right bank, and 4.0 mi west of Wibaux.

DRAINAGE AREA: 4.12 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD: March 1978 through April 1982.

GAGE: Water-stage recorder.

EXTREMES FOR PERIOD OF RECORD: Maximum instantaneous discharge, 104 ft^3/s, March 29, 1982; maximum gage height, 7.13 ft, March 29, 1982; no flow most of the time.

EXTREMES:

Period	Instantaneous peak discharge with base of 5.0 ft^3/s				Minimum discharge (ft^3/s)
	Date	Time	Instantaneous discharge (ft^3/s)	Gage height (ft)	
March 1, 1978, through September 30, 1978	March 19	--	85	Unknown	No flow most of the time.
	July 5	0430	14	6.66	
Water year 1979	April 9	--	10	Unknown	No flow most of the time.
Water year 1980	March 15	--	4	[1]7.06	No flow most of the time.
Water year 1981	February 15	--	14	7.05	No flow most of the time.
October 1, 1981, through April 22, 1982	February 18	--	98	7.12	No flow most of the time.
	March 9	1715	13	6.81	
	March 29	1530	104	7.13	
	April 10	1730	10	6.78	

[1]Backwater from ice.

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: March 1, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0.00	0.03	0.00	0.00	0.05	0.00	0.00
2						.00	.02	.00	.00	.01	.00	.00
3						.00	.01	.00	.00	.00	.00	.00
4						.00	.01	.00	.00	.00	.00	.00
5						.00	.00	.00	.00	3.5	.00	.00
6						.00	.00	.00	.00	.09	.00	.00
7						.00	.00	.00	.00	.02	.00	.00
8						.00	.00	.00	.00	.00	.00	.00
9						.00	.00	.00	.00	.00	.00	.00
10						.00	.00	.00	.00	.00	.00	.00
11						.00	.00	.00	.00	.00	.00	.00
12						.00	.00	.00	.00	.00	.00	.00
13						.00	.00	.00	.00	.00	.00	.00
14						2.0	.00	.00	.00	.00	.00	.00
15						4.0	.00	.00	.00	.00	.00	.00
16						3.0	.00	.00	.00	.00	.00	.00
17						2.6	.00	.00	.00	.00	.00	.00
18						12	.00	.00	.00	.00	.00	.00
19						50	.00	.00	.00	.00	.00	.00
20						30	.00	.00	.00	.00	.00	.00
21						20	.00	.00	.00	.00	.00	.00
22						10	.00	.00	.00	.00	.00	.00
23						4.0	.00	.00	.00	.00	.00	.00
24						2.0	.00	.00	.00	.00	.00	.00
25						1.0	.00	.00	.00	.00	.00	.00
26						.50	.00	.00	.00	.00	.00	.00
27						.30	.00	.00	.00	.00	.00	.00
28						.10	.00	.00	.00	.00	.00	.00
29						.08	.00	.00	.03	.00	.00	.00
30						.06	.00	.00	.14	.00	.00	.00
31						.06	---	.00	---	.00	.00	---
TOTAL						141.70	.07	.00	.17	3.67	.00	.00
MEAN						4.57	.002	.000	.006	.12	.000	.000
MAX						50	.03	.00	.14	3.5	.00	.00
MIN						.00	.00	.00	.00	.00	.00	.00
AC-FT						281	.1	.00	.3	7.3	.00	.00

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.01	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	8.0	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.63	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	3.5	.06	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	3.0	.05	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	3.5	.03	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	3.0	.02	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.5	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	15.50	19.05	.01	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.50	.64	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	3.5	8.0	.01	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	31	38	.02	.00	.00	.00	.00

WTR YR 1979 TOTAL 34.56 MEAN .095 MAX 8.0 MIN .00 AC-FT 69

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.75	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	1.90	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.061	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.75	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	3.8	.00	.00	.00	.00	.00	.00

WTR YR 1980 TOTAL 1.90 MEAN .005 MAX .75 MIN .00 AC-FT 3.8

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	3.5	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.60	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	6.60	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.24	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	3.5	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	13	.00	.00	.00	.00	.00	.00	.00

WTR YR 1981 TOTAL 6.60 MEAN .018 MAX 3.5 MIN .00 AC-FT 13

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: October 1, 1981, through April 22, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.70					
2	.00	.00	.00	.00	.00	.00	.20					
3	.00	.00	.00	.00	.00	.00	.00					
4	.00	.00	.00	.00	.00	.00	.00					
5	.00	.00	.00	.00	.00	.00	.00					
6	.00	.00	.00	.00	.00	.00	.00					
7	.00	.00	.00	.00	.00	.00	.00					
8	.00	.00	.00	.00	.00	.00	.00					
9	.00	.00	.00	.00	.00	.80	.00					
10	.00	.00	.00	.00	.00	.02	2.1					
11	.00	.00	.00	.00	.00	1.1	.73					
12	.00	.00	.00	.00	.00	.00	.25					
13	.00	.00	.00	.00	.00	.00	.00					
14	.00	.00	.00	.00	.00	.00	.00					
15	.00	.00	.00	.00	.00	.00	.00					
16	.00	.00	.00	.00	.50	.00	.00					
17	.00	.00	.00	.00	2.0	.00	.00					
18	.00	.00	.00	.00	35	.00	.00					
19	.00	.00	.00	.00	25	.00	.00					
20	.00	.00	.00	.00	7.0	.00	.00					
21	.00	.00	.00	.00	.40	.00	.00					
22	.00	.00	.00	.00	.01	.00	.00					
23	.00	.00	.00	.00	.00	.00	---					
24	.00	.00	.00	.00	.00	.00	---					
25	.00	.00	.00	.00	.00	.00	---					
26	.00	.00	.00	.00	.00	.00	---					
27	.00	.00	.00	.00	.00	.00	---					
28	.00	.00	.00	.00	.00	2.0	---					
29	.00	.00	.00	.00	---	19	---					
30	.00	.00	.00	.00	---	1.4	---					
31	.00	---	.00	.00	---	.50	---					
TOTAL	.00	.00	.00	.00	69.91	24.82	---	---	---	---	---	---
MEAN	.000	.000	.000	.000	2.50	.80	---	---	---	---	---	---
MAX	.00	.00	.00	.00	35	19	---	---	---	---	---	---
MIN	.00	.00	.00	.00	.00	.00	---	---	---	---	---	---
AC-FT	.00	.00	.00	.00	139	49	---	---	---	---	---	---

PERIOD OF RECORD: March 1978 through March 1982. (No data were collected during water year 1980.)

PERIOD: March 14, 1978, through March 24, 1978.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
MAR											
14...	0900	--	175	7.5	1.0	80	4	25	4.2	0.3	1
14...	1620	5.1	--	--	--	--	--	--	--	--	--
15...	1340	5.1	--	--	--	--	--	--	--	--	--
16...	0926	--	--	--	--	--	--	--	--	--	--
16...	1530	--	--	--	--	--	--	--	--	--	--
17...	0830	--	--	--	--	--	--	--	--	--	--
17...	1445	2.0	230	--	.0	--	--	--	--	--	--
18...	0830	11	--	--	--	--	--	--	--	--	--
19...	1600	66	--	--	.0	--	--	--	--	--	--
22...	1135	11	180	--	1.5	--	--	--	--	--	--
23...	1230	--	200	7.7	1.0	96	14	29	5.7	2.0	4
23...	1330	2.1	200	--	1.0	--	--	--	--	--	--
24...	1020	--	265	--	1.0	--	--	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE (MG/L AS HCO3) (00440)	CAR-BONATE (MG/L AS CO3) (00445)	ALKA-LINITY (MG/L AS CACO3) (00410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR											
14...	0.0	11	92	0	75	4.7	10	1.6	0.1	7.0	105
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
23...	.1	9.1	100	0	82	3.2	16	1.4	.1	9.2	122
23...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR										
14...	0.14	1.2	30	60	60	30	0	100	--	--
14...	--	--	--	--	--	--	--	--	39	0.54
15...	--	--	--	--	--	--	--	--	34	.47
16...	--	--	--	--	--	--	--	--	22	--
16...	--	--	--	--	--	--	--	--	285	--
17...	--	--	--	--	--	--	--	--	35	--
17...	--	--	--	--	--	--	--	--	117	.63
18...	--	--	--	--	--	--	--	--	47	1.4
19...	--	--	--	--	--	--	--	--	211	37
22...	--	--	--	--	--	--	--	--	151	4.3
23...	.17	.48	60	50	90	20	0	80	--	--
23...	--	--	--	--	--	--	--	--	48	.27
24...	--	--	--	--	--	--	--	--	80	--

PERIOD: March 27, 1979, through April 25, 1979.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR										
27...	1545	3.8	375	--	0.5	--	--	--	--	--
28...	1045	3.1	250	--	.5	--	--	--	--	--
29...	1605	3.7	215	--	.5	--	--	--	--	--
APR										
03...	1310	.60	260	--	.5	--	--	--	--	--
04...	1230	.30	225	--	.0	--	--	--	--	--
06...	1520	1.1	250	--	--	--	--	--	--	--
09...	1405	9.1	190	--	3.0	--	--	--	--	--
10...	1255	1.1	260	--	5.0	--	--	--	--	--
11...	1240	.17	340	--	2.5	--	--	--	--	--
14...	1030	.24	775	--	1.5	--	--	--	--	--
17...	1245	.52	640	8.3	8.5	250	140	62	24	17
18...	1445	.19	800	--	15.5	--	--	--	--	--
20...	1210	.11	750	--	9.0	--	--	--	--	--
25...	1325	.09	990	8.3	9.0	440	270	100	47	34

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
MAR										
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
17...	12	0.5	8.8	110	190	2.3	0.1	9.4	380	0.52
18...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
25...	14	.7	11	170	360	2.7	.1	13	671	.91

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR									
27...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	30	0.25
29...	--	--	--	--	--	--	--	146	1.5
APR									
03...	--	--	--	--	--	--	--	36	.06
04...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	2580	63
10...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
17...	0.33	0.61	150	70	70	<10	190	--	--
18...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
25...	.16	.77	260	60	50	<10	410	--	--

PERIOD: August 5, 1981.

DATE	TIME	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)
AUG 05...	1245	83	92	96	96	98	98	99

PERIOD: February 22, 1982, through March 29, 1982.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	TEMPER-ATURE, WATER (DEG C) (00010)
FEB 22...	1055	0.32	1950	3.5
MAR 29...	1405	18.9	170	6.0

06336515 HAY CREEK NEAR WIBAUX, MONT.

LOCATION: Lat 47°02'26", long 104°08'04", in SW¼SW¼NW¼ sec. 21, T. 15 N., R. 60 E., Wibaux County, Hydrologic Unit 10110204, on the left bank, and 5.5 mi northeast of Wibaux.

DRAINAGE AREA: 11.41 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD: March 1978 through April 1982.

GAGE: Water-stage recorder.

REMARKS: Some regulation due to stock dams upstream.

EXTREMES FOR PERIOD OF RECORD: Maximum instantaneous discharge, 100 ft^3/s, February 18, 1982, gage height, 3.10 ft; backwater from ice; maximum gage height, 6.67 ft, March 19, 1978; backwater from ice; no flow most of the time.

EXTREMES·

Period	Instantaneous peak discharge with base of 10.0 ft^3/s				Minimum discharge (ft^3/s)
	Date	Time	Instantaneous discharge (ft^3/s)	Gage height (ft)	
March 1, 1978, through September 30, 1978	March 19	--	50	6.67	No flow most of the time.
	June 29	1645	16	2.23	
Water year 1979	March 17	1400	--	[1]3.24	No flow most of the time.
	March 24	--	35	[1]--	
	April 1	--	25	[1]--	
	April 9	1545	58	2.04	
Water year 1980	March 19	--	1	[1]2.27	No flow most of the time.
Water year 1981	February 15	--	37	[1]2.50	No flow most of the time.
	June 20	2145	18	1.54	
	August 1	1600	10	1.31	
October 1, 1981, through April 22, 1982	February 18	1600	100	[1]3.10	No flow most of the time.
	March 10	--	62	--	
	March 30	0500	96	2.78	
	April 2	0800	23	1.65	
	April 11	0615	12	1.47	

[1]Backwater from ice.

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: March 1, 1978, through September 30, 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0.00	1.6	0.31	3.5	3.6	0.04	0.03
2						.00	1.1	.29	2.3	1.2	.04	.03
3						.00	1.7	.27	1.5	.44	.04	.03
4						.00	1.5	.37	1.0	.93	.04	.03
5						.00	1.3	.58	.64	3.3	.04	.03
6						.00	.84	.83	.44	1.8	.06	.03
7						.00	.52	.75	.39	1.3	.04	.03
8						.00	.43	1.0	.39	.52	.04	.03
9						.10	.40	.97	.34	.39	.04	.03
10						.20	.41	.60	.29	.27	.04	.03
11						.50	.40	.50	.22	.20	.04	.03
12						2.5	.43	.99	.20	.17	.04	.04
13						10	.41	.77	.18	.13	.04	.04
14						12	.43	.53	.17	.10	.03	.04
15						13	.41	.39	.30	.06	.03	.04
16						11	.41	.33	.28	.06	.03	.04
17						13	.41	.34	.28	.05	.03	.04
18						25	.47	.33	.32	.17	.03	.05
19						40	.58	.33	.32	.70	.03	.05
20						36	.58	.37	.30	.44	.04	.05
21						34	.52	.39	.28	.39	.03	.05
22						24	.43	.31	.26	.25	.03	.05
23						19	.40	.21	.24	.19	.03	.04
24						16	.36	.19	.30	.15	.03	.04
25						14	.32	.16	.35	.10	.03	.04
26						13	.29	.15	.31	.06	.03	.04
27						13	.29	.15	.27	.05	.03	.04
28						8.3	.29	.14	.22	.04	.03	.04
29						3.5	.31	.15	5.6	.04	.03	.04
30						3.0	.31	.39	8.2	.04	.03	.04
31						2.4	---	3.5	---	.04	.03	---
TOTAL						313.50	17.85	16.59	29.39	17.18	1.09	1.14
MEAN						10.1	.60	.54	.98	.55	.035	.038
MAX						40	1.7	3.5	8.2	3.6	.06	.05
MIN						.00	.29	.14	.17	.04	.03	.03
AC-FT						622	35	33	58	34	2.2	2.3

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.01	0.00	0.00	0.00	0.00	5.5	0.89	0.45	0.07	0.07	0.01
2	.03	.01	.00	.00	.00	.00	4.0	.86	.43	.07	.06	.01
3	.03	.01	.00	.00	.00	.00	3.0	.75	.36	.07	.06	.01
4	.02	.01	.00	.00	.00	.00	3.0	.66	.34	.07	.06	.01
5	.02	.01	.00	.00	.00	.00	2.5	.66	.29	.08	.06	.01
6	.02	.01	.00	.00	.00	.00	3.0	.77	.34	.08	.05	.01
7	.02	.01	.00	.00	.00	.00	12	.90	.31	.08	.05	.01
8	.02	.01	.00	.00	.00	.00	24	.79	.27	.10	.05	.01
9	.01	.01	.00	.00	.00	.00	31	.66	.24	.15	.04	.01
10	.01	.01	.00	.00	.00	.00	14	.66	.22	.12	.04	.01
11	.01	.01	.00	.00	.00	.00	6.1	.66	.19	.20	.04	.01
12	.01	.01	.00	.00	.00	.00	3.8	.63	.16	.14	.04	.01
13	.01	.01	.00	.00	.00	.00	1.6	.57	.11	.14	.04	.01
14	.01	.01	.00	.00	.00	.00	3.3	.57	.08	.13	.04	.01
15	.01	.01	.00	.00	.00	.00	3.8	.56	.08	.12	.04	.01
16	.01	.01	.00	.00	.00	.00	5.6	.48	.08	.12	.03	.01
17	.01	.01	.00	.00	.00	3.0	6.4	.45	.07	.12	.02	.01
18	.01	.01	.00	.00	.00	2.0	4.5	.45	.07	.11	.02	.01
19	.01	.00	.00	.00	.00	1.5	2.7	.50	.07	.10	.02	.01
20	.01	.00	.00	.00	.00	1.0	2.1	.54	.07	.10	.02	.01
21	.01	.00	.00	.00	.00	1.5	1.6	.55	.07	.10	.02	.01
22	.01	.00	.00	.00	.00	1.5	1.3	.47	.08	.09	.01	.01
23	.01	.00	.00	.00	.00	4.0	1.2	.46	.07	.11	.01	.01
24	.01	.00	.00	.00	.00	18	1.5	.45	.07	.11	.01	.01
25	.01	.00	.00	.00	.00	25	1.6	.43	.07	.12	.01	.01
26	.01	.00	.00	.00	.00	8.0	1.4	.45	.07	.13	.01	.01
27	.01	.00	.00	.00	.00	5.0	1.3	.44	.07	.10	.01	.01
28	.01	.00	.00	.00	.00	4.0	1.1	.37	.07	.09	.01	.01
29	.01	.00	.00	.00	---	2.5	.96	.55	.07	.08	.01	.01
30	.01	.00	.00	.00	---	3.0	.90	.65	.07	.08	.01	.01
31	.01	---	.00	.00	---	3.5	---	.52	---	.08	.01	---
TOTAL	.42	.18	.00	.00	.00	83.50	154.76	18.35	4.94	3.26	.97	.30
MEAN	.014	.006	.000	.000	.000	2.69	5.16	.59	.16	.11	.031	.010
MAX	.03	.01	.00	.00	.00	25	31	.90	.45	.20	.07	.01
MIN	.01	.00	.00	.00	.00	.00	.90	.37	.07	.07	.01	.01
AC-FT	.8	.4	.00	.00	.00	166	307	36	9.8	6.5	1.9	.6

WTR YR 1979 TOTAL 266.68 MEAN .73 MAX 31 MIN .00 AC-FT 529

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.01	0.01	0.01	0.00	0.00	0.09	0.03	0.02	0.00	0.00	0.00
2	.01	.01	.01	.00	.00	.00	.08	.03	.02	.01	.00	.00
3	.01	.01	.01	.00	.00	.00	.08	.02	.01	.00	.00	.00
4	.01	.01	.01	.00	.00	.00	.08	.02	.01	.00	.00	.00
5	.01	.01	.01	.00	.00	.00	.08	.02	.01	.00	.00	.00
6	.01	.01	.01	.00	.00	.00	.07	.02	.01	.00	.00	.00
7	.01	.01	.01	.00	.00	.00	.07	.02	.01	.00	.00	.00
8	.01	.01	.01	.00	.00	.00	.07	.02	.01	.00	.00	.00
9	.01	.01	.01	.00	.00	.00	.06	.03	.01	.00	.00	.00
10	.01	.01	.01	.00	.00	.00	.06	.03	.01	.00	.00	.00
11	.01	.01	.01	.00	.00	.02	.06	.03	.01	.00	.00	.00
12	.01	.01	.01	.00	.00	.05	.06	.03	.01	.00	.00	.01
13	.01	.01	.01	.00	.00	.07	.06	.03	.02	.00	.00	.01
14	.01	.01	.01	.00	.00	.10	.07	.03	.01	.00	.00	.01
15	.01	.01	.01	.00	.00	.15	.08	.03	.01	.00	.00	.01
16	.01	.01	.01	.00	.00	.20	.08	.03	.01	.00	.04	.01
17	.01	.01	.01	.00	.00	.30	.09	.03	.01	.00	.01	.01
18	.01	.01	.01	.00	.00	.35	.11	.03	.01	.00	.00	.01
19	.01	.01	.01	.00	.00	.50	.09	.03	.01	.00	.00	.01
20	.01	.01	.01	.00	.00	.45	.08	.03	.01	.00	.00	.01
21	.01	.01	.01	.00	.00	.40	.08	.03	.01	.00	.00	.01
22	.01	.01	.01	.00	.00	.35	.06	.02	.01	.00	.00	.02
23	.01	.01	.01	.00	.00	.30	.06	.02	.01	.00	.00	.02
24	.01	.01	.01	.00	.00	.25	.05	.02	.01	.00	.00	.02
25	.01	.01	.01	.00	.00	.20	.04	.02	.00	.00	.00	.02
26	.01	.01	.01	.00	.00	.15	.04	.02	.00	.00	.00	.02
27	.01	.01	.01	.00	.00	.12	.03	.02	.00	.00	.00	.02
28	.01	.01	.01	.00	.00	.10	.03	.02	.00	.00	.01	.02
29	.01	.01	.01	.00	.00	.10	.03	.02	.00	.00	.01	.02
30	.01	.01	.01	.00	---	.10	.03	.02	.00	.00	.01	.02
31	.01	---	.01	.00	---	.10	---	.02	---	.00	.00	---
TOTAL	.31	.30	.31	.01	.00	4.36	1.97	.77	.27	.01	.08	.28
MEAN	.010	.010	.010	.000	.000	.14	.066	.025	.009	.000	.003	.009
MAX	.01	.01	.01	.01	.00	.50	.11	.03	.02	.01	.04	.02
MIN	.01	.01	.01	.00	.00	.00	.03	.02	.00	.00	.00	.00
AC-FT	.6	.6	.6	.02	.00	8.6	3.9	1.5	.5	.02	.2	.6

WTR YR 1980 TOTAL 8.67 MEAN .024 MAX .50 MIN .00 AC-FT 17

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.01	0.00	0.03	0.00	0.02	0.00	0.02	0.00	0.01	0.92	0.00
2	.03	.01	.00	.00	.00	.02	.00	.02	.00	.01	.26	.00
3	.03	.02	.00	.00	.00	.02	.00	.02	.00	.01	.04	.00
4	.03	.01	.00	.00	.00	.02	.00	.02	.02	.01	.06	.00
5	.03	.01	.00	.00	.00	.02	.00	.02	.01	.00	.50	.00
6	.03	.01	.00	.00	.00	.02	.00	.02	.01	.00	.16	.00
7	.03	.03	.00	.00	.00	.02	.00	.01	.02	.00	.02	.00
8	.02	.03	.00	.00	.00	.02	.00	.00	.02	.00	.03	.00
9	.02	.03	.00	.00	.00	.02	.00	.00	.02	.00	.02	.00
10	.01	.02	.01	.00	.00	.02	.00	.00	.02	.00	.02	.00
11	.01	.02	.03	.00	.00	.02	.00	.00	.01	.00	.01	.00
12	.02	.01	.02	.00	.02	.02	.00	.00	.01	.00	.01	.00
13	.02	.01	.06	.00	.10	.02	.00	.00	.01	.00	.01	.00
14	.02	.01	.09	.00	2.5	.02	.00	.00	.01	.01	.01	.00
15	.03	.00	.08	.00	10	.02	.00	.00	.01	.00	.01	.00
16	.04	.00	.05	.00	5.0	.02	.00	.00	.01	.00	.01	.00
17	.03	.00	.01	.01	3.0	.02	.00	.00	.01	.00	.01	.00
18	.02	.00	.00	.02	1.8	.02	.00	.00	.01	.00	.01	.00
19	.01	.00	.00	.04	1.0	.02	.00	.00	.01	.00	.01	.00
20	.01	.00	.00	.10	.35	.02	.00	.00	1.5	.00	.01	.00
21	.01	.00	.00	.20	.25	.02	.01	.00	.97	.00	.01	.00
22	.04	.00	.00	.30	.15	.02	.03	.01	.05	.00	.01	.00
23	.02	.00	.00	.35	.05	.02	.03	.01	.02	.00	.00	.00
24	.02	.02	.00	.30	.04	.02	.03	.00	.02	.00	.00	.00
25	.01	.01	.00	.20	.03	.02	.03	.00	.02	.00	.00	.00
26	.01	.00	.01	.10	.02	.01	.03	.00	.02	.00	.00	.00
27	.01	.00	.05	.05	.02	.01	.03	.00	.02	.00	.00	.02
28	.01	.00	.08	.00	.02	.01	.03	.00	.02	.00	.00	.01
29	.00	.00	.10	.00	---	.01	.02	.00	.02	.00	.00	.01
30	.00	.00	.08	.00	---	.00	.02	.00	.01	.00	.00	.01
31	.00	---	.05	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.59	.26	.72	1.70	24.35	.54	.26	.15	2.88	.05	2.15	.05
MEAN	.019	.009	.023	.055	.87	.017	.009	.005	.096	.002	.069	.002
MAX	.04	.03	.10	.35	10	.02	.03	.02	1.5	.01	.92	.02
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.2	.5	1.4	3.4	48	1.1	.5	.3	5.7	.10	4.3	.10

WTR YR 1981 TOTAL 53.70 MEAN .092 MAX 10 MIN .00 AC-FT 67

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: October 1, 1981, through April 22, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.01	0.00	0.00	0.00	0.25	4.5					
2	.01	.01	.00	.00	.00	.14	16					
3	.01	.00	.00	.00	.00	.09	6.4					
4	.01	.00	.00	.00	.00	.05	2.6					
5	.01	.00	.00	.00	.00	.03	1.7					
6	.06	.00	.00	.00	.00	.01	1.4					
7	.06	.00	.00	.00	.00	.00	1.4					
8	.01	.01	.00	.00	.00	.00	1.1					
9	.01	.01	.00	.00	.00	.52	1.1					
10	.06	.01	.00	.00	.00	7.5	2.3					
11	.04	.01	.00	.00	.00	5.0	6.0					
12	.01	.01	.00	.00	.00	2.6	1.9					
13	.02	.01	.00	.00	.00	1.0	1.3					
14	.02	.01	.00	.00	.00	.50	.70					
15	.02	.01	.00	.00	.00	.25	.55					
16	.01	.01	.00	.00	1.0	.20	.65					
17	.01	.01	.00	.00	10	.18	.35					
18	.01	.01	.00	.00	55	.16	.24					
19	.01	.01	.00	.00	72	.14	.22					
20	.01	.01	.00	.00	44	.12	.30					
21	.01	.01	.00	.00	13	.10	.35					
22	.01	.00	.00	.00	12	.08	.28					
23	.01	.00	.00	.00	10	.06	---					
24	.01	.00	.00	.00	8.0	.04	---					
25	.01	.00	.00	.00	5.0	.03	---					
26	.01	.00	.00	.00	2.0	.02	---					
27	.01	.00	.00	.00	1.0	.06	---					
28	.01	.00	.00	.00	.50	5.4	---					
29	.01	.00	.00	.00	---	19	---					
30	.01	.00	.00	.00	---	30	---					
31	.01	---	.00	.00	---	7.5	---					
TOTAL	.52	.16	.00	.00	253.50	80.23	---					
MEAN	.017	.005	.000	.000	8.34	2.59	---					
MAX	.06	.01	.00	.00	72	30	---					
MIN	.01	.00	.00	.00	.00	.00	---					
AC-FT	1.0	.3	.00	.00	463	159	---					

PERIOD OF RECORD: March 1978 through April 1982.

