Air Temperature and Precipitation Data, Gulkana Glacier, Alaska, 1968-96

By Ben W. Kennedy, Lawrence R. Mayo, Dennis C. Trabant, *and* Rod S. March

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CONVERSION FACTORS, VERTICAL DATUM, AND MACHINE-READABLE FILES

Multiply	By	To Obtain
millimeter (mm)	0.03937	inch
meter (m)	3.281	foot
kilometer (km)	0.6214	mile
kilogram (kg)	2.205	pound, avoirdupois
liter (L)	0.2642	gallon
degree Celsius (°C)	1.8, then add 32	degree Fahrenheit

Vertical datum:

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

Machine-readable files:

The daily air temperature and precipitation data contained in this report have also been recorded on easily copied computer media. The data are available on the World Wide Web at http://www-water-ak.usgs.gov and from the World Data Center, Campus Box 449, University of Colorado, Boulder, CO, 80309. Additionally, the data may be obtained on disk from the District Chief, U.S. Geological Survey, 4230 University Drive, Suite 201, Anchorage, AK 99508-4664.

Air Temperature and Precipitation Data, Gulkana Glacier, Alaska, 1968-96

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Abstract

Daily, monthly, and annual average air temperature and precipitation-catch data were recorded at Gulkana Glacier basin, Alaska, between October 1967 and September 1996. The data set is important because it provides long-term climate information from the highest year-round climatological recording site in Alaska.

The daily air temperature data set is 96 percent complete. The daily precipitation data set is 83 percent complete; precipitation data for 1993-96 are missing. Annual data summaries are calculated for each hydrologic year, October 1 through September 30, for years that have 12 months of data. Monthly precipitation-catch and average air temperature summaries are calculated for months with nine or fewer daily records missing.

The average annual air temperature recorded at the site from hydrologic year 1968 through 1996 was -4.1 degrees Celsius. The coldest recorded year was 1972 with an average annual temperature of -6.7 degrees Celsius. The warmest year was 1981 with an average annual temperature of -2.6 degrees Celsius. January 1971 was the coldest month with an average temperature of -20.8 degrees Celsius. July 1989 was the warmest month with an average temperature of 8.7 degrees Celsius. January 17, 1971, was the coldest day with an average temperature of -35.0 degrees Celsius. June 15, 1969, was the warmest day with an average temperature of 16.4 degrees Celsius.

The average annual precipitation catch recorded at the site from hydrologic year 1968 through 1992 was 1,020 millimeters. The highest annual precipitation catch recorded was 1,572 millimeters in 1981; the lowest was 555 millimeters in 1969. The highest recorded monthly precipitation catch was 448 millimeters in July 1981 and in several different months no precipitation was recorded. The highest daily precipitation catch was 99 millimeters on September 12, 1972, and on many different dates no precipitation was recorded. Because of low gage-catch efficiency the reported annual precipitation-catch data are estimated to represent about 62 percent of the actual annual basin precipitation. Snowfall is the dominant form of precipitation on the glacier from September through mid-June.

INTRODUCTION

Gulkana Glacier (fig. 1), in central Alaska, is a compound valley glacier fed from several cirques on the south flank of the eastern Alaska Range. The glacier has been in general recession since the culmination of its last advance around the turn of the century (Péwé and Reger, 1983). Gulkana Glacier is one of three long-term glacier-monitoring sites operated by the U.S. Geological Survey. The other glacier-monitoring sites are Wolverine Glacier in southcentral Alaska and South Cascade Glacier in Washington. Air temperature, precipitation, glacier-motion, mass-balance, and stream

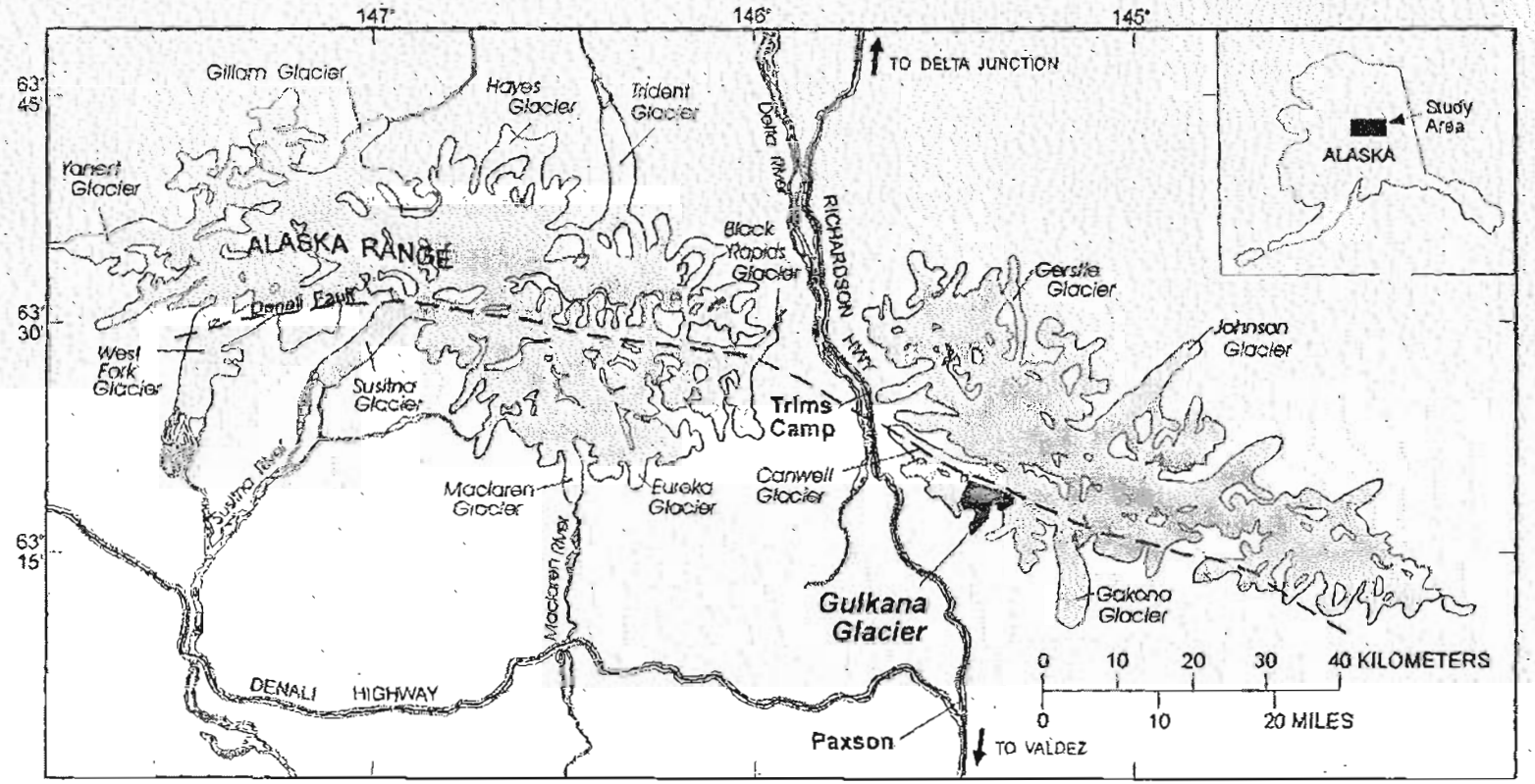


Figure 1. Location of Gulkana Glacier, Alaska Range, Alaska.

runoff data are recorded at these three glaciers to better understand glacier-related hydrologic processes.

This report contains air temperature and precipitation-catch measurements recorded at Gulkana Glacier basin from 1968 through 1996 hydrologic years as part of the long-term glacier-monitoring program. The data set is important because it provides long-term climate information from the highest year-round climatological recording site in Alaska.

Background

Measurements began on Gulkana Glacier during the early 1960's with the University of Alaska Gulkana Glacier Project (Péwé and Reger, 1983). For several years this project measured energy balance, mass balance, and meteorology, as well as supplemental measurements of ice foliation, flow, and glacier bottom topography (from gravity anomalies). In 1966, the U.S. Geological Survey initiated a continuing series of meteorological, snow- and ice-balance, and runoff measurements as part of the United States contribution to the International Hydrologic Decade study of mass balances on selected glaciers. Detailed results from 1966 and 1967 are reported by Meier and others (1971) and Tangborn and others (1977), respectively. Measured winter snow balance and annual balance from 1966-77 are reported by Meier and others (1980). Mass balance studies were relatively intensive until the mid-1970's, after which spatial sampling was reduced to three index sites. At that time, measurements were expanded to include ice motion and surface altitude observations, in addition to the ongoing balance, runoff, and meteorological observations. Since 1966, part of the Gulkana data set, including net balance, accumulation, ablation, accumulation area ratio (AAR), and equilibrium line altitude (ELA), has been published by the World Glacier Monitoring Service (Kasser, 1967; Müller, 1977; Haeberli, 1985; Haeberli and Müller, 1988; Haeberli and Hoelzle, 1993). Index-site glacier-surface and summer-surface altitudes, measured winter balance, and net firn and ice balances from 1975 to 1983 are published by Mayo and Trabant (1986). Detailed annual reports for 1992 and 1993 are published by March and Trabant (1996 and 1997, respectively). Net and seasonal mass balances from 1966 forward are available on the World Wide Web at http://www-water-ak.usgs.gov.

The Gulkana record is approaching the general 30-year length-of-record criterion (necessary to provide reasonable statistics) that is used in the selection of stations for international exchange through the Global Telecommunications Service (GTS) for global climate monitoring (Karl and others, 1989). Preliminary regional climate-glacier interpretive work using the Gulkana data includes papers by Meier and others (1971), Mayo and Trabant (1986), Letréguilly and Reynaud (1989), and by Walters and Meier (1989).

Purpose and Scope

The purpose of the Gulkana Glacier research program is to develop a better understanding of long-term climate variations and glacier processes in order to quantitatively predict the effects of glaciers on global sea level, water resources, and hydrologic hazards. The approach has been to establish long-term mass-balance monitoring programs at three widely spaced glacier basins in the United States—South Cascade, Wolverine, and Gulkana—that sample different climate-glacier-runoff regimes.

Air temperature and precipitation-catch data described in this report were recorded for the purpose of studying climate variations, estimating some mass-balance quantities, determining dates of important glacier mass-balance events, and investigating the effects of climate variation on glaciers. The purpose of this report is to provide a comprehensive climatological data set for Gulkana Glacier in both tabular and electronic formats.

The daily air temperature data set is 96 percent complete. Approximately 5 percent of the reported temperature record is estimated. The daily precipitation data set is 83 percent complete. Approximately 4 percent of this reported record is estimated. Precipitation data for 1993-96 are missing. Equipment malfunctions account for the missing air temperature and precipitation data. Monthly precipitation-catch and average air temperature summaries are calculated for months with nine or fewer daily records missing. Annual data summaries are calculated for the hydrologic year (HY), October 1 through September 30, for years that have 12 months of data. Dates of missing and estimated record are listed in table 1 (p. 13 of this report). Monthly and annual average air temperature values are presented in table 2 (p. 14). Monthly and annual precipitation-catch values are presented in table 3 (p. 15). Daily average air temperature values are reported in table 4 (p. 16-44) and daily precipitation-catch values through 1992 HY are reported in table 5 (p. 45-69). Daily, monthly, and annual air temperature and precipitation data are also presented in graphical form in Appendix A, figures A1 through A9. Daily, monthly, and annual air temperature and precipitation data are also available on the World Wide Web at http://www-water-ak.usgs.gov, or may be obtained from the USGS on a data disk as described in Appendix B.

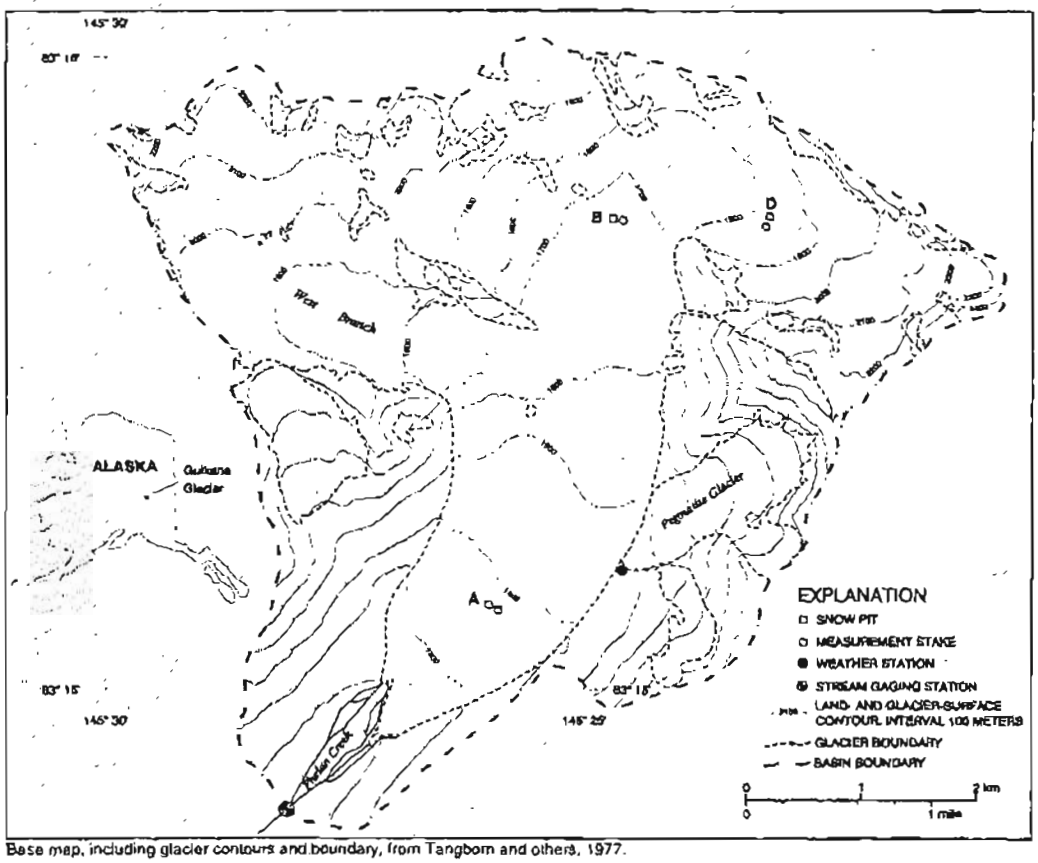
Data reduction methodologies described for a similar weather station at Wolverine Glacier, Alaska (Mayo and others, 1992; Kennedy, 1995), are applicable to the Gulkana Glacier meteorological data.

Instrument Site and Climate Description

The Gulkana climatological station is located at an altitude of 1,480 m on the crest of a wind-swept, ice-cored moraine along the eastern boundary of the glacier (fig. 2). The station is slightly lower than the glacier's average ELA and approximately 300 m from the east edge of the glacier. The average ELA is about 1,700 m, which is consistent with a continental mountain climate in Alaska. The average annual air temperature at the recorder site is about -4°C, and the average annual precipitation-gage catch is about 1,000 mm. Snowfall is the dominant form of precipitation on the glacier from September through mid-June. Wind prevents deep snow from accumulating at the recording site. Daily average temperatures range from a low of -35°C to a high of 16°C.

DATA COLLECTION AND EQUIPMENT

Weather station equipment consists of an air temperature sensor in a vented shelter, a precipitation gage with a windshield and steel storage tank, and an analog strip-chart recorder mounted inside a shelter on the storage tank (fig. 3). This equipment has remained essentially the same since the station began operation in 1967, and is identical to that operated at Wolverine Glacier. These gages were installed in 1967 by one author (Mayo), following designs for remote weather stations developed by Tangborn (1963) at South Cascade Glacier. Installation and testing of digital climate-recording equipment designed for satellite data telemetry began in September 1995 and is in progress.



Base map, including glacier contours and boundary, from Tangborn and others, 1977.

Figure 2. Gulkana Glacier basin and instruments sites, Alaska.

Chart Recorder

Precipitation catch and air temperature are recorded by a multi-pen strip-chart recorder (Leupold & Stevens, Type A35[1]). The recorder will operate for several months between servicing visits, recording analog data on a continuous basis.

[1]The use of brand, firm, or product names in this report is for identification purposes only, and does not constitute endorsement by the U.S. Geological Survey.

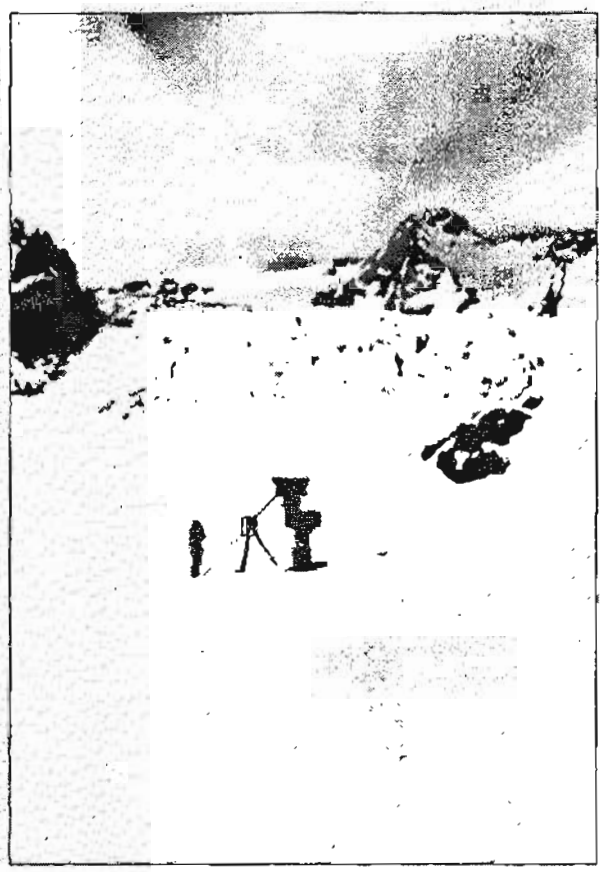


Figure 3. Air temperature and precipitation-gage site at Gulkana Glacier, Alaska.

Air Temperature

The air temperature sensor is a copper-finned, 20- by 300-mm, liquid-filled sensor. It has a slow response time that makes it good for determining daily average temperature, but poor for daily maximum and minimum temperatures which have not been extracted from the record. The sensor is housed in a small white shelter with slatted walls and an open bottom, 1.5 to 2.0 m above the ground. Snow accumulation is minimal at the site, so the height above the ground is not significantly reduced during the winter. A glass thermometer with graduations of two-tenths of a degree Celsius is used several times a year to make recorder calibration measurements. The south wall of the shelter has a narrow open slot (fig. 4) to allow the sun to warm the temperature sensor for approximately 15 minutes at the same time each day. On clear days, solar warming produces a distinct peak on the temperature record. These "sun peaks" are used as time calibration marks on the

strip-chart record. The temperature-recording system is designed for operation in temperatures between -40°C to 50°C. The daily average temperatures reported (table 4) have an accuracy of about ±1.0°C (Mayo and others, 1992; Kennedy, 1995).

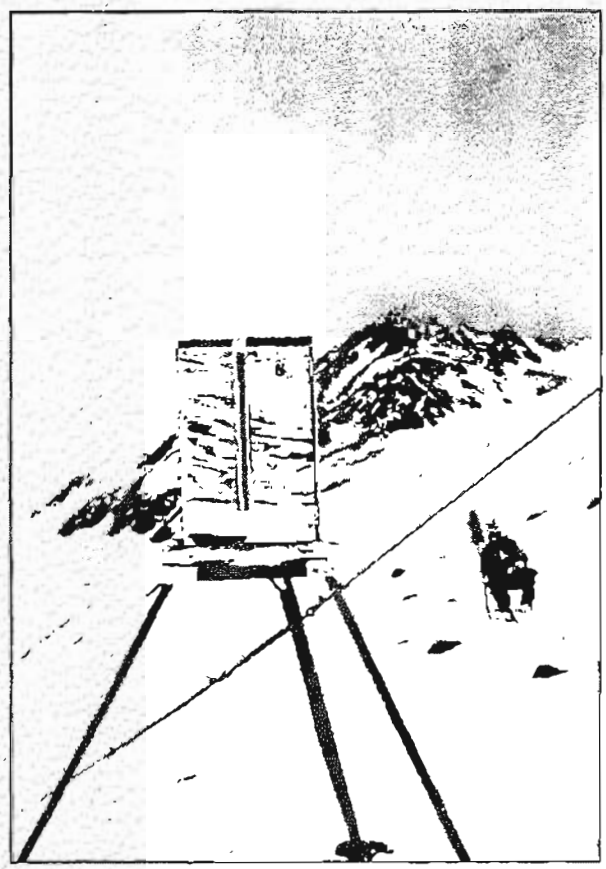


Figure 4. Shelter for the air temperature sensor.

Precipitation Catch

The precipitation gage consists of a white steel storage tank that tapers to a conical orifice, 0.305 m in diameter, 3 m above the ground. A modified Nipher shield (Warnick, 1953) is installed around the orifice to improve the catch efficiency during windy conditions and to help prevent snow from capping the orifice. The upper section of the gage is painted dark green to absorb sunlight and help prevent ice and snow from accumulating on the inside walls of the gage. The storage tank contains a self-mixing antifreeze (Mayo, 1972). An oil layer prevents evaporation of antifreeze and stored precipitation. The white color of the collection tank reduces solar warming and expansion of the stored antifreeze-water solution. The recording system is designed for operation

in temperatures above -40°C. The daily precipitation catch (table 5) has an estimated accuracy of about ±5 mm (Kennedy, 1995).

The complex relation between precipitation-gage catch and basin precipitation has not been thoroughly analyzed at Gulkana. It is generally well known that gage-catch efficiency is reduced by strong winds, especially for snow precipitation. Moreover, catch efficiencies are not constant but can vary with wind speed, direction, and the form of the precipitation, thus possibly producing a seasonal variation in catch efficiency. According to Goodison (1978), gage-catch efficiency is inversely related to wind speed. At Wolverine Glacier, which is a windier environment than Gulkana, the gage-catch efficiency relative to the basin precipitation was found to be about 0.3 for a 10-year period (Mayo and others, 1992). From April 27, 1967 to September 30, 1967 the catch efficiency of the Gulkana gage relative to the basin precipitation was calculated to be 0.5 (Tangborn and others, 1977), though the windshield has since been modified to what is believed to be a more effective design. For the 14 years, 1968-78 and 1990-92, the precipitation-catch efficiency of the gage relative to basin precipitation is estimated to be about 0.6 by considering the long-term water balance of the basin; however, individual year gage-catch efficiencies show a large variability, ranging from 0.2 to 1.0 (March and Trabant, 1997). Despite the uncertain catch efficiency, the recorded precipitation-gage catch is a useful indicator of the timing and intensity of precipitation events in the basin.

Operating Problems

The most serious equipment problems have been (1) occasional stoppage of the strip-chart recorder clock and (2) recent (1993-96) loss of liquid from the storage tank that may have been caused by an inadequate oil layer. Recorder malfunctions occur most commonly during the cold winter months, though gaps in the record also occur during the summer (table 1). The 1993-96 evaporation-affected record is being analyzed.

In addition, although the gage orifice is painted dark green to absorb sunlight, snow occasionally sticks on the inside or top of the gage above the antifreeze solution level. When temperatures increase, this snow falls into the collection tank producing an abrupt rise (usually less than 15 mm) on the precipitation-catch record. These events are reported as precipitation catch on the day they occur; however, caution should be used when analyzing these reported daily values because they probably include precipitation from previous days. The dates of these abrupt rises on the precipitation-catch record are listed in table 6 at the back of this report.

MONTHLY AND ANNUAL DATA FORMAT

In order to summarize the data set in an easy-to-read format, monthly and annual air temperature and precipitation data are presented in tables 2 and 3 respectively, and in graphical form in Appendix A. These data summaries follow suggested National Climate Data Center (NCDC) reporting format—if more than nine records are missing the monthly summary is reported as "not valid" (Grant Goodge, NCDC, oral commun., 1995). In some cases, partial records used in conjunction with climate data from nearby Trims Camp or Paxson (fig. 1) allowed reasonable linear regression estimates of daily values to complete partial monthly records. Regression equations were developed using 20 to 30 data points on either side of the missing record. Air temperature regression estimates are fair; coefficient of determination (r^2) values range from 0.4 to 0.8. Precip-

itation-catch regression estimates are poor; r^2 values range from 0.2 to 0.6. These data estimates are preliminary. Dates of missing and estimated record are listed in table 1. Annual data summaries are calculated for those hydrologic years that have 12 months of recorded data. It is important to note that even though several months of precipitation record may be missing within a particular hydrologic year, a valid cumulative precipitation catch for that period can still be measured when the chart recorder is restarted because the precipitation gage is a storage-type gage. Annual precipitation catch reported for 1984, 1987, 1991, and 1992 hydrologic years include data measured in this manner (table 3).

Graphs of annual average air temperature and annual total precipitation catch are presented in figures A1 and A2 (Appendix A). The relation between annual precipitation catch and annual average air temperature is graphed in figure A3. Monthly average air temperature maximums, means, and minimums are graphed in figure A4. Monthly precipitation-catch maximums, means, and minimums are graphed in figure A5. Graphs of average air temperature plotted by month are presented in figure A6 and graphs of precipitation catch plotted by month are presented in figure A7. Daily average air temperature is graphed in figure A8 and daily precipitation catch is graphed in figure A9. Summary data values are included next to each chart in figures A1, A2, A6, and A7. Each chart of monthly and annual air temperature and precipitation-catch data includes plots of the data mean and one standard deviation either side of the mean.

ANNUAL, MONTHLY, AND DAILY DATA SUMMARY

The average annual air temperature recorded at Gulkana Glacier, from hydrologic years 1968 through 1995, was -4.1°C. The coldest recorded year was 1972 with an annual average temperature of -6.7°C. The warmest year was 1981 with an annual average temperature of -2.6°C. January 1971 was the coldest month with an average temperature of -20.8°C and July 1989 was the warmest with an average temperature of 8.7°C. January 17, 1971, was the coldest day with an average temperature of -35.0°C. June 15, 1969, was the warmest day with an average temperature of 16.4° C.

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- page 13 follows -

Table 1. Dates of estimated and missing daily values for air temperature and precipitation data, Gulkana Glacier basin, 1968-96 hydrologic years

[Dates with subscript (chart) are estimated from original Gulkana chart record. Other estimated records use either Paxson or Trims Camp climate data]

Hydrologic year	Precipitation catch		Air temperature	
	Estimated record	Missing record	Estimated record	Missing record
1968	---	---	---	---
1969	---	---	11/30-12/12	---
1970	---	---	---	---
1971	---	---	---	---
1972	10/24-11/20	---	10/24-11/20	---
1973	---	---	---	---
1974	10/26-3/24 (chart)	---	---	---
1975	---	---	1/3-1/14	---
1976	6/21-7/28	---	5/21-5/31	6/1-7/28
1977	---	---	---	---
1978	3/6-3/25	---	3/6-3/25	---
1979	---	---	---	---
1980	---	---	---	---
1981	---	---	---	---
1982	6/18-6/19, 3/9-3/27	3/5-3/8	12/28-1/15, 3/5-3/28	---
1983	8/31-9/10	---	8/31-9/10	---
1984	1/28-1/31	2/1-3/23	1/28-1/31	2/1-3/23
1985	8/29-9/30 (chart)	---	---	---
1986	10/1-1/10 (chart), 9/8-9/30	---	9/8-9/30	---
1987	10/1-10/7, 11/27-11/30	12/1-3/24	10/1-10/7, 11/27-11/30	12/1-3/24
1988	2/6-2/10	---	2/6-2/10	---
1989	6/18-7/5	---	6/18-7/5	---
1990	---	---	---	---
1991	11/20-11/30, 1/1-1/16, 8/22-8/30	12/1-12/31	11/20-11/30, 1/1-1/16, 8/22-8/30	12/1-12/31
1992	11/19-11/30	12/1-1/29, 6/3-9/21	11/19-11/30, 9/1-9/21	12/1-1/29, 6/3-8/31
1993	---	Entire record	2/19-2/25	---
1994	---	Entire record	---	---
1995	---	Entire record	10/31-4/20 (chart)	---
1996	---	Entire record	9/1-9/30 (chart)	---

Table 2. Monthly and annual average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1968-96 hydrologic years

[Data in degrees Celsius; monthly and annual average temperatures are referenced as "N/A" if cumulative record is not available]

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Average
1968	- 6.4	-11.0	-13.3	-17.6	-10.8	-11.2	- 7.6	3.4	6.3	8.1	6.2	- 1.1	- 4.6
1969	- 5.4	- 8.3	-14.0	-16.6	-11.3	- 8.3	- 1.9	1.9	8.4	5.2	1.6	2.2	- 3.9
1970	- 0.8	-10.9	- 6.1	-15.6	- 5.9	- 6.2	- 5.9	2.1	3.1	5.2	3.3	- 1.9	- 3.3
1971	- 8.6	-10.3	-15.4	-20.8	-12.1	-14.4	- 6.1	- 1.0	6.7	7.3	5.4	0.4	- 5.7
1972	- 6.8	-11.8	-14.8	-18.6	-15.2	-15.2	-10.2	- 0.6	3.3	6.7	5.3	- 2.7	- 6.7
1973	- 7.1	- 9.5	-12.6	-17.1	-12.0	- 9.4	- 5.8	- 0.8	3.4	4.7	1.5	- 0.9	- 5.5
1974	- 7.3	-14.5	-11.1	-15.9	-14.3	-12.4	- 4.1	2.6	5.2	6.9	5.9	3.2	- 4.6
1975	- 4.8	-10.1	-12.1	-15.7	-13.3	-14.2	- 8.7	0.8	4.0	6.9	4.7	1.2	- 5.1
1976	- 7.5	-13.3	-15.3	-13.0	-15.1	-11.4	- 5.2	0.2	N/A	N/A	5.1	0.0	N/A
1977	- 5.9	- 5.6	-10.8	- 6.9	- 7.7	-12.6	- 6.1	0.9	5.2	6.5	7.7	0.4	- 2.9
1978	- 4.1	-12.8	-14.7	- 7.9	- 8.5	- 9.1	- 4.5	1.3	2.8	6.0	6.1	1.4	- 3.6
1979	- 4.9	- 9.6	-12.2	-10.1	-18.2	- 8.3	- 3.9	2.4	3.2	5.7	6.3	2.2	- 3.9
1980	- 2.4	- 5.7	-15.4	-13.9	- 5.9	- 8.8	- 2.5	2.1	5.0	6.6	4.9	0.3	- 3.0
1981	- 3.2	- 7.3	-14.8	- 4.3	- 9.8	- 5.5	- 6.3	3.9	5.0	5.3	5.2	0.1	- 2.6
1982	- 4.8	- 9.5	-11.3	-16.1	-14.5	-11.2	- 6.9	0.9	5.3	7.2	5.4	1.4	- 4.4
1983	-10.0	- 9.6	- 9.3	-12.9	-10.1	- 9.1	- 4.8	1.1	4.2	5.9	2.6	- 2.7	- 4.5
1984	- 6.4	- 7.2	-10.9	-11.6	N/A	N/A	- 4.8	0.4	5.1	4.4	3.2	1.9	N/A
1985	- 5.4	-11.0	-12.1	- 6.5	-16.5	-11.3	- 7.9	- 0.2	3.2	6.3	3.5	- 0.5	- 4.8
1986	- 9.3	-12.8	- 6.2	- 8.8	-10.5	-12.0	- 9.9	- 0.6	4.9	7.0	2.7	1.5	- 4.5
1987	- 2.6	-11.1	N/A	N/A	N/A	N/A	- 4.2	1.8	4.1	7.1	5.7	0.3	N/A
1988	- 4.2	- 7.8	-11.0	-10.0	-10.3	- 8.0	- 3.7	2.5	5.3	7.3	4.5	- 0.4	- 3.0
1989	- 5.9	-11.0	-10.8	-18.9	- 7.8	-10.4	- 1.1	2.3	5.8	8.7	7.7	1.5	- 3.3
1990	- 6.4	-14.1	- 8.8	-15.3	-19.1	- 7.6	- 1.8	3.7	5.2	7.4	6.4	1.0	- 4.0
1991	- 7.7	-18.4	N/A	-13.6	-10.8	-11.1	- 4.1	1.3	5.7	4.6	2.7	1.5	N/A
1992	- 7.0	- 8.5	N/A	N/A	-13.9	-11.1	- 6.6	- 1.4	N/A	N/A	N/A	- 6.4	N/A
1993	- 7.6	- 8.5	-14.0	-14.1	- 8.1	- 8.5	- 2.0	2.7	5.8	8.2	4.5	- 0.5	- 3.5
1994	- 3.5	-10.2	- 8.6	-10.6	-15.4	- 9.7	- 1.5	1.9	5.1	7.8	8.5	0.0	- 2.9
1995	- 5.9	-17.0	-12.6	-11.0	-12.4	-13.8	- 1.5	3.4	5.8	6.6	4.5	3.6	- 4.1
1996	- 4.6	-11.4	-13.0	-16.7	-13.1	- 9.8	- 4.6	- 0.1	4.7	6.1	2.8	- 0.7	- 5.0
												Average annual recorded air temperature, 1968-96	- 4.1

Note: Calculated average annual temperatures are weighted by days per month.

Table 3. Monthly and annual precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1968-96 hydrologic years

[Data in millimeters; monthly and annual totals are referenced as "N/A" if cumulative record is not available. [1]]

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Additional record	Annual total
1968	59	162	87	37	134	21	31	65	33	40	49	73	0	796
1969	47	45	27	12	25	52	20	40	31	181	62	13	0	555
1970	88	28	35	92	85	107	47	35	74	163	240	159	0	1153
1971	109	49	85	44	121	27	59	78	59	212	346	156	0	1345
1972	168	10	84	81	48	75	44	32	117	48	196	277	0	1180
1973	207	37	36	51	31	103	52	48	102	67	264	46	0	1044
1974	98	0	3	0	81	40	49	3	142	124	113	85	0	738
1975	115	62	105	74	7	0	92	43	81	114	91	212	0	996
1976	93	10	24	64	55	84	22	40	6	37	88	89	0	612
1977	184	141	38	99	64	80	89	28	35	22	13	255	0	1048
1978	116	36	73	64	37	44	33	61	190	109	61	90	0	914
1979	218	89	119	47	16	195	59	37	93	117	70	122	0	1182
1980	127	155	78	51	31	57	33	68	95	243	191	121	0	1250
1981	102	56	45	52	84	57	17	36	159	448	418	98	0	1572
1982	166	1	16	15	27	25	30	52	96	160	102	143	0	833
1983	128	77	57	40	30	10	72	75	53	78	327	201	0	1148
1984	212	14	29	48	N/A	N/A	45	36	55	125	134	27	116	841
1985	0	33	93	115	55	67	9	20	132	60	157	218	0	959
1986	67	38	138	87	28	51	45	36	88	152	155	39	0	924
1987	85	81	N/A	N/A	N/A	N/A	80	39	78	97	89	182	370	1100
1988	178	54	84	48	116	87	56	82	102	69	184	140	0	1200
1989	159	53	130	87	37	75	66	104	105	86	64	282	0	1248
1990	155	108	183	113	86	71	35	33	82	58	164	349	0	1437
1991	36	30	N/A	75	69	91	16	3	10	80	79	84	142	715
1992	52	23	N/A	N/A	32	50	8	53	N/A	N/A	N/A	N/A	491	709
1993	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A
1994	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A
1995	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A
1996	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A
												Average annual recorded precipitation catch, 1968-92		1020

[1]Because the gage is a storage type gage, valid annual precipitation catch can be measured for those years that have missing monthly data, provided that the gage was operational and periods of missing data do not include the beginning or ending months of a separate hydrologic year. The "Additional record" column includes precipitation-catch storage values measured for 1984, 1987, and 1991-92 including partial monthly data for those hydrologic years.

