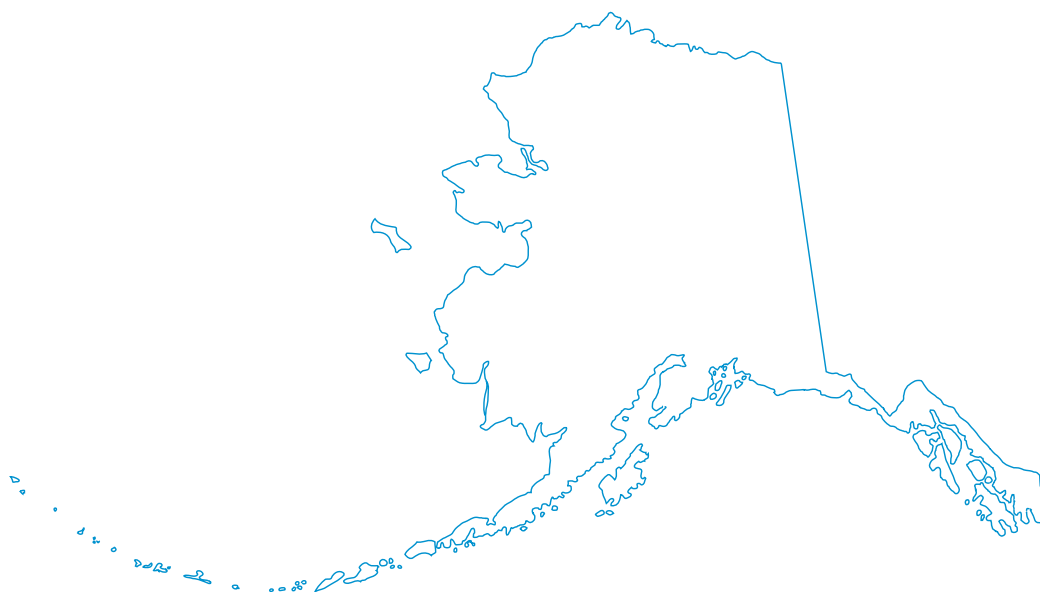


Water Resources Data Alaska Water Year 2003



Water-Data Report AK-03-1

U.S. Department of the Interior
U.S. Geological Survey



Prepared in cooperation with the
State of Alaska
and with other agencies

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

2003

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
														30	31					

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5					1	2	3	1	2	3	4	5	6	7
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30					

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U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Alaska Water Year 2003

D.F. Meyer, D.P. Bartu, J.D. Eash, W.A. Swenson

Water Data Report AK-03-1



Prepared in cooperation with the State of Alaska
and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

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See additional USGS information on water resources
of Alaska
on the World Wide Web at
<http://ak.water.usgs.gov>

PREFACE

This volume of the annual hydrologic data report of Alaska is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by state, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

The report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey (USGS) who collected, compiled, analyzed, verified, and organized the data, and who revised, edited, typed, illustrated, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. Most of the data were collected, computed, and processed from field offices. Chiefs-in-charge of the field offices are:

Dan Hess, Juneau (acting)
 Matt Schellekens, Fairbanks
 Ronald Rickman, Anchorage

The data were collected, computed, and processed by the following personnel:

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R.L. Glass			

** Volunteer

This report was prepared in cooperation with the State of Alaska and with other agencies under the general supervision of Steven A. Frenzel, Chief, Water Resources Office, and William Sexton, Regional Hydrologist, Western Region.

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FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

Note--Data for partial-record stations and miscellaneous sites for both surface-water quantity and quality are published in separate sections of the data report. See end of this list for page numbers for these sections.

[Letters after station name designate type of data: (d) discharge, (c) chemical, (t) water temperature, (s) sediment, (e) elevation, gage height, (b) biological or contents]

	Station number
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Unuk River Below Blue River Near Wrangell (t, c)	15015595 . . . 52
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GROUND-WATER WELLS, BY HYDROLOGIC SUBREGION,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

GROUND-WATER LEVELS

SOUTHEAST ALASKA

Juneau

WELL 582136134344802. Local number, CD04006631ACBC1015	395
WELL 582146134351701. Local number, CD04006631BBDD1016	395
WELL 582147134351401. Local number, CD04006631BBDB1017	396
WELL 582154134350501. Local number, CD04006630CDCB1027	396
WELL 582156134351701. Local number, CD04006631BBBA1018	397
WELL 582158134352001. Local number, CD04006630CCCD2017	397
WELL 582203134351601. Local number, CD04006630CCDB1028	398
WELL 582203134351701. Local number, CD04006630CCBD3015	398
WELL 582203134351901. Local number, CD04006630CCBD2015	399
WELL 582206134351401. Local number, CD04006630CCAC1029	399
WELL 582208134351201. Local number, CD04006630CCAB1030	400
WELL 582208134352601. Local number, CD04006630CCBB1031	400
WELL 582215134350501. Local number, CD04006630CBAD1032	401
WELL 582240134344501. Local number, CD04006630BADA2033	401
WELL 582240134352901. Local number, CD04006630BBCB1036	402
WELL 582306134344001. Local number CD04006619DBCB1056	402
WELL 582314134344801. Local number, CD04006619BDDD1055	403
WELL 582314134351201. Local number, CD04006619BCDD2020	404
WELL 582322134341001. Local number, CD04006619ACAB1050	405
WELL 582326134341901. Local number, CD04006619ADBA1011	405
WELL 582359134352103. Local number, CD04006618CBCA3019 85177	406

SOUTH-CENTRAL ALASKA

Municipality of Anchorage

WELL 611725149335401. Local number, SB01400223BCCD1003	407
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YUKON ALASKA

Fairbanks North Star Borough

WELL 644321147163801. Local number, FD00200223DDBA1003	408
WELL 644331147183901. Local number, FD00200222DABD1006	409
WELL 644345147172101. Local number, FD00200223BDAD1002	410
WELL 644401147193801. Local number, FD00200222BABA1005	411
WELL 644400147151501. Local number, FD00200224ABBB1001 51659	412
WELL 644402147132801. Local number, FD00200319BAAB1001	413
WELL 644402147150401. Local number, FD00200224ABBA1002	414
WELL 644402147182601. Local number, FD00200222AAAA1004	415
WELL 644403147112901. Local number, FD00200317CDDD1005	416
WELL 644408147162001. Local number, FD00200214DDDA1003	417
WELL 644423147124601. Local number, FD00200318DABC1006	418
WELL 644435147141901. Local number, FD00200213ADAD1007	419

YUKON ALASKA—Continued

Fairbanks North Star Borough—Continued

WELL 644435147141902. Local number, FD00200213ADAD2007	420
WELL 644435147172001. Local number, FD00200214ACBC1002	421
WELL 644444147143901. Local number, FD00200213AACD1005	422
WELL 644446147120901. Local number, FD00200317BBCA1001	423
WELL 644450147131201. Local number, FD00200318ABBD1005	424
WELL 644454147151701. Local number, FD00200213ABBB1006	425
WELL 644528147131201. Local number, FD00200307ACBD1001 51660.....	426
WELL 644531147130801. Local number, FD00200307ACBA1007	427
WELL 644547147141801. Local number, FD00200306CCCC1002	428
WELL 644603147131401. Local number, FD00200306DBCA1001	429
WELL 644603147151801. Local number, FD00200201DBCB1002	430
WELL 645434147385101. Local number, FB00100113DDBC2001 50673.....	431

Anaktuvuk Pass

WELL 680838151434901. Local number, UB01500218CCDC1001	432
WELL 680832151434301. Local number, UC01500217BBDA1001	432
WELL 680809151443101. Local number, UA01500219ABAB1001	433
WELL 680805151443001. Local number, UA01500219ABCC1001.....	433
WELL 680750151450501. Local number, UA01500219CBDC1001.....	434
WELL 680737151454701. Local number, UC01500219ABCC1001.....	434
WELL 680735151453901. Local number, UC01500219ACAB1001.....	435

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Alaska have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Short-term, seasonal, and fragmented records for data collected at 190 sites in Alaska west of 141 degrees longitude during water years 1906-14 have not been entered into NWIS and are not included in this list. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only)]

* Currently operated as a crest-stage partial-record station

Discontinued surface-water discharge or stage-only stations

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTHEAST ALASKA			
Salmon River near Hyder (d)	15008000	a94	1963-73
Davis River near Hyder (d)	15010000	a80	1930-40
Red River near Metlakatla (d)	15011500	45.3	1963-78
White Creek near Ketchikan (d)	15011870	2.70	1977-84
Keta River near Ketchikan (d)	15011880	74.2	1977-84
Blossom River near Ketchikan (d)	15011894	68.1	1981-84
Winstanley Creek near Ketchikan (d)	15012000	15.5	1936-38 1947-75
Punchbowl Lake Outlet near Ketchikan (d)	15014000	a12	1924-30
Klahini River near Bell Island (d)	15015600	58.0	1967-73
Short Creek near Bell Island at Short Bay (d)	15016000	a20	1922-26
Shelokum Lake Outlet near Bell Island (d)	15018000	15.6	b1915-25
Tyee Creek near Wrangell (d)	15020000	ar15.2	c1922-27
Tyee Creek at Mouth near Wrangell (d)	15020100	16.1	1963-69
East Fork Bradfield River near Wrangell (d)	15020500	63.3	1979-81
Mill Creek near Wrangell (d)	15024000	a37	1915-17 c1923-28
Goat Creek near Wrangell (d)	15024750	17.3	1976-86
Cascade Creek near Petersburg (d)	15026000	23.0	1918-29 1947-73
Scenery Creek near Petersburg (d)	15028000	30.0	1949-52
Farragut River near Petersburg (d)	15028300	151	1977-93
Sweetheart Falls Creek near Juneau (d)	15030000	r36.3	b1915-27
Long Lake near Juneau (e)	15031700	30.2	1965-75
Long Lake Outlet near Juneau (d)	15032000	30.2	1913-16
Long River near Juneau (d)	15034000	32.5	1916-24 b1927-33 1952-68 R1969-73
Speel River near Juneau (d)	15036000	226	1916-18 1960-75
Crater Creek near Juneau (d)	15038000	11.4	b1913-21 c1923-24 1927-33
Carlson Creek at Sunny Cove near Juneau (d)	15042000	22.3	c1914 b1916-21

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTHEAST ALASKA—Continued			
Carlson Creek near Juneau (d)	15044000	24.3	1951-61
Grindstone Creek near Juneau (d)	15046000	13.75	1916-21
Sheep Creek near Juneau (d)	15048000	4.57	1911-14 1916-21 1947-73
Gold Creek near Juneau (d)**	15049900	8.41	1984-97
Salmon Creek above Canyon Mouth near Juneau (d)	15051008	9.50	R1982-90
Lemon Creek near Mouth near Juneau (d)	15052009	22.9	1983-86
Montana Creek near Auke Bay (d)	15052800*	15.5	1965-75 1983-87
Lake Creek at Auke Bay (d)	15053800	2.50	1964-73
Auke Creek at Auke Bay (d)	15054000	3.96	1947-50 1962-75
Herbert River near Auke Bay (d)	15054200	56.9	1967-71
Bridget Cove Tributary near Auke Bay (d)	15054600	0.95	1971-73
Davies Creek near Auke Bay (d)	15054990	15.2	1970-72
Sherman Creek at Comet (d)	15056000	3.65	1914-17
Dayebas Creek near Haines (d)	15056070	9.33	1980-81
Goat Lake Outlet near Skagway (d)	15056095	2.92	1991-97
Skagway River at Skagway (d)	15056100	145	1964-86
West Creek near Skagway (d)	15056200	43.2	1962-77
Taiya River near Skagway (d)	15056210*	179	1970-78
Upper Chilkoot Lake Outlet near Haines (d)	15056280	4.59	1993-97
Chilkat River at Gorge near Klukwan (d)	15056400	190	1962-68
Chilkat River near Klukwan (d)	15056500	760	1959-61
Klehini River near Klukwan (d)	15056560	284	1982-93
Kahtaheena River near Gustavus	15057590	10.7	1998-2001
Purple Lake Outlet near Metlakatla (d)	15058000	6.67	1947-56
Whipple Creek near Ward Cove (d)	15059500	5.29	1968-80
Perseverance Creek near Wacker (d)	15060000	2.81	b1932-39 1947-69
Ward Creek near Wacker (d)	15062000	14.0	1949-53 R1954-58
Ketchikan Creek at Ketchikan (d)	15064000	13.5	R1910-12 bR1915-20 R1965-67
Beaver Falls Creek near Ketchikan (d)	15066000	5.8	c1917 1920-26 1928-32
Upper Mahoney Lake Outlet near Ketchikan (d)	15067900	2.03	1977-89

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTHEAST ALASKA—Continued			
Mahoney Creek near Ketchikan (d)	15068000	5.70	b1920-34 1948-58 1978-81
Swan Lake (Falls Creek) near Ketchikan (d)	15070000#	36.5	b1916-34 1947-59
Ella Creek near Ketchikan (d)	15074000	19.7	1928-38 1947-58
Manzanita Creek near Ketchikan (d)	15076000	33.9	1928-37 1947-67
Grace Creek near Ketchikan (d)	15078000	30.2	1928-37 1964-69
Orchard Creek near Bell Island (d)	15080000	a59	1915-27
Traitors River near Bell Island (d)	15080500	20.8	1964-68
Staney Creek near Craig (d)	15081500	51.6	1965-81
Bonnie Creek near Klawock (d)	15081510	2.72	1981
Black Bear Lake Outlet near Klawock (d)	15081580	1.82	1980-91
Klawak River near Klawock (d)	15081620	46.1	1977
North Branch Trocadero Creek near Hydaburg (d)	15081800	17.4	1967-73
Reynolds Creek near Hydaburg (d)	15082000	a5.7	1951-56
Perkins Creek near Metlakatla (d)	15083500	3.38	1976-93
Myrtle Creek at Niblack (d)	15084000	--	1917-21
Saltery Creek near Kasaan (d)	15085000	5.53	1962-64
Cabin Creek near Kasaan (d)	15085300	8.83	1962-64
Virginia Creek near Kasaan (d)	15085400	3.08	1962-64
Indian Creek near Hollis (d)	15085600	8.82	1949-64
Harris River near Hollis (d)	15085700	28.7	1949-64
Maybeso Creek at Hollis (d)	15085800	15.1	1949-63
Wolf Lake Outlet near Hollis (d)	15085900	1.64	1995-98
Karta River near Kasaan (d)	15086000	49.5	1915-23
Neck Creek near Point Baker (d)	15086500	17.0	1960-67
Big Creek near Point Baker (d)	15086600	11.2	1964-81
Sunrise Lake Outlet near Wrangell	150086960	1.17	1976-80 1997-2001
Mill Creek at Wrangell (d)	15087000	0.09	1965-67
Hammer Slough at Petersburg (d)	15087200	1.46	1965-67
Municipal Watershed Creek near Petersburg (d)	15087545	2.20	1979-88
No Name Creek near Petersburg (d)	15087560	3.17	1971-73
Hamilton Creek near Kake (d)	15087570	65.0	1977-86 1988-96
Rocky Pass Creek near Point Baker (d)	15087590	2.72	1977-88
Nakwasina River near Sitka (d)	15087610	31.9	1977-82

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTHEAST ALASKA—Continued			
Green Lake (outlet) near Sitka (d)	15090000#	r22.8	1915-25
Maksoutof River near Port Alexander (d)	15092000	a26	1951-56
Betty Lake Outlet near Port Armstrong (d)	15093200	2.66	1978-81
Sashin Creek near Big Port Walter (d)	15093400	3.72	1965-73 1975-80
East Branch Lovers Cove Creek Diversion near Big Port Walter (d)	15093600	--	1965-71
Deer Lake Outlet near Port Alexander (d)	15094000	7.41	1951-68
Coal Creek near Baranof (d)	15096000	28.5	b1922-27
Baranof River at Baranof (d)	15098000	32.0	1915-28 1958-74
Takatz Creek near Baranof (d)	15100000	17.5	1951-69
Nichols Creek near Angoon (d)	15100500	a0.12	1981
Stephens Creek near Angoon (d)	15100510	a0.14	1981
Kalinin Bay Tributary near Sitka (d)	15101200	2.28	1976-80
Greens Creek near Juneau (d)	15101500	22.8	1979-92
Hasselborg Creek near Angoon (d)	15102000	56.2	1951-68
Porcupine River near Chichagof (d)	15104000	7.12	1918-20
Falls Creek near Chichagof (d)	15106000	6.48	1918-20
Black River near Pelican (d)	15106100	24.7	1978-82
Hook Creek above Tributary near Tenakee (d)	15106940	4.48	1967-80
Hook Creek near Tenakee (d)	15106960	8.00	1966-80
Tonalite Creek near Tenakee (d)	15106980	14.5	1968-88
Kadashan River near Tenakee (d)	15107000	37.7	1964-79
West Fork Indian River near Tenakee (d)	15107910	3.02	1979-81
Indian River near Tenakee (d)	15107920	12.9	1976-82
Pavlof River near Tenakee (d)	15108000	24.3	1957-81
Hilda Creek near Douglas (d)	15108600	2.62	1967-71
Lawson Creek at Douglas (d)	15108800	2.98	1967-71
Fish Creek near Auke Bay (d)	15109000	13.6	1959-78
SOUTH-CENTRAL ALASKA			
Dick Creek near Cordova (d)	15195000	7.95	1970-81
Gakona River at Gakona (d)	15200000	a620	c1970
Tazlina River near Glennallen (d)	15202000	a2670	1949-50 1952-72
Klutina River at Copper Center (d)	15206000	a880	c1913 1949-67 c1970
Little Tonsina River near Tonsina (d)	15207800	22.7	1972-78

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTH-CENTRAL ALASKA--Continued			
Tonsina River at Tonsina (d)	15208000	a420	b1950-82
Squirrel Creek at Tonsina (d)	15208100	70.5	1965-75
West Fork Kennicott River at McCarthy (d)	15209700	---	c1992-95
East Fork Kennicott River at McCarthy (d)	15209800	---	c1991-92
Tebay River near Chitina (d)	15211500	a55.4	1962-65
Copper River near Chitina (d)	15212000	a20600	c1950 c1952-53 1956-90
Copper River at Million Dollar Bridge near Cordova (d)	15214000	24200	b1907-10 c1913 1988-95
Heney Creek at canyon mouth near Cordova (d)	15215992	1.53	1992-93
Power Creek near Cordova (d)	15216000	20.5	c1913 1947-95
Middle Arm Eyak Lake Tributary near Cordova (d)	15216003	2.90	1992-93
Murchison Creek near Cordova (d)	15216008	a0.37	1992-93
Humpback Creek near Cordova (d)	15216100	4.37	c1913 1974-75
West Fork Olsen Bay Creek near Cordova (d)	15219000	4.78	1964-81
Duck River at Silver Lake Outlet near Valdez (d)	15223900	25.1	1982-85
Duck River near Tidewater near Valdez (d)	15224000	26.7	c1913-14 1982-85
Solomon Gulch Bypass near Valdez (d)	15225998	---	c1986-94
Lowe River near Valdez (d)	15226500	201	1971-74
Lowe River in Keystone Canyon near Valdez (d)	15226600	222	1975-76
Hobo Creek near Whittier (d)	15236000	5.53	c1913 1990-2000
Nellie Juan River near Hunter (d)	15237000	133	1961-65
Main Bay Creek near Port Nellie Juan (d)	15237020	5.93	1981-84
San Juan River near Seward (d)	15237360	12.4	1986-96
Resurrection River at Seward (d)	15237700	169	1965-68
Bear Creek Tributary near Seward (d)	15237800	1.63	1967-68
Lost Creek near Seward (d)	15238000	8.42	1948-50
Lowell Creek above city wells at Seward (d)	1523849020	3.73	1993-95
Lowell Creek at Seward (d)	15238500	4.02	1965-68 1991-93
Nuka River near Tidewater near Homer (d)	15238653	a38	1984-85
Seldovia River near Seldovia (d)	15238795	26.2	1979-80
Barabara Creek near Seldovia (d)	15238820	20.7	1972-92
Tutka Lagoon Creek near Homer (d)	15238860	10.8	1973-76

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTH-CENTRAL ALASKA--Continued			
Battle Creek below Glacier near Homer (d)	15238982	g11.8	1991-93
South Fork Battle Creek near Homer (d)	15238984	a6.5	1991-93
Battle Creek near Tidewater near Homer (d)	15238985	ag21	1991-93
Fritz Creek near Homer (d)	15239500*	10.4	1967-70 1986-92
Twitter Creek near Homer (d)	15239880	16.1	1971-73
Anchor River near Anchor Point (d)	15239900*	137	1965-73 1979-86 1991-92
Anchor River at Anchor Point (d)	15240000	224	1953-66
Kasilof River near Kasilof (d)	15242000	738	1949-70
Snow River near Divide (d)	15243500	a99.8	1961-65
Ptarmigan Creek at Lawing (d)	15244000	32.6	1947-58
Grant Creek near Moose Pass (d)	15246000	44.2	1947-58
Trail River near Lawing (d,e)	15248000	181	d1947-74 e1975-77
Crescent Creek near Moose Pass (d)	15253000	21.4	1957-60
Crescent Creek near Cooper Landing (d)	15254000	31.7	1949-66
Cooper Creek near Cooper Landing (d)	15260000	31.8	1949-59
Stetson Creek near Cooper Landing (d)	15260500	a8.6	1958-63
Russian River near Cooper Landing (d)	15264000	61.8	1947-54
Beaver Creek near Kenai (d)	15266500	a51	1968-78
Bernice Lake near Kenai (e)	15266895	--	1977-79
Bishop Creek near Kenai (d)	15267000	a24.2	1977-79
Resurrection Creek near Hope (d)	15267900	149	1968-86
Resurrection Creek at Hope (d)	15268000	162	1950-51
Glacier Creek at Girdwood (d)	15272550	r58.2	1965-78
Rabbit Creek at Anchorage (d)	15273050	a15	1979-80 1984-85
Little Rabbit Creek above Goldenview Drive at Anchorage (d)	15273095	5.06	1981-85
Little Rabbit Creek at Anchorage (d)	15273102	5.94	1979-80
Rabbit Creek at New Seward Highway at Anchorage (d)	15273105	a24.5	1984-86
South Fork Campbell Creek at Canyon Mouth near Anchorage (d)	15273900	25.2	1967-79
South Fork Campbell Creek near Anchorage (d)	15274000	29.2	1947-71 1999-2001
North Fork Campbell Creek near Anchorage (d)	15274300	13.4	1974-84
Little Campbell Creek at Nathan Drive near Anchorage (d)	15274550	a15	c1981 1986-92
Campbell Creek near Spenard (d)	15274600	69.7	1966-93
Sand Lake near Spenard (e)	15274700	--	c1967-74

WATER RESOURCES DATA FOR ALASKA, 2003

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTH-CENTRAL ALASKA--Continued			
South Branch South Fork Chester Creek near East 20th Ave. at Anchorage (d)	15274798	9.39	1981-84
Chester Creek at Anchorage (d)	15275000	20.0	1958-76
Chester Creek at Arctic Boulevard near Anchorage (d)	15275100	27.4	1966-86 1987-93 1999-2001
Ship Creek at Elmendorf Air Force Base near Anchorage (d)	15276500	113	1963-71
Ship Creek below Power Plant at Elmendorf Air Force Base (d)	15276570	115	1971-81
Ditch on Elmendorf Air Force Base (d)	15276650	3.73	1973-75
Eagle River at Eagle River (d)	15277100	a192	1966-81
Peters Creek near Birchwood (d)	15277410	87.8	1973-83
East Fork Eklutna Creek near Palmer (d)	15277600	538.2	1960-62 1985-89
West Fork Eklutna Creek near Palmer (d)	15277800	25.4	1960-62 1985-89
Eklutna Creek near Palmer (d)	15280000	119	1947-54 R1955-62
Knik River near Palmer (d)	15281000	a1180	1960-88 1992
Caribou Creek near Sutton (d)	15282000	289	1955-78
Moose Creek near Palmer	15283700	47.3	1997-2001
Palmer Hayflat at railroad near Palmer (e)	15284500		1992-97
Cottonwood Creek near Wasilla (d)	15286000	28.5	1949-54 1998-2000
Susitna River near Denali (d)	15291000	a950	1957-66 1968-86
Maclaren River near Paxson (d)	15291200	a280	1958-86
Susitna River near Cantwell (d)	15291500	a4140	1961-72 1980-86
Chulitna River near Talkeetna (d)	15292400	a2570	1958-72 1980-86
Susitna River at Sunshine (d)	15292780	a11100	1981-86
Deception Creek near Willow (d)	15294010	48.0	1978-85
Deshka River near Willow (d)	15294100	591	1979-86 1999-2001
Skwentna River near Skwentna (d)	15294300	a2250	1960-82
Yentna River near Susitna Station (d)	15294345	a6180	1981-86
Susitna River at Susitna Station (d)	15294350	a19400	1975-93
Capps Creek below North Capps Creek near Tyonek (d)	15294410	10.5	1979-85
Chuitna River near Tyonek (d)	15294450	131	1976-86
Chakachatna River near Tyonek (d)	15294500	a1120	1959-72
Montana Bill Creek at pipeline near Kenai (d)	15294585	--	c1991-92

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTH-CENTRAL ALASKA--Continued			
Paint River near Kamishak (d)	15294900	205	1983-85 1989 1991-95
Little Kitoi Creek near Afognak (d)	15295500	2.63	1960-61
Terror River near Kodiak (d)	15295600	15.0	1962-68 1978-82 R1983-86
Uganik River near Kodiak (d)	15296000	123	1951-78
Spiridon Lake Outlet near Larsen Bay (d)	15296300	23.3	1962-65
Larsen Bay Creek near Larsen Bay (d)	15296480	3.92	1980-84
Falls Creek near Larsen Bay (d)	15296500	5.67	1974-75
Canyon Creek near Larsen Bay (d)	15296520	8.82	1974-76
Upper Thumb River near Larsen Bay (d)	15296550	18.8	1974-82
Karluk River at Outlet near Larsen Bay (d)	15296600	100	1975-76 1979-82
Akalura Creek at Olga Bay (d)	15296950	18.4	1975-76
Dog Salmon Creek near Ayakulik (d)	15297000	72.9	1960-61
Hidden Basin Creek near Port Lions (d)	15297100	3.01	1982-84
Hidden Basin Creek near Mouth near Kodiak (d)	15297110	11.9	1983-84
Myrtle Creek near Kodiak (d)	15297200*	4.74	1963-86
Middle Fork Pillar Creek near Kodiak (d)	15297450	2.02	1969-70
Monashka Creek near Kodiak (d)	15297470	5.51	1972 R1973-76
Falls Creek near Port Lions (d)	15297482	a4.3	1981-83
Kizhuyak River near Port Lions (d)	15297485	42.5	1980-94
SOUTHWEST ALASKA			
Whiskey Bills Creek near Sand Point (d)	15297602	a0.30	1983-84
Humboldt Creek at Sand Point (d)	15297603	a5.2	1983-84
Sweeper Creek at Adak (d)	15297617	1.0	1992-96
Moffett Creek at Adak (d)	15297625	4.5	1993-96
Limpet Creek on Amchitka Island (d)	15297640	1.69	1968-72
Falls Creek on Amchitka Island (d)	15297650	0.86	1968-72
Clevenger Creek on Amchitka Island (d)	15297655	0.28	1968-74
Constantine Spring Creek on Amchitka Island (d)	15297660	--	1968-73
Bridge Creek on Amchitka Island (d)	15297680	3.03	1968-74
White Alice Creek on Amchitka Island (d)	15297690	0.79	1968-74
Lake Creek at Shemya Air Force Base (d)	15297767	a1.0	1971-73
Gallery Spring at Shemya Air Force Base (d)	15297771	--	1971-72
Gallery Creek at Shemya Air Force Base (d)	15297773	a1.0	1971-73

WATER RESOURCES DATA FOR ALASKA, 2003

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
SOUTHWEST ALASKA--Continued			
Eskimo Creek at King Salmon (d)	15297900	16.1	1973-76 1978-84
Tanalian River near Port Alsworth (d)	15298000	a200	1951-56
Tazimina River near Nondalton (d)	15299900	327	1981-86
Newhalen River near Iliamna (d)	15300000	3478	1951-67 1982-86
Kvichak River at Igiugig (d)	15300500	a6500	1967-87
Allen River near Aleknagik (d)	15301500	278	1963-66
Nushagak River at Ekwok (d)	15302500	a9850	1978-93
Grant Lake Outlet near Aleknagik (d)	15302800	r34.3	1959-65
Elva Lake Outlet near Aleknagik (d)	15302840	9.00	1980-82
Wood River near Aleknagik (d)	15303000	a1110	1957-70
Silver Salmon Creek near Aleknagik (d)	15303010	4.46	1985-86 c1988-89
Wood River Tributary near Aleknagik (d)	15303011	3.35	c1990 c1992-93
East Creek near Dillingham (d)	15303100	2.12	1973-75
Snake River near Dillingham (d)	15303150	113	1973-83
Kuskokwim River at McGrath (d)	15303600	a11700	1963-73
Kisaralik River near Akiak (d)	15304200	265	1980-87
Browns Creek near Bethel (d)	15304293	4.79	c1985-94
Browns Creek at Bethel (d)	15304298	10.5	c1985
YUKON ALASKA			
King Creek near Dome Creek (d)	15344000*	5.87	1983-90
Fortymile River near Steele Creek (d)	15348000	a5880	c1910-12 1976-82
Kandik River near Nation (d)	15388060	1084	1991-2000
Kandik River below Threemile Creek near Nation (d)	15388070	1176	2002
Porcupine River at Old Crow, Yukon Territory, Canada (d)	15388950	a21400	f1980-89
Porcupine River near Fort Yukon (d)	15389000	a29500	1964-79
Chandalar River near Venetie (d)	15389500	a9330	1963-73
Boulder Creek near Central (d)	15439800*	31.3	1966-82 1984-86
Hess Creek near Livengood (d)	15457800	662	1970-78 1982-86
Yukon River at Rampart (d)	15468000	a199400	1955-67
Chisana River at Northway Junction (d)	15470000	a3280	1949-71
Tanana River near Tok Junction (d)	15472000	a6800	1950-53
Tok River near Tok Junction (d)	15474000	a930	1952-54

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
YUKON ALASKA--Continued			
Tanana River near Tanacross (d)	15476000	a8550	1953-90
Berry Creek near Dot Lake (d)	15476300*	65.1	1971-81
Dry Creek near Dot Lake (d)	15476400	57.6	1966-69
Clearwater Creek near Delta Junction (d)	15477500	a360	1977-79
Upper West Creek near Big Delta (d)	15477761	1.64	1999-2002
Tanana River at Big Delta (d)	15478000	a13500	1949-52 1954-57
Tanana River near Harding Lake (e)	15481000	17240	c1968-82
Moose Creek at Eielson Air Force Base (d)	15485000	136	1964-65
Garrison Slough at Eielson Air Force Base (d)	15485200	6.24	1964-65
Chena River near North Pole (d)	15493500	r1445	1972-80
Chena River below Moose Creek Dam (d)	15493700	1,460	1979-96
Wood River near Fairbanks (d)	15514500	855	1968-78
Seattle Creek near Cantwell (d)	15515800	36.2	1966-75
Nenana River near Windy (d)	15516000	a710	1950-56
Nenana River near Healy (d)	15518000	a1910	1951-79
Healy Creek at Suntrana	15518020	a110	1998-2001
Nenana River at Healy (d)	15518040	a2100	1990-91
Nenana River near Rex (d)	15518300	a2450	1965-68
Teklanika River near Lignite (d)	15518350	490	1965-74
Chatanika River above Poker Creek near Chatanika (d)	15534800	419	1996
Poker Creek near Chatanika (d)	15534900	23.1	1971-78
Caribou Creek near Chatanika (d)	15535000	9.19	1970-84
Long Creek at Long near Ruby	15564450	25.4	1995-97
Melozitna River near Ruby (d)	15564600	2693	1961-73
Yukon River at Ruby (d)	15564800	a259000	1957-78
Middle Fork Koyukuk River near Wiseman (d)	15564875	a1200	1970-78 1984-87
Wiseman Creek at Wiseman (d)	15564877	49.2	1970-78
Jim River near Bettles (d)	15564885	465	1970-77
Koyukuk River at Hughes (d)	15564900	a18400	1960-82
Yukon River near Kaltag (d)	15565200	a296000	1957-66
Ophir Creek near Takotna (d)	15565235	6.19	1975-80

WATER RESOURCES DATA FOR ALASKA, 2003

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
NORTHWEST ALASKA			
Snake River near Nome (d)	15621000	85.7	1965-81 1982-91
Eldorado Creek near Teller (d)	15635000	5.83	1988-90 1992-98
Gold Run Creek near Teller (d)	15637000*	24.2	c1986-88
Crater Creek near Nome (d)	15668200	21.9	1975-85
Kuzitrin River near Nome (d)	15712000	a1720	c1908-10 1962-73
Humboldt Creek near Serpentine Hot Springs near Nome (d)	15716010	8.15	c1992-93
June Creek near Kotzebue (d)	15743000	10.9	1965-67
Kobuk River at Ambler (d)	15744000	a6570	1965-78
Noatak River at Noatak (d)	15746000	a12000	c1965-71
Ikalukrok Creek above Red Dog Creek near Kivalina(d)	15746980	59.2	1991-92
Red Dog Mine clean water ditch near Kivalina(d)	15746983	4.74	1991-92
North Fork Red Dog Creek near Kivalina (d)	15746988*	15.9	1991-92
Red Dog Creek above mouth near Kivalina(d)	15746990	24.6	1991-92
Ogotoruk Creek near Point Hope (d)	15748000	a35	c1958-62
ARCTIC SLOPE ALASKA			
Esatkuat Creek near Barrow (d)	15799000	a1.46	c1972-73
Esatkuat Lagoon Outlet at Barrow (d)	15799300	a3.52	c1972-73
Meade River at Atkasuk (d)	15803000	a1800	c1977
Teshekpuk Lake Outlet near Lonely (e)	15829995	a1400	c1977
Miguakiak River near Teshekpuk Lake near Lonely (d)	15830000	a1460	c1977
Colville River near Nuiqsut (d)	15880000	20670	c1977
Putuligayuk River near Deadhorse (d)	15896700	a176	1970-79 c1980 1982-86 c1987-95
Atigun River near Pump Station 4 (d)	15904800	48.7	1991-94
Atigun River Tributary near Pump Station 4 (d)	15904900*	32.6	1977-86
Sagavanirktok River near Sagwon (d)	15910000	2208	1970-78
Chamberlin Creek near Barter Island (d)	15975000	1.46	c1958
Neruokpukkoonga Creek near Barter Island (d)	15976000	123	c1958

Discontinued surface-water discharge or stage-only stations--Continued

[Footnotes at end of table on p. xxv]

Station name	Station number	Drainage area (mi ²)	Period of record
Footnotes			
**	Currently operated as a water-quality partial record station		
#	Currently operated as a monthly discharge and reservoir elevation station		
a	Approximately		
b	Break in record		
c	Fragmentary or seasonal		
f	Additional record for water years 1961-79 available from discharge records of Water Survey of Canada		
g	Prior to diversion upstream		
r	Revised		
R	Regulated		

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following continuous-record surface-water-quality stations in Alaska have been discontinued. Daily records of temperature, specific conductance, or sediment were collected and published for the period of record shown for each station. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

[Type of record: Temp. (temperature), S.C. (specific conductance), Sed. (sediment)]

Discontinued continuous record surface-water-quality stations

[Footnotes at end of table on p. xxx]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
SOUTHEAST ALASKA				
White Creek near Ketchikan	15011870	2.70	Temp., S.C.	1978-83
Keta River near Ketchikan	15011880	74.2	Temp., S.C.	1978-81, 1983-84
Blossom River near Ketchikan	15011894	68.1	Temp., S.C.	1981-84
Stikine River near Wrangell	15024800	a19,920	Temp. Sed.	1976-82 1982
Speel River near Juneau	15036000	226	Temp., Sed.	1960
Dorothy Lake Outlet (head of Dorothy Creek) near Juneau	15039900	11.0	Temp	1996-99
Duck Creek below Nancy Street near Auke Bay	15053200	--	Temp	1997-99
Lake Creek at Auke Bay	15053800	2.50	Temp	1963-73
Auke Creek at Auke Bay	15054000	3.96	Temp.	1962-75
Davies Creek near Auke Bay	15054990	15.2	Temp.	1969-72
Skagway River at Skagway	15056100	a145	Temp., S.C.	1979-82 1980-82
Taiya River near Skagway	15056210	149	Temp.	1971-74, 1977
Chilkat River at Gorge near Klukwan	15056400	a190	Temp.	1962-67
Chilkat River near Klukwan	15056500	a760	Temp., Sed., S.C.	1960
Kahtaheena River near Gustavus	15057590	10.7	Temp.	1998-2001
Grace Creek near Ketchikan	15078000	30.2	Temp.	1965-69
Traitors River near Bell Island	15080500	20.8	Temp.	1965-68
Staney Creek near Craig	15081500	51.6	Temp.	1966-79
Klawak River near Klawock	15081620	46.1	Temp.	1976-77
Perkins Creek near Metlakatla	15083500	3.38	Temp.	1976-93
Saltery Creek near Kasaan	15085000	5.53	Temp.	1962-64
Cabin Creek near Kasaan	15085300	8.83	Temp.	1962-64
Virginia Creek near Kasaan	15085400	3.08	Temp.	1962-64
Big Creek near Point Baker	15086600	11.2	Temp.	1963-80
Sunrise Lake Outlet near Wrangell	15086960	1.17	Temp.	1978, 1980, 1998-2001
Zarembo Creek near Point Baker	15087110	1.27	Temp.	1979-80
Hamilton Creek near Kake	15087570	65.0	Temp.	1982-86, 1989-96
Rocky Pass Creek near Point Baker	15087590	2.72	Temp.	1978-79, 1981-82
Nakwasina River near Sitka	15087610	31.9	Temp.	1976-82
Indian River near Sitka	15087690	--	Temp., S.C.	2001-2002

Discontinued continuous record surface-water-quality stations--Continued
 [Footnotes at end of table on p. xxx]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
SOUTHEAST ALASKA—Continued				
Indian River at Sitka	15087700	--	Temp., S.C.	2001-2002
Betty Lake outlet at Port Armstrong	15093200	2.66	Temp.	1978-81
Sashin Creek near Big Port Walter	15093400	3.72	Temp.	1966-77
East Branch Lovers Cove Creek Diversion near Big Port Walter	15093600	--	Temp.	1965-71
Kalinin Bay tributary near Sitka	15101200	2.28	Temp.	1976-79
Greens Creek near Juneau	15101500	22.8	Temp. S.C.	1978-84 1979-85
Wheeler Creek near Douglas	15101600	57.1	Temp.	1970-73
North Arm Creek near Angoon	15102350	8.64	Temp.	1971-78
Hood Bay Creek near Angoon	15102400	--	Temp.	1970-71
Hook Creek above tributary near Tenakee	15106940	4.48	Temp.	1967-80
Hook Creek near Tenakee	15106960	8.00	Temp.	1966-78
Tonalite Creek near Tenakee	15106980	14.5	Temp. S.C., Sed.	1968-84, 1986-88 1972
Kadashan River near Tenakee	15107000	37.7	Temp.	1966-79
SOUTH-CENTRAL ALASKA				
Dick Creek near Cordova	15195000	7.95	Temp.	1971-79
Gakona River at Gakona	15200000	a620	Temp., S.C.	1953-54
Gulkana River at Sourdough	15200280	1,770	Temp.	1972-78
Klutina River at Copper Center	15206000	a880	Temp, S.C.	1953
Little Tonsina River near Tonsina	15207800	22.7	Temp.	1973-78
Tonsina River at Tonsina	15208000	a420	Temp., S.C.	1953, 1959-66
Copper River near Chitina	15212000	a20,600	Temp Sed. S.C.	1957, 1964-65, 1979-81 1957, 1963-65
Humpback Creek near Cordova	15216100	4.37	Temp.	1973-75
West Fork Olsen Bay Creek near Cordova	15219000	4.78	Temp.	1964-79
Duck River at Silver Lake outlet near Valdez	15223900	25.1	Temp.	1982-84
Duck River near tidewater near Valdez	15224000	26.7	Temp.	1982-84
Duck River above the Lagoon near Valdez	15224002	--	Temp.	1982-84
Lowe River in Keystone Canyon near Valdez	15226600	222	Temp.	1975-76
Tutka Lagoon Creek near Homer	15238860	10.8	Temp.	1973-76
Upper Bradley River near Homer	15238990	a10.0	Temp.	1979-90
Bradley River below dam near Homer	15239001	a66.0	Temp	1990-99
Bradley River near Tidewater near Homer	15239070	--	Temp	1986-99
Anchor River at Anchor Point	15240000	224	Temp., S.C.	1954, 1959-66

Discontinued continuous record surface-water-quality stations--Continued
 [Footnotes at end of table on p. xxx]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
SOUTH-CENTRAL ALASKA—Continued				
Ninilchik River at Ninilchik	15241600	131	Temp. Sed.	1963, 1965 1963-65
Trail River near Lawing	15248000	181	Temp.	1959-67
Kenai River at Cooper Landing	15258000	634	Temp., S.C.	1950
Kenai River below Skilak Lake Outlet near Sterling	15266110	1206	Temp.	1999-2001
Kenai River at Soldotna	15266300	1,950	Temp. Sed.	1999-2001 1979-80, 1999-2001
Beaver Creek near Kenai	15266500	a51	Temp.	1970-75
Bishop Creek near Kenai	15267000	a24.2	S.C.	1977-79
Rabbit Creek at Anchorage	15273050	a15	Temp.	1984-86
Little Rabbit Creek above Goldenview Drive at Anchorage	15273095	5.06	Temp.	1983-86
Rabbit Creek at New Seward Highway at Anchorage	15273105	a24.5	Temp.	1984-86
South Fork Campbell Creek near Anchorage	15274000	29.2	Temp.	1999-2001
Little Campbell Creek at Nathan Drive near Anchorage	15274550	a15.0	Temp. Sed.	1986-87 b1988-91
Campbell Creek near Spenard	15274600	69.7	Sed.	1986, 1988
Middle Fork Chester Creek at Nichols Street at Anchorage	611207149483600	--	Temp.	1982
Chester Creek at Anchorage	15275000	20.0	Temp.	1982
Chester Creek at Arctic Boulevard at Anchorage	15275100	27.4	Temp. Sed. S.C.	1981-86, 1999-2001 b1988-91 1981-86, 2000-01
Ship Creek near Anchorage	15276000	90.5	Temp.	1949-50
Ship Creek below powerplant at Elmendorf Air Force Base	15276570	115	Temp.	1970-80
Eagle River at Eagle River	15277100	a192	Temp. Sed., S.C.	1968-69, 1971 1967-69, 1971
East Fork Eklutna Creek near Palmer	15277600	38.2	Sed.	1985-87
West Fork Eklutna Creek near Palmer	15277800	25.4	Sed.	1985-87
Eklutna Creek near Palmer	15280000	119	Temp.	1950
Knik River near Palmer	15281000	a1,180	Temp. Sed. S.C.	1963, 1965 1962-66 1972
Chickaloon River near Sutton	15282800	--	Temp.	1953-54
Matanuska River at Palmer	15284000	a2,070	Temp. Sed. S.C.	1952-53, 1959-66 1953-54, 1959-66 1965-67, 1972
Susitna River near Denali	15291000	a950	Temp.	1974-82
Susitna River near Cantwell	15291500	a4,140	Temp.	1980, b1982-86
Susitna River at Gold Creek	15292000	a6,160	Temp. Sed.	1957, 1974-80, 1982-85 1952, 1957
Chulitna River near Talkeetna	15292400	a2,570	Temp.	b1982-86

Discontinued continuous record surface-water-quality stations--Continued
[Footnotes at end of table on p. xxx]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
SOUTH-CENTRAL ALASKA—Continued				
Talkeetna River near Talkeetna	15292700	2,006	Temp.	1954
Susitna River at Sunshine	15292780	a11,100	Temp.	b1981-85
Willow Creek near Willow	15294005	166	Temp.	b1978-90
Deception Creek near Willow	15294010	48.0	Temp.	b1978-85
Deshka River near Willow	15294100	591	Temp.	1999-2001
Yentna River near Susitna Station	15294345	a6,180	Temp.	b1981-86
Susitna River at Susitna Station	15294350	a19,400	Temp.	1975-80, b1983-86
Chuitna River near Tyonek	15294450	131	Temp.	1976-78
Falls Creek near Larsen Bay	15296500	5.67	Temp.	1974-75
Canyon Creek near Larsen Bay	15296520	8.82	Temp.	1974-76
East Fork Upper Thumb River near Larsen Bay	15296545	8.99	Temp.	1979-82
Upper Thumb River near Larsen Bay	15296550	18.8	Temp.	1974-82
Thumb River near Larsen Bay	15296554	25.3	Temp.	1979-82
Karluk River at outlet near Larsen Bay	15296600	100	Temp.	1975-76, 1978-82
Akalura Creek at Olga Bay	15296950	18.4	Temp.	1975-76
Kizhuyak River near Port Lions	15297485	c42.5	Temp.	b1980-86, 1987-94
SOUTHWEST ALASKA				
Tazimina River near Nondalton	15299900	327	Temp.	1982-86
Nushagak River at Ekwok	15302500	a9,850	Temp.	1979-80, 1982
East Creek near Dillingham	15303100	2.12	Temp.	1973-76
Snake River near Dillingham	15303150	113	Temp.	1974-80
Kuskokwim River at Medfra	630615154424500	--	Temp.	1954
Kuskokwim River at Crooked Creek	15304000	a31,100	Temp. S.C.	1957-67, 1977-79 1957-67
YUKON ALASKA				
Yukon River at Eagle	15356000	a113,500	Temp. Sed.	1951-52, 1962-63, 1965-66 1962-66
Hess Creek near Livengood	15457800	662	Temp.	1971-72, 1976-77
Yukon River at Rampart	15468000	a199,400	Temp., S.C.	1954-56, 1961-64
Tanana River near Tok Junction	15472000	a6,800	Temp., S.C.	1951-53
Tanana River near Tanacross	15476000	a8,550	Temp., S.C. Sed.	1954, 1957-66
Tanana River at Big Delta	15478000	13,500	Temp. S.C.	1949-51 1949-52
Chena River near North Pole	15493500	1,430	Temp.	1972-79
Little Chena River near Fairbanks	15511000	372	Temp.	1972-81

WATER RESOURCES DATA FOR ALASKA, 2003

Discontinued continuous record surface-water-quality stations--Continued
[Footnotes at end of table on p. xxx]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
YUKON ALASKA—Continued				
Chena River at Fairbanks	15514000	a1,980	Temp. Sed. S.C.	1953, 1962-66, 1969-71 1962-71 1968-71
Tanana River at Nenana	15515500	a25,600	Temp. S.C.	1954-56 1954-57
Nenana River near Healy	15518000	a1,910	Temp. Sed., S.C.	1957-66 1953-66
Nenana River at Healy	15518040	a2,100	Temp.	1949
Caribou Creek near Chatanika	15535000	9.19	Temp.	1972-73
Long Creek at Long near Ruby	15564450	25.4	Temp.	1995-97
Yukon River at Ruby	15564800	a259,000	Temp. S.C.	1966-67, 1969-74 1966-74
Yukon River at Galena	15564860	--	Temp., S.C.	1954
Middle Fork Koyukuk River near Wiseman	15564875	a1,200	Temp.	1971-72, 1976-79
Wiseman Creek at Wiseman	15564877	49.2	Temp.	1973, 1976
Jim River near Bettles	15564885	11.7	Temp.	1971-76
Yukon River at Pilot Station	15565447	a321,000	Temp.	1976, 1978
NORTHWEST ALASKA				
Eldorado Creek near Teller	15635000	5.83	Temp.	b1995-98
Kobuk River near Kiana	15744500	a9,520	Temp.	1978-81
Ogotoruk Creek near Hope	15748000	a35	Temp., Sed.	1959
ARCTIC SLOPE ALASKA				
Kuparuk River near Deadhorse	15896000	3,130	Temp.	1971-72, 1976, 1978-79
Putligayuk River near Deadhorse	15896700	a176	Temp.	1976
Sagavanirktok River near Sagwon	15910000	229	Temp.	1971

- a Approximately
b Seasonal
c After diversion upstream beginning 1985

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and other agencies, obtains a large amount of data pertaining to the water resources of Alaska each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Alaska."

Water resources data for the 2003 water year for Alaska consist of records of stage, discharge, and water quality of streams; stages of lakes; and water levels and water quality of ground water. This volume contains records for water discharge at 118 gaging stations; stage or contents only at 4 gaging stations; water quality at 28 gaging stations; and water levels for 53 observation wells. Also included are data for 66 crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. Some data collected during 2003 will be published in subsequent reports. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Alaska.

Records of discharge and stage of streams, stage of lakes, chemical quality, water temperatures, and suspended sediment were first published in U.S. Geological Survey Water-Supply Papers. Through September 30, 1960, these data were published in seven Water-Supply Papers entitled "Quantity and Quality of Surface Waters of Alaska" (through 1950, 1951-53, 1954-56, 1957, 1958, 1959, 1960). Since 1960, streamflow records and related data were published in a five-year series of Water-Supply Papers for 1961-65 and 1966-70 entitled "Surface Water Supply of the United States." Water-quality records were published in a Water-Supply Paper entitled "Quality of Surface Waters of Alaska, 1961-63" and after then until 1970 in an annual series of Water-Supply Papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1949 to 1974 in a series of Water-Supply Papers entitled "Ground-Water Levels in the United States." Water-Supply Papers may be consulted in the libraries of the principal cities in the United States or may be purchased from U.S. Geological Survey, Branch of Information Services, Box 25286, Denver, CO 80225.

For water years 1961 through 1970, streamflow data were also released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report AK-03-1." These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the Water Resources Office Chief at the address given on the back of the title page or by telephone (907) 786-7100.

The USGS is continually updating the availability of its information on the World Wide Web. Current streamflow conditions (via satellite) for Alaska and other Alaskan water resource information can be found at <http://ak.water.usgs.gov/>

Nationwide information on water resources, including real-time and historic streamflow data, water-use data, publications and USGS program activities, can be found at <http://water.usgs.gov/>

COOPERATION

The U.S. Geological Survey and organizations of the State of Alaska have had cooperative agreements since 1958 for the systematic collection of streamflow records, water-quality records, and ground-water levels. Organizations that assisted in collecting data contained in this report through cooperative agreements with the USGS are:

Alaska Department of Community and Economic Development, Edgar Blatchford,
Commissioner
Alaska Industrial Development and Export Authority, Alaska Energy Authority,
Ronald W. Miller, Executive Director
Alaska Department of Environmental Conservation, Ernesta Ballard, Commissioner
Alaska Department of Fish and Game, Kevin C. Duffy, Commissioner
Alaska Department of Natural Resources, Division of Mining and Water Management,
Tom Irwin, Commissioner
Alaska Department of Transportation and Public Facilities, Mike Barton,
Commissioner, in cooperation with the U.S. Department of Transportation,
Federal Highway Administration
Central Council of Tlingit and Haida Indian Tribes of Alaska, Desiree Welch, Native Lands
and Resources Manager
City and Borough of Juneau, Sally Smith, Mayor
City and Borough of Sitka, Valorie Nelson, Mayor
City and Borough of Yakutat, Tom Maloney, Mayor
City of Klawock, Donna Williams, Mayor
City of Wrangell, Fern Neimeyer, Mayor
Alaska Native Tribal Health Consortium, Paul Sherry, President/CEO
Haida Corporation, John Bruns, Resource Manager
Cheesh-na Tribal Council, Elaine Sinyon, Chief Executive Officer
Native Village of Eklutna, Lee Stephan, Chief Executive Officer
Kenai Peninsula Borough, Dale Bagley, Mayor
Municipality of Anchorage, Mark Begich, Mayor
University of Alaska Southeast, John Pugh, Chancellor

The following Federal agencies assisted in the data-collection program by providing funds or services:

U.S. Army Corps of Engineers
U.S. Army Corps of Engineers, Cold Regions Research & Engineering Laboratory
U.S. Department of Agriculture, Forest Service
U.S. Department of the Interior, Bureau of Land Management
U.S. Department of the Interior, National Park Service

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Richard Kemnitz, Colville River at Umiat
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Dick Levitt, Kahtaheena River near Gustavus
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Dean Orbison, Sawmill Creek and Green Lake near Sitka
Steve Paustian, Kadashan River near Tenakee
Alan Peck, Moody Creek near Aleknagik
Eric Sundberg, Greens Creek at Greens Creek Mine near Juneau
Tom Walters, Terror River near Kodiak
Bob Walworth, Tatalina River near Takotna
Ray Williams, Iliamna River near Pedro Bay
John Borg, Yukon River at Eagle
Rob Gieck, Sagavanirktok River Tributary near Pump Station 3
Sandy Hamilton, Nation and Kandik Rivers near Nation, and Kobuk River near Kiana
John Martinisko, Ikalukrok River below Red Dog Creek near Kivalina
Lorry Schuerch, Kobuk River near Kiana

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Alaska contains more than 40 percent of the Nation's surface-water resources. The highest runoff rates per unit area are in southeast Alaska and in other areas influenced by the maritime climate of the Northern Pacific Ocean and the Gulf of Alaska. In the interior and northern parts of the State, runoff rates are markedly lower than in the maritime-influenced areas. Runoff generally increases with altitude throughout the State, and year-to-year runoff variability increases from south to north.

Seasonal runoff characteristics differ from southern to northern Alaska. Areas influenced by maritime climates usually have two periods with high runoff: a spring snowmelt period and a fall rainfall period. High water can occur throughout the year, but the highest instantaneous peak discharges are more prevalent in the fall months; low-water periods usually occur in late spring and mid-summer, prior to the rainy fall period. Farther north, most of the total runoff and floods occur in the period from May through September; low-flow periods usually occur during late winter, shortly before spring snowmelt.

Record-setting precipitation and unusually warm temperatures produced widespread flooding in south-central Alaska in the fall of 2002. The unusual weather patterns persisted in the region for more than two months. On the Kenai Peninsula, heaviest rainfall and most severe flooding occurred October 22-24, and November 23, 2002. Flooding was most severe on the western part of the peninsula, especially between Ninilchik and Homer. Floods on eight streams exceeded previous record peak streamflows and many others reached near-record streamflows (table 1). The flooding destroyed critical portions of the limited road system, isolated communities, damaged private property, and damaged spawning and riparian habitat.

The same weather patterns were responsible for remarkably high winter flows throughout Alaska. In Southeast Alaska, 46 percent of the monthly mean discharges were at levels equalled or exceeded less than 25 percent of the time during October through January. In Southcentral and Southwestern Alaska and in the Yukon Basin, nearly all rivers measured for more than 10 years experienced flows in the upper 25th percentile for the most of the fall and winter, and 32 percent of the monthly mean discharges were record highs. Even streams in Northwestern Alaska and on the Arctic Slope were affected. Of those streams that did not freeze completely during the winter, most experienced flows in the upper 25th percentile all the winter. Warm fall rains resulted in generally low winter snowpack, and the resulting spring runoff was relatively low throughout the state. Summer rain in the Chena Basin and the Arctic Slope resulted in higher than normal flows, and flows in the Chena basin were restricted by Moose Creek dam during July 29 to August 2 and again during September 4-5.

Table 1. Peak gage heights and streamflows during October and November, 2002, and 100-year flood magnitude for selected stations on the Kenai Peninsula, Alaska.

Site No. (fig. 1)	Station no.	Station name	Drain age area (mi ²)	Period of record for peak data	October 2002 maximum peak data				November 2002 maximum peak data				100 yr flood (ft ³ /s) ¹	
					Date (month/day)	Gage height (ft)	Streamflow w (ft ³ /s)	Peak basin yield (ft ³ /s)/mi ²	Date (month/day)	Gage height (ft)	Streamflow (ft ³ /s)	Peak basin yield (ft ³ /s)/mi ²	For data through 1999	For data through 2002
1	15237730	Grouse Creek at Lake Outlet near Seward	6.24	1997-P	10/24	8.05	451*	72.3	11/23	7.87	401	64.5	1,080 ²	--
2	15238600	Spruce Creek near Seward	9.26	1967-P	10/23	6.63	1,560	168	11/23	6.04	835	90.2	4,090	3,910
3	15238820	Barabara Creek near Seldovia	20.7	1972-92	10/23	4.00	1,450	70.0	--	--	--	--	2,640	2,640 ³
4	15238978	Battle Creek diversion above Bradley Lake near Homer	0.95	1992-P	10/23	7.50	151*	159	11/23	6.60	80	11.6	159 ⁴	188
5	15239050	Middle Fork Bradley River near Homer	9.25	1980-P	10/23	9.49	1,310	142	11/23	8.99	259	28.0	1,660	1,770
6	15239500	Fritz Creek near Homer	10.4	1963-P	10/24	12.1	700e	67.3	11/23	11.37	530	51.0	664	819
7	15239800	Diamond Creek near Homer	5.35	1963-81	10/24	15.50	357*	66.7	11/23	14.33	282	52.7	342	418
8	15239900	Anchor River near Anchor Point	137	1965-74, 1978-87, 1991-92, 2000-P	10/24	9.30	8,000	58.4	11/23	9.1	9,000*	65.7	6,090	8,300
9	15240000	Anchor River at Anchor Point	224	1953-66, 1984-92	10/24	9.38	13,400	59.8	11/23	9.60	14,500*	66.1	8,670	14,000
10	15240500	Cook Inlet Tributary near Ninilchik	5.19	1966-81	10/24	17.16	359*	72.2	11/23	15.72	255	49.1	169	284
11	15241500	Deep Creek near Ninilchik	220	--	10/24	23.2	22,000	100	11/23	21.2	--	--	7,300 ²	--
12	15241600	Ninilchik River at Ninilchik	135	1963-85, 1999-P	10/24	9.39	6,600*	48.8	11/23	6.96	3,200	23.7	1,780	4,880
13	15242000	Kasilof River near Kasilof	738	1949-74, 1977	10/24	5.70	7,700	10.4	--	--	--	--	14,400	14,400 ³
14	15243900	Snow River near Seward	128	1970, 1974, 1977, 1997-P	10/24	13.22	12,600	98.4	11/23	10.95	6,870	53.7	--	--
15	15243950	Porcupine Creek near Primrose	16.8	1963-89	10/24	20.64	1,540	92.3	--	--	--	--	4,550	4,550 ³
16	15248000	Trail River near Lawing	181	1947-77, 1987	10/24	11.09	8,200*	45.3	--	--	--	--	8,890	9,360
17	15258000	Kenai River at Cooper Landing	634	1947-P	10/26	14.64	15,300	24.1	--	--	--	--	26,400 ⁶	26,100 ⁶
18	15261000	Cooper Creek at mouth near Cooper Landing	48.6	1958-64, 1998 to P	10/23	12.45	1,230*	25.3	--	11.28	337	6.9	--	--
19	15269500	Granite Creek near Portage	28.2	1967-81	-- ⁵	10.85	1,800	63.8	--	--	--	--	3,090	3,090 ³
20	15271000	Sixmile Creek near Hope	234	1979-90, 1997-P	10/24	13.56	10,800*	46.2	11/23	11.68	4,170	17.8	10,600	13,000

¹ 100-year flood calculated using observed station data and regional weighted skew from Curran and others (2003), unless otherwise noted.² Less than 10 years of systematic observed peak flow data, used regional flood-frequency equation from Curran and others, 2003.³ October and November, 2002 peaks are less than highest systematic peak and not used in computations following Bulletin 17-B guidelines (Interagency Committee on Water Data, 1982).⁴ Used data through 2001.⁵ Exact date of peak unknown, but did occur on October 23 or 24, 2002.⁶ 100-year flood calculated using only observed station data. See Curran and others (2003) for details.

e Estimated.

P Present

(mi², square miles; ft, feet; ft³/s, cubic feet per second; (ft³/s)/mi², cubic feet per second per square mile; --, no data; *, new peak of record)

Ground Water

Alaska's vast area and small population preclude a comprehensive evaluation of its ground-water resources. Throughout much of the State, aquifers are poorly defined. In many areas, wells have not been drilled and little is known about seasonal and long-term changes in ground-water storage. During water year 2003, the long-term monitoring of water levels in one well in Juneau, one well in Anchorage, and three wells in Fairbanks continued. Water levels were also measured in 19 wells in Fairbanks to monitor ground water levels in the vicinity of the Chena River dam. Water levels were measured intermittently in 18 wells and continuously in 3 wells in Juneau for studies of the interaction between ground water and water in anadromous fish streams. Water levels were measured intermittently at Anaktuvuk Pass during the summer for a study of surface water-ground water interactions affected by permafrost.

Water levels in the long-term monitoring wells in Juneau, Anchorage, and Fairbanks were within the range of historical values. Water levels in most of the 19 short-term wells in Fairbanks recorded the highest levels since the summer of 2001 during August and September, following a period during which flows were impounded behind Moose Creek Dam. Water levels in wells in the Duck and Jordan Creek watersheds in Juneau are closely related to the infiltration of rain and snowmelt and the level of water in nearby streams. Some of these wells are in stream channels or on flood plains and are intermittently flooded; most water levels in these wells were within 10 feet of land surface.

Water Quality

General Overview

Information on the concentration and composition of constituents in Alaska's surface water is markedly variable in coverage. Some subregions have had regular or periodic sampling for many years at many stream points and at a number of lakes. Information in other subregions consists of only a few miscellaneous samples. Although the chemical characteristics of water in the streams and lakes of Alaska seem variable, the ranges in concentration are not as great as those found in the conterminous United States. Most Alaskan streams above tidal reaches contain water of a calcium bicarbonate type, generally containing less than 200 mg/L dissolved solids. In these streams, the hardness generally increases with increased dissolved-solids content. The streams draining lowlands and intermontane basins usually contain harder water than the streams in the higher mountains. Some streams, especially those draining areas overlain by organic-rich deposits, can have excessive iron content.

In Alaska, the mineral content of water in lakes is more variable than that in rivers. The water in some mountain lakes is very low in dissolved-solids content and is little more concentrated than rainwater. Other lakes occupying lowlands near the sea, including many near the Arctic coastal plain, have become mineralized periodically by salts brought in from the sea either by overland flooding during storms or as ocean spray. The water in lakes in the lowlands remote from the sea is commonly very similar in chemical character to water in the larger rivers adjacent to them.

The character and distribution of suspended sediment are relatively complex in Alaska because glaciers contribute large amounts of very fine material (glacial flour) to many streams. In general, during the summer, suspended-sediment concentrations in nonglacial streams seldom exceed

100 mg/L, but can be greater than 2,000 mg/L for glacial streams. Nonglacial streams often transport the highest sediment loads during the spring breakup or during periods of high rainfall, whereas glacial streams transport the greatest sediment loads during periods of maximum glacial melting, usually in middle or late summer. The normal suspended-sediment concentration between January and April is usually less than 20 mg/L for most nonurban streams. Thus, less than 15 percent of the annual suspended-sediment load is carried during this period. The percentage of material finer than 0.062 millimeter (the silt-clay fraction as generally defined) transported by nonglacial streams is less than 50 percent in contrast to more than 50 percent for glacial streams.

Outside of the major urban areas, almost all ground water is obtained from unconsolidated aquifers. Most sampled water contains less than the State's recommended limit of 500 mg/L dissolved solids. Calcium and magnesium, which along with bicarbonate contribute to the hardness of water, are the major dissolved ions. In most wells, hardness concentrations are about 60 to 80 percent of dissolved-solids concentrations. Water of sodium bicarbonate or sodium chloride type is present in numerous community wells drilled near the coast.

Iron is present in high concentrations in a large number of shallow wells in most areas of the State. Concentrations in excess of 1.0 mg/L are common. Iron concentrations of more than about 0.3 mg/L can cause staining of laundry and plumbing fixtures and impart an unpleasant taste to the water.

The bedrock aquifers in most of Alaska are undeveloped and very little is known about their water quality. In general, the concentration of dissolved solids in water from bedrock aquifers is higher than that found in the unconsolidated aquifers and the chemical quality of water in bedrock aquifers is more variable.

Most of the State's ground-water resources have, for the present, been unaffected by humans. However, in the major urban areas and in some outlying villages, ground-water quality has been locally degraded, primarily from septic systems, landfills, and abandoned fuel storage tanks. Most ground-water contamination problems in Alaska are caused by petroleum products, primarily from leaky fuel tanks.

In 2003 as part of the Clean Water Action Plan, water-quality, and bed-material samples were collected at sites in Gates of the Arctic National Park and Preserve, Cape Krusenstern National Monument, and Lake Clark National Park and Preserve.

In 2003 sampling at 5 stations in the Yukon Basin continued as part of the National Stream-Quality Assessment Program (NASQAN), the third year of a five year monitoring program. The Alaska Water Resources Office is also collecting samples for personnel from the National Research Program to help extend the normal NASQAN data and assisted on 2 synoptic sampling trips from Yukon River near Stevens Village to Yukon River near Pilot Station.

Water-quality sampling is also done for projects throughout Alaska. The analyses for these samples are published in reports discussing these projects. For more information on reports published in 2003, contact the Chief, Water Resources Office (see p. ii) or the Alaska Water Resources Office webpage at <http://ak.water.usgs.gov>.

Remark Codes

The following remark codes may appear with the water-quality data in this section:

PRINTED OUTPUT	REMARK
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Dissolved Trace-Element Concentrations

Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's and 100's of nanograms per liter (ng/L). Present data above the $\mu\text{g/L}$ level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes. However, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols took place during the 1995 water year.

Quality-control data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this office are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

BLANK SAMPLES – blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank samples for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall

data-collection process. The types of blank samples collected in the Alaska Water Resources Office are:

Source solution blank – a blank solution that is transferred to a sample bottle in an area of the office laboratory with an atmosphere that is relatively clean and protected with respect to target analytes.

Ambient blank – a blank solution that is put in the same type of bottle used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.

Field blank – a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank – a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank – a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office.)

Sampler blank – a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Pump blank – a blank solution that is processed through the same pump-and-tubing system used for an environmental sample.

Standpipe blank – a blank solution that is poured from the containment vessel (stand-pipe) before the pump is inserted to obtain the pump blank.

Filter blank – a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank – a blank solution that is treated with the sampler preservatives used for an environmental sample.

Canister blank – a blank solution that is taken directly from a stainless steel canister just before the VOC sampler is submerged to obtain a field blank sample.

REFERENCE SAMPLES – Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

REPLICATE SAMPLES – Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in The Alaska Water Resources Office are:

Concurrent sample – a type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating collection of samples into two or more compositing containers.

Sequential sample – a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample – a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

SPIKE SAMPLES – Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

Concurrent sample – a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Split sample – a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Water Use

Water use in the broad sense deals with man's interaction with and influence on the hydrologic cycle. In a technical sense, water use refers to water that is actually used for a specific purpose, such as domestic use, commercial needs, or industrial processing. The offstream water use for the state of Alaska was estimated for the year 2000. Fewer water use categories were estimated in 2000 than in previous surveys.

The largest water uses are probably instream uses for hydroelectric power generation, and fish and wildlife resources. The Alaska Water Use Act was amended in 1980 to include instream flow as a use. The amendments provide the opportunity for private individuals, and local, State, and Federal governments to legally acquire instream flow water rights. Either one or a combination of the four following types of uses can be acquired: 1) protection of fish and wildlife habitat, migration, and propagation; 2) recreation and parks; 3) navigation and transportation; and 4) sanitation and water quality. Eleven instream flow rights applications have been granted.

From 1990-2003, Alaska's population increased 18 percent, which was one of the Nation's larger percentage increases. In 2003, Alaska's population increased by 1 percent. In 2003, about 60 percent of the State's population lived in the Anchorage, Fairbanks, and Juneau areas.

Because of the population increase and building water supply distribution systems in many villages in rural Alaska, public-supply use of water is also increasing. In 2000, 67 percent of the State's population received their water from a public-supply utility; the remainder supplied their own water. Mining was the largest category of water use in 2000 when including saline water use. This use was mostly production of hard rock minerals and fossil fuels.

In 2000, the water utilities in the Anchorage, Fairbanks, and Juneau areas used 61 percent of all water withdrawn in the State for public supply. The monthly mean rate of water withdrawn by the principal public-supply utilities servicing these three areas from January 1990 to September 2003 is shown in figure 1. (Data are from Municipality of Anchorage, Fort Richardson, City of Fairbanks, and City and Borough of Juneau.) The higher usage shown during the summer months in Anchorage and Fairbanks is probably due to tourism and other commercial activity, increased industrial activity, and seasonal climatic effects.

The State's 2000 average use from public supply was 190 gallons per day per person, while the nation's average is 180 gallons per day. One of the nation's lowest per capita use of all public-supply customers of 10 gallons per day has been reported on the North Slope.

Surface water is the source for around 60 percent of the 2003 State's public-water supply in these three cities, while ground water is the source for the remainder. Anchorage receives 85 percent of its water from surface-water sources. Surface water became the primary source when water from Eklutna Lake was brought into production in 1988. Juneau obtained 70 percent of public-supply water from ground-water sources in 2003. Juneau has reduced using its surface-water source because of cost to meet water-quality regulations. Fairbanks obtains 100 percent of public-supply water from ground-water sources. Of the water withdrawn in Fairbanks, about two-thirds is treated to be suitable for domestic use, and the other one-third is for thermoelectric power use.

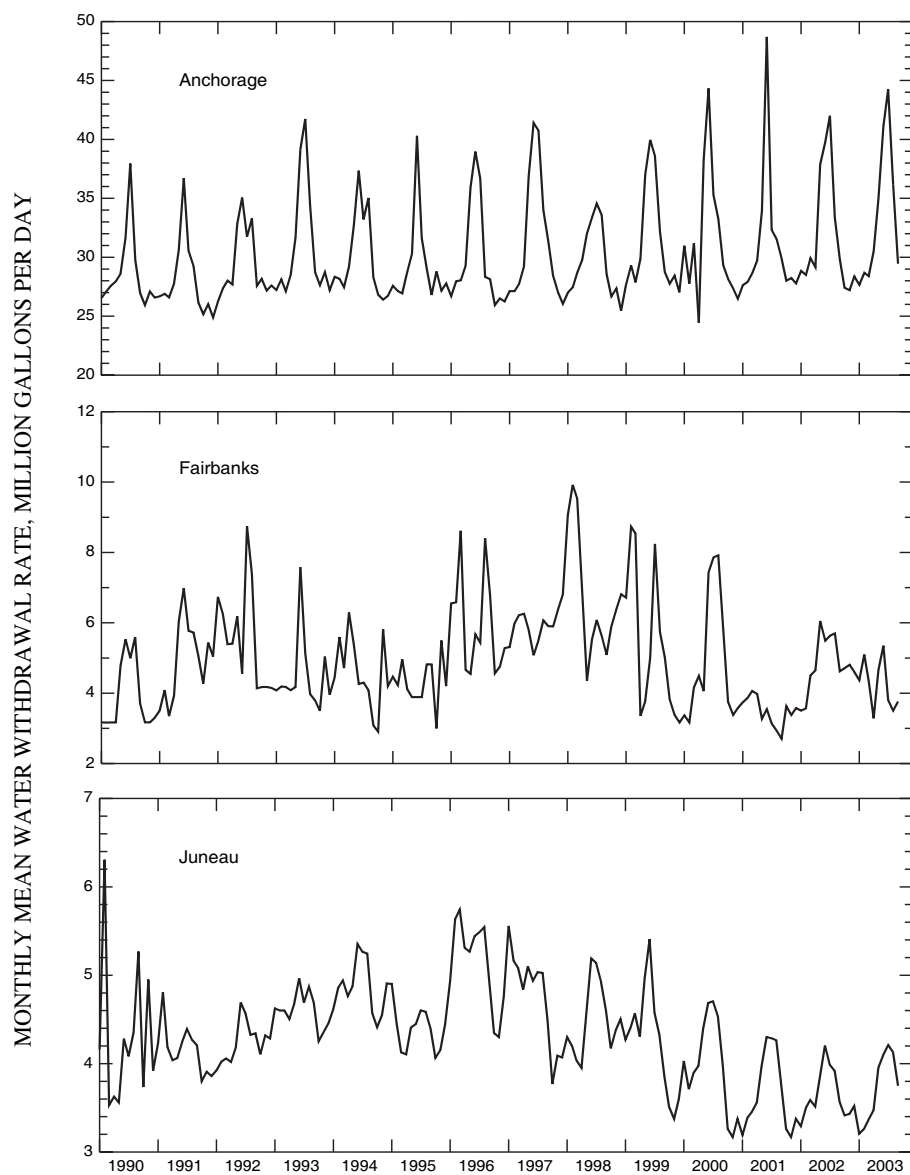


Figure 1. Monthly mean water withdrawal rate for public supply in the Anchorage, Fairbanks, and Juneau area, 1990 to 2003.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative of undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at <http://bqs.usgs.gov/acidrain/>.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will

provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest. Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at <http://water.usgs.gov/nawqa/>.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 2003 water year that began October 1, 2002, and ended September 30, 2003. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 1, 2 and 3. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether stream site, lake, reservoir, spring, or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The “downstream order” system is used for regular surface-water stations and the “latitude-longitude” system is used for wells, lakes, reservoirs, springs, and for surface-water stations where only miscellaneous measurements and/or water-quality samples are collected.

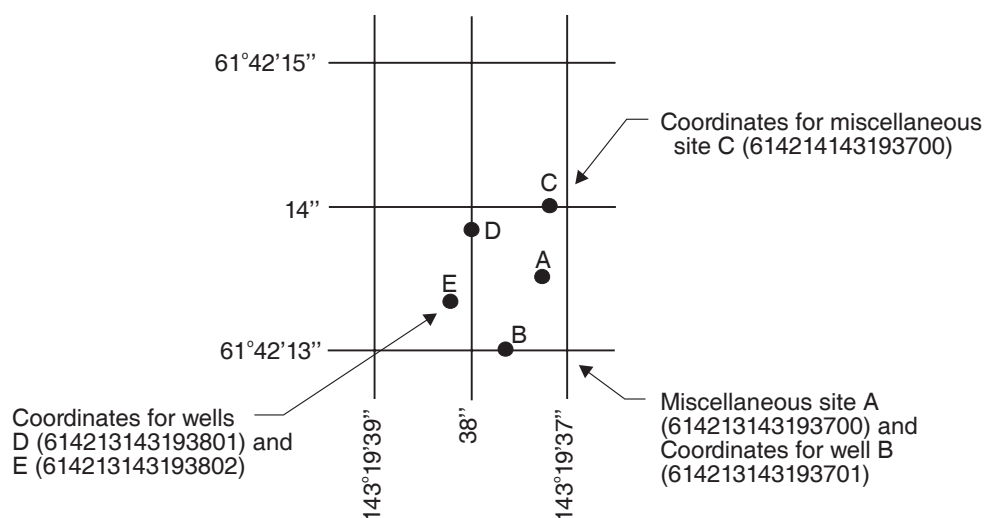
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in USGS reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the “List of Stations” in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated. Stations located on islands in Alaska are in downstream order starting at the most westerly point on the island and moving around the island in a counter-clockwise direction (stations on Kodiak Island start at the most northerly point).

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between regular stations and partial-record stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Water-quality stations located at or near regular stations or partial-record stations have the same number as the regular or partial-record station. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 15303600, which appears just to the left of the station name, includes the two-digit Part number “15” plus the six-digit downstream order number “303600.” The Part number designates the State of Alaska. Occasionally, the downstream order number consists of eight digits.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites, wells, springs, lakes, and reservoirs are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description and also stored in the computerized data base files. See the accompanying diagram.



Local Number

The local number, which is assigned to well and spring sites, is derived in part from the rectangular subdivision of public lands and is used in Alaska as the site name. The first two letters indicate the principal meridian and the quadrant formed by the intersection of the base line and the principal meridian. The first three digits indicate the township in which the well or spring is located, the next three digits the range, and the last two digits the section. The letters following the section number indicate the quarter section, the quarter-quarter section, and so forth to the fourth order subdivision. Each of these subdivisions is lettered counter-clockwise, from the northeast corner. Each site within the smallest order of subdivision is then given a sequential number. Finally, each well within a section is assigned a sequential map number indicated by the last three digits. Thus, SB00601115BCAD1 001 denotes the Seward meridian (S), the northwest quadrant (B), township 6 north, range 11 west, section 15; and the site is in the SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ (BCAD) of the section. It was the first site in the 2.5 acre "D" subdivision assigned a sequential number (1). The next space is left blank. The next three digits, 001, indicate the sequence in which a site was located on a map. Thus, 001 indicates the first site plotted in the one-square-mile section. The next space is left blank. The last five digits, such as 00114, are the Alaska (AK) register number. Therefore, the local number is SB00601115BCAD1 001 00114. The local number for springs

is the same, except for the last three digits and the Alaska (AK) register number, as indicated by the following example: SB00601115BCAD1S 4065S. Note: Public-land surveys have not been completed for a large portion of Alaska, therefore, some “local numbers” reflect this in an abbreviated form, e.g., SB00601115.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those at which daily mean discharges can be computed or estimated with reasonable accuracy from the supporting data and information. Because the daily mean discharges commonly are published, the stations are referred to as “daily stations.”

By contrast, partial records are obtained through discrete measurements and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as “Crest-stage partial records” or “Low-flow partial records.” Records of miscellaneous discharge measurements or from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Periodic lake-level measurements are also presented separately. Locations of all complete-record and crest-stage partial record stations for which data are given in this report are shown in figures 2 and 3, respectively.

Data Collection and Computation

Methodology

The base data collected at gaging stations consist of stage records and discharge measurements of streams, and stage of lakes. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

Computation

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) results of indirect measurements of peak discharge, such as slope-area or flow-through-culvert measurements and computations of flow-over-dams or weirs; (3) step-backwater techniques; or (4) velocity-area studies.

Daily mean discharges are computed from gage heights and stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by shifting control method, in which correction factors based on the individual discharge measurements and notes of the person who made the measurement are added (or subtracted) to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of debris or aquatic growth on the control.

In computing records of reservoir contents, it is necessary to have curves or tables defining the relation of stage and contents (from prior survey and computations). The application of stage to stage-content curves or tables gives the contents from which daily, monthly, or yearly changes can be determined. Discharges over lake or reservoir spillways are computed from stage-discharge relations much as other stream discharges are computed. Discharge through hydro-power plants can be calculated indirectly by using the theoretical relation of flow-rates with the amount of power being generated by each turbine, the reservoir level, and the estimated efficiency of each turbine. It is necessary to have tables, curves, or formulas relating the above variables (usually supplied by the manufacturer of the turbine). It is also necessary to have records of reservoir elevation, either from periodic observations or continuous records, and power-generation records (usually furnished by the operators of the power plant).

Winter discharge measurements

At most stream-gaging stations in Alaska, the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed or estimated on the basis of the available gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrographers, and comparable records of discharge for other stations in the same or nearby basins. Determinations of 0.0 or no flow may indicate a lack of distinguishable velocity, but do not necessarily describe a dewatered channel.

Estimates for periods of no data

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge. This happens when the recorder is stopped for the winter or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" ("REMARKS" paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteris-

tics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data presentation.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts: the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimum, and flow duration. Occasionally, data for other than the current year are published, usually to present unpublished data.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as location of station; drainage area; period of record; record accuracy; and other remarks pertinent to station operation and regulation. For some stations, historical extremes outside the period of record and peak discharges greater than base discharge for the station are given. The following information, as appropriate, is provided with each continuous record of discharge, stage, or reservoir contents. Comments to clarify information presented under the various headings of the station description follow:

LOCATION.--Information on locations is obtained from the most accurate maps available. The USGS topographic map showing the location of the station is included in parentheses for many sites, e.g. (Livengood E-1). The location of the gage with respect to the cultural and physical features nearby and to the reference place mentioned in the station name is given.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another or because of difficulties in determining drainage boundaries, the accuracy of drainage-area determinations likewise varies. As appropriate, some drainage-area figures are qualified by "approximately." Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which published records are available for the station or for an equivalent station. An equivalent station is one that was in operation at a time the present station was not, and whose location was such that records from it can be considered reasonably equivalent with records from the current station. Some daily stations were previously operated as partial-record stations or had only monthly discharge records published. These periods are included in the paragraph.

REVISED RECORDS.--Published records occasionally are found to be incorrect, usually because of new information, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual discharge figures, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak dis-

charges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see "Definition of Terms"), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--Periods of estimated daily discharge will be identified by date in this paragraph for selected stations. For all stations, estimated daily discharge will be flagged in the daily discharge table. (See next section "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, this information would be the first entry. This paragraph is also used to present information relative to the accuracy of the records, to the special methods of computation, to conditions that affect natural flow at the station, and to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose (use) of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here. Also, if data or information are supplied which aid in the computation of the record, the agency providing the information is named.

EXTREMES FOR PERIOD OF RECORD.--This paragraph is included in the station manuscript for stations for which tabular summary statistics are not appropriate because they have short records, seasonal records, or regulated flow.

EXTREMES OUTSIDE PERIOD OF RECORD.--Information about floods or unusually low flows that have occurred outside the stated period of record is included. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR or EXTREMES FOR CURRENT PERIOD.--This paragraph is included in the station manuscript for selected sites where peaks above base discharge are published and for stations for which tabular summary statistics are not appropriate because they have short records, seasonal records, or regulated flow. For records that meet certain criteria, all peak discharges and stages greater than a selected base discharge during the water year are given. The peaks greater than the base discharge, excluding the highest one, are called secondary peaks. The time that the peak occurred is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330. Except for stations for which tabular summary statistics are not appropriate, the maximum and minimum for the current water year appears below the daily values table in the tabular summaries.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. For these stations, there may be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry; users of data for these stations who obtained the record for previously published data reports may wish to contact the Water Resources Office Of-

fice (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. If the data for a discontinued station were obtained by computer retrieval, the data would be current because any previously published data are automatically accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings that appeared in reports before water year 1991 for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, and EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate, except for stations for which tabular summary statistics are not appropriate. No changes have been made to the data presentation of lake contents.

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives the mean discharge for each day of the water year. In the monthly summary for the daily table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also may be expressed in acre-feet (line headed "AC-FT"), in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the contributing drainage area or boundaries are unknown, or if the flow is mostly from a spring. At some stations, monthly and (or) yearly discharges are adjusted for diversions or changes in reservoir contents.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS ____ - ____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all the station records within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the sta-

tistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____" will consist of all of the station records within the specific water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. The comments clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations, the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations, the annual mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

MAXIMUM PEAK FLOW.--The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.--The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information. **(For Alaska, a second line heading, MAXIMUM PEAK STAGE, is used for stations where the peak stage was from a backwater condition and had a different date from the peak discharge.)**

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. In prior years, data for low-flow partial-record stations have been published, but no stations were in operation in the current water year. Data are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage partial-record stations. The second is a table of discharge measurements made at crest-stage partial-record stations and miscellaneous sites. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are given in special tables following the listing of miscellaneous measurements. Lake-level data collected at miscellaneous selected lakes are included. The data are being collected at these selected lakes to define lake-level changes in response to seasonal variations, the effects of man, droughts, and changes in the ground-water system. The lake-level data follow the water-quality data tables for miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values in the current annual data report are identified by the “e” notation next to each mean daily discharge in the daily values tables. Prior to the report for the 1985 water year, estimated daily-discharge values were not specifically identified.

Accuracy of the Records

The accuracy of streamflow data depends primarily on: (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under “REMARKS” states the degree of accuracy of the records. “Excellent” means that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair” within 15 percent. Records are rated as “poor” when they do not meet the criteria above. Different accuracies may be attributed to different parts of a given record.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous measurement sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, flow from springs, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions or for other factors that might affect the flows. At those stations where adjustments are made, large errors in computed runoff may occur if adjustments are large in comparison to observed discharge. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents.

Other Data Available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables, is filed in the field offices at Anchorage, Fairbanks, and Juneau for their areas of responsibility. Also, most of the daily mean discharges are in computer files and can be retrieved for statistical analyses. Information on the availability of unpublished data or statistical analyses may be obtained from the Water Resources Office in Anchorage.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A distinction needs to be made between “continuing records” as used in this report and “continuous recordings,” which refers to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained by continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

To assure the data obtained represent the *in situ* quality of the water, certain measurements, such as water temperature, pH, alkalinity, and dissolved oxygen, are made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the *in situ* water, pre-

scribed procedures are followed in collecting, treating, and shipping the samples to prevent changes in quality pending analysis in the laboratory. These procedures are given in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. For the tables of surface-water quality that are published in this report, parameter code 82398 (SAMPLING METHOD, CODES) lists a numeric value which corresponds to the following explanation:

- 10 - Equal width increment (EWI)
- 20 - Equal discharge increment (EDI)
- 25 - Timed sampling interval
- 30 - Single vertical
- 40 - Multiple verticals
- 50 - Point sample
- 60 - Weighted bottle
- 70 - Grab sample (dip)
- 80 - Discharge integrated, equal transit rate (ETR)
- 90 - Discharge integrated, centroid
- 100 - Van Dorn sampler
- 110 - Sewage sampler
- 120 - Velocity integrated
- 8010 - Other

To better define the sample, parameter code 84164 (SAMPLER TYPE) lists a numeric value which corresponds to the following explanation:

- | | |
|---------------------------------|--|
| 100 - Van Dorn sampler | 3050 - Collapsible Teflon Bag in Frame Sampler |
| 110 - Sewage sampler | 3053 - US D-95 Teflon bottle |
| 3001 - Sampler, US DH-48 | 3054 - US D-95 Plastic bottle |
| 3002 - Sampler, US DH-59 | 3055 - US D-96 Bag Sampler |
| 3003 - Sampler, US DH-75P | 3056 - US D-96-A1 Bag Sampler |
| 3004 - Sampler, US DH-75Q | 3060 - Weighted Bottle Sampler |
| 3007 - Sampler, US D-49 | 3070 - Grab Sampler |
| 3009 - Sampler, US D-74 | 3071 - Open Mouth Bottle |
| 3011 - Sampler, US D-77 | 3080 - VOC Hand Sampler |
| 3015 - Sampler, US P-63 | 4020 - Open top bailer |
| 3016 - Sampler, US P-72 | 4025 - Double valve bailer |
| 3042 - Sampler, US P-61 | 4041 - Submersible Helical Rotor Pump |
| 3044 - US DH-81 | 4080 - Peristaltic pump |
| 3045 - US DH-81 with Teflon cap | 4100 - Flowing Well |
| 8010 - Other | |

For further explanation on sampling methods, see *Techniques of Water-Resources Investigations*, Book 3, Chapter C2, "Field Methods for Measurement of Fluvial Sediment."

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

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are sometimes taken at the time of discharge measurements at water-discharge stations. Large streams have a small daily temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where temperature recording instruments are used, maximum and minimum temperatures for each day are published. Mean temperatures are published when diurnal variations are greater than 2.0 °C for more than 5 percent of the water year. Water temperatures measured at the time of water-discharge measurements are on file in the Alaska Science Center, Water Resources field offices.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the

time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

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

Laboratory Measurements

Sediment samples are analyzed in the U.S. Geological Survey laboratory in Vancouver, Washington. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4.

Records of Ground-Water Levels

Ground-water level data from a statewide network of observation wells are published in this report. This network consists of observation wells (figure 3) located either in important aquifers or in areas of significant water use.

Data Collection and Computation

Water-level measurements are made in many types of wells, under varying conditions of access and weather conditions. However, the equipment and measuring techniques used at each observation well assure that the measurements are of consistent accuracy and reliability.

Tables of water-level data are presented by Hydrologic Subregion. The station-identification number for a given well is the 15-digit number that appears in the upper left corner of the station description. The secondary identification number is the local number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape, battery-operated electric tape, or from data stored at selected time intervals on an electronic data logger. The water-level measurements in this report are given in feet with reference to either sea level or land-surface datum. Sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. The altitude of the land-surface datum is given in the well description. The height of the measuring point above or below land-surface datum is also given in each well description. Water levels in wells equipped with recording gages are the highest ground-water level recorded in the well on the day indicated.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet and if an electric water sensor is used, the error in determining the absolute value of the total depth to water may be a few tenths of a foot. However, the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some may be given only to a tenth of a foot.

Data Presentation

Each well record consists of the station description and the data table of water levels observed during the water year. The description of the well is presented through use of descriptive headings preceding the tabular data. Clarification of each heading is given below.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the Hydrologic Unit; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above sea level; it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the U.S. Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of record, with respect to land-surface datum or sea level, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet above or below land-surface datum. Water levels that are above land-surface datum have negative values. For wells equipped with recorders, water level values listed are the highest recorded in the well on the day indicated. Missing records are indicated by dashes in place of the water level.

Information of a more detailed nature than that published, such as well depths and water levels from other ground-water sites throughout the State, is filed in the Anchorage field office. Much of the data are in computer files and can be retrieved for analysis. Information on the availability of unpublished data may be obtained from the Water Resources Office Office in Anchorage.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most general purposes one annual sampling, or a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some areas but none for other areas. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other areas in earlier years.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed by Hydrologic Subregion, and are identified by well number. The station-identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the Internet. These data may be accessed at:

<http://water.usgs.gov>

Some water-quality and ground-water data also are available through the Internet. In addition, data can be provided in various machine-readable formats on compact disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division offices (see address on the back of the title page).

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from

<http://water.usgs.gov/glossaries.html>.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

Adenosine triphosphate (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also “Biomass” and “Dry weight”)

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most

low-flow frequency analyses use a climatic year (April 1–March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that purposely is placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also “Substrate”)

Ash mass is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²). (See also “Biomass” and “Dry mass”)

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also “Peak flow”)

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also “Bedload,” “Dry weight,” “Sediment,” and “Suspended-sediment discharge”)

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found com-

monly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Bottom material (See “Bed material”)

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada’s first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3 \pi r^3 \quad \text{cone } 1/3 \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See “Cubic foot per second-day”)

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also “Biochemical oxygen demand (BOD)”]

Clostridium perfringens (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also “Bacteria”)

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

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

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (CFS, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term “second-foot” sometimes is used synonymously with “cubic foot per second” but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft³/s)/d]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, (ft³/s)/mi²] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also “Annual runoff”)

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Sediment” and “Suspended-sediment concentration”)

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

Diatoms (*Bacillariophyta*) are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO_3) can be converted to carbonate concentration by multiplying by 0.60.

Diversity index (H) (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth’s surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also “Ash mass,” “Biomass,” and “Wet mass”)

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also “Wet weight”)

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also “Substrate embeddedness class”)

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis*, *Streptococcus feacium*, *Streptococcus avium*, and their variants. (See also “Bacteria”)

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

***Escherichia coli* (*E. coli*)** are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environ-

ment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

Gaging station is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating “moss” in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site:
<http://www.co-ops.nos.noaa.gov/tideglos.html>

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \sum \frac{(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See “Datum”)

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

Inch (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also “Annual runoff”)

Instantaneous discharge is the discharge at a particular instant of time. (See also “Discharge”)

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a “less than” (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term ‘non-detection value’ (NDV).

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_o}.$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

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

Mean high or low tide is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

Measuring point (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

Methylene blue active substances (MBAS) indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, $\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per kilogram (UG/KG, $\mu\text{g/kg}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, $\mu\text{S/cm}$) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide

stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or

hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

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

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable from bed (bottom) material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals

whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See “Recurrence interval”)

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical pre-

cipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See “Gage height”)

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

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

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

Surficial bed material is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and, thus, the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of “suspended, recoverable” constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also “Suspended”)

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “Sediment”)

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as “suspended, total.” Determinations of “suspended, total” constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term “temperature recorder” is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the

composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent’s physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total.” (Note that the word “total” does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also “Bacteria”)

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology

used, is required to judge when the results should be reported as “total in bottom material.”

Total length (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume”)

Total recoverable is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Bedload,” “Bedload discharge,” “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-sediment load,” and “Total load”)

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collec-

tive optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Vertical datum (See “Datum”)

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the “2002 water year.”

Watershed (See “Drainage basin”)

WDR is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for “Water-Resources Data” in reports published prior to 1976.)

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also “Plankton”)

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at <http://water.usgs.gov/pubs/twri/>. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at <http://www.usgs.gov/sales.html>, or by FAX to (303)236-469 of an order form available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

- 1-D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS-TWRI book 1, chap. D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS-TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS-TWRI book 2, chap. D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS-TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS-TWRI book 2, chap. E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS-TWRI book 2, chap. E2. 1990. 150 p.

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- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS-TWRI book 2, chap. F1. 1989. 97 p.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI book 3, chap. A1. 1967. 30 p.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI book 3, chap. A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI book 3, chap. A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI book 3, chap. A5. 1967. 29 p.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 p.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 p.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 p.

- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 p.
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- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 p.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 p.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 p.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 p.
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Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS-TWRI book 3, chap. C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 p.
- 4-A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS-TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

Section B. Surface Water

Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 p.

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 p.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 p.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS-TWRI book 5, chap. A1. 1989. 545 p.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI book 5, chap. A2. 1971. 31 p.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI book 5, chap. A3. 1987. 80 p.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 p.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI book 5, chap. A5. 1977. 95 p.
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Section C. Sediment Analysis

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI book 6, chap. A1. 1988. 586 p.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS-TWRI book 6, chap. A2. 1991. 68 p.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS-TWRI book 6, chap. A3. 1993. 136 p.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS-TWRI book 6, chap. A4. 1992. 108 p.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS-TWRI book 6, chap. A5. 1993. 243 p.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS-TWRI book 6, chap. A6. 1996. 125 p.
- 6-A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS-TWRI book 6, chap. A7. 2002. 77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI book 7, chap. C1. 1976. 116 p.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by

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- 7–C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

- 8–A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.
- 8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

- 8–B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

- 9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
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Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999. 149 p.

- 9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

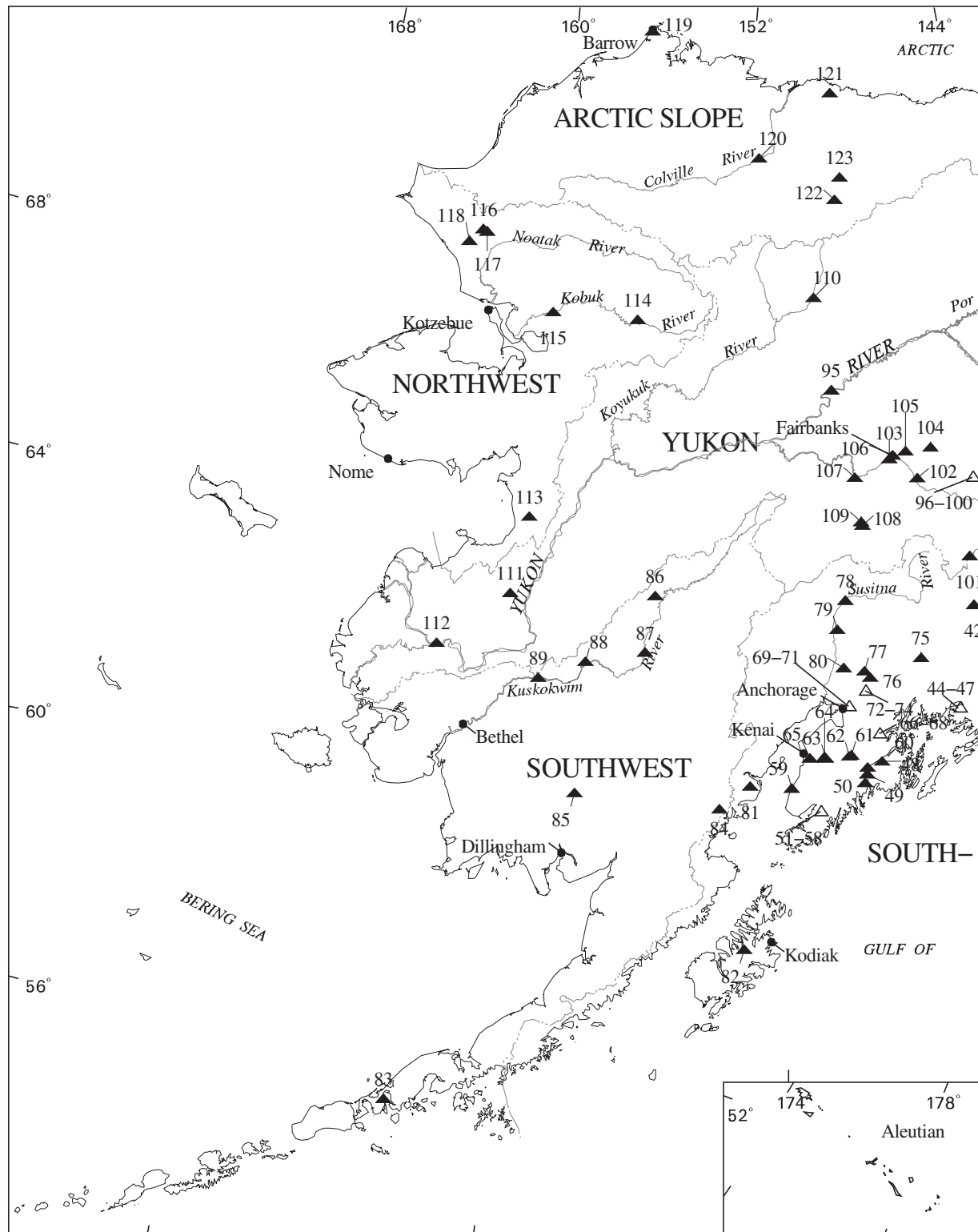
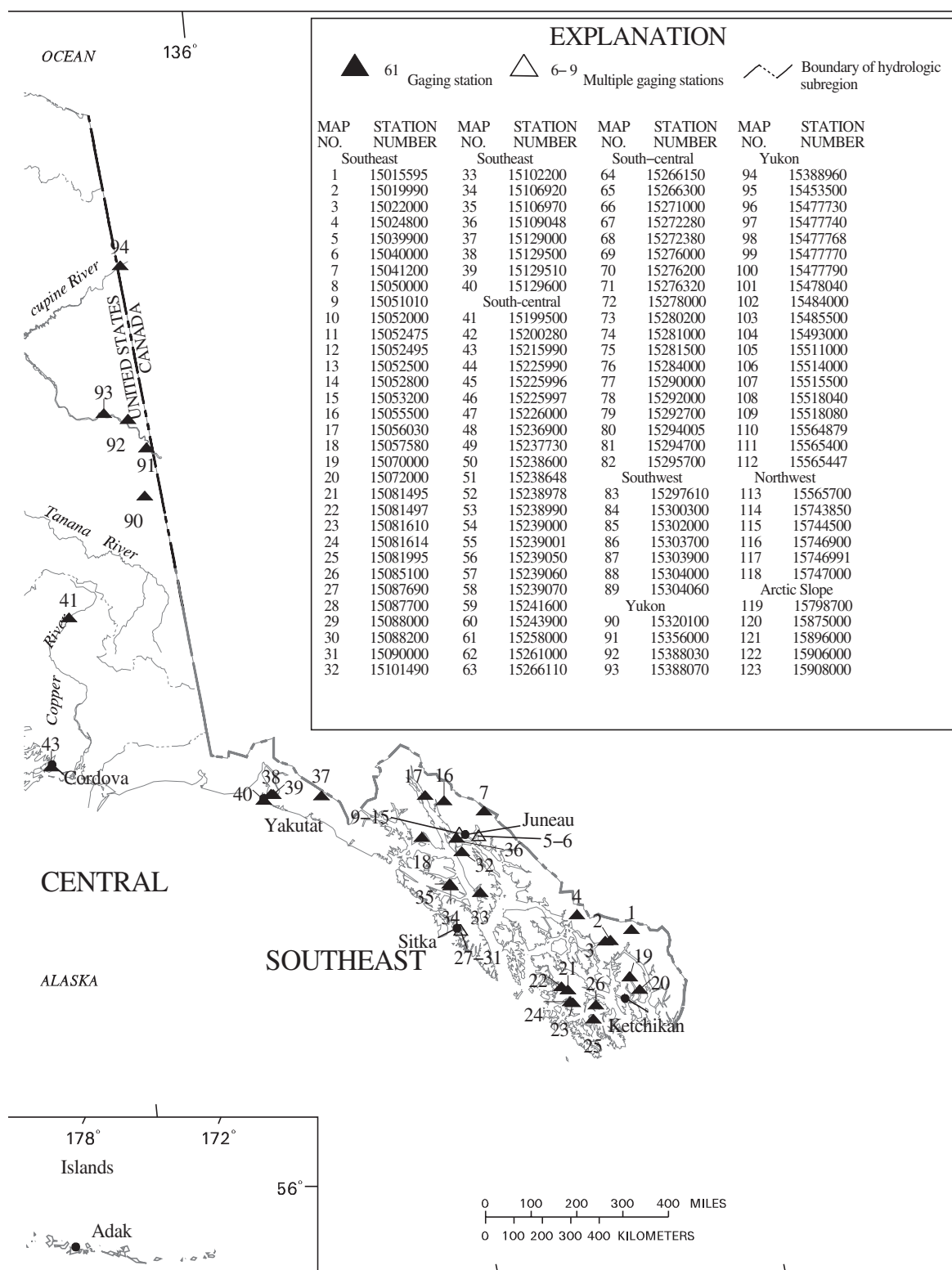


Figure 1. Locations of gaging stations



15015595 UNUK RIVER BELOW BLUE RIVER NEAR WRANGELL

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 2003.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April to September 2003.

INSTRUMENTATION.--Digital water-temperature recorder with 15-minute recording interval.

REMARKS.--Probe installed on April 30. Missing record from July 23-29 and August 1-25 due to buried probe. Records represent water temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross section on August 26. No variation was found in the temperature cross sections. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 10.0°C, June 5, July 12, 18, and 30; minimum recorded, 5.5°C May 1, 4, and 25.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Locatn in X-sect. looking downstrm ft from 1 bank (00009)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfilt'd, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
AUG								
26...	1815	14.0	85	7.3	9.5	754	11.1	98
26...	1816	42.0	85	7.3	9.5	754	10.9	96
26...	1817	70.0	85	7.3	9.5	754	11.0	97
26...	1818	98.0	85	7.3	9.5	754	11.0	97
26...	1819	126	85	7.3	9.5	754	11.0	97

TEMPERATURE WATER, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[illegible]

1501595 UNUK RIVER BELOW BLUE RIVER NEAR WRANGELL—Continued

TEMPERATURE WATER, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.0	5.0	6.0	7.0	5.5	6.0	---	---	---	7.0	6.0	6.5
2	8.5	5.0	6.5	7.0	6.0	6.5	---	---	---	8.0	6.5	7.0
3	9.0	4.5	7.0	7.5	6.0	6.5	---	---	---	8.0	6.0	7.0
4	8.5	5.5	7.0	8.0	5.5	6.5	---	---	---	7.5	6.0	6.5
5	10.0	6.0	8.0	8.5	5.5	7.0	---	---	---	7.0	6.5	6.5
6	9.5	5.5	7.5	8.0	6.0	7.0	---	---	---	7.5	6.5	7.0
7	9.0	5.0	7.0	9.5	6.0	7.5	---	---	---	7.0	6.0	6.5
8	9.0	4.5	7.0	8.5	6.0	7.0	---	---	---	7.0	6.0	6.5
9	9.5	5.0	7.0	9.5	6.0	7.5	---	---	---	7.0	6.0	6.5
10	9.5	5.0	7.5	9.5	6.0	8.0	---	---	---	7.0	6.0	6.5
11	8.5	5.5	7.0	9.5	6.0	8.0	---	---	---	7.0	6.5	6.5
12	7.5	5.5	6.5	10.0	6.0	8.0	---	---	---	8.0	6.5	7.0
13	7.0	5.0	6.5	8.5	6.0	7.0	---	---	---	7.0	6.5	6.5
14	7.5	5.0	6.5	7.5	6.0	6.5	---	---	---	7.0	6.5	7.0
15	6.5	5.0	5.5	7.0	6.0	6.5	---	---	---	7.5	6.0	7.0
16	7.5	5.0	6.5	7.0	6.0	6.5	---	---	---	8.0	6.0	7.0
17	7.0	6.0	6.5	7.5	6.0	6.5	---	---	---	7.0	5.5	6.5
18	8.0	5.5	6.5	10.0	6.0	7.5	---	---	---	6.5	5.5	6.0
19	7.5	5.0	6.0	8.5	6.0	7.5	---	---	---	7.0	6.0	6.5
20	8.5	5.5	7.0	7.5	6.5	7.0	---	---	---	6.5	6.0	6.0
21	8.5	5.5	7.0	7.5	6.0	6.5	---	---	---	6.5	6.0	6.5
22	9.0	6.0	7.5	7.5	6.0	6.5	---	---	---	7.5	6.0	6.5
23	8.5	6.0	7.0	---	---	---	---	---	---	6.5	5.5	6.0
24	7.5	6.0	6.5	---	---	---	---	---	---	6.0	5.5	6.0
25	7.0	6.0	6.5	---	---	---	---	---	---	7.0	6.0	6.5
26	8.5	6.0	7.0	---	---	---	9.5	---	---	6.5	6.0	6.5
27	7.5	5.5	6.5	---	---	---	8.5	6.5	7.5	7.0	6.0	6.5
28	7.5	5.5	6.5	---	---	---	9.0	6.5	8.0	8.0	6.0	7.0
29	8.0	5.5	6.5	---	---	---	9.5	6.5	8.0	7.5	6.0	7.0
30	7.0	6.0	6.5	10.0	6.0	---	8.5	6.5	7.0	7.5	5.5	6.5
31	---	---	---	9.0	6.5	7.5	7.0	6.0	6.5	---	---	---
MONTH	10.0	4.5	6.8	---	---	---	---	---	---	8.0	5.5	6.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Meduim code	Sample type	Stream width, feet (00004)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (84398)	Sampler type, code (84164)	Specif. conduc- tance, wat unf deg C (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00030)	Temper- ature, water deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	
AUG 26...	1800	9	9	136	23.77	5320	10	8010	85	7.3	14.0	9.5	754	
Date		Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Specif.p H Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd mg/L (00955)
AUG 26...	11.0	97	35	12.3	1.09	1.28	.70	31	25	12.6	.26	<.2	3.06	

[illegible]

15019990 TYEE LAKE OUTLET NEAR WRANGELL

LOCATION.--Lat 56°12'00", long 131°30'24", in SE¹/₄ SW¹/₄ sec. 28, T. 65 S., R. 90 E. (Bradfield Canal A-5 quad), Hydrologic Unit 19010101, in Tongass National Forest, on left bank at outlet of Tyee Lake, 1.5 mi south of Bradfield Canal and 37 mi southeast of Wrangell, Alaska.

DRAINAGE AREA.--14.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1981 and June 1992 to current year. Records for November 1922 to September 1927 and August 1963 to October 1969, published as Tyee Creek at Mouth near Wrangell (station 15020100) are not equivalent owing to inflow between sites.

GAGE.--Water-stage recorder. Elevation of gage is 1,370 ft above sea level from topographic map. Prior to June 9, 1992, at site 500 ft downstream at datum 13.66 ft lower.

REMARKS.--Records fair, except for estimated daily discharges and discharges below 10 ft³/s, which are poor. Water for power generation is diverted from Tyee Lake and discharged into Bradfield Canal. Diversion to hydropower plant began February 1984, and is not included in the discharge records.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	6.6	84	5.8	18	0.00	0.00	0.00	284	137	22	99
2	122	4.2	66	6.0	13	0.00	0.00	0.00	277	129	22	262
3	105	e3.2	49	5.6	10	0.00	0.00	0.00	261	137	24	269
4	86	2.2	33	21	7.0	0.00	0.00	0.00	240	178	19	217
5	74	1.3	20	62	4.7	0.00	0.00	0.00	237	186	13	181
6	115	4.9	12	226	3.0	0.00	0.00	0.00	270	168	9.2	184
7	127	9.3	14	269	1.7	0.00	0.00	0.00	303	148	6.6	197
8	132	9.2	47	229	0.70	0.00	0.00	0.00	303	132	5.2	201
9	132	7.3	128	178	0.19	0.00	0.00	0.00	289	115	4.2	168
10	116	5.9	153	135	0.00	0.00	0.00	0.00	283	101	3.1	205
11	94	4.3	143	103	0.00	0.00	0.00	0.00	283	93	1.8	283
12	76	10	164	78	0.00	0.00	0.00	0.00	291	86	0.89	246
13	72	40	167	58	0.00	0.00	0.00	0.00	313	87	0.54	303
14	65	68	140	42	0.00	0.00	0.00	0.13	304	85	0.34	422
15	60	76	132	28	0.00	0.00	0.00	0.37	314	74	1.2	381
16	55	74	119	20	0.00	0.00	0.00	0.51	304	74	5.1	315
17	51	63	97	26	0.00	0.00	0.00	0.74	299	91	10	248
18	43	54	76	33	0.00	0.00	0.00	1.5	336	88	25	270
19	39	78	58	38	0.00	0.00	0.00	2.8	331	78	40	332
20	61	107	42	48	0.00	0.00	0.00	4.7	298	79	44	308
21	60	290	28	42	0.00	0.00	0.00	9.6	256	96	54	363
22	51	257	18	32	0.00	0.00	0.00	44	220	106	54	354
23	42	201	25	23	0.00	0.00	0.00	122	193	91	47	291
24	32	152	40	17	0.00	0.00	0.00	290	166	75	39	349
25	23	120	39	13	0.00	0.00	0.00	347	152	62	29	437
26	16	147	33	21	0.00	0.00	0.00	349	157	53	20	382
27	24	148	24	34	0.00	0.00	0.00	314	146	48	14	315
28	26	128	17	29	0.00	0.00	0.00	287	143	44	11	258
29	20	107	12	28	---	0.00	0.00	303	149	39	8.2	207
30	15	97	8.8	28	---	0.00	0.00	284	142	33	13	162
31	10	---	6.7	24	---	0.00	---	279	---	26	49	---
TOTAL	2049	2275.4	1995.5	1902.4	58.29	0.00	0.00	2639.35	7544	2939	595.37	8209
MEAN	66.1	75.8	64.4	61.4	2.08	0.000	0.000	85.1	251	94.8	19.2	274
MAX	132	290	167	269	18	0.00	0.00	349	336	186	54	437
MIN	10	1.3	6.7	5.6	0.00	0.00	0.00	0.00	142	26	0.34	99
AC-FT	4060	4510	3960	3770	116	0.00	0.00	5240	14960	5830	1180	16280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)#

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	153	48.8	14.0	6.55	0.21	0.000	2.89	69.9	265	182	112	190
MAX	264	108	64.4	61.4	2.08	0.000	24.8	247	367	305	216	298
(WY)	2000	1993	2003	2003	2003	1993	1993	1993	1999	1999	2000	2001
MIN	66.1	5.10	0.000	0.000	0.000	0.000	0.000	0.000	176	55.2	19.2	41.5
(WY)	2003	1997	1995	1993	1993	1993	1994	2002	1994	1998	2003	1993

Record for 1980 and 1981 water years, prior to diversion of 1984, not included. See Period of Record.
e Estimated

15019990 TYEE LAKE OUTLET NEAR WRANGELL—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003#	
ANNUAL TOTAL	36708.60		30207.31			
ANNUAL MEAN	101		82.8		86.7	
HIGHEST ANNUAL MEAN					113 2001	
LOWEST ANNUAL MEAN					56.5 1995	
HIGHEST DAILY MEAN	553	Aug 27	437	Sep 25	710	Oct 27 1993
LOWEST DAILY MEAN	a0.00	Jan 1	b0.00	Feb 10	c0.00	Dec 30 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Feb 10	0.00	Dec 30 1992
MAXIMUM PEAK FLOW			452	Sep 25	d975	Oct 26 1993
MAXIMUM PEAK STAGE			23.97	Sep 25	28.62	Oct 26 1993
INSTANTANEOUS LOW FLOW			b0.00	Feb 10	c0.00	Dec 30 1992
ANNUAL RUNOFF (AC-FT)	72810		59920		62790	
10 PERCENT EXCEEDS	318		283		276	
50 PERCENT EXCEEDS	26		33		19	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

PRIOR TO DIVERSION OF 1984

SUMMARY STATISTICS	WATER YEARS 1980 - 1981	
ANNUAL MEAN	179	
HIGHEST ANNUAL MEAN	213	1981
LOWEST ANNUAL MEAN	146	1980
HIGHEST DAILY MEAN	1690	Oct. 7 1980
LOWEST DAILY MEAN	f1.4	Apr. 2 1980
ANNUAL SEVEN-DAY MINIMUM	2.0	Mar.31 1980
INSTANTANEOUS PEAK FLOW	1910	Oct. 7 1980
INSTANTANEOUS PEAK STAGE	12.72	Oct. 7 1980
ANNUAL RUNOFF (AC-FT)	130000	
10 PERCENT EXCEEDS	457	
50 PERCENT EXCEEDS	86	
90 PERCENT EXCEEDS	11	

15019990 TYEE LAKE OUTLET NEAR WRANGELL—Continued

LAKE-STAGE RECORDS

PERIOD OF RECORD.-- June of 1992 to Sept.2002 (fragmentary) during many winter months when lake level was below the point of Zero flow at the outlet. The 2003 WY is complete when sensor was lowered below the PZF.

GAGE.-- Water-stage recorder. Datum of gage is mean low low water (GPS survey of Aug.21,2003 by USGS using NADD 83) lake outlet at a datum of 1,368.80 ft. above mean low low water at the point of zero flow.

REMARKS.-- Lake outlet consists of Large boulders and log jams with uncontrolled spillway at elev 1368.80 ft. Water for power generation is diverted from Tyee lake and discharged into Bradfield Canal. Diversion to power plant began in February 1984.