PERIOD: March 13, 1978, through July 7, 1978.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
MAR											
13...	1630	16	740	7.3	0.5	350	230	60	48	39	19
15...	1130	11	495	7.6	.5	220	120	44	26	19	15
15...	1535	15	495	--	.5	--	--	--	--	--	--
16...	0830	--	--	--	--	--	--	--	--	--	--
16...	1630	--	--	--	--	--	--	--	--	--	--
17...	1625	9.0	640	--	.0	--	--	--	--	--	--
18...	1050	23	440	--	.0	--	--	--	--	--	--
20...	1715	--	255	--	.0	--	--	--	--	--	--
21...	1100	34	325	--	.5	--	--	--	--	--	--
22...	1200	27	360	--	1.0	--	--	--	--	--	--
23...	1040	10	580	7.8	.5	250	140	49	31	23	16
24...	0900	--	540	--	.5	--	--	--	--	--	--
28...	1330	2.9	890	--	5.0	--	--	--	--	--	--
29...	1410	3.2	1340	--	8.5	--	--	--	--	--	--
APR											
20...	1355	.57	3050	--	11.0	--	--	--	--	--	--
JUN											
29...	1300	3.3	--	--	--	--	--	--	--	--	--
JUL											
07...	0915	1.6	--	--	--	--	--	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE (MG/L AS HCO3) (00440)	CAR-BONATE (MG/L AS CO3) (00445)	ALKA-LINITY (MG/L AS CACO3) (00410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR											
13...	0.5	14	150	0	120	12	270	5.8	0.1	7.1	519
15...	.6	12	120	0	98	4.8	140	3.8	.1	7.6	312
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
23...	.6	9.7	140	0	110	3.6	180	4.0	.1	8.4	375
24...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
29...	--	--	--	--	--	--	--	--	--	--	--
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--

PERIOD: March 13, 1978, through July 7, 1978--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR											
13...	0.71	--	1.3	10	170	300	230	0	450	35	1.5
15...	.42	--	1.5	10	160	160	120	0	290	41	1.2
15...	--	--	--	--	--	--	--	--	--	32	1.3
16...	--	--	--	--	--	--	--	--	--	18	--
16...	--	--	--	--	--	--	--	--	--	21	--
17...	--	--	--	--	--	--	--	--	--	31	.75
18...	--	--	--	--	--	--	--	--	--	39	2.4
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	163	15
22...	--	--	--	--	--	--	--	--	--	231	17
23...	.51	--	.97	0	170	90	100	2	320	54	1.5
24...	--	--	--	--	--	--	--	--	--	30	--
28...	--	--	--	--	--	--	--	--	--	54	.42
29...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
29...	--	--	--	--	--	--	--	--	--	596	5.3
JUL											
07...	--	--	--	--	--	--	--	--	--	6	.03

PERIOD: March 17, 1979, through September 11, 1979.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR										
17...	1525	7.3	1000	--	0.0	--	--	--	--	--
20...	1145	.85	1350	--	.5	--	--	--	--	--
21...	1535	1.2	1600	--	.5	--	--	--	--	--
22...	1510	1.6	1525	--	.5	--	--	--	--	--
23...	1115	6.6	1100	--	.5	--	--	--	--	--
27...	1415	4.6	900	--	.5	--	--	--	--	--
28...	1210	3.9	925	--	.5	--	--	--	--	--
29...	1145	2.9	1450	--	.0	--	--	--	--	--
APR										
03...	1110	3.1	1400	--	.0	--	--	--	--	--
06...	1205	3.2	1450	--	--	--	--	--	--	--
09...	1310	20	760	--	2.0	--	--	--	--	--
10...	1340	12	1020	--	3.5	--	--	--	--	--
11...	1205	5.7	1300	8.3	.5	560	390	79	87	76
14...	0925	1.9	2050	--	1.5	--	--	--	--	--
16...	1200	--	--	--	--	--	--	--	--	--
16...	1300	--	--	--	--	--	--	--	--	--
16...	1400	--	--	--	--	--	--	--	--	--
16...	1500	--	--	--	--	--	--	--	--	--
16...	1600	--	--	--	--	--	--	--	--	--
16...	1700	--	--	--	--	--	--	--	--	--
16...	1800	--	--	--	--	--	--	--	--	--
16...	1900	--	--	--	--	--	--	--	--	--
16...	2000	--	--	--	--	--	--	--	--	--
16...	2100	--	--	--	--	--	--	--	--	--
16...	2200	--	--	--	--	--	--	--	--	--
16...	2300	--	--	--	--	--	--	--	--	--
16...	2400	--	--	--	--	--	--	--	--	--
17...	0100	--	--	--	--	--	--	--	--	--
17...	0200	--	--	--	--	--	--	--	--	--
17...	0300	--	--	--	--	--	--	--	--	--
17...	0400	--	--	--	--	--	--	--	--	--
17...	0500	--	--	--	--	--	--	--	--	--
17...	0600	--	--	--	--	--	--	--	--	--
17...	0700	--	--	--	--	--	--	--	--	--
17...	0800	--	--	--	--	--	--	--	--	--
17...	1120	6.6	2000	--	8.0	--	--	--	--	--
18...	1345	4.7	1950	--	15.0	--	--	--	--	--
20...	1105	2.1	1990	--	8.5	--	--	--	--	--
25...	1230	1.6	2850	8.1	4.0	1600	1200	230	240	200
MAY										
02...	1400	.81	2700	--	7.0	--	--	--	--	--
16...	1205	.48	2600	--	15.0	--	--	--	--	--
30...	1345	.61	2200	--	16.0	--	--	--	--	--
JUN										
21...	1445	.07	2500	8.1	23.0	1300	970	170	210	200
JUL										
24...	1010	.10	2100	--	24.0	--	--	--	--	--
SEP										
11...	1255	.04	2050	--	19.0	--	--	--	--	--

PERIOD: March 17, 1979, through September 11, 1979--Continued.

DATE	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY (MG/L AS CACO3) (00410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
MAR										
17...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
11...	23	1.4	9.3	170	560	6.3	0.1	9.7	931	1.27
14...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	-
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
25...	22	2.2	10	330	1600	15	.1	6.2	2500	3.40
MAY										
02...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUN										
21...	25	2.4	7.7	320	1500	18	.2	1.2	2300	3.13
JUL										
24...	--	--	--	--	--	--	--	--	--	--
SEP										
11...	--	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1979, through September 11, 1979--Continued.

DATE	SOLIOS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY) (80155)
MAR									
17...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	11	0.04
22...	--	--	--	--	--	--	--	21	.09
23...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	12	.13
29...	--	--	--	--	--	--	--	16	.13
APR									
03...	--	--	--	--	--	--	--	14	.12
06...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	94	5.1
10...	--	--	--	--	--	--	--	--	--
11...	14.4	0.87	360	440	180	10	780	12	.19
14...	--	--	--	--	--	--	--	10	.05
16...	--	--	--	--	--	--	--	[2]7	--
16...	--	--	--	--	--	--	--	[2]10	--
16...	--	--	--	--	--	--	--	[2]10	--
16...	--	--	--	--	--	--	--	[2]9	--
16...	--	--	--	--	--	--	--	[2]6	--
16...	--	--	--	--	--	--	--	[2]10	--
16...	--	--	--	--	--	--	--	[2]10	--
16...	--	--	--	--	--	--	--	[2]8	--
16...	--	--	--	--	--	--	--	[2]11	--
16...	--	--	--	--	--	--	--	[2]10	--
16...	--	--	--	--	--	--	--	[2]13	--
16...	--	--	--	--	--	--	--	[2]14	--
16...	--	--	--	--	--	--	--	[2]14	--
17...	--	--	--	--	--	--	--	[2]11	--
17...	--	--	--	--	--	--	--	[2]13	--
17...	--	--	--	--	--	--	--	[2]12	--
17...	--	--	--	--	--	--	--	[2]7	--
17...	--	--	--	--	--	--	--	[2]27	--
17...	--	--	--	--	--	--	--	[2]3	--
17...	--	--	--	--	--	--	--	[2]8	--
17...	--	--	--	--	--	--	--	[2]9	--
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
25...	10.8	.94	880	110	100	0	220	--	--
MAY									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
JUN									
21...	.43	1.6	680	60	40	0	1700	--	--
JUL									
24...	--	--	--	--	--	--	--	--	--
SEP									
11...	--	--	--	--	--	--	--	--	--

[2]Point source sample obtained by an automatic sediment sampler.

PERIOD: October 2, 1979, through July 7, 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT										
02...	1430	0.01	2350	--	16.0	--	--	--	--	--
NOV										
05...	1115	.01	2200	--	8.0	--	--	--	--	--
20...	1130	.01	2050	7.5	1.5	1000	610	170	150	130
DEC										
18...	1210	.01	2100	--	.5	--	--	--	--	--
MAR										
18...	1145	.28	1600	--	.0	--	--	--	--	--
19...	1130	.41	1600	--	.0	--	--	--	--	--
24...	1125	.25	2100	--	.5	--	--	--	--	--
28...	1215	.10	2050	6.8	1.0	1100	840	170	160	160
31...	1300	.10	2100	--	1.0	--	--	--	--	--
APR										
01...	1545	.09	2400	--	1.5	--	--	--	--	--
04...	1425	.08	1800	--	4.0	--	--	--	--	--
10...	1455	.05	1600	--	5.0	--	--	--	--	--
15...	1255	.07	2600	--	8.5	--	--	--	--	--
22...	1225	.06	2600	--	8.5	--	--	--	--	--
MAY										
08...	1350	.02	2300	--	12.0	--	--	--	--	--
JUN										
10...	1115	.01	[3]2620	6.3	19.5	1300	970	140	220	190
JUL										
07...	1335	.00	2500	--	25.0	--	--	--	--	--

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	PUTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
20...	39	1.8	10	430	850	30	0.2	7.6	1610	2.19
DEC										
18...	--	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
28...	24	2.1	10	250	1200	16	.1	8.6	1880	2.56
31...	--	--	--	--	--	--	--	--	--	--
APR										
01...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
MAY										
08...	--	--	--	--	--	--	--	--	--	--
JUN										
10...	25	2.3	8.1	290	1300	21	.2	6.6	2060	2.80
JUL										
07...	--	--	--	--	--	--	--	--	--	--

[3]Laboratory value determined by U.S. Geological Survey National Water Quality Laboratory, Denver, Colo.

PERIOD: October 2, 1979, through July 7, 1980--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDIMENT, SUS-PENDED (MG/L) (80154)	SEDIMENT DISCHARGE, SUS-PENDED (T/DAY) (80155)
OCT									
02...	--	--	--	--	--	--	--	--	--
NOV									
05...	--	--	--	--	--	--	--	--	--
20...	0.04	0.71	410	160	220	0	1500	--	--
DEC									
18...	--	--	--	--	--	--	--	--	--
MAR									
18...	--	--	--	--	--	--	--	6	0.00
19...	--	--	--	--	--	--	--	8	.01
24...	--	--	--	--	--	--	--	4	.00
28...	.51	1.4	500	320	370	0	1600	10	.00
31...	--	--	--	--	--	--	--	6	.00
APR									
01...	--	--	--	--	--	--	--	6	.00
04...	--	--	--	--	--	--	--	24	.01
10...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	81	.02
22...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	--	--	--	--	--	--	--	--
JUN									
10...	.06	1.1	650	170	300	0	1300	--	--
JUL									
07...	--	--	--	--	--	--	--	--	--

PERIOD: October 2, 1980, through August 6, 1981.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT										
02...	1320	0.02	2400	--	15.0	--	--	--	--	--
NOV										
05...	1200	.01	2500	--	8.5	--	--	--	--	--
24...	1045	.02	2500	--	.0	--	--	--	--	--
24...	1215	.01	2500	--	.0	--	--	--	--	--
DEC										
29...	1340	.08	2400	--	.0	--	--	--	--	--
FEB										
17...	1235	2.8	725	--	.0	--	--	--	--	--
18...	1240	1.6	875	7.5	.0	38	350	210	66	45
20...	1225	.28	1010	--	.5	--	--	--	--	--
23...	1330	.06	1550	--	2.0	--	--	--	--	--
26...	1235	.03	1650	--	2.0	--	--	--	--	--
MAR										
04...	1140	.02	2000	--	2.0	--	--	--	--	--
09...	1230	.02	2400	--	3.5	--	--	--	--	--
24...	1340	.02	3000	--	8.0	--	--	--	--	--
MAY										
07...	1150	.01	2800	--	9.0	--	--	--	--	--
JUN										
11...	1200	.01	3000	--	13.0	--	--	--	--	--
AUG										
02...	0730	.63	550	E7.3	13.0	--	250	160	49	30
03...	0915	.07	800	7.6	16.0	--	400	200	76	50
03...	1245	.06	875	--	16.0	--	--	--	--	--
05...	1035	.49	975	7.3	18.0	--	500	320	87	69
05...	1420	.65	940	--	22.0	--	--	--	--	--
06...	1030	.14	1300	--	18.0	--	--	--	--	--

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
DEC										
29...	--	--	--	--	--	--	--	--	--	--
FEB										
17...	--	--	--	--	--	--	--	--	--	--
18...	35	17	0.8	15	130	310	6.3	0.2	569	0.77
20...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAR										
04...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	--	--	--	--	--	--	--	--	--	--
JUN										
11...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	29	19	.9	14	86	190	7.4	.1	378	.51
03...	55	22	1.4	14	200	300	10	.5	635	.86
03...	--	--	--	--	--	--	--	--	--	--
05...	77	24	1.7	13	180	450	9.2	.1	826	1.1
05...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--

PERIOD: October 2, 1980, through August 6, 1981--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	POTAS-SIUM 40 DIS-SOLVED (PCI/L AS K40) (82068)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT									
02...	--	--	--	--	--	--	--	--	--
NOV									
05...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
DEC									
29...	--	--	--	--	--	--	--	--	--
FEB									
17...	--	--	--	--	--	--	--	--	--
18...	2.4	240	360	10	--	<10	600	11	--
20...	--	--	--	--	--	--	--	--	30
23...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	45
MAR									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
MAY									
07...	--	--	--	--	--	--	--	--	--
JUN									
11...	--	--	--	--	--	--	--	--	--
AUG									
02...	.64	160	93	10	56	<10	310	--	170
03...	.12	270	190	21	210	<10	550	--	43
03...	--	--	--	--	--	--	--	--	--
05...	1.1	350	140	25	72	<10	650	--	479
05...	--	--	--	--	--	--	--	--	427
06...	--	--	--	--	--	--	--	--	21

DATE	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)
OCT									
02...	--	--	--	--	--	--	--	--	--
NOV									
05...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
DEC									
29...	--	--	--	--	--	--	--	--	--
FEB									
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
20...	0.02	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
26...	.00	--	--	--	--	--	--	--	--
MAR									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
MAY									
07...	--	--	--	--	--	--	--	--	--
JUN									
11...	--	--	--	--	--	--	--	--	--
AUG									
02...	.29	100	--	--	--	--	--	--	--
03...	.01	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
05...	.63	--	52	59	67	71	77	87	96
05...	.75	--	--	--	--	--	--	--	--
06...	.01	--	--	--	--	--	--	--	--

PERIOD: October 2, 1981, through April 22, 1982.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	TEMPER-ATURE (DEG C) (00010)
OCT				
02...	1050	0.01	1850	9.0
FEB				
19...	1440	75.6	180	2.0
21...	1155	11.2	343	2.0
MAR				
09...	1055	.03	1820	.0
26...	1040	.02	2000	1.5
29...	1215	8.96	1390	4.5
APR				
22...	1230	.28	1550	13.0

06340524 WEST BRANCH ANTELOPE CREEK NO. 5 NEAR ZAP, N. DAK.

LOCATION: Lat 47°23'10", long 101°50'04", in NE¼NE¼SE¼ sec. 20, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130301, on the left bank upstream from culvert on county highway, and 5.5 mi north of Zap.

DRAINAGE AREA: 4.37 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD: October 1977 through April 1982.

GAGE: Water-stage recorder.

REMARKS: Some regulation due to stock dams upstream.

EXTREMES FOR PERIOD OF RECORD: Maximum instantaneous discharge, 435 ft^3/s, April 17, 1979; maximum gage height, 9.78 ft, April 17, 1979; no flow most of the time.

EXTREMES:

Period	Instantaneous peak discharge with base of 10.0 ft^3/s				Minimum discharge (ft^3/s)
	Date	Time	Instantaneous discharge (ft^3/s)	Gage height (ft)	
Water year 1978	March 23	--	--	[1]6.79	No flow most of the time.
	March 26	--	125	5.65	
Water year 1979	April 17	--	435	9.78	No flow most of the time.
Water year 1980	March 18	--	12	2.16	No flow most of the time.
Water year 1981	February 16	--	39	3.31	No flow most of the time.
October 1, 1981, through April 30, 1982	March 29	--	120	[1]6.13	No flow most of the time.
	April 11	1815	142	6.07	

[1]Backwater from ice.

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.02	0.04	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.48	.01	.01	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.82	.01	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	2.0	.01	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	1.7	.01	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	1.6	.01	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.70	.03	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.31	.23	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.11	.16	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.04	.06	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.02	.07	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.07	.13	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.03	.28	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.03	.32	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.01	.09	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.01	.05	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.21	.02	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.51	.01	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.10	.02	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	10	.01	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	20	.03	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	34	.03	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	43	.02	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	61	.01	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	51	.01	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	16	.02	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	15	.02	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	12	.02	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	5.6	---	.01	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	267.70	10.81	1.53	.05	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	8.64	.36	.049	.002	.000	.000	.000
MAX	.00	.00	.00	.00	.00	61	2.0	.32	.04	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	531	21	3.0	.10	.00	.00	.00

WTR YR 1978 TOTAL 280.09 MEAN .77 MAX 61 MIN .00 AC-FT 556

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	27	.02	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	142	.02	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	91	.02	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	8.7	.05	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	1.5	.05	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.62	.05	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.34	.04	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.25	.03	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.24	.04	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.27	.03	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.23	.02	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.13	.01	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.10	.01	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.09	.01	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.07	.01	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.01	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	272.54	.95	.04	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	9.08	.031	.001	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	142	.13	.01	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	541	1.9	.08	.00	.00	.00

WTR YR 1979 TOTAL 273.53 MEAN .75 MAX 142 MIN .00 AC-FT 543

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	5.1	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	4.1	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.80	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.57	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.32	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.03	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.02	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	15.25	.12	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.49	.004	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	5.1	.03	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	30	.2	.00	.00	.00	.00	.00

WTR YR 1980 TOTAL 15.37 MEAN .042 MAX 5.1 MIN .00 AC-FT 30

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.10	.00	.00	.00	.01	.00	.00	.00
15	.00	.00	.00	.00	1.0	.00	.00	.00	.01	.00	.00	.00
16	.00	.00	.00	.00	15	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	7.0	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	4.0	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	2.5	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.01	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	52.94	.31	.01	.01	.02	.00	.00	.00
MEAN	.000	.000	.000	.000	1.18	.010	.000	.000	.001	.000	.000	.000
MAX	.00	.00	.00	.00	15	.16	.01	.01	.01	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	65	.6	.02	.02	.04	.00	.00	.00

WTR YR 1981 TOTAL 53.29 MEAN .091 MAX 15 MIN .00 AC-FT 66

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	20					
2	.00	.00	.00	.00	.00	.00	12					
3	.00	.00	.00	.00	.00	.00	3.1					
4	.00	.00	.00	.00	.00	.00	2.1					
5	.00	.00	.00	.00	.00	.00	1.5					
6	.00	.00	.00	.00	.00	.00	1.2					
7	.00	.00	.00	.00	.00	.00	.71					
8	.00	.00	.00	.00	.00	.00	.29					
9	.00	.00	.00	.00	.00	.00	.32					
10	.00	.00	.00	.00	.00	.00	3.3					
11	.00	.00	.00	.00	.00	.00	46					
12	.00	.00	.00	.00	.00	.00	60					
13	.00	.00	.00	.00	.00	.00	15					
14	.00	.00	.00	.00	.00	.00	7.1					
15	.00	.00	.00	.00	.00	.05	2.9					
16	.00	.00	.00	.00	.00	.50	1.1					
17	.00	.00	.00	.00	.00	.70	.50					
18	.00	.00	.00	.00	.00	.10	.50					
19	.00	.00	.00	.00	.00	.00	.71					
20	.00	.00	.00	.00	.00	.00	.40					
21	.00	.00	.00	.00	.00	.00	.23					
22	.00	.00	.00	.00	.00	.00	.10					
23	.00	.00	.00	.00	.00	.00	.08					
24	.00	.00	.00	.00	.00	.02	.07					
25	.00	.00	.00	.00	.00	.04	.06					
26	.00	.00	.00	.00	.00	.02	.03					
27	.00	.00	.00	.00	.00	.02	.03					
28	.00	.00	.00	.00	.00	.04	.01					
29	.00	.00	.00	.00	---	25	.01					
30	.00	.00	.00	.00	---	32	.01					
31	.00	---	.00	.00	---	22	---					
TOTAL	.00	.00	.00	.00	.00	80.49	179.36					
MEAN	.000	.000	.000	.000	.000	2.60	5.98					
MAX	.00	.00	.00	.00	.00	32	60					
MIN	.00	.00	.00	.00	.00	.00	.01					
AC-FT	.00	.00	.00	.00	.00	160	356					

PERIOD OF RECORD: June 1977 through April 1982.