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1968 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-67	Nov-67	Dec-67	Jan-68	Feb-68	Mar-68	Apr-68	May-68	June-68	July-68	Aug-68	Sept-68
1	- 2.7	- 8.3	-21.1	- 9.9	-28.5	- 3.9	- 9.1	- 2.3	5.0	5.0	6.0	0.7
2	- 4.1	- 6.5	-23.5	- 6.5	-28.7	- 5.9	- 8.2	- 0.4	6.1	3.8	4.5	1.5
3	- 4.5	- 6.0	-21.1	-13.6	-27.5	- 6.0	- 6.7	- 1.5	1.5	5.2	6.0	1.4
4	- 8.5	- 5.5	-21.4	-13.0	-29.6	- 6.5	- 6.0	- 2.1	7.3	7.7	7.5	2.3
5	- 6.8	- 8.2	-15.3	-12.8	-22.3	- 7.7	- 6.3	- 2.7	5.5	9.8	7.8	2.5
6	- 7.5	-12.5	-14.5	-12.6	-11.1	- 7.8	- 8.7	2.0	5.5	11.1	12.3	2.8
7	- 5.1	-14.5	-11.7	-11.8	- 5.2	- 9.5	- 8.8	1.5	5.3	12.4	12.4	2.9
8	- 4.7	-11.7	-10.5	-14.6	- 4.7	- 7.9	- 8.4	0.2	5.9	9.7	9.6	1.5
9	- 1.7	- 8.7	-12.6	-10.3	- 3.3	- 8.3	-14.5	1.5	6.0	8.3	9.5	3.3
10	- 2.7	-10.7	-15.9	-16.8	- 3.8	- 8.5	-14.7	0.5	9.3	8.5	8.1	1.2
11	- 4.5	-13.3	-17.3	-22.5	- 2.9	- 8.7	-13.5	1.2	10.5	5.0	8.4	0.1
12	- 3.9	- 8.5	- 8.5	-24.6	- 2.2	-12.1	-10.3	2.1	10.7	5.4	9.7	- 0.6
13	- 4.5	- 5.7	- 8.3	-25.3	- 3.5	-12.2	- 8.0	3.5	9.7	7.6	10.8	0.0
14	- 3.5	- 7.3	- 7.7	-29.5	- 4.0	-12.8	-11.9	3.8	8.1	5.0	7.7	0.8
15	- 6.5	- 7.1	-10.1	-24.8	- 7.5	-16.1	- 7.5	1.7	6.3	8.5	5.7	0.4
16	- 6.3	- 8.9	-15.5	-24.4	-11.8	-17.7	- 8.5	0.6	5.3	7.7	5.5	- 0.9
17	- 6.6	- 8.3	-16.5	-22.5	-14.6	-20.6	-11.3	5.5	7.5	8.3	5.5	- 1.7
18	- 9.5	- 6.8	-17.8	-23.4	-15.3	-20.3	-11.0	8.5	6.0	8.6	5.7	- 2.9
19	- 9.3	- 5.5	-15.3	-19.8	-14.0	-16.3	-11.0	9.6	7.3	9.9	6.4	- 4.4
20	- 8.6	- 4.7	-15.0	-17.4	-10.6	- 9.3	- 8.0	11.5	5.0	9.7	5.2	- 5.7
21	- 8.6	- 6.7	-16.6	-18.0	- 8.9	- 3.5	- 5.2	6.2	1.5	10.4	3.8	- 6.9
22	- 8.7	- 8.8	-16.0	-11.5	- 7.8	- 6.7	- 2.5	5.4	2.0	10.5	4.5	- 6.8
23	- 8.9	-16.5	-14.5	-12.2	- 9.4	-10.7	- 2.9	6.1	5.0	11.4	5.5	- 6.2
24	-10.6	-24.7	-14.1	-21.5	- 9.0	-14.5	- 3.0	5.9	4.9	12.6	3.4	- 5.9
25	-11.3	-21.0	- 9.9	-17.2	- 9.5	-13.6	- 2.3	7.5	6.0	13.2	3.3	- 2.7
26	- 3.0	-14.5	- 6.9	-12.6	- 4.7	-13.5	- 5.1	5.5	5.5	9.3	4.5	- 1.9
27	- 5.8	-11.3	- 6.5	-12.0	- 4.6	-14.8	- 6.1	3.1	5.7	5.3	4.5	- 0.5
28	- 7.1	-12.8	- 5.4	-12.7	- 4.7	-13.0	- 4.2	6.4	8.5	5.7	4.0	- 1.8
29	- 8.7	-20.7	- 4.5	-17.5	- 4.2	-13.0	- 2.3	5.9	8.9	5.9	1.3	- 2.0
30	- 5.7	-24.3	- 7.8	-27.0		-13.5	- 2.5	2.5	7.5	5.8	1.5	- 4.8
31	- 8.0		-11.9	-27.0		-12.3		4.9		5.3	1.0	
Monthly Average	- 6.4	-11.0	-13.3	-17.6	-10.8	-11.2	- 7.6	3.4	6.3	8.1	6.2	- 1.1

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1969 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-68	Nov-68	Dec-68	Jan-69	Feb-69	Mar-69	Apr-69	May-69	June-69	July-69	Aug-69	Sept-69
1	- 3.8	- 4.8	-15.9	-25.3	-20.8	- 6.5	- 0.1	- 2.0	0.6	4.4	4.6	3.2
2	- 0.6	- 3.4	-15.5	-21.6	-22.7	-12.3	- 0.3	- 0.8	2.2	6.2	5.9	4.4
3	- 1.6	- 5.7	-19.5	-26.8	-24.6	- 8.8	- 1.9	- 2.8	3.4	4.8	7.2	1.4
4	- 2.8	- 8.6	-19.4	-17.4	-20.0	- 8.4	- 2.8	- 1.2	2.8	5.2	7.7	1.2
5	- 6.6	- 4.8	-19.7	-19.6	-16.7	- 9.3	- 4.4	- 0.8	2.2	5.6	5.5	0.9
6	- 6.0	- 3.1	-19.8	-21.8	-11.6	- 3.8	- 2.8	- 0.6	7.0	6.2	2.0	1.2
7	- 1.6	- 1.6	-19.7	-20.5	-14.2	- 4.3	- 0.3	- 1.2	7.2	7.4	- 1.6	1.8
8	- 0.2	- 3.8	-20.3	-23.6	-17.8	- 6.4	- 3.2	- 0.4	9.0	6.0	- 2.1	2.2
9	- 0.5	- 3.5	-19.6	-22.5	-12.8	- 4.1	- 0.8	- 1.4	7.0	6.0	- 1.2	4.1
10	- 3.2	- 4.8	-17.3	-19.8	- 8.0	- 4.3	0.0	1.4	6.6	7.0	- 4.1	4.1
11	- 4.8	- 8.8	-14.5	-20.3	- 8.8	- 4.5	- 1.4	3.6	6.2	7.2	- 2.8	4.4
12	- 5.2	- 8.0	-12.5	-21.5	- 8.1	- 8.9	- 2.8	1.0	11.4	7.2	- 3.6	3.2
13	- 5.4	- 9.6	- 8.6	-20.3	-10.0	- 9.8	- 3.1	1.2	12.0	7.4	- 4.6	2.5
14	- 5.3	-12.8	-10.7	-20.3	-10.0	-16.8	- 4.3	0.8	14.8	7.4	- 0.2	2.9
15	- 5.3	-12.3	- 7.6	-19.3	-10.0	-18.0	- 1.6	3.4	16.4	7.0	1.8	1.8
16	- 8.3	- 9.0	-10.5	-15.8	- 9.6	-18.6	- 1.3	3.0	11.2	7.0	2.1	3.2
17	- 9.2	- 6.6	-20.2	-15.4	- 5.3	-14.8	- 0.8	5.0	7.2	7.2	2.6	2.5
18	- 8.0	- 6.0	-14.2	-14.8	- 7.8	-16.0	- 2.4	7.4	7.6	9.2	2.0	1.4
19	- 8.0	- 5.6	- 8.5	-15.1	- 9.0	-11.3	- 3.6	0.6	9.4	6.8	0.7	3.5
20	- 6.0	- 7.7	-10.8	-11.6	- 6.8	- 7.4	- 4.0	5.6	12.6	3.4	- 0.8	3.2
21	- 6.2	-11.0	- 9.6	-12.0	- 9.3	- 7.2	- 7.8	7.2	13.2	5.6	0.7	2.4
22	- 6.8	-13.4	- 3.2	-14.3	- 9.2	- 7.6	- 4.2	4.2	10.2	6.4	1.2	1.6
23	- 5.2	-11.2	- 4.8	-12.8	- 7.4	- 8.8	- 3.1	5.0	10.0	4.6	1.2	2.4
24	- 3.9	- 8.0	- 5.6	- 8.8	- 8.8	- 8.0	- 0.2	7.4	9.2	2.0	3.2	0.4
25	- 5.0	- 7.0	- 7.2	- 7.3	- 5.3	- 8.8	0.7	6.0	9.4	1.0	3.6	- 0.3
26	- 5.4	-10.8	- 9.6	- 7.4	- 6.0	- 8.0	0.9	2.2	9.6	2.1	2.8	0.6
27	- 6.0	-13.3	-15.3	-10.0	- 6.6	- 8.4	- 1.0	- 1.6	9.4	3.1	4.2	0.6
28	- 9.0	-12.0	-14.2	-12.0	- 8.0	- 3.2	- 1.2	2.0	9.2	0.8	4.2	1.4
29	-10.1	-16.4	-18.6	-12.1		- 2.8	- 0.8	2.4	8.8	2.1	2.2	1.9
30	- 7.2	-15.9	-19.8	-10.0		- 1.3	0.7	1.2	6.2	2.2	3.2	0.5
31	-10.0		-22.0	-15.6		0.7		1.4		3.7	3.1	
Monthly Average	- 5.4	- 8.3	-14.0	-16.6	-11.3	- 8.3	- 1.9	1.9	8.4	5.2	1.6	2.2

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1970 hydrologic year

(Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-69	Nov-69	Dec-69	Jan-70	Feb-70	Mar-70	Apr-70	May-70	June-70	July-70	Aug-70	Sept-70
1	- 0.3	- 2.0	- 8.8	-10.0	-14.6	- 7.2	-11.4	- 2.2	1.4	7.6	1.2	5.0
2	- 1.0	- 2.4	- 4.8	-16.4	-12.8	-13.0	- 9.6	- 1.4	2.0	7.2	2.0	3.6
3	- 0.7	- 5.0	- 3.6	-13.6	- 9.0	-16.8	- 3.8	- 2.2	3.2	5.8	3.0	3.2
4	- 0.8	- 7.4	- 5.6	-16.8	- 8.6	-14.8	- 6.0	- 5.4	1.2	5.6	4.8	0.6
5	0.8	- 9.9	- 5.0	-20.6	- 5.8	- 7.8	- 8.4	0.0	4.0	6.0	4.4	0.8
6	4.4	-11.5	- 3.6	-21.4	- 5.8	- 5.8	- 8.0	0.6	4.2	4.8	4.0	- 2.0
7	3.2	-10.6	- 3.4	-13.6	- 4.6	- 5.4	- 8.2	2.0	5.2	4.4	1.4	- 5.6
8	0.7	- 7.3	- 4.9	-13.8	- 7.0	- 9.6	- 8.6	- 0.6	- 0.6	3.2	2.6	- 7.8
9	- 1.0	-13.8	- 6.2	-16.0	- 8.8	- 4.0	- 7.2	1.2	0.8	4.0	4.0	- 4.6
10	- 3.6	-21.0	- 8.6	-19.8	- 1.2	- 3.0	- 7.0	7.2	0.8	3.6	5.0	- 1.2
11	1.0	-20.4	- 9.2	-23.0	- 0.4	- 3.8	- 9.8	7.4	0.2	2.6	5.2	2.4
12	3.0	-12.2	-11.0	-26.0	1.4	- 7.0	- 7.6	7.8	2.0	2.6	5.0	2.2
13	4.2	-16.0	- 6.6	-28.6	0.2	- 5.4	- 4.2	6.6	3.0	3.6	6.4	1.6
14	3.6	-20.0	- 9.0	-28.0	- 2.4	- 4.2	- 1.6	- 1.4	2.2	4.0	6.0	2.8
15	6.6	-23.4	- 7.4	-20.6	- 7.4	- 4.6	- 1.8	1.2	2.0	2.6	2.2	1.8
16	3.8	-25.8	- 5.0	-17.0	- 7.8	- 4.8	- 5.4	2.8	1.4	3.6	1.8	2.8
17	1.7	-24.0	- 1.3	-20.6	- 7.0	- 4.6	- 3.4	2.4	2.6	5.8	2.0	0.6
18	- 0.8	-17.8	- 2.8	-21.0	- 6.8	- 6.2	- 3.0	2.2	- 0.4	0.4	3.0	- 5.0
19	- 2.2	- 9.8	0.8	-10.8	- 5.0	- 4.6	- 4.0	1.8	2.4	1.2	2.0	- 7.2
20	- 4.2	- 5.0	- 4.2	- 4.8	- 6.4	- 5.6	- 5.8	3.2	5.2	4.4	1.8	- 8.4
21	- 5.6	- 4.6	- 4.8	- 5.8	- 7.0	- 5.8	- 3.8	3.0	4.2	7.4	1.2	- 9.0
22	- 5.8	- 6.6	- 9.4	- 5.0	- 4.6	- 6.6	- 5.8	1.4	3.8	5.2	0.4	- 9.0
23	- 6.0	-10.0	-12.6	- 9.6	- 2.8	- 6.8	- 7.0	- 0.2	4.6	6.8	0.8	- 8.6
24	- 2.8	- 6.5	- 6.6	-13.2	- 5.2	- 6.2	- 8.2	1.4	6.4	9.0	1.2	- 6.8
25	- 2.3	- 5.3	- 8.8	-10.6	- 8.6	- 4.6	- 9.0	3.4	6.0	10.6	3.0	- 2.8
26	- 3.3	- 5.8	- 9.0	-11.6	- 5.8	- 4.2	- 6.0	4.0	5.6	9.6	4.4	- 0.8
27	- 6.0	- 5.6	- 7.0	-12.8	- 5.0	- 4.4	- 4.2	5.0	5.4	12.8	7.0	- 0.8
28	- 5.4	- 2.2	- 6.0	-10.8	- 7.6	- 4.6	- 2.2	3.6	5.6	10.4	6.6	- 1.4
29	- 2.8	- 6.3	- 4.8	-18.0		- 2.8	- 3.6	3.6	2.2	5.4	3.8	- 2.2
30	- 2.4	- 9.6	- 5.8	-14.0		- 2.8	- 2.8	3.2	5.4	1.4	2.8	- 2.4
31	- 0.2		- 4.8	-10.0		- 6.4		3.0		2.0	4.0	
Monthly Average	- 0.8	-10.9	- 6.1	-15.6	- 5.9	- 6.2	- 5.9	2.1	3.1	5.2	3.3	- 1.9

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1971 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-70	Nov-70	Dec-70	Jan-71	Feb-71	Mar-71	Apr-71	May-71	June-71	July-71	Aug-71	Sept-71
1	- 2.6	2.6	-23.7	-20.2	-12.3	- 5.4	-11.8	- 4.4	- 1.6	2.8	7.2	6.2
2	- 7.4	0.2	-26.5	-12.8	-17.6	-15.3	-10.2	- 2.0	- 2.8	6.2	6.4	3.4
3	-10.8	2.4	-24.4	- 5.4	-19.3	-27.8	- 4.6	- 5.6	1.0	6.0	4.2	1.4
4	-10.0	2.8	-24.2	- 3.8	-18.1	-34.8	- 6.6	- 4.6	4.6	7.6	6.0	2.0
5	- 8.6	- 0.6	-19.8	- 3.4	-10.4	-33.8	- 6.0	- 3.6	9.4	8.2	5.6	2.0
6	- 4.6	- 2.8	-21.6	-11.8	- 5.4	-30.8	- 4.4	- 1.4	10.6	9.0	4.0	1.4
7	- 4.0	- 2.8	-14.1	-14.1	- 3.4	-21.3	- 6.6	- 3.6	7.6	9.6	5.0	1.0
8	- 3.8	- 3.4	-14.8	-23.9	- 3.0	-18.1	-11.7	- 3.6	6.2	9.4	5.6	0.8
9	- 3.8	- 5.0	-10.7	-22.1	- 6.6	-14.3	-11.8	- 3.6	9.4	10.0	7.0	1.2
10	- 6.4	- 6.4	-11.7	-18.6	- 4.4	-20.8	-12.9	- 2.2	8.8	11.0	8.0	1.0
11	- 7.4	- 3.6	-10.3	-13.9	- 9.0	- 7.2	- 9.6	0.0	6.0	10.8	6.8	2.2
12	- 4.2	- 2.4	- 7.4	-16.5	- 6.6	- 7.6	- 4.8	1.4	3.6	9.8	7.0	1.2
13	- 4.0	- 4.6	- 6.8	-18.6	- 8.2	-12.0	- 2.6	- 2.4	2.2	10.0	4.6	1.0
14	- 8.2	- 8.6	- 6.6	-21.1	-11.3	-11.5	- 6.6	- 2.8	3.0	7.0	3.4	0.4
15	- 9.6	-10.7	- 6.6	-30.1	- 8.6	-13.9	- 6.6	- 2.4	5.0	4.6	3.6	1.6
16	- 9.6	-18.6	-10.0	-34.6	- 8.8	- 8.9	- 4.4	- 0.8	7.6	4.6	6.8	2.2
17	- 9.2	-14.8	-11.6	-35.0	- 6.6	- 6.0	- 4.4	- 1.4	6.0	6.0	6.6	1.4
18	-10.9	-15.8	-12.3	-33.6	- 5.6	- 7.0	- 4.6	2.6	5.6	8.6	7.0	- 0.6
19	-14.3	-17.7	- 9.6	-23.9	- 8.4	- 7.6	- 7.0	1.0	8.2	8.6	6.0	0.6
20	-16.4	-17.2	- 7.0	-21.3	- 5.0	- 7.8	- 7.4	0.0	10.2	8.2	4.4	1.6
21	-14.1	-15.8	- 8.4	-18.3	- 3.4	-12.9	- 6.0	- 1.4	8.4	4.8	3.6	0.6
22	-12.4	-19.8	-13.2	-27.1	- 8.4	-13.9	- 2.8	- 0.4	7.4	4.8	4.6	0.4
23	-20.0	-18.8	- 7.6	-35.0	-17.6	-11.8	- 2.2	1.0	14.4	4.8	5.4	- 0.6
24	-22.1	-17.7	-13.0	-35.0	-27.3	-12.5	- 3.4	4.0	13.0	4.0	3.6	- 1.2
25	-18.1	-16.5	-10.7	-26.9	-31.5	-15.3	- 1.0	4.0	12.0	6.4	3.8	- 0.6
26	- 9.0	-19.5	-23.9	-25.0	-28.1	-16.4	- 1.8	1.4	10.4	8.6	3.8	- 4.0
27	- 8.0	-11.8	-25.3	-25.0	-20.4	-10.7	- 8.0	1.0	10.0	8.4	3.6	- 5.6
28	- 5.8	-15.3	-26.5	-23.2	-24.1	- 8.0	- 5.4	2.2	9.0	7.0	5.0	- 5.4
29	- 4.2	-24.4	-20.0	-19.0		-10.4	- 5.8	- 2.0	2.8	4.6	7.8	- 1.5
30	0.4	-23.2	-23.0	-15.3		-11.8	- 3.0	- 1.4	2.6	7.4	5.6	- 1.8
31	1.6		-26.5	-11.5		-12.3		0.6		7.4	6.0	
Monthly Average	- 8.6	-10.3	-15.4	-20.8	-12.1	**-14.4**	- 6.1	- 1.0	6.7	7.3	5.4	0.4

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1972 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-71	Nov-71	Dec-71	Jan-72	Feb-72	Mar-72	Apr-72	May-72	June-72	July-72	Aug-72	Sept-72
1	- 2.0	-12.6	-13.7	-17.5	-10.0	-20.0	-12.7	- 3.8	0.2	4.2	7.3	2.5
2	- 1.8	-12.1	-16.0	-16.0	- 9.3	-20.7	-10.3	- 3.3	- 2.8	6.3	8.2	6.6
3	- 4.0	-13.2	-14.5	-14.5	-10.9	-20.8	-10.0	- 1.8	- 0.2	8.3	8.7	5.8
4	- 3.0	- 9.8	-16.0	-15.0	-12.7	-21.2	-12.7	1.8	- 0.7	10.0	7.5	1.0
5	- 3.4	- 9.5	-17.2	-15.2	-18.0	-27.3	-14.5	4.6	0.2	9.2	6.3	2.2
6	- 5.0	- 9.3	-11.0	-17.2	-23.0	-26.5	-13.8	4.2	0.5	9.5	2.6	2.4
7	- 0.6	-11.0	- 9.5	-17.2	-15.8	-25.2	-12.2	3.8	0.3	10.0	3.1	2.3
8	- 2.0	-12.4	-10.0	-22.0	- 8.0	-23.8	-10.3	3.7	2.4	10.0	5.8	0.8
9	- 4.0	-11.5	-17.8	-31.0	- 9.4	-23.3	-12.4	2.8	- 1.3	8.8	6.0	0.0
10	- 2.2	-10.2	-22.8	-32.5	-13.8	-20.0	-10.0	- 3.0	1.8	9.0	7.3	1.3
11	- 4.6	-11.5	-23.0	-31.0	-15.2	-17.8	- 7.3	- 5.0	8.0	10.7	10.0	0.2
12	- 6.6	- 8.8	-20.3	-27.0	-15.8	-18.0	- 8.4	- 3.2	8.6	10.0	6.7	0.4
13	- 9.0	-10.0	-17.5	-20.8	-15.3	-13.0	-12.0	- 4.2	11.8	8.2	4.0	- 2.0
14	- 8.8	- 8.7	-16.2	-17.8	-13.5	-13.5	-13.5	- 5.0	10.3	4.7	4.0	- 1.8
15	- 4.6	- 8.3	- 9.5	-24.8	-18.0	-12.3	-15.8	- 8.0	8.7	3.7	5.2	- 3.2
16	- 4.0	-10.4	-12.3	-29.5	-22.8	-12.8	-13.8	- 4.3	4.2	4.3	5.0	- 7.8
17	- 5.8	- 7.8	-14.7	-26.1	-24.0	-15.2	- 8.4	- 6.0	2.5	4.8	6.4	- 9.8
18	- 9.2	- 4.9	-13.0	-20.0	-18.8	-11.2	- 9.3	- 3.2	2.8	4.7	6.6	- 9.6
19	-10.0	- 4.4	-23.0	-17.7	-16.8	- 4.7	-10.2	- 1.8	2.8	4.5	7.0	- 6.3
20	- 9.4	- 9.0	-26.7	-13.0	-17.2	- 7.2	-10.9	- 1.7	3.3	3.8	5.8	- 7.2
21	- 9.4	-12.5	-24.3	-14.8	-14.3	- 6.6	-10.3	- 3.3	4.5	3.8	6.0	- 8.0
22	-10.0	-15.3	-21.0	-17.2	-10.0	- 8.0	-10.0	- 2.5	5.0	6.3	6.2	- 7.3
23	-13.4	-14.3	-11.0	-17.0	- 7.3	-10.0	- 8.3	0.7	2.8	6.5	4.7	- 6.8
24	-10.0	-13.2	- 9.8	-18.0	-15.3	-11.0	- 5.0	0.5	2.7	5.0	2.8	- 6.8
25	-10.0	-16.5	- 7.2	-16.8	-16.0	- 8.8	- 5.3	1.2	4.6	4.8	3.8	- 5.2
26	-11.7	-16.8	- 7.5	-11.2	-14.3	- 7.3	- 9.2	2.5	5.0	5.9	4.3	- 6.0
27	-10.0	-18.9	- 7.5	- 8.0	-18.2	- 8.2	-10.2	3.6	5.3	4.7	3.0	- 7.5
28	- 7.5	-14.4	- 9.4	- 6.0	-17.8	-11.3	- 7.3	2.8	1.8	3.4	3.7	- 3.7
29	- 9.3	-18.8	-12.2	-13.0	-19.9	-15.9	- 5.9	2.4	1.3	7.0	2.3	- 2.0
30	- 9.8	-17.3	-11.3	-16.8		-17.8	- 5.7	5.0	2.2	7.5	2.0	- 5.7
31	- 9.8		-12.0	-13.0		-13.0		1.2		8.1	1.9	
Monthly Average	- 6.8	-11.8	-14.8	-18.6	-15.2	-15.2	-10.2	- 0.6	3.3	6.7	5.3	- 2.7

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1973 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-72	Nov-72	Dec-72	Jan-73	Feb-73	Mar-73	Apr-73	May-73	June-73	July-73	Aug-73	Sept-73
1	-10.5	- 8.9	-16.1	-17.8	-18.4	-13.8	- 7.7	- 2.4	2.5	4.7	2.2	- 0.2
2	-11.8	-11.8	-14.5	-14.0	-11.2	-13.0	- 6.7	- 2.5	0.5	5.0	3.8	0.9
3	-10.0	- 9.5	- 9.8	-14.0	-12.4	-13.7	- 8.5	- 1.7	- 0.5	2.6	2.3	0.3
4	- 7.5	- 7.3	- 9.0	-14.1	- 6.4	-14.6	- 6.8	- 2.7	2.4	4.3	3.3	1.6
5	- 4.0	-12.4	- 8.9	-10.1	- 4.6	-13.9	- 7.2	- 2.9	3.7	5.2	3.9	0.6
6	- 6.2	-11.5	- 5.7	-11.1	- 8.1	-11.8	- 7.1	- 5.1	2.3	4.5	4.0	- 1.0
7	-11.3	-11.3	- 5.0	- 7.6	- 9.1	- 8.2	- 5.6	- 4.5	3.9	4.7	2.0	0.1
8	-11.8	- 8.4	- 7.5	- 4.6	- 9.9	- 7.7	- 2.4	- 3.9	0.7	5.7	1.2	- 1.8
9	-10.0	- 7.1	- 6.2	- 5.7	-11.7	- 8.2	- 5.6	- 2.3	2.5	7.7	1.0	- 1.0
10	- 6.7	- 7.7	- 9.1	- 7.8	-15.8	- 9.7	- 7.7	- 3.1	1.1	5.9	- 1.0	- 1.6
11	- 5.5	- 8.6	-10.7	-14.5	-18.4	- 9.8	- 5.8	- 1.8	3.3	4.5	- 0.2	0.0
12	- 6.0	-12.6	-16.2	-23.8	-23.6	- 7.9	- 6.3	- 0.7	4.6	2.3	- 3.2	2.0
13	- 3.5	-12.0	-19.2	-26.8	-22.7	- 7.9	- 4.4	1.7	7.8	1.5	- 3.6	3.5
14	- 1.0	- 6.9	-24.0	-26.5	-13.3	- 8.4	- 4.5	5.1	7.0	1.7	- 2.3	3.1
15	0.8	- 9.0	-21.7	-24.5	-10.3	- 8.0	- 4.6	3.6	3.8	3.6	- 0.6	5.8
16	0.8	- 8.2	-21.7	-28.5	- 9.8	-12.0	- 6.0	- 0.4	5.8	5.9	0.8	3.8
17	- 2.0	- 9.1	-16.8	-22.8	- 9.9	-14.5	- 4.4	1.0	5.6	4.0	3.1	3.4
18	- 5.2	-10.9	-14.6	-18.5	- 8.0	-13.8	- 6.1	0.5	3.5	3.9	5.7	2.6
19	- 9.3	- 6.4	-14.7	-17.6	- 6.2	-14.7	- 6.1	0.2	3.8	3.8	6.1	- 1.0
20	- 9.3	- 3.9	-12.3	-18.2	- 6.8	-13.9	- 6.5	- 1.0	4.3	3.0	9.0	- 2.3
21	- 8.6	- 5.5	-16.2	-18.0	- 9.7	-11.8	- 8.2	- 1.9	6.5	4.9	5.2	- 4.7
22	- 8.2	- 6.8	-16.3	-17.8	-11.9	- 6.7	- 7.2	- 1.5	4.0	5.3	1.8	- 4.1
23	- 5.8	- 8.4	-16.4	-21.9	-10.0	- 5.7	- 6.3	- 1.6	2.2	7.9	3.7	- 4.5
24	- 8.0	-12.5	-11.1	-25.4	-10.2	- 5.4	- 6.2	0.2	0.4	9.3	2.5	- 5.4
25	- 8.5	- 9.8	- 9.8	-25.4	-13.3	- 7.1	- 6.0	- 2.4	0.2	8.2	1.7	- 4.8
26	- 9.1	-13.7	- 8.3	-19.8	-16.0	- 7.0	- 5.0	- 0.9	1.7	5.9	- 0.7	- 2.9
27	-11.9	-10.4	- 9.7	-12.6	-16.7	- 7.5	- 6.2	2.6	3.5	6.6	- 0.3	- 3.9
28	- 6.6	- 8.2	- 8.4	- 9.8	-12.0	- 2.6	- 6.2	- 2.0	4.7	5.9	- 0.2	- 5.6
29	- 6.3	-13.2	- 8.3	-11.2		- 4.4	- 4.0	0.2	5.3	3.3	- 0.5	- 5.7
30	- 9.0	-14.3	- 8.2	-21.7		- 3.5	0.1	2.1	5.8	2.0	- 2.3	- 4.6
31	- 9.1		-13.6	-18.2		- 5.3		2.0		1.9	- 1.8	
Monthly Average	- 7.1	- 9.5	-12.6	-17.1	-12.0	- 9.4	- 5.8	- 0.8	3.4	4.7	1.5	- 0.9

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1974 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-73	Nov-73	Dec-73	Jan-74	Feb-74	Mar-74	Apr-74	May-74	June-74	July-74	Aug-74	Sept-74
1	- 3.0	- 9.3	-18.4	- 8.0	-18.5	-19.5	-10.6	- 3.9	4.1	5.0	8.7	9.9
2	- 6.1	- 7.0	-19.0	- 7.0	-17.0	-17.8	-13.3	- 5.9	2.1	7.8	7.8	10.0
3	- 6.4	- 8.0	-17.8	- 4.6	-13.6	-18.3	-10.6	- 3.3	0.8	9.6	7.7	7.9
4	- 6.6	- 0.4	-12.0	- 2.2	-13.6	-24.4	- 6.6	- 5.0	1.6	8.8	7.9	5.5
5	- 5.8	- 2.2	-11.4	- 3.5	-10.2	-24.6	- 5.0	- 0.3	5.1	5.8	8.6	5.2
6	- 6.1	- 9.1	-13.0	- 5.6	- 8.3	-22.4	- 6.6	- 0.2	4.2	3.7	8.1	5.3
7	-10.4	-11.0	-13.8	- 6.6	- 7.3	-25.8	- 5.8	1.5	3.0	4.1	8.0	4.8
8	- 9.3	-13.8	- 9.4	-10.3	- 6.8	-20.0	- 7.8	2.5	2.5	4.4	5.6	5.2
9	- 5.8	-16.0	- 7.1	-11.5	- 7.8	-18.7	- 5.7	0.2	6.3	4.1	4.7	3.8
10	- 5.0	-15.1	- 8.5	-12.7	- 9.0	-18.0	- 3.1	2.6	5.9	3.9	5.9	3.8
11	- 8.0	-19.9	-10.1	-20.4	-16.3	-18.2	- 2.8	2.2	6.1	4.8	5.7	4.9
12	-11.2	-23.8	-12.8	-21.8	-16.0	-18.0	- 2.8	- 1.7	5.6	7.6	6.7	2.7
13	- 8.9	-22.5	-17.3	-21.0	-12.6	-16.5	- 2.0	1.4	5.8	6.5	7.6	4.2
14	- 8.7	-19.0	-15.5	-17.7	-14.7	- 9.6	- 4.5	3.6	6.0	8.2	8.8	6.2
15	- 8.4	-18.4	-12.8	-26.4	-15.7	-11.0	- 3.2	3.5	6.9	9.0	9.5	6.0
16	- 9.0	-18.7	-12.6	-24.4	-19.8	-12.9	- 1.2	5.0	3.6	9.2	9.0	3.5
17	- 4.9	-18.7	- 9.0	-17.4	-16.7	- 9.1	- 3.2	3.0	2.9	10.8	6.7	3.4
18	- 4.5	-12.7	- 4.4	-16.3	-18.0	- 7.0	- 4.2	- 0.4	3.9	9.5	4.8	2.8
19	- 9.0	-12.4	- 3.2	-20.3	-17.9	- 6.0	- 4.5	6.1	2.7	5.7	4.1	3.1
20	- 9.6	-19.6	- 5.0	-21.0	-19.1	- 5.0	- 3.0	4.8	7.0	3.9	2.9	5.6
21	- 9.0	-19.8	-12.8	-22.4	-20.5	- 2.3	- 2.7	5.0	6.1	3.8	0.1	3.8
22	-11.6	-12.1	-17.8	-16.2	-16.5	- 0.5	- 3.9	4.5	8.0	5.5	- 4.8	1.9
23	-10.4	-12.6	-13.3	-12.3	-11.8	- 6.2	- 4.7	5.0	9.0	4.9	- 2.6	3.4
24	-11.8	- 9.1	- 9.3	-13.4	-13.7	- 3.2	- 4.4	5.8	6.5	5.8	- 0.1	2.6
25	- 9.1	-13.5	-10.4	-20.4	-13.6	- 2.2	- 1.1	4.5	7.6	6.2	1.6	1.6
26	- 3.4	-17.4	- 5.1	-21.0	-13.5	- 5.7	- 1.1	4.8	8.8	8.0	2.8	0.5
27	- 3.3	-18.4	- 4.6	-21.7	-14.2	- 9.6	1.0	5.7	6.8	8.7	4.6	- 2.5
28	- 4.5	-18.9	- 6.1	-21.8	-18.3	- 8.6	2.1	7.5	5.9	11.7	8.5	- 5.4
29	- 3.5	-18.8	- 9.0	-22.4		- 6.4	- 0.4	8.8	5.6	10.0	11.6	- 6.5
30	- 6.8	-17.7	-12.0	-22.0		- 7.4	- 2.4	8.0	5.9	10.1	10.8	- 7.2
31	- 7.2		-10.2	-19.6		-10.7		6.1		7.6	11.6	
Monthly Average	- 7.3	-14.5	-11.1	-15.9	-14.3	-12.4	- 4.1	2.6	5.2	6.9	5.9	3.2

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1975 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-74	Nov-74	Dec-74	Jan-75	Feb-75	Mar-75	Apr-75	May-75	June-75	July-75	Aug-75	Sept-75
1	-13.6	- 3.1	-11.6	-20.6	-18.7	-13.8	-17.2	- 1.5	6.9	3.3	4.1	2.1
2	-15.9	- 4.5	-10.4	-28.0	-18.3	-16.1	-19.7	0.9	2.8	5.6	5.6	1.7
3	-15.8	- 0.5	-11.6	-30.0	-10.5	-17.5	-16.7	- 1.9	2.1	9.9	5.6	1.1
4	- 9.6	- 7.2	-10.4	-28.0	- 6.9	-16.4	-15.0	- 4.1	0.5	4.5	4.1	2.0
5	0.5	- 7.4	- 5.7	-27.0	- 4.7	-15.2	- 9.9	- 5.1	3.2	7.0	4.5	0.3
6	0.8	- 7.3	- 5.1	-24.0	- 1.6	-16.0	- 6.9	- 5.3	2.2	10.3	3.2	0.3
7	0.5	- 8.5	- 5.0	-20.0	- 5.3	-14.1	- 6.6	- 4.4	1.0	12.7	3.3	0.5
8	- 5.0	- 6.4	- 4.9	-18.0	-13.4	-14.4	- 9.1	- 2.8	2.9	10.5	3.0	0.4
9	- 7.3	-11.4	-10.3	-17.0	-21.6	-15.8	- 5.2	2.9	2.3	12.1	3.3	- 0.8
10	- 8.4	-19.0	- 9.3	-20.0	-22.2	-13.1	- 4.1	9.4	- 1.6	12.8	3.3	1.0
11	- 7.0	-11.5	- 7.0	-24.0	-28.8	-11.6	- 4.9	8.4	0.5	12.6	5.1	2.3
12	- 5.8	- 7.5	- 9.7	-22.0	-26.0	-12.7	- 7.6	0.7	- 1.8	10.3	8.0	0.4
13	- 2.2	- 8.5	-11.6	-17.6	-26.0	-13.5	- 8.7	- 1.7	3.8	9.0	10.1	1.7
14	- 0.9	- 6.2	-11.5	-16.9	-15.0	-15.0	- 5.3	1.1	2.9	6.8	8.5	2.0
15	- 2.4	-12.6	-13.8	-12.0	-15.8	-15.5	- 4.1	1.1	4.0	5.3	6.9	1.8
16	- 3.7	-18.8	-16.3	- 7.9	-15.3	-15.9	- 3.1	2.0	7.3	6.1	6.7	0.3
17	- 3.5	-17.3	-16.1	- 7.0	- 9.9	-15.3	- 5.1	- 2.0	8.0	9.6	8.4	1.4
18	- 3.1	-18.2	-13.5	- 5.4	- 5.7	-17.1	-18.0	- 2.9	9.0	8.5	4.5	3.7
19	- 7.8	-19.6	-10.4	- 5.6	-10.4	-16.3	-13.8	- 2.9	4.7	7.0	4.2	0.2
20	-10.5	-17.0	-14.3	- 8.3	-15.8	-16.0	-10.6	0.6	3.2	2.3	3.3	1.3
21	- 3.1	-11.5	-15.8	- 8.2	- 5.0	-15.1	-10.6	0.9	6.9	3.0	4.8	0.6
22	- 2.4	- 9.6	-10.3	- 7.1	-10.6	-12.8	- 6.6	0.4	5.7	4.6	5.7	3.2
23	- 2.4	-10.2	- 7.3	- 6.5	-13.9	-14.1	- 6.9	2.5	2.2	6.8	6.0	3.3
24	- 0.5	-11.4	- 9.5	- 7.2	-13.8	-16.0	- 6.4	2.3	- 0.6	4.4	5.8	3.2
25	- 1.1	-13.0	-11.9	- 9.0	- 7.0	-17.2	- 7.1	5.0	5.2	3.2	5.6	2.6
26	- 1.1	-10.1	-16.0	- 9.7	- 6.4	-14.7	- 8.3	3.4	5.0	4.1	3.2	1.5
27	- 1.7	- 7.9	-22.5	-12.7	-11.0	- 8.9	- 8.0	3.3	7.5	5.5	0.4	- 0.1
28	- 6.2	- 2.7	-22.0	-12.7	-14.0	- 6.4	- 8.9	3.3	11.0	3.3	0.4	0.2
29	- 4.7	- 5.2	-22.2	-15.7		-10.5	- 5.4	3.2	9.5	5.7	4.1	0.1
30	- 2.4	- 8.2	-14.6	-20.2		-11.3	- 0.5	3.5	4.3	3.7	4.3	- 1.5
31	- 3.4		-13.7	-19.8		-10.5		4.6		2.0	0.4	
Monthly Average	- 4.8	-10.1	-12.1	-15.7	-13.3	-14.2	- 8.7	0.8	4.0	6.9	4.7	1.2

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1976 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-75	Nov-75	Dec-75	Jan-76	Feb-76	Mar-76	Apr-76	May-76	June-76	July-76	Aug-76	Sept-76
1	- 2.2	-22.4	-24.9	-11.9	-12.1	-13.7	- 5.6	3.2	--	--	12.2	0.3
2	- 0.7	-19.1	-26.0	-14.3	-12.9	-11.6	-11.2	2.8	--	--	12.2	0.4
3	2.0	-20.0	-27.5	-15.1	- 8.2	- 9.4	- 7.2	1.5	--	--	9.2	0.2
4	0.3	-16.8	-26.3	-14.6	- 6.1	- 9.4	- 6.8	- 0.5	--	--	8.6	- 3.9
5	- 3.1	-14.0	-27.4	-14.1	- 5.6	-11.6	- 8.8	- 2.8	--	--	8.0	- 1.9
6	- 2.0	-12.0	-21.3	-20.0	- 7.8	- 6.4	-10.1	- 1.4	--	--	8.6	0.7
7	- 5.1	-14.0	-21.9	-27.7	-18.8	-11.2	- 9.0	- 2.8	--	--	5.2	0.5
8	- 8.3	-18.0	-25.0	-22.9	-26.8	-13.6	- 5.5	- 2.3	--	--	3.0	0.1
9	-11.0	-14.0	-27.1	-18.0	-23.9	-14.8	- 3.2	- 2.6	--	--	4.2	- 0.5
10	- 6.1	-14.9	-27.1	-17.6	-22.0	-15.4	- 5.5	- 0.5	--	--	5.3	- 0.5
11	- 1.9	-11.9	-20.9	-19.2	-19.8	-17.9	- 5.1	- 1.0	--	--	5.3	- 1.3
12	- 0.7	-12.7	-21.9	-17.8	-14.9	-14.8	- 6.7	0.7	--	--	2.3	0.5
13	- 2.0	-12.6	-15.0	-17.6	-12.6	-12.1	- 6.3	- 3.2	--	--	6.1	1.5
14	- 1.9	-12.3	-16.0	-14.9	-13.3	-13.7	-15.1	- 1.4	--	--	4.7	0.5
15	- 1.5	-14.1	-13.3	-10.2	-14.3	-11.4	-11.5	- 1.7	--	--	4.3	- 2.8
16	- 2.9	-15.2	- 4.2	- 7.6	-16.9	-11.3	- 6.5	- 2.0	--	--	2.6	- 2.2
17	- 4.6	-13.5	- 9.0	- 8.4	-11.1	- 9.9	- 5.5	1.1	--	--	2.5	- 1.7
18	- 5.9	- 7.2	-10.0	- 8.0	-18.7	- 5.5	- 5.1	0.5	--	--	1.9	0.4
19	- 6.3	- 4.0	- 6.2	- 9.4	-16.8	- 7.8	- 3.0	- 1.0	--	--	3.0	0.8
20	- 8.8	- 6.1	-10.2	- 9.2	-20.7	-11.1	- 5.6	0.3	--	--	3.4	4.6
21	- 9.9	- 9.0	- 7.9	- 7.0	-21.5	- 8.6	- 5.4	2.9	--	--	4.3	7.6
22	-10.0	- 9.0	- 6.3	-11.9	-15.8	- 9.6	- 5.2	6.2	--	--	5.5	0.0
23	- 4.0	- 8.9	- 6.3	-13.8	-14.3	- 7.3	- 5.2	- 0.5	--	--	6.0	0.8
24	- 6.4	- 8.0	- 6.8	-13.0	-14.7	- 7.3	- 1.5	- 0.4	--	--	7.4	2.9
25	- 9.0	- 9.5	- 6.6	- 7.9	-16.5	- 8.5	- 5.4	- 1.7	--	--	6.6	2.3
26	-13.9	-11.2	- 8.0	- 7.5	-15.4	-11.4	- 5.0	3.8	--	--	4.4	0.4
27	-13.7	-13.1	- 8.1	- 9.7	-13.9	-11.6	- 1.3	- 0.6	--	--	4.3	0.9
28	-17.9	-15.6	- 9.4	- 8.9	-11.7	-13.0	6.4	1.3	--	--	2.6	- 1.1
29	-22.3	-17.3	-12.6	- 6.1	- 9.5	-16.8	5.2	0.0	--	10.9	2.3	- 4.4
30	-25.3	-22.0	-10.7	- 7.9		-15.4	5.2	2.7	--	9.9	2.6	- 4.2
31	-26.2		-10.0	-10.1		-11.0		4.6		10.4	0.5	
Monthly Average	- 7.5	-13.3	-15.3	-13.0	-15.1	-11.4	- 5.2	0.2	N/A	N/A	5.1	0.0