EXTREMES FOR PERIOD OF RECORD.-- Maximum elevation,1383.02 ft. Oct.26,1993;minimum observed unknown until 2003 wy

EXTREMES FOR CURRENT YEAR.-- Maximum elevation,1378.37 ft. September 25,2003; minimum 1357.51 ft.April 14,2003

ELEVATION OF RESERVOIR WATER SURFACE ABOVE DATUM, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.06	1369.94	1372.42	1369.87	1370.60	1364.28	1359.83	1363.57	1376.05	1373.60	1370.78	1372.76
2	1373.28	1369.68	1371.97	1369.89	1370.41	1364.08	1359.68	1364.05	1375.95	1373.42	1370.78	1375.70
3	1372.91	1369.58	1371.52	1369.85	1370.21	1363.84	1359.49	1364.32	1375.70	1373.59	1370.83	1375.82
4	1372.46	1369.40	1371.09	1370.63	1369.98	1363.65	1359.29	1364.47	1375.37	1374.36	1370.65	1375.00
5	1372.19	1369.23	1370.70	1371.87	1369.75	1363.48	1359.07	1364.52	1375.32	1374.48	1370.41	1374.41
6	1373.12	1369.72	1370.35	1375.12	1369.53	1363.22	1358.87	1364.58	1375.84	1374.17	1370.15	1374.45
7	1373.38	1370.16	1370.41	1375.83	1369.32	1362.93	1358.70	1364.64	1376.34	1373.82	1369.94	1374.67
8	1373.49	1370.15	1371.44	1375.19	1369.08	1362.62	1358.50	1364.78	1376.34	1373.49	1369.81	1374.74
9	1373.49	1370.01	1373.40	1374.35	1368.85	1362.31	1358.29	1365.07	1376.12	1373.13	1369.69	1374.17
10	1373.15	1369.88	1373.92	1373.56	1368.61	1361.99	1358.09	1365.51	1376.04	1372.83	1369.54	1374.80
11	1372.66	1369.70	1373.71	1372.86	1368.38	1361.69	1357.90	1366.08	1376.04	1372.64	1369.34	1376.03
12	1372.23	1370.19	1374.10	1372.28	1368.14	1361.39	1357.72	1367.10	1376.15	1372.48	1369.13	1375.47
13	1372.12	1371.28	1374.15	1371.77	1367.91	1361.22	1357.59	1368.32	1376.48	1372.49	1369.03	1376.32
14	1371.96	1372.02	1373.66	1371.31	1367.67	1361.21	1357.53	1368.79	1376.35	1372.45	1368.95	1378.01
15	1371.83	1372.24	1373.50	1370.96	1367.46	1361.09	1357.58	1368.96	1376.49	1372.17	1369.15	1377.45
16	1371.69	1372.18	1373.21	1370.69	1367.27	1361.00	1357.76	1369.02	1376.35	1372.17	1369.80	1376.50
17	1371.58	1371.91	1372.72	1370.88	1367.10	1360.84	1357.79	1369.10	1376.28	1372.58	1370.22	1375.49
18	1371.35	1371.68	1372.23	1371.10	1366.91	1360.69	1357.72	1369.28	1376.81	1372.52	1370.83	1375.83
19	1371.23	1372.27	1371.77	1371.23	1366.76	1360.49	1357.66	1369.50	1376.74	1372.28	1371.28	1376.76
20	1371.85	1372.91	1371.34	1371.50	1366.56	1360.31	1357.65	1369.76	1376.25	1372.30	1371.40	1376.41
21	1371.81	1376.14	1370.94	1371.33	1366.30	1360.17	1357.72	1370.16	1375.63	1372.70	1371.67	1377.19
22	1371.59	1375.64	1370.63	1371.04	1366.03	1360.04	1357.86	1371.37	1375.05	1372.92	1371.65	1377.07
23	1371.33	1374.74	1370.84	1370.79	1365.76	1359.89	1357.90	1373.23	1374.60	1372.59	1371.47	1376.15
24	1371.06	1373.89	1371.28	1370.58	1365.49	1359.62	1358.03	1376.13	1374.15	1372.19	1371.26	1376.98
25	1370.79	1373.25	1371.25	1370.38	1365.28	1359.36	1358.72	1376.97	1373.90	1371.88	1370.98	1378.18
26	1370.56	1373.78	1371.08	1370.70	1365.03	1359.09	1359.98	1377.00	1373.98	1371.65	1370.70	1377.46
27	1370.82	1373.81	1370.83	1371.12	1364.78	1358.83	1360.87	1376.49	1373.77	1371.49	1370.46	1376.51
28	1370.88	1373.40	1370.59	1370.99	1364.52	1358.58	1361.47	1376.10	1373.71	1371.37	1370.26	1375.65
29	1370.70	1372.94	1370.35	1370.95	---	1358.55	1362.08	1376.34	1373.84	1371.24	1370.07	1374.84
30	1370.47	1372.73	1370.12	1370.96	---	1359.23	1362.82	1376.06	1373.69	1371.08	1370.32	1374.08
31	1370.21	---	1369.96	1370.82	---	1359.87	---	1375.98	---	1370.90	1371.53	---
MEAN	1371.91	1371.82	1371.79	1371.63	1367.63	1361.15	1358.81	1369.59	1375.51	1372.61	1370.39	1375.83
MAX	1373.49	1376.14	1374.15	1375.83	1370.60	1364.28	1362.82	1377.00	1376.81	1374.48	1371.67	1378.18
MIN	1370.21	1369.23	1369.96	1369.85	1364.52	1358.55	1357.53	1363.57	1373.69	1370.90	1368.95	1372.76

Record for 1980 & 1981 water years, prior to diversion of 1984, not included. See PERIOD OF RECORD

a Jan.1 to Jun. 2,2002

b Feb. 10 to May 13

c No flow many days during winter months most years

d From rating extended above 400 cfs

f Apr. 2-3 1980

15022000 HARDING RIVER NEAR WRANGELL

LOCATION.--Lat 56°12'48", long 131°38'12", in SW¹/₄ SW¹/₄ sec. 22, T. 65 S., R. 89 E. (Bradfield Canal A-5 quad), Hydrologic Unit 19010101, in Tongass National Forest, on right bank 1 mi upstream from mouth on north shore of Bradfield Canal, 4 mi downstream from Fall Lake, and 34 mi southeast of Wrangell.

DRAINAGE AREA.--67.4 mi².

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WSP 1640: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above sea level, by barometer. Prior to September 30, 1960, at site 300 ft upstream at datum 0.12 ft lower. October 1, 1960, to August 23, 1975, at prior site and present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov.21	0430	6290	10.43	Sept.14	0230	*6950	*10.87
Jan 06	0700	4250	9.00	Sept 21	2030	4310	9.04
Sept 02	0515	6850	10.80	Sept 24	1145	5420	9.83

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	716	194	600	327	280	99	391	949	1360	1250	671	2420
2	1360	174	416	436	244	128	269	716	1290	1190	1130	5150
3	611	160	332	403	349	128	204	527	937	1510	1040	1740
4	454	150	277	1130	265	185	166	398	833	2960	638	905
5	561	175	239	1360	216	242	142	326	1090	1580	499	866
6	2520	546	217	2760	189	169	125	302	1680	1110	432	1160
7	2620	525	526	1720	172	e140	140	298	1630	922	464	1200
8	2880	315	1150	733	161	e125	156	330	1250	929	509	1130
9	1850	247	1580	473	150	e114	151	431	1080	859	542	677
10	935	220	1060	368	143	e106	142	566	1190	853	488	1360
11	593	217	724	308	137	e100	157	668	1210	950	409	3070
12	488	461	1040	268	130	e94	178	1160	1120	906	398	1540
13	758	912	934	235	123	e105	208	1220	1260	1080	459	3050
14	620	1070	605	208	113	e118	267	770	1180	962	518	4930
15	633	794	608	193	111	e135	334	560	1400	756	822	2100
16	747	571	520	193	107	e250	504	444	1070	1870	1240	1000
17	997	535	466	655	120	175	406	383	1300	2200	1180	645
18	601	507	385	643	158	212	328	431	2320	1270	984	1390
19	572	978	324	692	263	209	275	481	1800	934	1040	2230
20	1130	1100	272	823	237	183	273	510	1150	1300	1200	1750
21	678	3540	232	463	145	229	339	556	867	1880	1260	3230
22	528	988	219	306	e140	278	400	955	790	1490	774	1730
23	434	586	654	261	e128	292	332	1520	797	833	546	845
24	359	430	614	251	e116	213	394	2740	712	669	471	3140
25	305	414	440	247	e108	181	1250	1850	906	658	412	4210
26	268	2350	354	476	101	166	1550	1620	1300	692	388	2090
27	558	1220	290	512	101	158	1180	1120	957	783	380	1320
28	440	830	251	354	97	180	914	1120	1210	816	343	945
29	318	588	221	372	---	465	854	1740	1230	716	370	777
30	259	724	202	495	---	1200	929	1180	1030	670	929	629
31	221	---	208	385	---	773	---	1300	---	623	2060	---
TOTAL	26014	21521	15960	18050	4604	7152	12958	27171	35949	35221	22596	57229
MEAN	839	717	515	582	164	231	432	876	1198	1136	729	1908
MAX	2880	3540	1580	2760	349	1200	1550	2740	2320	2960	2060	5150
MIN	221	150	202	193	97	94	125	298	712	623	343	629
MED	601	541	416	403	141	175	301	668	1190	934	542	1470
AC-FT	51600	42690	31660	35800	9130	14190	25700	53890	71300	69860	44820	113500
CFSM	12.5	10.6	7.64	8.64	2.44	3.42	6.41	13.0	17.8	16.9	10.8	28.3
IN.	14.36	11.88	8.81	9.96	2.54	3.95	7.15	15.00	19.84	19.44	12.47	31.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)#

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
MEAN	1074	501	341	259	235	202	361	918	1385	1340	1137	1161
MAX	2152	1252	1065	819	655	510	733	1357	1896	1878	1871	2039
(WY)	1962	1970	1990	1981	1954	1986	1994	1956	1996	1972	2002	2001
MIN	610	118	102	50.6	46.7	54.8	90.0	624	960	861	601	507
(WY)	1970	1986	1984	1969	1969	1969	1954	1977	1981	1995	1993	1965

See period of record; partial years used in monthly statistics
e Estimated

15022000 HARDING RIVER NEAR WRANGELL—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003#	
ANNUAL TOTAL	321989.0		284425			
ANNUAL MEAN	882		779		747	
HIGHEST ANNUAL MEAN					921	
LOWEST ANNUAL MEAN					558	
HIGHEST DAILY MEAN	6190	Aug 23	5150	Sep 2	11400	Oct 14 1961
LOWEST DAILY MEAN	a57	Mar 24	94	Mar 12	b35	Jan 23 1969
ANNUAL SEVEN-DAY MINIMUM	59	Mar 18	107	Feb 23	35	Jan 23 1969
MAXIMUM PEAK FLOW			6950	Sep 14	c15300	Oct 26 1993
MAXIMUM PEAK STAGE			10.87	Sep 14	d16.22	Oct 14 1961
INSTANTANEOUS LOW FLOW			f		35	Jan 23 1969
ANNUAL RUNOFF (AC-FT)	638700		564200		541100	
ANNUAL RUNOFF (CFSM)	13.1		11.6		11.1	
ANNUAL RUNOFF (INCHES)	177.71		156.98		150.56	
10 PERCENT EXCEEDS	2010		1580		1610	
50 PERCENT EXCEEDS	582		561		544	
90 PERCENT EXCEEDS	84		157		110	

See Period of Record; partial years used in monthly statistics

a Mar. 24 & Apr. 9

b From Jan. 23 to Feb. 11, 1969

c From rating curve extended above 5,000 ft³/s on basis of slope-area measurement at gage height, 13.90 ft

d At site then in use

f Not determined, see lowest daily mean

15024800 STIKINE RIVER NEAR WRANGELL
(International gaging station)

LOCATION.--Lat 56°42'29", long 132°07'49", in SE¹/₄ SE¹/₄ sec. 35, T. 59 S., R. 84 E. (Petersburg C-1 quad), Hydrologic Unit 19010201, on right bank about 10 mi upstream from mouth near Point Rothsay, 11 mi west of Alaska-British Columbia boundary, and 18 mi northeast of Wrangell.

DRAINAGE AREA.--19,920 mi², approximately.

PERIOD OF RECORD.--July 1976 to current year.

REVISED RECORDS.--WDR AK-78-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 25 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges during periods of ice effect, Nov. 26 to Apr. 18, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58800	21600	e25500	e12200	e13000	e6000	e10000	51700	112000	120000	122000	88100
2	62700	e19300	e22500	e12200	e12700	e6200	e9000	53700	116000	139000	116000	127000
3	56000	e18900	e18600	e11900	e12400	e6200	e8500	49300	112000	146000	108000	136000
4	49200	e18200	e17000	e14500	e12000	e6100	e8200	43200	103000	153000	96900	108000
5	45500	e18300	e16800	e18200	e11500	e5800	e7900	37200	99100	146000	89900	87700
6	56500	e20700	29500	38900	e11000	e5500	e7900	33000	115000	134000	83500	84000
7	70500	e22000	47600	e37100	e10200	e5200	e9800	30800	141000	130000	86200	93400
8	79900	e21300	e41000	e28000	e9500	e5000	e10000	30100	152000	129000	93100	93800
9	77500	e19700	e37000	21200	e9000	e4800	e9500	31600	151000	133000	99000	77900
10	63400	18600	e29000	e19500	e8600	e4700	e9300	36200	149000	143000	95800	74200
11	52200	17600	e25600	e18000	e8100	e4600	e9200	42300	152000	152000	81200	102000
12	45500	17500	25300	e17000	e7800	e4500	e9100	52200	152000	157000	79800	91000
13	44800	20500	26800	e16000	e7500	e4700	e9000	60900	151000	154000	88500	92300
14	41100	23800	22800	e15500	e7300	e4900	e9950	58000	145000	149000	100000	129000
15	38900	e23900	e19800	e14600	e7000	e5700	e11200	51900	140000	142000	102000	103000
16	40400	e22800	e19300	e14200	e6700	e6800	e12000	e45500	124000	138000	120000	77500
17	45800	e21800	e17900	e15200	e6200	e7600	e12800	e41400	115000	148000	124000	64400
18	45500	e20800	e16700	e17000	e5800	e7300	e12300	e40200	128000	146000	108000	62200
19	46200	e21400	e15100	e20000	e5900	e7000	e12300	42000	133000	142000	98200	69300
20	55500	22500	e13700	e21000	e6100	e7200	e12300	44000	124000	142000	88900	65900
21	56400	36300	e12800	e19000	e5900	e7000	e12600	46500	113000	146000	84600	78300
22	53400	30600	e12400	e18000	e5800	e6900	e14400	51900	107000	141000	75300	79400
23	50200	22400	e13400	e17000	e5600	e6900	e15000	59400	105000	127000	65100	61700
24	44700	18800	e16100	e16000	e5400	e6900	15600	80700	100000	116000	61100	74500
25	39800	17500	e14600	e16000	e5400	e6900	23000	93500	104000	115000	59400	111000
26	35400	28900	e14100	e15200	e5400	e6700	36900	101000	108000	123000	59400	100000
27	35100	34200	e13600	e14800	e5600	e7000	43100	103000	108000	121000	61900	85400
28	33400	34000	e13000	e14100	e5800	e7200	44600	95800	105000	116000	62400	82100
29	30100	28100	e12300	e14000	---	e8500	43700	96200	108000	115000	62900	87300
30	27600	26400	e11700	e13800	---	e10300	46600	98700	106000	120000	70200	89700
31	24600	---	e11600	e13300	---	e11600	---	104000	---	119000	86600	---
TOTAL	1506600	688400	633100	553400	223200	201700	495750	1805900	3678100	4202000	2729900	2676100
MEAN	48600	22950	20420	17850	7971	6506	16520	58250	122600	135500	88060	89200
MAX	79900	36300	47600	38900	13000	11600	46600	104000	152000	157000	124000	136000
MIN	24600	17500	11600	11900	5400	4500	7900	30100	99100	115000	59400	61700
MED	45800	21500	17000	16000	7150	6700	11600	51700	115000	139000	88500	87500
AC-FT	2988000	1365000	1256000	1098000	442700	400100	983300	3582000	7296000	8335000	5415000	5308000
CFSM	2.44	1.15	1.03	0.90	0.40	0.33	0.83	2.92	6.15	6.80	4.42	4.48
IN.	2.81	1.29	1.18	1.03	0.42	0.38	0.93	3.37	6.87	7.85	5.10	5.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)#

MEAN	57070	24640	14150	11720	9254	10000	16490	66170	134600	134400	107200	80630
MAX	113300	58280	25780	39450	19080	42340	31960	119100	199900	163800	134200	128600
(WY)	1987	1979	1990	1981	1977	1992	1992	1993	1992	1985	1977	1981
MIN	30590	10010	5593	5958	5111	4719	7292	32260	103400	109100	76770	50760
(WY)	1986	1986	1997	1978	1999	1978	2002	1982	1978	1983	1995	1986

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1976 - 2003#

ANNUAL TOTAL	19314770	19394150	
ANNUAL MEAN	52920	53130	55710
HIGHEST ANNUAL MEAN			72870
LOWEST ANNUAL MEAN			42100
HIGHEST DAILY MEAN	226000	Aug 28	157000
LOWEST DAILY MEAN	a5300	Mar 23	4500
ANNUAL SEVEN-DAY MINIMUM	5310	Apr 5	4740
MAXIMUM PEAK FLOW			158000
MAXIMUM PEAK STAGE			22.08
ANNUAL RUNOFF (AC-FT)	38310000	38470000	40360000
ANNUAL RUNOFF (CFSM)	2.66	2.67	2.80
ANNUAL RUNOFF (INCHES)	36.07	36.22	38.00
10 PERCENT EXCEEDS	132000	125000	136000
50 PERCENT EXCEEDS	27700	36900	31600
90 PERCENT EXCEEDS	6000	7000	7200

See Period of Record; partial years used in monthly statistics
a Mar. 23-24, Apr. 6-11

15039900 DOROTHY LAKE OUTLET NEAR JUNEAU

LOCATION.--Lat 58°14'56", long 133°58'54", in NE¹/₄ NW¹/₄ sec. 9, T. 42 S., R. 70 E. (Taku River A-6 quad), Hydrologic Unit 19010301, City and Borough of Juneau, in Tongass National Forest, on right bank 3 mi upstream from mouth at Taku Inlet, and 16.4 mi east of Juneau.

DRAINAGE AREA.--11.0 mi².

PERIOD OF RECORD.--October 1986 to January 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 2,410.78 ft above sea level.

REMARKS.--Records fair, except for discharges under 50 ft³/s and estimated discharges, which are poor. Gage discontinued on Jan.3,2003.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 907 ft³/s, October 22, 2002, gage height, 12.58 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO JANUARY 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	81	199	31	---	---	---	---	---	---	---	---
2	144	69	156	29	---	---	---	---	---	---	---	---
3	126	e61	122	---	---	---	---	---	---	---	---	---
4	111	52	e98	---	---	---	---	---	---	---	---	---
5	102	48	e78	---	---	---	---	---	---	---	---	---
6	153	54	69	---	---	---	---	---	---	---	---	---
7	220	60	70	---	---	---	---	---	---	---	---	---
8	258	53	104	---	---	---	---	---	---	---	---	---
9	236	49	159	---	---	---	---	---	---	---	---	---
10	e188	48	171	---	---	---	---	---	---	---	---	---
11	151	49	140	---	---	---	---	---	---	---	---	---
12	135	45	136	---	---	---	---	---	---	---	---	---
13	133	58	e101	---	---	---	---	---	---	---	---	---
14	116	73	86	---	---	---	---	---	---	---	---	---
15	113	71	87	---	---	---	---	---	---	---	---	---
16	192	62	77	---	---	---	---	---	---	---	---	---
17	370	55	67	---	---	---	---	---	---	---	---	---
18	323	51	e61	---	---	---	---	---	---	---	---	---
19	290	50	e59	---	---	---	---	---	---	---	---	---
20	396	48	e40	---	---	---	---	---	---	---	---	---
21	692	49	e35	---	---	---	---	---	---	---	---	---
22	850	45	e31	---	---	---	---	---	---	---	---	---
23	609	40	43	---	---	---	---	---	---	---	---	---
24	415	34	46	---	---	---	---	---	---	---	---	---
25	296	39	43	---	---	---	---	---	---	---	---	---
26	238	114	e40	---	---	---	---	---	---	---	---	---
27	214	e202	e31	---	---	---	---	---	---	---	---	---
28	178	193	e30	---	---	---	---	---	---	---	---	---
29	143	165	e29	---	---	---	---	---	---	---	---	---
30	116	210	29	---	---	---	---	---	---	---	---	---
31	96	---	29	---	---	---	---	---	---	---	---	---
TOTAL	7733	2228	2466	---	---	---	---	---	---	---	---	---
MEAN	249	74.3	79.5	---	---	---	---	---	---	---	---	---
MAX	850	210	199	---	---	---	---	---	---	---	---	---
MIN	96	34	29	---	---	---	---	---	---	---	---	---
AC-FT	15340	4420	4890	---	---	---	---	---	---	---	---	---
CFSM	22.7	6.75	7.23	---	---	---	---	---	---	---	---	---
IN.	26.15	7.53	8.34	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)#

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	164	49.6	37.6	21.5	20.7	17.3	18.8	86.2	218	271	264	261	261	261	261	261	261
MAX	249	88.7	80.8	38.1	40.8	59.2	36.9	140	275	364	417	387	387	387	387	387	387
(WY)	2003	1994	2000	2000	1993	1992	1994	1993	2002	2000	2002	1991	1991	1991	1991	1991	1991
MIN	90.9	21.2	16.9	9.25	11.3	4.65	4.88	35.5	181	210	194	177	177	177	177	177	177
(WY)	1993	1996	1995	1997	1998	1989	2002	2001	1996	1993	1995	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

WATER YEARS 1987 - 2003#

ANNUAL TOTAL	52347.7																
ANNUAL MEAN	143									119							
HIGHEST ANNUAL MEAN										141						1990	
LOWEST ANNUAL MEAN										97.6						1996	
HIGHEST DAILY MEAN	850						Oct 22			915					Sep 11	1995	
LOWEST DAILY MEAN	a4.3						Apr 14			4.2					Mar 13	1989	
ANNUAL SEVEN-DAY MINIMUM	4.4						Apr 13			4.2					Mar 10	1989	
MAXIMUM PEAK FLOW										b990					Sep 10	1995	
MAXIMUM PEAK STAGE										13.05					Sep 10	1995	
INSTANTANEOUS LOW FLOW										c							
ANNUAL RUNOFF (AC-FT)	103800									86080							
ANNUAL RUNOFF (CFSM)	13.0									10.8							
ANNUAL RUNOFF (INCHES)	177.03									146.77							
10 PERCENT EXCEEDS	329									286							
50 PERCENT EXCEEDS	77									54							
90 PERCENT EXCEEDS	6.4									12							

See Period of Record; partial years used in monthly statistics
a Apr. 16-17 and 19th
b From rating curve extended above 350 cfs
c Not determined; see lowest daily mean
e Estimated

15040000 DOROTHY CREEK NEAR JUNEAU

LOCATION.--Lat 58°13'40", long 134°02'25", in NW¹/₄ SW¹/₄ sec.18, T. 42 S., R. 70 E.(Juneau A-1 quad), Hydrologic Unit 19010301, City and Borough of Juneau, in Tongass National Forest, on right bank 0.7 mi downstream from Bart lake, 0.8 mi upstream from the mouth at Taku Inlet, and 14.4 mi east of Juneau.

DRAINAGE AREA.--15.2 mi².

PERIOD OF RECORD.--Station originally established 100ft upstream from mouth Oct 1,1929 by private company and operated by the U.S.Forest Service until USGS assumed operations in 1946. Station was discontinued in 1967. Reestablished on Dec 21,2001 by the USGS and discontinued on Nov.5,2003

GAGE.--Water-stage recorder. Altitude of gage is 350 ft. (from topographic map).

REMARKS.--Records fair except estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO OCTOBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e180	179	205	48	40	16	20	82	209	289	277	224
2	e190	160	204	47	39	16	20	83	215	282	287	306
3	e165	132	193	45	39	16	19	82	216	283	293	387
4	e147	109	180	52	39	18	19	80	210	299	292	422
5	e133	98	163	59	38	17	18	77	205	312	288	392
6	e117	91	147	79	36	16	18	73	212	314	278	363
7	e160	86	132	78	34	15	18	70	224	306	268	338
8	e200	80	139	76	33	15	18	67	230	294	256	382
9	e290	75	161	74	31	14	17	66	231	282	245	444
10	e260	70	176	71	30	14	18	66	230	275	235	421
11	e215	68	180	68	28	13	18	67	232	275	224	405
12	e180	66	200	64	27	12	20	83	237	276	211	392
13	e154	71	194	59	26	13	21	88	244	276	202	418
14	e146	76	180	54	24	13	21	96	248	277	200	498
15	e140	76	168	51	23	13	23	95	251	275	229	468
16	e220	75	156	48	22	13	24	92	249	273	275	395
17	e405	74	142	49	21	13	24	90	245	271	355	339
18	e380	71	126	53	20	14	23	87	247	267	403	297
19	e345	71	112	58	19	14	24	85	257	263	391	273
20	e320	71	100	63	18	14	25	83	270	260	375	264
21	e500	73	90	60	17	14	25	83	275	265	378	276
22	e760	69	82	58	17	15	26	84	274	274	358	273
23	e900	66	79	55	16	15	28	93	268	277	321	262
24	e640	61	75	53	16	15	32	116	263	273	290	279
25	e490	62	71	51	16	15	42	155	263	266	268	295
26	e360	91	66	49	16	15	51	182	276	257	250	325
27	e390	115	62	48	16	14	59	196	297	250	230	411
28	e330	141	58	46	15	15	67	199	308	244	212	485
29	e270	154	54	44	---	18	72	204	308	263	196	453
30	e240	189	52	43	---	24	78	206	299	273	186	396
31	e200	---	50	42	---	21	---	207	---	275	190	---
TOTAL	9427	2820	3997	1745	716	470	888	3337	7493	8566	8463	10883
MEAN	304	94.0	129	56.3	25.6	15.2	29.6	108	250	276	273	363
MAX	900	189	205	79	40	24	78	207	308	314	403	498
MIN	117	61	50	42	15	12	17	66	205	244	186	224
MED	240	75	139	53	23	15	23	85	248	275	268	384
AC-FT	18700	5590	7930	3460	1420	932	1760	6620	14860	16990	16790	21590
CFSM	20.0	6.18	8.48	3.70	1.68	1.00	1.95	7.08	16.4	18.2	18.0	23.9
IN.	23.07	6.90	9.78	4.27	1.75	1.15	2.17	8.17	18.34	20.96	20.71	26.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)#

	MEAN	228	107	51.1	28.2	22.8	22.6	26.7	92.4	245	306	282
MAX	455	355	129	59.3	70.9	85.9	62.3	140	336	419	465	432
(WY)	1937	1950	2003	1957	1931	1947	1943	1946	1944	1961	1961	1967
MIN	97.5	31.7	14.3	10.0	10.0	10.2	13.0	51.8	150	241	198	142
(WY)	1951	1951	1951	1934	1935	1933	1967	1964	1933	1954	1954	1964

See period of record;partial years used in monthly statistics
e Estimated

15040000 DOROTHY CREEK NEAR JUNEAU—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1930 - 2003#		
ANNUAL TOTAL	62537			58805					
ANNUAL MEAN	171			161			144		
HIGHEST ANNUAL MEAN							184		
LOWEST ANNUAL MEAN							108		
HIGHEST DAILY MEAN							1690		
LOWEST DAILY MEAN	a12	Aug 28		900	Oct 23		6.0	Nov 3	1949
ANNUAL SEVEN-DAY MINIMUM	13	Apr 8		12	Mar 12		6.6	Mar 23	1933
MAXIMUM PEAK FLOW		Apr 12		13	Mar 11		d1780	Nov 3	1949
MAXIMUM PEAK STAGE				b			5.85	Nov 3	1949
INSTANTANEOUS LOW FLOW				c12	Mar 12		f6.0	Mar 23	1933
ANNUAL RUNOFF (AC-FT)	124000			116600			104200		
ANNUAL RUNOFF (CFSM)	11.3			10.6			9.46		
ANNUAL RUNOFF (INCHES)	153.05			143.92			128.55		
10 PERCENT EXCEEDS	362			327			326		
50 PERCENT EXCEEDS	132			126			92		
90 PERCENT EXCEEDS	15			18			16		

WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359	193	---	---	---	---	---	---	---	---	---	---
2	315	170	---	---	---	---	---	---	---	---	---	---
3	289	150	---	---	---	---	---	---	---	---	---	---
4	268	130	---	---	---	---	---	---	---	---	---	---
5	257	---	---	---	---	---	---	---	---	---	---	---
6	252	---	---	---	---	---	---	---	---	---	---	---
7	254	---	---	---	---	---	---	---	---	---	---	---
8	253	---	---	---	---	---	---	---	---	---	---	---
9	249	---	---	---	---	---	---	---	---	---	---	---
10	239	---	---	---	---	---	---	---	---	---	---	---
11	224	---	---	---	---	---	---	---	---	---	---	---
12	203	---	---	---	---	---	---	---	---	---	---	---
13	184	---	---	---	---	---	---	---	---	---	---	---
14	172	---	---	---	---	---	---	---	---	---	---	---
15	156	---	---	---	---	---	---	---	---	---	---	---
16	141	---	---	---	---	---	---	---	---	---	---	---
17	125	---	---	---	---	---	---	---	---	---	---	---
18	113	---	---	---	---	---	---	---	---	---	---	---
19	115	---	---	---	---	---	---	---	---	---	---	---
20	120	---	---	---	---	---	---	---	---	---	---	---
21	115	---	---	---	---	---	---	---	---	---	---	---
22	114	---	---	---	---	---	---	---	---	---	---	---
23	111	---	---	---	---	---	---	---	---	---	---	---
24	109	---	---	---	---	---	---	---	---	---	---	---
25	152	---	---	---	---	---	---	---	---	---	---	---
26	200	---	---	---	---	---	---	---	---	---	---	---
27	249	---	---	---	---	---	---	---	---	---	---	---
28	264	---	---	---	---	---	---	---	---	---	---	---
29	256	---	---	---	---	---	---	---	---	---	---	---
30	241	---	---	---	---	---	---	---	---	---	---	---
31	218	---	---	---	---	---	---	---	---	---	---	---
TOTAL	6317	---	---	---	---	---	---	---	---	---	---	---
MEAN	204	---	---	---	---	---	---	---	---	---	---	---
MAX	359	---	---	---	---	---	---	---	---	---	---	---
MIN	109	---	---	---	---	---	---	---	---	---	---	---
MED	218	---	---	---	---	---	---	---	---	---	---	---
AC-FT	12530	---	---	---	---	---	---	---	---	---	---	---
CFSM	13.4	---	---	---	---	---	---	---	---	---	---	---
IN.	15.46	---	---	---	---	---	---	---	---	---	---	---

See period of Record;partial years used in monthly statistics

a Apr. 8, 12, 15-19

b Not determined; see highest daily mean

c Mar. 12-13

d From a rating curve extended above 560 ft³/s

e Estimated

f Mar. 23, 25 and 28, 1933

15041200 TAKU RIVER NEAR JUNEAU
(International gaging station)

LOCATION.--Lat 58°32'19", long 133°42'00", in NE¹/₄ NW¹/₄ sec. 33, T. 38 S., R. 71 E. (Taku River C-6 quad), Hydrologic Unit 19010301, City and Borough of Juneau, in Tongass National Forest, on left bank, 1.5 mi upstream from Wright River, and 31 mi northeast of Juneau.

DRAINAGE AREA.--6,600 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1987 to current year.

REVISED RECORD.--WDR AK-98-1, 1987-1997; WDR AK-00-1 1989-90 (M), 1992-95 (M).

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 11	0345	*70,700	*40.95

DISCHARGE, in CFS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10800	7410	11400	e2300	e2800	e1400	e2150	16800	33400	24700	25100	15400
2	11000	6980	9170	e2200	e2700	e1400	e2050	16500	24400	29000	24300	23700
3	10300	6620	7300	e2100	e2600	e1400	e1900	13900	20200	31100	22500	30000
4	9490	6490	e5500	e2700	e2700	e1400	e1700	11700	18500	32800	20800	25200
5	8740	6350	e4540	e4600	e2600	e1400	e1650	10300	18600	30700	19300	18800
6	9650	6330	e4550	e6200	e2400	e1400	e1600	9290	24900	29600	19700	16400
7	13200	6300	e4600	e7100	e2100	e1300	e1600	8700	31800	28000	21800	16800
8	17900	5930	e5900	e5600	e1960	e1300	e1850	8460	30700	28600	26800	17900
9	16600	5670	e8600	e5000	e1900	e1300	1990	8990	28500	31600	37400	17000
10	12900	5390	e10000	e4400	e1800	e1200	2020	10200	28700	34000	57700	14500
11	10600	5110	e6700	e4200	e1900	e1200	2110	11400	30300	35200	44800	14900
12	9960	4880	e7200	e4000	e1800	e1200	2270	13300	30600	36000	20800	15500
13	9950	4870	e6100	e3900	e1800	e1200	2430	13900	31500	35000	22000	17600
14	9230	4980	e5500	e3600	e1700	e1200	2610	12800	31700	35400	23800	20700
15	8980	5020	e5000	e3100	e1700	e1300	2860	11500	27400	34600	27700	15800
16	12300	4880	e4700	e2700	e1700	e1400	3230	10500	25000	33100	37800	12500
17	23200	4830	e4300	e3000	e1600	e1400	3380	9980	23700	31900	37800	10800
18	21900	4860	e4100	e3400	e1500	e1500	3490	9790	25500	31800	28400	9950
19	17300	4650	e3900	e4000	e1500	e1440	3450	10000	25400	30700	23700	9670
20	17600	4600	e3600	e4600	e1500	e1440	3530	10500	22200	31500	20900	9890
21	25300	4910	e3400	e4400	e1400	e1450	3760	11300	19900	32600	18700	12100
22	28100	4740	e3200	e4100	e1400	e1440	4030	12300	19600	30400	16000	11600
23	21700	4150	e3400	e3800	e1400	e1420	4120	15300	19900	26500	14200	10200
24	16400	3730	e3500	e3600	e1300	e1400	5060	16800	19600	24900	13100	10600
25	13500	3530	e3400	e3400	e1300	e1400	7250	20000	19700	25600	13200	14900
26	12100	6720	e3100	e3300	e1300	e1390	10200	19800	21600	26000	13000	20300
27	11800	16100	e2800	e3100	e1300	e1400	12400	18100	21200	25400	13500	19600
28	10900	15200	e2600	e3000	e1400	e1450	13300	17300	19600	25300	14000	24400
29	9920	11500	e2400	e3000	---	e1600	13600	17800	20300	26800	14200	24800
30	8970	11600	e2200	e2900	---	e1900	14900	20700	22200	28100	14800	22700
31	8000	---	e2200	e2900	---	e2200	---	24900	---	25400	15800	---
TOTAL	428290	194330	154860	116200	51060	43830	136490	422810	736600	932300	723600	504210
MEAN	13820	6478	4995	3748	1824	1414	4550	13640	24550	30070	23340	16810
MAX	28100	16100	11400	7100	2800	2200	14900	24900	33400	36000	57700	30000
MIN	8000	3530	2200	2100	1300	1200	1600	8460	18500	24700	13000	9670
AC-FT	849500	385500	307200	230500	101300	86940	270700	838600	1461000	1849000	1435000	1000000
CFSM	2.09	0.98	0.76	0.57	0.28	0.21	0.69	2.07	3.72	4.56	3.54	2.55
IN.	2.41	1.10	0.87	0.65	0.29	0.25	0.77	2.38	4.15	5.25	4.08	2.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)#

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	11630	4729	3451	2288	1930	2501	4291	19540	33680	31620	26310	19130				
MAX	17250	8633	6613	4223	3682	10500	6815	33800	49280	41080	33330	26550				
(WY)	1992	1994	2000	2000	1992	1992	1992	1993	1992	1992	2002	1994				
MIN	6265	2488	1256	1125	1041	1359	1870	9652	23170	25040	18610	11180				
(WY)	1997	1997	1997	1988	1999	1991	2002	2001	1995	1996	1995	1992				

See Period of Record;partial yearsused in monthly statistics
e Estimated

15041200 TAKU RIVER NEAR JUNEAU—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003#	
ANNUAL TOTAL	4685750		4444580		13490	
ANNUAL MEAN	12840		12180		16820	1992
HIGHEST ANNUAL MEAN					10800	1996
LOWEST ANNUAL MEAN					93100	Jul 26 2000
HIGHEST DAILY MEAN	69200	Aug 17	57700	Aug 10	710	Feb 12 1988
LOWEST DAILY MEAN	a1300	Mar 23	b1200	Mar 10	721	Feb 8 1988
ANNUAL SEVEN-DAY MINIMUM	1300	Apr 5	1230	Mar 8	c110000	Aug 17 1989
MAXIMUM PEAK FLOW			c70700	Aug 11	44.13	Aug 17 1989
MAXIMUM PEAK STAGE			40.95	Aug 11	710	Feb 12 1989
INSTANTANEOUS LOW FLOW			d		9773000	
ANNUAL RUNOFF (AC-FT)	9294000		8816000		2.04	
ANNUAL RUNOFF (CFSM)	1.95		1.84		27.77	
ANNUAL RUNOFF (INCHES)	26.41		25.05		33000	
10 PERCENT EXCEEDS	30500		28200		7290	
50 PERCENT EXCEEDS	7300		9790		1600	
90 PERCENT EXCEEDS	1470		1500			

See Period of Record; partial years used in monthly statistics

a Mar. 23 and Apr. 6 to 11

b Mar. 10 to 14

c Result of Tulsequah River glacier dam breakout

d Not determined see lowest daily mean

15041200 TAKU RIVER NEAR JUNEAU—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1999 to current year

INSTRUMENTATION.--Electronic water-temperature recorder set for 15-minute recording interval.

REMARKS.- Records good. Records represent water temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the average of the river by cross sections on April 9, May 20, June 18, August 10, and September 29. The outburst peak of the lake dammed by Tulsequah Glacier occurred on August 10-11. The temperature cross sections showed variations of 2.0°C during sampling on August 10 and 1.0°C on April 9th.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 12.5°C, July 14, 1999, July 20 and 21, 2001, and July 9-10, 12-13, and 18, 2003; minimum, 0.0°C, many days during most winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 12.5°C, July 9-10, 12-13, and 18; minimum, 0.0°C, many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		Loca- tion in X-sect. looking downstrm ft from l bank (00009)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
APR								
09...	1658	50.0	219	7.9	3.0	751	11.5	87
09...	1707	200	237	8.0	2.5	751	11.4	85
09...	1710	240	242	8.1	2.0	751	11.7	86
09...	1715	278	244	8.1	2.0	751	11.4	84
09...	1720	305	247	8.1	2.0	751	11.4	84
MAY								
20...	1050	55.0	175	7.8	7.5	747	10.6	90
20...	1051	165	175	7.9	7.5	747	10.6	90
20...	1052	275	175	7.9	7.5	747	10.5	89
20...	1053	385	175	7.9	7.5	747	10.5	89
20...	1054	495	175	7.9	7.5	747	10.5	89
JUN								
18...	1234	70.0	124	7.9	9.0	734	10.6	95
18...	1236	210	124	7.8	9.0	734	10.6	95
18...	1238	350	125	7.8	9.0	734	10.6	95
18...	1240	490	125	7.8	9.0	734	10.6	95
18...	1241	630	124	7.8	9.0	734	10.7	96
AUG								
10...	1941	450	64	8.2	3.5	759	12.6	95
10...	1943	397	65	8.1	3.5	759	12.6	95
10...	1945	286	65	8.1	3.5	759	12.5	94
10...	1947	126	68	8.1	4.5	759	12.4	96
10...	1948	48.0	71	8.0	5.5	759	12.2	97
SEP								
29...	0940	75.0	113	8.2	6.0	765	12.0	96
29...	0941	150	113	8.2	6.0	765	11.9	95
29...	0942	225	113	8.2	6.0	765	11.8	94
29...	0943	300	113	8.2	6.0	765	11.8	94
29...	0944	375	114	8.3	6.0	765	11.8	94

15041200 TAKU RIVER NEAR JUNEAU—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, unfltrd recover- able, mg/L (00916)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, unfltrd recover- able, mg/L (00927)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, unfltrd recover- able, mg/L (00929)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, unfltrd recover- able, mg/L (00937)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L as CaCO3 (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)
DEC 05...	12.7	88	86	--	26.0	--	5.1	--	2.6	--	.9	71	58
APR 09...	11.5	86	110	33.2	32.0	8.5	8.1	4.7	4.6	.9	.92	187	153
MAY 20...	10.5	89	86	27.0	25.1	6.1	5.70	2.5	2.54	.8	.79	88	72
JUN 18...	10.5	94	59	19.1	17.8	5.0	3.53	1.7	1.57	1.1	.73	64	52
JUL 11...	10.7	97	51	19.7	15.8	7.1	2.91	1.9	1.30	1.7	.73	56	46
AUG 10...	12.5	96	31	17.3	9.8	9.4	1.44	1.9	.65	3.1	.78	29	24
11...	11.9	93	41	16.0	12.9	6.2	2.17	1.5	.84	2.1	.86	41	34
SEP 29...	11.9	95	61	21.7	19.1	6.8	3.22	2.3	1.52	2.2	.85	59	49

Date	Sulfate water, fltrd, mg/L (00945)	Sulfate water, unfltrd mg/L (00946)	Chlor- ide, water, fltrd, mg/L (00940)	Chlor- ide, water, unfltrd mg/L (99220)	Fluor- ide, water, fltrd, mg/L (00950)	Fluor- ide, water, unfltrd mg/L (00951)	Residue water, fltrd, consti- tuents mg/L (70301)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, unfltrd mg/L as N (00610)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, unfltrd mg/L (00665)	Alum- inum, water, recover- able, ug/L (01105)
DEC 05...	--	16.8	--	1.71	--	.1	--	.266	--	.060	--	.018	773
APR 09...	19.5	19.8	4.0	4.2	<.10	<.1	162	.155	.154	<.040	<.040	.019	269
MAY 20...	14.4	14.4	.7	.70	.10	.1	93	.182	--	.074	--	.029	546
JUN 18...	--	11.2	--	.30	--	.1	--	.046	--	.027	--	.099	2120
JUL 11...	8.0	8.1	.2	.20	<.10	<.1	57	.034	.033	<.050	--	.443	5750
AUG 10...	8.4	8.3	.4	.20	.05	.1	36	.031	.024	<.050	--	.723	12000
11...	9.6	9.6	.3	.30	.05	.1	47	.033	.030	<.050	--	.433	6300
SEP 29...	--	10.3	--	.40	--	.1	--	.091	--	<.100	--	.315	6150

15041200 TAKU RIVER NEAR JUNEAU—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alum- inum, water, fltrd, ug/L (01106)	Arsenic water, unfltrd ug/L (01002)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recovery, able, ug/L (01007)	Barium, water, fltrd, ug/L (01005)	Cadmium water, unfltrd ug/L (01027)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, water, unfltrd recovery, able, ug/L (01034)	Chrom- ium, water, fltrd, ug/L (01030)	Copper, water, unfltrd recovery, able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recovery, able, ug/L (01045)	Iron, water, fltrd, ug/L (01046)
DEC 05...	40	1	.6	49.4	36.4	<.10	<.10	1	--	2.3	<1.0	970	20
APR 09...	30	1	.4	51.2	44.0	<.10	<.10	1	<1.0	1.8	<1.0	745	<50
MAY 20...	43	1.4	1.2	39.9	33.0	<.10	<.10	1	<1.0	2.1	<1.0	740	20
JUN 18...	38	1.9	1.2	62.2	39.0	<.10	<.10	4	<.1.0	6.1	<1.0	3140	<10
JUL 11...	45	4.7	.73	122	24.5	.17	<.10	12	<1.0	15.1	<1	8720	<10
AUG 10...	48	9.7	1.1	267	21.1	.45	<.10	22	<1.0	35.8	<1.0	17500	<10
11...	50	6	.5	157	24.7	.23	<.10	11	<1.0	19.2	<1.0	9610	<10
SEP 29...	51	5	1.2	130	28.8	.19	<.10	9	<1.0	12.4	<1.0	8370	<10

Date	Lead, water, unfltrd recovery, able, ug/L (01051)	Lead water, fltrd, ug/L (01049)	Mangan- ese, water, unfltrd recovery, able, ug/L (01055)	Mangan- ese, water, fltrd, ug/L (01056)	Nickel, water, unfltrd recovery, able, ug/L (01067)	Nickel, water, fltrd, ug/L (01065)	Silver, water, unfltrd recovery, able, ug/L (01077)	Silver, water, fltrd, ug/L (01075)	Zinc, water, unfltrd recovery, able, ug/L (01092)	Zinc, water, fltrd, ug/L (01090)	Organic carbon, water, unfltrd, mg/L (00680)	Organic carbon, water, fltrd, mg/L (00681)
DEC 05...	.7	<.10	40	20	2.7	.77	<.10	<.1	5	<4	1.9	1.8
APR 09...	.5	<.10	52	40.1	2	.62	<.10	<.10	4	<4	.8	.7
MAY 20...	.5	<.10	5	5.3	3	.86	<.10	<.10	<4	<4	2.2	2.0
JUN 18...	2	<.10	88	4.4	7	.48	.10	<.10	11	<4	<.5	--
JUL 11...	6	.29	259	5.3	15	.41	.17	<.10	26	<4	1.4	.9
AUG 10...	12	<.10	502	6.7	31.7	.31	.25	<.1	69	<4	.9	.6
11...	6	<.10	257	9.1	15	.44	.16	<.10	40	<4	.7	.7
SEP 29...	7	<.10	245	6.5	12	.50	.10	<.10	32	<4	<1.0	<1.0

15041200 TAKU RIVER NEAR JUNEAU—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

WATER TEMPERATURE in (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	5.5	5.0	5.5	1.5	1.0	1.0	2.0	1.0	1.5	1.0	0.5	0.5
2	6.0	5.5	5.5	1.5	1.0	1.0	1.5	0.5	1.0	1.0	0.5	0.5
3	5.5	4.5	5.0	1.5	1.0	1.5	0.5	0.0	0.0	0.5	0.5	0.5
4	5.5	4.5	5.0	2.0	1.5	2.0	0.5	0.0	0.5	0.5	0.5	0.5
5	4.5	4.0	4.0	2.5	2.0	2.0	0.5	0.0	0.5	0.5	0.0	0.5
6	6.0	4.0	5.0	3.0	2.5	2.5	0.5	0.5	0.5	0.5	0.0	0.0
7	6.5	6.0	6.0	3.0	2.5	2.5	0.5	0.0	0.5	0.5	0.0	0.0
8	6.5	5.5	6.0	2.5	2.0	2.0	0.5	0.0	0.0	0.5	0.0	0.5
9	5.5	4.5	5.0	2.5	2.0	2.0	0.0	0.0	0.0	0.5	0.0	0.5
10	4.5	3.0	3.5	2.0	1.5	1.5	0.0	0.0	0.0	0.5	0.0	0.5
11	3.5	2.5	3.0	1.5	1.5	1.5	0.0	0.0	0.0	0.5	0.5	0.5
12	4.0	3.5	3.5	1.5	1.0	1.5	0.0	0.0	0.0	0.5	0.5	0.5
13	5.0	4.0	4.5	2.0	1.5	1.5	0.5	0.0	0.5	0.5	0.0	0.5
14	5.0	4.5	4.5	2.0	1.5	2.0	1.0	0.5	0.5	0.5	0.0	0.5
15	5.0	4.5	4.5	2.0	2.0	2.0	1.0	0.5	0.5	0.5	0.5	0.5
16	6.0	5.0	5.5	2.0	1.5	2.0	1.0	0.5	0.5	0.5	0.5	0.5
17	6.5	5.5	6.0	2.0	2.0	2.0	1.0	0.5	0.5	0.5	0.0	0.5
18	6.0	4.5	5.0	2.0	1.5	2.0	1.0	0.5	0.5	0.5	0.5	0.5
19	4.5	4.5	4.5	1.5	0.0	0.5	1.0	0.5	0.5	0.5	0.0	0.5
20	5.0	4.5	4.5	1.0	0.5	1.0	0.5	0.5	0.5	0.5	0.0	0.0
21	5.0	4.5	5.0	1.5	1.0	1.0	0.5	0.5	0.5	0.0	0.0	0.0
22	5.0	4.5	4.5	1.5	1.0	1.5	0.5	0.5	0.5	0.0	0.0	0.0
23	5.0	4.5	5.0	1.5	0.5	1.0	0.5	0.5	0.5	0.0	0.0	0.0
24	4.5	4.0	4.0	1.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
25	4.0	3.5	3.5	1.0	0.5	1.0	0.5	0.5	0.5	0.0	0.0	0.0
26	4.0	3.5	4.0	1.5	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0
27	4.5	4.0	4.0	2.0	0.5	1.5	0.5	0.5	0.5	0.0	0.0	0.0
28	4.5	4.0	4.0	2.0	1.5	1.5	0.5	0.5	0.5	0.0	0.0	0.0
29	4.0	2.5	3.0	2.0	1.5	2.0	0.5	0.5	0.5	0.0	0.0	0.0
30	3.0	1.5	2.0	2.0	1.5	2.0	1.0	0.0	0.5	0.0	0.0	0.0
31	1.5	1.0	1.5	---	---	---	0.5	0.5	0.5	0.5	0.0	0.0
MONTH	6.5	1.0	4.4	3.0	0.0	1.6	2.0	0.0	0.5	1.0	0.0	0.3

15041200 TAKU RIVER NEAR JUNEAU—Continued

WATER TEMPERATURE, in (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	0.0	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0	7.0	5.0	6.0
2	0.0	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0	6.0	4.5	5.0
3	0.5	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.5	6.0	4.0	5.0
4	0.5	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.5	6.0	3.5	4.5
5	0.5	0.0	0.0	0.5	0.0	0.0	2.0	0.0	1.0	6.0	4.0	5.0
6	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.5	1.0	7.5	5.0	6.0
7	0.0	0.0	0.0	0.5	0.0	0.0	3.5	0.5	2.0	8.0	5.5	6.5
8	0.0	0.0	0.0	0.5	0.0	0.5	4.0	1.5	2.5	9.0	6.0	7.5
9	0.5	0.0	0.0	0.5	0.0	0.5	3.5	2.0	2.5	9.5	6.5	8.0
10	0.5	0.0	0.0	0.5	0.0	0.0	5.0	2.0	3.0	9.5	7.0	8.5
11	0.5	0.0	0.0	0.5	0.0	0.0	4.5	2.0	3.0	9.0	6.5	7.0
12	0.5	0.0	0.5	0.5	0.0	0.0	5.0	2.5	3.5	7.0	6.5	6.5
13	0.5	0.0	0.5	0.5	0.0	0.0	5.5	2.5	3.5	7.5	6.0	7.0
14	0.5	0.0	0.0	0.0	0.0	0.0	5.0	2.5	3.5	7.5	6.0	6.5
15	0.5	0.0	0.0	0.0	0.0	0.0	4.5	3.0	3.5	8.0	6.0	7.0
16	0.5	0.0	0.0	0.5	0.0	0.0	4.0	3.0	3.5	8.5	6.0	7.5
17	0.5	0.0	0.0	0.5	0.0	0.0	5.0	2.5	3.5	9.0	6.0	7.5
18	0.5	0.0	0.0	1.0	0.0	0.0	4.0	3.0	3.5	10.0	7.0	8.5
19	0.0	0.0	0.0	1.0	0.0	0.5	5.0	2.5	3.5	10.0	7.5	9.0
20	0.0	0.0	0.0	1.0	0.0	0.5	5.5	3.0	4.5	10.5	7.5	9.0
21	0.0	0.0	0.0	1.0	0.0	0.5	5.0	3.5	4.5	10.0	8.0	9.0
22	0.5	0.0	0.0	1.0	0.0	0.0	4.5	3.5	4.0	10.0	8.5	9.5
23	0.5	0.0	0.0	1.0	0.0	0.0	6.0	3.5	4.5	10.0	8.0	8.5
24	0.5	0.0	0.0	1.0	0.0	0.0	6.5	4.0	5.5	8.5	7.0	8.0
25	0.5	0.0	0.5	1.5	0.0	0.5	6.0	4.0	5.0	8.5	7.5	8.0
26	0.5	0.0	0.5	1.5	0.0	0.5	5.0	3.0	4.0	9.0	7.0	8.0
27	0.5	0.0	0.0	1.0	0.5	0.5	5.5	3.0	4.5	9.5	7.0	8.5
28	0.5	0.0	0.0	1.5	0.0	0.5	6.0	3.5	4.5	9.5	7.5	8.5
29	---	---	---	1.0	0.0	0.5	7.0	4.0	5.5	10.0	7.5	8.5
30	---	---	---	1.0	0.0	0.0	7.0	4.5	6.0	10.5	7.5	9.0
31	---	---	---	0.5	0.0	0.0	---	---	---	9.5	7.5	8.5
MONTH	0.5	0.0	0.1	1.5	0.0	0.2	7.0	0.0	3.2	10.5	3.5	7.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	8.5	6.0	7.0	12.0	8.0	9.5	10.5	9.0	9.5	7.0	6.5	6.5
2	10.0	7.0	8.0	11.0	9.5	10.0	10.0	9.0	9.5	7.0	6.0	6.5
3	10.5	7.5	9.0	10.0	9.5	9.5	11.5	9.0	10.0	7.5	6.0	6.5
4	10.0	7.5	9.0	9.5	8.5	9.0	11.0	9.0	9.5	8.0	6.5	7.0
5	11.0	8.5	9.5	10.0	8.0	9.0	11.0	8.5	9.5	7.5	6.0	7.0
6	11.0	9.0	10.0	10.5	9.0	9.5	11.0	9.0	10.0	7.0	6.5	7.0
7	10.5	8.5	9.5	12.0	8.5	10.0	10.5	8.5	9.5	8.0	6.5	7.0
8	11.0	8.5	9.5	11.5	9.5	10.5	9.5	7.5	8.5	8.0	7.0	7.5
9	11.5	8.5	10.0	12.5	9.5	10.5	7.5	5.5	6.5	8.0	7.0	7.5
10	12.0	9.0	10.5	12.5	10.0	11.0	6.5	4.5	5.0	7.5	6.5	7.0
11	11.5	9.0	10.0	12.0	10.5	11.0	9.0	4.0	6.0	7.5	6.5	7.0
12	11.0	9.0	9.5	12.5	10.0	11.0	10.0	8.0	9.0	8.0	7.0	7.5
13	9.5	8.0	9.0	12.5	10.0	11.0	10.0	9.0	9.5	7.5	6.5	7.0
14	9.5	8.0	8.5	12.0	10.0	11.0	10.0	8.5	8.5	6.5	6.0	6.5
15	10.0	8.0	9.0	11.5	10.5	11.0	8.5	7.5	8.0	6.5	5.5	6.0
16	11.0	8.5	9.5	11.5	10.5	10.5	8.0	7.0	7.0	6.0	5.0	5.5
17	10.5	9.0	9.5	11.0	10.0	10.5	8.0	6.5	7.0	6.0	5.0	5.5
18	9.5	8.5	9.0	12.5	10.0	11.0	8.5	7.0	7.5	6.0	5.5	5.5
19	9.5	8.0	8.0	12.0	10.0	11.0	8.5	7.5	8.0	6.5	5.5	6.0
20	8.5	7.0	7.5	11.0	10.0	10.5	8.5	7.0	7.5	6.5	6.0	6.0
21	10.0	7.5	8.5	10.5	9.5	10.0	9.0	7.0	7.5	6.5	6.0	6.0
22	11.5	8.5	10.0	11.0	9.5	10.0	9.0	7.0	8.0	6.5	5.0	6.0
23	11.0	9.0	9.5	12.0	9.0	10.5	8.5	7.0	7.5	6.0	4.5	5.0
24	10.0	9.0	9.5	12.0	9.5	10.5	8.0	7.0	7.5	5.5	5.0	5.0
25	9.5	8.5	9.0	12.0	10.0	11.0	8.5	7.0	8.0	6.0	5.0	5.5
26	9.0	8.0	8.0	11.5	10.0	10.5	9.5	6.5	8.0	6.0	5.5	6.0
27	9.5	8.0	8.5	10.5	9.5	10.0	9.0	8.0	8.0	6.0	5.5	5.5
28	10.0	8.0	9.0	10.5	9.5	10.0	9.5	7.5	8.5	7.0	5.5	6.0
29	11.5	8.5	10.0	10.5	9.5	10.0	9.0	7.5	8.5	7.5	6.0	6.5
30	11.0	8.5	9.5	11.5	9.0	10.0	8.5	7.5	8.0	7.0	6.0	6.5
31	---	---	---	11.0	9.0	10.0	8.0	7.0	7.5	---	---	---
MONTH	12.0	6.0	9.1	12.5	8.0	10.3	11.5	4.0	8.1	8.0	4.5	6.3

15050000 GOLD CREEK AT JUNEAU

LOCATION.--Lat 58°18'25", long 134°24'05", in NW¹/₄ NE¹/₄ sec. 23, T. 41 S., R. 67 E. (Juneau B-2 SE quad), City and Borough of Juneau, Hydrologic Unit 19010301, on left bank, 150 ft upstream from Alaska Electric Light and Power Company dam and diversion, 0.5 mi northeast of Juneau, and 1 mi upstream from mouth at Gastineau Channel.

DRAINAGE AREA.--9.76 mi².

PERIOD OF RECORD.--July 1916 to December 1920 (monthly discharge only), October 1946 to September 1948, October 1949 to September 1982. Annual maximums, water years 1991, 1994, 1996. October 1997 to current year.

REVISED RECORDS.--WSP 1372: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 245 ft above sea level, from topographic map. July 20, 1916 to December 31, 1920, at site 50 ft upstream at different datum. September 11, 1946 to September 30, 1948, nonrecording gage at site 0.7 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Water may be diverted about 0.5 mi upstream and three wells, located upstream from the gage in Last Chance Basin, pump water for municipal use and may decrease flow during winter periods.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 16	1945	1200	4.95	Sept 08	0645	*1490	*5.44
Oct 21	0930	1200	4.94	Sept 25	1630	918	4.43
Nov 26	1115	1480	5.43	Sept 27	1615	1280	5.09

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	27	201	13	15	8.0	8.8	81	130	118	88	312
2	137	23	130	14	15	7.7	7.9	56	165	136	146	420
3	95	19	86	13	15	8.0	7.5	38	111	354	97	238
4	91	17	62	70	19	9.8	7.2	26	88	207	102	166
5	96	21	45	113	16	8.8	7.0	21	137	130	106	124
6	221	27	37	205	14	e7.0	7.0	17	190	104	78	140
7	344	21	83	137	13	e2.6	7.0	16	116	91	65	175
8	312	15	237	70	12	e1.5	7.0	17	76	91	57	883
9	183	14	288	42	11	e1.6	7.2	21	88	89	47	298
10	120	13	180	31	11	e1.5	7.0	24	99	83	36	195
11	93	14	125	23	11	e1.7	7.1	36	108	89	30	281
12	223	13	165	20	11	e1.5	7.3	139	96	75	36	203
13	180	26	125	17	10	e1.4	7.8	87	108	69	48	417
14	162	41	81	15	9.8	e2.5	8.5	57	78	81	152	274
15	213	27	71	14	9.4	e3.1	10	41	64	55	252	167
16	747	19	55	15	8.9	e3.7	10	30	56	83	391	114
17	632	20	42	75	8.7	e4.5	9.9	25	94	200	282	85
18	264	23	33	98	8.5	e5.2	9.5	26	151	108	144	90
19	223	37	24	145	8.0	5.6	9.9	27	208	68	112	98
20	405	45	21	122	e6.0	5.8	11	28	180	75	241	294
21	864	47	19	58	e5.0	6.1	11	32	112	162	164	228
22	682	33	19	36	e4.8	6.1	12	61	92	99	106	134
23	284	24	20	25	e5.3	5.7	15	136	73	57	83	98
24	168	24	27	22	e6.5	5.6	44	286	113	45	90	388
25	124	71	21	20	e7.0	5.6	184	224	189	36	70	607
26	136	841	17	18	7.6	5.5	194	168	211	83	53	280
27	131	431	15	17	7.1	5.6	158	110	145	129	70	633
28	86	293	14	15	6.9	5.9	122	112	143	81	52	345
29	61	217	13	16	---	8.3	99	172	111	246	44	204
30	44	391	12	26	---	16	93	136	106	106	173	137
31	33	---	13	18	---	11	---	144	---	78	221	---
TOTAL	7561	2834	2281	1523	282.5	172.9	1096.6	2394	3638	3428	3636	8028
MEAN	244	94.5	73.6	49.1	10.1	5.58	36.6	77.2	121	111	117	268
MAX	864	841	288	205	19	16	194	286	211	354	391	883
MIN	33	13	12	13	4.8	1.4	7.0	16	56	36	30	85
MED	180	25	42	23	9.6	5.6	9.7	41	111	89	90	216
AC-FT	15000	5620	4520	3020	560	343	2180	4750	7220	6800	7210	15920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003, BY WATER YEAR (WY)#

MEAN	160	82.4	37.3	22.7	14.4	12.3	24.5	125	224	226	191	185
MAX	349	206	202	170	81.4	137	91.7	220	326	364	374	302
(WY)	2000	1947	2000	1981	1977	1947	1947	1948	2002	1975	1961	1999
MIN	62.6	18.1	6.22	1.71	0.48	0.055	3.78	64.5	121	111	85.4	73.7
(WY)	1952	1976	1956	1974	1972	1974	1954	1920	2003	2003	1968	1978

See Period of Record; partial years used in monthly statistics

e Estimated

15050000 GOLD CREEK AT JUNEAU—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003#	
ANNUAL TOTAL	55229.8		36875.0			
ANNUAL MEAN	151		101		109	
HIGHEST ANNUAL MEAN					155 2000	
LOWEST ANNUAL MEAN					77.5 1951	
HIGHEST DAILY MEAN	901	Aug 21	883	Sep 8	1830	Aug 12 1961
LOWEST DAILY MEAN	3.2	Apr 9	a1.4	Mar 13	b0.00	Mar 4 1951
ANNUAL SEVEN-DAY MINIMUM	3.6	Apr 5	1.7	Mar 8	0.00	Mar 4 1951
MAXIMUM PEAK FLOW			1490	Sep 8	2950	Sep 25 1996
MAXIMUM PEAK STAGE			5.44	Sep 8	8.14	Sep 25 1996
INSTANTANEOUS LOW FLOW			c		b0.00	Mar 4 1951
ANNUAL RUNOFF (AC-FT)	109500		73140		79130	
10 PERCENT EXCEEDS	379		232		265	
50 PERCENT EXCEEDS	79		61		67	
90 PERCENT EXCEEDS	6.9		7.1		5.0	

See Period of Record; partial years used in monthly statistics
a May have been lower during period of ice affect
b No flow at times during winter
c Not determined, see lowest daily discharge

15051010 SALMON CREEK NEAR JUNEAU

LOCATION.--Lat 58°19'57", long 134°27'57", in NE¹/₄ SE¹/₄ NW¹/₄ sec. 9, T. 41 S., R. 67 E. (Juneau B-2 SE quad), City and Borough of Juneau, Hydrologic Unit 19010301, in Tongass National Forest, on left bank, about 0.3 mi upstream from mouth and 2.5 mi northwest of Juneau.

DRAINAGE AREA.--9.69 mi².

PERIOD OF RECORD.--October 1990 to current year. Daily discharge record previously collected 0.5 mi upstream at station number 15051008 "above canyon mouth" during water-years 1982-90. Drainage area, 9.50 mi².

REVISED RECORDS.--WDR AK 93-1: 1991 (m).

GAGE.--Water-stage recorder. Elevation of gage is 30 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges which are poor. Flow regulated by Salmon Creek Reservoir 2.5 mi upstream. Diversions upstream for off-stream hydropower plant; outflow from the plant goes into Gastineau Channel and is not included in the discharge records. Diversions upstream into Twin Lakes via a pipeline are also not included in the discharge records.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	29	67	18	15	15	e11	e16	37	21	22	69
2	55	27	46	18	18	12	e9.5	21	70	22	36	84
3	38	25	37	16	19	13	e8.2	18	40	50	29	46
4	35	23	30	48	21	19	e7.4	15	33	40	29	36
5	36	20	27	62	18	14	e7.4	13	37	26	30	28
6	59	20	25	98	16	e10	e7.3	12	45	22	22	28
7	59	19	31	58	14	e7.0	e7.3	12	32	18	18	28
8	69	17	58	37	13	e6.8	e8.2	12	25	16	18	160
9	58	16	91	29	13	e6.4	e8.7	14	27	15	17	70
10	40	16	55	24	13	e6.0	e8.2	16	27	14	16	45
11	35	16	46	22	12	e6.0	e8.0	21	27	15	14	50
12	78	15	78	19	12	e5.7	e8.7	57	25	16	13	45
13	66	18	56	17	11	e5.6	e9.9	43	28	15	14	111
14	51	21	39	16	11	e6.6	e12	34	23	15	28	73
15	53	21	36	16	10	e7.4	e13	27	20	13	43	47
16	146	18	32	18	9.8	e7.3	e14	22	18	13	71	36
17	134	20	30	49	9.4	e7.3	e12	20	23	21	54	31
18	66	23	27	46	9.2	e6.9	e10	19	34	20	34	30
19	60	39	23	61	8.5	e6.8	e10	20	49	17	27	30
20	101	34	21	51	e7.5	e6.5	e11	22	48	15	41	67
21	245	32	19	31	e7.0	e6.8	e12	23	31	30	36	65
22	166	26	21	25	e6.5	e6.9	e14	31	26	28	26	45
23	80	22	26	e20	e6.5	e6.4	e18	46	22	16	22	36
24	59	23	34	e18	e7.1	e6.2	e23	71	25	13	21	75
25	50	43	26	e16	e7.1	e6.1	e36	58	35	13	18	134
26	50	245	21	e14	8.3	e6.2	e34	45	38	19	15	66
27	52	173	19	e13	9.5	e6.2	e25	34	29	25	15	164
28	43	88	18	e15	10	e9.0	e23	35	30	20	15	101
29	38	62	16	18	---	e11	e27	45	24	61	13	56
30	34	135	15	25	---	e20	e26	37	22	28	30	42
31	31	---	15	18	---	e16	---	39	---	23	36	---
TOTAL	2145	1286	1085	936	322.4	276.1	429.8	898	950	680	823	1898
MEAN	69.2	42.9	35.0	30.2	11.5	8.91	14.3	29.0	31.7	21.9	26.5	63.3
MAX	245	245	91	98	21	20	36	71	70	61	71	164
MIN	31	15	15	13	6.5	5.6	7.3	12	18	13	13	28
AC-FT	4250	2550	2150	1860	639	548	853	1780	1880	1350	1630	3760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)#

	MEAN	63.4	30.9	27.0	19.1	21.0	16.2	23.0	47.7	54.6	44.3	38.7	62.0
MAX	131	76.9	69.5	33.5	45.0	39.0	38.6	71.3	82.9	69.0	76.1	108	
(WY)	1999	1994	2000	1992	1992	1992	1994	1992	1991	1997	2002	1991	
MIN	36.2	16.3	12.7	9.65	9.16	8.91	9.52	29.0	31.7	21.9	18.2	41.0	
(WY)	1997	1991	1997	1997	1999	2003	2002	2003	2003	2003	1994	1997	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1991 - 2003#

	ANNUAL TOTAL	14327.7	11729.3	
ANNUAL MEAN		39.3	32.1	37.4
HIGHEST ANNUAL MEAN				48.6
LOWEST ANNUAL MEAN				29.7
HIGHEST DAILY MEAN	245	Oct 21	245	Oct 20 1998
LOWEST DAILY MEAN	7.7	Apr 15	5.6	Mar 13 2003
ANNUAL SEVEN-DAY MINIMUM	8.1	Apr 10	6.2	Mar 8 2003
MAXIMUM PEAK FLOW			400	Nov 26 1930
MAXIMUM PEAK STAGE			3.16	Nov 26 a4.65
INSTANTANEOUS LOW FLOW			b	
ANNUAL RUNOFF (AC-FT)	28420		23270	27090
10 PERCENT EXCEEDS	78		61	71
50 PERCENT EXCEEDS	34		23	28
90 PERCENT EXCEEDS	8.7		8.4	9.8

See Period of Record

a From flood marks

b Undetermined, see lowest daily mean

e Estimated

15052000 LEMON CREEK NEAR JUNEAU

LOCATION.--Lat 58°23'30", long 134°25'15", in SE¹/₄ NW¹/₄ NW¹/₄ sec. 19, T. 40 S., R. 67 E. (Juneau B-2 quad), Hydrologic Unit 19010301, City and Borough of Juneau, in Tongass National Forest, on left bank 0.3 mi upstream from Canyon Creek, 4.5 mi upstream from the mouth at Gastineau Channel, and 6 mi north of Juneau.

DRAINAGE AREA.-- 12.1 mi².

PERIOD OF RECORD.--August 1951 to November 1953, July 1954 to September 1973, annual maximum 1999, May 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above sea level, from topographic map. Prior to Oct.1967 same site and datum about 6.94 ft lower; Oct.1967 to Sept 1973 at same site at datum about 5.85 ft lower.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Large diurnal fluctuations caused by glacier melt at source.

EXTREMES FOR WATER YEAR 2002.--Maximum discharge during period May to September, 2,750 ft³/s, August 12, gage height, 11.58 ft, believed to be the maximum discharge for the 2002 water year; minimum not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e25	231	376	312	501
2	---	---	---	---	---	---	---	e23	246	589	305	391
3	---	---	---	---	---	---	---	e20	244	427	277	350
4	---	---	---	---	---	---	---	e18	323	463	286	281
5	---	---	---	---	---	---	---	e16	349	444	280	215
6	---	---	---	---	---	---	---	e14	286	348	270	210
7	---	---	---	---	---	+3.8	---	13	252	322	767	361
8	---	---	---	---	---	---	---	15	268	332	1360	371
9	---	---	---	---	---	---	---	18	332	336	1210	346
10	---	---	---	---	---	---	---	27	487	341	810	325
11	---	---	---	---	---	---	---	27	420	352	616	317
12	---	---	---	---	---	---	---	29	295	326	1600	257
13	---	---	---	---	---	---	---	49	272	323	1320	188
14	---	---	---	---	---	---	---	44	347	453	702	174
15	---	---	---	---	---	---	---	42	435	443	373	299
16	---	---	---	---	---	---	---	58	421	390	244	305
17	---	---	---	---	---	---	---	78	399	455	190	321
18	---	---	---	---	---	---	---	76	364	471	273	482
19	---	---	---	---	---	---	---	121	322	409	318	339
20	---	---	---	---	---	---	---	208	351	299	424	333
21	---	---	---	---	---	---	---	247	282	367	859	302
22	---	---	---	---	---	---	---	205	261	436	845	184
23	---	---	---	---	---	---	---	190	310	460	981	194
24	---	---	---	---	---	---	---	149	343	709	554	219
25	---	---	---	---	---	---	---	156	529	803	383	231
26	---	---	---	---	---	---	---	179	537	795	603	244
27	---	---	---	---	---	---	---	178	433	620	1090	359
28	---	---	---	---	---	---	---	274	360	564	1260	304
29	---	---	---	---	---	---	---	352	331	407	1030	185
30	---	---	---	---	---	---	---	327	314	328	620	122
31	---	---	---	---	---	---	---	256	---	314	564	---
TOTAL	---	---	---	---	---	---	---	3434	10344	13702	20726	8710
MEAN	---	---	---	---	---	---	---	111	345	442	669	290
MAX	---	---	---	---	---	---	---	352	537	803	1600	501
MIN	---	---	---	---	---	---	---	13	231	299	190	122
AC-FT	---	---	---	---	---	---	---	6810	20520	27180	41110	17280
CFSM	---	---	---	---	---	---	---	9.15	28.5	36.5	55.3	24.0
IN.	---	---	---	---	---	---	---	10.56	31.80	42.13	63.72	26.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)#

MEAN	147	49.2	17.6	8.00	5.49	5.76	12.9	86.5	265	419	464	356
MAX	350	129	67.0	25.8	13.6	23.5	23.4	189	382	557	718	544
(WY)	1953	1970	1963	1965	1968	1968	1969	1963	1969	1961	1961	1957
MIN	50.8	16.4	4.71	1.50	1.00	1.50	4.50	42.6	158	310	324	205
(WY)	1957	1972	1962	1952	1952	1952	1955	1971	1952	1952	1954	1964

+ Result of discharge measurement

e Estimated

15052000 LEMON CREEK NEAR JUNEAU—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	57	168	21	17	e9.1	e9.0	e115	e185	366	379	918
2	191	50	101	21	17	e9.8	e8.2	e90	e210	341	497	1300
3	121	44	74	19	19	e12	e7.5	e75	e175	463	342	660
4	96	40	61	76	24	e14	e7.2	e60	168	504	328	387
5	87	44	53	71	18	e12	e7.0	e50	228	359	331	323
6	370	93	48	98	16	e9.4	e6.8	e43	323	310	332	475
7	661	72	84	65	15	e7.2	e6.8	e42	273	330	356	508
8	552	47	198	39	14	e6.3	e7.0	e48	232	396	387	975
9	308	41	268	29	14	e6.0	e7.1	e60	250	417	410	498
10	188	44	156	e24	16	e5.5	e7.3	e70	272	358	320	429
11	135	48	104	e21	21	e5.3	e8.0	e80	274	380	285	644
12	147	45	117	e19	17	e5.1	e9.0	e107	267	385	295	554
13	127	62	83	e18	15	e5.0	e11	e98	311	350	451	1150
14	99	65	64	e17	15	e5.4	e14	e82	278	324	823	470
15	175	46	64	e16	14	e5.8	e18	e70	248	325	1690	204
16	918	33	57	e15	14	e6.2	e17	e60	238	315	1480	129
17	1210	34	46	e41	13	e6.0	e15	e56	316	416	1000	103
18	522	37	38	e58	13	e5.8	e14	e60	362	400	459	110
19	585	55	33	e73	12	e5.8	e15	e62	377	411	387	104
20	1120	55	28	e50	e12	e6.0	e16	e68	396	419	531	264
21	2500	46	27	39	e11	e6.4	e18	e77	304	522	390	307
22	1160	32	29	e32	e11	e6.2	e21	e100	283	484	266	154
23	454	27	32	e27	e10	e6.0	e32	e153	232	340	205	114
24	320	29	40	e24	e10	e5.6	e83	e282	242	288	277	366
25	215	69	28	e21	e9.8	e5.5	e250	e186	330	264	298	686
26	236	376	24	e19	e9.2	e5.6	e210	e140	456	312	241	433
27	212	355	23	e17	e8.9	e5.8	e160	e114	366	434	250	1020
28	139	178	22	18	e8.7	e6.4	e150	e129	351	441	271	817
29	98	140	20	22	---	e8.0	e138	e137	281	989	320	647
30	77	317	18	26	---	e15	e140	e152	310	540	536	436
31	64	---	19	19	---	e12	---	e194	---	374	560	---
TOTAL	13282	2581	2127	1055	394.6	230.2	1412.9	3060	8538	12557	14697	15185
MEAN	428	86.0	68.6	34.0	14.1	7.43	47.1	98.7	285	405	474	506
MAX	2500	376	268	98	24	15	250	282	456	989	1690	1300
MIN	64	27	18	15	8.7	5.0	6.8	42	168	264	205	103
AC-FT	26340	5120	4220	2090	783	457	2800	6070	16940	24910	29150	30120
CFSM	35.4	7.11	5.67	2.81	1.16	0.61	3.89	8.16	23.5	33.5	39.2	41.8
IN.	40.83	7.93	6.54	3.24	1.21	0.71	4.34	9.41	26.25	38.60	45.18	46.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)#

MEAN	159	50.8	19.9	9.18	5.88	5.84	14.4	87.0	266	419	464	362
MAX	428	129	68.6	34.0	14.1	23.5	47.1	189	382	557	718	544
(WY)	2003	1970	2003	2003	2003	1968	2003	1963	1969	1961	1961	1957
MIN	50.8	16.4	4.71	1.50	1.00	1.50	4.50	42.6	158	310	324	205
(WY)	1957	1972	1962	1952	1952	1952	1955	1971	1952	1952	1954	1964

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 1951 - 2003#

ANNUAL TOTAL	75119.7		
ANNUAL MEAN	206		156
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			122
HIGHEST DAILY MEAN	2500	Oct 21	2660
LOWEST DAILY MEAN	5.0	Mar 13	0.70
ANNUAL SEVEN-DAY MINIMUM	5.4	Mar 9	0.73
MAXIMUM PEAK FLOW	2960	Oct 21	a5900
MAXIMUM PEAK STAGE	11.71	Oct 21	b
ANNUAL RUNOFF (AC-FT)	149000		113200
ANNUAL RUNOFF (CFSM)	17.0		12.9
ANNUAL RUNOFF (INCHES)	230.95		175.45
10 PERCENT EXCEEDS	472		436
50 PERCENT EXCEEDS	93		42
90 PERCENT EXCEEDS	9.0		4.0

See Period of Record, partial years used in monthly summary statistics

a From rating curve extended above 1,200 ft³/s, from flood marks, at datum then in use

b Not determined

e Estimated

15052475 JORDAN CREEK BELOW EGAN DRIVE NEAR AUKE BAY

LOCATION.--Lat 58°21'59", long 134°34'34", in SW¹/₄ SW¹/₄ SE¹/₄ sec. 30, T. 40 S., R. 66 (Juneau B-2 SW quad), Hydrologic Unit 19010301, City and Borough of Juneau on right bank at downstream side of footbridge, 50 ft downstream from Egan Drive, 0.4 mi southeast of intersection of Egan Drive and Mendenhall Loop Road and 3 mi east of Auke Bay Post Office.

DRAINAGE AREA.--2.60 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year. Prior to October 1996, published as miscellaneous site 15052482 Jordan Creek at Trout Street Bridge near Auke Bay, at site about 500 ft downstream at different datum.

GAGE.--Water-stage recorder. Datum of gage is 19.80 ft above sea level, determined by levels survey.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTEREMES OUTSIDE PERIOD OF DAILY RECORD.--Flood of September 25, 1996, reached a stage of 4.34 ft, site and datum then in use, from floodmarks, discharge 140 ft³/s; no flow observed March 2, 1989, March 5, 1996, and January 15, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	8.2	27	6.1	e4.4	e4.8	e1.6	2.0	1.2	1.3	2.6	7.6
2	e9.9	7.4	17	6.3	e6.3	e4.2	e1.4	1.8	2.3	1.2	4.6	21
3	6.3	6.7	13	5.0	e7.9	e3.7	e1.3	1.7	1.2	3.9	3.6	9.5
4	5.8	6.1	11	15	e7.1	e5.6	e1.2	1.6	0.88	3.3	2.9	6.9
5	7.1	5.8	8.9	21	e5.4	e5.1	e1.0	1.5	0.80	2.3	2.6	5.4
6	19	5.6	7.9	24	e4.5	e3.6	e1.0	1.3	1.2	2.0	2.2	5.5
7	18	5.1	7.9	16	e4.1	e2.1	e0.90	1.3	0.80	1.8	2.0	5.4
8	19	4.7	9.0	10	e3.7	e0.80	e0.90	1.1	0.69	1.5	1.8	26
9	19	4.3	15	8.1	e3.5	e1.0	e0.80	0.89	0.59	1.3	1.6	22
10	10	4.0	10	6.7	e3.6	e1.0	e0.90	0.77	0.49	1.1	1.3	11
11	8.4	4.0	8.9	5.7	e3.6	e0.90	e0.90	0.77	0.39	0.97	1.1	19
12	12	3.7	19	5.1	e3.4	e0.90	e0.90	1.4	0.35	0.85	1.0	15
13	13	4.0	17	4.8	e3.2	e0.90	e1.0	2.5	0.81	0.75	1.3	29
14	8.6	3.5	10	e4.4	e3.0	e1.5	e1.1	5.5	0.47	0.83	1.8	32
15	8.9	3.4	9.6	3.9	e2.9	e1.9	e1.3	5.3	0.34	0.71	3.1	19
16	34	3.1	8.7	4.5	e2.8	e2.3	e1.4	3.0	0.34	0.69	3.8	13
17	84	4.0	8.4	11	e2.7	e2.6	e1.4	2.2	0.41	0.97	6.5	9.8
18	32	6.3	7.2	9.3	e2.0	e3.1	e1.4	1.8	1.8	0.79	3.3	9.2
19	25	16	6.3	12	e1.8	e2.6	e1.4	1.6	6.7	0.56	2.6	8.8
20	27	11	5.4	17	e1.6	e2.9	e1.4	1.5	5.6	0.47	4.4	10
21	89	11	4.5	8.3	e1.3	e3.2	e1.2	1.4	2.7	0.91	4.5	11
22	82	7.4	4.4	e5.0	e1.1	e3.1	e1.5	1.4	2.1	1.3	3.1	9.7
23	40	6.2	9.8	e3.5	e1.0	e2.5	e1.9	1.4	1.8	0.71	2.6	7.5
24	27	6.0	12	e2.8	e1.0	e1.9	1.9	1.5	1.8	0.52	2.6	19
25	21	7.0	7.7	e1.8	e1.1	e1.5	3.2	1.3	2.0	0.43	2.4	18
26	18	43	6.0	e1.5	e1.2	e1.3	3.4	1.2	2.3	0.82	2.1	13
27	20	28	5.2	e1.3	e2.2	e1.3	2.9	1.1	1.9	2.0	2.5	52
28	15	21	4.8	2.0	e2.3	e1.3	2.6	1.0	2.5	1.1	2.5	44
29	12	15	4.5	e3.9	---	e1.8	2.3	1.0	1.9	14	2.0	21
30	10	50	4.2	e6.3	---	e2.4	2.2	0.87	2.4	4.5	4.6	16
31	9.1	---	4.0	e5.3	---	e2.2	---	0.87	---	2.7	5.9	---
TOTAL	717.8	311.5	294.3	237.6	88.7	74.00	46.30	52.57	48.76	56.28	88.9	496.3
MEAN	23.2	10.4	9.49	7.66	3.17	2.39	1.54	1.70	1.63	1.82	2.87	16.5
MAX	89	50	27	24	7.9	5.6	3.4	5.5	6.7	14	6.5	52
MIN	5.8	3.1	4.0	1.3	1.0	0.80	0.80	0.77	0.34	0.43	1.0	5.4
AC-FT	1420	618	584	471	176	147	92	104	97	112	176	984
CFSM	8.91	3.99	3.65	2.95	1.22	0.92	0.59	0.65	0.63	0.70	1.10	6.36
IN.	10.27	4.46	4.21	3.40	1.27	1.06	0.66	0.75	0.70	0.81	1.27	7.10

e Estimated

15052475 JORDAN CREEK BELOW EGAN DRIVE NEAR AUKE BAY—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY) #

MEAN	17.7	8.40	10.3	6.39	2.73	2.94	4.37	6.92	4.63	4.89	7.01	14.0
MAX	23.2	11.2	20.8	11.3	5.25	4.74	12.1	13.7	10.2	8.49	15.0	18.7
(WY)	2003	2000	2000	1999	2001	2001	1999	1999	1999	2000	2002	1999
MIN	11.1	4.21	2.67	3.52	0.47	1.62	0.72	1.70	1.63	1.82	1.79	7.68
(WY)	1998	1999	1999	1998	1999	1998	2002	2003	2003	2003	2001	1997

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003#	
ANNUAL TOTAL	3004.02		2513.01			
ANNUAL MEAN	8.23		6.88		7.61	
HIGHEST ANNUAL MEAN					9.87	
LOWEST ANNUAL MEAN					5.95	
HIGHEST DAILY MEAN	89	Oct 21	89	Oct 21	129	Dec 28 1999
LOWEST DAILY MEAN	a0.00	Apr 8	b0.34	Jun 15	c0.00	Mar 3 1999
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 8	0.44	Jun 11	0.00	Mar 3 1999
MAXIMUM PEAK FLOW			114	Oct 17	149	Dec 28 1999
MAXIMUM PEAK STAGE			6.93	Oct 17	7.59	Dec 28 1999
INSTANTANEOUS LOW FLOW			d0.31	Jun 16	c0.00	Mar 3 1999
ANNUAL RUNOFF (AC-FT)	5960		4980		5510	
ANNUAL RUNOFF (CFSM)	3.17		2.65		2.93	
ANNUAL RUNOFF (INCHES)	42.98		35.96		39.78	
10 PERCENT EXCEEDS	19		17		17	
50 PERCENT EXCEEDS	5.2		3.3		4.9	
90 PERCENT EXCEEDS	1.3		0.90		1.1	

See Period of Record; partial year used in monthly statistics

a Apr. 8 to Apr. 18

b Jun. 15 and Jun. 16

c Mar. 3 to Mar. 9, 1999 and Apr. 8 to Apr. 18, 2002

d Jun. 16 and Jun. 17

15052475 JORDAN CREEK BELOW EGAN DRIVE NEAR AUKE BAY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1999 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder with 15-minute recording interval started on July 15, 1999.

REMARKS.-- Record is missing from February 21 to April 28 due to recorder malfunction, and August 26, 29-30, September 2, and 12-16, due to thermistor malfunction. Partial days of record retained February 21, 27, April 28, and August 26. Records represent water temperature at the sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 15.5°C, on June 10 and July 12, 2003, ; minimum, 0°C, many days during winters.

EXTREMES FOR CURRENT PERIOD.--

WATER TEMPERATURE: Maximum, 15.5°C, June 10 and July 12; minimum, 0°C, many days during winter.

WATER TEMPERATURE, in (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.5	6.5	7.0	5.0	4.0	4.5	5.5	4.5	5.0	1.5	0.5	1.5
2	7.5	7.0	7.0	5.0	5.0	5.0	4.5	3.0	3.5	2.0	1.5	2.0
3	7.5	6.5	7.0	5.0	4.0	4.5	3.0	2.0	2.5	2.5	2.0	2.0
4	7.0	6.5	7.0	5.0	4.5	5.0	2.0	1.5	2.0	2.5	1.5	2.0
5	7.0	6.0	6.0	6.0	5.0	5.5	2.5	1.5	2.0	2.5	1.5	2.0
6	7.5	6.0	7.0	6.5	5.5	6.0	2.5	2.0	2.5	3.5	2.5	3.0
7	8.0	7.5	7.5	6.0	4.0	5.0	3.5	2.5	3.0	3.5	2.5	3.0
8	8.0	7.0	7.5	4.0	3.0	3.5	4.5	3.5	4.0	2.5	1.5	2.0
9	7.0	5.5	6.5	4.5	3.0	4.0	5.0	4.5	5.0	1.5	0.5	1.0
10	5.5	4.0	4.5	4.5	4.5	4.5	5.0	4.5	5.0	1.0	0.0	0.5
11	6.0	5.0	5.5	4.5	4.5	4.5	5.0	4.5	4.5	1.0	0.5	1.0
12	6.0	6.0	6.0	4.5	4.0	4.5	4.5	4.0	4.5	2.0	0.5	1.5
13	7.0	6.0	6.5	5.5	4.5	5.0	4.0	3.0	4.0	2.5	1.5	2.0
14	7.0	6.0	6.5	6.0	5.5	5.5	3.0	2.5	3.0	1.5	0.0	0.5
15	7.0	6.5	7.0	5.5	4.5	5.5	3.5	2.5	3.0	2.0	1.0	1.5
16	8.0	7.0	7.5	4.5	3.5	4.0	3.0	2.5	3.0	2.5	2.0	2.0
17	8.0	7.5	8.0	4.5	3.5	4.0	3.5	3.0	3.0	2.5	1.0	1.5
18	7.5	6.5	7.0	4.5	4.0	4.0	3.5	3.0	3.5	3.0	2.0	3.0
19	8.0	7.5	7.5	4.5	4.0	4.0	3.0	1.0	2.0	3.0	2.5	3.0
20	8.5	8.0	8.5	5.0	4.5	5.0	1.0	0.5	0.5	3.0	2.0	2.5
21	8.5	8.0	8.5	5.0	4.5	5.0	0.5	0.0	0.5	2.0	0.0	1.0
22	8.5	8.0	8.0	4.5	3.5	4.0	2.0	0.5	1.0	0.5	0.0	0.0
23	8.0	7.0	7.5	3.5	2.5	3.0	2.0	1.0	1.5	0.5	0.0	0.0
24	7.5	6.5	7.0	4.5	2.5	3.0	2.0	1.0	1.5	0.0	0.0	0.0
25	7.0	6.5	6.5	5.0	4.5	5.0	2.0	1.0	1.5	0.5	0.0	0.0
26	7.0	7.0	7.0	7.0	5.0	6.0	2.5	1.5	2.0	1.0	0.0	0.5
27	7.0	6.5	7.0	7.0	5.5	6.0	1.5	1.5	1.5	1.0	0.0	0.5
28	7.0	6.0	6.5	5.5	5.0	5.5	1.5	1.0	1.0	2.0	1.0	1.5
29	6.0	4.5	5.0	6.5	5.0	6.0	1.0	1.0	1.0	2.0	1.5	2.0
30	4.5	3.5	4.0	6.5	5.5	6.0	1.0	0.5	1.0	2.0	1.5	2.0
31	4.0	3.5	4.0	---	---	---	1.5	0.5	1.0	1.5	1.0	1.5
MONTH	8.5	3.5	6.7	7.0	2.5	4.8	5.5	0.0	2.5	3.5	0.0	1.5

15052475 JORDAN CREEK BELOW EGAN DRIVE NEAR AUKE BAY—Continued

WATER TEMPERATURE, in (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.0	1.5	2.0	---	---	---	---	---	---	8.5	6.0	7.5
2	2.5	1.5	2.0	---	---	---	---	---	---	7.5	4.0	5.5
3	2.0	1.5	2.0	---	---	---	---	---	---	7.0	4.0	5.5
4	2.5	2.0	2.0	---	---	---	---	---	---	6.5	3.0	5.0
5	2.0	1.5	2.0	---	---	---	---	---	---	6.5	3.0	5.0
6	2.0	1.0	1.5	---	---	---	---	---	---	6.5	5.0	5.5
7	2.5	1.5	2.0	---	---	---	---	---	---	8.0	3.5	5.5
8	2.5	2.0	2.5	---	---	---	---	---	---	9.0	4.5	7.0
9	3.0	2.0	2.5	---	---	---	---	---	---	10.0	5.5	8.0
10	3.0	2.5	2.5	---	---	---	---	---	---	9.5	7.0	8.0
11	3.5	2.5	3.0	---	---	---	---	---	---	8.5	7.0	7.5
12	3.0	2.0	2.5	---	---	---	---	---	---	7.0	6.0	6.5
13	2.5	2.0	2.5	---	---	---	---	---	---	6.0	5.0	6.0
14	2.0	0.5	1.0	---	---	---	---	---	---	5.5	4.0	5.0
15	2.0	1.5	2.0	---	---	---	---	---	---	7.0	3.5	5.5
16	2.0	1.5	1.5	---	---	---	---	---	---	8.0	4.5	6.5
17	2.0	1.5	1.5	---	---	---	---	---	---	8.5	4.5	6.5
18	1.5	1.0	1.5	---	---	---	---	---	---	9.0	5.0	7.0
19	1.5	0.0	0.5	---	---	---	---	---	---	9.5	5.5	8.0
20	0.0	0.0	0.0	---	---	---	---	---	---	10.0	6.0	8.5
21	---	0.0	---	---	---	---	---	---	---	10.5	7.0	8.5
22	---	---	---	---	---	---	---	---	---	10.0	8.5	9.0
23	---	---	---	---	---	---	---	---	---	9.5	8.5	8.5
24	---	---	---	---	---	---	---	---	---	10.0	8.0	9.0
25	---	---	---	---	---	---	---	---	---	9.5	8.0	8.5
26	---	---	---	---	---	---	---	---	---	10.0	7.5	8.5
27	---	0.0	---	---	---	---	---	---	---	10.0	7.5	8.5
28	---	---	---	---	---	---	8.0	---	---	10.5	8.0	9.5
29	---	---	---	---	---	---	8.5	4.5	7.0	11.5	9.5	10.5
30	---	---	---	---	---	---	9.0	5.0	7.0	12.5	9.5	11.0
31	---	---	---	---	---	---	---	---	---	12.0	10.0	11.0
MONTH	---	---	---	---	---	---	---	---	---	12.5	3.0	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.0	8.5	9.5	14.0	10.5	12.0	11.0	10.0	10.5	9.5	9.0	9.5
2	10.5	8.0	9.0	13.0	11.0	12.0	10.5	9.5	10.0	---	---	---
3	12.0	8.5	10.0	11.0	9.5	10.0	11.0	9.0	10.0	10.0	9.5	9.5
4	11.5	8.5	10.0	10.5	9.5	10.0	10.5	9.5	10.0	10.0	9.0	9.5
5	12.5	10.0	11.5	10.5	9.5	10.0	11.5	9.0	10.0	9.5	7.5	8.5
6	13.5	11.0	12.0	11.0	9.5	10.5	11.5	8.5	10.0	9.0	8.5	8.5
7	12.0	10.5	11.0	12.0	8.5	10.5	11.5	9.0	10.0	9.5	8.5	9.0
8	13.5	9.0	11.0	13.5	10.5	12.0	12.0	9.0	10.5	9.5	9.0	9.5
9	14.5	9.5	11.5	15.0	12.0	13.0	12.5	9.5	11.0	9.5	9.0	9.5
10	15.5	10.5	12.5	14.5	11.0	12.5	11.5	9.0	10.5	9.5	8.5	9.0
11	13.5	11.5	12.5	14.0	12.0	13.0	12.0	9.0	10.5	9.5	7.5	9.0
12	12.5	11.5	12.0	15.5	11.5	13.5	11.5	11.0	11.0	---	---	---
13	13.5	11.0	12.0	15.0	12.0	13.0	11.5	10.5	11.0	---	---	---
14	13.5	11.0	12.0	13.5	12.0	12.5	11.5	11.0	11.0	---	---	---
15	12.0	11.0	11.5	13.0	11.5	12.0	12.5	11.5	12.0	---	---	---
16	14.5	10.0	12.0	12.0	11.0	11.5	12.0	11.0	11.5	---	---	---
17	13.0	11.5	12.0	11.5	10.5	11.0	11.5	10.5	11.0	7.5	6.0	7.0
18	11.5	9.5	10.5	14.5	10.5	12.0	11.0	9.5	10.5	7.5	7.0	7.0
19	9.5	8.5	9.0	14.0	11.0	12.5	11.0	9.5	10.5	7.5	6.5	7.0
20	9.5	8.5	9.0	13.5	12.5	13.0	10.0	9.5	10.0	8.0	7.5	7.5
21	10.5	8.5	9.5	13.0	11.5	12.5	10.0	9.0	9.5	8.0	7.5	7.5
22	11.0	9.0	10.0	12.5	10.5	11.5	10.5	8.5	9.5	8.0	7.0	7.5
23	10.5	9.5	10.0	13.0	10.5	12.0	9.5	8.0	9.0	7.5	6.0	7.0
24	10.0	9.0	9.5	12.5	11.5	12.0	10.0	9.0	9.5	8.0	7.0	7.0
25	10.0	9.0	9.5	12.5	11.0	12.0	10.5	9.0	10.0	8.5	8.0	8.0
26	9.5	9.0	9.0	12.0	11.0	11.5	---	7.5	---	8.5	7.5	8.0
27	10.0	8.5	9.0	11.5	10.5	11.0	10.0	8.5	9.5	8.5	7.5	8.0
28	10.0	8.5	9.5	11.5	10.0	11.0	10.0	6.5	9.0	9.0	8.0	8.5
29	11.0	8.0	9.5	11.0	10.5	11.0	---	---	---	8.5	7.0	8.0
30	12.0	9.5	10.5	11.5	10.0	10.5	---	---	---	8.5	7.0	7.5
31	---	---	---	12.0	9.5	10.5	10.0	9.5	9.5	---	---	---
MONTH	15.5	8.0	10.6	15.5	8.5	11.7	---	---	---	---	---	---

15052495 NUGGET CREEK ABOVE DIVERSION NEAR AUKE BAY

LOCATION.--Lat 58°25'25", long 134°31'25", in SE¹/₄ SE¹/₄ SW¹/₄ sec. 4, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301, City and Borough of Juneau, on left bank, 1,200 ft upstream from old diversion dam, 3,000 ft upstream from mouth at Mendenhall Lake and 5.2 mi northeast of Auke Bay.

DRAINAGE AREA.-- 15.8 mi².

PERIOD OF RECORD.--March 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 590 ft above sea level, from topographic map.

REMARKS.--Records fair except estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	71	192	29	29	17	15	129	173	251	218	471
2	184	63	125	29	28	17	14	101	201	242	277	610
3	128	57	96	27	28	18	14	84	146	435	204	413
4	113	55	77	89	31	26	13	70	130	435	188	257
5	116	57	67	101	28	20	13	62	171	263	178	201
6	394	81	61	155	25	e16	12	56	253	210	179	241
7	714	64	105	102	24	e12	13	54	188	193	187	233
8	520	49	180	64	23	e12	13	60	161	204	198	802
9	278	44	230	49	22	e11	13	73	177	216	190	326
10	175	45	144	44	22	e11	13	80	198	225	158	245
11	139	48	106	39	25	e10	14	82	197	238	147	255
12	190	45	148	36	23	e10	15	128	190	233	153	196
13	160	56	109	32	21	e10	18	105	231	211	258	e623
14	144	56	82	30	20	e11	21	94	180	201	491	e338
15	217	51	76	31	19	e11	27	82	156	203	676	e186
16	1320	43	66	32	19	12	26	73	153	207	816	e126
17	1150	44	59	122	18	11	22	72	214	295	579	e100
18	382	54	52	130	18	11	21	75	277	263	262	e103
19	385	81	45	143	16	11	22	78	326	240	222	e104
20	690	77	40	116	14	11	23	83	338	248	379	e249
21	1540	77	39	67	e13	12	25	90	232	340	238	e239
22	932	57	42	54	e12	12	28	112	209	299	168	e150
23	325	47	43	43	e12	11	40	157	175	192	138	e113
24	203	55	52	e38	e13	11	78	282	193	165	179	e327
25	159	125	42	e34	e14	11	258	205	252	149	160	e540
26	179	1220	36	e32	15	11	236	159	348	204	133	e330
27	167	444	34	e30	15	11	197	124	249	287	156	e682
28	130	241	32	32	14	12	150	134	240	254	152	e497
29	103	179	30	35	---	15	134	158	193	712	161	e378
30	89	470	27	41	---	26	136	156	220	301	291	e266
31	77	---	28	33	---	20	---	184	---	217	303	---
TOTAL	11519	4056	2465	1839	561	420	1624	3402	6371	8133	8039	9601
MEAN	372	135	79.5	59.3	20.0	13.5	54.1	110	212	262	259	320
MAX	1540	1220	230	155	31	26	258	282	348	712	816	802
MIN	77	43	27	27	12	10	12	54	130	149	133	100
MED	190	57	61	39	20	11	22	90	197	238	190	256
AC-FT	22850	8050	4890	3650	1110	833	3220	6750	12640	16130	15950	19040
CFSM	23.5	8.56	5.03	3.75	1.27	0.86	3.43	6.95	13.4	16.6	16.4	20.3
IN.	27.12	9.55	5.80	4.33	1.32	0.99	3.82	8.01	15.00	19.15	18.93	22.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)#

	MEAN	250	91.4	55.6	47.6	23.0	15.4	28.9	133	359	426	397	332
	MAX	372	135	79.5	59.3	37.3	22.3	54.1	183	476	586	575	438
	(WY)	2003	2003	2003	2003	2001	2001	2003	2002	2000	2000	2002	2000
	MIN	143	35.7	26.6	28.5	11.5	10.4	12.6	95.2	212	262	259	243
	(WY)	2002	2002	2002	2002	2002	2002	2002	2001	2003	2003	2003	2002

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 2000 - 2003#

ANNUAL TOTAL	73552.2	58030	
ANNUAL MEAN	202	159	169
HIGHEST ANNUAL MEAN			178
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	1610	Aug 12	1610
LOWEST DAILY MEAN	6.4	Mar 22	6.4
ANNUAL SEVEN-DAY MINIMUM	6.7	Mar 18	6.7
MAXIMUM PEAK FLOW			2940
MAXIMUM PEAK STAGE			25.57
ANNUAL RUNOFF (AC-FT)	145900	115100	122400
ANNUAL RUNOFF (CFSM)	12.8	10.1	10.7
ANNUAL RUNOFF (INCHES)	173.17	136.63	145.27
10 PERCENT EXCEEDS	484	326	413
50 PERCENT EXCEEDS	96	109	80
90 PERCENT EXCEEDS	8.9	14	13

See period of Record; partial years used in monthly statistics
a Mar. 11-13
e Estimated

15052500 MENDENHALL RIVER NEAR AUKE BAY

LOCATION.--Lat 58°25'47", long 134°34'22", in NW¹/₄ SE¹/₄ sec. 6, T. 40 S., R. 66 E. (Juneau B-2 NW quad.), Hydrologic Unit 19010301, at the north end of Mendenhall Lake, 1.2 mi north of Mendenhall Lake Outlet and 4.1 mi northeast of Auke Bay, and 7 mi upstream from mouth at Fritz Cove.

DRAINAGE AREA.--85.1 mi².

PERIOD OF RECORD.--May 1965 to October 1994, annual maximum, water years 1995-96, October 1996 to current year. Prior to April 15, 1983, at site 1.3 mi southeast at east end of Mendenhall Lake, same datum.

REVISED RECORDS.--WDR AK-95-1: 1981(M)

GAGE.--Water-stage recorder. Elevation of gage is 60 ft above sea level, from topographic map.

REMARKS.--Records fair except estimated daily discharges, which are poor. Streamflow is augmented and diurnal fluctuations caused by melting from Mendenhall Glacier, which covers two-thirds of the basin. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--During late summer 1961, flood flows of 27,000 ft³/s were estimated at the mouth of the Mendenhall River. For discussion of this flood, see USGS Hydrologic Atlas HA-259.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,600 ft³/s and maximum (*):.

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct 17	1100	5770	7.03	Sept 03	0915	6130	7.21
*Oct 22	0445	*11000	*9.23	Sept 08	2215	5450	6.86
Jul 29	1830	5600	6.94	Sept 13	1930	4630	6.41
Aug 17	0000	10800	9.14	Sept 27	2030	4810	6.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	532	1550	143	164	74	72	687	1520	3370	3250	3460
2	1390	467	1290	146	156	83	68	676	1590	3320	3150	4840
3	1430	410	1150	139	154	87	64	680	1450	3490	2800	6010
4	1160	363	751	161	158	104	62	725	1330	4210	2540	4760
5	838	e346	505	267	151	111	60	811	1420	3220	2320	2860
6	1010	e340	421	407	137	94	58	674	1920	2760	2450	2790
7	1790	e300	430	447	123	82	57	479	1940	2630	2930	3210
8	3540	e250	638	361	111	72	59	451	1660	2980	3240	4660
9	3310	e200	1030	289	103	65	61	485	1730	3300	3430	4240
10	2530	e180	1170	251	97	59	63	513	2020	3350	2850	2790
11	2170	e160	1250	239	97	55	66	515	2270	3650	2550	3270
12	1820	e140	1320	232	97	51	71	579	2210	3610	2680	3840
13	1430	e160	1100	231	95	55	77	654	2280	3600	2830	4160
14	1090	e160	683	217	91	54	86	632	2150	3300	3610	3280
15	1000	e140	513	189	88	51	97	562	1980	3000	6330	1980
16	2320	e120	435	167	86	49	106	490	1910	2790	9780	1310
17	5320	e140	381	201	83	46	106	462	2130	3050	9560	1020
18	4380	e190	340	308	81	46	105	467	2710	3440	5010	944
19	4090	e210	291	385	80	46	105	494	3230	3490	3710	932
20	5110	e210	238	484	77	47	109	537	3320	3820	3950	1150
21	8820	e180	205	386	e75	50	117	595	2450	4120	3380	1620
22	9120	e170	189	308	e71	54	126	669	2200	3980	2480	1700
23	4760	e160	202	267	e67	54	137	760	2090	3000	2120	1270
24	2780	e220	208	253	65	52	165	1050	1910	2950	1970	1380
25	1940	e400	205	255	69	51	289	1260	2110	2670	2260	2180
26	1760	1540	189	247	66	49	524	1440	2760	2500	2100	3290
27	1950	1980	174	222	69	48	596	1480	2940	3200	1950	3840
28	1540	2080	164	192	68	50	595	1490	2630	3440	2160	4600
29	994	1520	156	174	---	55	587	1560	2390	5040	2270	4490
30	762	1750	144	176	---	65	636	1450	2540	4760	2770	3460
31	627	---	139	176	---	74	---	1510	---	3370	3660	---
TOTAL	81871	15018	17461	7920	2779	1933	5324	24837	64790	105410	106090	89336
MEAN	2641	501	563	255	99.2	62.4	177	801	2160	3400	3422	2978
MAX	9120	2080	1550	484	164	111	636	1560	3320	5040	9780	6010
MIN	627	120	139	139	65	46	57	451	1330	2500	1950	932
AC-FT	162400	29790	34630	15710	5510	3830	10560	49260	128500	209100	210400	177200
CFSM	31.0	5.88	6.62	3.00	1.17	0.73	2.09	9.41	25.4	40.0	40.2	35.0
IN.	35.79	6.56	7.63	3.46	1.21	0.84	2.33	10.86	28.32	46.08	46.38	39.05

e Estimated

15052500 MENDENHALL RIVER NEAR AUKE BAY—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY) #

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1374	350	167	117	90.8	91.0	139	652	1888	3017	3360	2673
MAX	2649	920	563	600	254	379	313	1227	2819	3835	4701	4100
(WY)	1987	1977	2003	1981	1977	1992	1994	1993	1969	1979	1990	1991
MIN	532	110	40.0	30.8	21.5	22.3	46.9	268	732	1939	2025	1380
(WY)	1969	1986	1984	1969	1969	1974	2002	1985	1985	1985	1985	1984

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR				FOR 2003 WATER YEAR				WATER YEARS 1965 - 2003#			
ANNUAL TOTAL	511311				522769							
ANNUAL MEAN	1401				1432				1172			
HIGHEST ANNUAL MEAN									1547			
LOWEST ANNUAL MEAN									758			
HIGHEST DAILY MEAN	10100				9780				13700			
LOWEST DAILY MEAN	28				a46				19			
ANNUAL SEVEN-DAY MINIMUM	29				48				19			
MAXIMUM PEAK FLOW					11000				16000			
MAXIMUM PEAK STAGE					9.23				b11.18			
INSTANTANEOUS LOW FLOW					c44				d19			
ANNUAL RUNOFF (AC-FT)	1014000				1037000				848900			
ANNUAL RUNOFF (CFSM)	16.5				16.8				13.8			
ANNUAL RUNOFF (INCHES)	223.51				228.52				187.08			
10 PERCENT EXCEEDS	3260				3490				3230			
50 PERCENT EXCEEDS	524				669				392			
90 PERCENT EXCEEDS	44				69				49			

See Period of Record; partial years used in monthly summary statistics and break in record

a Mar. 17-19

b From flood marks

c Mar. 12, 17, and 19

d Mar. 1-3, 1969, and Mar. 7-11, 1974

15052800 MONTANA CREEK NEAR AUKE BAY

LOCATION.--Lat 58°23'53", long 134°36'34", in SE¹/₄ SW¹/₄ sec. 13, T. 40 S., R. 65 E. (Juneau B-2 NW quad.), Hydrologic Unit 19010301, On right bank 30 ft upstream from bridge on Mendenhall Loop Road, 1.2 mi upstream from mouth at Mendenhall River, 1.5 mi northeast of Auke Lake, and 3.9 mi downstream from McGinnis Creek.

DRAINAGE AREA.--14.1 mi².

PERIOD OF RECORD.-- August 1965 to September 1975, July 1983 to September 1987, Annual Maximum 1996 to 2000, November 2000 to current year.

REVISED RECORDS.--WDR-99-1: 1996-98 (M).

GAGE.--Water-stage recorder. Elevation of gage is 40 ft above sea level, from topographic map.

REMARKS.--Records fair, except estimated daily discharges, which are poor. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.-- Peak discharges greater than base discharge of 800 ft³/s and maximum (*)

	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)		Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
	Oct 16	1615	1700	15.57		Sep 2	0045	1020	14.45
	Oct 21	0500	1120	14.67		Sep 8	0830	910	14.18
	Nov 26	1415	*1820	*15.73		Sep 27	1730	1450	15.23
	Nov 30	0730	1060	14.55					

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003 DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	43	184	64	40	84	39	76	88	70	69	213
2	175	38	118	74	39	105	43	60	112	71	79	464
3	77	33	90	46	58	64	40	50	73	199	64	243
4	63	31	e69	115	97	123	28	42	61	198	53	126
5	67	30	e54	142	61	69	20	38	65	96	49	87
6	195	33	e40	225	46	112	16	35	118	73	43	83
7	289	31	e47	146	e34	51	17	32	81	62	41	84
8	297	26	e130	73	e28	25	20	33	60	59	39	594
9	217	23	355	54	e30	e15	25	37	63	56	38	253
10	104	23	166	e47	e36	e15	26	43	71	54	34	127
11	76	27	111	e42	e40	e14	33	43	74	53	31	239
12	218	25	192	e37	e30	e14	36	77	64	50	32	156
13	148	32	154	33	e27	e13	39	104	76	46	42	287
14	93	30	87	e30	26	e14	41	115	66	47	119	205
15	107	34	74	e33	24	e15	52	90	57	43	159	124
16	942	27	68	38	23	e15	54	56	53	40	216	83
17	719	37	60	217	21	e16	40	47	60	64	239	66
18	201	112	54	159	21	e16	34	43	152	61	99	63
19	236	173	46	209	e18	e25	35	43	286	48	74	68
20	399	96	41	220	e16	42	41	43	257	44	218	315
21	944	95	e36	95	e15	47	41	48	134	89	132	258
22	531	54	e50	e70	19	52	45	57	101	94	80	144
23	191	37	70	e50	25	47	50	85	79	59	64	93
24	126	43	95	e33	30	34	68	100	72	47	62	326
25	95	108	59	e35	33	28	122	87	96	39	57	560
26	101	935	44	e36	33	21	127	79	167	39	49	216
27	152	480	38	e41	41	18	108	63	102	97	49	629
28	109	298	37	e47	38	21	89	56	103	64	49	263
29	73	168	35	90	---	34	79	78	82	289	46	139
30	57	533	33	107	---	73	80	74	69	105	145	103
31	48	---	33	63	---	53	---	85	---	69	126	---
TOTAL	7221	3655	2670	2671	949	1275	1488	1919	2942	2425	2597	6611
MEAN	233	122	86.1	86.2	33.9	41.1	49.6	61.9	98.1	78.2	83.8	220
MAX	944	935	355	225	97	123	127	115	286	289	239	629
MIN	48	23	33	30	15	13	16	32	53	39	31	63
AC-FT	14320	7250	5300	5300	1880	2530	2950	3810	5840	4810	5150	13110
CFSM	16.5	8.64	6.11	6.11	2.40	2.92	3.52	4.39	6.96	5.55	5.94	15.6
IN.	19.05	9.64	7.04	7.05	2.50	3.36	3.93	5.06	7.76	6.40	6.85	17.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)#

MEAN	162	75.9	47.2	45.4	38.7	47.5	52.3	128	160	144	159	167
MAX	285	138	112	186	121	195	88.5	185	207	213	246	263
(WY)	1975	1975	1986	1985	1971	1972	1969	1972	1967	1975	1972	1987
MIN	89.7	21.4	15.9	5.02	7.52	9.64	25.0	61.9	71.1	52.5	69.2	70.9
(WY)	1969	1986	1972	1974	1972	1974	2002	2003	1971	1971	1968	1984

e Estimated

See Period of Record, partial years used in monthly statistics

15052800 MONTANA CREEK NEAR AUKE BAY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003#	
ANNUAL TOTAL	40620.4		36423		103	
ANNUAL MEAN	111		99.8		131	
HIGHEST ANNUAL MEAN					80.8	
LOWEST ANNUAL MEAN					1350	
HIGHEST DAILY MEAN	944	Oct 21	944	Oct 21	3.4	Sep 29 1970
LOWEST DAILY MEAN	9.1	Apr 10	13	Mar 13	3.5	Feb 8 1972
ANNUAL SEVEN-DAY MINIMUM	9.5	Apr 7	14	Mar 9	3800	Jan 13 1974
MAXIMUM PEAK FLOW			1820	Nov 26	17.36	Oct 20 1998
MAXIMUM PEAK STAGE			15.73	Nov 26	3.2	Oct 20 1998
INSTANTANEOUS LOW FLOW			a		74920	Feb 8 1972
ANNUAL RUNOFF (AC-FT)	80570		72250		7.33	
ANNUAL RUNOFF (CFSM)	7.89		7.08		99.65	
ANNUAL RUNOFF (INCHES)	107.17		96.09		222	
10 PERCENT EXCEEDS	223		216		75	
50 PERCENT EXCEEDS	76		62		14	
90 PERCENT EXCEEDS	13		27			

a Not determined, see lowest daily mean

See Period of Record, partial years used in monthly statistics

15053200 DUCK CREEK BELOW NANCY STREET NEAR AUKE BAY

LOCATION.--Lat 58°22'31", long 134°34'38", in NW¹/₄ SW¹/₄ NE¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 NW), Hydrologic Unit 19010301, City and Borough of Juneau, on right bank, 50 ft south of intersection of Nancy Street and Mendenhall Loop Road, 0.4 mi north of intersection of Egan Drive and Mendenhall Loop Road, and 1.44 mi upstream from mouth.

DRAINAGE AREA.-- 1.30 mi².

PERIOD OF RECORD.--December 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 21.87 ft above sea level, determined by levels survey.