PERIOD: June 15, 1977, through June 16, 1977.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	COLOR (PLAT-INUM COBALT UNITS) (00080)	TUR-BID-ITY (JTU) (00070)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JUN												
15...	1130	--	--	--	--	--	--	--	--	--	--	--
15...	1230	2.4	--	--	--	--	--	--	--	--	--	--
15...	1400	2.3	205	6.8	21.0	550	190	66	7	15	6.9	3.1
16...	0915	--	--	--	17.0	--	--	--	--	--	--	--
16...	1130	--	--	--	18.0	--	--	--	--	--	--	--

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE (MG/L AS HCO3) (00440)	CAR-BONATE (MG/L AS CO3) (00445)	ALKA-LINITY (MG/L AS CACO3) (00410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	8	0.2	11	72	0	59	16	17	2.0	0.1	11
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	134	104	0.18	0.85	0.30	0.060	0.08	0.87	0.93	0.600	200
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	3	0	0	100	0	0	0	11	220	5	2
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
JUN											
15...	--	--	--	--	--	--	--	--	--	278	--
15...	--	--	--	--	--	--	--	--	--	264	1.7
15...	10	0.0	0	4	1	80	3.0	10	21	273	1.7
16...	--	--	--	--	--	--	--	--	--	211	--
16...	--	--	--	--	--	--	--	--	--	182	--

PERIOD: March 23, 1978, through May 2, 1978.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
MAR											
23...	1400	18	100	7.2	1.0	27	0	5.9	2.9	0.6	3
24...	1010	--	--	--	--	--	--	--	--	--	--
25...	1425	43	101	--	2.5	--	--	--	--	--	--
26...	1445	72	--	--	.0	--	--	--	--	--	--
27...	1315	41	75	--	3.0	--	--	--	--	--	--
28...	1220	7.6	83	--	3.0	--	--	--	--	--	--
29...	1350	7.0	120	--	10.0	--	--	--	--	--	--
29...	1355	7.0	120	--	10.0	--	--	--	--	--	--
30...	1215	4.3	124	7.2	11.5	51	4	12	5.1	1.3	5
APR											
04...	1105	1.8	270	--	7.0	--	--	--	--	--	--
04...	1120	1.8	270	--	7.0	--	--	--	--	--	--
19...	1350	.14	440	--	10.5	--	--	--	--	--	--
20...	1125	--	--	--	7.0	--	--	--	--	--	--
23...	1512	--	--	--	--	--	--	--	--	--	--
MAY											
02...	0805	.01	670	--	8.0	--	--	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE (MG/L AS HCO3) (00440)	CAR-BONATE (MG/L AS CO3) (00445)	ALKA-LINITY (MG/L AS CACO3) (00410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR											
23...	0.1	9.5	42	0	34	4.2	7.5	1.9	0.0	6.1	55
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
30...	.1	6.2	57	0	47	5.8	12	1.3	.0	7.8	74
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
02...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR										
23...	0.07	2.5	40	80	140	30	1	80	74	3.6
24...	--	--	--	--	--	--	--	--	36	--
25...	--	--	--	--	--	--	--	--	59	6.8
26...	--	--	--	--	--	--	--	--	164	32
27...	--	--	--	--	--	--	--	--	53	5.9
28...	--	--	--	--	--	--	--	--	32	.66
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	16	.30
30...	.10	.70	0	50	110	0	1	90	16	.32
APR										
04...	--	--	--	--	--	--	--	--	10	.05
04...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	36	.15
23...	--	--	--	--	--	--	--	--	14	.01
MAY										
02...	--	--	--	--	--	--	--	--	4	.00

PERIOD: April 16, 1979, through May 8, 1979.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
APR										
16...	1740	64	120	--	2.0	--	--	--	--	--
17...	1645	--	80	6.6	2.0	24	8	5.6	2.5	1.3
18...	--	--	--	--	--	--	--	--	--	--
19...	1540	4.9	215	--	5.0	--	--	--	--	--
20...	1125	1.5	285	7.3	7.0	120	51	24	15	5.1
23...	1512	.25	540	--	5.5	--	--	--	--	--
30...	1505	.06	750	--	13.0	--	--	--	--	--
MAY										
08...	1310	.04	900	--	7.0	--	--	--	--	--

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
APR										
16...	--	--	--	--	--	--	--	--	--	--
17...	8	0.1	4.9	16	4.8	1.5	0.0	3.9	34	0.05
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	8	.2	8.4	71	50	4.7	.1	10	160	.22
23...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
MAY										
08...	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
APR									
16...	--	--	--	--	--	--	--	84	15
17...	--	0.98	90	120	20	<10	20	391	--
18...	--	--	--	--	--	--	--	152	--
19...	--	--	--	--	--	--	--	--	--
20...	.66	.98	50	110	10	<10	90	36	.15
23...	--	--	--	--	--	--	--	14	.01
30...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1980, through April 10, 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR										
17...	1600	0.45	220	--	0.0	--	--	--	--	--
18...	1635	6.6	150	7.0	.0	52	13	12	5.3	3.1
20...	1535	2.2	145	--	1.0	--	--	--	--	--
21...	1340	.65	180	--	2.0	--	--	--	--	--
25...	1215	.20	240	--	4.0	--	--	--	--	--
27...	1145	.20	255	6.6	3.5	110	28	24	12	4.6
31...	1500	.02	350	--	10.0	--	--	--	--	--
APR										
04...	1040	.01	450	--	9.0	--	--	--	--	--
08...	1005	.01	480	--	6.0	--	--	--	--	--
10...	1220	.03	625	--	12.5	--	--	--	--	--

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
MAR										
17...	--	--	--	--	--	--	--	--	--	--
18...	9	0.2	15	39	21	17	0.0	5.4	103	0.14
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	7	.2	13	81	40	5.3	.1	12	160	.22
31...	--	--	--	--	--	--	--	--	--	--
APR										
04...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR									
17...	--	--	--	--	--	--	--	36	0.04
18...	1.84	3.2	190	130	30	<10	40	36	.64
20...	--	--	--	--	--	--	--	40	.24
21...	--	--	--	--	--	--	--	42	.07
25...	--	--	--	--	--	--	--	28	.02
27...	.09	1.8	100	180	20	<10	80	26	.01
31...	--	--	--	--	--	--	--	14	.00
APR									
04...	--	--	--	--	--	--	--	16	.00
08...	--	--	--	--	--	--	--	30	.00
10...	--	--	--	--	--	--	--	23	.00

PERIOD: February 17, 1981, through July 21, 1981.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM RECOV. FM BOT-TOM MA-TERIAL (MG/KG AS CA) (00917)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, RECOV. FM BOT-TOM MA-TERIAL (MG/KG) (00924)
FEB												
17...	1430	6.0	110	--	0.5	--	--	--	--	--	--	--
18...	1432	5.5	150	7.9	1.0	66	67	16	17	--	5.9	--
19...	1413	4.2	160	--	2.0	--	--	--	--	--	--	--
23...	1039	.12	250	--	1.5	--	--	--	--	--	--	--
23...	1407	.11	255	--	4.5	--	--	--	--	--	--	--
25...	1155	.01	300	--	2.0	--	--	--	--	--	--	--
JUL												
21...	1300	--	--	--	--	--	--	--	--	340	--	130

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, RECOV. FM BOT-TOM MA-TERIAL (MG/KG AS NA) (00934)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	POTAS-SIUM, RECOV. FM BOT-TOM MA-TERIAL (MG/KG) (00938)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
FEB												
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	3.1	7	0.2	--	13	--	51	5.1	16	0.1	100	0.14
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
21...	--	--	--	4.0	--	1180	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS B) (01023)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) (01170)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01063)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
FEB											
17...	--	--	--	--	--	--	--	--	--	--	--
18...	1.5	170	--	400	--	10	60	--	0	--	60
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
21...	--	--	265	--	11000	--	--	640	--	3	--

DATE	STRON-TIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01083)	POTAS-SIUM 40 DIS-SOLVED (PCI/L AS K40) (82068)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)
FEB											
17...	--	--	92	1.5	--	--	--	--	--	--	--
18...	--	9.7	76	1.1	--	--	--	--	--	--	--
19...	--	--	64	.73	--	--	--	--	--	--	--
23...	--	--	48	.02	--	--	--	--	--	--	--
23...	--	--	54	.02	--	--	--	--	--	--	--
25...	--	--	12	.00	--	--	--	--	--	--	--
JUL											
21...	82	--	--	--	73	75	81	92	94	96	98

PERIOD: March 17, 1982, through April 28, 1982.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	TEMPER-ATURE (DEG C) (00010)
MAR				
17...	1212	0.66	140	0.5
24...	1221	.04	--	.5
31...	1121	13	110	.5
APR				
08...	1149	.22	215	.5
12...	1406	79	80	2.0
14...	1140	4.4	190	10.5
21...	1205	.22	360	12.0
22...	1222	.11	410	16.0
28...	1049	.02	600	14.5

KNIFE RIVER BASIN

06340528 WEST BRANCH ANTELOPE CREEK NO. 4 NEAR ZAP, N. DAK.

LOCATION: Lat 47°21'21", long 101°51'16", in NW¼NW¼NE¼ sec. 26, T. 145 N., R. 88 W., Mercer County, Hydrologic Unit 10130201, on the left bank upstream from culvert, and 6.0 mi northeast of Zap.

DRAINAGE AREA: 8.46 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD: October 1976 through April 1982.

GAGE: Water-stage recorder.

REMARKS: Some regulation due to stock dams above station.

EXTREMES FOR PERIOD OF RECORD: Maximum instantaneous discharge, 650 ft^3/s, April 17, 1979; maximum gage height, 9.66 ft, April 17, 1979; no flow most of the time.

EXTREMES:

	Instantaneous peak discharge with base of 10.0 ft^3/s				
Period	Date	Time	Instantaneous discharge (ft^3/s)	Gage height (ft)	Minimum discharge (ft^3/s)
Water year 1977	June 15	--	36	3.85	No flow most of the time.
Water year 1978	March 24	--	--	[1]7.07	No flow most of the time.
	March 26	--	122	6	
Water year 1979	April 11	--	35	[1]--	No flow most of the time.
	April 17	2300	650	9.66	
Water year 1980	March 18	--	21	3.43	No flow most of the time.
Water year 1981	February 16	--	30	3.70	No flow most of the time.
	September 5	2245	99	2.80	
October 1, 1981, through April 30, 1982	March 29	--	200	[1]--	No flow most of the time.
	April 11	--	212	7.52	

[1]Backwater from ice.

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1977.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00
3	.00	.00	.00	.00	.00	.00	.03	.00	.00	.01	.00	.00
4	.00	.00	.00	.00	.00	.00	.05	.00	.00	.01	.00	.00
5	.00	.00	.00	.00	.00	.00	.07	.00	.00	.01	.00	.00
6	.00	.00	.00	.00	.00	.00	.14	.00	.00	.01	.00	.00
7	.00	.00	.00	.00	.00	.00	.13	.00	.00	.01	.00	.00
8	.00	.00	.00	.00	.00	.00	.11	.00	.00	.01	.00	.00
9	.00	.00	.00	.00	.00	.00	.10	.00	.00	.01	.00	.00
10	.00	.00	.00	.00	.00	.00	.09	.00	.00	.01	.00	.00
11	.00	.00	.00	.00	.00	.00	.06	.00	.00	.01	.00	.00
12	.00	.00	.00	.00	.00	.00	.04	.00	.00	.01	.00	.00
13	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.02	.00	4.1	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.02	.00	3.1	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.02	.00	.48	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.01	.00	.16	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.01	.00	.07	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.02	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.01	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.98	.00	8.21	.12	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.033	.000	.27	.004	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.14	.00	4.1	.01	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	1.9	.00	16	.2	.00	.00

WTR YR 1977 TOTAL 9.31 MEAN .026 MAX 4.1 MIN .00 AC-FT 18

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1978.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	5.4	0.25	0.14	0.01	0.01	0.00
2	.00	.00	.00	.00	.00	.00	2.6	.21	.06	.01	.01	.00
3	.00	.00	.00	.00	.00	.00	3.3	.18	.02	.01	.00	.00
4	.00	.00	.00	.00	.00	.00	4.2	.16	.01	.02	.00	.00
5	.00	.00	.00	.00	.00	.00	6.2	.16	.01	.01	.00	.00
6	.00	.00	.00	.00	.00	.00	4.9	.15	.01	.02	.00	.00
7	.00	.00	.00	.00	.00	.00	2.9	.36	.01	.02	.00	.00
8	.00	.00	.00	.00	.00	.00	1.9	1.6	.01	.02	.00	.00
9	.00	.00	.00	.00	.00	.00	1.6	1.2	.01	.03	.00	.00
10	.00	.00	.00	.00	.00	.00	1.8	.63	.01	.02	.00	.00
11	.00	.00	.00	.00	.00	.00	1.6	.44	.01	.02	.00	.00
12	.00	.00	.00	.00	.00	.00	1.7	.67	.01	.13	.00	.12
13	.00	.00	.00	.00	.00	.00	1.3	.78	.00	.03	.00	.00
14	.00	.00	.00	.00	.00	.00	1.1	.54	.00	.02	.00	.00
15	.00	.00	.00	.00	.00	.00	.97	.40	.00	.02	.00	.00
16	.00	.00	.00	.00	.00	.00	1.1	.27	.00	.02	.00	.00
17	.00	.00	.00	.00	.00	.00	1.3	.17	.00	.02	.00	.00
18	.00	.00	.00	.00	.00	.00	1.6	.12	.00	.02	.00	.00
19	.00	.00	.00	.00	.00	.00	1.0	.11	.00	.04	.00	.00
20	.00	.00	.00	.00	.00	.00	.66	.14	.00	.03	.00	.00
21	.00	.00	.00	.00	.00	.00	.57	.09	.00	.03	.00	.00
22	.00	.00	.00	.00	.00	3.0	.56	.06	.00	.03	.00	.00
23	.00	.00	.00	.00	.00	.50	.89	.03	.00	.03	.00	.00
24	.00	.00	.00	.00	.00	3.0	.63	.02	.00	.02	.00	.00
25	.00	.00	.00	.00	.00	50	.56	.01	.00	.02	.00	.00
26	.00	.00	.00	.00	.00	80	.48	.01	.00	.02	.00	.00
27	.00	.00	.00	.00	.00	74	.43	.01	.00	.02	.00	.00
28	.00	.00	.00	.00	.00	37	.46	.01	.00	.02	.00	.00
29	.00	.00	.00	.00	---	29	.41	.01	.20	.02	.00	.00
30	.00	.00	.00	.00	---	30	.33	.01	.16	.02	.00	.00
31	.00	---	.00	.00	---	17	---	.01	---	.01	.00	---
TOTAL	.00	.00	.00	.00	.00	323.50	52.45	8.81	.67	.76	.02	.12
MEAN	.000	.000	.000	.000	.000	10.4	1.75	.28	.022	.025	.001	.004
MAX	.00	.00	.00	.00	.00	80	6.2	1.6	.20	.13	.01	.12
MIN	.00	.00	.00	.00	.00	.00	.33	.01	.00	.01	.00	.00
AC-FT	.00	.00	.00	.00	.00	642	104	17	1.3	1.5	.04	.2

WTR YR 1978 TOTAL 386.33 MEAN 1.06 MAX 80 MIN .00 AC-FT 766

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1979.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.03	0.02	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.00	.54	.02	.01	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.49	.02	.01	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.46	.02	.01	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.49	.01	.01	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.82	.01	.01	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.77	.01	.01	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.57	.01	.01	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.49	.01	.01	.00	.00
10	.00	.00	.00	.00	.00	.00	5.0	.44	.01	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	25	.39	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	3.0	.32	.01	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	1.0	.30	.01	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	1.0	.29	.01	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.50	.27	.01	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	53	.27	.01	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	140	.24	.01	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	136	.20	.02	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	19	.31	.02	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	5.2	.35	.01	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	3.8	.31	.03	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	3.8	.23	.02	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	2.8	.18	.02	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	1.8	.14	.02	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	1.5	.11	.02	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	1.3	.08	.01	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	1.1	.06	.01	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	1.1	.05	.01	.00	.00	.00
29	.00	.00	.00	.00	---	.00	1.0	.04	.01	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.82	.04	.01	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.03	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	407.72	9.93	.43	.10	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	13.6	.32	.014	.003	.000	.000
MAX	.00	.00	.00	.00	.00	.00	140	.82	.03	.02	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.03	.01	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	809	20	.9	.2	.00	.00

WTR YR 1979 TOTAL 418.18 MEAN 1.15 MAX 140 MIN .00 AC-FT 829

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1980.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.18	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.18	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.01	.08	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.01	.09	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.70	.08	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.05	.05	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.90	.04	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	4.5	.03	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	9.3	.02	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	3.1	.02	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	2.2	.01	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	1.2	.01	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.72	.01	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.49	.01	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.95	.01	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.80	.01	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.76	.01	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.68	.01	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.49	.01	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.49	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.33	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	27.68	2.48	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.89	.083	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	9.3	.24	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	55	4.9	.00	.00	.00	.00	.00

WTR YR 1980 TOTAL 30.16 MEAN .082 MAX 9.3 MIN .00 AC-FT 60

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: Water year 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
2	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.51	.00	.00	.00	.00	.00	4.5
6	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	2.2
7	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	20	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	5.0	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	2.9	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	2.6	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.99	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.59	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.32	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.01	.00	.02	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.01	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.02	.00	44.83	.91	.00	.00	.00	.00	.00	6.70
MEAN	.000	.000	.001	.000	1.60	.029	.000	.000	.000	.000	.000	.22
MAX	.00	.00	.01	.00	20	.51	.00	.00	.00	.00	.00	4.5
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.04	.00	89	1.8	.00	.00	.00	.00	.00	13

WTR YR 1981 TOTAL 52.46 MEAN .14 MAX 20 MIN .00 AC-FT 104

DISCHARGE (FT^3/S)
MEAN VALUES

PERIOD: October 1, 1981, through April 30, 1982.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	28					
2	.00	.00	.00	.00	.00	.00	12					
3	.00	.00	.00	.00	.00	.00	12					
4	.00	.00	.00	.00	.00	.00	6.1					
5	.00	.00	.00	.00	.00	.00	1.0					
6	.00	.00	.00	.00	.00	.00	.72					
7	.00	.00	.00	.00	.00	.00	.45					
8	.00	.00	.00	.00	.00	.00	.42					
9	.00	.00	.00	.00	.00	.00	.54					
10	.00	.00	.00	.00	.00	.00	6.0					
11	.00	.00	.00	.00	.00	.00	60					
12	.00	.00	.00	.00	.00	.00	75					
13	.00	.00	.00	.00	.00	.20	26					
14	.00	.00	.00	.00	.00	1.5	14					
15	.00	.00	.00	.00	.00	3.0	7.1					
16	.00	.00	.00	.00	.00	5.0	2.9					
17	.00	.00	.00	.00	.00	6.0	1.9					
18	.00	.00	.00	.00	.00	1.0	1.6					
19	.00	.00	.00	.00	.00	.10	1.8					
20	.00	.00	.00	.00	.00	.10	1.4					
21	.00	.00	.00	.00	.80	.10	1.1					
22	.00	.00	.00	.00	.40	.20	.84					
23	.00	.00	.00	.00	.00	.20	.76					
24	.00	.00	.00	.00	.00	.10	.60					
25	.00	.00	.00	.00	.00	.20	.42					
26	.00	.00	.00	.00	.00	.10	.38					
27	.00	.00	.00	.00	.00	.20	.32					
28	.00	.00	.00	.00	.00	20	.30					
29	.00	.00	.00	.00	---	90	.28					
30	.00	.00	.00	.00	---	69	.26					
31	.00	---	.00	.00	---	28	---					
TOTAL	.00	.00	.00	.00	1.20	225.00	264.19					
MEAN	.000	.000	.000	.000	.043	7.26	8.81					
MAX	.00	.00	.00	.00	.80	90	75					
MIN	.00	.00	.00	.00	.00	.00	.26					
AC-FT	.00	.00	.00	.00	2.4	446	524					

PERIOD OF RECORD: June 1977 through April 1982.

PERIOD: June 15, 1977, through June 16, 1977.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	COLOR (PLAT-INUM COBALT UNITS) (00080)	TUR-BID-ITY (JTU) (00070)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JUN												
15...	1055	1.9	890	7.6	20.5	--	--	--	--	--	--	--
15...	1100	1.7	890	7.5	20.5	70	85	330	210	66	40	66
15...	1200	--	--	--	--	--	--	--	--	--	--	--
15...	1310	1.2	--	--	20.5	--	--	--	--	--	--	--
15...	1340	--	--	--	20.5	--	--	--	--	--	--	--
15...	1435	--	--	--	21.0	--	--	--	--	--	--	--
16...	0850	--	--	--	15.5	--	--	--	--	--	--	--
16...	1115	--	--	--	17.0	--	--	--	--	--	--	--
16...	1355	--	--	--	19.5	--	--	--	--	--	--	--

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE (MG/L AS HCO3) (00440)	CAR-BONATE (MG/L AS CO3) (00445)	ALKA-LINITY (MG/L AS CACO3) (00410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	30	1.6	6.1	150	0	120	6.8	330	3.0	0.2	8.0
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	626	595	0.85	2.89	0.21	0.010	0.01	0.40	0.41	0.100	20
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

PERIOD: June 15, 1977, through June 16, 1977--Continued.