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1977 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-76	Nov-76	Dec-76	Jan-77	Feb-77	Mar-77	Apr-77	May-77	June-77	July-77	Aug-77	Sept-77
1	- 4.2	-10.2	- 8.6	- 5.8	- 3.7	-10.1	- 9.2	- 1.2	5.6	4.2	4.1	5.4
2	- 3.4	- 7.3	-10.7	- 8.5	- 5.5	- 6.8	- 4.2	2.3	5.1	1.6	7.5	5.0
3	- 3.2	- 6.1	-14.6	- 9.4	- 5.4	- 9.6	- 4.3	- 0.4	6.2	1.1	11.1	4.3
4	- 2.3	- 8.5	-13.9	- 3.0	- 3.0	- 8.1	- 3.5	1.7	4.5	2.2	12.3	3.5
5	- 1.4	- 6.2	-12.5	- 4.5	- 6.3	-10.4	- 7.5	- 1.8	3.5	4.3	8.1	3.7
6	- 1.1	- 5.1	-12.6	- 9.2	- 4.9	-13.6	- 9.2	- 2.9	5.3	6.2	6.3	1.1
7	- 5.3	- 4.2	-18.0	- 5.0	- 5.7	-15.6	- 6.3	- 2.5	5.2	7.8	7.3	0.5
8	- 7.2	- 3.9	-23.6	- 5.8	- 8.1	-15.9	- 6.4	- 3.7	5.9	8.5	8.1	- 0.5
9	- 7.8	- 2.1	-19.6	- 9.4	- 8.7	-15.7	- 5.1	- 2.8	6.5	9.4	7.5	2.0
10	- 5.8	- 3.4	-14.8	- 7.9	-10.2	-12.1	- 6.3	- 2.8	7.5	8.6	10.1	1.2
11	- 6.1	- 1.5	- 7.3	- 7.6	-10.3	-15.4	- 7.1	- 3.3	6.2	10.6	7.5	1.1
12	- 8.9	1.2	- 8.0	- 7.9	- 9.0	-15.8	- 7.5	- 0.5	3.0	9.2	8.6	0.3
13	- 8.2	- 1.9	- 7.6	-11.5	- 5.7	-11.9	-10.4	1.8	5.8	7.3	9.3	- 0.3
14	- 5.1	- 3.2	-10.0	- 5.4	- 5.6	-12.1	-11.3	3.0	7.6	4.9	10.4	1.3
15	- 4.9	- 3.9	- 9.7	- 4.6	- 7.7	-10.0	-11.0	0.8	5.1	4.4	9.4	- 0.9
16	- 4.0	- 7.0	-11.7	- 5.7	- 8.9	- 8.8	- 7.5	0.5	6.6	6.5	6.7	0.3
17	- 3.1	- 9.9	-14.6	- 5.6	-12.1	-11.8	- 5.5	2.4	6.1	7.4	7.6	0.5
18	- 3.4	- 9.9	-13.8	- 7.5	- 5.7	-15.7	- 6.0	6.8	3.5	6.3	10.1	0.0
19	- 1.3	- 8.7	- 9.8	-11.0	- 2.4	-11.9	- 6.5	1.8	5.1	4.4	10.8	- 0.9
20	- 0.9	- 7.7	- 8.6	- 8.5	- 4.1	-12.7	- 2.7	- 0.3	5.1	5.1	10.5	- 1.5
21	- 3.1	- 6.0	- 5.7	- 7.3	- 3.9	-14.3	- 0.3	- 0.8	3.6	5.1	12.2	1.5
22	- 5.5	- 6.8	- 7.7	- 7.5	- 7.4	-14.2	0.8	1.9	3.4	4.1	11.4	- 0.8
23	- 6.9	- 7.7	- 8.6	- 6.1	- 9.8	-19.6	1.8	1.6	4.2	5.5	8.0	- 0.4
24	- 8.1	-10.9	- 6.9	- 3.4	- 9.7	-15.9	1.8	1.2	5.3	6.8	6.5	0.1
25	- 7.1	-10.6	- 7.9	- 3.8	-11.2	-11.0	- 0.7	2.5	6.0	6.6	5.6	- 1.9
26	- 6.7	- 6.6	-10.6	- 5.7	-11.4	-12.9	-11.6	1.8	5.2	8.2	3.3	- 0.5
27	-13.2	- 1.8	- 7.0	- 6.8	-14.6	-14.0	-13.5	5.0	5.3	8.3	2.5	- 0.9
28	-13.9	- 2.2	- 7.9	- 5.9	-13.5	-12.0	-10.8	4.1	4.7	8.3	1.5	- 1.7
29	-13.9	- 3.9	- 9.0	- 6.8		- 8.7	- 8.9	4.2	4.0	10.5	3.3	- 7.1
30	-10.1	- 2.8	- 6.9	- 7.5		-10.2	- 2.9	4.6	4.7	12.1	5.6	- 3.7
31	- 8.1		- 7.8	- 7.9		-14.6		2.6		5.4	5.2	
Monthly Average	- 5.9	- 5.6	-10.8	- 6.9	- 7.7	-12.6	- 6.1	0.9	5.2	6.5	7.7	0.4

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1978 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-77	Nov-77	Dec-77	Jan-78	Feb-78	Mar-78	Apr-78	May-78	June-78	July-78	Aug-78	Sept-78
1	- 3.8	-10.1	-19.8	- 9.4	-11.6	- 6.0	-11.3	- 0.2	1.4	1.6	10.4	4.4
2	- 3.8	-11.8	-23.5	- 7.8	-13.5	-10.3	-11.6	1.8	1.1	3.6	9.0	8.1
3	- 4.1	-10.8	-23.4	- 7.8	-16.8	- 9.9	-11.1	1.7	3.0	4.5	9.5	6.9
4	- 2.8	-11.6	-22.5	- 8.0	-13.4	-12.7	- 7.9	0.0	3.4	6.5	10.9	5.4
5	- 4.7	-14.3	-18.7	- 8.2	- 7.5	-12.5	- 8.9	- 0.3	4.8	6.5	8.2	4.0
6	- 3.5	-12.7	-18.7	-14.5	- 6.3	-12.3	- 6.8	- 0.2	4.8	6.6	7.5	1.3
7	- 1.5	-16.3	-22.4	-15.7	- 5.6	-10.8	- 4.3	4.8	0.9	4.7	6.5	3.1
8	- 2.5	-19.7	-21.7	- 6.6	-11.2	-10.0	- 5.9	1.8	2.4	7.8	6.6	4.5
9	- 1.7	-17.8	-19.5	- 1.6	-10.0	- 8.2	- 4.6	1.0	5.1	8.7	7.9	4.4
10	- 2.1	-15.1	-18.8	- 3.7	- 9.3	- 8.0	- 5.7	3.5	6.1	9.4	6.6	4.4
11	0.3	-19.8	-22.6	- 8.4	- 9.5	- 7.1	- 5.4	4.5	6.9	10.1	6.7	2.6
12	- 3.3	-12.3	-22.9	- 7.8	- 7.3	- 7.9	- 5.8	3.8	5.8	5.7	6.8	5.7
13	- 4.0	-12.2	-19.7	- 8.6	- 5.5	- 7.4	- 3.1	3.1	3.6	5.5	4.3	3.2
14	- 3.5	-11.7	-14.9	- 7.6	- 8.3	- 7.5	- 2.1	3.2	1.7	2.9	3.9	2.9
15	- 1.8	-12.2	-18.3	- 5.8	- 8.1	- 8.3	- 3.6	1.8	3.6	4.2	6.3	2.2
16	- 3.5	-17.6	-14.4	- 9.6	- 7.8	- 8.6	- 7.5	0.3	- 0.3	3.0	4.6	0.0
17	- 2.0	-15.8	-11.4	- 7.6	- 6.4	-10.1	- 7.5	- 1.2	- 0.1	4.0	5.4	1.3
18	- 9.4	- 9.5	-14.8	- 4.5	- 6.2	-10.6	- 4.4	0.0	- 0.4	7.5	4.7	0.4
19	-10.8	- 4.8	-15.4	- 2.5	- 7.4	- 8.9	- 2.2	0.0	1.5	5.2	6.6	- 0.4
20	- 3.4	- 4.9	-12.9	- 3.8	- 8.3	- 6.8	0.1	- 0.6	1.8	3.9	2.6	- 2.1
21	- 3.3	- 9.6	- 9.7	- 7.7	- 9.1	-10.3	1.5	0.1	4.6	3.1	3.2	- 4.2
22	- 4.5	-11.6	- 4.3	- 8.6	- 7.2	-12.1	- 1.4	1.9	3.4	3.6	3.5	- 3.7
23	- 6.8	- 7.8	- 3.5	- 3.7	- 6.5	-13.5	- 2.2	1.8	1.9	4.5	3.5	- 1.8
24	- 4.6	-12.5	- 7.7	- 4.7	- 5.1	-11.5	- 1.6	1.7	0.1	5.5	2.5	- 3.2
25	- 5.7	-13.6	- 8.5	- 9.6	- 7.1	- 9.5	0.1	1.6	0.2	5.7	4.6	- 1.6
26	- 3.5	-13.6	- 5.6	-11.6	- 9.1	- 7.4	- 2.0	- 0.8	1.7	6.5	6.3	0.1
27	- 3.6	-11.3	-10.8	- 8.7	- 6.6	- 7.9	- 2.9	- 1.1	3.5	6.4	6.8	2.2
28	- 3.9	-10.4	- 9.8	- 7.6	- 6.5	- 6.1	- 3.0	1.7	3.5	8.3	7.9	- 0.7
29	- 5.0	-14.3	- 7.9	- 8.8		- 5.9	- 2.1	- 0.2	4.6	9.1	6.2	- 3.5
30	- 7.2	-17.6	- 5.8	-12.4		- 6.2	- 0.1	1.0	4.4	10.0	5.5	- 4.1
31	- 8.6		- 6.2	-11.9		- 8.9		3.4		10.8	5.2	
Monthly Average	- 4.1	-12.8	-14.7	- 7.9	- 8.5	- 9.1	- 4.5	1.3	2.8	6.0	6.1	1.4

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1979 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-78	Nov-78	Dec-78	Jan-79	Feb-79	Mar-79	Apr-79	May-79	June-79	July-79	Aug-79	Sept-79
1	- 3.3	- 8.4	- 5.9	- 9.7	- 9.7	-17.5	-11.9	5.6	6.2	6.7	7.5	1.8
2	- 7.1	-11.5	- 5.1	- 8.3	-20.7	-15.8	- 8.7	3.0	3.2	7.7	7.1	2.4
3	- 6.6	-11.5	-10.6	- 6.9	-26.6	-12.9	- 5.0	4.0	4.4	9.5	7.0	1.3
4	- 2.0	- 8.9	-13.5	- 6.2	-21.9	- 5.8	- 4.9	4.3	3.1	9.9	7.2	0.4
5	0.2	- 6.7	- 9.8	- 5.0	-20.7	- 4.9	- 5.0	3.3	5.6	3.6	7.1	0.3
6	1.6	- 8.2	- 5.9	- 6.0	-24.7	- 5.5	- 7.6	3.7	2.6	2.4	4.8	4.7
7	1.0	-13.0	- 3.5	- 9.7	-25.4	- 7.4	- 4.1	- 4.9	2.5	1.4	6.0	5.4
8	1.0	-14.9	- 4.9	- 5.1	-21.6	- 6.2	- 4.9	- 3.2	4.0	1.9	6.3	6.3
9	1.7	-11.0	- 6.3	- 5.2	-20.2	- 5.3	- 5.6	- 1.7	6.5	3.8	5.7	5.6
10	2.5	-10.4	- 9.7	- 7.8	-17.9	- 7.8	- 5.8	1.0	5.2	6.3	5.9	5.6
11	- 5.4	- 9.8	-12.4	- 9.2	-17.8	- 8.2	- 7.6	1.6	1.0	5.9	7.2	5.0
12	- 5.5	- 8.5	- 9.6	-11.2	-22.6	- 6.6	- 9.0	1.3	0.5	4.5	9.2	6.6
13	- 4.0	-11.7	- 8.7	-10.9	-23.7	- 6.1	-10.7	2.1	0.3	7.2	7.3	6.1
14	- 6.0	-14.5	-15.5	- 9.8	-22.4	- 6.7	-11.7	2.9	- 0.3	7.4	7.8	4.9
15	- 7.9	-15.4	-20.7	- 7.9	-20.6	- 6.5	-10.7	3.0	2.8	2.2	6.6	2.5
16	- 6.5	-13.9	-21.2	- 6.6	-20.1	- 8.3	- 8.0	0.6	0.2	4.2	6.6	2.2
17	- 2.0	-11.7	-15.3	-12.8	-18.0	- 7.6	- 5.9	0.4	2.0	5.8	3.9	0.1
18	- 3.5	- 9.5	-14.1	-12.0	-13.9	- 6.4	- 4.2	0.7	4.6	5.0	4.0	- 0.2
19	- 4.9	- 5.7	-18.2	-13.5	-15.0	- 5.6	- 2.2	0.9	3.9	6.0	8.3	1.2
20	- 4.7	- 9.0	-17.7	-15.8	-13.6	- 6.0	- 1.4	1.3	4.2	7.2	5.8	1.2
21	- 7.9	- 7.0	-17.9	- 9.8	-12.6	- 4.4	0.9	2.3	4.9	5.6	3.8	1.0
22	-12.9	- 7.1	-16.4	-10.2	-10.6	- 3.6	- 0.4	3.5	5.5	5.0	6.7	1.8
23	-11.0	-12.7	-13.4	-13.6	- 9.8	- 6.9	- 0.5	3.0	7.4	5.6	8.2	0.5
24	- 4.7	-13.0	-17.7	-12.7	-17.5	- 8.4	- 0.9	3.7	6.4	8.7	10.5	- 0.3
25	- 6.0	- 7.7	-18.5	- 9.8	-15.2	- 7.8	- 1.3	2.5	- 0.3	6.8	11.3	- 1.4
26	- 5.7	- 3.6	-17.9	-13.9	-13.9	- 7.4	- 1.1	3.5	0.7	4.1	9.3	- 0.1
27	- 8.0	- 1.8	-12.8	-15.5	-14.9	-10.9	2.7	3.6	1.5	5.3	5.9	0.9
28	- 9.9	- 5.5	- 9.4	-12.0	-18.2	-12.0	4.7	10.2	0.3	6.0	3.8	- 0.3
29	- 6.2	- 6.4	- 9.6	-15.9		-13.7	5.4	3.0	1.6	7.7	2.0	- 0.8
30	- 7.7	-10.3	- 8.7	-11.8		-14.6	7.9	3.2	5.1	6.8	0.7	1.0
31	- 9.4		- 7.4	- 9.7		-11.7		4.9		5.2	0.3	
Monthly Average	- 4.9	- 9.6	-12.2	-10.1	-18.2	- 8.3	- 3.9	2.4	3.2	5.7	6.3	2.2

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1980 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-79	Nov-79	Dec-79	Jan-80	Feb-80	Mar-80	Apr-80	May-80	June-80	July-80	Aug-80	Sept-80
1	1.5	- 5.7	- 6.2	-20.1	- 7.6	- 1.2	- 3.3	0.3	1.9	5.7	4.8	- 2.6
2	1.3	- 6.0	- 8.6	-17.9	- 4.4	- 9.2	- 2.8	- 2.7	2.9	9.2	4.5	- 6.9
3	- 1.3	- 6.2	- 9.2	-20.1	- 7.6	- 6.3	- 1.5	- 1.0	2.4	5.8	5.2	- 7.7
4	- 0.2	- 6.3	-11.2	-18.3	- 7.7	- 4.4	- 0.7	- 0.3	9.6	5.5	6.4	- 3.2
5	- 0.9	- 3.8	-14.8	-10.7	- 4.7	- 7.2	- 1.3	3.6	12.6	10.1	8.3	- 0.7
6	- 2.0	- 2.3	-19.8	- 9.9	- 3.4	- 9.3	- 2.2	5.8	12.1	7.1	11.9	0.4
7	- 2.3	- 3.0	-17.3	- 9.7	-11.2	- 8.4	- 2.9	3.0	5.6	6.0	6.1	1.9
8	- 0.3	- 1.3	-18.0	- 9.3	-11.1	- 6.7	- 2.9	2.8	2.4	5.3	4.3	5.1
9	1.3	- 3.2	-19.3	-14.5	- 5.1	- 9.9	- 2.7	0.8	6.1	4.9	7.4	0.4
10	1.4	- 3.0	-18.3	-23.3	- 2.2	-11.5	- 3.2	- 1.0	5.4	6.2	9.4	0.5
11	1.3	- 2.5	-24.0	-24.3	2.5	-14.1	- 1.7	0.7	2.1	4.8	12.5	1.4
12	- 1.9	- 3.1	-27.0	-26.5	2.5	-15.1	- 5.3	1.4	1.9	4.8	11.1	1.8
13	- 2.5	- 5.6	-22.2	-26.0	1.9	-16.5	- 6.1	3.4	3.4	6.1	5.3	1.6
14	- 3.2	-12.4	-18.6	-17.2	2.0	-17.0	- 5.3	0.8	4.3	7.1	3.0	4.9
15	- 2.8	- 5.4	-15.9	-17.0	1.6	-12.3	- 6.3	1.4	4.9	6.9	2.5	4.6
16	- 1.4	- 6.3	-13.6	-17.3	- 2.5	-14.5	- 5.5	5.2	4.9	6.6	2.0	1.5
17	- 3.6	-13.6	-18.3	-10.0	- 6.2	-12.2	- 3.5	0.5	1.9	4.9	5.2	- 0.3
18	- 4.3	-12.9	-13.0	- 5.0	-13.7	-11.2	- 4.8	2.4	0.8	7.5	0.5	- 0.6
19	- 5.1	- 6.0	-12.3	- 4.3	-17.1	- 9.5	- 1.3	2.5	3.9	9.4	1.6	- 0.8
20	- 8.0	- 6.7	-10.9	- 4.2	-13.0	- 6.1	- 2.2	0.3	- 1.2	9.2	1.2	- 1.6
21	- 7.2	- 4.6	-15.7	- 1.3	- 9.7	- 7.3	- 3.1	0.8	2.8	10.2	1.6	- 1.6
22	- 6.0	- 3.2	-19.0	- 3.2	- 7.5	- 9.1	- 2.2	2.6	4.3	9.5	2.8	- 0.3
23	- 5.1	- 7.7	-15.5	-16.7	- 3.3	- 6.9	- 3.7	2.3	7.0	11.3	4.3	0.4
24	- 0.4	-10.0	-13.9	-15.2	- 7.2	- 5.8	- 3.2	4.0	6.9	10.1	4.8	0.8
25	- 2.4	-11.0	- 9.0	- 9.1	- 7.2	- 4.8	- 0.5	4.9	7.8	7.5	3.5	- 0.8
26	- 2.6	- 8.1	- 9.4	-10.8	- 7.7	- 6.3	1.4	6.3	9.2	6.1	3.8	4.6
27	- 3.6	- 6.0	- 9.2	- 8.0	- 6.7	- 5.3	0.8	6.2	8.2	3.8	4.5	2.7
28	- 3.9	- 0.2	- 8.9	-10.7	- 5.5	- 5.3	0.3	3.0	7.9	1.7	2.2	0.5
29	- 2.5	- 2.3	-14.1	-17.0	- 8.4	- 7.3	- 1.6	3.0	3.9	2.9	2.3	1.7
30	- 2.6	- 3.5	-19.2	-20.7		- 5.3	1.1	1.9	2.9	4.1	4.0	1.5
31	- 4.5		-24.6	-11.2		- 5.4		0.8		4.8	3.4	
Monthly Average	- 2.4	- 5.7	-15.4	-13.9	- 5.9	- 8.8	- 2.5	2.1	5.0	6.6	4.9	0.3

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1981 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-80	Nov-80	Dec-80	Jan-81	Feb-81	Mar-81	Apr-81	May-81	June-81	July-81	Aug-81	Sept-81
1	1.3	-10.2	- 7.8	- 0.5	- 1.0	- 3.3	- 6.7	1.0	3.6	3.4	4.6	3.9
2	- 2.5	- 4.6	- 4.0	- 5.2	- 5.0	- 7.2	- 8.5	0.9	3.3	1.7	3.9	3.8
3	- 2.4	- 2.6	- 7.6	- 5.4	- 6.1	-10.0	- 8.5	0.1	2.1	2.6	6.1	3.5
4	- 1.9	- 1.2	-11.0	- 4.6	- 6.2	-10.8	-10.0	2.0	2.2	5.7	6.9	2.9
5	0.5	- 2.5	-14.4	- 7.0	- 5.5	- 7.1	-10.0	4.0	4.1	3.7	7.7	4.3
6	- 6.9	- 6.5	-17.0	- 3.9	- 4.7	- 8.0	-11.0	5.9	3.1	4.2	6.5	4.2
7	2.0	-10.0	-14.8	- 5.8	- 7.0	- 8.0	-11.0	5.9	4.4	2.4	6.4	2.0
8	- 2.5	-13.1	-14.9	- 3.8	- 7.5	- 5.1	-10.1	7.1	0.9	2.2	6.8	2.7
9	- 5.7	-14.9	-14.9	- 3.8	- 6.6	- 4.1	-13.2	6.0	1.0	4.2	4.3	3.7
10	- 4.4	- 9.4	-20.0	- 3.8	- 8.7	- 5.5	-11.0	3.0	3.4	4.2	4.6	2.7
11	- 4.7	- 5.7	-26.3	- 2.7	-13.6	- 3.9	- 6.1	2.5	5.2	3.5	2.9	1.3
12	- 7.2	- 6.3	-21.6	- 5.7	-16.6	- 6.6	-10.8	3.5	6.4	4.2	2.0	0.8
13	- 6.8	- 6.9	-11.9	- 1.9	-16.5	- 4.8	-12.7	4.5	9.0	6.1	1.8	0.7
14	- 3.1	- 7.5	-15.2	- 1.3	-22.7	- 4.5	-14.6	5.0	8.8	5.8	0.9	1.8
15	- 1.6	- 5.0	-24.0	- 1.3	-23.9	- 6.1	-12.3	4.4	7.7	5.6	0.8	1.6
16	- 6.3	- 5.7	-30.3	- 2.9	-18.2	- 6.1	-10.2	4.2	9.6	7.2	- 0.7	1.5
17	- 2.6	- 6.8	-22.1	- 2.4	-14.5	- 1.0	- 7.2	3.2	9.6	7.7	1.3	2.1
18	- 1.1	- 5.8	-17.1	- 0.8	-13.6	2.6	- 4.7	2.9	8.7	7.0	2.8	2.8
19	- 1.6	- 5.2	-15.9	- 4.7	- 9.6	- 3.0	- 2.8	1.9	6.3	5.6	4.3	2.4
20	- 3.0	- 6.9	-16.6	- 9.4	- 8.0	- 7.2	- 1.1	1.8	7.6	5.4	5.1	0.4
21	- 3.5	- 8.7	- 9.0	- 4.4	- 8.1	- 8.2	- 1.1	1.2	6.0	6.6	5.1	- 0.7
22	- 0.2	- 5.5	- 9.6	- 1.5	-12.6	- 8.9	- 0.6	2.0	6.2	7.8	3.5	- 2.8
23	1.5	- 5.8	-10.9	- 2.8	- 8.2	- 4.2	- 0.1	3.3	5.9	5.8	3.6	- 1.7
24	1.7	- 3.6	- 8.7	- 2.8	- 8.9	- 3.9	- 1.9	5.1	6.2	6.8	5.7	- 3.5
25	- 1.6	- 5.4	-14.5	- 1.4	- 5.1	- 5.7	- 0.9	5.4	5.0	5.5	10.0	- 6.3
26	- 4.1	- 5.9	-20.0	- 4.7	- 4.0	- 3.8	- 1.9	5.2	3.9	5.3	11.4	- 7.4
27	- 4.1	- 6.8	-22.6	-10.5	- 5.3	- 4.8	- 2.1	2.9	1.5	7.9	13.0	- 8.6
28	- 3.1	- 9.9	-14.2	-13.4	- 5.3	- 6.0	0.4	3.6	3.5	8.7	10.0	- 7.8
29	- 6.7	-13.9	-10.6	- 8.7		- 4.3	- 1.1	8.2	1.3	6.8	8.8	- 5.6
30	- 8.6	-15.5	- 9.2	- 3.1		- 5.0	1.9	9.6	3.1	5.9	6.9	- 3.1
31	- 9.8		- 1.6	- 2.0		- 6.7		3.2		5.8	3.8	
Monthly Average	- 3.2	- 7.3	-14.8	- 4.3	- 9.8	- 5.5	- 6.3	3.9	5.0	5.3	5.2	0.1

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1982 hydrologic year.

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-81	Nov-81	Dec-81	Jan-82	Feb-82	Mar-82	Apr-82	May-82	June-82	July-82	Aug-82	Sept-82
1	- 6.5	- 9.1	- 7.5	-20.7	- 8.0	-11.1	-20.0	- 4.0	6.8	4.5	3.1	3.3
2	- 6.9	- 7.8	-10.7	-18.1	- 1.7	-10.3	-19.7	- 7.1	2.2	5.6	4.2	2.5
3	- 7.0	-10.1	- 6.1	-17.6	0.3	-12.0	-11.9	- 4.1	0.8	7.3	4.8	1.5
4	- 6.9	- 9.1	-10.7	-16.7	- 0.3	-11.9	- 7.6	- 4.0	3.9	7.7	5.8	1.7
5	- 1.7	-13.5	-12.7	-18.7	- 1.6	-12.0	- 5.1	- 1.3	4.4	6.4	6.3	5.9
6	- 5.8	-15.7	-13.4	-20.7	- 2.0	-13.0	- 1.1	1.3	6.5	9.2	7.3	6.7
7	- 6.7	- 6.4	-14.0	-18.1	- 0.1	-14.0	- 4.2	2.1	4.7	12.9	6.4	1.2
8	- 4.9	- 6.2	-14.9	-17.7	- 5.0	-15.0	- 6.1	2.1	5.3	12.2	5.2	0.1
9	- 3.6	- 2.1	-14.7	-17.3	-10.0	-16.8	- 9.2	0.5	4.3	7.9	4.0	0.7
10	- 5.8	- 0.3	-14.2	- 8.3	-17.1	-13.7	- 8.9	1.4	3.6	6.9	4.3	1.6
11	- 4.2	- 1.6	-11.6	- 9.6	-20.1	-11.3	-10.2	0.6	2.8	5.4	4.4	1.1
12	- 0.3	- 4.8	- 6.9	- 8.4	-17.0	-14.4	-11.5	- 0.5	1.9	4.9	7.0	- 0.5
13	- 0.6	- 6.3	- 6.0	-12.7	-18.1	-17.2	-13.0	- 0.5	3.2	6.2	10.8	2.0
14	- 0.7	- 9.7	- 9.8	-11.1	-27.6	-17.5	- 7.3	0.7	3.7	7.3	11.8	3.2
15	- 0.6	-11.6	- 8.6	- 9.6	-26.4	-12.5	- 5.1	0.3	1.5	5.3	7.1	6.2
16	- 2.0	-12.5	- 3.1	-12.1	-20.2	-12.5	- 5.1	0.0	2.7	3.0	3.6	1.9
17	- 2.6	-14.2	- 1.2	-19.8	-18.7	- 4.3	- 6.1	1.6	3.9	4.1	2.9	3.3
18	- 5.0	-14.9	- 2.8	-19.7	-19.6	- 4.7	- 8.4	1.4	4.0	5.7	4.5	4.0
19	- 8.9	-15.5	- 7.4	-18.7	-19.1	- 4.7	- 6.1	2.2	4.6	9.3	6.1	4.8
20	- 4.7	-14.8	- 9.7	-18.9	-22.2	- 2.4	- 4.3	0.7	1.9	12.2	6.5	1.1
21	- 0.5	-14.4	- 9.8	-20.7	-27.2	- 2.8	- 4.1	1.2	3.7	9.6	6.9	1.5
22	- 0.5	-11.2	-11.2	-19.1	-21.9	- 3.9	- 4.3	4.2	6.7	5.7	8.5	- 0.3
23	- 0.7	- 7.7	- 6.0	-18.7	-20.1	- 5.1	- 5.5	2.2	8.4	5.5	5.9	- 3.4
24	- 2.5	- 9.1	- 8.2	-21.8	-18.6	- 8.2	- 4.7	3.5	10.0	6.3	6.1	- 1.5
25	- 5.9	-10.8	-13.4	-20.6	-17.0	-10.2	- 2.0	3.3	11.4	6.1	5.7	1.0
26	- 9.0	- 8.5	-16.2	-22.7	-17.0	-12.5	- 3.9	3.3	13.2	8.1	5.8	- 0.6
27	- 8.2	- 6.6	-20.7	-19.7	-15.3	-13.0	- 0.4	1.7	13.1	9.6	4.7	- 1.3
28	- 8.9	-11.7	-21.5	- 9.0	-13.0	-14.4	- 1.4	1.6	6.9	11.5	3.7	- 2.2
29	- 7.1	-12.9	-20.6	-10.3		-13.6	- 4.1	3.2	6.6	6.5	1.7	- 0.8
30	- 7.7	- 6.8	-19.5	-12.2		-16.6	- 4.5	4.3	6.0	5.1	1.2	- 2.1
31	-10.9		-17.6	-10.9		-16.4		5.3		4.4	2.4	
Monthly Average	- 4.8	- 9.5	-11.3	-16.1	-14.5	-11.2	- 6.9	0.9	5.3	7.2	5.4	1.4

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1983 hydrologic year

(Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-82	Nov-82	Dec-82	Jan-83	Feb-83	Mar-83	Apr-83	May-83	June-83	July-83	Aug-83	Sept-83
1	- 3.2	- 4.4	-14.8	- 6.7	- 3.1	-12.4	- 5.5	- 0.8	5.3	9.1	5.8	2.3
2	- 4.5	- 6.1	-17.9	- 7.8	- 6.2	-14.2	- 6.5	- 2.0	5.1	5.9	5.9	- 1.0
3	- 6.6	- 7.0	-18.7	-12.1	- 8.2	-15.7	- 5.3	- 2.8	- 1.3	6.6	6.4	- 1.9
4	- 8.1	- 7.2	-15.4	-18.3	- 7.2	-14.7	- 3.7	- 1.4	0.4	10.5	5.2	- 1.0
5	- 9.5	- 9.8	-10.4	-22.8	- 7.5	-12.7	- 8.9	- 1.3	2.1	11.3	1.9	- 2.3
6	- 6.6	-13.7	- 6.1	-23.0	- 5.4	- 9.5	- 8.3	- 1.4	- 0.6	7.3	2.8	- 2.7
7	- 4.5	-17.0	- 3.2	-21.0	- 6.4	- 6.5	- 9.9	- 1.7	- 0.1	6.3	5.0	- 3.5
8	- 6.3	-10.5	- 6.3	-24.9	-11.2	- 7.9	- 9.7	1.5	0.4	6.2	2.8	0.2
9	- 1.2	-12.7	- 9.4	-29.4	-14.1	-11.9	-10.2	0.9	- 2.0	3.6	3.6	0.2
10	- 5.3	-12.3	-12.0	-25.9	-15.6	- 9.9	-14.9	0.2	- 0.4	5.1	4.5	0.2
11	- 6.1	- 9.2	- 7.9	-23.0	-15.8	- 5.7	-12.1	1.4	- 0.2	3.6	4.5	1.5
12	- 1.7	- 6.6	- 5.3	-23.8	-18.7	- 4.4	- 6.6	0.9	1.6	5.4	2.6	1.4
13	- 4.8	- 6.1	- 6.1	-19.7	-18.7	- 5.8	- 4.0	0.8	4.3	3.5	1.3	- 0.9
14	- 8.3	- 8.4	- 6.2	-14.1	-17.3	- 6.4	- 4.6	1.0	2.5	4.6	0.2	- 0.5
15	- 9.4	-11.6	- 6.3	- 8.1	-14.9	- 6.4	- 7.1	2.0	2.8	5.9	- 0.8	- 2.5
16	- 7.3	-13.5	- 5.4	- 6.5	-11.4	- 7.2	- 5.0	- 0.2	3.1	7.4	0.7	- 1.6
17	- 5.3	-14.6	- 8.6	- 8.3	-12.7	- 8.3	- 6.6	- 1.1	3.5	4.2	2.3	- 1.6
18	- 6.9	-17.1	-10.5	- 4.6	-12.1	- 9.3	- 7.3	- 1.1	6.8	1.3	2.3	0.2
19	- 6.7	-17.1	- 9.7	-10.5	- 9.4	- 9.6	- 6.3	0.9	7.1	3.7	4.2	- 0.4
20	-12.1	-12.5	- 9.4	-11.6	- 6.5	- 9.4	- 3.4	0.9	7.3	4.1	1.3	2.7
21	-16.4	- 7.5	-12.0	- 6.7	- 6.5	- 7.5	- 2.8	1.7	8.0	5.3	0.1	1.3
22	-14.6	- 6.7	-15.3	- 3.6	- 7.1	- 8.1	- 3.1	2.1	8.5	6.1	1.6	- 1.7
23	-16.5	- 6.3	-13.6	- 5.6	- 7.5	- 9.8	- 1.2	- 0.5	9.7	2.8	0.0	-11.7
24	-17.2	- 5.4	-10.5	-10.3	- 7.5	-10.0	3.4	2.0	10.3	6.0	0.1	-14.1
25	-17.2	- 7.4	-12.5	- 9.6	- 8.9	- 9.9	4.6	1.5	11.0	7.6	2.4	-14.9
26	-20.9	- 5.2	- 7.4	- 4.9	- 7.0	-10.2	2.8	0.9	9.2	7.3	3.4	-13.7
27	-23.1	- 6.2	- 4.2	- 6.6	- 6.5	- 9.2	0.6	2.5	4.5	7.3	3.4	-10.1
28	-14.5	- 7.6	- 4.0	- 8.9	- 9.9	- 8.1	0.6	4.0	4.7	10.3	3.9	- 3.8
29	-12.9	- 8.7	- 3.2	- 9.8		- 8.8	0.0	7.1	5.6	5.7	3.5	0.0
30	-16.7	- 8.4	- 7.8	- 7.8		- 7.8	- 3.9	10.8	6.8	3.5	- 2.4	0.1
31	-14.7		- 6.7	- 4.9		- 5.7		5.0		5.3	1.1	
Monthly Average	-10.0	- 9.6	- 9.3	-12.9	-10.1	- 9.1	- 4.8	1.1	4.2	5.9	2.6	- 2.7

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1984 hydrologic year

(Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-84	Nov-84	Dec-84	Jan-84	Feb-84	Mar-84	Apr-84	May-84	June-84	July-84	Aug-84	Sept-84
1	- 2.3	- 5.3	- 4.3	- 5.3	--	--	- 5.1	- 0.7	1.0	8.3	6.6	1.0
2	- 3.1	- 4.1	- 8.0	- 5.3	--	--	- 5.6	- 2.6	2.6	3.5	6.4	1.3
3	- 7.7	- 5.5	-10.3	- 5.3	--	--	- 7.6	- 2.4	2.6	5.8	7.6	1.6
4	- 6.3	- 5.7	-10.6	-11.2	--	--	- 4.1	- 2.6	2.6	6.0	9.1	2.9
5	- 5.8	- 8.3	- 9.6	-20.2	--	--	- 5.3	- 2.0	3.0	7.7	7.6	3.5
6	- 8.4	- 9.3	- 9.5	-15.8	--	--	- 9.2	- 3.3	1.6	6.2	6.7	1.6
7	-13.1	- 6.7	-13.6	-10.8	--	--	-10.1	- 3.2	3.3	4.5	6.6	2.7
8	-13.1	- 3.1	-10.7	- 8.8	--	--	- 9.3	- 1.9	5.7	2.4	6.7	2.9
9	- 7.1	- 4.7	-19.0	- 8.1	--	--	- 6.7	2.0	4.4	2.3	3.8	4.1
10	- 1.9	- 5.3	-14.8	- 5.7	--	--	- 4.9	1.9	4.5	3.9	3.3	2.9
11	- 2.1	- 5.5	-11.3	- 5.8	--	--	- 2.7	- 6.4	5.4	4.2	2.7	2.0
12	- 4.2	- 8.4	-14.4	- 2.1	--	--	- 2.9	3.9	3.8	5.6	2.3	2.1
13	- 7.8	- 9.3	-13.1	- 4.1	--	--	- 2.9	0.6	2.4	4.1	3.5	1.1
14	- 7.6	-10.5	-16.9	- 2.6	--	--	- 3.5	2.1	2.6	2.7	5.5	3.9
15	- 9.4	- 8.6	-21.2	- 7.1	--	--	- 3.9	3.2	1.1	4.0	7.5	3.3
16	- 5.8	- 9.1	-18.7	- 7.4	--	--	- 8.8	3.4	2.3	3.6	8.5	3.2
17	- 2.1	-10.0	-14.2	- 7.7	--	--	- 7.7	4.3	5.2	1.2	8.3	1.0
18	- 3.6	-10.4	-12.4	-12.0	--	--	- 4.2	4.2	7.9	2.1	3.6	0.3
19	- 6.6	-11.6	-10.8	-14.0	--	--	- 3.7	3.4	8.6	3.1	5.6	- 0.7
20	- 5.4	-11.1	-10.3	-15.5	--	--	- 2.8	5.4	8.6	2.5	4.5	- 0.9
21	- 3.2	- 4.3	- 8.3	-18.3	--	--	- 1.2	4.2	8.7	3.2	3.3	1.3
22	- 4.3	- 6.1	- 4.5	-24.5	--	--	- 6.4	4.3	10.3	4.5	4.5	1.6
23	- 7.5	- 9.2	- 2.0	-26.5	--	--	- 6.7	3.3	7.5	6.9	2.3	1.6
24	- 7.6	-12.7	- 3.0	-25.9	--	- 8.3	- 5.4	0.9	7.6	7.5	0.2	1.6
25	-10.2	- 9.4	- 3.3	-23.6	--	- 6.2	- 6.0	0.9	7.7	4.1	0.1	0.8
26	- 7.6	- 8.2	- 4.2	-17.3	--	- 7.0	- 5.5	- 0.5	7.7	3.3	- 4.8	1.0
27	- 7.2	- 7.4	- 8.9	-13.8	--	- 5.5	- 1.9	- 0.6	4.4	4.9	- 5.8	0.9
28	- 6.7	- 3.5	-11.1	-15.0	--	- 6.2	- 1.9	- 1.8	7.5	5.2	- 5.8	0.8
29	- 5.2	- 0.1	-13.7	- 8.8	--	- 5.5	0.1	0.9	4.7	4.2	- 7.1	4.4
30	- 7.3	- 3.6	-13.9	- 5.0		- 3.6	2.1	- 0.5	6.9	4.6	- 4.9	2.3
31	- 8.4		-11.6	- 7.0		- 6.4		1.1		5.7	- 0.5	
Monthly Average	- 6.4	- 7.2	-10.9	-11.6	N/A	N/A	- 4.8	0.4	5.1	4.4	3.2	1.9