REMARKS.--Records fair except for estimated record, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	3.5	12	3.8	3.1	3.7	e1.0	e0.63	0.93	1.5	2.2	4.8
2	6.7	3.6	9.0	4.3	4.2	3.7	e0.80	e0.63	1.3	1.5	2.7	7.2
3	5.4	3.0	6.7	3.6	5.6	3.1	e0.68	e0.58	1.2	2.1	2.5	5.7
4	3.9	3.2	5.3	8.9	5.5	4.3	e0.58	e0.58	1.1	2.2	2.2	5.0
5	4.4	3.1	4.2	13	4.2	3.9	e0.45	e0.51	0.99	1.9	2.0	4.3
6	8.1	2.7	3.6	14	3.4	2.8	e0.40	e0.49	1.1	1.7	1.7	4.1
7	10	2.4	3.6	9.8	3.0	1.7	e0.36	0.45	1.1	1.6	1.6	4.1
8	12	2.6	4.3	6.8	2.7	e1.2	e0.36	0.40	1.1	1.5	1.5	14
9	12	2.3	6.4	5.4	2.5	e0.85	e0.31	0.38	1.1	1.4	1.5	12
10	7.6	2.0	5.4	4.6	2.5	e0.66	e0.31	0.36	0.99	1.3	1.5	8.0
11	5.0	2.3	5.1	3.9	2.5	e0.52	e0.31	0.36	0.91	1.2	1.4	9.8
12	6.2	2.1	15	3.5	2.4	e0.50	0.34	0.58	0.89	1.1	1.2	8.4
13	7.5	2.7	18	3.3	2.2	e0.59	0.38	1.3	0.99	1.0	1.3	14
14	6.0	1.7	10	2.9	2.0	e0.75	0.46	2.5	0.95	1.1	1.6	14
15	5.7	2.1	7.0	2.8	1.9	e1.0	0.58	2.2	0.97	1.1	2.2	10
16	15	1.9	5.0	4.0	1.9	1.3	0.73	1.6	0.92	1.0	2.4	7.7
17	24	2.5	5.8	11	1.8	1.6	0.76	1.4	0.95	1.1	2.9	6.5
18	13	4.2	4.5	7.4	1.7	2.0	0.71	1.2	1.2	1.0	2.7	6.2
19	11	8.5	e3.0	8.1	1.6	1.8	0.75	1.1	1.9	0.95	2.4	6.0
20	11	6.2	e2.9	9.7	1.5	1.9	0.77	1.0	2.2	0.95	3.1	7.2
21	22	6.3	e2.8	6.4	1.3	2.1	0.62	1.0	1.8	1.1	3.1	8.4
22	24	4.9	4.3	4.8	1.1	2.2	0.76	0.99	1.6	1.2	2.7	7.7
23	15	4.4	8.5	3.9	0.95	1.7	0.76	0.95	1.5	1.2	2.3	6.7
24	10	3.7	8.5	e3.1	0.90	1.3	e0.80	0.95	1.5	1.1	2.2	13
25	8.1	4.6	6.2	e2.8	1.1	0.92	e0.90	0.93	1.6	1.0	2.0	12
26	7.7	15	4.7	e2.6	0.99	0.71	e1.3	0.89	1.7	1.1	1.8	9.7
27	9.2	13	3.8	e2.4	1.8	0.64	e1.0	0.85	1.6	1.2	1.8	22
28	7.7	15	3.3	e2.2	1.8	0.59	e0.82	0.80	1.8	1.3	1.9	17
29	6.5	8.3	2.9	2.3	---	0.88	e0.68	0.81	1.6	3.9	1.7	10
30	5.1	18	2.7	4.3	---	1.5	e0.63	0.78	1.5	2.9	3.1	7.1
31	4.0	---	2.6	4.0	---	e1.4	---	0.77	---	2.3	3.9	---
TOTAL	299.5	155.8	187.1	169.6	66.14	51.81	19.31	27.97	38.99	45.50	67.1	272.6
MEAN	9.66	5.19	6.04	5.47	2.36	1.67	0.64	0.90	1.30	1.47	2.16	9.09
MAX	24	18	18	14	5.6	4.3	1.3	2.5	2.2	3.9	3.9	22
MIN	3.9	1.7	2.6	2.2	0.90	0.50	0.31	0.36	0.89	0.95	1.2	4.1
AC-FT	594	309	371	336	131	103	38	55	77	90	133	541
CFSM	7.43	3.99	4.64	4.21	1.82	1.29	0.50	0.69	1.00	1.13	1.67	6.99
IN.	8.57	4.46	5.35	4.85	1.89	1.48	0.55	0.80	1.12	1.30	1.92	7.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)#

	MEAN	9.38	4.90	5.29	2.92	2.37	2.34	2.66	2.61	2.16	2.72	3.96	8.09
	MAX	18.1	10.3	12.2	5.47	3.97	5.08	6.16	4.97	3.47	4.23	7.66	14.5
	(WY)	2000	2000	2000	2003	2002	1994	1999	1999	1999	1997	2002	2000
	MIN	5.29	2.36	1.95	0.85	0.79	0.94	0.64	0.86	1.20	1.47	1.31	3.81
	(WY)	1998	1996	1996	1997	1999	1995	2003	2002	1998	2003	1994	1997

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1994 - 2003#
ANNUAL TOTAL	1614.57	1401.42	
ANNUAL MEAN	4.42	3.84	4.12
HIGHEST ANNUAL MEAN			6.90
LOWEST ANNUAL MEAN			3.26
HIGHEST DAILY MEAN	24 Oct 17	a24 Oct 17	68 Dec 28 1999
LOWEST DAILY MEAN	0.25 May 7	b0.31 Apr 9	0.19 Mar 15 2000
ANNUAL SEVEN-DAY MINIMUM	0.32 May 3	0.34 Apr 7	0.26 Mar 10 2000
MAXIMUM PEAK FLOW		35 Sep 27	80 Dec 28 1999
MAXIMUM PEAK STAGE		5.98 Sep 27	c7.59 Sep 25 1996
INSTANTANEOUS LOW FLOW		d	f0.18 Mar 8 1999
ANNUAL RUNOFF (AC-FT)	3200	2780	2980
ANNUAL RUNOFF (CFSM)	3.40	2.95	3.17
ANNUAL RUNOFF (INCHES)	46.20	40.10	43.04
10 PERCENT EXCEEDS	10	9.7	8.6
50 PERCENT EXCEEDS	2.9	2.2	2.6
90 PERCENT EXCEEDS	0.94	0.72	0.96

See period of Record; partial years used in monthly summary statistics

a Oct. 17 and 22

b Apr. 9-11

c Backwater caused by culvert, which was removed Apr. 1998

d Underdetermined, see lowest daily mean

e Estimated

f Mar. 8, 1999 and Mar. 14 and 15, 2000

15055500 ANTLER RIVER BELOW ANTLER LAKE NEAR AUKE BAY

LOCATION.--Lat 58°51'07", long 134°42'31", in NE¹/₄ SE¹/₄ NE¹/₄ sec. 10, T. 35 S., R. 64 E. (Juneau D-3 quad), Hydrologic Unit 19010301, in Tongass National Forest, 200 ft below outlet of Antler Lake, 10 mi northeast of Berners Bay, and located 32 mi northwest of Auke Bay.

DRAINAGE AREA.--26.0 mi², approximately.

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 80 ft above sea level, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	86	292	40	38	17	22	162	199	224	213	166
2	91	77	213	39	36	17	21	152	188	238	202	254
3	84	69	162	37	36	17	20	135	174	230	194	281
4	77	62	130	48	35	17	19	118	164	239	181	249
5	71	58	108	84	34	17	19	103	163	223	168	211
6	72	59	93	134	33	17	18	91	215	204	165	186
7	92	63	85	153	31	16	18	83	241	196	168	178
8	143	60	101	133	30	16	18	80	221	200	174	168
9	150	56	138	111	28	15	18	83	218	209	175	160
10	134	55	156	94	27	15	18	90	239	218	169	148
11	116	54	142	81	26	14	18	94	263	229	161	167
12	114	52	138	71	25	14	19	109	257	225	156	183
13	121	54	144	63	25	14	19	123	270	223	149	215
14	112	58	125	56	23	15	20	120	261	220	156	241
15	107	57	110	51	22	14	22	110	236	210	330	220
16	182	55	101	48	22	14	24	99	223	198	465	175
17	335	52	91	52	21	14	e25	91	224	186	467	143
18	314	52	81	71	21	15	e26	87	256	180	354	121
19	270	53	72	84	20	15	e25	87	258	185	268	110
20	375	56	63	92	20	14	e26	90	255	195	226	114
21	769	59	57	87	19	15	27	95	235	208	199	165
22	743	58	53	76	18	15	27	107	220	213	169	167
23	469	54	58	67	18	15	29	124	216	198	149	145
24	310	51	59	59	18	15	36	173	200	187	135	179
25	224	53	58	54	18	15	58	226	193	173	126	283
26	182	147	54	51	18	15	97	269	223	162	119	326
27	168	378	50	49	17	15	126	232	224	164	116	330
28	146	360	46	45	17	15	142	196	210	170	115	274
29	126	266	43	42	---	15	145	181	202	233	118	257
30	109	323	40	42	---	19	153	182	200	250	131	237
31	96	---	39	40	---	23	---	193	---	223	156	---
TOTAL	6395	2937	3102	2154	696	484	1255	4085	6648	6413	6074	6053
MEAN	206	97.9	100	69.5	24.9	15.6	41.8	132	222	207	196	202
MAX	769	378	292	153	38	23	153	269	270	250	467	330
MIN	71	51	39	37	17	14	18	80	163	162	115	110
AC-FT	12680	5830	6150	4270	1380	960	2490	8100	13190	12720	12050	12010
CFSM	7.93	3.77	3.85	2.67	0.96	0.60	1.61	5.07	8.52	7.96	7.54	7.76
IN.	9.15	4.20	4.44	3.08	1.00	0.69	1.80	5.84	9.51	9.18	8.69	8.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	172	66.8	72.5	43.1	24.4	19.7	38.1	137	301	265	227	221
MAX	240	97.9	134	69.5	35.0	29.1	55.8	204	330	327	317	271
(WY)	1999	2003	2000	2003	2001	2001	1999	1998	1999	2000	2002	1999
MIN	104	39.4	30.6	21.2	11.5	14.6	14.5	90.1	222	207	189	160
(WY)	1998	2002	2002	1999	1999	1999	2002	2001	2003	2003	1998	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003#	
ANNUAL TOTAL	51039		46296			
ANNUAL MEAN	140		127		132	
HIGHEST ANNUAL MEAN					147	
LOWEST ANNUAL MEAN					121	
HIGHEST DAILY MEAN	869	Aug 13	769	Oct 21	993	Oct 20 1998
LOWEST DAILY MEAN	a13	Mar 20	b14	Mar 11	7.8	Mar 9 1999
ANNUAL SEVEN-DAY MINIMUM	13	Apr 5	14	Mar 11	8.0	Mar 5 1999
MAXIMUM PEAK FLOW			889	Oct 21	c1300	Oct 20 1998
MAXIMUM PEAK STAGE			33.24	Oct 21	34.07	Oct 20 1998
INSTANTANEOUS LOW FLOW			10	Mar 12	7.8	Mar 9 1999
ANNUAL RUNOFF (AC-FT)	101200		91830		95990	
ANNUAL RUNOFF (CFSM)	5.38		4.88		5.10	
ANNUAL RUNOFF (INCHES)	73.03		66.24		69.24	
10 PERCENT EXCEEDS	313		241		305	
50 PERCENT EXCEEDS	92		110		88	
90 PERCENT EXCEEDS	15		18		18	

See period of record; partial years used in monthly statistics

a Mar. 20-24 and Apr. 5-18

b Mar. 11-13, 15-17 and 20

c From rating curve extended above 600 cfs on basis of slope-area measurement at gage height 34.07 ft.

e Estimated

15056030 KAKUHAN CREEK NEAR HAINES

LOCATION.--Lat 59°00'19", long 135°11'02", in SW¹/₄ NE¹/₄ SE¹/₄ sec. 14, T. 33 S., R. 61 E. (Skagway A-1 quad), Hydrologic Unit 19010301, in Tongass National Forest, about 500 ft upstream from mouth on east side of Lynn Canal, 19 mi southeast of Haines, and 60 mi northwest of Juneau.

DRAINAGE AREA.--1.53 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 45 ft above sea level, from topographic map. May 1997 to May 15, 2003, at a site 300 ft down stream at a different datum.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	0800	176	a8.63	Jul. 21	0130	67	11.43
Nov. 26	1600	253	a8.79	Aug. 15	unknown	*313	*12.49
May 24	0400	64	11.41	Sep. 04	1545	92	11.62
Jul. 13	1700	67	11.43	Sep. 20	2230	51	11.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	6.3	8.7	2.6	1.8	0.91	0.80	e14	19	37	e19	e34
2	6.3	6.4	7.5	2.9	1.8	0.95	e0.78	e11	15	40	e25	e40
3	5.7	6.2	e7.0	2.5	1.9	0.94	e0.77	e7.8	15	45	e18	43
4	6.1	8.8	e6.6	5.8	1.9	0.96	e0.76	e5.9	16	39	e15	36
5	5.5	8.7	e6.3	5.2	1.8	0.90	e0.78	e4.4	23	36	e13	e26
6	9.9	8.6	7.3	7.0	1.7	e0.85	e0.80	e3.3	34	33	e14	29
7	9.6	5.6	9.2	5.1	1.6	e0.80	e0.86	e2.8	25	36	e15	31
8	8.4	4.4	12	3.3	1.6	e0.75	e0.89	e2.8	24	39	e16	33
9	7.1	3.5	13	2.8	1.5	e0.72	0.94	e2.9	27	44	e14	28
10	8.5	3.4	9.9	2.7	1.5	e0.68	1.0	e3.0	30	46	e12	25
11	9.1	3.5	8.7	2.7	1.5	e0.65	1.2	e3.6	34	46	e11	27
12	11	5.2	9.3	2.5	1.4	e0.63	1.4	e4.5	36	48	e10	24
13	9.5	4.2	8.0	2.3	1.3	e0.64	1.6	e5.8	40	49	e12	41
14	9.2	4.5	6.5	2.2	1.3	e0.66	1.7	e6.8	31	46	e30	27
15	12	4.3	6.3	2.2	1.3	e0.68	1.8	e5.2	26	42	e90	20
16	21	4.6	5.9	2.3	1.3	e0.70	1.4	4.4	25	36	56	15
17	19	4.0	5.3	3.3	e1.2	0.75	1.3	4.3	35	33	33	12
18	16	3.9	5.1	4.6	e1.2	0.72	1.3	5.6	38	35	22	10
19	37	3.4	4.4	4.2	e1.1	0.71	1.5	8.7	30	40	23	8.4
20	73	3.7	3.6	3.4	e1.0	0.72	2.2	9.6	28	47	24	13
21	111	3.5	e3.3	2.5	e0.96	0.74	2.8	11	25	51	22	15
22	44	3.1	e3.1	e2.3	e0.93	0.73	3.8	14	24	40	e19	8.0
23	27	3.0	e3.0	e2.1	e0.93	0.72	e3.5	26	22	34	e16	7.8
24	17	3.0	3.8	e1.9	e0.94	0.73	e3.7	43	22	35	e13	15
25	15	4.7	3.5	e1.7	e0.94	0.71	e4.5	29	31	32	e11	26
26	18	60	3.1	e1.7	0.93	0.73	e11	21	34	32	8.8	17
27	14	29	e2.7	e1.8	0.93	0.74	e30	18	26	40	9.3	31
28	10	12	e2.5	e1.8	0.87	0.80	e21	17	28	38	10	33
29	8.4	12	e2.3	1.9	---	0.89	e15	19	26	e69	13	30
30	7.1	17	e2.3	2.0	---	0.99	e15	19	28	e50	25	28
31	6.5	---	2.5	1.8	---	0.83	---	22	---	e17	23	---
TOTAL	570.4	250.5	182.7	91.1	37.13	23.93	134.08	355.4	817	1255	642.1	733.2
MEAN	18.4	8.35	5.89	2.94	1.33	0.77	4.47	11.5	27.2	40.5	20.7	24.4
MAX	111	60	13	7.0	1.9	0.99	30	43	40	69	90	43
MIN	5.5	3.0	2.3	1.7	0.87	0.63	0.76	2.8	15	17	8.8	7.8
AC-FT	1130	497	362	181	74	47	266	705	1620	2490	1270	1450
CFSM	12.0	5.46	3.85	1.92	0.87	0.50	2.92	7.49	17.8	26.5	13.5	16.0
IN.	13.87	6.09	4.44	2.21	0.90	0.58	3.26	8.64	19.86	30.51	15.61	17.83

a At site 300 ft. downstream, at different datum
e Estimated

15056030 KAKUHAN CREEK NEAR HAINES—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY) #

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.9	3.89	3.34	1.54	1.02	1.02	2.43	8.16	23.0	31.9	28.2	18.5
MAX	18.4	8.35	5.89	2.94	1.33	1.76	4.47	11.5	27.2	40.5	43.9	24.4
(WY)	2003	2003	2003	2003	2003	1999	2003	2003	2003	2003	2002	2003
MIN	4.70	1.72	0.89	0.88	0.58	0.50	0.70	4.87	20.9	22.9	20.7	11.7
(WY)	1998	2002	2002	2002	2002	2002	2002	2001	2000	2002	2003	2002

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1997 - 2003#

ANNUAL TOTAL	4512.79	5092.54	
ANNUAL MEAN	12.4	14.0	11.3
HIGHEST ANNUAL MEAN			14.0
LOWEST ANNUAL MEAN			9.66
HIGHEST DAILY MEAN	155	Aug 13	155
LOWEST DAILY MEAN	0.40	Mar 22	0.36
ANNUAL SEVEN-DAY MINIMUM	0.42	Mar 18	0.41
MAXIMUM PEAK FLOW		b313	c415
MAXIMUM PEAK STAGE		12.49	a8.77
ANNUAL RUNOFF (AC-FT)	8950	10100	8180
ANNUAL RUNOFF (CFSM)	8.08	9.12	7.38
ANNUAL RUNOFF (INCHES)	109.72	123.82	100.26
10 PERCENT EXCEEDS	28	36	31
50 PERCENT EXCEEDS	6.5	7.8	4.3
90 PERCENT EXCEEDS	0.51	0.92	0.75

See period of Record;partial years used in monthly statistics

a At site 300 ft. downstream, at different datum

b From a rating curve extended above 33 ft³/sc From rating curve extended above 51 ft³/s

15056030 KAKUHAN CREEK NEAR HAINES—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1998 to current year.

INSTRUMENTATION.-- Electronic water-temperature recorder set for 15-minute recording interval.

REMARKS.-- Records represent water temperature at the sensor within 0.5°C. Sensor was moved upstream 200ft on May 15, 2003.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 15.0°C, August 1-2, 1999; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.5°C, July 10 and July 12; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.0	6.5	7.0	4.0	3.5	3.5	4.5	3.0	4.0	0.5	0.0	0.5
2	7.5	5.5	6.5	4.0	3.0	3.5	3.0	2.0	2.5	0.5	0.5	0.5
3	7.5	5.5	6.5	4.0	3.5	3.5	2.5	1.5	2.0	0.5	0.5	0.5
4	6.5	5.5	6.5	4.5	3.5	4.0	1.5	0.5	1.0	2.0	0.5	1.0
5	5.5	4.5	5.0	5.5	4.5	5.0	0.5	0.5	0.5	2.5	1.0	1.5
6	8.5	5.0	7.0	7.0	5.5	6.5	1.5	0.5	1.0	3.0	2.5	3.0
7	8.5	7.0	8.0	6.5	5.0	5.5	4.0	1.5	2.5	3.0	1.5	2.5
8	7.0	5.5	6.5	5.0	3.5	4.0	5.0	4.0	4.0	1.5	1.0	1.5
9	5.5	3.0	4.5	3.5	2.5	3.0	5.0	4.5	4.5	1.0	0.5	0.5
10	4.0	2.0	3.0	3.0	2.5	2.5	5.0	4.5	4.5	0.5	0.0	0.5
11	5.0	3.5	4.5	4.0	2.5	3.5	4.5	3.5	4.0	0.5	0.0	0.5
12	6.0	5.0	5.5	4.5	3.5	4.0	4.0	2.5	3.5	1.0	0.5	1.0
13	6.5	5.5	6.0	5.0	3.5	4.5	3.0	2.0	2.5	1.0	0.5	1.0
14	7.0	6.0	6.5	5.5	5.0	5.5	2.0	1.5	1.5	0.5	0.0	0.0
15	8.5	6.5	7.5	5.0	4.0	5.0	2.0	1.5	1.5	0.5	0.0	0.5
16	8.5	8.0	8.5	4.0	3.5	3.5	2.5	2.0	2.0	1.5	0.5	1.0
17	8.5	7.5	8.0	4.0	3.0	3.5	2.5	2.0	2.0	2.5	1.5	2.0
18	8.0	6.0	7.0	4.5	4.0	4.0	2.5	2.0	2.0	3.0	2.5	3.0
19	8.5	7.5	8.0	4.0	2.5	3.5	2.0	0.5	1.5	3.5	3.0	3.0
20	8.0	5.5	7.0	4.5	4.0	4.5	0.5	0.5	0.5	3.5	1.0	3.0
21	6.5	5.5	6.0	4.5	4.0	4.0	0.5	0.5	0.5	1.0	0.0	0.5
22	7.5	6.5	7.0	4.5	3.0	4.0	0.5	0.0	0.5	0.5	0.0	0.0
23	9.0	6.0	7.0	3.0	2.5	2.5	0.5	0.0	0.5	0.5	0.0	0.5
24	7.5	5.5	6.5	4.5	2.5	3.5	0.5	0.5	0.5	0.5	0.0	0.0
25	7.0	6.5	6.5	5.0	4.5	5.0	0.5	0.5	0.5	0.5	0.0	0.5
26	7.0	6.0	6.5	6.5	3.5	5.5	0.5	0.5	0.5	0.5	0.0	0.0
27	7.0	6.0	6.5	6.0	5.0	5.0	0.5	0.0	0.5	0.5	0.0	0.0
28	6.5	4.5	5.5	5.0	4.5	4.5	0.5	0.0	0.5	0.5	0.0	0.0
29	5.5	3.5	4.5	6.0	3.5	5.0	0.5	0.0	0.5	0.5	0.5	0.5
30	4.0	3.0	3.5	5.5	4.5	5.5	0.5	0.5	0.5	1.0	0.5	1.0
31	3.5	3.0	3.0	---	---	---	0.5	0.0	0.5	1.0	0.5	1.0
MONTH	9.0	2.0	6.2	7.0	2.5	4.2	5.0	0.0	1.7	3.5	0.0	1.0

15056030 KAKUHAN CREEK NEAR HAINES—Continued

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	1.5	0.5	1.0	1.0	0.5	1.0	0.5	0.5	0.5	6.5	4.0	5.0
2	1.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	6.0	3.0	4.0
3	2.0	1.0	1.5	1.5	1.0	1.5	0.5	0.5	0.5	5.0	3.0	3.5
4	2.0	2.0	2.0	1.5	1.0	1.5	0.5	0.5	0.5	4.5	1.5	3.0
5	2.0	1.5	2.0	1.0	0.0	0.5	0.5	0.5	0.5	5.0	2.5	3.5
6	2.0	1.5	2.0	0.5	0.0	0.5	0.5	0.5	0.5	5.5	3.0	4.0
7	2.0	1.0	1.5	0.5	0.5	0.5	1.0	0.5	0.5	6.5	3.0	4.5
8	1.5	1.0	1.5	0.5	0.5	0.5	1.5	1.0	1.0	8.0	4.0	5.5
9	2.0	1.5	1.5	0.5	0.0	0.5	1.5	1.0	1.5	8.5	4.5	6.0
10	2.5	1.5	2.0	0.5	0.5	0.5	2.5	1.5	2.0	6.5	5.0	6.0
11	3.0	2.5	2.5	0.5	0.5	0.5	3.0	2.0	2.5	6.5	5.5	6.0
12	2.5	2.0	2.0	0.5	0.5	0.5	3.5	2.0	2.5	6.0	4.5	5.5
13	2.0	1.0	1.5	0.5	0.5	0.5	4.0	2.0	2.5	---	---	---
14	1.5	1.0	1.0	0.5	0.5	0.5	4.0	2.0	3.0	---	---	---
15	1.0	0.5	1.0	0.5	0.5	0.5	3.5	2.5	3.0	5.5	3.0	4.0
16	0.5	0.0	0.5	0.5	0.5	0.5	2.5	2.5	2.5	6.5	3.0	4.5
17	0.5	0.0	0.5	0.5	0.5	0.5	4.0	2.0	3.0	7.0	3.0	4.5
18	0.5	0.0	0.5	0.5	0.5	0.5	3.5	2.5	3.0	7.5	4.0	5.5
19	0.5	0.0	0.5	0.5	0.5	0.5	5.0	2.5	3.5	7.5	4.0	5.5
20	0.5	0.0	0.5	1.0	0.5	0.5	5.5	3.0	4.0	7.5	3.5	5.5
21	0.5	0.5	0.5	1.0	0.5	1.0	5.5	3.5	4.5	8.5	4.0	6.0
22	0.5	0.0	0.5	1.0	1.0	1.0	6.0	4.0	4.5	8.0	5.5	6.5
23	0.5	0.0	0.5	1.0	0.5	1.0	7.5	4.0	5.0	6.0	5.0	5.5
24	0.5	0.0	0.5	1.5	1.0	1.0	8.5	4.0	5.5	6.5	5.0	5.5
25	0.5	0.0	0.5	1.0	0.5	1.0	9.0	5.0	6.5	6.0	4.5	5.5
26	0.5	0.5	0.5	1.0	0.5	1.0	8.5	4.5	6.0	7.0	5.0	6.0
27	0.5	0.5	0.5	1.5	1.0	1.5	7.5	4.5	6.0	8.0	4.5	6.0
28	1.0	0.5	0.5	1.5	1.5	1.5	8.0	4.0	5.5	8.5	5.0	6.5
29	---	---	---	2.0	1.5	1.5	8.0	4.5	5.5	7.5	6.0	7.0
30	---	---	---	2.5	1.5	2.0	8.5	5.0	6.0	9.5	6.0	7.0
31	---	---	---	1.5	0.5	1.0	---	---	---	8.5	6.0	7.0
MONTH	3.0	0.0	1.1	2.5	0.0	0.9	9.0	0.5	3.1	---	---	--
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.0	5.5	6.0	13.5	8.5	11.0	12.5	8.5	10.0	8.0	7.5	7.5
2	7.5	5.5	6.5	10.0	8.0	9.0	10.5	8.0	9.0	9.0	8.0	8.5
3	9.0	5.0	6.5	9.0	7.5	8.0	10.5	8.0	9.0	9.0	7.5	8.0
4	9.0	5.5	7.0	10.0	7.0	8.0	9.0	8.0	8.5	10.0	7.0	8.5
5	10.0	7.0	8.0	9.5	8.0	8.5	12.0	7.5	9.5	11.0	6.0	8.0
6	10.0	6.5	8.0	11.5	7.0	9.0	13.0	8.0	10.0	10.0	8.0	9.0
7	9.0	6.0	7.5	14.0	8.0	10.0	14.0	8.5	10.5	10.0	8.0	8.5
8	10.5	5.0	7.5	14.0	9.5	11.0	13.5	9.0	10.5	9.0	7.5	8.0
9	11.5	6.0	8.5	14.0	9.0	11.5	11.5	7.5	9.0	9.0	7.0	8.0
10	12.0	7.0	9.0	14.5	9.0	11.5	12.0	6.5	9.0	9.0	7.0	8.0
11	10.5	7.0	8.5	11.5	10.5	11.0	13.5	7.5	10.0	9.0	7.0	8.0
12	11.0	6.5	8.5	14.5	10.0	11.5	10.5	9.0	9.5	9.0	7.5	8.0
13	9.5	7.0	7.5	14.0	9.0	11.5	11.5	9.0	10.0	8.0	6.0	7.0
14	10.5	6.5	8.0	11.0	9.5	10.0	10.5	9.0	9.5	6.0	4.0	5.0
15	8.5	6.5	7.5	10.5	9.0	9.5	10.5	8.5	9.5	5.0	3.0	4.0
16	10.0	6.5	8.0	9.5	8.5	9.0	8.5	8.0	8.5	5.5	2.5	3.5
17	9.5	7.5	8.5	10.5	9.0	9.5	10.0	7.5	8.5	5.5	3.0	4.0
18	8.0	6.0	7.0	13.0	8.5	10.5	10.0	7.0	8.0	5.0	4.0	4.5
19	7.0	6.0	6.5	14.0	8.5	11.0	9.0	7.0	8.0	6.0	4.0	4.5
20	9.0	6.0	7.0	12.0	9.0	10.5	9.0	7.0	7.5	7.5	5.5	6.5
21	10.5	7.0	8.0	9.5	7.5	8.5	9.5	6.5	7.5	6.5	5.0	5.5
22	10.5	7.0	8.5	9.5	7.5	8.0	10.0	6.0	7.5	6.5	4.5	5.5
23	9.0	7.0	8.0	12.0	7.5	9.5	10.5	7.5	8.5	6.0	4.5	5.5
24	8.5	7.5	8.0	10.0	9.0	9.5	10.5	8.0	9.0	6.5	3.0	4.5
25	8.5	7.5	8.0	9.5	8.5	9.0	10.5	8.0	9.0	8.5	6.5	7.0
26	7.5	6.5	7.0	9.5	8.5	8.5	9.5	7.0	8.5	7.5	6.5	7.0
27	8.5	6.0	7.0	9.0	8.0	8.5	9.5	8.5	9.0	7.0	6.0	6.5
28	9.5	6.5	7.5	9.5	8.0	8.5	12.0	8.0	9.5	12.0	7.0	9.0
29	11.5	6.5	9.0	10.0	8.0	9.0	10.5	8.5	9.5	11.0	8.5	9.5
30	13.0	8.5	10.0	10.0	7.5	8.5	9.5	7.5	9.0	10.0	8.5	9.0
31	---	---	---	11.0	7.5	9.0	8.0	7.5	8.0	---	---	---
MONTH	13.0	5.0	7.8	14.5	7.0	9.6	14.0	6.0	9.0	12.0	2.5	6.9

15057580 KAHTAHEENA RIVER ABOVE UPPER FALLS NEAR GUSTAVUS

LOCATION.--Lat 58°26'37", long 135°36'01", in SW¹/₄ SE¹/₄ SE¹/₄ sec. 36, T. 39 S., R. 59 E. (Juneau B-5 quad), Hydrologic Unit 19010302, in Glacier Bay National Park and Preserve, 1.7 miles above the mouth at Icy Passage, 4.5 mi east of Gustavus, and 44 mi west of Juneau.

DRAINAGE AREA.--10.1 mi²

PERIOD OF RECORD.--August 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 560 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those above 180 ft³/s, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	40	165	20	28	e49	e18	71	49	40	44	135
2	44	35	93	26	29	e33	e14	58	45	35	39	244
3	39	31	63	20	43	e40	e11	48	37	63	32	154
4	37	29	48	165	46	e48	e8.2	40	33	52	28	92
5	42	27	39	132	35	e28	e8.0	35	32	37	27	63
6	102	37	34	168	28	e18	e10	32	46	33	23	49
7	235	34	35	85	25	e10	e12	30	36	30	21	46
8	211	26	91	52	22	e9.0	e15	30	32	27	19	136
9	118	24	155	e40	21	e8.3	20	32	29	24	17	81
10	74	23	90	e34	30	e7.6	20	34	27	22	16	60
11	58	25	73	e30	37	e7.3	20	34	26	20	15	67
12	68	24	109	e27	28	e7.0	19	41	24	19	15	79
13	66	28	68	e25	27	e7.2	20	41	25	17	17	158
14	53	30	48	e23	23	e7.4	21	49	23	17	19	115
15	51	32	45	e22	20	e7.5	23	43	21	16	21	80
16	273	27	41	23	19	e7.7	23	34	20	16	21	56
17	282	46	35	128	17	e8.0	26	30	28	15	27	44
18	155	49	32	132	16	e8.5	24	28	79	14	24	43
19	146	95	28	122	15	e9.5	26	27	73	13	22	46
20	278	61	e24	e80	e14	e11.5	31	28	67	13	36	75
21	549	55	e21	e55	e13	e13	28	29	55	29	36	113
22	321	41	e18	e37	e13	e14	26	33	49	35	29	72
23	138	35	e26	e32	e12	e12	28	99	46	35	27	60
24	82	41	34	e28	e12	e10	34	210	44	25	26	215
25	58	80	26	e24	e13	e9.7	68	131	55	23	30	169
26	86	802	22	e22	e14	e9.6	112	111	141	23	25	137
27	119	463	20	e20	e15	e9.5	128	75	92	27	30	294
28	95	274	19	e19	e20	e19	109	57	78	31	28	154
29	68	173	e17	27	---	e47	87	48	68	141	25	89
30	54	283	e16	60	---	e48	78	43	49	69	66	62
31	45	---	17	39	---	e27	---	49	---	50	59	---
TOTAL	3997	2970	1552	1717	635	551.3	1067.2	1650	1429	1011	864	3188
MEAN	129	99.0	50.1	55.4	22.7	17.8	35.6	53.2	47.6	32.6	27.9	106
MAX	549	802	165	168	46	49	128	210	141	141	66	294
MIN	37	23	16	19	12	7.0	8.0	27	20	13	15	43
MED	82	36	35	32	21	10	23	41	45	27	26	80
AC-FT	7930	5890	3080	3410	1260	1090	2120	3270	2830	2010	1710	6320
CFSM	12.8	9.80	4.96	5.48	2.25	1.76	3.52	5.27	4.72	3.23	2.76	10.5
IN.	14.72	10.94	5.72	6.32	2.34	2.03	3.93	6.08	5.26	3.72	3.18	11.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)#

	MEAN	98.6	56.6	58.8	34.8	19.0	17.3	28.2	77.2	88.7	63.0	61.9	99.5
MAX	129	99.0	128	55.4	23.4	22.7	37.8	107	114	79.1	131	128	
(WY)	2003	2003	2000	2003	2001	2000	2000	2002	2000	2000	2002	1999	
MIN	67.7	22.8	20.6	18.7	11.0	8.67	15.2	53.2	47.6	32.6	26.7	77.5	
(WY)	2002	2002	2002	2000	2000	2002	2002	2003	2003	2003	2001	2002	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1999 - 2003#

ANNUAL TOTAL	25431.2	20631.5	
ANNUAL MEAN	69.7	56.5	58.3
HIGHEST ANNUAL MEAN			70.3
LOWEST ANNUAL MEAN			50.5
HIGHEST DAILY MEAN	802	Nov 26	1110
LOWEST DAILY MEAN	5.5	Mar 24	5.0
ANNUAL SEVEN-DAY MINIMUM	5.8	Mar 18	5.8
MAXIMUM PEAK FLOW		a1510	Nov 26
MAXIMUM PEAK STAGE		30.41	Nov 26
INSTANTANEOUS LOW FLOW		b	30.52
ANNUAL RUNOFF (AC-FT)	50440	40920	5.0
ANNUAL RUNOFF (CFSM)	6.90	5.60	5.77
ANNUAL RUNOFF (INCHES)	93.67	75.99	78.37
10 PERCENT EXCEEDS	166	128	128
50 PERCENT EXCEEDS	40	34	36
90 PERCENT EXCEEDS	8.1	14	11

See period of Record, partial years used in monthly statistics
a From rating curve extended above 130 cfs
b Undetermined, See lowest daily value
e Estimated

15070000 SWAN LAKE NEAR KETCHIKAN

LOCATION.--Lat 55°36'54", long 131°20'14", in SW¹/₄ NE¹/₄ sec. 20, T. 72 S., R. 92 E. (Ketchikan C-4 quad), Hydrologic Unit 19010102, Ketchikan Gateway Borough, on Revillagigedo Island, in Tongass National Forest, 0.7 mi upstream from mouth at Carroll Inlet, and 22 mi northeast of Ketchikan.

DRAINAGE AREA.--36.5 mi².

PERIOD OF RECORD.--September 1916 to January 1926, September 1927 to December 1933 and October 1946 to September 1959 (discharge). Published as "Swan Lake Outlet at Carroll Inlet" prior to 1946 and as "Falls Creek near Ketchikan" October 1946 to September 1959. Monthly discharges only for some periods, published in WSP 1372. October 1984 to current year (month end reservoir contents and monthly discharges).

REVISED RECORDS.--WSP 1372: Drainage area, 1918.

GAGE.--Non-recording lake-level staff gage. Datum of lake-level staff gage is at sea level. Totalizing MWH meters on the two turbines in Swan Lake Powerhouse. September 1916 to January 1926 and September 1927 to December 1933 at site 1,500 ft downstream at different datum. October 1946 to September 1959, recording gage at site 2,500 ft downstream, elevation of gage was 130 ft above sea level, from topographic map.

REMARKS.--Reservoir is formed by a concrete arch dam located at the outlet of Swan Lake; construction began in August 1980 and was completed in March 1983. Total and usable capacities below spillway crest of 330 ft are 126,200 and 82,800 acre-ft, respectively. Reservoir is used for power. Discharge released through turbines is computed from relation between discharge, head, and power generation; release flow enters directly into Carroll Inlet and is not returned to stream. Spill is computed from a theoretical relation between discharge and stage above crest of the spillway. Turbine and spillway ratings and reservoir capacity table furnished by the City of Ketchikan in 1985.

COOPERATION.--Reservoir elevations and release flow provided by the City of Ketchikan.

AVERAGE DISCHARGE.--46 years (water years 1917-25, 1928-33, 1947-59, 1985-2003), 445 ft³/s, 165.6 in/yr, 322,402 acre-ft/yr. Mean discharge for water years 1985-2002 adjusted for change in contents of Swan Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 133,256 acre-ft, January 7, 2003, elevation, 334.9 ft; minimum contents observed, 51,770 acre-ft, September 22, 1993, elevation, 278.4 ft. Maximum discharge, about 5,500 ft³/s, November 1, 1917; minimum daily discharge, 19 ft³/s, February 21 to 25, 1925. Maximum daily discharge since construction of dam, 3,680 ft³/s, November 30, 1988; no flow released several days most years.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 133,256 acre-ft, January 7, 2003, elevation, 334.90 ft; minimum contents observed, 91,594 acre-ft, August 30, 2003, elevation, 306.1 ft. Maximum release from reservoir (mean daily, not adjusted for changes in storage), 2,659 ft³/s, January 6, 2003; minimum release, 240.0 ft³/s, June 9, 2003.

MONTH END RESERVOIR ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS, IN ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	ELEVATION	CONTENTS	CHANGE IN CONTENTS
Sep 30	330.2	126,460	
Oct 31	324.4	188,070	-8,390
Nov 30	330.0	126,170	+8,100
Dec 31	329.1	124,860	-1,310
Jan 31	330.1	126,310	+1,450
Feb 28	318.3	109,240	-17,070
Mar 31	313.7	102,590	-6,650
Apr 30	311.1	98,820	-3,760
May 31	319.0	110,260	+11,440
Jun 30	323.1	116,180	+5,920
Jul 31	315.2	104,760	-11,430
Aug 31	306.7	92,460	-12,300
Sep 30	326.3	120,810	+28,350
		CAL YR 2002	+14,310
		WTR YR 2003	-5,650

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
MEAN VALUES

MONTH	RELEASE	SPILL	TOTAL	ADJUSTED
OCT	417	19	436	300
NOV	424	14	438	574
DEC	435	84	519	498
JAN	426	243	669	693
FEB	434	0	434	127
MAR	435	0	435	327
APR	378	0	378	315
MAY	361	0	361	547
JUN	345	0	345	e300
JUL	59	0	59	e18
AUG	413	0	413	213
SEP	365	0	365	842
CAL YR 2002	318	105	423	443
WTR YR 2003	64	340	404	397

e Estimated

15072000 FISH CREEK NEAR KETCHIKAN

LOCATION.--Lat 55°23'31", long 131°11'38", in SW¹/₄SW¹/₄ sec. 6, T. 75 S., R. 94 E. (Ketchikan B-4 quad.), Gateway Borough, Hydrologic Unit 19010102, on Revillagigedo Island, in Tongass National Forest, on right bank 250 ft upstream from outlet of Low Lake, 750 ft upstream from mouth at Thorne Arm, and 18 mi east of Ketchikan.

DRAINAGE AREA.--32.1 mi², excludes that of Granite Lake drainage basin.

PERIOD OF RECORD.--May 1915 to October 1936, October 1938 to current year. Prior to October 1945, monthly discharge only. Records of daily discharge prior to October 1945 are available in computer files of the Geological Survey. Prior to January 1921, published as "near Sea Level, Revillagigedo Island."

REVISED RECORDS.--WSP 1372: 1918.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above sea level, by barometer. Prior to October 1935, at site 150 ft downstream at different datum. October 1935 to October 3, 1975, at prior site and present datum.

REMARKS.--No estimated daily discharges. Records fair. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s and/or maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 7	0330	3200	4.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	131	293	567	449	145	765	307	459	273	104	522
2	474	122	254	801	428	173	594	299	460	258	99	1140
3	429	115	222	941	379	167	469	276	440	279	97	1300
4	358	109	198	1470	318	162	378	248	384	450	93	897
5	336	109	178	1890	274	176	312	222	335	443	88	666
6	550	158	163	2800	237	172	287	201	305	376	84	626
7	572	155	185	2920	211	154	331	184	288	315	79	617
8	508	152	296	1910	189	136	298	170	273	279	74	595
9	473	145	559	1220	171	121	357	162	256	251	69	527
10	447	138	688	809	156	112	321	160	236	220	64	640
11	382	144	774	598	145	103	283	161	220	198	60	793
12	331	267	1130	470	134	100	267	176	218	177	56	715
13	405	517	944	376	125	238	253	240	226	174	54	714
14	386	781	815	310	117	313	247	313	242	165	51	800
15	350	916	773	275	118	323	248	332	339	152	61	773
16	308	851	669	261	122	327	261	315	447	139	89	686
17	275	786	606	302	149	327	324	285	451	136	123	550
18	242	711	536	321	182	375	338	255	480	133	353	944
19	226	760	429	344	245	335	374	231	486	130	350	1430
20	275	995	352	427	288	348	338	215	467	135	335	1240
21	267	1690	297	404	270	396	324	215	411	166	485	1210
22	242	1270	288	344	237	426	318	298	348	187	464	969
23	218	853	527	292	210	353	304	561	298	185	406	726
24	197	627	655	288	187	301	291	1130	258	174	356	903
25	179	494	642	320	174	279	287	1050	244	159	302	1110
26	165	506	662	635	159	259	298	1090	293	145	257	1010
27	174	498	531	804	151	232	311	886	286	134	220	786
28	172	469	442	739	147	246	318	721	286	125	194	608
29	161	407	367	715	---	411	311	700	293	118	171	470
30	150	342	324	644	---	666	308	605	280	110	190	370
31	140	---	423	545	---	919	---	515	---	103	401	---
TOTAL	9730	15218	15222	24742	5972	8795	10115	12523	10009	6289	5829	24337
MEAN	314	507	491	798	213	284	337	404	334	203	188	811
MAX	572	1690	1130	2920	449	919	765	1130	486	450	485	1430
MIN	140	109	163	261	117	100	247	160	218	103	51	370
MED	308	482	442	567	185	259	312	285	295	174	104	750
AC-FT	19300	30180	30190	49080	11850	17440	20060	24840	19850	12470	11560	48270
CFSM	9.78	15.8	15.3	24.9	6.64	8.84	10.5	12.6	10.4	6.32	5.86	25.3
IN.	11.28	17.64	17.64	28.67	6.92	10.19	11.72	14.51	11.60	7.29	6.76	28.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2003, BY WATER YEAR (WY) #

	694	567	421	356	316	262	353	503	471	334	333	449
MEAN	694	567	421	356	316	262	353	503	471	334	333	449
MAX	1326	1767	1081	975	944	673	655	867	764	718	767	966
(WY)	1975	1918	1931	1926	1993	1986	1949	1999	1951	1976	1972	2001
MIN	237	89.2	83.4	37.9	37.8	71.4	130	182	142	65.3	50.7	80.0
(WY)	1926	1974	1984	1950	1969	1969	1967	1998	1998	1958	1965	1965

See period of record

15072000 FISH CREEK NEAR KETCHIKAN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1915 - 2003#	
ANNUAL TOTAL	156103		148781			
ANNUAL MEAN	428		408		423	
HIGHEST ANNUAL MEAN					556	1992
LOWEST ANNUAL MEAN					302	1978
HIGHEST DAILY MEAN	2260	Aug 28	2920	Jan 7	4410	Oct 15 1961
LOWEST DAILY MEAN	47	Mar 24	51	Aug 14	20	Sep 9 1928
ANNUAL SEVEN-DAY MINIMUM	53	Mar 18	59	Aug 9	23	Sep 5 1928
MAXIMUM PEAK FLOW			3200	Jan 7	a5400	Oct 15 1961
MAXIMUM PEAK STAGE			4.11	Jan 7	b5.85	Oct 15 1961
INSTANTANEOUS LOW FLOW			48	Aug 15	20	Sep 9 1928
ANNUAL RUNOFF (AC-FT)	309600		295100		306100	
ANNUAL RUNOFF (CFSM)	13.3		12.7		13.2	
ANNUAL RUNOFF (INCHES)	180.90		172.42		178.86	
10 PERCENT EXCEEDS	854		796		863	
50 PERCENT EXCEEDS	330		308		320	
90 PERCENT EXCEEDS	116		134		99	

See Period of Record

a From rating curve extended above 3,600 ft³/s

b At site then in use

15081495 NORTH FORK STANEY CREEK NEAR KLAWOCK

LOCATION.--Lat 55°43'58", long 132°58'02", in NE¹/₄ NE¹/₄ sec. 10, T. 71 S., R. 81 E. (Craig C-4 quad), Hydrologic Unit 19010103, on Prince of Wales Island, in Tongass National Forest, on left bank, immediately upstream from bridge on Forest Road 2050, 6 mi upstream from Middle Fork Stanley Creek and 12.4 mi north of Klawock.

DRAINAGE AREA.--3.07 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1990 to September 2003 (discontinued).

REVISED RECORDS.--WDR AK-92-1: 1991. WDR AK-00-1: 1990(M), 1991-92(P), 1993, 1994-99(P).

GAGE.--Water-stage recorder. Elevation of gage is 600 ft above sea level, from topographic map.

REMARKS.--Records fair except for those above 200 ft³/s which are poor and estimated daily discharges which are poor.

EXTREMES FOR CURRENT YEAR.-- Peak discharges greater than base discharge of 350 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 6	0100	357	4.41	Sept 1	1915	362	4.43
Nov 20	1900	380	4.49	Sept 13	1615	*440	*4.69
Jan 6	0115	416	4.61				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	3.0	4.3	47	4.9	15	6.7	4.2	6.7	2.8	1.5	150
2	16	2.8	3.6	52	22	13	4.3	3.3	16	2.5	1.6	122
3	7.2	2.6	3.1	40	14	8.5	3.0	2.5	5.7	16	1.6	47
4	5.7	2.7	2.7	71	6.8	11	2.6	2.0	3.5	13	1.4	13
5	39	8.6	2.6	116	4.7	9.2	2.3	1.7	2.7	5.9	1.2	19
6	86	24	2.7	91	3.5	3.5	4.0	1.6	2.2	3.9	1.2	29
7	17	8.1	9.6	38	2.8	2.5	12	1.5	1.9	3.4	1.1	22
8	20	4.3	25	9.4	2.5	e1.8	12	1.7	1.7	3.0	0.96	9.5
9	22	3.2	29	5.3	2.3	e1.3	9.0	2.0	1.5	2.6	0.91	5.9
10	9.6	2.7	23	4.1	2.2	e1.1	9.2	2.3	1.3	2.1	0.82	78
11	6.1	2.7	26	3.4	2.1	e1.0	10	2.2	1.2	1.9	0.81	41
12	25	30	65	3.0	1.9	e1.1	8.1	39	1.5	1.7	0.81	16
13	22	108	21	2.6	2.1	e1.5	6.5	25	1.8	2.0	0.81	204
14	17	30	24	2.3	2.1	e3.5	6.5	18	1.6	1.8	0.86	60
15	13	24	77	2.7	2.4	e8.0	8.1	11	4.2	1.7	4.4	18
16	7.7	15	17	4.5	2.6	e6.5	6.4	9.7	3.4	4.5	9.2	9.3
17	5.5	17	13	29	11	e7.3	7.0	5.9	48	14	11	6.9
18	4.4	12	10	9.4	15	e9.0	8.0	4.6	19	5.3	8.3	90
19	7.6	42	6.3	25	45	e6.5	13	3.9	12	3.0	3.3	24
20	15	96	4.5	14	11	e10	11	3.0	8.1	4.2	3.8	96
21	7.1	28	3.5	5.7	5.1	e8.0	8.2	5.1	4.6	5.1	5.6	103
22	11	9.5	6.0	3.4	3.3	e6.5	6.2	17	3.4	3.8	5.0	24
23	6.9	5.8	125	2.9	2.6	e5.0	8.7	37	2.9	4.1	26	12
24	4.7	4.3	39	10	2.4	4.5	8.5	24	2.6	2.7	6.2	122
25	3.8	16	35	28	2.4	3.9	12	24	6.9	2.1	3.2	121
26	12	67	14	92	2.5	5.4	8.1	15	7.4	1.8	2.3	22
27	27	43	7.5	36	4.6	6.6	9.2	10	5.2	1.7	1.9	14
28	8.1	18	5.5	12	7.8	15	6.6	11	11	1.7	1.7	8.8
29	5.0	7.9	4.3	20	---	64	5.7	9.9	4.7	1.6	1.6	6.0
30	3.8	5.4	4.3	24	---	115	5.4	5.0	3.0	1.4	45	4.6
31	3.3	---	62	8.7	---	14	---	5.5	---	1.3	46	---
TOTAL	462.5	643.6	675.5	812.4	191.6	369.2	228.3	308.6	195.7	122.6	200.08	1498.0
MEAN	14.9	21.5	21.8	26.2	6.84	11.9	7.61	9.95	6.52	3.95	6.45	49.9
MAX	86	108	125	116	45	115	13	39	48	16	46	204
MIN	3.3	2.6	2.6	2.3	1.9	1.0	2.3	1.5	1.2	1.3	0.81	4.6
AC-FT	917	1280	1340	1610	380	732	453	612	388	243	397	2970
CFSM	4.86	6.99	7.10	8.54	2.23	3.88	2.48	3.24	2.12	1.29	2.10	16.3
IN.	5.60	7.80	8.19	9.84	2.32	4.47	2.77	3.74	2.37	1.49	2.42	18.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)#

	MEAN	32.8	23.6	26.6	25.5	20.2	15.5	16.5	14.6	8.79	5.70	10.6	27.3
MAX	61.1	40.2	49.1	48.9	51.7	35.1	29.7	33.8	21.0	11.8	24.8	49.9	
(WY)	2000	1994	1991	1997	1993	1994	1997	1999	1999	1997	2002	2003	
MIN	14.9	13.0	11.5	11.7	6.84	4.99	7.61	3.87	1.59	1.46	1.80	10.4	
(WY)	2003	1997	1997	2002	2003	2002	2003	1998	1993	1993	1993	1993	

See Period of Record; partial years used in monthly summary statistics
e Estimated

15081495 NORTH FORK STANEY CREEK NEAR KLAWOCK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003#	
ANNUAL TOTAL	6274.9		5708.08			
ANNUAL MEAN	17.2		15.6		19.1	
HIGHEST ANNUAL MEAN					24.7	
LOWEST ANNUAL MEAN					15.4	
HIGHEST DAILY MEAN	304	Feb 14	204	Sep 13	793	Oct 26 1993
LOWEST DAILY MEAN	1.7	Jul 15	a0.81	Aug 11	0.38	Jul 21 1993
ANNUAL SEVEN-DAY MINIMUM	1.9	Jul 9	0.85	Aug 8	0.49	Jul 15 1993
MAXIMUM PEAK FLOW			440	Sep 13	b1110	Jan 29 1993
MAXIMUM PEAK STAGE			4.69	Sep 13	6.34	Jan 29 1993
INSTANTANEOUS LOW FLOW			c0.81	Aug 9	d0.37	Jul 20 1993
ANNUAL RUNOFF (AC-FT)	12450		11320		13830	
ANNUAL RUNOFF (CFSM)	5.60		5.09		6.22	
ANNUAL RUNOFF (INCHES)	76.03		69.17		84.50	
10 PERCENT EXCEEDS	37		39		44	
50 PERCENT EXCEEDS	8.1		6.5		9.1	
90 PERCENT EXCEEDS	3.0		1.7		2.2	

See Period of Record; partial years used in monthly summary statistics

a Aug. 11 to Aug. 13

b From rating extended above 140 ft³/s

c Aug. 9 to Aug. 14

d Jul. 20 and 21, 1993

15081495 NORTH FORK STANEY CREEK NEAR KLAWOCK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1991 to September 2003 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1990 to September 2003 (discontinued).

INSTRUMENTATION.--Electronic water temperature recorder since November 20, 1990, set for 2-hour recording interval. New water temperature recorder installed April 11, 1996 with a 15-minute recording interval.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross sections on November 15 and September 16. No variation was found within the cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE.--Maximum recorded, 18.5°C, June 30, 1992, July 16, 1993, and July 2-4, 1998; minimum, 0.0°C, on many days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--Maximum, 17.0°C August 8-9, and 13; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	STREAM WIDTH (FT) (000004)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (000009)	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)
Nov							
15...	1011	24.8	10.0	2.38	27.0	6.1	6.7
15...	1012	24.8	15.0	2.38	27.0	6.1	6.7
15...	1013	24.8	20.0	2.38	27.0	6.1	6.7
15...	1014	24.8	25.0	2.38	27.0	6.1	6.7
15...	1015	24.8	30.0	2.38	27.0	6.1	6.7
Sept							
16...	1055	23.9	2.0	2.09	8.6	8.8	6.5
16...	1056	23.9	7.0	2.09	8.6	8.8	6.5
16...	1057	23.9	12.0	2.09	8.6	8.7	6.5
16...	1058	23.9	17.0	2.09	8.6	8.7	6.5

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.5	7.5	8.0	3.5	2.5	3.0	5.0	4.0	4.5	2.5	1.5	2.0
2	8.5	7.5	8.0	4.0	3.0	3.5	4.0	4.0	4.0	2.5	2.0	2.0
3	7.5	6.0	7.0	4.0	3.0	3.5	4.0	2.0	3.0	3.0	2.5	3.0
4	7.5	6.5	7.0	5.0	4.0	4.5	2.0	1.0	1.5	3.5	3.0	3.5
5	8.5	7.5	7.5	6.0	4.5	5.5	1.5	1.0	1.5	4.0	3.0	3.5
6	9.0	8.5	9.0	7.0	6.0	6.5	2.5	1.5	2.0	4.0	3.5	4.0
7	9.0	8.5	8.5	6.5	6.0	6.0	4.5	2.5	3.5	3.5	2.0	3.0
8	9.0	8.0	8.5	6.0	5.0	5.5	5.5	4.5	5.0	2.0	0.5	1.5
9	8.0	6.5	7.5	5.5	4.5	5.0	6.0	5.5	5.5	1.0	0.5	0.5
10	6.5	5.0	5.5	6.0	5.0	5.5	5.5	5.0	5.5	1.5	0.5	1.0
11	5.5	4.5	5.0	6.5	5.5	6.0	5.0	4.5	4.5	1.0	0.5	1.0
12	6.5	5.5	6.0	6.5	6.0	6.5	5.5	4.0	5.0	1.5	0.5	1.0
13	7.5	6.5	7.0	7.0	6.5	6.5	4.0	3.5	3.5	0.5	0.0	0.5
14	8.0	7.5	7.5	6.5	6.0	6.0	4.0	3.5	4.0	1.0	0.0	0.5
15	8.5	7.5	8.0	6.0	6.0	6.0	4.5	4.0	4.5	2.0	1.0	1.5
16	8.5	8.0	8.5	6.0	5.0	5.5	4.0	3.5	4.0	3.0	2.0	2.5
17	9.0	7.5	8.5	5.5	5.0	5.0	3.5	3.0	3.0	4.0	3.0	3.5
18	8.0	7.0	7.5	5.0	5.0	5.0	3.0	2.5	2.5	4.0	3.5	3.5
19	9.0	8.0	8.5	5.5	5.0	5.5	2.5	2.0	2.0	4.5	4.0	4.0
20	9.0	8.0	8.5	6.5	5.0	5.5	2.0	1.0	1.5	4.0	3.0	3.5
21	9.0	8.5	9.0	6.0	5.0	6.0	1.0	0.5	1.0	3.0	1.0	2.0
22	9.0	8.5	9.0	5.0	3.5	4.5	2.5	1.0	1.5	1.0	0.0	0.5
23	8.5	8.0	8.0	4.0	3.0	3.5	3.5	2.5	3.0	0.5	0.0	0.0
24	8.0	7.5	8.0	4.5	3.5	4.0	4.0	3.0	3.5	1.0	0.0	0.5
25	8.5	7.5	8.0	5.5	4.5	5.0	3.0	2.5	3.0	2.0	1.0	1.5
26	8.0	7.0	7.5	6.5	5.5	6.0	2.5	2.0	2.5	2.5	2.0	2.5
27	7.5	7.0	7.5	6.0	5.5	5.5	2.0	1.0	1.5	3.0	2.5	2.5
28	7.0	5.5	6.0	5.5	5.0	5.5	1.0	0.0	0.5	3.5	2.5	3.0
29	5.5	4.5	5.0	6.0	5.5	5.5	0.5	0.0	0.0	3.5	3.0	3.5
30	4.5	3.5	4.0	5.5	5.0	5.5	1.0	0.0	0.5	3.5	3.0	3.0
31	3.5	2.5	3.0	---	---	---	1.5	0.5	1.0	3.0	2.0	2.5
MONTH	9.0	2.5	7.3	7.0	2.5	5.2	6.0	0.0	2.9	4.5	0.0	2.2

15081495 NORTH FORK STANEY CREEK NEAR KLAWOCK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	2.0	2.0	2.0	1.5	1.5	3.0	1.0	2.0	7.5	6.0	7.0
2	2.5	2.0	2.5	2.5	1.5	2.0	3.0	0.5	1.5	8.5	4.5	6.5
3	3.0	2.5	3.0	3.0	2.0	2.5	3.0	0.0	1.5	8.0	5.0	6.5
4	3.5	2.5	3.0	3.0	2.5	3.0	2.0	0.5	1.0	7.0	4.0	5.5
5	2.5	1.5	2.0	3.0	1.0	2.0	3.5	0.5	2.0	8.5	4.0	6.0
6	2.0	1.0	1.5	1.5	0.0	0.5	2.0	1.0	1.5	8.5	5.0	7.0
7	2.0	1.0	1.5	0.5	0.0	0.0	2.0	1.0	1.5	10.5	5.5	7.5
8	1.5	1.0	1.0	0.5	0.0	0.0	3.0	1.0	2.0	10.5	5.5	8.0
9	2.0	1.0	1.0	0.5	0.0	0.0	3.0	1.0	2.0	11.0	6.5	8.5
10	2.0	0.5	1.0	0.5	0.0	0.0	4.0	2.0	3.0	11.5	7.5	9.0
11	2.0	1.0	1.5	0.5	0.0	0.0	4.5	3.0	3.5	9.0	8.0	8.0
12	2.0	1.0	1.5	0.0	0.0	0.0	5.0	2.0	3.5	8.0	5.0	6.0
13	2.0	1.0	1.5	0.0	0.0	0.0	5.5	2.0	4.0	6.0	4.5	5.0
14	2.0	0.5	1.5	0.0	0.0	0.0	5.0	2.5	4.0	6.0	4.0	5.0
15	2.5	1.5	2.0	0.5	0.0	0.0	4.5	3.5	4.0	5.5	4.0	5.0
16	2.5	2.0	2.5	0.5	0.0	0.0	4.0	3.0	3.5	6.5	4.0	5.0
17	3.0	2.5	3.0	0.5	0.0	0.0	4.5	2.5	3.5	8.0	4.0	6.0
18	3.0	2.5	2.5	0.5	0.0	0.0	3.5	2.5	3.0	7.5	5.0	6.5
19	3.5	2.5	3.0	0.5	0.0	0.5	5.0	2.5	3.5	8.0	5.0	6.5
20	3.0	2.0	2.5	1.0	0.0	0.5	5.0	2.5	4.0	10.0	5.0	7.5
21	2.0	0.5	1.5	1.0	0.0	0.5	6.0	3.5	4.5	8.0	7.0	7.5
22	1.5	0.0	0.5	1.5	0.5	1.0	5.0	3.5	4.0	7.5	6.0	6.5
23	1.0	0.0	0.5	2.0	0.0	1.0	5.5	4.0	4.5	7.0	6.5	6.5
24	0.5	0.0	0.5	2.5	0.5	1.5	7.5	3.0	5.5	7.5	6.5	7.0
25	1.0	0.5	0.5	2.5	1.0	1.5	8.0	4.0	6.0	7.0	6.0	6.5
26	2.0	0.5	1.0	3.0	1.5	2.0	8.0	4.5	6.0	8.0	6.5	7.0
27	1.5	0.5	1.0	3.0	1.5	2.5	6.5	4.5	5.5	8.5	6.0	7.5
28	2.0	1.0	1.5	2.5	1.5	2.0	7.5	3.5	6.0	9.0	7.5	8.0
29	---	---	---	2.0	1.0	1.5	9.0	4.5	7.0	8.0	7.0	7.5
30	---	---	---	2.0	1.5	2.0	9.0	5.5	7.5	9.5	7.0	8.0
31	---	---	---	2.5	1.0	1.5	---	---	---	10.5	8.5	9.0
MONTH	3.5	0.0	1.7	3.0	0.0	1.0	9.0	0.0	3.7	11.5	4.0	6.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	9.5	8.0	8.5	11.0	10.0	10.5	14.5	13.5	14.0	10.5	10.0	10.0
2	8.5	7.0	8.0	12.5	10.5	11.0	14.5	13.0	13.5	10.5	10.0	10.5
3	10.0	6.0	8.5	11.0	9.5	10.5	14.5	12.5	13.5	11.0	10.0	10.5
4	10.5	9.0	9.5	10.0	9.0	9.5	13.5	11.0	12.5	11.0	9.5	10.5
5	13.5	9.0	11.5	11.0	9.0	10.0	13.0	11.0	12.0	11.0	10.0	10.5
6	15.0	11.0	13.0	11.5	10.0	11.0	16.0	10.5	13.5	11.0	10.5	10.5
7	15.0	11.5	13.0	14.0	10.5	12.0	16.5	12.0	14.5	11.0	10.0	10.5
8	15.0	10.5	13.0	14.5	12.0	12.5	17.0	12.5	15.0	11.0	10.0	10.5
9	16.0	11.0	13.5	15.5	11.5	13.5	17.0	13.0	15.5	11.0	9.5	10.5
10	16.5	11.5	14.0	16.0	12.5	14.5	16.5	13.0	15.0	10.5	10.0	10.5
11	14.5	12.5	13.5	16.5	13.0	15.0	16.5	12.5	15.0	10.5	9.5	10.0
12	12.5	11.5	12.0	16.5	13.5	15.0	16.5	13.0	14.5	11.0	10.0	10.5
13	11.5	10.0	11.0	15.0	14.0	14.5	17.0	14.5	15.5	10.5	9.5	10.0
14	11.0	9.5	10.0	15.0	13.0	14.0	16.0	14.5	15.5	10.0	9.5	10.0
15	11.5	9.5	10.5	14.0	13.0	13.5	15.0	13.0	14.0	10.0	9.0	9.5
16	11.0	10.0	10.5	13.0	12.0	12.5	13.0	11.5	12.5	9.5	8.0	9.0
17	10.5	8.0	9.5	12.0	10.5	11.0	12.0	11.0	11.5	9.0	8.0	8.5
18	9.0	7.5	8.5	14.5	11.0	12.5	12.5	11.0	11.5	9.0	8.0	8.5
19	10.0	8.0	9.0	13.0	12.0	12.5	13.0	11.0	12.0	9.0	8.0	8.5
20	9.5	8.0	9.0	13.0	12.5	12.5	12.0	11.0	11.5	9.0	8.5	9.0
21	10.0	9.0	9.5	13.0	12.0	12.5	12.0	10.5	11.0	9.0	8.5	9.0
22	10.5	9.0	10.0	12.0	11.0	11.5	11.5	10.5	11.0	9.0	7.5	8.0
23	11.5	9.5	10.5	13.0	11.0	12.0	11.0	9.5	10.5	7.5	6.5	7.0
24	11.0	10.0	10.5	14.5	11.0	13.0	11.5	9.5	10.5	8.5	7.5	8.5
25	11.0	9.5	10.5	15.5	12.0	14.0	12.0	9.0	10.5	9.0	8.5	8.5
26	10.0	9.0	9.5	14.0	13.0	13.5	12.5	9.5	11.0	9.0	8.5	9.0
27	10.0	9.0	9.5	14.5	13.0	13.5	12.0	11.0	11.5	10.0	9.0	9.5
28	11.5	8.5	10.0	16.5	13.0	14.5	13.5	10.0	12.0	11.0	9.5	10.0
29	11.5	9.5	10.5	15.0	13.5	14.5	12.5	10.5	11.5	11.0	8.5	9.5
30	11.0	10.0	10.5	16.5	12.5	14.5	11.5	10.0	10.5	11.0	9.0	10.0
31	---	---	---	15.0	13.0	14.0	10.5	10.0	10.0	---	---	---
MONTH	16.5	6.0	10.6	16.5	9.0	12.8	17.0	9.0	12.7	11.0	6.5	9.6

15081497 STANEY CREEK NEAR KLAWOCK

LOCATION.--Lat 55°48'05", long 133°06'31", in SW¹/₄ NW¹/₄ sec. 14, T. 70 S., R. 80 E. (Craig D-4 quad), Hydrologic Unit 19010103, on Prince of Wales Island, in Tongass National Forest, on right bank, approximately 2.9 mi upstream from mouth, and 17 mi north of Klawock.

DRAINAGE AREA.--50.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1989 to current year. Equivalent daily discharge record collected at station No. 15081500 near Craig during water years 1964-81. Drainage area, 51.6 mi².

GAGE.--Water-stage recorder. Elevation of gage is 47 ft above sea level, by barometer.

REMARKS.--Records fair, except for discharges above 6,000 ft³/s, and estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 6	0345	8240	14.18	Jan 6	0115	*10800	*15.03
Nov 20	2115	7120	13.75	Sept 13	2115	9910	14.75

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	404	104	105	942	146	213	220	57	141	51	25	1790
2	529	95	85	1310	583	266	157	47	232	45	25	2840
3	237	89	70	530	456	168	108	40	141	188	25	684
4	183	85	56	1280	203	157	84	35	89	259	24	288
5	541	211	55	2830	143	228	69	32	66	145	22	324
6	3070	406	49	3280	108	112	94	30	53	90	21	454
7	633	258	142	701	88	e60	354	29	44	71	20	616
8	664	166	1070	275	74	e40	248	28	39	55	19	254
9	569	134	958	167	65	e35	220	28	35	46	18	155
10	266	113	454	124	59	e32	171	29	33	39	18	1350
11	181	102	544	101	55	e30	157	28	29	35	17	1010
12	252	292	1120	86	51	e32	151	507	29	32	17	389
13	563	1480	640	68	50	e57	124	447	29	32	17	3600
14	312	781	322	65	45	e340	104	433	27	32	18	1960
15	323	597	1720	63	45	309	110	283	68	e27	99	523
16	237	275	425	114	49	324	116	255	76	31	204	261
17	197	453	334	488	114	275	156	161	568	114	166	166
18	165	332	243	223	227	842	156	102	520	86	155	1180
19	184	851	171	360	867	303	236	82	261	47	79	669
20	553	1960	123	389	311	407	209	59	191	45	59	1090
21	247	1050	91	179	147	413	160	53	114	71	84	1280
22	390	249	144	116	88	396	121	176	75	66	74	564
23	266	159	2830	102	71	239	106	611	64	86	286	250
24	187	116	1340	234	66	162	106	528	54	54	140	2060
25	154	138	812	707	67	127	126	787	61	38	70	1860
26	140	1050	397	1710	86	129	121	384	132	32	46	530
27	401	733	210	1140	127	130	95	243	88	30	37	320
28	226	414	155	303	227	169	99	168	135	30	34	216
29	165	192	117	247	---	1030	74	165	95	28	31	156
30	134	134	118	437	---	2030	67	112	61	26	590	116
31	116	---	1270	222	---	442	---	115	---	24	651	---
TOTAL	12489	13019	16170	18793	4618	9497	4319	6054	3550	1955	3091	26955
MEAN	403	434	522	606	165	306	144	195	118	63.1	99.7	898
MAX	3070	1960	2830	3280	867	2030	354	787	568	259	651	3600
MIN	116	85	49	63	45	30	67	28	27	24	17	116
AC-FT	24770	25820	32070	37280	9160	18840	8570	12010	7040	3880	6130	53470
CFSM	7.96	8.58	10.3	12.0	3.26	6.05	2.85	3.86	2.34	1.25	1.97	17.8
IN.	9.18	9.57	11.89	13.82	3.40	6.98	3.18	4.45	2.61	1.44	2.27	19.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)#

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	659	557	592	463	385	337	296	231	121	94.1	198	492		
MAX	1123	996	1270	782	983	565	559	558	252	200	469	898		
(WY)	2000	1992	1992	1992	1991	1994	1997	1999	1999	1997	2002	2003		
MIN	403	201	267	240	152	104	144	79.0	26.5	22.1	26.6	166		
(WY)	2003	1997	1997	1998	1994	2002	2003	1998	1993	1993	1993	1995		

See period of Record;partial years used in monthly summary of statistics
e Estimated

15081497 STANEY CREEK NEAR KLAWOCK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003#	
ANNUAL TOTAL	116966		120510			
ANNUAL MEAN	320		330		369	
HIGHEST ANNUAL MEAN					506	1992
LOWEST ANNUAL MEAN					283	1995
HIGHEST DAILY MEAN	3070	Oct 6	3600	Sep 13	14900	Oct 26 1993
LOWEST DAILY MEAN	a27	Mar 24	b17	Aug 11	4.4	Jul 21 1993
ANNUAL SEVEN-DAY MINIMUM	29	Mar 19	18	Aug 8	6.0	Jul 15 1993
MAXIMUM PEAK FLOW			10800	Jan 6	c19800	Oct 26 1993
MAXIMUM PEAK STAGE			15.03	Jan 6	17.20	Oct 26 1993
INSTANTANEOUS LOW FLOW			d16	Aug 12	4.0	Jul 21 1993
ANNUAL RUNOFF (AC-FT)	232000		239000		267100	
ANNUAL RUNOFF (CFSM)	6.33		6.52		7.29	
ANNUAL RUNOFF (INCHES)	85.99		88.60		98.99	
10 PERCENT EXCEEDS	765		797		881	
50 PERCENT EXCEEDS	175		155		171	
90 PERCENT EXCEEDS	56		32		38	

See Period of Record;partial years used in monthly statistics

a Mar. 24 and 25

b Aug. 11-13

c From rating curve extended above 3300 ft³/sec

d Aug. 12 and 13

15081497 STANEY CREEK NEAR KLAWOCK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January 1990 to current year.

INSTRUMENTATION.--Electronic water temperature recorder since January 11, 1990, set for 2-hour recording interval.
As of April 9, 1996, recorder set to 15-minute recording interval.

REMARKS.-- Records represent water temperature at sensor within 0.5°C. Temperature at the sensor was compared with stream average by cross section on November 15, 2003. No variation was found in the temperature cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE.--Maximum recorded, 26.0°C, June 29, 1990, but may have been higher during period of instrument malfunction July 9 to August 23, 1990; minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--Maximum, 19.5°C, August 8-9; minimum, 0.0°C on many days during the winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	Location in X-sect. looking downstream ft from l bank (00009)	Gage height, feet (00065)	Instantaneous dis- charge, cfs (00061)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)
NOV							
15...	0835	109	103	8.94	666	6.5	6.1
15...	0836	109	83.0	8.94	666	6.5	6.1
15...	0837	109	63.0	8.94	666	6.5	6.1
15...	0838	109	43.0	8.94	666	6.5	6.1
15...	0839	109	23.0	8.94	666	6.5	6.1
15...	0840	109	3.00	8.94	666	6.5	6.1

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.0	8.0	8.5	5.5	3.5	5.0	6.0	5.0	5.5	3.0	2.0	2.5
2	9.0	8.0	8.5	5.5	3.5	4.5	5.5	4.0	5.0	3.0	2.5	3.0
3	8.0	7.0	7.5	5.5	4.0	5.0	5.0	3.5	4.5	4.0	3.0	3.5
4	8.5	7.0	8.0	6.5	5.0	5.5	3.5	2.0	3.0	4.5	4.0	4.5
5	9.5	8.0	8.5	7.0	5.5	6.0	3.0	2.5	3.0	5.0	4.0	4.5
6	10.0	9.5	10.0	7.5	6.5	7.0	3.5	2.5	3.0	5.5	5.0	5.5
7	10.0	9.5	9.5	7.0	6.0	6.5	4.0	3.0	4.0	5.0	3.5	4.5
8	9.5	9.0	9.5	6.5	6.0	6.5	5.5	4.0	4.5	4.0	2.0	3.0
9	9.0	7.5	8.5	6.5	5.0	6.0	6.0	5.5	6.0	2.5	1.0	2.0
10	7.5	6.0	6.5	7.0	5.5	6.5	6.5	6.0	6.0	2.0	0.5	1.5
11	7.0	5.5	6.0	7.0	6.0	7.0	6.0	5.0	5.5	2.0	0.5	0.5
12	7.5	6.5	7.0	7.5	7.0	7.0	6.0	5.0	5.5	1.5	0.0	1.0
13	8.5	7.0	8.0	7.5	7.5	7.5	5.0	4.5	4.5	1.0	0.0	0.5
14	8.5	8.0	8.5	7.5	7.0	7.0	5.0	4.5	4.5	0.5	0.0	0.5
15	9.0	8.0	8.5	7.0	6.5	7.0	5.5	5.0	5.0	2.0	0.5	1.0
16	9.5	8.5	9.0	7.0	5.5	6.5	5.0	4.5	5.0	3.0	2.0	2.0
17	9.0	8.5	9.0	6.5	5.5	6.0	4.5	3.5	4.0	3.5	3.0	3.0
18	8.5	8.0	8.5	6.5	5.0	5.5	4.5	3.0	3.5	3.5	2.5	3.0
19	10.0	8.5	9.0	6.5	6.0	6.0	3.5	2.5	3.0	4.0	3.0	3.5
20	9.5	9.0	9.0	7.0	5.5	6.0	3.5	0.5	2.0	4.0	3.5	3.5
21	9.5	8.5	9.0	7.0	6.5	6.5	1.0	0.0	0.5	3.5	1.0	2.5
22	10.0	9.0	9.5	6.5	5.0	5.5	3.0	0.5	2.0	2.0	0.5	1.0
23	9.5	8.5	9.0	5.5	4.5	5.0	4.0	2.5	3.5	1.5	0.0	0.5
24	8.5	8.0	8.5	6.0	4.0	5.0	4.5	4.0	4.0	2.0	0.5	1.0
25	8.5	8.0	8.0	6.5	5.5	6.0	4.0	3.5	3.5	2.5	1.5	2.0
26	8.5	8.0	8.5	7.0	6.0	6.5	4.0	3.0	3.5	3.5	2.5	3.0
27	8.5	8.0	8.5	6.5	6.5	6.5	3.5	2.0	3.0	3.5	3.0	3.0
28	8.0	6.5	7.0	6.5	6.0	6.0	3.0	1.5	2.0	4.0	3.0	3.5
29	6.5	5.5	6.0	7.0	6.0	6.5	2.0	0.5	1.0	4.5	4.0	4.0
30	5.5	3.5	5.0	6.5	5.5	6.0	2.0	1.0	1.0	4.5	3.5	4.0
31	5.0	3.5	4.5	---	---	---	2.0	1.5	2.0	3.5	2.5	3.0
MONTH	10.0	3.5	8.1	7.5	3.5	6.1	6.5	0.0	3.6	5.5	0.0	2.6

15081497 STANEY CREEK NEAR KLAWOCK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	3.0	2.5	2.5	4.0	2.5	3.0	4.5	2.0	3.0	10.5	7.5	9.0
2	3.5	3.0	3.0	3.5	2.5	3.0	4.0	1.5	3.0	11.5	6.0	9.0
3	4.0	3.5	3.5	4.5	3.0	4.0	4.0	1.5	3.0	10.0	5.5	8.0
4	4.5	3.5	4.0	5.0	3.5	4.5	4.0	1.5	3.0	10.0	5.5	8.0
5	3.5	2.0	3.0	4.0	2.0	3.5	4.5	1.5	3.5	11.0	5.5	8.5
6	3.0	2.0	2.5	2.0	0.0	1.0	3.5	2.0	3.0	10.5	6.5	8.5
7	3.0	2.0	2.5	0.5	0.0	0.0	3.5	1.5	2.5	12.0	6.5	9.5
8	2.5	1.5	2.0	0.0	0.0	0.0	4.0	2.0	3.0	13.0	7.5	10.5
9	2.5	1.5	2.0	0.0	0.0	0.0	4.5	2.0	3.0	14.5	8.0	11.0
10	2.5	1.0	1.5	0.0	0.0	0.0	6.0	3.5	4.5	15.0	9.5	12.0
11	2.5	1.0	2.0	0.0	0.0	0.0	7.0	4.0	5.5	12.0	9.5	10.0
12	2.5	1.0	2.0	0.0	0.0	0.0	7.5	3.5	5.5	10.0	6.5	8.0
13	2.5	1.0	2.0	0.0	0.0	0.0	7.5	3.5	5.5	8.0	6.0	6.5
14	2.5	0.0	1.0	0.0	0.0	0.0	7.5	3.5	5.5	7.0	5.5	6.0
15	3.0	2.0	2.0	0.5	0.0	0.0	6.5	4.5	5.5	6.5	5.0	6.0
16	3.5	1.5	2.5	0.5	0.0	0.0	5.5	4.0	5.0	7.5	5.0	6.5
17	4.0	3.0	3.5	1.0	0.0	0.0	7.0	4.0	5.0	11.0	5.0	7.5
18	3.5	3.0	3.0	1.0	0.0	0.5	5.0	3.5	4.5	10.0	6.0	8.0
19	4.0	3.5	3.5	2.0	0.0	1.0	6.5	4.0	5.0	11.0	6.5	8.5
20	3.5	2.5	3.0	2.5	1.0	1.5	6.5	4.0	5.5	12.5	6.5	9.5
21	2.5	1.0	2.0	2.5	1.0	1.5	7.5	4.5	5.5	10.0	8.5	9.0
22	1.0	0.0	0.5	3.0	1.5	2.0	6.5	4.5	5.5	9.5	8.0	9.0
23	0.5	0.0	0.0	3.0	1.0	2.0	7.5	5.0	6.0	8.5	8.0	8.5
24	0.5	0.0	0.0	4.0	1.5	2.5	10.5	4.5	7.0	8.5	8.0	8.0
25	2.0	0.0	1.0	4.0	2.0	3.0	12.0	6.5	8.5	8.5	7.5	8.0
26	3.0	1.5	2.0	5.0	2.5	3.5	11.0	6.5	8.5	9.0	7.5	8.0
27	3.0	1.5	2.0	5.5	2.5	4.0	9.0	7.5	8.0	8.5	7.0	7.5
28	3.0	2.0	2.5	4.0	3.0	3.5	11.5	5.5	8.0	8.5	7.0	8.0
29	---	---	---	3.5	2.5	3.0	12.5	6.5	9.5	8.5	7.5	8.0
30	---	---	---	3.0	2.5	3.0	12.5	7.5	10.0	10.5	7.5	8.5
31	---	---	---	3.5	2.0	2.5	---	---	---	11.5	8.0	9.5
MONTH	4.5	0.0	2.2	5.5	0.0	1.7	12.5	1.5	5.3	15.0	5.0	8.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	10.0	8.5	9.0	11.5	11.0	11.0	15.5	14.5	15.0	11.0	11.0	11.0
2	11.5	8.5	9.5	12.5	11.0	11.5	15.5	14.0	15.0	11.5	11.0	11.5
3	13.0	7.5	9.5	12.5	10.5	11.5	17.0	13.5	15.0	11.5	10.5	11.0
4	10.5	8.5	9.5	11.5	10.5	11.0	16.5	12.5	14.5	11.5	9.5	10.5
5	14.0	9.0	11.5	11.5	9.5	10.5	15.0	13.0	14.0	12.0	9.5	11.0
6	16.0	10.5	13.0	11.5	10.0	11.0	18.0	12.0	15.0	12.0	10.0	11.5
7	16.5	10.5	13.5	15.0	10.5	12.5	19.0	13.5	16.5	12.0	10.5	11.0
8	16.0	10.5	13.0	14.0	11.5	13.0	19.5	14.5	17.0	11.0	10.0	10.5
9	16.5	10.5	13.5	16.5	12.0	14.0	19.5	15.0	17.5	10.5	9.0	10.0
10	16.0	11.5	13.5	17.0	12.5	15.0	18.5	14.0	16.5	11.0	9.5	10.5
11	13.5	12.0	12.5	16.5	13.5	15.0	18.5	14.0	16.5	11.0	10.5	10.5
12	12.0	11.5	12.0	16.0	14.0	15.0	16.5	13.5	15.5	11.5	10.0	10.5
13	13.0	11.0	12.0	15.0	13.5	14.0	17.5	15.5	16.5	11.0	10.5	10.5
14	12.0	11.0	11.5	15.0	13.5	14.5	16.5	15.5	16.0	10.5	10.0	10.5
15	13.5	11.0	11.5	14.5	13.0	13.5	15.5	14.0	15.0	10.5	9.5	10.0
16	11.0	10.0	10.5	13.5	12.5	13.0	14.5	13.0	13.5	10.0	8.5	9.5
17	11.5	10.0	10.5	13.5	12.0	12.5	13.5	12.5	13.0	9.5	8.5	9.0
18	10.0	9.0	9.5	15.0	12.0	13.5	14.0	12.5	13.0	9.5	8.5	9.0
19	11.0	9.0	9.5	14.5	13.0	13.5	14.0	12.0	13.0	10.0	9.0	9.5
20	12.0	9.0	10.0	13.5	13.0	13.0	13.5	12.5	13.0	9.5	9.0	9.5
21	11.5	9.5	10.5	13.0	12.5	13.0	14.0	12.0	13.0	10.0	9.5	9.5
22	12.5	10.0	11.0	12.5	11.5	12.0	13.5	12.0	12.5	9.5	8.0	9.0
23	12.0	10.0	11.0	15.5	11.5	13.5	12.5	11.5	12.0	8.0	7.0	7.5
24	11.0	10.0	10.5	16.0	12.0	14.5	12.5	10.0	11.0	9.5	8.0	9.0
25	12.5	10.0	11.0	17.5	13.5	15.5	13.5	10.0	12.0	9.5	9.0	9.5
26	12.0	10.0	11.0	16.5	14.0	14.5	14.0	10.0	12.0	9.5	9.0	9.5
27	11.0	10.0	10.5	15.0	13.5	14.5	14.0	12.0	13.0	11.0	9.5	10.0
28	12.5	10.0	11.0	19.0	14.0	16.5	14.5	11.0	13.0	11.0	9.5	10.5
29	14.0	10.0	12.0	17.5	15.5	16.5	14.5	11.5	12.5	11.0	9.0	10.0
30	12.0	10.5	11.5	18.0	14.0	16.0	13.0	11.5	12.0	10.5	9.5	10.0
31	---	---	---	16.5	15.0	15.5	11.5	11.0	11.0	---	---	---
MONTH	16.5	7.5	11.2	19.0	9.5	13.6	19.5	10.0	14.0	12.0	7.0	10.1

15081610 THREEMILE CREEK NEAR KLAWOCK

LOCATION.--Lat 55°32'06", long 132°57'17", in SW¹/₄ SW¹/₄ SE¹/₄ sec. 16, T. 73 S., R. 82 E. (Craig C-3 quad), Hydrologic Unit 19010103, on Prince of Wales Island, approximately 2.0 mi upstream from the mouth at Klawock Lake, and 5.2 mi east of the city of Klawock.

DRAINAGE AREA.--6.63 mi².

PERIOD OF RECORD.--March 1999 to September 2003 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 295 ft above sea level, from topographic map.

REMARKS.-- Records fair, except for those above 250 ft³/s and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	18	28	122	e27	42	41	39	e46	e31	e13	e111
2	94	18	24	97	e67	50	30	33	e39	e33	e15	e289
3	56	17	21	127	e45	32	25	28	e34	e87	e17	e200
4	46	17	19	245	e30	81	22	25	e31	e100	e13	e83
5	349	19	17	303	e23	55	20	21	e29	e47	e12	e92
6	426	60	19	235	e21	28	46	20	e28	e39	e11	e95
7	148	27	29	137	e19	20	47	18	e26	e39	e10	e131
8	135	22	84	65	e18	16	38	18	e26	e33	e10	e71
9	136	19	159	44	e17	e14	28	20	e25	e30	e9.7	e37
10	65	18	94	34	e16	e12	25	23	e25	e28	e9.3	e180
11	46	18	101	29	16	e11	27	24	e24	e27	e9.0	e170
12	51	87	194	26	15	e10	26	61	e24	e26	e8.7	e98
13	49	187	84	22	14	e80	26	66	e24	e26	e9.3	e260
14	61	114	109	20	14	36	26	55	e25	e25	e28	e148
15	55	85	240	22	18	54	31	47	e34	e25	e59	e87
16	45	73	81	31	17	36	31	39	e34	e27	e86	e46
17	37	89	54	61	59	59	36	30	e165	e52	e75	e55
18	31	59	42	45	43	76	47	27	e102	e44	e64	e115
19	57	111	33	68	96	38	40	25	e99	e27	e57	e129
20	60	179	28	59	39	59	32	24	e92	e31	e49	e100
21	38	121	23	34	25	50	32	37	e52	e48	e52	e146
22	33	61	44	28	20	43	28	77	e38	e47	e51	e84
23	29	41	262	25	17	29	30	273	e33	e54	e87	e53
24	26	32	153	48	16	22	34	123	e30	e27	e61	e206
25	24	45	125	69	27	20	58	118	e33	e18	e30	e120
26	26	140	56	e200	20	21	58	77	e37	e16	e29	e84
27	35	95	37	e120	23	23	57	51	e37	e15	e27	e55
28	27	61	30	e40	54	48	52	71	e31	e18	e26	e44
29	23	40	25	e38	---	129	46	61	e33	e16	e30	e37
30	21	32	26	e70	---	208	44	e38	e31	e14	e36	e34
31	20	---	121	e45	---	66	---	e53	---	e13	e70	---
TOTAL	2370	1905	2362	2509	816	1468	1083	1622	1287	1063	1064.0	3360
MEAN	76.5	63.5	76.2	80.9	29.1	47.4	36.1	52.3	42.9	34.3	34.3	112
MAX	426	187	262	303	96	208	58	273	165	100	87	289
MIN	20	17	17	20	14	10	20	18	24	13	8.7	34
AC-FT	4700	3780	4690	4980	1620	2910	2150	3220	2550	2110	2110	6660
CFSM	11.5	9.58	11.5	12.2	4.40	7.14	5.44	7.89	6.47	5.17	5.18	16.9
IN.	13.30	10.69	13.25	14.08	4.58	8.24	6.08	9.10	7.22	5.96	5.97	18.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)#

	MEAN	81.1	62.1	58.4	58.9	32.3	32.3	38.4	68.9	72.4	53.8	55.2	91.8
MAX	113	68.1	76.2	80.9	38.6	47.4	50.1	88.8	108	68.3	90.5	118	
(WY)	2000	2000	2003	2003	2002	2003	1999	1999	1999	1999	2002	2002	
MIN	59.6	57.8	48.1	36.0	26.8	16.0	25.6	52.3	42.9	34.3	34.3	57.5	
(WY)	2001	2002	2001	2000	2000	2002	2002	2003	2003	2003	2003	2000	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1999 - 2003#
ANNUAL TOTAL	22522.8	20909.0	
ANNUAL MEAN	61.7	57.3	57.4
HIGHEST ANNUAL MEAN			59.1
LOWEST ANNUAL MEAN			55.8
HIGHEST DAILY MEAN	426 Oct 6	426 Oct 6	482 Oct 21 1999
LOWEST DAILY MEAN	7.9 Mar 20	8.7 Aug 12	7.3 Mar 9 2000
ANNUAL SEVEN-DAY MINIMUM	8.2 Mar 17	9.4 Aug 7	8.2 Mar 17 2002
MAXIMUM PEAK FLOW		a2470 Oct 6	a2470 Oct 6 2002
MAXIMUM PEAK STAGE		11.42 Oct 6	b11.42 Oct 6 2002
INSTANTANEOUS LOW FLOW		c	6.4 Mar 10 2000
ANNUAL RUNOFF (AC-FT)	44670	41470	41590
ANNUAL RUNOFF (CFSM)	9.31	8.64	8.66
ANNUAL RUNOFF (INCHES)	126.37	117.32	117.64
10 PERCENT EXCEEDS	125	121	110
50 PERCENT EXCEEDS	47	37	48
90 PERCENT EXCEEDS	15	18	16

See Period of Record

a From rating curve extended above 130 ft³/s

b Peak stage of 11.55 was recorded on August 21, 2000 due to backwater caused by a log

c Undetermined, see lowest daily mean

e Estimated

15081614 HALFMILE CREEK ABOVE DIVERSION NEAR KLAWOCK

LOCATION.--Lat 55°33'26", long 133°01'01", in NW¹/₄ SW¹/₄ NW¹/₄ sec. 7, T. 73 S., R. 82 E. (Craig C-3 quad), Hydrologic Unit 19010103, on Prince of Wales Island, approximately 1.1 mi upstream from the mouth at Klawock Lake, and 2.9 mi east of the city of Klawock.

DRAINAGE AREA.--4.73 mi²

PERIOD OF RECORD.--December 2000 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above sea level, from topographic map.

REMARKS.--Records fair, except for estimated discharges and those above 180 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	3.1	7.5	131	11	27	17	5.4	18	7.5	e3.2	e150
2	58	2.7	6.0	103	49	30	10	4.7	20	8.0	e3.3	e230
3	16	2.5	5.1	79	28	15	7.3	3.8	11	47	e3.3	e130
4	10	2.7	4.2	171	14	48	5.6	3.2	7.9	52	e3.1	e43
5	174	6.8	3.7	274	9.3	34	5.0	2.9	6.2	18	e3.0	e52
6	262	49	5.1	148	6.9	11	21	2.6	5.0	12	e2.8	e60
7	88	14	16	85	5.6	e8.0	33	2.5	4.2	12	e2.7	e75
8	76	7.2	106	21	4.8	e6.0	26	2.3	3.5	8.3	e2.6	e34
9	75	4.8	124	11	4.6	e4.6	17	2.3	3.1	6.6	e2.5	e13
10	21	3.7	50	7.6	4.3	e3.3	13	2.3	2.7	5.2	e2.4	e140
11	11	3.7	48	6.1	4.7	e2.5	12	2.4	2.4	4.3	e2.4	e110
12	29	69	133	5.5	4.3	e2.0	11	23	2.4	3.7	e2.6	e53
13	30	157	59	4.5	3.8	e50	9.4	37	2.6	3.8	e2.9	e220
14	37	78	63	3.9	3.5	52	8.4	28	3.1	e3.5	e4.1	e110
15	25	43	178	4.1	5.1	33	11	18	9.7	e3.4	e24	e48
16	15	24	51	7.9	5.6	22	12	21	9.1	e6.1	e42	e20
17	9.3	48	29	26	40	33	20	15	111	e26	e37	23
18	6.7	22	17	13	37	62	25	10	57	e16	e29	112
19	35	70	10	46	85	21	23	9.2	51	e5.0	e22	76
20	35	180	7.3	40	27	39	20	6.7	44	e8.2	e18	108
21	13	89	5.7	14	11	40	17	11	20	e18	e21	138
22	11	22	32	6.3	6.9	37	11	41	12	e17	e20	50
23	7.6	11	272	7.2	5.1	19	9.8	161	8.3	e21	e54	26
24	5.8	7.5	107	22	4.2	13	9.9	70	6.6	e5.0	e26	184
25	4.6	31	99	39	13	12	11	64	11	e4.0	e7.0	136
26	7.3	115	32	151	11	15	9.5	27	14	e3.6	e5.8	49
27	19	59	16	96	15	17	8.7	16	12	e3.5	e4.6	28
28	8.9	25	12	24	30	31	7.6	25	13	e3.5	e3.7	18
29	5.8	12	9.3	35	---	98	6.6	27	9.5	e3.3	e6.0	13
30	4.3	9.1	9.4	52	---	187	6.0	13	7.5	e3.1	e20	10
31	3.5	---	144	17	---	46	---	21	---	e3.1	e38	---
TOTAL	1215.8	1171.8	1661.3	1651.1	449.7	1018.4	403.8	678.3	487.8	341.7	419.0	2459.0
MEAN	39.2	39.1	53.6	53.3	16.1	32.9	13.5	21.9	16.3	11.0	13.5	82.0
MAX	262	180	272	274	85	187	33	161	111	52	54	230
MIN	3.5	2.5	3.7	3.9	3.5	2.0	5.0	2.3	2.4	3.1	2.4	10
MED	16	22	29	24	8.1	27	11	13	9.3	6.1	4.6	56
AC-FT	2410	2320	3300	3270	892	2020	801	1350	968	678	831	4880
CFSM	8.29	8.26	11.3	11.3	3.40	6.95	2.85	4.63	3.44	2.33	2.86	17.3
IN.	9.56	9.22	13.07	12.99	3.54	8.01	3.18	5.33	3.84	2.69	3.30	19.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	47.8	38.2	50.2	49.6	28.0	28.6	24.9	39.6	34.2	20.8	35.0	66.5
MAX	56.3	39.1	53.6	59.4	40.6	39.7	36.5	59.9	69.3	32.4	61.2	82.0
(WY)	2002	2003	2003	2001	2002	2001	2001	2001	2001	2001	2002	2003
MIN	39.2	37.3	46.8	36.2	16.1	13.3	13.5	21.9	16.3	11.0	13.5	55.3
(WY)	2003	2002	2002	2002	2003	2002	2003	2003	2003	2003	2003	2002

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2001 - 2003#

ANNUAL TOTAL	13265.5	11957.7	
ANNUAL MEAN	36.3	32.8	34.9
HIGHEST ANNUAL MEAN			37.1
LOWEST ANNUAL MEAN			32.8
HIGHEST DAILY MEAN	272	Dec 23	288
LOWEST DAILY MEAN	2.5	Nov 3	2.0
ANNUAL SEVEN-DAY MINIMUM	3.5	Oct 29	2.5
MAXIMUM PEAK FLOW			666
MAXIMUM PEAK STAGE			10.23
INSTANTANEOUS LOW FLOW			a
ANNUAL RUNOFF (AC-FT)	26310	23720	25300
ANNUAL RUNOFF (CFSM)	7.68	6.93	7.38
ANNUAL RUNOFF (INCHES)	104.33	94.04	100.31
10 PERCENT EXCEEDS	89	97	89
50 PERCENT EXCEEDS	19	14	18
90 PERCENT EXCEEDS	6.0	3.3	4.6

See Period of Record, partial years used in monthly statistics
a Undetermined, see lowest daily mean
e Estimated

15081995 REYNOLDS CREEK BELOW LAKE MELLEEN NEAR HYDABURG

LOCATION.--Lat 55°13'05", long 132°34'50", in SW¹/₄ SE¹/₄ sec. 3, T. 77 S., R. 84 E. (Craig A-2 quad), Hydrologic Unit 19010103, on Prince of Wales Island, in Tongass National Forest, 0.1 mi below Lake Mellen, approximately 1 mi upstream from mouth at Copper Harbor in Hetta Inlet, and 10 mi east of Hydaburg.

DRAINAGE AREA.--5.20 mi².

PERIOD OF RECORD.--July 1982 to September 1985, October 1997 to July 14, 2003 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 860 ft above sea level, from topographic map. Prior to January 1, 1984, at datum 2.00 ft higher.

REMARKS.--Records good, except for estimated daily discharges which are poor. GOES satellite telemetry at station. Streamflow affected by storage in lakes, which cover 30 percent of the basin.

EXTREMES FOR CURRENT YEAR.--Maximum discharge for period October 2002 through July 14, 2003, 615 ft³/s, January 6, gage height 8.21, minimum not determined, minimum daily mean discharge 21 ft³/s, July 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO JULY 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	35	74	131	e120	43	73	47	60	33	---	---
2	111	33	67	140	e110	46	62	44	58	30	---	---
3	87	31	59	133	e100	40	54	40	52	36	---	---
4	75	30	53	282	e88	39	49	38	45	46	---	---
5	83	31	48	297	e79	42	45	36	40	43	---	---
6	192	45	46	453	e70	35	50	34	36	34	---	---
7	125	43	54	293	e64	31	68	32	32	31	---	---
8	109	37	91	186	e57	29	59	31	30	28	---	---
9	104	33	121	144	e50	27	53	30	27	26	---	---
10	91	31	113	125	43	28	51	30	25	25	---	---
11	77	31	117	112	41	27	52	29	24	23	---	---
12	71	50	153	100	38	27	51	34	25	22	---	---
13	92	125	130	89	35	39	47	43	30	22	---	---
14	84	113	124	80	33	51	45	44	48	21	---	---
15	83	98	208	80	34	46	46	42	71	---	---	---
16	73	86	147	88	35	50	49	41	55	---	---	---
17	65	91	124	102	64	50	54	38	88	---	---	---
18	58	84	111	87	69	73	58	34	88	---	---	---
19	75	81	99	92	94	54	68	32	69	---	---	---
20	115	103	89	92	76	51	59	31	60	---	---	---
21	83	140	80	76	60	56	56	34	53	---	---	---
22	70	106	84	66	51	59	55	47	46	---	---	---
23	62	92	182	62	46	48	80	104	39	---	---	---
24	55	82	192	65	42	41	68	111	35	---	---	---
25	50	83	158	e110	41	38	63	103	41	---	---	---
26	48	148	135	e190	38	39	60	95	50	---	---	---
27	59	123	116	e170	38	39	56	83	42	---	---	---
28	51	107	104	e150	43	47	53	77	50	---	---	---
29	44	92	93	e170	---	83	51	74	42	---	---	---
30	40	82	88	e150	---	113	49	66	35	---	---	---
31	37	---	109	e135	---	94	---	62	---	---	---	---
TOTAL	2460	2266	3369	4450	1659	1485	1684	1586	1396	---	---	---
MEAN	79.4	75.5	109	144	59.2	47.9	56.1	51.2	46.5	---	---	---
MAX	192	148	208	453	120	113	80	111	88	---	---	---
MIN	37	30	46	62	33	27	45	29	24	---	---	---
AC-FT	4880	4490	6680	8830	3290	2950	3340	3150	2770	---	---	---
CFSM	15.3	14.5	20.9	27.6	11.4	9.21	10.8	9.84	8.95	---	---	---
IN.	7.60	16.21	24.10	31.83	11.87	10.62	12.05	11.35	9.99	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY) #

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	94.8	76.6	73.9	94.5	70.7	56.0	60.5	76.9	64.6	46.1	52.3	70.8										
MAX	172	142	131	144	107	97.9	90.9	128	103	63.5	78.7	124										
(WY)	2000	2000	1998	2003	1984	1984	2000	1999	1999	2001	1983	2002										
MIN	71.6	44.1	20.7	61.4	47.7	24.9	23.9	40.4	22.9	20.2	19.3	32.2										
(WY)	1986	1986	1984	1998	1999	2002	2002	1998	1998	1998	1982	1982										

e Estimated

See Period of Record, partial years used in monthly statistics

15081995 REYNOLDS CREEK BELOW LAKE MELLEN NEAR HYDABURG—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		WATER YEARS 1982 - 2003#	
ANNUAL TOTAL	25324			
ANNUAL MEAN	69.4		71.1	
HIGHEST ANNUAL MEAN			88.9	2000
LOWEST ANNUAL MEAN			59.5	1983
HIGHEST DAILY MEAN	217	Sep 22	610	Oct 23 1999
LOWEST DAILY MEAN	14	Mar 24	9.0	Jul 9 1998
ANNUAL SEVEN-DAY MINIMUM	17	Mar 18	9.8	Jul 4 1998
MAXIMUM PEAK FLOW	262	Dec 15	806	Oct 23 1999
MAXIMUM PEAK STAGE	6.91	Dec 15	8.71	Oct 23 1999
INSTANTANEOUS LOW FLOW	a		b8.7	Jul 9 1998
ANNUAL RUNOFF (AC-FT)	50230		51520	
ANNUAL RUNOFF (CFSM)	13.3		13.7	
ANNUAL RUNOFF (INCHES)	181.16		185.83	
10 PERCENT EXCEEDS	127		121	
50 PERCENT EXCEEDS	62		63	
90 PERCENT EXCEEDS	25		30	

See Period of Record; partial years used in monthly summary statistics and break in record

a Not determined, see lowest daily mean

b Jul. 9 and 10, 1998

15085100 OLD TOM CREEK NEAR KASAAN

LOCATION.--Lat 55°23'44", long 132°24'25", in NW¹/₄ SW¹/₄ sec. 6, T. 75 S., R. 86 E. (Craig B-2 quad) Hydrologic Unit 19010103, on Prince of Wales Island, in Tongass National Forest, on left bank 1,000 ft upstream from mouth at Skowl Arm of Kasaan Bay, 0.4 mi downstream from unnamed tributary, and 10 mi south of Kasaan.

DRAINAGE AREA.--5.90 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1949 to current year.

REVISED RECORDS.--WDR AK-85-1: 1950-1983 (P), 1984.

GAGE.--Water-stage recorder. Elevation of gage is 10 ft above sea level, from topographic map.

REMARKS.--Records fair except estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov 13	1330	685	4.88	Jan 4	0745	734	5.02
Nov 20	2100	481	4.24	Jan 6	0130	912	5.50
Dec 12	1230	579	4.56	May 23	1715	535	4.42
Dec 15	0830	*1040	*5.83	Aug 23	0830	652	4.78
Dec 24	0300	951	5.60	Sept 24	0645	538	4.43

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	8.3	19	251	30	11	34	18	21	9.7	3.5	89
2	24	7.7	17	173	53	12	23	15	18	8.9	3.1	178
3	15	6.9	15	275	45	10	18	12	16	10	2.9	52
4	12	6.5	14	538	28	10	14	10	13	11	2.7	29
5	20	14	13	463	21	9.1	12	9.1	12	8.6	2.4	34
6	104	74	13	370	18	6.5	74	8.1	11	8.0	2.2	97
7	35	27	19	188	16	5.6	97	7.4	9.8	11	2.2	60
8	23	17	52	59	14	e4.8	100	6.9	9.2	13	2.0	36
9	23	13	147	35	12	e4.4	47	6.5	8.6	11	1.9	25
10	17	12	131	25	11	e4.0	56	6.4	8.0	8.5	1.8	146
11	14	15	261	20	10	e3.7	60	6.4	7.3	7.0	1.7	99
12	21	212	384	18	9.0	e3.4	39	15	19	5.9	1.5	50
13	36	310	155	16	8.0	e3.3	28	17	51	6.2	1.4	93
14	31	111	230	14	7.7	e25	26	14	109	5.6	1.5	68
15	28	66	617	46	21	125	30	13	97	5.3	3.1	40
16	19	63	140	59	48	76	25	15	43	6.3	3.5	28
17	15	64	64	72	73	113	21	12	180	8.3	5.2	26
18	13	51	49	37	38	158	50	9.7	88	6.9	19	129
19	31	59	35	35	55	47	62	8.5	43	5.7	8.4	59
20	46	193	26	31	30	87	39	7.1	30	12	6.2	48
21	23	140	20	22	20	101	36	9.6	24	11	6.1	62
22	17	45	97	18	16	60	47	19	18	8.7	18	39
23	15	31	537	16	13	31	124	246	15	7.8	355	29
24	12	24	439	26	11	22	51	110	13	6.3	75	207
25	11	29	248	78	10	21	38	98	13	5.3	32	109
26	13	105	111	340	9.2	34	33	66	15	4.5	21	48
27	29	49	56	116	10	33	28	40	12	4.2	16	32
28	16	39	36	73	11	57	24	47	11	3.9	14	23
29	13	28	26	221	---	122	21	39	9.7	3.6	13	19
30	10	22	29	84	---	161	19	26	9.1	3.3	42	15
31	9.1	---	238	46	---	62	---	24	---	3.1	49	---
TOTAL	714.1	1842.4	4238	3765	647.9	1422.8	1276	941.7	933.7	230.6	717.3	1969
MEAN	23.0	61.4	137	121	23.1	45.9	42.5	30.4	31.1	7.44	23.1	65.6
MAX	104	310	617	538	73	161	124	246	180	13	355	207
MIN	9.1	6.5	13	14	7.7	3.3	12	6.4	7.3	3.1	1.4	15
AC-FT	1420	3650	8410	7470	1290	2820	2530	1870	1850	457	1420	3910
CFSM	3.90	10.4	23.2	20.6	3.92	7.78	7.21	5.15	5.28	1.26	3.92	11.1
IN.	4.50	11.62	26.72	23.74	4.09	8.97	8.05	5.94	5.89	1.45	4.52	12.41

e Estimated

15085100 OLD TOM CREEK NEAR KASAAN—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY) #

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.1	66.3	59.0	49.9	45.0	38.7	48.1	43.0	26.1	13.2	15.5	32.7
MAX	163	166	137	128	117	86.3	122	99.1	56.1	31.0	50.9	93.6
(WY)	1978	2000	2003	1992	1998	1984	1980	1999	1950	1991	2001	2001
MIN	23.0	17.1	8.29	3.00	5.00	10.1	19.1	15.0	5.45	2.66	1.81	2.69
(WY)	2003	1966	1984	1950	1950	1956	1967	1996	1958	1958	1993	1965

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1949 - 2003#

ANNUAL TOTAL	15635.9	18698.5	
ANNUAL MEAN	42.8	51.2	42.2
HIGHEST ANNUAL MEAN			63.1
LOWEST ANNUAL MEAN			25.2
HIGHEST DAILY MEAN	617	Dec 15	858
LOWEST DAILY MEAN	3.8	Mar 22	0.28
ANNUAL SEVEN-DAY MINIMUM	4.1	Mar 18	0.55
MAXIMUM PEAK FLOW			a1490
MAXIMUM PEAK STAGE			5.83
INSTANTANEOUS LOW FLOW	b		1.0
ANNUAL RUNOFF (AC-FT)	31010	37090	30600
ANNUAL RUNOFF (CFSM)	7.26	8.68	7.16
ANNUAL RUNOFF (INCHES)	98.59	117.90	97.29
10 PERCENT EXCEEDS	98	123	94
50 PERCENT EXCEEDS	21	21	24
90 PERCENT EXCEEDS	8.3	6.2	6.5

See Period of Record; partial years used in monthly summary statistics

a From rating curve extended above 330 ft³/s

b Undetermined, see lowest daily mean

15085100 OLD TOM CREEK NEAR KASAAN—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1959, and 1965 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1964, April 1965 to February 1975, June 1975 to April 1978, and November 1978 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 15-minute recording interval since April 11, 1996.

REMARKS.--Records represent water-temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross section on November 14. No variation was found within the cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 18.5°C, July 3, 1998; minimum, 0.0°C, on many days during most winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 16.0°C, July 28 and August 10; minimum, 0.0°C, on several days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	STREAM WIDTH (FT) (000004)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BK) (72103)	GAGE HEIGHT (FEET) (000065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	TEMPER- ATURE WATER (DEG C) (000010)	TEMPER- ATURE AIR (DEG C) (000020)
NOV							
14...	0945	44.7	40.0	2.67	90.5	7.0	7.7
14...	0946	44.7	35.0	2.67	90.5	7.0	7.7
14...	0947	44.7	30.0	2.67	90.5	7.0	7.7
14...	0948	44.7	25.0	2.67	90.5	7.0	7.7
14...	0949	44.7	20.0	2.67	90.5	7.0	7.7
14...	0950	44.7	10.0	2.67	90.5	7.0	7.7
14...	0951	44.7	5.0	2.67	90.5	7.0	7.7

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

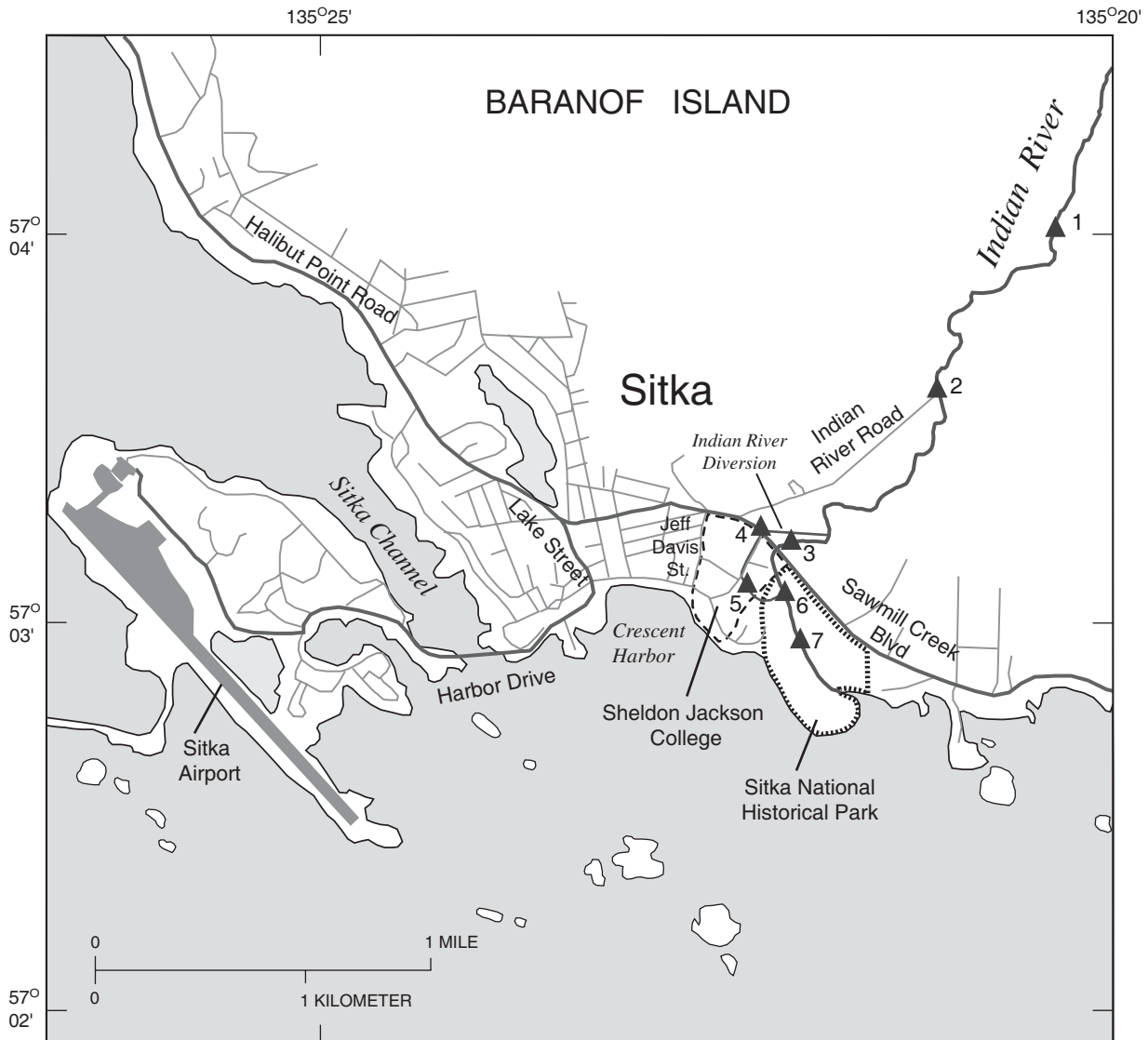
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.5	8.5	9.0	5.0	4.5	5.0	6.0	5.5	5.5	3.0	3.0	3.0
2	9.5	9.0	9.0	5.5	4.5	5.0	5.5	5.5	5.5	3.5	3.0	3.0
3	9.0	7.5	8.5	5.5	5.0	5.0	5.5	3.5	4.0	3.5	3.0	3.5
4	9.0	8.0	8.5	6.0	5.0	5.5	3.5	2.0	2.5	4.0	3.5	4.0
5	9.5	9.0	9.0	7.0	5.5	6.5	3.0	2.0	2.5	4.5	4.0	4.0
6	10.5	9.5	10.0	7.5	7.0	7.0	3.0	2.5	3.0	5.0	4.0	4.5
7	10.5	9.5	10.0	7.0	6.5	7.0	4.5	3.0	4.0	4.5	3.0	4.0
8	10.0	9.5	9.5	7.0	6.0	6.5	6.0	4.5	5.5	3.0	2.5	3.0
9	9.5	8.0	8.5	7.0	6.0	6.5	6.5	6.0	6.0	2.5	2.0	2.0
10	8.0	6.0	7.0	7.0	6.5	7.0	6.0	5.5	6.0	2.5	2.0	2.0
11	7.0	5.5	6.5	7.5	6.5	7.0	5.5	5.0	5.0	2.0	2.0	2.0
12	8.0	7.0	7.5	7.5	7.0	7.0	6.0	5.0	5.5	2.5	2.0	2.5
13	8.5	7.5	8.0	7.5	7.0	7.5	5.0	4.5	4.5	2.5	2.0	2.5
14	9.0	8.5	8.5	7.0	6.5	7.0	5.0	4.5	5.0	2.5	2.0	2.0
15	9.5	8.5	9.0	7.0	6.5	7.0	5.0	5.0	5.0	3.0	2.0	2.5
16	9.5	9.0	9.5	7.0	6.0	6.5	5.0	4.5	5.0	4.0	3.0	3.5
17	9.5	8.0	9.0	6.0	6.0	6.0	4.5	4.0	4.0	4.5	4.0	4.0
18	9.0	8.0	8.5	6.5	6.0	6.0	4.0	3.5	4.0	4.0	3.5	4.0
19	10.0	9.0	9.5	6.5	6.0	6.5	4.0	3.5	3.5	4.5	4.0	4.0
20	9.5	9.0	9.0	7.0	6.0	6.0	3.5	3.0	3.5	4.0	3.5	4.0
21	10.0	9.0	9.5	7.0	6.0	6.5	3.0	2.5	2.5	3.5	2.0	3.0
22	10.0	9.5	9.5	6.0	5.5	5.5	4.0	2.5	3.0	2.0	1.5	2.0
23	9.5	9.0	9.0	5.5	4.0	4.5	5.0	4.0	4.5	2.0	1.5	2.0
24	9.0	8.5	9.0	5.0	4.0	4.5	5.0	4.0	4.5	2.5	2.0	2.5
25	9.0	8.5	8.5	6.0	5.0	5.5	4.5	4.0	4.0	3.5	2.5	3.0
26	8.5	8.0	8.5	6.5	6.0	6.5	4.0	3.5	4.0	4.0	3.0	3.5
27	8.5	7.5	8.0	6.0	6.0	6.0	3.5	2.5	3.0	4.0	3.5	3.5
28	7.5	6.0	6.5	6.0	6.0	6.0	2.5	2.0	2.5	4.0	3.5	4.0
29	6.0	5.0	5.5	6.5	5.5	6.0	2.0	1.5	1.5	4.5	4.0	4.0
30	5.0	4.5	4.5	6.0	5.5	6.0	2.0	1.0	1.5	4.0	3.5	4.0
31	5.0	4.0	4.5	---	---	---	3.0	1.5	2.5	4.0	3.5	3.5
MONTH	10.5	4.0	8.3	7.5	4.0	6.2	6.5	1.0	4.0	5.0	1.5	3.2

15085100 OLD TOM CREEK NEAR KASAAN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	3.5	3.0	3.5	3.5	2.5	3.0	4.0	2.5	3.0	6.5	6.0	6.5
2	3.5	3.5	3.5	3.5	3.0	3.5	3.5	1.5	2.0	6.5	5.5	6.0
3	4.0	3.5	4.0	4.5	3.5	4.0	3.0	1.5	2.0	6.0	5.0	5.5
4	4.0	3.5	4.0	4.5	4.0	4.0	3.0	1.5	2.0	5.5	4.5	5.0
5	4.0	3.5	3.5	4.0	2.5	3.5	3.5	1.5	2.5	5.5	4.0	5.0
6	3.5	3.0	3.0	2.5	0.0	1.0	3.0	2.0	2.5	6.0	4.5	5.0
7	3.0	3.0	3.0	0.0	0.0	0.0	3.5	2.5	3.0	6.5	5.0	5.5
8	3.0	2.5	2.5	0.0	0.0	0.0	4.0	2.5	3.0	7.0	5.0	6.0
9	3.0	2.5	2.5	0.0	0.0	0.0	4.0	3.0	3.5	7.5	5.5	6.5
10	3.0	2.0	2.5	0.0	0.0	0.0	4.0	3.5	3.5	8.0	6.0	7.0
11	3.0	2.0	2.5	0.0	0.0	0.0	4.5	3.5	4.0	8.0	6.5	7.0
12	3.5	3.0	3.0	0.0	0.0	0.0	4.5	3.5	4.0	7.5	7.0	7.5
13	3.0	2.0	2.5	0.0	0.0	0.0	5.0	3.5	4.0	7.5	6.5	7.0
14	3.0	1.5	2.0	0.5	0.0	0.0	5.0	4.0	4.5	7.0	6.0	6.5
15	3.5	3.0	3.0	2.0	0.5	1.0	4.5	4.5	4.5	6.0	5.5	6.0
16	4.0	3.0	3.5	2.0	1.5	1.5	5.0	4.0	4.5	6.0	5.5	5.5
17	4.0	3.5	3.5	2.0	1.0	1.5	5.0	4.0	4.5	7.0	5.0	6.0
18	4.0	3.5	3.5	3.0	1.0	2.0	4.5	4.0	4.0	7.0	6.0	6.5
19	4.0	3.5	4.0	2.5	2.0	2.5	5.0	4.0	4.5	8.0	6.0	7.0
20	4.0	3.5	3.5	3.0	2.0	2.5	5.5	4.5	5.0	7.5	6.0	6.5
21	3.5	2.0	3.0	2.5	2.0	2.5	5.5	4.5	5.0	8.0	7.0	7.5
22	2.0	1.5	2.0	3.5	2.0	3.0	5.0	4.5	5.0	8.0	7.0	7.5
23	1.5	1.0	1.0	3.5	2.0	2.5	5.5	4.5	5.0	8.0	7.5	7.5
24	2.0	0.5	1.5	3.5	2.0	2.5	6.0	4.5	5.5	9.0	8.0	8.5
25	2.5	1.5	2.0	4.0	2.5	3.0	6.5	5.5	6.0	8.0	7.5	8.0
26	3.0	2.0	2.5	4.0	2.5	3.0	6.5	5.5	6.0	9.0	8.0	8.5
27	3.0	2.0	2.5	4.5	2.5	3.5	6.5	5.5	6.0	9.0	8.0	8.5
28	3.5	2.5	3.0	3.5	2.5	3.0	6.5	5.0	6.0	9.0	8.5	8.5
29	---	---	---	4.0	2.5	3.0	7.0	5.5	6.0	9.0	8.0	8.5
30	---	---	---	4.0	3.0	3.5	7.0	6.0	6.5	10.5	8.0	9.0
31	---	---	---	3.5	3.0	3.0	---	---	---	10.0	9.0	9.5
MONTH	4.0	0.5	2.9	4.5	0.0	2.0	7.0	1.5	4.2	10.5	4.0	6.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	9.5	8.5	9.0	11.0	10.5	10.5	13.5	12.5	13.0	11.5	11.5	11.5
2	9.5	8.0	9.0	11.5	10.5	11.0	13.0	12.0	12.5	12.5	11.5	12.0
3	11.0	7.5	9.0	11.0	10.5	11.0	13.0	11.5	12.0	12.5	12.0	12.0
4	10.5	9.0	9.5	11.0	10.5	10.5	13.0	11.0	12.0	12.0	11.5	12.0
5	12.5	9.0	10.5	13.0	9.5	11.0	12.5	11.0	12.0	12.5	11.5	12.0
6	14.5	10.5	12.0	11.5	11.0	11.0	14.5	10.5	12.0	12.0	11.5	11.5
7	14.0	10.5	12.0	13.0	10.5	11.5	15.0	11.0	12.5	12.5	11.5	11.5
8	13.5	10.0	11.5	11.5	11.0	11.5	15.5	11.5	13.0	11.5	11.0	11.5
9	14.0	10.0	11.5	14.0	10.5	12.0	15.5	12.0	13.5	11.5	11.0	11.5
10	15.0	10.5	12.5	13.5	11.5	12.5	16.0	13.0	14.0	11.5	10.5	11.0
11	12.0	11.0	11.5	14.0	12.0	12.5	15.5	12.0	13.5	11.5	11.0	11.0
12	11.5	10.0	11.0	15.0	12.0	13.0	14.5	12.0	13.0	12.0	11.0	11.5
13	10.0	9.0	9.5	14.0	12.5	13.0	15.5	13.5	14.0	11.5	10.5	11.0
14	9.0	8.5	8.5	13.5	12.0	12.5	15.0	13.5	14.5	11.5	10.5	11.0
15	10.0	8.5	9.5	12.5	12.0	12.5	14.5	13.0	14.0	11.0	10.5	11.0
16	10.5	10.0	10.0	12.5	11.5	12.0	14.0	12.5	13.0	11.0	10.0	10.5
17	10.0	9.5	9.5	12.0	11.5	11.5	13.0	12.0	12.5	10.0	9.0	9.5
18	10.5	9.5	10.0	14.5	11.0	12.5	12.5	11.5	12.0	10.5	9.0	9.5
19	10.5	9.5	10.0	12.5	11.0	12.0	12.0	11.0	11.5	10.5	9.5	10.0
20	10.0	9.5	10.0	12.5	12.0	12.0	12.0	11.0	11.5	10.5	10.0	10.0
21	10.5	9.5	10.0	12.5	11.5	12.0	12.0	11.0	11.5	10.5	10.0	10.0
22	10.5	9.5	10.0	11.5	10.5	11.0	11.5	10.5	11.0	10.0	9.0	9.5
23	10.5	9.5	10.0	12.5	10.5	11.5	12.0	10.5	11.0	9.0	8.0	8.5
24	10.5	9.5	10.0	14.0	10.5	12.0	13.0	11.5	12.0	10.0	8.5	9.5
25	11.0	10.0	10.5	15.0	11.0	12.5	13.0	11.0	12.0	10.5	9.5	10.0
26	11.0	10.0	10.5	12.5	12.0	12.0	13.0	10.5	11.5	10.0	9.5	10.0
27	10.5	9.5	10.0	13.5	12.0	12.5	12.5	11.5	12.0	11.0	10.0	10.5
28	11.5	9.5	10.5	16.0	12.5	13.5	12.5	11.0	12.0	11.0	10.0	10.5
29	12.5	10.0	11.0	15.5	12.5	13.5	12.0	11.0	11.5	11.0	10.0	10.5
30	11.0	10.0	10.5	15.0	12.0	13.0	12.0	11.0	11.5	11.0	10.0	10.5
31	---	---	---	13.5	12.0	13.0	12.0	11.0	11.5	---	---	---
MONTH	15.0	7.5	10.3	16.0	9.5	12.0	16.0	10.5	12.4	12.5	8.0	10.7



EXPLANATION

▲¹ Discharge site and map number

Map No.	Station No.	Station Name	Map No.	Station No.	Station Name
* 1	15087690	Indian River near Sitka	5	15087735	Indian River Diversion Return Flow from Sheldon Jackson College at Sitka
2	15087695	Indian River above CBS pumphouse near Sitka	6	15087740	Indian River Diversion Return Flow at Mouth at Sitka
* 3	15087700	Indian River at Sitka	7	15087750	Indian River at Mouth at Sitka
4	15087730	Indian River Diversion to Sheldon Jackson College at Sawmill Cr Rd at Sitka			

* Daily discharge site

Locations of gaging stations in the Sitka area.