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	1	100	5	120	1	10	0	3	50	3	30
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
JUN											
15...	--	--	--	--	--	--	--	--	--	230	1.2
15...	20	0.0	0	2	0	560	0.4	0	9.5	--	--
15...	--	--	--	--	--	--	--	--	--	158	--
15...	--	--	--	--	--	--	--	--	--	134	.43
15...	--	--	--	--	--	--	--	--	--	126	--
15...	--	--	--	--	--	--	--	--	--	122	--
16...	--	--	--	--	--	--	--	--	--	191	--
16...	--	--	--	--	--	--	--	--	--	167	--
16...	--	--	--	--	--	--	--	--	--	180	--

PERIOD: March 22, 1978, through September 12, 1978.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
MAR											
22...	1555	0.30	240	--	1.0	--	--	--	--	--	--
22...	1630	6.5	--	--	--	--	--	--	--	--	--
22...	1700	--	240	7.1	1.0	84	24	19	8.9	11	20
23...	0745	--	--	--	.0	--	--	--	--	--	--
23...	1015	.71	--	--	.0	--	--	--	--	--	--
23...	1455	--	--	--	--	--	--	--	--	--	--
24...	0930	--	--	--	--	--	--	--	--	--	--
24...	1150	2.4	--	--	.0	--	--	--	--	--	--
25...	1225	35	208	--	2.0	--	--	--	--	--	--
25...	1445	--	--	--	--	--	--	--	--	--	--
26...	1230	83	--	--	.5	--	--	--	--	--	--
27...	1545	140	118	--	1.0	--	--	--	--	--	--
28...	1020	--	--	--	--	--	--	--	--	--	--
28...	1315	25	159	--	1.0	--	--	--	--	--	--
29...	1230	16	280	--	1.5	--	--	--	--	--	--
30...	1100	16	255	7.4	3.0	99	32	23	10	11	18
APR											
04...	1035	3.3	800	--	4.0	--	--	--	--	--	--
05...	1200	--	--	--	--	--	--	--	--	--	--
19...	1250	1.1	1095	--	6.0	--	--	--	--	--	--
MAY											
02...	0930	.20	--	--	11.5	--	--	--	--	--	--
JUN											
29...	1625	--	--	--	16.0	--	--	--	--	--	--
29...	1710	--	1300	--	16.0	--	--	--	--	--	--
29...	1715	--	--	--	--	--	--	--	--	--	--
29...	1740	--	--	--	--	--	--	--	--	--	--
29...	1741	--	--	--	17.5	--	--	--	--	--	--
29...	1810	--	--	--	--	--	--	--	--	--	--
29...	1840	--	--	--	--	--	--	--	--	--	--
SEP											
12...	0200	--	--	--	--	--	--	--	--	--	--
12...	0230	--	--	--	--	--	--	--	--	--	--
12...	0700	--	--	--	--	--	--	--	--	--	--
12...	0730	--	--	--	--	--	--	--	--	--	--
12...	0800	--	--	--	--	--	--	--	--	--	--
12...	1045	.12	900	7.3	15.5	--	--	--	--	--	--

PERIOD: March 22, 1978, through September 12, 1978--Continued.

DATE	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE (MG/L AS HCO3) (00440)	CARBONATE (MG/L AS CO3) (00445)	ALKALINITY (MG/L AS CACO3) (00410)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	0.5	8.7	74	0	61	9.4	53	2.3	0.0	5.7	146
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
30...	.5	6.2	81	0	66	5.2	56	1.8	.1	7.6	156
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
MAY											
02...	--	--	--	--	--	--	--	--	--	--	--
JUN											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--

PERIOD: March 22, 1978, through September 12, 1978--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR										
22...	--	--	--	--	--	--	--	--	21	0.02
22...	--	--	--	--	--	--	--	--	26	.46
22...	0.20	1.3	0	70	110	50	1	180	--	--
23...	--	--	--	--	--	--	--	--	9	--
23...	--	--	--	--	--	--	--	--	11	.02
23...	--	--	--	--	--	--	--	--	26	--
24...	--	--	--	--	--	--	--	--	10	--
24...	--	--	--	--	--	--	--	--	9	.06
25...	--	--	--	--	--	--	--	--	50	4.7
25...	--	--	--	--	--	--	--	--	100	--
26...	--	--	--	--	--	--	--	--	84	19
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	222	--
28...	--	--	--	--	--	--	--	--	76	5.1
29...	--	--	--	--	--	--	--	--	99	4.3
30...	.21	.85	20	60	330	50	1	180	68	2.9
APR										
04...	--	--	--	--	--	--	--	--	7	.06
05...	--	--	--	--	--	--	--	--	6	--
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	--	--	--	--	--	--	--	9	.00
JUN										
29...	--	--	--	--	--	--	--	--	38	--
29...	--	--	--	--	--	--	--	--	73	--
29...	--	--	--	--	--	--	--	--	65	--
29...	--	--	--	--	--	--	--	--	[2]37	--
29...	--	--	--	--	--	--	--	--	40	--
29...	--	--	--	--	--	--	--	--	[2]38	--
29...	--	--	--	--	--	--	--	--	[2]70	--
SEP										
12...	--	--	--	--	--	--	--	--	[2]272	--
12...	--	--	--	--	--	--	--	--	[2]83	--
12...	--	--	--	--	--	--	--	--	[2]103	--
12...	--	--	--	--	--	--	--	--	[2]147	--
12...	--	--	--	--	--	--	--	--	[2]126	--
12...	--	--	--	--	--	--	--	--	37	.01

[2]Point source sample obtained by an automatic sediment sampler.

PERIOD: April 10, 1979, through June 15, 1979.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
APR										
10...	1215	1.7	410	--	1.0	--	--	--	--	--
10...	1354	--	--	--	--	--	--	--	--	--
10...	1554	--	--	--	--	--	--	--	--	--
10...	1754	--	--	--	--	--	--	--	--	--
10...	1954	--	--	--	--	--	--	--	--	--
10...	2154	--	--	--	--	--	--	--	--	--
10...	2354	--	--	--	--	--	--	--	--	--
11...	0154	--	--	--	--	--	--	--	--	--
11...	0354	--	--	--	--	--	--	--	--	--
11...	0554	--	--	--	--	--	--	--	--	--
11...	0754	--	--	--	--	--	--	--	--	--
11...	0954	--	--	--	--	--	--	--	--	--
11...	1100	--	--	--	--	--	--	--	--	--
11...	1200	--	--	--	--	--	--	--	--	--
11...	1218	6.6	340	--	1.0	--	--	--	--	--
11...	1225	--	--	--	--	--	--	--	--	--
16...	1359	13	340	--	2.0	--	--	--	--	--
16...	1403	--	--	--	--	--	--	--	--	--
17...	1100	--	140	7.4	1.5	45	19	9.9	4.9	4.7
17...	1121	--	--	--	--	--	--	--	--	--
17...	1515	--	70	--	1.0	--	--	--	--	--
17...	1700	--	90	--	1.0	--	--	--	--	--
17...	1850	--	65	--	.5	--	--	--	--	--
18...	1145	125	110	--	6.0	--	--	--	--	--
18...	1430	--	--	--	--	--	--	--	--	--
19...	1312	13	340	--	6.0	--	--	--	--	--
20...	1305	5.0	565	7.4	9.8	210	94	46	24	29
23...	1440	1.8	925	--	6.0	--	--	--	--	--
30...	1325	.72	1250	--	7.0	--	--	--	--	--
MAY										
08...	1233	.55	1300	--	6.0	--	--	--	--	--
JUN										
15...	1000	.01	1400	7.7	15.5	530	270	130	50	120

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
APR										
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	16	0.3	6.8	26	20	2.1	0.0	5.2	70	0.10
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	22	.9	7.4	120	160	4.2	.1	11	354	.48
23...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
MAY										
08...	--	--	--	--	--	--	--	--	--	--
JUN										
15...	44	2.4	6.5	260	500	5.6	.3	11	981	1.33

PERIOD: April 10, 1979, through June 15, 1979--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY) (80155)
APR									
10...	--	--	--	--	--	--	--	20	0.09
10...	--	--	--	--	--	--	--	[2]12	--
10...	--	--	--	--	--	--	--	[2]19	--
10...	--	--	--	--	--	--	--	[2]32	--
10...	--	--	--	--	--	--	--	[2]19	--
10...	--	--	--	--	--	--	--	[2]12	--
10...	--	--	--	--	--	--	--	[2]12	--
11...	--	--	--	--	--	--	--	[2]17	--
11...	--	--	--	--	--	--	--	[2]12	--
11...	--	--	--	--	--	--	--	[2]12	--
11...	--	--	--	--	--	--	--	[2]12	--
11...	--	--	--	--	--	--	--	[2]20	--
11...	--	--	--	--	--	--	--	[2]16	--
11...	--	--	--	--	--	--	--	[2]19	--
11...	--	--	--	--	--	--	--	37	.66
11...	--	--	--	--	--	--	--	[2]22	--
16...	--	--	--	--	--	--	--	59	2.1
16...	--	--	--	--	--	--	--	[2]91	--
17...	--	1.1	60	180	40	<10	60	87	--
17...	--	--	--	--	--	--	--	[2]101	--
17...	--	--	--	--	--	--	--	201	--
17...	--	--	--	--	--	--	--	296	--
17...	--	--	--	--	--	--	--	325	--
18...	--	--	--	--	--	--	--	248	84
18...	--	--	--	--	--	--	--	114	--
19...	--	--	--	--	--	--	--	54	2.0
20...	4.78	.95	50	70	120	<10	330	28	.38
23...	--	--	--	--	--	--	--	8	.04
30...	--	--	--	--	--	--	--	--	--
MAY									
08...	--	--	--	--	--	--	--	--	--
JUN									
15...	.03	.44	190	20	50	0	1200	--	--

DATE	SEDIMENT, SUSPENDED FALL DIAMETER PERCENT FINER THAN 0.004 MM (70338)	SEDIMENT, SUSPENDED FALL DIAMETER PERCENT FINER THAN 0.016 MM (70340)	SEDIMENT, SUSPENDED FALL DIAMETER PERCENT FINER THAN 0.062 MM (70342)
APR			
10...	--	--	--
10...	--	--	--
10...	--	--	--
10...	--	--	--
10...	--	--	--
10...	--	--	--
10...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
11...	--	--	--
16...	--	--	--
16...	--	--	--
17...	--	--	--
17...	--	--	--
17...	60	88	100
17...	--	--	--
17...	--	--	--
18...	--	--	--
18...	--	--	--
19...	--	--	--
20...	--	--	--
23...	--	--	--
30...	--	--	--
MAY			
08...	--	--	--
JUN			
15...	--	--	--

[2]Point source sample obtained by an automatic sediment sampler.

PERIOD: March 17, 1980, through April 22, 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SOOIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR										
17...	1400	0.85	320	--	0.5	--	--	--	--	--
18...	1230	--	--	--	--	--	--	--	--	--
18...	1236	--	--	--	--	--	--	--	--	--
18...	1245	--	--	--	--	--	--	--	--	--
18...	1300	--	--	--	--	--	--	--	--	--
18...	1315	4.3	400	--	1.0	--	--	--	--	--
18...	1317	--	--	--	--	--	--	--	--	--
18...	1330	--	--	--	--	--	--	--	--	--
18...	1345	--	--	--	--	--	--	--	--	--
18...	1400	--	--	--	--	--	--	--	--	--
18...	1415	--	--	--	--	--	--	--	--	--
18...	1430	--	--	--	--	--	--	--	--	--
18...	1445	--	--	--	--	--	--	--	--	--
18...	1515	--	--	--	--	--	--	--	--	--
18...	1530	--	--	--	--	--	--	--	--	--
18...	1545	--	--	--	--	--	--	--	--	--
18...	1600	--	--	--	--	--	--	--	--	--
18..	1615	--	--	--	--	--	--	--	--	--
18...	1630	--	--	--	--	--	--	--	--	--
18...	1645	--	--	--	--	--	--	--	--	--
18...	1700	--	--	--	--	--	--	--	--	--
18...	1715	--	--	--	--	--	--	--	--	--
18...	1730	--	--	--	--	--	--	--	--	--
18...	1745	--	--	--	--	--	--	--	--	--
18...	1800	--	--	--	--	--	--	--	--	--
18...	1815	--	--	--	--	--	--	--	--	--
18...	1830	--	--	--	--	--	--	--	--	--
18...	1845	--	--	--	--	--	--	--	--	--
18...	1900	--	--	--	--	--	--	--	--	--
18...	1915	--	--	--	--	--	--	--	--	--
18...	1930	--	--	--	--	--	--	--	--	--
18...	1945	--	--	--	--	--	--	--	--	--
18...	2000	--	--	--	--	--	--	--	--	--
18...	2015	--	--	--	--	--	--	--	--	--
18...	2030	--	--	--	--	--	--	--	--	--
18...	2045	--	--	--	--	--	--	--	--	--
18...	2100	--	--	--	--	--	--	--	--	--
18...	2115	--	--	--	--	--	--	--	--	--
18...	2130	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR										
18...	2145	--	--	--	--	--	--	--	--	--
18...	2200	--	--	--	--	--	--	--	--	--
18...	2215	--	--	--	--	--	--	--	--	--
18...	2230	--	--	--	--	--	--	--	--	--
18...	2245	--	--	--	--	--	--	--	--	--
18...	2300	--	--	--	--	--	--	--	--	--
19...	0300	--	--	--	--	--	--	--	--	--
19...	0500	--	--	--	--	--	--	--	--	--
19...	0700	--	--	--	--	--	--	--	--	--
19...	0900	--	--	--	--	--	--	--	--	--
19...	1045	--	--	--	--	--	--	--	--	--
19...	1145	--	--	--	--	--	--	--	--	--
19...	1215	8.6	170	7.7	0.0	64	19	14	7.0	5.5
19...	1415	--	--	--	--	--	--	--	--	--
19...	1430	--	--	--	--	--	--	--	--	--
19...	1445	--	--	--	--	--	--	--	--	--
19...	1500	--	--	--	--	--	--	--	--	--
19...	1515	--	--	--	--	--	--	--	--	--
19...	1530	--	--	--	--	--	--	--	--	--
19...	1545	--	--	--	--	--	--	--	--	--
19...	1600	--	--	--	--	--	--	--	--	--
19...	1615	--	--	--	--	--	--	--	--	--
20...	1200	--	--	--	--	--	--	--	--	--
20...	1245	--	--	--	--	--	--	--	--	--
20...	1250	3.4	200	--	.5	--	--	--	--	--
20...	1415	--	--	--	--	--	--	--	--	--
20...	1515	--	--	--	--	--	--	--	--	--
20...	1615	--	--	--	--	--	--	--	--	--
20...	1715	--	--	--	--	--	--	--	--	--
20...	1815	--	--	--	--	--	--	--	--	--
20...	1915	--	--	--	--	--	--	--	--	--
20...	2015	--	--	--	--	--	--	--	--	--
20...	2100	--	--	--	--	--	--	--	--	--
20...	2200	--	--	--	--	--	--	--	--	--
20...	2300	--	--	--	--	--	--	--	--	--
20...	2400	--	--	--	--	--	--	--	--	--
21...	0100	--	--	--	--	--	--	--	--	--
21...	0200	--	--	--	--	--	--	--	--	--
21...	0300	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)	PH FIELD (UNITS) (00400)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR										
21...	0400	--	--	--	--	--	--	--	--	--
21...	0500	--	--	--	--	--	--	--	--	--
21...	0600	--	--	--	--	--	--	--	--	--
21...	0700	--	--	--	--	--	--	--	--	--
21...	0815	--	--	--	--	--	--	--	--	--
21...	0915	--	--	--	--	--	--	--	--	--
21...	1015	--	--	--	--	--	--	--	--	--
21...	1115	--	--	--	--	--	--	--	--	--
21...	1215	--	--	--	--	--	--	--	--	--
21...	1315	--	--	--	--	--	--	--	--	--
21...	1415	--	--	--	--	--	--	--	--	--
21...	1500	2.3	210	--	1.0	--	--	--	--	--
21...	1503	--	--	--	--	--	--	--	--	--
21...	1518	--	--	--	--	--	--	--	--	--
21...	1615	--	--	--	--	--	--	--	--	--
21...	1715	--	--	--	--	--	--	--	--	--
21...	1815	--	--	--	--	--	--	--	--	--
21...	1915	--	--	--	--	--	--	--	--	--
21...	2015	--	--	--	--	--	--	--	--	--
21...	2100	--	--	--	--	--	--	--	--	--
21...	2200	--	--	--	--	--	--	--	--	--
21...	2300	--	--	--	--	--	--	--	--	--
21...	2400	--	--	--	--	--	--	--	--	--
22...	0100	--	--	--	--	--	--	--	--	--
22...	0200	--	--	--	--	--	--	--	--	--
22...	0300	--	--	--	--	--	--	--	--	--
22...	0400	--	--	--	--	--	--	--	--	--
22...	0500	--	--	--	--	--	--	--	--	--
22...	0600	--	--	--	--	--	--	--	--	--
25...	1120	.62	440	--	1.0	--	--	--	--	--
31...	1240	.21	560	7.0	2.0	240	100	52	27	42
APR										
04...	1145	.14	625	--	5.0	--	--	--	--	--
08...	1125	.14	780	--	5.0	--	--	--	--	--
17...	1055	.04	1100	--	13.0	--	--	--	--	--
22...	1200	.01	1230	--	14.5	--	--	--	--	--

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY (MG/L AS CACO3) (00410)	SULFATE, DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
MAR										
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
MAR										
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	13	0.3	13	45	35	5.0	0.0	7.2	114	0.16
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY (MG/L AS CACO3) (00410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
MAR										
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
31...	27	1.2	8.5	140	190	3.6	0.2	10	418	0.57
APR										
04...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR									
17...	--	--	--	--	--	--	--	22	0.05
18...	--	--	--	--	--	--	--	[2]12	--
18...	--	--	--	--	--	--	--	[2]15	--
18...	--	--	--	--	--	--	--	[2]18	--
18...	--	--	--	--	--	--	--	[2]19	--
18...	--	--	--	--	--	--	--	35	.41
18...	--	--	--	--	--	--	--	[2]22	--
18...	--	--	--	--	--	--	--	[2]31	--
18...	--	--	--	--	--	--	--	[2]21	--
18...	--	--	--	--	--	--	--	[2]3	--
18...	--	--	--	--	--	--	--	[2]20	--
18...	--	--	--	--	--	--	--	[2]24	--
18...	--	--	--	--	--	--	--	[2]24	--
18...	--	--	--	--	--	--	--	[2]20	--
18...	--	--	--	--	--	--	--	[2]14	--
18...	--	--	--	--	--	--	--	[2]11	--
18...	--	--	--	--	--	--	--	[2]25	--
18...	--	--	--	--	--	--	--	[2]29	--
18...	--	--	--	--	--	--	--	[2]29	--
18...	--	--	--	--	--	--	--	[2]25	--
18...	--	--	--	--	--	--	--	[2]33	--
18...	--	--	--	--	--	--	--	[2]30	--
18...	--	--	--	--	--	--	--	[2]32	--
18...	--	--	--	--	--	--	--	[2]42	--
18...	--	--	--	--	--	--	--	[2]33	--
18...	--	--	--	--	--	--	--	[2]39	--
18...	--	--	--	--	--	--	--	[2]37	--
18...	--	--	--	--	--	--	--	[2]34	--
18...	--	--	--	--	--	--	--	[2]31	--
18...	--	--	--	--	--	--	--	[2]26	--
18...	--	--	--	--	--	--	--	[2]31	--
18...	--	--	--	--	--	--	--	[2]29	--
18...	--	--	--	--	--	--	--	[2]31	--
18...	--	--	--	--	--	--	--	[2]32	--
18...	--	--	--	--	--	--	--	[2]30	--
18...	--	--	--	--	--	--	--	[2]28	--
18...	--	--	--	--	--	--	--	[2]22	--
18...	--	--	--	--	--	--	--	[2]29	--
18...	--	--	--	--	--	--	--	[2]33	--

[2]Point source sample obtained by an automatic sediment sampler.

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY) (80155)
MAR									
18...	--	--	--	--	--	--	--	[2]25	--
18...	--	--	--	--	--	--	--	[2]34	--
18...	--	--	--	--	--	--	--	[2]31	--
18...	--	--	--	--	--	--	--	[2]30	--
18...	--	--	--	--	--	--	--	[2]31	--
18...	--	--	--	--	--	--	--	[2]33	--
19...	--	--	--	--	--	--	--	[2]34	--
19...	--	--	--	--	--	--	--	[2]29	--
19...	--	--	--	--	--	--	--	[2]28	--
19...	--	--	--	--	--	--	--	[2]29	--
19...	--	--	--	--	--	--	--	[2]18	--
19...	--	--	--	--	--	--	--	[2]24	--
19...	2.65	12	160	280	40	<10	70	42	0.98
19...	--	--	--	--	--	--	--	[2]28	--
19...	--	--	--	--	--	--	--	[2]34	--
19...	--	--	--	--	--	--	--	[2]23	--
19...	--	--	--	--	--	--	--	[2]36	--
19...	--	--	--	--	--	--	--	[2]33	--
19...	--	--	--	--	--	--	--	[2]43	--
19...	--	--	--	--	--	--	--	[2]44	--
19...	--	--	--	--	--	--	--	[2]43	--
19...	--	--	--	--	--	--	--	[2]44	--
20...	--	--	--	--	--	--	--	[2]45	--
20...	--	--	--	--	--	--	--	[2]43	--
20...	--	--	--	--	--	--	--	32	.29
20...	--	--	--	--	--	--	--	[2]44	--
20...	--	--	--	--	--	--	--	[2]43	--
20...	--	--	--	--	--	--	--	[2]38	--
20...	--	--	--	--	--	--	--	[2]31	--
20...	--	--	--	--	--	--	--	[2]32	--
20...	--	--	--	--	--	--	--	[2]34	--
20...	--	--	--	--	--	--	--	[2]27	--
20...	--	--	--	--	--	--	--	[2]32	--
20...	--	--	--	--	--	--	--	[2]31	--
20...	--	--	--	--	--	--	--	[2]28	--
20...	--	--	--	--	--	--	--	[2]22	--
21...	--	--	--	--	--	--	--	[2]23	--
21...	--	--	--	--	--	--	--	[2]16	--
21...	--	--	--	--	--	--	--	[2]21	--

[2]Point source sample obtained by an automatic sediment sampler.

PERIOD: March 17, 1980, through April 22, 1980--Continued.

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDIMENT, SUS-PENDED (MG/L) (80154)	SEDIMENT DISCHARGE, SUS-PENDED (T/DAY) (80155)
MAR									
21...	--	--	--	--	--	--	--	[2]19	--
21...	--	--	--	--	--	--	--	[2]23	--
21...	--	--	--	--	--	--	--	[2]25	--
21...	--	--	--	--	--	--	--	[2]24	--
21...	--	--	--	--	--	--	--	[2]23	--
21...	--	--	--	--	--	--	--	[2]27	--
21...	--	--	--	--	--	--	--	[2]23	--
21...	--	--	--	--	--	--	--	[2]24	--
21...	--	--	--	--	--	--	--	[2]24	--
21...	--	--	--	--	--	--	--	[2]22	--
21...	--	--	--	--	--	--	--	[2]26	--
21...	--	--	--	--	--	--	--	35	0.22
21...	--	--	--	--	--	--	--	[2]28	--
21...	--	--	--	--	--	--	--	[2]24	--
21...	--	--	--	--	--	--	--	[2]18	--
21...	--	--	--	--	--	--	--	[2]27	--
21...	--	--	--	--	--	--	--	[2]23	--
21...	--	--	--	--	--	--	--	[2]17	--
21...	--	--	--	--	--	--	--	[2]13	--
21...	--	--	--	--	--	--	--	[2]23	--
21...	--	--	--	--	--	--	--	[2]13	--
21...	--	--	--	--	--	--	--	[2]26	--
21...	--	--	--	--	--	--	--	[2]22	--
22...	--	--	--	--	--	--	--	[2]94	--
22...	--	--	--	--	--	--	--	[2]12	--
22...	--	--	--	--	--	--	--	[2]18	--
22...	--	--	--	--	--	--	--	[2]37	--
22...	--	--	--	--	--	--	--	[2]10	--
22...	--	--	--	--	--	--	--	[2]83	--
25...	--	--	--	--	--	--	--	14	.02
31...	0.24	1.0	80	110	40	<10	380	6	.00
APR									
04...	--	--	--	--	--	--	--	4	.00
08...	--	--	--	--	--	--	--	4	.00
17...	--	--	--	--	--	--	--	12	.00
22...	--	--	--	--	--	--	--	--	--

[2]Point source sample obtained by an automatic sediment sampler.