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1985 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; —, record missing]

Day	Oct-84	Nov-84	Dec-84	Jan-85	Feb-85	Mar-85	Apr-85	May-85	June-85	July-85	Aug-85	Sept-85
1	1.6	- 7.4	- 8.8	- 1.7	- 9.2	-15.0	-13.3	- 2.6	0.5	6.7	6.6	2.0
2	- 0.8	- 6.4	- 7.2	- 5.2	- 6.0	-14.9	-15.2	- 1.0	7.0	5.2	6.2	2.4
3	- 2.3	- 8.5	- 4.1	- 8.4	- 6.8	-15.2	- 8.7	- 1.2	8.9	5.1	3.8	1.7
4	- 2.4	-11.5	- 2.1	- 9.1	-13.1	-17.3	-12.2	- 1.8	5.2	6.5	5.9	- 0.3
5	- 1.3	- 7.3	- 4.8	-10.5	-13.1	-13.3	-11.6	0.3	1.0	7.0	7.5	0.2
6	0.4	- 6.8	- 6.4	- 8.5	-16.2	-10.5	- 7.9	- 1.0	1.1	7.9	6.5	1.1
7	1.9	- 8.3	-10.1	- 3.2	-18.1	-13.8	- 5.8	- 1.3	0.2	7.3	6.4	5.3
8	0.9	- 8.6	-10.1	- 1.5	-18.6	-10.3	- 6.1	- 5.3	- 0.8	4.2	2.3	3.9
9	- 2.0	-13.5	-15.4	- 4.1	-18.4	- 9.7	-11.3	- 6.5	0.6	4.5	1.6	- 0.4
10	- 2.6	-14.8	-17.5	- 4.0	-21.6	- 8.3	-14.1	- 4.0	3.9	4.5	1.4	- 1.8
11	- 2.3	-18.4	-14.0	- 6.1	-21.7	-10.1	-10.5	- 4.7	2.9	5.6	2.1	- 0.5
12	- 4.8	-18.1	-18.1	-10.1	-23.6	-10.5	- 9.3	- 5.5	0.8	5.7	2.6	0.1
13	- 6.4	-18.3	-15.4	-11.5	-21.8	-11.2	-11.1	- 4.5	0.7	5.2	4.6	2.2
14	- 7.2	-15.1	-15.7	- 9.5	-22.2	-12.9	-11.4	- 3.1	1.8	6.5	4.9	0.5
15	- 8.4	- 7.6	-16.1	- 8.9	-18.0	-10.4	- 4.6	1.1	- 0.3	7.7	3.7	1.6
16	- 9.4	- 9.0	-11.3	- 5.2	-18.2	-10.1	- 4.8	1.3	3.3	9.2	2.6	- 5.8
17	- 3.0	- 9.1	- 6.3	- 4.7	-18.1	- 8.6	- 5.5	- 0.5	2.4	9.2	3.0	- 5.0
18	- 2.0	- 8.9	- 5.9	- 7.1	-22.3	- 9.0	-11.2	- 4.0	1.3	9.2	2.6	- 4.0
19	- 8.0	-10.6	-12.9	- 4.6	-23.5	-10.1	- 8.3	- 3.4	3.1	8.6	1.5	- 1.3
20	- 6.4	- 4.2	-17.4	- 6.6	-19.1	- 8.2	- 6.5	- 6.1	3.9	4.5	0.9	- 5.3
21	- 2.1	- 3.9	-17.4	- 6.3	-20.5	- 8.4	- 3.4	3.1	2.6	3.5	0.9	- 4.0
22	1.2	- 8.4	-13.1	- 5.9	-20.2	- 9.8	- 3.5	7.4	3.3	5.7	1.4	- 2.3
23	- 1.8	-10.0	- 8.9	- 5.1	-17.2	-10.6	- 3.0	6.4	6.0	4.4	2.4	- 1.6
24	-10.1	-12.1	-14.0	- 8.6	-13.3	- 9.6	- 3.4	7.9	1.8	5.1	3.6	0.0
25	-11.2	-15.0	-15.4	- 9.3	-10.4	- 9.8	- 7.0	8.2	0.1	6.5	2.9	- 4.5
26	-12.5	-16.8	-15.0	- 6.6	- 7.9	-10.6	- 7.3	6.5	3.3	7.4	2.6	- 2.2
27	-10.2	-15.2	-18.5	- 6.8	- 8.1	-12.9	- 8.4	5.6	3.9	8.7	3.3	2.9
28	-14.0	-14.3	-20.6	- 7.1	-15.1	-11.8	- 4.6	1.7	7.5	9.4	4.7	- 0.8
29	-16.0	-11.4	-16.7	- 6.0		-10.6	- 3.8	0.2	9.6	5.6	1.6	- 0.6
30	-14.0	-10.6	-11.5	- 4.3		-12.1	- 3.5	- 1.3	10.3	6.1	3.2	0.2
31	-10.9		- 5.2	- 5.8		-13.6		1.8		4.0	3.8	
Monthly Average	- 5.4	-11.0	-12.1	- 6.5	-16.5	-11.3	- 7.9	- 0.2	3.2	6.3	3.5	- 0.5

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1986 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-85	Nov-85	Dec-85	Jan-86	Feb-86	Mar-86	Apr-86	May-86	June-86	July-86	Aug-86	Sept-86
1	- 0.6	-16.7	-11.9	-12.7	- 4.1	-18.0	-13.5	- 2.1	- 2.4	10.9	4.1	1.2
2	- 1.4	-13.4	-12.3	-11.5	- 4.6	-16.8	-11.0	0.7	0.3	12.7	7.0	0.7
3	- 4.1	-14.8	-14.9	- 6.0	-10.4	-17.1	- 9.6	- 3.4	- 0.9	12.0	7.5	1.8
4	- 3.7	-16.2	-11.7	- 4.4	-11.6	-18.8	-12.7	- 2.1	5.2	10.5	6.2	4.6
5	- 4.7	-15.5	- 9.0	- 6.0	- 7.8	-18.5	-15.1	- 1.7	6.4	12.3	2.1	5.9
6	- 2.1	-16.2	-11.0	- 7.4	- 5.0	-16.7	-23.6	- 1.4	6.9	10.6	2.3	7.5
7	- 3.3	-18.0	- 9.9	- 9.2	- 3.1	-16.5	-25.0	- 1.6	5.3	8.6	3.4	7.4
8	- 2.8	-19.2	- 6.3	-11.4	- 6.3	-17.9	-26.7	- 3.7	3.1	5.6	3.5	3.9
9	- 3.5	-13.2	- 3.2	- 9.1	- 9.1	-11.4	-21.0	- 5.0	- 0.4	6.6	5.3	1.6
10	- 6.1	- 8.4	- 1.2	- 5.6	- 4.9	- 8.2	-14.5	- 1.8	3.3	7.6	4.5	1.3
11	- 5.5	- 9.9	2.9	- 8.5	- 0.9	- 7.6	-12.3	- 3.3	2.5	7.7	4.6	2.9
12	- 5.1	-14.9	- 4.0	- 6.2	0.9	- 4.4	-11.6	- 3.9	3.9	7.0	1.3	2.6
13	- 5.1	-17.7	- 7.7	- 6.4	0.0	- 6.2	-10.1	- 1.6	7.4	4.2	0.6	2.9
14	- 8.2	-20.1	- 8.4	- 6.2	- 3.2	- 6.2	- 7.9	1.1	7.6	5.5	0.4	3.2
15	- 6.4	-21.9	- 8.7	- 7.3	- 2.9	- 7.6	- 6.1	- 2.1	10.7	8.6	1.8	3.2
16	- 6.4	-18.0	- 7.3	- 9.5	- 9.3	- 9.9	- 4.8	- 2.5	11.0	8.5	2.0	5.2
17	- 7.4	-12.5	- 7.3	-11.2	-14.9	-10.1	- 4.5	- 2.9	8.2	11.1	3.6	3.5
18	-12.0	-12.6	- 6.6	-11.2	-20.2	-11.6	- 5.2	- 1.7	7.3	8.0	0.7	2.6
19	-12.5	- 8.3	- 0.2	-13.1	-17.3	-10.8	- 9.0	1.1	6.3	6.4	2.1	0.9
20	-13.8	- 3.2	- 1.0	-11.7	-17.5	-10.4	- 5.6	- 0.9	2.7	6.1	1.2	3.2
21	-11.2	- 6.6	- 1.2	-13.0	-18.1	-10.3	- 4.8	- 1.0	2.4	3.9	1.5	0.6
22	-14.6	- 5.5	- 2.1	- 8.5	-20.3	-10.4	- 6.6	2.7	2.2	5.3	- 2.4	0.0
23	-17.6	0.9	- 2.2	- 4.8	-20.8	- 8.4	- 3.7	1.8	1.8	3.2	- 1.5	- 1.7
24	-19.1	- 3.2	- 2.9	- 7.2	-21.7	- 7.1	- 5.5	2.7	2.0	2.6	0.7	- 5.2
25	-17.6	- 9.4	- 9.2	- 8.9	-13.2	- 6.9	- 5.2	3.5	3.1	2.7	2.6	- 5.2
26	-13.0	-14.1	- 2.0	- 8.3	-16.0	- 8.2	- 8.1	0.5	4.8	1.2	5.7	- 3.9
27	-14.7	-15.1	- 1.4	-10.3	-15.3	-12.7	- 7.6	0.1	10.2	3.0	4.5	- 2.6
28	-11.7	-15.1	- 5.6	-14.4	-17.0	-11.9	- 2.8	0.4	9.3	6.1	1.9	- 0.7
29	-15.6	-13.7	- 7.6	-10.7		-13.4	- 1.8	3.5	8.9	9.2	2.5	- 2.6
30	-19.4	-12.0	- 9.0	- 7.8		-19.1	- 0.3	3.3	8.7	7.6	0.7	0.9
31	-19.7		- 9.5	- 4.8		-18.7		2.3		2.3	1.9	
Monthly Average	- 9.3	-12.8	- 6.2	- 8.8	-10.5	-12.0	- 9.9	- 0.6	4.9	7.0	2.7	1.5

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1987 hydrologic year

[Data in degrees Celsius, monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-86	Nov-86	Dec-86	Jan-87	Feb-87	Mar-87	Apr-87	May-87	June-87	July-87	Aug-87	Sept-87
1	- 0.4	- 0.6	--	--	--	--	- 8.3	4.4	3.8	9.1	6.5	1.0
2	- 0.4	1.4	--	--	--	--	- 6.5	3.2	2.2	9.6	6.7	2.4
3	- 1.3	- 3.0	--	--	--	--	- 4.5	- 1.4	3.2	9.9	8.0	2.8
4	- 2.0	- 4.2	--	--	--	--	- 4.1	1.2	4.5	9.9	8.8	1.9
5	- 3.0	- 6.7	--	--	--	--	- 4.5	- 0.5	5.4	9.9	4.1	1.3
6	- 4.3	-10.0	--	--	--	--	- 5.6	0.8	2.0	5.8	3.8	1.7
7	- 3.6	-10.9	--	--	--	--	- 6.9	2.2	4.6	3.7	3.3	5.3
8	- 3.3	- 8.8	--	--	--	--	- 5.1	2.3	3.5	6.5	4.6	- 0.2
9	- 3.5	- 6.4	--	--	--	--	- 5.5	1.5	0.3	6.8	6.5	0.7
10	0.6	- 5.2	--	--	--	--	- 4.1	0.6	2.4	6.4	8.2	0.9
11	- 0.5	- 6.4	--	--	--	--	- 5.0	0.0	3.3	5.6	9.6	0.4
12	- 0.3	- 5.9	--	--	--	--	- 3.8	3.6	0.7	4.1	6.6	- 0.8
13	0.9	- 6.9	--	--	--	--	- 3.7	0.9	2.4	5.6	6.0	- 6.6
14	- 1.1	- 7.2	--	--	--	--	- 7.4	- 0.5	3.3	5.1	3.9	- 3.8
15	- 2.8	- 9.2	--	--	--	--	- 5.0	2.5	1.5	5.9	3.9	- 3.6
16	- 5.7	- 8.8	--	--	--	--	- 5.7	0.6	1.4	6.9	4.0	0.3
17	- 5.8	-12.7	--	--	--	--	- 4.7	0.8	2.4	6.2	4.7	1.9
18	- 4.0	-14.5	--	--	--	--	- 6.5	1.2	2.2	7.6	4.1	2.4
19	- 3.7	-19.1	--	--	--	--	- 6.9	2.3	3.2	8.6	3.2	2.4
20	- 1.2	-22.0	--	--	--	--	- 3.0	3.0	8.1	11.0	3.4	0.9
21	- 1.3	-14.8	--	--	--	--	- 2.5	3.4	13.2	7.6	4.5	- 0.2
22	- 1.4	-12.3	--	--	--	--	- 2.7	1.4	6.8	5.4	7.1	1.5
23	- 1.8	-16.6	--	--	--	--	- 0.2	0.4	5.2	4.5	8.8	1.5
24	- 3.6	-15.9	--	--	--	--	- 2.4	1.1	5.4	6.8	9.0	- 0.3
25	- 5.9	-16.9	--	--	--	- 4.0	- 6.1	1.4	2.5	5.0	9.8	- 0.9
26	- 2.3	-22.0	--	--	--	- 6.0	- 5.0	1.1	2.2	6.8	8.6	0.6
27	- 5.5	-16.7	--	--	--	- 6.3	- 3.4	2.0	2.4	11.0	8.0	0.2
28	- 4.0	-18.3	--	--	--	- 5.4	- 1.2	1.4	4.4	9.7	7.4	- 1.4
29	- 3.7	-17.2	--	--		- 1.5	1.9	3.5	9.7	8.7	7.5	- 0.7
30	- 2.5	-16.5	--	--		- 6.2	3.0	5.5	9.7	5.2	- 2.7	- 2.0
31	- 2.5		--	--		- 6.9		6.3		5.8	0.0	
Monthly Average	- 2.6	-11.1	N/A	N/A	N/A	N/A	- 4.2	1.8	4.1	7.1	5.7	0.3

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1988 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-87	Nov-87	Dec-87	Jan-88	Feb-88	Mar-88	Apr-88	May-88	June-88	July-88	Aug-88	Sept-88
1	- 0.5	- 6.7	- 8.4	- 8.0	-15.4	- 2.8	- 7.3	- 1.6	2.6	8.0	5.2	0.8
2	3.0	- 8.7	- 7.0	- 5.7	-17.4	- 6.1	- 7.2	- 1.5	3.6	10.4	4.0	0.8
3	- 1.1	- 9.9	- 9.1	- 3.8	-18.7	- 7.5	-12.3	0.4	2.7	9.9	4.5	2.8
4	- 1.2	- 7.7	-12.4	- 3.7	-11.7	- 8.2	- 8.3	- 3.5	5.5	8.5	6.8	1.5
5	- 1.7	- 6.2	-13.2	- 5.7	-10.7	- 9.4	- 8.0	0.5	6.5	7.0	6.9	0.1
6	- 2.8	- 9.9	-13.8	- 4.6	- 6.4	- 7.2	- 7.8	2.9	1.5	6.5	4.4	- 0.8
7	- 3.6	- 8.9	- 6.6	- 4.2	- 6.9	- 7.0	- 6.9	1.0	3.9	6.5	4.0	- 0.1
8	- 1.7	-10.0	- 8.0	- 7.6	- 7.5	- 6.5	- 8.6	3.4	6.9	7.9	3.2	0.3
9	- 1.3	-10.6	-11.8	- 9.2	- 8.9	- 7.3	- 4.6	5.4	7.9	7.2	3.9	2.6
10	- 1.5	- 4.3	-10.9	-11.8	- 8.3	- 4.6	- 6.8	4.4	9.1	6.7	4.3	1.4
11	- 2.9	- 5.8	-11.7	-13.9	-10.6	- 8.2	- 4.7	4.4	8.6	7.2	2.2	0.1
12	- 3.8	- 4.0	-12.9	-12.0	-12.8	- 6.2	- 2.8	4.5	8.5	9.3	2.4	0.2
13	- 2.6	- 7.1	-16.2	- 9.3	-10.9	- 7.9	- 1.9	3.7	8.9	12.1	2.8	0.9
14	- 2.5	-12.7	-19.9	- 8.0	-10.4	- 9.4	- 4.0	2.5	7.5	12.1	4.0	- 0.1
15	- 5.0	-13.6	-20.1	-10.9	-14.0	- 7.8	- 3.4	2.8	3.6	12.4	6.9	1.0
16	- 7.1	- 7.0	-12.2	-11.3	-12.8	- 8.2	- 3.0	2.4	3.5	10.7	9.0	- 0.6
17	- 5.1	- 5.0	-11.9	-10.9	-10.0	- 7.1	- 2.8	4.3	6.9	8.3	10.9	0.6
18	- 3.2	- 5.9	-13.6	-11.1	- 7.4	- 6.7	- 4.4	2.3	6.2	8.2	9.0	0.8
19	- 1.1	- 7.0	- 5.7	- 9.7	- 7.0	- 9.4	- 3.5	2.6	0.4	8.7	3.9	0.5
20	- 3.5	- 7.6	- 8.7	-10.8	-12.4	- 9.6	- 2.3	2.8	1.7	8.5	2.5	- 0.5
21	- 1.8	- 8.0	-12.6	- 7.1	-24.2	- 9.6	- 2.1	2.3	3.9	2.7	4.1	- 0.2
22	- 1.4	- 7.0	-13.6	- 6.8	-10.6	- 8.3	0.0	2.1	6.4	2.2	1.0	- 1.4
23	- 2.7	- 9.9	- 5.5	- 7.4	- 2.1	- 7.7	0.0	2.6	2.8	2.5	0.6	- 0.5
24	- 5.0	-12.2	- 4.9	-10.2	- 5.2	- 8.8	- 1.4	3.3	3.1	4.9	2.0	- 0.8
25	- 6.7	- 5.9	- 7.9	-14.1	- 3.7	-10.6	- 3.8	3.5	3.9	4.4	7.2	- 1.2
26	- 7.2	- 4.6	-12.3	-18.1	- 8.7	-11.4	0.2	4.2	3.3	4.9	6.5	- 2.0
27	- 9.2	- 7.3	-15.7	-18.3	- 9.7	-11.8	2.0	4.2	2.8	6.6	5.7	- 4.0
28	-10.1	- 5.4	-11.7	-15.8	- 8.4	- 9.8	3.1	5.5	5.7	4.6	4.7	- 5.2
29	-11.7	- 6.9	- 7.1	-17.1	- 4.8	- 7.9	3.1	3.0	9.4	6.3	4.0	- 3.9
30	-11.8	- 6.8	- 5.0	-13.9		- 7.5	- 2.6	0.9	10.9	5.5	1.9	- 4.3
31	-13.1		-12.1	- 9.9		- 7.0		1.7		7.0	2.1	
Monthly Average	- 4.2	- 7.8	-11.0	-10.0	-10.3	- 8.0	- 3.7	2.5	5.3	7.3	4.5	- 0.4

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1989 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-88	Nov-88	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	June-89	July-89	Aug-89	Sept-89
1	- 2.7	-11.5	-15.5	-11.3	-19.1	-11.3	- 6.3	5.3	0.9	9.1	7.1	4.3
2	1.8	-11.6	-12.8	-17.2	-16.5	-18.7	- 5.2	5.4	3.4	7.9	4.8	3.2
3	2.6	-11.4	- 2.9	-16.0	-12.7	-22.8	- 6.0	6.1	5.5	9.5	6.9	2.8
4	1.7	-13.8	-11.2	-18.0	- 7.9	-17.8	- 6.1	0.8	5.1	9.5	7.9	3.9
5	2.0	-11.7	-18.9	-15.6	- 2.0	-18.1	- 5.7	1.1	3.4	11.1	9.0	2.4
6	0.0	-10.2	-18.3	- 8.0	- 4.7	-18.5	- 6.8	2.5	3.4	11.3	10.1	3.8
7	- 4.2	- 7.2	-12.7	- 8.9	- 6.6	-18.1	- 4.1	3.3	4.7	11.1	6.2	5.9
8	- 2.7	- 9.3	- 6.2	-10.9	- 6.3	-21.1	- 4.5	- 1.1	6.8	13.0	7.2	9.1
9	- 3.1	- 7.5	- 8.7	-13.9	- 9.0	-19.0	- 2.2	- 3.3	4.5	12.5	6.8	11.1
10	- 7.4	- 8.2	- 3.9	-13.7	- 7.1	-10.7	- 0.6	- 0.2	5.6	11.7	10.1	6.1
11	- 8.5	- 7.6	- 5.1	- 7.5	- 8.5	- 4.5	1.7	- 3.1	5.3	13.0	11.7	1.9
12	- 5.0	-12.9	- 7.6	-14.3	- 8.5	1.8	- 1.5	- 2.1	6.0	13.8	12.0	0.4
13	- 9.4	-11.9	-11.5	-18.6	- 4.2	2.6	- 1.4	1.6	7.8	12.3	10.4	0.7
14	-11.9	- 9.8	- 8.2	-14.9	- 3.3	2.9	- 0.3	2.1	5.6	10.0	6.3	- 0.1
15	-13.3	- 8.2	- 4.4	-17.9	- 2.4	0.6	0.1	0.1	2.7	6.5	8.8	- 3.6
16	-10.7	-11.0	- 5.2	-18.6	- 4.0	- 2.4	- 2.1	- 2.6	4.1	6.7	11.4	- 3.5
17	- 9.3	-12.2	-10.2	-22.3	- 2.7	- 6.6	- 2.4	3.1	6.6	3.8	10.2	- 2.2
18	- 6.1	-14.2	-11.5	-27.4	0.4	- 8.5	- 1.4	5.4	5.9	7.8	8.8	- 2.1
19	- 7.2	-12.3	- 8.9	-25.9	- 1.6	- 7.9	0.8	0.1	5.9	10.6	5.9	- 1.6
20	- 5.4	- 7.5	-10.1	-26.5	- 7.3	- 7.8	2.2	5.9	9.5	7.4	3.7	0.4
21	- 9.0	- 7.7	-14.0	-29.9	- 7.5	- 7.6	0.9	4.7	8.7	5.7	3.0	1.0
22	- 9.5	- 7.4	-15.7	-24.3	- 9.0	- 6.4	- 1.0	- 3.0	6.3	5.9	6.9	0.0
23	- 9.7	-10.7	-17.6	-16.7	-12.8	- 6.5	- 1.9	4.4	6.3	3.9	5.9	0.9
24	- 7.2	-14.7	-17.0	-16.8	- 9.2	- 6.5	- 1.4	3.5	4.3	3.7	6.1	1.3
25	- 8.6	-14.8	-12.0	-15.4	- 4.4	- 8.3	1.8	5.4	3.5	6.1	10.1	2.2
26	-10.3	-13.7	-10.5	-22.4	-13.9	-13.4	6.0	6.0	6.7	7.1	9.7	- 1.0
27	- 7.4	-13.6	- 8.5	-24.1	-15.6	-18.2	5.9	3.2	6.7	6.4	9.2	- 1.1
28	- 6.4	-16.5	-10.1	-25.0	-11.9	-18.5	3.1	4.7	7.5	8.8	8.3	0.4
29	- 3.7	- 8.6	-13.7	-31.8		-14.8	2.8	5.1	11.1	9.4	6.8	- 0.1
30	- 6.3	-11.4	-11.8	-29.3		- 9.8	3.8	5.0	9.9	6.8	3.9	- 0.1
31	- 7.1		-10.1	-23.7		- 6.7		3.2		7.0	4.0	
Monthly Average	- 5.9	-11.0	-10.8	-18.9	- 7.8	-10.4	- 1.1	2.3	5.8	8.7	7.7	1.5

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1990 hydrologic year

(Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	June-90	July-90	Aug-90	Sept-90
1	- 0.2	- 2.3	- 8.6	-26.8	-20.7	-11.5	- 8.7	0.5	8.0	9.2	4.9	2.5
2	- 2.1	- 2.6	- 4.2	-18.1	-20.4	- 5.2	- 7.6	- 2.2	5.3	9.1	6.7	2.3
3	- 1.8	- 3.6	- 4.1	-13.0	-20.8	- 3.8	- 6.8	- 1.2	8.3	11.6	7.5	1.2
4	- 1.2	- 7.3	- 3.6	-11.5	-18.5	- 7.0	- 5.1	- 0.2	8.6	11.6	4.7	4.3
5	- 1.1	-10.3	- 5.8	-18.4	-23.5	-11.1	- 9.0	- 3.1	7.5	9.1	4.7	2.5
6	1.9	-18.0	- 6.5	-15.2	-30.3	-15.3	- 5.1	- 0.2	5.4	8.9	3.7	1.8
7	- 2.1	-23.0	- 6.4	-12.7	-30.9	-11.5	- 3.2	0.8	4.5	5.4	0.9	2.2
8	- 4.2	-30.2	-11.4	-19.5	-26.3	-11.9	1.6	1.7	2.4	4.9	4.5	1.0
9	- 7.4	-30.4	- 8.8	-26.4	-20.1	-12.1	3.7	4.6	2.2	4.2	5.6	1.4
10	- 7.7	-30.4	- 5.9	-16.0	-22.4	-13.2	- 3.2	5.0	3.0	3.3	6.9	1.3
11	-10.5	-26.6	- 7.3	- 7.0	-24.8	-11.8	- 3.3	4.6	5.4	3.0	11.5	1.4
12	-11.0	-22.0	- 4.8	-10.3	-20.6	- 7.7	- 1.7	6.1	7.0	1.6	12.0	1.9
13	- 9.6	-21.6	- 5.0	-10.1	-13.5	- 7.2	- 0.6	4.0	3.4	2.3	13.6	2.8
14	- 5.9	-18.9	- 8.2	-13.3	-17.3	- 8.0	- 0.6	4.3	2.3	6.0	12.7	3.8
15	- 1.3	-13.7	- 5.6	-12.7	-18.4	-10.0	- 0.6	4.8	2.5	7.7	12.6	0.5
16	- 1.1	- 9.7	- 9.9	- 9.0	-15.8	- 5.5	0.9	7.1	0.5	8.9	11.4	1.7
17	- 3.7	- 7.2	- 8.7	- 8.5	-15.0	- 9.0	0.3	6.9	1.6	10.5	11.2	3.4
18	- 7.2	-12.6	-10.8	- 7.5	-20.1	-13.1	- 1.3	5.8	2.4	10.0	6.8	3.2
19	- 6.6	-15.4	-16.2	- 8.8	-21.7	-13.2	1.0	7.2	2.9	10.9	6.5	2.4
20	- 8.0	-18.0	-15.5	- 8.4	-21.3	- 7.9	- 0.5	7.3	4.2	12.4	4.1	1.6
21	-13.2	-12.5	- 7.6	- 8.7	-19.5	- 1.7	0.7	0.9	2.8	10.5	5.3	0.9
22	-14.0	- 3.8	- 6.9	- 9.8	-20.4	- 0.8	- 0.5	- 1.6	4.7	11.7	6.7	0.2
23	- 8.6	- 8.7	- 5.0	-12.3	- 9.8	- 1.5	- 0.4	0.5	3.1	13.8	5.2	- 0.7
24	- 9.6	-10.4	- 3.3	-17.3	- 9.0	- 3.1	- 3.2	3.3	5.1	11.6	3.7	- 4.1
25	-10.8	-11.8	- 4.3	-19.9	-11.8	- 1.9	- 2.6	5.4	8.0	3.9	4.9	- 4.7
26	-14.3	-10.8	- 9.2	-24.1	- 8.7	- 2.6	0.7	6.5	10.8	4.1	5.4	- 2.0
27	-10.8	-12.1	-10.5	-22.7	-12.9	- 2.6	0.7	7.7	7.5	4.7	5.7	1.5
28	- 4.5	-11.4	- 6.9	-22.5	-19.0	- 4.4	0.1	7.8	7.4	6.1	1.6	- 0.7
29	- 6.4	- 9.7	-16.1	-22.5		- 6.9	0.8	4.8	9.3	5.5	1.1	- 1.1
30	- 8.6	- 8.6	-19.1	-23.2		- 7.7	- 1.2	6.8	10.1	4.1	3.0	- 3.0
31	- 6.6		-25.1	-18.6		- 7.3		7.7		3.2	3.4	
Monthly Average	- 6.4	-14.1	- 8.8	-15.3	-19.1	- 7.6	- 1.8	3.7	5.2	7.4	6.4	1.0

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1991 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	June-91	July-91	Aug-91	Sept-91
1	- 7.8	-11.4	--	-22.3	-20.5	- 3.6	-10.7	- 0.8	0.5	11.3	3.1	3.2
2	- 8.1	-11.0	--	-22.5	-16.0	- 3.9	- 6.9	- 1.7	1.6	8.7	2.1	5.3
3	- 8.3	-10.0	--	-20.1	-17.4	- 6.8	- 6.0	0.6	2.7	7.5	1.0	4.3
4	- 9.0	- 8.6	--	-18.4	-15.8	- 7.9	- 5.4	2.7	2.0	3.5	1.6	4.5
5	- 5.4	- 8.3	--	-17.9	-15.4	-11.3	- 6.0	4.9	3.9	5.0	2.1	6.9
6	- 3.7	-17.2	--	-18.7	-19.6	-10.0	- 5.9	3.4	0.8	0.3	2.0	4.1
7	- 2.0	-25.7	--	-16.5	-25.0	-11.0	- 7.4	2.0	2.7	7.7	3.2	1.6
8	- 3.7	-30.3	--	-14.6	-16.2	-14.3	- 6.4	2.7	0.2	3.7	6.3	0.6
9	- 4.9	-29.8	--	-12.2	- 5.8	-16.5	- 5.8	- 2.3	- 2.4	1.8	5.7	1.9
10	- 4.7	-23.5	--	-11.7	- 3.7	-17.9	- 7.1	- 4.5	0.7	0.5	3.9	3.1
11	- 1.5	-19.9	--	-12.2	- 3.4	-20.0	- 9.0	- 2.8	2.8	2.8	5.2	0.8
12	- 7.9	-15.2	--	-12.9	- 5.5	-17.1	- 6.2	- 1.4	3.1	1.5	5.1	1.2
13	- 9.6	-15.9	--	-14.1	- 8.6	-12.2	- 4.5	2.5	4.8	2.9	5.9	2.2
14	-16.5	-13.3	--	-18.9	- 4.7	-12.1	- 5.0	0.7	4.9	5.0	4.7	2.3
15	-12.9	- 9.6	--	-17.7	- 7.4	-13.2	- 5.6	- 0.7	3.8	7.2	3.9	3.2
16	-14.1	-14.4	--	-10.8	- 8.3	-16.6	- 3.6	2.8	4.0	1.8	6.9	4.0
17	-13.8	-11.2	--	- 7.7	-10.0	- 9.8	- 4.7	1.9	3.7	2.9	4.8	2.2
18	-11.2	-13.5	--	- 9.8	-14.1	- 9.1	- 2.6	0.9	3.0	3.4	0.8	- 0.1
19	- 4.1	-14.6	--	- 4.2	-17.3	-12.6	- 2.9	1.5	6.9	3.4	2.8	- 1.4
20	- 5.8	-16.9	--	- 5.9	-19.5	-12.5	- 4.1	- 0.1	12.0	4.3	2.9	- 0.5
21	- 7.9	-33.4	--	- 9.0	-17.5	-14.0	- 2.0	1.8	14.0	6.6	3.1	- 0.6
22	- 6.1	-20.0	--	- 7.8	-12.8	-13.5	- 0.3	5.3	11.3	7.8	1.8	0.5
23	- 3.7	-26.6	--	- 9.5	- 5.5	-11.8	1.6	5.7	10.0	7.2	2.6	- 0.4
24	- 6.2	-24.7	--	-11.3	- 5.0	- 8.4	0.8	5.2	11.0	4.0	2.6	- 0.7
25	- 6.0	-20.7	--	- 6.7	- 3.1	- 5.6	1.7	4.4	9.9	4.6	0.2	- 0.2
26	- 4.7	-16.3	--	- 6.8	- 1.6	- 5.9	- 1.3	3.0	9.0	7.2	- 1.0	2.0
27	- 7.3	-19.4	--	-12.0	0.0	- 7.3	- 3.5	- 0.6	8.9	7.5	- 1.0	- 1.3
28	- 5.9	-20.3	--	-11.4	- 1.6	- 9.2	- 0.8	3.0	11.4	5.9	- 0.6	- 1.6
29	- 7.0	-23.5	--	-18.2		- 8.1	- 0.6	1.1	12.0	2.4	0.2	- 0.6
30	-10.1	-27.2	--	-19.9		-10.0	- 1.6	0.5	13.2	2.1	0.2	- 0.6
31	-19.8		--	-19.3		-10.6		0.0		3.4	1.2	
Monthly Average	- 7.7	-18.4	N/A	-13.6	-10.8	-11.1	- 4.1	1.3	5.7	4.6	2.7	1.5

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1992 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	June-92	July-92	Aug-92	Sept-92
1	- 2.0	- 4.6	--	--	- 9.0	-17.2	- 6.1	- 3.3	4.7	--	--	- 1.9
2	- 1.9	- 4.1	--	--	-12.7	-26.6	-12.3	- 3.5	4.2	--	--	- 1.9
3	- 1.5	- 9.4	--	--	-11.5	-27.7	-13.3	- 8.4	--	--	--	- 2.1
4	- 1.7	- 3.7	--	--	- 9.6	-26.1	-14.1	- 7.0	--	--	--	- 2.6
5	- 3.4	- 4.3	--	--	- 8.5	-23.9	-12.2	- 5.9	--	--	--	- 1.6
6	- 5.9	- 3.2	--	--	-12.6	-14.5	- 8.7	- 7.4	--	--	--	- 2.1
7	- 7.4	- 9.3	--	--	-10.4	- 8.1	- 8.9	- 2.8	--	--	--	- 0.9
8	- 7.2	-10.4	--	--	-12.6	- 4.1	- 7.6	- 3.9	--	--	--	- 1.9
9	- 9.5	- 6.2	--	--	- 6.3	- 6.9	- 7.0	- 5.9	--	--	--	- 3.6
10	- 8.3	- 6.5	--	--	-10.5	- 4.1	-10.4	-10.2	--	--	--	- 6.6
11	- 7.6	- 8.7	--	--	-15.4	- 5.2	-17.1	- 4.2	--	--	--	- 7.4
12	- 8.3	-13.7	--	--	-15.8	- 7.5	-15.5	- 3.5	--	--	--	- 7.1
13	- 2.4	-18.4	--	--	-16.1	- 7.3	-12.8	- 2.3	--	--	--	- 4.9
14	- 3.5	-10.0	--	--	-19.4	- 9.4	- 5.1	- 2.3	--	--	--	- 4.1
15	- 9.5	-12.1	--	--	-18.5	- 8.2	3.7	- 8.2	--	--	--	- 7.1
16	-12.0	-11.7	--	--	-23.4	- 8.0	- 2.1	-11.2	--	--	--	- 8.6
17	- 7.4	-11.1	--	--	-27.2	- 9.4	- 2.9	- 6.1	--	--	--	- 6.4
18	- 5.4	- 7.4	--	--	-20.7	-10.4	- 4.2	- 3.2	--	--	--	- 6.6
19	- 3.5	- 7.3	--	--	-20.7	- 7.7	- 2.9	- 1.9	--	--	--	- 7.1
20	-10.6	- 9.6	--	--	-24.7	- 7.9	- 2.3	3.1	--	--	--	- 6.6
21	-11.6	- 9.3	--	--	-19.0	- 8.9	- 5.5	4.2	--	--	--	- 7.9
22	- 9.8	- 9.9	--	--	-18.6	-10.3	- 3.9	3.7	--	--	--	-13.0
23	- 9.0	- 9.9	--	--	-12.4	- 9.4	- 2.3	6.2	--	--	--	-12.1
24	- 8.6	- 8.9	--	--	-11.1	- 8.1	- 3.9	7.3	--	--	--	-12.6
25	- 9.7	- 8.9	--	--	- 5.5	- 7.6	- 2.2	8.4	--	--	--	-10.0
26	-11.0	-13.1	--	--	- 3.2	- 8.2	- 2.5	3.3	--	--	--	-10.4
27	- 8.6	- 7.7	--	--	- 2.9	-10.6	- 3.9	4.6	--	--	--	- 5.6
28	-10.9	- 8.0	--	--	-11.2	-11.0	- 4.0	5.3	--	--	--	- 8.1
29	- 6.6	- 4.5	--	--	-14.1	-12.2	- 2.9	4.9	--	--	--	-12.4
30	- 6.5	- 3.5	--	- 9.2		- 9.3	- 3.7	4.2	--	--	--	- 7.6
31	- 7.2		--	- 7.3		- 7.0		4.0		--	--	
Monthly Average	- 7.0	- 8.5	N/A	N/A	-13.9	-11.1	- 6.6	- 1.4	N/A	N/A	N/A	- 6.4

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1993 hydrologic year

(Data in degrees Celsius, monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-92	Nov-92	Dec-92	Jan-93	Feb-93	Mar-93	Apr-93	May-93	June-93	July-93	Aug-93	Sept-93
1	- 3.7	-14.0	- 9.5	-12.8	-29.2	- 6.4	- 4.7	- 0.5	8.2	5.7	8.2	5.7
2	- 1.4	- 5.5	- 6.8	-15.1	-30.5	- 9.7	- 5.5	0.7	7.4	6.2	6.4	2.4
3	- 5.0	- 4.2	-11.8	-17.1	-26.5	-11.8	- 5.7	- 0.4	9.3	5.5	6.6	3.6
4	- 5.4	- 7.7	-16.6	-12.8	-21.8	- 7.1	- 6.2	0.0	10.7	4.0	5.6	2.4
5	- 6.2	- 3.4	-11.9	-10.4	- 6.4	- 6.7	- 4.6	0.5	8.7	3.4	4.7	5.0
6	- 1.4	- 3.0	-11.5	-10.3	- 5.5	- 8.0	- 3.9	- 0.3	3.7	2.0	4.4	4.2
7	- 2.0	- 5.8	- 7.4	-11.8	-17.0	- 8.8	- 4.5	- 1.9	2.3	3.5	6.2	3.1
8	-10.4	- 8.1	- 9.8	- 8.6	- 8.2	- 9.8	- 3.7	- 1.7	2.4	3.4	6.1	3.4
9	- 9.4	- 4.9	-12.8	-10.9	- 4.8	-11.8	- 2.5	- 1.8	1.5	6.0	6.0	1.0
10	-10.4	-14.0	-13.7	-13.9	- 2.8	-10.0	- 2.0	- 1.8	3.1	7.4	5.6	- 0.1
11	-11.7	-14.2	-12.1	-10.8	- 3.0	- 5.5	- 5.1	- 3.4	3.7	9.0	6.5	0.8
12	-13.0	-15.6	-13.1	-12.7	- 4.2	- 4.4	- 4.1	0.5	5.7	9.1	4.5	0.1
13	-14.2	-13.9	-10.4	-10.0	- 3.3	- 7.5	- 2.5	4.9	7.4	10.7	5.2	1.5
14	-11.7	-11.0	-13.6	-12.3	- 1.9	-11.4	- 3.5	9.0	8.6	13.6	4.9	2.7
15	- 9.9	- 8.1	-22.8	-17.2	- 0.4	-10.7	- 1.7	8.4	7.4	12.8	3.5	4.3
16	- 7.3	- 5.6	-22.6	-12.4	- 3.8	-13.8	0.0	11.7	5.0	14.0	2.4	1.2
17	- 8.0	- 5.3	-15.7	- 8.6	- 3.8	-13.4	- 0.8	8.7	5.8	13.0	4.1	- 7.1
18	- 9.5	- 9.2	-16.5	-11.2	- 5.5	-12.7	- 0.7	6.3	6.3	10.9	3.4	- 7.6
19	-14.0	-11.8	-19.8	-15.6	- 7.6	-10.9	- 0.7	4.7	6.6	12.7	2.8	- 3.2
20	- 9.4	-14.5	-18.0	-21.4	- 8.4	- 8.9	- 2.1	2.7	4.6	9.4	3.8	- 2.2
21	- 4.8	-13.1	-21.2	-19.0	- 6.0	- 6.6	- 1.4	2.6	4.2	7.4	1.9	- 4.0
22	- 2.9	- 8.2	-15.5	-21.6	- 8.4	- 6.3	0.9	2.1	3.1	7.3	- 0.5	- 6.2
23	- 7.1	- 3.7	-16.9	-21.5	- 2.0	- 7.2	1.5	3.6	3.4	6.6	- 0.4	- 7.1
24	- 5.4	- 1.2	-14.2	-22.3	- 3.2	-11.3	0.3	2.2	5.3	6.5	2.8	- 3.8
25	- 2.3	- 4.0	-15.2	-22.1	- 5.2	-14.0	0.4	3.3	5.7	6.1	3.9	- 3.8
26	- 3.5	- 8.6	-21.2	-16.3	- 2.4	- 9.8	0.1	1.9	4.8	8.0	5.0	- 3.9
27	- 3.8	- 7.6	-15.5	- 8.7	- 2.0	- 6.7	0.6	1.0	4.3	10.8	5.7	- 3.0
28	- 7.6	- 7.2	-10.6	- 4.9	- 1.6	- 5.0	1.3	3.7	8.3	9.7	6.1	- 0.3
29	- 7.7	-11.0	- 9.1	- 8.8		- 3.6	- 0.3	6.2	8.4	9.8	3.6	- 3.8
30	-12.4	-11.8	- 7.7	-14.0		- 2.1	0.1	6.6	7.2	8.8	4.7	- 1.3
31	-12.7		-11.7	-20.6		- 2.6		5.7		9.9	5.0	
Monthly Average	- 7.6	- 8.5	-14.0	-14.1	- 8.1	- 8.5	- 2.0	2.7	5.8	8.2	4.5	- 0.5