15087690 INDIAN RIVER NEAR SITKA

LOCATION.--Lat 57°04'01", long 135°17'42", in SW¹/₄ SE¹/₄ sec. 30, T. 55 S., R. 64 E. (Sitka A-4 quad), Hydrologic Unit 19010203, in Tongass National Forest, on Baranof Island, on right bank 2 mi upstream from mouth, and 1 mi northeast of Sitka.

DRAINAGE AREA.--10.1 mi²

PERIOD OF RECORD.--August 1980 to September 1993. October 1998 to current year.

REVISED RECORD.--WDR-82-1: 1980-81.

GAGE.--Water-stage recorder. Elevation of gage is 125 ft above sea level, from topographic map. Prior to October 1998, at site 200 ft upstream and at different datum

REMARKS.-- No estimated daily discharges. Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of November 19, 1993, reached a stage of 14.04 ft, site and datum then in use, from recorder, discharge, 6,460 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1200 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 16	1530	*3090	*13.03	Nov 26	0830	2260	12.31
Oct 20	2030	1390	11.34	Sep 1	2115	1400	11.35

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	44	124	76	67	85	35	36	33	47	25	343
2	96	41	95	57	90	70	31	34	36	45	42	283
3	75	38	81	51	83	59	30	31	33	54	46	166
4	63	36	71	128	68	94	29	29	32	125	33	105
5	83	34	64	123	61	69	29	28	33	69	28	82
6	240	35	58	156	56	51	29	27	32	54	25	71
7	503	32	54	130	52	44	29	27	31	48	22	83
8	328	30	120	80	49	41	34	27	29	45	20	340
9	231	29	106	68	46	40	34	27	28	42	19	121
10	129	28	71	63	48	38	31	28	27	40	18	129
11	98	27	64	61	47	36	31	28	27	38	17	237
12	94	28	69	57	43	34	31	60	26	36	17	128
13	89	39	71	52	40	35	31	53	27	34	17	236
14	73	46	60	47	37	33	32	57	25	33	17	288
15	64	47	64	44	36	36	34	43	24	31	68	131
16	919	37	62	42	34	34	32	39	24	30	133	97
17	416	57	65	121	34	31	31	37	26	30	130	82
18	120	51	63	74	41	35	30	35	33	29	68	77
19	93	126	52	114	60	31	30	34	57	27	69	83
20	358	81	47	128	38	30	29	34	91	28	167	181
21	700	88	44	72	33	30	30	35	59	31	101	160
22	276	64	67	59	31	35	30	37	55	29	75	106
23	136	51	85	53	30	31	32	40	52	29	64	88
24	104	48	78	50	44	28	37	43	42	26	58	376
25	88	76	57	50	49	28	58	50	46	25	53	691
26	82	658	49	65	39	27	61	50	111	24	48	188
27	85	327	46	125	41	27	54	39	72	27	45	317
28	70	154	44	67	41	28	46	37	76	26	42	240
29	60	111	42	59	---	42	40	36	60	72	40	122
30	53	204	40	126	---	82	38	35	51	39	113	93
31	48	---	68	76	---	45	---	34	---	28	93	---
TOTAL	5878	2667	2081	2474	1338	1329	1048	1150	1298	1241	1713	5644
MEAN	190	88.9	67.1	79.8	47.8	42.9	34.9	37.1	43.3	40.0	55.3	188
MAX	919	658	124	156	90	94	61	60	111	125	167	691
MIN	48	27	40	42	30	27	29	27	24	24	17	71
AC-FT	11660	5290	4130	4910	2650	2640	2080	2280	2570	2460	3400	11190
CFSM	18.8	8.80	6.65	7.90	4.73	4.24	3.46	3.67	4.28	3.96	5.47	18.6
IN.	21.65	9.82	7.66	9.11	4.93	4.89	3.86	4.24	4.78	4.57	6.31	20.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)#

	MEAN	MAX	(WY)	MIN	(WY)
1980	189	293	1988	104	1985
1981	101	218	1990	37.0	1999
1982	99.3	207	1990	21.7	1984
1983	98.7	184	1984	46.3	1988
1984	79.6	154	1993	24.8	1999
1985	61.6	122	1986	19.9	1989
1986	65.3	111	1983	29.0	2002
1987	104	167	1983	37.1	2003
1988	88.6	166	1985	28.8	1993
1989	63.4	111	1985	20.6	1993
1990	89.4	238	1983	30.0	1989
1991	170	295	1991	52.8	1986

See period of record; partial years used in monthly summary statistics and break in record

15087690 INDIAN RIVER NEAR SITKA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003#	
ANNUAL TOTAL	34253		27861			
ANNUAL MEAN	93.8		76.3		101	
HIGHEST ANNUAL MEAN					123	
LOWEST ANNUAL MEAN					76.3	
HIGHEST DAILY MEAN					2000	
LOWEST DAILY MEAN	a15	Aug 12	b17	Oct 16	8.6	
ANNUAL SEVEN-DAY MINIMUM	16	Apr 6	18	Aug 11	10	
MAXIMUM PEAK FLOW			c3090	Aug 8	d5710	
MAXIMUM PEAK STAGE			13.03	Oct 16	e13.51	
INSTANTANEOUS LOW FLOW			f16		8.2	
ANNUAL RUNOFF (AC-FT)	67940		55260		73310	
ANNUAL RUNOFF (CFSM)	9.29		7.56		10.0	
ANNUAL RUNOFF (INCHES)	126.16		102.62		136.13	
10 PERCENT EXCEEDS	157		128		185	
50 PERCENT EXCEEDS	68		48		68	
90 PERCENT EXCEEDS	26		28		29	

See period of record; partial years used in monthly summary statistics and break in record

a Apr. 6 to Apr. 8

b Aug. 11-14

c From rating curve extended above 300 ft³/s

d From rating curve extended above 3,100 ft³/s, at site and datum then in use

e At site and datum then in use

f Aug. 12 and Aug. 14

15087700 INDIAN RIVER AT SITKA

LOCATION.--Lat 57°03'12", long 135°18'52", in NE¹/₄ SW¹/₄ SE¹/₄ sec. 36, T. 55 S., R. 63 E. (Sitka A-4 quad), Hydrologic Unit 19010203, Greater Sitka Borough, in Tongass National Forest, on Baranof Island, on right bank 500 ft upstream from Sawmill Creek Road, 600 ft downstream from Sheldon Jackson College Diversion, and 0.6 mi above mouth.

DRAINAGE AREA.--12.0 mi²

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 30 ft above sea level, from topographic map.

REMARKS. Records good. Flow is diverted 600 ft upstream to Sheldon Jackson College.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	16	104	73	62	73	e19	17	18	41	29	482
2	82	14	70	45	89	60	e16	16	21	39	47	435
3	58	14	56	38	81	40	e14	15	19	46	56	185
4	47	13	48	118	62	76	e14	14	18	122	41	101
5	69	13	42	121	53	52	e14	14	19	67	36	79
6	319	13	37	153	46	29	e14	14	18	49	31	61
7	753	13	36	134	42	22	e15	13	17	42	28	72
8	402	14	117	e75	38	19	e19	13	16	39	27	503
9	238	13	100	e52	35	18	e19	13	18	36	26	116
10	94	12	58	47	38	17	e17	13	20	34	24	109
11	66	12	49	45	38	15	e15	13	19	36	23	292
12	63	12	53	41	33	14	e15	32	19	35	23	117
13	59	21	61	35	29	15	e15	27	19	33	24	279
14	46	28	46	30	25	15	e16	33	18	32	23	365
15	38	29	50	27	22	17	e18	21	18	29	77	122
16	1270	20	48	26	21	15	e16	18	17	26	142	81
17	604	44	53	124	21	14	e15	17	18	26	141	65
18	93	35	52	65	26	16	14	16	23	25	65	62
19	63	121	36	101	49	14	14	16	45	24	56	66
20	515	65	30	125	25	14	14	15	91	24	165	175
21	1260	74	27	62	21	14	14	16	57	26	88	167
22	352	47	56	47	20	16	15	19	49	25	62	95
23	103	33	85	41	19	15	15	23	47	25	49	75
24	85	29	82	38	32	13	17	28	42	24	44	490
25	48	57	47	38	36	13	28	35	47	23	39	1010
26	43	999	34	57	26	13	34	38	120	22	34	208
27	47	436	29	127	27	e12	27	25	80	24	33	427
28	33	137	27	62	27	e14	21	22	86	23	31	303
29	24	83	25	51	---	e25	19	22	66	75	28	116
30	20	215	24	124	---	e52	18	20	49	41	111	81
31	17	---	55	72	---	e26	---	20	---	32	82	---
TOTAL	7007	2632	1637	2194	1043	768	521	618	1114	1145	1685	6739
MEAN	226	87.7	52.8	70.8	37.2	24.8	17.4	19.9	37.1	36.9	54.4	225
MAX	1270	999	117	153	89	76	34	38	120	122	165	1010
MIN	17	12	24	26	19	12	14	13	16	22	23	61
MED	69	29	49	57	32	16	16	17	19	32	39	119
AC-FT	13900	5220	3250	4350	2070	1520	1030	1230	2210	2270	3340	13370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

	MEAN	205	71.1	98.4	76.0	49.4	48.5	47.7	79.2	80.3	56.0	75.7	151
	MAX	248	87.7	240	125	82.7	107	108	139	130	67.7	196	225
	(WY)	1999	2003	2000	1999	2002	2001	1999	1999	1999	2000	2002	2003
	MIN	141	38.0	51.0	55.7	23.6	24.8	15.2	19.9	37.1	36.9	22.0	78.9
	(WY)	2001	1999	2002	2002	1999	2003	2002	2003	2003	2003	2001	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1999 - 2003
ANNUAL TOTAL	31980.7	27103	
ANNUAL MEAN	87.6	74.3	86.8
HIGHEST ANNUAL MEAN			103
LOWEST ANNUAL MEAN			74.3
HIGHEST DAILY MEAN	1270	Oct 16	2390
LOWEST DAILY MEAN	a9.2	Apr 6	a9.2
ANNUAL SEVEN-DAY MINIMUM	9.2	Apr 6	9.2
MAXIMUM PEAK FLOW		c3890	c5740
MAXIMUM PEAK STAGE		25.93	26.84
INSTANTANEOUS LOW FLOW		d11	9.0
ANNUAL RUNOFF (AC-FT)	63430	53760	62910
10 PERCENT EXCEEDS	152	123	157
50 PERCENT EXCEEDS	48	35	50
90 PERCENT EXCEEDS	13	14	19

a Apr. 6 to Apr. 9, 2002

b Nov. 10 to Nov. 12, and Mar. 27

c From rating curve extended above 1050 ft³/s

d Nov. 11 and 12

15088000 SAWMILL CREEK NEAR SITKA

LOCATION.--Lat 57°03'05", long 135°13'40", in NE¹/₄ SW¹/₄ sec. 34, T. 55 S., R. 64 E. (Sitka A-4 quad.), Hydrologic Unit 19010401, on Baranof Island, in Tongass National Forest, on left bank 500 ft upstream from mouth, 1.6 mi downstream from Blue Lake, and 4.0 mi east of Sitka.

DRAINAGE AREA.--39.0 mi².

PERIOD OF RECORD.-- September 1920 to December 1923, February 1928 to September 1942, October 1945 to September 1957, 1994 (peak discharge only, published in WRD AK 95-1), and May 2001 to current year. Records prior to 1945 furnished by U.S. Forest Service.

REVISED RECORDS.-- WSP 1372: 1921-22 and 1928-36.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is sea level, from topographic map. Prior to April 1947, staff gages or water-stage recorders at several sites within 1,700 ft of present site at various datums. April 1947 to September 1957 at site about 200 ft upstream at different datum.

REMARKS.--Records good. Minor regulation above station by Sitka Public Utilities hydroelectric plant during periods 1920-23 and 1937-42. In 1959, Blue Lake Dam, 1.6 mi upstream, was completed. The area of the lake is 1225 acres. The dam is concrete with a spillway elevation of 342.0 ft above sea level. In 1960, the Blue Lake Hydro plant, located 400 ft downstream from gage, was put into operation. Water is taken from Blue Lake and piped via a penstock to Blue Lake hydro, through 2-3,000 kw turbines and discharged back into Sawmill Creek just below high tide level. This penstock also provides water for the City of Sitka and for the filter plant for the Sitka Sawmill. In the years following, Campground Hydro, a smaller generation plant was constructed about 1,000 ft below Blue Lake Dam. It also has a penstock from Blue Lake and discharges directly into Sawmill Creek. A fish bypass valve has been installed at Campground Hydro that automatically releases 50 ft³/s to the tailrace anytime the hydro plant is shut down. Another small generator was installed just above the Sawmill Filter Plant diversion from Blue Lake Hydro penstock with the capability of bypassing the filter plant and discharging back into Sawmill Creek above the gage site. Water that went to the filter plant was piped to the sawmill and eventually discharged directly into Silver Bay. The sawmill has since closed and water is now supplied to Sawmill Cove Industrial Park. Flow is constantly regulated except when Blue Lake is spilling.

EXTREMES OUTSIDE PERIOD OF RECORD.-- It was reported that in October 1972, a storm produced a peak elevation at Blue Lake of 353.0 ft or 11.0 ft of spill at the spillway. Extending the spillway rating, this flood was estimated to be 17,000 ft³/s. It was reported to have been the largest since 1921.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296	241	601	54	78	89	71	65	66	73	120	e241
2	313	248	279	51	82	88	68	64	66	73	124	e154
3	281	247	123	64	83	85	67	63	66	74	123	e138
4	270	188	72	100	77	96	66	63	66	87	118	e117
5	280	62	69	93	75	88	66	63	65	79	117	e111
6	572	63	68	103	74	80	66	63	65	76	116	e111
7	2440	62	68	93	74	77	66	63	65	75	115	e109
8	2630	62	80	78	73	74	67	62	65	74	114	e184
9	1670	62	87	73	73	74	67	62	55	73	114	e125
10	841	62	97	72	74	74	66	62	65	73	114	e114
11	408	62	119	71	75	73	66	63	65	72	114	e173
12	297	63	120	71	73	73	66	65	66	72	113	e120
13	297	64	128	70	73	73	66	67	66	72	113	e214
14	273	65	101	70	73	73	66	69	66	72	113	e247
15	270	67	98	69	73	74	66	67	66	72	118	e108
16	1850	67	116	69	73	73	65	66	66	72	124	e104
17	3710	72	94	80	73	73	64	66	67	72	126	e105
18	1410	72	79	75	77	74	64	65	69	73	118	e107
19	687	84	73	88	77	73	64	65	75	72	120	e110
20	791	77	71	93	76	74	64	64	85	72	127	e131
21	2950	80	70	79	75	72	64	64	80	72	108	e148
22	2330	75	78	74	74	75	64	64	81	99	117	e148
23	1170	71	86	72	74	74	64	64	80	116	114	e128
24	616	70	86	71	75	73	65	64	75	116	112	e188
25	373	71	77	70	78	73	67	66	74	116	111	e2540
26	285	203	73	83	78	72	68	67	81	116	e109	e2390
27	268	1380	66	100	78	72	67	66	79	115	e109	e1240
28	257	1530	70	81	80	70	66	66	81	115	e108	e2300
29	252	754	70	76	---	70	64	65	76	122	e108	e1150
30	251	702	60	86	---	78	64	66	74	114	e117	e993
31	249	---	53	79	---	74	---	66	---	117	e118	---
TOTAL	28587	6926	3332	2408	2118	2361	1974	2005	2116	2696	3592	14048
MEAN	922	231	107	77.7	75.6	76.2	65.8	64.7	70.5	87.0	116	468
MAX	3710	1530	601	103	83	96	71	69	85	122	127	2540
MIN	249	62	53	51	73	70	64	62	55	72	108	104
AC-FT	56700	13740	6610	4780	4200	4680	3920	3980	4200	5350	7120	27860
CFSM	23.6	5.92	2.76	1.99	1.94	1.95	1.69	1.66	1.81	2.23	2.97	12.0
IN.	27.27	6.61	3.18	2.30	2.02	2.25	1.88	1.91	2.02	2.57	3.43	13.40

e Estimated

15088000 SAWMILL CREEK NEAR SITKA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY) #

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	744	473	259	174	166	128	202	534	704	657	663	744
MAX	1204	998	818	500	644	365	663	861	1179	976	1235	1287
(WY)	1938	1936	1931	1942	1935	1947	1936	1936	1936	1935	1939	1947
MIN	354	78.5	50.1	29.9	33.1	24.8	61.5	60.3	53.9	87.0	116	359
(WY)	1923	2002	1951	1956	1951	1922	1948	2002	2002	2003	2003	1941
SUMMARY STATISTICS												
	FOR 2002 CALENDAR YEAR					FOR 2003 WATER YEAR				WATER YEARS 1920 - 2003#		
ANNUAL TOTAL	108127					72163						
ANNUAL MEAN	296					198				460		
HIGHEST ANNUAL MEAN										715		
LOWEST ANNUAL MEAN										198		
HIGHEST DAILY MEAN	4760					3710				5500		
LOWEST DAILY MEAN	a47					51				11		
ANNUAL SEVEN-DAY MINIMUM	47					60				12		
MAXIMUM PEAK FLOW						5680				b10700		
MAXIMUM PEAK STAGE						17.52				c		
INSTANTANEOUS LOW FLOW						37				9.1		
ANNUAL RUNOFF (AC-FT)	214500					143100				333600		
ANNUAL RUNOFF (CFSM)	7.60					5.07				11.8		
ANNUAL RUNOFF (INCHES)	103.14					68.83				160.41		
10 PERCENT EXCEEDS	778					271				933		
50 PERCENT EXCEEDS	77					75				346		
90 PERCENT EXCEEDS	57					64				65		

See Period of Record; partial years used in monthly statistics

a Jun. 18-24

b On the basis of a slope-area computation of peak flow below Campground Hydro and adding diversion values at the time of peak between Campground Hydro and gage; peak flow below Blue Lake Tailrace was computed to be 11,100 ft³/s

c Undetermined

15088200 SILVER BAY TRIBUTARY AT BEAR COVE NEAR SITKA

LOCATION.--Lat 57°01'09", long 135°09'45", in SW¹/₄ NW¹/₄ NE¹/₄ sec. 13, T. 56 S., R. 64 E. (Sitka A-4 quad), Hydrologic Unit 19010203, in Tongass National Forest, on Baranof Island, on right bank 350 ft upstream from mouth, and 6.5 mi southwest of Sitka.

DRAINAGE AREA.--0.38 mi².

PERIOD OF RECORD.-- October 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 110 ft above sea level, from topographic map.

REMARKS.-- Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	0.45	1.4	1.7	3.2	2.6	0.72	0.98	0.75	0.96	3.8	10
2	2.5	0.41	1.1	2.1	3.9	4.2	0.68	0.75	0.60	1.5	1.9	4.1
3	1.5	0.38	0.97	9.8	1.8	5.6	0.67	0.64	0.70	2.8	1.8	1.4
4	1.1	0.36	0.88	8.5	1.3	2.0	0.64	0.64	0.65	1.5	1.4	0.81
5	4.5	0.37	0.86	13	1.1	1.0	0.59	0.57	0.56	1.1	0.78	0.58
6	12	1.00	1.5	2.9	1.0	0.70	0.66	0.53	0.45	0.80	0.43	1.2
7	12	0.75	13	e2.0	1.0	0.46	1.0	0.72	0.40	0.59	0.30	7.2
8	5.0	0.46	4.7	e1.2	1.00	e0.32	0.97	0.83	0.38	0.50	0.18	1.6
9	3.8	0.43	1.9	1.3	2.2	e0.21	0.98	0.75	0.36	0.40	0.03	3.9
10	1.3	0.40	2.4	2.2	1.9	e0.11	1.2	0.77	0.34	0.32	0.00	10
11	0.93	1.9	5.0	1.5	1.3	e0.03	1.5	1.8	0.38	0.23	0.01	2.7
12	5.7	3.4	2.5	1.1	1.1	0.37	1.9	1.4	0.37	0.20	0.56	14
13	1.8	2.7	1.8	0.97	1.0	0.56	1.9	1.5	0.31	0.32	0.36	7.1
14	1.1	2.5	6.5	0.94	0.90	1.2	1.5	1.1	0.29	0.19	5.0	1.4
15	0.84	1.4	2.2	1.0	0.82	0.80	0.98	0.90	0.30	0.05	2.9	0.85
16	41	3.2	1.9	6.2	0.85	0.59	0.85	0.90	0.84	0.02	2.0	0.88
17	6.3	2.0	1.8	2.3	1.5	0.69	0.81	1.0	1.6	0.00	1.3	3.1
18	1.3	6.0	1.2	8.9	2.7	0.58	0.86	0.79	3.1	0.00	1.5	3.0
19	1.3	3.9	1.1	5.4	1.2	0.67	1.1	0.73	8.1	0.03	4.3	8.7
20	25	4.3	0.97	1.6	0.99	0.79	1.2	0.81	6.9	0.24	1.5	3.6
21	27	1.8	6.1	1.0	0.93	0.96	0.99	0.72	5.2	0.58	0.90	2.3
22	6.4	1.1	4.0	0.88	0.88	0.68	1.5	1.0	3.2	0.50	0.54	1.6
23	1.4	1.4	3.8	0.83	1.4	0.63	3.9	0.95	2.2	0.49	0.36	21
24	1.0	3.6	1.7	1.2	1.8	0.61	5.0	3.1	2.6	0.63	0.29	16
25	0.80	20	1.2	5.7	1.5	0.56	3.5	1.3	4.3	0.54	0.22	2.8
26	1.0	18	1.1	5.7	1.9	0.68	2.7	0.72	4.9	0.69	0.26	15
27	2.2	4.1	0.99	1.8	2.5	0.93	1.9	0.76	3.9	0.42	0.29	3.8
28	1.1	1.8	0.91	2.0	3.0	2.7	1.6	0.65	2.1	3.8	0.21	1.0
29	0.75	6.4	0.91	3.4	---	4.3	1.3	0.61	1.5	1.1	5.7	0.57
30	0.56	2.3	1.1	1.6	---	1.2	1.3	0.60	1.2	0.90	2.4	0.42
31	0.50	---	1.8	1.3	---	0.82	---	0.48	---	1.7	16	---
TOTAL	177.98	96.81	77.29	100.02	44.67	37.55	44.40	29.00	58.48	23.10	57.22	150.61
MEAN	5.74	3.23	2.49	3.23	1.60	1.21	1.48	0.94	1.95	0.75	1.85	5.02
MAX	41	20	13	13	3.9	5.6	5.0	3.1	8.1	3.8	16	21
MIN	0.50	0.36	0.86	0.83	0.82	0.03	0.59	0.48	0.29	0.00	0.00	0.42
MED	1.5	1.8	1.7	1.8	1.3	0.69	1.1	0.77	0.80	0.50	0.78	2.9
AC-FT	353	192	153	198	89	74	88	58	116	46	113	299
CFSM	15.1	8.49	6.56	8.49	4.20	3.19	3.89	2.46	5.13	1.96	4.86	13.2
IN.	17.42	9.48	7.57	9.79	4.37	3.68	4.35	2.84	5.72	2.26	5.60	14.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003
MEAN	6.56	3.46	4.17	2.73
MAX	7.64	4.56	7.73	3.23
(WY)	2002	2000	2000	2003
MIN	5.34	2.85	2.49	1.68
(WY)	2001	2001	2003	2000

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2000 - 2003

ANNUAL TOTAL	1317.56	897.13		
ANNUAL MEAN	3.61	2.46	3.55	
HIGHEST ANNUAL MEAN			4.54	2000
LOWEST ANNUAL MEAN			2.46	2003
HIGHEST DAILY MEAN	51	Aug 12	41	Oct 16
LOWEST DAILY MEAN	0.21	Mar 19	a0.00	Jul 17
ANNUAL SEVEN-DAY MINIMUM	0.23	Mar 15	0.08	Jul 14
MAXIMUM PEAK FLOW			167	Oct 16
MAXIMUM PEAK STAGE			19.67	Oct 16
INSTANTANEOUS LOW FLOW			b0.00	Jul 16
ANNUAL RUNOFF (AC-FT)	2610		1780	
ANNUAL RUNOFF (CFSM)	9.50		6.47	
ANNUAL RUNOFF (INCHES)	128.98		87.82	
10 PERCENT EXCEEDS	8.2		5.6	
50 PERCENT EXCEEDS	1.9		1.2	
90 PERCENT EXCEEDS	0.42		0.38	

a Jul. 17-18, and Aug. 10
b Jul. 16-19, and Aug. 10-11
c Dec. 2 and Dec. 3, 2001
e Estimated

15090000 GREEN LAKE NEAR SITKA

LOCATION.--Lat 56°59'14", long 135°06'37", in SW¹/₄ NE¹/₄ sec. 29, T. 56 S., R. 65 E. (Port Alexander D-4 quad), Hydrologic Unit 19010203, Greater Sitka Borough, on Baranof Island, in Tongass National Forest, 0.4 mi upstream from mouth at Silver Bay, and 9.4 mi southeast of Sitka.

DRAINAGE AREA.--28.8 mi².

PERIOD OF RECORD.--September 1915 to September 1925 (published as "Green Lake Outlet"); monthly discharges only published in WSP 1372. October 1983 to current year (month end reservoir contents and monthly discharges).

REVISED RECORDS.--WSP 1372: 1916, 1917, 1922 (monthly discharge). WDR AK-84-1: Drainage area. WDR AK-86-1: 1984, 1985 (month-end reservoir contents, change in month-end and yearly contents, adjusted mean monthly discharges, and extremes). WRD AK-00-01: 1998-1999 (M m).

GAGE.--Staff gage on upstream face of dam. Datum of gage is at mean low water, which is about 5 ft below sea level. Totalizing MWH meters are on the two turbines in Green Lake powerhouse. September 1915 to September 1925, recording gage at site of present day dam, elevation of gage was 220 ft above sea level, by barometer; prior to December 27, 1916 at datum 1 ft higher. Water years 1983-88, nonrecording remote lake-level indicator at Blue Lake powerhouse (6 mi northwest of gage).

REMARKS.--Reservoir is formed by concrete arch dam located at the outlet of Green Lake, construction began in 1978 and was completed in 1982. Total and usable capacity below spillway crest elevation of 395 ft is 88,000 and 75,000 acre-ft, respectively. Reservoir is used for power. Discharge released through the turbines is computed from relation between discharge, head, and power generation; release flow empties directly into Silver Bay and is not returned to stream. Spill is computed from a theoretical relation between discharge and stage above the crest of the 100 ft wide spillway. Turbine and spillway ratings and reservoir capacity table furnished by City and Borough of Sitka in 1983. Corrected reservoir capacity table furnished in April 1987.

COOPERATION.--Daily reservoir elevations and MWH power generation provided by City and Borough of Sitka.

AVERAGE DISCHARGE.--29 years (water years, 1916-25, 1985-2003), 313 ft³/s, 147.6 in/yr, 226,800 acre-ft/yr. Mean discharge for water years 1985-03 adjusted for change in contents of Green Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 93,780 acre-ft, September 22-23, 1994, elevation, 400.5 ft; minimum contents observed, 23,170 acre-ft, June 1, 1996, elevation, 307.6 ft; Maximum daily discharge, 5,020 ft³/s, September 22-23, 1994; no flow released, February 5-8, 1987 and November 27-29, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 90,840 acre-ft, October 21-23, elevation 397.7 ft; minimum contents observed, 58,920 acre-ft, April 24, elevation 362.4 ft; Maximum daily discharge (not adjusted for storage) 313 ft³/s, December 13; minimum daily discharge, 6.0 ft³/s, December 14.

MONTH END RESERVOIR ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS, IN ACRE FEET

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	ELEVATION	CONTENTS	CHANGE IN CONTENTS
Sep 30	395.6	88,630	
Oct 31	394.8	87,810	-820
Nov 30	396.4	89,470	+1660
Dec 31	393.0	86,100	-3,370
Jan 31	391.6	84,770	-1,330
Feb 28	382.4	76,160	-8,610
Mar 31	370.5	65,680	-10,480
Apr 30	364.4	60,520	-5,160
May 31	370.4	65,590	+5,070
Jun 30	382.5	76,250	+10,660
Jul 31	386.5	79,930	+3,680
Aug 31	392.2	85,340	+5,410
Sep 30	395.4	88,420	+3,080
CAL YR 2002			+9220
WTR YR 2003			-210

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
MEAN VALUES

MONTH	RELEASE	SPILL	TOTAL	ADJUSTED
OCT	225	0	225	212
NOV	200	587	787	789
DEC	139	0	139	144
JAN	198	0	198	176
FEB	215	0	215	60
MAR	243	0	243	73
APR	167	0	167	80
MAY	149	0	149	231
JUN	154	0	154	333
JUL	134	0	134	194
AUG	131	0	131	219
SEP	128	133	261	313
CAL YR 2002	231	57.4	289	304
WTR YR 2003	173	59.2	233	235

15101490 GREENS CREEK AT GREENS CREEK MINE NEAR JUNEAU

LOCATION.--Lat 58°05'00", long 134°37'54", in NW¹/₄ SE¹/₄ sec. 4, T. 44 S., R. 66 E. (Juneau A-2 quad), Hydrologic Unit 19010204, on Admiralty Island, in Admiralty Island National Monument, Tongass National Forest, on right bank, 100 ft upstream from mine portal, 0.3 mi downstream from Big Sore Creek, 7.0 mi upstream from mouth at Hawk Inlet, and 19 mi southwest of Juneau.

DRAINAGE AREA.--8.62 mi².

PERIOD OF RECORD.--August 1989 to current year.

REVISED RECORD.--WRD AK-99-1, 1990-1994(M), 1996-1998(M).

GAGE.--Water-stage recorder. Datum of gage is 890.16 ft above sea level (levels by Greens Creek Mining Company). Prior to February 16, 1999, recording gage at site 30 ft upstream at datum 9.84 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Greens Creek Mining Company pumps water from gage pool for use in mill. Diversion flow is recorded on totalizing meters in gage house. Pump records are available from Greens Creek Mining Company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	25	78	17	15	9.1	8.9	69	76	31	25	e28
2	51	23	48	17	15	11	7.9	47	69	29	31	e105
3	43	22	34	16	16	15	9.8	35	54	34	25	e75
4	41	21	29	67	17	20	6.4	29	50	35	26	e57
5	47	20	26	65	15	14	5.3	26	72	28	23	e41
6	68	23	25	85	14	e12	5.0	24	82	27	20	e38
7	74	20	27	43	14	e10	5.2	24	67	25	19	e41
8	84	19	61	27	13	e7.0	6.4	26	53	23	e18	e75
9	82	18	89	23	13	e6.0	6.9	30	51	23	e18	e98
10	66	18	65	22	14	e5.4	6.9	32	51	22	e17	e70
11	52	18	42	20	15	e5.2	8.5	33	46	21	e20	e85
12	69	18	90	19	14	e5.0	11	52	43	19	e20	e78
13	67	25	56	18	13	e5.0	13	40	42	19	e16	e112
14	52	23	34	e17	12	e5.3	14	34	37	19	e16	e164
15	52	21	47	17	12	5.6	16	32	35	18	e26	e116
16	92	20	33	16	11	5.7	14	29	33	18	e31	e99
17	120	20	27	36	11	5.4	13	28	53	18	e32	e86
18	87	20	25	31	10	5.2	12	30	55	17	e26	e86
19	82	27	22	38	e9.6	5.2	13	31	60	16	e27	e83
20	93	29	20	34	e8.5	5.2	14	33	73	16	e32	e75
21	165	33	20	e23	e8.0	5.4	15	40	57	17	e32	e108
22	132	24	20	e20	e7.8	5.4	16	68	52	16	e29	e90
23	95	20	20	e18	e8.1	5.0	20	107	38	15	e27	e85
24	78	20	42	e17	9.6	4.8	35	122	36	14	e24	e116
25	55	36	23	e16	9.1	4.6	61	108	45	14	e23	e124
26	53	137	20	e15	8.7	4.7	83	86	44	14	e23	e101
27	49	120	18	e15	8.8	5.1	88	71	36	17	e20	e93
28	35	90	18	16	8.0	6.2	77	71	44	16	e21	e129
29	31	69	18	20	---	14	69	81	35	27	e20	e82
30	28	117	16	18	---	17	73	80	32	19	e18	e75
31	26	---	16	16	---	12	---	84	---	18	e27	---
TOTAL	2127	1096	1109	822	330.2	246.5	734.2	1602	1521	645	732	2615
MEAN	68.6	36.5	35.8	26.5	11.8	7.95	24.5	51.7	50.7	20.8	23.6	87.2
MAX	165	137	90	85	17	20	88	122	82	35	32	164
MIN	26	18	16	15	7.8	4.6	5.0	24	32	14	16	28
AC-FT	4220	2170	2200	1630	655	489	1460	3180	3020	1280	1450	5190
CFSM	7.96	4.24	4.15	3.08	1.37	0.92	2.84	6.00	5.88	2.41	2.74	10.1
IN.	9.18	4.73	4.79	3.55	1.42	1.06	3.17	6.91	6.56	2.78	3.16	11.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)#

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	61.7	30.2	25.9	15.6	13.1	11.2	28.3	77.4	86.2	54.0	40.6	62.1			
MAX	97.9	49.5	65.7	26.5	36.9	27.2	49.6	107	147	90.5	69.7	95.0			
(WY)	1999	1994	1990	2003	1992	1992	1994	1992	1992	2000	1991	1991			
MIN	34.7	14.6	8.27	5.50	3.43	2.82	3.56	51.7	50.7	20.8	18.7	33.3			
(WY)	1994	1991	1997	1997	1999	2002	2002	2003	2003	2003	1994	1995			

See Period of Record, partial years used in monthly statistics
e Estimated

15101490 GREENS CREEK AT GREENS CREEK MINE NEAR JUNEAU—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003#	
ANNUAL TOTAL	15112.0		13579.9			
ANNUAL MEAN	41.4		37.2		42.4	
HIGHEST ANNUAL MEAN					60.1	
LOWEST ANNUAL MEAN					31.8	
HIGHEST DAILY MEAN	165	Oct 21	165	Oct 21	465	Oct 20 1998
LOWEST DAILY MEAN	1.2	Apr 3	4.6	Mar 25	a1.2	Apr 3 2002
ANNUAL SEVEN-DAY MINIMUM	1.2	Apr 8	5.0	Mar 21	1.2	Apr 8 2002
MAXIMUM PEAK FLOW			b193	Oct 21	c710	Oct 20 1998
MAXIMUM PEAK STAGE			2.85	Oct 21	d14.79	Oct 20 1998
INSTANTANEOUS LOW FLOW			2.0	Feb 26	f0.98	Mar 20 2002
ANNUAL RUNOFF (AC-FT)	29970		26940		30730	
ANNUAL RUNOFF (CFSM)	4.80		4.32		4.92	
ANNUAL RUNOFF (INCHES)	65.22		58.60		66.86	
10 PERCENT EXCEEDS	93		84		91	
50 PERCENT EXCEEDS	32		25		31	
90 PERCENT EXCEEDS	1.9		8.8		6.3	

See Period of Record, partial years used in monthly statistics

a Apr. 3-4, 8, and 11-14

b May have been higher during period of estimated discharge

c From rating curve extended above 140 ft³/s on basis of slope area measurement of peak flow

d Same site, different datum

f Mar. 20, and Apr. 7-11

15102200 FAVORITE CREEK NEAR ANGOON

LOCATION.--Lat 57°26'52", long 134°27'35", in SE¹/₄ NE¹/₄ SW¹/₄ sec. 14, T. 51 S., R. 68 E. (Sitka B-2 quad), Hydrologic Unit 19010204, in Tongass National Forest, on Admiralty Island, on right bank 1.2 mi upstream from confluence with North Fork Favorite Creek, 2.2 miles from the mouth of Favorite Creek and about 5.7 mi south east of Angoon.

DRAINAGE AREA.--2.52 mi²

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 2000 to September 2003 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 370 ft above sea level, from topographic map.

REMARKS.-- Records good, except for discharges above 80 ft³/s, and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	e7.5	18	17	8.0	5.1	5.2	14	19	9.3	3.3	9.0
2	e8.0	e6.6	15	12	14	4.7	4.2	13	17	8.7	3.1	19
3	e9.0	e8.0	13	16	13	5.3	e3.6	11	15	9.2	2.9	12
4	e10	e6.6	11	83	12	7.5	3.4	10	14	10	3.0	9.5
5	e15	6.3	9.9	86	9.7	6.1	3.3	8.8	17	8.5	3.2	8.3
6	e10	12	8.9	58	8.0	4.3	5.6	7.9	18	7.6	2.9	9.3
7	e14	10	9.0	25	6.8	e2.9	14	7.2	18	6.8	2.7	16
8	e25	8.3	15	18	6.1	e2.5	14	7.0	16	6.3	2.6	12
9	e45	7.4	21	15	5.7	e2.4	8.8	7.3	16	5.7	2.5	10
10	e35	7.0	20	13	5.6	e2.2	10	8.5	15	5.4	2.4	11
11	e20	6.8	34	12	5.4	e2.2	7.9	10	14	5.0	2.3	11
12	e25	8.3	66	11	5.1	e2.1	7.7	13	14	4.8	2.3	9.1
13	e20	19	25	9.3	4.9	e2.1	7.7	13	15	4.6	2.2	23
14	e15	21	19	8.3	4.6	e2.3	7.7	12	14	4.4	2.3	20
15	e10	14	90	8.6	4.4	2.6	9.3	11	13	4.2	6.3	15
16	e34	11	22	9.4	4.3	2.8	7.8	10	12	3.9	4.8	13
17	e55	14	16	20	4.1	3.2	7.0	9.1	17	3.8	4.2	11
18	e30	12	16	17	4.1	3.9	9.3	8.9	18	3.6	4.0	13
19	e24	17	11	18	4.1	3.2	12	9.3	15	3.4	3.7	12
20	e29	14	8.7	16	3.7	3.1	9.0	10	14	3.4	3.7	13
21	e70	16	7.3	13	e3.2	3.5	8.4	11	13	3.5	3.8	13
22	e35	12	12	11	3.4	3.7	9.2	14	12	3.8	3.7	12
23	e20	10	19	9.8	e2.9	3.4	9.6	32	12	3.6	3.5	12
24	e16	9.7	35	8.8	3.1	2.9	10	53	11	3.3	3.3	18
25	e14	14	11	8.2	3.1	2.7	15	54	11	3.1	3.1	15
26	e17	26	8.4	7.7	3.0	2.7	16	24	11	3.0	3.0	14
27	e20	28	7.1	7.0	3.1	2.8	15	19	11	2.9	2.9	14
28	e16	21	6.3	8.3	3.0	8.6	14	18	12	2.7	2.8	13
29	e13	16	5.6	17	---	15	14	19	11	3.2	2.7	12
30	e11	24	5.3	13	---	15	14	20	9.8	2.9	4.8	10
31	e8.5	---	21	9.8	---	7.9	---	20	---	2.7	4.3	---
TOTAL	683.5	393.5	586.5	586.2	158.4	138.7	282.7	485.0	424.8	153.3	102.3	389.2
MEAN	22.0	13.1	18.9	18.9	5.66	4.47	9.42	15.6	14.2	4.95	3.30	13.0
MAX	70	28	90	86	14	15	16	54	19	10	6.3	23
MIN	8.0	6.3	5.3	7.0	2.9	2.1	3.3	7.0	9.8	2.7	2.2	8.3
MED	17	12	15	13	4.5	3.2	9.1	11	14	3.9	3.1	12
AC-FT	1360	781	1160	1160	314	275	561	962	843	304	203	772
CFSM	8.75	5.21	7.51	7.50	2.24	1.78	3.74	6.21	5.62	1.96	1.31	5.15
IN.	10.09	5.81	8.66	8.65	2.34	2.05	4.17	7.16	6.27	2.26	1.51	5.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)#

	MEAN	19.0	15.4	15.8	17.8	8.15	4.14	7.05	21.0	24.7	11.6	7.64	13.7
MAX	22.0	17.6	18.9	22.5	10.7	5.37	9.42	28.2	30.3	18.0	12.2	16.0	
(WY)	2003	2002	2003	2001	2001	2001	2003	2002	2001	2001	2002	2001	
MIN	15.9	13.1	12.4	12.0	5.66	2.57	3.25	15.6	14.2	4.95	3.30	12.2	
(WY)	2002	2003	2002	2002	2003	2002	2002	2003	2003	2003	2003	2002	

See Period of Record, partial year used in monthly statistics
e Estimated

15102200 FAVORITE CREEK NEAR ANGOON—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003#	
ANNUAL TOTAL	5309.7		4384.1			
ANNUAL MEAN	14.5		12.0		12.9	
HIGHEST ANNUAL MEAN					13.8	2002
LOWEST ANNUAL MEAN					12.0	2003
HIGHEST DAILY MEAN	107	May 29	90	Dec 15	123	Dec 24 2001
LOWEST DAILY MEAN	1.5	Apr 7	a2.1	Mar 12	1.5	Apr 7 2002
ANNUAL SEVEN-DAY MINIMUM	1.5	Apr 5	2.3	Mar 8	1.5	Apr 5 2002
MAXIMUM PEAK FLOW			462	Dec 15	b462	Dec 15 2002
MAXIMUM PEAK STAGE			11.43	Dec 15	11.43	Dec 15 2002
INSTANTANEOUS LOW FLOW			2.1	Aug 13	1.4	Apr 4 2002
ANNUAL RUNOFF (AC-FT)	10530		8700		9360	
ANNUAL RUNOFF (CFSM)	5.77		4.77		5.13	
ANNUAL RUNOFF (INCHES)	78.38		64.72		69.69	
10 PERCENT EXCEEDS	33		20		26	
50 PERCENT EXCEEDS	10		9.8		9.8	
90 PERCENT EXCEEDS	2.4		3.0		2.7	

See Period of Record, partial year used in monthly statistics

a Mar. 12 and 13

b From rating curve extended above 80 ft³/s.

15102200 FAVORITE CREEK NEAR ANGOON—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2002 to July 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)
NOV 04...	1145	9	9	13.5	10.06	6.6	30	8010	6.0	6.5	<1.0
JAN 09...	1315	9	9	14.5	10.23	15	30	8010	--	--	1.1
MAR 07...	1000	9	9	13.9	10.04	2.9	30	8010	-7.5	.0	3.7
APR 25...	0930	9	9	17.0	10.18	13	30	8010	6.5	3.0	<1.0
JUL 07...	1200	9	9	16.0	10.01	6.9	30	8010	15.5	8.0	<1.0

15106920 KADASHAN RIVER ABOVE HOOK CREEK NEAR TENAKEE

LOCATION.--Lat 57°39'46", long 135°11'06", in NW¹/₄ SE¹/₄ sec. 34, T. 48 S., R. 63 E. (Sitka C-4 quad), Greater Sitka Borough, Hydrologic Unit 19010203, on Chichagof Island, in Tongass National Forest, on right bank 0.6 mi upstream from Hook Creek, 3.5 mi upstream from mouth at Kadashan Bay, and 9 mi south of Tenakee.

DRAINAGE AREA.--10.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1968 to September 1978, October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 100 ft above sea level, from topographic map. Prior to October 24, 1969, at site 90 ft downstream at different datum; October 24, 1969 to September 30, 1978, at site 75 ft downstream at datum 1.89 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*)

Date		Time	Discharge (ft ³ /s)	Gage Height (ft)	Date		Time	Discharge (ft ³ /s)	Gage Height (ft)			
Oct. 16		1415	721	4.05	Sept. 01		2115	748	4.10			
Oct. 20		2200	977	4.49	Sept. 13		1700	654	3.92			
Nov. 26		0945	*1100	*4.68	Sept. 24		0500	634	3.88			
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	28	69	55	35	66	31	50	28	18	15	216
2	86	26	48	45	92	43	25	40	37	14	14	206
3	56	24	39	36	96	49	23	33	27	33	12	75
4	43	23	34	226	72	64	21	29	25	35	11	43
5	83	22	30	197	58	41	20	27	28	20	9.8	31
6	125	24	28	246	44	26	23	26	26	16	8.9	30
7	175	22	33	104	37	e15	53	26	22	14	8.3	102
8	195	20	123	65	33	e13	64	28	20	13	7.8	143
9	108	19	141	50	32	e13	52	32	18	12	7.3	53
10	62	20	80	42	38	e12	47	33	17	11	6.9	72
11	56	19	82	37	40	e12	41	34	16	10	6.7	80
12	88	20	125	35	32	e11	39	63	16	9.8	6.8	46
13	68	48	74	32	29	e11	37	49	16	9.4	7.1	237
14	54	42	49	29	27	e11	37	38	15	9.4	7.5	148
15	48	39	125	29	25	e13	38	35	14	9.0	18	70
16	345	29	74	35	24	e14	38	32	14	8.8	33	47
17	147	75	57	174	23	e15	43	27	31	9.9	22	38
18	58	63	60	100	24	e16	38	27	54	9.3	14	54
19	65	104	39	100	25	e18	53	28	36	8.6	12	60
20	337	93	32	79	21	24	43	28	33	9.8	34	156
21	544	69	28	48	e18	28	43	29	29	14	22	103
22	165	40	49	36	e17	28	41	38	22	12	15	56
23	75	32	59	31	e17	23	46	60	19	13	12	60
24	56	32	77	28	18	19	55	91	19	10	10	316
25	46	85	42	27	19	19	77	65	39	9.2	9.2	221
26	79	482	31	27	19	18	82	62	39	9.3	8.5	76
27	77	386	27	25	21	19	76	38	33	13	8.2	161
28	45	115	26	26	21	32	61	32	75	10	8.0	89
29	37	69	24	35	---	93	56	30	53	21	8.0	55
30	33	134	22	73	---	96	56	28	26	14	50	43
31	29	---	28	46	---	45	---	30	---	11	38	---
TOTAL	3506	2204	1755	2118	957	907	1359	1188	847	416.5	451.0	3087
MEAN	113	73.5	56.6	68.3	34.2	29.3	45.3	38.3	28.2	13.4	14.5	103
MAX	544	482	141	246	96	96	82	91	75	35	50	316
MIN	29	19	22	25	17	11	20	26	14	8.6	6.7	30
AC-FT	6950	4370	3480	4200	1900	1800	2700	2360	1680	826	895	6120
CFSM	11.1	7.20	5.55	6.70	3.35	2.87	4.44	3.76	2.77	1.32	1.43	10.1
IN.	12.79	8.04	6.40	7.72	3.49	3.31	4.96	4.33	3.09	1.52	1.64	11.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)#

	MEAN	117	76.9	63.5	50.2	48.1	43.7	65.9	99.7	65.3	30.2	33.1	75.8
	MAX	234	152	147	147	118	129	118	182	151	60.2	79.0	141
(WY)	1975	1975	2000	1985	1985	1994	1994	1994	1972	1972	1970	1983	1981
MIN	50.6	17.7	8.05	6.15	5.95	9.21	22.7	38.3	19.8	6.41	9.44	17.5	
(WY)	1970	1974	1978	1969	1969	1974	2002	2003	1998	1989	1977	1986	

See Period of Record; partial years used in monthly summary statistics
e Estimated

15106920 KADASHAN RIVER ABOVE HOOK CREEK NEAR TENAKEE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003#	
ANNUAL TOTAL	20027.8		18795.5			
ANNUAL MEAN	54.9		51.5		64.1	
HIGHEST ANNUAL MEAN					80.8	
LOWEST ANNUAL MEAN					44.1	
HIGHEST DAILY MEAN	544	Oct 21	544	Oct 21	1010	Oct 19 1998
LOWEST DAILY MEAN	7.7	Mar 20	6.7	Aug 11	a3.2	Jul 28 1989
ANNUAL SEVEN-DAY MINIMUM	8.1	Mar 15	7.2	Aug 8	4.2	Jan 13 1974
MAXIMUM PEAK FLOW			1100	Nov 26	b1970	Oct 8 1990
MAXIMUM PEAK STAGE			4.68	Nov 26	5.83	Oct 8 1990
INSTANTANEOUS LOW FLOW			c6.1	Aug 10	3.2	Jul 28 1989
ANNUAL RUNOFF (AC-FT)	39730		37280		46410	
ANNUAL RUNOFF (CFSM)	5.38		5.05		6.28	
ANNUAL RUNOFF (INCHES)	73.04		68.55		85.34	
10 PERCENT EXCEEDS	114		100		138	
50 PERCENT EXCEEDS	35		33		43	
90 PERCENT EXCEEDS	13		12		12	

See Period of Record; partial years used in monthly summary statistics

a Jul. 28 to Jul. 29, 1989

b From rating curve extended above 330 ft³/s on basis of area-velocity study at gage height 4.8 ft. and shape of previous rating

c Aug. 10 to Aug. 12, 2003

15106920 KADASHAN RIVER ABOVE HOOK CREEK NEAR TENAKEE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-72, 1974-77, 1981-1985, and 1987 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1967 to September 1978, December 1981 to December 1984, March 1987 to March 1988, and September 1988 to current year.

INSTRUMENTATION.--Digital water-temperature recorder, November 1967 to December 1984, set for 1-hour punch interval. Electronic water-temperature recorder since March 13, 1987, set for 2-hour recording interval. Electronic water-temperature recorder with 15-minute recording interval since July 11, 1996.

REMARKS.--Records represent water temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross sections on November 1, and March 7. No variation was found in the temperature cross sections. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 16.5°C, July 15, 1993; minimum, 0.0°C, on many days during most winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.0°C, July 10-11; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	X-sect. looking downstrm ft from l bank (00009)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)
NOV							
01...	1105	33.0	2.00	1.53	28	5.0	5.8
01...	1106	33.0	7.00	1.53	28	5.0	5.8
01...	1107	33.0	12.0	1.53	28	5.0	5.8
01...	1108	33.0	17.0	1.53	28	5.0	5.8
01...	1109	33.0	22.0	1.53	28	5.0	5.8
01...	1110	33.0	27.0	1.53	28	5.0	5.8
01...	1111	33.0	32.0	1.53	28	5.0	5.8
MAR							
07...	1135	35.0	4.00	1.66	14	.0	-6.5
07...	1136	35.0	11.0	1.66	14	.0	-6.5
07...	1137	35.0	18.0	1.66	14	.0	-6.5
07...	1138	35.0	25.0	1.66	14	.0	-6.5
07...	1139	35.0	32.0	1.66	14	.0	-6.5

TEMPERATURE WATER, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.0	6.5	7.5	5.5	4.5	5.0	5.5	4.5	5.0	1.5	1.0	1.0
2	7.5	7.0	7.5	5.5	5.0	5.0	4.5	3.5	4.0	2.0	1.5	1.5
3	7.5	7.0	7.5	5.5	5.0	5.0	3.5	2.5	3.5	2.0	2.0	2.0
4	7.5	6.5	7.0	5.5	5.0	5.5	2.5	2.0	2.5	2.0	1.0	1.5
5	7.0	6.5	7.0	6.0	5.5	5.5	2.5	2.0	2.0	2.5	1.5	2.0
6	8.0	7.0	8.0	6.5	6.0	6.0	2.5	2.5	2.5	3.0	2.5	2.5
7	8.5	8.0	8.0	6.0	5.0	5.5	3.5	2.5	3.0	3.0	2.0	2.5
8	8.0	7.0	7.5	5.5	5.0	5.0	4.5	3.5	4.0	2.5	2.0	2.0
9	7.0	5.5	6.5	5.0	4.5	5.0	5.0	4.5	5.0	2.0	1.0	1.5
10	5.5	4.0	4.5	5.0	4.5	4.5	5.0	4.5	5.0	1.5	1.0	1.0
11	6.0	5.0	5.5	5.0	5.0	5.0	4.5	4.0	4.5	1.5	1.0	1.0
12	6.5	6.0	6.0	5.5	5.0	5.0	4.5	4.0	4.5	2.0	1.0	1.5
13	6.5	6.0	6.5	6.0	5.0	5.5	4.0	3.5	3.5	2.0	2.0	2.0
14	7.0	6.5	6.5	6.0	5.5	5.5	3.5	3.0	3.0	2.0	1.5	1.5
15	7.5	7.0	7.0	5.5	5.5	5.5	3.5	3.0	3.0	2.0	1.5	2.0
16	8.5	7.5	8.0	5.5	4.0	4.5	3.5	3.0	3.0	2.0	2.0	2.0
17	8.5	7.5	8.0	4.5	4.0	4.5	3.5	3.0	3.5	2.0	1.0	1.5
18	7.5	7.5	7.5	4.5	4.5	4.5	3.0	2.5	3.0	2.5	2.0	2.5
19	8.5	7.5	8.0	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5
20	9.0	8.0	8.5	5.0	4.5	4.5	2.5	1.0	2.0	2.5	2.5	2.5
21	8.5	8.5	8.5	4.5	4.0	4.5	1.5	1.0	1.5	2.5	1.0	1.5
22	8.5	7.5	8.0	4.5	4.0	4.5	2.0	1.0	1.5	1.0	0.5	0.5
23	7.5	7.5	7.5	4.0	3.0	3.5	2.0	1.0	1.5	1.0	0.5	0.5
24	7.5	7.0	7.0	4.5	3.5	4.0	1.5	0.5	1.0	0.5	0.0	0.0
25	7.0	6.5	7.0	5.0	4.5	5.0	2.0	1.5	2.0	1.0	0.0	0.5
26	7.0	7.0	7.0	6.5	5.0	6.0	2.0	1.0	1.5	1.0	0.0	0.5
27	7.0	6.5	7.0	6.5	5.5	6.0	1.5	1.0	1.5	1.0	0.5	0.5
28	6.5	5.5	5.5	5.5	5.5	5.5	1.5	1.0	1.0	1.5	1.0	1.5
29	5.5	4.0	5.0	6.0	5.5	5.5	1.5	1.0	1.0	1.5	1.0	1.5
30	4.5	4.0	4.5	6.0	5.5	6.0	2.0	1.5	1.5	1.0	0.5	1.0
31	4.5	4.0	4.0	---	---	---	1.5	1.0	1.5	1.5	1.0	1.0
MONTH	9.0	4.0	6.9	6.5	3.0	5.0	5.5	0.5	2.7	3.0	0.0	1.5

15106920 KADASHAN RIVER ABOVE HOOK CREEK NEAR TENAKEE—Continued

TEMPERATURE WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	1.5	1.5	1.5	0.5	1.0	1.5	0.5	1.0	6.5	4.5	5.5
2	2.0	0.5	1.5	1.5	0.5	1.0	1.5	0.5	1.0	6.0	3.5	5.0
3	1.5	0.5	1.5	1.5	1.0	1.5	1.0	0.0	0.5	5.5	3.5	4.5
4	2.0	1.5	2.0	2.0	1.0	1.5	1.5	0.0	1.0	5.5	3.0	4.5
5	2.0	2.0	2.0	1.5	0.0	0.5	2.5	1.0	1.5	5.5	3.0	4.5
6	2.5	2.0	2.0	0.0	0.0	0.0	2.0	1.0	1.5	6.0	4.0	5.0
7	2.5	2.0	2.0	0.0	0.0	0.0	1.5	1.0	1.5	6.5	3.5	5.0
8	2.5	2.0	2.0	0.0	0.0	0.0	2.0	1.0	1.5	7.0	4.0	5.5
9	2.5	2.0	2.5	0.0	0.0	0.0	2.0	1.0	1.5	7.5	4.5	6.0
10	3.0	2.5	2.5	0.0	0.0	0.0	3.0	1.5	2.0	7.0	5.0	6.0
11	2.5	1.5	2.0	0.0	0.0	0.0	3.5	1.5	2.5	6.5	6.0	6.0
12	2.0	1.5	2.0	0.0	0.0	0.0	3.5	1.5	2.5	6.0	5.5	5.5
13	2.5	2.0	2.0	0.0	0.0	0.0	3.5	1.5	2.5	6.0	5.0	5.5
14	2.0	1.5	2.0	0.0	0.0	0.0	3.5	1.5	2.5	6.0	4.5	5.5
15	2.0	1.5	2.0	0.0	0.0	0.0	4.0	2.5	3.0	5.5	4.0	5.0
16	2.5	2.0	2.0	0.0	0.0	0.0	3.5	2.5	3.0	6.0	4.0	5.0
17	2.5	2.0	2.0	0.0	0.0	0.0	4.0	2.5	3.0	6.5	4.0	5.5
18	2.5	1.5	2.0	0.0	0.0	0.0	3.5	2.5	3.0	7.0	4.5	6.0
19	1.5	0.5	1.0	0.5	0.0	0.0	4.0	2.5	3.0	8.0	4.5	6.5
20	1.0	0.0	0.5	1.0	0.5	1.0	4.5	2.5	3.5	8.5	5.5	7.0
21	0.0	0.0	0.0	1.5	0.5	1.0	4.5	2.5	3.5	7.5	6.0	7.0
22	0.5	0.0	0.0	1.5	1.0	1.0	4.5	3.5	4.0	8.0	6.5	7.0
23	0.0	0.0	0.0	1.5	0.5	1.0	5.0	3.5	4.0	7.0	6.5	7.0
24	0.5	0.0	0.5	2.0	1.0	1.5	5.5	3.0	4.0	8.0	6.5	7.0
25	1.5	0.5	1.0	2.0	0.5	1.5	5.5	3.0	4.0	7.0	6.5	7.0
26	1.5	1.0	1.5	2.0	1.0	1.5	6.0	3.5	4.5	7.5	6.5	7.0
27	1.5	1.0	1.0	2.0	1.0	1.5	6.0	3.5	5.0	8.5	6.0	7.0
28	2.0	1.0	1.5	2.0	0.0	1.5	6.0	3.5	4.5	8.5	7.0	8.0
29	---	---	---	1.0	0.0	0.5	6.5	3.5	5.0	9.0	8.0	8.5
30	---	---	---	1.0	0.5	0.5	6.5	4.0	5.5	9.5	7.5	8.5
31	---	---	---	1.5	0.5	1.0	---	---	---	8.5	8.0	8.5
MONTH	3.0	0.0	1.5	2.0	0.0	0.6	6.5	0.0	2.9	9.5	3.0	6.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	8.5	7.0	8.0	12.5	10.0	11.0	12.0	11.5	11.5	11.0	10.5	11.0
2	9.0	7.5	8.0	11.5	10.5	11.0	12.0	11.0	11.5	11.0	10.5	10.5
3	9.0	7.5	8.5	11.0	10.0	10.5	11.5	10.5	11.0	10.5	10.0	10.5
4	9.0	7.5	8.5	11.5	10.0	10.5	11.5	11.0	11.0	10.5	9.5	10.0
5	10.0	8.0	9.0	11.0	10.0	10.5	11.5	10.0	11.0	10.0	9.0	9.5
6	11.0	9.0	10.0	11.5	10.0	11.0	12.5	9.5	11.0	10.0	9.5	10.0
7	10.0	9.0	9.5	12.5	10.5	11.5	13.0	10.0	11.5	11.0	10.0	10.5
8	11.5	8.5	10.0	13.0	11.0	12.0	13.0	10.5	12.0	10.5	10.0	10.5
9	11.5	8.5	10.0	12.5	11.5	12.0	13.5	11.0	12.0	10.5	10.0	10.0
10	12.0	9.0	10.5	14.0	11.0	12.5	13.0	10.0	11.5	10.5	10.0	10.0
11	11.5	9.5	10.5	14.0	12.0	13.0	13.0	10.5	11.5	10.5	10.0	10.0
12	11.5	10.0	10.5	13.5	12.0	13.0	12.0	11.5	12.0	10.0	9.5	10.0
13	11.5	10.0	10.5	13.0	12.0	12.5	13.5	11.5	12.5	10.5	10.0	10.0
14	12.0	9.5	10.5	12.5	12.0	12.5	12.5	12.0	12.0	10.0	9.5	9.5
15	12.0	10.0	11.0	13.0	11.0	12.0	12.5	12.0	12.5	9.5	8.0	8.5
16	11.0	10.0	10.5	12.0	11.5	11.5	12.5	12.0	12.0	8.0	7.0	7.5
17	10.5	10.0	10.5	11.5	11.0	11.5	12.5	11.5	12.0	7.5	6.5	7.0
18	10.5	9.5	10.0	12.5	11.0	11.5	12.0	11.0	11.5	8.0	7.5	7.5
19	10.0	9.0	9.5	12.5	10.5	11.5	11.5	11.0	11.0	8.0	7.5	7.5
20	10.0	9.0	9.5	12.0	11.5	12.0	11.5	10.5	11.0	9.0	8.0	8.5
21	10.5	9.5	10.0	12.0	11.0	11.5	11.0	10.0	10.5	9.0	8.0	8.5
22	10.5	9.5	10.0	11.5	11.0	11.5	11.0	10.0	10.5	8.0	7.5	7.5
23	10.5	9.5	10.0	12.0	11.0	11.5	10.5	9.0	10.0	7.5	7.0	7.5
24	10.0	9.0	9.5	12.0	11.5	11.5	11.0	10.0	10.5	8.5	7.5	8.0
25	10.0	9.5	9.5	12.0	11.5	11.5	11.0	9.0	10.0	9.0	8.5	8.5
26	10.0	9.5	9.5	11.5	11.5	11.5	10.5	9.0	10.0	8.5	8.0	8.0
27	9.5	9.0	9.5	11.5	11.0	11.5	10.5	10.0	10.5	9.5	8.0	9.0
28	10.5	9.0	9.5	11.5	10.5	11.0	11.5	9.5	10.5	9.5	9.0	9.0
29	11.0	9.5	10.0	12.5	11.5	11.5	11.0	10.0	10.5	9.0	8.5	8.5
30	11.0	9.5	10.5	12.5	11.0	11.5	11.5	10.5	11.0	9.0	8.5	8.5
31	---	---	---	12.5	11.0	11.5	11.0	10.5	11.0	---	---	---
MONTH	12.0	7.0	9.8	14.0	10.0	11.6	13.5	9.0	11.2	11.0	6.5	9.1

15106970 MIDDLE BASIN CREEK NEAR TENAKEE

LOCATION.--Lat 57°41'33", long 135°12'06", in NE¹/₄ NE¹/₄ SE¹/₄ sec. 21, T. 48 S., R. 63 E. (Sitka C-4 quad), Hydrologic Unit 19010203, in Tongass National Forest, on Chichagof Island, on left bank 0.3 mi upstream from confluence with Kadashan River, and about 7 mi south of Tenakee.

DRAINAGE AREA.--0.12 mi²

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to July 1987 (unpublished fragmentary records provided by the U.S. Forest Service). July 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 190 ft above sea level, from topographic map.

REMARKS.-- Records fair, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.53	0.78	1.7	0.82	0.58	0.46	0.27	0.64	0.29	0.25	0.16	0.28
2	0.43	0.71	1.5	0.80	0.83	0.39	0.25	0.61	0.28	0.22	0.13	0.41
3	0.39	0.66	1.2	0.77	0.81	0.39	0.23	0.59	0.26	0.24	0.11	0.22
4	0.39	0.64	0.93	1.5	0.70	0.42	0.23	0.53	0.25	0.22	0.11	0.17
5	0.58	0.64	0.83	1.9	0.65	0.37	0.25	0.49	0.27	0.20	0.10	0.16
6	0.68	0.64	0.78	2.3	0.62	0.30	0.28	0.48	0.28	0.22	0.11	0.20
7	0.76	0.58	0.79	2.1	0.59	0.23	0.33	0.42	0.24	0.25	0.11	0.31
8	0.98	0.55	1.1	1.7	0.57	0.21	0.36	0.40	0.24	0.23	0.12	0.30
9	1.1	0.49	1.4	1.3	0.56	0.28	0.33	0.39	0.25	0.21	0.13	0.26
10	1.0	0.45	1.1	1.0	0.55	0.22	0.33	0.38	0.26	0.22	0.11	0.31
11	0.96	0.42	1.4	0.92	0.52	0.24	0.30	0.39	0.26	0.23	0.10	0.33
12	0.91	0.47	1.6	0.85	0.51	e0.24	0.27	0.43	0.28	0.22	0.11	0.27
13	0.80	0.48	1.2	0.79	0.51	e0.29	0.28	0.40	0.26	0.21	0.12	0.75
14	0.73	0.41	1.3	0.71	0.49	0.29	0.28	0.39	0.23	0.19	0.12	1.0
15	0.68	0.40	1.8	0.68	0.49	0.34	0.29	0.37	0.20	0.18	0.17	0.95
16	1.6	0.38	1.4	0.66	0.48	0.32	0.28	0.34	0.20	0.18	0.14	0.83
17	1.4	0.48	1.2	1.0	0.45	0.32	0.29	0.32	0.30	0.15	0.12	0.73
18	1.5	0.47	1.1	0.81	0.45	0.32	0.29	0.31	0.30	0.17	0.10	0.74
19	1.3	0.59	0.94	0.82	0.42	0.29	0.29	0.30	0.22	0.18	0.08	0.63
20	2.0	0.68	0.87	0.80	0.36	0.30	0.28	0.31	0.21	0.19	0.09	0.79
21	4.8	0.65	0.87	0.81	0.30	0.31	0.27	0.32	0.20	0.18	0.08	0.84
22	4.9	0.50	1.0	0.81	0.29	0.31	0.30	0.32	0.20	0.15	0.08	0.73
23	3.3	0.46	1.0	0.76	0.29	0.25	0.30	0.38	0.20	0.15	0.07	0.78
24	2.5	0.44	1.2	0.71	0.33	0.25	0.29	0.45	0.18	0.15	0.07	2.1
25	2.0	0.52	1.0	0.71	0.37	0.24	0.31	0.44	0.20	0.15	0.07	2.1
26	1.9	2.6	0.84	0.73	0.35	0.23	0.30	0.48	0.17	0.14	0.07	1.7
27	1.5	4.2	0.74	0.64	0.38	0.22	0.40	0.43	0.17	0.11	0.07	2.2
28	1.1	3.9	0.72	0.65	0.35	0.28	0.57	0.45	0.23	0.10	0.06	1.9
29	1.00	2.7	0.67	0.69	---	0.46	0.62	0.41	0.24	0.15	0.07	1.7
30	0.89	2.4	0.69	0.71	---	0.44	0.64	0.39	0.24	0.12	0.15	1.3
31	0.83	---	0.74	0.63	---	0.34	---	0.35	---	0.14	0.11	---
TOTAL	43.44	29.29	33.61	30.08	13.80	9.55	9.71	12.91	7.11	5.70	3.24	24.99
MEAN	1.40	0.98	1.08	0.97	0.49	0.31	0.32	0.42	0.24	0.18	0.10	0.83
MAX	4.9	4.2	1.8	2.3	0.83	0.46	0.64	0.64	0.30	0.25	0.17	2.2
MIN	0.39	0.38	0.67	0.63	0.29	0.21	0.23	0.30	0.17	0.10	0.06	0.16
MED	1.00	0.56	1.0	0.80	0.49	0.30	0.29	0.40	0.24	0.18	0.11	0.74
AC-FT	86	58	67	60	27	19	19	26	14	11	6.4	50
CFSM	11.7	8.14	9.03	8.09	4.11	2.57	2.70	3.47	1.98	1.53	0.87	6.94
IN.	13.47	9.08	10.42	9.32	4.28	2.96	3.01	4.00	2.20	1.77	1.00	7.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)#

	1999	2000	2001	2002	2003
MEAN	1.70	1.34	1.52	0.69	0.47
MAX	2.98	2.65	3.75	0.97	0.57
(WY)	2000	2000	2000	2003	2001
MIN	1.16	0.83	0.45	0.47	0.30
(WY)	2001	2001	2002	2000	2000

See Period of Record; partial years used in monthly statistics
e Estimated

15106970 MIDDLE BASIN CREEK NEAR TENAKEE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003#	
ANNUAL TOTAL	254.37		223.43			
ANNUAL MEAN	0.70		0.61		0.77	
HIGHEST ANNUAL MEAN					1.20	
LOWEST ANNUAL MEAN					0.61	
HIGHEST DAILY MEAN	4.9 Oct 22		4.9 Oct 22		31 Dec 27 1999	
LOWEST DAILY MEAN	0.14 Apr 1		0.06 Aug 28		0.06 Aug 28 2003	
ANNUAL SEVEN-DAY MINIMUM	0.15 Apr 1		0.07 Aug 23		0.07 Aug 23 2003	
MAXIMUM PEAK FLOW			7.2 Nov 26		a66 Dec 27 1999	
MAXIMUM PEAK STAGE			4.43 Nov 26		5.16 Dec 27 1999	
INSTANTANEOUS LOW FLOW			b0.05 Aug 23		b0.05 Aug 23 2003	
ANNUAL RUNOFF (AC-FT)	505		443		557	
ANNUAL RUNOFF (CFSM)	5.81		5.10		6.40	
ANNUAL RUNOFF (INCHES)	78.85		69.26		86.99	
10 PERCENT EXCEEDS	1.5		1.3		1.3	
50 PERCENT EXCEEDS	0.47		0.39		0.48	
90 PERCENT EXCEEDS	0.18		0.15		0.21	

See Period of Record; partial years used in monthly statistics

a From rating curve extended above 3.0 ft³/s

b Aug. 23, 25, 26, and 28-29

15106970 MIDDLE BASIN CREEK NEAR TENAKEE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1981 to July 1987 (unpublished fragmentary records provided by the U.S. Forest Service), July 2000 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 2000 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder with 15-minute recording interval since July 09, 2000.

REMARKS.--Records represent water temperature at the sensor within 0.5°C. Temperature at the sensor was compared with stream average by cross section on January 9, 2003. No variation was found in the temperature cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 9.5°C, August 12, 2002, August 8, 2003 ; minimum, 0.0°C, on many days during most winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 9.5°C, August 8; minimum, 0.0°C, on several days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	SAMPLE LOC- ATION, STREAM WIDTH (FT) (000004)	CROSS SECTION (FT FM L BANK) (000009)	DIS- CHARGE, INST. GAGE HEIGHT (FEET) (000065)	CUBIC FEET PER SECOND (000061)	TEMPER- ATURE WATER (DEG C) (00010)
JAN						
09...	1100	4.10	1.00	4.02	1.4	2.5
09...	1111	4.10	2.00	4.02	1.4	2.5
09...	1112	4.10	3.00	4.02	1.4	2.5

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.0	6.5	6.5	5.0	5.0	5.0	5.0	4.5	5.0	3.0	2.5	3.0
2	6.5	6.5	6.5	5.0	5.0	5.0	4.5	4.0	4.0	3.0	3.0	3.0
3	7.0	6.5	6.5	5.0	5.0	5.0	4.0	3.5	4.0	3.0	3.0	3.0
4	6.5	6.5	6.5	5.0	5.0	5.0	3.5	3.0	3.0	3.5	3.0	3.5
5	6.5	6.5	6.5	5.5	5.0	5.5	3.0	3.0	3.0	3.5	3.0	3.5
6	7.0	6.5	7.0	6.0	5.5	5.5	3.5	3.0	3.0	4.0	3.5	4.0
7	7.0	7.0	7.0	5.5	5.0	5.5	4.0	3.5	3.5	3.5	3.0	3.5
8	7.0	6.0	6.5	5.5	5.0	5.0	5.0	4.0	4.5	3.0	3.0	3.0
9	6.0	5.0	6.0	5.5	5.0	5.0	5.0	4.5	5.0	3.0	2.0	2.5
10	5.5	4.5	5.0	5.0	5.0	5.0	5.0	4.5	5.0	2.5	2.0	2.0
11	5.5	5.0	5.5	5.5	5.0	5.0	4.5	4.5	4.5	2.0	2.0	2.0
12	6.0	5.5	5.5	5.5	5.0	5.0	5.0	4.5	4.5	3.0	2.0	2.5
13	6.0	5.5	6.0	5.5	5.0	5.5	4.5	4.0	4.0	3.0	2.5	2.5
14	6.0	5.5	6.0	5.5	5.5	5.5	4.0	3.5	4.0	2.5	2.0	2.5
15	6.5	6.0	6.0	5.5	5.5	5.5	4.0	4.0	4.0	3.0	2.0	2.5
16	7.0	6.0	7.0	5.5	4.5	5.0	4.0	4.0	4.0	3.0	2.5	3.0
17	7.0	6.5	6.5	5.0	4.5	5.0	4.0	4.0	4.0	3.5	3.0	3.0
18	6.5	6.0	6.5	5.0	5.0	5.0	4.0	3.5	3.5	3.5	3.5	3.5
19	6.5	6.5	6.5	5.0	5.0	5.0	3.5	3.0	3.5	3.5	3.5	3.5
20	7.5	6.5	7.0	5.0	5.0	5.0	3.0	2.5	3.0	3.5	3.5	3.5
21	7.5	6.5	7.0	5.0	5.0	5.0	2.5	2.5	2.5	3.5	2.0	2.5
22	6.5	6.0	6.5	5.0	4.5	4.5	3.0	2.5	2.5	2.0	2.0	2.0
23	6.0	6.0	6.0	4.5	4.0	4.5	3.0	3.0	3.0	2.0	1.5	1.5
24	6.0	6.0	6.0	5.0	4.5	4.5	3.0	2.5	3.0	1.5	1.0	1.5
25	6.0	5.5	6.0	5.0	5.0	5.0	3.0	3.0	3.0	2.0	1.0	2.0
26	6.0	6.0	6.0	6.0	5.0	6.0	3.0	2.5	2.5	2.0	1.5	2.0
27	6.0	5.5	6.0	6.0	5.5	5.5	2.5	2.5	2.5	2.0	1.0	2.0
28	5.5	5.0	5.5	5.5	5.0	5.0	2.5	2.0	2.5	2.5	2.0	2.0
29	5.5	5.0	5.0	5.5	5.0	5.5	2.5	2.0	2.5	2.5	2.0	2.5
30	5.0	4.5	4.5	5.5	5.0	5.5	2.5	2.5	2.5	2.5	2.5	2.5
31	5.0	4.5	4.5	---	---	---	2.5	2.5	2.5	2.5	2.5	2.5
MONTH	7.5	4.5	6.1	6.0	4.0	5.1	5.0	2.0	3.5	4.0	1.0	2.7

15106970 MIDDLE BASIN CREEK NEAR TENAKEE—Continued

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	2.5	2.5	2.5	2.0	2.0	1.5	1.0	1.5	5.0	4.5	4.5
2	2.5	2.5	2.5	2.5	2.0	2.5	1.5	1.0	1.5	5.0	4.0	4.5
3	3.0	2.5	3.0	3.0	2.5	2.5	1.5	0.5	1.0	4.5	4.0	4.0
4	3.0	3.0	3.0	3.0	2.5	3.0	2.0	0.5	1.5	4.5	3.5	4.0
5	3.0	3.0	3.0	2.5	1.5	2.0	2.0	1.5	1.5	4.5	3.0	4.0
6	3.0	2.5	3.0	1.5	1.0	1.5	2.0	1.5	1.5	4.5	3.5	4.0
7	3.0	3.0	3.0	1.0	0.0	0.5	2.0	2.0	2.0	4.5	3.5	4.0
8	3.0	2.5	3.0	0.5	0.0	0.0	2.5	2.0	2.0	5.0	3.5	4.5
9	3.5	3.0	3.0	1.0	0.5	0.5	2.5	2.0	2.0	5.5	4.0	4.5
10	3.5	3.0	3.5	0.5	0.0	0.5	3.0	2.0	2.5	5.0	4.0	4.5
11	3.5	3.0	3.0	1.0	0.0	0.5	3.0	2.0	2.5	5.0	4.5	5.0
12	3.0	2.5	3.0	0.5	0.0	0.0	3.0	2.0	2.5	5.0	4.5	5.0
13	3.0	3.0	3.0	0.5	0.0	0.5	3.0	2.0	2.5	5.0	4.5	4.5
14	3.0	2.5	3.0	1.0	0.5	1.0	3.0	2.0	2.5	5.0	4.5	4.5
15	3.0	2.5	3.0	1.5	1.0	1.0	3.0	2.5	3.0	4.5	4.0	4.5
16	3.0	2.5	3.0	1.5	1.5	1.5	3.0	2.0	2.5	5.0	4.0	4.5
17	3.0	2.5	2.5	1.5	1.5	1.5	3.0	2.5	3.0	5.0	3.5	4.5
18	3.0	2.5	2.5	1.5	1.5	1.5	3.0	2.5	2.5	5.0	3.5	4.5
19	2.5	2.0	2.0	2.0	1.5	1.5	3.5	2.5	3.0	5.5	4.0	4.5
20	2.0	1.5	1.5	2.0	1.5	1.5	3.5	3.0	3.0	5.5	4.0	5.0
21	1.5	1.0	1.5	2.0	1.5	2.0	3.5	2.5	3.0	5.5	4.5	5.0
22	1.5	1.0	1.5	2.0	1.5	2.0	3.5	3.0	3.5	5.5	5.0	5.0
23	1.5	1.0	1.0	2.0	1.5	1.5	4.0	3.0	3.5	5.5	5.0	5.5
24	2.0	1.5	1.5	2.0	1.5	2.0	4.5	3.0	3.5	5.5	5.5	5.5
25	2.0	2.0	2.0	2.0	1.5	1.5	5.0	3.0	4.0	5.5	5.5	5.5
26	2.0	2.0	2.0	2.0	1.5	2.0	5.0	3.5	4.0	5.5	5.0	5.5
27	2.0	1.5	2.0	2.5	1.5	2.0	4.5	3.5	4.0	6.0	5.0	5.5
28	2.5	2.0	2.0	2.5	1.5	2.0	4.5	3.5	4.0	6.0	5.5	5.5
29	---	---	---	2.5	1.5	2.0	5.0	3.5	4.5	6.0	5.5	6.0
30	---	---	---	2.5	2.0	2.0	5.0	4.0	4.5	6.5	5.5	6.0
31	---	---	---	2.0	1.5	2.0	---	---	---	6.0	5.5	6.0
MONTH	3.5	1.0	2.5	3.0	0.0	1.5	5.0	0.5	2.8	6.5	3.0	4.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	6.0	5.5	6.0	8.0	7.0	7.5	8.5	8.0	8.5	9.0	8.5	8.5
2	6.0	5.5	6.0	7.5	7.0	7.0	8.5	8.0	8.0	9.0	8.5	9.0
3	6.5	5.5	6.0	7.5	7.0	7.0	8.5	8.0	8.0	9.0	8.5	8.5
4	6.0	5.5	6.0	7.5	7.0	7.5	8.5	8.0	8.0	8.5	8.0	8.5
5	6.5	6.0	6.0	7.5	7.0	7.5	8.5	7.5	8.0	8.5	7.5	8.0
6	6.5	6.0	6.5	7.5	7.0	7.5	9.0	7.5	8.5	8.5	8.5	8.5
7	6.5	6.0	6.5	8.0	7.5	7.5	9.0	8.0	8.5	8.5	8.5	8.5
8	7.0	6.0	6.5	8.0	7.5	8.0	9.5	8.0	8.5	8.5	8.5	8.5
9	7.0	6.0	6.5	8.0	7.5	8.0	9.0	8.5	9.0	8.5	8.5	8.5
10	7.5	6.0	6.5	8.5	7.5	8.0	9.0	7.5	8.5	8.5	8.5	8.5
11	7.0	6.5	6.5	8.5	8.0	8.5	9.0	8.0	8.5	8.5	8.5	8.5
12	7.0	6.5	7.0	8.5	8.0	8.0	9.0	8.5	8.5	8.5	8.5	8.5
13	7.0	6.5	7.0	8.5	8.0	8.0	9.0	8.5	9.0	9.0	8.5	8.5
14	7.0	6.5	6.5	8.5	8.0	8.0	9.0	8.5	9.0	8.5	8.0	8.5
15	7.0	6.5	7.0	8.5	7.5	8.0	9.0	9.0	9.0	8.0	7.0	7.5
16	7.0	6.5	7.0	8.0	8.0	8.0	9.0	8.5	8.5	7.0	6.5	7.0
17	7.5	6.5	7.0	8.0	8.0	8.0	9.0	8.5	8.5	6.5	6.0	6.5
18	7.0	6.5	7.0	8.5	8.0	8.0	9.0	8.5	8.5	6.5	6.5	6.5
19	7.0	6.5	6.5	8.5	7.5	8.0	8.5	8.5	8.5	6.5	6.5	6.5
20	7.0	6.5	6.5	8.5	8.0	8.5	8.5	8.0	8.5	7.0	6.5	7.0
21	7.0	6.5	7.0	8.5	8.0	8.0	8.5	8.0	8.0	7.0	6.5	7.0
22	7.0	6.5	7.0	8.0	8.0	8.0	8.5	8.0	8.0	7.0	6.5	6.5
23	7.0	6.5	7.0	8.5	8.0	8.0	8.5	7.0	8.0	6.5	6.0	6.5
24	7.0	6.5	6.5	8.5	8.0	8.5	8.5	8.0	8.5	7.0	6.5	7.0
25	7.0	6.5	7.0	8.5	8.0	8.5	8.5	7.5	8.0	7.0	6.5	7.0
26	7.0	6.5	7.0	8.0	8.0	8.0	8.5	7.5	8.0	6.5	6.5	6.5
27	7.0	6.5	6.5	8.5	8.0	8.0	8.5	8.5	8.5	7.0	6.5	7.0
28	7.0	6.5	7.0	8.5	8.0	8.0	9.0	8.0	8.5	7.0	7.0	7.0
29	7.5	6.5	7.0	8.5	8.0	8.5	8.5	8.0	8.5	7.0	6.5	7.0
30	7.5	6.5	7.0	8.5	8.0	8.5	9.0	8.5	8.5	7.0	6.5	7.0
31	---	---	---	8.5	8.0	8.5	8.5	8.5	8.5	---	---	---
MONTH	7.5	5.5	6.7	8.5	7.0	8.0	9.5	7.0	8.4	9.0	6.0	7.6

15109048 PETERSON CREEK BELOW NORTH FORK NEAR AUKE BAY

LOCATION.(REVISED)--Lat 58°17'00", long 134°39'54", in SE¹/₄ NW¹/₄ SW¹/₄ sec. 29, T. 41 S., R. 66 E. (Juneau B-2 SW), Hydrologic Unit 19010301, City and Borough of Juneau, on Douglas Island, in Tongass National Forest, on left bank 100 ft downstream from North Fork Peterson Creek, 1.25 mi upstream from mouth, 7.2 mi south of Auke Bay, and 9.6 mi west of Douglas.

DRAINAGE AREA.--4.33 mi²,

PERIOD OF RECORD.--November 1998 to current year.

REVISED RECORDS.--WDR AK-00-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, in CFS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	e9.8	33	15	8.9	7.5	8.1	11	4.8	2.8	6.6	5.2
2	12	e9.0	19	16	12	8.5	6.2	8.5	5.5	2.6	14	8.0
3	10	8.3	13	13	18	9.5	e5.3	6.6	4.8	2.7	12	7.9
4	9.3	e7.0	e10	40	19	19	e4.5	4.9	4.1	2.8	9.7	8.1
5	11	e6.5	9.6	53	15	16	3.9	3.9	3.9	2.9	8.1	6.5
6	25	5.7	8.7	50	12	8.9	3.8	3.3	4.3	2.6	6.9	6.2
7	19	5.5	e8.5	30	9.5	e5.0	4.2	3.0	4.1	2.4	6.0	6.2
8	25	4.9	9.2	21	8.4	e3.9	4.8	2.8	3.6	2.3	5.2	17
9	25	4.5	23	15	7.6	e3.4	5.5	3.1	3.0	2.2	4.7	20
10	17	4.2	21	e12	7.9	e3.1	5.5	3.4	2.9	2.1	4.3	15
11	13	4.3	15	e10	8.9	e2.8	5.5	3.9	2.8	2.0	4.2	22
12	11	4.0	42	e9.0	8.7	e2.6	5.5	5.6	2.6	2.0	4.1	15
13	11	4.4	30	e8.0	7.6	e2.5	5.8	6.8	2.8	1.9	4.1	40
14	9.9	4.6	17	e6.5	6.7	e2.4	6.3	10	2.6	1.9	3.9	34
15	9.3	4.5	16	5.4	5.9	e2.6	7.9	9.8	2.5	1.9	3.8	23
16	48	3.9	16	5.1	5.5	e3.5	8.9	6.7	2.3	1.9	4.0	16
17	84	4.6	12	22	4.9	7.3	7.4	5.4	2.5	1.9	4.0	11
18	27	e9.0	10	25	e4.3	8.1	6.5	5.0	6.3	1.9	4.1	10
19	18	20	e8.5	27	e4.0	7.7	5.8	4.8	7.3	1.8	4.0	11
20	26	21	7.3	27	e3.7	7.1	5.6	4.6	8.2	1.8	4.8	11
21	225	37	6.1	17	e3.5	8.4	5.8	4.7	6.5	2.0	4.8	11
22	104	e19	6.2	11	e3.3	9.4	6.4	5.4	5.0	2.0	5.5	10
23	34	e13	15	e7.0	e3.2	6.4	6.9	6.6	3.9	2.0	5.2	9.0
24	23	e10	34	e5.5	e3.1	5.4	8.8	10	3.3	1.9	4.6	23
25	16	e9.5	20	e4.6	e3.2	4.9	17	8.3	3.2	1.9	4.1	23
26	15	81	14	e3.9	4.5	4.3	23	6.9	3.3	1.9	3.9	21
27	22	54	10	e3.8	4.5	4.2	22	5.9	3.3	2.1	3.5	189
28	20	33	8.3	5.3	4.7	4.7	17	5.0	4.1	2.1	3.6	61
29	15	20	7.2	6.1	---	10	14	4.6	3.7	8.1	3.3	26
30	12	94	6.5	13	---	17	12	4.4	3.2	5.8	3.9	18
31	e11	---	6.2	12	---	12	---	4.7	---	6.0	4.5	---
TOTAL	917.5	516.2	462.3	499.2	208.5	218.1	249.9	179.6	120.4	80.2	165.4	684.1
MEAN	29.6	17.2	14.9	16.1	7.45	7.04	8.33	5.79	4.01	2.59	5.34	22.8
MAX	225	94	42	53	19	19	23	11	8.2	8.1	14	189
MIN	9.3	3.9	6.1	3.8	3.1	2.4	3.8	2.8	2.3	1.8	3.3	5.2
AC-FT	1820	1020	917	990	414	433	496	356	239	159	328	1360
CFSM	6.84	3.97	3.44	3.72	1.72	1.62	1.92	1.34	0.93	0.60	1.23	5.27
IN.	7.88	4.43	3.97	4.29	1.79	1.87	2.15	1.54	1.03	0.69	1.42	5.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)#

	MEAN	20.7	12.4	17.0	10.3	6.35	6.46	8.74	12.7	11.8	8.52	9.51	17.7
MAX	29.6	19.7	43.2	16.1	12.2	7.96	19.2	18.1	14.9	15.9	16.6	22.8	
(WY)	2003	2000	2000	2003	2002	2001	1999	1999	1999	2000	2002	2003	
MIN	15.9	4.99	8.30	5.57	2.00	4.14	3.02	5.79	4.01	2.59	3.95	13.2	
(WY)	2001	1999	2002	2000	1999	2002	2002	2003	2003	2003	2001	1999	
TOTAL	517.4	260.5	257.3	261.0	342.3	128.47	90.5	486.9	393.2	251.1	514.6	454.9	
MEAN	16.69	8.683	8.300	8.419	12.22	4.144	3.017	15.71	13.11	8.100	16.60	15.16	
MAX	45	30	37	16	48	29	7.1	29	34	17	60	76	
MIN	6.7	2.1	1.7	5.0	3.0	0.90	2.2	3.5	5.0	4.5	3.2	5.4	
AC-FT	1030	517	510	518	679	255	180	966	780	498	1020	902	
CFSM	3.85	2.01	1.92	1.94	2.82	0.96	0.70	3.63	3.03	1.87	3.83	3.50	
IN.	4.45	2.24	2.21	2.24	2.94	1.10	0.78	4.18	3.38	2.16	4.42	3.91	

See Period of Record

e Estimated

15109048 PETERSON CREEK BELOW NORTH FORK NEAR AUKE BAY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003#	
ANNUAL TOTAL	4818.97		4301.4			
ANNUAL MEAN	13.2		11.8		12.0	
HIGHEST ANNUAL MEAN					15.5	
LOWEST ANNUAL MEAN					9.84	
HIGHEST DAILY MEAN	225	Oct 21	225	Oct 21	364	Dec 27 1999
LOWEST DAILY MEAN	0.90	Mar 17	a1.8	Jul 19	0.90	Mar 17 2002
ANNUAL SEVEN-DAY MINIMUM	0.97	Mar 16	1.9	Jul 14	0.97	Mar 16 2002
MAXIMUM PEAK FLOW			452	Sep 27	616	Dec 28 1999
MAXIMUM PEAK STAGE			10.34	Sep 27	10.80	Dec 28 1999
INSTANTANEOUS LOW FLOW			b1.8	Jul 13	c	
ANNUAL RUNOFF (AC-FT)	9560		8530		8690	
ANNUAL RUNOFF (CFSM)	3.05		2.72		2.77	
ANNUAL RUNOFF (INCHES)	41.40		36.95		37.63	
10 PERCENT EXCEEDS	26		23		22	
50 PERCENT EXCEEDS	8.8		6.6		7.7	
90 PERCENT EXCEEDS	2.5		2.8		2.9	

See Period of Record

a Jul. 19 and 20

b Jul. 13-20, Jul. 25 and 26

c Not determined; see lowest daily mean

15129000 ALSEK RIVER NEAR YAKUTAT
(International gaging station)

LOCATION.--Lat 59°23'42", long 138°04'55", in NW¹/₄ NE¹/₄ sec. 19, T. 29 S., R. 44 E. (Yakutat B-1 quad), Hydrologic Unit 19010401, in Glacier Bay National Park, on right bank across from terminus of Walker Glacier, 33 mi upstream from Dry Bay, and 55 mi southeast of Yakutat.

DRAINAGE AREA.--10,820 mi².

PERIOD OF RECORD.--July 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26500	17000	31700	e6150	e5080	e3740	3920	20400	33800	75600	69600	52900
2	27900	16200	24600	e6240	e4970	e3670	3860	19600	32900	86100	71000	56000
3	26000	15500	21400	6530	e4800	e3490	3810	18400	33100	87000	70700	64200
4	24200	15000	18500	7470	e4830	e3190	3830	17000	34300	88200	68600	61100
5	22500	14800	16300	9350	e4960	e3000	3850	15800	36100	90800	61800	54900
6	23600	14800	15000	12700	e4710	e2920	3910	14900	41300	87400	60700	49900
7	28500	15100	14900	10200	e4530	e2760	3970	14700	51400	87200	63700	51800
8	35700	14500	15000	8470	e4410	e2640	4360	15100	55600	92700	69900	51300
9	31200	14000	14700	7030	e4300	e2640	4690	16000	57200	96500	75400	49100
10	27200	13700	14300	6830	e4220	e2620	4910	17100	60200	98600	73500	45500
11	24900	13100	13700	e6120	e4160	e2640	5140	18600	65000	99800	72600	43000
12	27300	12700	13700	e5590	e4030	e2610	5270	20600	68600	103000	78800	44100
13	28200	12500	13800	e5400	e3910	e2580	5360	19900	70800	105000	85600	45300
14	25200	12500	12900	e5310	e3740	e2640	5600	18700	68000	106000	89300	43200
15	23400	12300	12300	e4770	e3630	e2800	5890	17800	66800	103000	103000	35300
16	31200	12000	12000	e4290	e3460	e3010	6180	17400	65100	94800	118000	29600
17	34100	11700	11600	e5630	e3310	e3180	6230	17100	67000	90900	113000	26300
18	30500	11700	11200	e6540	e3070	e3350	6420	17600	67400	92400	99900	24300
19	29400	11700	10700	e7700	e3040	e3380	6440	18200	65000	93900	84500	22300
20	38000	12200	10200	e7500	e3000	e3350	6980	18600	62000	97400	72300	21400
21	42900	11600	9700	e6700	e2940	e3230	7570	19000	63000	101000	60200	22500
22	35500	11000	8810	e6500	e2880	e3180	8080	19900	65100	94600	50600	e23400
23	30700	10300	8300	e6000	e2830	e3290	8900	21100	66100	82500	48100	e26500
24	27600	10500	8370	e5900	e2730	e3350	10500	22500	66800	82400	49700	e33000
25	25500	11200	7950	e5850	e2760	e3400	12000	24000	64500	82800	49500	e40600
26	24500	26500	7230	e5810	e3060	e3600	14100	25100	60900	78100	49000	e52000
27	24100	74500	6960	e5810	e3250	e4000	15900	26100	58200	73200	51300	e49700
28	22300	64400	e6750	e5650	e3490	4110	17000	28100	56600	76100	52100	e54800
29	20400	44500	e6520	e5530	---	4360	18000	28900	57900	79700	54400	e59300
30	18900	37200	e6420	e5420	---	4850	18700	30700	62600	81700	55500	e57400
31	17700	---	e6420	e5200	---	4520	---	33600	---	78100	56400	---
TOTAL	855600	574700	391930	204190	106100	102100	231370	632500	1723300	2786500	2178700	1290700
MEAN	27600	19160	12640	6587	3789	3294	7712	20400	57440	89890	70280	43020
MAX	42900	74500	31700	12700	5080	4850	18700	33600	70800	106000	118000	64200
MIN	17700	10300	6420	4290	2730	2580	3810	14700	32900	73200	48100	21400
AC-FT1697000	1140000	777400	405000	210400	202500	458900	1255000	3418000	5527000	4321000	2560000	
CFSM	2.55	1.77	1.17	0.61	0.35	0.30	0.71	1.89	5.31	8.31	6.50	3.98
IN.	2.94	1.98	1.35	0.70	0.36	0.35	0.80	2.17	5.92	9.58	7.49	4.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)#

	MEAN	24140	9897	7123	5221	4263	4070	6520	25580	67060	86130	76210	49020
MAX	40300	19160	12640	9118	6625	6619	10870	40100	83970	98590	99370	76330	
(WY)	1995	2003	2003	2001	1993	1992	1992	1993	1993	1993	1994	1995	
MIN	12040	5828	3229	3045	2707	3033	4379	16770	53490	73510	59750	29040	
(WY)	1997	1997	1997	1995	1995	1995	2002	2001	1996	1996	1996	1992	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1991 - 2003#

ANNUAL TOTAL	11346160	11077690	
ANNUAL MEAN	31090	30350	
HIGHEST ANNUAL MEAN			30480
LOWEST ANNUAL MEAN			35850
HIGHEST DAILY MEAN	175000	Aug 13	118000
LOWEST DAILY MEAN	a2900	Mar 23	2580
ANNUAL SEVEN-DAY MINIMUM	2950	Apr 4	2620
MAXIMUM PEAK FLOW			121000
MAXIMUM PEAK STAGE			85.10
ANNUAL RUNOFF (AC-FT)	22510000	21970000	22080000
ANNUAL RUNOFF (CFSM)	2.87	2.80	2.82
ANNUAL RUNOFF (INCHES)	39.01	38.09	38.27
10 PERCENT EXCEEDS	78400	76900	82400
50 PERCENT EXCEEDS	16000	18000	12800
90 PERCENT EXCEEDS	3300	3560	3500

See Period of Record; partial years used in monthly summary statistics

a Mar. 23-24 and Apr. 8

b From rating extended above 100,000 cfs

e Estimated

15129500 SITUK RIVER NEAR YAKUTAT

LOCATION.--Lat 59°35'00", long 139°29'31", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 27 S., R. 35 E. (Yakutat C-4 quad.), Yakutat Borough, Hydrologic Unit 19010401, in Tongass National Forest, on left bank 20 ft downstream from Alsek Road bridge, 3.5 mi downstream from Situk Lake, 8.8 mi northeast of Yakutat, and 10 mi upstream from mouth.

DRAINAGE AREA.--36 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level, by U.S. Forest Service.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct 12	1415	1000	68.22	Jan 18	0700	1170	68.62
Oct 20	1900	1080	68.41	Aug 15	2145	1440	69.21
Nov 27	0145	3070*	71.95*				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	394	284	903	167	241	e280	180	77	168	155	141	326
2	406	268	682	160	324	e270	158	76	174	148	133	506
3	369	253	541	155	304	e260	141	74	187	187	126	599
4	341	262	446	246	371	e250	126	72	178	204	129	512
5	315	307	382	386	330	e240	114	71	195	191	116	420
6	441	292	336	716	330	e236	105	70	249	176	106	351
7	679	285	355	552	295	e230	98	70	262	161	98	312
8	899	265	365	457	265	e220	99	68	230	149	92	287
9	848	249	391	380	242	e212	105	67	206	138	87	264
10	662	236	401	323	240	e204	105	78	187	128	82	240
11	537	223	346	284	255	e198	97	209	170	120	78	217
12	833	213	327	259	256	e185	92	329	158	113	81	201
13	822	214	331	238	248	e165	89	297	151	106	84	190
14	676	268	300	218	231	e152	86	289	152	102	154	176
15	572	268	274	203	215	e141	84	290	147	99	1010	162
16	799	246	257	201	201	e130	83	278	138	96	1350	149
17	690	236	244	246	189	120	83	251	132	94	1360	140
18	599	253	238	785	178	124	81	222	145	90	1050	131
19	695	280	228	506	169	125	80	199	168	86	704	e118
20	1000	284	214	524	162	120	79	181	169	85	538	e151
21	872	267	202	433	156	115	82	165	160	97	434	e230
22	679	252	218	367	148	112	85	155	153	120	347	e212
23	553	238	279	317	141	112	81	151	145	123	287	e186
24	464	252	265	280	148	117	79	203	140	118	245	e248
25	401	346	244	252	155	114	77	212	143	112	217	e293
26	403	1680	224	229	158	109	76	257	173	104	202	e286
27	409	2710	210	214	198	106	76	237	216	111	297	e264
28	373	1850	199	207	188	104	77	213	203	136	297	e237
29	341	1440	190	209	---	130	78	194	187	169	270	e219
30	314	1180	181	255	---	297	78	181	169	168	303	e197
31	293	---	173	244	---	212	---	172	---	155	380	---
TOTAL	17679	15401	9946	10013	6338	5390	2874	5408	5255	4041	10798	7824
MEAN	570	513	321	323	226	174	95.8	174	175	130	348	261
MAX	1000	2710	903	785	371	297	180	329	262	204	1360	599
MIN	293	213	173	155	141	104	76	67	132	85	78	118
AC-FT	35070	30550	19730	19860	12570	10690	5700	10730	10420	8020	21420	15520
CFSM	15.8	14.3	8.91	8.97	6.29	4.83	2.66	4.85	4.87	3.62	9.68	7.24
IN.	18.27	15.91	10.28	10.35	6.55	5.57	2.97	5.59	5.43	4.18	11.16	8.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)#

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	544	357	382	290	240	233	228	270	229	188	285	492			
MAX	878	598	739	620	471	516	370	418	345	292	612	838			
(WY)	2000	1993	2000	2001	1997	1992	1998	1991	1991	1991	2002	1991			
MIN	283	173	142	131	81.2	54.2	73.6	160	127	77.7	105	261			
(WY)	1998	1999	1991	1996	1999	1989	2002	1996	1993	1993	1994	2003			

See Period of Record
e Estimated

15129500 SITUK RIVER NEAR YAKUTAT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003#	
ANNUAL TOTAL	115429		100967			
ANNUAL MEAN	316		277		312	
HIGHEST ANNUAL MEAN					382	1992
LOWEST ANNUAL MEAN					230	1996
HIGHEST DAILY MEAN	2710	Nov 27	2710	Nov 27	2850	Dec 27 1999
LOWEST DAILY MEAN	a48	Apr 14	67	May 9	b47	Mar 5 1989
ANNUAL SEVEN-DAY MINIMUM	48	Apr 11	70	May 3	48	Mar 3 1989
MAXIMUM PEAK FLOW			3070	Nov 27	3840	Oct 18 1999
MAXIMUM PEAK STAGE			71.95	Nov 27	72.99	Oct 18 1999
INSTANTANEOUS LOW FLOW			66	May 10	47	cMar 5 1989
ANNUAL RUNOFF (AC-FT)	229000		200300		225900	
ANNUAL RUNOFF (CFSM)	8.78		7.68		8.66	
ANNUAL RUNOFF (INCHES)	119.28		104.33		117.66	
10 PERCENT EXCEEDS	607		517		594	
50 PERCENT EXCEEDS	245		212		236	
90 PERCENT EXCEEDS	88		91		112	

See Period of Record

a Apr. 14-17

b Mar. 5-7, 1989

c Mar. 5, 1989 and Apr. 15 and 17, 2002

15129500 SITUK RIVER NEAR YAKUTAT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to 1973 and 1988 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1970 to September 1973 (fragmentary) and May 1988 to current year.

INSTRUMENTATION.--Water-temperature recorder October 1970 to September 1973, at a site 500 ft downstream. Electronic water-temperature recorder since May 1988, set for 2-hour recording interval. Recording interval changed to 15-minutes on March 6, 1996.

REMARKS.--Records represent water temperature at sensor within 0.5°C. water year. Missing record September 19-30 due to recorder malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 20.0°C, July 4, 1997; minimum, 0.0°C, on many days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 18.5°C, July 1, 10, and 12; minimum, 0.0°C on several days during winter.

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.0	8.0	8.5	7.5	7.0	7.0	5.5	5.0	5.5	2.0	1.5	2.0
2	9.5	8.0	8.5	7.0	6.5	6.5	5.0	4.5	5.0	2.0	1.5	2.0
3	9.0	7.5	8.5	6.5	6.0	6.5	5.0	4.5	4.5	2.5	1.5	2.0
4	9.0	8.0	8.5	7.0	6.5	6.5	4.5	4.0	4.5	3.0	2.0	2.5
5	8.5	8.0	8.0	7.0	6.5	6.5	4.5	4.0	4.5	2.5	2.0	2.0
6	8.5	8.0	8.5	7.0	6.5	6.5	4.0	3.5	3.5	2.0	2.0	2.0
7	9.0	8.5	8.5	7.0	5.0	6.0	5.0	4.0	4.5	2.0	1.5	2.0
8	8.5	8.0	8.5	5.0	4.5	5.0	5.0	4.5	5.0	2.5	2.0	2.5
9	8.0	7.0	7.5	5.0	4.0	4.5	5.0	4.5	4.5	2.0	1.5	1.5
10	8.0	7.0	7.5	5.5	4.5	5.0	5.0	4.0	4.5	2.0	1.0	1.5
11	8.0	7.0	7.5	4.5	4.0	4.0	4.5	4.5	4.5	2.0	1.5	1.5
12	8.0	7.5	7.5	5.0	4.0	4.5	4.5	4.0	4.5	2.5	1.5	2.0
13	8.5	7.5	8.0	5.5	5.0	5.5	4.5	3.5	4.0	2.5	1.0	2.0
14	8.0	7.5	8.0	5.5	5.0	5.5	3.5	2.5	3.0	1.0	0.5	1.0
15	8.0	7.5	8.0	5.5	4.5	5.0	3.5	2.5	3.5	2.5	1.0	2.0
16	8.0	8.0	8.0	4.5	3.5	4.0	3.5	3.0	3.5	3.0	2.5	2.5
17	8.0	8.0	8.0	4.5	3.5	4.0	4.0	3.5	3.5	3.0	2.5	2.5
18	8.0	7.5	7.5	4.5	4.0	4.5	3.5	2.5	3.0	2.5	1.0	1.5
19	8.5	8.0	8.0	5.0	4.0	4.5	3.0	2.0	2.5	2.5	2.0	2.5
20	8.5	8.0	8.5	5.0	4.0	4.5	2.0	1.5	1.5	2.5	2.0	2.5
21	8.0	7.0	7.5	4.5	4.0	4.5	2.0	1.5	2.0	2.0	1.5	2.0
22	8.0	7.0	7.5	5.5	4.5	5.0	3.0	2.0	2.5	2.0	1.5	1.5
23	8.0	7.0	7.0	4.5	4.0	4.0	3.0	2.0	2.5	1.5	1.0	1.5
24	8.0	7.0	7.5	5.0	4.5	5.0	3.0	2.5	2.5	2.0	1.5	2.0
25	7.5	7.5	7.5	5.0	5.0	5.0	2.5	1.5	2.5	2.5	2.0	2.5
26	7.5	7.0	7.0	7.0	5.0	6.5	1.5	1.0	1.5	2.5	1.5	2.0
27	7.5	7.0	7.0	7.0	6.0	6.5	2.0	1.5	2.0	3.0	2.0	2.5
28	7.5	6.0	6.5	6.0	5.5	6.0	2.0	2.0	2.0	3.0	2.5	2.5
29	7.0	7.0	7.0	6.5	5.5	6.0	2.5	1.5	2.0	3.0	2.5	3.0
30	7.5	6.5	7.0	6.5	5.5	6.0	2.5	1.5	2.0	3.0	2.0	2.5
31	7.5	7.0	7.0	---	---	---	2.5	1.5	1.5	2.5	1.5	2.0
MONTH	9.5	6.0	7.7	7.5	3.5	5.3	5.5	1.0	3.3	3.0	0.5	2.1

15129500 SITUK RIVER NEAR YAKUTAT—Continued

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	2.0	2.0	3.5	2.5	3.0	3.5	0.5	1.5	11.5	8.0	10.0
2	2.5	2.0	2.5	3.5	2.5	3.0	3.5	0.0	1.5	11.5	7.0	9.0
3	3.0	2.0	2.5	4.0	3.0	3.5	4.0	0.0	2.0	9.5	6.5	8.5
4	3.0	2.5	2.5	4.0	2.5	3.5	3.0	0.5	2.0	8.5	5.0	7.0
5	3.0	2.5	3.0	3.0	1.5	2.0	4.5	0.5	2.5	9.0	5.5	7.5
6	3.0	3.0	3.0	2.0	0.5	1.0	3.5	1.5	2.5	9.5	6.5	8.0
7	3.0	2.5	3.0	1.5	0.0	0.5	5.0	2.5	3.5	11.5	5.5	8.0
8	3.0	2.5	2.5	0.5	0.0	0.0	5.0	3.0	4.0	12.0	6.0	9.0
9	3.5	2.5	3.0	1.0	0.0	0.0	4.5	2.5	3.5	12.0	6.5	9.5
10	3.5	3.0	3.5	0.5	0.0	0.0	6.0	2.5	4.5	10.0	7.0	8.0
11	4.0	3.0	3.5	0.5	0.0	0.0	6.5	2.5	4.5	7.0	5.5	6.5
12	3.5	3.0	3.0	0.0	0.0	0.0	6.5	2.5	4.5	8.0	5.5	6.5
13	3.0	2.5	3.0	0.0	0.0	0.0	7.0	4.0	5.5	9.0	6.5	7.5
14	2.5	1.5	2.0	0.0	0.0	0.0	7.0	4.5	6.0	7.5	6.5	7.5
15	2.5	1.5	2.0	2.5	0.0	1.0	7.0	4.0	5.5	8.0	6.5	7.0
16	2.5	1.5	2.0	2.5	0.5	1.5	6.0	4.0	5.0	8.5	6.5	7.5
17	2.5	1.5	2.0	3.0	0.5	1.5	5.5	3.5	4.5	10.5	7.0	8.5
18	3.0	2.5	2.5	2.0	1.5	2.0	6.5	3.5	5.0	11.5	7.5	9.5
19	2.5	1.5	2.0	3.5	1.0	2.5	6.5	4.5	5.5	13.0	7.0	9.5
20	2.0	1.5	2.0	3.5	1.0	2.0	7.0	4.5	5.5	13.5	7.0	10.0
21	2.5	1.5	2.0	4.5	1.5	3.0	6.0	4.0	5.0	14.0	7.5	10.5
22	2.5	1.5	2.0	3.5	2.0	2.5	8.0	4.5	6.0	11.5	9.0	10.0
23	2.5	1.0	2.0	2.0	0.5	1.5	9.5	4.5	7.0	10.5	9.0	10.0
24	3.0	1.5	2.5	3.0	0.0	1.5	10.0	4.5	7.5	10.0	8.5	9.0
25	4.0	2.5	3.0	3.5	0.5	2.0	10.5	5.5	8.0	9.5	8.0	9.0
26	4.0	3.0	3.5	4.0	0.5	2.5	11.5	6.0	8.5	10.0	8.0	9.0
27	4.0	2.5	3.0	4.0	1.0	2.5	11.5	6.5	9.0	12.0	7.5	9.5
28	3.5	2.5	3.0	4.5	1.5	3.0	11.0	7.0	9.0	13.5	8.0	10.5
29	---	---	---	3.5	2.0	3.0	11.0	7.5	9.0	12.0	10.0	11.0
30	---	---	---	3.0	1.5	2.0	11.5	7.5	9.5	13.0	9.0	10.5
31	---	---	---	3.5	1.0	2.0	---	---	---	11.0	9.0	10.0
MONTH	4.0	1.0	2.6	4.5	0.0	1.7	11.5	0.0	5.2	14.0	5.0	8.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	11.0	8.5	10.0	18.5	12.5	15.5	16.5	12.5	14.5	13.0	12.0	12.5
2	11.0	9.0	10.0	16.0	12.5	13.5	16.5	13.5	15.0	12.0	11.5	12.0
3	12.5	9.0	10.5	13.0	12.0	12.5	15.5	12.5	14.0	13.0	12.0	12.5
4	12.5	9.0	10.5	15.0	12.0	13.5	14.5	13.0	13.5	13.5	11.5	12.5
5	11.0	10.0	10.5	14.5	13.0	13.5	17.0	11.5	14.0	13.5	11.0	12.0
6	11.5	9.5	10.5	16.5	12.0	14.0	17.0	11.5	14.5	13.5	11.0	12.5
7	12.5	10.0	11.0	17.0	12.5	14.5	17.0	12.0	14.5	14.0	12.0	13.0
8	14.0	9.5	11.5	16.0	13.0	14.5	17.5	13.5	15.5	13.5	12.0	12.5
9	13.0	10.5	11.5	17.5	13.0	15.0	17.5	12.5	15.0	12.0	11.5	12.0
10	14.5	11.0	12.5	18.5	14.0	16.0	17.0	12.5	15.0	12.5	10.0	11.5
11	13.0	11.0	12.0	18.0	14.0	15.5	15.5	13.5	14.0	12.5	10.5	11.5
12	16.5	11.0	13.5	18.5	14.0	16.0	13.5	12.5	13.0	12.5	11.0	11.5
13	14.5	12.0	12.5	18.0	13.0	15.5	14.5	12.5	13.5	11.5	10.5	11.0
14	13.0	11.0	12.0	16.5	14.5	15.0	14.0	13.0	13.0	10.5	9.0	10.0
15	14.0	10.5	12.5	15.0	13.5	14.5	14.5	13.5	14.0	9.5	7.5	8.5
16	15.5	11.5	13.5	14.0	13.0	13.5	15.0	14.5	15.0	9.0	6.5	7.5
17	14.0	11.5	12.5	14.5	12.5	13.5	15.0	14.5	14.5	9.0	6.5	8.0
18	12.5	11.5	12.0	17.5	12.5	14.5	15.5	14.0	14.5	9.5	8.0	8.5
19	13.0	11.0	12.0	17.5	12.0	15.0	15.0	14.0	14.5	---	---	---
20	15.0	11.5	13.0	16.5	14.0	15.0	14.5	13.5	14.0	---	---	---
21	14.0	12.0	13.0	14.5	13.0	13.5	15.0	12.5	13.5	---	---	---
22	15.0	12.0	13.0	14.0	12.5	13.0	15.0	12.0	13.5	---	---	---
23	14.0	12.0	13.0	16.5	13.0	14.5	15.0	12.0	13.5	---	---	---
24	13.0	11.5	12.0	15.5	13.5	14.5	15.0	13.0	14.0	---	---	---
25	12.5	11.0	11.5	14.5	13.5	14.0	15.0	12.0	13.5	---	---	---
26	11.5	11.0	11.0	14.5	13.0	13.5	13.5	12.5	13.0	---	---	---
27	12.5	10.5	11.5	14.0	12.5	13.5	13.0	12.0	12.5	---	---	---
28	14.0	11.0	12.5	13.5	13.0	13.5	15.0	12.5	13.5	---	---	---
29	16.5	11.5	14.0	14.5	13.0	13.5	13.5	12.5	13.0	---	---	---
30	18.0	12.0	14.5	15.0	13.0	14.0	13.0	12.0	12.5	---	---	---
31	---	---	---	16.0	13.0	14.5	13.5	12.0	12.5	---	---	---
MONTH	18.0	8.5	12.0	18.5	12.0	14.3	17.5	11.5	13.9	---	---	---

15129510 OLD SITUK RIVER NEAR YAKUTAT

LOCATION.--Lat 59°34'14", long 139°26'18", in NW¹/₄ NE¹/₄ NW¹/₄ sec. 23, T. 27 S., R. 35 E. (Yakutat C-4 quad.), Yakutat Borough, Hydrologic Unit 19010401, in Tongass National Forest, on right bank 100 ft downstream from Forest Hwy. 10, 10.5 mi northeast of Yakutat.