PERIOD: February 17, 1981, through July 21, 1981.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM RECOV. FM BOT-TOM MA-TERIAL (MG/KG AS CA) (00917)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, RECOV. FM BOT-TOM MA-TERIAL (MG/KG) (00924)
FEB												
17...	1238	11	130	--	0.5	--	--	--	--	--	--	--
18...	1209	4.8	160	--	.5	--	--	--	--	--	--	--
18...	1705	11	200	--	.0	--	--	--	--	--	--	--
19...	1115	2.9	190	8.1	1.0	85	77	13	18	--	7.7	--
23...	1205	.59	310	--	1.5	--	--	--	--	--	--	--
23...	1512	.31	320	--	2.0	--	--	--	--	--	--	--
25...	1235	.01	375	--	2.0	--	--	--	--	--	--	--
MAR												
11...	1424	.03	560	--	3.0	--	--	--	--	--	--	--
JUL												
21...	1000	--	--	--	--	--	--	--	--	270	--	108

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, RECOV. FM BOT-TOM MA-TERIAL (MG/KG AS NA) (00934)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	POTAS-SIUM, RECOV. FM BOT-TOM MA-TERIAL (MG/KG) (00936)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
FEB												
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	5.8	12	0.3	--	11	--	66	31	4.2	0.2	129	0.18
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
21...	--	--	--	5.7	--	1517	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS B) (01023)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) (01170)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01063)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
FEB											
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	1.0	10	--	380	--	<4	50	--	<10	--	100
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
11...	--	--	--	--	--	--	--	--	--	--	--
JUL											
21...	--	--	253	--	14000	--	--	600	--	2	--

PERIOD: February 17, 1981, through July 21, 1981--Continued.

DATE	STRONTIUM, RECOV. FM BOTTOM MATERIAL (UG/G) (01083)	POTASSIUM 40 DISSOLVED (PCI/L AS K40) (82068)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)
FEB											
17...	--	--	116	3.6	--	--	--	--	--	--	--
18...	--	--	79	1.0	--	--	--	--	--	--	--
18...	--	--	58	1.7	--	--	--	--	--	--	--
19...	--	8.2	39	.31	--	--	--	--	--	--	--
23...	--	--	24	.04	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	9	.00	--	--	--	--	--	--	--
MAR											
11...	--	--	16	.00	--	--	--	--	--	--	--
JUL											
21...	104	--	--	--	45	54	69	87	91	94	98

PERIOD: February 22, 1982, through April 22, 1982.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHUS) (00095)	PH (UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB										
22...	1125	0.39	260	--	1.0	--	--	--	--	--
MAR										
15...	1140	4.0	280	--	.0	--	--	--	--	--
15...	1320	4.0	295	--	.0	--	--	--	--	--
15...	1323	--	--	--	--	--	--	--	--	--
17...	1330	6.0	215	--	.5	--	--	--	--	--
24...	1007	.02	--	--	.5	--	--	--	--	--
30...	1130	63	95	7.9	.5	32	1.0	7.9	2.9	2.6
31...	1338	18	155	--	1.0	--	--	--	--	--
APR										
01...	1329	22	140	--	1.0	--	--	--	--	--
08...	1143	.52	560	--	.5	--	--	--	--	--
12...	1105	--	150	--	2.0	--	--	--	--	--
14...	1308	12	300	--	9.5	--	--	--	--	--
21...	1025	1.1	800	--	6.0	--	--	--	--	--
22...	1031	.83	850	--	8.5	--	--	--	--	--

DATE	PERCENT SODIUM (00932)	SODIUM AD-SURP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
FEB									
22...	--	--	--	--	--	--	--	--	--
MAR									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
30...	13	0.2	5.2	31	6.0	1.0	<0.1	48	0.07
31...	--	--	--	--	--	--		--	--
APR									
01...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
FEB									
22...	--	--	--	--	--	--	--	15	0.02
MAR									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	10	.11
15...	--	--	--	--	--	--	--	14	--
17...	--	--	--	--	--	--	--	15	.24
24...	--	--	--	--	--	--	--	--	--
30...	8.1	10	93	<12	26	1	37	--	--
31...	--	--	--	--	--	--	--	--	--
APR									
01...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	4	.01
12...	--	--	--	--	--	--	--	313	--
14...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	17	.05
22...	--	--	--	--	--	--	--	--	--

TABLE 6.--Surface-water data for miscellaneous sites

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	TEMPER-ATURE (DEG C) (00010)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)
470019104063600 HAY CREEK NO. 3 NEAR WIBAUX, MONT.						
PERIOD: Water year 1979.						
MAR						
29...	0910	0.89	16	0.04	0.0	1,010
APR						
03...	1210	.83	18	.04	.0	750
10...	1330	1.9	62	.32	4.0	700
470033104064800 HAY CREEK NO. 4 NEAR WIBAUX, MONT.						
PERIOD: Water year 1979.						
APR						
10...	1510	2.0	77	0.42	3.0	750
470113104072500 HAY CREEK NO. 5 NEAR WIBAUX, MONT.						
PERIOD: Water year 1979.						
APR						
10...	1440	4.2	84	0.95	1.0	900
472312101555200 WEST BRANCH ANTELOPE CREEK TRIBUTARY NO. 7 NEAR ZAP, N. DAK.						
PERIOD: Water year 1978.						
MAR						
20...	1415	2.7	520	3.8	0.0	70
21...	0820	[1]1.0	56	--	.0	50
21...	1125	[1]2.0	364	--	.5	55
21...	1400	3.1	953	8.0	2.0	--
22...	0935	[1]2.0	99	--	.5	55
22...	1237	[1]2.0	283	--	4.0	55
23...	0825	[1]1.0	62	--	.0	50
PERIOD: Water year 1979.						
APR						
17...	1215	4.6	6	0.07	3.0	750
18...	1600	1.2	4	.01	18.0	55

[1]Estimated.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	TEMPER-ATURE (DEG C) (00010)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) (00095)
472233101555200 WEST BRANCH ANTELOPE CREEK NO. 8 NEAR ZAP, N. DAK.						
PERIOD: Water year 1979.						
APR						
17...	1402	68	224	41	1.5	75
17...	1802	142	105	40	1.0	150
472213101545500 WEST BRANCH ANTELOPE CREEK TRIBUTARY NO. 11 NEAR ZAP, N. DAK.						
PERIOD: Water year 1978.						
MAR						
23...	1055	[1]1.0	75	--	0.0	110
24...	1045	[1]2.0	70	--	--	--
28...	1200	[1]1.0	36	--	6.5	173
PERIOD: Water year 1979.						
APR						
17...	1428	30	818	66	0.5	750
472121101533900 WEST BRANCH ANTELOPE CREEK TRIBUTARY NO. 13 NEAR ZAP, N. DAK.						
PERIOD: Water year 1978.						
MAR						
23...	1030	[1]0.5	39	--	0.0	70
PERIOD: Water year 1979.						
APR						
09...	1455	11	122	3.7	1.5	75
472309101561300 WEST BRANCH ANTELOPE CREEK NO. 20 NEAR ZAP, N. DAK.						
PERIOD: Water year 1979.						
APR						
17...	1142	30	16	1.3	--	--
18...	1525	38	80	8.2	--	--

[1]Estimated.

TABLE 7.--Soil-moisture data

HAY CREEK BASIN

470226104080410 (W1)

LOCATION: Lat 47°02'26", long 104°08'04", in SW¼SW¼NW¼ sec. 21, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through April 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]5.5
18...	1.0	[1]13.5
18...	1.5	[1]7.0
18...	2.0	[1]6.5
18...	2.5	[1]6.5
18...	3.0	[1]7.5
18...	3.5	[1]7.5

June 12, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
12...	1.0	8.5
12...	1.5	10.5
12...	2.0	10.5
12...	2.5	11.5
12...	3.0	15.0
12...	3.5	15.0
JUL		
17...	1.0	9.5
17...	1.5	14.0
17...	2.0	11.5
17...	2.5	7.5
17...	3.0	8.5
17...	3.5	12.5
31...	1.0	5.0
31...	1.5	9.0
31...	2.0	9.5
31...	2.5	7.0
31...	3.0	8.0
31...	3.5	11.0
SEP		
20...	1.0	3.5
20...	1.5	6.0
20...	2.0	7.5
20...	2.5	6.0
20...	3.0	7.5
20...	3.5	10.5

October 18, 1979, through April 25, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	4.0
18...	1.5	8.0
18...	2.0	8.5
18...	2.5	7.0
18...	3.0	7.5
18...	3.5	10.5
APR		
25...	.5	[2]1.0
25...	1.0	4.0
25...	1.5	10.5
25...	2.0	11.5
25...	2.5	9.5
25...	3.0	9.5
25...	3.5	10.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

470204104080810 (W2)

LOCATION: Lat 47°02'04", long 104°08'08", in SE¼SE¼SE¼ sec. 20, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through September 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]4.5
18...	1.0	[1]6.0
18...	1.5	[1]13.5
18...	2.0	[1]18.5
18...	2.5	[1]19.5
18...	3.0	[1]17.0
18...	3.5	[1]14.5

June 12, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
12...	1.0	8.5
12...	1.5	17.5
12...	2.0	24.0
12...	2.5	26.0
12...	3.0	24.0
12...	3.5	21.0
JUL		
17...	1.0	6.5
17...	1.5	10.5
17...	2.0	19.5
17...	2.5	24.0
17...	3.0	23.5
17...	3.5	19.5
AUG		
01...	1.0	6.5
01...	1.5	10.0
01...	2.0	19.0
01...	2.5	24.0
01...	3.0	24.0
01...	2.5	20.0
SEP		
20...	1.0	4.0
20...	1.5	9.0
20...	2.0	17.5
20...	2.5	23.0
20...	3.0	23.0
20...	3.5	19.0
20...	4.0	18.0

October 18, 1979, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	6.0
18...	1.5	8.5
18...	2.0	17.5
18...	2.5	22.5
18...	3.0	21.5
18...	3.5	17.0
APR		
25...	.5	[2]2.0
25...	1.0	7.5
25...	1.5	13.0
25...	2.0	11.5
25...	2.5	11.5
25...	3.0	15.0
25...	3.5	15.5
MAY		
14...	.5	[2]2.0
14...	1.0	5.0
14...	1.5	9.5
14...	2.0	18.5
14...	2.5	21.5
14...	3.0	21.5
14...	3.5	17.5
29...	.5	[2]2.0
29...	1.0	2.5
29...	1.5	8.0
29...	2.0	17.0
29...	2.5	21.0
29...	3.0	21.0
29...	3.5	17.5
JUN		
11...	.5	[2]3.0
11...	1.0	4.0
11...	1.5	8.5
11...	2.0	18.0
11...	2.5	21.5
11...	3.0	21.5
25...	.5	[2]3.0
25...	1.0	6.0
25...	1.5	9.5
25...	2.0	19.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 18, 1979, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
25...	2.5	21.5
25...	3.0	22.0
JUL		
08...	.5	[2]2.5
08...	1.0	5.0
08...	1.5	9.0
08...	2.0	16.0
08...	2.5	21.5
08...	3.0	21.5
08...	3.5	17.0
AUG		
13...	1.0	4.5
13...	1.5	8.5
13...	2.0	17.5
13...	2.5	21.5
13...	3.0	20.5
13...	3.5	21.5
SEP		
04...	.5	[2]3.5
04...	1.0	8.0
04...	1.5	10.5
04...	2.0	17.5
04...	2.5	21.0
04...	3.0	20.0
04...	3.5	17.5

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]5.9
14...	1.00	5.0
14...	1.50	9.0
14...	2.00	17
14...	2.50	21
14...	3.00	20
MAY		
04...	.50	[2]9.6
04...	1.00	9.5
04...	1.50	19
04...	2.00	20
04...	2.50	14
04...	3.00	16
04...	3.50	17
JUN		
10...	1.00	1.5
10...	1.50	2.5
10...	2.00	3.5
10...	2.50	4.0
10...	3.00	3.5
24...	1.00	7.0
24...	1.50	13
24...	2.00	19
24...	2.50	22
24...	3.00	21
24...	3.50	17
JUL		
30...	.50	[1]8.0
30...	1.00	5.5
30...	1.50	10
30...	2.00	19
30...	2.50	22
30...	3.00	22
30...	3.50	18
AUG		
03...	.50	[1]9.7
03...	1.00	11
03...	1.50	12
03...	2.00	19
03...	2.50	22

October 14, 1980, through September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
03...	3.00	21
03...	3.50	17
SEP		
01...	.50	[1]7.0
01...	1.00	5.0
01...	1.50	10
01...	2.00	19
01...	2.50	22
01...	3.00	21
01...	3.50	17

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

470204104084910 (W3)

LOCATION: Lat 47°02'04", long 104°08'49", in SE¼SW¼SE¼ sec. 20, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through September 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]5.5
18...	1.0	[1]8.0
18...	1.5	[1]17.0
18...	2.0	[1]21.5
18...	2.5	[1]26.0
18...	3.0	[1]27.0
18...	3.5	[1]26.0
18...	4.0	[1]26.0
18...	4.5	[1]29.0
18...	5.0	[1]30.5
18...	5.5	[1]31.5

June 12, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
12...	1.0	8.0
12...	1.5	17.0
12...	2.0	24.0
12...	2.5	29.0
12...	3.0	30.5
12...	3.5	29.5
12...	4.0	28.5
12...	4.5	29.0
12...	5.0	30.0
12...	5.5	31.0
JUL		
17...	1.0	10.0
17...	1.5	12.0
17...	2.0	16.5
17...	2.5	26.0
17...	3.0	28.0
17...	3.5	28.0
17...	4.0	27.0
17...	4.5	27.0
17...	5.0	29.0
17...	5.5	29.5
AUG		
01...	1.0	9.5
01...	1.5	11.0
01...	2.0	16.0
01...	2.5	25.5
01...	3.0	27.0
01...	3.5	27.5
01...	4.0	26.5
01...	4.5	27.0
01...	5.0	28.5
01...	5.5	28.5
SEP		
20...	1.0	7.5
20...	1.5	8.5
20...	2.0	10.5
20...	2.5	19.5
20...	3.0	25.5
20...	3.5	25.5
20...	4.0	25.0

June 12, 1979, through September 20, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
20...	4.5	25.0
20...	5.0	27.5
20...	5.5	27.5
20...	6.0	28.0

[1]Moisture determined from soil sample.

October 18, 1979, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	6.5
18...	1.5	9.0
18...	2.0	13.0
18...	2.5	22.5
18...	3.0	25.5
18...	3.5	25.5
18...	4.0	24.5
18...	4.5	25.0
18...	5.0	27.0
APR		
25...	.5	[2]4.5
25...	1.0	13.0
25...	1.5	17.0
25...	2.0	21.5
25...	2.5	27.0
25...	3.0	27.5
25...	3.5	27.0
25...	4.0	26.0
25...	4.5	25.5
25...	5.0	28.0
MAY		
14...	.5	[2]3.5
14...	1.0	7.5
14...	1.5	11.5
14...	2.0	18.5
14...	2.5	25.5
14...	3.0	27.0
14...	3.5	26.5
14...	4.0	25.5
14...	4.5	25.0
14...	5.0	27.0
29...	.5	[2]3.5
29...	1.0	7.5
29...	1.5	12.0
29...	2.0	19.0
29...	2.5	25.5
29...	3.0	26.5
29...	3.5	26.5
29...	4.0	25.0
29...	4.5	25.5

October 18, 1979, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
29...	5.0	26.5
29...	5.5	26.5
JUN		
11...	.5	[2]5.5
11...	1.0	7.5
11...	1.5	10.5
11...	2.0	17.0
11...	2.5	25.0
11...	3.0	27.5
11...	3.5	27.5
11...	4.0	25.5
11...	4.5	26.0
11...	5.0	28.0
25...	.5	[2]6.0
25...	1.0	10.0
25...	1.5	12.0
25...	2.0	18.5
25...	2.5	25.0
25...	3.0	27.0
25...	3.5	27.0
25...	4.0	25.5
25...	4.5	25.5
25...	5.0	27.5
JUL		
08...	.5	[2]4.0
08...	1.0	7.5
08...	1.5	10.5
08...	2.0	18.0
08...	2.5	25.0
08...	3.0	27.5
08...	3.5	26.0
08...	4.0	25.0
08...	4.5	26.0
08...	5.0	27.5
08...	5.5	27.5
AUG		
13...	1.0	7.5
13...	1.5	10.5
13...	2.0	17.5
13...	2.5	25.0

October 18, 1979, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
13...	3.0	26.5
13...	3.5	26.5
13...	4.0	25.0
13...	4.5	25.5
13...	5.0	27.0
13...	5.5	27.0
SEP		
04...	.5	[2]14.1
04...	1.0	12.0
04...	1.5	12.5
04...	2.0	17.5
04...	2.5	25.5
04...	3.0	26.5
04...	3.5	26.0
04...	4.0	25.0
04...	4.5	24.5
04...	5.0	26.5
04...	5.5	26.0

[2]Soil moisture percent by weight.

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]6.0
14...	1.00	7.0
14...	1.50	11
14...	2.00	19
14...	2.50	25
14...	3.00	27
14...	3.50	25
14...	4.00	25
14...	4.50	25
14...	5.00	27
MAY		
04...	.50	[2]20
04...	1.00	15
04...	1.50	20
04...	2.00	23
04...	2.50	27
04...	3.00	28
04...	3.50	27
04...	4.00	26
04...	4.50	26
04...	5.00	27
04...	5.50	27
JUN		
10...	1.00	2.0
10...	1.50	3.0
10...	2.00	4.0
10...	2.50	4.5
10...	3.00	4.5
10...	3.50	4.5
10...	4.00	4.5
10...	4.50	4.5
10...	5.00	4.5
10...	5.50	4.5
23...	1.00	15
23...	1.50	18
23...	2.00	23
23...	2.50	28
23...	3.00	28
23...	3.50	27
23...	4.00	26

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
23...	4.50	26
23...	5.00	28
23...	5.50	28
JUL		
30...	.50	[1]5.9
30...	1.00	8.0
30...	1.50	13
30...	2.00	22
30...	2.50	28
30...	3.00	29
30...	3.50	29
30...	4.00	27
30...	4.50	27
30...	5.00	29
30...	5.50	29
AUG		
03...	.50	[1]12
03...	1.00	19
03...	1.50	15
03...	2.00	21
03...	2.50	27
03...	3.00	28
03...	3.50	27
03...	4.00	26
03...	4.50	26
03...	5.00	28
03...	5.50	28
SEP		
01...	.50	[1]5.7
01...	1.00	7.0
01...	1.50	12
01...	2.00	20
01...	2.50	27
01...	3.00	28
01...	3.50	27
01...	4.00	25
01...	4.50	26
01...	5.00	28
01...	5.50	28

LOCATION: Lat 47°02'01", long 104°07'39", in NW¼NE¼NW¼ sec. 28, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through April 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]3.5
18...	1.0	[1]5.5
18...	1.5	[1]6.0
18...	2.0	[1]6.0
18...	2.5	[1]6.0
18...	3.0	[1]5.5
18...	3.5	[1]4.5
18...	4.0	[1]4.0
18...	4.5	[1]5.0
18...	5.0	[1]7.5
18...	5.5	[1]8.0
18...	6.0	[1]9.5
18...	6.5	[1]12.5
18...	7.0	[1]15.0
18...	7.5	[1]18.5

June 12, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
12...	1.0	4.5
12...	1.5	7.0
12...	2.0	7.5
12...	2.5	9.0
12...	3.0	9.5
12...	3.5	9.5
12...	4.0	9.0
12...	4.5	9.0
12...	5.0	9.5
12...	5.5	9.5
12...	6.0	11.0
12...	6.5	12.0
12...	7.0	12.0
12...	7.5	13.5
JUL		
17...	1.0	3.0
17...	1.5	6.0
17...	2.0	6.5
17...	2.5	6.5
17...	3.0	6.5
17...	3.5	6.0
17...	4.0	5.0
17...	4.5	5.5
17...	5.0	6.5
17...	5.5	8.0
17...	6.0	9.0
17...	6.5	10.5
17...	7.0	10.5
17...	7.5	12.0
31...	1.0	3.5
31...	1.5	7.0
31...	2.0	6.5
31...	2.5	6.5
31...	3.0	6.5
31...	3.5	6.0
31...	4.0	5.0
31...	4.5	5.0
31...	5.0	6.5
31...	5.5	7.5
31...	6.0	9.0

June 12, 1979, through September 20, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
31...	6.5	10.0
31...	7.0	10.5
31...	7.5	12.0
SEP		
20...	1.0	3.5
20...	1.5	5.5
20...	2.0	5.5
20...	2.5	6.0
20...	3.0	6.0
20...	3.5	5.0
20...	4.0	4.5
20...	4.5	5.0
20...	5.0	6.5
20...	5.5	7.5
20...	6.0	9.0
20...	6.5	9.5
20...	7.0	10.5
20...	7.5	13.0

[1]Moisture determined from soil sample.

October 18, 1979, through
April 25, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	2.0
18...	1.5	5.5
18...	2.0	5.5
18...	2.5	6.0
18...	3.0	6.0
18...	3.5	6.0
18...	4.0	5.0
18...	4.5	5.0
18...	5.0	6.0
18...	5.5	6.5
18...	6.0	8.0
18...	6.5	8.0
18...	7.0	10.0
18...	7.5	11.5
APR		
25...	.5	[2]2.8
25...	1.0	3.5
25...	1.5	4.0
25...	2.0	5.0
25...	2.5	8.0
25...	3.0	13.5
25...	3.5	20.5
25...	4.0	22.0
25...	4.5	25.0
25...	5.0	25.0
25...	5.5	27.5
25...	6.0	29.5
25...	6.5	30.0
25...	7.0	30.5
25...	7.5	31.0

[2]Soil moisture percent by weight.