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1994 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-93	Nov-93	Dec-93	Jan-94	Feb-94	Mar-94	Apr-94	May-94	June-94	July-94	Aug-94	Sept-94
1	- 0.1	- 8.8	- 6.0	-11.6	- 1.1	- 6.6	0.8	0.1	3.6	10.5	11.7	3.6
2	- 3.3	-10.3	- 8.1	- 8.0	- 1.0	- 6.8	- 0.3	2.5	3.4	9.5	12.1	2.1
3	- 6.1	- 9.2	-14.5	-10.0	- 2.6	-12.8	0.0	- 0.8	3.2	6.2	9.8	3.6
4	- 2.9	- 4.4	-17.4	-13.9	- 7.0	-16.9	- 1.6	- 4.2	4.7	3.1	12.5	3.5
5	- 2.3	- 1.2	- 6.2	-13.0	-10.5	-19.3	- 1.8	0.4	3.9	3.0	15.0	1.7
6	4.1	- 2.4	- 5.1	-15.1	-12.0	-13.3	- 2.4	- 0.8	4.2	3.6	14.4	0.2
7	5.1	- 3.9	-12.7	-20.4	-10.7	- 5.7	- 2.6	- 0.6	0.3	4.3	14.8	3.3
8	2.5	- 5.7	-14.3	-24.9	-12.1	- 3.4	- 4.4	- 1.8	3.8	7.6	11.8	2.4
9	0.8	- 5.0	-11.2	-21.2	-14.1	- 4.7	- 3.5	1.4	6.7	7.8	14.3	0.4
10	- 0.1	- 7.7	-10.6	-16.0	-17.6	- 5.5	- 5.9	1.8	7.4	7.7	11.7	0.2
11	- 3.0	- 9.3	-10.2	-13.0	-20.2	- 5.7	- 4.3	4.5	7.1	10.7	11.5	0.4
12	- 2.6	- 8.2	- 9.6	-10.4	-21.4	- 4.0	- 5.6	2.1	9.9	10.9	9.2	0.0
13	- 1.4	- 6.2	-13.8	-10.1	-22.3	- 7.3	- 5.4	3.8	11.7	10.5	5.3	- 1.3
14	- 1.1	- 9.4	-12.0	-11.1	-19.3	- 5.3	- 6.8	3.3	12.7	9.3	7.3	3.3
15	- 3.0	-14.1	- 6.8	-15.1	-14.2	- 5.9	- 9.4	3.5	10.8	8.7	10.5	3.1
16	- 2.9	-15.3	- 6.1	-12.9	-15.6	-11.0	-13.2	5.3	5.6	8.6	12.1	2.6
17	- 4.2	-17.3	- 6.5	-11.0	-14.9	-19.2	-10.9	4.6	6.3	6.0	12.2	2.4
18	- 8.0	-12.2	- 5.5	-11.2	-20.8	-20.7	- 2.7	3.0	3.5	5.8	10.5	1.4
19	- 6.7	-22.8	- 7.6	-12.0	-24.7	-21.1	0.3	1.8	3.1	5.5	9.0	- 1.3
20	- 7.8	-24.6	- 9.6	-10.3	-26.4	-29.1	3.6	- 0.2	1.4	4.5	8.1	- 0.7
21	- 6.6	-12.7	- 8.3	-10.9	-24.7	-21.9	3.9	2.4	2.1	4.0	2.9	- 0.7
22	-10.3	- 7.4	- 5.3	- 9.6	-20.0	-13.5	4.1	3.6	4.5	6.4	1.1	- 0.8
23	-10.3	- 8.8	- 5.5	- 7.9	-18.6	- 9.1	4.1	3.8	6.6	7.4	0.3	- 6.2
24	- 8.0	- 7.5	- 6.8	- 4.6	-18.2	- 5.8	4.8	2.5	5.2	7.2	3.1	- 0.6
25	- 4.5	-13.4	- 9.5	- 5.7	-18.3	- 6.5	5.2	1.2	2.8	9.5	3.4	- 0.8
26	- 3.0	-11.5	- 7.9	- 7.3	-17.9	- 5.7	5.1	2.3	2.2	9.2	6.4	- 2.7
27	- 3.9	- 9.8	- 3.7	- 5.0	-16.2	- 9.8	4.0	3.4	3.2	7.4	7.0	- 3.8
28	- 4.3	-12.9	- 3.6	- 5.7	- 9.0	- 4.5	0.8	0.6	2.4	9.7	1.6	- 5.0
29	- 2.9	-14.4	- 4.3	- 2.6		0.5	1.0	3.7	3.3	10.9	3.4	- 4.8
30	- 4.9	- 9.3	- 6.7	0.7		- 0.7	- 2.2	2.4	6.8	13.0	5.6	- 5.9
31	- 6.4		-12.0	0.4		- 0.5		3.4		12.7	5.8	
Monthly Average	- 3.5	-10.2	- 8.6	-10.6	-15.4	- 9.7	- 1.5	1.9	5.1	7.8	8.5	0.0

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1995 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-94	Nov-94	Dec-94	Jan-95	Feb-95	Mar-95	Apr-95	May-95	June-95	July-95	Aug-95	Sept-95
1	- 2.1	-12.5	-23.6	- 2.0	-11.9	- 7.0	- 2.7	7.6	0.8	4.4	4.9	1.3
2	1.1	- 6.6	-13.8	- 3.0	- 7.6	- 7.3	- 2.3	6.5	1.1	6.8	3.0	1.4
3	0.8	- 7.3	-10.6	- 2.0	- 8.9	- 7.4	- 2.5	3.4	2.3	9.1	3.5	0.4
4	- 1.0	-13.8	- 9.8	- 2.0	- 4.6	- 9.4	- 2.0	7.8	3.8	12.1	3.1	0.6
5	- 2.0	-15.9	-20.4	- 4.1	- 0.7	-12.5	- 3.1	0.3	1.6	11.2	3.2	2.7
6	- 2.9	-13.0	-27.8	- 7.4	- 6.7	-12.9	- 4.1	- 0.6	2.8	10.1	4.6	4.6
7	- 2.3	-14.1	-20.7	- 9.9	- 4.8	-10.1	- 3.9	0.6	2.4	9.8	7.0	5.9
8	- 4.8	-17.5	-17.0	-11.7	- 5.4	-11.0	- 3.1	4.6	3.8	6.7	7.7	4.8
9	- 6.4	-13.7	-14.6	-13.9	- 6.9	-17.1	- 1.7	6.9	6.4	6.8	7.5	2.6
10	- 3.6	- 7.5	-13.6	-16.3	- 7.2	-20.7	- 3.8	11.0	10.5	8.0	5.6	3.4
11	- 2.1	-14.9	-12.2	-17.1	- 8.9	-25.5	- 1.7	11.9	12.1	5.9	7.3	2.3
12	- 2.7	-15.9	- 8.4	-16.7	-10.6	-25.3	- 2.5	10.3	10.7	6.6	4.6	1.3
13	- 5.6	-17.8	- 9.1	-16.2	-13.9	-25.1	- 1.4	5.7	10.4	9.2	3.4	1.4
14	- 3.4	-18.7	-12.9	-15.9	-16.6	-25.4	- 3.1	1.3	10.5	4.8	3.9	3.4
15	- 2.8	-16.2	-11.7	-16.7	-19.9	-18.2	- 6.9	0.9	5.1	4.3	3.8	2.5
16	- 7.4	-15.9	- 9.6	-11.2	-19.7	- 8.4	- 1.8	- 2.0	2.8	7.5	4.5	4.0
17	- 7.2	-11.1	- 8.8	- 8.3	-22.6	- 2.3	- 1.0	1.7	4.8	8.2	5.5	6.5
18	- 9.0	-20.0	- 8.1	-10.3	-21.4	- 8.7	- 3.5	1.4	8.9	6.9	5.4	7.5
19	- 9.0	-21.2	- 8.7	- 8.9	-20.9	-12.9	- 2.5	1.8	9.6	7.8	4.1	6.5
20	-12.4	-15.6	- 9.7	- 5.4	-10.8	-17.7	- 1.3	- 0.8	9.1	8.2	4.4	8.8
21	-11.6	-19.2	- 9.4	- 2.4	-11.5	-24.2	- 1.0	- 1.0	7.1	8.9	3.8	6.9
22	- 8.5	-26.8	- 9.8	-10.2	-14.7	-25.0	0.8	2.5	8.6	7.6	5.2	5.6
23	- 4.8	-30.4	-12.6	-15.6	-17.7	-25.6	0.4	1.5	1.1	5.0	4.8	5.3
24	- 5.2	-24.9	-15.4	-20.6	-20.1	-21.6	0.1	3.9	0.9	3.1	5.0	5.7
25	- 7.1	-19.4	-14.9	-25.0	-19.8	-19.0	- 2.3	5.7	2.7	2.3	4.8	4.3
26	- 5.6	-14.6	-17.3	-25.5	-13.9	-12.6	3.8	0.7	3.9	3.9	4.8	3.0
27	- 7.1	-14.8	-12.9	-13.9	- 9.9	- 4.7	3.5	4.3	6.9	4.4	3.3	2.9
28	- 8.6	-17.4	-10.3	- 5.3	- 8.6	- 4.2	- 4.4	2.6	8.2	4.2	4.3	2.9
29	-11.2	-24.7	- 5.6	- 5.2		- 2.5	3.6	1.5	8.4	3.5	4.1	0.2
30	-14.4	-27.6	- 7.7	- 7.3		- 1.5	6.3	0.7	7.3	3.2	1.0	- 1.0
31	-14.2		- 5.1	-11.6		- 2.3		2.5		4.0	1.5	
Monthly Average	- 5.9	-17.0	-12.6	-11.0	-12.4	-13.8	- 1.5	3.4	5.8	6.6	4.5	3.6

Table 4. Daily and monthly average air temperature at 1,480 meters altitude, Gulkana Glacier basin, 1996 hydrologic year

[Data in degrees Celsius; monthly average is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-95	Nov-95	Dec-95	Jan-96	Feb-96	Mar-96	Apr-96	May-96	June-96	July-96	Aug-96	Sept-96
1	- 0.9	- 2.8	-24.7	- 8.0	-15.1	- 4.3	-17.0	- 5.6	5.4	3.4	3.8	3.0
2	- 1.1	- 7.6	-28.7	-11.4	-19.3	- 5.8	-19.3	- 5.2	6.6	5.4	1.7	3.2
3	- 1.5	-10.4	-30.6	- 9.5	-18.8	- 6.0	-14.5	- 2.9	1.8	8.0	1.4	4.8
4	- 2.2	-12.9	-28.8	-10.4	-17.8	- 9.7	- 4.7	- 2.6	- 0.6	8.3	3.3	5.4
5	- 4.6	-14.6	-29.3	-11.8	- 7.5	-12.2	- 4.7	- 1.5	0.8	6.1	1.9	4.1
6	- 3.1	-16.6	-24.8	-16.9	- 5.4	-14.8	- 5.8	- 0.1	5.5	7.3	1.4	4.5
7	- 1.5	-13.0	-20.2	-23.1	-14.4	-16.8	- 8.8	0.0	5.4	7.4	3.3	3.9
8	- 1.0	- 9.7	-17.0	-19.8	-15.8	-13.4	-10.0	- 3.1	0.2	7.4	4.1	4.4
9	- 1.7	-13.6	-16.4	-20.8	-13.0	-13.0	- 7.9	0.2	2.8	5.2	1.7	1.1
10	- 4.1	-14.5	-15.5	-22.1	- 5.2	-12.1	- 4.0	3.2	0.9	5.0	0.4	1.3
11	- 3.1	-16.6	-10.4	-26.0	- 5.1	-11.8	- 4.5	3.1	0.8	5.1	3.2	- 0.2
12	- 6.6	-13.8	- 8.1	-23.1	- 7.3	- 9.4	- 4.9	3.7	3.0	3.4	3.2	2.9
13	- 8.3	-14.4	-14.5	-19.1	- 8.8	- 8.1	- 4.9	3.8	3.3	2.2	4.3	3.3
14	-10.4	-14.1	-14.6	-18.6	- 6.4	- 7.8	- 2.8	- 6.7	3.9	1.8	4.5	- 0.3
15	- 7.2	-11.4	-11.5	-17.1	- 8.4	- 9.7	- 0.2	- 3.6	5.5	4.1	5.6	0.9
16	- 6.2	- 7.5	- 9.3	-16.6	-10.7	-10.0	- 1.3	- 0.9	7.5	7.1	5.7	1.1
17	- 7.1	- 5.8	- 9.4	-17.3	-14.2	-10.4	0.8	- 1.0	8.8	6.9	4.6	2.7
18	- 7.3	- 8.2	- 8.2	-18.7	-13.5	- 8.8	1.7	- 1.7	9.1	8.3	4.7	0.6
19	- 2.4	- 6.9	- 6.1	-17.8	-22.7	-16.5	2.5	- 3.1	10.0	9.3	5.3	- 2.3
20	- 5.2	- 8.4	- 7.2	-15.7	-27.2	-10.0	- 1.4	- 2.8	9.2	9.0	5.2	- 3.2
21	- 5.1	- 7.3	- 6.9	-15.3	-25.4	- 9.8	- 2.9	- 0.1	8.4	6.6	2.4	- 4.1
22	- 4.0	- 7.7	- 6.1	-14.2	-22.7	- 6.8	- 2.1	1.3	9.5	5.0	2.3	- 5.7
23	- 5.4	- 7.2	- 3.7	-16.1	-26.1	- 6.1	- 0.5	3.8	10.5	6.9	4.2	- 7.5
24	- 4.2	- 8.5	- 6.2	-21.4	-18.9	- 6.6	- 4.4	1.1	8.1	8.5	3.7	- 7.1
25	- 3.8	-11.7	- 3.9	-20.1	- 8.8	- 7.6	- 1.4	0.8	3.2	6.4	1.7	- 2.0
26	- 7.7	-14.2	- 4.5	-20.1	- 8.8	- 6.6	- 1.5	1.8	2.9	5.6	- 0.9	- 6.1
27	-10.3	-13.1	- 4.6	-20.1	- 7.5	- 8.9	- 4.1	- 0.7	2.4	4.3	- 3.0	- 6.3
28	- 9.1	-12.7	- 7.6	-17.4	- 3.3	- 6.6	- 4.4	0.3	1.2	9.3	0.2	- 6.4
29	- 7.1	-15.2	- 7.7	-10.6	- 2.2	- 7.7	- 3.2	4.4	2.0	9.1	3.6	- 7.8
30	- 1.7	-22.9	- 7.4	- 7.8		-11.7	- 2.3	6.6	3.0	3.2	2.7	- 8.2
31	1.2		- 7.6	-10.8		-13.6		5.2		4.2	0.4	
Monthly Average	- 4.6	-11.4	-13.0	-16.7	-13.1	- 9.8	- 4.6	- 0.1	4.7	6.1	2.8	- 0.7

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1968 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; –, record missing]

Day	Oct-67	Nov-67	Dec-67	Jan-68	Feb-68	Mar-68	Apr-68	May-68	June-68	July-68	Aug-68	Sept-68
1	1	0	0	0	0	0	0	0	0	4	0	0
2	2	1	0	6	0	1	0	0	0	4	2	0
3	0	2	0	6	0	0	0	0	7	1	2	3
4	0	13	0	0	0	0	0	0	0	5	0	0
5	0	3	0	1	0	3	0	0	2	0	0	17
6	3	3	0	0	14	0	2	0	1	0	5	3
7	0	0	0	0	0	2	2	0	2	0	0	2
8	0	0	0	1	2	0	8	1	0	1	2	7
9	0	0	0	0	0	0	7	0	1	3	0	0
10	0	0	1	1	6	0	0	0	1	1	1	2
11	0	0	1	0	0	0	0	10	0	4	0	4
12	6	7	2	0	0	3	0	2	0	1	0	2
13	2	0	6	0	2	0	0	0	0	2	0	0
14	1	0	1	0	0	0	0	0	2	4	0	0
15	0	0	7	3	3	2	0	23	0	1	0	0
16	0	10	8	0	2	2	0	14	1	0	0	0
17	0	0	4	0	3	4	5	3	0	0	0	0
18	3	14	3	1	0	0	0	0	0	0	0	0
19	0	33	0	3	0	0	0	0	0	1	0	0
20	7	8	0	0	4	0	0	0	0	0	0	1
21	0	22	3	0	24	0	0	6	5	0	3	0
22	1	23	0	5	3	0	0	3	4	0	0	0
23	1	22	0	2	17	0	0	0	0	0	0	0
24	3	6	0	8	16	2	0	0	0	0	6	0
25	4	0	0	0	1	0	0	0	1	0	1	3
26	0	0	7	0	18	0	1	2	0	1	3	2
27	13	0	0	0	11	1	3	0	0	5	0	2
28	10	0	0	0	8	0	2	0	5	0	2	7
29	2	0	29	0	0	0	0	0	0	0	4	14
30	0	0	10	0		1	1	1	1	0	17	4
31	0		5	0		0		0		2	1	
Monthly Total	59	167	87	37	134	21	31	65	33	40	49	73

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1969 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-68	Nov-68	Dec-68	Jan-69	Feb-69	Mar-69	Apr-69	May-69	June-69	July-69	Aug-69	Sept-69
1	2	0	0	0	1	0	2	7	6	16	0	0
2	0	0	0	0	1	4	1	0	4	0	0	0
3	0	3	0	12	0	0	3	3	0	7	0	2
4	0	3	0	0	0	0	3	2	3	3	0	1
5	8	0	0	0	0	0	3	6	7	1	19	1
6	0	0	0	0	0	0	0	0	0	6	2	0
7	0	0	0	0	0	3	0	3	0	3	4	2
8	0	0	0	0	0	4	0	1	0	8	0	2
9	0	0	0	0	0	1	0	3	3	1	25	1
10	2	0	0	0	0	0	0	0	3	0	4	0
11	4	7	0	0	0	2	0	0	1	0	0	0
12	0	1	0	0	0	7	2	0	0	0	0	1
13	0	5	0	0	0	2	0	7	0	0	0	1
14	0	5	4	0	0	5	0	0	0	0	0	0
15	0	0	0	0	0	2	0	0	0	4	0	0
16	2	0	0	0	0	0	0	0	2	0	0	0
17	0	0	9	0	0	0	0	0	1	0	0	0
18	0	0	0	0	0	0	2	0	0	0	0	0
19	0	0	2	0	2	0	1	4	0	1	0	0
20	2	0	3	0	0	0	0	0	0	9	0	0
21	8	0	0	0	1	11	2	0	0	6	0	0
22	1	2	0	0	0	7	0	2	0	0	0	0
23	5	0	0	0	0	2	0	0	0	0	0	0
24	1	2	0	0	3	0	0	0	0	43	0	1
25	4	4	1	0	0	1	0	0	0	11	4	1
26	0	5	4	0	12	0	0	0	0	0	1	0
27	1	2	0	0	4	0	0	1	0	0	1	0
28	5	0	0	0	1	0	0	0	0	37	0	0
29	0	6	3	0		0	1	0	0	18	2	0
30	0	0	1	0		0	0	0	1	6	0	0
31	2		0	0		1		1		1	0	
Monthly Total	47	45	27	12	25	52	20	40	31	181	62	13

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1970 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-69	Nov-69	Dec-69	Jan-70	Feb-70	Mar-70	Apr-70	May-70	June-70	July-70	Aug-70	Sept-70
1	0	2	1	3	2	0	3	0	1	0	45	0
2	3	1	0	6	5	1	0	0	0	0	3	1
3	9	2	0	0	1	0	6	0	0	0	3	0
4	1	2	4	0	5	3	2	2	1	8	0	5
5	0	3	0	0	10	6	2	1	2	2	7	8
6	0	0	2	0	4	3	0	1	1	0	11	1
7	0	0	0	0	2	0	0	1	0	11	31	0
8	0	0	0	0	2	4	0	2	3	6	1	0
9	4	3	5	0	1	0	0	0	0	7	4	1
10	1	6	2	1	0	0	4	0	12	4	1	0
11	2	0	0	1	1	0	1	0	14	4	0	0
12	1	0	0	3	2	1	7	0	6	0	3	12
13	0	0	0	2	2	0	0	1	1	0	0	5
14	0	1	0	0	2	0	0	2	3	2	5	14
15	0	3	0	0	11	0	0	4	5	9	13	15
16	0	2	0	0	0	0	1	4	1	10	3	0
17	1	0	0	0	0	1	0	2	1	3	5	9
18	2	0	0	0	0	2	0	0	6	8	10	13
19	1	0	0	0	0	4	1	0	3	9	6	3
20	1	0	0	0	16	2	4	0	0	1	13	0
21	1	0	0	0	0	2	1	0	1	0	21	0
22	0	0	0	0	4	3	4	4	10	1	28	0
23	0	0	3	2	0	0	1	4	0	0	8	0
24	0	0	0	3	12	2	1	0	0	0	0	0
25	0	0	0	5	3	4	0	3	0	0	0	5
26	0	0	0	34	0	22	0	0	0	1	0	10
27	0	0	4	19	0	12	3	0	0	0	0	3
28	1	0	2	8	0	4	2	1	0	0	0	44
29	24	0	0	5		5	4	0	3	10	0	2
30	30	3	12	0		16	0	1	0	32	16	8
31	6		0	0		10		2		35	3	
Monthly Total	88	28	35	92	85	107	47	35	74	163	240	159

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1971 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-70	Nov-70	Dec-70	Jan-71	Feb-71	Mar-71	Apr-71	May-71	June-71	July-71	Aug-71	Sept-71
1	0	0	0	0	0	0	0	0	4	3	50	6
2	19	4	2	0	0	8	0	1	3	0	14	15
3	4	0	0	0	0	6	0	10	0	3	3	18
4	0	0	0	6	0	3	4	0	0	0	0	8
5	0	1	0	20	0	0	0	2	0	0	2	10
6	3	2	0	4	27	0	0	12	0	0	19	0
7	1	0	0	2	4	0	2	14	0	1	21	1
8	8	1	0	5	1	0	5	1	0	0	62	1
9	5	2	0	0	5	0	0	2	0	0	79	12
10	2	1	0	0	0	0	1	1	0	0	48	2
11	15	0	0	0	3	0	5	1	0	1	2	0
12	15	0	0	0	15	0	0	5	0	1	0	0
13	12	0	0	0	15	0	4	6	5	41	13	1
14	7	3	0	0	2	0	4	2	9	19	3	13
15	3	0	0	6	4	1	1	0	0	2	0	0
16	1	3	0	1	1	0	0	0	0	23	0	2
17	0	2	0	0	0	1	0	0	0	1	1	0
18	2	2	0	0	0	2	3	0	2	0	0	2
19	4	0	0	0	7	2	7	3	0	0	1	13
20	3	1	0	0	0	0	1	1	0	9	3	6
21	0	8	19	0	3	4	0	1	1	3	0	26
22	0	3	4	0	6	0	0	0	2	0	6	2
23	3	0	38	0	7	0	0	2	0	1	0	1
24	2	0	5	0	8	0	1	0	0	24	3	0
25	0	2	6	0	4	0	5	0	0	43	1	1
26	0	4	9	0	0	0	8	2	0	1	15	2
27	0	0	2	0	0	0	5	1	0	12	0	0
28	0	5	0	0	9	0	0	5	0	4	0	0
29	0	5	0	0		0	3	5	11	5	0	2
30	0	0	0	0		0	0	1	22	0	0	12
31	0		0	0		0		0		15	0	
Monthly Total	109	49	85	44	121	27	59	78	59	212	346	156

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1972 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-71	Nov-71	Dec-71	Jan-72	Feb-72	Mar-72	Apr-72	May-72	June-72	July-72	Aug-72	Sept-72
1	36	0	0	4	20	0	0	0	4	3	0	20
2	17	0	0	0	8	0	0	0	10	0	0	2
3	15	0	2	0	3	0	0	0	0	0	1	0
4	5	0	0	0	4	0	0	0	2	0	3	2
5	3	0	0	0	3	0	0	0	1	1	6	0
6	6	0	8	2	3	0	0	0	8	0	58	0
7	4	0	6	0	0	0	0	0	4	1	4	0
8	2	0	0	12	0	0	0	0	0	0	0	0
9	1	0	1	4	0	0	4	0	15	2	0	18
10	0	0	2	1	4	0	0	12	3	1	0	9
11	17	0	0	0	0	2	0	0	2	0	0	8
12	8	0	0	0	1	2	16	0	0	0	0	99
13	2	0	0	0	0	3	7	0	0	0	15	13
14	0	0	3	0	0	1	0	0	0	12	11	16
15	17	0	4	0	2	0	3	0	0	4	29	9
16	17	0	5	9	0	9	0	0	3	6	18	2
17	6	0	6	1	0	1	6	0	8	1	2	1
18	3	0	9	0	0	0	1	4	19	0	0	0
19	0	0	5	0	0	0	0	7	3	0	0	0
20	0	0	3	0	0	8	1	2	2	5	8	0
21	0	0	0	0	0	0	0	2	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	3	4	0	0	0	3	0	0	2	0	6	0
24	0	0	0	0	0	8	0	0	4	0	2	0
25	0	0	5	0	0	8	1	0	0	3	0	0
26	0	0	7	0	0	9	4	0	0	0	0	16
27	0	0	3	0	0	12	1	1	1	1	6	0
28	6	4	3	28	0	6	0	0	5	2	1	15
29	0	2	4	4	0	3	0	1	10	1	3	33
30	0	0	0	3		0	0	0	11	1	10	14
31	0		8	13		0		3		4	13	
Monthly Total	168	10	84	81	48	75	44	32	117	48	196	277

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1973 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-72	Nov-72	Dec-72	Jan-73	Feb-73	Mar-73	Apr-73	May-73	June-73	July-73	Aug-73	Sept-73
1	0	0	0	3	0	4	2	6	0	1	9	1
2	0	0	0	0	2	1	0	0	22	2	0	1
3	0	0	0	3	0	2	1	0	9	3	1	0
4	2	0	0	0	0	2	0	0	0	2	4	0
5	18	0	0	4	0	0	0	6	0	0	13	2
6	27	0	0	3	0	0	0	0	4	1	11	7
7	3	0	0	0	0	7	0	0	1	1	5	0
8	0	0	0	0	1	14	4	0	5	1	5	7
9	0	0	0	0	1	20	3	3	0	0	13	0
10	8	0	0	0	4	16	3	0	7	0	13	3
11	33	6	2	3	0	7	0	0	0	7	38	0
12	1	4	4	3	3	1	1	0	0	2	10	0
13	10	0	2	5	0	0	0	0	0	13	0	0
14	33	5	2	0	0	2	0	0	0	1	0	0
15	2	1	0	0	0	6	0	2	5	0	0	0
16	14	0	1	2	0	4	1	1	0	0	0	0
17	42	5	0	0	0	3	0	0	0	2	0	0
18	3	2	0	0	0	0	2	0	1	2	0	1
19	4	0	0	0	0	0	1	2	0	0	0	1
20	0	0	0	0	7	0	0	12	0	2	0	2
21	1	0	0	0	4	0	2	0	0	2	42	3
22	0	9	0	0	2	0	0	1	5	0	42	0
23	0	1	0	0	0	4	0	2	0	0	2	3
24	0	2	0	2	0	1	10	12	11	0	14	2
25	0	0	0	0	2	2	3	0	20	0	2	2
26	0	1	4	0	2	4	0	0	11	0	13	4
27	1	0	6	0	0	2	7	1	1	0	6	5
28	0	0	0	0	3	0	2	0	0	3	1	2
29	2	0	5	5		0	1	0	0	10	10	0
30	3	1	4	11		0	9	0	0	3	6	0
31	0		6	7		1		0		9	4	
Monthly Total	207	37	36	51	31	103	52	48	102	67	264	46

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1974 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-73	Nov-73	Dec-73	Jan-74	Feb-74	Mar-74	Apr-74	May-74	June-74	July-74	Aug-74	Sept-74
1	29	0	0	0	0	1	0	1	0	1	0	0
2	5	0	0	0	0	4	1	1	9	0	6	0
3	1	0	0	0	0	2	0	0	29	0	3	1
4	0	0	0	0	0	4	0	0	20	0	0	1
5	2	0	0	0	4	0	0	0	0	11	0	0
6	8	0	0	0	8	0	0	0	12	14	0	0
7	9	0	0	0	3	0	0	0	12	2	0	0
8	0	0	0	0	8	0	0	0	0	6	5	0
9	10	0	0	0	1	0	0	0	0	3	2	0
10	12	0	0	0	23	0	0	0	2	0	4	0
11	10	0	0	0	10	0	0	0	0	7	1	0
12	4	0	0	0	9	0	3	0	0	0	2	14
13	0	0	0	0	0	0	2	0	2	0	5	0
14	0	0	0	0	0	0	1	0	4	4	1	0
15	0	0	0	0	5	0	0	0	0	2	1	0
16	0	0	0	0	3	0	0	0	10	0	0	1
17	0	0	0	0	0	0	0	0	0	0	1	1
18	0	0	0	0	1	0	1	1	1	1	3	1
19	0	0	0	0	1	2	0	0	4	15	1	8
20	0	0	0	0	2	4	0	0	4	37	1	8
21	0	0	0	0	1	11	0	0	3	0	0	2
22	2	0	0	0	1	0	0	0	0	2	1	3
23	0	0	0	0	0	2	32	0	1	4	1	12
24	0	0	0	0	1	0	6	0	1	6	0	6
25	0	0	2	0	0	0	0	0	0	2	0	7
26	0	0	0	0	0	0	0	0	0	3	18	17
27	0	0	0	0	0	0	0	0	2	0	46	1
28	6	0	0	0	0	5	0	0	4	0	11	2
29	0	0	1	0		0	3	0	2	0	0	0
30	0	0	0	0		3	0	0	20	0	0	0
31	0		0	0		2		0		4	0	
Monthly Total	98	0	3	0	81	40	49	3	142	124	113	85

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1975 hydrologic year

(Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-74	Nov-74	Dec-74	Jan-75	Feb-75	Mar-75	Apr-75	May-75	June-75	July-75	Aug-75	Sept-75
1	1	4	4	4	0	0	1	0	0	3	1	0
2	2	7	16	0	0	0	2	0	0	0	6	0
3	0	0	5	2	0	0	0	0	0	0	0	8
4	13	1	0	0	0	0	0	0	3	3	0	2
5	17	0	0	0	0	0	2	1	0	0	0	5
6	25	0	0	0	0	0	0	0	1	0	4	10
7	3	0	0	0	0	0	0	0	2	0	2	19
8	7	0	8	0	0	0	3	0	4	0	29	2
9	2	0	3	0	0	0	1	0	2	0	0	2
10	4	0	0	0	0	0	5	0	9	0	7	40
11	0	0	0	0	0	0	1	0	4	0	4	47
12	9	0	0	0	0	0	1	0	4	0	0	4
13	0	0	1	0	0	0	1	6	0	0	0	0
14	7	10	0	0	0	0	5	1	0	0	0	0
15	0	5	5	20	0	0	2	1	0	3	34	0
16	5	0	1	1	0	0	15	0	0	1	2	4
17	3	0	0	10	2	0	44	3	0	4	0	31
18	2	0	0	0	0	0	8	10	0	0	2	10
19	0	0	10	0	1	0	0	7	2	3	0	1
20	0	3	4	18	4	0	0	0	24	21	0	4
21	0	0	0	0	0	0	0	0	0	24	0	3
22	1	0	10	0	0	0	0	14	0	2	0	8
23	9	0	7	0	0	0	0	0	7	0	0	0
24	1	8	12	1	0	0	0	0	0	9	0	0
25	1	23	8	0	0	0	0	0	0	13	0	8
26	0	0	1	13	0	0	0	0	0	6	0	1
27	0	0	4	2	0	0	0	0	0	1	0	1
28	0	0	0	2	0	0	1	0	0	5	0	0
29	0	0	0	1		0	0	0	3	0	0	0
30	0	1	0	0		0	0	0	16	0	0	2
31	3		6	0		0		0		16	0	
Monthly Total	115	62	105	74	7	0	92	43	81	114	91	212

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1976 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-75	Nov-75	Dec-75	Jan-76	Feb-76	Mar-76	Apr-76	May-76	June-76	July-76	Aug-76	Sept-76
1	27	0	0	0	5	0	0	1	0	0	0	0
2	0	0	0	1	0	2	0	0	0	0	0	0
3	0	0	1	0	2	14	0	3	0	1	0	9
4	0	0	0	0	9	21	1	3	0	1	0	9
5	0	0	0	0	0	2	2	3	0	9	0	0
6	0	0	0	1	5	0	2	0	0	0	0	0
7	0	0	0	2	12	1	0	0	1	0	15	0
8	0	0	0	0	1	1	0	0	0	1	12	4
9	0	0	0	0	1	1	0	0	0	4	0	12
10	9	0	0	0	4	0	0	0	0	0	1	7
11	14	0	0	0	0	1	0	2	0	0	4	3
12	16	0	0	0	0	0	2	0	0	0	7	0
13	4	0	0	0	2	9	4	5	0	2	0	2
14	1	0	0	0	6	1	2	0	0	1	0	8
15	0	0	0	0	6	2	0	0	0	1	8	10
16	1	0	0	0	2	3	0	0	0	2	18	9
17	9	0	0	5	0	3	0	0	1	1	10	0
18	0	3	2	19	0	5	0	0	3	0	12	0
19	0	0	4	2	0	5	0	0	0	0	1	2
20	1	0	5	0	0	3	0	0	0	0	0	2
21	6	2	0	5	0	0	0	5	0	0	0	0
22	0	0	0	4	0	0	0	0	0	0	0	11
23	4	0	0	1	0	0	0	11	1	2	0	0
24	1	0	0	0	0	0	0	1	0	1	0	0
25	0	0	1	0	0	3	0	0	0	6	0	0
26	0	1	1	0	0	4	7	1	0	1	0	0
27	0	2	4	19	0	0	2	4	0	4	0	0
28	0	2	2	3	0	0	0	0	0	0	0	0
29	0	0	4	0	0	3	0	0	0	0	0	0
30	0	0	0	1		0	0	1	0	0	0	1
31	0		0	1		0		0		0	0	
Monthly Total	93	10	24	64	55	84	22	40	6	37	88	89

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1977 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-76	Nov-76	Dec-76	Jan-77	Feb-77	Mar-77	Apr-77	May-77	June-77	July-77	Aug-77	Sept-77
1	1	0	1	0	26	0	11	6	0	1	7	0
2	0	0	8	0	11	0	22	0	0	2	0	0
3	1	0	0	0	1	7	16	1	0	2	0	0
4	11	15	1	0	0	1	0	0	0	1	0	0
5	1	4	0	10	1	2	4	6	0	0	0	0
6	5	0	3	4	0	2	2	13	0	0	1	2
7	23	0	5	0	0	0	0	0	0	0	0	4
8	2	3	1	3	2	1	0	2	0	0	0	30
9	3	0	0	3	7	1	0	0	0	0	0	2
10	0	4	10	0	0	0	2	0	0	0	0	24
11	0	0	0	2	0	0	2	0	0	0	0	35
12	12	0	0	1	0	1	2	0	0	0	0	3
13	0	1	0	2	0	0	3	0	1	0	0	13
14	16	6	1	0	0	0	1	0	0	0	0	10
15	25	0	0	0	0	7	0	0	2	0	0	19
16	7	3	1	0	1	12	0	0	0	0	1	3
17	11	4	1	0	3	3	0	0	0	0	0	0
18	11	0	0	0	0	5	0	0	23	2	0	17
19	0	0	0	0	0	0	0	0	0	0	0	4
20	3	5	0	0	0	0	12	0	0	0	0	3
21	4	0	0	1	1	0	0	0	3	0	0	14
22	4	0	5	4	5	0	0	0	2	8	0	5
23	4	0	1	0	2	6	0	0	1	0	0	0
24	0	0	0	9	0	0	0	0	0	0	0	0
25	0	1	0	3	0	0	0	0	0	0	0	2
26	30	22	0	12	0	0	9	0	1	2	2	0
27	7	43	0	1	4	0	2	0	1	2	2	20
28	3	15	0	12	0	0	0	0	1	0	0	38
29	0	9	0	12		26	0	0	0	0	0	7
30	0	6	0	12		3	1	0	0	0	0	0
31	0		0	8		3		0		2	0	
Monthly Total	184	141	38	99	64	80	89	28	35	22	13	255