DRAINAGE AREA.--3.0 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to September 2003.

GAGE.--Water-stage recorder. Elevation of gage is 77 ft above sea level, from topographic map.

REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR - Maximum discharge during period June to September, 74 ft³/s, August 15, gage height 14.82 ft; minimum discharge, 12 ft³/s, August 9-11, gage height 14.35 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	19	16	30
2	---	---	---	---	---	---	---	---	---	20	16	42
3	---	---	---	---	---	---	---	---	---	23	15	41
4	---	---	---	---	---	---	---	---	---	22	15	37
5	---	---	---	---	---	---	---	---	---	21	14	35
6	---	---	---	---	---	---	---	---	---	20	14	33
7	---	---	---	---	---	---	---	---	---	20	14	32
8	---	---	---	---	---	---	---	---	---	19	13	33
9	---	---	---	---	---	---	---	---	---	19	13	31
10	---	---	---	---	---	---	---	---	---	18	13	30
11	---	---	---	---	---	---	---	---	---	18	13	28
12	---	---	---	---	---	---	---	---	---	17	14	28
13	---	---	---	---	---	---	---	---	---	17	14	27
14	---	---	---	---	---	---	---	---	---	17	20	26
15	---	---	---	---	---	---	---	---	---	17	53	25
16	---	---	---	---	---	---	---	---	---	16	55	24
17	---	---	---	---	---	---	---	---	---	16	46	24
18	---	---	---	---	---	---	---	---	---	16	40	23
19	---	---	---	---	---	---	---	---	---	15	36	23
20	---	---	---	---	---	---	---	---	---	15	35	29
21	---	---	---	---	---	---	---	---	---	16	32	29
22	---	---	---	---	---	---	---	---	---	17	29	27
23	---	---	---	---	---	---	---	---	---	16	28	26
24	---	---	---	---	---	---	---	---	---	15	26	27
25	---	---	---	---	---	---	---	---	---	14	26	30
26	---	---	---	---	---	---	---	---	---	14	26	31
27	---	---	---	---	---	---	---	---	---	16	31	29
28	---	---	---	---	---	---	---	---	---	20	16	28
29	---	---	---	---	---	---	---	---	---	20	18	27
30	---	---	---	---	---	---	---	---	---	19	19	31
31	---	---	---	---	---	---	---	---	---	18	32	---
TOTAL	---	---	---	---	---	---	---	---	---	544	785	883
MEAN	---	---	---	---	---	---	---	---	---	17.5	25.3	29.4
MAX	---	---	---	---	---	---	---	---	---	23	55	42
MIN	---	---	---	---	---	---	---	---	---	14	13	23
AC-FT	---	---	---	---	---	---	---	---	---	1080	1560	1750
CFSM	---	---	---	---	---	---	---	---	---	3.67	5.30	6.16
IN.	---	---	---	---	---	---	---	---	---	4.23	6.11	6.87

15129510 OLD SITUK RIVER NEAR YAKUTAT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- June to September 2003.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June to September 2003.

INSTRUMENTATION.--Water-temperature recorder set for 15 minute recording interval.

REMARKS.--Records represent water temperature at sensor within 0.5°C. No temperature cross sections were taken in the 2003 water year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 14.0°C July 1 and 10; minimum recorded, 3.5°C on September 16, 2003.

TEMPERATURE, WATER, DEGREES CELSIUS, JUNE TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	14.0	8.5	11.0	10.5	7.0	8.5	7.5	6.5	7.0
2	---	---	---	11.0	8.0	9.0	9.5	6.0	6.5	8.5	7.0	7.5
3	---	---	---	8.5	7.5	8.0	6.5	6.0	6.5	8.5	7.0	7.5
4	---	---	---	10.5	7.0	8.5	6.5	6.0	6.5	9.5	6.5	7.5
5	---	---	---	9.5	7.5	8.5	7.5	6.0	6.5	9.0	5.5	7.0
6	---	---	---	11.5	7.0	9.0	7.5	6.0	7.0	9.0	5.5	7.0
7	---	---	---	12.0	7.5	9.5	8.0	6.0	7.0	8.5	6.5	7.5
8	---	---	---	10.5	8.0	9.0	8.0	6.5	7.0	8.5	6.5	7.5
9	---	---	---	12.5	7.5	9.5	8.0	6.5	7.0	7.5	6.5	7.0
10	---	---	---	14.0	8.5	11.0	7.5	6.5	7.0	7.5	5.5	6.5
11	---	---	---	13.5	8.5	11.0	7.0	6.5	6.5	8.5	6.0	7.0
12	---	---	---	13.5	8.5	10.5	8.5	6.0	6.5	8.5	6.5	7.0
13	---	---	---	13.0	8.0	10.5	8.5	7.5	8.0	7.5	6.0	7.0
14	---	---	---	11.0	9.0	9.5	9.5	7.5	8.5	6.5	5.5	6.0
15	---	---	---	10.0	8.0	9.0	10.0	9.0	9.5	7.5	4.5	5.5
16	---	---	---	9.0	8.0	8.5	9.5	8.0	9.0	7.0	3.5	5.0
17	---	---	---	9.5	7.5	8.5	9.0	7.5	8.0	6.5	4.0	5.5
18	---	---	---	12.5	8.0	9.5	9.0	6.5	7.5	7.0	5.5	6.0
19	---	---	---	13.0	8.0	10.0	8.5	6.0	7.5	6.5	4.0	5.0
20	---	---	---	11.0	9.0	10.0	8.5	6.5	7.5	6.5	5.5	6.0
21	---	---	---	9.5	8.5	8.5	9.5	6.0	7.5	7.0	5.5	6.0
22	---	---	---	8.5	7.5	8.0	10.0	5.5	7.5	7.0	4.0	5.5
23	---	---	---	10.5	7.0	9.0	9.5	6.0	7.5	6.5	5.0	6.0
24	---	---	---	9.5	8.0	8.5	9.0	6.5	7.5	7.0	5.5	6.0
25	---	---	---	8.5	7.5	8.0	9.5	6.0	7.5	7.0	6.0	6.5
26	---	---	---	9.0	7.5	8.0	7.5	6.5	7.0	7.5	6.0	6.5
27	9.0	---	---	9.0	8.0	8.5	8.0	7.0	7.5	7.0	6.0	6.5
28	10.0	6.5	8.5	8.5	7.5	8.0	10.5	7.0	8.0	8.0	6.5	7.0
29	13.0	7.0	9.5	9.0	7.5	8.0	8.0	7.0	7.5	8.0	6.0	7.0
30	13.5	7.5	10.5	8.5	7.5	8.0	8.0	7.0	7.5	6.5	6.0	6.5
31	---	---	---	10.0	7.0	8.5	9.0	6.5	7.5	---	---	---
MONTH	---	---	---	14.0	7.0	9.1	10.5	5.5	7.4	9.5	3.5	6.5

15129600 OPHIR CREEK NEAR YAKUTAT

LOCATION.--Lat 59°31'26", long 139°44'37", in SW¹/₄ NW¹/₄ NE¹/₄ sec. 1, T. 28 S., R. 33 E. (Yakutat C-5 SW quad), Hydrologic Unit 19010401, in Tongass National Forest, on right bank 0.8 mi upstream from Summit Lake and 2 mi south of Yakutat.

DRAINAGE AREA.-- 2.5 mi², approximately.

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 9.05 ft above sea level, determined by levels survey.

REMARKS.--Records fair, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	16	56	13	13	15	6.7	2.8	5.6	4.3	2.7	17
2	24	15	49	13	18	15	6.0	2.7	5.9	4.3	3.0	22
3	20	14	43	12	20	13	5.6	2.7	5.6	6.4	2.8	21
4	17	15	39	16	26	13	5.2	2.5	5.4	6.3	3.7	19
5	16	17	35	21	24	11	4.9	2.5	6.1	5.6	3.3	17
6	18	16	31	30	25	10	4.8	2.5	7.1	5.1	3.0	16
7	25	15	31	26	23	9.7	4.7	2.4	6.6	4.8	2.8	14
8	27	14	31	23	20	e9.1	4.8	2.4	6.1	4.5	2.5	13
9	22	12	32	21	19	e8.3	4.8	2.3	5.7	4.2	2.3	12
10	19	11	32	20	18	7.8	5.2	2.7	5.4	3.8	2.2	14
11	17	10	29	18	18	7.4	4.9	6.5	5.2	3.6	2.1	12
12	36	9.9	28	17	18	e6.8	4.6	9.9	4.8	3.4	2.2	10
13	31	9.9	27	16	17	e6.7	4.6	9.3	4.5	3.2	2.1	9.8
14	25	13	25	15	16	6.6	4.4	8.1	4.3	3.2	4.3	8.8
15	23	15	24	14	15	6.3	4.3	7.3	4.0	3.0	19	8.1
16	42	14	23	14	14	6.0	4.2	6.6	3.9	2.9	18	7.5
17	35	13	22	16	13	5.8	4.1	6.1	3.8	2.8	22	7.1
18	31	12	21	45	12	5.8	4.0	5.7	4.2	2.7	19	6.7
19	37	13	20	34	11	5.6	4.0	5.4	4.1	2.5	17	6.0
20	47	13	19	31	10	5.1	3.8	5.1	3.9	2.5	16	7.4
21	42	13	18	26	9.6	4.8	3.8	4.8	3.7	2.8	14	11
22	35	12	19	23	8.9	4.6	3.7	4.6	3.5	2.9	13	10
23	30	11	22	21	8.4	4.6	3.7	4.6	3.4	2.5	12	8.9
24	27	12	21	18	8.9	4.6	3.5	5.5	3.4	2.3	10	11
25	23	19	20	17	8.4	4.4	3.5	6.0	3.5	2.2	9.4	13
26	24	72	19	16	8.4	4.3	3.3	9.1	3.9	2.3	9.3	13
27	25	98	18	14	12	4.1	3.2	8.1	5.5	2.4	13	12
28	23	71	17	13	12	4.0	3.0	7.0	5.5	2.6	12	11
29	20	69	16	13	---	5.2	3.0	6.4	5.0	3.5	11	10
30	19	64	15	15	---	9.9	3.0	5.9	4.6	3.4	13	9.4
31	17	---	14	14	---	7.9	---	5.7	---	3.0	20	---
TOTAL	822	708.8	816	605	426.6	232.4	129.3	163.2	144.2	109.0	286.7	357.7
MEAN	26.5	23.6	26.3	19.5	15.2	7.50	4.31	5.26	4.81	3.52	9.25	11.9
MAX	47	98	56	45	26	15	6.7	9.9	7.1	6.4	22	22
MIN	16	9.9	14	12	8.4	4.0	3.0	2.3	3.4	2.2	2.1	6.0
AC-FT	1630	1410	1620	1200	846	461	256	324	286	216	569	709
CFSM	10.6	9.45	10.5	7.81	6.09	3.00	1.72	2.11	1.92	1.41	3.70	4.77
IN.	12.23	10.55	12.14	9.00	6.35	3.46	1.92	2.43	2.15	1.62	4.27	5.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	MEAN	31.5	25.4	23.2	19.2	15.6	15.3	14.4	13.2	6.80	4.37	9.11	18.5
MAX	60.7	43.8	49.1	42.7	35.9	38.3	28.3	34.4	19.7	9.67	19.4	30.8	
(WY)	2000	2000	2000	2001	1997	1992	1998	1999	1999	1998	1998	1998	
MIN	20.5	12.6	8.96	5.13	3.31	4.13	2.68	5.26	2.01	0.66	1.32	5.90	
(WY)	1998	1996	1996	1993	1999	1999	2002	2003	1993	1993	1993	1993	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	5098.3	4800.9	
ANNUAL MEAN	14.0	13.2	16.4
HIGHEST ANNUAL MEAN			23.3
LOWEST ANNUAL MEAN			10.9
HIGHEST DAILY MEAN	98	Nov 27	e118
LOWEST DAILY MEAN	a1.8	Apr 14	0.27
ANNUAL SEVEN-DAY MINIMUM	1.8	Apr 12	0.39
MAXIMUM PEAK FLOW		116	c159
MAXIMUM PEAK STAGE		12.22	c12.55
INSTANTANEOUS LOW FLOW		1.9	d0.21
ANNUAL RUNOFF (AC-FT)	10110	9520	11870
ANNUAL RUNOFF (CFSM)	5.59	5.26	6.55
ANNUAL RUNOFF (INCHES)	75.86	71.44	89.01
10 PERCENT EXCEEDS	29	26	35
50 PERCENT EXCEEDS	9.9	10	12
90 PERCENT EXCEEDS	2.7	3.0	3.3

a Apr. 14-18, and Jul. 21-22

b Aug. 11 and Aug. 13

c May have been exceeded during period of gage malfunction from Dec. 25 to 28, 1999

d Minimum recorded, Jul. 28, Aug. 2, Aug. 7 to Aug. 10, 1993, but may have been less during period water was below intake Jul. 28, Aug. 2, and Aug. 8 to Aug. 10, 1993

e Estimated

15199500 SINONA CREEK NEAR CHISTOCHINA

LOCATION.--Lat 62°35'28", long 144°38'48", in SW¹/₄ of NW¹/₄ sec. 3, T. 9 N., R. 4 E., (Gulkana C-2 quad), Hydrologic Unit 19020101, on downstream left bank, at Glenn Highway/Tok Cutoff (Alaska Route 1) bridge, 1.8 miles NE of Chistochina.

DRAINAGE AREA.-- 167 mi²

PERIOD OF RECORD.--September 2002 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,900 ft. above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	90
2	---	---	---	---	---	---	---	---	---	---	---	84
3	---	---	---	---	---	---	---	---	---	---	---	75
4	---	---	---	---	---	---	---	---	---	---	---	68
5	---	---	---	---	---	---	---	---	---	---	---	63
6	---	---	---	---	---	---	---	---	---	---	---	59
7	---	---	---	---	---	---	---	---	---	---	---	59
8	---	---	---	---	---	---	---	---	---	---	---	58
9	---	---	---	---	---	---	---	---	---	---	---	65
10	---	---	---	---	---	---	---	---	---	---	---	70
11	---	---	---	---	---	---	---	---	---	---	---	80
12	---	---	---	---	---	---	---	---	---	---	---	90
13	---	---	---	---	---	---	---	---	---	---	---	88
14	---	---	---	---	---	---	---	---	---	---	---	95
15	---	---	---	---	---	---	---	---	---	---	---	91
16	---	---	---	---	---	---	---	---	---	---	---	81
17	---	---	---	---	---	---	---	---	---	---	---	73
18	---	---	---	---	---	---	---	---	---	‡28	---	69
19	---	---	---	---	---	---	---	---	---	---	---	67
20	---	---	---	---	---	---	---	---	---	---	---	66
21	---	---	---	---	---	---	---	---	---	---	---	63
22	---	---	---	---	---	---	---	---	---	---	---	59
23	---	---	---	---	---	---	---	---	---	---	---	57
24	---	---	---	---	---	---	---	---	---	---	---	58
25	---	---	---	---	---	---	---	---	---	---	---	68
26	---	---	---	---	---	---	---	---	---	---	---	67
27	---	---	---	---	---	---	---	---	---	---	---	55
28	---	---	---	---	---	---	---	---	---	---	‡163	70
29	---	---	---	---	---	---	---	---	---	---	---	70
30	---	---	---	---	---	---	---	---	---	---	---	65
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	2123
MEAN	---	---	---	---	---	---	---	---	---	---	---	70.8
MAX	---	---	---	---	---	---	---	---	---	---	---	95
MIN	---	---	---	---	---	---	---	---	---	---	---	55
AC-FT	---	---	---	---	---	---	---	---	---	---	---	4210

‡ Result of discharge measurement

15199500 SINONA CREEK NEAR CHISTOCHINA—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	60	e14	e5.7	e5.5	e13	e6.1	e25	66	18	15	17
2	73	e58	e13	e5.7	e5.5	e13	e6.1	e28	68	20	14	16
3	85	e55	e12	e5.7	e5.6	e13	e6.1	e35	76	20	14	16
4	104	e52	e11	e5.7	e5.8	e12	e6.1	e40	73	21	15	16
5	100	e50	e10	e5.7	e6.0	e12	e6.3	e46	64	20	15	15
6	87	e48	e9.8	e5.7	e7.1	e11	e6.3	e54	58	19	14	15
7	86	e45	e9.5	e5.7	e8.0	e11	e6.8	e65	51	18	13	14
8	96	e42	e9.0	e5.6	e9.0	e10	e7.3	e77	58	17	12	14
9	95	e40	e8.5	e5.6	e10	e9.2	e7.5	e100	58	17	12	14
10	91	e36	e8.0	e5.6	e12	e8.5	e7.7	145	50	16	11	14
11	72	e33	e7.7	e5.6	e14	e7.9	e8.0	180	43	16	11	14
12	65	e29	e7.3	e5.6	e14	e7.2	e8.2	205	39	16	13	15
13	63	e27	e7.0	e5.6	e14	e6.8	e8.3	206	35	15	12	17
14	65	e25	e6.8	e5.6	e14	e6.4	e8.5	180	34	16	12	16
15	67	e23	e6.5	e5.6	e13	e6.3	e8.8	163	34	16	12	16
16	78	e21	e6.2	e5.6	e12	e6.2	e9.0	e156	31	16	13	15
17	104	e19	e6.0	e5.6	e12	e6.2	e9.3	e149	29	14	13	15
18	118	e18	e5.9	e5.5	e11	e6.2	e9.5	e140	27	14	13	15
19	131	e17	e5.8	e5.5	e11	e6.4	e9.8	e134	26	13	12	15
20	146	e16	e5.8	e5.5	e10	e6.5	e10	e131	29	13	11	15
21	163	e16	e5.8	e5.5	e10	e6.7	e11	e126	28	14	12	15
22	149	e15	e5.8	e5.5	e10	e6.7	e11	e120	27	15	13	15
23	127	e15	e5.8	e5.5	e10	e6.5	e12	e117	29	15	12	14
24	111	e15	e5.8	e5.5	e10	e6.4	e13	e114	26	14	12	15
25	97	e15	e5.8	e5.5	e12	e6.3	e14	e116	23	14	12	15
26	81	e16	e5.8	e5.5	e12	e6.2	e15	e127	22	14	12	16
27	73	e16	e5.8	e5.5	e13	e6.3	e16	125	21	13	12	15
28	e70	e16	e5.8	e5.5	e13	e6.3	e18	122	21	13	12	15
29	67	e15	e5.7	e5.5	---	e6.2	e20	102	20	13	11	15
30	62	e15	e5.7	e5.5	---	e6.2	e22	88	19	13	12	15
31	60	---	e5.7	e5.5	---	e6.1	---	76	---	14	16	---
TOTAL	2850	868	233.3	172.9	289.5	248.7	307.7	3492	1185	487	393	454
MEAN	91.9	28.9	7.53	5.58	10.3	8.02	10.3	113	39.5	15.7	12.7	15.1
MAX	163	60	14	5.7	14	13	22	206	76	21	16	17
MIN	60	15	5.7	5.5	5.5	6.1	6.1	25	19	13	11	14
AC-FT	5650	1720	463	343	574	493	610	6930	2350	966	780	901

SUMMARY STATISTICS

FOR 2003 WATER YEAR

ANNUAL TOTAL	10981.1
ANNUAL MEAN	30.1
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	206 May 13
LOWEST DAILY MEAN	a5.5 Jan 18
ANNUAL SEVEN-DAY MINIMUM	5.5 Jan 18
MAXIMUM PEAK FLOW	231 May 13
MAXIMUM PEAK STAGE	7.23 May 13
MAXIMUM PEAK STAGE	b9.63 Apr 27
ANNUAL RUNOFF (AC-FT)	21780
ANNUAL RUNOFF (CFSM)	0.18
ANNUAL RUNOFF (INCHES)	2.45
10 PERCENT EXCEEDS	87
50 PERCENT EXCEEDS	14
90 PERCENT EXCEEDS	5.7

a Jan. 18 to Feb. 2
b Backwater from ice
e Estimated

15200280 GULKANA RIVER AT SOURDOUGH

LOCATION.--Lat 62°31'15", long 145°31'51", in SE¹/₄ NE¹/₄ sec. 35, T. 9 N., R. 2 W. (Gulkana C-4 quad), Hydrologic Unit 19020102, near left bank on downstream side of pier of Alyeska Pipeline Service Company bridge, 0.3 mi downstream from Sourdough Creek and 0.8 mi southwest of Sourdough.

DRAINAGE AREA.--1,770 mi².

PERIOD OF RECORD.--October 1972 to September 1978, May to September 1982, October 1988 to September 1993, May 1997 to current year.

REVISED RECORDS.--WRD AK-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,845.96 ft above sea level (levels of Alyeska Engineering).

REMARKS.--Records good except for estimated daily discharges, which are poor. Rain gage at station. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2340	1670	e1200	e880	e720	e620	e530	e1150	2770	1200	1280	1330
2	3690	1640	e1150	e870	e720	e620	e520	e1250	3060	1160	1240	1790
3	4050	1660	e1150	e870	e720	e620	e520	e1400	2800	1280	1150	1860
4	3500	1750	e1150	e870	e720	e610	e520	e1550	2480	1690	1070	2110
5	3040	1760	e1100	e870	e720	e590	e520	e1700	2250	1840	1010	2010
6	2770	1670	e1100	e860	e710	e580	e520	e1900	2150	1660	964	1790
7	2600	1570	e1100	e850	e700	e580	e520	e2050	2150	1500	911	1600
8	2590	1550	e1050	e840	e690	e580	e520	2300	2060	1390	863	1450
9	2510	e1500	e1050	e840	e690	e570	e520	2450	1920	1290	822	1340
10	2210	e1400	e1050	e830	e680	e570	e520	2490	1810	1190	778	1290
11	2120	e1400	e1050	e820	e680	e570	e520	2490	1730	1120	751	1230
12	2060	e1400	e1000	e820	e680	e570	e520	2600	1690	1060	735	1180
13	1990	e1400	e1000	e820	e680	e570	e520	2740	1660	1020	719	1210
14	1940	e1300	e1000	e820	e670	e560	e520	2940	1570	983	720	1240
15	1880	e1300	e1000	e810	e660	e560	e525	2840	1540	945	722	1200
16	1930	e1300	e990	e800	e660	e560	e530	2690	1630	923	722	1120
17	2080	e1300	e990	e800	e650	e560	e535	2700	1630	883	718	1070
18	2170	e1200	e990	e800	e650	e560	e540	3220	1590	854	702	1030
19	2230	e1200	e970	e800	e640	e550	e545	3270	1550	832	707	963
20	2360	e1100	e960	e800	e640	e550	e555	2950	1600	800	705	924
21	2590	e1100	e950	e790	e640	e550	e565	2640	1820	785	692	914
22	2630	e1100	e950	e780	e640	e550	e595	2450	2010	770	700	883
23	2490	e1200	e950	e760	e640	e540	e630	2330	2000	780	692	853
24	2360	e1200	e930	e750	e640	e540	e680	2270	1930	807	685	849
25	2200	e1200	e930	e740	e630	e540	e720	2350	1820	785	693	875
26	2080	e1200	e920	e730	e630	e540	e770	2540	1660	768	736	935
27	1970	e1200	e900	e720	e630	e530	e830	2740	1530	770	771	957
28	1730	e1200	e890	e720	e630	e530	e900	2680	1420	843	796	976
29	1810	e1200	e890	e720	---	e530	e980	2520	1340	980	797	1020
30	1800	e1200	e890	e720	---	e530	e1050	2460	1260	1040	792	1140
31	1730	---	e890	e720	---	e530	---	2480	---	1190	899	---
TOTAL	73450	40870	31140	24820	18760	17460	18240	74140	56430	33138	25542	37139
MEAN	2369	1362	1005	801	670	563	608	2392	1881	1069	824	1238
MAX	4050	1760	1200	880	720	620	1050	3270	3060	1840	1280	2110
MIN	1730	1100	890	720	630	530	520	1150	1260	768	685	849
AC-FT	145700	81070	61770	49230	37210	34630	36180	147100	111900	65730	50660	73670
CFSM	1.34	0.77	0.57	0.45	0.38	0.32	0.34	1.35	1.06	0.60	0.47	0.70
IN.	1.54	0.86	0.65	0.52	0.39	0.37	0.38	1.56	1.19	0.70	0.54	0.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)#

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
MEAN	1064	598	444	373	327	315	476	3074	2709	1485	1335	1440
MAX	2369	1362	1005	801	670	563	1344	5630	4969	2696	2821	4253
(WY)	2003	2003	2003	2003	2003	2003	1993	1989	1977	1992	1992	1990
MIN	437	287	208	200	200	200	227	836	1150	637	714	505
(WY)	1975	1976	1974	1974	1974	1974	2000	2002	1998	1976	1989	1974

15200280 GULKANA RIVER AT SOURDOUGH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1973 - 2003#		
ANNUAL TOTAL	467513			451129					
ANNUAL MEAN	1281			1236			1138		
HIGHEST ANNUAL MEAN							1564		
LOWEST ANNUAL MEAN							658		
HIGHEST DAILY MEAN	7070	Aug	22	4050	Oct	3	12100	Sep	12 1990
LOWEST DAILY MEAN	a270	Apr	16	b520	Apr	2	c200	Dec	6 1973
ANNUAL SEVEN-DAY MINIMUM	270	Apr	16	520	Apr	2	200	Dec	6 1973
MAXIMUM PEAK FLOW				4290	Oct	3	d12700	Sep	12 1990
MAXIMUM PEAK STAGE				8.01	Oct	3	11.26	Sep	12 1990
MAXIMUM PEAK STAGE				f11.12	Apr	29			
ANNUAL RUNOFF (AC-FT)	927300			894800			824400		
ANNUAL RUNOFF (CFSM)	0.72			0.70			0.64		
ANNUAL RUNOFF (INCHES)	9.83			9.48			8.74		
10 PERCENT EXCEEDS	2600			2360			2620		
50 PERCENT EXCEEDS	1000			980			650		
90 PERCENT EXCEEDS	290			560			250		

See period of record, partial years used in monthly statistics

a Apr. 16-28

b Apr. 02-14

c Dec. 6, 1973 to Apr. 12, 1974

d From rating curve extended above 4,600 ft³/s

e Estimated

f Backwater from ice

15215990 NICOLET CREEK NEAR CORDOVA

LOCATION.--Lat 60°31'09", long 145°47'23", in SW¹/₄ SW¹/₄ SE¹/₄ sec. 32, T. 15 S., R. 3 W. (Cordova C-5 quad), Hydrologic Unit 19020201, on right bank 275 ft upstream from culvert for Whitshed Road, 475 ft upstream from mouth and 2.1 mi southwest of Cordova.

DRAINAGE AREA.--0.75 mi².

PERIOD OF RECORD.--Annual maximum, water years 1991-99. September 1999 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 40 ft above sea level, from topographic map.

REMARKS.--Records good except for discharges greater than 60 ft³/s, which are fair; and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	20	9.7	2.1	9.7	13	0.44	0.37	e9.5	e2.0	1.7	2.2
2	3.7	34	4.5	1.2	14	4.0	0.45	0.32	e3.0	e3.5	1.6	1.9
3	1.7	9.2	4.7	20	65	2.7	0.46	0.29	e2.0	e2.5	1.0	18
4	1.3	32	21	23	80	1.5	0.40	0.35	e1.0	e2.0	0.81	9.2
5	2.5	5.4	3.3	4.5	124	0.98	0.36	7.1	e22	e1.5	0.64	2.3
6	14	14	1.7	2.6	11	0.66	0.38	12	e26	e1.5	0.53	1.5
7	34	5.6	12	1.6	2.9	0.65	0.37	1.9	e8.0	e1.0	0.45	1.2
8	2.5	1.9	10	1.2	4.2	0.63	1.8	1.0	e4.0	e1.0	0.39	0.97
9	1.3	1.3	4.7	1.2	15	e0.50	2.3	3.9	e2.5	e1.0	0.34	2.9
10	0.97	1.5	18	1.1	84	e0.50	7.1	68	e2.0	e0.50	0.31	1.6
11	4.1	14	11	6.1	51	e0.50	3.3	46	e1.5	e0.50	0.30	1.1
12	24	3.6	2.2	4.1	18	e0.10	2.1	13	e1.0	e0.50	12	1.0
13	7.9	16	5.9	2.8	4.1	e0.10	2.7	4.1	e1.0	e0.50	48	0.97
14	8.1	24	2.2	2.2	1.9	2.2	2.5	3.1	e1.0	e0.50	43	0.73
15	52	12	1.3	1.7	1.3	3.2	1.6	2.9	e1.0	e0.50	73	0.61
16	21	2.2	1.1	4.8	1.0	3.6	3.3	e2.5	e1.0	e2.0	76	0.55
17	5.0	3.8	1.3	33	0.89	3.1	2.1	e2.0	e0.50	e6.0	50	0.51
18	7.1	18	1.6	24	0.72	1.2	1.8	e2.0	e0.50	e2.0	5.2	0.46
19	42	37	0.99	22	0.78	1.9	1.1	e1.5	e0.50	e1.0	2.9	0.46
20	46	24	0.88	25	0.60	3.9	6.9	e1.5	e1.0	e0.80	14	14
21	17	6.2	0.64	3.0	0.56	2.6	48	e1.5	e1.0	2.5	3.8	30
22	5.0	43	4.2	1.4	0.55	0.91	9.4	e1.5	e1.0	2.2	2.1	2.1
23	2.6	14	14	1.7	0.84	0.79	2.3	e1.5	e1.0	1.4	1.4	1.4
24	12	22	4.3	0.99	15	4.8	1.4	e1.5	e7.5	0.99	1.1	1.9
25	57	15	e1.5	0.70	7.2	3.1	1.0	e1.5	e27	2.3	3.4	7.2
26	35	52	e1.5	0.58	37	1.4	0.85	e1.5	e7.0	2.3	81	e2.5
27	3.4	57	e1.0	2.2	13	2.8	0.71	e1.0	e5.0	5.8	18	e1.5
28	6.8	9.1	e0.50	5.2	16	5.3	0.62	e1.0	e4.0	26	13	e35
29	33	53	e0.50	6.5	---	3.3	0.54	e1.0	e3.0	15	3.7	e43
30	21	43	e7.0	7.2	---	1.2	0.44	e1.5	e2.5	28	7.9	e14
31	25	---	12	3.2	---	0.65	---	e7.0	---	2.9	4.9	---
TOTAL	521.97	593.8	165.21	216.87	580.24	71.77	106.72	194.33	148.00	120.19	472.47	200.76
MEAN	16.8	19.8	5.33	7.00	20.7	2.32	3.56	6.27	4.93	3.88	15.2	6.69
MAX	57	57	21	33	124	13	48	68	27	28	81	43
MIN	0.97	1.3	0.50	0.58	0.55	0.10	0.36	0.29	0.50	0.50	0.30	0.46
AC-FT	1040	1180	328	430	1150	142	212	385	294	238	937	398
CFSM	22.5	26.4	7.11	9.33	27.6	3.09	4.74	8.36	6.58	5.17	20.3	8.92
IN.	25.89	29.45	8.19	10.76	28.78	3.56	5.29	9.64	7.34	5.96	23.43	9.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)#

	MEAN	16.7	12.7	13.9	15.5	9.93	5.92	8.78	10.5	6.12	5.31	9.66	8.89
MAX	20.2	19.8	20.4	26.6	20.7	10.2	11.3	16.1	9.35	6.79	15.2	10.9	
(WY)	2001	2003	2000	2001	2003	2000	2002	2000	2002	2001	2003	2002	
MIN	10.4	6.88	5.33	7.00	2.00	2.32	3.56	6.27	1.59	3.88	4.97	6.69	
(WY)	2002	2002	2003	2003	2002	2003	2003	2003	2001	2003	2001	2003	

See Period of Record and Remarks
e Estimated

15215990 NICOLET CREEK NEAR CORDOVA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 2000 - 2003#
ANNUAL TOTAL	3749.65	3392.33	
ANNUAL MEAN	10.3	9.29	10.3
HIGHEST ANNUAL MEAN			11.7 2001
LOWEST ANNUAL MEAN			9.06 2002
HIGHEST DAILY MEAN	144 Apr 19	124 Feb 5	144 Apr 19 2002
LOWEST DAILY MEAN	0.36 Jul 17	a0.10 Mar 12	a0.10 Mar 12 2003
ANNUAL SEVEN-DAY MINIMUM	0.73 Jul 11	0.41 Apr 1	0.19 Jun 27 2001
MAXIMUM PEAK FLOW		b301 May 10	cd988 Nov 3 1994
MAXIMUM PEAK STAGE		f25.00 May 10	d19.60 Nov 3 1994
ANNUAL RUNOFF (AC-FT)	7440	6730	7500
ANNUAL RUNOFF (CFSM)	13.7	12.4	13.8
ANNUAL RUNOFF (INCHES)	185.98	168.26	187.47
10 PERCENT EXCEEDS	32	26	31
50 PERCENT EXCEEDS	3.9	2.5	4.0
90 PERCENT EXCEEDS	0.89	0.52	0.92

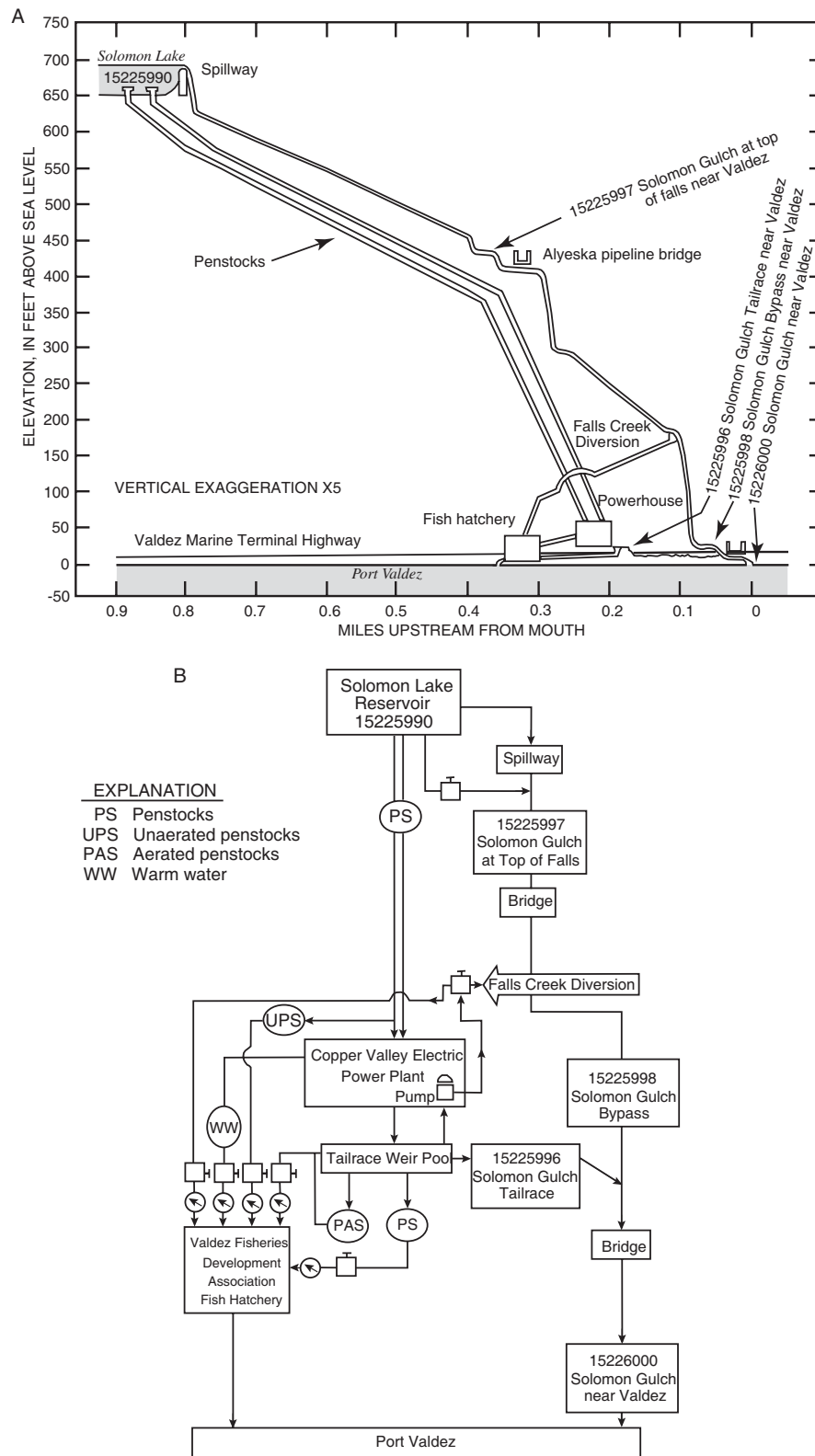
See Period of Record and Remarks

a Mar. 12 and 13

b From rating curve extended above 33 ft³/s on basis of step-backwater analysisc From rating curve extended above 66 ft³/s on basis of slope-area measurement of peak flow

d Site and datum then in use

f From crest-stage gage



Solomon Gulch (A) profile and (B) schematic diagram of flows.

15225990 SOLOMON LAKE NEAR VALDEZ

LOCATION.--Lat 61°04'25", long 146°18'08", in NE¹/₄ SW¹/₄ sec. 21, T. 9 S., R. 6 W. (Valdez A-7 SE quad), Hydrologic Unit 19020201, within Valdez Corporate boundary, at outlet of Solomon Lake, 0.7 mi upstream from mouth of Solomon Gulch, and 4.6 mi southeast of Valdez.

DRAINAGE AREA.--19.2 mi².

PERIOD OF RECORD.--October 1991 to current year. Additional unpublished records prior to period of record available from Copper Valley Electric Association and in station files of Geological Survey.

REMARKS.--Reservoir is formed by a rockfill dam at outlet of Solomon Lake. Reservoir is used for power; power-plant operation began January 6, 1982. Usable capacity is 31,500 acre-feet below spillway crest at 685 ft. Discharge released to the penstocks is accounted for at Solomon Gulch Tailrace (station 15225996). Releases through the dam to maintain minimum flows, spillway releases, and incremental flow are accounted for at the Solomon Gulch at top of falls gage (station 15225997).

COOPERATION.--Reservoir contents furnished by Copper Valley Electric Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents 32,500 acre-ft, September 21, 1993, from crest-stage gage and rating extended above 31,500 acre-ft; minimum contents, 2,167 acre-ft, May 1, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,900 acre-ft October 21, elevation, 685.87 ft, from crest-stage gage and rating extended above 31,500 acre-ft; minimum contents, 4,430 acre-ft, April 29, elevation, 626.7 ft.

MONTH END RESERVOIR ELEVATION, IN FEET, AND CONTENTS, IN ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	ELEVATION	CONTENTS	CHANGE IN CONTENTS
SEP 30	685.1	31,500	----
OCT 31	685.4	31,700	+200
NOV 30	684.8	31,300	-400
DEC 31	673.6	24,000	-7,300
JAN 31	669.6	21,800	-2,200
FEB 28	664.3	19,200	-2,600
MAR 31	645.9	11,000	-8,200
APR 30	627.8	4,700	-6,300
MAY 31	644.6	10,400	+5,700
JUN 30	667.2	20,600	+10,200
JUL 31	682.1	29,100	+8,500
AUG 31	685.4	31,700	+2,600
SEP 30	684.6	31,100	-600
		CAL YR 2002	+4,600
		WTR YR 2003	-400

15225996 SOLOMON GULCH TAILRACE NEAR VALDEZ

LOCATION.--Lat 61°05'01", long 146°18'10", in NE¹/₄ SE¹/₄ SW¹/₄ sec. 16, T. 9 S., R. 6 W. (Valdez A-7 SE quad), Hydrologic Unit 19020201, within Valdez Corporate boundary, on left wingwall of tailrace pool of Copper Valley Electric Association powerhouse facility, 350 ft upstream from mouth at Solomon Gulch, and 3.8 mi southeast of Valdez.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--September 1986 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 40 ft above sea level, from topographic map.

REMARKS.--Records fair. Discharge shown herein is flow through the Solomon Gulch Power Plant turbines. Solomon Lake, 0.8 mi upstream, supplies water to the power-plant through two 48-in. diameter penstocks. Water for the fish hatchery, diverted upstream from the gage, is not included in these published daily values. Annual mean discharge for these diversions for 2003 water year was 12.0 ft³/s.

COOPERATION.--Records of daily discharge diverted to the fish hatchery are furnished by Valdez Fisheries Development Association. Copper Valley Electric Association provides tables of hourly power output through the turbines.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 293 ft³/s, January 2 and 3, 1992, gage height, 3.04 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 274 ft³/s, November 13, December 12 and 13, gage height, 3.03; no flow for periods on November 26, May 20, and 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	210	201	74	41	92	221	106	189	217	195	205
2	201	210	218	91	42	93	208	106	201	218	198	211
3	199	202	216	94	41	107	207	98	200	215	201	180
4	193	203	214	88	40	107	218	96	204	204	202	173
5	188	201	216	71	41	107	208	106	204	210	204	140
6	189	211	220	58	39	109	209	109	180	210	208	187
7	200	211	221	52	40	106	221	107	196	218	201	188
8	192	220	212	48	39	80	220	105	194	176	142	196
9	190	213	225	43	36	83	219	111	191	223	153	197
10	195	211	215	39	40	123	118	112	200	223	181	191
11	193	219	198	40	44	123	55	132	160	223	202	197
12	181	209	230	38	43	135	63	195	129	219	203	184
13	175	222	226	46	42	132	69	191	148	221	208	180
14	185	165	224	49	40	125	65	195	200	214	207	177
15	194	74	223	52	38	123	68	135	197	186	135	185
16	192	75	220	46	38	109	62	95	200	190	156	179
17	191	75	219	46	41	114	68	93	205	188	211	183
18	187	83	145	40	113	111	67	97	193	188	213	152
19	181	85	89	40	151	90	65	99	210	182	214	88
20	183	83	89	38	123	109	64	53	211	185	219	67
21	193	98	93	42	87	110	79	89	214	186	217	56
22	122	112	107	44	116	99	72	86	197	188	211	59
23	162	101	102	44	113	100	71	101	223	186	205	56
24	167	90	95	48	119	112	78	123	223	190	168	60
25	97	93	90	43	116	107	89	159	188	185	208	60
26	104	100	79	40	111	172	94	195	201	180	217	63
27	129	150	83	44	106	214	93	198	165	174	217	64
28	171	170	80	43	105	209	104	196	163	186	212	71
29	213	205	81	44	---	206	104	199	209	189	215	115
30	214	199	80	45	---	211	104	159	219	189	206	169
31	209	---	75	43	---	217	---	195	---	184	211	---
TOTAL	5595	4700	4986	1573	1945	3935	3583	4041	5814	6147	6140	4233
MEAN	180	157	161	50.7	69.5	127	119	130	194	198	198	141
MAX	214	222	230	94	151	217	221	199	223	223	219	211
MIN	97	74	75	38	36	80	55	53	129	174	135	56
AC-FT	11100	9320	9890	3120	3860	7810	7110	8020	11530	12190	12180	8400
CAL YR 2002	TOTAL	49914	MEAN 137	MAX 230	MIN 41	AC-FT 99000						
WTR YR 2003	TOTAL	52692	MEAN 144	MAX 230	MIN 36	AC-FT 104500						

15225997 SOLOMON GULCH AT TOP OF FALLS NEAR VALDEZ

LOCATION.--Lat 61°04'45", long 146°18'11", in SE¹/₄ NE¹/₄ NW¹/₄ sec. 21, T. 9 S., R. 6 W. (Valdez A-7 SE quad), Hydrologic Unit 19020201, within Valdez Corporate boundary, on right bank, 72 ft above Alyeska Pipeline Service Company Bridge, 150 ft upstream from top of falls, 0.3 mi upstream from mouth, and 4.2 mi southeast of Valdez.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--September 1986 to current year.

REVISED RECORDS.--WDR AK-00-1: 1999.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above sea level, from topographic map. Prior to October 1, 1991, discharge computed for site 150 ft downstream at datum 72.00 ft higher.

REMARKS.--Records fair except for periods of, August 13-19, August 27 to September 5, and September 30, which are poor and periods of estimated daily discharges, which are poor. Discharge shown herein represents controlled releases from bypass valve and flow over the spillway of dam at Solomon Lake, 0.5 mi upstream, plus inflow between the spillway and the gage. Spillway crest elevation is 685 ft above sea level, from construction plans. Water for power generation is diverted from Solomon Lake (see records for station 15225996). Water is diverted for fish hatchery use 1,150 ft downstream from gage. Reservoir spilled most of October, November 1-7, 30, December 1, August 13-21, 26-31, September 1-6, and 30.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,280 ft³/s, October 11, 1986, by computation of peak flow by several indirect measurement methods; gage height, 82.20 ft from water surface profiles for 1986 flood at top of falls and at datum 72.00 ft lower (12.90 ft from profile at present site and datum); minimum daily discharge, about 0.20 ft³/s, January 23 to April 6, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s, October 21, gage height, 8.07 ft; minimum daily discharge, 2.7 ft³/s, July 01.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	172	161	e4.9	3.8	3.1	3.8	13	4.0	2.7	7.4	118
2	106	186	9.2	e4.8	3.6	3.2	4.2	11	4.2	3.0	6.9	34
3	7.8	225	7.3	e5.8	3.6	3.6	4.4	11	3.9	4.1	5.9	45
4	5.7	421	10	6.6	5.8	4.3	4.4	9.3	3.7	3.3	5.7	76
5	5.6	301	8.0	6.7	9.5	4.2	4.4	9.6	4.6	3.1	5.0	57
6	7.2	63	7.1	4.7	8.1	4.2	4.3	10	7.0	2.9	4.7	6.9
7	89	18	6.5	5.9	6.2	4.2	4.1	9.7	6.1	3.1	4.4	4.8
8	350	7.1	6.3	5.9	5.7	4.2	3.9	9.0	4.8	3.7	4.3	4.6
9	45	6.3	5.9	5.9	5.5	4.2	3.9	9.5	4.2	3.6	4.2	4.8
10	5.9	5.8	5.6	5.9	5.4	3.9	4.3	15	4.0	3.7	4.1	4.6
11	7.7	5.7	5.5	5.9	5.3	3.9	4.3	12	3.7	3.7	4.1	4.5
12	11	5.6	5.8	5.9	5.8	e3.8	4.2	11	3.7	3.6	7.7	4.4
13	8.3	5.1	5.7	5.0	5.6	e3.7	4.4	9.2	3.6	3.5	25	4.7
14	197	5.1	5.4	4.4	5.1	e3.6	5.5	8.4	5.1	3.7	208	5.0
15	208	5.2	5.3	4.5	4.6	3.5	5.5	8.7	4.3	3.9	285	4.8
16	572	5.0	5.3	4.4	4.3	3.4	5.0	8.8	4.1	3.9	438	4.7
17	193	4.9	5.5	4.5	4.1	3.5	5.5	8.5	3.9	4.1	363	4.7
18	151	4.8	5.2	5.4	3.9	3.4	5.8	8.3	4.1	4.2	206	4.7
19	278	4.7	5.2	4.8	3.8	3.5	6.1	7.8	4.8	4.0	117	4.5
20	710	5.4	5.1	4.4	3.7	3.4	6.7	7.1	8.0	4.0	33	4.6
21	790	5.0	e5.2	4.4	3.5	3.6	7.4	6.8	7.6	6.2	9.3	4.7
22	277	14	e5.1	4.3	3.3	3.7	6.6	6.5	7.4	6.0	5.1	4.6
23	148	12	e5.8	4.3	3.3	3.7	7.6	5.9	6.6	5.1	4.6	4.4
24	51	12	e6.0	4.2	3.3	3.8	8.5	6.3	7.0	4.7	4.4	4.4
25	432	10	e5.7	4.2	3.2	4.0	9.0	5.4	6.1	5.1	4.4	4.7
26	668	30	e5.3	4.1	3.2	3.8	18	5.2	6.4	5.0	9.8	4.8
27	241	51	e5.1	3.9	3.2	3.7	15	4.6	5.8	5.0	193	4.5
28	71	11	e5.1	3.9	3.2	3.9	13	4.0	4.9	5.6	205	5.4
29	456	37	e5.0	3.8	---	4.3	16	3.7	3.8	7.6	146	19
30	435	257	e4.4	3.8	---	3.9	16	4.4	2.9	7.4	167	32
31	378	---	e5.0	3.8	---	3.9	---	4.2	---	6.5	209	---
TOTAL	7096.2	1895.7	338.6	151.0	129.6	117.1	211.8	253.9	150.3	136.0	2697.0	490.8
MEAN	229	63.2	10.9	4.87	4.63	3.78	7.06	8.19	5.01	4.39	87.0	16.4
MAX	790	421	161	6.7	9.5	4.3	18	15	8.0	7.6	438	118
MIN	5.6	4.7	4.4	3.8	3.2	3.1	3.8	3.7	2.9	2.7	4.1	4.4
AC-FT	14080	3760	672	300	257	232	420	504	298	270	5350	974
CAL YR 2002	TOTAL 14969.6 MEAN 41.0 MAX 1110 MIN 2.3 AC-FT 29690											
WTR YR 2003	TOTAL 13668.0 MEAN 37.4 MAX 790 MIN 2.7 AC-FT 27110											

e Estimated

15226000 SOLOMON GULCH NEAR VALDEZ

LOCATION.--Lat 61°05'02", long 146°18'13", in NE¹/₄ SE¹/₄ SW¹/₄ sec. 16, T. 9 S., R. 6 W. (Valdez A-7 SE quad), Hydrologic Unit 19020201, at bridge crossing at mouth and 3.8 mi southeast across Port Valdez from Valdez.

DRAINAGE AREA.--19.7 mi².

PERIOD OF RECORD.--July to December 1948, October 1949 to September 1956, and September 1986 to current year.

GAGE.--Nonrecording gage. Elevation of gage is at sea level. July 9, 1948 to May 21, 1950, nonrecording gage, and May 22, 1950 to September 30, 1956, water-stage recorder at about present site and datum.

REMARKS.-- Records fair. Discharge data represent the flow at mouth which includes Solomon Gulch at top of falls (station 15225997), power plant tailrace (station 15225996), and all fish hatchery diversions. Water for power generation is diverted by a dam at Solomon Lake, 0.8 mi upstream. Water is diverted for the fish hatchery by a 24-in. penstock aeration system, and a 24-in. penstock line from the tailrace weir pool. An unaerated penstock and an 8-in. pipe for warm water supply are upstream. Additional water is diverted to the fish hatchery from Solomon Gulch bypass channel about 750 ft above gage, by means of a 12-in. diameter pipe. The fish hatchery discharges water directly into Port Valdez. Average daily diversion to fish hatchery for 2003 water year was 12.0 ft³/s. Power generation began January 6, 1982.

COOPERATION.--Records of daily discharge diverted to the fish hatchery are furnished by Valdez Fisheries Development Association. Copper Valley Electric Association provides tables of hourly power output through the turbines and monthly storage values for Solomon Lake.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	424	390	370	e87	52	102	235	124	195	222	226	352
2	335	404	235	e103	53	103	219	122	207	223	232	274
3	235	435	231	e107	52	118	218	115	206	221	234	254
4	227	632	232	102	54	119	229	111	210	209	235	278
5	222	510	232	86	58	118	218	122	211	215	236	227
6	224	282	235	71	55	120	219	125	189	215	240	224
7	317	237	236	66	55	117	231	121	203	223	232	222
8	570	235	226	61	53	91	230	118	200	182	173	231
9	263	227	239	56	50	94	229	125	196	229	185	230
10	229	225	229	52	53	135	127	131	204	229	213	224
11	229	233	212	53	57	134	64	149	164	229	233	230
12	221	223	244	51	57	e146	72	209	133	224	238	216
13	211	236	240	58	56	e143	78	203	152	225	260	213
14	410	180	237	60	53	e136	75	206	205	240	442	210
15	430	87	236	63	51	133	80	147	201	212	448	218
16	792	89	233	57	50	119	73	107	204	216	621	212
17	412	89	232	57	52	125	80	105	209	214	602	216
18	366	96	158	52	125	122	79	108	197	214	446	185
19	487	98	102	52	162	101	77	110	215	208	358	120
20	921	96	102	50	134	119	76	63	219	211	279	100
21	1010	111	e106	54	98	121	91	99	222	214	253	89
22	427	134	e120	56	127	110	84	95	204	217	243	92
23	338	121	e116	56	124	111	85	110	230	214	237	88
24	246	110	e109	60	131	124	92	132	230	218	199	92
25	557	110	e103	54	127	118	104	166	194	213	239	93
26	800	138	e92	51	122	185	118	202	207	208	253	96
27	398	209	e96	55	118	226	114	205	171	202	437	96
28	270	189	e93	55	116	220	123	202	168	215	446	104
29	677	250	e94	56	---	218	126	205	213	220	390	162
30	657	464	e91	57	---	223	126	165	222	219	401	231
31	595	---	e88	55	---	229	---	201	---	214	449	---
TOTAL	13500	6840	5569	1953	2295	4280	3972	4403	5981	6715	9680	5579
MEAN	435	228	180	63.0	82.0	138	132	142	199	217	312	186
MAX	1010	632	370	107	162	229	235	209	230	240	621	352
MIN	211	87	88	50	50	91	64	63	133	182	173	88
AC-FT	26780	13570	11050	3870	4550	8490	7880	8730	11860	13320	19200	11070

ADJUSTED FOR CHANGE IN STORAGE IN SOLOMON LAKE

MEAN	439	221	61.0	27.2	35.1	4.7	26.6	235	371	355	354	176
AC-FT	26980	13170	3750	1670	1950	290	1580	14430	22060	21820	21800	10470
CFSM	22.27	11.23	3.10	1.38	1.78	0.24	1.35	11.91	18.82	18.01	18.00	8.93
IN	25.71	12.55	3.57	1.59	1.86	0.28	1.51	13.75	21.02	20.79	20.77	9.98

e Estimated

15226000 SOLOMON GULCH NEAR VALDEZ—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY) #

MEAN	197	109	99.9	94.0	90.3	83.8	75.6	151	184	269	299	332
MAX	435	228	180	138	130	138	132	213	229	410	462	501
(WY)	2003	2003	2003	1995	1987	2003	2003	1993	1990	2001	1993	1989
MIN	97.2	77.1	69.0	63.0	58.9	5.08	26.2	103	145	177	152	152
(WY)	1997	1993	2002	2003	2002	1991	1991	1992	1988	1991	1996	1996

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1986 - 2003#

ANNUAL TOTAL	69111	70767		
ANNUAL MEAN	189	194		
ANNUAL MEAN	*194	*192		
HIGHEST ANNUAL MEAN				166
LOWEST ANNUAL MEAN				*166
HIGHEST DAILY MEAN				197
LOWEST DAILY MEAN				125
HIGHEST DAILY MEAN	1330	Aug 22	1010	Oct 21
LOWEST DAILY MEAN	53	Feb 11	50	Jan 20
ANNUAL SEVEN-DAY MINIMUM	55	Feb 11	54	Feb 11
ANNUAL RUNOFF (AC-FT)	137100		140400	
ANNUAL RUNOFF (AC-FT)	*141700		*140000	
ANNUAL RUNOFF (CFSM)	*9.87		*9.75	
ANNUAL RUNOFF (IN)	*135.02		*133.37	
10 PERCENT EXCEEDS	324		344	
50 PERCENT EXCEEDS	188		199	
90 PERCENT EXCEEDS	60		58	

PRIOR TO CONSTRUCTION OF SOLOMON GULCH HYDROELECTRIC PROJECT

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1956, BY WATER YEAR (WY) #

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	124	58.9	18.3	13.3	10.4	8.82	10.9	102	370	385	322	260
MAX	304	131	35.6	20.9	12.2	11.1	18.3	224	544	514	442	574
(WY)	1953	1953	1950	1956	1954	1953	1953	1953	1953	1955	1956	1951
MIN	48.0	21.7	4.00	1.40	3.57	7.19	6.57	36.5	261	277	254	126
(WY)	1951	1951	1949	1951	1951	1951	1950	1955	1951	1950	1950	1955

SUMMARY STATISTICS

WATER YEARS 1948 - 1956#

ANNUAL MEAN	143	
HIGHEST ANNUAL MEAN	194	1953
LOWEST ANNUAL MEAN	126	1950
HIGHEST DAILY MEAN	1530	Sep 4 1951
LOWEST DAILY MEAN	.50	Dec 31 1950
ANNUAL SEVEN-DAY MINIMUM	1.0	Jan 10 1951
MAXIMUM PEAK FLOW	a2420	Sep 4 1951
MAXIMUM PEAK STAGE	b6.50	Sep 4 1951
INSTANTANEOUS LOW FLOW	c.00	Feb 20 1954
ANNUAL RUNOFF (AC-FT)	103900	
ANNUAL RUNOFF (CFSM)	7.28	
ANNUAL RUNOFF (INCHES)	98.89	
10 PERCENT EXCEEDS	396	
50 PERCENT EXCEEDS	49	
90 PERCENT EXCEEDS	8.0	

See Period of Record and Remarks. Values shown on this page are unadjusted for change in storage in Solomon Lake, unless otherwise noted

* Adjusted for change in storage in Solomon Lake

a From rating curve extended above 620 ft³/s

b Site and datum then in use

c No flow sometime during period Feb. 20 to Mar. 3, 1954, caused by temporary storage upstream

15236900 WOLVERINE CREEK NEAR LAWING

LOCATION.--Lat 60°22'14", long 148°53'48", in NE¹/₄ NE¹/₄ sec. 10, T.3 N., R.3 E. (Seward B-6 quad), Kenai Peninsula Borough, Hydrologic Unit 19020202, on the left bank, approximately 0.1 mi downstream from terminus of Wolverine Glacier, 2.0 mi upstream from mouth, 16 mi east of Lawing, Alaska.

DRAINAGE AREA.--9.51 mi².

PERIOD OF RECORD.--October 1966 to September 1978, October 1980 to September 1981, May 1997 to September 1997, October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft above sea level, from topographic map.

REMARKS.--Records are poor due to large fluctuations from ice melt and alternate damming and storage releases during the melt season. Stream flow is modified by runoff from the melting of Wolverine Glacier, which covers 6.8 mi², more than 70% of the drainage basin. Precipitation gage and air temperature recorded at station is available from computer files at the Alaska Science Center, Water Resources Office. GOES satellite telemetry at station transmits every 4 hours. At 3,250 feet of elevation, there is a weather station recording air temperature, wind speed, and precipitation. In addition to the weather station, there are also three snow and ice balance measurement sites located in the basin. Combined snow, ice, and water balance data of the basin are published in other reports of the Geological Survey.

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 05	1300	659	2.92	Aug 12	0215	863	3.18
Jul 13	1800	567	2.78	Aug 14	1800	1270	3.59
Jul 19	1615	659	2.92	Aug 20	0500	1320	3.63
Jul 25	1400	561	2.77	Aug 29	1900	1670	3.91
Jul 29	1515	782	3.08	Sep 30	2000	*a1720	*a3.95
Aug 09	1500	975	3.30				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	e80	e100	e2.0	e2.0	e2.0	e4.0	28	127	308	367	298
2	80	e90	e90	e2.0	e2.0	e2.0	e3.0	21	104	351	329	291
3	56	e70	e200	e2.0	e2.0	e2.0	e3.0	20	96	357	288	231
4	48	e90	e70	e2.0	e2.0	e2.0	e2.0	15	106	359	317	195
5	39	e200	e40	e2.0	e2.0	e2.0	e2.0	13	311	326	352	192
6	46	e300	e20	e2.0	e2.0	e2.0	e2.0	8.3	252	350	396	202
7	74	e200	e10	e2.0	e2.0	e2.0	e2.0	8.0	200	348	385	203
8	48	e100	e9.0	e2.0	e2.0	e2.0	e2.0	9.3	152	388	489	195
9	32	e90	e8.0	e2.0	e2.0	e2.0	e2.0	23	152	405	609	199
10	24	e80	e7.0	e2.0	e2.0	e2.0	e2.0	21	180	356	590	212
11	51	e70	e6.0	e2.0	e2.0	e2.0	e2.0	9.5	221	339	470	200
12	53	e60	e6.0	e2.0	e2.0	e2.0	e2.0	8.8	279	338	569	192
13	139	e50	e5.0	e2.0	e2.0	e2.0	e2.0	9.4	320	415	482	199
14	79	e40	e5.0	e2.0	e2.0	e2.0	e2.0	7.7	291	431	878	141
15	48	e40	e5.0	e2.0	e2.0	e2.0	e2.0	9.9	266	369	778	111
16	34	e30	e4.0	e2.0	e2.0	e2.0	e2.0	15	252	314	511	103
17	24	e30	e4.0	e2.0	e2.0	e2.0	e2.0	19	222	289	408	101
18	45	e30	e4.0	e2.0	e2.0	e2.0	e2.0	21	230	338	299	94
19	128	e40	e4.0	e2.0	e2.0	e2.0	e2.0	19	220	450	327	73
20	229	e50	e3.0	e2.0	e2.0	e2.0	e2.0	20	218	454	592	65
21	180	e60	e3.0	e2.0	e2.0	e2.0	e2.0	25	212	384	320	56
22	e300	e80	e3.0	e2.0	e2.0	e2.0	e2.0	35	230	357	314	46
23	e500	e200	e3.0	e2.0	e2.0	e2.0	e3.0	54	217	329	274	43
24	e400	e100	e3.0	e2.0	e2.0	e3.0	e4.0	80	290	308	250	49
25	e300	e70	e2.0	e2.0	e2.0	e3.0	e5.0	92	307	349	243	85
26	e200	e100	e2.0	e2.0	e2.0	e4.0	e10	72	249	339	281	83
27	e100	e80	e2.0	e2.0	e2.0	e4.0	e30	84	231	306	364	75
28	e100	e70	e2.0	e2.0	e2.0	e4.0	e60	83	266	393	622	136
29	e300	e300	e2.0	e2.0	---	e4.0	40	76	315	465	982	264
30	e200	e200	e2.0	e2.0	---	e4.0	33	103	325	322	643	679
31	e100	---	e2.0	e2.0	---	e4.0	---	142	---	356	379	---
TOTAL	4070	3000	626.0	62.0	56.0	76.0	233.0	1151.9	6841	11193	14108	5013
MEAN	131	100	20.2	2.00	2.00	2.45	7.77	37.2	228	361	455	167
MAX	500	300	200	2.0	2.0	4.0	60	142	325	465	982	679
MIN	24	30	2.0	2.0	2.0	2.0	2.0	7.7	96	289	243	43
AC-FT	8070	5950	1240	123	111	151	462	2280	13570	22200	27980	9940
CFSM	13.8	10.5	2.12	0.21	0.21	0.26	0.82	3.91	24.0	38.0	47.9	17.6
IN.	15.92	11.74	2.45	0.24	0.22	0.30	0.91	4.51	26.76	43.78	55.19	19.61

a Maximum observed, may have been higher during estimated periods
e Estimated

15236900 WOLVERINE CREEK NEAR LAWING—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY) #

MEAN	42.5	13.0	3.64	1.53	1.16	0.99	1.59	23.0	143	297	347	195
MAX	131	100	20.2	2.71	2.00	2.45	7.77	89.3	262	375	494	351
(WY)	2003	2003	2003	1970	1970	2003	2003	1967	1967	1967	1981	1974
MIN	13.1	2.01	0.51	0.39	0.000	0.000	0.000	0.61	31.1	146	176	80.0
(WY)	1975	2002	2001	2001	2001	2001	2001	1971	1971	1997	1997	1970

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003#	
ANNUAL TOTAL	37132.20		46429.9			
ANNUAL MEAN	102		127		91.2	
HIGHEST ANNUAL MEAN					127	
LOWEST ANNUAL MEAN					66.6	
HIGHEST DAILY MEAN	679	Jul 24	982	Aug 29	1930	Aug 28 2001
LOWEST DAILY MEAN	b0.00	Jan 25	c2.0	Dec 25	b0.00	Dec 2 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 25	2.0	Dec 25	0.00	Dec 2 2000
MAXIMUM PEAK FLOW			d1720	Sep 30	d4160	Aug 28 2001
MAXIMUM PEAK STAGE			3.95	Sep 30	f6.28	Aug 21 1981
ANNUAL RUNOFF (AC-FT)	73650		92090		66100	
ANNUAL RUNOFF (CFSM)	10.7		13.4		9.59	
ANNUAL RUNOFF (INCHES)	145.25		181.62		130.35	
10 PERCENT EXCEEDS	279		356		315	
50 PERCENT EXCEEDS	50		46		6.0	
90 PERCENT EXCEEDS	0.00		2.0		0.80	

See Period of Record; partial years used in monthly statistics
 b No flow most days during winter
 c Dec. 25 to Mar. 23, and Apr. 4-22
 d From rating curve extended above 1,290 ft³/s
 f From floodmarks, date approximate: flow over dense snow

15237730 GROUSE CREEK AT GROUSE LAKE OUTLET NEAR SEWARD

LOCATION.--Lat 60°11'54", long 149°22'24", in NE¹/₄ NE¹/₄ NW¹/₄ sec. 12, T. 1 N., R. 1 W. (Seward A-7 NE quad), Kenai Peninsula Borough, Hydrologic Unit 19020202, on right bank, 200 ft downstream from Grouse Lake outlet, 0.2 mi upstream from Seward Highway, 7 mi north of Seward.

DRAINAGE AREA.--6.22 mi².

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water stage recorder and crest-stage gage. Elevation of gage is 250 ft above sea level from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Rain gage recorder at station. GOES satellite telemetry and phone modem at station.

EXTREMES FOR 1998-2003 YEAR.--Peak discharge greater than base discharge of 100 ft³/s and water year maximums (*).

Date	Time	Discharge (ft ³ /s)	Gage Height(ft)	Date	Time	Discharge (ft ³ /s)	Gage Height(ft)
Nov. 12, 1997	22:00	145	6.68	Dec. 27, 2001	03:45	*114	*6.36
May 09, 1998	18:00	137	6.62	May 19, 2002	22:15	106	6.29
May 30, 1998	21:15	119	6.47	Oct. 24, 2002	11:15	451	8.05
Jun. 08, 1998	06:00	*184	*6.96	Oct. 29, 2002	07:20	249	7.20
Oct. 24, 1998	17:00	112	6.41	Nov. 05, 2002	24:00	231	7.10
Sep. 22, 1999	18:15	*113	*6.42	Nov. 23, 2002	21:45	401	7.87
Jun. 07, 2000	22:15	*100	*6.30	Nov. 30, 2002	09:00	311	7.51
Nov. 20, 2000	00:15	145	6.81	Dec. 03, 2002	20:30	182	6.80
Dec. 29, 2000	22:00	140	6.78	Feb. 05, 2003	01:30	*478	*8.14
Jan. 15, 2001	09:30	227	7.11	May 10, 2003	11:15	123	6.36
Jan. 19, 2001	06:15	*269	*7.32				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	64	123	12	13	19	7.7	36	14	6.7	5.3	10
2	20	61	83	12	12	18	7.7	34	14	8.0	5.1	9.4
3	17	51	114	12	13	19	7.6	33	13	8.0	5.0	8.7
4	15	68	121	12	109	18	7.5	31	e13	7.5	5.0	8.2
5	15	132	94	11	277	16	7.4	32	e13	7.3	4.9	7.9
6	15	168	70	9.3	116	15	7.3	31	e12	7.3	4.8	7.5
7	17	105	56	9.4	66	14	7.3	25	e12	7.1	4.8	7.3
8	16	73	49	10	56	14	7.4	22	e12	7.0	4.7	7.1
9	14	56	44	12	53	13	7.5	45	e11	6.8	4.7	6.9
10	13	48	44	12	49	12	8.1	100	e11	6.7	4.6	6.7
11	15	43	40	13	47	12	8.6	67	e10	6.6	4.7	6.4
12	18	39	36	12	46	10	8.9	54	e10	6.5	5.9	6.3
13	24	35	33	12	44	9.3	9.4	42	e9.5	6.4	6.6	6.2
14	31	33	31	11	40	10	9.7	35	e9.5	6.2	8.5	5.9
15	28	30	26	11	36	12	9.3	32	e9.0	6.2	8.5	5.7
16	27	27	23	11	33	11	9.1	28	e8.5	6.2	11	5.7
17	22	25	20	11	29	11	9.3	26	8.3	6.1	12	5.7
18	20	24	20	13	24	10	9.5	23	8.2	6.0	9.7	5.7
19	19	31	18	12	20	10	9.5	21	7.9	5.9	8.5	5.6
20	38	45	17	14	18	10	10	20	7.7	5.8	9.8	6.6
21	46	50	17	14	17	9.6	14	19	7.7	5.9	8.6	7.0
22	53	80	18	14	16	9.2	30	18	7.5	5.8	7.8	6.3
23	283	326	20	13	19	9.0	30	18	7.3	5.7	7.3	6.1
24	295	208	19	13	19	9.0	27	19	7.3	5.8	6.9	5.9
25	156	118	16	13	20	8.9	26	20	7.4	5.9	6.9	5.9
26	117	103	14	12	24	8.7	29	18	7.4	5.8	9.9	6.0
27	77	80	14	12	23	8.7	33	18	7.4	5.6	9.3	5.7
28	67	60	12	12	21	8.9	35	16	7.2	5.7	11	6.2
29	157	84	14	12	---	8.5	36	15	7.0	5.7	12	11
30	138	233	13	13	---	8.1	37	15	6.8	5.7	13	15
31	90	---	12	13	---	7.8	---	15	---	5.5	11	---
TOTAL	1885	2500	1231	372.7	1260	359.7	465.8	928	286.6	197.4	237.8	214.6
MEAN	60.8	83.3	39.7	12.0	45.0	11.6	15.5	29.9	9.55	6.37	7.67	7.15
MAX	295	326	123	14	277	19	37	100	14	8.0	13	15
MIN	13	24	12	9.3	12	7.8	7.3	15	6.8	5.5	4.6	5.6
AC-FT	3740	4960	2440	739	2500	713	924	1840	568	392	472	426
CFSM	9.78	13.4	6.38	1.93	7.23	1.87	2.50	4.81	1.54	1.02	1.23	1.15
IN.	11.27	14.95	7.36	2.23	7.54	2.15	2.79	5.55	1.71	1.18	1.42	1.28

15237730 GROUSE CREEK AT GROUSE LAKE OUTLET NEAR SEWARD—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY) #

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.3	31.7	20.3	18.9	14.4	8.96	17.3	49.0	38.3	11.1	8.06	17.8
MAX	60.8	83.3	39.7	58.0	45.0	15.6	38.6	67.9	70.7	19.2	14.3	35.3
(WY)	2003	2003	2003	2001	2003	1998	1998	1998	1998	1998	2001	1997
MIN	11.8	7.41	8.89	5.23	3.34	2.69	5.81	29.9	9.55	6.11	6.04	6.66
(WY)	1998	2002	1999	1998	1999	1999	2002	2003	2003	1997	1999	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1997 - 2003#		
ANNUAL TOTAL	9960.6			9938.6					
ANNUAL MEAN	27.3			27.2			22.0		
HIGHEST ANNUAL MEAN							27.3		
LOWEST ANNUAL MEAN							15.4		
HIGHEST DAILY MEAN	326			Nov 23			326		
LOWEST DAILY MEAN	3.3			Mar 28			a2.1		
ANNUAL SEVEN-DAY MINIMUM	3.5			Mar 22			2.2		
MAXIMUM PEAK FLOW				4.7			Aug 5		
MAXIMUM PEAK STAGE				478			Feb 5		
INSTANTANEOUS LOW FLOW				b8.14			Feb 5		
ANNUAL RUNOFF (AC-FT)	19760			c4.6			Aug 9		
ANNUAL RUNOFF (CFSM)	4.39			19710			15970		
ANNUAL RUNOFF (INCHES)	59.57			4.38			3.54		
10 PERCENT EXCEEDS	69			59.44			48.14		
50 PERCENT EXCEEDS	13			60			55		
90 PERCENT EXCEEDS	4.5			13			12		
				6.1			5.5		

See Period of Record, partial year used in monthly statistics

a Mar. 9 and 10, 1999

b From crest-stage gage.

c Aug. 9, 10, and 11

d From temporary blockage of channel upstream from gage

15238600 SPRUCE CREEK NEAR SEWARD

LOCATION.--Lat 60°04'10", long 149°27'08", in SW¹/₄ SE¹/₄ sec. 21, T. 1 S., R. 1 W. (Seward A-7 quad), Kenai Peninsula Borough, Hydrologic Unit 19020202, on left bank 0.7 mi upstream from mouth at Resurrection Bay and 2.4 mi south of Seward.

DRAINAGE AREA.--9.26 mi².

PERIOD OF RECORD.--September 1967 to September 1979, annual maximum, water years 1980-90. October 1990 to current year.

REVISED RECORDS.--WDR AK-76-1: 1966-67(M), 1970(M), 1972(M). WDR AK-77-1: 1969(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 75 ft above sea level, from topographic map.

REMARKS.--Records good, except estimated daily discharges and discharges below 7.0 ft³/s, which are poor. Precipitation gage at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 21, 1966, reached a stage of 10.1 ft, from floodmarks; discharge, 3,090 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct. 23	0645	1560	6.63	Nov. 29	2045	*1850	*6.82
Oct. 29	1900	1110	6.30				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	205	e260	e16	26	19	2.4	77	113	184	100	96
2	91	244	e240	e16	23	17	2.2	78	107	191	89	88
3	74	196	e480	e16	28	19	2.2	81	111	173	77	84
4	63	336	e320	16	248	18	2.0	74	113	198	68	69
5	57	527	e220	15	220	16	1.8	74	160	164	68	59
6	58	620	e190	14	96	14	1.5	64	250	154	64	56
7	84	385	e140	13	58	12	1.4	57	185	196	65	55
8	71	e160	e120	13	65	11	1.5	54	141	240	79	47
9	57	e120	e95	24	57	11	1.5	113	128	187	79	48
10	48	e96	e90	23	72	9.9	1.6	161	152	151	73	46
11	69	e86	e65	27	90	9.2	2.1	92	171	130	72	44
12	83	78	e55	24	66	10	2.4	72	189	119	138	39
13	209	65	e50	24	50	e9.0	3.5	58	234	175	312	36
14	212	58	e44	20	42	e8.0	e5.0	48	207	173	368	33
15	181	51	e38	18	35	7.1	e6.0	45	158	129	422	29
16	156	46	e32	16	28	6.9	e7.0	49	145	123	334	25
17	110	44	e30	20	25	6.6	e7.0	53	142	129	213	23
18	101	45	e28	26	21	6.5	e7.0	51	137	112	141	22
19	186	55	e26	22	18	6.4	7.4	49	145	97	148	20
20	482	92	e24	49	16	6.0	7.8	53	144	97	227	21
21	403	93	e24	37	16	5.5	e10	59	162	95	131	18
22	528	270	e22	27	15	5.1	e24	68	154	85	103	16
23	985	702	e20	22	25	4.7	e22	86	142	79	86	15
24	881	292	e20	20	31	4.4	e20	114	127	105	73	15
25	633	206	e20	18	29	4.1	e30	121	240	169	102	15
26	387	e380	e18	17	35	3.7	e35	119	169	120	215	15
27	209	e180	e18	16	29	3.6	50	147	219	95	177	16
28	209	e130	e18	15	22	3.4	57	145	186	177	263	94
29	615	e900	e18	16	---	2.9	71	116	194	154	212	220
30	351	e800	e18	21	---	2.6	78	110	194	135	184	465
31	334	---	e16	24	---	2.5	---	116	---	109	123	---
TOTAL	8054	7462	2759	645	1486	265.1	470.3	2604	4919	4445	4806	1829
MEAN	260	249	89.0	20.8	53.1	8.55	15.7	84.0	164	143	155	61.0
MAX	985	900	480	49	248	19	78	161	250	240	422	465
MIN	48	44	16	13	15	2.5	1.4	45	107	79	64	15
AC-FT	15980	14800	5470	1280	2950	526	933	5170	9760	8820	9530	3630
CFSM	28.1	26.9	9.61	2.25	5.73	0.92	1.69	9.07	17.7	15.5	16.7	6.58
IN.	32.36	29.98	11.08	2.59	5.97	1.06	1.89	10.46	19.76	17.86	19.31	7.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)#

	MEAN	91.9	44.8	19.0	11.4	11.3	4.10	12.5	73.4	200	189	148	167
MAX	333	249	89.0	46.1	53.1	15.3	35.6	135	318	371	323	372	
(WY)	1970	2003	2003	2001	2003	1970	1969	1993	2001	1977	1977	1995	
MIN	17.0	9.40	3.52	0.65	0.000	0.000	0.12	30.6	116	104	56.9	48.8	
(WY)	1997	1974	1997	1974	1972	1971	1972	1971	1972	1997	1969	2000	

See Period of Record, partial year used in monthly statistics
e Estimated

15238600 SPRUCE CREEK NEAR SEWARD—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003#	
ANNUAL TOTAL	41014.20		39744.4			
ANNUAL MEAN	112		109		80.7	
HIGHEST ANNUAL MEAN					123	1977
LOWEST ANNUAL MEAN					50.6	1996
HIGHEST DAILY MEAN	985	Oct 23	985	Oct 23	1650	Oct 11 1969
LOWEST DAILY MEAN	a0.00	Mar 17	1.4	Apr 7	b0.00	Mar 1 1969
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 17	1.6	Apr 4	0.00	Mar 1 1969
MAXIMUM PEAK FLOW			1850	Nov 29	c13600	Oct 11 1986
MAXIMUM PEAK STAGE			d6.82	Nov 29	f13.96	Oct 11 1986
INSTANTANEOUS LOW FLOW			g1.1	Apr 7	0.00	Mar 1 1969
ANNUAL RUNOFF (AC-FT)	81350		78830		58480	
ANNUAL RUNOFF (CFSM)	12.1		11.8		8.72	
ANNUAL RUNOFF (INCHES)	164.77		159.66		118.45	
10 PERCENT EXCEEDS	227		230		207	
50 PERCENT EXCEEDS	72		66		34	
90 PERCENT EXCEEDS	0.10		7.6		1.5	

See Period of Record, partial year used in monthly statistics

a No flow Mar. 17 to Apr. 17

b No flow many days in water years 1969, 1971-76, 1992, 1996, 1999, and 2002

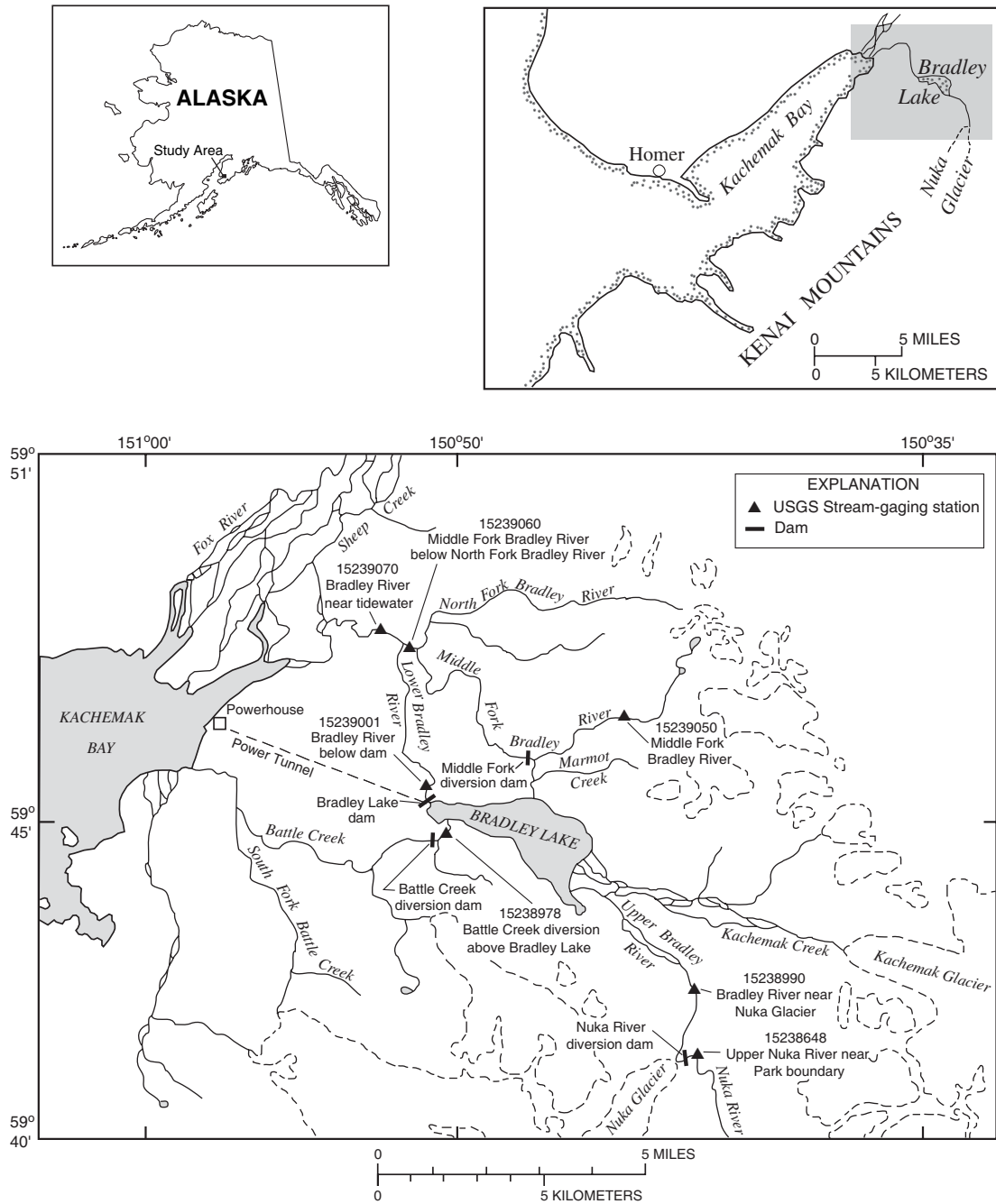
c Slope-area measurement of the release of water temporarily stored behind a debris-avalanche dam. Inflow into the ponded area was 5,420 ft³/s, from a

slope-area measurement made about 0.3 mi upstream at a site with a drainage area of 8.98 mi²

d From crest-stage gage

f From floodmarks

g Apr. 7 to 10, 2003



Location of the Bradley Lake Hydroelectric Project area.

15238648 UPPER NUKA RIVER NEAR PARK BOUNDARY NEAR HOMER

LOCATION.--Lat 59°41'04", long 150°42'12" (Seldovia C-2 quad), Kenai Peninsula Borough, Hydrologic Unit 19020202, on left bank, 0.4 mi downstream from terminus of Nuka Glacier, 4.9 mi southeast of Bradley Lake, and 29 mi east of Homer, Alaska.

DRAINAGE AREA.--Indeterminate. Prior to July 29, 1990, drainage area was about 3 mi² and varied according to position of glacier terminus.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1980-81, prior to shift in glacier terminus; September 1984 to current year. Records prior to July 29, 1990, are not equivalent. Published as "Upper Nuka River near Homer" prior to October 1989. Low-flow records not equivalent prior to November 1987 because most low-flow measurements were made at site 0.5 mi downstream.

REVISED RECORDS.--WDR AK-89-1: 1985 (M), 1986-88.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,300 ft above sea level, from topographic map.

REMARKS.--Records fair except estimated daily discharges, which are poor. Water is diverted, 300 ft upstream from gage, into Bradley River drainage since July 29, 1990. Precipitation gage and air temperature recorder at station; daily values of precipitation and air temperature are available from the computer files of the Alaska Science Center, Water Resources Office. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	90	6.4	e0.30	e0.10	e0.40	e0.00	e0.60	15	41	27	21
2	16	111	2.5	e0.30	e0.20	e0.40	e0.00	e0.80	12	47	27	20
3	12	121	14	e0.30	e1.0	e0.50	e0.00	e1.0	6.9	47	27	19
4	10	152	10	e0.20	e3.0	e0.40	e0.00	e1.5	5.1	31	27	19
5	9.2	191	4.7	e0.20	e2.0	e0.30	e0.00	e3.0	10	26	27	18
6	9.6	119	3.0	e0.20	e1.8	e0.25	e0.00	e6.0	24	28	26	19
7	11	42	2.0	e0.20	e1.8	e0.20	e0.00	e9.0	25	34	26	19
8	7.7	35	1.9	e0.20	e1.6	e0.20	e0.00	11	19	44	27	19
9	6.4	12	3.1	e0.20	e1.6	e0.10	e0.00	26	16	38	27	19
10	4.9	3.5	2.7	e0.10	e1.4	e0.10	e0.00	25	18	25	27	19
11	5.9	1.9	e2.5	e0.10	e1.3	e0.10	e0.10	17	23	15	28	19
12	7.2	1.9	e2.0	e0.10	e1.3	e0.00	e0.10	13	25	16	29	19
13	15	1.8	e1.6	e0.10	e1.2	e0.00	e0.10	6.0	27	38	34	19
14	16	1.7	e1.5	e0.10	e1.2	e0.00	e0.10	3.4	26	31	38	17
15	15	1.8	e1.2	e0.10	e1.1	e0.00	e0.10	4.4	27	20	46	11
16	10	1.7	e1.0	e0.10	e1.1	e0.00	e0.10	6.0	27	14	37	10
17	8.2	1.7	e0.80	e0.10	e1.0	e0.00	e0.10	5.5	27	8.1	38	6.9
18	10	1.7	e0.70	e0.10	e1.0	e0.00	e0.10	3.9	26	6.5	41	3.9
19	19	1.9	e0.60	e0.10	e0.90	e0.00	e0.10	5.2	29	4.3	34	4.1
20	37	2.6	e0.50	e0.10	e0.80	e0.00	e0.10	6.1	28	3.8	28	2.7
21	45	3.6	e0.40	e0.10	e0.70	e0.00	e0.10	5.4	34	3.3	27	2.2
22	132	22	e0.40	e0.00	e0.60	e0.00	e0.20	5.5	34	2.8	27	2.4
23	389	96	e0.40	e0.00	e0.50	e0.00	e0.20	9.5	32	2.8	27	2.2
24	277	17	e0.40	e0.00	e0.50	e0.00	e0.20	16	38	4.6	27	2.1
25	142	15	e0.40	e0.00	e0.40	e0.00	e0.20	18	49	8.7	28	4.7
26	126	14	e0.40	e0.00	e0.40	e0.00	e0.25	15	45	6.6	28	8.6
27	91	4.6	e0.30	e0.00	e0.30	e0.00	e0.30	17	47	6.9	32	15
28	91	2.0	e0.30	e0.00	e0.30	e0.00	e0.30	17	45	22	54	34
29	134	14	e0.30	e0.00	---	e0.00	e0.40	16	42	28	52	50
30	118	19	e0.30	e0.00	---	e0.00	e0.40	19	39	28	34	94
31	125	---	e0.30	e0.00	---	e0.00	---	16	---	28	22	---
TOTAL	1924.1	1102.4	66.60	3.30	29.10	2.95	3.55	308.80	821.0	659.4	979	519.8
MEAN	62.1	36.7	2.15	0.11	1.04	0.095	0.12	9.96	27.4	21.3	31.6	17.3
MAX	389	191	14	0.30	3.0	0.50	0.40	26	49	47	54	94
MIN	4.9	1.7	0.30	0.00	0.10	0.00	0.00	0.60	5.1	2.8	22	2.1
AC-FT	3820	2190	132	6.5	58	5.9	7.0	613	1630	1310	1940	1030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)#

	WY	WY	WY	WY	WY	WY	WY	WY	WY	WY	WY	WY
MEAN	7.51	4.28	0.28	0.039	0.20	0.007	0.012	1.38	28.7	38.4	19.7	13.3
MAX	62.1	36.7	2.15	0.16	1.56	0.095	0.12	9.96	209	272	53.1	41.1
(WY)	2003	2003	2003	1995	1994	2003	2003	2003	1999	1999	1998	2002
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.06	2.96	0.97	1.72
(WY)	1992	1992	1991	1991	1991	1991	1992	1998	1992	1991	1991	1991

See Period of Record and Remarks. Not adjusted to account for changes in drainage area
e Estimated

15238648 UPPER NUKA RIVER NEAR PARK BOUNDARY NEAR HOMER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003#	
ANNUAL TOTAL	8724.00		6420.00			
ANNUAL MEAN	23.9		17.6		9.54	
HIGHEST ANNUAL MEAN					a45.6	
LOWEST ANNUAL MEAN					1.09	
HIGHEST DAILY MEAN	389	Oct 23	389	Oct 23	389	Oct 23 2002
LOWEST DAILY MEAN	b0.00	Jan 4	c0.00	Jan 22	d0.00	Nov 3 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 4	0.00	Jan 22	0.00	Nov 3 1990
MAXIMUM PEAK FLOW			565	Oct 23	565	Oct 23 2002
MAXIMUM PEAK STAGE			f4.48	Oct 23	f4.48	Oct 23 2002
ANNUAL RUNOFF (AC-FT)	17300		12730		6910	
10 PERCENT EXCEEDS	70		38		17	
50 PERCENT EXCEEDS	2.2		4.7		0.25	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

PRIOR TO REGULATION AND DIVERSION OF NUKA RIVER

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1989, BY WATER YEAR (WY)#

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUGSEP
MEAN	47.6	7.01	2.83	1.48	.49	.21	.22	23.8	34.7	141	180	131
MAX	72.0	24.9	9.00	5.79	2.24	.87	.72	117	81.2	307	432	321
(WY)	1987	1987	1987	1985	1985	1985	1985	1986	1989	1989	1989	1989
MIN	3.84	.024	.000	.000	.000	.000	.000	.016	.76	6.41	12.1	7.08
(WY)	1989	1989	1989	1989	1988	1988	1988	1987	1987	1988	1986	1988

SUMMARY STATISTICSWATER YEARS 1985 - 1989#

ANNUAL MEAN	47.9	
HIGHEST ANNUAL MEAN	96.2	1989
LOWEST ANNUAL MEAN	8.60	1988
HIGHEST DAILY MEAN	1240	Aug 25 1989
LOWEST DAILY MEAN	g.00	May 6 1987
ANNUAL SEVEN-DAY MINIMUM	.00	May 6 1987
INSTANTANEOUS PEAK FLOW	h1630	Aug 25 1989
INSTANTANEOUS PEAK STAGE	5.47	Aug 25 1989
ANNUAL RUNOFF (AC-FT)	34700	
10 PERCENT EXCEEDS	183	
50 PERCENT EXCEEDS	1.1	
90 PERCENT EXCEEDS	.00	

See Period of Record and Remarks. Not adjusted to account for changes in drainage area

a Diversion dam failed Jun. 17, 1999; repaired Sep. 25, 1999

b From Jan. 4 - May 12

c From Jan. 22-31 and Mar. 12 - Apr. 10

d No flow most days during winter

f From crest-stage gage

g No flow many days each year since 1987 during winter through Jun

See Period of Record for remark on low-flow records

h From rating curve extended above 380 ft³/s

15238978 BATTLE CREEK DIVERSION ABOVE BRADLEY LAKE NEAR HOMER

LOCATION.--Lat 59°44'45", long 150°50'22", in SW¹/₄ NE¹/₄ sec. 17, T. 5 S., R. 9 W. (Seldovia C-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on right bank 0.6 mi upstream from Bradley Lake and 25 mi east of Homer.

DRAINAGE AREA.--0.95 mi².

PERIOD OF RECORD.--August 1992 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,350 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. The entire flow of Battle Creek at the station has been diverted into Bradley Lake since October 1991.

EXTREMES FOR CURRENT YEAR.-- Peak discharges greater than base discharge of 50 ft³/s and maximums (*).

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 13	1030	56	6.19	Nov. 30	0315	62	6.29
Oct. 22	2345	137	7.35	Dec. 03	1545	80	6.59
Oct. 23	2300	151*	7.50*	Feb. 04	1300	61	6.27
Oct. 29	1700	80	6.60	Sep. 28	2315	61	6.28
Nov. 05	2130	107	6.98	Sep. 30	2345	117	7.11
Nov. 23	1530	80	6.60				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	9.9	14	0.00	0.00	0.00	0.00	0.86	9.5	14	2.1	4.0
2	3.1	11	6.4	0.00	0.00	0.00	e0.00	1.1	8.1	23	1.8	3.0
3	2.1	13	42	0.00	0.02	0.05	0.00	1.3	8.0	18	1.5	2.4
4	1.7	30	22	0.00	26	0.03	e0.00	1.1	8.3	13	1.3	1.9
5	1.6	74	17	0.00	7.8	0.00	e0.00	1.1	18	13	1.3	1.6
6	1.6	48	14	0.00	1.7	0.00	0.00	0.71	20	10	1.3	1.3
7	1.9	18	7.3	0.00	0.76	0.00	0.00	0.55	14	9.8	1.2	1.2
8	1.9	8.3	4.7	0.00	1.2	0.00	0.00	0.64	12	11	1.6	0.98
9	1.3	4.9	3.7	0.00	1.3	0.00	0.00	3.9	22	11	1.8	0.92
10	1.3	2.9	3.3	0.07	1.6	0.00	0.00	4.9	27	8.7	1.6	0.87
11	2.6	2.6	2.4	0.64	1.7	0.00	e0.00	1.8	21	9.0	2.4	0.69
12	3.4	2.3	2.0	0.73	1.1	e0.00	e0.00	1.1	20	9.0	3.2	0.57
13	24	1.7	1.5	0.61	0.58	e0.00	e0.00	0.71	22	7.8	3.1	0.47
14	12	1.4	1.0	0.35	0.34	e0.00	e0.00	0.47	30	8.3	4.7	0.34
15	9.2	1.2	0.87	0.22	0.12	e0.00	e0.00	0.32	27	7.2	5.5	0.18
16	6.5	0.81	0.72	0.34	0.01	e0.00	e0.00	0.27	21	9.5	6.7	0.12
17	5.1	0.50	0.78	1.2	0.00	e0.05	e0.00	0.50	14	7.9	4.6	0.07
18	4.1	1.2	0.70	0.95	0.00	e0.03	e0.00	0.69	14	7.8	2.8	0.02
19	7.0	1.3	0.62	0.49	0.00	e0.02	0.00	0.91	13	5.3	3.6	0.00
20	23	1.7	0.56	0.46	0.00	e0.00	0.01	1.3	9.7	4.3	7.4	0.01
21	14	2.1	0.60	0.40	0.00	e0.00	0.07	1.6	13	4.5	3.4	0.12
22	64	13	0.58	0.19	0.00	e0.00	0.14	1.9	11	4.2	2.6	0.06
23	121	62	0.45	0.06	0.00	e0.00	0.13	3.4	10	4.9	2.1	0.05
24	57	26	0.26	0.00	0.00	e0.00	0.35	4.7	12	7.0	1.9	0.13
25	24	16	0.13	0.00	0.00	e0.00	0.55	5.0	15	5.3	2.0	0.65
26	15	21	0.05	0.00	0.00	0.00	0.63	7.1	11	3.6	3.3	0.43
27	8.4	10	0.00	0.00	0.00	0.00	0.84	13	10	3.3	5.0	0.19
28	10	5.6	0.00	0.00	0.00	0.00	0.93	13	10	4.0	17	8.2
29	44	20	0.00	0.00	---	0.00	0.77	8.8	10	2.9	11	18
30	18	43	0.00	0.00	---	0.00	0.82	11	11	2.3	13	29
31	23	---	0.00	0.00	---	0.00	---	9.9	---	2.1	5.8	---
TOTAL	516.0	453.41	147.62	6.71	44.23	0.18	5.24	103.63	451.6	251.7	126.6	77.47
MEAN	16.6	15.1	4.76	0.22	1.58	0.006	0.17	3.34	15.1	8.12	4.08	2.58
MAX	121	74	42	1.2	26	0.05	0.93	13	30	23	17	29
MIN	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.27	8.0	2.1	1.2	0.00
AC-FT	1020	899	293	13	88	0.4	10	206	896	499	251	154
CFSM	17.5	15.9	5.01	0.23	1.66	0.01	0.18	3.52	15.8	8.55	4.30	2.72
IN.	20.21	17.75	5.78	0.26	1.73	0.01	0.21	4.06	17.68	9.86	4.96	3.03

e Estimated

15238978 BATTLE CREEK DIVERSION ABOVE BRADLEY LAKE NEAR HOMER—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY) #

MEAN	3.85	2.24	0.59	0.056	0.25	0.002	0.13	2.71	14.1	11.3	5.72	6.76
MAX	16.6	15.1	4.76	0.22	1.58	0.015	0.67	7.67	23.5	20.1	14.5	16.9
(WY)	2003	2003	2003	2003	2003	1998	1997	1993	1998	2001	2001	1995
MIN	0.21	0.009	0.000	0.000	0.000	0.000	0.000	0.21	5.55	1.83	0.094	0.91
(WY)	1997	2000	1996	1996	1996	1994	1999	1999	1996	1996	1996	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003#	
ANNUAL TOTAL	2326.86		2184.39			
ANNUAL MEAN	6.37		5.98		4.02	
HIGHEST ANNUAL MEAN					5.98	
LOWEST ANNUAL MEAN					1.23	
HIGHEST DAILY MEAN	121	Oct 23	121	Oct 23	121	Oct 23 2002
LOWEST DAILY MEAN	a0.00	Jan 1	b0.00	Dec 27	c0.00	Jun 3 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Dec 27	0.00	Jan 11 1993
MAXIMUM PEAK FLOW			151	Oct 23	151	Oct 23 2002
MAXIMUM PEAK STAGE			7.50	Oct 23	7.50	Oct 23 2002
MAXIMUM PEAK STAGE					d8.06	May 20 1999
ANNUAL RUNOFF (AC-FT)	4620		4330		2910	
ANNUAL RUNOFF (CFSM)	6.71		6.30		4.24	
ANNUAL RUNOFF (INCHES)	91.11		85.54		57.55	
10 PERCENT EXCEEDS	16		17		13	
50 PERCENT EXCEEDS	2.0		1.3		0.41	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

See Period of Record and Remarks, partial years used in summary statistics

a No flow many days during the winter

b No flow many days during the winter, and Sep. 19

c No flow many days most winters, and Jun. 3, 1992 (observation), Aug. 4, Aug. 5, Aug. 9, and Aug. 14 - Sep. 11, 1986.

d Backwater from ice jam

15238990 UPPER BRADLEY RIVER NEAR NUKA GLACIER NEAR HOMER

LOCATION.--Lat 59°42'02", long 150°42'09", (Seldovia C-2 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on left bank 1.0 mi downstream from Nuka Glacier terminus, 2.7 mi upstream from confluence with Kachemak Creek, 3.7 mi southeast of Bradley Lake, and 29 mi east of Homer. Prior to July 22, 1991 at site 0.2 mi downstream.

DRAINAGE AREA.--Indeterminate. Prior to July 29, 1990, drainage area was about 10 mi² and varied according to position of glacier terminus.

PERIOD OF RECORD.--October 1979 to current year. Prior to October 1989, published as Upper Bradley River near Homer.

REVISED RECORDS.--WDR AK-86-1: 1980-85, WRD AK-96-1: 1991-95.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,250 ft above sea level, from topographic map. Prior to July 22, 1991 at site 0.2 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow diverted from Upper Nuka River into Upper Bradley River drainage since July 29, 1990. Air temperature recorder at station, daily values of air temperature available from the computer files of the Alaska Science Center, Water Resources Office. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	e75	151	e2.0	e0.30	e0.80	0.00	e8.0	117	292	407	315
2	99	124	105	e1.5	e1.0	e0.80	0.00	e10	98	351	350	304
3	65	174	439	e1.5	e3.0	e1.0	0.00	e13	97	364	293	228
4	55	323	225	e1.5	e15	e0.80	0.00	e16	92	388	280	183
5	61	983	255	e1.0	e12	e0.70	0.00	e22	148	343	292	147
6	81	548	201	e1.0	e10	e0.60	0.00	e29	200	332	278	184
7	153	269	120	e0.90	e8.0	e0.50	0.00	38	171	387	309	188
8	e70	151	97	e0.80	e8.0	e0.50	0.00	41	142	517	433	145
9	e60	125	110	e0.70	e7.0	e0.45	0.00	103	134	485	459	186
10	e45	97	76	e0.60	e7.0	e0.35	e0.00	78	175	434	408	197
11	e55	88	54	e0.60	e6.0	e0.30	e0.10	43	207	425	450	183
12	e65	81	48	e0.50	e6.0	e0.30	e0.25	36	222	421	622	154
13	e140	62	43	e0.50	e5.0	e0.25	e0.25	32	261	493	1070	162
14	e150	53	e35	e0.50	e5.0	e0.25	e0.25	31	261	550	1150	100
15	e140	47	e25	e0.40	e4.0	e0.20	e0.25	36	244	488	937	75
16	e90	41	e20	e0.40	e4.0	e0.20	e0.25	37	236	484	718	62
17	e75	37	e20	e0.40	e3.5	e0.10	e0.30	34	218	469	426	61
18	e90	35	e15	e0.40	e3.5	e0.10	e0.40	32	217	508	284	55
19	e180	34	e15	e0.40	e3.0	e0.10	e0.50	33	225	435	474	44
20	e340	44	e10	e0.40	e2.5	e0.00	e0.70	35	210	416	445	41
21	e420	52	e10	e0.40	e2.0	e0.00	e0.90	37	239	396	287	37
22	e1200	180	e9.0	e0.40	e1.5	e0.00	e1.0	42	223	368	272	33
23	e1800	670	e8.0	e0.40	e1.5	e0.00	e1.5	58	214	379	215	34
24	e700	260	e7.0	e0.40	e1.0	0.00	e1.5	71	270	558	191	34
25	e120	172	e6.0	e0.40	e1.0	0.00	e2.0	80	321	648	309	43
26	e110	263	e5.0	e0.30	e0.90	0.00	e2.5	80	233	591	563	42
27	e75	127	e4.0	e0.30	e0.60	0.00	e3.0	122	238	495	780	48
28	e75	78	e3.5	e0.30	e0.70	0.00	e4.0	118	233	543	1100	313
29	e110	247	e3.0	e0.30	---	0.00	e5.0	114	248	443	963	728
30	e100	413	e2.5	e0.30	---	0.00	e6.0	122	262	397	695	1280
31	e110	---	e2.0	e0.30	---	0.00	---	116	---	420	421	---
TOTAL	7023	5853	2124.0	19.80	123.00	8.30	30.65	1667.0	6156	13820	15881	5606
MEAN	227	195	68.5	0.64	4.39	0.27	1.02	53.8	205	446	512	187
MAX	1800	983	439	2.0	15	1.0	6.0	122	321	648	1150	1280
MIN	45	34	2.0	0.30	0.30	0.00	0.00	8.0	92	292	191	33
AC-FT	13930	11610	4210	39	244	16	61	3310	12210	27410	31500	11120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)#

	MEAN	85.4	28.7	7.71	0.56	0.69	0.021	0.15	22.5	218	407	448	348
MAX	227	195	68.5	4.75	4.39	0.27	1.02	93.6	363	763	597	851	
(WY)	2003	2003	2003	2001	2003	2003	2003	1993	2001	2001	1993	1995	
MIN	12.9	2.40	0.000	0.000	0.000	0.000	0.000	0.008	94.4	106	293	117	
(WY)	1997	2000	1995	1991	1991	1991	1992	1998	1999	1999	1998	1992	

See Period of Record and Remarks. Not adjusted to account for changes in drainage area
e Estimated

15238990 UPPER BRADLEY RIVER NEAR NUKA GLACIER NEAR HOMER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003#	
ANNUAL TOTAL	58972.80		58311.75			
ANNUAL MEAN	162		160		131	
HIGHEST ANNUAL MEAN					181	
LOWEST ANNUAL MEAN					91.1	
HIGHEST DAILY MEAN	a1800	Oct 23	a1800	Oct 23	b3600	Sep 21 1995
LOWEST DAILY MEAN	c0.00	Feb 3	d0.00	Mar 20	f0.00	Dec 5 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 3	0.00	Mar 20	0.00	Dec 5 1990
MAXIMUM PEAK FLOW			2930	Sep 30	g4100	Sep 20 1995
MAXIMUM PEAK STAGE			h14.46	Sep 30	i15.10	Sep 20 1995
ANNUAL RUNOFF (AC-FT)	117000		115700		95210	
10 PERCENT EXCEEDS	430		441		422	
50 PERCENT EXCEEDS	55		58		6.5	
90 PERCENT EXCEEDS	0.00		0.30		0.00	

PRIOR TO DIVERSION FROM UPPER NUKA RIVER

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1989, BY WATER YEAR (WY)#

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	106	22.8	10.2	4.67	1.74	1.35	1.29	38.3	161	290	349	292
MAX	279	75.7	54.6	15.1	4.82	6.50	4.67	92.0	270	458	595	673
(WY)	1980	1980	1987	1981	1981	1984	1981	1986	1988	1981	1986	1982
MIN	26.3	2.60	.50	.000	.000	.000	.000	.33	102	149	133	63.1
(WY)	1986	1988	1989	1989	1989	1989	1986	1987	1985	1985	1985	1983

SUMMARY STATISTICS

WATER YEARS 1980 - 1989 #

ANNUAL MEAN	107	
HIGHEST ANNUAL MEAN	154	1986
LOWEST ANNUAL MEAN	49.6	1985
HIGHEST DAILY MEAN	1890	Aug 27 1986
LOWEST DAILY MEAN	f.00	Dec 25 1979
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 25 1979
INSTANTANEOUS PEAK FLOW	j2530	Oct 10 1986
INSTANTANEOUS PEAK STAGE	k9.86	Oct 10 1986
ANNUAL RUNOFF (AC-FT)	77650	
10 PERCENT EXCEEDS	338	
50 PERCENT EXCEEDS	15	
90 PERCENT EXCEEDS	.50	

See Period of Record and Remarks. Not adjusted to account for changes in drainage area

a Estimated discharge, but may have been higher during period of no gage-height record, Oct. 8 to Nov. 1

b Estimated discharge, but may have been higher during period of no gage-height record, Sep. 21 to Sep. 22, 1995

c From Feb. 3 to Apr. 27

d From Mar. 20 to Apr. 10

f No flow in winter most years

g From rating curve extended above 400 ft³/s on basis of slope-area measurement of peak flow

h From crest-stage gage

i From floodmarks

j From rating curve extended above 440 ft³/s on basis of slope-area measurement of peak flow

k Site and datum then in use

15239000 BRADLEY RIVER NEAR HOMER

LOCATION.--Lat 59°45'30", long 150°51'02", in SW¹/₄ SE¹/₄ NW¹/₄ sec. 8, T. 5 S., R. 9 W. (Seldovia D-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, about 1,300 ft downstream from Bradley Lake dam, 3.3 mi upstream from confluence with Middle Fork Bradley River, and 26 mi northeast of Homer.

DRAINAGE AREA.--About 65 mi² since July and August 1990, when additional water was diverted into the basin. Prior drainage area was about 54 mi².

PERIOD OF RECORD.--July to August 1955, October 1957 to September 1990 (discharge). October 1991 to current year (beginning month reservoir contents and monthly discharges).

REVISED RECORDS.--WSP 2136: 1960(M), 1965. WDR AK-77-1: 1958, 1961, 1963(M), 1966, 1967, 1970, 1972, 1974, 1976.

GAGE.--Nonrecording gage. Datum of gage is 1,054.16 ft above sea level (levels of dam-site survey for Alaska Power Authority). Totalizing flow meters on penstocks to two turbines in Bradley powerhouse. Lake-level sensor. July 13-22, 1955, non-recording lake gage at site 1 mi upstream and July 23 to August 5, 1955, at site 3 mi upstream at different datum. Prior to November 4, 1980, and April 29 to October 5, 1986, water-stage recorder at site 500 ft upstream at different datum and November 4, 1980 to April 28, 1986, water-stage recorder 1,300 ft upstream at different datum. April 29, 1986 to September 30, 1989, water-stage recorder at present site and datum.

REMARKS.--Reservoir is formed by an earthen dam with impermeable core and concrete face at the outlet of Bradley Lake. Construction began November 1986 and was completed in April 1991. Total and usable capacities below the spillway crest of 1,180 ft are 547,500 and 284,200 acre-ft, respectively. Reservoir is used for power. Discharge released through turbines is computed using totalizing flow meters; release flow enters Kachemak Bay and is not returned to stream. Spill, dam seepage, and fish-water bypass are measured at Bradley River below Dam (15239001) gage. Reservoir capacity table furnished by the Alaska Energy Authority.

COOPERATION.--Reservoir elevations and power generation discharge provided by the Homer Electric Association, for the Alaska Energy Authority.

AVERAGE DISCHARGE.--44 years (water years 1958 to 1989, and 1992 to current year), 461 ft³/s, 334,000 acre-ft/yr. The inflow diversions from Middle Fork Bradley River and Battle Creek into the reservoir are excluded. Flow diverted from Upper Nuka River into Upper Bradley since July 29, 1990 was not measurable and is included in the following tabulations.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 557,700 acre-ft, November 6, 2002, elevation 1182.6 ft; minimum contents observed, 246,600 acre-ft, April 23, 1997, elevation 1069.3 ft. Maximum computed discharge, 8,800 ft³/s, October 10, 1986, gage height, 10.90 ft from floodmarks, site and datum then in use. Maximum discharge, September 21-22, 1995 was probably higher, as indicated by extremes for period of record on these dates for other sites in the Bradley River basin; minimum daily, about 9.0 ft³/s, December 7, 1986, result of power tunnel construction at dam site.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 557,700 acre-ft, November 6, elevation 1182.6 ft; minimum contents not determined.