470110104080410 (W5)

LOCATION: Lat 47°01'10", long 104°08'04", in SW¼SW¼SW¼ sec. 28, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through April 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]4.0
18...	1.0	[1]8.0
18...	1.5	[1]9.5
18...	2.0	[1]10.5
18...	2.5	[1]13.5
18...	3.0	[1]14.5
18...	3.5	[1]13.5
18...	4.0	[1]15.0
18...	4.5	[1]34.0

June 13, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
13...	1.0	11.5
13...	1.5	15.5
13...	2.0	20.0
13...	2.5	24.5
13...	3.0	29.0
13...	3.5	28.5
13...	4.0	28.5
JUL		
17...	1.0	6.0
17...	1.5	9.5
17...	2.0	11.5
17...	2.5	15.0
17...	3.0	20.5
17...	3.5	23.0
17...	4.0	23.5
17...	4.5	25.5
31...	1.0	10.0
31...	1.5	11.5
31...	2.0	10.5
31...	2.5	13.0
31...	3.0	17.0
31...	3.5	21.0
31...	4.0	21.5
31...	4.5	25.0
SEP		
20...	1.0	4.5
20...	1.5	7.5
20...	2.0	9.0
20...	2.5	10.5
20...	3.0	12.0
20...	3.5	14.5
20...	4.0	16.5
20...	4.5	21.5

October 18, 1979, through April 25, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	4.0
18...	1.5	7.5
18...	2.0	9.0
18...	2.5	10.0
18...	3.0	12.0
18...	3.5	14.5
18...	4.0	16.5
18...	4.5	20.5
APR		
25...	.5	[2]8.4
25...	1.0	9.0
25...	1.5	13.5
25...	2.0	11.0
25...	2.5	11.0
25...	3.0	11.5
25...	3.5	16.5
25...	4.0	17.5
25...	4.5	21.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

470029104063210 (W6)

LOCATION: Lat 47°00'29", long 104°06'32", in NW¼NW¼SW¼ sec. 34, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through September 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]3.0
18...	1.0	[1]3.0
18...	1.5	[1]2.0
18...	2.0	[1]3.5
18...	2.5	[1]14.0
18...	3.0	[1]18.0
18...	3.5	[1]20.0

June 13, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
13...	1.0	6.5
13...	1.5	8.5
13...	2.0	10.5
13...	2.5	13.5
13...	3.0	25.0
13...	3.5	26.0
JUL		
18...	1.0	3.5
18...	1.5	4.0
18...	2.0	4.5
18...	2.5	8.0
18...	3.0	21.5
18...	3.5	26.5
31...	1.0	7.0
31...	1.5	5.0
31...	2.0	4.5
31...	2.5	7.5
31...	3.0	20.5
31...	3.5	25.5
SEP		
20...	1.0	3.0
20...	1.5	3.5
20...	2.0	3.5
20...	2.5	6.0
20...	3.0	17.0
20...	3.5	24.5

October 17, 1979, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
17...	1.0	3.0
17...	1.5	3.5
17...	2.0	3.5
17...	2.5	6.0
17...	3.0	18.0
17...	3.5	24.5
APR		
25...	.5	[2]4.7
25...	1.0	5.0
25...	1.5	5.0
25...	2.0	4.5
25...	2.5	6.5
25...	3.0	18.0
25...	3.5	24.5
MAY		
14...	.5	[2]2.1
14...	1.0	3.5
14...	1.5	4.5
14...	2.0	6.5
14...	2.5	18.0
14...	3.0	25.0
14...	3.5	23.0
29...	.5	[2]2.0
29...	1.0	3.0
29...	1.5	3.5
29...	2.0	4.0
29...	2.5	6.0
29...	3.0	16.5
29...	3.5	22.5
JUN		
11...	.5	[2]5.7
11...	1.0	3.5
11...	1.5	4.0
11...	2.0	4.0
11...	2.5	6.5
11...	3.0	17.5
11...	3.5	24.5
24...	.5	[2]8.6
24...	1.0	9.5
24...	1.5	8.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 17, 1979, through
September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
24...	2.0	5.5
24...	2.5	6.5
24...	3.0	17.0
24...	3.5	25.5
JUL		
08...	.5	[2]3.2
08...	1.0	3.5
08...	1.5	6.0
08...	2.0	10.0
08...	2.5	14.5
08...	3.0	15.5
08...	3.5	17.5
AUG		
13...	1.0	4.0
13...	1.5	5.5
13...	2.0	8.5
13...	2.5	12.5
13...	3.0	14.0
13...	3.5	16.5
SEP		
04...	.5	[2]8.4
04...	1.0	9.0
04...	1.5	8.5
04...	2.0	5.5
04...	2.5	6.0
04...	3.0	15.5
04...	3.5	24.5

October 14, 1980, through
September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]4.8
14...	1.00	5.0
14...	1.50	5.5
14...	2.00	4.5
14...	2.50	6.0
14...	3.00	16
14...	3.50	24
MAY		
04...	.50	[2]12
04...	1.00	11
04...	1.50	11
04...	2.00	10
04...	2.50	11
04...	3.00	21
JUN		
10...	1.00	1.5
10...	1.50	1.5
10...	2.00	1.5
10...	2.50	2.0
10...	3.00	4.0
23...	1.00	8.0
23...	1.50	7.5
23...	2.00	7.0
23...	2.50	10
23...	3.00	22
JUL		
30...	.50	[1]4.2
30...	1.00	4.0
30...	1.50	4.0
30...	2.00	4.0
30...	2.50	7.0
30...	3.00	19
SEP		
01...	.50	[1]3.2
01...	1.00	3.0
01...	1.50	3.5
01...	2.00	4.0
01...	2.50	6.5
01...	3.00	18

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

470030104063110 (W7)

LOCATION: Lat 47°00'30", long 104°06'31", in SE¼NW¼SW¼ sec. 34, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through September 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]5.0
18...	1.0	[1]6.5
18...	1.5	[1]7.5
18...	2.0	[1]8.0
18...	2.5	[1]8.0
18...	3.0	[1]9.5
18...	3.5	[1]14.5
18...	4.0	[1]17.0
18...	4.5	[1]11.5
18...	5.0	[1]19.5
18...	5.5	[1]22.0
18...	6.0	[1]20.0
18...	6.5	[1]17.5

June 13, 1979, through September 19, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
13...	1.0	7.5
13...	1.5	9.5
13...	2.0	11.0
13...	2.5	11.0
13...	3.0	11.0
13...	3.5	12.5
13...	4.0	16.0
13...	4.5	20.0
13...	5.0	20.5
13...	5.5	21.0
13...	6.0	18.5
13...	6.5	15.0
JUL		
18...	1.0	6.0
18...	1.5	7.0
18...	2.0	7.0
18...	2.5	7.0
18...	3.0	7.0
18...	3.5	8.5
18...	4.0	12.5
18...	4.5	18.0
18...	5.0	19.0
18...	5.5	20.0
18...	6.0	18.0
18...	6.5	14.5
31...	1.0	9.0
31...	1.5	7.0
31...	2.0	7.0
31...	2.5	7.0
31...	3.0	7.0
31...	3.5	8.0
31...	4.0	12.5
31...	4.5	18.0
31...	5.0	19.0
31...	5.5	19.0
31...	6.0	18.0
31...	6.5	15.0
SEP		
19...	1.0	4.5
19...	1.5	6.0

June 13, 1979, through September 19, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
19...	2.0	6.5
19...	2.5	6.5
19...	3.0	6.5
19...	3.5	7.5
19...	4.0	10.0
19...	4.5	16.0
19...	5.0	17.5
19...	5.5	18.0
19...	6.0	17.0
19...	6.5	14.5

[1]Moisture determined from soil sample.

October 18, 1979, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	5.0
18...	1.5	6.0
18...	2.0	6.0
18...	2.5	6.0
18...	3.0	6.5
18...	3.5	7.5
18...	4.0	11.5
18...	4.5	16.0
18...	5.0	17.0
18...	5.5	17.0
18...	6.0	16.0
18...	6.5	14.5
APR		
25...	.5	[2]5.9
25...	1.0	7.0
25...	1.5	7.0
25...	2.0	6.5
25...	2.5	6.5
25...	3.0	7.5
25...	3.5	8.5
25...	4.0	12.5
25...	4.5	17.0
25...	5.0	17.0
25...	5.5	17.0
25...	6.0	16.0
25...	6.5	14.0
MAY		
14...	.5	[2]4.2
14...	1.0	6.0
14...	1.5	6.5
14...	2.0	6.5
14...	2.5	6.5
14...	3.0	7.0
14...	3.5	8.0
14...	4.0	12.5
14...	4.5	16.5
14...	5.0	17.0
14...	5.5	17.0
14...	6.0	16.0
14...	6.5	14.0

[2]Soil moisture percent by weight.

October 18, 1979, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
29...	0.5	[2]3.5
29...	1.0	6.0
29...	1.5	6.5
29...	2.0	6.5
29...	2.5	6.0
29...	3.0	7.0
29...	3.5	8.5
29...	4.0	13.5
29...	4.5	16.5
29...	5.0	17.0
29...	5.5	16.5
29...	6.0	15.0
JUN		
11...	.5	[2]6.2
11...	1.0	5.5
11...	1.5	6.0
11...	2.0	6.5
11...	2.5	6.0
11...	3.0	6.5
11...	3.5	7.5
11...	4.0	12.0
11...	4.5	16.5
11...	5.0	16.5
11...	5.5	17.0
11...	6.0	15.5
11...	6.5	13.5
24...	.5	[2]15.7
24...	1.0	9.5
24...	1.5	8.0
24...	2.0	7.5
24...	2.5	7.0
24...	3.0	7.0
24...	3.5	8.0
24...	4.0	12.0
24...	4.5	16.5
24...	5.0	17.0
24...	5.5	17.5
24...	6.0	15.5
24...	6.5	14.0
JUL		
08...	.5	[2]4.5

October 18, 1979, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
08...	1.0	5.5
08...	1.5	6.5
08...	2.0	7.0
08...	2.5	6.5
08...	3.0	6.5
08...	3.5	8.0
08...	4.0	12.0
08...	4.5	16.0
08...	5.0	17.5
08...	5.5	17.5
08...	6.0	15.5
08...	6.5	14.0
AUG		
13...	1.0	5.0
13...	1.5	6.0
13...	2.0	8.5
13...	2.5	9.5
13...	3.0	15.0
13...	3.5	15.5
13...	4.0	16.0
13...	4.5	16.5
13...	5.0	16.5
13...	5.5	17.5
13...	6.0	23.0
13...	6.5	22.0
SEP		
04...	.5	[2]10.9
04...	1.0	10.5
04...	1.5	10.5
04...	2.0	7.5
04...	2.5	6.0
04...	3.0	6.5
04...	3.5	7.5
04...	4.0	11.5
04...	4.5	16.5
04...	5.0	17.0
04...	5.5	17.0
04...	6.0	16.0

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]6.1
14...	1.00	6.5
14...	1.50	7.5
14...	2.00	7.0
14...	2.50	6.5
14...	3.00	6.5
14...	3.50	7.5
14...	4.00	12
14...	4.50	16
14...	5.00	16
14...	5.50	17
14...	6.00	16
MAY		
04...	.50	[2]13
04...	1.00	10
04...	1.50	13
04...	2.00	13
04...	2.50	11
04...	3.00	8.0
04...	3.50	9.0
04...	4.00	13
04...	4.50	17
04...	5.00	18
04...	5.50	17
04...	6.00	16
JUN		
10...	1.00	1.5
10...	1.50	2.0
10...	2.00	2.0
10...	2.50	1.5
10...	3.00	1.5
10...	3.50	2.0
10...	4.00	2.5
10...	4.50	3.0
10...	5.00	3.0
10...	5.50	3.0
10...	6.00	3.0
23...	1.00	7.0
23...	1.50	8.0
23...	2.00	8.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
23...	2.50	7.5
23...	3.00	7.0
23...	3.50	9.0
23...	4.00	13
23...	4.50	17
23...	5.00	17
23...	5.50	17
23...	6.00	17
JUL		
30...	.50	[1]5.1
30...	1.00	4.0
30...	1.50	6.0
30...	2.00	6.5
30...	2.50	6.5
30...	3.00	6.5
30...	3.50	6.0
30...	4.00	7.5
30...	4.50	12
30...	5.00	17
30...	5.50	17
30...	6.00	17
SEP		
01...	.50	[1]5.2
01...	1.00	5.5
01...	1.50	6.0
01...	2.00	6.0
01...	2.50	6.0
01...	3.00	6.0
01...	3.50	7.5
01...	4.00	11
01...	4.50	15
01...	5.00	16
01...	5.50	16
01...	6.00	15

470029104063010 (W8)

LOCATION: Lat 47°00'29", long 104°06'30", in SE¼NW¼SW¼ sec. 34, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through September 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]6.5
18...	1.0	[1]8.5
18...	1.5	[1]14.0
18...	2.0	[1]11.5
18...	2.5	[1]25.0
18...	3.0	[1]29.0
18...	3.5	[1]34.5

June 13, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
13...	1.0	7.0
13...	1.5	11.5
13...	2.0	17.0
13...	2.5	19.5
13...	3.0	21.5
13...	3.5	27.5
JUL		
18...	1.0	4.0
18...	1.5	7.0
18...	2.0	11.0
18...	2.5	17.0
18...	3.0	19.5
18...	3.5	27.0
31...	1.0	9.0
31...	1.5	9.5
31...	2.0	11.5
31...	2.5	16.5
31...	3.0	19.5
31...	3.5	27.0
SEP		
20...	1.0	3.5
20...	1.5	6.0
20...	2.0	10.0
20...	2.5	14.5
20...	3.0	17.0
20...	3.5	25.0

October 18, 1979, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	3.5
18...	1.5	6.0
18...	2.0	9.5
18...	2.5	14.5
18...	3.0	17.0
18...	3.5	25.0
APR		
25...	.5	[2]7.2
25...	1.0	5.0
25...	1.5	8.0
25...	2.0	11.0
25...	2.5	15.5
25...	3.0	17.5
25...	3.5	26.0
MAY		
14...	.5	[2]5.0
14...	1.0	4.0
14...	1.5	7.0
14...	2.0	11.0
14...	2.5	15.5
14...	3.0	18.0
14...	3.5	25.5
29...	.5	[2]1.5
29...	1.0	4.5
29...	1.5	7.5
29...	2.0	9.0
29...	2.5	16.0
29...	3.0	19.5
29...	3.5	24.5
JUN		
11...	.5	[2]5.9
11...	1.0	4.0
11...	1.5	6.5
11...	2.0	10.5
11...	2.5	15.0
11...	3.0	17.0
11...	3.5	25.0
24...	.5	[2]15.4
24...	1.0	8.0
24...	1.5	7.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 18, 1979, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
24...	2.0	11.0
24...	2.5	15.0
24...	3.0	18.0
24...	3.5	25.0
JUL		
08...	.5	[2].80
08...	1.0	3.5
08...	1.5	6.5
08...	2.0	11.0
08...	2.5	15.0
08...	3.0	17.5
08...	3.5	25.5
AUG		
13...	1.0	4.0
13...	1.5	6.0
13...	2.0	10.5
13...	2.5	14.5
13...	3.0	17.0
13...	3.5	25.0
SEP		
04...	.5	[2]12.3
04...	1.0	8.5
04...	1.5	14.0
04...	2.0	14.0
04...	2.5	15.0
04...	3.0	16.5
04...	3.5	25.0

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]8.8
14...	1.00	5.5
14...	1.50	11
14...	2.00	13
14...	2.50	15
14...	3.00	17
MAY		
04...	.50	[2]13
04...	1.00	9.0
04...	1.50	16
04...	2.00	20
04...	2.50	20
04...	3.00	21
04...	3.50	27
JUN		
10...	1.00	1.5
10...	1.50	2.5
10...	2.00	3.0
10...	2.50	3.5
10...	3.00	3.5
10...	3.50	4.5
23...	1.00	7.5
23...	1.50	17
23...	2.00	19
23...	2.50	20
23...	3.00	20
23...	3.50	27
JUL		
30...	.50	[1]5.6
30...	1.00	1.5
30...	1.50	4.5
30...	2.00	7.0
30...	2.50	12
30...	3.00	17
30...	3.50	19
SEP		
01...	.50	[1]5.9
01...	1.00	3.0
01...	1.50	6.5
01...	2.00	11

October 14, 1980, through September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
01...	2.50	16
01...	3.00	18
01...	3.50	26

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

470028104063010 (W9)

LOCATION: Lat 47°00'28", long 104°06'30", in SE¼NW¼SW¼ sec. 34, T. 15 N., R. 60 E.

PERIOD OF RECORD: September 1978 through September 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]6.0
18...	1.0	[1]5.5
18...	1.5	[1]7.0
18...	2.0	[1]14.0
18...	2.5	[1]14.5
18...	3.0	[1]13.5

June 13, 1979, through September 19, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
13...	1.0	7.0
13...	1.5	9.5
13...	2.0	15.5
13...	2.5	20.5
13...	3.0	17.0
JUL		
18...	1.0	4.0
18...	1.5	6.0
18...	2.0	9.0
18...	2.5	17.5
18...	3.0	16.5
31...	1.0	9.5
31...	1.5	8.0
31...	2.0	9.5
31...	2.5	17.5
31...	3.0	16.0
SEP		
19...	1.0	3.5
19...	1.5	5.5
19...	2.0	8.5
19...	2.5	16.0
19...	3.0	15.0
19...	3.5	14.0

October 17, 1979, through August 13, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
17...	1.0	3.5
17...	1.5	5.5
17...	2.0	8.5
17...	2.5	16.0
17...	3.0	14.5
APR		
25...	.5	[2]4.8
25...	1.0	5.0
25...	1.5	8.0
25...	2.0	10.0
25...	3.0	16.5
MAY		
14...	.5	[2]4.0
14...	1.0	4.0
14...	1.5	6.5
14...	2.0	9.5
14...	2.5	16.5
14...	3.0	14.5
29...	.5	[2]1.5
29...	1.0	3.5
29...	1.5	6.0
29...	2.0	9.5
29...	2.5	16.0
29...	3.0	14.0
JUN		
11...	.5	[2]5.5
11...	1.0	4.0
11...	1.5	5.5
11...	2.0	9.0
11...	2.5	15.5
11...	3.0	14.5
24...	.5	[2]14.1
24...	1.0	8.0
24...	1.5	7.0
24...	2.0	9.0
24...	2.5	16.0
24...	3.0	15.0
JUL		
08...	.5	[1]3.3
08...	1.0	3.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 17, 1979, through August 13, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
08...	1.5	6.0
08...	2.0	9.5
08...	2.5	16.0
08...	3.0	15.0
AUG		
13...	1.0	5.0
13...	1.5	5.5
13...	2.0	9.0
13...	2.5	16.0
13...	3.0	15.0

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]7.6
14...	1.00	5.0
14...	1.50	8.0
14...	2.00	10
14...	2.50	16
14...	3.00	15
MAY		
04...	.50	[2]11
04...	1.00	7.5
04...	1.50	14
04...	2.00	15
04...	2.50	19
04...	3.00	17
JUN		
10...	1.00	1.5
10...	1.50	2.0
10...	2.00	2.5
10...	2.50	3.5
10...	3.00	3.0
23...	1.00	7.0
23...	1.50	9.0
23...	2.00	13
23...	2.50	19
23...	3.00	16
JUL		
30...	.50	[1]5.1
30...	1.00	1.5
30...	1.50	4.5
30...	2.00	6.0
30...	2.50	10
30...	3.00	16
SEP		
01...	.50	[1]4.7
01...	1.00	3.5
01...	1.50	5.5
01...	2.00	9.5
01...	2.50	16
01...	3.00	15

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

465931104061210 (W10)

LOCATION: Lat 46°59'31", long 104°06'12", in NW¼SW¼SE¼ sec. 3, T. 14 N., R. 60 E.

PERIOD OF RECORD: September 1978 through May 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]15.0
18...	1.0	[1]24.0
18...	1.5	[1]23.0
18...	2.0	[1]22.0
18...	2.5	[1]25.0
18...	3.0	[1]27.5
18...	3.5	[1]30.5
18...	4.0	[1]31.5
18...	4.5	[1]31.5
18...	5.0	[1]31.0
18...	5.5	[1]32.0
18...	6.0	[1]34.0
18...	6.5	[1]38.5
18...	7.0	[1]41.0
18...	7.5	[1]43.5

June 13, 1979, through September 19, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
13...	1.0	26.0
13...	1.5	28.5
13...	2.0	25.0
13...	2.5	25.5
13...	3.0	29.5
13...	3.5	32.5
13...	4.0	33.5
13...	4.5	33.5
13...	5.0	34.5
13...	5.5	35.5
13...	6.0	37.0
13...	6.5	37.5
13...	7.0	36.5
JUL		
18...	1.0	20.5
18...	1.5	25.0
18...	2.0	21.5
18...	2.5	21.5
18...	3.0	25.5
18...	3.5	28.5
18...	4.0	30.0
18...	4.5	30.5
18...	5.0	30.5
18...	5.5	31.5
18...	6.0	33.0
18...	6.5	35.0
18...	7.0	38.0
AUG		
01...	1.0	23.5
01...	1.5	24.5
01...	2.0	21.0
01...	2.5	21.5
01...	3.0	25.0
01...	3.5	28.5
01...	4.0	30.0
01...	4.5	30.0
01...	5.0	31.0
01...	5.5	31.5
01...	6.0	33.0
01...	6.5	35.5

June 13, 1979, through September 19, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
01...	4.0	38.5
SEP		
19...	1.0	17.5
19...	1.5	22.0
19...	2.0	19.0
19...	2.5	19.0
19...	3.0	23.0
19...	3.5	26.0
19...	4.0	28.0
19...	4.5	28.0
19...	5.0	28.0
19...	5.5	30.0
19...	6.0	31.0
19...	6.5	32.5
19...	7.0	36.5
19...	7.5	38.5

[1]Moisture determined from soil sample.

October 18, 1979, through May 14, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	11.0
18...	1.5	11.5
18...	2.0	11.0
18...	2.5	11.5
18...	3.0	19.5
18...	3.5	23.0
18...	4.0	25.0
18...	4.5	25.0
18...	5.0	25.5
18...	5.5	25.5
18...	6.0	30.0
18...	6.5	29.5
18...	7.0	31.0
APR		
25...	.5	[2]19.9
25...	1.0	27.0
25...	1.5	27.5
25...	2.0	23.5
25...	2.5	25.5
25...	3.0	28.0
25...	3.5	31.5
25...	4.0	32.5
25...	4.5	32.5
25...	5.0	33.5
25...	5.5	34.5
25...	6.0	35.5
25...	6.5	36.0
25...	7.0	40.5
MAY		
14...	.5	[2]10.4
14...	1.0	24.5
14...	1.5	26.0
14...	2.0	22.5
14...	2.5	23.0
14...	3.0	26.5
14...	3.5	29.0
14...	4.0	30.5
14...	4.5	30.5
14...	5.0	31.0
14...	5.5	32.5

[2]Soil moisture percent by weight.

October 18, 1979, through May 14, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
14...	6.0	33.5
14...	6.5	35.0
14...	7.0	38.0

470205104080910 (W11)

LOCATION: Lat 47°02'05", long 104°08'09", in SE¼SE¼SE¼ sec. 20, T. 15 N., R. 60 E.

PERIOD OF RECORD: July 1979 through September 1981.

LAND USE: Grass.