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1978 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-77	Nov-77	Dec-77	Jan-78	Feb-78	Mar-78	Apr-78	May-78	June-78	July-78	Aug-78	Sept-78
1	1	2	2	0	0	0	1	0	0	7	0	0
2	0	2	3	0	1	0	0	0	2	3	0	0
3	1	0	0	0	0	0	0	4	1	0	0	0
4	0	0	0	0	0	1	0	0	0	0	0	1
5	0	1	0	0	16	0	0	3	0	0	0	11
6	0	0	0	2	3	0	0	2	0	3	0	3
7	0	3	0	0	1	0	4	0	4	7	0	0
8	0	1	0	0	4	0	9	6	0	0	0	0
9	0	0	0	3	0	0	1	0	0	0	6	0
10	0	0	0	3	0	0	1	0	0	0	3	0
11	0	0	0	4	0	0	0	0	0	0	0	5
12	0	2	0	0	0	0	0	0	3	2	0	0
13	43	0	0	0	6	0	0	1	2	0	9	0
14	0	0	0	0	2	1	0	0	10	16	0	2
15	40	0	0	0	0	0	3	0	0	2	0	0
16	12	5	0	1	0	20	1	1	15	9	11	5
17	1	0	0	4	0	1	0	1	5	9	1	0
18	5	0	0	1	0	1	0	0	5	0	1	0
19	2	0	0	0	0	1	0	3	21	13	0	1
20	0	0	3	13	0	11	0	0	1	9	21	42
21	0	1	0	19	2	0	0	0	0	18	3	6
22	0	3	4	1	0	0	8	0	21	8	1	1
23	2	0	14	4	0	0	4	4	27	0	0	0
24	0	0	2	3	0	0	0	8	15	1	0	5
25	0	0	4	3	0	0	0	5	18	2	0	1
26	0	1	28	2	2	0	0	10	28	0	0	2
27	0	0	13	0	0	4	1	1	11	0	0	0
28	2	8	0	0	0	1	0	0	1	0	1	3
29	1	2	0	0		1	0	10	0	0	0	2
30	4	5	0	1		1	0	2	0	0	1	0
31	2		0	0		1		0		0	3	
Monthly Total	116	36	73	64	37	44	33	61	190	109	61	90

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1979 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-78	Nov-78	Dec-78	Jan-79	Feb-79	Mar-79	Apr-79	May-79	June-79	July-79	Aug-79	Sept-79
1	5	8	1	0	5	0	0	0	0	1	0	1
2	16	4	3	0	5	0	0	0	6	0	0	1
3	7	2	5	0	2	3	0	0	1	0	0	0
4	2	0	5	0	0	1	22	0	0	0	0	0
5	3	0	5	0	0	1	8	5	0	31	0	0
6	4	0	5	0	2	1	3	0	1	7	19	0
7	2	0	15	2	1	2	0	4	0	0	3	0
8	0	0	4	0	0	0	0	0	0	7	4	0
9	0	0	9	0	0	3	1	0	0	4	0	0
10	0	0	15	0	0	22	6	0	0	0	0	0
11	27	0	2	0	0	0	4	0	3	4	0	0
12	0	0	0	1	1	3	1	2	4	1	0	0
13	1	0	0	0	0	5	1	0	6	3	1	1
14	12	0	2	1	0	2	0	0	0	0	2	6
15	2	0	2	0	0	6	0	1	0	9	0	3
16	0	0	0	2	0	6	0	0	5	1	2	0
17	13	0	18	11	0	13	0	2	5	0	17	40
18	5	0	16	0	0	17	0	1	0	0	1	19
19	23	0	4	3	0	18	0	0	6	0	0	1
20	6	0	0	0	0	17	0	0	1	0	2	18
21	5	32	0	0	0	31	0	0	0	17	3	14
22	6	9	2	11	0	27	0	0	1	8	0	2
23	0	3	0	3	0	6	0	2	0	3	0	11
24	0	0	3	0	0	1	5	2	0	0	0	1
25	16	3	0	0	0	0	8	4	26	13	0	1
26	25	1	2	1	0	3	0	1	13	1	0	0
27	15	3	0	2	0	4	0	1	4	4	0	0
28	2	16	0	3	0	1	0	0	3	0	0	1
29	1	5	1	3		1	0	1	8	0	9	0
30	11	3	0	4		1	0	11	0	0	4	0
31	9		0	0		0		0		3	3	
Monthly Total	218	89	119	47	16	195	59	37	93	117	70	122

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1980 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-79	Nov-79	Dec-79	Jan-80	Feb-80	Mar-80	Apr-80	May-80	June-80	July-80	Aug-80	Sept-80
1	0	0	2	0	13	0	0	4	0	0	1	5
2	1	2	1	0	0	0	4	21	0	1	11	6
3	4	0	4	0	6	0	0	0	0	1	2	0
4	1	0	10	0	1	0	0	1	0	0	0	0
5	18	0	8	3	1	5	0	0	0	0	0	0
6	12	2	2	1	0	1	0	0	0	1	0	0
7	0	17	0	3	2	4	4	0	0	7	48	0
8	13	4	0	3	3	4	0	2	0	3	11	0
9	17	7	0	1	0	8	1	3	0	3	1	2
10	0	31	7	4	0	3	0	4	1	0	1	4
11	2	18	2	0	0	0	1	0	11	23	0	0
12	1	25	2	1	0	0	7	0	9	33	0	0
13	0	14	0	0	0	0	0	0	0	6	13	33
14	1	5	0	0	0	0	0	0	0	8	4	23
15	0	2	0	0	0	1	0	0	0	1	9	10
16	0	3	0	0	0	4	1	0	0	0	9	1
17	12	5	5	15	0	0	0	2	9	7	0	2
18	0	3	7	0	3	1	2	0	38	1	45	0
19	0	3	2	2	2	0	0	0	6	1	13	0
20	2	3	5	1	0	1	8	6	12	0	9	0
21	0	1	3	0	0	12	0	5	0	0	5	2
22	0	2	4	9	0	1	1	2	2	0	0	8
23	1	3	0	4	0	0	3	1	0	0	0	11
24	11	3	0	0	0	0	0	1	0	0	0	6
25	0	0	2	0	0	0	0	0	0	3	0	2
26	0	0	2	0	0	2	0	0	0	9	0	0
27	2	0	3	0	0	0	0	0	0	72	2	3
28	20	0	0	2	0	0	0	1	0	41	5	3
29	3	1	3	0	0	1	1	0	3	17	2	0
30	2	1	1	2		1	0	9	4	3	0	0
31	4		3	0		8		6		2	0	
Monthly Total	127	155	78	51	31	57	33	68	95	243	191	121

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1981 hydrologic year

(Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing)

Day	Oct-80	Nov-80	Dec-80	Jan-81	Feb-81	Mar-81	Apr-81	May-81	June-81	July-81	Aug-81	Sept-81
1	0	0	0	4	0	0	7	1	5	3	56	0
2	13	1	0	2	0	6	2	0	0	3	23	0
3	3	0	0	0	2	2	1	1	1	0	0	2
4	8	4	0	5	12	2	1	0	10	0	0	0
5	4	1	0	2	6	0	0	0	12	11	0	5
6	3	3	0	0	28	0	0	0	1	17	0	10
7	0	1	0	2	1	0	0	0	2	25	31	7
8	13	1	0	0	0	0	0	0	16	16	6	5
9	2	0	0	0	0	0	3	0	5	14	21	0
10	4	0	0	0	3	1	0	0	0	89	16	4
11	2	0	2	0	5	4	0	1	0	38	18	14
12	2	0	0	12	1	1	0	2	0	12	70	4
13	2	0	2	0	0	0	0	0	0	1	66	4
14	6	0	5	6	3	0	0	0	1	6	20	0
15	9	0	5	1	0	1	0	2	1	34	40	5
16	2	0	0	2	0	0	0	0	0	40	7	1
17	0	8	0	0	0	0	0	0	0	6	0	0
18	0	0	0	0	2	0	0	6	0	13	0	0
19	0	1	0	6	2	0	0	0	2	16	17	1
20	2	0	0	2	1	1	0	3	0	14	2	0
21	0	5	0	0	4	0	0	1	0	0	2	0
22	0	0	0	0	3	2	0	1	0	0	16	0
23	0	7	0	0	0	4	0	4	0	10	0	6
24	0	0	0	0	3	8	0	0	0	12	0	28
25	2	3	0	0	1	0	0	2	2	38	0	1
26	0	3	0	2	2	3	0	0	7	15	0	1
27	0	5	0	4	5	15	0	3	36	1	0	0
28	9	10	0	2	0	2	0	1	21	1	0	0
29	12	1	0	0		0	3	1	19	5	0	0
30	3	2	28	0		0	0	0	18	2	3	0
31	1		3	0		5		7		6	4	
Monthly Total	102	56	45	52	84	57	17	36	159	448	418	98

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1982 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-81	Nov-81	Dec-81	Jan-82	Feb-82	Mar-82	Apr-82	May-82	June-82	July-82	Aug-82	Sept-82
1	0	0	0	0	0	0	1	0	0	2	1	5
2	0	0	0	0	5	0	0	1	23	2	0	1
3	0	0	0	0	6	0	0	2	1	0	0	15
4	0	0	0	0	9	0	0	1	0	0	0	1
5	0	0	0	0	1	--	0	0	0	0	0	0
6	0	1	0	0	0	--	0	0	0	0	0	0
7	0	0	0	0	0	--	0	0	10	0	0	0
8	0	0	0	0	2	--	0	0	0	0	9	5
9	0	0	0	0	0	14	3	8	3	4	0	2
10	0	0	0	0	0	1	0	2	2	1	0	0
11	9	0	0	2	0	0	0	5	1	1	2	7
12	21	0	0	1	0	0	0	3	3	5	0	1
13	39	0	0	3	0	0	1	0	2	3	0	26
14	10	0	0	0	3	1	0	0	0	6	0	14
15	9	0	0	0	0	3	0	1	8	7	0	12
16	9	0	0	5	0	1	0	0	5	8	4	7
17	0	0	0	2	0	2	0	0	11	4	8	0
18	6	0	0	0	0	0	0	0	5	2	0	5
19	3	0	0	0	0	0	1	0	6	0	0	18
20	0	0	0	0	0	0	2	16	10	0	0	1
21	17	0	0	0	1	0	8	1	0	1	0	0
22	21	0	0	0	0	0	0	0	0	4	0	4
23	13	0	3	0	0	1	1	0	1	32	0	1
24	2	0	2	0	0	0	9	0	0	18	12	0
25	2	0	3	0	0	0	0	4	0	15	0	0
26	2	0	6	1	0	0	1	3	0	2	1	3
27	0	0	2	0	0	0	0	2	0	0	0	7
28	0	0	0	0	0	0	0	1	1	0	1	2
29	0	0	0	0		1	2	0	1	22	18	1
30	0	0	0	1		1	1	2	3	18	16	5
31	3		0	0		0		0		3	30	
Monthly Total	166	1	16	15	27	25	30	52	96	160	102	143

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1983 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-82	Nov-82	Dec-82	Jan-83	Feb-83	Mar-83	Apr-83	May-83	June-83	July-83	Aug-83	Sept-83
1	4	0	5	0	0	2	0	0	0	0	0	7
2	1	0	1	4	1	1	0	14	0	2	0	10
3	1	0	0	10	1	1	0	2	12	1	1	11
4	0	2	0	3	0	0	0	0	2	0	8	5
5	1	1	0	2	0	0	8	0	0	0	50	5
6	0	2	0	0	0	0	0	0	4	6	15	5
7	0	1	0	0	1	0	2	0	0	1	5	5
8	1	8	3	0	2	0	0	0	0	0	51	5
9	6	3	2	1	2	0	2	0	1	4	15	6
10	14	1	2	0	1	4	3	0	0	1	1	5
11	4	16	0	2	0	0	1	0	11	22	6	0
12	7	1	0	0	2	0	9	0	3	4	4	0
13	20	0	1	0	0	0	11	0	1	13	9	0
14	8	2	0	0	0	0	1	0	0	0	10	8
15	1	0	0	3	0	0	6	0	5	1	8	7
16	7	0	1	0	0	1	4	0	6	0	6	0
17	9	1	6	4	0	0	3	28	0	3	0	0
18	1	1	1	3	0	1	7	14	0	2	0	1
19	11	0	0	3	4	0	2	3	0	0	0	5
20	1	0	0	2	0	0	0	0	0	0	10	16
21	1	0	1	0	0	0	2	0	0	0	0	36
22	1	0	2	0	1	0	5	3	0	0	24	14
23	1	0	0	0	0	0	0	2	0	5	18	3
24	0	2	0	1	8	0	0	1	0	0	47	3
25	0	2	0	0	2	0	0	1	0	0	14	0
26	2	0	0	0	0	0	0	6	0	0	3	0
27	2	0	0	0	0	0	0	0	4	0	0	0
28	15	5	26	0	5	0	0	0	2	0	0	6
29	8	24	3	1		0	4	0	0	2	4	31
30	1	5	3	1		0	2	0	2	9	12	7
31	0		0	0		0		1		2	6	
Monthly Total	128	77	57	40	30	10	72	75	53	78	327	201

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1984 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-83	Nov-83	Dec-83	Jan-84	Feb-84	Mar-84	Apr-84	May-84	June-84	July-84	Aug-84	Sept-84
1	7	1	2	0	--	--	0	6	1	0	0	0
2	4	2	5	8	--	--	5	1	0	3	1	0
3	3	1	3	2	--	--	2	0	0	0	2	0
4	0	0	6	5	--	--	0	1	0	1	0	0
5	6	2	1	5	--	--	10	0	1	2	7	0
6	15	1	0	0	--	--	7	1	3	1	1	0
7	1	0	4	0	--	--	1	0	1	3	1	0
8	0	0	0	0	--	--	0	0	0	1	0	0
9	13	0	3	0	--	--	0	0	0	0	5	0
10	51	0	0	0	--	--	0	0	0	0	2	0
11	44	0	0	0	--	--	0	2	0	0	6	0
12	7	0	0	0	--	--	0	0	0	3	0	0
13	3	0	0	4	--	--	0	0	11	2	0	0
14	0	1	0	6	--	--	0	0	4	2	0	0
15	2	0	2	5	--	--	4	0	9	3	0	0
16	0	0	0	0	--	--	3	0	8	18	0	0
17	1	0	0	0	--	--	1	0	1	13	0	0
18	3	0	0	4	--	--	2	0	0	1	6	0
19	11	0	0	1	--	--	2	0	0	3	5	27
20	14	1	0	2	--	--	2	0	0	2	4	0
21	0	0	0	0	--	--	0	0	0	10	2	0
22	0	0	0	1	--	--	3	2	0	2	0	0
23	1	2	0	0	--	--	0	1	2	2	22	0
24	0	3	0	0	--	1	0	6	3	9	38	0
25	2	0	0	0	--	0	0	5	1	12	26	0
26	0	0	0	0	--	7	0	5	0	3	4	0
27	0	0	1	0	--	0	0	4	6	9	2	0
28	0	0	0	0	--	0	1	1	0	2	0	0
29	7	0	2	2	--	0	0	0	0	13	0	0
30	13	0	0	0		4	2	1	4	4	0	0
31	4		0	3		7		0		1	0	
Monthly Total	212	14	29	48	N/A	N/A	45	36	55	125	134	27

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1985 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-84	Nov-84	Dec-84	Jan-85	Feb-85	Mar-85	Apr-85	May-85	June-85	July-85	Aug-85	Sept-85
1	0	0	6	3	2	4	0	0	3	6	0	14
2	0	0	0	1	0	2	0	0	0	7	0	2
3	0	0	0	0	11	0	0	0	0	5	1	0
4	0	0	5	1	4	0	0	0	0	2	0	0
5	0	0	5	5	0	1	0	0	4	0	0	0
6	0	0	0	0	0	11	0	0	1	0	0	0
7	0	0	3	0	0	4	0	0	3	0	0	1
8	0	0	2	0	0	8	0	0	10	3	4	30
9	0	0	0	5	0	10	4	0	7	0	3	14
10	0	0	0	1	0	4	5	0	0	0	6	2
11	0	0	0	2	0	9	0	0	0	0	11	6
12	0	0	0	0	0	12	0	0	9	0	45	1
13	0	0	0	0	0	2	0	0	7	0	23	0
14	0	0	0	23	0	0	0	0	5	0	2	48
15	0	0	0	1	0	0	0	0	26	0	8	16
16	0	0	0	8	0	0	0	0	6	0	4	0
17	0	0	8	2	0	0	0	0	4	0	0	1
18	0	0	18	0	0	0	0	0	14	0	5	0
19	0	0	4	0	0	0	0	1	3	0	11	33
20	0	0	0	10	0	0	0	2	0	25	19	7
21	0	6	0	0	0	0	0	0	3	6	13	1
22	0	4	0	0	0	0	0	0	2	1	2	3
23	0	2	16	0	0	0	0	0	0	1	0	10
24	0	4	2	2	0	0	0	0	1	0	0	8
25	0	3	0	3	0	0	0	0	19	1	0	1
26	0	0	1	12	11	0	0	0	5	0	0	1
27	0	0	0	11	25	0	0	0	0	0	0	0
28	0	0	0	0	2	0	0	0	0	0	0	17
29	0	2	7	1		0	0	16	0	0	0	2
30	0	12	9	1		0	0	1	0	1	0	0
31	0		7	23		0		0		2	0	
Monthly Total	0	33	93	115	55	67	9	20	132	60	157	218

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1986 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-85	Nov-85	Dec-85	Jan-86	Feb-86	Mar-86	Apr-86	May-86	June-86	July-86	Aug-86	Sept-86
1	0	5	0	14	0	1	0	0	15	0	5	13
2	5	0	0	31	1	0	0	0	10	0	2	11
3	14	2	0	3	5	0	0	1	1	0	3	1
4	1	1	0	0	1	0	0	0	0	0	1	0
5	1	0	3	0	0	0	7	2	0	0	5	0
6	0	0	1	1	0	0	8	1	0	0	5	0
7	5	1	0	3	2	0	12	0	1	2	1	0
8	24	0	2	4	2	0	2	5	5	2	14	1
9	8	0	19	0	3	1	0	2	18	0	0	0
10	0	13	3	0	0	3	0	0	9	0	7	0
11	2	7	4	0	0	0	0	6	3	0	5	0
12	0	6	3	0	0	0	0	0	0	1	9	0
13	0	0	0	2	0	1	0	4	0	6	4	0
14	2	0	1	0	0	0	0	0	0	0	2	0
15	0	0	15	0	0	0	0	2	0	0	0	0
16	0	0	1	2	0	3	1	0	0	0	0	0
17	0	0	14	0	0	0	0	11	0	7	0	0
18	0	0	8	0	3	1	3	1	0	4	8	0
19	0	0	4	2	0	0	3	0	0	2	15	0
20	0	0	24	0	0	0	2	1	1	24	1	5
21	1	0	0	1	0	0	5	0	0	2	6	2
22	1	0	1	0	0	1	2	0	4	7	5	0
23	2	0	11	0	0	0	0	0	20	42	0	0
24	0	0	13	1	1	0	0	0	0	5	22	0
25	0	0	5	4	0	13	0	0	0	19	15	0
26	0	2	0	2	2	9	0	0	0	18	5	0
27	0	1	0	4	4	7	0	0	0	0	2	3
28	0	0	0	4	4	0	0	0	0	0	3	1
29	0	0	2	0		0	0	0	0	0	1	0
30	1	0	0	5		11	0	0	1	0	9	2
31	0		4	4		0		0		11	0	
Monthly Total	67	38	138	87	28	51	45	36	88	152	155	39

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1987 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-86	Nov-86	Dec-86	Jan-87	Feb-87	Mar-87	Apr-87	May-87	June-87	July-87	Aug-87	Sept-87
1	3	3	--	--	--	--	1	0	2	0	3	1
2	1	5	--	--	--	--	1	0	5	0	1	0
3	0	1	--	--	--	--	20	4	2	0	0	19
4	1	11	--	--	--	--	12	0	0	0	0	33
5	0	3	--	--	--	--	1	1	0	0	6	5
6	0	1	--	--	--	--	2	0	1	0	20	2
7	0	1	--	--	--	--	0	0	0	3	29	4
8	0	0	--	--	--	--	0	0	2	1	1	19
9	6	18	--	--	--	--	2	1	3	0	2	10
10	11	0	--	--	--	--	5	1	0	0	0	12
11	14	0	--	--	--	--	1	0	0	0	0	6
12	16	1	--	--	--	--	0	0	11	3	0	10
13	2	7	--	--	--	--	0	0	11	2	13	4
14	10	15	--	--	--	--	14	0	2	11	11	4
15	3	2	--	--	--	--	1	0	10	4	1	0
16	4	0	--	--	--	--	1	0	7	0	0	0
17	1	2	--	--	--	--	4	0	1	2	0	7
18	0	1	--	--	--	--	2	0	4	2	0	1
19	5	2	--	--	--	--	0	0	0	2	0	1
20	2	1	--	--	--	--	0	0	0	0	1	3
21	2	0	--	--	--	--	0	0	0	0	0	9
22	1	0	--	--	--	--	0	0	0	19	0	0
23	0	0	--	--	--	--	0	0	0	9	0	0
24	0	1	--	--	--	--	1	14	0	0	0	3
25	3	3	--	--	--	0	9	0	0	0	0	12
26	0	1	--	--	--	0	3	6	2	0	0	2
27	0	0	--	--	--	0	0	1	13	0	0	1
28	0	2	--	--	--	0	0	11	2	0	0	11
29	0	0	--	--		0	0	0	0	0	0	2
30	0	0	--	--		0	0	0	0	35	1	1
31	0		--	--		0		0		4	0	
Monthly Total	85	81	N/A	N/A	N/A	N/A	80	39	78	97	89	182

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1988 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-87	Nov-87	Dec-87	Jan-88	Feb-88	Mar-88	Apr-88	May-88	June-88	July-88	Aug-88	Sept-88
1	1	0	2	0	4	0	3	0	1	0	0	4
2	5	0	0	0	2	2	3	0	12	0	6	8
3	2	2	1	0	1	0	4	0	2	0	1	2
4	1	0	2	0	0	0	0	5	0	0	0	20
5	0	3	1	0	0	2	0	0	0	2	0	5
6	2	5	0	0	1	0	0	0	34	1	8	2
7	0	1	0	0	0	2	0	2	5	3	8	0
8	10	0	0	0	0	0	1	5	0	0	8	1
9	17	3	0	1	0	2	0	5	0	1	1	0
10	39	0	0	2	0	0	3	2	0	0	1	1
11	9	0	1	2	5	3	0	1	0	0	48	6
12	2	0	6	0	1	0	0	2	0	0	10	7
13	0	0	2	0	0	0	0	7	0	0	0	2
14	25	3	2	0	2	3	3	5	0	0	0	1
15	7	2	0	0	8	2	0	0	7	0	0	0
16	1	0	0	0	8	10	0	4	13	1	0	1
17	7	0	3	0	18	2	0	0	0	3	0	4
18	12	1	1	0	9	6	3	0	0	0	0	3
19	16	3	0	4	12	2	2	7	7	0	0	3
20	6	12	1	6	17	1	0	0	8	3	0	48
21	2	3	2	2	11	3	0	1	3	7	0	11
22	1	4	3	6	0	15	0	0	0	23	45	2
23	2	2	41	14	5	0	0	0	2	14	1	0
24	2	1	7	2	6	8	1	4	4	0	3	2
25	6	0	2	3	0	0	2	0	0	3	0	0
26	0	3	3	3	5	1	0	0	0	0	8	1
27	1	1	2	0	1	1	0	0	4	0	6	4
28	0	3	0	0	0	0	0	0	0	4	1	1
29	0	2	0	0	0	2	7	1	0	0	8	0
30	1	0	0	0		16	24	20	0	4	16	1
31	1		2	3		4		11		0	5	
Monthly Total	178	54	84	48	116	87	56	82	102	69	184	140

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1989 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-88	Nov-88	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	June-89	July-89	Aug-89	Sept-89
1	0	3	6	12	0	0	0	0	6	3	15	0
2	11	0	3	4	0	5	0	0	0	2	29	3
3	4	0	0	0	0	11	0	0	5	2	3	3
4	31	1	1	1	0	1	0	12	6	2	0	0
5	6	1	5	0	0	1	0	2	12	2	0	46
6	3	2	0	0	0	0	0	2	2	0	0	3
7	3	10	0	7	1	0	0	6	0	0	4	0
8	17	2	9	2	3	1	0	4	0	0	0	1
9	0	0	12	2	4	0	0	2	0	0	1	0
10	2	0	5	10	2	0	0	0	0	0	0	12
11	11	0	1	0	10	0	0	26	0	0	0	24
12	6	2	2	5	0	0	0	0	0	0	0	19
13	2	6	2	3	0	0	0	0	0	0	0	10
14	0	9	0	3	0	0	0	8	1	0	0	7
15	1	0	9	2	0	0	0	8	12	2	0	4
16	0	4	5	3	0	0	0	1	0	1	0	0
17	5	1	7	4	0	0	0	0	0	3	0	0
18	14	2	2	2	0	0	0	0	2	0	0	2
19	1	0	2	0	0	1	0	2	5	0	3	2
20	7	0	14	0	4	1	0	0	2	0	3	13
21	3	0	4	0	0	8	2	0	2	2	2	8
22	1	0	3	0	0	3	1	0	2	7	0	26
23	2	3	0	0	3	27	7	0	4	14	0	14
24	2	0	0	0	0	8	9	1	24	19	0	43
25	1	0	3	3	3	2	42	0	8	5	0	2
26	7	0	3	8	5	3	0	0	3	0	0	21
27	10	0	5	2	2	3	4	2	2	3	0	6
28	0	0	7	14	0	0	1	15	2	0	0	0
29	6	2	2	0		0	0	5	3	0	0	2
30	3	5	0	0		0	0	4	2	7	4	11
31	0		18	0		0		4		12	0	
Monthly Total	159	53	130	87	37	75	66	104	105	86	64	282

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1990 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	June-90	July-90	Aug-90	Sept-90
1	4	4	0	0	0	17	3	2	0	0	0	0
2	4	25	0	0	0	4	0	11	0	0	0	3
3	0	13	0	0	0	1	0	0	0	0	0	28
4	0	9	29	0	0	6	0	0	0	0	3	3
5	0	19	8	6	0	6	11	3	0	0	9	22
6	0	16	0	0	8	3	0	0	0	0	6	24
7	19	8	0	0	0	0	0	0	0	4	28	0
8	15	13	9	9	0	0	0	3	0	2	3	6
9	6	1	0	2	0	0	0	0	23	2	0	75
10	3	0	0	0	0	0	0	0	0	14	23	27
11	0	0	0	0	0	0	0	1	0	3	0	3
12	0	0	2	1	0	0	0	0	0	2	0	29
13	0	0	26	7	0	0	0	1	14	12	0	17
14	0	0	5	4	1	6	0	0	13	0	0	18
15	0	0	5	6	0	3	0	0	4	0	0	3
16	8	0	5	29	2	0	0	0	11	0	0	0
17	12	0	1	17	11	3	0	0	7	0	0	0
18	3	0	6	11	6	6	6	0	2	0	0	0
19	20	0	3	3	1	0	2	0	1	0	18	0
20	2	0	0	4	0	0	3	0	0	0	50	7
21	4	0	3	1	0	0	0	8	7	0	6	2
22	1	0	48	1	0	0	0	4	0	0	0	18
23	7	0	6	4	0	0	0	0	0	0	0	25
24	21	0	0	7	26	0	3	0	0	0	0	7
25	1	0	9	0	7	0	0	0	0	8	0	9
26	2	0	8	1	4	0	0	0	0	0	12	0
27	0	0	1	0	11	0	0	0	0	0	2	0
28	12	0	1	0	9	3	0	0	0	6	4	0
29	5	0	8	0		8	0	0	0	1	0	3
30	5	0	0	0		1	7	0	0	2	0	20
31	1		0	0		4		0		2	0	
Monthly Total	155	108	183	113	86	71	35	33	82	58	164	349

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1991 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	June-91	July-91	Aug-91	Sept-91
1	6	0	--	0	0	1	0	0	0	0	6	0
2	1	0	--	0	0	0	0	0	0	0	2	0
3	0	0	--	0	0	2	0	0	0	0	1	0
4	0	0	--	0	0	0	0	0	0	0	0	0
5	0	1	--	0	0	2	0	0	0	0	10	0
6	0	10	--	0	6	11	0	0	5	0	3	0
7	6	3	--	0	1	3	0	0	0	0	2	0
8	2	0	--	0	0	4	0	0	3	0	0	29
9	0	0	--	14	0	0	0	0	0	0	0	0
10	1	0	--	8	0	1	0	3	0	0	2	4
11	0	0	--	6	0	1	0	0	2	0	0	17
12	0	0	--	2	0	0	0	0	0	0	1	0
13	1	0	--	0	3	0	0	0	0	1	0	0
14	8	0	--	0	0	2	2	0	0	0	2	0
15	0	0	--	2	1	3	3	0	0	0	11	4
16	0	1	--	4	15	8	3	0	0	21	0	4
17	0	7	--	0	14	7	3	0	0	6	10	4
18	0	1	--	3	12	1	0	0	0	1	7	1
19	0	2	--	0	3	5	1	0	0	1	0	1
20	0	1	--	4	3	0	4	0	0	0	0	11
21	0	0	--	8	0	0	0	0	0	0	0	2
22	0	0	--	9	0	0	0	0	0	0	1	0
23	0	0	--	5	0	0	0	0	0	0	1	0
24	0	0	--	3	0	0	0	0	0	9	4	0
25	0	4	--	0	10	10	0	0	0	3	9	0
26	0	0	--	0	1	13	0	0	0	0	2	0
27	0	0	--	2	0	10	0	0	0	0	1	7
28	0	0	--	0	0	6	0	0	0	5	1	0
29	0	0	--	3		0	0	0	0	18	1	0
30	3	0	--	2		1	0	0	0	11	1	0
31	8		--	0		0		0		4	1	
Monthly Total	36	30	N/A	75	69	91	16	3	10	80	79	84

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 5. Daily and monthly precipitation catch at 1,480 meters altitude, Gulkana Glacier basin, 1992 hydrologic year

[Data in millimeters; monthly total is referenced as "N/A" if more than 9 records are missing; --, record missing]

Day	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	June-92	July-92	Aug-92	Sept-92
1	10	0	--	--	0	3	1	0	0	--	--	--
2	0	0	--	--	2	4	1	0	7	--	--	--
3	7	0	--	--	2	1	1	0	--	--	--	--
4	4	0	--	--	0	0	1	0	--	--	--	--
5	0	0	--	--	0	0	0	6	--	--	--	--
6	0	0	--	--	0	0	0	5	--	--	--	--
7	0	0	--	--	0	0	0	0	--	--	--	--
8	0	0	--	--	0	1	0	15	--	--	--	--
9	0	0	--	--	0	4	0	0	--	--	--	--
10	0	0	--	--	0	0	0	2	--	--	--	--
11	0	0	--	--	4	1	4	0	--	--	--	--
12	0	2	--	--	0	2	0	5	--	--	--	--
13	0	0	--	--	0	0	0	10	--	--	--	--
14	0	0	--	--	1	4	0	0	--	--	--	--
15	0	0	--	--	0	1	0	7	--	--	--	--
16	0	0	--	--	0	2	0	3	--	--	--	--
17	0	0	--	--	0	1	0	0	--	--	--	--
18	2	2	--	--	0	3	0	0	--	--	--	--
19	24	0	--	--	0	0	0	0	--	--	--	--
20	5	1	--	--	0	0	0	0	--	--	--	--
21	0	1	--	--	0	3	0	0	--	--	--	--
22	0	2	--	--	0	4	0	0	--	--	--	0
23	0	0	--	--	0	1	0	0	--	--	--	0
24	0	1	--	--	0	0	0	0	--	--	--	0
25	0	0	--	--	0	10	0	0	--	--	--	0
26	0	0	--	--	11	0	0	0	--	--	--	0
27	0	9	--	--	2	0	0	0	--	--	--	0
28	0	0	--	--	7	5	0	0	--	--	--	0
29	0	1	--	--	3	0	0	0	--	--	--	0
30	0	4	--	0		0	0	0	--	--	--	0
31	0		--	0		0		0		--	--	
Monthly Total	52	23	N/A	N/A	32	50	8	53	N/A	N/A	N/A	N/A

Note: Gage catch may not equal actual precipitation because of errors caused by wind.

Table 6. Dates of recorded precipitation catch that may include precipitation from previous days, Gulkana Glacier basin, 1968-96 hydrologic years

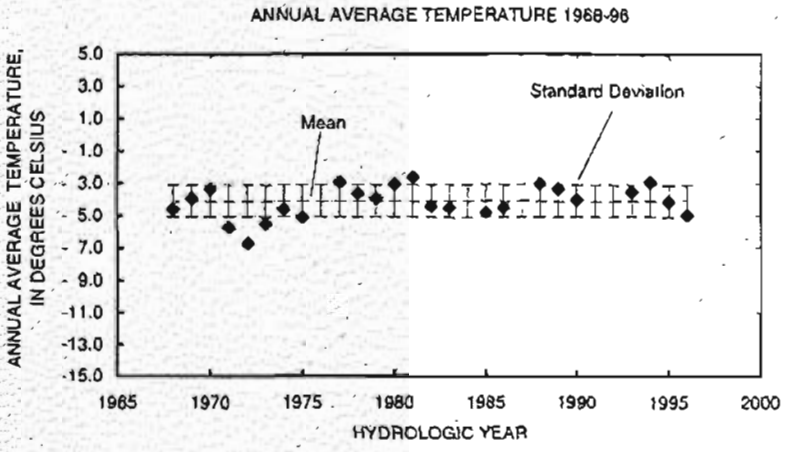
Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
1968	---	---	---	---	---	---	---	---	---	---	30	---
1969	---	---	---	---	---	---	---	---	---	---	---	---
1970	---	---	---	27, 31	---	---	---	---	---	---	---	---
1971	---	---	---	---	---	---	---	---	---	---	---	---
1972	---	---	---	9	---	---	---	---	---	---	---	---
1973	---	---	---	31	---	---	---	---	---	---	---	---
1974	---	---	3	---	---	---	---	---	---	---	---	---
1975	---	---	---	---	---	---	---	---	---	---	---	---
1976	---	---	---	---	---	---	---	---	---	---	---	---
1977	---	---	---	---	---	---	2	---	---	---	---	---
1978	---	---	---	---	---	---	---	---	---	---	---	---
1979	---	---	---	---	---	---	---	---	---	---	---	---
1980	---	---	---	---	---	---	---	---	---	---	---	---
1981	---	---	23, 25	---	---	---	---	---	---	---	---	---
1982	---	11	---	---	---	---	---	---	---	---	---	---
1983	11, 20	---	---	---	---	---	---	---	---	---	---	---
1984	---	---	---	---	---	---	---	---	---	---	---	---
1985	---	---	---	---	---	---	---	---	---	---	---	---
1986	---	---	---	2	---	---	---	---	---	---	---	---
1987	---	---	---	---	---	---	---	---	---	---	---	---
1988	---	---	---	---	---	---	---	---	---	---	---	---
1989	---	7	8, 26	1	4, 5	---	---	---	---	---	---	---
1990	24	3	4	17	9	---	---	6	---	---	---	---
1991	---	---	---	---	18	7	---	---	---	---	---	---
1992	---	---	---	---	---	---	---	---	---	---	---	---
1993	---	---	---	---	---	---	---	---	---	---	---	---
1994	---	---	---	---	---	---	---	---	---	---	---	---
1995	---	---	---	---	---	---	---	---	---	---	---	---
1996	---	---	---	---	---	---	---	---	---	---	---	---

APPENDIX A

Graphs of daily, monthly, and annual air temperature and precipitation-catch data, Gulkana Glacier basin, 1968-96

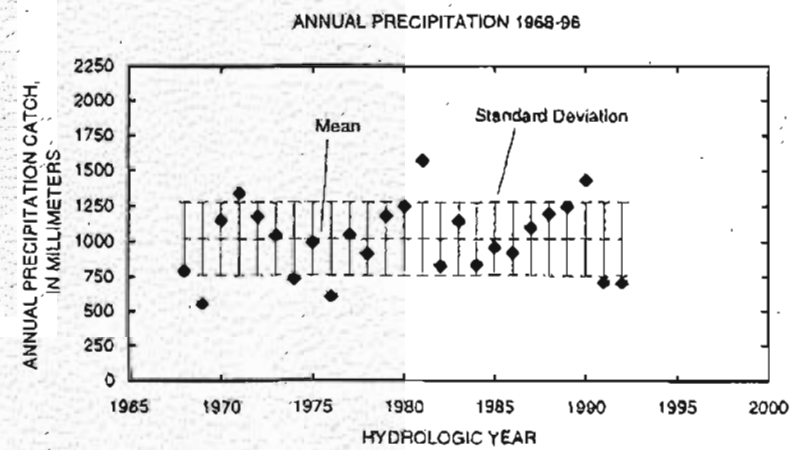
[note: figures A8 and A9 have been printed on one side to facilitate overlaying of the graphs]

Appendix A. Graphs of monthly and annual air temperature and precipitation-catch data, Gulkana Glacier basin, 1968-1996



TEMPERATURE ANNUAL 1968-96	
Mean	-4.1
Std. Dev.	1.0
Range	4.1
Minimum	-6.7
Maximum	-2.6
Count	24

Figure A1. Annual average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.



PRECIPITATION ANNUAL 1968-96	
Mean	1020
Std. Dev.	259
Range	1017
Minimum	555
Maximum	1572
Count	25

Figure A2. Annual precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.

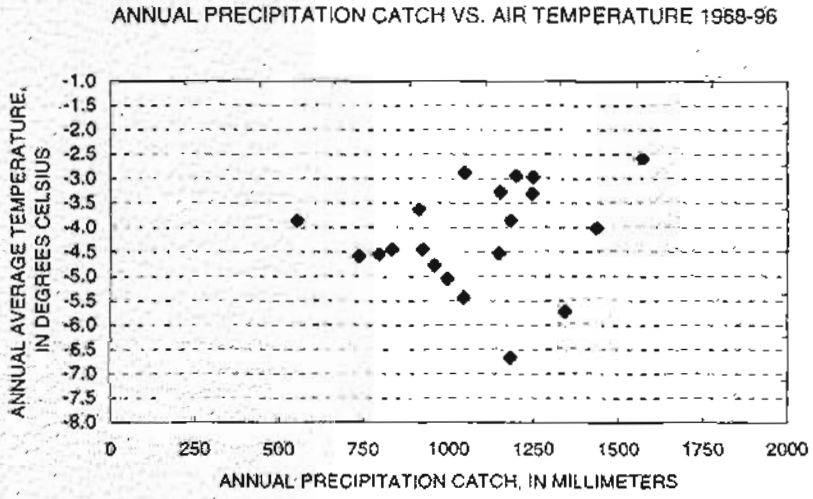


Figure A3. Relation between annual precipitation catch and annual average air temperature, Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.

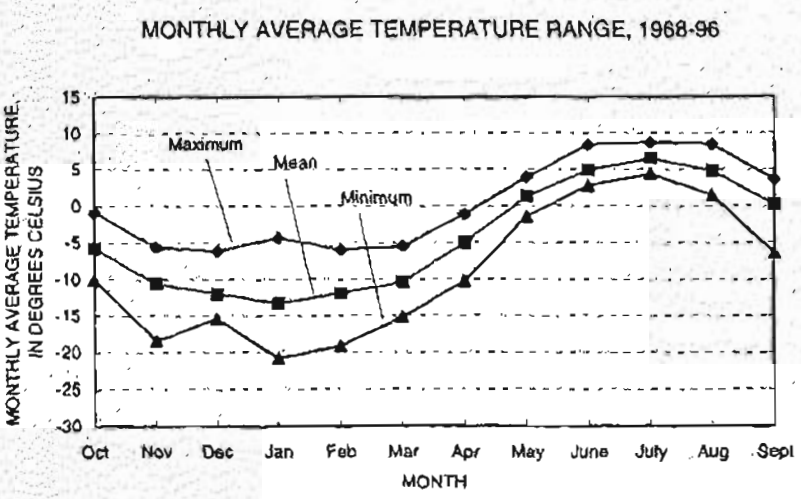


Figure A4. Monthly average temperature maximum, mean, and minimum, Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.