BEGINNING OF MONTH RESERVOIR ELEVATION, IN FEET ABOVE SEA LEVEL, AND CONTENTS, IN ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	ELEVATION	CONTENTS	CHANGE IN CONTENTS
Oct 1	1,164.3	489,800	--
Nov 1	1,179.5	545,500	+55,700
Dec 1	1,178.8	542,700	-2,800
Jan 1	1,170.8	512,500	-30,200
Feb 1	1,163.0	485,200	-27,300
Mar 1	1,156.3	461,400	-23,800
Apr 1	no data	414,000e	-47,400e
May 1	no data	384,000e	-30,000e
Jun 1	1,126.6	366,600	-17,400e
Jul 1	1,138.7	404,200	+37,600
Aug 1	1,158.7	469,900	+65,700
Sep 1	1,175.3	529,000	+59,100
Oct 1	1,171.9	516,800	-12,200
		CAL YR 2002	+45,800
		WTR YR 2003	+27,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
MEAN VALUES

MONTH	CHANGE IN CONTENTS	POWER GENERATION	BRADLEY RIVER BELOW DAM 15239001	MIDDLE FORK BRADLEY RIVER 15239050	BATTLE CREEK DIVERSION 15238978	BRADLEY RIVER 15239000
OCT	+906	681	38.8	136	16.6	1,470
NOV	-47	1,210	217	106	15.1	1,260
DEC	-490	932	28.1	37.5	4.76	427
JAN	-444	560	43.1	8.86	0.22	149
FEB	-428	641	40.4	22.9	1.58	228
MAR	-771	786	38.0	5.59	0.01	47
APR	-504	672	38.8	4.11	0.17	203e
MAY	-283	499	48.2	20.4	3.34	241e
JUN	+632	597	36.3	126	15.1	1,120
JUL	+1,070	460	55.7	202	8.12	1,370
AUG	+961	789	85.5	162	4.08	1,670
SEP	-205	909	85.3	66.6	2.58	720
CAL YR 2002	+59	679	49.2	68.6	6.37	713
WTR YR 2003	+33	728	62.8	75.3	5.98	743

e Estimated

LOCATION.--Lat 59°45'30", long 150°51'02", in SW¹/₄ SE¹/₄ NW¹/₄ sec. 8, T. 5 S., R. 9 W. (Seldovia D-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on right bank about 1,300 ft downstream from Bradley Lake Dam, 3.3 mi upstream from Middle Fork Bradley River, and 26 mi northeast of Homer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,480 ft³/s, Nov. 6, gage height, 7.15 ft; minimum, 0.26 ft³/s, Nov. 16., gage-height 1.67 ft.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	8.3	0.96	43	42	40	37	48	49	44	83	80
2	57	8.5	1.0	43	42	40	38	48	49	32	83	81
3	57	11	13	44	43	39	38	48	48	32	84	85
4	57	14	1.5	43	28	39	38	48	49	45	87	93
5	57	765	27	43	19	39	38	47	50	45	91	91
6	57	2350	9.6	43	43	39	38	47	36	45	92	90
7	57	1790	0.49	43	43	39	38	46	38	45	91	91
8	56	1010	0.47	44	43	39	38	46	41	35	91	91
9	56	426	0.45	44	43	38	38	43	46	35	87	91
10	57	80	0.45	44	42	38	38	38	28	45	88	94
11	56	14	3.1	45	42	38	39	37	21	48	89	99
12	54	0.70	12	44	42	38	39	48	24	48	86	103
13	55	0.35	13	44	42	38	38	53	23	48	86	108
14	55	0.42	33	43	42	38	38	52	20	49	85	108
15	55	0.31	46	43	42	38	38	53	11	49	86	107
16	55	0.28	46	44	41	38	38	53	19	50	81	108
17	55	0.36	45	45	41	38	38	57	25	54	80	107
18	55	0.43	45	44	41	38	38	64	27	60	88	107
19	55	0.61	45	43	41	38	38	56	29	59	88	108
20	29	1.3	45	43	41	38	39	57	32	59	87	97
21	7.3	1.4	45	43	41	38	39	56	34	59	88	89
22	11	3.2	45	43	41	38	39	56	32	61	90	80
23	11	6.9	45	43	42	37	39	56	37	66	93	67
24	4.8	5.9	45	42	41	37	40	51	45	63	92	59
25	14	2.7	44	42	41	37	40	45	39	61	93	55
26	2.9	5.6	44	42	41	37	40	44	46	66	92	57
27	0.98	0.67	44	42	41	37	40	40	47	83	90	57
28	20	0.72	43	42	41	37	40	36	53	86	67	59
29	5.5	5.7	43	42	---	37	41	40	47	88	69	50
30	17	2.8	43	42	---	37	43	40	43	83	69	47
31	16	---	43	42	---	37	---	41	---	83	75	---
TOTAL	1202.48	6517.15	872.02	1337	1132	1179	1163	1494	1088	1726	2651	2559
MEAN	38.8	217	28.1	43.1	40.4	38.0	38.8	48.2	36.3	55.7	85.5	85.3
MAX	57	2350	46	45	43	40	43	64	53	88	93	108
MIN	0.98	0.28	0.45	42	19	37	37	36	11	32	67	47
AC-FT	2390	12930	1730	2650	2250	2340	2310	2960	2160	3420	5260	5080
CAL YR 2002	TOTAL 17955.00											
WTR YR 2003	TOTAL 22920.65											
	MEAN 62.8			49.2	MAX 2350		MIN 0.04	AC-FT 35610				
				62.8								

15239050 MIDDLE FORK BRADLEY RIVER NEAR HOMER

LOCATION.--Lat 59°46'42", long 150°45'15", in NW¹/₄ NE¹/₄ sec.2, T.5 S., R.9 W. (Seldovia D-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on left bank 6.0 mi upstream from mouth and 27 mi east of Homer.

DRAINAGE AREA.--9.25 mi².

PERIOD OF RECORD.--October 1979 to current year. Published as Bradley River tributary near Homer prior to October 1989.

REVISED RECORDS.-- WDR AK-86-1: 1980(P), 1981-82(M), 1984(M). WRD AK-2000-1: 1995-1997.

GAGE.--Water-stage recorder. Elevation of gage is 2,300 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Precipitation gage and air temperature recorder at station; daily values of air temperature and precipitation are available from the computer files of the Alaska Science Center, Water-Resources office.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximums (*)

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct.23	2330	*1310	9.49	Dec. 3	1300	385	9.28
Oct. 29	1630	316	9.14	Aug. 28	1630	445	9.37
Nov. 5	2000	1020	*10.09				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	98	70	e11	7.3	6.7	e4.2	e5.4	46	170	146	136
2	54	97	53	e10	7.2	7.4	e4.2	e5.8	46	238	134	126
3	47	107	242	e10	120	7.3	e4.2	e6.1	49	228	124	114
4	43	160	125	e9.5	156	6.9	e4.1	e6.5	49	213	119	103
5	43	525	90	e9.5	64	7.0	e4.1	e6.8	67	207	118	88
6	44	387	68	e9.5	19	6.7	e4.0	e7.3	74	195	118	82
7	53	174	54	e9.5	12	6.6	e4.0	e7.8	66	195	118	80
8	48	115	43	e9.0	11	6.5	e4.0	e8.3	60	229	141	73
9	44	90	36	e9.0	11	6.5	e4.0	e8.8	79	238	158	73
10	38	74	33	e9.0	12	6.5	e4.0	e9.2	120	220	160	70
11	46	65	e29	e10	12	6.4	e3.9	e10	153	210	206	66
12	52	58	e26	e10	11	e6.2	e3.9	e10	185	216	225	62
13	99	51	e23	e9.5	10	e5.7	e3.8	e11	184	213	222	61
14	83	47	e21	e9.5	9.4	e5.7	e3.8	e12	190	224	228	50
15	66	e42	e19	e9.5	9.0	e5.5	e3.8	14	196	217	224	40
16	65	e37	e17	9.3	8.6	e5.5	e3.8	15	176	218	210	37
17	56	e34	e17	9.6	8.3	e5.2	e3.8	15	162	226	165	34
18	57	e32	e17	8.8	8.0	e5.1	e3.8	16	152	228	129	32
19	90	e30	e16	8.6	7.8	e5.0	e3.8	18	160	200	139	31
20	128	e29	e16	8.6	7.5	e5.0	e3.8	20	148	195	155	31
21	100	e28	e16	8.3	7.4	e4.9	e3.8	22	151	185	120	28
22	322	80	e15	8.2	7.3	e4.8	e3.9	25	149	172	113	27
23	909	210	e15	8.0	25	e4.7	e4.0	29	146	180	104	25
24	577	112	e14	7.9	48	e4.6	e4.2	34	148	220	100	24
25	204	72	e14	7.7	15	e4.6	e4.3	35	148	210	121	24
26	156	97	e13	7.7	12	e4.5	e4.4	38	135	182	150	23
27	119	71	e13	7.7	8.0	e4.5	e4.6	49	127	170	165	22
28	116	49	e12	e7.5	8.8	e4.4	e4.8	48	128	186	271	46
29	208	72	e12	e7.5	---	e4.4	e5.0	44	142	169	269	151
30	164	136	e11	7.5	---	e4.2	e5.2	47	148	150	220	240
31	128	---	e11	7.4	---	e4.2	---	47	---	144	161	---
TOTAL	4223	3179	1161	274.8	642.6	173.2	123.2	631.0	3784	6248	5033	1999
MEAN	136	106	37.5	8.86	22.9	5.59	4.11	20.4	126	202	162	66.6
MAX	909	525	242	11	156	7.4	5.2	49	196	238	271	240
MIN	38	28	11	7.4	7.2	4.2	3.8	5.4	46	144	100	22
AC-FT	8380	6310	2300	545	1270	344	244	1250	7510	12390	9980	3970
CFSM	14.7	11.5	4.05	0.96	2.48	0.60	0.44	2.20	13.6	21.8	17.6	7.20
IN.	16.98	12.78	4.67	1.11	2.58	0.70	0.50	2.54	15.22	25.13	20.24	8.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	MEAN	47.4	20.5	9.65	5.88	5.40	3.70	3.33	16.9	96.9	163	144	103
	MAX	144	106	37.5	17.0	23.0	7.17	4.42	44.5	162	221	204	220
	(WY)	1987	2003	2003	1981	2003	1981	2001	1990	1998	2001	2001	1995
	MIN	15.6	5.29	4.45	3.82	2.86	1.30	2.38	5.45	44.7	111	86.9	38.7
	(WY)	1997	1985	1985	1991	1991	1986	1999	1987	1985	1996	1996	1992

e Estimated

15239050 MIDDLE FORK BRADLEY RIVER NEAR HOMER—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.4	20.5	9.65	5.88	5.40	3.70	3.33	16.9	96.9	163	144	103
MAX	144	106	37.5	17.0	23.0	7.17	4.42	44.5	162	221	204	220
(WY)	1987	2003	2003	1981	2003	1981	2001	1990	1998	2001	2001	1995
MIN	15.6	5.29	4.45	3.82	2.86	1.30	2.38	5.45	44.7	111	86.9	38.7
(WY)	1997	1985	1985	1991	1991	1986	1999	1987	1985	1996	1996	1992

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1980 - 2003

ANNUAL TOTAL	25024.4	27471.8	
ANNUAL MEAN	68.6	75.3	52.0
HIGHEST ANNUAL MEAN			75.3
LOWEST ANNUAL MEAN			34.6
HIGHEST DAILY MEAN	909	Oct 23	966
LOWEST DAILY MEAN	a2.5	Apr 20	c1.1
ANNUAL SEVEN-DAY MINIMUM	2.5	Apr 20	1.1
MAXIMUM PEAK FLOW			d1310
MAXIMUM PEAK STAGE			10.09
MAXIMUM PEAK STAGE			f16.16
ANNUAL RUNOFF (AC-FT)	49640	54490	37640
ANNUAL RUNOFF (CFSM)	7.41	8.14	5.62
ANNUAL RUNOFF (INCHES)	100.64	110.48	76.31
10 PERCENT EXCEEDS	161	202	155
50 PERCENT EXCEEDS	48	38	12
90 PERCENT EXCEEDS	3.2	4.8	3.3

a Apr. 20-27

b Apr. 13-21

c From Mar. 28 to Apr. 10, 1986

d Oct. 23-24

f Backwater from ice

15239060 MIDDLE FORK BRADLEY RIVER BELOW NORTH FORK BRADLEY RIVER NEAR HOMER

LOCATION.--Lat 59°47'54", long 150°51'48", in SE¹/₄ NE¹/₄ SW¹/₄ sec. 29, T. 4 S., R. 9 W. (Seldovia D-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on left bank 100 ft upstream from confluence with the main stem Bradley River, 0.2 mi below the mouth of the North Fork Bradley River, 5.5 mi downstream from the Middle Fork Bradley River diversion dam, and 25 mi east of Homer.

DRAINAGE AREA.--24.8 mi².

PERIOD OF RECORD.--August 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Water from upper Middle Fork Bradley River (15239050) is diverted into Bradley Lake at Middle Fork Bradley River diversion dam, located 5.5 mi upstream. Air temperature recorder at station, daily values of air temperature are available from the computer files of the Alaska Science Center, Water Resources Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	203	263	e13	e18	21	5.2	83	75	71	27	47
2	78	161	154	e14	20	27	5.1	84	71	87	26	41
3	70	142	726	e13	24	31	5.0	88	72	83	24	36
4	62	205	417	e13	363	27	4.8	81	72	74	22	32
5	61	1520	252	e12	423	e26	4.7	77	87	72	21	29
6	56	937	169	e11	178	e24	4.5	65	104	67	21	27
7	62	400	124	e10	105	e22	4.4	58	90	68	20	25
8	55	249	101	e9.5	109	e20	4.4	59	80	77	22	24
9	49	160	89	e10	108	e18	4.5	98	82	76	28	22
10	46	118	80	e11	124	e17	4.5	122	99	67	26	21
11	54	97	70	e10	117	e16	6.0	88	103	62	29	20
12	58	84	64	e10	92	e15	9.4	73	104	61	35	19
13	121	74	56	e9.0	75	e14	12	63	117	62	32	18
14	130	e65	43	e10	65	e13	11	57	120	65	34	17
15	117	e60	e33	e10	56	e12	10	55	116	60	33	15
16	107	55	e28	e9.0	44	e12	9.0	53	96	58	40	14
17	95	53	e28	e9.0	45	e12	8.9	52	83	55	34	14
18	85	52	e27	e9.0	39	11	10	53	77	53	24	14
19	92	53	e26	e9.0	33	10	12	57	77	48	22	13
20	127	61	e25	e8.0	30	e9.5	14	61	71	45	38	14
21	124	82	e23	e8.0	e29	e9.0	15	63	73	43	28	16
22	344	210	e21	e8.0	27	e8.5	19	65	72	39	24	14
23	1950	1810	e19	e8.0	28	e8.0	23	73	71	39	22	14
24	1610	537	e18	e7.0	29	e7.5	34	78	70	48	21	15
25	541	368	e18	e7.0	27	7.1	44	77	68	45	21	19
26	371	375	e17	e7.0	26	7.2	53	79	64	38	28	17
27	243	220	e16	e8.0	24	6.8	60	94	61	34	30	15
28	268	138	e14	e10	22	6.4	66	93	61	37	58	23
29	498	271	e13	e12	---	6.1	70	81	67	34	69	68
30	410	505	e13	e14	---	5.7	81	84	67	29	68	86
31	289	---	e13	e16	---	5.4	---	81	---	27	55	---
TOTAL	8263	9265	2960	314.5	2280	435.2	614.4	2295	2470	1724	982	749
MEAN	267	309	95.5	10.1	81.4	14.0	20.5	74.0	82.3	55.6	31.7	25.0
MAX	1950	1810	726	16	423	31	81	122	120	87	69	86
MIN	46	52	13	7.0	18	5.4	4.4	52	61	27	20	13
AC-FT	16390	18380	5870	624	4520	863	1220	4550	4900	3420	1950	1490
CFSM	10.7	12.5	3.85	0.41	3.28	0.57	0.83	2.99	3.32	2.24	1.28	1.01
IN.	12.39	13.90	4.44	0.47	3.42	0.65	0.92	3.44	3.71	2.59	1.47	1.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)#

	MEAN	79.5	83.7	31.4	20.0	21.3	10.0	21.3	111	178	104	48.2	69.2
MAX	267	309	95.5	75.3	81.4	20.7	36.4	155	277	193	120	116	
(WY)	2003	2003	2003	2001	2003	1998	1998	2002	2001	2001	2001	1997	
MIN	23.2	16.2	7.69	2.68	2.00	2.74	9.59	74.0	82.3	45.7	12.5	25.0	
(WY)	1997	2000	1997	1999	1999	1999	1999	2003	2003	1997	1996	2003	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003#	
ANNUAL TOTAL	38288.2		32352.1			
ANNUAL MEAN	105		88.6		65.7	
HIGHEST ANNUAL MEAN					90.8	
LOWEST ANNUAL MEAN					44.0	
HIGHEST DAILY MEAN	1950	Oct 23	1950	Oct 23	1950	Oct 23 2002
LOWEST DAILY MEAN	5.2	Apr 17	a4.4	Apr 7	b1.0	Feb 5 1999
ANNUAL SEVEN-DAY MINIMUM	5.4	Apr 11	4.5	Apr 4	1.0	Feb 5 1999
MAXIMUM PEAK FLOW			c3940	Oct 24	c3940	Oct 24 2002
MAXIMUM PEAK STAGE			16.27	Oct 24	16.27	Oct 24 2002
ANNUAL RUNOFF (AC-FT)	75940		64170		47620	
ANNUAL RUNOFF (CFSM)	4.23		3.57		2.65	
ANNUAL RUNOFF (INCHES)	57.43		48.53		36.01	
10 PERCENT EXCEEDS	227		140		158	
50 PERCENT EXCEEDS	54		44		33	
90 PERCENT EXCEEDS	6.4		9.0		6.0	

See Period of Record; partial years used in monthly statistics

a Apr. 7-8

b Feb. 5-12, 1999

c From rating curve extended above 32 ft³/s on basis of comparison of instantaneous discharge of Bradley River below Dam (15239001) and instantaneous discharge of Bradley River near Tidewater (15239070)

e Estimated

15239070 BRADLEY RIVER NEAR TIDEWATER NEAR HOMER

LOCATION.--Lat 59°48'06", long 150°52'58", in SE¹/₄ NE¹/₄ sec. 30, T. 4 S., R. 9 W. (Seldovia D-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on right bank 0.7 mi upstream from mouth, 0.8 mi downstream from Middle Fork Bradley River, 4.3 mi downstream from Bradley Lake outlet and dam site, and 25 mi east of Homer.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 25 ft above sea level, from topographic map.

REMARKS.--Records good, except for November 5 to 20 and estimated daily discharges, which are poor. Flow occasionally affected by high tides. Intermittent regulation during construction at the Bradley River dam site began in November 1986. Flow has been regulated since the reservoir began filling April 26, 1991. (See station 15239001.) Upper Nuka River was diverted into Upper Bradley River on July 29, 1990; flow from about 10 mi² of Middle Fork Bradley River upstream drainage has been seasonally diverted into the Bradley Lake reservoir since August 7, 1990. Battle Creek was diverted into the reservoir in October 1990. Water has been diverted out of the basin through the turbines since hydropower generation began June 28, 1991. Rain gage and air temperature recorder at station; daily values of precipitation and air temperature available from the computer files of the Alaska Science Center, Water Resources Office. GOES satellite telemetry at station.

DISCHARGE, in CFS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	226	291	e58	e61	50	e45	149	140	126	119	134
2	140	197	197	e59	e68	54	47	149	133	138	118	123
3	131	177	913	e59	e76	56	47	156	134	126	117	124
4	123	251	458	e58	e400	53	47	145	135	132	118	132
5	122	2390	271	e57	503	49	46	139	162	129	121	126
6	116	3490	200	e56	218	e49	46	119	178	121	123	123
7	124	2240	136	e55	141	e48	46	109	158	121	121	122
8	116	1430	108	e55	146	e48	46	110	147	125	123	120
9	108	654	95	e56	144	e48	46	168	157	118	124	118
10	105	260	86	e57	158	e48	46	219	156	119	123	121
11	115	134	72	e57	149	e47	48	162	158	117	126	124
12	116	99	76	e56	124	e47	55	148	152	116	130	125
13	187	82	69	e55	103	e47	60	139	172	116	126	131
14	199	72	92	e55	90	e47	58	128	174	120	129	128
15	183	67	82	e55	79	e47	57	125	156	114	129	127
16	172	58	79	e55	71	e47	56	122	136	113	132	125
17	158	57	e78	e56	72	e60	55	123	131	111	117	124
18	149	57	e76	e55	e70	e52	56	138	122	118	120	123
19	157	64	e75	e54	e90	e51	57	130	126	110	118	123
20	182	92	e73	e53	e70	e50	60	137	117	105	133	118
21	149	137	e72	e53	54	e50	65	139	126	103	123	106
22	433	305	e70	e53	53	e49	74	141	117	100	121	94
23	1950	2240	e68	e53	59	e48	74	150	122	107	123	79
24	1460	737	e67	e51	60	e47	85	153	131	113	120	70
25	647	434	e66	e51	57	e47	95	142	121	109	120	69
26	418	412	e64	e51	56	e47	105	143	123	107	126	67
27	253	255	e62	e53	53	e46	112	159	118	123	127	66
28	307	177	e59	e54	52	e46	119	151	127	132	139	75
29	574	336	e58	e55	---	e46	124	140	127	132	146	114
30	449	679	e58	e56	---	e46	140	146	120	121	144	125
31	319	---	e58	e59	---	e46	---	140	---	119	133	---
TOTAL	9815	17809	4229	1710	3277	1516	2017	4419	4176	3661	3889	3356
MEAN	317	594	136	55.2	117	48.9	67.2	143	139	118	125	112
MAX	1950	3490	913	59	503	60	140	219	178	138	146	134
MIN	105	57	58	51	52	46	45	109	117	100	117	66
AC-FT	19470	35320	8390	3390	6500	3010	4000	8770	8280	7260	7710	6660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)#

	MEAN	112	130	70.9	64.2	67.5	52.4	69.1	159	186	142	132	135
	MAX	317	594	136	137	117	70.5	93.8	205	263	185	178	224
	(WY)	2003	2003	2003	2001	2003	1998	1993	1992	1998	2001	1995	1995
	MIN	64.0	51.2	47.1	41.6	42.2	43.9	50.5	120	114	115	105	104
	(WY)	1998	2000	1998	1999	1999	1999	1999	1996	1997	1997	2002	1993

See Period of Record and Remarks
e Estimated

15239070 BRADLEY RIVER NEAR TIDEWATER NEAR HOMER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1992 - 2003#		
ANNUAL TOTAL	61874			59874					
ANNUAL MEAN	170			164			110		
HIGHEST ANNUAL MEAN							164		
LOWEST ANNUAL MEAN							83.8		
HIGHEST DAILY MEAN	3490			3490			3490		
LOWEST DAILY MEAN	44			45			a40		
ANNUAL SEVEN-DAY MINIMUM	45			46			40		
MAXIMUM PEAK FLOW				6200			6200		
MAXIMUM PEAK STAGE				b10.83			b10.83		
INSTANTANEOUS LOW FLOW							17		
ANNUAL RUNOFF (AC-FT)	122700			118800			79870		
10 PERCENT EXCEEDS	262			198			177		
50 PERCENT EXCEEDS	108			118			92		
90 PERCENT EXCEEDS	50			51			48		

PRIOR TO REGULATION AND DIVERSION OF BRADLEY DAM

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1989, BY WATER YEAR (WY)#

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	808	224	198	145	82.1	74.0	72.8	462	1032	1390	1318	966
MAX	1908	480	503	223	114	163	101	676	1357	1577	1781	1746
(WY)	1987	1984	1987	1985	1985	1984	1989	1987	1988	1988	1988	1989
MIN	363	86.1	78.9	72.5	37.4	27.4	42.5	282	862	1153	907	470
(WY)	1984	1986	1988	1989	1989	1989	1985	1985	1986	1983	1983	1983

SUMMARY STATISTICS

WATER YEARS 1983 - 1989#

ANNUAL MEAN	583	
HIGHEST ANNUAL MEAN	722	1987
LOWEST ANNUAL MEAN	475	1985
HIGHEST DAILY MEAN	10000	Oct 11 1986
LOWEST DAILY MEAN	19	Dec 7 1986
ANNUAL SEVEN-DAY MINIMUM	22	Mar 26 1989
MAXIMUM PEAK FLOW	c11000	Oct 11 1986
MAXIMUM PEAK STAGE	b13.73	Oct 11 1986
INSTANTANEOUS LOW FLOW	d17	Mar 28 1989
ANNUAL RUNOFF (AC-FT)	422700	
ANNUAL RUNOFF (CFSM)	7.11	
ANNUAL RUNOFF (IN)	96.67	
10 PERCENT EXCEEDS	1470	
50 PERCENT EXCEEDS	388	
90 PERCENT EXCEEDS	52	

See Period of Record and Remarks

a Dec. 15 to Dec. 18, 1992; Apr. 20 to Apr. 21, 1995; Jan. 9 and Apr. 22, 1997; Mar. 5, 1998; Jan. 16 to Jan. 20, and Jan. 28 to Feb. 12, 1999

b From floodmarks

c From rating curve extended above 2,400 ft³/s on basis of runoff comparisons with nearby stations

d Minimum recorded, but may have been less during period of ice effect, Mar. 28 to Mar. 31, 1989

15241600 NINILCHIK RIVER AT NINILCHIK

LOCATION.--Lat 60°02'56", long 151°39'48", in NE¹/₄ sec. 34, T. 1 S., R. 14 W. (Kenai A-5 quad), Kenai Peninsula Borough, Hydrologic Unit 19020301, on right bank 60 ft downstream from bridge, 0.9 mi upstream from mouth, at Ninilchik.

DRAINAGE AREA.--135 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to September 1985, October 1998 to September 2003 (discontinued).

REVISED RECORDS.--WDR AK-01-1: Drainage area.

GAGE.--Water-stage-recorder. Datum of gage is 8.37 ft above NAVD of 1988. Prior to October 1, 1965, at site 0.2 mi upstream at different datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	e270	278	e64	e66	e120	e110	121	83	76	60	67
2	258	e240	236	e62	e64	e120	e110	116	89	117	56	65
3	198	e210	235	e60	e62	e120	e110	119	88	129	54	62
4	164	e170	254	e60	e100	e120	e110	118	84	101	53	61
5	139	e210	223	e58	e140	e120	e110	130	86	81	53	64
6	175	e320	194	e58	e150	e120	e110	123	95	76	52	65
7	189	332	171	e56	e160	e120	e120	115	112	71	52	62
8	175	233	155	e54	e160	e110	e120	108	102	67	52	61
9	144	159	144	e60	e160	e110	e120	125	96	64	51	61
10	119	128	140	e120	e160	e110	e120	170	114	61	51	63
11	127	158	134	e160	e160	e110	e130	186	208	61	52	61
12	222	146	131	e160	e160	e110	e140	156	246	63	63	60
13	209	118	134	e160	e150	e100	e150	142	197	61	64	59
14	178	146	98	e150	e150	e94	e150	155	156	58	69	59
15	167	143	e94	e140	e150	e110	e140	148	123	56	137	58
16	209	127	e88	e130	e140	e130	e140	140	108	55	187	58
17	192	124	e84	e120	e130	e130	e140	126	110	56	163	59
18	190	127	e82	e120	e130	e120	e150	120	99	56	130	60
19	181	e150	e80	e110	e120	e110	159	118	98	54	105	61
20	169	e160	e80	e100	e120	e110	153	116	92	54	93	62
21	153	154	e78	e95	e120	e110	153	106	89	55	82	63
22	147	165	e78	e90	e110	e96	176	107	109	56	73	62
23	576	650	e78	e80	e110	e96	190	111	103	56	67	62
24	e5400	1610	e78	e78	e110	e96	186	109	90	58	63	63
25	2010	1190	e76	e76	e110	e96	173	102	85	64	62	70
26	e1050	671	e76	e74	e110	e98	154	103	103	66	90	78
27	e700	463	e76	e72	e110	e100	159	115	111	61	114	72
28	e500	313	e74	e70	e120	e100	153	99	102	60	97	73
29	e300	265	e72	e70	---	e100	148	e90	88	65	84	90
30	e500	281	e70	e68	---	e100	137	84	78	73	77	108
31	e300	---	e68	e66	---	e100	---	84	---	68	72	---
TOTAL	15276	9433	3859	2841	3532	3386	4221	3762	3344	2099	2478	1969
MEAN	493	314	124	91.6	126	109	141	121	111	67.7	79.9	65.6
MAX	5400	1610	278	160	160	130	190	186	246	129	187	108
MIN	119	118	68	54	62	94	110	84	78	54	51	58
AC-FT	30300	18710	7650	5640	7010	6720	8370	7460	6630	4160	4920	3910
CFSM	3.65	2.33	0.92	0.68	0.93	0.81	1.04	0.90	0.83	0.50	0.59	0.49
IN.	4.21	2.60	1.06	0.78	0.97	0.93	1.16	1.04	0.92	0.58	0.68	0.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

MEAN	143	105	66.2	57.3	59.6	65.7	158	229	117	86.3	88.0	115
MAX	493	314	124	91.6	126	109	548	488	238	151	155	204
(WY)	2003	2003	2003	2003	2003	2003	1974	1977	1964	1980	1981	1982
MIN	78.2	41.1	42.0	36.8	36.0	36.9	41.4	81.7	62.2	57.6	47.8	54.6
(WY)	1969	1964	1966	1974	1974	1974	1985	1969	1969	1983	1969	1969

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1963 - 2003#
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ANNUAL TOTAL	55296		56200				
ANNUAL MEAN	151		154			108	
HIGHEST ANNUAL MEAN						154	2003
LOWEST ANNUAL MEAN						55.4	1969
HIGHEST DAILY MEAN	5400	Oct 24	5400	Oct 24		5400	Oct 24 2002
LOWEST DAILY MEAN	45	Mar 22	a51	Aug 9		30	Jul 20 1966
ANNUAL SEVEN-DAY MINIMUM	45	Mar 22	52	Aug 5		32	Jan 9 1983
MAXIMUM PEAK FLOW			b6600	Oct 24		b6600	Oct 24 2002
MAXIMUM PEAK STAGE			9.39	Oct 24		9.39	Oct 24 2002
ANNUAL RUNOFF (AC-FT)	109700		111500			78110	
ANNUAL RUNOFF (CFSM)	1.12		1.14			0.80	
ANNUAL RUNOFF (INCHES)	15.24		15.49			10.85	
10 PERCENT EXCEEDS	279		202			197	
50 PERCENT EXCEEDS	78		110			76	
90 PERCENT EXCEEDS	50		60			49	

See Period of Record, partial years used in monthly statistics

a Aug. 9, 10

b From rating curve extended above 700 ft³/s on basis of slope-area measurement of peak flow

e Estimated

15241600 NINILCHIK RIVER AT NINILCHIK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1955-58, 1963-65, 1967-68, 1975, 1978-79, and 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to September 1963, October 1964 to July 1965, and October 1998 to September 2003 (discontinued).

SEDIMENT: October 1963 to July 1965.

INSTRUMENTATION.--Electronic water temperature recorder set for one-hour recording interval, October 1 to 29, and 15-minute recording interval, October 20 to September 30.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Temperature at the sensor was compared with the average for the river by cross sections on May 29 and July 21. No variation was found within the cross sections. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 20.5°C, July 4, 1999 and July 15, 2003; minimum, 0.0°C on many days during fall and winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 20.5°C, July 15; minimum, 0.0°C on many days during fall and winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (000004)	Location in X-sect. looking downstrm ft from 1 bank (000009)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)
MAY 2003							
29...	1421	40.5	6.00	3.31	89	12.0	15.0
29...	1422	40.5	14.0	3.31	89	12.0	15.0
29...	1423	40.5	22.0	3.31	89	12.0	15.0
29...	1424	40.5	30.0	3.31	89	12.0	15.0
29...	1425	40.5	38.0	3.31	89	12.0	15.0
JUL							
21...	1718	37.4	32.0	3.02	55	16.0	15.0
21...	1719	37.4	25.0	3.02	55	16.0	15.0
21...	1720	37.4	18.0	3.02	55	16.0	15.0
21...	1721	37.4	11.0	3.02	55	16.0	15.0
21...	1722	37.4	4.00	3.02	55	16.1	15.0

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.0	6.5	7.0	3.5	3.0	3.5	1.5	0.5	1.0	0.5	0.0	0.5
2	7.0	5.5	6.0	3.5	3.0	3.5	1.0	0.5	0.5	0.5	0.5	0.5
3	5.5	4.0	4.5	3.5	3.0	3.0	2.0	1.0	1.5	0.5	0.0	0.5
4	4.5	3.5	4.0	4.0	3.5	3.5	1.0	0.5	1.0	0.5	0.0	0.5
5	5.0	4.0	4.5	4.5	4.0	4.0	1.0	0.5	1.0	0.5	0.5	0.5
6	5.5	4.5	5.0	5.0	4.5	4.5	0.5	0.5	0.5	0.5	0.0	0.5
7	7.0	5.0	6.0	4.5	3.5	4.0	0.5	0.0	0.5	0.5	0.0	0.5
8	6.0	4.5	5.0	3.5	2.5	3.0	0.5	0.0	0.5	0.5	0.0	0.0
9	4.5	2.5	3.5	---	---	---	0.5	0.0	0.0	0.0	0.0	0.0
10	3.0	1.5	2.5	---	---	---	0.5	0.0	0.0	0.0	0.0	0.0
11	3.5	3.0	3.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
12	4.5	3.5	4.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
13	5.0	4.0	4.5	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0
14	5.0	3.5	4.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
15	5.0	4.0	4.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
16	5.0	4.0	4.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
17	4.5	3.5	4.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
18	5.0	4.0	4.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
19	6.0	5.0	5.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
20	6.0	5.0	5.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
21	5.5	4.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	5.5	4.5	4.5	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
23	6.0	5.5	5.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
24	6.0	5.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	5.5	5.0	5.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
26	5.0	4.5	4.5	0.5	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0
27	4.5	3.0	3.5	0.5	0.0	0.5	0.5	0.0	0.5	0.0	0.0	0.0
28	3.0	2.5	3.0	0.5	0.0	0.5	0.5	0.0	0.5	0.0	0.0	0.0
29	4.0	3.0	3.5	1.0	0.5	0.5	0.5	0.0	0.5	0.0	0.0	0.0
30	3.5	3.0	3.5	1.5	1.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0
31	3.5	3.0	3.5	---	---	---	0.5	0.5	0.5	0.0	0.0	0.0
MONTH	8.0	1.5	4.5	---	---	---	2.0	0.0	0.3	0.5	0.0	0.1

15241600 NINILCHIK RIVER AT NINILCHIK—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	0.0	0.0	0.0	0.5	0.0	0.0	2.0	0.0	0.5	9.0	6.0	7.5
2	0.0	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0	10.0	6.5	8.0
3	0.0	0.0	0.0	0.5	0.0	0.5	1.5	0.0	0.0	10.0	6.5	8.5
4	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.5	9.5	7.5	8.0
5	0.5	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.5	8.5	6.5	7.5
6	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.5	9.5	6.0	7.5
7	0.5	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.5	9.5	6.0	8.0
8	0.0	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.5	9.5	7.5	8.5
9	0.0	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.5	9.0	7.5	8.5
10	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	9.0	7.0	8.0
11	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.5	9.5	6.5	8.0
12	0.0	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.0	9.0	6.5	8.0
13	0.0	0.0	0.0	0.5	0.0	0.5	1.5	0.0	0.5	8.5	6.0	7.0
14	0.5	0.0	0.0	0.5	0.0	0.5	2.5	0.5	1.5	8.5	5.5	7.0
15	0.5	0.0	0.5	0.5	0.0	0.0	2.0	1.0	1.5	10.0	6.5	8.0
16	0.5	0.0	0.5	1.0	0.0	0.0	3.0	1.0	1.5	11.0	7.5	9.5
17	0.5	0.0	0.0	1.0	0.0	0.0	3.5	1.5	2.5	10.5	8.0	9.5
18	0.5	0.0	0.0	0.0	0.0	0.0	4.5	1.5	3.0	9.5	7.0	8.5
19	0.5	0.0	0.0	0.0	0.0	0.0	4.5	2.0	3.5	11.5	7.0	9.0
20	0.5	0.0	0.0	0.5	0.0	0.0	4.0	2.5	3.0	12.5	8.0	10.5
21	0.5	0.0	0.0	0.0	0.0	0.0	3.5	2.5	3.0	12.5	9.0	11.0
22	0.5	0.0	0.0	0.0	0.0	0.0	3.5	2.5	3.0	13.0	9.5	11.0
23	0.0	0.0	0.0	0.5	0.0	0.0	6.0	2.0	4.0	13.5	11.0	12.0
24	0.5	0.0	0.0	0.0	0.0	0.0	5.5	3.5	4.5	13.5	10.5	11.5
25	0.0	0.0	0.0	1.0	0.0	0.0	7.0	4.0	5.5	14.0	10.0	12.0
26	0.5	0.0	0.0	1.0	0.0	0.0	8.0	4.5	6.5	13.5	11.0	12.0
27	0.5	0.0	0.0	0.0	0.0	0.0	8.5	5.5	7.0	12.0	10.0	10.5
28	0.5	0.0	0.0	1.5	0.0	0.5	8.5	5.5	7.0	13.5	9.5	9.0
29	---	---	---	1.5	0.0	0.5	9.0	5.5	7.5	14.0	11.0	12.5
30	---	---	---	1.0	0.0	0.5	9.0	6.0	7.5	14.0	12.0	13.0
31	---	---	---	1.5	0.0	0.5	---	---	---	13.5	11.5	12.5
MONTH	0.5	0.0	0.0	1.5	0.0	0.1	9.0	0.0	2.5	14.0	5.5	9.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	13.0	11.0	12.0	18.0	15.5	16.0	16.5	13.5	15.5	12.5	10.0	11.5
2	13.5	10.5	12.0	17.0	14.0	15.5	16.5	13.5	15.0	12.5	10.0	11.5
3	14.5	11.0	12.5	17.5	14.0	15.5	16.0	13.0	14.5	12.5	10.5	11.5
4	14.5	11.5	12.5	18.0	14.5	16.5	16.0	12.5	14.5	12.0	10.0	11.0
5	12.5	11.0	12.0	17.5	15.5	16.0	16.5	13.0	15.0	11.0	9.5	10.5
6	12.5	11.0	11.5	18.5	14.5	16.0	16.5	14.0	15.0	11.5	9.0	10.0
7	14.0	10.5	12.0	19.5	15.5	17.5	17.0	14.0	15.5	11.0	8.5	10.0
8	13.5	12.0	12.5	20.0	16.5	18.5	18.0	14.5	16.0	10.5	8.0	9.5
9	12.5	11.5	12.0	20.0	17.0	18.5	18.5	15.0	17.0	10.5	9.0	9.5
10	12.0	11.5	11.5	18.5	17.0	17.5	18.0	15.0	17.0	10.5	8.5	9.5
11	11.5	11.0	11.0	18.0	16.5	17.0	17.5	15.5	16.0	10.5	8.0	9.5
12	14.5	11.0	12.0	18.5	15.0	16.5	16.0	14.0	15.0	10.5	8.5	9.5
13	16.0	13.0	14.0	19.5	15.5	17.5	15.5	14.0	14.5	10.5	8.5	10.0
14	15.5	14.5	15.0	20.0	17.0	18.5	14.0	13.0	13.5	10.0	7.5	8.5
15	15.0	14.0	14.5	20.5	17.0	18.5	13.0	12.5	13.0	8.5	6.0	7.0
16	14.5	12.5	13.5	20.0	17.0	18.0	13.0	12.5	12.5	7.0	5.0	6.0
17	15.0	12.5	13.5	17.0	15.5	16.0	13.5	11.5	12.5	6.5	5.0	6.0
18	15.0	12.5	14.0	18.0	15.0	16.0	13.0	11.0	12.0	6.5	4.5	5.5
19	16.0	12.5	14.0	18.0	15.0	16.5	12.0	10.5	11.5	5.5	4.0	5.0
20	16.5	13.0	15.0	17.5	15.5	16.5	11.5	10.0	11.0	5.5	4.5	5.0
21	16.0	13.5	14.5	17.0	15.5	16.0	13.5	10.5	12.0	6.5	5.0	5.5
22	16.0	12.5	14.0	18.0	15.5	16.5	13.5	10.5	12.0	6.0	4.5	5.5
23	16.0	13.5	14.5	17.5	15.0	16.5	13.0	10.5	12.0	5.5	4.0	5.0
24	15.0	13.0	13.5	17.5	15.0	16.0	13.5	11.5	12.5	5.5	4.5	5.0
25	14.0	12.5	13.0	15.0	14.5	14.5	13.5	12.0	12.5	6.5	5.0	6.0
26	13.5	12.0	13.0	16.5	13.5	15.0	12.5	11.0	12.0	6.5	5.0	5.5
27	14.0	12.0	13.0	16.0	14.0	14.5	12.0	11.5	11.5	7.0	5.0	6.0
28	16.5	12.5	14.0	14.5	13.0	13.5	12.5	11.0	11.5	7.0	6.0	6.5
29	17.0	13.5	15.5	14.5	13.0	13.5	12.5	11.5	11.5	7.5	6.5	7.0
30	18.5	14.5	16.5	15.5	13.0	14.0	13.0	10.5	11.5	7.5	7.0	7.5
31	---	---	---	17.0	13.5	15.0	12.5	10.0	11.5	---	---	---
MONTH	18.5	10.5	13.3	20.5	13.0	16.2	18.5	10.0	13.5	12.5	4.0	7.9

15243900 SNOW RIVER NEAR SEWARD

LOCATION.--Lat 60°17'42", long 149°20'38", in NE¹/₄ SW¹/₄ sec. 6, T. 2 N., R. 1 E. (Seward B-7 quad), Kenai Peninsula Borough, Hydrologic Unit 19020302, on left bank, 0.5 mi below the Alaska Railroad bridge, 3.0 mi upstream from the mouth at Kenai Lake, and 13.5 mi north of Seward.

DRAINAGE AREA.--128 mi² (revision pending).

PERIOD OF RECORD.--August to September of 1970, 1974, 1977 and April 1997 to current year.

GAGE.--Water stage recorder. Elevation of gage is 470 ft above sea level, from topographic map. Prior to April 9, 1998 at site 0.5 mi upstream at different datum.

REMARKS.--Record poor. Rain gage at station. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Glacier-dammed lake outburst flood about August 31, 1967, 55,000 ft³/s from rating curve extended above 27,000 ft³/s, gage-height 42.60 ft from floodmarks, site and datum then in use.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1550	2280	2030	e160	e230	e200	e90	625	1300	2550	2640	2730
2	e950	3770	1390	e150	e200	e200	e90	573	1190	2860	2440	2460
3	e720	1920	2030	e140	e200	e190	e85	570	1100	2940	2160	2330
4	e480	3280	2400	e130	e1200	e180	e85	551	1100	2950	1910	1900
5	e390	6470	2000	e120	2580	e170	e85	557	1480	2870	1930	1600
6	e440	7160	1480	e120	1170	e160	e85	526	1890	2730	2100	1470
7	e510	3660	1120	e110	741	e150	e85	463	1730	2970	2320	1500
8	e440	2460	894	e120	617	e140	e85	450	1610	3280	2730	1430
9	e360	1880	780	e120	e500	e130	e85	646	1450	3470	3030	1410
10	e340	1550	750	e130	e420	e120	e85	1100	1570	3350	3220	1440
11	e400	1400	674	e130	e380	e120	e90	892	1800	3360	3070	1330
12	e520	1280	609	e150	e360	e100	e95	763	2000	3370	3640	1270
13	1110	1170	560	e140	e340	e100	e100	659	2400	3600	3570	1280
14	1880	1100	e480	e140	e320	e100	e100	589	2560	3950	4160	1060
15	e1200	1040	e440	e130	e300	e100	e100	550	2290	3890	4830	799
16	e1000	974	e400	e120	e280	e100	e100	563	2110	3540	4410	683
17	e900	939	e380	e130	e260	e100	e100	629	2050	3270	3500	621
18	e800	932	e400	e130	e240	e100	e100	607	2020	3300	2730	581
19	1260	988	e380	e130	e220	e95	e110	577	2020	3260	2500	514
20	3350	1120	e340	e130	e200	e95	e100	586	1990	3390	3660	514
21	3490	1130	e340	e150	e190	e90	e180	606	2080	3390	2790	468
22	3780	1630	e300	e170	e180	e100	e340	642	1970	3140	2370	411
23	10600	5970	e260	e200	e190	e105	e310	741	1990	3010	2140	377
24	10600	3200	e250	e180	e200	e95	e280	932	2000	2980	2060	397
25	6950	2040	e240	e160	e220	e90	e290	1050	2240	3130	2180	529
26	4860	2700	e230	e140	e240	e90	e360	1060	2130	3120	2820	551
27	3030	1870	e220	e130	e240	e90	473	1030	2090	2970	3130	522
28	2470	1370	e190	e130	e220	e90	534	981	2010	3140	4070	849
29	5090	1790	e200	e150	---	e90	580	929	2130	3320	4640	2080
30	4080	4090	e180	e190	---	e90	627	1000	2360	2980	4780	3140
31	2700	---	e170	e210	---	e90	---	1210	---	2680	3490	---
TOTAL	76250	71163	22117	4440	12438	3670	5829	22657	56660	98760	95020	36246
MEAN	2460	2372	713	143	444	118	194	731	1889	3186	3065	1208
MAX	10600	7160	2400	210	2580	200	627	1210	2560	3950	4830	3140
MIN	340	932	170	110	180	90	85	450	1100	2550	1910	377
AC-FT	151200	141200	43870	8810	24670	7280	11560	44940	112400	195900	188500	71890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)#

	MEAN	1175	637	373	224	172	104	167	815	2249	3169	2993	3009
MAX	2506	2372	713	524	444	220	277	1412	2714	3281	5598	6294	
(WY)	1999	2003	2003	2001	2003	1998	1998	2002	2002	1998	1977	1974	
MIN	279	163	87.3	57.0	42.0	39.2	81.8	491	1780	2866	1764	1157	
(WY)	1998	2002	1999	1999	1999	1999	1999	2001	1999	1999	1998	2000	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003#	
ANNUAL TOTAL	568072		505250		1177	
ANNUAL MEAN	1556		1384		1412	
HIGHEST ANNUAL MEAN					965	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	a10600	Oct 23	a10600	Oct 23	b23800	Sep 20 1974
LOWEST DAILY MEAN	65	Mar 16	85	Apr 3	c36	Mar 3 1999
ANNUAL SEVEN-DAY MINIMUM	65	Mar 16	85	Apr 3	37	Feb 26 1999
MAXIMUM PEAK FLOW			13400	Nov 6	b26400	Sep 20 1974
MAXIMUM PEAK STAGE			13.53	Nov 6	d40.75	Sep 20 1974
INSTANTANEOUS LOW FLOW					36	Mar 3 1999
ANNUAL RUNOFF (AC-FT)	1127000		1002000		852600	
10 PERCENT EXCEEDS	3350		3330		3130	
50 PERCENT EXCEEDS	1100		780		450	
90 PERCENT EXCEEDS	70		100		72	

See Period of Record, partial years used in monthly summary statistics

a Oct. 23 and Oct. 24, 2002

b Result of release of stored water from glacier-dammed lake

c Mar. 3 and Mar. 4, 1999

d Site and datum then in use

e Estimated

15258000 KENAI RIVER AT COOPER LANDING

LOCATION.--Lat 60°29'34", long 149°48'28", in SE¹/₄ sec. 28, T. 5 N., R. 3 W. (Seward B-8 quad), Kenai Peninsula Borough, Hydrologic Unit 19020302, Chugach National Forest, on right bank 10 ft downstream from bridge on Sterling Highway, 0.9 mi upstream from Bean Creek, 0.9 mi east of Cooper Landing, and at Kenai Lake outlet.

DRAINAGE AREA.--634 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1947 to current year.

REVISED RECORDS.--WSP 2136: 1964 (M).

GAGE.--Water-stage recorder. Datum of gage is 419.92 ft above sea level (levels by Alaska Department of Transportation). See WSP 2136 for history of changes prior to August 28, 1965. August 28, 1965 to January 21, 1974, at site 10 ft upstream at present datum. January 22, 1974 to September 30, 1981, non-recording gage at site 40 ft upstream at present datum.

REMARKS.--Records good. Diversion from Cooper Lake to Kenai Lake above gage through Cooper Lake power plant began May 1961. No diversions occurred during November. Rain gage at station. GOES satellite telemetry and telephone modem at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3930	10900	7280	1600	1060	1480	775	1280	3360	5850	5770	6320
2	3830	10100	7010	1560	1030	1470	760	1380	3490	6140	5600	5990
3	3620	9450	6750	1530	1060	1410	739	1490	3590	6470	5420	5690
4	3360	8730	6920	1490	1220	1360	728	1590	3670	6790	5190	5390
5	3160	8910	6860	1430	1990	1320	713	1660	3760	7000	4950	5040
6	2940	11100	6510	1390	2470	1290	694	1750	4020	7000	4800	4680
7	2800	11500	6020	1350	2670	1250	679	1810	4290	7020	4710	4420
8	2680	10700	5540	1320	2760	1220	671	1860	4450	7150	4700	4210
9	2560	9470	5070	1310	2760	1180	664	1940	4510	7410	4850	4010
10	2470	8310	4650	1280	2740	1150	652	2030	4560	7590	5050	3810
11	2380	7290	4290	1260	2700	1120	643	2130	4740	7710	5260	3670
12	2320	6420	3960	1240	2620	1080	654	2200	4970	7720	5500	3540
13	2330	5710	3700	1210	2560	1050	653	2240	5380	7740	5780	3330
14	2440	5120	3420	1190	2460	1010	652	2250	5870	7940	6020	3170
15	2510	4620	3160	1170	2360	1010	662	2240	6180	8130	6480	3040
16	2510	4230	2930	1150	2280	1010	661	2230	6320	8120	6980	2910
17	2540	3900	2780	1140	2190	1000	678	2240	6350	7940	7100	2730
18	2550	3620	2650	1160	2110	983	680	2240	6310	7670	6860	2570
19	2550	3430	2530	1160	2030	976	689	2220	6230	7430	6490	2460
20	2750	3340	2410	1160	1960	955	705	2210	6150	7280	6270	2350
21	3200	3240	2300	1130	1890	938	722	2220	6120	7230	6150	2280
22	3640	3220	2250	1120	1820	928	736	2250	6030	7090	5900	2190
23	6350	4280	2230	1110	1780	909	758	2270	5980	6930	5600	2100
24	11300	5920	2170	1110	1730	898	787	2340	5880	6730	5300	2010
25	14700	6380	2110	1090	1680	880	814	2460	5870	6550	5080	1950
26	15200	6540	2020	1080	1630	866	855	2600	5880	6460	5010	1930
27	13900	6570	1920	1100	1560	860	912	2730	5820	6360	5030	1870
28	12200	6320	1830	1090	1540	850	984	2850	5700	6210	5160	1870
29	11700	6030	1770	1050	---	826	1060	2960	5640	6200	5560	1990
30	12600	6810	1720	1060	---	808	1170	3060	5670	6130	6150	2300
31	12000	---	1660	1060	---	793	---	3200	---	5940	6460	---
TOTAL	173020	202160	116420	38100	56660	32880	22550	67930	156790	217930	175180	99820
MEAN	5581	6739	3755	1229	2024	1061	752	2191	5226	7030	5651	3327
MAX	15200	11500	7280	1600	2760	1480	1170	3200	6350	8130	7100	6320
MIN	2320	3220	1660	1050	1030	793	643	1280	3360	5850	4700	1870
MED	3160	6400	2930	1160	2010	1010	709	2230	5680	7020	5560	2970
AC-FT	343200	401000	230900	75570	112400	65220	44730	134700	311000	432300	347500	198000
CFSM	8.80	10.6	5.92	1.94	3.19	1.67	1.19	3.46	8.24	11.1	8.91	5.25
IN.	10.15	11.86	6.83	2.24	3.32	1.93	1.32	3.99	9.20	12.79	10.28	5.86

ADJUSTED TO EXCLUDE DIVERSION FROM COOPER LAKE

MEAN	5551	6670	3648	1122	1852	933	639	2070	5123	6919	5559	3246
CFSM	8.76	10.52	5.75	1.77	2.92	1.47	1.01	3.26	8.08	10.91	8.77	5.12
IN	10.09	11.74	6.63	2.04	3.04	1.70	1.13	3.76	9.01	12.58	10.11	5.71
AC-FT	341330	396890	224280	68980	102840	57360	38050	127260	304840	425430	341840	193180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)#

MEAN	3314	1872	1169	835	682	524	549	1928	5433	7002	6354	5254
MAX	8955	6739	3755	2807	2066	1122	1071	3508	10010	10480	11430	11490
(WY)	1980	2003	2003	1981	1981	1977	1980	1990	1953	1980	1977	1967
MIN	1264	654	364	310	251	208	262	658	3268	4868	3651	2629
(WY)	1956	1951	1951	1951	1949	1951	1952	1952	1972	1996	1969	1969

See Period of Record and Remarks; partial years used in monthly statistics

15258000 KENAI RIVER AT COOPER LANDING—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003#	
ANNUAL TOTAL	1398984		1359440			
ANNUAL MEAN	3833		3724		2928	
ANNUAL MEAN	*3695		*3622		*2853	
HIGHEST ANNUAL MEAN					4499	1977
LOWEST ANNUAL MEAN					2102	1969
HIGHEST DAILY MEAN	15200	Oct 26	15200	Oct 26	22500	Sep 21 1974
LOWEST DAILY MEAN	478	Apr 16	643	Apr 11	100	Mar 28 1964
ANNUAL SEVEN-DAY MINIMUM	484	Apr 12	654	Apr 10	190	Mar 15 1951
MAXIMUM PEAK FLOW			15600	Oct 26	a23100	Sep 21 1974
MAXIMUM PEAK STAGE			14.74	Oct 26	17.18	Sep 21 1974
INSTANTANEOUS LOW FLOW			635	Apr 11	b0.00	Mar 27 1964
ANNUAL RUNOFF (AC-FT)	2775000		2696000		2121000	
ANNUAL RUNOFF (AC-FT)	*2680000		*2620000		*2067000	
ANNUAL RUNOFF (CFSM)	*5.83		*5.71		*4.50	
ANNUAL RUNOFF (INCHES)	*79.10		*77.54		*61.11	
10 PERCENT EXCEEDS	7120		7050		6980	
50 PERCENT EXCEEDS	3570		2730		1660	
90 PERCENT EXCEEDS	583		922		419	

- # See Period of Record and Remarks; partial years used in monthly statistics
 Values shown on this page are unadjusted for inflow from diversion, unless otherwise noted
- * Adjusted to account for inflow from diversion, see Remarks
- a Result of release of stored water from glacier-dammed lake at head of unnamed glacier in the Snow River Basin
- b No flow, Mar. 27 and Mar. 28, 1964, caused by earthquake

WATER-QUALITY RECORDS

WATER TEMPERATURE: Maximum, 16.5°C, August 10; minimum, 0.0°C, several days in January and March.

[illegible]

15258000 KENAI RIVER AT COOPER LANDING—Continued

WATER TEMPERATURE (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.0	1.5	1.5	3.0	1.5	2.5	2.5	0.5	1.5	---	---	---
2	2.0	1.0	1.5	3.0	2.0	2.5	3.0	0.5	2.0	---	---	---
3	2.5	1.5	2.0	3.5	1.0	2.5	4.0	0.5	2.0	---	---	---
4	2.5	2.0	2.0	3.0	0.5	2.0	3.5	1.5	2.0	5.5	4.5	5.0
5	2.5	2.0	2.0	3.0	0.5	1.5	3.5	1.5	2.5	5.5	4.5	5.0
6	2.5	1.5	2.0	2.5	1.0	1.5	3.0	1.5	2.0	7.0	4.0	5.0
7	2.5	1.5	2.0	3.0	1.0	1.5	3.0	1.5	2.0	6.0	4.0	5.0
8	2.5	2.0	2.0	2.5	1.0	1.5	3.0	1.5	2.5	7.0	5.0	6.0
9	2.5	2.0	2.5	2.0	0.0	1.0	3.0	2.0	2.5	6.0	5.0	5.5
10	2.5	2.0	2.0	2.5	0.5	1.5	3.0	2.0	2.5	6.0	4.5	5.0
11	2.5	2.0	2.5	2.5	0.5	1.5	---	---	---	6.5	4.5	5.0
12	3.0	2.0	2.5	2.0	0.0	1.0	---	---	---	6.0	4.5	5.5
13	2.5	1.5	2.0	2.0	0.5	1.0	---	---	---	7.0	4.5	5.5
14	2.5	1.5	2.0	1.5	1.0	1.5	---	---	---	6.5	4.5	5.5
15	2.5	1.5	2.0	2.0	1.0	1.5	3.0	2.5	2.5	6.5	4.5	5.0
16	2.5	1.5	2.0	2.0	1.0	1.5	3.5	2.0	3.0	6.0	4.5	5.0
17	2.5	1.5	2.0	2.5	1.0	1.5	4.0	2.5	3.0	7.0	4.0	5.5
18	2.5	1.5	2.0	3.0	1.0	1.5	4.5	2.5	3.0	7.5	4.5	6.0
19	2.5	1.5	2.0	1.5	1.0	1.5	4.5	2.5	3.5	8.0	5.0	6.5
20	2.5	1.5	2.0	2.5	1.0	1.5	4.0	3.0	3.0	8.0	5.5	6.5
21	2.5	1.5	2.0	3.0	1.0	1.5	3.5	2.5	3.0	8.0	5.5	7.0
22	2.0	1.5	2.0	3.0	1.0	2.0	4.0	3.0	3.5	9.0	6.0	7.0
23	2.5	1.5	2.0	2.5	1.5	2.0	---	---	---	9.0	6.0	7.5
24	2.5	1.5	2.0	2.0	1.0	1.5	---	---	---	7.5	5.0	6.0
25	2.5	1.5	2.0	3.5	1.0	2.0	---	---	---	7.5	5.5	6.5
26	3.0	2.0	2.0	3.5	2.0	2.5	---	---	---	8.5	5.5	7.0
27	3.5	1.5	2.5	3.0	1.5	2.0	---	---	---	7.5	6.5	7.0
28	3.0	2.0	2.0	3.5	1.5	2.0	---	---	---	8.0	6.0	7.0
29	---	---	---	3.5	0.0	1.5	---	---	---	9.0	6.0	7.0
30	---	---	---	2.0	0.0	1.0	---	---	---	8.0	6.5	7.5
31	---	---	---	2.5	0.0	1.0	---	---	---	8.0	6.5	7.0
MONTH	3.5	1.0	2.0	3.5	0.0	1.6	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.5	6.5	7.0	9.0	6.5	7.5	12.0	10.5	11.0	12.5	11.5	12.0
2	7.0	6.5	7.0	9.5	8.0	8.5	11.5	9.0	10.5	12.0	11.0	11.5
3	8.0	6.5	7.0	10.0	7.0	9.0	12.0	9.0	10.5	12.0	10.5	11.5
4	8.5	7.5	8.0	9.5	7.5	8.5	12.0	10.0	10.5	12.5	11.5	12.0
5	8.0	7.0	7.5	10.5	9.0	10.0	11.0	9.5	10.0	12.5	11.5	12.0
6	7.5	7.0	7.0	11.0	9.5	10.5	12.5	9.5	10.5	12.0	10.5	11.5
7	7.5	6.5	7.0	10.0	8.5	9.5	13.5	10.0	11.5	11.5	9.0	10.5
8	8.0	7.0	7.5	9.0	6.5	8.0	12.0	10.5	11.0	12.0	11.0	11.5
9	8.0	7.5	7.5	10.5	7.0	9.0	15.0	10.0	12.0	12.0	11.0	11.5
10	8.0	7.5	8.0	12.0	10.0	11.0	16.5	14.0	15.0	12.0	11.0	11.5
11	8.5	7.5	8.0	11.5	10.0	11.0	16.0	15.0	15.5	12.0	10.5	11.0
12	8.5	6.5	7.5	12.5	10.5	11.5	15.0	14.5	15.0	11.5	10.5	11.0
13	8.0	5.5	6.5	11.0	10.0	10.5	15.0	14.0	14.5	11.5	9.0	10.5
14	8.5	7.5	8.0	12.5	9.0	10.5	14.5	14.0	14.0	10.0	7.5	9.0
15	8.5	7.5	8.0	12.5	11.0	11.5	14.0	13.0	13.5	8.5	7.0	8.0
16	9.0	8.0	8.5	12.5	11.5	12.0	13.5	13.0	13.5	9.0	7.5	8.5
17	9.0	7.5	8.0	12.5	11.5	12.0	13.5	12.5	13.0	9.5	8.5	9.0
18	9.0	7.5	8.5	12.5	11.5	12.0	13.5	12.0	12.5	9.0	8.0	8.5
19	9.0	7.5	8.5	12.5	11.0	12.0	13.5	12.5	13.0	9.0	8.0	8.5
20	9.0	8.0	8.5	14.0	11.0	12.5	13.0	12.5	12.5	8.5	7.5	8.0
21	10.0	7.5	9.0	14.0	12.0	13.0	13.0	12.0	12.5	9.0	7.5	8.0
22	10.0	8.5	9.5	13.5	13.0	13.0	13.0	11.5	12.0	9.0	7.5	8.5
23	10.0	8.5	9.5	13.5	13.0	13.0	13.0	11.5	12.0	8.5	8.0	8.0
24	9.5	9.0	9.5	13.5	12.5	13.0	12.5	10.0	11.5	8.5	8.0	8.0
25	9.5	8.5	9.0	13.0	12.0	12.5	12.5	12.0	12.0	8.5	8.0	8.0
26	9.0	8.5	9.0	13.0	12.0	12.5	12.5	12.0	12.0	9.0	7.5	8.0
27	9.0	8.5	9.0	12.5	12.0	12.5	12.5	12.0	12.0	8.5	8.0	8.0
28	9.0	7.5	8.0	12.5	12.0	12.0	12.5	12.0	12.0	9.5	8.0	8.5
29	9.0	7.0	8.0	12.5	12.0	12.0	12.5	11.5	12.0	9.0	8.0	8.5
30	8.5	6.5	7.5	13.0	12.0	12.5	12.5	11.0	12.0	9.0	8.5	9.0
31	---	---	---	13.0	11.0	12.0	12.0	11.0	11.5	---	---	---
MONTH	10.0	5.5	8.1	14.0	6.5	11.1	16.5	9.0	12.3	12.5	7.0	9.7

15261000 COOPER CREEK AT MOUTH NEAR COOPER LANDING

LOCATION.--Lat 60°28'50", long 149°52'50", in NW¹/₄ SW¹/₄ sec. 31, T. 5 N., R. 3 W. (Seward B-8 quad), Hydrologic Unit 19020302 Kenai Peninsula Borough, on left bank, approximately 0.5 mi upstream from mouth, and 1.5 mi west of Cooper Landing.

DRAINAGE AREA.--48.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to January 1965, August 1998 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 450 ft above sea level, from topographic map. From October 1957 to January 1965, 0.4 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Since July 1959, entire flow from 31.8 mi² of drainage area has been regulated by dam at Cooper Lake outlet. No spilling since 1959 except for period May 1961 to October 1962. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	174	118	e25	14	25	e12	52	77	89	52	36
2	52	144	93	e25	14	26	e12	50	72	113	50	34
3	45	129	128	e25	14	26	e12	52	72	102	46	34
4	41	138	124	e27	129	24	e12	51	72	81	42	34
5	40	195	107	e25	187	e23	e12	49	86	82	41	32
6	39	228	111	e24	110	e22	12	42	105	77	41	31
7	43	119	102	e23	81	e21	12	39	93	77	41	30
8	42	96	90	e23	72	e19	11	40	82	94	43	29
9	45	80	78	e32	64	e18	11	52	82	102	44	28
10	46	69	70	e28	64	e17	10	62	102	100	46	28
11	53	57	65	e25	61	e17	10	53	112	96	49	27
12	59	51	60	e24	58	e16	9.5	50	120	93	55	27
13	79	46	53	e22	51	e16	11	48	124	87	51	26
14	104	40	e51	e21	45	e15	11	44	122	98	50	26
15	101	36	e47	e20	41	e15	13	41	118	100	50	25
16	98	34	e44	e20	e39	e15	13	43	106	92	55	25
17	97	33	e41	20	e38	e15	15	42	99	90	54	24
18	98	31	e39	19	e36	e14	15	42	97	82	47	23
19	105	29	e38	18	e34	e14	16	45	101	77	41	22
20	150	32	e36	18	e33	e14	17	48	100	74	41	25
21	153	30	e33	18	e31	e14	18	51	102	75	38	28
22	165	57	e31	17	e30	e14	19	53	94	72	36	26
23	649	188	e28	e17	e29	e14	20	59	87	66	35	25
24	554	142	e28	e18	29	e13	22	69	77	70	34	25
25	277	76	e28	e20	28	e13	24	72	73	72	35	26
26	226	84	e28	e23	28	e13	30	71	70	66	42	24
27	141	71	e27	e21	27	e13	39	74	67	62	41	23
28	145	57	e27	16	26	e13	46	73	65	64	41	24
29	314	87	e26	16	---	e12	51	71	68	64	44	31
30	277	184	e26	16	---	e12	52	75	78	60	43	29
31	236	---	e26	15	---	e12	---	78	---	54	40	---
TOTAL	4528	2737	1803	661	1413	515	567.5	1691	2723	2531	1368	827
MEAN	146	91.2	58.2	21.3	50.5	16.6	18.9	54.5	90.8	81.6	44.1	27.6
MAX	649	228	128	32	187	26	52	78	124	113	55	36
MIN	39	29	26	15	14	12	9.5	39	65	54	34	22
AC-FT	8980	5430	3580	1310	2800	1020	1130	3350	5400	5020	2710	1640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)#

	MEAN	77.5	53.3	27.1	20.3	16.8	12.1	18.4	97.0	187	142	80.8	72.5
MAX	264	285	82.9	58.9	50.5	28.0	50.3	219	412	326	226	309	
(WY)	1958	1958	1958	1958	2003	1958	1958	1961	1958	1961	1961	1961	1961
MIN	20.7	11.9	10.0	8.00	6.43	4.50	9.00	42.6	73.7	68.1	38.0	21.6	
(WY)	1964	1964	1964	1964	1999	1999	1960	1964	1963	1960	1963	1963	1963

See Period of Record, partial years used in monthly statistics
e Estimated

15261000 COOPER CREEK AT MOUTH NEAR COOPER LANDING—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003#	
ANNUAL TOTAL	21807.3		21364.5			
ANNUAL MEAN	59.7		58.5		68.1	
HIGHEST ANNUAL MEAN					a174	
LOWEST ANNUAL MEAN					29.9	
HIGHEST DAILY MEAN	174	May 26	649	Oct 23	ab810	Sep 22 1961
LOWEST DAILY MEAN	7.8	Apr 16	9.5	Apr 12	c4.0	Mar 19 1999
ANNUAL SEVEN-DAY MINIMUM	8.1	Apr 11	10	Apr 8	4.0	Mar 19 1999
MAXIMUM PEAK FLOW	d213	May 23	f1230	Oct 23	f1230	Oct 23 2002
MAXIMUM PEAK STAGE	d10.92	May 23	f12.45	Oct 23	f12.45	Oct 23 2002
MAXIMUM PEAK STAGE			g13.60	Jan 8	g13.60	Jan 8 2003
INSTANTANEOUS LOW FLOW	h		i7.3	Apr 10	j3.1	Mar 1 1960
ANNUAL RUNOFF (AC-FT)	43250		42380		49350	
10 PERCENT EXCEEDS	141		106		174	
50 PERCENT EXCEEDS	39		42		35	
90 PERCENT EXCEEDS	9.5		15		10	

- # See Period of Record, partial years used in monthly statistics
a Includes natural flow or spill from area upstream from Cooper Lake dam
b Caused by release of water behind log jam upstream. Site and datum then in use
c From Mar. 19 to Apr. 14, 1999
d Also occurred on May 25, 2002
f From high water mark
g Backwater from ice
h Not determined. See Lowest Daily Mean
i Also occurred on Apr. 11
j Caused by temporary storage behind ice jam upstream (observed)

15261000 COOPER CREEK AT MOUTH NEAR COOPER LANDING—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1998 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 15 minute recording interval.

REMARKS.--Records represent water temperature at the sensor within 0.5°C. No record from January 22-27 due to dead batteries. Temperature at the sensor was compared with the average for the stream by cross section on April 16. No variations were found within the cross section. No variation was found between mean stream temperature and sensor temperature. Heavy shore ice occurs near the gage.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 11.5°C, July 14, 1999 and August 8-9, 2003; Minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 11.5°C, August 8-9; Minimum, 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Sampler type, code (84164)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)
APR									
16...	1600	31.3	5.00	9.80	15	10	8010	2.0	3.0
16...	1602	31.3	10.0	9.80	15	10	8010	2.0	3.0
16...	1604	31.3	15.0	9.80	15	10	8010	2.0	3.0
16...	1606	31.3	20.0	9.80	15	10	8010	2.0	3.0
16...	1608	31.3	25.0	9.80	15	10	8010	2.0	3.0

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	5.0	4.0	4.5	4.5	3.0	3.5	3.0	2.5	2.5	0.0	0.0	0.0
2	4.5	2.5	3.5	4.5	4.0	4.0	3.0	2.5	3.0	0.0	0.0	0.0
3	3.5	1.5	2.5	4.5	3.5	4.0	4.0	3.0	3.5	0.0	0.0	0.0
4	4.0	2.0	3.0	4.5	4.0	4.5	3.5	3.0	3.0	0.0	0.0	0.0
5	4.5	3.0	4.0	5.0	4.0	4.5	3.5	3.0	3.5	0.0	0.0	0.0
6	5.0	4.0	4.5	4.5	4.0	4.0	3.5	2.5	3.0	0.0	0.0	0.0
7	5.0	4.0	4.5	4.0	2.0	3.0	2.5	1.5	2.0	0.0	0.0	0.0
8	4.0	1.5	3.0	2.0	1.5	2.0	2.5	2.0	2.5	0.0	0.0	0.0
9	1.5	0.5	1.0	1.5	0.5	1.0	3.0	2.0	2.5	0.0	0.0	0.0
10	3.5	0.5	2.0	1.0	0.5	0.5	3.0	2.0	2.5	0.0	0.0	0.0
11	4.0	3.0	3.5	2.5	0.5	1.5	2.0	1.0	1.0	0.0	0.0	0.0
12	4.5	3.5	4.0	2.0	1.0	1.5	1.0	1.0	1.0	0.0	0.0	0.0
13	5.0	3.5	4.5	2.0	0.5	1.5	1.0	0.0	0.5	0.0	0.0	0.0
14	4.5	3.0	3.5	2.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
15	5.0	3.5	4.0	2.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
16	5.0	3.0	3.5	1.5	1.0	1.5	0.0	0.0	0.0	1.0	0.0	0.5
17	4.5	2.5	3.5	2.0	1.5	2.0	0.0	0.0	0.0	1.5	0.5	1.0
18	5.5	4.0	5.0	2.0	1.0	1.5	0.0	0.0	0.0	1.0	0.5	0.5
19	6.0	5.0	5.5	1.5	1.0	1.5	0.0	0.0	0.0	1.0	0.5	1.0
20	5.5	4.5	5.0	1.5	1.0	1.5	0.0	0.0	0.0	1.5	1.0	1.0
21	4.5	4.0	4.5	2.0	1.5	2.0	0.0	0.0	0.0	1.0	0.0	0.5
22	5.0	4.0	4.5	2.5	1.0	2.0	1.0	0.0	0.5	---	---	---
23	5.0	4.5	5.0	2.5	1.0	2.0	1.0	0.0	0.5	---	---	---
24	5.0	4.0	4.5	3.0	2.0	2.5	0.5	0.0	0.5	---	---	---
25	4.5	3.5	4.0	3.0	2.5	3.0	0.0	0.0	0.0	---	---	---
26	3.5	3.0	3.5	3.5	2.5	3.0	0.0	0.0	0.0	---	---	---
27	3.0	2.0	2.5	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---
28	4.0	2.0	3.0	2.5	2.0	2.0	0.0	0.0	0.0	1.0	0.5	1.0
29	4.5	3.5	4.0	3.0	2.5	3.0	0.0	0.0	0.0	1.5	1.0	1.0
30	4.5	4.0	4.0	3.5	3.0	3.0	0.0	0.0	0.0	1.5	1.0	1.0
31	4.5	4.0	4.0	---	---	---	0.0	0.0	0.0	1.5	1.0	1.0
MONTH	6.0	0.5	3.8	5.0	0.5	2.4	4.0	0.0	1.0	---	---	---

15261000 COOPER CREEK AT MOUTH NEAR COOPER LANDING—Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.0	1.0	1.0	1.5	1.0	1.0	0.0	0.0	0.0	5.0	1.5	3.0
2	1.0	0.0	0.5	2.5	1.0	1.5	0.0	0.0	0.0	5.0	1.5	3.0
3	1.5	0.0	1.0	2.0	1.0	1.5	0.5	0.0	0.0	5.0	1.5	3.0
4	1.5	0.0	0.5	1.0	0.0	0.5	0.5	0.0	0.0	4.5	2.0	3.5
5	1.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.5	3.5	2.5	3.0
6	1.5	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.5	5.0	1.0	2.5
7	2.0	1.5	1.5	0.0	0.0	0.0	1.0	0.5	0.5	5.0	1.5	3.0
8	2.0	2.0	2.0	0.0	0.0	0.0	1.5	0.5	1.0	5.5	2.0	4.0
9	2.0	1.5	2.0	0.0	0.0	0.0	1.5	1.0	1.0	4.5	3.0	4.0
10	2.0	1.5	2.0	0.0	0.0	0.0	1.5	1.0	1.0	4.5	2.5	3.5
11	2.5	2.0	2.0	0.0	0.0	0.0	2.0	1.0	1.0	4.5	2.5	3.5
12	2.5	1.5	2.0	0.0	0.0	0.0	1.5	1.0	1.5	4.0	2.0	3.0
13	2.0	1.0	1.5	0.0	0.0	0.0	1.5	1.0	1.5	5.5	2.5	3.5
14	1.5	0.5	1.0	0.0	0.0	0.0	2.5	0.5	1.0	5.0	1.5	3.5
15	0.5	0.0	0.0	0.0	0.0	0.0	1.5	1.0	1.0	5.0	2.5	4.0
16	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.5	5.0	2.5	4.0
17	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.0	1.5	5.0	2.0	3.5
18	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	1.5	5.5	2.0	3.5
19	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.5	1.5	6.0	1.5	3.5
20	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.0	1.5	6.5	1.5	4.0
21	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	2.0	6.5	2.0	4.0
22	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	2.0	7.0	2.0	4.5
23	1.0	0.0	0.5	0.0	0.0	0.0	4.0	1.5	2.5	7.0	3.0	5.0
24	1.5	0.5	1.0	0.0	0.0	0.0	4.0	1.0	2.5	6.5	3.0	4.5
25	2.0	1.0	1.5	0.0	0.0	0.0	4.5	1.0	2.5	7.5	3.5	5.0
26	2.0	1.0	1.5	0.0	0.0	0.0	4.5	1.5	2.5	7.0	3.0	5.0
27	1.5	1.0	1.0	0.0	0.0	0.0	5.0	1.5	3.0	5.0	4.0	4.5
28	2.0	1.0	1.5	0.0	0.0	0.0	5.5	1.5	3.0	7.0	2.0	4.5
29	---	---	---	0.0	0.0	0.0	5.0	1.5	3.0	7.5	2.5	4.5
30	---	---	---	0.0	0.0	0.0	5.0	1.5	3.0	6.5	3.5	5.0
31	---	---	---	0.0	0.0	0.0	---	---	---	6.5	3.5	5.0
MONTH	2.5	0.0	0.9	2.5	0.0	0.1	5.5	0.0	1.5	7.5	1.0	3.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.0	3.0	4.5	7.5	5.0	6.5	9.0	5.0	7.0	7.5	5.0	6.5
2	7.5	3.0	5.0	6.5	5.0	6.0	9.0	4.5	7.0	8.5	6.0	7.0
3	7.5	3.0	5.0	7.0	3.5	5.0	8.5	5.5	7.0	8.0	6.5	7.0
4	6.5	2.5	4.5	9.0	4.0	6.5	9.0	5.0	7.0	7.5	5.0	6.5
5	6.0	4.0	5.0	8.0	5.0	6.5	9.5	5.0	7.5	7.5	4.5	6.0
6	6.0	4.0	4.5	9.0	5.0	7.0	10.0	6.0	8.0	7.0	4.5	6.0
7	7.5	2.5	4.5	10.5	5.0	7.5	11.0	6.5	8.5	7.0	4.0	5.5
8	6.5	3.0	4.5	10.0	5.5	7.5	11.5	7.5	9.5	7.0	4.5	6.0
9	7.5	4.0	5.5	10.0	5.0	7.5	11.5	7.5	9.5	7.5	5.5	6.5
10	6.5	4.0	5.5	9.0	5.5	7.0	11.0	7.5	9.5	7.0	4.5	6.0
11	7.0	4.0	5.5	8.5	6.0	7.0	10.0	7.5	9.0	6.5	4.0	5.5
12	8.5	3.5	6.0	10.0	4.5	7.0	9.0	8.0	8.5	7.0	4.5	6.0
13	7.5	4.0	5.5	10.5	5.5	7.5	8.5	7.0	8.0	7.0	5.0	6.0
14	7.5	4.0	5.5	10.5	6.0	8.0	8.5	7.0	8.0	5.0	2.5	3.5
15	7.0	4.0	5.0	10.0	5.5	7.5	9.0	7.5	8.0	3.0	1.0	2.5
16	7.5	3.5	5.5	9.5	6.0	7.5	8.0	7.0	7.5	3.0	1.0	2.0
17	7.0	3.5	5.0	8.0	5.5	6.5	8.0	6.5	7.0	3.5	1.0	2.5
18	7.5	4.5	5.5	9.5	6.0	7.5	8.0	5.5	6.5	2.5	1.5	2.0
19	7.0	4.5	5.5	10.5	5.0	7.5	8.0	6.0	7.0	3.5	1.0	2.0
20	7.5	4.5	6.0	10.0	6.5	8.0	7.5	6.0	6.5	3.0	1.0	2.0
21	6.5	4.5	5.5	8.0	6.5	7.0	7.5	5.0	6.0	4.0	2.0	3.0
22	8.0	4.0	6.0	8.0	6.0	7.0	8.5	5.0	6.5	3.5	2.0	2.5
23	6.5	4.0	5.5	10.5	6.0	8.0	8.0	4.5	6.5	4.0	1.5	2.5
24	6.0	4.5	5.0	8.5	7.0	7.0	9.0	6.0	7.5	5.0	3.0	4.0
25	6.5	4.5	5.5	8.0	6.0	7.0	8.0	7.0	7.5	5.0	3.5	4.5
26	6.5	3.5	5.0	8.5	6.0	7.5	8.5	7.0	7.5	4.5	2.0	3.5
27	8.0	4.5	6.0	7.5	6.0	7.0	8.0	6.5	7.0	4.0	3.0	3.5
28	8.5	4.5	6.0	8.0	6.5	7.0	8.5	6.5	7.5	7.5	3.5	6.0
29	9.5	4.5	6.5	9.0	6.0	7.5	8.0	6.5	7.0	8.0	6.0	7.0
30	9.5	5.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	7.5	7.5
31	---	---	---	9.0	6.0	7.5	7.5	5.0	6.5	---	---	---
MONTH	9.5	2.5	5.4	10.5	3.5	7.1	11.5	4.5	7.5	8.5	1.0	4.7

15266110 KENAI RIVER BELOW SKILAK LAKE OUTLET NEAR STERLING

LOCATION.--Lat 60°28'00", long 150°35'56", in SW¹/₄ NW¹/₄ sec. 1, T. 4 N., R. 8 W. (Kenai B-2 quad), Kenai Peninsula Borough, Hydrologic Unit 19020302, on right bank, 3.5 mi downstream from Skilak Lake, 7 mi southeast of Sterling.

DRAINAGE AREA.--1,206 mi².

PERIOD OF RECORD.--June 1997 to current year.

REVISED RECORDS.-- WRD-AK-00-1: Drainage area.

GAGE.--Water stage recorder. Elevation of gage is 240 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Rain gage recorder at station. GOES satellite telemetry and phone modem at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9200	19300	14900	2990	e1680	2570	1310	1260	3460	9260	12700	12400
2	9050	18400	13900	2880	1650	2510	1300	1320	3580	9650	12400	12600
3	8710	17500	13300	2780	1760	2440	1280	1370	3760	10100	12100	12400
4	8290	16600	13000	2690	1860	2380	1260	1490	3930	10400	11800	12300
5	7810	16300	12700	2610	1960	2320	1230	1500	4130	10700	11400	11700
6	7440	17300	12300	2540	2170	2240	1220	1560	4320	11000	10900	11100
7	7010	17900	11700	2440	2490	2170	1200	1630	4490	11200	10600	10500
8	6670	17500	11100	2380	2700	2110	1190	1710	4780	11400	10400	9990
9	6330	16600	10500	2420	2800	2050	1170	1910	5060	11700	10300	9520
10	6010	15600	9810	2410	2990	2000	1140	1900	5340	12100	10400	9020
11	5820	14500	9230	2360	3140	1930	1120	1960	5690	12400	10800	8510
12	5480	13400	8610	2310	3240	1900	1130	2030	6030	12800	10900	8080
13	5460	12400	7980	2240	3340	1700	1100	2130	6470	13000	11400	7740
14	5190	11500	7390	2190	3370	e2000	1100	2230	7050	13300	11800	7510
15	5130	10800	6840	2150	3360	e2010	1130	2290	7630	13600	12300	7220
16	5110	10000	6380	2120	3340	1880	1120	2350	8160	13900	13200	6900
17	5040	9330	5990	2080	3300	1810	1130	2410	8580	14300	14000	6500
18	4980	8780	5610	2070	3250	1760	1110	2470	8860	14400	14400	6100
19	4910	8490	5250	2010	3190	1730	1090	2480	9070	14300	14700	5790
20	4980	8280	4950	1980	3110	1720	1130	2520	9210	14400	14500	5400
21	5200	8200	4700	1960	3060	1680	1130	2550	9390	14400	14200	5100
22	5570	8470	4510	1910	2980	1630	1100	2600	9440	14400	13800	4790
23	7400	10200	4400	1870	e2950	1600	1090	2610	9420	14100	13100	4550
24	11600	12500	4210	1830	2920	1570	1100	2660	9400	14300	12500	4300
25	15200	14200	4040	1810	2840	1530	1100	2690	9380	14200	12000	4110
26	17200	17000	3840	1780	2820	1510	1110	2760	9240	13900	11900	3950
27	18300	20300	3650	1740	2720	1480	1120	2920	9220	13700	11500	3750
28	18700	19800	3500	1760	e2650	1460	1140	2940	9140	13600	11400	3710
29	19000	17800	3370	1750	---	1440	1180	3040	9080	13300	11300	3490
30	19900	16100	3230	1700	---	1390	1220	3160	9120	13200	11700	3710
31	20000	---	3110	1700	---	1360	---	3310	---	13000	12100	---
TOTAL	286690	425050	234000	67460	77640	57880	34750	69760	212430	396010	376500	222740
MEAN	9248	14170	7548	2176	2773	1867	1158	2250	7081	12270	12150	7425
MAX	20000	20300	14900	2990	3370	2570	1310	3310	9440	14400	14700	12600
MIN	4910	8200	3110	1700	1650	1360	1090	1260	3460	9260	10300	3490
AC-FT	568600	843100	464100	133800	154000	114800	68930	138400	421400	785500	746800	441800
CFSM	7.67	11.7	6.26	1.80	2.30	1.55	0.96	1.87	5.87	10.6	10.1	6.16
IN.	8.84	13.11	7.22	2.08	2.39	1.79	1.07	2.15	6.55	12.22	11.61	6.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY) #

	MEAN	6455	4852	2713	1932	1680	1198	1077	2477	8150	13050	11940	9714
MAX	9248	14170	7548	2960	2773	1867	1241	3036	9795	15400	13600	13860	
(WY)	2003	2003	2003	2001	2003	2003	1998	2002	1998	2001	2001	2001	
MIN	3937	2106	1387	1164	891	870	888	2210	6156	11960	10310	5659	
(WY)	2001	2002	2002	1999	1998	1998	2002	2001	1997	1999	1998	2000	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1997 - 2003#

ANNUAL TOTAL	2534210	2460910	
ANNUAL MEAN	6943	6742	5455
HIGHEST ANNUAL MEAN			6742
LOWEST ANNUAL MEAN			4742
HIGHEST DAILY MEAN	20300	Nov 27	20300
LOWEST DAILY MEAN	812	Apr 26	a1090
ANNUAL SEVEN-DAY MINIMUM	833	Apr 21	1110
MAXIMUM PEAK FLOW			21400
MAXIMUM PEAK STAGE			13.95
INSTANTANEOUS LOW FLOW			910
ANNUAL RUNOFF (AC-FT)	5027000	4881000	3952000
ANNUAL RUNOFF (CFSM)	5.76	5.59	4.52
ANNUAL RUNOFF (INCHES)	78.17	75.91	61.46
10 PERCENT EXCEEDS	13000	14200	12800
50 PERCENT EXCEEDS	7390	4980	3060
90 PERCENT EXCEEDS	983	1450	1060

See Period of Record, partial year used in monthly statistics

a Apr. 19 and 23

b Mar. 12 and 13, 1998 and Apr. 20, 2002

e Estimated

15266150 KENAI RIVER BELOW MOUTH OF KILLEY RIVER NEAR STERLING

LOCATION.--Lat 60°29'28", long 150°37'50", in NW¹/₄ SW¹/₄ SE¹/₄ sec. 26, T. 5 N., R. 8 W. (Kenai B-2 quad), Kenai Peninsula Borough, Hydrologic Unit 19020302, on right bank, 1.5 mi downstream from Killey River, 4.5 mi southeast of Sterling.

DRAINAGE AREA.--1,496 mi².

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water stage recorder. Elevation of gage is 230 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. GOES satellite telemetry and phone modem at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9890	22400	18000	3310	1920	2610	e1450	1620	4600	11100	14300	13200
2	9720	21100	16200	3200	1850	2560	e1400	1690	4700	11800	13900	13200
3	9270	19800	15300	3110	1950	2500	e1400	1760	4800	12600	13600	13000
4	8790	19400	16300	3030	2050	2420	e1350	1890	4910	12600	13200	12800
5	8270	19600	15200	2930	2300	2350	e1350	1910	5150	12800	12800	12200
6	7930	24100	14200	2840	2730	2230	e1300	1940	5690	13100	12400	11600
7	7540	24600	13200	2730	2980	2160	e1300	1980	5930	13300	12100	10900
8	7220	22000	12300	2650	3240	2100	e1250	2050	6030	13700	11900	10300
9	6840	20400	11500	2700	3310	2030	e1250	2280	6300	14100	11800	9850
10	6510	18800	10800	2700	3500	1980	e1200	2360	6770	14600	11900	9320
11	6340	17200	10100	2670	3670	1930	e1200	2390	7370	14800	12200	8880
12	6120	15900	9480	2630	3750	1890	e1150	2440	7900	15100	12700	8410
13	6060	14400	8940	2560	3760	1310	e1150	2510	8460	15300	13100	8100
14	6180	13300	8460	2500	3740	2050	e1140	2590	9360	15600	13500	7750
15	5870	12300	7860	2430	3710	2060	1160	2680	10100	16100	14200	7340
16	5800	11500	7280	2390	3590	1890	1200	2740	10300	16400	15100	6950
17	5680	10800	6940	2350	3480	1890	1230	2820	10500	16800	15600	6560
18	5600	10100	6560	2350	3410	1920	1230	2910	10700	16800	15800	6180
19	5610	9820	6090	2320	3320	1900	1240	2940	10900	16700	16100	5910
20	5840	9660	5690	2280	3210	1880	1260	2990	11100	16500	16100	5660
21	5990	9570	5440	2240	3120	1840	1280	3060	11300	16600	15600	5440
22	6170	9810	5270	2200	3060	1770	1270	3140	11300	16400	14900	5110
23	9180	12800	5130	2130	e3000	1680	1280	3210	11300	16100	14100	4820
24	19700	17800	4920	2090	3020	1640	1290	3320	11200	16200	13500	4580
25	22600	17900	4740	2060	2910	e1600	1320	3410	11200	16200	12900	4380
26	21400	20500	4450	2040	2880	e1600	1330	3580	11000	15900	12800	4240
27	21400	24100	4180	2000	2780	e1550	1380	3850	10800	15500	12500	4040
28	21400	23400	3970	1980	e2700	e1550	1430	3990	10700	15400	12300	3990
29	22000	20600	3760	1970	---	e1500	1490	4050	10700	15300	12800	4060
30	24600	19500	3570	1940	---	e1500	1550	4220	10900	15000	13000	4570
31	23800	---	3460	1920	---	e1450	---	4440	---	14700	13200	---
TOTAL	339320	513160	269290	76250	84940	59340	38830	86760	261970	463100	419900	233340
MEAN	10950	17110	8687	2460	3034	1914	1294	2799	8732	14940	13550	7778
MAX	24600	24600	18000	3310	3760	2610	1550	4440	11300	16800	16100	13200
MIN	5600	9570	3460	1920	1850	1310	1140	1620	4600	11100	11800	3990
AC-FT	673000	1018000	534100	151200	168500	117700	77020	172100	519600	918600	832900	462800
CFSM	7.32	11.4	5.81	1.64	2.03	1.28	0.87	1.87	5.84	9.99	9.05	5.20
IN.	8.44	12.76	6.70	1.90	2.11	1.48	0.97	2.16	6.51	11.52	10.44	5.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)#

	MEAN	6990	5469	3022	2052	1766	1275	1240	2877	9400	14580	12950	10200
MAX	10950	17110	8687	3140	3034	1914	1490	3823	11080	18240	15930	14240	
(WY)	2003	2003	2003	2001	2003	2003	1998	2002	1998	2001	2001	2001	
MIN	4291	2139	1633	1126	989	926	1010	2456	7701	12580	11020	6196	
(WY)	2001	2002	2002	1999	1998	1999	1999	1999	1997	1999	1998	2000	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1997 - 2003#		
ANNUAL TOTAL	2871945			2846200					
ANNUAL MEAN	7868			7798			6003		
HIGHEST ANNUAL MEAN							7798		
LOWEST ANNUAL MEAN							5010		
HIGHEST DAILY MEAN	a24600			Oct 30			a24600		
LOWEST DAILY MEAN	963			Apr 16			b800		
ANNUAL SEVEN-DAY MINIMUM	978			Apr 11			836		
MAXIMUM PEAK FLOW				27300			27300		
MAXIMUM PEAK STAGE				13.52			13.52		
ANNUAL RUNOFF (AC-FT)	5697000			5645000			4349000		
ANNUAL RUNOFF (CFSM)	5.26			5.21			4.01		
ANNUAL RUNOFF (INCHES)	71.41			70.77			54.52		
10 PERCENT EXCEEDS	15000			16200			14000		
50 PERCENT EXCEEDS	8270			5690			3320		
90 PERCENT EXCEEDS	1120			1580			1150		

See Period of Record, partial year used in monthly statistics
a Oct. 30 and Nov. 7
b Apr. 19, 1997 and Apr. 6-7, 1999
e Estimated

15266300 KENAI RIVER AT SOLDOTNA

LOCATION.--Lat 60°28'39", long 151°04'46", in W¹/₂ SW¹/₄ sec. 32, T. 5 N., R. 10 W. (Kenai B-3 quad), Kenai Peninsula Borough, Hydrologic Unit 19020302, near center of span on downstream side of bridge on Sterling Highway, 1.0 mi southwest of Soldotna.

DRAINAGE AREA.--1,951 mi².

PERIOD OF RECORD.--May 1965 to current year.

REVISED RECORDS.--WRD AK-00-1 drainage area.

GAGE.--Water-stage recorder. Datum of gage is 35.34 ft above sea level. Prior to May 1, 1997, non-recording gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry and phone modem at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10500	23000	18400	e3600	e2050	3260	1740	2020	4780	11300	14400	13500
2	10200	22100	17000	3520	2070	3160	e1700	2080	4860	12000	14100	13500
3	9820	21000	16300	e3500	2230	3200	e1680	2180	5010	12600	13700	13300
4	9390	20300	16600	e3450	2340	3030	e1680	2300	5140	12700	13300	12900
5	9030	20200	16100	e3400	2520	2860	e1640	2240	5380	12700	12900	12600
6	8770	22500	15200	e3350	2840	2710	e1600	2210	5850	12900	12400	12000
7	8680	24100	14500	e3300	3070	2580	e1580	2240	6150	13300	12100	11400
8	8200	21600	13600	e3250	3430	2490	e1560	2310	6260	13600	11900	10900
9	7510	20100	12700	3230	3530	2460	e1540	2510	6520	13900	11700	10400
10	7170	18800	12000	3180	3760	e2400	e1520	2690	6990	14200	11700	9830
11	7320	17800	11300	3200	3960	e2300	e1520	2760	7810	14400	11800	9250
12	7260	16800	10400	3040	4130	e2200	e1510	2860	8410	14800	12400	8790
13	7170	15500	9580	2780	4170	2200	e1510	2860	8970	15100	12800	8540
14	6890	14400	8590	2720	4150	e2150	e1500	2930	9590	15400	13200	7930
15	6810	13500	7890	e2700	4090	e2100	e1540	3020	10400	15700	13800	7480
16	6780	12400	7240	e2700	3920	e2150	e1570	3020	10800	15800	14700	7190
17	6540	11600	7070	2770	3780	e2150	e1590	3080	11000	16000	15300	6880
18	6680	10800	6540	2790	3710	e2150	e1620	3160	11100	16200	15500	6640
19	6680	10500	6080	2730	3630	e2150	e1640	3230	11200	16100	15700	6210
20	7020	10200	5760	2630	3520	e2150	e1670	3310	11300	16200	15800	5920
21	7090	9830	5710	2440	3420	2160	e1700	3460	11400	16200	15500	5610
22	7400	10200	5610	e2400	3390	2110	e1740	3560	11500	15900	15000	5280
23	9880	12700	5430	e2400	3580	2120	e1770	3660	11400	15700	14400	5130
24	19100	17500	5090	e2350	3590	2090	1790	3800	11400	15700	13900	4990
25	25100	18400	4860	e2350	3430	2040	1820	3940	11300	15800	13300	4660
26	23100	19900	4610	e2300	3490	2000	1830	3920	11000	15700	13100	4450
27	22700	22200	4410	e2300	3420	1940	1890	4080	10800	15500	12800	4290
28	22100	22400	4180	e2250	3430	1860	1930	4310	10800	15300	12500	4290
29	22400	20700	3970	e2200	---	1910	1940	4400	10900	15100	13000	4480
30	24200	19400	3840	e2150	---	e1850	1990	4520	11100	14900	13200	4930
31	24200	---	3770	e2100	---	1800	---	4760	---	14900	13300	---
TOTAL	365690	520430	284330	87080	94650	71730	50310	97420	269120	455600	419200	243270
MEAN	11800	17350	9172	2809	3380	2314	1677	3143	8971	14700	13520	8109
MAX	25100	24100	18400	3600	4170	3260	1990	4760	11500	16200	15800	13500
MIN	6540	9830	3770	2100	2050	1800	1500	2020	4780	11300	11700	4290
AC-FT	725300	1032000	564000	172700	187700	142300	99790	193200	533800	903700	831500	482500
CFSM	6.05	8.89	4.70	1.44	1.73	1.19	0.86	1.61	4.60	7.53	6.93	4.16
IN.	6.97	9.92	5.42	1.66	1.80	1.37	0.96	1.86	5.13	8.69	7.99	4.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)#

MEAN	7272	3782	2394	1911	1684	1365	1560	3173	8578	13520	14370	11640
MAX	14370	17350	9172	4290	4575	2696	2836	5645	12570	18740	24890	21280
(WY)	1970	2003	2003	1981	1981	1981	1980	1990	1980	1977	1977	1995
MIN	2852	1631	1132	823	822	800	812	1950	4940	9696	8706	5873
(WY)	1993	1974	1976	1976	1976	1976	1972	1973	1972	1973	1969	1969

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003#	
ANNUAL TOTAL	2987610		2958830			
ANNUAL MEAN	8185		8106		5983	
HIGHEST ANNUAL MEAN					8810	
LOWEST ANNUAL MEAN					4002	
HIGHEST DAILY MEAN	25100	Oct 25	25100	Oct 25	41400	Sep 24 1995
LOWEST DAILY MEAN	a1000	Apr 8	1500	Apr 14	b770	Apr 1 1966
ANNUAL SEVEN-DAY MINIMUM	1030	Apr 4	1520	Apr 9	774	Apr 1 1966
MAXIMUM PEAK FLOW			28100	Oct 25	42200	Sep 24 1995
MAXIMUM PEAK STAGE			12.28	Oct 25	14.50	Sep 24 1995
MAXIMUM PEAK STAGE					c22.62	Jan 18 1969
INSTANTANEOUS LOW FLOW			d		b770	Apr 1 1966
ANNUAL RUNOFF (AC-FT)	5926000		5869000		4334000	
ANNUAL RUNOFF (CFSM)	4.20		4.15		3.07	
ANNUAL RUNOFF (INCHES)	56.97		56.42		41.67	
10 PERCENT EXCEEDS	15100		16000		14200	
50 PERCENT EXCEEDS	8680		6210		3270	
90 PERCENT EXCEEDS	1250		2010		1200	

- # See Period of Record; partial years used in monthly statistics
a Apr. 8 to Apr. 10
b Apr. 1 to Apr. 4, 1966
c Backwater from ice
d Not determined, see lowest daily mean
e Estimated

15271000 SIXMILE CREEK NEAR HOPE

LOCATION.--Lat 60°49'15", long 149°25'31", in SW¹/₄ SE¹/₄ sec. 34, T. 8 N., R. 1 W. (Seward D-7 quad), Kenai Peninsula Borough, Hydrologic Unit 19020302, Chugach National Forest, on left bank, 6.0 mi upstream from mouth at Turnagain Arm, and 10.6 mi southeast of Hope.

DRAINAGE AREA.--234 mi²

PERIOD OF RECORD.--June 1979 to September 1990, August 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level, from topographic map. Prior to November 26, 1979, recording gage at site 0.8 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Rain gage at station. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*)

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct. 24	1700	*10800	*13.56	Nov. 23	1830	4170	11.68
Oct. 29	2130	5220	12.08	Jun. 13	2315	4170	11.68
Nov. 06	0415	6030	12.35				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	750	1980	1630	e280	246	238	176	1300	2470	2540	886	709
2	694	1850	1300	e280	239	236	178	1220	2010	2970	829	666
3	621	1590	1380	e440	235	233	173	1270	1850	2820	761	646
4	585	2030	1400	e400	484	228	172	1250	1910	2440	697	607
5	559	3370	1240	e360	1480	214	172	1180	2270	2370	685	554
6	571	4890	1090	e320	863	201	171	1050	2770	2180	708	518
7	611	3150	968	e360	648	201	170	938	2550	2220	746	506
8	609	2330	885	466	609	199	171	938	2260	2350	808	490
9	549	1850	830	400	577	195	173	1070	2150	2400	858	485
10	531	1510	812	341	564	194	176	1150	2610	2350	879	466
11	526	1360	754	292	544	199	185	1060	2910	2230	904	451
12	546	1210	694	274	517	194	202	988	3200	2080	1020	437
13	533	1080	640	262	478	198	217	958	3660	2000	909	432
14	589	983	572	241	443	218	230	890	3690	2090	968	404
15	577	904	507	305	397	253	231	851	3250	2020	1120	369
16	579	842	474	262	363	237	226	894	2880	1890	1140	350
17	557	801	522	274	335	218	234	971	2640	1680	952	334
18	554	762	527	288	339	212	249	967	2480	1520	794	321
19	607	753	474	269	306	202	258	981	2480	1440	702	306
20	1100	708	471	274	297	197	276	1050	2440	1430	1030	320
21	1010	669	465	262	295	190	294	1120	2490	1430	797	327
22	1060	820	434	e260	286	189	388	1210	2330	1330	686	315
23	5030	3340	434	e260	280	207	448	1430	2330	1230	629	301
24	6550	2460	438	e260	273	195	496	1680	2340	1320	604	303
25	4660	1840	402	e260	263	184	562	1820	2460	1340	646	364
26	3520	2260	e380	e260	259	181	687	1920	2130	1180	880	361
27	2490	1660	e340	255	252	181	881	1940	1940	1080	822	325
28	2130	1300	e320	257	246	181	1040	1770	1890	1030	940	365
29	3220	1490	e320	255	---	180	1250	1740	2070	1050	1060	526
30	3310	2260	e300	262	---	178	1310	1930	2360	970	1020	628
31	2430	---	e300	254	---	177	---	2280	---	894	814	---
TOTAL	47658	52052	21303	9233	12118	6310	11396	39816	74820	55874	26294	13186
MEAN	1537	1735	687	298	433	204	380	1284	2494	1802	848	440
MAX	6550	4890	1630	466	1480	253	1310	2280	3690	2970	1140	709
MIN	526	669	300	241	235	177	170	851	1850	894	604	301
AC-FT	94530	103200	42250	18310	24040	12520	22600	78980	148400	110800	52150	26150
CFSM	6.57	7.41	2.94	1.27	1.85	0.87	1.62	5.49	10.7	7.70	3.62	1.88
IN.	7.58	8.27	3.39	1.47	1.93	1.00	1.81	6.33	11.89	8.88	4.18	2.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)#

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
MEAN	915	492	303	242	191	157	252	1269	2711	2226	1282	996
MAX	1777	1735	687	528	433	240	397	1811	3957	3986	2699	1556
(WY)	1981	2003	2003	1981	2003	1984	1990	1981	2001	1980	1981	1999
MIN	500	221	198	133	113	106	119	748	1736	1166	760	440

See Period of Record; partial years used in monthly statistics
e Estimated

15271000 SIXMILE CREEK NEAR HOPE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003#	
ANNUAL TOTAL	378708		370060			
ANNUAL MEAN	1038		1014		929	
HIGHEST ANNUAL MEAN					1335	1980
LOWEST ANNUAL MEAN					675	1986
HIGHEST DAILY MEAN	6550	Oct 24	6550	Oct 24	7570	Jul 12 1980
LOWEST DAILY MEAN	126	Apr 15	170	Apr 7	a80	Apr 1 1986
ANNUAL SEVEN-DAY MINIMUM	130	Mar 19	172	Apr 3	80	Apr 1 1986
MAXIMUM PEAK FLOW			10800	Oct 24	10800	Oct 24 2002
MAXIMUM PEAK STAGE			13.56	Oct 24	13.56	Oct 24 2002
INSTANTANEOUS LOW FLOW			b149	Apr 4	c29	Nov 26 1979
ANNUAL RUNOFF (AC-FT)	751200		734000		673400	
ANNUAL RUNOFF (CFSM)	4.43		4.33		3.97	
ANNUAL RUNOFF (INCHES)	60.20		58.83		53.97	
10 PERCENT EXCEEDS	2610		2350		2430	
50 PERCENT EXCEEDS	656		685		535	
90 PERCENT EXCEEDS	142		218		142	

See Period of Record; partial years used in monthly statistics

a Apr. 1 to Apr. 9, 1986

b Apr. 4 and Apr. 5

c Sometime between Nov. 26, 1979 and Jan. 9, 1980, during release from storage behind snow-avalanche dam upstream from former gage site, site and datum then in use

15272280 PORTAGE CREEK AT PORTAGE LAKE OUTLET NEAR WHITTIER

LOCATION.--Lat 60°47'07", long 148°50'20", in SW¹/₄ NE¹/₄ sec. 13, T. 8 N., R. 3 E. (Seward D-5 SW quad), Municipality of Anchorage, Hydrologic Unit 19020302, on left bank at lake outlet, 5.0 mi west of Whittier, 5.8 mi southeast of Portage, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--40.5 mi².

PERIOD OF RECORD.--March 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 95 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s, August 19, 1984 (elevation about 97.05 ft above sea level from USFS levels) by contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 4,600 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage Height	Date	Time	Discharge (ft ³ /s)	Gage Height
Oct 24	1330	*7730	*8.78	Aug 15	0700	6440	8.24
Nov 6	0115	6500	8.27	Aug 28	1215	6190	8.13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	1670	1600	99	299	183	40	296	1490	1770	1610	1670
2	1040	2210	974	91	268	171	39	284	1430	2050	1430	1360
3	693	1930	1330	102	318	148	37	289	1120	2360	1280	1330
4	514	3220	1630	118	980	132	36	291	922	2110	1140	1210
5	432	4850	1380	108	2370	117	34	424	1480	1900	1140	1070
6	407	4910	1020	99	1310	104	34	446	2920	1680	1220	914
7	455	2610	671	91	720	94	33	361	2710	1780	1300	883
8	472	1310	537	99	565	86	34	315	1740	1980	1510	883
9	399	818	510	153	514	79	39	410	1240	2070	1730	1280
10	332	586	578	154	451	73	50	831	1150	2050	1760	1450
11	348	460	504	154	412	69	51	738	1180	1990	1790	1150
12	560	402	380	149	423	64	53	552	1250	1880	2280	1030
13	933	346	310	172	359	60	60	440	1480	1970	2370	979
14	1790	313	253	154	290	60	67	370	1630	2150	4340	826
15	1210	342	211	136	237	74	74	324	1610	1990	6220	622
16	1050	328	187	135	195	75	88	313	1630	1870	4560	494
17	779	331	193	216	167	63	91	314	1460	1820	3320	423
18	831	381	197	399	145	63	100	313	1260	1920	2150	369
19	1800	574	177	e330	128	69	100	305	1190	1830	1900	326
20	4030	616	160	e370	116	76	119	299	1150	1820	3360	328
21	3210	565	171	e360	102	69	227	290	1230	1800	2250	339
22	3620	1110	234	e250	103	62	432	301	1340	1630	1590	303
23	6500	2760	315	e200	138	62	394	333	1350	1540	1310	273
24	6550	2010	317	e170	167	62	308	403	1700	1670	1200	e262
25	4230	1540	250	e150	150	60	256	547	2900	2200	1420	e325
26	2950	1830	196	e140	150	55	241	694	3010	2610	2960	e440
27	1450	1270	163	e140	151	51	245	964	3230	2120	3700	e410
28	1170	822	141	203	173	49	253	1000	2290	2320	5450	e525
29	2150	1190	132	245	---	46	272	876	1870	2780	4620	e1050
30	2770	2380	119	289	---	43	291	796	1790	2250	4080	e2500
31	2420	---	107	289	---	41	---	955	---	1830	2440	---
TOTAL	56425	43684	14947	5765	11401	2460	4098	15074	50752	61740	77430	25024
MEAN	1820	1456	482	186	407	79.4	137	486	1692	1992	2498	834
MAX	6550	4910	1630	399	2370	183	432	1000	3230	2780	6220	2500
MIN	332	313	107	91	102	41	33	284	922	1540	1140	262
AC-FT	111900	86650	29650	11430	22610	4880	8130	29900	100700	122500	153600	49640
CFSM	44.9	36.0	11.9	4.59	10.1	1.96	3.37	12.0	41.8	49.2	61.7	20.6
IN.	51.83	40.12	13.73	5.30	10.47	2.26	3.76	13.85	46.62	56.71	71.12	22.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)#

	MEAN	MAX	(WY)	MIN	(WY)
636	316	163	150	135	83.7
1820	1456	482	460	407	189
2003	2003	2003	2001	2003	1998
136	90.5	26.3	26.0	26.0	36.7
1997	1991	1991	1991	1991	2002
591	1456	2084	2058	1785	1785
1158	1728	2518	3164	3583	3583
1995	1990	1990	1989	1995	1995
286	1178	1714	1409	649	649
2001	2001	1999	1998	1992	1992

See Period of Record: partial years used in monthly statistics
e Estimated

15272280 PORTAGE CREEK AT PORTAGE LAKE OUTLET NEAR WHITTIER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003#	
ANNUAL TOTAL	349774		368800			
ANNUAL MEAN	958		1010		799	
HIGHEST ANNUAL MEAN					1010	2003
LOWEST ANNUAL MEAN					656	2000
HIGHEST DAILY MEAN	6550	Oct 24	6550	Oct 24	10700	Sep 20 1995
LOWEST DAILY MEAN	27	Mar 13	33	Apr 7	a26	Dec 5 1990
ANNUAL SEVEN-DAY MINIMUM	29	Mar 8	35	Apr 2	26	Dec 5 1990
MAXIMUM PEAK FLOW			7730	Oct 24	13000	Sep 20 1995
MAXIMUM PEAK STAGE			8.78	Oct 24	10.66	Sep 20 1995
INSTANTANEOUS LOW FLOW			30	Apr 9	26	Dec 5 1990
ANNUAL RUNOFF (AC-FT)	693800		731500		578800	
ANNUAL RUNOFF (CFSM)	23.7		24.9		19.7	
ANNUAL RUNOFF (INCHES)	321.27		338.75		268.04	
10 PERCENT EXCEEDS	2140		2360		2000	
50 PERCENT EXCEEDS	671		504		320	
90 PERCENT EXCEEDS	33		76		55	

See Period of Record: partial years used in monthly statistics

a From Dec. 5, 1990 to Mar. 31, 1991

e Estimated

15272380 TWENTYMILE RIVER BELOW GLACIER RIVER NEAR PORTAGE

LOCATION.--Lat 60°53'53", long 148°55'19", in SW¹/₄ SW¹/₄ SE¹/₄ sec. 4, T. 9 N., R. 3 E. (Seward D-6 quad), Hydrologic Unit 19020401, on right bank, 0.1 miles downstream from Glacier River, 4.0 miles upstream from mouth at Seward Highway, and 6.0 miles northeast of Portage.

DRAINAGE AREA.--141 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2001 to current year.

REVISED RECORDS.--WDR AK-02-1: 2001.

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030	2630	3230	262	557	333	e160	984	2660	3390	2990	3710
2	1570	2770	2020	254	540	301	e150	983	2460	3870	2620	3040
3	1160	2500	2070	335	550	286	142	1000	2100	4250	2360	3010
4	906	3920	2410	400	2260	266	e140	1000	1900	3850	2110	2780
5	733	6470	2000	324	6180	250	e140	1040	2610	3580	2210	2340
6	679	8410	1590	327	2740	255	e140	998	4570	3290	2450	2030
7	769	4650	1190	435	1500	237	e145	1070	4410	3510	2660	1880
8	802	2640	986	442	1180	224	144	999	3210	3900	3050	1740
9	671	1810	922	353	1070	e220	151	966	2630	4100	3400	1780
10	578	1350	986	303	1030	e220	203	1400	2580	4060	3460	1880
11	524	1080	971	345	987	e210	231	1330	2640	3960	3520	1780
12	798	929	801	321	1010	e210	248	1290	2990	3790	4250	1700
13	960	800	718	322	e900	e210	269	1150	3550	4010	4550	1640
14	1700	727	610	328	e700	e210	282	969	3610	4330	7160	1380
15	1410	761	496	329	e550	e210	257	849	3190	4030	11200	1100
16	1390	708	460	279	e450	e200	245	880	2890	3840	9530	928
17	1180	681	e440	466	e400	e200	257	898	2780	3860	7000	813
18	1110	729	e410	809	e350	e220	277	883	2740	3960	4630	724
19	2090	1030	e380	673	e330	237	282	875	2650	3750	3820	619
20	6800	1240	371	771	299	305	293	891	2530	3710	5600	578
21	5660	1170	360	761	281	328	438	891	2800	3530	4140	557
22	4960	2120	515	634	269	203	730	1020	2630	3170	3130	501
23	8540	4400	724	513	337	e200	563	1140	2790	3030	2730	452
24	11000	3670	601	488	351	e205	575	1240	3040	3380	2530	429
25	8270	2660	490	435	308	210	603	1360	4190	3650	2710	646
26	6010	3340	458	378	324	e205	652	1530	4010	3520	4250	833
27	3090	2650	e440	345	328	e200	766	1810	3880	3310	5320	817
28	2210	1760	e410	419	329	e190	848	1840	3300	3780	8390	962
29	3680	2380	e380	437	---	e185	936	1800	3160	4540	7960	2570
30	4530	4900	350	499	---	181	971	1820	3340	3840	7800	5220
31	3550	---	282	510	---	e175	---	1880	---	3330	5150	---
TOTAL	89360	74885	28071	13497	26110	7086	11238	36786	91840	116120	142680	48439
MEAN	2883	2496	906	435	932	229	375	1187	3061	3746	4603	1615
MAX	11000	8410	3230	809	6180	333	971	1880	4570	4540	11200	5220
MIN	524	681	282	254	269	175	140	849	1900	3030	2110	429
MED	1570	2250	601	400	545	210	263	1020	2840	3790	3820	1510
AC-FT	177200	148500	55680	26770	51790	14060	22290	72970	182200	230300	283000	96080
CFSM	20.4	17.7	6.42	3.09	6.61	1.62	2.66	8.42	21.7	26.6	32.6	11.5
IN.	23.58	19.76	7.41	3.56	6.89	1.87	2.96	9.71	24.23	30.64	37.64	12.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)#

	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
MEAN	2059	1469	834	585	530	153	269	1118	2799	3263	3708	2132
MAX	2883	2496	906	735	932	229	375	1373	3061	3746	4603	2613
(WY)	2003	2003	2003	2002	2003	2003	2003	2002	2003	2003	2003	2001
MIN	1235	442	763	435	127	77.1	121	796	2513	2796	2700	1615
(WY)	2002	2002	2002	2003	2002	2002	2002	2001	2002	2002	2002	2003

See Period of Record, partial years used in monthly statistics
e Estimated

15272380 TWENTYMILE RIVER BELOW GLACIER RIVER NEAR PORTAGE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003#	
ANNUAL TOTAL	578067		686112			
ANNUAL MEAN	1584		1880		1571	
HIGHEST ANNUAL MEAN					1880	2003
LOWEST ANNUAL MEAN					1263	2002
HIGHEST DAILY MEAN	11000	Oct 24	11200	Aug 15	11200	Aug 15 2003
LOWEST DAILY MEAN	60	Mar 13	a140	Apr 4	60	Mar 13 2002
ANNUAL SEVEN-DAY MINIMUM	66	Mar 7	143	Apr 2	66	Mar 7 2002
MAXIMUM PEAK FLOW			12700	Oct 24	12700	Oct 24 2002
MAXIMUM PEAK STAGE			24.87	Oct 24	25.47	Aug 29 2001
ANNUAL RUNOFF (AC-FT)	1147000		1361000		1138000	
ANNUAL RUNOFF (CFSM)	11.2		13.3		11.1	
ANNUAL RUNOFF (INCHES)	152.51		181.02		151.42	
10 PERCENT EXCEEDS	3080		4120		3580	
50 PERCENT EXCEEDS	1270		1020		967	
90 PERCENT EXCEEDS	80		249		140	

See Period of Record, partial years used in monthly statistics

a Apr. 4-6

15272380 TWENTYMILE RIVER BELOW GRANITE RIVER NEAR PORTAGE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 2002 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 15 minute recording interval.