July 17, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
17...	1.0	17.5
17...	1.5	21.0
17...	2.0	22.0
17...	2.5	23.0
17...	3.0	20.5
AUG		
01...	1.0	20.5
01...	1.5	23.0
01...	2.0	23.0
01...	2.5	23.0
01...	3.0	20.5
SEP		
20...	1.0	8.5
20...	1.5	16.5
20...	2.0	18.0
20...	2.5	19.0
20...	3.0	18.5
20...	3.5	17.5

October 18, 1979, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	8.5
18...	1.5	21.5
18...	2.0	21.5
18...	2.5	21.5
18...	3.0	21.0
MAY		
29...	.5	[1]9.5
29...	1.0	12.0
29...	1.5	20.5
29...	2.0	21.0
29...	2.5	22.5
29...	3.0	18.5
29...	3.5	16.5
JUN		
11...	.5	[2]12.9
11...	1.0	16.0
11...	1.5	21.5
11...	2.0	22.5
11...	2.5	22.5
11...	3.0	19.0
11...	3.5	17.0
24...	.5	[2]12.4
24...	1.0	17.5
24...	1.5	22.0
24...	2.0	22.0
24...	2.5	22.0
24...	3.0	18.5
24...	3.5	16.5
JUL		
08...	.5	[2]9.9
08...	1.0	14.5
08...	1.5	20.0
08...	2.0	21.0
08...	2.5	22.5
08...	3.0	18.5
08...	3.5	16.5
AUG		
13...	1.0	10.0
13...	1.5	14.0
13...	2.0	15.0

October 18, 1979, through September 4, 1980--Continued

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
13...	2.5	16.0
13...	3.0	14.0
13...	3.5	14.0
SEP		
04...	.5	[2]15.2
04...	1.0	19.5
04...	1.5	24.0
04...	2.0	23.5
04...	2.5	25.0
04...	3.0	20.5
04...	3.5	17.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]14
14...	1.00	15
14...	1.50	21
14...	2.00	21
14...	2.50	23
14...	3.00	19
14...	3.50	17
JUN		
24...	1.00	18
24...	1.50	21
24...	2.00	22
24...	2.50	22
24...	3.00	19
24...	3.50	17
24...	4.00	18
JUL		
30...	.50	[1]10
30...	1.00	3.0
30...	1.50	11
30...	2.00	12
30...	2.50	13
30...	3.00	12
30...	3.50	12
30...	4.00	13
AUG		
03...	.50	[1]21
03...	1.00	28
03...	1.50	17
03...	2.00	13
03...	2.50	12
03...	3.00	12
03...	3.50	13
03...	4.00	16
SEP		
01...	.50	[1]14
01...	1.00	13
01...	1.50	16
01...	2.00	14
01...	2.50	13
01...	3.00	12

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
01...	3.50	13
01...	4.00	14

470205104084910 (W12)

LOCATION: Lat 47°02'05", long 104°08'49", in SE¼SW¼SE¼ sec. 20, T. 15 N., R. 60 E.

PERIOD OF RECORD: July 1979 through September 1981.

LAND USE: Crop.

July 17, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
17...	1.0	10.5
17...	1.5	18.0
17...	2.0	23.5
17...	2.5	28.0
17...	3.0	29.0
AUG		
01...	1.0	8.0
01...	1.5	15.0
01...	2.0	21.0
01...	2.5	27.0
01...	3.0	29.5
SEP		
20...	1.0	4.5
20...	1.5	12.5
20...	2.0	19.5
20...	2.5	25.0
20...	3.0	27.0

May 29, 1980, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
29...	0.5	[1]10.0
29...	1.0	11.0
29...	1.5	20.5
29...	2.0	22.0
29...	2.5	22.0
29...	3.0	23.5
29...	3.5	24.0
JUN		
11...	.5	[2]8.4
11...	1.0	13.5
11...	1.5	21.0
11...	2.0	23.0
11...	2.5	23.0
11...	3.0	24.0
11...	3.5	25.0
24...	.5	[2]10.7
24...	1.0	16.5
24...	1.5	21.5
24...	2.0	22.5
24...	2.5	22.5
24...	3.0	23.5
24...	3.5	24.5
JUL		
08...	.5	[2]4.6
08...	1.0	15.5
08...	1.5	21.0
08...	2.0	22.0
08...	2.5	22.5
08...	3.0	24.0
08...	3.5	24.0
AUG		
13...	1.0	9.0
13...	1.5	17.5
13...	2.0	21.0
13...	2.5	22.0
13...	3.0	23.0
15...	3.5	24.0
SEP		
04...	.5	[2]11.0
04...	1.0	15.0

May 29, 1980, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
04...	1.5	22.0
04...	2.0	22.0
04...	2.5	21.0
04...	3.0	23.5
04...	3.5	24.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through
September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]12
14...	1.00	14
14...	1.50	21
14...	2.00	21
14...	2.50	22
14...	3.00	23
14...	3.50	23
JUN		
23...	1.00	21
23...	1.50	25
23...	2.00	28
23...	2.50	27
23...	3.00	28
JUL		
30...	.50	[1]7.4
30...	1.00	11
30...	1.50	20
30...	2.00	24
30...	2.50	28
30...	3.00	29
AUG		
03...	.50	[1]8.3
03...	1.00	22
03...	1.50	23
03...	2.00	27
03...	2.50	28
03...	3.00	27
SEP		
01...	.50	[1]9.6

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

465846104043610 (W13)

LOCATION: Lat 46°58'46", long 104°04'36", in NE¼SW¼NE¼ sec. 14, T. 14 N., R. 60 E.

PERIOD OF RECORD: July 1979 through September 1981.

LAND USE: Crop.

July 17, 1979, through September 20, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
17...	1.0	9.5
17...	1.5	14.5
17...	2.0	15.5
17...	2.5	11.5
17...	3.0	14.5
17...	3.5	25.0
17...	4.0	27.5
17...	4.5	28.5
AUG		
01...	1.0	12.0
01...	1.5	14.5
01...	2.0	15.5
01...	2.5	13.0
01...	3.0	12.0
01...	3.5	23.0
01...	4.0	27.5
01...	4.5	28.5
SEP		
20...	1.0	6.0
20...	1.5	12.0
20...	2.0	14.0
20...	2.5	11.5
20...	3.0	10.0
20...	3.5	20.0
20...	4.0	25.0
20...	4.5	26.0
20...	5.0	26.0

October 18, 1979, through July 8, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
18...	1.0	10.5
18...	1.5	11.5
18...	2.0	11.5
18...	2.5	11.0
18...	3.0	10.5
18...	3.5	19.0
18...	4.0	22.5
18...	4.5	25.0
APR		
25...	.5	[2]7.2
25...	1.0	9.0
25...	1.5	17.5
25...	2.0	19.0
25...	2.5	13.0
25...	3.0	11.0
25...	3.5	21.0
25...	4.0	31.0
MAY		
29...	.5	[2]2.5
29...	1.0	8.0
29...	1.5	14.0
29...	2.0	13.5
29...	2.5	10.0
29...	3.0	13.0
29...	3.5	23.0
29...	4.0	25.0
JUN		
11...	.5	[2]8.0
11...	1.0	4.0
11...	1.5	12.0
11...	2.0	14.0
11...	2.5	11.5
11...	3.0	10.0
11...	3.5	20.0
11...	4.0	24.0
11...	4.5	23.5
24...	.5	[2]7.6
24...	1.0	7.5
24...	1.5	12.5
24...	2.0	15.0

October 18, 1979, through July 8, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
24...	2.5	12.0
24...	3.0	10.5
24...	3.5	20.0
24...	4.0	8.5
24...	4.5	24.0
JUL		
08...	.5	[2]5.3
08...	1.0	6.5
08...	1.5	12.0
08...	2.0	14.5
08...	2.5	12.0
08...	3.0	10.0
08...	3.5	20.0
08...	4.0	24.5
08...	4.5	24.5

[2]Soil moisture percent by weight.

October 14, 1980, through
September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]6.9
14...	1.00	6.0
14...	1.50	13
14...	2.00	15
14...	2.50	11
14...	3.00	10
14...	3.50	19
14...	4.00	25
14...	4.50	24
MAY		
04...	.50	[2]11
04...	1.00	9.0
04...	1.50	17
04...	2.00	18
04...	2.50	13
04...	3.00	11
04...	3.50	20
04...	4.00	25
04...	4.50	25
JUN		
10...	1.00	1.5
10...	1.50	2.5
10...	2.00	3.0
10...	2.50	2.5
10...	3.00	2.5
10...	3.50	3.5
10...	4.00	4.5
10...	4.50	4.5
24...	1.00	8.0
24...	1.50	14
24...	2.00	15
24...	2.50	12
24...	3.00	11
24...	3.50	20
24...	4.00	25
24...	4.50	25
JUL		
30...	.50	[1]7.4
30...	1.00	2.5
30...	1.50	8.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through
September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
30...	2.00	13
30...	2.50	14
30...	3.00	11
30...	3.50	11
30...	4.00	21
30...	4.50	25
AUG		
03...	.50	[1]12
03...	1.00	13
03...	1.50	14
03...	2.00	15
03...	2.50	11
03...	3.00	11
03...	3.50	20
03...	4.00	25
03...	4.50	25
SEP		
01...	.50	[1]6.6
01...	1.00	5.5
01...	1.50	12
01...	2.00	14
01...	2.50	11
01...	3.00	10
01...	3.50	19
01...	4.00	24
01...	4.50	23

465846104043611 (W14)

LOCATION: Lat 46°58'46", long 104°04'36", in NE¼SW¼NE¼ sec. 14, T. 14 N., R. 60 E.

PERIOD OF RECORD: May 1980 through September 1981.

LAND USE: Crop.

May 29, 1980, through September 4, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
29...	0.5	[1]5.5
29...	1.0	10.0
29...	1.5	19.0
29...	2.0	22.5
29...	2.5	20.5
29...	3.0	12.5
29...	3.5	9.5
JUN		
11...	.5	[2]5.8
11...	1.0	10.0
11...	1.5	18.0
11...	2.0	21.5
11...	2.5	17.0
11...	3.0	12.0
11...	3.5	9.5
24...	.5	[2]6.1
24...	1.0	11.5
24...	1.5	18.5
24...	2.0	23.0
24...	2.5	17.5
24...	3.0	12.5
24...	3.5	10.0
JUL		
08...	.5	[2]3.7
08...	1.0	7.0
08...	1.5	11.0
08...	2.0	15.0
08...	2.5	15.0
08...	3.0	10.0
08...	3.5	8.5
AUG		
13...	1.0	5.5
13...	1.5	8.5
13...	2.0	9.5
13...	2.5	10.0
13...	3.0	7.5
13...	3.5	6.0
SEP		
04...	.5	[2]6.7
04...	1.0	7.5

May 29, 1980, through September 4, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
04...	1.5	13.5
04...	2.0	14.0
04...	2.5	12.0
04...	3.0	7.5
04...	3.5	6.0

October 14, 1980, through September 1, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
14...	0.50	[2]5.3
14...	1.00	7.5
14...	1.50	11
14...	2.00	12
14...	2.50	11
14...	3.00	7.5
14...	3.50	6.0
MAY		
04...	.50	[2]13
04...	1.00	14
04...	1.50	22
04...	2.00	25
04...	2.50	22
04...	3.00	13
04...	3.50	9.0
JUN		
10...	1.00	2.0
10...	1.50	3.0
10...	2.00	3.5
10...	2.50	3.5
10...	3.00	2.5
10...	3.50	2.0
24...	1.00	10
24...	1.50	15
24...	2.00	17
24...	2.50	15
24...	3.00	9.5
24...	3.50	7.0
JUL		
30...	.50	[1]7.1
30...	1.00	5.5
30...	1.50	12
30...	2.00	10
30...	2.50	10
30...	3.00	10
30...	3.50	7.0
AUG		
03...	.50	[1]12
03...	1.00	17
03...	1.50	12

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 14, 1980, through
September 1, 1981--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
03...	2.00	10
03...	2.50	9.5
03...	3.00	6.5
03...	3.50	6.0
SEP		
01...	.50	[1]5.6
01...	1.00	1.5
01...	1.50	2.0
01...	2.00	2.0
01...	2.50	2.0
01...	3.00	1.5
01...	3.50	1.5

[1]Moisture determined from soil sample.

472411101565910 (B1)

LOCATION: Lat 47°24'11", long 101°56'59", in NW¼SW¼SW¼ sec. 6, T. 145 N., R. 88 W.

PERIOD OF RECORD: September 1978 through May 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]9.0
18...	1.0	[1]10.5
18...	1.5	[1]11.5
18...	2.0	[1]12.5
18...	2.5	[1]11.0

June 4, 1979, through August 6, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
04...	1.0	15.5
04...	1.5	25.5
04...	2.0	25.5
04...	2.5	25.5
AUG		
06...	1.0	24.0
06...	1.5	19.0
06...	2.0	15.0
06...	2.5	16.5
30...	1.0	13.0
30...	1.5	14.0
30...	2.0	14.5
30...	2.5	16.0
30...	3.0	16.5

October 4, 1979, through May 1, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
04...	1.0	9.0
04...	1.5	12.0
04...	2.0	13.0
04...	2.5	14.5
MAY		
01...	.5	[2]17.6
01...	1.0	21.5
01...	1.5	25.0
01...	2.0	24.5
01...	2.5	24.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

472259101565910 (B3)

LOCATION: Lat 47°22'59", long 101°56'59", in SW¼NW¼NW¼ sec. 18, T. 145 N., R. 88 W.

PERIOD OF RECORD: September 1978 through May 1980.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]11.0
18...	1.0	[1]15.5
18...	1.5	[1]18.0
18...	2.0	[1]17.5
18...	2.5	[1]15.5
18...	3.0	[1]16.5
18...	3.5	[1]18.0
18...	4.0	[1]17.0
18...	4.5	[1]12.5
18...	5.0	[1]10.5
18...	5.5	[1]12.0
18...	6.0	[1]14.0
18...	6.5	[1]16.0
18...	7.0	[1]18.0
18...	7.5	[1]19.0

May 30, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
30...	1.0	28.0
30...	1.5	39.0
30...	2.0	39.5
30...	2.5	37.5
30...	3.0	33.5
30...	3.5	31.0
30...	4.0	31.0
30...	4.5	28.5
30...	5.0	26.0
30...	5.5	19.5
30...	6.0	17.5
30...	6.5	16.5
30...	7.0	17.5
30...	7.5	21.5
JUL		
26...	1.0	12.5
26...	1.5	17.0
26...	2.0	20.5
26...	2.5	19.5
26...	3.0	20.0
26...	3.5	23.5
26...	4.0	25.0
26...	4.5	22.5
26...	5.0	18.5
26...	5.5	15.0
26...	6.0	14.5
26...	6.5	14.5
26...	7.0	15.5
AUG		
06...	1.0	23.0
06...	1.5	22.5
06...	2.0	21.0
06...	2.5	19.0
06...	3.0	19.5
06...	3.5	22.5
06...	4.0	24.0
06...	4.5	21.5
06...	5.0	17.5
06...	5.5	14.5
06...	6.0	14.0

May 30, 1979, through August 30, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
06...	6.5	14.0
06...	7.0	15.0
30...	1.0	13.5
30...	1.5	19.0
30...	2.0	20.5
30...	2.5	18.0
30...	3.0	18.0
30...	3.5	20.5
30...	4.0	22.0
30...	4.5	20.0
30...	5.0	15.0
30...	5.5	12.5
30...	6.0	12.5
30...	6.5	13.0
30...	7.0	14.0

[1]Moisture determined from soil sample.

October 4, 1979, through
May 1, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
04...	1.0	9.0
04...	1.5	16.5
04...	2.0	18.0
04...	2.5	16.5
04...	3.0	16.0
04...	3.5	18.5
04...	4.0	19.5
04...	4.5	17.5
04...	5.0	12.5
04...	5.5	10.5
04...	6.0	11.0
04...	6.5	11.5
04...	7.0	12.0
MAY		
01...	.5	[2]27.6
01...	1.0	28.0
01...	1.5	41.0
01...	2.0	41.5
01...	2.5	38.5
01...	3.0	35.0
01...	3.5	32.0
01...	4.0	31.5
01...	4.5	30.0
01...	5.0	26.5
01...	5.5	20.5
01...	6.0	19.5
01...	6.5	19.5
01...	7.0	22.0

[2]Soil moisture percent by weight.

472305101560210 (B4)

LOCATION: Lat 47°23'05", long 101°56'02", in NW¼NE¼NE¼ sec. 18, T. 145 N., R. 88 W.

PERIOD OF RECORD: September 1978 through May 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]11.5
18...	1.0	[1]14.5
18...	1.5	[1]19.5
18...	2.0	[1]22.5
18...	2.5	[1]24.0
18...	3.0	[1]24.0
18...	3.5	[1]30.5

May 30, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
30...	1.0	28.0
30...	1.5	38.5
30...	2.0	36.5
30...	2.5	33.5
30...	3.0	35.0
30...	3.5	36.5
JUL		
26...	1.0	11.5
26...	1.5	16.5
26...	2.0	21.0
26...	2.5	26.0
26...	3.0	29.0
26...	3.5	31.5
AUG		
06...	1.0	18.5
06...	1.5	22.0
06...	2.0	21.0
06...	2.5	26.0
06...	3.0	29.5
30...	1.0	12.5
30...	1.5	16.5
30...	2.0	18.0
30...	2.5	22.5
30...	3.0	27.5
30...	3.5	30.0

May 1, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
01...	0.5	[2]34.8
01...	1.0	25.0
01...	1.5	33.0
01...	2.0	30.5
01...	2.5	29.5
01...	3.0	31.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

472115101532010 (B5)

LOCATION: Lat 47°21'15", long 101°53'20", in SE¼NE¼NE¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: September 1978 through November 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]9.0
18...	1.0	[1]12.0
18...	1.5	[1]14.5
18...	2.0	[1]15.0
18...	2.5	[1]17.0

May 30, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
30...	1.0	11.5
30...	1.5	27.0
30...	2.0	28.5
30...	2.5	23.0
JUN		
15...	1.0	15.5
15...	1.5	22.5
15...	2.0	23.0
15...	2.5	19.0
JUL		
02...	1.0	25.0
02...	1.5	23.0
02...	2.0	21.0
02...	2.5	19.5
26...	1.0	14.0
26...	1.5	17.0
26...	2.0	17.5
26...	2.5	17.5
AUG		
06...	1.0	28.0
06...	1.5	21.0
06...	2.0	18.0
06...	2.5	18.0
30...	1.0	19.5
30...	1.5	19.0
30...	2.0	18.0
30...	2.5	17.5

October 4, 1979, through September 15, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
04...	1.0	11.5
04...	1.5	16.5
04...	2.0	16.5
04...	2.5	16.5
MAY		
01...	.5	[2]17.2
01...	1.0	20.5
01...	1.5	24.5
01...	2.0	17.5
01...	2.5	17.0
28...	1.0	11.0
28...	1.5	16.0
28...	2.0	16.5
28...	2.5	16.5
JUN		
09...	.5	[2]13.5
09...	1.0	10.0
09...	1.5	15.0
09...	2.0	16.0
09...	2.5	16.5
25...	.5	[2]13.2
25...	1.0	14.5
25...	1.5	20.0
25...	2.0	17.0
25...	2.5	16.5
JUL		
11...	.5	[2] 7.6
11...	1.0	8.0
11...	1.5	14.5
11...	2.0	16.5
11...	2.5	16.0
AUG		
11...	1.0	8.5
11...	1.5	14.0
11...	2.0	15.0
11...	2.5	15.5
SEP		
15...	.5	[2]31.2
15...	1.0	23.5
15...	1.5	26.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 4, 1979, through September 15, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
15...	2.0	18.5
15...	2.5	15.5

October 20, 1980, through August 25, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
20...	1.00	31
20...	1.50	30
20...	2.00	19
20...	2.50	17
APR		
21...	.50	[2]23
21...	1.00	25
21...	1.50	29
21...	2.00	28
21...	2.50	27
JUN		
05...	1.00	21
05...	1.50	22
05...	2.00	23
05...	2.50	24
18...	.50	[1]14
18...	1.00	24
18...	1.50	28
18...	2.00	23
18...	2.50	24
JUL		
22...	1.00	19
22...	1.50	19
22...	2.00	20
22...	2.50	19
AUG		
25...	.50	[1]11
25...	1.00	9.5
25...	1.50	16
25...	2.00	17
25...	2.50	18

November 5, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
NOV		
05...	0.50	[1]20
05...	1.00	21
05...	1.50	18
05...	2.00	17
05...	2.50	17

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

472115101534810 (B6)

LOCATION: Lat 47°21'15", long 101°53'48", in SW¼NW¼NE¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: September 1978 through November 1981.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]7.0
18...	1.0	[1]7.5
18...	1.5	[1]10.5
18...	2.0	[1]10.0
18...	2.5	[1]5.5
18...	3.0	[1]6.0
18...	3.5	[1]12.0
18...	4.0	[1]13.0
18...	4.5	[1]16.5
18...	5.0	[1]19.5
18...	5.5	[1]24.5

June 4, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
04...	1.0	10.0
04...	1.5	15.5
04...	2.0	28.0
04...	2.5	17.0
04...	3.0	8.0
04...	3.5	8.5
04...	4.0	12.5
04...	4.5	13.0
04...	5.0	17.0
04...	5.5	19.5
19...	1.0	9.5
19...	1.5	13.0
19...	2.0	22.5
19...	2.5	10.5
19...	3.0	7.5
19...	3.5	10.0
19...	4.0	12.5
19...	4.5	14.5
19...	5.0	17.5
19...	5.5	21.5
JUL		
26...	1.0	9.0
26...	1.5	9.5
26...	2.0	16.0
26...	2.5	12.0
26...	3.0	8.0
26...	3.5	8.5
26...	4.0	12.5
26...	4.5	13.0
26...	5.0	17.5
26...	5.5	19.5
26...	6.0	22.0
AUG		
06...	1.0	14.5
06...	1.5	13.0
06...	2.0	17.0
06...	2.5	12.0
06...	3.0	8.0
06...	3.5	9.0
06...	4.0	13.0

June 4, 1979, through August 30, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
AUG		
06...	4.5	13.5
06...	5.0	18.0
06...	5.5	20.5
30...	1.0	13.5
30...	1.5	11.5
30...	2.0	15.0
30...	2.5	11.0
30...	3.0	7.5
30...	3.5	8.5
30...	4.0	12.5
30...	4.5	13.0
30...	5.0	18.0
30...	5.5	20.0

[1]Moisture determined from soil sample.

October 4, 1979, through September 15, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
04...	1.0	7.5
04...	1.5	10.0
04...	2.0	13.5
04...	2.5	8.5
04...	3.0	7.0
04...	3.5	9.5
04...	4.0	12.0
04...	4.5	15.0
04...	5.0	17.5
04...	5.5	22.0
MAY		
01...	.5	[2]7.4
01...	1.0	10.5
01...	1.5	12.5
01...	2.0	13.5
01...	2.5	8.5
01...	3.0	7.5
01...	3.5	10.0
01...	4.0	12.0
01...	4.5	15.0
01...	5.0	18.0
01...	5.5	22.5
JUN		
09...	.5	[2]6.0
09...	1.0	6.5
09...	1.5	7.5
09...	2.0	11.0
09...	2.5	9.0
09...	3.0	7.0
09...	3.5	8.5
09...	4.0	12.0
09...	4.5	12.5
09...	5.0	17.5
09...	5.5	20.0
JUL		
11...	.5	[2]7.6
11...	1.0	3.5
11...	1.5	6.5
11...	2.0	9.5
11...	2.5	10.5

October 4, 1979, through September 15, 1980--Continued

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
11...	3.0	7.0
11...	3.5	7.5
11...	4.0	11.0
11...	4.5	12.0
11...	5.0	16.5
11...	5.5	18.5
AUG		
11...	1.0	5.0
11...	1.5	7.0
11...	2.0	8.5
11...	2.5	10.0
11...	3.0	6.5
11...	3.5	7.5
11...	4.0	11.0
11...	4.5	11.5
11...	5.0	16.5
11...	5.5	18.5
SEP		
15...	.5	[2]23.2
15...	1.0	16.5
15...	1.5	15.5
15...	2.0	16.5
15...	2.5	9.5
15...	3.0	6.5
15...	3.5	8.0
15...	4.0	11.0
15...	4.5	12.0
15...	5.0	17.0
15...	5.5	19.0

October 20, 1980, through August 25, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
20...	1.00	18
20...	1.50	20
20...	2.00	27
20...	2.50	11
20...	3.00	6.5
20...	3.50	8.0
20...	4.00	12
20...	4.50	13
20...	5.00	17
20...	5.50	20
APR		
21...	.50	[2]18
21...	1.00	13
21...	1.50	17
21...	2.00	30
21...	2.50	17
21...	3.00	7.5
21...	3.50	8.0
21...	4.00	12
21...	4.50	13
21...	5.00	17
21...	5.50	20
JUN		
05...	1.00	15
05...	1.50	15
05...	2.00	24
05...	2.50	14
05...	3.00	7.5
05...	3.50	8.0
05...	4.00	12
05...	4.50	13
05...	5.00	17
05...	5.50	20
18...	.50	[1]15
18...	1.00	13
18...	1.50	18
18...	2.00	25
18...	2.50	20
18...	3.00	8.0
18...	3.50	7.5

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 20, 1980, through
August 25, 1981--Continued.