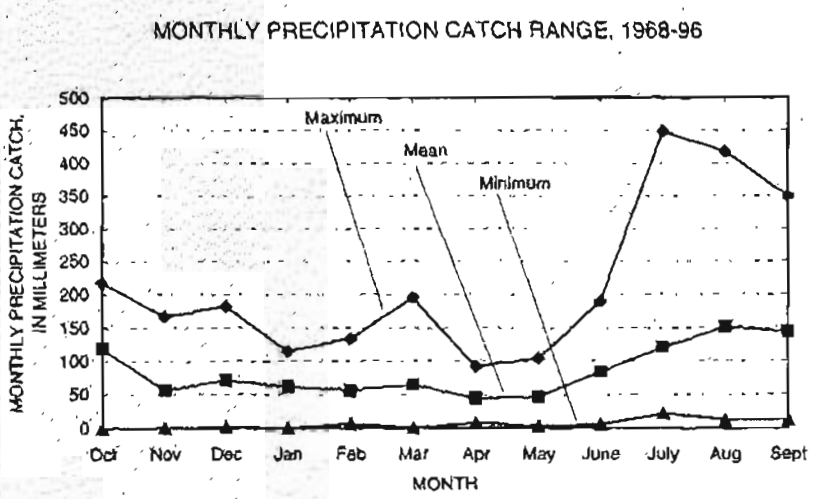
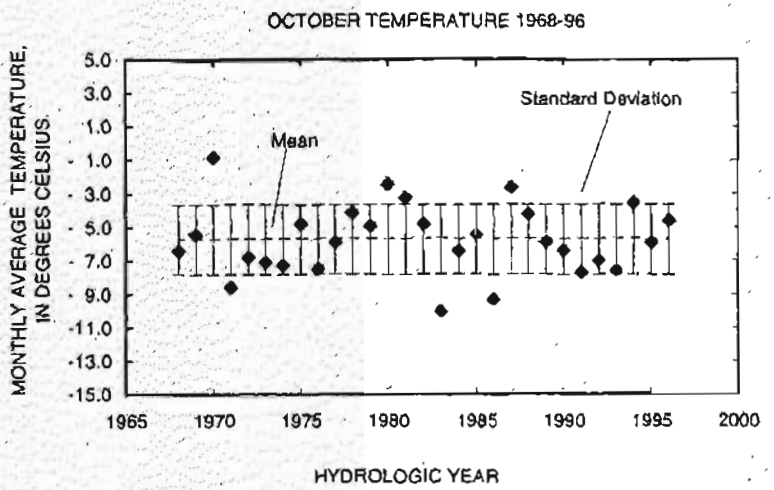
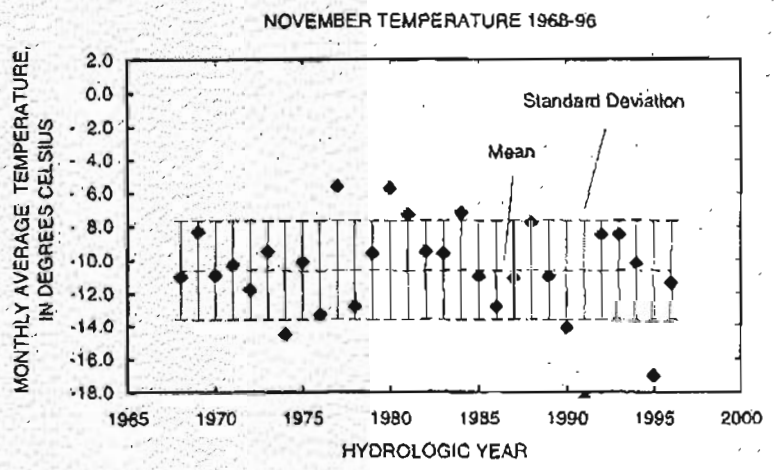


Figure A5. Monthly precipitation catch maximum, mean, and minimum, Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.

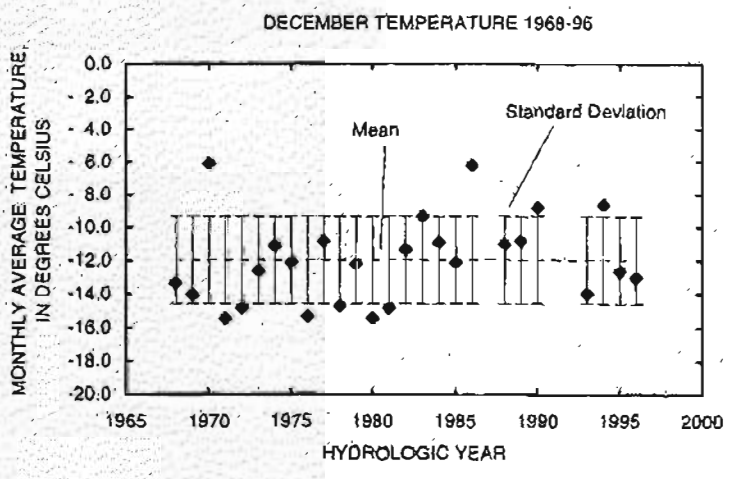


TEMPERATURE OCT 1968-96	
Mean	-5.7
Std. Dev.	2.1
Range	9.2
Minimum	-10.0
Maximum	-0.8
Count	29

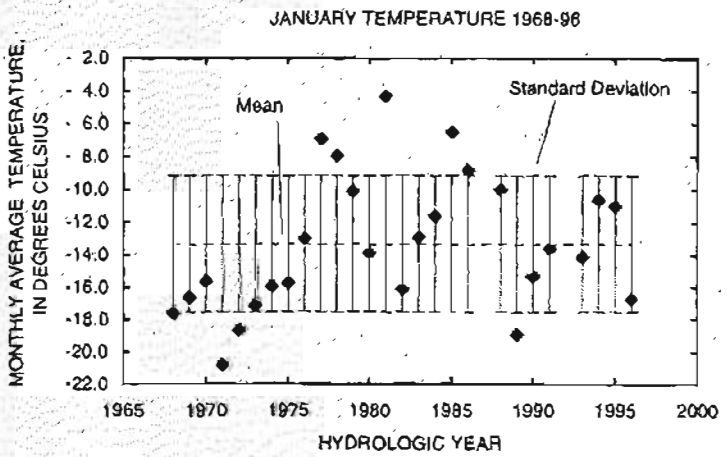


TEMPERATURE NOV 1968-96	
Mean	-10.6
Std. Dev.	3.0
Range	12.8
Minimum	-18.4
Maximum	-5.6
Count	29

Figure A6. Monthly average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.

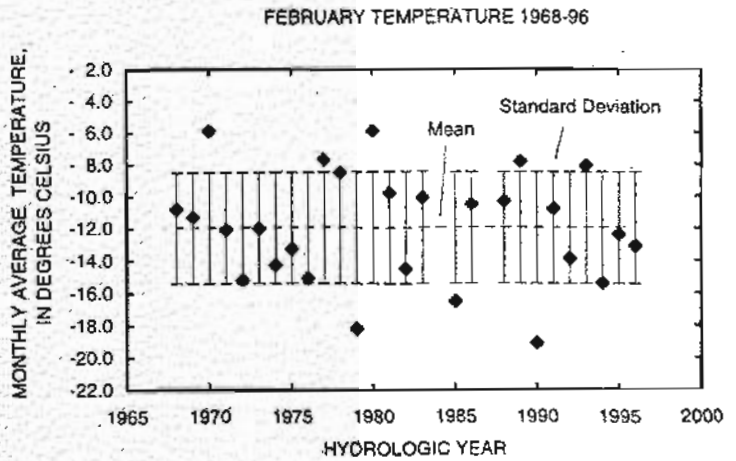


TEMPERATURE DEC 1968-96	
Mean	-12.0
Std. Dev.	2.6
Range	9.3
Minimum	-15.4
Maximum	-6.1
Count	26

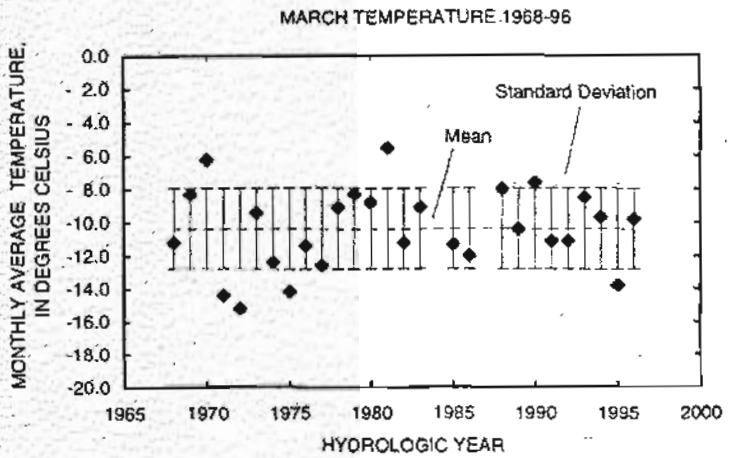


TEMPERATURE JAN 1968-96	
Mean	-13.3
Std. Dev.	4.2
Range	16.5
Minimum	-20.8
Maximum	-4.3
Count	27

Figure A6. Monthly average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

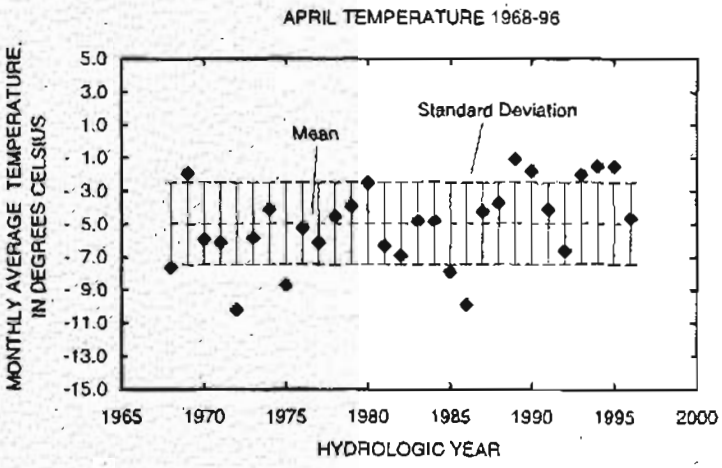


TEMPERATURE FEB 1968-96	
Mean	-11.9
Std. Dev.	3.5
Range	13.2
Minimum	-19.1
Maximum	-5.9
Count	27

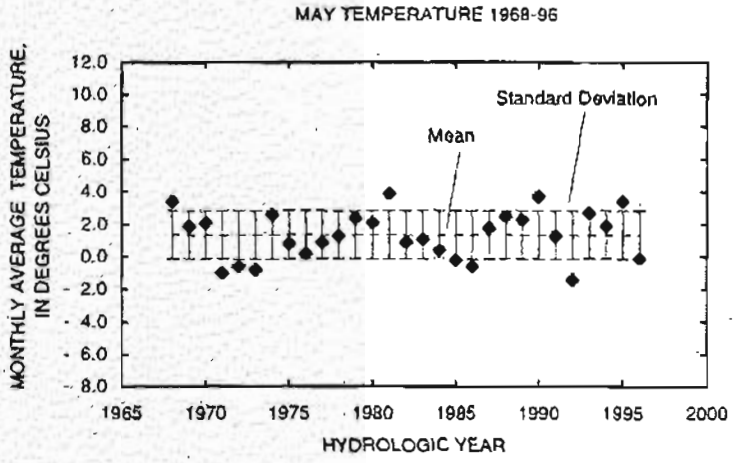


TEMPERATURE MAR 1968-96	
Mean	-10.4
Std. Dev.	2.4
Range	9.7
Minimum	-15.2
Maximum	-5.5
Count	27

Figure A6. Monthly average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

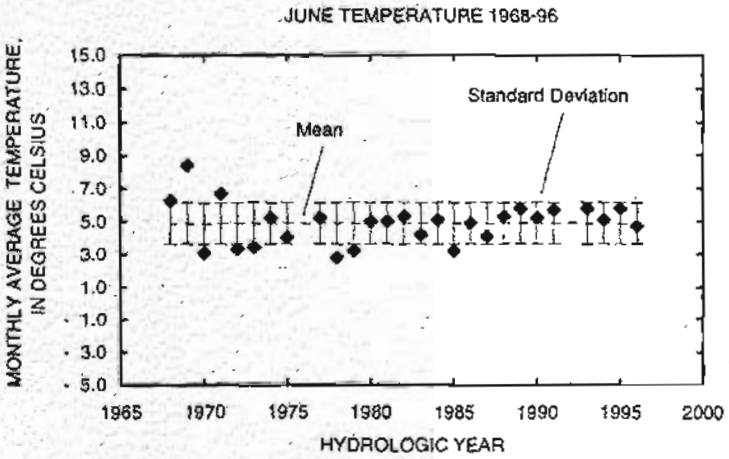


TEMPERATURE APR 1968-96	
Mean	-5.0
Std. Dev.	2.5
Range	9.1
Minimum	-10.2
Maximum	-1.1
Count	29

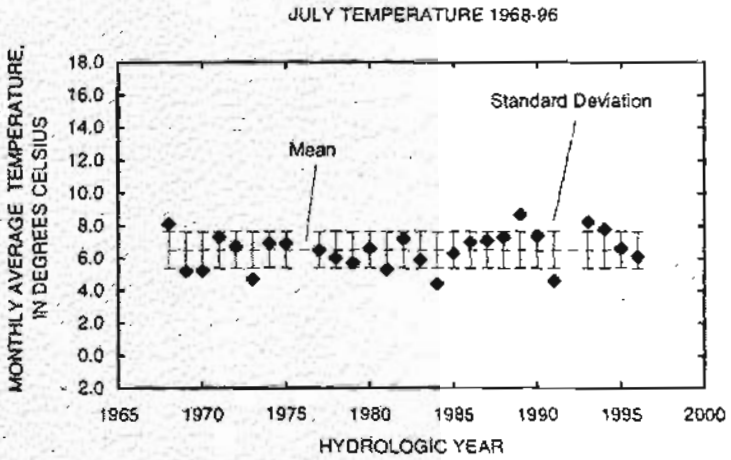


TEMPERATURE MAY 1968-96	
Mean	1.3
Std. Dev.	1.5
Range	5.3
Minimum	-1.4
Maximum	3.9
Count	29

Figure A6. Monthly average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years--Continued.

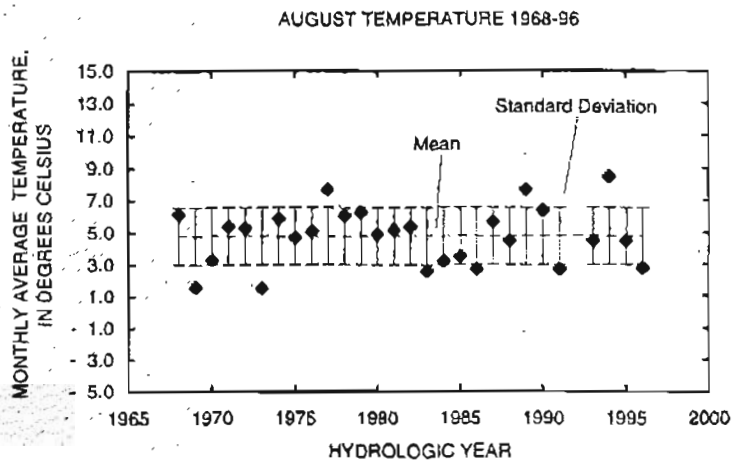


TEMPERATURE JUNE 1968-96	
Mean	4.9
Std. Dev.	1.3
Range	5.6
Minimum	2.8
Maximum	8.4
Count	27

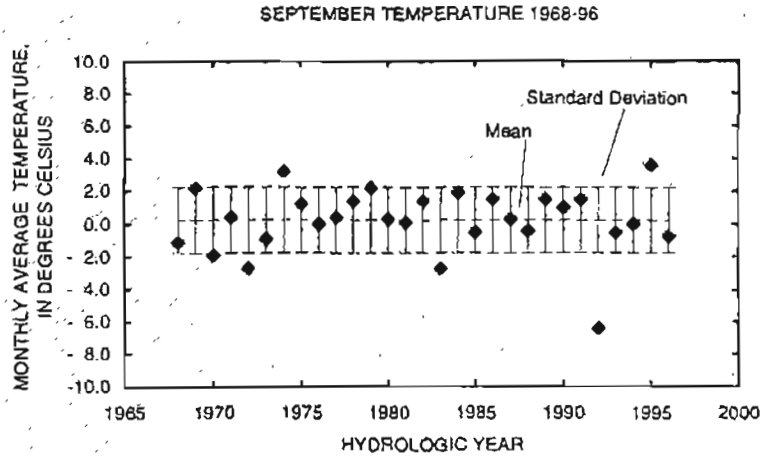


TEMPERATURE JULY 1968-96	
Mean	6.5
Std. Dev.	1.1
Range	4.3
Minimum	4.4
Maximum	8.7
Count	27

Figure A6. Monthly average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

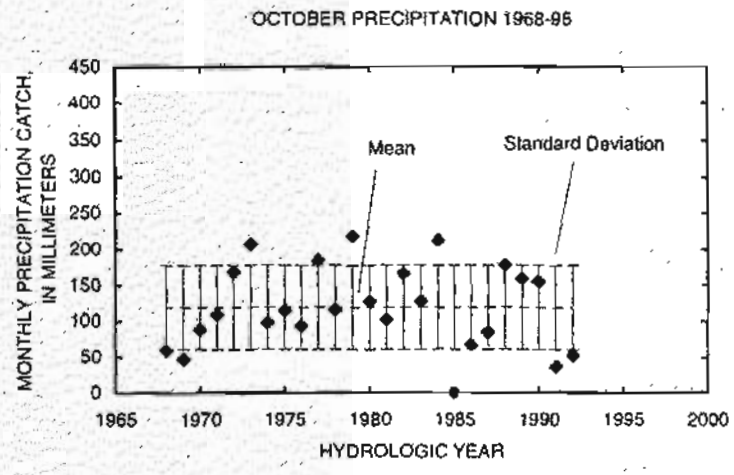


TEMPERATURE AUG 1968-96	
Mean	4.8
Std. Dev.	1.8
Range	7.0
Minimum	1.5
Maximum	8.5
Count	28

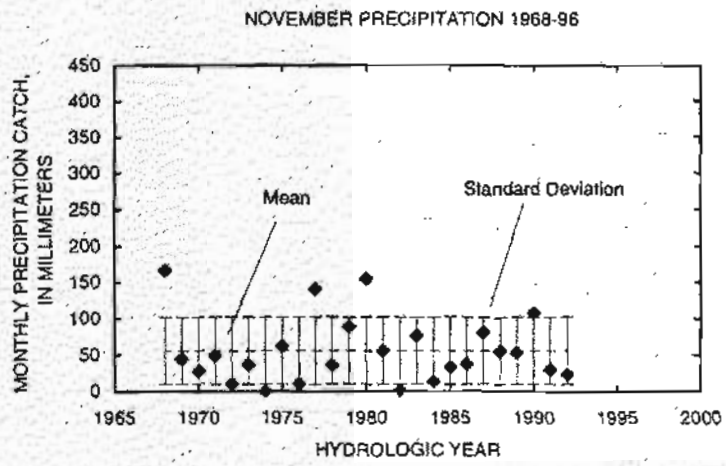


TEMPERATURE SEPT 1968-96	
Mean	0.2
Std. Dev.	2.0
Range	10.0
Minimum	-6.4
Maximum	3.6
Count	29

Figure A6. Monthly average air temperature at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

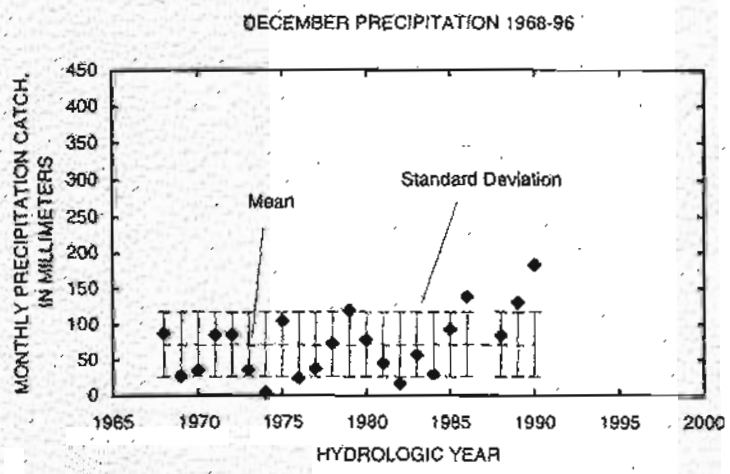


PRECIPITATION OCT 1968-96	
Mean	119
Std. Dev.	59
Range	218
Minimum	0
Maximum	218
Count	25

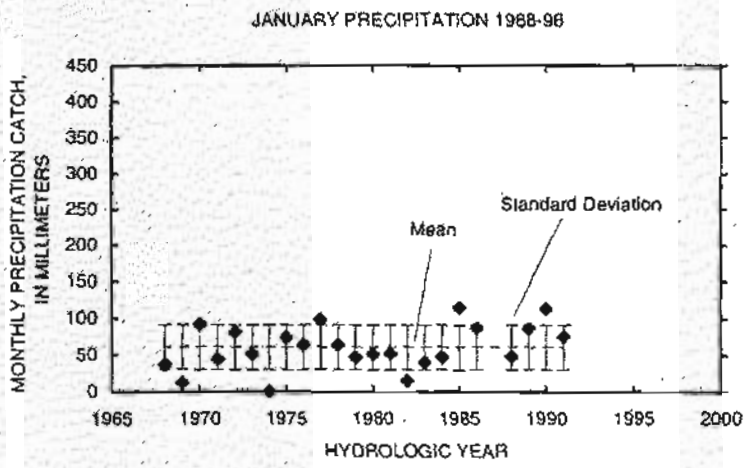


PRECIPITATION NOV 1968-96	
Mean	56
Std. Dev.	46
Range	167
Minimum	0
Maximum	167
Count	25

Figure A7. Monthly precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years.

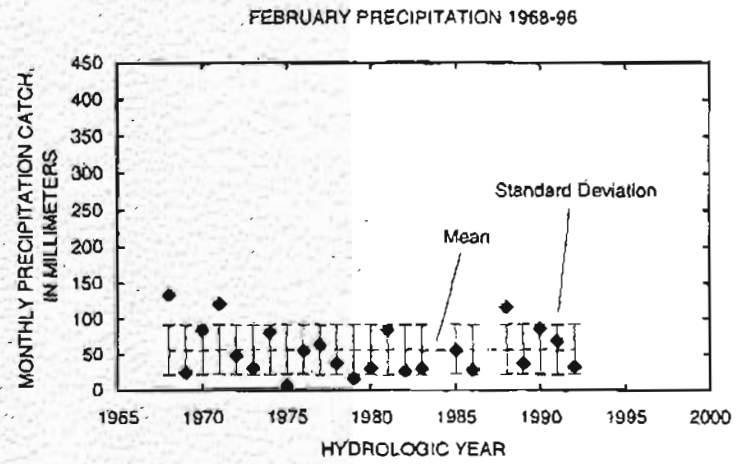


PRECIPITATION DEC 1968-96	
Mean	71
Std. Dev.	45
Range	180
Minimum	3
Maximum	183
Count	22

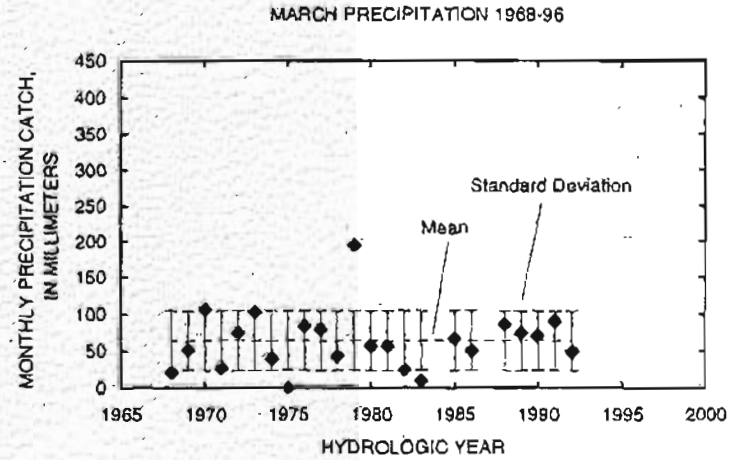


PRECIPITATION JAN 1968-96	
Mean	61
Std. Dev.	31
Range	115
Minimum	0
Maximum	115
Count	23

Figure A7. Monthly precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

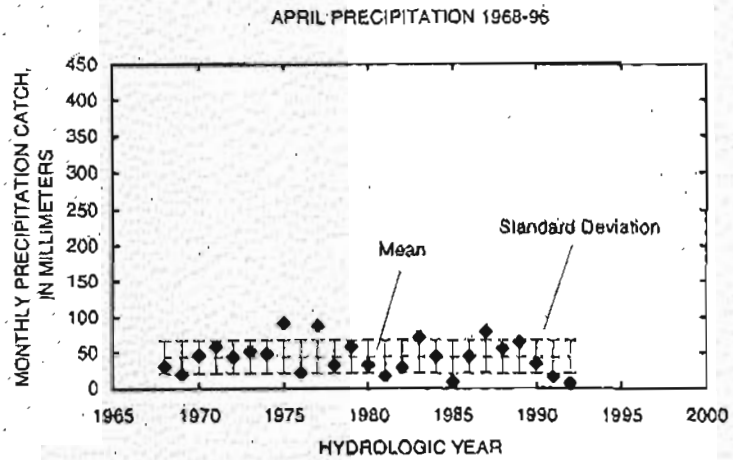


PRECIPITATION FEB 1968-96	
Mean	56
Std. Dev.	35
Range	127
Minimum	7
Maximum	134
Count	23

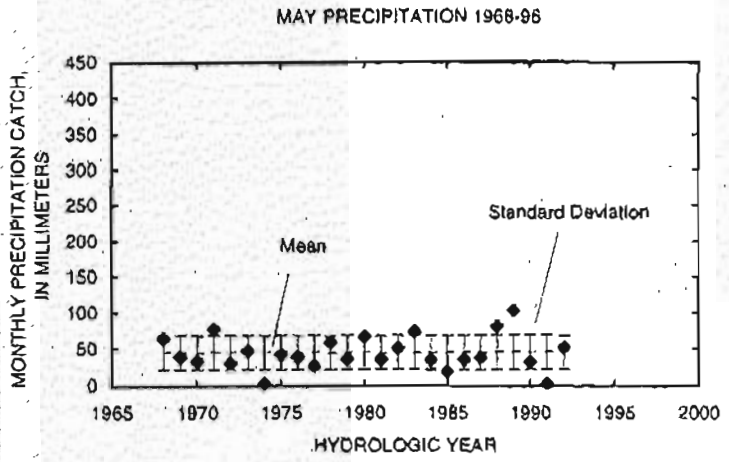


PRECIPITATION MAR 1968-96	
Mean	64
Std. Dev.	40
Range	195
Minimum	0
Maximum	195
Count	23

Figure A7. Monthly precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

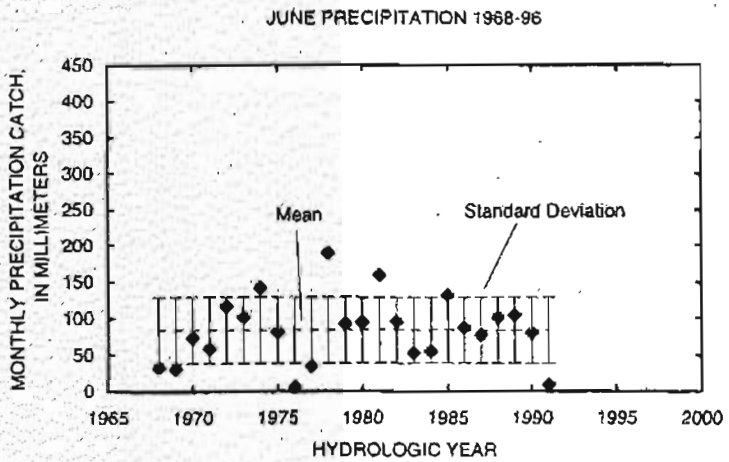


PRECIPITATION APR 1968-96	
Mean	44
Std. Dev.	24
Range	84
Minimum	8
Maximum	92
Count	25

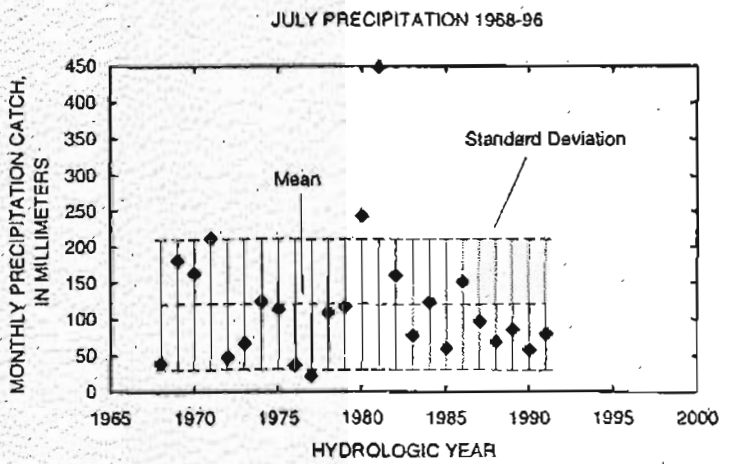


PRECIPITATION MAY 1968-96	
Mean	46
Std. Dev.	24
Range	101
Minimum	3
Maximum	104
Count	25

Figure A7. Monthly precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years–Continued.

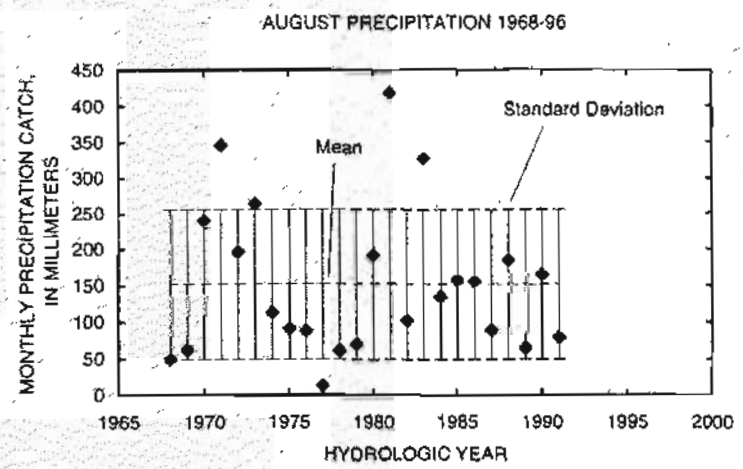


PRECIPITATION JUNE 1968-96	
Mean	84
Std. Dev.	45
Range	184
Minimum	6
Maximum	190
Count	24

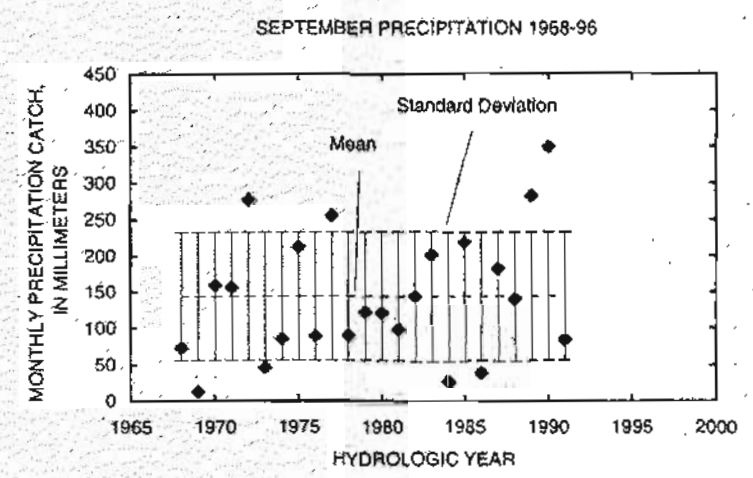


PRECIPITATION JULY 1968-96	
Mean	120
Std. Dev.	90
Range	426
Minimum	22
Maximum	448
Count	24

Figure A7. *Monthly precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years*--Continued.



PRECIPITATION AUG 1968-96	
Mean	152
Std. Dev.	103
Range	405
Minimum	13
Maximum	418
Count	24



PRECIPITATION SEPT 1968-96	
Mean	144
Std. Dev.	88
Range	336
Minimum	13
Maximum	349
Count	24

Figure A7. Monthly precipitation catch at Gulkana Glacier basin, 1,480 meters altitude, 1968-96 hydrologic years—Continued.

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years.

-89 follows

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

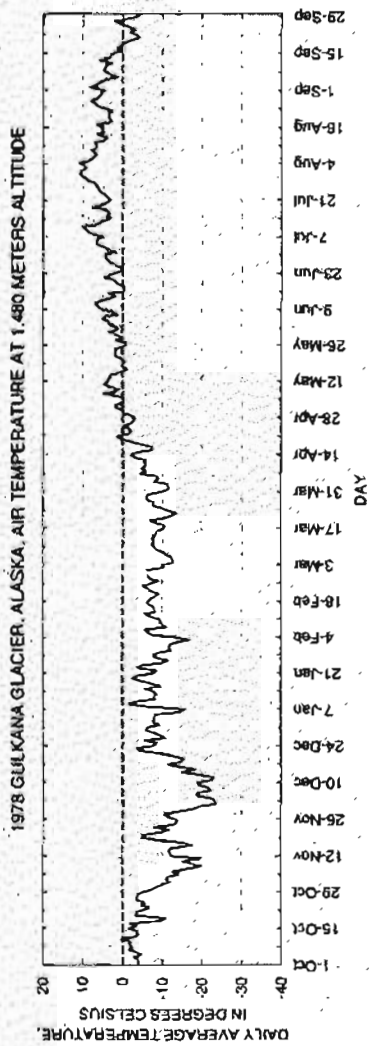
—as follows—

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-95 follows-

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-91 follows-



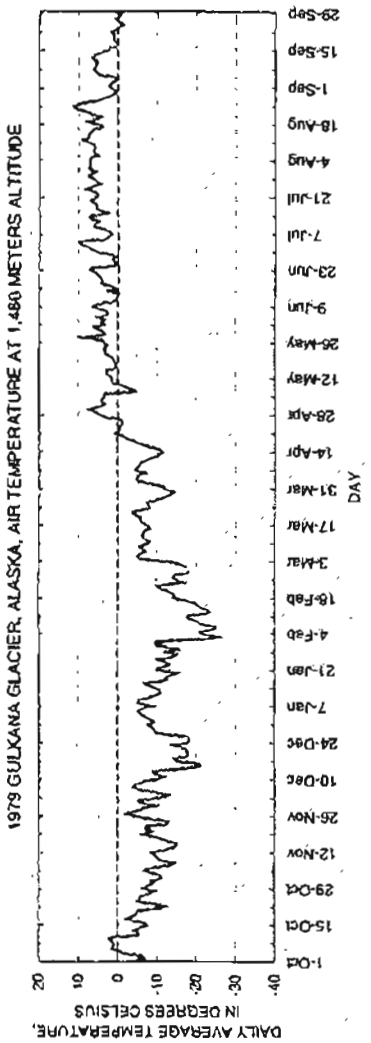


Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-99 FOLLOWS-

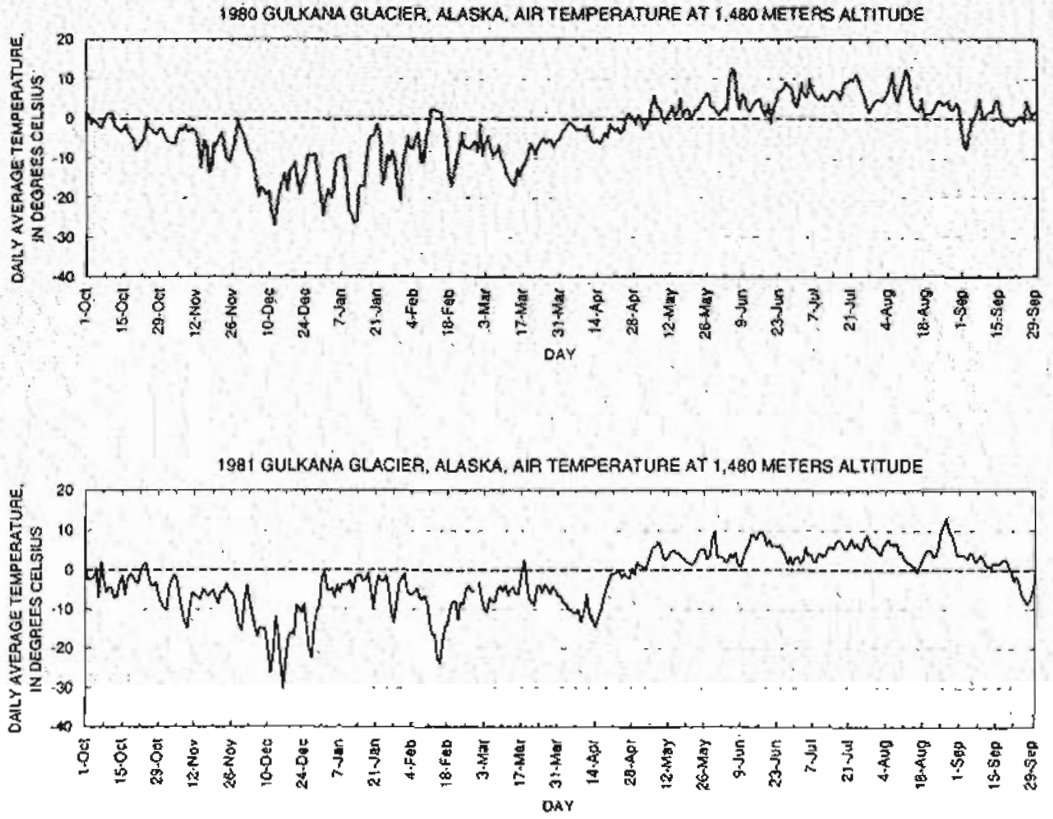


Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

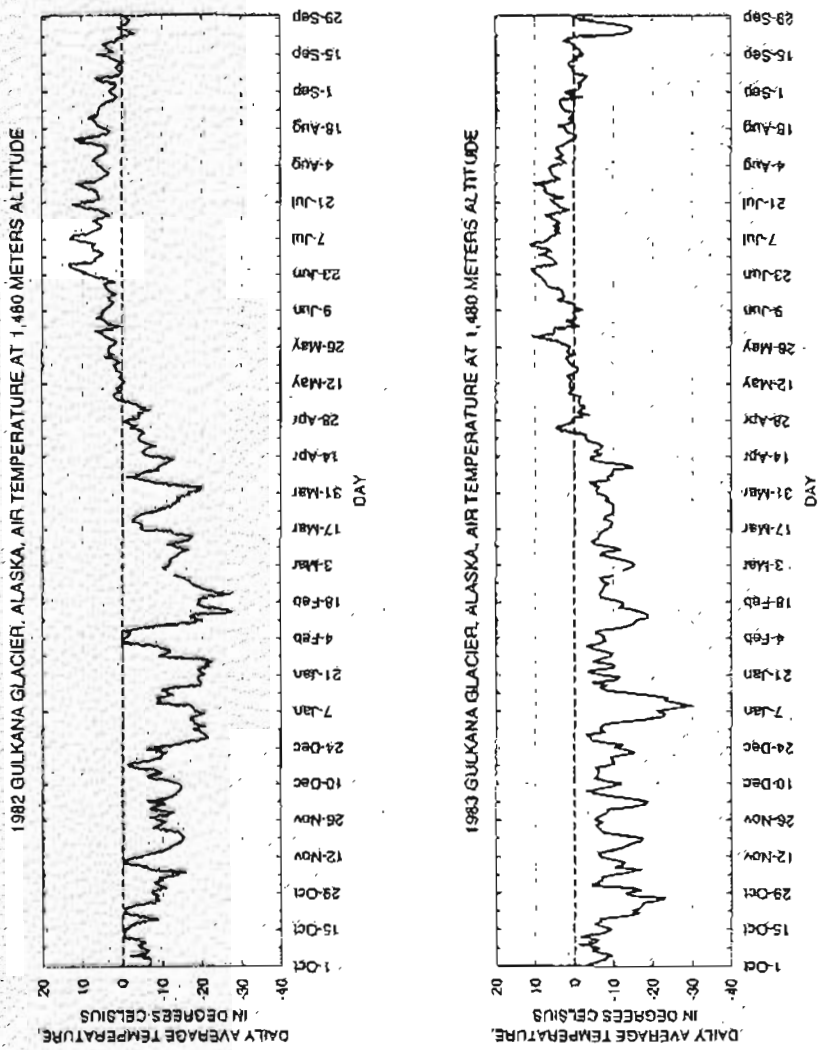


Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years—Continued.