REMARKS.--Records represent water temperature at the sensor within 0.5°C. No record February 16-18 due to dead batteries. Temperature at the sensor was compared with the average for the stream by cross section on May 1 and August 6. No variation more than 0.6°C was found within the cross sections. No variation more than 0.4°C was found between mean stream temperature and sensor temperature. Heavy shore ice occurs near the gage.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 9.5°C, several days in May, June and July, 2003; Minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 9.5°C, several days in May, June and July; Minimum, 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	Sample loc- ation, cross section ft from rt bank (72103)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)
MAY									
01...	1143	123	10.0	16.77	989	10	8010	4.4	10.8
01...	1145	123	30.0	16.77	989	10	8010	4.5	10.8
01...	1147	123	50.0	16.77	989	10	8010	4.7	10.8
01...	1149	123	70.0	16.77	989	10	8010	4.8	10.8
01...	1151	123	90.0	16.77	989	10	8010	5.0	10.8
AUG									
06...	1707	200	12.0	18.52	2390	10	8010	8.8	16.1
06...	1709	200	25.0	18.52	2390	10	8010	8.7	16.1
06...	1711	200	75.0	18.52	2390	10	8010	8.6	16.1
06...	1713	200	125.0	18.52	2390	10	8010	8.4	16.1
06...	1715	200	175.0	18.52	2390	10	8010	8.5	16.1

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4.5	4.0	4.5	4.0	3.0	3.5	3.5	3.0	3.0	0.0	0.0	0.0
2	5.0	3.5	4.0	4.5	4.0	4.0	3.0	2.5	3.0	0.0	0.0	0.0
3	4.5	2.5	3.5	4.0	4.0	4.0	3.5	3.0	3.5	0.5	0.0	0.5
4	4.5	3.0	4.0	4.5	4.0	4.5	3.5	3.0	3.5	0.5	0.0	0.5
5	4.5	3.5	4.0	5.0	4.0	4.5	3.5	3.0	3.5	0.5	0.0	0.0
6	6.0	4.0	4.5	5.0	4.0	4.5	3.5	3.0	3.0	0.0	0.0	0.0
7	5.5	4.5	5.0	4.5	3.5	4.0	3.0	2.0	2.5	0.0	0.0	0.0
8	5.0	3.0	4.0	3.5	2.5	3.0	3.0	2.5	2.5	0.0	0.0	0.0
9	4.0	2.0	3.0	2.5	2.0	2.0	3.0	2.5	3.0	0.5	0.0	0.5
10	4.0	2.0	3.0	2.0	1.0	1.5	3.0	1.0	2.0	1.0	0.5	0.5
11	4.5	3.5	4.0	3.0	2.0	2.5	2.0	0.5	1.5	0.5	0.5	0.5
12	5.5	4.0	4.5	3.0	2.0	2.5	2.0	1.5	2.0	1.5	0.5	1.0
13	5.0	4.0	4.5	2.5	2.5	2.5	1.5	0.5	1.0	1.0	0.0	0.5
14	5.0	3.5	4.0	3.0	2.5	3.0	1.5	0.5	1.0	0.0	0.0	0.0
15	4.5	3.5	4.0	3.0	3.0	3.0	1.0	0.5	0.5	0.5	0.0	0.5
16	5.0	4.0	4.5	3.0	2.5	3.0	0.5	0.0	0.0	1.5	0.5	1.0
17	4.5	4.0	4.0	3.0	2.0	2.5	1.0	0.0	0.5	1.5	0.5	1.5
18	5.0	4.0	4.5	3.0	2.5	2.5	1.0	0.5	1.0	0.5	0.0	0.5
19	5.0	4.5	4.5	3.0	2.5	2.5	1.0	0.5	1.0	1.5	0.5	1.0
20	5.0	4.5	4.5	2.5	2.5	2.5	1.0	0.5	0.5	1.5	1.0	1.5
21	5.0	4.0	4.5	3.0	2.5	2.5	1.0	0.5	1.0	1.5	1.0	1.0
22	4.5	4.0	4.5	3.5	3.0	3.0	1.0	0.5	1.0	1.0	0.5	0.5
23	5.0	4.0	5.0	3.5	3.0	3.5	1.5	0.5	1.0	0.5	0.0	0.0
24	5.5	4.5	5.0	3.5	3.0	3.0	1.5	0.5	1.0	0.5	0.0	0.5
25	4.5	4.0	4.0	3.5	3.0	3.5	1.0	0.5	0.5	1.0	0.0	0.5
26	4.5	3.5	4.0	4.0	3.0	3.5	0.5	0.0	0.0	1.0	0.5	0.5
27	3.5	2.5	3.0	3.0	3.0	3.0	0.0	0.0	0.0	1.5	0.5	1.0
28	4.0	3.0	3.5	3.0	3.0	3.0	0.0	0.0	0.0	1.5	1.5	1.5
29	4.0	3.5	4.0	4.0	3.0	3.5	0.0	0.0	0.0	1.5	1.0	1.5
30	4.5	4.0	4.0	4.0	3.0	3.5	0.5	0.0	0.0	1.5	1.0	1.5
31	4.5	4.0	4.0	---	---	---	0.0	0.0	0.0	2.0	1.0	1.5
MONTH	6.0	2.0	4.1	5.0	1.0	3.1	3.5	0.0	1.4	2.0	0.0	0.6

15272380 TWENTYMILE RIVER BELOW GRANITE RIVER NEAR PORTAGE—Continued

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.5	1.0	1.5	3.0	1.0	2.0	2.5	0.0	1.0	7.5	2.5	4.5
2	2.0	1.0	1.0	2.5	1.5	2.0	2.5	0.0	1.0	8.0	2.5	5.0
3	1.5	1.5	1.5	4.0	1.5	2.5	3.5	0.0	1.5	8.0	2.5	5.0
4	1.5	0.5	1.0	2.5	0.5	1.5	3.5	0.0	1.5	6.0	3.5	4.5
5	1.5	0.5	1.0	2.0	0.0	1.0	4.0	0.0	1.5	5.0	3.0	4.5
6	2.0	1.0	1.5	1.5	0.0	0.5	3.5	0.0	1.5	6.5	2.5	4.5
7	2.0	1.5	1.5	1.0	0.0	0.5	4.0	1.0	2.5	8.5	3.0	5.5
8	2.0	1.5	2.0	1.0	0.0	0.5	4.5	1.5	3.0	8.0	3.5	5.5
9	2.0	1.5	2.0	1.0	0.0	0.0	3.5	1.5	2.5	5.5	4.0	4.5
10	2.0	1.5	2.0	0.5	0.0	0.0	3.5	1.5	2.5	5.0	3.5	4.0
11	2.0	2.0	2.0	0.5	0.0	0.0	6.5	1.5	3.5	6.0	3.5	4.5
12	2.5	1.5	2.0	0.5	0.0	0.0	4.0	1.0	2.5	6.5	3.5	5.0
13	2.5	1.5	2.0	0.0	0.0	0.0	3.5	2.0	2.5	8.5	3.5	5.5
14	1.5	---	---	0.0	0.0	0.0	6.5	1.0	3.0	7.0	3.5	5.0
15	1.5	1.0	1.0	0.0	0.0	0.0	3.5	1.0	2.0	7.5	4.5	5.5
16	---	---	---	0.0	0.0	0.0	5.0	1.5	3.0	7.0	4.5	5.5
17	---	---	---	0.5	0.0	0.0	4.5	2.0	3.0	7.0	4.0	5.5
18	---	---	---	1.0	0.0	0.5	7.5	2.0	4.0	8.5	4.0	6.0
19	1.0	---	---	0.5	0.0	0.5	7.5	1.0	4.0	9.5	3.0	6.0
20	1.0	0.0	0.5	1.5	0.0	0.5	5.0	2.5	3.5	9.5	3.0	6.0
21	2.0	0.5	1.0	1.0	0.0	0.5	3.5	2.0	3.0	9.0	3.5	6.0
22	2.0	1.0	1.5	1.5	0.0	0.5	4.0	1.5	2.5	9.0	3.5	6.0
23	2.0	1.0	1.5	0.0	0.0	0.0	8.0	2.0	4.5	9.5	4.5	6.5
24	2.5	1.0	1.5	0.5	0.0	0.0	8.0	2.0	4.5	8.0	4.0	6.0
25	2.0	1.0	1.5	2.0	0.5	1.0	8.5	2.0	4.5	9.5	4.5	6.5
26	2.5	1.5	2.0	2.5	0.0	1.0	8.5	2.5	5.0	6.5	5.0	5.5
27	3.0	1.5	2.0	1.5	0.5	1.0	8.0	2.5	4.5	7.0	5.0	5.5
28	2.5	2.0	2.0	2.0	0.5	1.0	8.0	2.5	5.0	8.5	4.0	6.0
29	---	---	---	3.5	0.5	2.0	8.0	2.5	5.0	8.0	4.0	6.0
30	---	---	---	2.0	0.0	1.0	8.0	2.5	5.0	9.0	4.5	6.0
31	---	---	---	2.0	0.0	0.5	---	---	---	6.0	4.5	5.5
MONTH	---	---	---	4.0	0.0	0.7	8.5	0.0	3.1	9.5	2.5	5.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.0	4.5	5.5	6.5	5.0	6.0	8.0	4.5	6.0	8.0	5.0	6.0
2	8.5	4.5	6.0	7.0	5.5	6.0	8.5	4.5	6.0	7.0	5.0	5.5
3	9.0	4.5	6.5	7.5	5.0	6.0	7.0	5.0	6.0	6.5	5.0	5.5
4	8.0	4.0	6.0	9.0	4.5	6.5	9.0	5.0	6.5	6.0	4.5	5.0
5	6.0	5.0	5.5	7.5	5.5	6.0	9.0	4.5	6.5	7.0	4.5	5.5
6	6.0	4.5	5.0	8.5	5.0	6.5	8.5	5.0	6.5	7.5	4.5	5.5
7	9.0	4.0	5.5	9.5	5.0	7.0	9.0	5.0	6.5	7.0	4.0	5.5
8	6.5	4.0	5.5	9.0	5.5	7.0	9.0	5.0	6.5	6.5	4.5	5.5
9	8.5	4.5	6.0	9.5	5.0	7.0	8.5	5.0	6.5	6.0	5.0	5.5
10	6.5	5.0	5.5	8.5	5.5	7.0	9.0	5.0	6.5	7.0	4.0	5.5
11	8.5	4.5	6.0	8.0	6.0	7.0	6.5	5.5	6.0	7.0	4.0	5.5
12	9.0	4.5	6.5	9.5	5.0	7.0	6.0	5.5	5.5	7.0	4.5	5.5
13	9.0	4.5	6.5	9.5	5.5	7.0	6.0	5.0	5.5	7.5	4.5	5.5
14	6.5	5.0	5.5	9.0	5.5	7.0	5.5	5.0	5.0	6.5	3.5	4.5
15	6.5	4.5	5.5	9.0	5.5	7.0	6.0	5.0	5.5	6.0	3.0	4.0
16	8.0	4.5	6.0	7.0	6.0	6.5	6.5	5.0	5.5	6.5	3.0	4.5
17	7.5	4.5	6.0	7.5	5.5	6.5	7.0	5.0	5.5	6.5	3.0	4.5
18	7.5	5.0	6.0	8.5	5.5	6.5	7.5	4.5	5.5	6.0	3.0	4.0
19	7.0	5.0	5.5	9.0	5.0	6.5	6.5	5.0	6.0	5.5	3.0	4.0
20	7.0	5.0	6.0	7.5	5.5	6.5	6.0	4.5	5.0	4.5	3.0	3.5
21	6.5	5.0	5.5	6.5	6.0	6.0	7.0	4.5	5.5	5.5	3.0	4.0
22	9.0	4.5	6.5	7.0	5.5	6.0	8.0	4.5	6.0	6.5	4.0	5.0
23	7.0	5.0	6.0	9.0	5.5	7.0	8.0	4.5	6.0	5.5	3.5	4.5
24	6.0	5.0	5.5	6.5	5.5	6.0	7.0	5.0	6.0	5.0	4.0	4.5
25	6.0	4.5	5.0	6.5	5.0	5.5	5.5	5.0	5.5	5.5	4.5	5.0
26	6.0	4.5	5.0	7.0	5.0	6.0	6.0	5.0	5.5	5.5	4.0	4.5
27	6.5	4.5	5.5	6.0	5.5	5.5	6.0	5.0	5.5	6.0	3.5	4.5
28	8.5	4.0	6.0	6.5	5.0	5.5	6.0	4.5	5.0	6.5	4.5	5.5
29	9.0	4.5	6.5	6.5	4.5	5.5	5.5	4.5	5.0	5.5	4.5	4.5
30	9.5	5.0	7.0	7.0	5.0	5.5	6.5	4.5	5.0	5.5	4.5	5.0
31	---	---	---	8.5	5.0	6.5	7.0	5.0	5.5	---	---	---
MONTH	9.5	4.0	5.8	9.5	4.5	6.4	9.0	4.5	5.8	8.0	3.0	4.9

15276000 SHIP CREEK NEAR ANCHORAGE

LOCATION.--Lat 61°13'32", long 149°38'06", in SW¹/₄ SE¹/₄ sec. 9, T. 13 N., R. 2 W. (Anchorage A-8 quad), Municipality of Anchorage, Hydrologic Unit 19020401, in Fort Richardson Military Reservation, on left bank, 800 ft downstream from diversion dam, 3.3 mi upstream from North Fork Ship Creek, and 7.8 mi east of intersection of Seward and Glenn Highways in Anchorage.

DRAINAGE AREA.--90.5 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1936: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 490 ft above sea level, from topographic map. Prior to August 22, 1985, water-stage recorder at dam 800 ft upstream. See WSP 1936 for history of changes prior to October 1, 1954.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Discharge data represent the net flow remaining after diversion for water supply to Fort Richardson, Elmendorf Air Force Base, and Municipality of Anchorage. Average diversion for water year 2003 was 6.23 ft³/s. Diversion began in 1944. Magnitude of discharges downstream of dam may be affected by periodic spillway adjustment.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	398	307	166	e95	e65	e60	e44	141	347	266	125	153
2	369	289	155	e90	e65	e60	e44	146	321	329	121	147
3	300	276	153	e90	e65	e55	e42	155	315	368	118	150
4	275	265	151	e90	e65	e55	e42	155	316	320	115	142
5	260	266	146	e90	e65	e55	e40	149	337	282	111	136
6	266	270	141	e85	e65	e55	e40	139	356	268	108	130
7	390	254	138	e85	e65	e55	e38	129	340	251	105	126
8	416	237	135	e85	e65	e55	e38	133	322	239	104	122
9	356	219	130	e85	e65	e55	e36	143	312	223	103	120
10	324	202	131	e85	e60	e50	e34	143	363	228	102	116
11	309	207	130	e85	e60	e50	e34	139	407	233	107	113
12	305	205	124	e80	e60	e50	e36	133	438	220	148	109
13	286	192	e120	e80	e60	e50	e36	128	471	207	163	112
14	272	187	e120	e80	e60	e50	e36	121	480	188	191	107
15	275	180	e110	e80	e60	e50	e36	127	459	187	189	104
16	295	176	e110	e80	e60	e50	e36	146	401	194	260	104
17	296	172	e110	e80	e60	e50	e36	162	364	183	263	104
18	311	166	e110	e80	e60	e50	e36	148	351	170	234	102
19	315	162	e110	e75	e60	e48	e38	144	342	150	209	100
20	428	157	e110	e75	e60	e48	e40	148	340	151	194	100
21	451	152	e100	e75	e60	e48	e45	163	335	161	175	101
22	419	152	e100	e75	e60	e48	e45	192	318	159	163	97
23	405	167	e100	e75	e60	e46	e50	221	307	152	151	95
24	466	154	e100	e75	e60	e46	57	261	292	156	146	95
25	502	149	e100	e70	e60	e46	61	281	277	160	154	103
26	491	158	e100	e70	e60	e46	68	280	262	148	206	101
27	418	153	e160	e70	e60	e46	82	282	240	144	194	94
28	380	144	e680	e70	e60	e46	102	282	227	140	178	97
29	380	155	e540	e70	---	e44	119	297	229	138	172	100
30	361	188	e95	e70	---	e44	135	341	245	132	167	107
31	326	---	e95	e65	---	e44	---	350	---	130	161	---
TOTAL	11045	5961	4770	2460	1725	1555	1526	5779	10114	6277	4937	3387
MEAN	356	199	154	79.4	61.6	50.2	50.9	186	337	202	159	113
MAX	502	307	680	95	65	60	135	350	480	368	263	153
MIN	260	144	95	65	60	44	34	121	227	130	102	94
AC-FT	21910	11820	9460	4880	3420	3080	3030	11460	20060	12450	9790	6720
ADJUSTED TO INCLUDE DIVERSION												
MEAN	362	204	160	85.1	67.2	56.0	56.7	193	345	211	165	118
CFSM	4.00	2.26	1.76	0.94	0.74	0.62	0.63	2.14	3.81	2.33	1.82	1.31
IN	4.61	2.52	2.03	1.08	0.77	0.71	0.70	2.46	4.25	2.69	2.10	1.46
AC-FT	22240	12170	9815	5230	3730	3440	3380	11890	20530	12980	10160	7040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)#

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
MEAN	152	79.5	49.1	32.1	22.9	17.4	25.4	167	452	304	207	209
MAX	356	199	154	79.4	61.6	50.2	69.7	456	798	645	510	471
(WY)	2003	2003	2003	2003	2003	2003	1990	1990	1977	1980	1981	1967
MIN	48.7	24.3	13.9	7.13	5.36	3.61	4.77	39.9	132	72.0	73.0	55.8
(WY)	1969	1969	1969	1956	1983	1956	1954	1971	1996	1996	1996	1969

See Period of Record and Remarks. Values shown on this page are unadjusted for diversion, unless otherwise noted
e Estimated

15276000 SHIP CREEK NEAR ANCHORAGE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003#	
ANNUAL TOTAL	61275		59536		143	
ANNUAL MEAN	168		163		*162	
ANNUAL MEAN	*174		*169		223	1980
HIGHEST ANNUAL MEAN					67.3	1969
LOWEST ANNUAL MEAN					1420	Aug 9 1971
HIGHEST DAILY MEAN	680	Dec 28	ae680	Dec 28	c0.00	Jan 2 1956
LOWEST DAILY MEAN	22	Apr 8	b34	Apr 10	0.43	Jan 9 1956
ANNUAL SEVEN-DAY MINIMUM	24	Apr 4	35	Apr 9	1860	Jun 21 1949
MAXIMUM PEAK FLOW			d		f3.44	Jun 21 1949
MAXIMUM PEAK STAGE					g6.52	Jun 21 1949
MAXIMUM PEAK STAGE					h8.54	Dec 29 2002
MAXIMUM PEAK STAGE			h8.54	Dec 29	103900	
ANNUAL RUNOFF (AC-FT)	121500		118100		*117400	
ANNUAL RUNOFF (AC-FT)	*126800		*122600		*1.79	
ANNUAL RUNOFF (CFSM)	*1.93		*1.86		*24.3	
ANNUAL RUNOFF (IN)	*26.3		*25.4		368	
10 PERCENT EXCEEDS	394		336		78	
50 PERCENT EXCEEDS	149		133		14	
90 PERCENT EXCEEDS	28		50			

See Period of Record and Remarks. Values shown on this page are unadjusted for diversion, unless otherwise noted

* Adjusted to account for diversion, see Remarks

a From winter flood event

b Apr. 10 and Apr. 11

c No flow during one or more days in water years 1956, 1960, 1969, and 1971

d Not determined, see highest daily mean

e Estimated

f Site and datum then in use

g Current site and datum

h From CSG mark from ice-affected winter breakout event, at current site and datum

15276200 SHIP CREEK AT GLENN HIGHWAY NEAR ANCHORAGE

LOCATION.--Lat 61°14'20", long 149°41'45", on line between sec. 6 and 7, T. 13 N., R. 2 W. (Anchorage A-8NE quad), Municipality of Anchorage, Hydrologic Unit 19020401, in Fort Richardson Military Reservation, on right bank, just downstream from the Glenn Highway Bridge, 2.6 mi downstream from the Ship Creek diversion dam, and 6.0 mi east of intersection of Seward and Glenn Highways in Anchorage.

DRAINAGE AREA.--103.4 mi².

PERIOD OF RECORD.-- October 2002 to September 2003.

GAGE.--Water-stage recorder. Elevation of gage is 279 ft. above sea level, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Discharge data represent the net flow remaining after diversion for water supply to Fort Richardson, Elmendorf Air Force Base, and Municipality of Anchorage. Average diversion for water year 2003 was 6.23 ft³/s. Diversion began in 1944. Magnitude of discharges downstream of dam may be affected by periodic spillway adjustment.

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

EXTREMES FOR CURRENT YEAR.-- Maximum daily discharge, 680 ft³/s (estimated), December 28, 2002, maximum gage height 9.2 ft, from floodmarks, December 28, 2002; minimum daily discharge 37 ft³/s, April 12, 2003.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e400	e305	e170	e100	e65	61	40	133	329	e270	124	146
2	e370	e290	e160	e95	e65	62	44	138	296	e320	121	142
3	e300	e275	e155	e90	e65	63	44	151	304	e360	118	149
4	e270	e265	e155	e90	e65	60	42	152	302	e310	116	141
5	e260	e265	e150	e90	e65	54	43	146	314	e270	110	135
6	e260	e270	e145	e85	e65	49	44	138	343	e260	107	132
7	e390	e250	e140	e85	e60	e45	45	128	e330	e240	104	127
8	e410	e235	e140	e85	e60	e45	44	130	e320	e230	103	120
9	e350	e220	e135	e85	e60	e45	43	138	295	e220	102	116
10	e320	e200	e130	e85	e60	e45	40	137	327	e220	101	110
11	e310	e205	e130	e85	e60	e45	38	135	397	e230	106	107
12	e300	e205	e125	e80	e55	e45	37	134	449	e220	140	103
13	e280	e190	e115	e80	e55	e45	42	127	e480	e210	151	105
14	e270	e185	e115	e80	e55	e45	41	122	e490	209	172	101
15	e270	e185	e110	e80	e55	e55	38	123	e470	195	172	99
16	e290	e180	e110	e80	e55	e55	38	134	399	200	e240	97
17	e295	e175	e110	e80	e55	e55	41	147	354	184	e250	95
18	e310	e170	e110	e80	e55	e55	42	138	337	171	e225	94
19	e315	e165	e110	e75	e55	45	41	132	314	155	208	92
20	e425	e160	e110	e75	e55	40	43	139	317	156	176	93
21	e450	e155	e100	e75	e55	39	45	152	314	164	162	94
22	e420	e155	e100	e75	e55	44	46	164	296	163	155	92
23	e405	e170	e100	e75	e55	e45	49	182	289	151	153	91
24	e460	e155	e100	e75	e55	e45	55	203	280	153	145	92
25	e500	e150	e100	e70	e55	e45	60	236	267	157	153	98
26	e490	e160	e100	e70	e55	e45	65	255	253	147	187	97
27	e420	e155	e160	e70	e55	42	77	263	229	142	185	91
28	e380	e145	e680	e70	e55	41	105	266	219	137	168	93
29	e380	e155	e540	e70	---	39	115	302	225	136	158	97
30	e360	e190	127	e70	---	40	123	285	248	130	157	103
31	e325	---	124	e65	---	40	---	302	---	128	147	---
TOTAL	10985	5985	4856	2470	1625	1479	1570	5332	9787	6238	4716	3252
MEAN	354	200	157	79.7	58.0	47.7	52.3	172	326	201	152	108
MAX	500	305	680	100	65	63	123	302	490	360	250	149
MIN	260	145	100	65	55	39	37	122	219	128	101	91
AC-FT	21790	11870	9630	4900	3220	2930	3110	10580	19410	12370	9350	6450
CFSM	3.43	1.93	1.51	0.77	0.56	0.46	0.51	1.66	3.16	1.95	1.47	1.05
IN.	3.95	2.15	1.75	0.89	0.58	0.53	0.56	1.92	3.52	2.24	1.70	1.17

WTR YR 2003 TOTAL 58295 MEAN 160 MAX 680 MIN 37 AC-FT 115600 CFSM 1.54 IN. 20.97

ADJUSTED TO INCLUDE DIVERSIONS

MEAN	360	205	162	85.4	63.6	53.5	58.2	179	334	210	158	114
CFSM	3.48	1.98	1.57	0.83	0.62	0.52	0.56	1.73	3.23	2.03	1.53	1.10
IN	4.01	2.22	1.81	0.95	0.64	0.60	0.63	2.00	3.61	2.34	1.76	1.23
AC-FT	22120	12220	9990	5250	3530	3290	3460	11010	19880	12900	9720	6770

e Estimated

15276320 SHIP CREEK BELOW FISH HATCHERY NEAR ANCHORAGE

LOCATION.--Lat 61°14'36", long 149°43'19", in SW¹/₄ NE¹/₄ SE¹/₄ sec. 1, T. 13 N., R. 3 W. (Anchorage A-8NE quad), Municipality of Anchorage, Hydrologic Unit 19020401, in Fort Richardson Military Reservation, on left bank, 0.5 mi downstream from fish hatchery, 0.8 mi upstream of the Fort Richardson Elmendorf border, 3.3 mi downstream from diversion dam, and 6.0 mi east of intersection of Seward and Glenn Highways in Anchorage.

DRAINAGE AREA.--Pending.

PERIOD OF RECORD.--October 2002 to September 2003.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Discharge data represent the net flow remaining after diversion for water supply to Fort Richardson, Elmendorf Air Force Base, and Municipality of Anchorage. Average diversion for water year 2003 was 6.23 ft³/s. Diversion began in 1944. Magnitude of discharges downstream of dam may be affected by periodic spillway adjustment.

EXTREMES FOR CURRENT YEAR.--Maximum discharge and gage-height unknown, minimum daily discharge, 34 ft³/s, April 10 and 11.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e380	e280	e160	e90	e60	e55	e44	121	325	258	120	152
2	e360	e260	e150	e85	e60	e55	e44	120	305	313	117	147
3	e280	e240	e150	e85	e60	e50	e42	129	301	355	114	149
4	e260	e240	e150	e85	e60	e50	e42	132	306	306	111	143
5	e240	e240	e140	e85	e60	e50	e40	127	325	271	107	136
6	e240	e240	e140	e80	e60	e50	e40	120	344	257	103	131
7	e380	e220	e130	e80	e60	e50	e38	112	330	240	101	127
8	e400	e220	e130	e80	e60	e50	e38	114	314	228	99	123
9	e340	e200	e120	e80	e60	e50	e36	123	306	217	98	120
10	e300	e200	e120	e80	e55	e50	e34	124	353	224	97	118
11	e280	e200	e120	e80	e55	e50	e34	125	422	231	102	115
12	e280	e200	e120	e75	e55	e50	e36	124	471	214	140	111
13	e260	e190	e110	e75	e55	e50	e36	119	507	201	155	113
14	e260	e190	e110	e75	e55	e50	e36	117	517	186	182	108
15	e260	e180	e100	e75	e55	e50	e36	118	499	186	180	105
16	e280	e170	e100	e75	e55	e50	e36	132	414	191	245	103
17	e280	e170	e100	e75	e55	e50	e36	149	375	179	252	101
18	e300	e160	e100	e75	e55	e50	e36	138	355	166	224	99
19	e300	e160	e100	e70	e55	e48	e36	136	342	147	201	97
20	e400	e150	e100	e70	e55	e48	e38	140	336	147	186	98
21	e440	e150	e95	e70	e55	e48	e40	151	333	155	171	98
22	e400	e150	e95	e70	e55	e48	e42	165	315	154	159	97
23	e380	e160	e95	e70	e55	e46	e46	188	302	147	148	94
24	e440	e150	e95	e70	e55	e46	e50	207	287	150	142	94
25	e480	e140	e95	e65	e55	e46	55	221	276	156	146	101
26	e470	e150	e95	e65	e55	e46	61	244	261	143	196	101
27	e400	e150	e160	e65	e55	e46	71	253	241	138	187	94
28	e360	e140	e680	e65	e55	e46	87	257	231	135	172	96
29	e360	e150	e540	e65	---	e44	102	268	231	133	166	100
30	e340	e180	e90	e65	---	e44	113	316	243	126	162	107
31	e300	---	e90	e60	---	e44	---	328	---	124	159	---
TOTAL	10450	5630	4580	2305	1585	1510	1425	5118	10167	6078	4742	3378
MEAN	337	188	148	74.4	56.6	48.7	47.5	165	339	196	153	113
MAX	480	280	680	90	60	55	113	328	517	355	252	152
MIN	240	140	90	60	55	44	34	112	231	124	97	94
AC-FT	20730	11170	9080	4570	3140	3000	2830	10150	20170	12060	9410	6700

WTR YR 2003 TOTAL 56968 MEAN 156 MAX 680 MIN 34 AC-FT 113000

e Estimated

15278000 EKLUTNA LAKE NEAR PALMER

LOCATION.--Lat 61°24'39", long 149°07'20", in NE¹/₄ NE¹/₄ sec. 18, T. 15 N., R. 2 E. (Anchorage B-6 quad), Municipality of Anchorage, Hydrologic Unit 19020402, on north shore, 0.7 mi upstream from lake outlet, 12 mi upstream from mouth of Eklutna River, and 14 mi south of Palmer.

DRAINAGE AREA.--119 mi².

PERIOD OF RECORD.--November 1946 to September 1962 (fragmentary after January 1955), June 1983 to current year. Fragmentary records for the period October 1962 to June 1983 available from Eklutna Hydroelectric Project.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Alaska Power Administration). Prior to June 1983, non-recording gage at lake outlet at datum of 859.8 ft above sea level.

REMARKS.--Lake outlet consists of earth and rockfill dam with uncontrolled spillway crest at an elevation of 871 ft. Prior to 1965, control structure 1400 ft upstream with spillway crest at elevation of 867.5 ft which could be flash-boarded to elevation of 871 ft. Outflow was controlled by the flash boards and sluice gates. Dead storage below elevation of 859 ft. Reservoir is used for power generation and water supply. GOES satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 877.68 ft, September 25, 1995; minimum observed, 814.2 ft, June 1, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 867.15 ft, September 8; minimum, 831.29 ft, June 5.

GAGE-HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	864.13	863.26	861.44	857.80	852.95	848.36	841.19	834.60	831.78	837.56	855.58	866.36
2	864.10	863.18	861.37	857.66	852.78	848.12	840.99	834.40	831.67	838.08	855.83	866.45
3	863.98	863.11	861.27	857.56	852.62	847.86	840.79	834.20	831.58	838.70	856.07	866.65
4	863.88	863.02	861.14	857.46	852.43	847.60	840.61	834.04	831.49	839.25	856.24	866.84
5	863.80	863.01	861.02	857.31	852.28	847.35	840.42	833.92	831.41	839.78	856.42	866.93
6	863.75	863.16	860.91	857.16	852.10	847.10	840.26	833.98	831.43	840.40	856.65	866.98
7	863.71	863.17	860.85	857.01	851.91	846.87	840.09	834.03	831.45	840.92	856.92	867.07
8	863.65	863.13	860.76	856.85	851.71	846.63	839.87	834.07	831.45	841.51	857.26	867.10
9	863.58	863.08	860.64	856.70	851.56	846.40	839.67	834.12	831.46	842.12	857.69	867.09
10	863.50	863.03	860.54	856.53	851.46	846.14	839.42	834.15	831.59	842.77	858.14	867.03
11	863.39	862.98	860.48	856.36	851.33	845.92	839.16	834.20	831.76	843.46	858.65	866.93
12	863.29	862.90	860.42	856.18	851.27	845.72	838.93	834.26	831.96	844.20	859.39	866.85
13	863.18	862.80	860.31	855.99	851.21	845.50	838.76	834.30	832.27	844.87	860.07	866.83
14	863.04	862.71	860.16	855.85	851.07	845.28	838.58	834.26	832.72	845.63	860.73	866.80
15	862.96	862.61	860.02	855.73	850.91	845.00	838.37	834.15	833.15	846.39	861.54	866.69
16	862.88	862.51	859.87	855.57	850.73	844.71	838.15	834.00	833.50	847.17	862.26	866.53
17	862.79	862.41	859.74	855.41	850.58	844.47	837.94	833.83	833.77	847.88	862.76	866.43
18	862.65	862.29	859.60	855.27	850.52	844.24	837.73	833.68	833.95	848.48	863.08	866.29
19	862.52	862.16	859.48	855.08	850.54	844.00	837.53	833.58	834.21	849.03	863.35	866.18
20	862.56	862.04	859.35	854.93	850.56	843.76	837.35	833.48	834.43	849.63	863.57	866.07
21	862.63	861.95	859.22	854.79	850.44	843.57	837.13	833.33	834.65	850.27	863.74	865.96
22	862.61	861.86	859.14	854.63	850.21	843.38	836.78	833.07	834.86	850.88	863.92	865.78
23	862.60	861.79	859.13	854.45	849.97	843.15	836.44	832.83	835.12	851.45	864.05	865.58
24	862.80	861.74	859.01	854.28	849.67	842.92	836.17	832.68	835.43	852.08	864.21	865.42
25	863.07	861.67	858.87	854.07	849.38	842.71	835.95	832.59	835.74	852.71	864.42	865.25
26	863.28	861.58	858.68	853.88	849.12	842.47	835.73	832.48	835.98	853.21	864.71	865.07
27	863.34	861.55	858.53	853.70	848.87	842.28	835.49	832.38	836.21	853.69	864.98	864.89
28	863.36	861.49	858.37	853.54	848.61	842.07	835.17	832.25	836.47	854.15	865.28	864.75
29	863.34	861.42	858.21	853.43	---	841.81	834.99	832.13	836.80	854.56	865.61	864.69
30	863.33	861.45	858.04	853.30	---	841.61	834.79	832.01	837.15	854.92	865.95	864.84
31	863.31	---	857.90	853.13	---	841.39	---	831.86	---	855.26	866.21	---
MEAN	863.26	862.44	859.82	855.54	850.96	844.79	838.15	833.51	833.51	846.81	861.14	866.21
MAX	864.13	863.26	861.44	857.80	852.95	848.36	841.19	834.60	837.15	855.26	866.21	867.10
MIN	862.52	861.42	857.90	853.13	848.61	841.39	834.79	831.86	831.41	837.56	855.58	864.69

15280200 EKLUTNA RIVER AT OLD GLENN HIGHWAY AT EKLUTNA

LOCATION.--Lat 61°27'01", long 149°22'02", in NE¹/₄ SW¹/₄ NE¹/₄ sec. 25, T. 16 N., R. 1 W. (Anchorage B-7 quad), Municipality of Anchorage, Hydrologic Unit 19020402, on right bank, 1.3 mi upstream from mouth, 0.7 mi south of Eklutna.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--May 1 2002 to current year

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records are fair except for estimated daily discharges, which are poor. Flow regulated by Eklutna Reservoir, 11 mi upstream, for power generation and water supply. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	63	33	e20	21	22	e15	24	28	81	49	40
2	73	60	32	e23	21	23	e14	22	28	90	50	39
3	62	57	32	e22	22	23	e14	22	27	88	47	39
4	63	55	31	e22	24	22	e14	e21	29	89	45	39
5	62	55	31	e22	26	23	e14	e20	32	88	42	35
6	61	55	30	e22	23	e22	e14	e19	35	84	40	34
7	70	52	29	e21	22	e21	e14	19	35	84	38	34
8	66	48	30	e21	24	e18	15	19	38	82	37	33
9	65	e45	29	e21	25	e12	17	19	38	78	36	32
10	64	e44	29	e22	28	e7.0	17	19	46	75	36	32
11	65	e45	29	e22	26	e7.0	20	19	55	74	37	31
12	64	e44	26	e22	25	e10	28	20	65	66	43	30
13	63	e43	e25	e22	25	e12	27	19	81	65	40	32
14	63	42	e24	e22	23	e15	28	18	93	57	38	30
15	63	42	e23	e22	23	e16	27	19	111	e60	39	29
16	64	41	e15	e22	e22	e16	27	20	104	67	39	29
17	64	e40	e10	e22	e21	e16	22	21	106	66	38	28
18	66	e39	e15	e22	e20	e16	22	20	99	62	38	28
19	67	38	e20	e22	e19	e15	20	19	99	59	38	27
20	68	37	e24	e22	e19	e15	20	19	101	59	38	27
21	70	37	e24	22	e18	e14	21	19	102	59	38	27
22	69	36	e24	e21	e18	e14	22	20	99	58	39	26
23	69	36	e25	e21	e19	e13	25	20	100	57	36	26
24	68	36	e25	e20	e20	e13	28	20	108	56	37	27
25	69	35	e25	e19	e21	e14	29	22	97	58	37	26
26	70	35	e20	e19	e21	e14	29	22	87	56	38	26
27	67	35	e12	e19	22	e15	29	23	80	54	37	25
28	67	34	e8.0	e20	22	e15	27	24	79	53	40	25
29	67	35	e10	e21	---	e15	24	26	77	52	39	26
30	66	36	e15	e21	---	e15	25	27	78	50	39	26
31	64	---	e22	22	---	e15	---	29	---	50	39	---
TOTAL	2050	1300	727.0	661	620	488.0	648	650	2157	2077	1227	908
MEAN	66.1	43.3	23.5	21.3	22.1	15.7	21.6	21.0	71.9	67.0	39.6	30.3
MAX	73	63	33	23	28	23	29	29	111	90	50	40
MIN	61	34	8.0	19	18	7.0	14	18	27	50	36	25
AC-FT	4070	2580	1440	1310	1230	968	1290	1290	4280	4120	2430	1800
CFSM	0.38	0.25	0.14	0.12	0.13	0.09	0.13	0.12	0.42	0.39	0.23	0.18
IN.	0.44	0.28	0.16	0.14	0.13	0.11	0.14	0.14	0.47	0.45	0.27	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)#

	MEAN	66.1	43.3	23.5	21.3	22.1	15.7	21.6	36.7	74.7	60.1	51.4	47.3
MAX	66.1	43.3	23.5	21.3	22.1	15.7	21.6	52.5	77.5	67.0	63.2	64.4	
(WY)	2003	2003	2003	2003	2003	2003	2003	2002	2002	2003	2002	2002	2002
MIN	66.1	43.3	23.5	21.3	22.1	15.7	21.6	21.0	71.9	53.3	39.6	30.3	
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002	2003	2003	2003

SUMMARY STATISTICS

FOR 2003 WATER YEAR

ANNUAL TOTAL	13513.0		
ANNUAL MEAN	37.0		
HIGHEST ANNUAL MEAN			
LOWEST ANNUAL MEAN			
HIGHEST DAILY MEAN	111	Jun 15	
LOWEST DAILY MEAN	a7.0	Mar 10	
ANNUAL SEVEN-DAY MINIMUM	11	Mar 9	
MAXIMUM PEAK FLOW	131	Jun 21	
MAXIMUM PEAK STAGE	85.87	Jun 21	
MAXIMUM PEAK STAGE	b87.68	Mar 13	
ANNUAL RUNOFF (AC-FT)	26800		
10 PERCENT EXCEEDS	69		
50 PERCENT EXCEEDS	28		
90 PERCENT EXCEEDS	16		

See Period of Record. Partial years used in monthly statistics
a Mar. 10 and 11
b Backwater from ice
e Estimated

15281000 KNIK RIVER NEAR PALMER

LOCATION.--Lat 61°30'18", long 149°01'50", in NE¹/₄ SE¹/₄ sec. 2, T.16 N., R.2 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020402, near the right bank on downstream side of bridge on Old Glenn Highway, 7 mi south of Palmer, 7 mi upstream from Alaska Railroad bridge, 9 mi downstream from Friday Creek, and about 17 mi downstream from Knik Glacier.

DRAINAGE AREA.--1,180 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to January 1988, annual maximum, water year 1989, October 1991 to September 1992, and April, 2001 to current year.

REVISED RECORDS.--WRD-AK-77-1: 1974-75 (M).

GAGE.--Water-stage recorder. Datum of gage is 33.68 ft above North American Vertical Datum of 1988. Prior to June 27, 1960, nonrecording gage, and June 27, 1960 to Apr. 25, 1974, water-stage recorder at old bridge 100 ft upstream at original 1929 datum. Apr. 26, 1974 to Apr. 18, 1976, recording gage at site 0.4 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flood peaks due to outbreak of glacier-dammed Lake George, 1948-62, 1964, 1965, published in WSP 1936. Streamflow augmented by glaciers, which cover 54 percent of the basin.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1948, 359,000 ft³/s, July 18, 1958, gage height, 25.30 ft, at site in use beginning 1959, from outbreak of glacier-dammed Lake George.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9050	10400	e4000	e2200	e2000	1160	e640	3100	9850	20000	22600	18400
2	8660	8810	e3800	e2200	e2400	1180	e640	3180	9950	22700	20900	16600
3	7360	8060	e3500	e2200	2890	1170	e620	3130	9980	25100	19500	16300
4	6260	8080	e3300	e2200	3270	1120	e620	3160	10200	24000	17400	16500
5	5620	9840	e3100	e2200	5190	1120	e620	3310	10500	24700	17100	14900
6	5270	12900	e3000	e2200	7150	1110	e600	3260	11300	25700	18200	12900
7	5220	12300	e2900	e2200	5030	e1100	e600	3110	11400	25800	19500	11900
8	5520	9770	e2900	e2200	3930	e1000	e600	3110	11500	27800	21100	11500
9	5230	7960	e2800	e2200	3600	e940	e600	3280	11600	30100	23500	11300
10	4840	7090	e2800	e2200	3520	e900	e620	3800	12900	32000	25400	10500
11	4620	6820	e2700	e2200	3480	e860	e630	4090	14600	31900	27000	e9700
12	4850	5350	e2700	e2200	3220	e860	690	3840	15800	31400	28500	e9400
13	4860	5750	e2600	e2200	2850	e800	789	3720	17900	31100	29200	e10000
14	5260	4810	e2600	e2200	2450	e800	1070	3630	20900	32200	30400	9310
15	5440	4140	e2500	e2100	2160	e800	1230	3590	20500	33200	36600	7520
16	5910	3900	e2500	e2100	e2000	e740	1170	3710	20700	34400	41500	6260
17	6050	3820	e2400	e2100	e1800	e740	1120	3920	19900	34300	39600	5630
18	6000	3790	e2400	e2100	e1600	e740	1100	4120	20100	33000	33600	5240
19	6490	3480	e2400	e2100	e1500	e720	1130	4210	21200	30700	27700	4870
20	8380	e3470	e2400	e2100	e1450	e720	1150	4190	21100	31200	24900	4470
21	11100	e3470	e2400	e2100	e1400	e720	1210	4200	19600	31900	22000	4180
22	11500	e3400	e2400	e2100	e1350	e700	1340	4350	18400	29000	18700	3840
23	13800	e3400	e2400	e2100	e1300	e700	1470	4990	18400	27000	17700	3560
24	18300	e3500	e2400	e2100	e1300	e700	1540	5480	19200	29700	17500	3360
25	21100	e3800	e2300	e2100	e1300	e680	1630	5900	18700	27900	18300	3270
26	21600	e4000	e2300	e2000	e1250	e680	1740	6520	17200	25000	18900	3390
27	15300	e4000	e2300	e2000	e1240	e680	2010	8920	16000	24800	19100	e3700
28	11400	e4100	e2300	e2000	1220	e660	2370	9250	15800	25300	19900	3850
29	10700	e4100	e2300	e2000	---	e660	2580	8470	16300	25000	22400	5790
30	13100	e4200	e2300	e2000	---	e660	2740	9190	18100	25000	22400	10100
31	12000	---	e2300	e2000	---	e640	---	9660	---	23400	20900	---
TOTAL	280790	178510	83000	65900	71850	26060	34869	148390	479580	875300	742000	258240
MEAN	9058	5950	2677	2126	2566	841	1162	4787	15990	28240	23940	8608
MAX	21600	12900	4000	2200	7150	1180	2740	9660	21200	34400	41500	18400
MIN	4620	3400	2300	2000	1220	640	600	3100	9850	20000	17100	3270
AC-FT	556900	354100	164600	130700	142500	51690	69160	294300	951200	1736000	1472000	512200
CFSM	7.68	5.04	2.27	1.80	2.17	0.71	0.98	4.06	13.5	23.9	20.3	7.29
IN.	8.85	5.63	2.62	2.08	2.27	0.82	1.10	4.68	15.12	27.59	23.39	8.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)#

	MEAN	4494	1906	1022	909	790	658	922	3807	12900	23710	21460	11180
MAX	9419	5950	2677	3781	2566	1314	1534	7347	19960	37450	28300	16960	
(WY)	1970	2003	2003	1981	2003	1977	1983	1981	1969	1960	1979	1974	
MIN	1782	637	500	460	338	260	348	1039	2598	17440	15260	6594	
(WY)	1982	1969	1974	1976	1962	1962	1972	1965	1965	1970	1969	1992	

See Period of Record; partial years used in monthly statistics
e Estimated

15281000 KNIK RIVER NEAR PALMER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003#	
ANNUAL TOTAL	3091880		3244489			
ANNUAL MEAN	8471		8889		7004	
HIGHEST ANNUAL MEAN					8889	2003
LOWEST ANNUAL MEAN					5590	1973
HIGHEST DAILY MEAN	33600	Jul 25	41500	Aug 16	341000	Jul 26 1961
LOWEST DAILY MEAN	a850	Feb 11	b600	Apr 6	c260	Mar 1 1962
ANNUAL SEVEN-DAY MINIMUM	850	Feb 11	609	Apr 3	260	Mar 1 1962
MAXIMUM PEAK FLOW			d42700	Aug 16	fg355000	Jul 26 1961
MAXIMUM PEAK STAGE			d13.06	Aug 16	24.35	Jul 17 1960
ANNUAL RUNOFF (AC-FT)	6133000		6435000		5074000	
ANNUAL RUNOFF (CFSM)	7.18		7.53		5.94	
ANNUAL RUNOFF (INCHES)	97.47		102.28		80.65	
10 PERCENT EXCEEDS	23000		24800		21100	
50 PERCENT EXCEEDS	4140		4000		2100	
90 PERCENT EXCEEDS	850		976		500	

See Period of Record; partial years used in monthly statistics

a Feb. 11 to Mar. 19

b Apr. 6-9

c Mar. 1-31, 1962

d Aug. 16 and 17

f Site then in use, caused by release of stored water from outbreak of glacier-dammed Lake George

g Gage height, 24.3 ft

15281000 KNIK RIVER NEAR PALMER—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-1958, 1961-1972, 1974-1975, 1989 and current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1962-1966.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

				Loca- tion in X-sect. looking dwnstrm			Starting time, 24 hour clock, hr:min	Ending time, 24 hour clock, hr:min	Instan- taneous dis- charge, cfs	Sampling method code	Sampler type, code	Temper- ature. water. deg C	Temper- ature air deg C	Sus- pended sediment concen- tration mg/L	Sus- pended sediment load tons/d
Date	Time	Strem width, feet (0004)	ft from l bank (00009)	Gage height, feet (00065)	(82074)	(82073)	(00061)	(82398)	(84164)	(00010)	(00020)	(80154)	(80155)		
JUN															
13...	1311	397	--	10.14	1311.00	1425.00	19000	20	3055	5.5	17.0	--	--		
13...	1500	397	510	10.18	1507.00	1811.00	17800	1000	1100	5.5	17.0	--	--		
JUL															
03...	1410	400	--	11.04	1410.00	1515.00	24700	20	3055	5.5	19.0	364	24300		
03...	1540	400	510	10.99	1540.00	1721.00	24300	1000	1100	5.5	19.0	--	--		
12...	1456	400	--	11.64	1456.00	1531.00	30000	20	3055	8.5	22.0	711	57800		
12...	1555	400	510	11.60	1555.00	1706.00	29800	1000	1100	8.5	22.0	--	--		
12...	1728	400	--	11.58	1728.00	1920.00	29800	--	8010	8.5	22.0	--	--		
AUG															
14...	1234	390	--	11.70	1234.00	1303.00	30200	20	3055	4.0	13.0	610	49700		
14...	1316	390	510	11.71	1316.00	1417.00	30300	1000	1100	4.0	13.0	--	--		
SEP															
19...	1410	388	--	6.96	1410.00	1434.00	4820	20	3055	1.5	.0	205	2670		
19...	1512	388	702	6.98	1512.00	1728.00	4820	1000	1100	1.5	.0	--	--		
		Suspnd. sedi- ment, seive diametr percent <.063mm (70311)	Bedload sedimnt dischrge average unit composit t/d/ft (04122)	Compstd samples in x-sec bedload measmnt number (04118)	Number of sampling points, count (00063)	Verti- cals in compo- site sample, number (04119)	Hori- zontal width of verti- cal, feet (04121)	Rest time on bed for bed load sample, seconds (04120)	Bag mesh size, bedload sampler mm (30333)	Tether line used in sampling (yes=1) code (04117)	Bedload sedi- ment, seive diametr percent <.25mm (80228)	Bedload sedi- ment, seive diametr percent <.5mm (80229)	Bedload sedi- ment, seive diametr percent <1mm (80230)		
JUN															
13...	--	--	--	--	--	--	--	--	--	--	--	--	--		
13...	--	--	8760	22.1	2	1	19	20.0	20	.025	1	.0	15	46	
JUL															
03...	86	--	--	--	--	--	--	--	--	--	--	--	--		
03...	--	--	6700	16.8	2	1	19	20.0	15	.025	1	.0	13	35	
12...	86	--	--	--	--	--	--	--	--	--	--	--	--		
12...	--	--	9010	22.5	2	1	19	20.0	15	.025	1	.0	12	38	
12...	--	--	--	--	--	--	--	--	--	--	--	--	--		
AUG															
14...	64	--	--	--	--	--	--	--	--	--	--	--	--		
14...	--	--	9700	24.9	2	1	19	20.0	15	.025	1	.0	10	36	
SEP															
19...	32	--	--	--	--	--	--	--	--	--	--	--	--		
19...	--	--	480	1.24	2	1	20	10.0	60	.025	1	.0	26	65	

15281000 KNIK RIVER NEAR PALMER—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Bedload sedi- ment, sieve diametr percent <2mm (80231)	Bedoad sedi- ment, sieve diametr percent <4mm (80232)	Bedoad sedi- ment, sieve diametr percent <8mm (80233)	Bedoad sedi- ment, sieve diametr percent <16mm (80234)	Bedoad sedi- ment, sieve diametr percent <32mm (80235)	Bed sedi- ment, dry svd sve dia percent <.25mm (80166)	Bed sedi- ment, dry svd dve dia percent <.5mm (80167)	Bed sedi- ment, dry svd dve dia percent <1mm (80168)	Bed sedi- ment, dry svd dve dia percent <2mm (80169)	Bed sedi- ment, dry svd dve dia percent <4mm (80170)	Bed sedi- ment, dry svd dve dia percent <8mm (80171)	Bed sedi- ment, dry svd dve dia percent <16mm (80172)	Bed sedi- ment, dry svd dve dia percent <32mm (80173)
JUN													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	74	90	98	100	--	--	--	--	--	--	--	--	--
JUL													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	66	85	95	100	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	66	83	94	99	100	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	.0	13	35	59	77	91	99	100
AUG													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	65	83	95	99	100	--	--	--	--	--	--	--	--
SEP													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	82	91	97	100	100	--	--	--	--	--	--	--	--

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE

LOCATION.--Lat 61°50'20", long 147°24'31", in SE¹/₄ SE¹/₄ NW¹/₄ sec. 11, T. 20 N., R. 11 E. (Anchorage D-2 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020402, on left bank 5 ft downstream from culvert on old alignment (1/2 mile upstream from new alignment) Glenn Highway, and 3.5 mi northeast of Sheep Mountain Lodge.

DRAINAGE AREA.--1.09 mi²

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1968-69, 1971, 1989-95. October 1995 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,950 ft above sea level, from topographic map. Prior to 1971 crest-stage gage at site above culvert at different datum, June 2, 1989 to September 30, 1995, crest-stage gage at same site and datum.

REMARKS.--Records are poor. Goes satellite telemetry at station. Rain gauge at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.75	e0.21	e0.03	e0.01	e0.0	e0.0	e0.0	e0.02	0.77	0.26	0.22	0.45
2	e0.63	e0.21	e0.03	e0.01	e0.0	e0.0	e0.0	e0.02	0.81	0.26	0.20	0.42
3	0.63	e0.20	e0.03	e0.01	e0.0	e0.0	e0.0	e0.03	0.68	0.27	0.21	0.39
4	0.64	e0.20	e0.03	e0.01	e0.0	e0.0	e0.0	e0.03	0.63	0.27	0.22	0.38
5	0.65	e0.19	e0.03	e0.01	e0.0	e0.0	e0.0	e0.04	0.82	0.25	0.25	0.39
6	0.60	e0.19	e0.03	e0.01	e0.0	e0.0	e0.0	e0.04	1.1	0.23	0.27	0.43
7	0.57	e0.17	e0.03	e0.01	e0.0	e0.0	e0.0	e0.05	1.5	0.19	0.30	0.40
8	0.56	e0.15	e0.02	e0.01	e0.0	e0.0	e0.0	e0.06	1.2	0.18	0.32	0.39
9	0.54	e0.13	e0.02	e0.01	e0.0	e0.0	e0.0	e0.07	0.93	0.16	0.32	0.41
10	0.53	e0.12	e0.02	e0.01	e0.0	e0.0	e0.0	e0.09	0.82	0.15	0.34	0.42
11	0.49	e0.11	e0.02	e0.01	e0.0	e0.0	e0.0	e0.11	0.74	0.17	0.42	0.43
12	e0.45	e0.10	e0.02	e0.01	e0.0	e0.0	e0.0	e0.15	0.64	0.16	0.43	0.42
13	e0.43	e0.09	e0.02	e0.01	e0.0	e0.0	e0.0	0.22	0.58	0.17	0.41	0.40
14	e0.42	e0.08	e0.02	e0.0	e0.0	e0.0	e0.0	0.59	0.57	0.18	0.35	0.40
15	e0.42	e0.07	e0.02	e0.0	e0.0	e0.0	e0.0	0.69	0.54	0.17	0.35	0.42
16	e0.41	e0.07	e0.02	e0.0	e0.0	e0.0	e0.0	0.51	0.51	0.16	0.40	0.41
17	e0.40	e0.06	e0.02	e0.0	e0.0	e0.0	e0.0	1.0	0.51	0.19	0.40	0.40
18	e0.39	e0.06	e0.02	e0.0	e0.0	e0.0	e0.0	1.8	0.52	0.21	0.40	0.38
19	e0.37	e0.05	e0.02	e0.0	e0.0	e0.0	e0.0	2.4	0.55	0.24	0.40	0.37
20	e0.35	e0.05	e0.02	e0.0	e0.0	e0.0	e0.0	2.7	0.54	0.20	0.46	0.36
21	e0.32	e0.05	e0.02	e0.0	e0.0	e0.0	e0.0	2.9	0.46	0.19	0.45	0.35
22	e0.31	e0.04	e0.02	e0.0	e0.0	e0.0	e0.0	2.6	0.40	0.20	0.48	0.33
23	e0.30	e0.04	e0.02	e0.0	e0.0	e0.0	e0.0	2.3	0.36	0.21	0.46	0.32
24	e0.29	e0.04	e0.02	e0.0	e0.0	e0.0	e0.01	2.3	0.37	0.22	0.43	0.30
25	e0.28	e0.04	e0.02	e0.0	e0.0	e0.0	e0.01	2.0	0.40	0.25	0.44	0.28
26	e0.27	e0.04	e0.02	e0.0	e0.0	e0.0	e0.01	1.7	0.35	0.24	0.45	0.27
27	e0.26	e0.04	e0.02	e0.0	e0.0	e0.0	e0.01	1.2	0.35	0.25	0.47	0.26
28	e0.25	e0.03	e0.02	e0.0	e0.0	e0.0	e0.01	1.0	0.37	0.27	0.47	0.26
29	e0.24	e0.03	e0.02	e0.0	---	e0.0	e0.02	0.94	0.33	0.28	0.46	0.26
30	e0.23	e0.03	e0.02	e0.0	---	e0.0	e0.02	0.88	0.27	0.27	0.48	0.26
31	e0.22	---	e0.01	e0.0	---	e0.0	---	0.74	---	0.23	0.47	---
TOTAL	13.20	2.89	0.68	0.13	0.0	0.0	0.09	29.18	18.62	6.68	11.73	10.96
MEAN	0.43	0.096	0.022	0.004	0.000	0.000	0.003	0.94	0.62	0.22	0.38	0.37
MAX	0.75	0.21	0.03	0.01	0.00	0.00	0.02	2.9	1.5	0.28	0.48	0.45
MIN	0.22	0.03	0.01	0.00	0.00	0.00	0.00	0.02	0.27	0.15	0.20	0.26
AC-FT	26	5.7	1.3	0.3	0.00	0.00	0.2	58	37	13	23	22
CFSM	0.39	0.09	0.02	0.00	0.00	0.00	0.00	0.86	0.57	0.20	0.35	0.34
IN.	0.45	0.10	0.02	0.00	0.00	0.00	0.00	1.00	0.64	0.23	0.40	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)#

	1996	1997	1998	1999	2000	2001	2002
MEAN	0.53	0.24	0.088	0.009	0.000	0.000	0.017
MAX	1.12	0.65	0.39	0.042	0.000	0.000	0.058
(WY)	1998	1998	1998	1999	1996	1996	1998
MIN	0.17	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1997	2001	2001	1996	1996	1996	1999

e Estimated

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002#	
ANNUAL TOTAL	453.53		94.16			
ANNUAL MEAN	1.24		0.26		0.82	
HIGHEST ANNUAL MEAN					1.46	2000
LOWEST ANNUAL MEAN					0.26	2002
HIGHEST DAILY MEAN	14	Jun 9	2.9	May 21	17	Jun 7 1997
LOWEST DAILY MEAN	a0.00	Jan 1	b0.00	Jan 14	c0.00	Dec 6 1995
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Jan 14	0.00	Dec 6 1995
MAXIMUM PEAK FLOW			6.1	May 20	d46	Jul 21 1992
MAXIMUM PEAK STAGE			f15.08	May 20	15.49	Jun 28 2000
MAXIMUM PEAK STAGE			fg17.02	Apr 28		
ANNUAL RUNOFF (AC-FT)	900		187		598	
ANNUAL RUNOFF (CFSM)	1.14		0.24		0.76	
ANNUAL RUNOFF (INCHES)	15.48		3.21		10.28	
10 PERCENT EXCEEDS	4.6		0.57		2.3	
50 PERCENT EXCEEDS	0.10		0.12		0.21	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

See Period of Record

a Jan. 1 to May 12

b Jan. 14 to Apr. 23

c No flow most days during winter

d From rating curve extended above 0.8 ft³/s

f From crest-stage gage

g Flow over ice

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.28	0.16	e0.05	e0.03	e0.01	e0.01	e0.01	e0.02	2.8	0.68	0.43	1.00
2	0.27	0.16	e0.05	e0.03	e0.01	e0.01	e0.01	e0.03	2.5	0.73	0.41	0.83
3	0.26	0.16	e0.05	e0.02	e0.01	e0.01	e0.01	e0.03	2.0	0.74	0.39	0.71
4	0.25	0.16	e0.05	e0.02	e0.01	e0.01	e0.01	e0.03	2.2	0.72	0.41	0.66
5	0.25	0.17	e0.05	e0.02	e0.01	e0.01	e0.01	e0.04	2.3	0.70	0.38	0.60
6	0.24	0.16	e0.05	e0.02	e0.01	e0.01	e0.01	e0.05	2.6	0.71	0.34	0.52
7	0.24	0.15	e0.05	e0.02	e0.01	e0.01	e0.01	e0.05	2.2	0.73	0.34	0.49
8	0.23	0.15	e0.04	e0.02	e0.01	e0.01	e0.01	e0.07	2.0	0.70	0.33	0.46
9	0.21	0.15	e0.04	e0.02	e0.01	e0.01	e0.01	e0.07	2.6	0.70	0.31	0.43
10	0.20	e0.14	e0.04	e0.02	e0.01	e0.01	e0.01	e0.10	4.5	0.69	0.31	0.42
11	0.20	e0.14	e0.04	e0.02	e0.01	e0.01	e0.01	e0.12	3.2	0.64	0.32	0.41
12	0.21	e0.13	e0.04	e0.02	e0.01	e0.01	e0.01	e0.15	2.8	0.61	0.33	0.39
13	0.22	e0.12	e0.04	e0.02	e0.01	e0.01	e0.01	e0.20	2.0	0.59	0.32	0.39
14	0.21	e0.12	e0.04	e0.02	e0.01	e0.01	e0.01	e0.30	1.6	0.59	0.31	0.36
15	0.20	e0.11	e0.04	e0.01	e0.01	e0.01	e0.01	e0.34	1.4	0.57	0.32	0.32
16	0.21	e0.10	e0.04	e0.01	e0.01	e0.01	e0.01	e0.37	1.3	0.56	0.28	0.31
17	0.20	e0.09	e0.03	e0.01	e0.01	e0.01	e0.01	e0.39	1.2	0.53	0.28	0.30
18	0.20	e0.08	e0.03	e0.01	e0.01	e0.01	e0.01	e0.42	1.2	0.52	0.28	0.30
19	0.21	e0.07	e0.03	e0.01	e0.01	e0.01	e0.01	e0.50	1.2	0.47	0.27	0.28
20	0.23	e0.07	e0.03	e0.01	e0.01	e0.01	e0.01	e0.55	1.1	0.47	0.26	0.30
21	0.21	e0.07	e0.03	e0.01	e0.01	e0.01	e0.01	e0.59	1.2	0.52	0.27	0.32
22	0.19	e0.06	e0.03	e0.01	e0.01	e0.01	e0.01	e0.64	1.2	0.55	0.26	0.31
23	0.19	e0.06	e0.03	e0.01	e0.01	e0.01	e0.01	e0.70	1.1	0.51	0.24	0.29
24	0.19	e0.06	e0.03	e0.01	e0.01	e0.01	e0.01	e0.78	1.1	0.51	0.25	0.30
25	0.19	e0.06	e0.03	e0.01	e0.01	e0.01	e0.01	e0.87	0.98	0.53	0.24	0.29
26	0.19	e0.06	e0.03	e0.01	e0.01	e0.01	e0.01	1.5	0.93	0.52	0.22	0.29
27	0.18	e0.06	e0.03	e0.01	e0.01	e0.01	e0.02	2.2	0.89	0.52	0.22	0.27
28	0.18	e0.06	e0.03	e0.01	e0.01	e0.01	e0.02	2.6	0.84	0.51	0.22	0.27
29	0.18	e0.05	e0.03	e0.01	---	e0.01	e0.02	3.0	0.79	0.50	0.23	0.30
30	0.17	e0.05	e0.03	e0.01	---	e0.01	e0.02	3.2	0.70	0.46	0.25	0.30
31	0.17	---	e0.03	e0.01	---	e0.01	---	3.2	---	0.46	0.91	---
TOTAL	6.56	3.18	1.16	0.47	0.28	0.31	0.34	23.11	52.43	18.24	9.93	12.42
MEAN	0.21	0.11	0.037	0.015	0.010	0.010	0.011	0.75	1.75	0.59	0.32	0.41
MAX	0.28	0.17	0.05	0.03	0.01	0.01	0.02	3.2	4.5	0.74	0.91	1.0
MIN	0.17	0.05	0.03	0.01	0.01	0.01	0.01	0.02	0.70	0.46	0.22	0.27
AC-FT	13	6.3	2.3	0.9	0.6	0.6	0.7	46	104	36	20	25
CFSM	0.19	0.10	0.03	0.01	0.01	0.01	0.01	0.68	1.60	0.54	0.29	0.38
IN.	0.22	0.11	0.04	0.02	0.01	0.01	0.01	0.79	1.79	0.62	0.34	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)#

MEAN	0.49	0.23	0.082	0.010	0.001	0.001	0.016	0.87	3.67	1.56	1.22	1.04
MAX	1.12	0.65	0.39	0.042	0.010	0.010	0.058	1.55	8.58	2.97	3.58	2.63
(WY)	1998	1998	1998	1999	2003	2003	1996	1998	2001	2001	1997	2000
MIN	0.17	0.000	0.000	0.000	0.000	0.000	0.000	0.25	0.56	0.22	0.32	0.37
(WY)	1997	2001	2001	1996	1996	1996	1999	1999	1996	2002	2003	2002

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1996 - 2003#

ANNUAL TOTAL	88.29	128.43	
ANNUAL MEAN	0.24	0.35	0.77
HIGHEST ANNUAL MEAN			1.46
LOWEST ANNUAL MEAN			0.26
HIGHEST DAILY MEAN	2.9 May 21	4.5 Jun 10	17 Jun 7 1997
LOWEST DAILY MEAN	a0.00 Jan 14	b0.01 Jan 15	c0.00 Dec 6 1995
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 14	0.01 Jan 15	0.00 Dec 6 1995
MAXIMUM PEAK FLOW		8.6 Jun 10	d46 Jul 21 1992
MAXIMUM PEAK STAGE		f15.28 Jun 10	15.49 Jun 28 2000
ANNUAL RUNOFF (AC-FT)	175	255	555
ANNUAL RUNOFF (CFSM)	0.22	0.32	0.70
ANNUAL RUNOFF (INCHES)	3.01	4.38	9.55
10 PERCENT EXCEEDS	0.51	0.85	2.2
50 PERCENT EXCEEDS	0.14	0.14	0.20
90 PERCENT EXCEEDS	0.00	0.01	0.00

See Period of Record

a Jan. 14 to Apr. 23

b Jan. 15 to Apr. 26

c No flow most days during winter

d From rating curve extended above 2 ft³/s

e Estimated

f From crest-stage gage

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1996 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 1-hour recording interval.

REMARKS.--No record from October 16 to May 15 due to probe froze in ice or no flow conditions. Records represent water temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross section on July 10. No variation was found within the cross section. No variation was found between mean stream temperature and temperature at the sensor. Large stream icing forms near the gage.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 10.0°C, on July 15, 2003; minimum, 0.0°C, on many days during fall, winter, and spring breakup periods.

EXTREMES FOR 2002.--

WATER TEMPERATURE: Maximum, 8.5°C, July 23, and August 4-5; minimum, 0.0°C, on several days during fall, and spring breakup periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	SAMPLE			DIS-	TEMPER-	TEMPER-	SAM-	SAMPLER	
		STREAM	SECTION	GAGE	CHARGE,					
					CUBIC					FEET
WIDTH	(FT FM	HEIGHT	PER	ATURE	ATURE	PLING				
(FT)	R BK)	(FEET)	SECOND	(DEG C)	(DEG C)	METHOD,				
(000004)	(72103)	(00065)	(00061)	(00010)	(00020)	CODES	(CODE)			
JUL										
10...	1302	3.60	0.6	14.36	.16	7.0	18.0	10	8010	
10...	1304	3.60	1.6	14.36	.16	7.0	18.0	10	8010	
10...	1306	3.60	2.6	14.36	.16	7.0	18.0	10	8010	
10...	1308	3.60	3.6	14.36	.16	7.0	18.0	10	8010	

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
17	---	---	---	---	---	---	---	---	---	1.5	0.0	0.5
18	---	---	---	---	---	---	---	---	---	2.0	0.0	0.5
19	---	---	---	---	---	---	---	---	---	3.0	0.0	1.0
20	---	---	---	---	---	---	---	---	---	3.5	0.0	1.5
21	---	---	---	---	---	---	---	---	---	4.0	0.5	1.5
22	---	---	---	---	---	---	---	---	---	4.0	0.5	2.0
23	---	---	---	---	---	---	---	---	---	5.0	1.0	2.5
24	---	---	---	---	---	---	---	---	---	5.0	1.0	2.5
25	---	---	---	---	---	---	---	---	---	5.5	1.0	3.0
26	---	---	---	---	---	---	---	---	---	5.0	1.5	3.0
27	---	---	---	---	---	---	---	---	---	3.5	2.0	2.5
28	---	---	---	---	---	---	---	---	---	3.5	2.0	2.5
29	---	---	---	---	---	---	---	---	---	4.5	2.0	3.0
30	---	---	---	---	---	---	---	---	---	3.5	2.0	3.0
31	---	---	---	---	---	---	---	---	---	3.5	2.0	2.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	3.0	2.0	2.5	7.5	5.0	6.0	7.5	5.5	6.5	6.5	5.5	5.5
2	3.5	1.0	2.5	7.0	5.5	6.0	7.5	5.5	6.5	6.5	5.0	5.5
3	3.5	1.5	2.5	7.0	5.5	6.0	8.0	6.0	7.0	6.0	4.5	5.5
4	3.5	1.5	2.5	6.5	5.5	5.5	8.5	6.0	7.0	6.0	5.0	5.5
5	4.0	2.0	3.0	6.5	4.5	5.5	8.5	6.0	7.0	6.0	5.0	5.5
6	3.0	2.0	2.5	7.5	5.0	6.0	8.0	6.5	7.0	6.0	5.5	5.5
7	4.0	2.0	3.0	7.5	5.0	6.0	7.0	6.5	6.5	5.5	4.5	5.5
8	4.5	2.0	3.0	7.5	5.0	6.5	7.0	6.5	6.5	6.0	4.5	5.0
9	3.0	1.5	2.5	7.5	5.5	6.0	7.0	6.0	6.5	5.5	4.5	5.0
10	4.5	1.5	3.0	7.0	5.5	6.0	7.0	5.5	6.0	5.5	4.5	5.0
11	4.0	2.0	3.0	7.0	6.0	6.5	7.0	6.0	6.5	5.0	4.0	4.5
12	4.5	2.0	3.0	7.5	6.0	6.5	7.0	6.0	6.5	5.0	4.0	4.5
13	4.0	2.5	3.5	7.5	6.0	6.5	7.5	6.0	6.5	4.5	4.0	4.5
14	5.0	2.5	4.0	7.5	5.5	6.5	7.5	5.5	6.5	5.0	4.0	4.5
15	6.0	3.0	4.5	8.0	5.5	6.5	6.5	5.0	6.0	5.0	4.5	4.5
16	6.5	3.0	4.5	8.0	5.5	6.5	6.5	5.5	6.0	5.5	4.0	4.5
17	7.0	4.0	5.5	7.5	6.5	7.0	7.5	6.0	6.5	5.0	4.0	4.5
18	7.0	4.5	5.5	7.0	6.5	6.5	7.5	6.0	6.5	4.5	4.0	4.5
19	6.0	4.5	5.0	7.5	6.0	6.5	6.5	6.0	6.5	4.5	3.5	4.0
20	6.0	4.0	5.0	8.0	5.5	6.5	6.5	5.5	6.0	4.0	3.5	3.5
21	6.5	4.0	5.0	8.0	5.5	6.5	6.5	5.5	6.0	4.5	3.0	3.5
22	6.5	4.0	5.0	8.0	6.0	6.5	6.5	5.5	6.0	4.0	2.5	3.0
23	5.5	4.0	5.0	8.5	6.5	7.0	7.0	5.5	6.0	4.0	2.5	3.5
24	6.0	4.5	5.0	7.5	7.0	7.0	7.0	5.5	6.0	4.0	3.0	3.5
25	5.5	4.5	5.0	8.0	6.5	7.0	6.5	5.5	6.0	5.0	3.0	4.0
26	5.5	4.0	4.5	7.0	6.0	6.5	6.5	5.0	5.5	4.5	3.5	3.5
27	6.0	4.0	5.0	6.5	6.0	6.0	6.0	5.0	5.5	4.5	3.0	3.5
28	6.5	4.5	5.0	6.5	6.0	6.0	7.0	5.0	6.0	4.0	3.0	3.5
29	7.0	4.5	5.5	6.5	6.0	6.0	6.5	5.5	6.0	3.5	2.5	3.0
30	7.0	5.0	5.5	7.5	5.5	6.5	6.0	5.5	6.0	3.5	3.0	3.0
31	---	---	---	7.5	6.0	6.5	7.0	5.0	6.0	---	---	---
MONTH	7.0	1.0	4.0	8.5	4.5	6.3	8.5	5.0	6.3	6.5	2.5	4.4

REMARKS.--No record from Jan. 24 to Apr.27 due to probe froze in ice. No record from Jun. 01 to Jun. 03 due to equipment malfunction. Records represent water temperature at the sensor within 0.5°C. Large stream icing forms near the gage.

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE—Continued

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 10.0°C, on July 15, 2003 ; minimum, 0.0°C, on several days during fall, and spring breakup periods.

Temperature, water, degrees Celsius
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	3.0	2.5	2.5	1.5	0.5	1.0	1.0	0.5	0.5	0.5	0.5	0.5
2	3.0	2.0	2.5	1.5	1.0	1.5	1.0	0.5	1.0	0.5	0.5	0.5
3	2.5	1.5	2.0	1.0	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5
4	2.5	2.0	2.0	1.5	1.0	1.0	1.0	0.5	1.0	0.5	0.5	0.5
5	2.0	2.0	2.0	1.5	1.0	1.5	1.0	0.5	1.0	0.5	0.5	0.5
6	2.5	1.5	2.0	1.5	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
7	2.5	1.5	2.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
8	2.5	1.5	2.0	1.0	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5
9	1.5	1.0	1.0	1.0	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5
10	1.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
11	2.0	1.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
12	2.5	1.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
13	2.0	1.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
14	2.5	1.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
15	1.5	1.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
16	2.0	1.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
17	2.0	1.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
18	2.0	1.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
19	2.0	1.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
20	2.5	1.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
21	2.0	1.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22	1.5	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5
23	2.0	1.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0
24	2.5	1.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	---	---	---
25	2.0	1.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	---	---	---
26	2.0	1.0	1.5	1.0	0.5	0.5	0.5	0.5	0.5	---	---	---
27	1.0	0.5	0.5	1.0	0.5	1.0	0.5	0.5	0.5	---	---	---
28	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	0.5	---	---	---
29	1.5	1.0	1.5	1.0	0.5	1.0	0.5	0.5	0.5	---	---	---
30	1.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	---	---	---
31	2.0	1.0	1.5	---	---	---	0.5	0.5	0.5	---	---	---
MONTH	3.0	0.5	1.6	1.5	0.5	0.7	1.0	0.5	0.6	---	---	---

Temperature, water, degrees Celsius
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
2	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
3	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
4	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
5	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
6	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
7	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
8	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
9	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
10	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
11	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
12	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
13	---	---	---	---	---	---	---	---	---	1.0	0.0	0.0
14	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
15	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
16	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
17	---	---	---	---	---	---	---	---	---	2.0	0.0	1.0
18	---	---	---	---	---	---	---	---	---	2.0	0.0	1.0
19	---	---	---	---	---	---	---	---	---	2.0	0.0	1.0
20	---	---	---	---	---	---	---	---	---	2.5	0.0	1.0
21	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
22	---	---	---	---	---	---	---	---	---	2.0	0.5	1.5
23	---	---	---	---	---	---	---	---	---	2.0	0.5	1.0
24	---	---	---	---	---	---	---	---	---	3.0	0.5	1.5
25	---	---	---	---	---	---	---	---	---	3.0	0.5	1.5
26	---	---	---	---	---	---	---	---	---	3.5	1.0	2.0
27	---	---	---	---	---	---	---	---	---	3.0	0.5	2.0
28	---	---	---	---	---	---	0.0	0.0	0.0	3.5	1.5	2.0
29	---	---	---	---	---	---	0.0	0.0	0.0	3.5	1.5	2.0
30	---	---	---	---	---	---	0.5	0.0	0.0	3.5	1.0	2.0
31	---	---	---	---	---	---	---	---	---	3.5	1.0	2.0
MONTH	---	---	---	---	---	---	---	---	---	3.5	0.0	0.8

15281500 CAMP CREEK NEAR SHEEP MOUNTAIN LODGE—Continued

Temperature, water, degrees Celsius
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	8.0	5.5	6.5	7.5	6.0	6.5	6.0	5.0	5.5
2	---	---	---	7.0	6.0	6.5	7.5	5.5	6.5	6.0	5.0	5.5
3	---	---	---	6.5	5.5	6.0	6.5	6.0	6.5	6.0	4.5	5.0
4	4.5	1.0	2.5	8.0	4.5	6.5	7.0	6.0	6.5	6.0	4.5	5.0
5	5.0	2.0	3.0	8.5	5.5	7.0	7.5	5.5	6.5	6.0	4.5	5.0
6	5.5	2.0	3.5	8.5	6.0	7.0	8.0	6.0	7.0	6.0	4.0	5.0
7	5.0	1.5	3.0	8.5	6.5	7.5	8.0	6.0	7.0	5.5	4.0	5.0
8	4.5	1.5	3.0	9.0	6.5	7.5	8.0	6.5	7.5	6.5	4.0	5.0
9	5.5	2.5	3.5	9.5	6.5	8.0	8.0	6.5	7.0	5.5	4.0	4.5
10	6.5	3.0	4.5	8.5	7.0	8.0	8.5	6.5	7.5	5.5	4.0	4.5
11	7.0	3.5	5.0	9.0	7.0	8.0	8.0	7.0	7.5	5.5	3.5	4.5
12	7.5	4.0	5.5	9.5	7.0	8.0	8.0	7.0	7.5	5.5	4.0	4.5
13	7.0	3.5	5.0	9.0	7.0	8.0	7.5	6.5	7.0	4.5	3.5	4.0
14	5.0	3.5	4.5	9.5	7.5	8.5	7.0	6.5	7.0	3.5	2.0	3.0
15	7.5	3.5	5.5	10.0	7.5	8.5	7.5	6.5	7.0	3.0	1.5	2.0
16	7.0	4.0	5.0	9.5	7.5	8.5	7.5	6.0	7.0	3.0	1.5	2.0
17	6.5	3.5	5.0	9.0	7.0	8.0	7.0	6.5	6.5	3.0	1.5	2.0
18	8.0	4.5	6.0	9.0	6.5	8.0	7.0	6.0	6.5	2.5	1.0	1.5
19	8.0	5.0	6.0	9.5	7.0	8.0	6.5	5.5	6.0	2.0	1.0	1.5
20	7.5	5.0	6.0	9.5	7.5	8.5	6.5	5.5	6.0	2.0	1.5	1.5
21	6.0	5.0	5.5	8.5	8.0	8.0	6.5	5.5	6.0	2.5	1.5	2.0
22	7.5	4.5	6.0	9.5	7.5	8.0	6.5	5.5	6.0	2.0	1.0	1.5
23	8.0	4.5	6.0	9.5	7.5	8.5	6.5	5.5	6.0	2.0	1.0	1.5
24	7.5	5.0	6.0	9.5	7.0	8.0	7.0	6.0	6.0	2.0	1.5	1.5
25	6.5	5.0	5.5	8.0	7.5	7.5	6.5	5.5	6.0	2.5	1.5	2.0
26	7.5	4.5	6.0	8.0	6.5	7.5	6.0	5.5	6.0	2.5	1.0	1.5
27	7.0	4.5	5.5	7.5	6.5	7.0	6.0	5.0	5.5	2.5	1.5	2.0
28	7.0	4.5	5.5	7.5	6.0	7.0	6.0	5.0	5.5	2.0	1.5	2.0
29	8.0	4.5	6.5	8.0	6.5	7.0	6.0	5.0	5.5	3.5	2.0	2.5
30	8.0	5.5	6.5	8.0	6.0	7.0	6.0	5.0	5.5	3.5	2.5	3.0
31	---	---	---	7.5	6.5	7.0	5.5	5.0	5.5	---	---	---
MONTH	---	---	---	10.0	4.5	7.6	8.5	5.0	6.5	6.5	1.0	3.2

15284000 MATANUSKA RIVER AT PALMER

LOCATION.--Lat 61°36'33", long 149°04'15", in SE¹/₄ NW¹/₄ sec. 34, T. 18 N., R. 2 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020402, on downstream left bank of Old Glenn Highway bike path bridge, and 1 mi east of Palmer.

DRAINAGE AREA.--2,070 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1949 to September 1973, May 1985 to September 1986, October 1991 to September 1992, and May 2000 to current year. Annual maximum, water year 1974 and 1995.

GAGE.--Water-stage recorder. Datum of gage is 170.92 ft above National Geodetic Vertical Datum of 1929 (Alaska Railroad Commission benchmark, prior to Mar. 27, 1964 earthquake). Prior to Nov. 2, 1950, non-recording gage at bridge 20 ft upstream at same datum. Nov. 2, 1950 to Apr. 30, 1952, non-recording gage at current site and same datum. May 1, 1952 to Sep. 30, 1973, July 19 to Oct. 20, 1987, and Oct. 1, 1991 to Sep. 30, 1992, water-stage recorder at site 100 ft downstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Precipitation gage at station. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 21,000 ft³/s and maximums (*).

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jul 21	2045	a21,800	11.84	Aug 13	0515	*a24,300	*12.37

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3440	2140	1420	e630	e640	687	559	2020	5080	11600	9610	6430
2	3440	2090	1230	e630	e660	694	590	1720	4670	14100	7520	6130
3	3110	2050	1330	e630	e680	697	571	1720	4360	14500	6030	6400
4	3020	2040	1330	e620	e700	681	571	1620	4540	12500	4770	6030
5	2880	2030	1270	e620	e740	624	559	1500	5310	12800	4290	5300
6	2770	2000	1170	e620	826	531	546	1430	5940	13000	4720	5080
7	2860	1930	1040	e620	778	492	556	1350	6140	13800	5920	4970
8	3040	1820	1020	e620	822	e480	564	1370	5980	14400	7080	4670
9	2680	1800	973	e630	839	e470	569	1490	6120	e15000	9110	4500
10	e2500	1570	940	e640	858	e470	581	1630	7750	e16000	10000	4350
11	e2300	1380	944	e620	850	e460	640	1570	10600	15500	10500	4150
12	2400	1370	948	e620	811	e450	695	1450	13100	15200	14200	3990
13	e2400	1250	905	e620	795	e440	729	1390	15900	15400	18200	4060
14	e2500	1450	e880	e620	740	e450	794	1370	14700	16300	14600	3640
15	e2500	1350	837	e620	616	e460	754	1450	12600	17200	11300	3030
16	e2600	1290	728	e620	e580	e470	750	1610	10900	17000	11500	2750
17	2600	1200	e720	e620	e550	e480	831	1780	10000	16600	9940	2550
18	2590	1190	719	e620	526	e490	829	1770	10400	15000	8110	2430
19	2490	1200	e710	e620	e540	e500	842	1720	e11500	14700	6330	2330
20	2570	1240	e710	e620	e570	e510	856	1730	e11500	18000	5770	2260
21	2640	1190	e700	e620	598	e520	850	1780	e11000	20900	5670	2210
22	2500	1230	e720	e600	685	e540	900	1880	e10500	18700	5120	2170
23	2430	1470	e740	e600	733	e560	1040	2070	e11000	16300	4730	2100
24	2460	1440	e720	e600	784	e580	1160	2290	11900	15400	4790	2080
25	2450	1330	e700	e600	762	585	1370	2490	11000	13300	5180	2080
26	2420	1460	e680	e600	744	595	1510	3010	9300	10500	5440	2050
27	2350	1520	e660	e600	714	595	2080	3210	8850	10200	5040	2010
28	2140	1490	e640	e600	688	587	2290	3180	8400	11700	4540	2000
29	2230	1470	e640	e620	---	593	2170	3490	8640	10800	4390	2250
30	2260	1580	e640	e620	---	592	2140	4090	10100	9900	4840	2820
31	2200	---	e630	e620	---	595	---	4550	---	9810	6670	---
TOTAL	80770	46570	27294	19140	19829	16878	28896	63730	277780	446110	235910	106820
MEAN	2605	1552	880	617	708	544	963	2056	9259	14390	7610	3561
MAX	3440	2140	1420	640	858	697	2290	4550	15900	20900	18200	6430
MIN	2140	1190	630	600	526	440	546	1350	4360	9810	4290	2000
AC-FT	160200	92370	54140	37960	39330	33480	57320	126400	551000	884900	467900	211900
CFSM	1.26	0.75	0.43	0.30	0.34	0.26	0.47	0.99	4.47	6.95	3.68	1.72
IN.	1.45	0.84	0.49	0.34	0.36	0.30	0.52	1.15	4.99	8.02	4.24	1.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)#

	1952	1005	734	622	527	476	648	2722	10100	13120	9838	4853
MEAN	1952	1005	734	622	527	476	648	2722	10100	13120	9838	4853
MAX	3093	1793	1024	821	708	583	985	6019	17250	18750	15730	8966
(WY)	2001	1972	1972	1961	2003	2001	1964	1960	1964	2000	1971	1951
MIN	1166	568	440	349	381	360	465	1007	5415	9206	4992	2123
(WY)	1992	1959	1969	1959	1971	1971	1972	1966	1965	1973	1969	1969

See Period of Record; partial years used in monthly statistics

a Peak discharge adjusted to exclude surge; peak gage-height not adjusted to exclude surge

e Estimated

15284000 MATANUSKA RIVER AT PALMER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003#	
ANNUAL TOTAL	1343364		1369727			
ANNUAL MEAN	3680		3753		3822	
HIGHEST ANNUAL MEAN					4815	1957
LOWEST ANNUAL MEAN					2562	1969
HIGHEST DAILY MEAN	14700	Jul 18	20900	Jul 21	40700	Aug 10 1971
LOWEST DAILY MEAN	b490	Mar 16	440	Mar 13	234	Apr 25 1956
ANNUAL SEVEN-DAY MINIMUM	490	Mar 16	457	Mar 9	304	Apr 20 1956
MAXIMUM PEAK FLOW			a24300	Aug 13	c82100	Aug 10 1971
MAXIMUM PEAK STAGE			12.37	Aug 13	d13.60	Aug 10 1971
ANNUAL RUNOFF (AC-FT)	2665000		2717000		2769000	
ANNUAL RUNOFF (CFSM)	1.78		1.81		1.85	
ANNUAL RUNOFF (INCHES)	24.14		24.62		25.09	
10 PERCENT EXCEEDS	9850		11500		11700	
50 PERCENT EXCEEDS	2230		1720		1200	
90 PERCENT EXCEEDS	500		591		480	

See Period of Record; partial years used in monthly statistics

a Peak discharge adjusted to exclude surge; peak stage not adjusted to exclude surge

b Mar. 16 to 31

c From rating curve extended above 34,000 ft³/s on basis of velocity-area study, from break-out of natural reservoir on Granite Creek tributary

d Site then in use

15284000 MATANUSKA RIVER AT PALMER—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-1954, 1957-1968, 1985-1987, and current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water year 1953-1954, 1959-1966.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (0004)	Location in X-sect. looking down stream ft from l bank (00009)	Gage height, feet (00065)	Starting time, 24 hour clock, hr:min (82074)	Ending time, 24 hour clock, hr:min (82073)	Instantaneous discharge, cfs (00061)	Sampling method code (82398)	Sampler type, code (84164)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
JUN													
10...	1515	205	--	10.00	1515.00	1615.00	8650	20	3055	8.5	16.5	2220	51800
11...	1317	205	--	10.00	1310.00	1430.00	11500	--	--	8.5	16.5	--	--
JUL													
02...	1150	286	--	10.95	1150.00	1229.00	14700	20	3055	7.0	--	2400	95400
02...	1315	286	40.0	10.94	1315.00	1507.00	14500	1000	1170	7.0	--	--	--
16...	1315	396	40.0	11.01	1315.00	1438.00	15500	1000	1170	7.5	16.5	--	--
16...	1457	396	--	11.13	1457.00	1548.00	16200	20	3055	7.5	16.5	2690	118000
AUG													
12...	1425	398	--	11.73	1425.00	1500.00	14700	20	3055	7.0	7.0	2850	113000
12...	1627	398	40.0	11.74	1627.00	1653.00	14600	1000	1170	7.0	7.0	--	--
12...	1710	--	--	--	1710.00	1740.00	--	--	8010	--	--	--	--
SEP													
18...	1530	129	--	9.64	1530.00	1620.00	2410	20	3055	4.5	--	77	501
18...	1651	129	27.0	9.63	1651.00	1831.00	2360	1000	1170	4.5	--	--	--

Date	Suspended sediment, sieve diameter percent <.063mm (70311)	Bedload sediment, discharge, tons/d (80225)	Bedload sediment, average unit t/d/ft (04122)	Composite samples in x-sect bedload measurement number (04118)	Number of sampling points, count (00063)	Verticals in composite site sample, number (04119)	Horizontal width of vertical, feet (04121)	Rest time on bed for sample, seconds (04120)	Bag mesh size, bedload sampler mm (30333)	Bedload sediment, sieve diameter percent <.063mm (80226)	Bedload sediment, sieve diameter percent <.125mm (80227)	Bedload sediment, sieve diameter percent <.25mm (80228)	Bedload sediment, sieve diameter percent <.5mm (80229)
JUN													
10...	72	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
02...	69	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	4830	16.9	2	1	21	10.0	10	.025	--	.0	1	4
16...	--	660	1.67	2	1	22	10.0	10	.025	.0	2	6	18
16...	76	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	67	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	1360	3.42	1	1	21	10.0	20	.025	.0	1	4	17
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
18...	72	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	16	.13	2	1	21	3.0	60	.025	--	.0	1	21

15284000 MATANUSKA RIVER AT PALMER—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bedload sedi- ment, sieve diametr percent <1mm (80230)	Bedoad sedi- ment, sieve diametr percent <2mm (80231)	Bedoad sedi- ment, sieve diametr percent <4mm (80232)	Bedoad sedi- ment, sieve diametr percent <8mm (80233)	Bedoad sedi- ment, sieve diametr percent <16mm (80234)	Bedoad sedi- ment, sieve diametr percent <32mm (80235)	Bedoad sedi- ment, sieve diametr percent <64mm (80236)	Bedoad sedi- ment, sieve diametr percent <128mm (80238)	Bedoad sedi- ment, sieve diametr percent <256mm (69160)	Bed sedi- ment, dry svd dve dia percent <.063mm (80164)	Bed sedi- ment, dry svd dve dia percent <.125mm (80165)	Bed sedi- ment, dry svd dve dia percent <.25mm (80166)	Bed sedi- ment, dry svd dve dia percent <.5mm (80167)
JUN													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	5	6	8	14	31	61	89	95	100	--	--	--	--
16...	21	21	22	25	33	63	90	100	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	19	19	20	22	33	58	87	100	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	1	3	6	9
SEP													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	32	40	47	53	69	93	100	--	--	--	--	--	--

Date	Bed sedi- ment, dry svd sve dia percent <1mm (80168)	Bed sedi- ment, dry svd dve dia percent <2mm (80169)	Bed sedi- ment, dry svd dve dia percent <4mm (80170)	Bed sedi- ment, dry svd dve dia percent <8mm (80171)	Bed sedi- ment, dry svd dve dia percent <16mm (80172)	Bed sedi- ment, dry svd dve dia percent <32mm (80173)	Bed sedi- ment, dry svd dve dia percent <64mm (80174)	Bed sedi- ment, dry svd dve dia percent <128mm (80175)
JUN								
10...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
JUL								
02...	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
AUG								
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	9	9	10	12	24	49	82	100
SEP								
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--

15290000 LITTLE SUSITNA RIVER NEAR PALMER

LOCATION.--Lat 61°42'37", long 149°13'47", in SE¹/₄NW¹/₄ sec. 26, T. 19 N., R. 1 E. (Anchorage C-6 NW quad), Matanuska-Susitna Borough, Hydrologic Unit 19020505, on right bank 100 ft downstream from highway bridge on Wasilla-Fishhook Road, 1.5 mi north of road junction, 1.8 mi downstream from unnamed tributary, and 8 mi northwest of Palmer. Prior to October 1, 1991 at site 60 ft upstream.

DRAINAGE AREA.--61.9 mi².

PERIOD OF RECORD.--July 1948 to current year. Low-flow records not equivalent prior to January 1962 because most measurements below 300 ft³/s were made at site 3.4 mi downstream.

GAGE.--Water-stage recorder. Datum of gage is 916.6 ft above sea level (river-profile survey). Prior to August 16, 1948, non-recording gage and August 17, 1948 to May 15, 1972, water-stage recorder on left bank; water-stage recorder on right bank, May 16, 1972 to September 30, 1991, at site 60 ft upstream. Prior to October 1, 1974, at datum 4.00 ft higher; October 1, 1974 to September 30, 1991, at datum 2.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges, and for discharges above 700 ft³/s, which are poor. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun. 12	2315	1550	5.55	Jul. 28	0100	1490	5.50
Jul. 3	0500	*1580	*5.58				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003 DAILY MEAN VALUE												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	628	183	76	e41	32	31	27	98	442	476	492	305
2	520	174	74	e41	31	e30	23	98	417	934	411	288
3	441	170	74	e40	31	e30	23	101	384	1150	356	340
4	400	161	73	e40	e31	e30	22	94	420	684	326	337
5	369	152	72	e40	e31	e29	22	87	476	548	298	308
6	342	145	69	e39	31	e29	22	82	492	480	279	285
7	575	137	66	e39	31	e29	22	86	482	471	271	266
8	575	130	e65	e39	e32	e29	22	91	428	450	266	248
9	397	121	63	e39	e35	e29	21	114	462	439	262	227
10	357	117	e60	e38	e38	e28	21	99	729	428	258	212
11	349	e116	e60	e38	e36	e28	e22	97	999	423	269	198
12	350	e112	e55	e38	e32	e28	e24	102	1160	390	453	185
13	317	e108	e55	39	e31	e28	e24	98	1260	360	705	213
14	296	e104	e55	39	e30	e28	e26	94	1100	353	543	177
15	291	e100	e55	38	e30	e28	e26	104	774	344	435	163
16	350	100	e50	37	e30	e28	27	113	625	346	490	154
17	316	106	e50	37	e30	e28	e28	111	595	398	432	145
18	342	102	e50	37	e30	28	e30	106	684	330	385	137
19	320	97	e48	37	e30	27	e32	109	579	300	346	132
20	323	94	e48	36	e30	e26	33	119	540	301	326	128
21	326	90	e46	36	e30	e26	31	132	501	314	332	125
22	305	88	e46	35	e32	e26	33	159	520	289	321	122
23	296	87	e45	35	e32	e26	43	192	561	280	288	117
24	299	84	e45	35	e32	e26	54	224	465	266	271	121
25	286	82	e44	34	32	e26	60	248	447	243	343	125
26	274	84	e44	33	32	e26	75	282	396	221	432	119
27	248	82	e43	33	31	26	91	274	369	673	367	113
28	231	79	e43	33	31	25	93	315	368	855	338	120
29	224	80	e42	32	---	25	90	381	418	488	308	253
30	208	80	e42	32	---	24	98	417	468	408	290	279
31	196	---	e41	32	---	24	---	429	---	693	322	---
TOTAL	10751	3365	1699	1142	884	851	1165	5056	17561	14335	11215	5942
MEAN	347	112	54.8	36.8	31.6	27.5	38.8	163	585	462	362	198
MAX	628	183	76	41	38	31	98	429	1260	1150	705	340
MIN	196	79	41	32	30	24	21	82	368	221	258	113
MED	323	103	50	37	31	28	27	109	487	408	332	181
AC-FT	21320	6670	3370	2270	1750	1690	2310	10030	34830	28430	22240	11790
CFSM	5.60	1.81	0.89	0.60	0.51	0.44	0.63	2.63	9.46	7.47	5.84	3.20
IN.	6.46	2.02	1.02	0.69	0.53	0.51	0.70	3.04	10.55	8.61	6.74	3.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)#

	MEAN	141	63.3	40.3	30.8	24.9	20.5	25.4	220	665	495	408	302
MAX	391	134	61.7	54.1	41.2	29.7	68.0	649	1215	1047	909	651	
(WY)	1984	1980	1980	1961	1982	1991	1990	1990	1977	1963	1971	1985	
MIN	51.3	24.5	17.4	17.5	14.0	10.0	10.0	52.9	276	193	169	82.2	
(WY)	1969	1969	1955	1959	1952	1956	1955	1971	1996	1996	1969	1969	

See Period of Record for remark on low-flow records; partial years used in monthly statistics
e Estimated

15290000 LITTLE SUSITNA RIVER NEAR PALMER—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003#	
ANNUAL TOTAL	76674		73966		203	
ANNUAL MEAN	210		203		316	
HIGHEST ANNUAL MEAN					95.8	
LOWEST ANNUAL MEAN					5040	
HIGHEST DAILY MEAN	1180	Aug 13	1260	Jun 13	Aug 10	1971
LOWEST DAILY MEAN	a18	Mar 28	b21	Apr 9	c8.0	Apr 1 1956
ANNUAL SEVEN-DAY MINIMUM	18	Mar 28	22	Apr 4	8.0	Apr 1 1956
MAXIMUM PEAK FLOW			1580	Jul 3	d7840	Aug 10 1971
MAXIMUM PEAK STAGE			5.58	Jul 3	f13.00	Aug 10 1971
INSTANTANEOUS LOW FLOW			g21	Apr 6	8.0	Apr 1 1956
ANNUAL RUNOFF (AC-FT)	152100		146700		147200	
ANNUAL RUNOFF (CFSM)	3.39		3.27		3.28	
ANNUAL RUNOFF (INCHES)	46.08		44.45		44.60	
10 PERCENT EXCEEDS	523		469		560	
50 PERCENT EXCEEDS	117		106		70	
90 PERCENT EXCEEDS	19		28		21	

See Period of Record for remark on low-flow records; partial years used in monthly statistics

a Mar. 28 to Apr. 25

b Apr. 9 and 10

c Apr. 1 to Apr. 20, 1956; and Mar. 11 and 12, 1957

d From rating curve extended above 4,600 ft³/s on basis of slope-area measurement of peak flow

f Gage height about 13.0 ft, from floodmarks; 9.84 ft in gage well; 12.30 ft at

top of needle peak in gage well; at prior datum (WY 1974-91) at sites then in use

g Apr. 6 - 10

15292000 SUSITNA RIVER AT GOLD CREEK

LOCATION.--Lat 62°46'04", long 149°41'28", in NW¹/₄ sec. 20, T. 31 N., R. 2 W. (Talkeetna Mts. D-6 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020501, near left bank under Alaska Railroad bridge, 0.1 mi downstream from Gold Creek, 0.9 mi north of Gold Creek railroad station, and 2.0 mi. downstream from Indian River.

DRAINAGE AREA.--6,160 mi², approximately.

PERIOD OF RECORD.--August 1949 to 1996 and May 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 676.50 ft above sea level. Prior to June 6, 1957, non-recording gage at same site and datum. June 7, 1957 to June 2, 1964, water-stage recorder at site 0.3 mi upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. GOES satellite telemetry at station. Rain gage at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18800	7840	e3900	e2000	e1400	e2400	e1000	e5000	24000	21100	31000	24500
2	19600	7530	e3800	e2000	e1400	e2300	e1000	e4500	25100	24000	26900	24000
3	17700	7400	e3700	e2000	e1400	e2200	e1000	e4500	20900	30300	21800	23900
4	14900	7780	e3600	e2000	e1500	e2200	e1000	e4200	17800	32600	19700	25300
5	13100	8940	e3500	e1900	e1800	e2100	e1000	e4100	18200	29100	17400	25400
6	11900	8910	3460	e1900	e2200	e2080	e900	e4000	22900	26300	15800	22400
7	11800	8030	3420	e1800	e2500	e2000	e900	e3800	25400	25600	14900	19300
8	11700	6980	3210	e1800	e2700	e1900	e900	e4500	23300	25200	15000	16800
9	10700	6000	2600	e1800	e3000	e1700	e900	e5000	20400	24500	15900	15300
10	9380	e5000	e2500	e1700	e3300	e1600	e1000	e5500	20700	23900	16700	14500
11	9010	e4400	e2400	e1700	e3500	e1500	e1000	e6000	26100	24400	17500	13800
12	9260	e4500	e2500	e1700	e3700	e1500	e1000	e6200	31800	23400	21100	13200
13	9400	e4700	e2600	e1700	e3500	e1400	e1100	e5500	32100	22100	25900	13700
14	9350	e4700	e2600	e1600	e3300	e1400	e1100	e5000	28800	21700	28100	13900
15	9000	e4600	e2500	e1600	e3000	e1300	e1200	e4500	26300	21900	27500	12200
16	9290	e4500	e2400	e1600	e2600	e1300	e1300	e4200	25200	25700	28100	10800
17	9190	e4400	e2300	e1600	e2400	e1300	e1400	e5000	24600	42900	32700	10000
18	9410	e4400	e2300	e1600	e2100	e1300	e1500	e5000	24300	43700	31500	9420
19	9660	e4400	e2200	e1600	e1800	e1300	e1700	e6000	25100	36200	26900	8860
20	10100	e4300	e2200	e1500	e1700	e1300	e2000	e7500	25500	29500	22300	8370
21	11800	e4300	e2200	e1500	e1600	e1200	e2300	e8500	25300	27500	19600	8240
22	12500	e4500	e2100	e1500	e1500	e1200	e2500	e9500	25900	27900	17900	8000
23	11400	e4500	e2100	e1500	e1500	e1200	e3000	10600	26500	28100	16700	7620
24	10400	e4400	e2100	e1500	e1500	e1200	e3500	10900	26000	26100	15900	7340
25	9790	e4200	e2100	e1500	e1700	e1200	e4000	11300	25800	24500	16000	7400
26	9620	e4100	e2000	e1500	e1900	e1200	e5000	13000	24700	23700	18300	7750
27	8980	e4300	e2000	e1500	e2000	e1100	e5500	15600	24500	30200	19800	7650
28	7960	e4200	e2000	e1500	e2300	e1100	e6000	15200	23700	48400	20400	7600
29	7580	e4000	e2000	e1400	---	e1100	e5500	16200	19300	46600	18000	8470
30	8130	e4000	e2000	e1400	---	e1100	e5000	18100	19700	35200	16600	9670
31	8140	---	e2000	e1400	---	e1100	---	19700	---	32900	18800	---
TOTAL	339550	161810	80290	51300	62800	46780	65200	248600	729900	905200	654700	405390
MEAN	10950	5394	2590	1655	2243	1509	2173	8019	24330	29200	21120	13510
MAX	19600	8940	3900	2000	3700	2400	6000	19700	32100	48400	32700	25400
MIN	7580	4000	2000	1400	1400	1100	900	3800	17800	21100	14900	7340
AC-FT	673500	321000	159300	101800	124600	92790	129300	493100	1448000	1795000	1299000	804100
CFSM	1.78	0.88	0.42	0.27	0.36	0.24	0.35	1.30	3.95	4.74	3.43	2.19
IN.	2.05	0.98	0.48	0.31	0.38	0.28	0.39	1.50	4.41	5.47	3.95	2.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)#

	MEAN	MAX	(WY)	MIN	(WY)
1949	6277	12680	1987	3124	1970
1950	2713	5394	2003	1215	1970
1951	1893	3264	1958	866	1970
1952	1592	2452	1961	724	1969
1953	1416	2243	2003	723	1969
1954	1294	1900	1968	713	1964
1955	1652	4250	1990	745	1964
1956	13340	25630	1990	3745	1971
1957	26780	50580	1964	15500	1969
1958	24000	34400	1963	16010	1996
1959	21400	37870	1981	8879	1969
1960	13710	26510	1990	5093	1969

15292000 SUSITNA RIVER AT GOLD CREEK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003#	
ANNUAL TOTAL	3390150		3751520			
ANNUAL MEAN	9288		10280		9710	
HIGHEST ANNUAL MEAN					13020	1990
LOWEST ANNUAL MEAN					5597	1969
HIGHEST DAILY MEAN	34800	Aug 23	48400	Jul 28	85900	Jun 7 1964
LOWEST DAILY MEAN	a1200	Apr 2	b900	Apr 6	c600	Feb 16 1950
ANNUAL SEVEN-DAY MINIMUM	1200	Apr 2	943	Apr 3	614	Feb 16 1950
MAXIMUM PEAK FLOW			51700	Jul 28	90700	Jun 7 1964
MAXIMUM PEAK STAGE			13.39	Jul 28	16.58	Jun 7 1964
MAXIMUM PEAK STAGE					d24.48	May 10 1954
ANNUAL RUNOFF (AC-FT)	6724000		7441000		7035000	
ANNUAL RUNOFF (CFSM)	1.51		1.67		1.58	
ANNUAL RUNOFF (INCHES)	20.47		22.66		21.42	
10 PERCENT EXCEEDS	21000		25600		25400	
50 PERCENT EXCEEDS	4600		5000		3400	
90 PERCENT EXCEEDS	1300		1400		1100	

See Period of Record; partial years used in monthly statistics

a Apr. 2-16

b Apr. 6-9

c Feb. 16-20, 1950

d Maximum observed, ice jam

e Estimated

15292700 TALKEETNA RIVER NEAR TALKEETNA
(Hydrologic Bench-Mark Station)

LOCATION.--Lat 62°20'49", long 150°01'01", in NE¹/₄ sec. 16, T. 26 N., R. 4 W. (Talkeetna B-1 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020503, on left bank 1.7 mi downstream from Chunilna Creek, 3.5 mi northeast of Talkeetna, and about 5 mi upstream from mouth.

DRAINAGE AREA.--1,996 mi².

REVISED RECORDS.-- WRD AK 2000-1: Drainage Area.

PERIOD OF RECORD.--June 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above sea level, from topographic map. From October 1, 1992 to September 30, 1994 at site 0.5 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10300	3710	e1800	e600	e400	e520	e360	3150	11800	9020	10600	7690
2	9070	3590	e1700	e550	e400	e550	e360	2970	9480	11900	9200	6950
3	7920	3540	e1650	e550	e400	e550	e360	3250	7710	16500	8120	7870
4	7290	3480	e1650	e550	e400	e530	e350	3100	7310	13400	7920	8150
5	6530	3390	e1650	e550	e450	e500	e350	3040	8470	11500	7180	7190
6	6230	3280	e1600	e500	e550	e470	e350	3100	11600	10300	6990	6500
7	6540	3160	1580	e500	e600	e450	e350	2880	11000	10400	7250	5960
8	7560	2860	1450	e500	e650	e420	e350	3010	8650	10100	7420	5600
9	6150	2640	1240	e500	e700	e420	e360	3330	7800	10100	7670	5290
10	5410	2130	1080	e470	e750	e400	e370	4000	9700	10200	7850	4940
11	5440	e2000	1030	e470	e800	e400	e400	4010	13500	9850	8440	4660
12	5820	e1900	e1000	e470	e700	e420	e500	4060	16000	9570	10800	4430
13	5450	e2100	e950	e470	e650	e420	e550	3840	14300	9040	12500	4480
14	5170	e2200	e900	e450	e600	e400	e600	3510	11600	9150	11000	4080
15	4940	e2200	e800	e450	e550	e400	e650	3580	10700	9680	9610	3710
16	5900	e2100	e800	e450	e500	e400	e650	3780	9840	10600	10500	3550
17	5760	e2100	e850	e450	e470	e400	e700	3660	8870	22900	11500	3400
18	5800	e2100	e850	e450	e450	e390	e800	3660	8690	17200	10700	3200
19	5750	e2000	e800	e450	e450	e390	e900	3640	8630	12600	9260	3040
20	5680	e2000	e750	e450	e420	e390	e1100	3780	8320	11700	8190	2940
21	5510	e2000	e750	e420	e420	e380	1300	3900	8510	12800	7750	2830
22	5050	e2000	e750	e420	e420	e380	1220	4230	9540	11700	6970	2720
23	4810	e2100	e700	e420	e400	e380	1230	4570	9590	11100	6390	2560
24	4750	e2000	e700	e420	e400	e380	1390	5010	9210	10800	6090	2510
25	4620	e1900	e700	e420	e400	e380	1550	5090	9840	10100	6750	2630
26	4540	1950	e650	e420	e450	e380	1900	5510	9730	9790	7730	2750
27	4190	2000	e650	e420	e470	e370	2420	7140	9030	11500	7000	2610
28	3830	1960	e650	e420	e500	e370	2930	6610	8810	21200	6240	2520
29	4040	e1800	e600	e400	---	e370	3120	7840	8320	14700	5740	3700
30	4040	e1800	e600	e400	---	e370	3270	8790	8640	12300	6000	5190
31	3910	---	e600	e400	---	e360	---	9700	---	11800	7050	---
TOTAL	178000	71990	31480	14390	14350	12940	30740	137740	295190	373500	256410	133650
MEAN	5742	2400	1015	464	512	417	1025	4443	9840	12050	8271	4455
MAX	10300	3710	1800	600	800	550	3270	9700	16000	22900	12500	8150
MIN	3830	1800	600	400	400	360	350	2880	7310	9020	5740	2510
AC-FT	353100	142800	62440	28540	28460	25670	60970	273200	585500	740800	508600	265100
CFSM	2.88	1.20	0.51	0.23	0.26	0.21	0.51	2.23	4.93	6.04	4.14	2.23
IN.	3.32	1.34	0.59	0.27	0.27	0.24	0.57	2.57	5.50	6.96	4.78	2.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)#

	MEAN	2854	1197	834	675	572	512	669	4782	10930	10330	9137	5839
MAX	10000	2400	1122	996	990	1058	1912	11510	19040	15410	16770	12090	
(WY)	1987	2003	1987	1990	1990	1990	1990	1990	1971	1971	1971	1993	
MIN	1424	672	538	457	401	285	396	2145	5207	7080	3787	2070	
(WY)	1997	1992	1996	1996	1969	1982	1986	1971	1969	1969	1969	1969	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1964 - 2003#
ANNUAL TOTAL	1557210	1550380	
ANNUAL MEAN	4266	4248	4041
HIGHEST ANNUAL MEAN			5389
LOWEST ANNUAL MEAN			2249
HIGHEST DAILY MEAN	20100	May 21	63200
LOWEST DAILY MEAN	a360	Apr 13	c260
ANNUAL SEVEN-DAY MINIMUM	374	Apr 8	260
MAXIMUM PEAK FLOW		27300	75700
MAXIMUM PEAK STAGE		11.05	17.38
ANNUAL RUNOFF (AC-FT)	3089000	3075000	2927000
ANNUAL RUNOFF (CFSM)	2.14	2.13	2.02
ANNUAL RUNOFF (INCHES)	29.02	28.89	27.51
10 PERCENT EXCEEDS	10000	10200	10600
50 PERCENT EXCEEDS	2200	2970	1400
90 PERCENT EXCEEDS	420	400	500

See Period of Record; partial years used in monthly statistics

a Apr. 13-14

b Apr. 4-8

c From Feb. 27 to Mar. 20, 1982

15294005 WILLOW CREEK NEAR WILLOW

LOCATION.--Lat 61°46'51", long 149°53'04", in NW¹/₄ SE¹/₄ sec. 31, T.20 N., R.3 W. (Anchorage D-8 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020505, on the right bank, 0.9 mi downstream from unnamed tributary, 5.5 mi northeast of Willow, and 6.7 mi upstream from Deception Creek.

DRAINAGE AREA.--166 mi².

PERIOD OF RECORD.--June 1978 to September 1993, and May 2001 to current year.

REVISED RECORDS.--WRD-AK-80-1: 1979 (M).

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above sea level from topographic map. Prior to Apr. 2, 1981 at site 0.2 mi upstream at different datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor. Rain gage at station. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge 2,300 ft³/s and maximums (*).

	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)				
	Oct. 07	2115	*1960	*4.52	No peaks greater than base discharge							
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003 DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	427	169	e110	e80	e110	e34	244	813	539	546	503
2	1210	412	142	e110	e80	e100	e32	231	680	1090	442	445
3	967	407	176	e110	e80	e100	e32	230	656	1250	391	708
4	865	384	164	e110	e110	e90	e32	203	645	861	367	669
5	790	364	174	e100	e130	e90	e32	195	782	664	338	560
6	741	348	158	e100	e140	e80	e30	177	838	583	305	498
7	1130	329	144	e100	e160	e80	e32	180	887	548	282	457
8	1280	273	128	e100	e180	e80	e34	191	738	494	265	441
9	877	240	105	e100	e200	e70	e36	286	699	459	249	442
10	769	221	e110	e100	e220	e70	e40	286	1030	447	236	397
11	764	e230	e140	e100	e250	e70	e44	273	1160	441	240	368
12	870	e240	e140	e100	e240	e60	e50	302	1230	421	446	345
13	751	e230	e130	e100	e180	e60	e55	261	1290	373	913	452
14	687	e220	e130	e100	e150	e60	e60	236	1190	349	735	373
15	663	e210	e130	e100	e150	e55	e65	226	1010	333	558	335
16	932	e200	e130	e90	e140	e55	e70	243	890	325	640	316
17	780	e200	e130	e90	e130	e50	e75	237	798	424	682	300
18	922	e190	e120	e90	e120	e50	e80	228	916	359	568	284
19	818	e190	e120	e90	e110	e45	80	223	827	294	475	272
20	785	e200	e120	e90	e110	e45	84	248	732	269	435	262
21	785	211	e120	e90	e100	e45	87	267	664	285	519	260
22	713	207	e120	e90	e100	e40	84	316	695	300	482	256
23	674	202	e120	e90	e90	e40	100	384	731	287	451	239
24	664	191	e120	e90	e90	e40	156	441	655	266	402	251
25	630	179	e120	e90	e100	e40	186	435	608	268	448	330
26	600	186	e120	e80	e100	e38	226	500	540	244	690	323
27	540	178	e110	e80	e110	e38	291	520	498	577	547	284
28	502	171	e110	e80	e110	e36	291	540	483	908	478	292
29	509	169	e110	e80	---	e36	257	644	494	539	432	685
30	482	180	e110	e80	---	e34	253	712	513	472	417	677
31	454	---	e110	e80	---	e34	---	723	---	700	571	---
TOTAL	24614	7389	4030	2920	3760	1841	2928	10182	23692	15369	14550	12024
MEAN	794	246	130	94.2	134	59.4	97.6	328	790	496	469	401
MAX	1460	427	176	110	250	110	291	723	1290	1250	913	708
MIN	454	169	105	80	80	34	30	177	483	244	236	239
AC-FT	48820	14660	7990	5790	7460	3650	5810	20200	46990	30480	28860	23850
CFSM	4.78	1.48	0.78	0.57	0.81	0.36	0.59	1.98	4.76	2.99	2.83	2.41
IN.	5.52	1.66	0.90	0.65	0.84	0.41	0.66	2.28	5.31	3.44	3.26	2.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)#

	MEAN	415	163	109	85.5	76.6	63.4	91.3	619	1038	688	614	645
MAX	1197	364	152	112	134	97.5	205	1578	1500	1287	1286	1177	
(WY)	1987	1980	1980	1980	2003	1990	1990	1990	1990	1980	1981	1993	
MIN	177	81.5	57.3	57.1	52.9	33.7	45.8	328	484	310	307	259	
(WY)	1985	1985	1981	1981	1981	1982	2002	2003	1981	2002	1978	1978	

See Period of Record; partial years used in monthly statistics
e Estimated

15294005 WILLOW CREEK NEAR WILLOW—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR			WATER YEARS 1978 - 2003#		
ANNUAL TOTAL	140257		123299					
ANNUAL MEAN	384		338			393		
HIGHEST ANNUAL MEAN						536		
LOWEST ANNUAL MEAN						315		
HIGHEST DAILY MEAN						8670		
LOWEST DAILY MEAN	1670	Sep 27	1460	Oct 1		30	Oct 11	1986
ANNUAL SEVEN-DAY MINIMUM	a38	Apr 17	30	Apr 6		32	Apr 6	2003
MAXIMUM PEAK FLOW	39	Apr 13	32	Apr 1		32	Apr 1	2003
MAXIMUM PEAK STAGE			1960	Oct 7		b12000	Oct 11	1986
MAXIMUM PEAK STAGE			4.52	Oct 7		9.01	Oct 11	1986
ANNUAL RUNOFF (AC-FT)	278200		244600			c9.40	Dec 18	1986
ANNUAL RUNOFF (CFSM)	2.31		2.03			2.36		
ANNUAL RUNOFF (INCHES)	31.43		27.63			32.13		
10 PERCENT EXCEEDS	932		756			984		
50 PERCENT EXCEEDS	224		240			200		
90 PERCENT EXCEEDS	50		70			62		

See Period of Record; partial years used in monthly statistics

a Apr. 17-19

b From rating curve extended above 3,900 ft³/s on basis of slope-area measurement of peak flow

c Backwater from ice

15294700 JOHNSON RIVER ABOVE LATERAL GLACIER NEAR TUXEDNI BAY

LOCATION.--Lat 60°05'41", long 152°54'38", in SW¹/₄ NW¹/₄ NW¹/₄ sec. 16, T. 1 S., R. 21 W. (Kenai A-8 quad), Kenai Peninsula Borough, Hydrologic Unit 19020602, on the right bank about 20 mi upstream from mouth, 10 mi south of Tuxedni Bay, and 60 mi northeast of Iliamna.