November 5, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
18...	4.00	11
18...	4.50	11
18...	5.00	16
18...	5.50	22
JUL		
22...	.50	[1]7.9
22...	1.00	9.0
22...	1.50	13
22...	2.00	18
22...	2.50	9.5
22...	3.00	7.0
22...	3.50	9.5
22...	4.00	11
22...	4.50	13
22...	5.00	18
22...	5.50	22
AUG		
25...	.50	[1]11
25...	1.00	6.5
25...	1.50	8.5
25...	2.00	13
25...	2.50	10
25...	3.00	7.0
25...	3.50	8.0
25...	4.00	11
25...	4.50	13
25...	5.00	17
25...	5.50	20

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
NOV		
05...	0.50	[1]14
05...	1.00	12
05...	1.50	13
05...	2.00	14
05...	2.50	7.5
05...	3.00	6.5
05...	3.50	8.5
05...	4.00	11
05...	4.50	14
05...	5.00	17
05...	5.50	21

[1]Moisture determined from soil sample.

472125101512210 (B7)

LOCATION: Lat 47°21'25", long 101°51'22", in NW¼NW¼NE¼ sec. 26, T. 145 N., R. 88 W.

PERIOD OF RECORD: September 1978 through May 1980.

LAND USE: Grass.

September 18, 1978.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
18...	0.5	[1]13.0
18...	1.0	[1]12.5
18...	1.5	[1]15.0
18...	2.0	[1]18.0
18...	2.5	[1]20.0
18...	3.0	[1]20.0
18...	3.5	[1]24.5
18...	4.0	[1]27.0
18...	4.5	[1]35.5

May 31, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
31...	1.0	31.0
31...	1.5	28.0
31...	2.0	32.0
31...	2.5	36.5
31...	3.0	36.0
31...	3.5	37.0
31...	4.0	40.0
31...	4.5	39.0
JUN		
11...	1.0	26.5
11...	1.5	26.0
11...	2.0	30.5
11...	2.5	36.5
11...	3.0	35.5
11...	3.5	36.0
11...	4.0	39.0
11...	4.5	39.5
15...	1.0	22.5
15...	1.5	24.0
15...	2.0	30.0
15...	2.5	36.0
15...	3.0	35.0
15...	3.5	35.0
15...	4.0	38.5
15...	4.5	38.5
JUL		
02...	1.0	25.5
02...	1.5	23.5
02...	2.0	30.0
02...	2.5	36.5
02...	3.0	35.5
02...	3.5	36.0
02...	4.0	38.5
02...	4.5	39.5
26...	1.0	16.5
26...	1.5	16.0
26...	2.0	23.5
26...	2.5	32.0
26...	3.0	32.5
26...	3.5	32.0

May 31, 1979, through August 30, 1979--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUL		
26...	4.0	36.5
26...	4.5	36.5
AUG		
06...	1.0	22.0
06...	1.5	17.0
06...	2.0	24.0
06...	2.5	32.5
06...	3.0	32.0
06...	3.5	33.0
06...	4.0	37.0
06...	4.5	37.0
30...	1.0	19.0
30...	1.5	18.0
30...	2.0	21.5
30...	2.5	28.5
30...	3.0	29.5
30...	3.5	30.0
30...	4.0	34.5
30...	4.5	34.5

[1]Moisture determined from soil sample.

October 4, 1979, through
May 1, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
04...	1.0	13.5
04...	1.5	13.5
04...	2.0	17.0
04...	2.5	23.5
04...	3.0	24.5
04...	3.5	26.0
04...	4.0	31.5
04...	4.5	31.5
MAY		
01...	.5	[2]22.3
01...	1.0	23.5
01...	1.5	24.0
01...	2.0	30.0
01...	2.5	35.5
01...	3.0	35.0
01...	3.5	36.0
01...	4.0	40.0
01...	4.5	39.5

[2]Soil moisture percent by weight.

472121101532010 (B8)

LOCATION: Lat 47°21'21", long 101°53'20", in NE¼NE¼NE¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: June 1979 through November 1981.

LAND USE: Crop.

June 26, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
26...	1.0	16.0
26...	1.5	24.5
26...	2.0	25.5
JUL		
26...	1.0	16.0
26...	1.5	25.5
26...	2.0	26.0
AUG		
06...	1.0	19.5
06...	1.5	27.5
06...	2.0	26.5
06...	2.5	26.5
30...	1.0	13.0
30...	1.5	21.0
30...	2.0	23.0
30...	2.5	23.5

May 28, 1980, through September 11, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
28...	1.0	11.5
28...	1.5	23.5
28...	2.0	21.0
28...	2.5	20.0
28...	3.0	21.0
28...	3.5	23.5
JUN		
09...	.5	[2]11.0
09...	1.0	15.0
09...	1.5	23.5
09...	2.0	20.5
09...	2.5	20.0
09...	3.0	21.5
09...	3.5	24.5
25...	.5	[2]15.5
25...	1.0	12.5
25...	1.5	22.0
25...	2.0	20.0
25...	2.5	19.0
25...	3.0	21.0
25...	3.5	23.5
JUL		
11...	.5	[2]5.0
11...	1.0	7.5
11...	1.5	16.5
11...	2.0	15.0
11...	2.5	15.0
11...	3.0	18.0
11...	3.5	23.5
AUG		
11...	1.0	9.0
11...	1.5	15.0
11...	2.0	12.5
11...	2.5	12.5
11...	3.0	14.0
11...	3.5	19.0
SEP		
11...	.5	[2]10.3
11...	1.0	14.0
11...	1.5	25.0

May 28, 1980, through September 11, 1980--Continued.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
SEP		
11...	2.0	17.0
11...	2.5	20.0
11...	3.0	14.5
11...	3.5	19.5

[2]Soil moisture percent by weight.

October 20, 1980, through August 25, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
20...	1.00	29
20...	1.50	24
20...	2.00	15
20...	2.50	13
20...	3.00	16
APR		
21...	.50	15
21...	1.00	22
21...	1.50	25
21...	2.00	25
21...	2.50	24
21...	3.00	21
JUN		
05...	1.00	24
05...	1.50	21
05...	2.00	21
05...	2.50	21
05...	3.00	21
18...	.50	[1]14
18...	1.00	27
18...	1.50	27
18...	2.00	22
18...	2.50	21
18...	3.00	21
JUL		
22...	.50	[1]10
22...	1.00	13
22...	1.50	16
22...	2.00	16
22...	2.50	17
AUG		
25...	.50	[1]11
25...	1.00	12
25...	1.50	14
25...	2.00	14
25...	2.50	15
25...	3.00	18

November 5, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
NOV		
05...	0.50	[1]13
05...	1.00	14
05...	1.50	14
05...	2.00	14
05...	2.50	16
05...	3.00	18

[1]Moisture determined from soil sample.

472121101541710 (B9)

LOCATION: Lat 47°21'21", long 101°54'17", in NE¼NW¼NW¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: June 1979 through April 1982.

LAND USE: Crop.

June 26, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
26...	1.0	22.5
26...	1.5	22.0
26...	2.0	16.0
26...	2.5	14.0
26...	3.0	14.5
JUL		
26...	1.0	12.5
26...	1.5	13.5
26...	2.0	13.0
26...	2.5	13.5
26...	3.0	14.0
AUG		
06...	1.0	21.5
06...	1.5	17.5
06...	2.0	16.0
06...	2.5	15.0
06...	3.0	14.5
30...	1.0	13.0
30...	1.5	13.0
30...	2.0	13.0
30...	2.5	14.0
30...	3.0	14.5

May 28, 1980, through September 11, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
28...	1.0	11.5
28...	1.5	16.0
28...	2.0	13.5
JUN		
09...	.5	[2]5.0
09...	1.0	12.5
09...	1.5	16.5
09...	2.0	13.5
25...	.5	[2]11.9
25...	1.0	16.5
25...	1.5	21.0
25...	2.0	15.5
JUL		
11...	.5	[2]6.5
11...	1.0	9.0
11...	1.5	15.0
11...	2.0	14.5
AUG		
11...	1.0	7.0
11...	1.5	11.5
11...	2.0	12.5
SEP		
11...	.5	[2]25.2
11...	1.0	25.5
11...	1.5	29.0
11...	2.0	27.5

October 20, 1980, through August 25, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
20...	1.00	27
20...	1.50	31
20...	2.00	30
APR		
21...	.50	[2]13
21...	1.00	20
21...	1.50	24
21...	2.00	23
21...	2.50	20
21...	3.00	21
JUN		
05...	1.00	20
05...	1.50	18
05...	2.00	17
05...	2.50	16
05...	3.00	19
18...	.50	[1]21
18...	1.00	25
18...	1.50	25
18...	2.00	19
18...	2.50	16
JUL		
22...	.50	[1]21
22...	1.00	11
22...	1.50	13
22...	2.00	14
22...	2.50	13
22...	3.00	16
AUG		
25...	.50	[1]11
25...	1.00	11
25...	1.50	12
25...	2.00	12
25...	2.50	13
25...	3.00	16

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

November 5, 1981, through
April 8, 1982.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
NOV		
05...	0.50	[1]19
05...	1.00	13
05...	1.50	12
05...	2.00	12
05...	2.50	12
05...	3.00	16
APR		
08...	.50	[2]26
08...	1.00	33
08...	1.50	21
08...	2.00	13
08...	2.50	12
08...	3.00	15

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

472035101532010 (B10)

LOCATION: Lat 47°20'35", long 101°53'20", in SE¼SE¼SE¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: June 1979 through May 1980.

LAND USE: Grass.

June 26, 1979, through August 30, 1979.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
JUN		
26...	1.0	19.5
26...	1.5	20.5
26...	2.0	25.5
26...	2.5	29.0
26...	3.0	29.5
JUL		
26...	1.0	13.0
26...	1.5	16.0
26...	2.0	21.5
26...	2.5	26.5
26...	3.0	27.5
AUG		
06...	1.0	20.5
06...	1.5	24.0
06...	2.0	25.0
06...	2.5	27.0
06...	3.0	27.5
30...	1.0	20.5
30...	1.5	21.5
30...	2.0	22.5
30...	2.5	26.0
30...	3.0	27.0

October 4, 1979, through May 1, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
04...	1.0	10.0
04...	1.5	14.0
04...	2.0	16.5
04...	2.5	22.0
04...	3.0	24.0
MAY		
01...	.5	[2]7.7
01...	1.0	16.5
01...	1.5	22.0
01...	2.0	27.0
01...	2.5	29.0
01...	3.0	27.0

[2]Soil moisture percent by weight.

472121101532011 (B11)

LOCATION: Lat 47°21'21", long 101°53'20", in NE¼NE¼NE¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: May 1980 through November 1981.

LAND USE: Grass.

May 28, 1980, through September 11, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
28...	0.5	[1]10.5
28...	1.0	11.0
28...	1.5	15.5
28...	2.0	15.0
28...	2.5	16.0
28...	3.0	18.5
JUN		
09...	.5	[2]12.5
09...	1.0	13.0
09...	1.5	13.0
09...	2.0	15.0
09...	2.5	16.5
09...	3.0	19.0
25...	.5	[2]12.8
25...	1.0	19.0
25...	1.5	18.0
25...	2.0	15.5
25...	2.5	16.5
25...	3.0	19.0
JUL		
11...	.5	[2]7.0
11...	1.0	10.5
11...	1.5	15.0
11...	2.0	14.5
11...	2.5	16.0
11...	3.0	19.0
AUG		
11...	1.0	12.0
11...	1.5	13.5
11...	2.0	14.0
11...	2.5	15.0
11...	3.0	18.0
SEP		
11...	.5	[2]16.9
11...	1.0	20.5
11...	1.5	25.0
11...	2.0	19.0
11...	2.5	15.5
11...	3.0	18.0

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

October 20, 1980, through August 25, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
20...	1.00	28
20...	1.50	27
20...	2.00	18
20...	2.50	16
20...	3.00	18
JUN		
18...	1.00	29
18...	1.50	30
18...	2.00	26
18...	2.50	25
JUL		
22...	1.00	21
22...	1.50	28
22...	2.00	26
22...	2.50	27
AUG		
25...	.50	[1]15
25...	1.00	21
25...	1.50	25
25...	2.00	25
25...	2.50	28

November 5, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
NOV		
05...	0.50	[1]18
05...	1.00	26
05...	1.50	26
05...	2.00	26
05...	2.50	27

472121101541711 (B12)

LOCATION: Lat 47°21'21", long 101°54'17", in NE¼NW¼NW¼ sec. 28, T. 145 N., R. 88 W.

PERIOD OF RECORD: May 1980 through April 1982.

LAND USE: Grass.

May 28, 1980, through September 11, 1980.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
MAY		
28...	0.5	[1]10.4
28...	1.0	8.0
28...	1.5	10.5
28...	2.0	11.5
28...	2.5	11.0
28...	3.0	13.0
JUN		
09...	.5	[2]11.5
09...	1.0	9.5
09...	1.5	11.0
09...	2.0	11.5
09...	2.5	11.5
09...	3.0	14.0
25...	.5	[2]10.2
25...	1.0	12.0
25...	1.5	15.0
25...	2.0	12.5
25...	2.5	11.5
25...	3.0	14.0
JUL		
11...	.5	[2]6.3
11...	1.0	7.0
11...	1.5	11.0
11...	2.0	12.0
11...	2.5	11.5
11...	3.0	13.5
AUG		
11...	1.0	9.5
11...	1.5	11.0
11...	2.0	11.5
11...	2.5	11.0
11...	3.0	13.5
SEP		
11...	.5	[2]23.5
11...	1.0	21.5
11...	1.5	22.5
11...	2.0	18.0
11...	2.5	11.5
11...	3.0	13.0

October 20, 1980, through August 25, 1981.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
OCT		
20...	1.00	26
20...	1.50	28
20...	2.00	23
20...	2.50	13
20...	3.00	14
JUN		
18...	1.00	27
18...	1.50	24
18...	2.00	22
18...	2.50	19
JUL		
22...	1.00	14
22...	1.50	16
22...	2.00	16
22...	2.50	16
AUG		
25...	.50	[1]14
25...	1.00	11
25...	1.50	13
25...	2.00	13
25...	2.50	13

November 5, 1981, through April 8, 1982.

DATE	SAMPLING DEPTH (FT) (00003)	SOIL MOISTURE PERCENT OF TOTAL VOLUME (74207)
NOV		
05...	0.50	[1]21
05...	1.00	15
05...	1.50	14
05...	2.00	13
05...	2.50	13
JAN		
19...	1.00	23
19...	1.50	16
19...	2.00	14
19...	2.50	13
APR		
08...	.50	[2]33
08...	1.00	34
08...	1.50	26
08...	2.00	23
08...	2.50	19

[1]Moisture determined from soil sample.

[2]Soil moisture percent by weight.

TABLE 8.--Land-use data

Land use	Winter 1978-79	Summer 1979	Winter 1979-80	Summer 1980	Winter 1980-81	Summer 1981	Winter 1981-82
	Area, in percent						
	HAY CREEK STUDY AREA (Total area, 11.41 mi^2)						
Corn	0.0	0.4	0.0	0.2	0.0	0.3	--
Corn stubble	.0	.0	.4	.0	.0	.0	--
Fallow	35.3	34.4	34.5	35.9	40.6	24.8	--
Farm site	1.6	1.6	1.6	1.6	1.6	1.6	--
Grain	.0	36.6	.0	35.5	.0	48.8	--
Grain stubble	36.4	.0	36.5	.0	31.7	.0	--
Grassland	3.4	10.5	11.2	3.3	3.2	12.0	--
Hayfield	8.3	13.9	13.0	1.3	1.0	7.5	--
Pasture	15.0	2.6	2.8	22.2	21.9	5.0	--
	WEST BRANCH ANTELOPE CREEK STUDY AREA (Total area, 8.46 mi^2)						
Brush	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Corn	.0	2.9	.0	2.5	.0	5.0	.0
Corn stubble	.1	.0	2.2	.0	.6	.0	5.0
Fallow	19.7	19.6	21.1	15.8	21.9	17.8	18.1
Farm site	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Grain	.0	23.2	.0	27.9	.0	21.9	.0
Grain stubble	25.6	.0	21.9	.0	24.9	.0	21.9
Grassland	7.1	3.5	3.0	1.1	3.1	4.7	4.5
Gravel pit	.0	.0	.0	.2	.2	.2	.2
Hayfield	7.6	6.6	6.1	6.2	3.9	9.2	9.6
Pasture	36.7	41.0	42.5	43.1	42.2	38.0	37.5

TABLE 9.--Basin characteristics

File code	06336510 (Hay Creek No. 2 near Wibaux, Mont.)	06336515 (Hay Creek near Wibaux, Mont.)	06340524 (West Branch Antelope Creek No. 5 near Zap, N. Dak.)	06340528 (West Branch Antelope Creek No. 4 near Zap, N. Dak.)	Description
AREA	4.12	11.41	4.37	8.46	Total drainage area, in square miles, including noncontributing areas.
SLOPE	28.9	26.7	22.4	32.2	Main channel slope, in feet per mile, computed by the 85 to 10 percent method described by Benson (Water-Supply Paper 1580-B).
BSLOPE	145	166	158	196	Average basin slope, in feet per mile, measured by grid sampling method.
LENGTH	4.63	10.24	5.02	9.85	Stream length, in miles, measured along channel from gage to basin divide.
BLENGTH	4.17	9.36	4.71	9.54	Stream length, in miles, measured from gage to end of defined channel (blue line on topographic map).
VALLGH	3.88	7.82	4.22	7.92	Valley length, in miles, measured along general path of flood plain from gage to basin divide.
ELEV	2786	2756	2241	2179	Mean basin elevation, in feet above National Geodetic Vertical Datum of 1929, measured from topographic maps by transparent grid sampling method (20 to 80 points in basin were sampled).
ELV10,85	2760	2702.5	2200	2102.5	Average of channel elevations, in feet above National Geodetic Vertical Datum of 1929, at points 10 and 85 percent of stream length upstream from gage.
LAKEAREA	--	--	.28	.14	Area of lakes and ponds, in percent of contributing drainage area, measured by the grid sampling method.
FOREST	--	--	.21	.7	Forested area, in percent of contributing drainage area, measured by the grid sampling methods.
SOIL	3.2	3.2	2.8	2.8	Soils index, a relative measure of infiltration, from Soil Conservation Service.
AZIMUTH	325	322	134	112	Azimuth, in degrees from north, of a straight line connecting points 85 and 10 percent of distance from gage to divide.
LAT	46°58'30"	47°00'15"	47°23'00"	47°21'40"	Latitude of center of basin, in degrees.
LONG	104°05'35"	104°06'45"	101°55'50"	101°54'20"	Longitude of center of basin, in degrees.
LAT GAGE	46°59'31"	47°02'26"	47°23'10"	47°21'21"	Latitude of stream-gaging station in degrees.
LNG GAGE	104°06'12"	104°08'04"	101°50'04"	101°51'16"	Longitude of stream-gaging station in degrees.
PRECIP	13.82	13.82	17.2	17.2	Mean annual precipitation, in inches, from U.S. Weather Bureau series, "Climates of States." Grid sampling methods used if isohyetal map is available; otherwise anomaly map constructed (Water-Supply Paper 1580-D).

File code	06336510 (Hay Creek No. 2 near Wibaux, Mont.)	06336515 (Hay Creek near Wibaux, Mont.)	06340524 (West Branch Antelope Creek No. 5 near Zap, N. Dak.)	06340528 (West Branch Antelope Creek No. 4 near Zap, N. Dak.)	Description
I24,2	1.8	1.8	1.9	1.9	Precipitation intensity; 24-hour rainfall, in inches, expected on the average of once each d years. (Estimated from U.S. Weather Bureau Technical Paper 40 or Technical Paper 29 for east coast regions.) d=2.
I24,10	2.9	2.9	3.1	3.1	Do. d=10.
I24,25	3.4	3.4	3.6	3.6	Do. d=25.
I24,50	3.9	3.9	4.1	4.1	Do. d=50.
I24,100	4.4	4.4	4.6	4.6	Do. d=100.
PRC10	.81	.81	.66	.66	Mean precipitation, in inches, for M calendar month. M = October.
PRC11	.55	.55	.55	.55	Do. M = November.
PRC12	.42	.42	.32	.32	Do. M = December.
PRC1	.44	.44	.47	.47	Do. M = January.
PRC2	.41	.41	.43	.43	Do. M = February.
PRC3	.61	.61	.63	.63	Do. M = March.
PRC4	1.31	1.31	1.48	1.48	Do. M = April.
PRC5	2.09	2.09	2.57	2.57	Do. M = May.
PRC6	3.16	3.16	3.97	3.97	Do. M = June.
PRC7	1.55	1.55	2.62	2.62	Do. M = July.
PRC8	1.26	1.26	2.08	2.08	Do. M = August.
PRC9	1.21	1.21	1.42	1.42	Do. M = September.
SNOFALL	32	32	35	35	Mean annual snowfall, in inches, from U.S. Weather Bureau, "Climates of States."
SN2	.5	.5	.7	.7	Maximum water equivalent, in inches, of snow cover as of March 15, T-year recurrence interval, from U.S. Weather Bureau Technical Paper 50. T=2.
SN10	1.5	1.5	2.5	2.5	Do. T=10.
SN25	2.4	2.4	3.8	3.8	Do. T=25.
SN100	3.9	3.9	6.5	6.5	Do. T=100.
JANMIN	2.5	2.5	-1.5	-1.5	Mean minimum January temperature, in degrees F, from U.S. Weather Bureau "Climates of States."
JANAV	11.5	11.5	9	9	Mean monthly temperature for January, in degrees F, from U.S. Weather Bureau "Climates of States."
MARMAX	39	39	36.5	36.5	Mean maximum March temperature, in degrees F, from U.S. Weather Bureau "Climates of States."
JULYMAX	84	84	85	85	Mean maximum July temperature, in degrees F, from U.S. Weather Bureau "Climates of States."
JULYAV	67	67	71	71	Mean monthly temperature for July, in degrees F, from U.S. Weather Bureau "Climates of States."