-103 FOLLOWS-

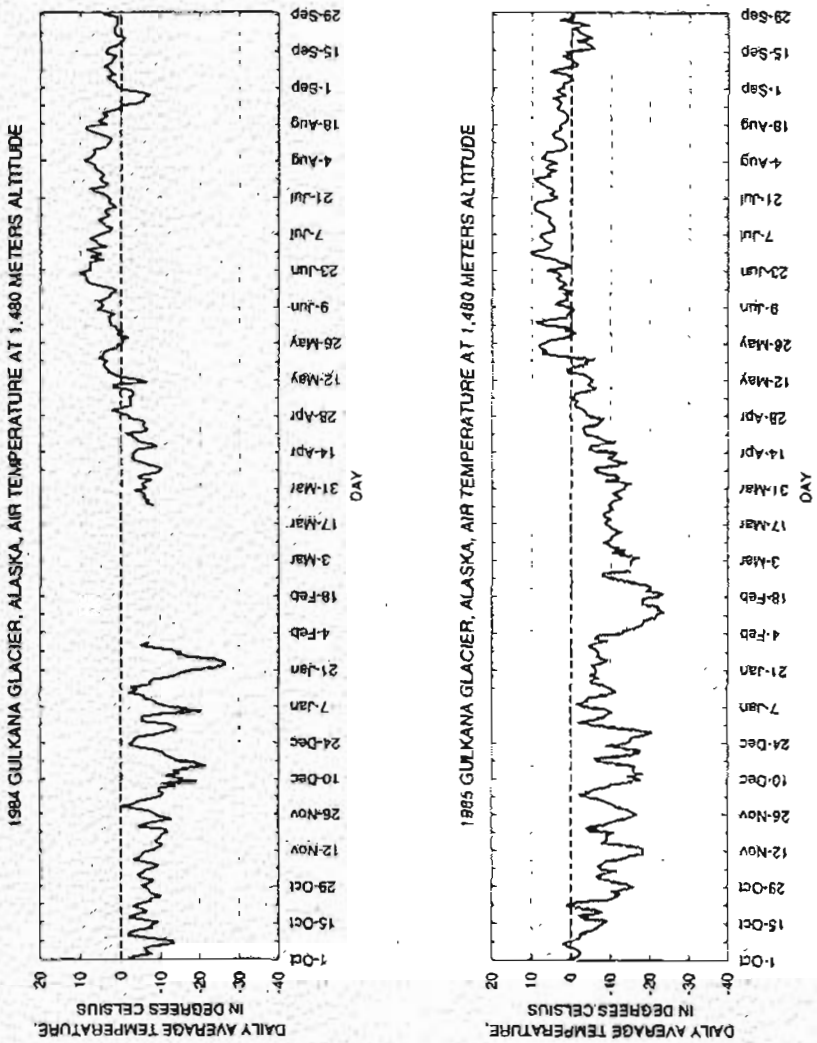


Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-105 FOLLOWS-

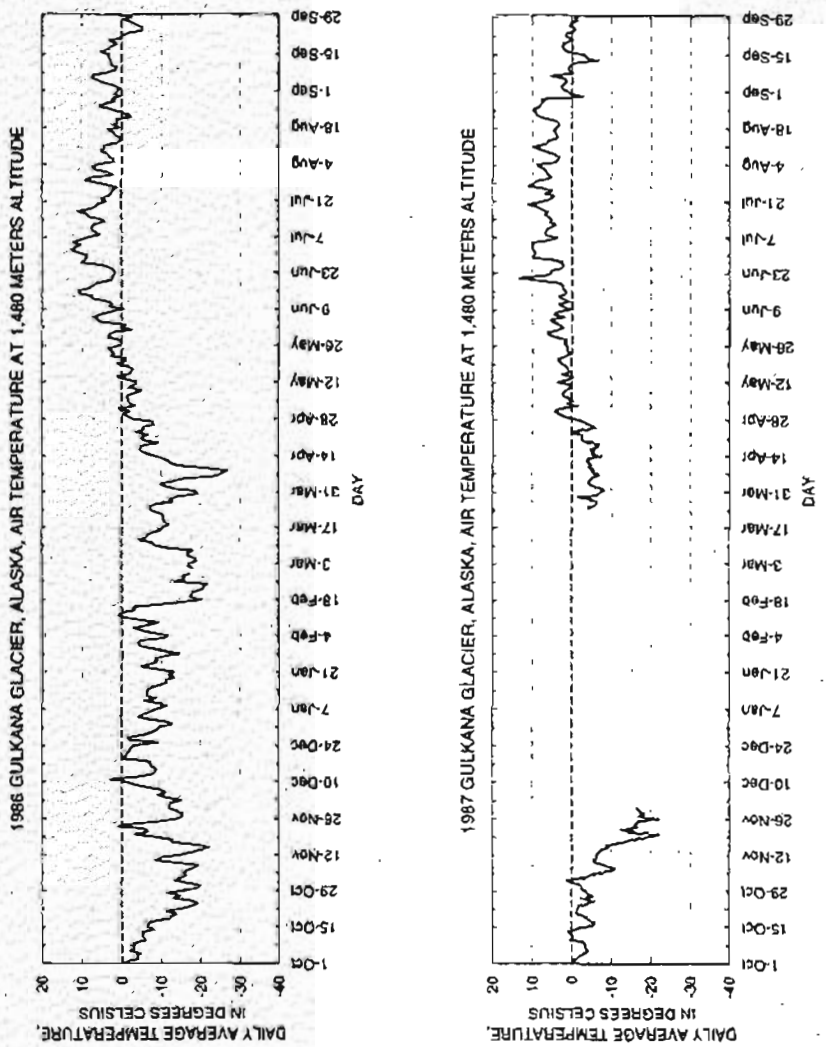
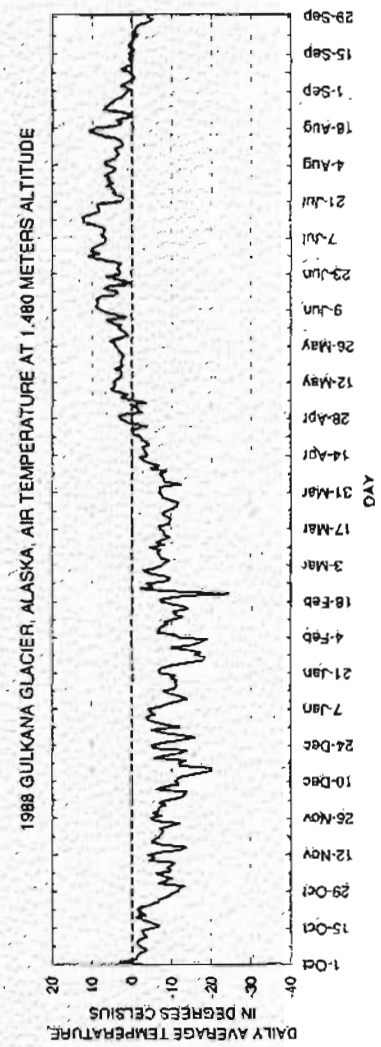


Figure A8.—Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years—Continued.

-107 follows-



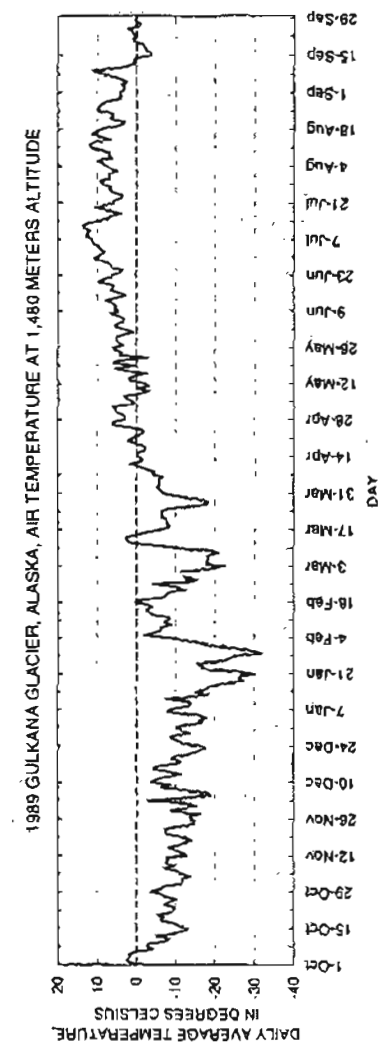


Figure A6. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-109 follows-

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-98 hydrologic years--Continued.

-113 follows-

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

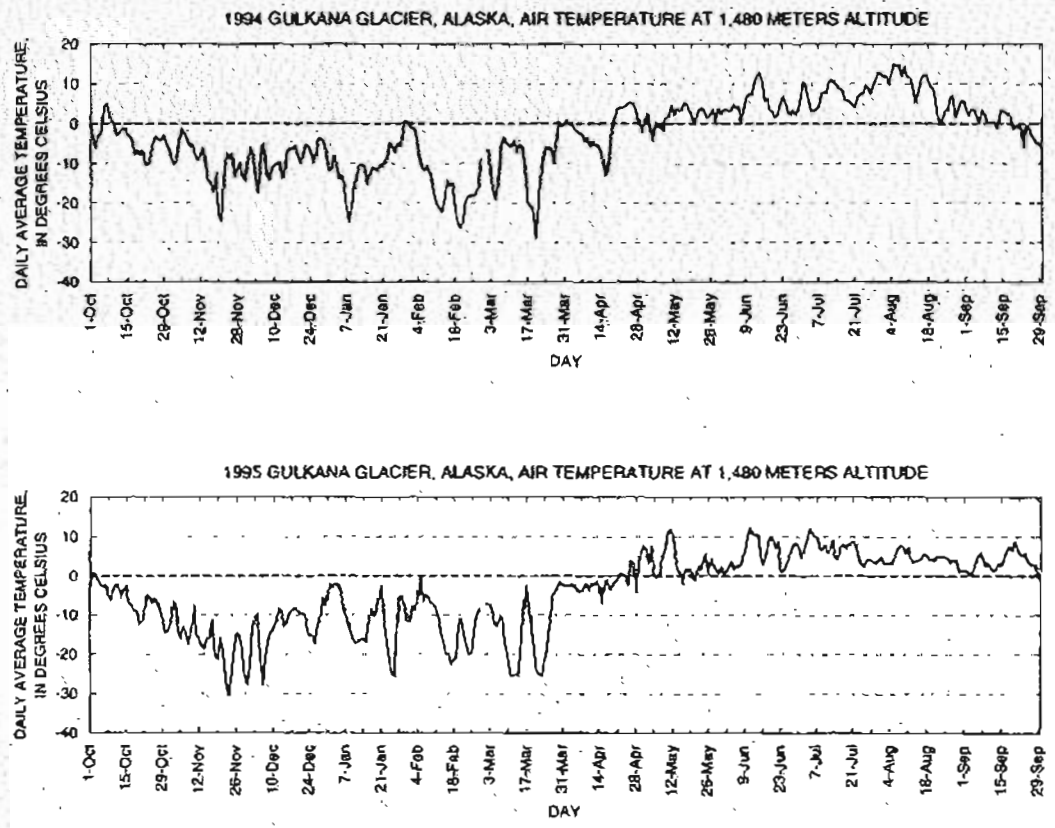


Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

Figure A8. Daily average air temperature at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

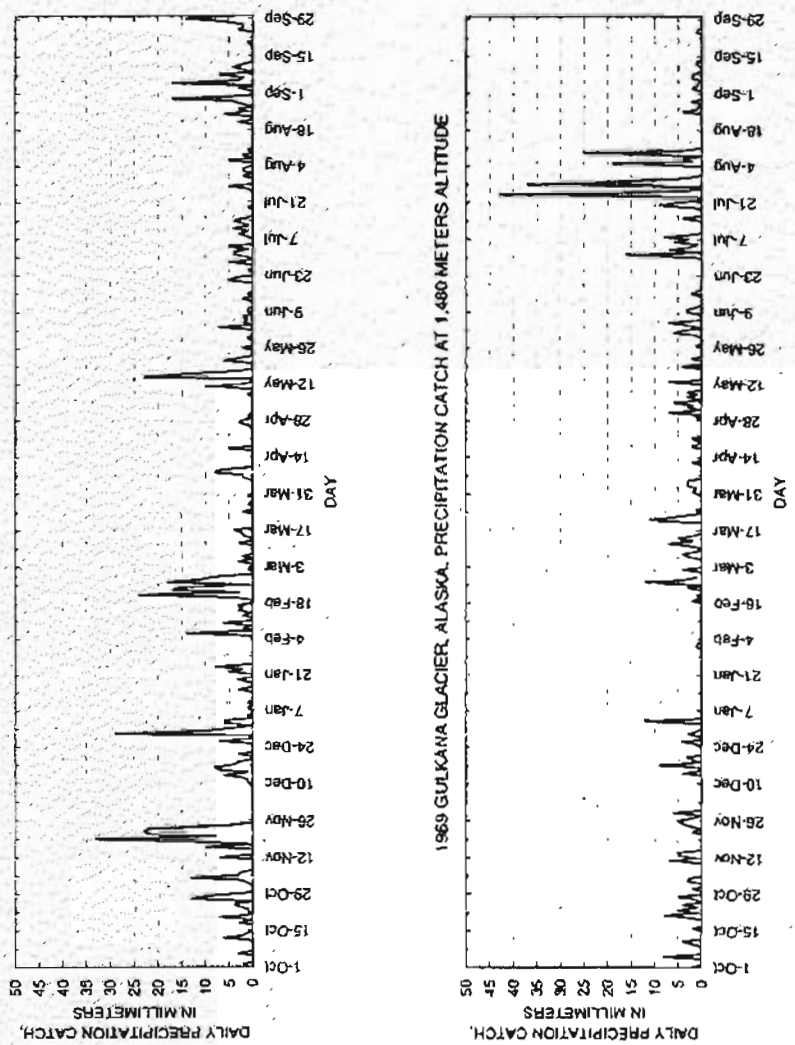


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years.

-119 follows-

Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

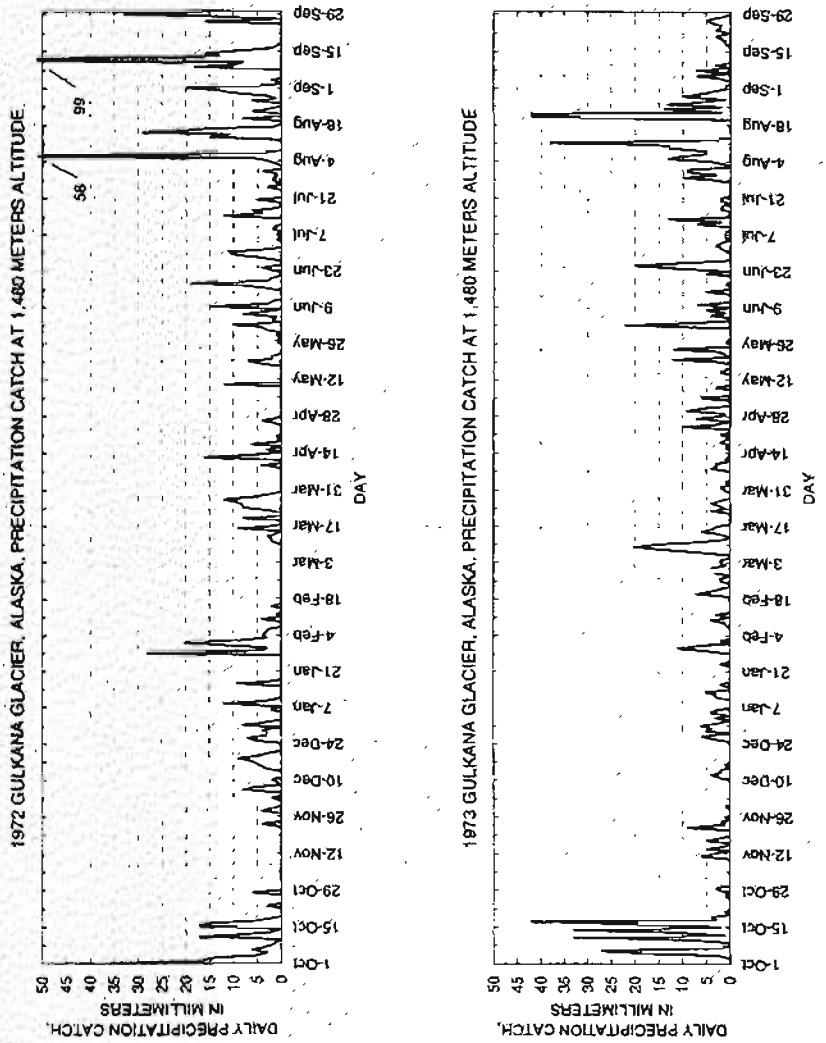


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

—123 follows—

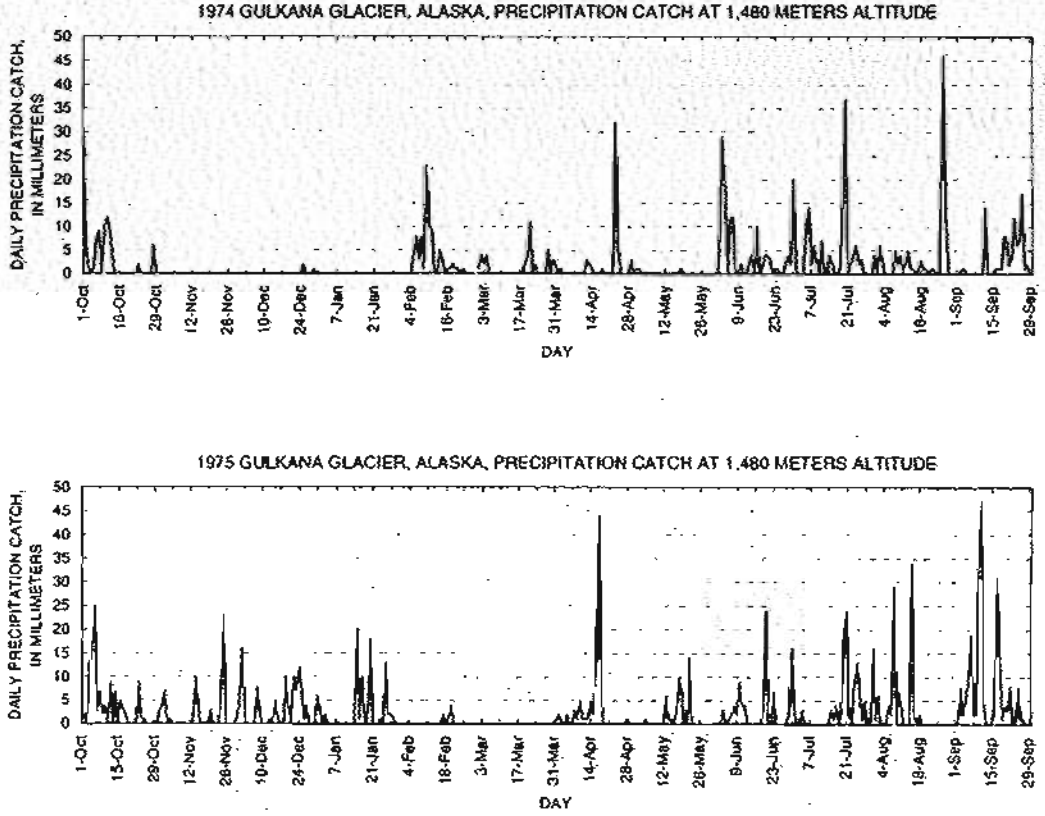
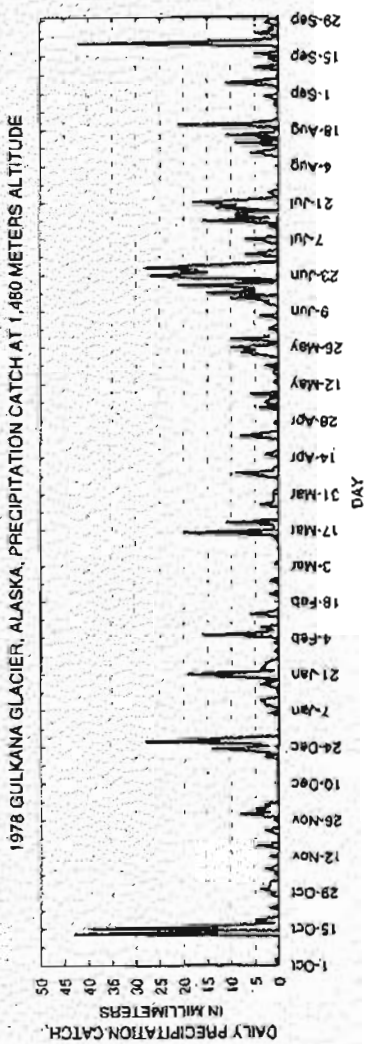


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-125 follows-

Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.



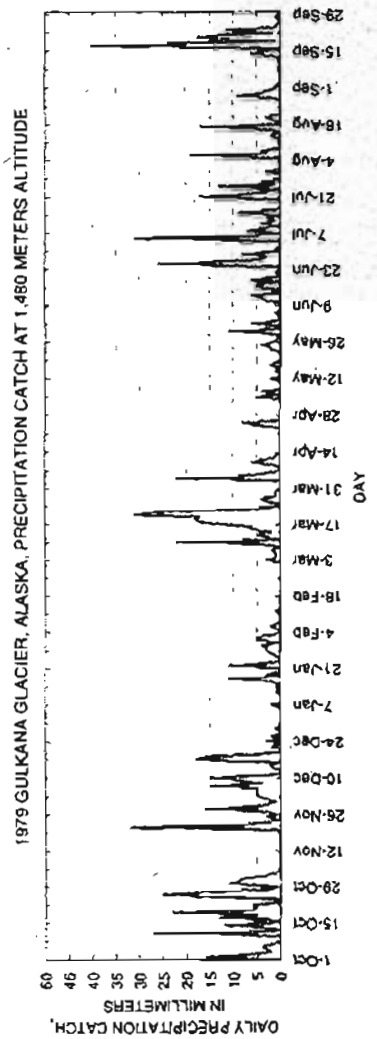


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-129 Follows-

Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1988-96 hydrologic years–Continued.

- 131 follows -

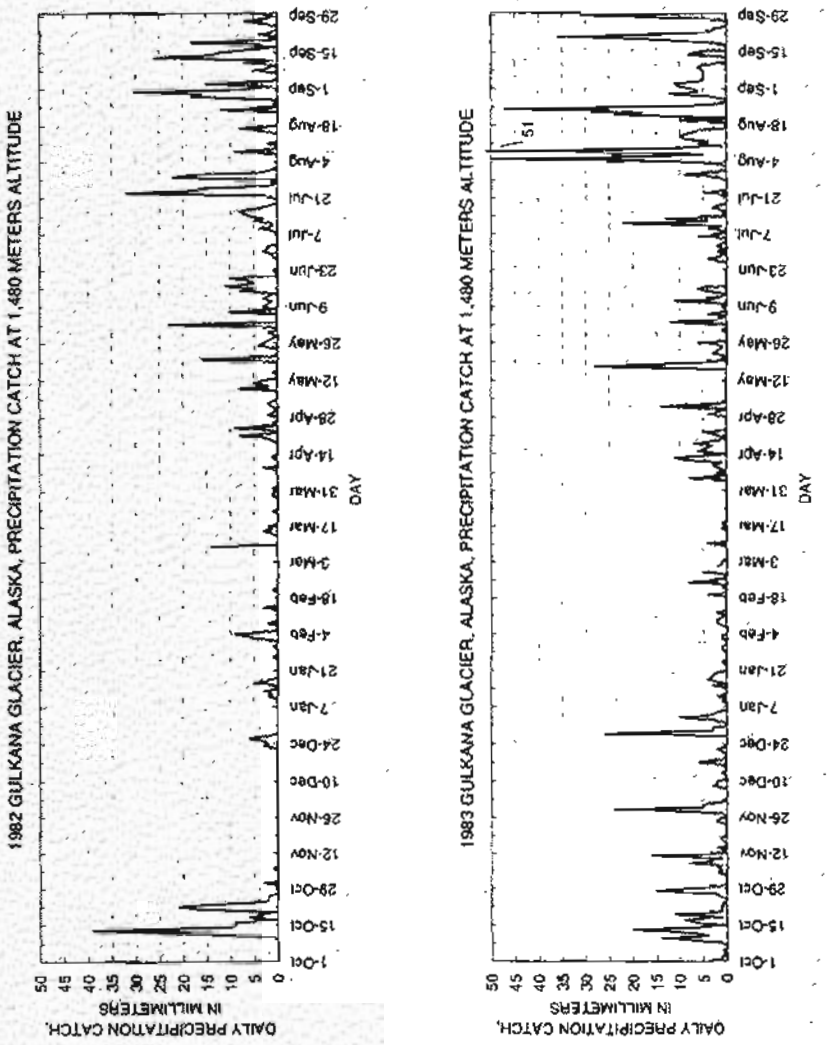
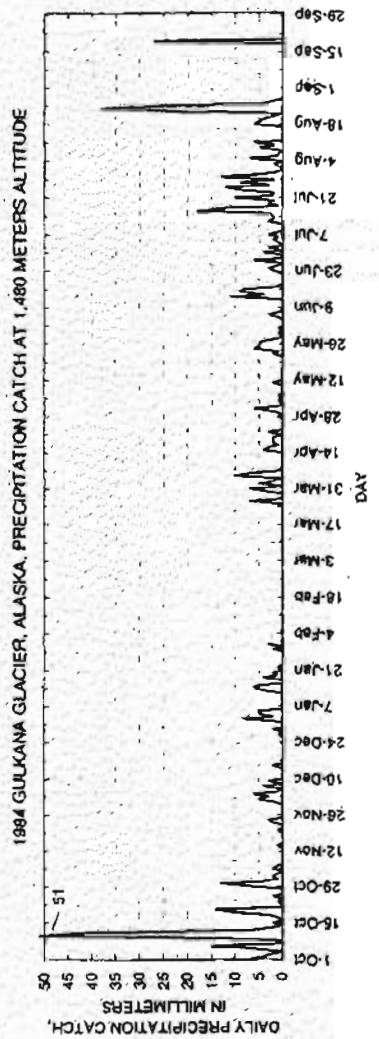


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

—133 follows—



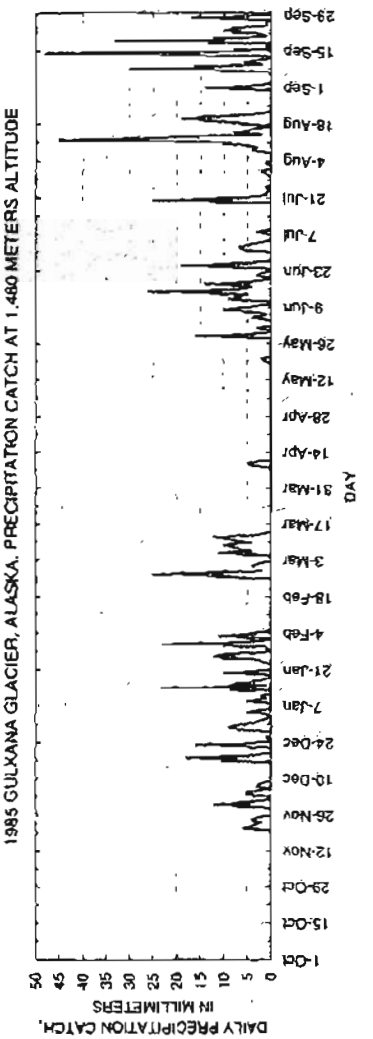


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

- 135 FOLLOWS -

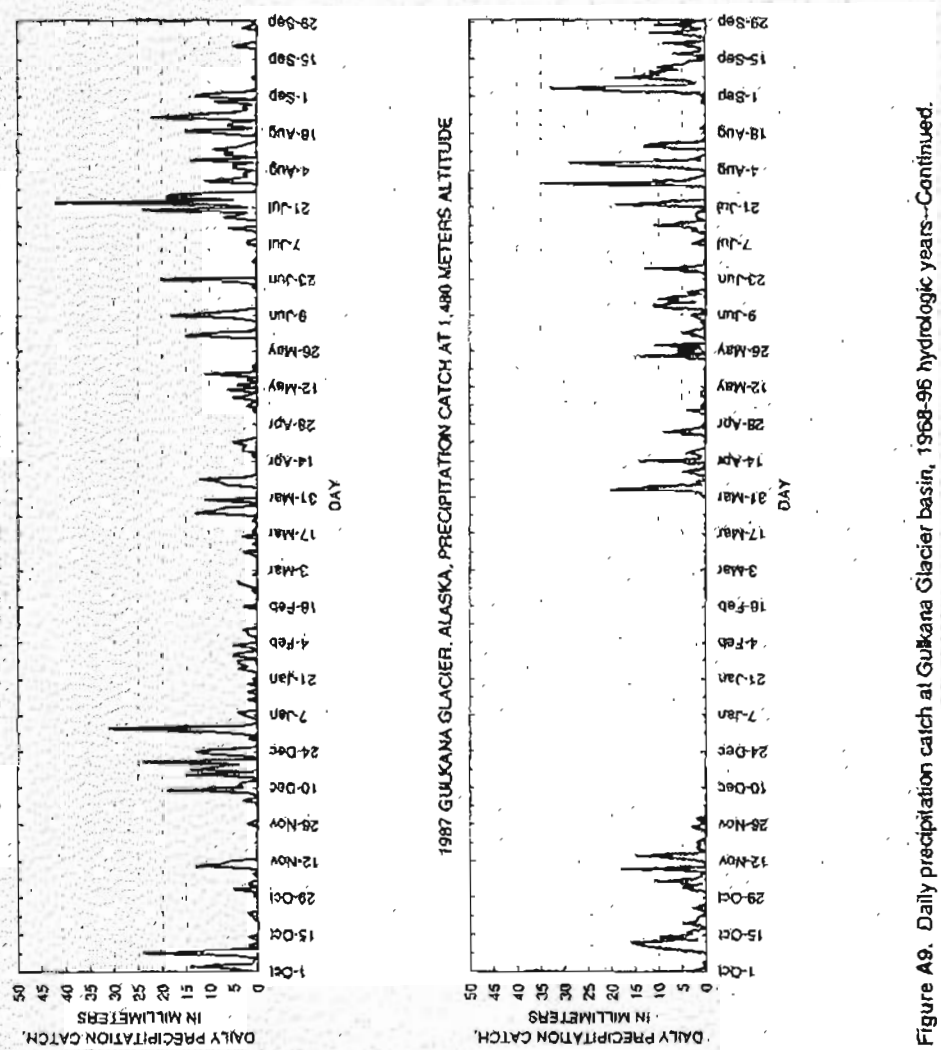


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-137 FOLLOWS-

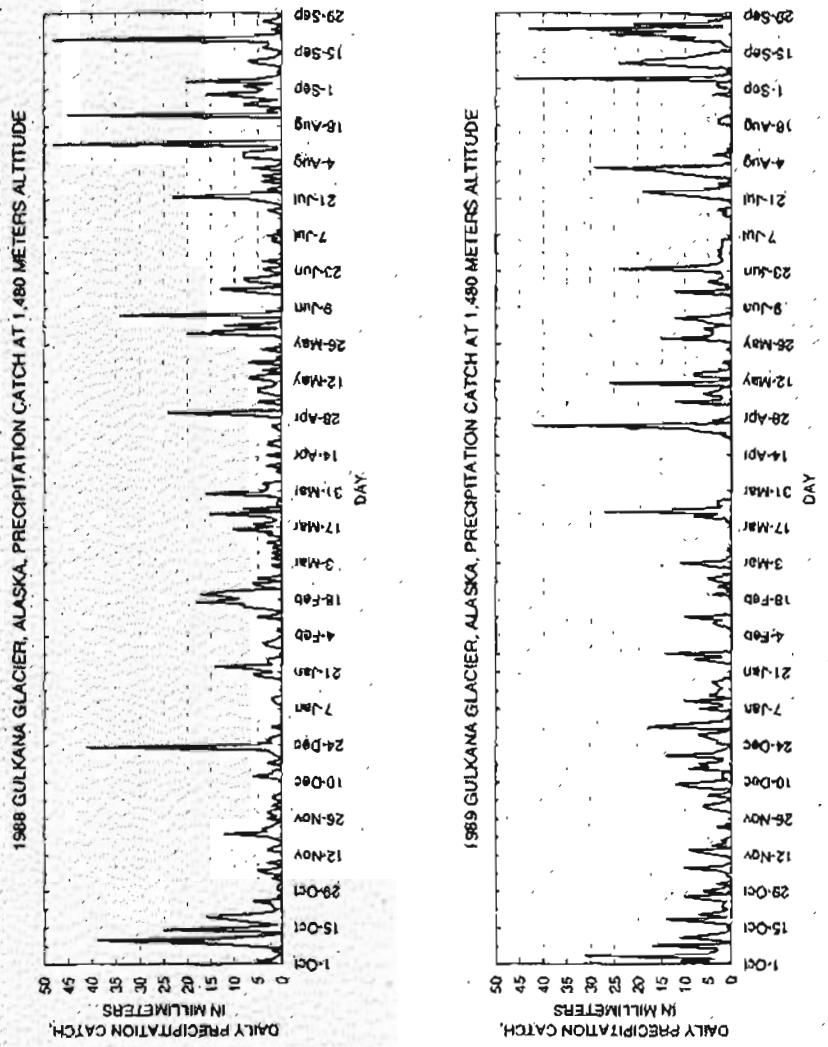


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-139 Follows-

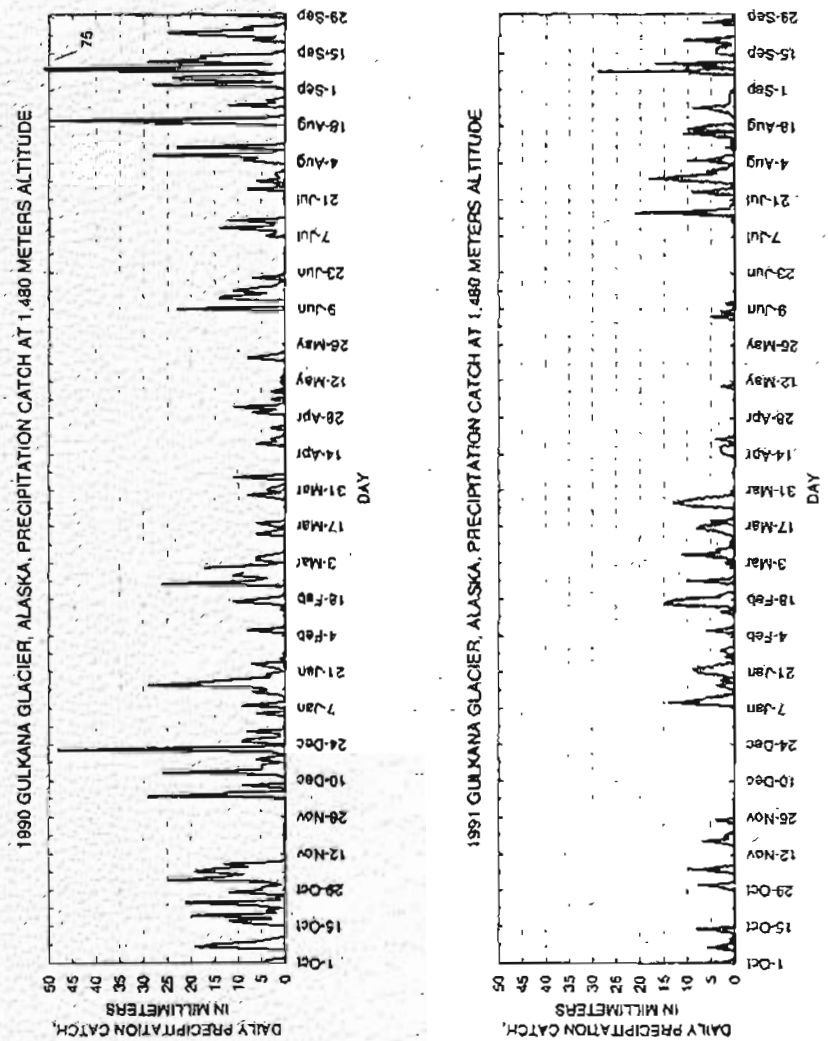


Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-141 follows-

Figure A9. Daily precipitation catch at Gulkana Glacier basin, 1968-96 hydrologic years--Continued.

-143 FOLLOWS-

APPENDIX B

Data Retrieval Information

Appendix B. Data Retrieval Information

The data in this report are available on the World Wide Web at http://www-water-ak.usgs.gov. A disk containing the data in this report is available from the District Chief at the address listed below. In the root directory on the disk there is an ASCII file named README.TXT. It says:

This text file contains an overview of the files available on this data disk.

Report title:
Air Temperature and Precipitation Data,
Gulkana Glacier Basin, Alaska, 1968-96
By Ben W. Kennedy, Lawrence R. Mayo, Dennis C. Trabant, *and* Rod S. March
U.S. GEOLOGICAL SURVEY Open-File Report 97-358

For additional information write to:

District Chief
U.S. Geological Survey
4230 University Drive, Suite 201
Anchorage, Alaska 99508-4664

This disk contains the 1968-96 daily average air temperature and precipitation-catch data from Gulkana Glacier basin. It is a 3.5-inch, 1.44 megabyte disk formatted with IBM PC operating system MS-DOS 6.0. Data tables are written in two formats: ASCII text and Lotus 123 version 2.01.WK1 spreadsheet format. The ASCII files are in a subdirectory named ***ASCII*** and the Lotus 123 files are in a subdirectory named ***Lotus 123***.

There are two daily data files, GGTEMP--daily temperature data and GGPRECIP--daily precipitation-catch data. Both files have identical formats. The data are formatted in columns by hydrologic year. Column one contains dates beginning with October 1, includes February 29, and ends with September 30. Columns 2 though 30 are labeled by year and contain data in ascending order for 1968 through 1996 hydrologic years, with data for 1996 being the last data column. Where data are missing the column is blank.

There are two summary data files, TABLE2--monthly and annual air temperature data and TABLE3--monthly and annual precipitation-catch data. Both files are identical in content and format to table 2 and table 3 presented in this report.

Lotus 123 file names	ASCII file names	File Description
GGTEMP.WK1	GGTEMP.TXT	Daily air temperature
GGPRECIP.WK1	GGPRECIP.TXT	Daily precipitation
TABLE2.WK1	TABLE2.TXT	Monthly & annual temperature
TABLE3.WK1	TABLE3.TXT	Monthly & annual precipitation