DRAINAGE AREA.--24.8 mi².

PERIOD OF RECORD.--July 1995 to current year (no winter record).

GAGE.--Water-stage recorder. Elevation of gage is 450 ft above sea level, from topographic map. July 1995 to June 1996, at site 300 ft downstream at same datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 9,980 ft³/s, September 30, 2003, stage rising, peak occurred October 1, 2003, from rating curve extended above 3,500 ft³/s on the basis of slope-area measurement, gage height 16.75 ft., minimum not determined, occurs during the winter.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,980 ft³/s, September 30, stage rising, peak occurred October 1, 2003; maximum peak discharge, 3,630 ft³/s, November 5, gage height, 13.72. minimum discharge 32 ft³/s, April 11, gage height 10.06 ft.

REMARKS.--Records are fair except for estimated discharges, which are poor. Rain gage at station. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	436	237	e58	e45	50	e48	139	e380	804	648	577
2	161	510	194	e60	e48	53	47	164	e360	856	613	535
3	136	448	540	e70	e60	50	e47	203	e320	862	539	465
4	122	686	343	e80	e150	e50	e47	179	369	864	525	370
5	124	1980	348	e90	e300	e47	e46	165	655	754	520	315
6	126	1450	314	111	e250	e45	e45	141	852	732	529	294
7	185	794	244	117	e220	e45	e44	132	645	853	602	280
8	139	480	180	118	e270	e44	e43	127	491	983	770	251
9	111	331	157	121	e230	e43	e43	249	546	989	867	266
10	105	248	142	134	e210	e42	e42	307	862	1000	819	272
11	192	214	113	206	e200	e42	e41	215	1070	921	878	292
12	139	185	107	134	e180	e41	37	171	1000	868	1170	269
13	560	151	e100	114	e150	e40	40	147	1020	965	1720	239
14	676	130	e95	102	e100	e50	e40	138	948	1160	1730	177
15	725	118	e90	93	e90	70	39	145	831	1260	1330	143
16	364	111	e85	91	e85	64	38	164	664	1020	984	127
17	244	108	e80	100	e80	58	37	164	613	798	727	118
18	318	103	e75	72	80	56	37	150	605	692	566	109
19	554	101	e70	53	80	54	38	159	607	719	794	98
20	998	135	70	52	e78	e53	39	183	577	776	997	89
21	1270	150	68	e52	77	e53	44	212	642	789	659	83
22	1490	296	e68	e51	75	e53	57	e285	599	769	551	78
23	2020	995	e66	e50	e72	e52	55	e330	575	700	479	75
24	1250	511	e65	e50	e70	e52	58	e350	627	977	461	74
25	1010	397	e64	49	e65	51	63	e360	886	1120	576	74
26	795	664	e63	47	e60	50	73	e365	674	918	966	79
27	434	298	e62	e47	e55	50	88	e400	677	713	986	90
28	464	187	e61	e46	e53	e50	107	e420	618	767	1350	626
29	715	366	e60	e46	---	e50	129	e400	624	897	1290	1000
30	498	512	e60	e45	---	e50	134	e390	713	674	1100	3410
31	708	---	e59	e45	---	e49	---	e380	---	681	750	---
TOTAL	16846	13095	4280	2504	3433	1557	1646	7334	20050	26881	26496	10875
MEAN	543	436	138	80.8	123	50.2	54.9	237	668	867	855	362
MAX	2020	1980	540	206	300	70	134	420	1070	1260	1730	3410
MIN	105	101	59	45	45	40	37	127	320	674	461	74
AC-FT	33410	25970	8490	4970	6810	3090	3260	14550	39770	53320	52550	21570
CFSM	21.9	17.6	5.57	3.26	4.94	2.03	2.21	9.54	26.9	35.0	34.5	14.6
IN.	25.27	19.64	6.42	3.76	5.15	2.34	2.47	11.00	30.07	40.32	39.74	16.31

e Estimated

15295700 TERROR RIVER AT MOUTH NEAR KODIAK

LOCATION.--Lat 57°41'41", long 153°09'42", in SW¹/₄ NE¹/₄ sec. 5, T. 29 S., R. 24 W. (Kodiak C-4 quad), Kodiak Island Borough, Hydrologic Unit 19020701, on Kodiak Island, in Kodiak National Wildlife Refuge, on right bank, 0.9 mi upstream from mouth, 7.5 mi downstream from Terror Lake Dam, and 29 mi southwest of Kodiak.

DRAINAGE AREA.--30.7 mi², 45.7 mi² prior to partial diversion of Terror Lake to hydropower plant in February 1985.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1964 to October 1968, October 1981 to current year.

REVISED RECORDS.--WDR AK-84-1: 1982-83. WDR AK-96-1: 1995(M).

GAGE.--Water-stage recorder. Elevation of gage is 30 ft above sea level, from topographic map. Prior to October 1, 1981 at site 0.2 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Flow from 15 mi² at headwaters regulated by Terror Lake Dam and some flow diverted from Terror Lake to Kizhuyak River. Regulation for construction began in November 1982. Began filling reservoir April 29, 1984. Diversion to hydropower plant began February 12, 1985. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	251	441	87	91	90	113	248	395	381	202	169
2	188	215	591	107	89	105	123	358	300	605	200	184
3	179	541	2060	109	126	112	123	375	266	679	197	206
4	198	965	967	92	694	103	123	313	344	601	201	205
5	243	2280	534	85	522	93	122	225	373	590	213	207
6	216	2080	483	80	334	109	123	171	361	555	219	195
7	221	874	394	89	438	122	116	168	307	479	218	187
8	205	474	361	200	554	122	121	189	419	513	217	182
9	185	311	422	491	421	117	122	207	530	573	210	191
10	239	232	274	554	382	114	138	208	458	504	211	195
11	314	205	146	395	287	108	165	176	391	493	215	181
12	227	170	98	381	205	108	221	149	482	603	208	179
13	450	165	91	378	153	106	233	121	476	535	200	173
14	271	168	109	446	122	109	164	124	449	501	212	176
15	362	159	115	963	105	117	175	155	392	473	200	177
16	246	157	134	538	132	125	155	182	356	403	182	175
17	227	127	115	543	142	120	141	170	349	364	174	196
18	227	175	99	311	100	112	197	199	319	419	170	181
19	262	158	99	260	92	109	162	238	309	361	215	175
20	330	171	86	177	85	105	152	198	286	335	367	186
21	261	202	86	135	80	103	135	192	271	439	250	176
22	1340	867	89	113	79	102	128	187	248	348	201	172
23	510	2740	80	101	100	100	154	194	292	312	180	298
24	323	810	82	108	90	95	173	225	425	255	175	544
25	755	809	92	351	82	133	223	233	396	197	180	284
26	380	1110	85	193	81	106	203	233	304	200	179	209
27	261	493	76	148	83	121	208	257	272	213	173	179
28	822	370	85	368	83	92	215	272	247	200	178	207
29	806	905	87	205	---	86	218	236	258	210	539	191
30	501	732	84	146	---	94	238	559	281	195	253	888
31	309	---	75	110	---	102	---	413	---	205	187	---
TOTAL	11239	18916	8540	8264	5752	3340	4884	7175	10556	12741	6726	6868
MEAN	363	631	275	267	205	108	163	231	352	411	217	229
MAX	1340	2740	2060	963	694	133	238	559	530	679	539	888
MIN	179	127	75	80	79	86	113	121	247	195	170	169
AC-FT	22290	37520	16940	16390	11410	6620	9690	14230	20940	25270	13340	13620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)#

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	278	209	153	131	115	101	172	323	491	366	282	286						
MAX	427	631	313	267	205	152	247	454	872	1070	662	707						
(WY)	1995	2003	1986	2003	2003	1998	1993	1993	1987	1987	1988	1995						
MIN	192	93.8	78.4	81.8	72.6	60.9	115	231	305	228	183	175						
(WY)	1998	1995	1988	1989	1989	1986	1986	2003	1990	1989	1994	2000						

See Period of Record and Remarks

15295700 TERROR RIVER AT MOUTH NEAR KODIAK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003#	
ANNUAL TOTAL	103085		105001			
ANNUAL MEAN	282		288		243	
HIGHEST ANNUAL MEAN					369	1987
LOWEST ANNUAL MEAN					193	2000
HIGHEST DAILY MEAN	2740	Nov 23	2740	Nov 23	4610	Sep 20 1995
LOWEST DAILY MEAN	70	Jan 25	75	Dec 31	a26	Dec 11 1996
ANNUAL SEVEN-DAY MINIMUM	82	Mar 24	83	Dec 26	39	Nov 19 1985
MAXIMUM PEAK FLOW			4410	Nov 23	b10000	Sep 19 1995
MAXIMUM PEAK STAGE			5.57	Nov 23	7.67	Sep 19 1995
INSTANTANEOUS LOW FLOW			c67	Dec 31	a9.8	Dec 11 1996
ANNUAL RUNOFF (AC-FT)	204500		208300		175800	
10 PERCENT EXCEEDS	530		536		464	
50 PERCENT EXCEEDS	202		203		186	
90 PERCENT EXCEEDS	90		99		86	

PRIOR TO CONSTRUCTION OF TERROR LAKE DAM

SUMMARY STATISTICS, WATER YEARS 1965 - 1983 #

ANNUAL MEAN	293	
HIGHEST ANNUAL MEAN	421	1983
LOWEST ANNUAL MEAN	230	1967
HIGHEST DAILY MEAN	2600	Oct 2 1965
LOWEST DAILY MEAN	d19	Feb 23 1967
ANNUAL SEVEN-DAY MINIMUM	20	Feb 23 1967
INSTANTANEOUS PEAK FLOW	3820	Sep 26 1966
INSTANTANEOUS PEAK STAGE	f6.48	Sep 26 1966
INSTANTANEOUS PEAK STAGE	g7.54	Mar 28 1964
ANNUAL RUNOFF (AC-FT)	212200	
ANNUAL RUNOFF (CFSM)	9.54	
ANNUAL RUNOFF (IN)	129.66	
10 PERCENT EXCEEDS	774	
50 PERCENT EXCEEDS	157	
90 PERCENT EXCEEDS	39	

See Period of Record and Remarks

a Occurred while dam release valve was closed for repair

b From rating curve extended above 960 ft³/s on basis of slope-area measurement of peak flow
Dec. 31, Feb. 28, and Mar. 26

c Feb. 23 and Mar. 1, 1967

d Site and datum then in use

f Site and datum then in use; from tidal wave

15295700 TERROR RIVER AT MOUTH NEAR KODIAK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968, 1982 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: December 1981 to current year.

INSTRUMENTATION.--Water-temperature recorder since December 10, 1981. Electronic water temperature recorder set for 1-hour recording interval.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Temperature at the sensor was compared with the average for the river by cross section on May 21. No variation was found within the cross sections. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 15.0°C, July 15, 2003; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.0°C, July 15, 2003; minimum, 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	STREAM WIDTH (FT) (000004)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (000009)	GAGE HEIGHT (FEET) (000065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)
MAY							
21...	1409	22.0	1.00	2.07	163	6.5	17.0
21...	1410	22.0	5.00	2.07	163	6.5	17.0
21...	1411	22.0	10.0	2.07	163	6.5	17.0
21...	1412	22.0	15.0	2.07	163	6.5	17.0
21...	1413	22.0	20.0	2.07	163	6.5	17.0
21...	1414	22.0	21.0	2.07	163	6.5	17.0

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.5	5.5	6.0	5.5	4.0	5.0	4.5	3.5	4.0	1.5	0.0	0.5
2	6.5	4.5	5.5	5.5	4.5	5.0	5.0	4.0	4.5	2.5	1.5	2.0
3	6.5	4.5	5.5	7.0	5.0	6.0	5.0	4.5	4.5	2.0	1.5	1.5
4	6.0	5.5	6.0	6.0	5.5	5.5	4.5	4.5	4.5	1.5	0.5	1.0
5	7.5	6.0	6.5	7.0	6.0	6.5	5.0	4.5	4.5	0.5	0.0	0.5
6	7.5	6.5	7.0	6.5	5.5	6.0	4.5	4.5	4.5	0.0	0.0	0.0
7	7.0	5.5	6.5	6.0	5.5	6.0	4.5	4.5	4.5	0.0	0.0	0.0
8	6.0	4.5	5.5	5.5	4.0	5.0	4.5	4.0	4.5	2.0	0.0	1.5
9	5.0	3.5	4.5	4.5	3.5	4.0	4.5	3.5	4.0	1.5	1.0	1.0
10	7.0	4.0	5.5	3.5	3.0	3.5	3.5	1.5	2.5	1.5	1.0	1.0
11	7.0	5.5	6.5	4.5	3.5	4.0	1.5	1.0	1.5	2.0	1.0	2.0
12	6.5	4.5	5.5	4.5	4.0	4.0	1.5	0.5	1.0	2.0	1.5	2.0
13	7.0	5.5	6.5	4.5	4.0	4.5	0.5	0.5	0.5	2.0	1.5	2.0
14	6.5	5.0	6.0	4.5	4.0	4.5	1.0	0.5	0.5	2.5	1.5	2.0
15	7.5	5.5	6.5	4.0	3.0	3.5	1.0	0.5	0.5	2.5	2.0	2.0
16	6.0	4.0	5.0	4.0	2.5	3.0	1.5	0.5	1.0	2.0	1.5	1.5
17	7.0	5.5	6.5	3.5	2.5	3.0	1.5	0.5	1.0	2.5	2.0	2.0
18	7.5	7.0	7.0	3.5	2.5	3.0	0.5	0.0	0.5	2.0	1.5	1.5
19	7.5	7.0	7.0	3.5	2.5	3.0	2.0	0.5	1.0	3.0	2.0	2.5
20	7.5	6.5	7.0	3.5	3.0	3.0	2.0	1.5	2.0	2.0	1.5	2.0
21	7.5	6.5	7.0	3.5	2.5	3.0	2.0	1.5	2.0	2.5	1.5	2.0
22	7.5	5.0	6.5	4.5	3.0	3.5	2.0	2.0	2.0	2.0	1.5	2.0
23	6.5	5.0	5.5	5.0	4.0	4.5	2.5	2.0	2.0	2.5	2.0	2.0
24	5.0	4.0	4.5	5.0	4.0	4.5	2.0	1.0	1.5	2.5	2.0	2.0
25	5.5	4.5	5.0	5.0	4.0	4.5	1.0	0.5	1.0	2.5	2.0	2.5
26	5.5	3.5	4.5	5.0	4.0	4.5	1.5	0.5	1.0	2.5	2.0	2.5
27	4.5	3.0	3.5	4.0	3.5	4.0	0.5	0.0	0.5	2.5	1.5	2.0
28	6.5	4.5	5.5	4.0	3.0	3.5	1.5	0.0	0.5	2.5	2.0	2.5
29	6.0	5.0	5.5	4.5	3.5	4.5	2.0	1.5	1.5	2.0	1.5	2.0
30	5.5	5.0	5.5	4.5	3.5	4.0	2.5	1.0	2.0	2.0	1.5	1.5
31	5.5	4.0	5.0	---	---	---	1.0	0.0	0.5	2.0	1.0	1.5
MONTH	7.5	3.0	5.8	7.0	2.5	4.3	5.0	0.0	2.1	3.0	0.0	1.6

15295700 TERROR RIVER AT MOUTH NEAR KODIAK—Continued

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	1.5	1.5	4.0	3.0	3.5	4.5	2.0	3.0	6.5	3.0	4.5
2	2.0	1.0	1.5	5.5	3.5	4.0	4.0	3.0	3.5	6.0	3.5	4.5
3	3.0	2.0	2.5	4.0	3.0	3.5	4.5	2.0	3.0	7.5	2.5	4.5
4	3.0	2.0	2.5	4.0	2.0	3.0	4.5	2.5	3.0	5.5	3.0	4.0
5	2.5	2.0	2.5	3.0	1.0	2.0	4.5	2.5	3.5	5.5	2.5	4.0
6	2.5	2.0	2.5	2.5	0.5	1.5	3.0	2.0	2.5	6.0	3.0	4.0
7	3.5	2.5	3.0	2.5	1.0	1.5	3.5	2.0	2.5	6.5	3.0	4.5
8	3.0	2.0	3.0	3.0	1.5	2.5	4.0	2.0	3.0	7.0	4.0	5.0
9	3.5	2.0	3.0	3.0	1.5	2.0	5.0	2.0	3.5	5.5	3.5	4.5
10	3.5	2.5	3.0	1.5	0.0	1.0	4.0	2.5	3.5	6.0	3.0	4.5
11	3.0	2.5	3.0	3.0	1.5	2.0	6.0	3.0	4.0	6.0	3.5	4.5
12	3.0	2.0	2.5	2.0	0.5	1.0	5.0	2.5	3.5	5.5	3.0	4.0
13	3.0	2.0	2.5	0.5	0.0	0.5	4.0	1.5	3.0	5.5	3.0	4.0
14	3.0	2.0	2.5	0.0	0.0	0.0	5.0	2.0	3.0	5.5	2.5	4.0
15	3.0	2.0	2.5	1.5	0.0	0.5	5.5	3.0	3.5	7.5	3.0	5.0
16	2.5	1.0	1.5	3.0	1.5	2.0	4.5	1.5	3.0	7.5	2.5	5.0
17	2.0	1.0	1.5	3.5	1.5	2.5	3.5	1.0	2.5	7.0	3.0	5.0
18	3.0	2.0	2.5	3.5	1.0	2.0	3.5	2.0	2.5	6.5	4.0	5.0
19	2.5	1.0	1.5	3.0	1.0	2.0	6.0	1.5	3.5	6.5	4.0	5.0
20	2.5	1.5	2.0	2.5	0.0	1.0	6.5	3.0	4.5	8.0	3.0	5.0
21	3.0	1.5	2.0	1.5	0.0	1.0	5.0	3.0	4.0	8.0	2.5	5.0
22	2.5	2.0	2.0	2.0	0.5	1.0	4.0	2.5	3.5	6.5	2.5	4.5
23	4.0	2.5	3.0	2.5	0.0	1.0	7.0	3.0	5.0	7.0	4.0	5.5
24	3.5	2.5	3.0	3.0	1.0	2.0	5.5	3.0	4.0	8.5	3.0	5.5
25	3.5	2.5	3.0	2.5	2.0	2.5	5.5	3.5	4.0	7.0	4.0	5.5
26	3.5	2.5	3.0	3.0	1.5	2.5	7.0	2.5	4.5	7.5	3.5	5.5
27	3.0	2.0	2.5	3.5	2.0	2.5	7.5	2.5	5.0	6.5	4.0	5.0
28	4.0	2.5	3.0	3.5	1.5	2.5	7.0	2.5	4.5	6.0	4.0	5.0
29	---	---	---	4.0	1.5	2.5	7.5	3.0	5.0	5.0	3.5	4.5
30	---	---	---	3.5	1.0	2.0	8.0	2.5	5.0	5.5	4.0	4.5
31	---	---	---	3.5	1.0	2.0	---	---	---	5.5	3.5	4.5
MONTH	4.0	1.0	2.4	5.5	0.0	1.9	8.0	1.0	3.6	8.5	2.5	4.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	5.5	3.5	4.5	8.5	7.0	7.5	10.0	6.5	8.0	8.5	7.0	7.5
2	8.0	3.5	5.5	9.5	6.5	8.0	9.5	6.5	7.5	8.5	6.5	7.5
3	6.5	4.0	5.0	9.5	6.0	7.5	10.0	5.5	7.5	8.0	6.0	7.0
4	6.0	4.5	5.0	10.5	6.5	8.5	10.0	6.0	7.5	8.0	6.5	7.0
5	7.5	4.0	5.5	9.0	8.0	8.5	10.0	6.0	7.5	7.0	6.5	6.5
6	7.5	4.0	5.5	11.0	7.0	8.5	9.5	6.5	7.5	8.0	6.0	7.0
7	8.5	4.0	6.0	11.0	7.0	8.5	10.5	7.0	8.5	8.0	5.5	6.5
8	6.5	5.0	5.5	12.0	8.0	10.0	10.5	7.0	8.5	7.5	5.5	6.5
9	6.0	4.5	5.0	13.0	9.0	11.0	10.5	6.5	8.5	8.0	6.5	7.0
10	6.5	4.5	5.5	13.0	10.5	11.5	9.5	7.0	8.0	8.5	6.5	7.0
11	6.5	4.5	5.5	11.0	9.5	10.0	9.5	7.5	8.5	8.5	5.5	7.0
12	8.0	5.0	6.0	11.5	9.5	10.5	10.0	7.0	8.0	7.5	5.5	6.5
13	9.5	5.0	7.0	13.5	9.0	11.0	8.5	7.0	8.0	8.0	6.0	7.0
14	9.5	5.0	7.0	14.5	10.0	12.0	8.5	7.0	7.5	7.5	5.0	6.5
15	7.5	5.5	6.0	15.0	10.5	12.5	8.5	7.0	7.5	7.0	4.5	5.5
16	7.0	5.0	6.0	13.0	10.5	11.5	9.0	6.5	7.5	6.5	4.5	5.5
17	6.0	5.0	5.5	11.5	10.0	10.5	8.0	6.0	7.0	6.5	5.5	6.0
18	7.5	5.0	6.0	11.0	10.0	10.5	8.0	6.0	6.5	6.5	4.5	5.5
19	7.5	5.5	6.5	11.0	10.0	10.5	7.0	6.5	6.5	6.0	4.0	5.0
20	7.5	5.0	6.5	11.0	9.5	10.0	8.0	6.5	7.0	6.5	4.5	5.5
21	6.5	5.0	6.0	12.0	9.5	10.5	8.5	6.5	7.5	6.0	4.0	5.0
22	9.0	5.0	6.5	13.5	10.0	11.5	9.0	6.0	7.0	6.0	3.5	4.5
23	6.5	5.5	6.0	14.5	10.5	12.0	9.0	5.5	7.0	5.5	5.0	5.5
24	6.5	5.0	5.5	13.5	11.0	12.0	8.0	6.5	7.0	6.0	4.5	5.5
25	7.0	5.0	5.5	12.0	10.0	11.0	7.5	6.5	7.0	6.0	4.5	5.5
26	6.5	5.0	5.5	11.5	9.5	10.5	9.0	6.5	7.5	7.0	5.0	6.0
27	7.5	5.0	6.0	12.0	9.0	10.5	7.5	6.5	7.0	7.0	6.0	6.5
28	10.0	4.0	7.0	10.5	8.5	9.5	8.0	6.5	7.0	8.0	6.5	7.0
29	10.0	6.0	7.5	8.5	7.5	8.0	10.0	7.5	9.0	6.5	5.0	6.0
30	10.5	6.5	8.0	9.0	6.5	7.5	8.5	6.5	7.5	9.5	6.5	7.5
31	---	---	---	10.0	6.5	8.0	9.0	5.5	7.0	---	---	---
MONTH	10.5	3.5	6.0	15.0	6.0	10.0	10.5	5.5	7.5	9.5	3.5	6.3

15297610 RUSSELL CREEK NEAR COLD BAY

LOCATION.--Lat 55°10'40", long 162°41'15", (Cold Bay A-3 quad), Aleutians East Borough, Hydrologic Unit 19030101, on left bank, at Russell Creek Fish Hatchery, 2.1 mi upstream from mouth, and 2.6 mi southeast of Cold Bay. Prior to February 27, 1997, at site 0.2 mi downstream.

DRAINAGE AREA.--30.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to December 1986, October 1995 to current year.

REVISED RECORDS.-- WRD AK-97-1: 1996, Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 7.65 ft above sea level. Prior to February 27, 1997, elevation 3.55 ft above sea level at site 0.2 mi downstream (levels by private engineering firm).

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	358	293	e110	124	323	155	178	151	630	159	239
2	158	302	268	e110	128	771	135	240	146	392	178	194
3	166	418	249	e100	161	377	120	221	143	303	203	169
4	187	628	408	e100	162	312	114	217	143	299	231	174
5	412	635	388	e100	144	272	133	177	143	307	263	187
6	308	463	429	e100	150	242	120	162	145	245	322	172
7	255	437	424	e100	460	222	112	187	174	239	345	254
8	203	349	327	e95	320	206	105	214	416	238	386	385
9	306	290	269	e95	371	193	105	178	293	448	480	235
10	815	256	236	e100	261	194	102	155	226	365	434	246
11	430	235	e230	e110	240	178	132	148	211	369	304	199
12	496	227	e220	e110	208	166	265	146	218	312	429	177
13	842	242	e220	e120	186	e160	176	138	269	274	372	175
14	606	204	e210	126	174	e160	150	133	269	277	343	156
15	468	251	e210	160	163	e150	193	124	235	243	333	154
16	343	613	e200	264	158	e150	150	116	235	239	254	396
17	364	382	e190	190	160	e140	140	124	579	295	212	249
18	368	326	e180	191	153	e140	129	121	453	508	201	183
19	331	302	e180	167	190	e130	137	140	303	412	239	162
20	327	259	e170	211	167	e130	173	152	303	295	254	153
21	339	231	e160	286	192	e130	144	141	275	317	322	142
22	394	226	e150	205	161	e120	144	142	242	276	227	140
23	356	207	e150	177	271	e120	138	147	246	328	204	176
24	318	204	e140	162	348	e120	135	136	217	242	194	142
25	405	200	e140	151	310	e110	123	127	229	205	251	132
26	294	188	e130	143	355	e110	118	120	284	179	195	143
27	257	227	e130	138	251	e110	116	224	336	168	203	202
28	394	191	e130	147	379	e110	119	191	294	170	391	299
29	574	196	e120	132	---	106	119	157	371	169	332	333
30	412	179	e120	130	---	110	130	162	369	167	253	288
31	386	---	e110	125	---	155	---	158	---	164	234	---
TOTAL	11694	9226	6781	4455	6347	5917	4132	4976	7918	9075	8748	6256
MEAN	377	308	219	144	227	191	138	161	264	293	282	209
MAX	842	635	429	286	460	771	265	240	579	630	480	396
MIN	158	179	110	95	124	106	102	116	143	164	159	132
AC-FT	23200	18300	13450	8840	12590	11740	8200	9870	15710	18000	17350	12410
CFSM	12.2	9.95	7.08	4.65	7.34	6.18	4.46	5.19	8.54	9.47	9.13	6.75
IN.	14.08	11.11	8.16	5.36	7.64	7.12	4.97	5.99	9.53	10.93	10.53	7.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

	MEAN	282	297	249	163	154	143	141	234	329	338	312	347
MAX	516	530	549	318	272	218	261	575	634	528	403	538	
(WY)	1986	1986	1984	1982	1982	1996	1998	2002	2000	1982	2000	1998	
MIN	172	168	86.8	59.5	71.2	75.8	80.3	133	208	192	256	170	
(WY)	1997	2000	2000	2000	2000	1986	1985	2001	1997	1997	1996	2000	

See Period of Record
e Estimated

15297610 RUSSELL CREEK NEAR COLD BAY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003#	
ANNUAL TOTAL	98162		85525			
ANNUAL MEAN	269		234		249	
HIGHEST ANNUAL MEAN					302	1982
LOWEST ANNUAL MEAN					206	1983
HIGHEST DAILY MEAN	1670	May 24	842	Oct 13	4000	Jun 24 1996
LOWEST DAILY MEAN	a80	Feb 21	b95	Jan 8	c50	Feb 19 1982
ANNUAL SEVEN-DAY MINIMUM	84	Feb 18	99	Jan 3	51	Feb 18 1982
MAXIMUM PEAK FLOW			1490	Oct 10	d6000	Oct 22 1981
MAXIMUM PEAK STAGE			27.49	Oct 10	f11.76	Jun 24 1996
INSTANTANEOUS LOW FLOW					g49	Mar 13 1983
ANNUAL RUNOFF (AC-FT)	194700		169600		180500	
ANNUAL RUNOFF (CFSM)	8.70		7.58		8.06	
ANNUAL RUNOFF (INCHES)	118.18		102.96		109.53	
10 PERCENT EXCEEDS	436		389		430	
50 PERCENT EXCEEDS	229		201		202	
90 PERCENT EXCEEDS	110		120		98	

See Period of Record

a Feb. 21-22

b Jan. 8-9

c Feb. 19-23, 1982

d From rating curve extended above 610 ft³/s on basis of estimateby slope-area measurement of 6,000 ft³/s and gage height of 11.19 ft

f Site and datum then in use; from flood marks

g Mar. 13-14, 1983

15297610 RUSSELL CREEK NEAR COLD BAY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1996 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 1-hour recording interval.

REMARKS.--Records represent water-temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross section on August 25. No variation was found within the cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 15.5°C, August 13-14, 2001, July 31 and August 1, 2002; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.0°C, May 29 and July 13; minimum 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	Locatn in X-sect. looking downstrm ft from l bank (00009)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)
AUG							
25...	1630	72.0	72.0	25.92	247	10.5	13.6
25...	1632	72.0	55.0	25.92	247	10.5	13.6
25...	1634	72.0	40.0	25.92	247	10.5	13.6
25...	1636	72.0	25.0	25.92	247	10.5	13.6
25...	1638	72.0	10.0	25.92	247	10.5	13.6
25...	1640	72.0	.00	25.92	247	10.5	13.6

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.0	4.0	6.0	6.0	5.0	5.5	4.0	3.0	3.5	1.0	0.0	0.5
2	8.0	2.0	4.5	5.5	3.5	4.5	4.0	3.0	3.5	1.0	0.0	0.5
3	6.0	5.0	5.5	6.0	4.5	5.5	3.0	2.0	2.5	1.0	0.0	0.5
4	9.5	5.5	7.5	5.5	4.5	5.0	4.0	3.0	3.5	0.0	0.0	0.0
5	8.5	6.5	7.5	5.5	4.0	5.0	4.0	3.5	3.5	0.0	0.0	0.0
6	8.0	5.0	6.5	5.5	3.5	4.5	4.0	3.5	3.5	0.0	0.0	0.0
7	7.0	4.5	5.5	5.5	4.5	5.0	3.5	2.5	3.0	0.0	0.0	0.0
8	8.0	3.5	5.0	6.0	4.5	5.0	3.0	2.0	2.5	0.0	0.0	0.0
9	7.0	3.0	5.0	5.0	3.5	4.5	2.0	1.0	1.5	0.0	0.0	0.0
10	7.5	4.5	6.5	4.5	3.0	3.5	2.0	0.0	1.0	0.0	0.0	0.0
11	6.5	4.5	5.5	4.0	2.5	3.0	1.0	0.0	0.0	1.0	0.0	0.5
12	7.0	5.0	6.0	4.0	2.5	3.5	0.0	0.0	0.0	1.0	0.5	1.0
13	7.0	5.5	6.0	2.5	0.5	1.0	0.0	0.0	0.0	1.5	0.5	1.0
14	6.5	5.0	5.5	2.0	0.0	1.0	0.0	0.0	0.0	2.0	1.0	1.5
15	7.0	4.5	5.5	4.0	1.5	3.0	0.0	0.0	0.0	2.5	1.5	2.0
16	6.5	3.0	4.5	4.0	2.5	3.0	0.0	0.0	0.0	2.0	1.5	1.5
17	8.0	5.0	6.5	3.0	2.0	2.5	0.0	0.0	0.0	3.0	1.5	1.5
18	8.0	6.5	7.0	3.0	2.0	2.5	0.5	0.0	0.0	2.5	1.5	2.0
19	8.0	6.0	6.5	3.0	2.0	2.5	1.5	0.0	0.5	2.5	1.0	2.0
20	6.5	3.5	5.5	3.5	2.0	2.5	1.0	0.0	0.5	3.5	2.0	2.5
21	5.0	2.5	3.5	3.0	1.5	2.0	1.0	0.0	0.5	3.5	2.0	3.0
22	5.5	4.0	4.5	3.0	1.5	2.0	1.0	0.0	0.5	2.0	0.5	1.5
23	4.5	3.0	4.0	2.5	1.5	2.0	0.0	0.0	0.0	3.0	1.0	2.0
24	4.0	2.5	3.5	3.5	1.5	2.5	0.0	0.0	0.0	2.5	1.0	1.5
25	5.5	3.5	4.0	4.0	2.5	3.0	0.0	0.0	0.0	3.5	1.5	2.5
26	4.5	2.5	3.5	4.0	1.0	2.5	0.0	0.0	0.0	3.0	1.0	2.0
27	4.0	2.0	3.0	2.5	1.5	2.0	0.0	0.0	0.0	3.5	2.0	2.5
28	6.0	4.0	5.0	1.5	0.0	1.0	2.0	0.0	1.0	3.0	1.5	2.0
29	6.0	4.0	5.0	2.0	1.0	1.5	2.5	0.5	1.5	3.0	1.5	2.0
30	5.5	4.0	4.5	3.0	1.0	1.5	0.5	0.0	0.0	2.5	1.5	2.0
31	6.0	4.0	4.5	---	---	---	2.0	0.5	1.0	3.0	1.0	1.5
MONTH	9.5	2.0	5.3	6.0	0.0	3.1	4.0	0.0	1.1	3.5	0.0	1.3

15297610 RUSSELL CREEK NEAR COLD BAY—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	4.0	1.0	2.0	5.5	2.5	4.0	6.0	2.5	4.0	7.0	4.0	5.5
2	2.5	0.0	1.5	5.0	2.0	3.5	6.5	1.5	3.5	9.0	4.0	6.0
3	4.5	2.0	3.0	4.5	1.5	2.5	6.5	1.5	3.5	11.5	4.0	7.0
4	2.5	1.5	2.0	3.5	1.5	2.5	7.5	1.5	4.0	9.0	4.0	6.0
5	1.5	0.0	0.5	2.5	1.0	1.5	4.0	2.0	3.0	7.0	2.5	4.5
6	1.5	0.0	0.0	4.5	0.0	1.5	5.5	1.0	3.0	6.5	4.0	5.0
7	3.5	1.5	2.5	4.5	0.0	1.5	4.5	0.0	1.5	8.5	4.5	6.0
8	3.5	2.5	3.0	4.0	0.5	2.0	6.0	0.0	2.0	6.0	4.0	5.0
9	4.5	2.0	3.0	5.0	0.0	2.0	4.5	0.0	1.5	6.5	2.5	4.5
10	3.5	2.0	2.5	2.0	0.0	1.0	5.0	0.0	2.0	11.5	1.5	6.0
11	3.5	2.0	2.5	4.0	1.0	2.0	3.5	0.5	2.0	8.0	3.5	5.0
12	4.0	2.0	3.0	4.0	0.0	1.5	6.5	3.5	4.5	8.0	2.5	4.5
13	4.0	2.0	3.0	0.0	0.0	0.0	8.0	1.0	4.0	8.5	1.5	4.5
14	3.0	1.0	2.0	0.0	0.0	0.0	6.0	3.0	4.5	8.0	1.5	4.5
15	3.0	1.5	2.0	0.0	0.0	0.0	7.0	1.5	4.0	9.0	1.5	5.0
16	3.0	1.5	2.5	0.0	0.0	0.0	6.5	1.0	3.0	11.5	1.0	6.0
17	3.5	2.0	2.5	0.0	0.0	0.0	4.0	1.5	2.5	8.5	2.5	5.5
18	2.5	1.0	2.0	0.0	0.0	0.0	5.5	0.5	3.0	8.0	5.0	6.5
19	4.0	1.0	2.5	0.0	0.0	0.0	2.5	0.0	1.0	8.5	5.0	6.5
20	3.5	1.5	2.5	0.0	0.0	0.0	7.0	1.0	3.5	7.5	4.5	6.0
21	4.5	2.0	3.0	0.0	0.0	0.0	8.0	1.5	4.0	14.0	3.5	8.0
22	4.0	1.5	2.5	1.0	0.0	0.0	8.5	1.5	4.5	12.0	3.0	7.5
23	4.0	1.5	3.0	1.0	0.0	0.0	6.0	2.0	3.5	7.0	4.0	5.5
24	5.5	2.5	3.5	1.0	0.0	0.0	10.5	2.0	5.5	7.0	2.5	4.5
25	4.0	2.0	3.0	2.5	0.0	0.5	9.5	2.0	5.5	10.5	3.0	6.0
26	4.0	2.0	2.5	3.0	0.0	0.5	11.5	1.0	5.5	7.0	4.0	5.5
27	3.0	1.5	2.0	4.0	0.0	1.0	9.5	2.5	6.0	5.5	4.0	4.5
28	5.0	2.5	3.5	4.5	0.0	1.5	6.0	2.5	4.5	8.0	4.0	5.5
29	---	---	---	4.0	1.0	2.0	7.0	3.5	5.0	15.0	3.5	8.5
30	---	---	---	4.5	0.5	2.0	10.5	3.5	6.0	13.5	4.0	8.0
31	---	---	---	5.5	2.5	3.5	---	---	---	9.5	5.0	7.5
MONTH	5.5	0.0	2.4	5.5	0.0	1.2	11.5	0.0	3.7	15.0	1.0	5.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	11.0	5.0	8.0	8.5	5.0	7.0	14.5	6.5	9.5	10.0	7.0	8.0
2	11.0	4.0	7.5	12.0	4.5	7.5	10.5	7.0	9.0	10.0	5.5	7.5
3	11.5	5.0	7.5	13.0	5.0	8.0	11.5	7.5	9.5	9.5	5.5	7.0
4	10.5	5.0	7.5	8.5	5.5	6.5	13.5	8.0	10.5	10.0	6.0	7.5
5	12.5	5.0	8.0	14.0	4.5	8.5	12.5	8.5	10.0	12.0	7.0	9.0
6	8.5	5.5	7.0	11.5	5.5	8.0	11.5	9.0	10.0	13.0	6.5	9.0
7	7.0	5.0	6.0	12.0	6.0	8.5	10.5	8.5	9.5	9.0	7.0	8.0
8	8.0	4.5	5.5	11.0	5.5	8.0	12.0	8.5	10.0	9.0	6.5	7.0
9	8.0	4.5	5.5	11.5	7.5	9.0	11.0	8.5	9.5	10.5	6.0	8.0
10	11.5	4.5	7.0	10.5	5.0	7.5	12.5	8.5	9.5	9.5	7.5	8.5
11	12.5	4.5	7.5	9.5	5.5	7.5	10.0	7.0	8.0	9.0	6.5	7.5
12	8.0	5.0	6.5	10.0	5.5	7.5	10.0	7.5	8.5	10.0	4.5	7.0
13	9.0	4.5	6.5	15.0	6.0	9.5	9.5	7.0	8.5	9.5	7.0	8.0
14	14.0	4.5	8.0	14.5	5.5	9.0	10.5	7.5	9.0	12.5	4.0	7.5
15	14.5	4.5	8.5	14.0	5.5	9.0	9.5	7.0	8.0	8.0	5.5	6.5
16	8.5	5.5	6.5	10.0	7.0	8.0	10.5	5.0	7.5	7.5	6.5	7.0
17	7.0	5.0	6.0	10.0	6.5	7.5	11.0	6.0	8.0	10.5	5.0	7.5
18	9.0	4.0	6.0	7.5	6.5	7.0	11.0	6.0	8.5	10.0	3.0	6.0
19	7.0	4.0	5.5	8.5	6.5	7.5	11.0	6.0	8.0	9.0	5.0	6.5
20	7.5	5.0	6.0	13.5	5.5	9.0	10.5	6.5	8.5	8.0	4.5	6.0
21	12.0	4.5	7.5	12.0	6.5	9.5	12.0	7.0	9.0	10.5	4.0	6.5
22	7.5	4.0	6.0	13.5	5.5	9.0	12.5	6.0	9.0	8.0	5.5	6.5
23	8.0	5.0	6.5	10.0	7.5	8.5	10.0	6.5	8.5	8.0	5.0	6.0
24	12.0	5.0	8.0	8.0	6.0	7.0	11.0	6.5	8.5	9.0	4.5	6.5
25	8.0	5.5	7.0	8.0	6.0	7.0	11.5	8.0	9.0	9.0	4.5	6.5
26	7.5	5.0	6.0	11.0	5.5	8.0	9.5	6.0	7.5	12.0	6.0	8.0
27	9.5	5.0	7.0	11.0	6.5	8.5	10.5	7.0	8.5	8.0	6.0	7.0
28	11.0	5.0	7.0	9.0	6.5	7.5	9.5	7.5	8.5	9.5	6.5	7.5
29	10.5	5.5	7.5	9.5	6.0	7.5	11.5	7.5	9.0	7.5	6.0	6.5
30	9.0	5.0	7.0	13.0	7.0	9.0	9.5	7.5	8.0	8.0	6.5	7.0
31	---	---	---	11.5	6.5	9.0	9.0	7.0	8.0	---	---	---
MONTH	14.5	4.0	6.9	15.0	4.5	8.1	14.5	5.0	8.8	13.0	3.0	7.2

15300300 ILIAMNA RIVER NEAR PEDRO BAY

LOCATION.--Lat 59°45'31", long 153°50'41", in NE¹/₄ SE¹/₄ sec. 10, T. 5 S., R. 27 W. (Iliamna D-3 quad), Lake and Peninsula Borough, Hydrologic Unit 19030206, on left bank 100 ft downstream from bridge on road between Pile Bay and Williamsport, 9.2 mi east of Pedro Bay, and 37 mi east of Iliamna.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 80 ft above sea level, from topographic map.

REMARKS.--Records are good except for estimated daily discharges which are poor. GOES satellite telemetry at station. Precipitation gage at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	2940	1350	e310	293	404	134	521	2080	2410	945	931
2	1100	1880	1090	e300	286	413	134	680	1900	2860	879	822
3	902	1540	2420	e310	297	455	123	837	1700	2900	788	777
4	772	2580	2490	e300	1020	418	119	780	1610	2470	728	821
5	718	8000	1960	e290	1870	364	118	678	2200	2060	677	932
6	769	9470	3060	340	1340	378	115	547	3230	1860	649	771
7	1050	3970	2180	369	1120	374	115	470	2500	1770	678	693
8	1230	2100	1630	420	1630	343	113	498	1960	1820	732	635
9	905	1470	1470	496	1230	307	113	1490	2470	1930	745	620
10	772	1170	1360	520	1140	298	114	1960	3400	1810	746	604
11	975	996	1080	538	1120	304	115	1320	3110	1790	878	572
12	939	944	961	500	1040	285	122	1080	2950	1810	1510	540
13	2600	866	821	489	807	262	174	937	3180	1670	1890	523
14	3170	779	738	436	e600	252	166	844	3070	1750	2690	485
15	2470	707	e700	402	e500	259	159	806	2390	1730	1750	454
16	2210	631	e650	365	e450	254	168	796	2120	1550	1620	430
17	1570	636	e600	379	e400	236	154	795	2020	1220	1230	412
18	1370	593	e550	491	e380	216	150	748	1990	1240	952	397
19	1440	643	e500	422	382	205	148	725	1820	1260	995	381
20	2550	844	e480	418	359	197	166	783	1740	1180	1220	375
21	5000	860	e450	413	336	e190	262	862	2150	1110	975	358
22	8970	1680	e420	385	320	e190	311	970	2100	1060	830	341
23	7370	8570	e410	437	341	e180	283	1130	1780	1080	742	327
24	4620	4870	e400	409	390	e180	282	1310	1720	2020	708	321
25	3750	2520	e390	330	364	e180	318	1300	2870	2290	849	313
26	3990	2690	e380	311	406	e170	363	1420	2550	1570	1480	308
27	2350	1910	e370	293	420	e160	390	2030	2540	1170	1370	337
28	1770	1300	e360	283	415	e160	429	2280	2130	1120	1490	489
29	2730	1290	e350	283	---	e150	451	1970	1830	1180	1970	1850
30	2830	1940	e330	277	---	145	470	2010	1950	1050	1400	4610
31	3240	---	e320	287	---	145	---	2060	---	974	1100	---
TOTAL	75592	70389	30270	11803	19256	8074	6279	34637	69060	51714	35216	21429
MEAN	2438	2346	976	381	688	260	209	1117	2302	1668	1136	714
MAX	8970	9470	3060	538	1870	455	470	2280	3400	2900	2690	4610
MIN	718	593	320	277	286	145	113	470	1610	974	649	308
AC-FT	149900	139600	60040	23410	38190	16010	12450	68700	137000	102600	69850	42500
CFSM	19.1	18.3	7.63	2.97	5.37	2.03	1.64	8.73	18.0	13.0	8.88	5.58
IN.	21.97	20.46	8.80	3.43	5.60	2.35	1.82	10.07	20.07	15.03	10.23	6.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)#

MEAN	882	684	351	233	206	172	246	1091	2510	1695	1172	1358
MAX	2438	2346	976	410	688	407	500	1594	3790	2931	1631	2178
(WY)	2003	2003	2003	2002	2003	1998	1998	2002	1998	2001	1999	1999
MIN	289	161	84.5	75.2	61.6	60.6	87.8	752	1716	788	692	627
(WY)	1997	1997	1997	1998	1998	1999	1999	2001	1996	1997	1997	1996

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1996 - 2003#

ANNUAL TOTAL	432953	433719		
ANNUAL MEAN	1186	1188		
HIGHEST ANNUAL MEAN			913	
LOWEST ANNUAL MEAN			1188	2003
HIGHEST DAILY MEAN	9470	Nov 6	622	1997
LOWEST DAILY MEAN	a50	Apr 19	12300	Jun 8 1998
ANNUAL SEVEN-DAY MINIMUM	53	Apr 15	c38	Jan 5 1997
MAXIMUM PEAK FLOW			40	Jan 2 1997
MAXIMUM PEAK STAGE			14800	Jun 8 1998
ANNUAL RUNOFF (AC-FT)	858800	70.39	71.82	Jun 8 1998
ANNUAL RUNOFF (CFSM)	9.27	9.28	661700	
ANNUAL RUNOFF (INCHES)	125.83	126.05	7.14	
10 PERCENT EXCEEDS	2680	2490	96.96	
50 PERCENT EXCEEDS	807	795	498	
90 PERCENT EXCEEDS	70	253	85	

See Period of Record; partial year used in monthly statistics

a From Apr. 19-21

b From Apr. 8-9

c From Jan. 5-6, 1997

e Estimated

15302000 NUYAKUK RIVER NEAR DILLINGHAM

LOCATION.--Lat 59°56'08", long 158°11'16", in NE¹/₄ NE¹/₄ sec. 10, T.3 S., R.52 W. (Dillingham D-6 quad), Hydrologic Unit 19030301, on the left bank 350 ft downstream from outlet of Tikchik Lake, about 0.6 mi upstream from unnamed tributary entering from left bank and 62 mi north of Dillingham.

DRAINAGE AREA.--1,490 mi², approximately.

PERIOD OF RECORD.--May 1953 to September 1996 and July 2002 to September 2003 (discontinued).

REVISED RECORDS.--WRD-Alaska 1972; 1971.

GAGE.--Water-stage recorder. Elevation of gage is 325 ft above sea level from topographic map. Prior to Oct.8, 1983, at site 650 ft downstream at different datum, but datum was 2.00 ft higher from May 1953 to Oct. 1. 1957.

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry at station. Discharge affected by storage in Tikchik Lake, Nuyakuk Lake, Lake Chauekuktuli, and other smaller lakes covering over 170 mi² of the basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6090	13600	11000	e7100	e3900	e3900	e2400	e2800	7150	14800	9450	7420
2	6090	13800	10700	e6900	e3900	e3900	e2400	e2900	7510	14800	9240	7320
3	6100	13900	10800	e6700	e3800	e4000	e2400	e3000	7840	14800	9000	7180
4	6100	13600	10900	e6500	e3800	e4000	e2300	e3100	8210	14500	8770	7090
5	6080	14300	11000	e6300	e3900	e4000	e2300	e3200	8620	14300	8570	7040
6	6190	14900	11800	e6100	e4000	e4000	e2300	e3400	9190	14000	8360	6970
7	6240	15700	12700	e6000	e4000	e3900	e2300	e3600	9590	13900	8180	6850
8	6240	15900	13400	e5900	e4100	e3800	e2200	e3800	9910	13600	8030	6710
9	6150	15600	14100	e5800	e4200	e3700	e2200	4110	10700	13200	7880	6560
10	5980	15400	14700	e5800	e4300	e3600	e2200	4310	11600	13100	7650	6480
11	6110	15100	15000	e5800	e4300	e3600	e2200	4390	12200	12900	7570	6310
12	6330	14800	15000	e5800	e4400	e3500	e2200	4430	12700	12600	7630	6180
13	6300	14400	e14500	e5600	e4400	e3500	e2200	4490	13300	12500	7660	6040
14	6840	13900	e14000	e5500	e4400	e3400	e2200	4600	13900	12200	7820	5970
15	7370	13500	e13000	e5400	e4300	e3300	e2200	4600	14300	11900	8070	5780
16	7810	13100	e12500	e5300	e4300	e3200	e2200	4600	14700	11700	8060	5640
17	8080	12700	e12000	e5200	e4200	e3200	e2200	4570	15100	11600	7910	5520
18	8330	12500	e11500	e5100	e4200	e3100	e2300	4570	15300	11200	7800	5440
19	8570	12100	e11000	e5000	e4100	e3100	e2300	4640	15500	11300	7780	5280
20	8620	11800	e10600	e4900	e4100	e3000	e2300	4740	15600	11300	8100	5180
21	8620	11500	e10300	e4800	e4100	e3000	e2300	4850	15800	11000	8060	4990
22	8710	11300	e10000	e4700	e4000	e2900	e2400	4970	15800	10700	7960	4850
23	9410	11200	e9600	e4600	e4000	e2800	e2400	5130	15300	10300	7850	4660
24	9560	11300	e9300	e4500	e4000	e2800	e2400	5280	15500	10200	7780	4600
25	9900	11400	e8900	e4400	e3900	e2700	e2500	5360	15400	10100	7610	4430
26	10700	11600	e8600	e4300	e3900	e2700	e2500	5380	15300	9990	7590	4320
27	11000	11400	e8300	e4200	e3900	e2600	e2600	5560	15400	9770	7540	4290
28	11100	11300	e8000	e4200	e3900	e2600	e2600	5860	15300	9820	7580	4210
29	11300	11500	e7800	e4100	---	e2500	e2700	6120	15200	9800	7600	4180
30	12200	11300	e7600	e4100	---	e2500	e2700	6340	15000	9700	7530	4130
31	13100	---	e7300	e4000	---	e2400	---	6720	---	9600	7460	---
TOTAL	251220	394400	345900	164600	114300	101200	70400	141420	386920	371180	248090	171620
MEAN	8104	13150	11160	5310	4082	3265	2347	4562	12900	11970	8003	5721
MAX	13100	15900	15000	7100	4400	4000	2700	6720	15800	14800	9450	7420
MIN	5980	11200	7300	4000	3800	2400	2200	2800	7150	9600	7460	4130
AC-FT	498300	782300	686100	326500	226700	200700	139600	280500	767500	736200	492100	340400
CFSM	5.44	8.82	7.49	3.56	2.74	2.19	1.57	3.06	8.66	8.04	5.37	3.84
IN.	6.27	9.85	8.64	4.11	2.85	2.53	1.76	3.53	9.66	9.27	6.19	4.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

	MEAN	7769	5200	3390	2519	2122	1859	1797	4493	15300	13970	8978	8126
MAX	13350	13150	11160	5310	4082	3265	2692	11320	23290	26220	24190	17070	
(WY)	1992	2003	2003	2003	2003	2003	1993	1978	1969	1977	1977	1989	
MIN	3816	2570	1848	1397	1252	990	800	1719	10360	6794	3855	4099	
(WY)	1969	1969	1964	1964	1964	1976	1960	1964	1954	1954	1957	1984	

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 1953 - 2003#

ANNUAL TOTAL	2761250		
ANNUAL MEAN	7565		6330
HIGHEST ANNUAL MEAN			9470
LOWEST ANNUAL MEAN			4236
HIGHEST DAILY MEAN	15900	Nov 8	32100 Jul 2 1977
LOWEST DAILY MEAN	a2200	Apr 8	b770 Apr 16 1960
ANNUAL SEVEN-DAY MINIMUM	2200	Apr 8	770 Apr 16 1960
MAXIMUM PEAK FLOW	16000	Nov 8	32200 Jul 2 1977
MAXIMUM PEAK STAGE	9.07	Nov 8	c10.49 Jul 2 1977
INSTANTANEOUS LOW FLOW			770 Apr 16 1960
ANNUAL RUNOFF (AC-FT)	5477000		4586000
ANNUAL RUNOFF (CFSM)	5.08		4.25
ANNUAL RUNOFF (INCHES)	68.94		57.72
10 PERCENT EXCEEDS	14000		14300
50 PERCENT EXCEEDS	6700		4400
90 PERCENT EXCEEDS	2700		1700

See Period of Record
a Apr. 8-17
b Apr. 16-30, 1960
c Site and datum then in use
e Estimated

15303700 TATALINA RIVER NEAR TAKOTNA

LOCATION.--Lat 62°53'06", long 155°56'22", in NW¹/₄ NE¹/₄ sec. 12, T.32 N., R.36 W. (McGrath D-6 quad), Hydrologic Unit 19030405, at downstream side of bridge on right bank, 1.2 mi southeast of Tatalina Airstrip, and 8.1 mi southeast of Takotna.

DRAINAGE AREA.--76.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1987 to current year (no winter record), except May only in 1989, and annual maximum in water year 1991.

GAGE.--Water-stage recorder, non-recording gage, and crest-stage gage. Elevation of gage is 450 ft above sea level, from topographic map. Prior to May 9, 1990 at site 20 ft downstream at same datum.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Precipitation gage and air temperature recorder at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s, July 8, 1998, gage-height 10.97 ft; maximum gage height 11.46 ft, 1996, date and time unknown, backwater from ice, discharge not determined; minimum discharge not determined, occurs during winter.

EXTREMES FOR CURRENT PERIOD.-- May 2003 to September 2003: maximum discharge during period, 902 ft³/s, July 28, gage height 9.60 ft. Minimum discharge not determined, occurs during winter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e530	189	92	246	98
2	---	---	---	---	---	---	---	e500	470	427	217	109
3	---	---	---	---	---	---	---	e520	309	417	194	95
4	---	---	---	---	---	---	---	e470	225	234	179	116
5	---	---	---	---	---	---	---	e420	193	183	162	129
6	---	---	---	---	---	---	---	e380	176	167	147	105
7	---	---	---	---	---	---	---	e320	167	159	135	92
8	---	---	---	---	---	---	---	e370	154	140	136	86
9	---	---	---	---	---	---	---	e450	143	127	124	81
10	---	---	---	---	---	---	---	e420	153	121	114	77
11	---	---	---	---	---	---	---	e360	173	122	109	74
12	---	---	---	---	---	---	---	e320	198	147	132	74
13	---	---	---	---	---	---	---	e280	166	122	137	74
14	---	---	---	---	---	---	---	e250	139	107	176	69
15	---	---	---	---	---	---	---	e220	124	101	167	e67
16	---	---	---	---	---	---	---	e200	116	101	205	e66
17	---	---	---	---	---	---	---	e180	110	93	165	e65
18	---	---	---	---	---	---	---	e172	105	88	140	e64
19	---	---	---	---	---	---	---	168	106	82	131	e63
20	---	---	---	---	---	---	---	158	117	78	119	e62
21	---	---	---	---	---	---	---	153	127	73	109	e61
22	---	---	---	---	---	---	---	144	114	70	101	e60
23	---	---	---	---	---	---	---	130	102	70	97	e59
24	---	---	---	---	---	---	---	121	97	93	95	e58
25	---	---	---	---	---	---	---	114	92	90	102	e57
26	---	---	---	---	---	---	---	115	91	88	117	56
27	---	---	---	---	---	---	---	219	87	494	108	55
28	---	---	---	---	---	---	---	284	85	751	97	55
29	---	---	---	---	---	---	---	181	82	346	91	70
30	---	---	---	---	---	---	---	158	81	312	89	70
31	---	---	---	---	---	---	---	153	---	329	90	---
TOTAL	---	---	---	---	---	---	---	8460	4491	5824	4231	2267
MEAN	---	---	---	---	---	---	---	273	150	188	136	75.6
MAX	---	---	---	---	---	---	---	530	470	751	246	129
MIN	---	---	---	---	---	---	---	114	81	70	89	55
AC-FT	---	---	---	---	---	---	---	16780	8910	11550	8390	4500
CFSM	---	---	---	---	---	---	---	3.55	1.95	2.44	1.77	0.98
IN.	---	---	---	---	---	---	---	4.09	2.17	2.82	2.05	1.10

e Estimated

WATER-QUALITY RECORDS

WATER TEMPERATURE: Maximum, 11.5°C, July 21; minimum, 0.0°C, many days in May and September.

DATE	TIME	STREAM WIDTH (FT) (000004)	SAMPLE LOC- ATION, CROSS SECTION	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)
			(FT FM R BK) (72103)		FEET PER SECOND (00061)				
JULY									
10...	1621	32.0	27.0	4.62	120	9.0	16.5	10	8010
10...	1622	32.0	22.0	4.62	120	9.0	16.5	10	8010
10...	1623	32.0	17.0	4.62	120	9.0	16.5	10	8010
10...	1624	32.0	12.0	4.62	120	9.0	16.5	10	8010
10...	1625	32.0	7.0	4.62	120	9.0	16.5	10	8010

[illegible]

15303700 TATALINA RIVER NEAR TAKOTNA—Continued

WATER TEMPERATURE (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.0	3.0	4.5	9.0	8.5	9.0	6.5	5.5	6.0	7.5	6.5	7.0
2	3.0	2.5	3.0	8.5	7.0	7.5	6.5	5.0	6.0	7.0	6.5	7.0
3	5.5	3.0	4.0	7.0	6.0	6.5	6.5	5.5	6.0	6.5	5.0	5.5
4	6.0	4.0	5.0	8.5	6.5	7.5	6.5	5.0	5.5	6.0	5.0	5.5
5	6.0	5.0	5.5	8.5	7.5	8.0	7.0	5.5	6.0	6.0	5.0	5.5
6	5.5	4.5	5.0	8.5	7.5	8.0	7.5	6.0	6.5	5.5	4.5	5.0
7	6.0	5.0	5.5	9.5	7.0	8.0	7.5	6.5	7.0	5.0	4.0	4.5
8	6.0	5.0	5.5	10.0	8.0	9.0	8.5	7.0	7.5	4.5	3.0	4.0
9	6.0	5.5	6.0	10.5	8.5	9.5	9.0	7.5	8.0	4.5	3.0	3.5
10	6.5	5.5	6.0	10.0	8.5	9.0	9.0	7.0	8.0	4.5	3.0	3.5
11	7.5	6.0	7.0	8.5	8.0	8.0	9.5	8.5	9.0	4.5	3.5	4.0
12	8.0	6.5	7.0	9.0	7.0	8.0	9.0	8.5	8.5	5.0	4.5	5.0
13	8.5	6.5	7.5	10.5	8.0	9.0	8.5	8.0	8.0	5.0	3.5	4.0
14	8.5	6.5	7.5	10.5	9.5	10.0	8.5	7.5	8.0	3.5	2.0	2.5
15	9.0	6.5	8.0	10.0	8.5	9.0	8.5	8.0	8.5	2.0	0.5	1.0
16	9.0	8.0	8.5	8.5	7.5	8.0	8.0	7.0	7.5	2.0	0.5	1.0
17	10.0	7.5	8.5	7.5	6.0	7.0	7.0	6.0	6.5	1.5	0.5	1.0
18	9.0	7.5	8.5	9.5	6.5	8.0	6.0	5.5	6.0	1.0	0.0	0.5
19	9.5	7.5	8.5	11.0	8.0	9.5	6.5	5.5	6.0	0.5	0.0	0.0
20	9.0	8.0	8.5	11.0	8.5	9.5	6.5	5.0	6.0	0.0	0.0	0.0
21	9.0	7.5	8.0	11.5	9.0	10.5	7.5	5.5	6.5	0.5	0.0	0.0
22	9.5	7.5	8.5	11.0	9.0	10.0	7.0	5.5	6.0	0.0	0.0	0.0
23	10.0	8.0	9.0	10.0	9.0	9.5	6.5	6.0	6.0	0.0	0.0	0.0
24	10.0	8.0	9.0	9.0	8.0	8.5	7.0	6.0	6.5	0.0	0.0	0.0
25	9.5	7.5	8.5	10.0	8.0	9.0	7.0	6.5	7.0	0.0	0.0	0.0
26	9.0	7.0	8.0	9.5	8.0	9.0	7.5	6.5	7.0	0.5	0.0	0.0
27	9.0	7.5	8.0	8.0	6.0	7.5	7.5	6.0	7.0	1.0	0.0	0.5
28	9.0	7.0	8.0	6.5	5.5	6.0	7.0	5.5	6.5	1.0	0.0	0.5
29	8.5	8.0	8.5	7.0	5.5	6.5	6.5	5.5	6.0	1.5	0.5	1.0
30	9.5	7.5	8.5	7.0	6.0	6.5	6.5	5.5	6.0	2.5	1.5	2.0
31	---	---	---	6.5	5.5	6.0	7.0	6.0	6.5	---	---	---
MONTH	10.0	2.5	7.1	11.5	5.5	8.3	9.5	5.0	6.8	7.5	0.0	2.5

15303900 KUSKOKWIM RIVER AT LISKYS CROSSING NEAR STONY RIVER

LOCATION.--Lat 62°03'07", long 156°12'38", in SW¹/₄ NE¹/₄ SE¹/₄ sec. 27, T. 23 N., R. 38 W. (Iditarod A-1 quad), Hydrologic Unit 19030405, on the downstream point of the first channel island located 0.25 mi above Lisky's house site (historic, house since destroyed), 22 mi northeast of the village of Stony River.

DRAINAGE AREA.--15,600 mi², approximately.

PERIOD OF RECORD.--May 1996 to current year (no winter record).

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level from topographic map.

REMARKS.-- Rain gage at station. GOES satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed 34.11 ft, August 1, 2003, but may have been higher during a period of missing record. Minimum gage height observed 22.94 ft, October 11, 1997, but may have been lower during a period of missing record.

EXTREMES FOR CURRENT PERIOD.--October 1-19, 2002, June 6 to September 30, 2003; Maximum gage height 34.11 ft, August 1; minimum gage height 24.82 ft, September 28 and 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.45	---	---	---	---	---	---	---	---	26.91	34.06	27.20
2	26.84	---	---	---	---	---	---	---	---	27.00	33.88	27.04
3	27.11	---	---	---	---	---	---	---	---	27.35	33.60	26.95
4	27.14	---	---	---	---	---	---	---	---	28.16	33.19	27.10
5	27.04	---	---	---	---	---	---	---	---	29.55	32.57	27.36
6	26.87	---	---	---	---	---	---	---	28.55	30.81	31.74	27.55
7	26.66	---	---	---	---	---	---	---	28.14	30.89	30.92	27.64
8	26.47	---	---	---	---	---	---	---	27.60	30.23	30.27	27.69
9	26.25	---	---	---	---	---	---	---	27.22	29.74	29.69	27.60
10	26.10	---	---	---	---	---	---	---	27.05	29.50	29.25	27.38
11	26.10	---	---	---	---	---	---	---	26.96	29.29	28.96	27.15
12	26.13	---	---	---	---	---	---	---	27.02	29.21	28.91	26.91
13	25.99	---	---	---	---	---	---	---	27.05	29.22	28.88	26.67
14	25.89	---	---	---	---	---	---	---	27.12	29.35	29.02	26.42
15	25.82	---	---	---	---	---	---	---	27.63	29.45	29.45	26.24
16	25.83	---	---	---	---	---	---	---	28.38	29.24	30.09	26.11
17	25.80	---	---	---	---	---	---	---	28.82	28.88	30.32	25.95
18	25.60	---	---	---	---	---	---	---	28.70	28.73	30.20	25.78
19	25.44	---	---	---	---	---	---	---	28.56	29.01	30.19	25.64
20	---	---	---	---	---	---	---	---	28.46	29.74	30.37	25.52
21	---	---	---	---	---	---	---	---	28.28	29.56	30.14	25.50
22	---	---	---	---	---	---	---	---	28.16	28.75	29.51	25.41
23	---	---	---	---	---	---	---	---	28.15	28.23	28.85	25.27
24	---	---	---	---	---	---	---	---	28.12	28.04	28.32	25.11
25	---	---	---	---	---	---	---	---	28.08	27.94	27.96	25.05
26	---	---	---	---	---	---	---	---	27.94	27.90	27.68	24.98
27	---	---	---	---	---	---	---	---	27.77	28.20	27.42	24.91
28	---	---	---	---	---	---	---	---	27.73	29.15	27.29	24.84
29	---	---	---	---	---	---	---	---	27.51	30.50	27.35	24.85
30	---	---	---	---	---	---	---	---	27.18	32.38	27.41	24.85
31	---	---	---	---	---	---	---	---	---	33.81	27.32	---
MEAN	---	---	---	---	---	---	---	---	---	29.25	29.83	26.22
MAX	---	---	---	---	---	---	---	---	---	33.81	34.06	27.69
MIN	---	---	---	---	---	---	---	---	---	26.91	27.29	24.84

15304000 KUSKOKWIM RIVER AT CROOKED CREEK

LOCATION.--Lat 61°52'16", long 158°06'03", in NE¹/₄ NE¹/₄ sec. 32, T. 21 N., R. 48 W. (Sleetmute D-6 quad), Hydrologic Unit 19030501, on right bank at village of Crooked Creek, 0.1 mi upstream from Crooked Creek.

DRAINAGE AREA.--31,100 mi², approximately.

PERIOD OF RECORD.--June 1951 to September 1994, October 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above sea level, from topographic map. Prior to August 6, 1977, non-recording gage at site 1,600 ft upstream at same datum. From August 6, 1977, to September 30, 1991, water-stage recorder at site 2,300 ft upstream at same datum. From October 1, 1991 to September 30, 1994, and October 1, 1995 to August 7, 1997 non-recording gage.

REMARKS.--Records good except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67700	68200	e39000	e26000	e20000	e19000	e14000	e64000	52000	55300	127000	67100
2	70700	68700	e38000	e26000	e20000	e19000	e14000	e67000	59800	58600	124000	66400
3	70100	67300	e37000	e26000	e20000	e19000	e14000	e70000	75800	66600	121000	65500
4	68200	65200	e36000	e26000	e19000	e18000	e14000	e75000	80100	80300	115000	64900
5	65500	62900	e35000	e25000	e19000	e18000	e14000	e80000	81600	89500	107000	65300
6	63200	61200	e35000	e25000	e19000	e17000	e15000	e85000	78700	92000	99500	66900
7	61900	57800	e34000	e25000	e19000	e17000	e15000	e90000	76700	92000	92000	67400
8	61300	54400	e34000	e25000	e19000	e17000	e16000	e95000	73300	89200	e86500	65900
9	62000	50200	e33000	e24000	e19000	e16000	e16000	e100000	69800	83500	e83000	64100
10	63300	46500	e33000	e24000	e20000	e16000	e17000	e100000	66700	78500	e80000	62000
11	60700	e43000	e32000	e24000	e21000	e16000	e17000	e100000	65400	76200	e78500	60000
12	58900	e41000	e32000	e24000	e22000	e16000	e18000	e98000	68000	75000	e78000	57700
13	60900	e38000	e31000	e24000	e22000	e15000	e19000	e94000	71300	74600	e78500	55600
14	60100	e36000	e31000	e23000	e22000	e15000	e20000	e90000	70900	74500	e82000	53500
15	58400	e34000	e31000	e23000	e21000	e15000	e21000	e84000	70400	73200	89100	51500
16	57100	e32000	e30000	e23000	e20000	e15000	e23000	e78000	70700	72300	93300	49600
17	56600	e31000	e30000	e23000	e19000	e15000	e24000	e73000	71700	71700	98300	47900
18	57500	e30000	e30000	e23000	e19000	e15000	e25000	e68000	72400	73100	102000	46100
19	57700	e30000	e30000	e22000	e18000	e15000	e27000	63100	72100	73300	98600	44700
20	55500	e30000	e29000	e22000	e18000	e15000	e29000	55400	73100	72200	93800	43400
21	54200	e31000	e29000	e22000	e17000	e15000	e31000	52800	70900	72100	91500	42300
22	50700	e31000	e29000	e22000	e17000	e15000	e33000	51200	69200	70600	87500	41000
23	47500	e32000	e28000	e22000	e17000	e14000	e36000	49100	67700	66500	82200	39900
24	46900	e33000	e28000	e21000	e17000	e14000	e40000	48800	66300	63700	76900	39200
25	52800	e34000	e28000	e21000	e17000	e14000	e45000	48800	65800	62900	72700	38100
26	64800	e35000	e28000	e21000	e18000	e14000	e55000	48600	64200	64100	70000	37300
27	70300	e36000	e27000	e21000	e18000	e14000	e65000	48500	62300	65200	69800	36700
28	72200	e37000	e27000	e21000	e18000	e14000	e62000	49400	60600	73100	70000	36400
29	72100	e38000	e27000	e20000	---	e14000	e60000	49200	58600	90300	69500	36800
30	71400	e39000	e27000	e20000	---	e14000	e62000	49300	57100	108000	69100	38000
31	69600	---	e26000	e20000	---	e14000	---	50500	---	121000	68000	---
TOTAL	1909800	1293400	964000	714000	535000	484000	861000	2175700	2063200	2379100	2754300	1551200
MEAN	61610	43110	31100	23030	19110	15610	28700	70180	68770	76750	88850	51710
MAX	72200	68700	39000	26000	22000	19000	65000	100000	81600	121000	127000	67400
MIN	46900	30000	26000	20000	17000	14000	14000	48500	52000	55300	68000	36400
AC-FT	3788000	2565000	1912000	1416000	1061000	960000	1708000	4316000	4092000	4719000	5463000	3077000
CFSM	1.98	1.39	1.00	0.74	0.61	0.50	0.92	2.26	2.21	2.47	2.86	1.66
IN.	2.28	1.55	1.15	0.85	0.64	0.58	1.03	2.60	2.47	2.85	3.29	1.86

e Estimated

15304000 KUSKOKWIM RIVER AT CROOKED CREEK—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY) #

MEAN	44580	21730	15550	13160	11730	10780	14670	80170	82620	68050	76080	68880
MAX	102000	43110	31100	23030	20710	19550	41000	161700	235100	119500	169800	150900
(WY)	1994	2003	2003	2003	1991	1991	1967	1957	1964	1980	1963	1951
MIN	22650	12730	10000	8400	6900	6100	8600	22130	33880	40910	41840	30550
(WY)	1979	1981	1957	1966	1966	1966	1953	1964	1954	1997	1957	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003 #	
ANNUAL TOTAL	16093600		17684700			
ANNUAL MEAN	44090		48450		42350	
HIGHEST ANNUAL MEAN					62120	
LOWEST ANNUAL MEAN					28600	
HIGHEST DAILY MEAN	170000	May 16	127000	Aug 1	391000	Jun 5 1964
LOWEST DAILY MEAN	a8000	Apr 14	b14000	Mar 23	c6100	Mar 1 1966
ANNUAL SEVEN-DAY MINIMUM	8000	Apr 14	14000	Mar 23	6100	Mar 1 1966
MAXIMUM PEAK FLOW			129000	Aug 2	392000	Jun 5 1964
MAXIMUM PEAK STAGE			11.87	Aug 2		
MAXIMUM PEAK STAGE			d18.86	Apr 27	f25.74	Jun 5 1964
INSTANTANEOUS LOW FLOW					6100	Mar 1 1966
ANNUAL RUNOFF	31920000		35080000		30680000	
ANNUAL RUNOFF (AC-FT)	1.42		1.56		1.36	
ANNUAL RUNOFF (INCHES)	19.25		21.15		18.50	
10 PERCENT EXCEEDS	76300		82100		93200	
50 PERCENT EXCEEDS	46500		47900		26000	
90 PERCENT EXCEEDS	8400		17000		10000	

See Period of Record, partial years used in monthly computations

a Apr. 14-24

b Mar. 23 - Apr. 5

c Mar. 1-31, 1966

d From floodmarks, backwater from ice

f From floodmarks, backwater from ice, at different site, same datum

15304060 KUSKOKWIM RIVER AT ANIAK

LOCATION.--Lat 61°35'14", long 159°32'54", in SE¹/₄ SE¹/₄ sec. 2, T. 17 N., R. 57 W. (Russian Mission C-2 quad), Hydrologic unit 19030502, on the left bank near the NW corner of the west end of the runway in the village of Aniak.

WATER-STAGE RECORDS

PERIOD OF RECORD.--May 1996 to September 2003 (discontinued) (no winter record).

GAGE.--Water-stage recorder. A supplementary stage gage was installed April 23, 1998 approximately 1 mi upstream from gage of record. This gage records water elevation at the Aniak city dike system during ice break-up events. Elevation of the gage is 75 ft above sea level from topographic map.

REMARKS.--GOES satellite telemetry at station. Supplementary stage records are available from the computer files of the Alaska Science Center, Water Resources Office.

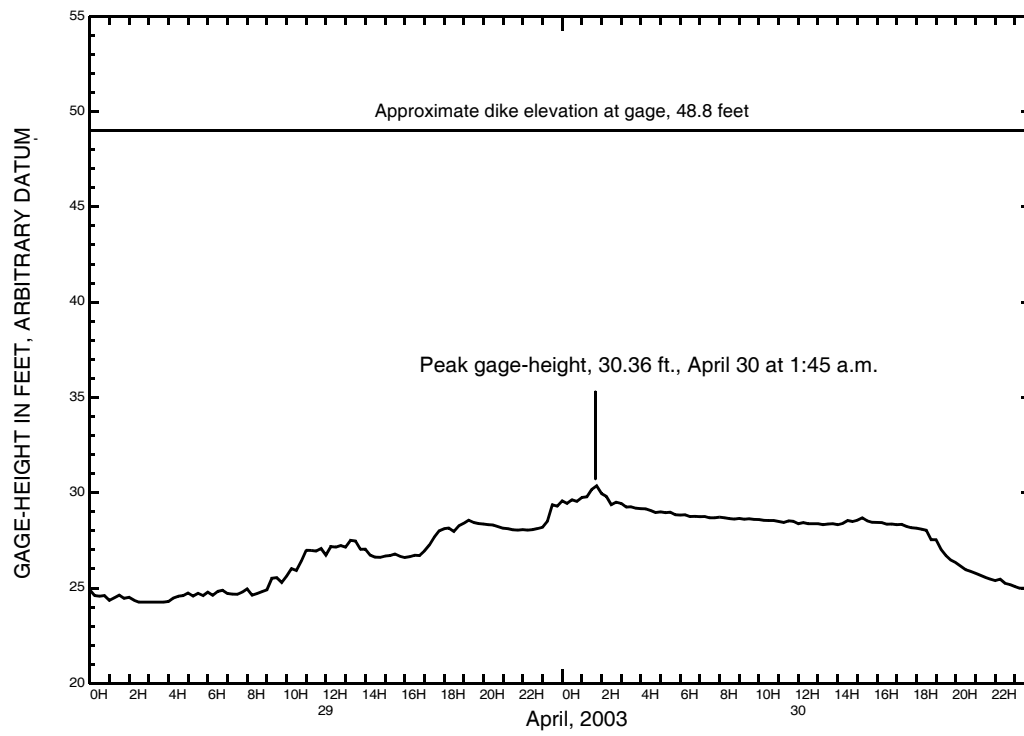
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed 26.97 ft, May 18, 2002, but may have been higher during periods of missing record. Minimum gage height observed 14.37 ft, October 27, 2000, but may have been lower during periods of missing record.

EXTREMES FOR CURRENT PERIOD.--October 1-17, 2002 and May 4 to September 30, 2003: Maximum gage height observed 22.92 ft, August 1, 2, but may have been higher during periods of missing record. Minimum gage height observed 16.15 ft, Sep. 29, but may have been lower during periods of missing record.

GAGE-HEIGHT, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.95	---	---	---	---	---	---	---	18.83	18.43	22.76	19.38
2	19.31	---	---	---	---	---	---	---	19.18	18.52	22.86	19.34
3	19.36	---	---	---	---	---	---	---	20.35	19.13	22.69	19.25
4	19.22	---	---	---	---	---	---	20.85	20.86	19.75	22.35	19.14
5	19.06	---	---	---	---	---	---	20.72	20.77	20.62	21.93	19.11
6	18.85	---	---	---	---	---	---	20.69	20.71	21.01	21.53	19.14
7	18.70	---	---	---	---	---	---	20.64	20.54	21.07	21.10	19.22
8	18.60	---	---	---	---	---	---	20.16	20.25	20.99	20.72	19.18
9	18.55	---	---	---	---	---	---	19.90	19.97	20.69	20.36	19.04
10	18.68	---	---	---	---	---	---	20.31	19.76	20.29	19.86	18.87
11	18.62	---	---	---	---	---	---	20.57	19.58	20.01	19.52	18.72
12	18.46	---	---	---	---	---	---	20.64	19.58	19.89	19.61	18.54
13	18.38	---	---	---	---	---	---	21.00	19.79	19.81	19.77	18.34
14	18.45	---	---	---	---	---	---	20.92	19.92	19.76	20.30	18.16
15	18.49	---	---	---	---	---	---	20.44	19.81	19.67	20.89	17.98
16	18.42	---	---	---	---	---	---	20.02	19.74	19.60	21.33	17.78
17	18.35	---	---	---	---	---	---	19.51	19.76	19.52	21.53	17.60
18	---	---	---	---	---	---	---	19.12	19.80	19.47	21.74	17.44
19	---	---	---	---	---	---	---	18.77	19.95	19.59	21.77	17.29
20	---	---	---	---	---	---	---	18.53	20.13	19.52	21.47	17.32
21	---	---	---	---	---	---	---	18.48	19.97	19.42	21.26	17.35
22	---	---	---	---	---	---	---	18.43	19.70	19.43	21.10	17.29
23	---	---	---	---	---	---	---	18.46	19.49	19.20	20.68	16.99
24	---	---	---	---	---	---	---	18.29	19.33	18.87	20.22	16.75
25	---	---	---	---	---	---	---	18.34	19.17	18.73	19.90	16.71
26	---	---	---	---	---	---	---	18.26	---	18.73	19.69	16.61
27	---	---	---	---	---	---	---	18.26	---	18.82	19.59	16.64
28	---	---	---	---	---	---	---	18.47	---	19.21	19.61	16.67
29	---	---	---	---	---	---	---	18.48	---	20.16	19.57	16.74
30	---	---	---	---	---	---	---	18.51	---	21.38	19.50	16.84
31	---	---	---	---	---	---	---	18.67	---	22.21	19.42	---
MEAN	---	---	---	---	---	---	---	---	---	19.79	20.79	17.98
MAX	---	---	---	---	---	---	---	---	---	22.21	22.86	19.38
MIN	---	---	---	---	---	---	---	---	---	18.43	19.42	16.61

15304060 KUSKOKWIM RIVER AT ANIAK—Continued



River ice break-up hydrograph for Kuskokwim River at Dike (supplementary gage) at Aniak, 2003

15304060 KUSKOKWIM RIVER AT ANIAK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to September 2003 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1998 to September 2003 (seasonal).

INSTRUMENTATION.--Electronic water temperature recorder set for 1-hour recording interval on left bank.

REMARKS.--Records represent water temperature from sensor within 0.5°C. No water temperature record December 22 - April 1 due to battery failure. No record from April 30 to June 4 when probe was out of water. No record from June 24-30 when water dropped below probe elevation. Temperature at the sensor was compared with the stream average by cross section on June 7 which found a variation of 1.5°C. The variation found between mean stream temperature and sensor temperature was usually less than 1.0°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 16.5°C, July 8-10, 20, 2003, but may have been higher during periods of missing record; minimum, 0.0°C, many days during fall and winter most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 16.5°C, July 8-10, 20; minimum, 0.0°C, many days during fall and winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	STREAM WIDTH (FT) (000004)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (000009)	GAGE HEIGHT (FEET) (000065)	TEMPER- ATURE WATER (DEG C) (000110)	SAM- PLING METHOD, CODES (82398)
JUN						
07...	1151	1800	10.0	20.56	9.5	10
07...	1152	1800	400	20.56	10.5	10
07...	1153	1800	800	20.56	10.5	10
07...	1154	1800	1200	20.56	11.0	10
07...	1155	1800	1600	20.56	11.0	10

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.0	6.0	6.5	3.5	3.0	3.5	0.0	0.0	0.0	---	---	---
2	6.0	5.5	6.0	3.0	2.5	2.5	0.0	0.0	0.0	---	---	---
3	5.5	4.5	5.0	2.5	2.0	2.0	0.0	0.0	0.0	---	---	---
4	4.5	4.0	4.0	2.5	2.0	2.0	0.0	0.0	0.0	---	---	---
5	4.0	3.5	3.5	3.0	2.5	3.0	0.0	0.0	0.0	---	---	---
6	4.0	3.5	4.0	3.5	3.0	3.5	0.0	0.0	0.0	---	---	---
7	5.0	4.0	4.5	3.5	3.0	3.5	0.0	0.0	0.0	---	---	---
8	5.0	4.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---
9	4.0	3.5	4.0	2.0	1.0	1.0	0.0	0.0	0.0	---	---	---
10	4.0	3.5	4.0	1.0	1.0	1.0	0.0	0.0	0.0	---	---	---
11	5.0	4.0	4.5	1.5	1.0	1.0	0.0	0.0	0.0	---	---	---
12	5.5	5.0	5.0	1.5	1.5	1.5	0.0	0.0	0.0	---	---	---
13	6.0	5.0	5.5	1.5	1.5	1.5	0.0	0.0	0.0	---	---	---
14	6.0	6.0	6.0	1.5	0.0	1.0	0.0	0.0	0.0	---	---	---
15	6.0	5.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
16	5.0	4.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
17	4.5	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
18	3.5	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
19	2.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
20	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
22	0.5	0.0	0.0	0.0	0.0	0.0	---	---	---	---	---	---
23	1.5	0.5	1.0	0.0	0.0	0.0	---	---	---	---	---	---
24	2.0	1.0	1.5	0.0	0.0	0.0	---	---	---	---	---	---
25	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---	---	---	---
26	3.0	3.0	3.0	0.0	0.0	0.0	---	---	---	---	---	---
27	3.0	2.5	2.5	0.0	0.0	0.0	---	---	---	---	---	---
28	2.5	2.0	2.0	0.0	0.0	0.0	---	---	---	---	---	---
29	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---	---	---	---
30	4.0	3.0	3.5	0.0	0.0	0.0	---	---	---	---	---	---
31	4.0	3.5	4.0	---	---	---	---	---	---	---	---	---
MONTH	7.0	0.0	3.5	3.5	0.0	1.0	---	---	---	---	---	---

15304060 KUSKOKWIM RIVER AT ANIAK—Continued

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
3	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
4	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
5	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
6	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
7	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
8	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
9	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
10	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
11	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
12	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
13	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
14	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
15	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
16	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
17	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
18	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
19	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
20	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
21	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
22	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
23	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
24	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
25	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
26	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
27	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
28	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
29	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	11.5	---	10.5	13.0	12.5	13.0	---	---	11.5
2	---	---	---	11.0	10.0	10.5	12.5	12.0	12.5	---	---	11.0
3	---	---	---	11.0	10.0	10.5	12.5	12.0	12.5	---	---	10.5
4	---	---	---	13.5	11.0	12.0	13.0	12.0	12.5	---	---	10.5
5	10.0	9.0	9.5	14.0	13.0	13.5	13.5	12.5	13.0	---	---	10.5
6	9.0	8.5	9.0	13.5	13.0	13.5	13.5	13.0	13.0	---	---	10.0
7	9.5	9.0	9.0	15.0	13.0	14.0	14.0	13.0	13.5	---	---	10.0
8	9.5	9.0	9.0	16.5	14.5	15.5	14.5	13.5	14.0	---	---	10.0
9	9.5	9.0	9.0	16.5	15.5	16.0	15.5	14.5	15.0	---	---	9.5
10	9.5	9.0	9.0	16.5	14.5	15.5	15.5	15.0	15.0	---	---	9.5
11	11.0	9.5	10.0	14.5	14.0	14.0	---	---	15.0	---	---	9.5
12	11.5	10.0	11.0	15.0	13.5	14.0	---	---	14.5	---	---	9.5
13	12.5	11.0	11.5	16.0	14.0	15.0	---	---	14.5	---	---	9.0
14	13.0	11.5	12.0	16.0	15.0	15.5	---	---	14.0	---	---	9.0
15	13.0	12.0	12.5	15.5	14.5	15.0	---	---	14.0	---	---	8.5
16	12.5	10.5	12.0	14.5	13.5	14.0	---	---	13.0	---	---	8.5
17	11.5	10.0	11.0	14.0	12.0	13.0	---	---	12.5	---	---	8.0
18	12.0	11.0	11.0	13.5	11.5	12.5	---	---	12.5	---	---	7.5
19	11.5	10.0	11.0	16.0	13.0	14.0	---	---	12.0	---	---	7.5
20	10.5	10.0	10.0	16.5	14.5	15.5	---	---	12.0	---	---	7.0
21	10.5	9.5	10.0	16.0	14.0	15.0	---	---	11.5	---	---	6.5
22	12.0	10.0	11.0	16.0	13.5	14.5	---	---	11.5	---	---	6.5
23	12.5	11.5	12.0	15.5	14.0	14.5	---	---	11.5	---	---	6.0
24	---	---	---	14.0	13.5	14.0	---	---	11.5	---	---	6.0
25	---	---	---	14.0	12.5	13.5	---	---	11.5	---	---	6.0
26	---	---	---	13.5	12.5	13.0	---	---	11.5	---	---	5.5
27	---	---	---	12.5	11.5	11.5	---	---	11.5	---	---	5.5
28	---	---	---	13.5	11.0	12.0	---	---	11.5	---	---	5.5
29	---	---	---	13.5	12.5	13.0	---	---	11.5	---	---	6.0
30	---	---	---	13.5	12.5	13.0	---	---	11.0	---	---	6.0
31	---	---	---	13.5	12.5	13.0	---	---	11.0	---	---	---
MONTH	---	---	---	16.5	---	13.6	---	---	12.7	---	---	8.2

15320100 WADE CREEK TRIBUTARY NEAR CHICKEN

LOCATION.-- Lat 64°07'06", Long 141°33'13", in SE $\frac{1}{4}$ sec. 18, T. 27 N., R. 20 E. (Eagle A-2 quad), Hydrologic Unit 19040104, on left bank, 600 ft upstream from Taylor Highway, 0.4 mi upstream from the culvert at mi 86.1 Taylor Highway and 12 mi northeast of Chicken.

DRAINAGE AREA.--4.24 mi².

PERIOD OF RECORD.--Annual maximum, water year 1995. May 1996 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 1970 ft above sea level, from topographic map. Prior to June 19, 1997, recording gage was at a site 700 ft downstream at a different datum.

REMARKS.--Records fair, except for discharges below 0.1 ft³/s and estimated daily discharges which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 236 ft³/s, June 13, 1997, from rating curve extended above 14 ft³/s on basis of slope-area measurement of peak flow, gage height, 22.7 ft, from floodmarks; no flow most days during the winter.

EXTREMES FOR WATER YEAR 2002.--Maximum discharge, 34 ft³/s, June 11, gage height, 21.08 ft, no flow most days during the winter.

EXTREMES FOR WATER YEAR 2003.--Maximum discharge, 35 ft³/s, July 3, gage height, 21.10 ft, no flow most days during the winter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	13	4.4	0.85	4.2
2	---	---	---	---	---	---	---	---	15	2.4	0.63	3.7
3	---	---	---	---	---	---	---	---	7.3	1.7	0.52	3.1
4	---	---	---	---	---	---	---	---	3.8	4.6	0.39	2.5
5	---	---	---	---	---	---	---	---	2.4	3.6	0.32	2.2
6	---	---	---	---	---	---	---	---	2.2	2.2	0.33	4.2
7	---	---	---	---	---	---	---	---	1.6	1.3	0.53	10
8	---	---	---	---	---	---	---	---	0.97	0.84	2.1	12
9	---	---	---	---	---	---	---	---	0.79	4.1	4.3	7.9
10	---	---	---	---	---	---	---	---	6.1	9.1	2.9	15
11	---	---	---	---	---	---	---	---	25	4.0	1.8	11
12	---	---	---	---	---	---	---	---	15	4.6	2.3	8.1
13	---	---	---	---	---	---	---	---	7.8	15	6.8	6.4
14	---	---	---	---	---	---	---	---	3.9	5.5	4.9	5.3
15	---	---	---	---	---	---	---	---	2.0	3.4	2.6	4.3
16	---	---	---	---	---	---	---	---	1.1	2.9	1.8	3.7
17	---	---	---	---	---	---	---	---	0.69	1.5	15	e3.2
18	---	---	---	---	---	---	---	---	0.50	0.93	9.8	3.6
19	---	---	---	---	---	---	---	---	0.37	0.66	18	3.8
20	---	---	---	---	---	---	---	---	1.6	3.3	11	5.2
21	---	---	---	---	---	---	---	e3.0	1.9	1.9	19	4.2
22	---	---	---	---	---	---	---	3.5	1.4	0.91	18	e4.0
23	---	---	---	---	---	---	---	2.4	0.86	0.59	11	e3.7
24	---	---	---	---	---	---	---	1.4	0.69	0.55	8.5	e3.2
25	---	---	---	---	---	---	---	0.95	0.82	5.2	10	e2.8
26	---	---	---	---	---	---	---	0.69	0.92	5.0	8.0	e2.7
27	---	---	---	---	---	---	---	0.45	0.76	2.0	6.5	e2.6
28	---	---	---	---	---	---	---	0.30	0.73	2.9	5.6	e2.2
29	---	---	---	---	---	---	---	0.19	0.56	7.6	4.4	e1.9
30	---	---	---	---	---	---	---	6.3	3.4	3.6	3.6	e1.6
31	---	---	---	---	---	---	---	22	---	1.5	3.7	---
TOTAL	---	---	---	---	---	---	---	---	123.16	107.78	185.17	148.3
MEAN	---	---	---	---	---	---	---	---	4.11	3.48	5.97	4.94
MAX	---	---	---	---	---	---	---	---	25	15	19	15
MIN	---	---	---	---	---	---	---	---	0.37	0.55	0.32	1.6
AC-FT	---	---	---	---	---	---	---	---	244	214	367	294
CFSM	---	---	---	---	---	---	---	---	0.97	0.82	1.41	1.17
IN.	---	---	---	---	---	---	---	---	1.08	0.95	1.62	1.30

e Estimated

15320100 WADE CREEK TRIBUTARY NEAR CHICKEN—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	1.4	0.14	0.13	17
2	---	---	---	---	---	---	---	---	0.99	0.11	0.12	13
3	---	---	---	---	---	---	---	---	1.1	15	0.12	e6.8
4	---	---	---	---	---	---	---	---	1.1	11	0.14	4.4
5	---	---	---	---	---	---	---	---	0.87	3.6	0.12	3.2
6	---	---	---	---	---	---	---	---	13	1.6	0.16	2.5
7	---	---	---	---	---	---	---	---	9.6	2.3	0.14	1.8
8	---	---	---	---	---	---	---	---	6.3	4.3	0.10	2.1
9	---	---	---	---	---	---	---	---	3.5	1.6	0.08	2.0
10	---	---	---	---	---	---	---	---	2.0	0.85	0.07	1.6
11	---	---	---	---	---	---	---	---	1.3	0.78	0.06	1.4
12	---	---	---	---	---	---	---	---	0.90	1.1	0.05	2.5
13	---	---	---	---	---	---	---	---	0.63	0.78	0.04	e3.0
14	---	---	---	---	---	---	---	---	0.81	0.72	0.04	e2.0
15	---	---	---	---	---	---	---	e3.1	0.85	0.68	0.04	e1.8
16	---	---	---	---	---	---	---	2.9	0.65	0.66	0.03	e1.5
17	---	---	---	---	---	---	---	4.4	0.48	0.56	0.03	e1.2
18	---	---	---	---	---	---	---	5.5	0.42	0.42	0.02	e0.80
19	---	---	---	---	---	---	---	2.6	0.38	0.31	0.02	e0.70
20	---	---	---	---	---	---	---	1.7	0.33	0.23	0.03	e0.70
21	---	---	---	---	---	---	---	1.4	0.28	0.19	0.04	e0.70
22	---	---	---	---	---	---	---	1.1	0.23	0.23	0.14	e0.60
23	---	---	---	---	---	---	---	1.4	0.20	0.20	0.11	e0.50
24	---	---	---	---	---	---	---	2.8	0.19	0.16	0.15	e0.50
25	---	---	---	---	---	---	---	3.9	0.19	0.14	0.15	e0.50
26	---	---	---	---	---	---	---	3.3	0.18	0.13	0.14	e6.5
27	---	---	---	---	---	---	---	2.7	0.18	0.12	0.12	e11
28	---	---	---	---	---	---	---	1.8	0.17	0.11	0.11	e3.3
29	---	---	---	---	---	---	---	1.7	0.17	0.10	0.10	e2.0
30	---	---	---	---	---	---	---	2.4	0.16	0.10	0.09	e1.0
31	---	---	---	---	---	---	---	1.9	---	0.12	0.33	---
TOTAL	---	---	---	---	---	---	---	---	48.56	48.34	3.02	96.60
MEAN	---	---	---	---	---	---	---	---	1.62	1.56	0.097	3.22
MAX	---	---	---	---	---	---	---	---	13	15	0.33	17
MIN	---	---	---	---	---	---	---	---	0.16	0.10	0.02	0.50
AC-FT	---	---	---	---	---	---	---	---	96	96	6.0	192
CFSM	---	---	---	---	---	---	---	---	0.38	0.37	0.02	0.76
IN.	---	---	---	---	---	---	---	---	0.43	0.42	0.03	0.85

e Estimated

15356000 YUKON RIVER AT EAGLE (International Gaging Station)

LOCATION.--Lat 64°47'22", long 141°11'52", in NW¹/₄ sec. 31, T. 1 S., R. 33 E. (Eagle D-1 quad), Hydrologic Unit 19040401, on left bank at Eagle, 0.1 mi upstream from Mission Creek, 1.1 mi downstream from Castalia Creek, and 11 mi downstream from the international boundary.

DRAINAGE AREA.--113,500 mi², approximately.

PERIOD OF RECORD.--January 1911 to December 1913, June 1950 to current year. Monthly discharge only for some periods, published in WSP 1372.

GAGE.--Water-stage recorder. Elevation of gage is 850 ft above sea level, from topographic map. See WSP 1936 for history of changes prior to October 1, 1963. Nonrecording gage prior to June 26, 1982 at same site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98800	65200	e34000	e29000	e24000	e21000	e18000	e56000	146000	137000	131000	98900
2	97500	62600	e34000	e29000	e23000	e21000	e18000	e66000	144000	140000	127000	115000
3	96600	61100	e33000	e28000	e23000	e21000	e18000	e80000	140000	141000	122000	120000
4	95700	60200	e33000	e28000	e23000	e21000	e18000	e90000	139000	142000	120000	114000
5	94400	59800	e32000	e28000	e23000	e20000	e18000	e94000	141000	146000	122000	110000
6	91600	61000	e32000	e28000	e23000	e20000	e18000	e94000	146000	160000	120000	109000
7	89200	65800	e31000	e28000	e23000	e20000	e18000	e93000	159000	180000	119000	108000
8	87800	73700	e31000	e27000	e23000	e20000	e18000	e92000	169000	177000	120000	110000
9	86700	77000	e31000	e27000	e23000	e20000	e18000	e94000	174000	173000	118000	112000
10	84800	79200	e31000	e27000	e22000	e20000	e18000	e95000	177000	173000	114000	112000
11	82400	74300	e31000	e27000	e22000	e20000	e18000	e98000	184000	180000	111000	109000
12	80500	69500	e31000	e27000	e22000	e20000	e18000	e100000	190000	174000	108000	107000
13	78900	63600	e31000	e27000	e22000	e20000	e18000	e102000	194000	167000	106000	105000
14	78100	55900	e31000	e27000	e22000	e20000	e18000	e100000	194000	164000	106000	103000
15	77400	47100	e31000	e27000	e22000	e20000	e18000	99000	191000	162000	108000	101000
16	76300	41800	e32000	e26000	e22000	e20000	e18000	99200	182000	165000	111000	98400
17	74800	37900	e32000	e26000	e22000	e20000	e18000	100000	169000	169000	109000	96000
18	73900	35300	e32000	e26000	e22000	e20000	e18000	102000	155000	170000	107000	93500
19	74300	34800	e32000	e26000	e22000	e19000	e18000	101000	145000	166000	108000	91700
20	74100	34400	e32000	e25000	e22000	e19000	e18000	97600	141000	161000	106000	89400
21	73800	e34000	e32000	e25000	e21000	e19000	e18000	94500	152000	151000	104000	87500
22	73200	e34000	e31000	e25000	e21000	e19000	e18000	91200	177000	147000	102000	85900
23	72400	e35000	e31000	e25000	e21000	e19000	e19000	88200	175000	148000	101000	83900
24	71700	e35000	e31000	e25000	e21000	e19000	e20000	87500	171000	155000	99900	82300
25	71300	e35000	e30000	e25000	e21000	e19000	e21000	93200	167000	169000	99500	81200
26	70800	e36000	e30000	e24000	e21000	e19000	e23000	103000	160000	163000	100000	80600
27	70900	e36000	e30000	e24000	e21000	e19000	e28000	116000	153000	152000	101000	79600
28	72300	e35000	e30000	e24000	e21000	e19000	e34000	125000	147000	144000	99500	78600
29	72000	e35000	e29000	e24000	---	e19000	e41000	137000	141000	136000	98500	77400
30	70500	e35000	e29000	e24000	---	e19000	e49000	145000	139000	131000	97000	76700
31	68300	---	e29000	e24000	---	e19000	---	147000	---	130000	95900	---
TOTAL	2481000	1510200	969000	812000	618000	611000	631000	3080400	4862000	4873000	3391300	2916600
MEAN	80030	50340	31260	26190	22070	19710	21030	99370	162100	157200	109400	97220
MAX	98800	79200	34000	29000	24000	21000	49000	147000	194000	180000	131000	120000
MIN	68300	34000	29000	24000	21000	19000	18000	56000	139000	130000	95900	76700
AC-FT	4921000	2995000	1922000	1611000	1226000	1212000	1252000	6110000	9644000	9666000	6727000	5785000
CFSM	0.71	0.44	0.28	0.23	0.19	0.17	0.19	0.88	1.43	1.38	0.96	0.86
IN.	0.81	0.49	0.32	0.27	0.20	0.20	0.21	1.01	1.59	1.60	1.11	0.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)#

MEAN	74690	38360	25810	21130	18850	17250	19290	124600	222800	181900	144200	112700
MAX	133300	62500	38870	30390	28000	25480	41530	201500	456800	269500	200400	187900
(WY)	2001	1953	2001	2001	1977	1977	1990	1993	1964	1992	2000	2000
MIN	45870	24000	13000	9000	7200	7800	8650	61770	120900	108900	88710	70690
(WY)	1959	1959	1951	1951	1951	1956	1956	1964	1953	1998	1998	1998

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1950 - 2003#

ANNUAL TOTAL	31589200	26755500	
ANNUAL MEAN	86550	73300	84050
HIGHEST ANNUAL MEAN			110900
LOWEST ANNUAL MEAN			61020
HIGHEST DAILY MEAN	310000	May 13	194000
LOWEST DAILY MEAN	a15000	Apr 5	b18000
ANNUAL SEVEN-DAY MINIMUM	15000	Apr 5	18000
MAXIMUM PEAK FLOW			195000
MAXIMUM PEAK STAGE			18.55
ANNUAL RUNOFF (AC-FT)	62660000	53070000	60890000
ANNUAL RUNOFF (CFSM)	0.76	0.65	0.74
ANNUAL RUNOFF (INCHES)	10.35	8.77	10.06
10 PERCENT EXCEEDS	184000	152000	197000
50 PERCENT EXCEEDS	68300	70900	44300
90 PERCENT EXCEEDS	16000	19600	16000

See Period of Record; partial years used in monthly statistics
a From Apr. 5 - Apr. 21
b From Apr. 1 - 22
c Feb. 1-28, 1951
e Estimated

15356000 YUKON RIVER AT EAGLE—Continued
(International Gaging Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-57, 1962-70, 1974-76, 1978-79 and 2001 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: 1962 to 1966

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Loca- tion in X-sect. looking downstrm ft from l bank (00009)	Sample loc- ation, cross section ft from rt bank (72103)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
APR									
01...	1052	100	--	259	--	.0	754	10.3	71
01...	1122	220	--	258	--	.0	754	--	--
01...	1152	340	--	--	7.9	.0	754	10.3	71
01...	1222	460	--	--	--	.0	754	--	--
01...	1252	620	--	--	8.0	.0	754	10.5	73
JUN									
17...	1142	--	193.0	212	8.1	13.5	748	9.4	92
17...	1202	--	383.0	211	8.1	13.6	748	9.9	97
17...	1222	--	549.0	208	8.1	13.7	748	9.7	95
17...	1242	--	710.0	208	8.2	13.7	748	9.6	94
17...	1302	--	908.0	208	8.2	13.8	748	8.7	86
JUL									
17...	1442	--	1180	224	8.1	16.5	732	8.6	92
17...	1446	--	950.0	223	8.2	16.6	732	8.6	92
17...	1450	--	800.0	224	8.2	16.6	732	8.9	95
17...	1454	--	650.0	224	8.2	16.6	732	8.6	92
17...	1458	--	450.0	226	8.2	16.2	732	8.6	91
AUG									
13...	1200	--	375.0	239	8.2	15.4	747	9.8	100
13...	1225	--	575.0	241	8.2	15.4	747	9.9	101
13...	1250	--	725.0	240	8.2	15.4	747	9.9	101
13...	1315	--	850.0	239	8.2	15.4	747	9.9	101
13...	1340	--	1025	240	8.2	15.4	747	9.9	101
SEP									
09...	1518	--	360.0	236	7.3	10.3	744	10.8	99
09...	1521	--	560.0	233	7.4	10.4	744	10.7	98
09...	1524	--	700.0	233	7.4	10.4	744	10.7	98
09...	1527	--	850.0	233	7.5	10.4	744	10.7	98
09...	1530	--	1020	233	7.5	10.5	744	10.6	97
24...	1158	--	280.0	246	8.4	2.8	735	12.1	93
24...	1213	--	458.0	241	8.4	2.9	735	12.1	93
24...	1228	--	584.0	240	8.4	3.0	735	12.0	92
24...	1243	--	721.0	240	8.4	3.0	735	11.9	92
24...	1258	--	888.0	240	8.4	2.9	735	12.0	92

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method code (82398)	Sampler type, code (84164)	Type of sample related QA data, code (99111)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)
APR													
01...	1050	9	7	1080	18500	20	3060	100	265	7.7	-10.0	.0	1.1
MAY													
23...	1740	9	9	1180	84500	20	3056	1	210	7.6	--	8.8	31
JUN													
17...	1220	9	9	1490	163000	20	3056	1	209	8.1	23.4	13.7	130
JUL													
17...	1300	9	7	--	163000	20	3056	30	224	8.2	25.5	16.6	540
AUG													
13...	1300	9	9	--	106000	20	3056	1	240	8.2	--	15.4	220
SEP													
09...	1430	9	9	1240	113000	20	3056	100	234	7.8	7.2	10.4	40
24...	1230	9	9	1160	82300	20	3056	1	240	8.4	--	2.9	9.9

15356000 YUKON RIVER AT EAGLE—Continued
(International Gaging Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate wat incrm. titr., field, mg/L (00452)
APR													
01...	.032	.023	752	10.4	72	130	36.7	9.96	2.85	92	1.15	113	.0
MAY													
23...	.321	.241	739	--	--	97	26.0	7.79	2.29	--	1.05	88	.0
JUN													
17...	.106	.078	748	9.5	93	110	28.3	8.69	2.02	--	.95	84	.0
JUL													
17...	.079	.058	732	8.6	92	110	29.0	8.38	2.88	--	1.64	95	.0
AUG													
13...	.060	.043	747	9.9	101	120	32.2	8.88	3.16	--	1.51	100	.0
SEP													
09...	.084	.060	744	10.7	98	120	32.2	10.5	2.45	--	1.02	100	.0
24...	.055	.038	735	12.0	92	130	33.6	10.7	2.52	--	1.09	105	.0

Date	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Alka- linity, wat flt fxd end field, mg/L as CaCO3 (39036)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Flour- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180 deg C wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR													
01...	92	93	33.3	.22	.12	6.92	158	147	<.002	.089	<.015	E.06	E.07
MAY													
23...	72	72	29.6	.53	<.2	5.51	137	117	.003	.026	<.015	.28	.26
JUN													
17...	69	69	33.5	.75	<.2	5.64	127	122	<.002	.038	<.015	.47	E.10
JUL													
17...	78	78	33.9	.75	<.2	5.97	133	129	<.002	E.018	<.015	.43	.10
AUG													
13...	82	90	34.6	.93	<.2	6.64	147	137	<.002	E.021	<.015	.22	E.08
SEP													
09...	82	80	40.5	.67	<.2	6.04	147	143	<.002	.033	<.015	.19	E.06
24...	86	87	40.2	.62	<.2	6.08	141	147	<.002	.035	<.015	E.10	.10

Date	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, suspnd sedimnt total, percent (30292)	Alum- inum, suspnd sedimnt total, percent (30221)	Alum- inum, water, fltrd, ug/L (01106)	Anti- mony, suspnd sedimnt total, ug/g (29816)	Anti- mony, water, fltrd, ug/L (01095)	Arsenic suspnd sedimnt total, ug/g (29818)	Arsenic water, fltrd, ug/L (01000)	Barium, suspnd sedimnt total, ug/g (29820)	Barium, water, fltrd, ug/L (01005)	Beryll- ium suspnd sedimnt total, ug/g (29822)
APR													
01...	.005	<.004	<.007	--	--	2	--	<.30	--	.4	--	61	--
MAY													
23...	.119	.006	<.007	.100	6.5	38	1.6	<.30	14	.5	1100	46	2
JUN													
17...	.35	E.004		.100	6.6	29	2.2	E.18	17	.6	1200	44	2
JUL													
17...	1.10	<.004	<.007	.110	7.0	23	1.4	E.23	12	.6	710	39	1
AUG													
13...	.41	<.004	<.007	.096	7.1	18	1.6	E.20	11	.6	700	40	1
SEP													
09...	.161	<.004	<.007	.086	6.4	--	1.6	<.30	11	.5	850	46	1
24...	.061	<.004	<.007	.061	4.5	14	1.3	<.30	9.4	.5	300	43	1

15356000 YUKON RIVER AT EAGLE—Continued
(International Gaging Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium suspnd sedimnt total, ug/g (29826)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, suspnd sedimnt total, ug/g (29829)	Chrom- ium, water, fltrd, ug/L (01030)	Cobalt, suspnd sedimnt total, ug/g (35031)	Cobalt water, fltrd, ug/L (01035)	Copper, suspnd sedimnt total, ug/g (29832)	Copper, water, fltrd, ug/L (01040)	Iron, suspnd sedimnt total, percent (30269)	Iron, water, fltrd, ug/L (01046)	Lead, suspnd sedimnt total, ug/g (29836)
APR													
01...	<.06	9	--	<.04	--	<.8	--	.074	--	.8	--	E7	--
MAY													
23...	<.06	11	1.3	<.04	100	<.8	16	.121	37	2.7	3.9	78	19
JUN													
17...	<.06	10	1.2	E.03	100	<.8	14	.084	40	2.1	3.8	20	14
JUL													
17...	<.06	11	.6	<.04	92	<.8	18	.079	44	1.2	4.4	E6	9.7
AUG													
13...	<.06	13	.4	<.04	99	<.8	18	.084	43	1.2	4.5	<8	11
SEP													
09...	<.06	7	.8	<.04	110	<.8	15	.082	31	1.2	3.7	10	14
24...	<.06	10	.6	E.02	79	<.8	12	.094	30	1.0	2.6	9	14

Date	Lead water, fltrd, ug/L (01049)	Lithium suspnd sedimnt total, ug/g (35050)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, suspnd sedimnt total, ug/g (29839)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury suspnd sedimnt total, ug/g (29841)	Molyb- denum, suspnd sedimnt total, ug/g (29843)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, suspnd sedimnt total, ug/g (29845)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, suspnd sedimnt total, ug/g (29847)	Selen- ium, water, fltrd, ug/L (01145)	Silver, suspnd sedimnt total, ug/g (29850)
APR													
01...	<.08	--	2.3	--	1.8	--	--	1.4	--	1.78	--	.6	--
MAY													
23...	E.05	28	2.7	970	8.7	.08	4	1.0	61	3.26	M	E.4	1
JUN													
17...	<.08	29	2.6	840	2.5	.16	4	1.0	58	1.55	M	.6	<.5
JUL													
17...	<.08	23	3.1	820	--	.04	2	1.4	55	1.32	M	.5	M
AUG													
13...	<.08	25	2.8	820	2.1	.06	2	1.6	55	1.77	M	.5	<.5
SEP													
09...	<.08	22	<.5	800	2.0	.02	4	1.1	55	1.45	M	E.4	<.5
24...	<.08	19	2.8	590	4.1	<.01	5	1.2	50	1.77	M	.5	<.5

Date	Silver, water, fltrd, ug/L (01075)	Stront- ium, suspnd sedimnt total, ug/g (35040)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, suspnd sedimnt total, ug/g (49955)	Titan- ium, suspnd sedimnt total, percent (30317)	Vanad- ium, suspnd sedimnt total, ug/g (29853)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, suspnd sedimnt total, ug/g (29855)	Zinc, water, fltrd, ug/L (01090)	Uranium suspnd sedimnt total, ug/g (35046)	Uranium natural water, fltrd, ug/L (22703)	Organic carbon, water, fltrd, mg/L (00681)	Inor- ganic carbon suspnd sedimnt total, mg/L (00688)
APR													
01...	<.2	--	171	--	--	--	.2	--	3	--	1.31	1.4	<.1
MAY													
23...	<.2	290	140	<50	.410	130	1.0	180	3	<50	.97	8.5	<.1
JUN													
17...	<.2	260	129	<50	.420	150	.9	200	1	<50	.76	3.0	1.7
JUL													
17...	<.2	370	148	<50	.530	140	.6	110	<1	<50	.93	2.8	--
AUG													
13...	<.2	330	157	<50	.470	130	.9	94	<1	<50	.90	2.2	7.6
SEP													
09...	<.2	320	167	<50	.450	130	.4	110	M	<50	.98	2.8	.6
24...	<.2	440	164	<50	.260	79	.6	120	M	<50	.94	2.1	<.1

15356000 YUKON RIVER AT EAGLE—Continued
(International Gaging Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Total carbon, suspnd sedimnt total, percent (30244)	Organic carbon, suspnd sedimnt percent (50465)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Suspnd. sedimnt conc, flow through cntrfug mg/L (50279)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
APR 01...	<.1	<.1	--	--	<.02	--	1	50	--
MAY 23...	1.4	1.5	2.9	2.1	.08	7	129	29400	52
JUN 17...	4.1	5.9	2.4	1.0	.26	288	312	137000	66
JUL 17...	5.6	--	2.5	.5	.32	959	933	411000	84
AUG 13...	.7	8.2	2.3	.6	.15	395	400	114000	78
SEP 09...	1.5	2.1	2.1	.5	.08	161	157	47900	55
24...	.5	.5	4.8	2.3	.03	37	64	14200	42

15388030 NATION RIVER NEAR NATION

LOCATION.--Lat 65°14'23", long 141°39'10", in NW¹/₄ NW¹/₄ sec.30, T.5 N., R.30 E.(Charley River A-2 quad), Hydrologic Unit 19040401, in Yukon-Charley Rivers National Preserve, on left bank, 3.75 mi upstream from mouth, 4.25 mi downstream from mouth of Hard Luck Creek, 5 mi northeast of Nation townsite, and 33 mi northwest of Eagle.

DRAINAGE AREA.--931 mi², revised.

PERIOD OF RECORD.--June 1991 to current year (no winter records in water years 1991-97 and 2003).

GAGE.--Water-stage recorder. Elevation of gage is 850 ft. above sea level, from topographic map.

EXTREMES FOR CURRENT YEAR.--Maximum discharge for periods October 1 to 7, 2002, and June 1 to September 30, 2003, 8940 ft³/s, September 1, 2003 gage height 38.44 ft; minimum not determined, occurs during winter.

REMARKS.--WY2001, records poor; WY2002, records good, except for estimated daily discharges, which are poor; WY2003, records fair, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	e360	e230	e180	e150	e130	e110	e130	2890	1010	3790	929
2	930	e350	e220	e180	e150	e130	e110	e140	2950	1230	3090	944
3	849	e340	e220	e170	e150	e130	e110	e140	2850	1260	2610	983
4	750	e340	e220	e170	e150	e130	e110	e150	3050	1200	2280	1090
5	761	e330	e220	e170	e140	e130	e110	e150	3300	1380	2040	1070
6	947	e320	e220	e170	e140	e130	e110	e160	3440	2820	1900	1450
7	933	e320	e220	e170	e140	e120	e110	e170	3690	2800	1900	1290
8	850	e310	e210	e170	e140	e120	e110	e180	2740	2140	1770	1220
9	776	e310	e210	e170	e140	e120	e110	e190	2720	1680	1590	1140
10	672	e300	e210	e170	e140	e120	e110	e220	2420	1420	1450	1070
11	601	e300	e210	e170	e140	e120	e110	e290	2220	1260	1350	1000
12	578	e290	e210	e170	e140	e120	e110	e390	2080	1180	1490	951
13	571	e290	e200	e160	e140	e120	e110	e540	2390	1130	2000	910
14	e550	e280	e200	e160	e140	e120	e110	e750	3980	1080	1840	875
15	e540	e280	e200	e160	e140	e120	e110	e900	3360	1160	1970	840
16	e520	e270	e200	e160	e140	e120	e120	e1100	2750	1110	2110	806
17	e510	e270	e200	e160	e140	e120	e120	e1400	2100	1040	2220	785
18	e490	e270	e200	e160	e140	e120	e120	e1900	1790	1440	2110	761
19	e480	e260	e190	e160	e140	e120	e120	e2400	1630	1430	1970	737
20	e470	e260	e190	e160	e130	e120	e120	2850	1480	1190	1840	715
21	e450	e260	e190	e160	e130	e120	e120	3410	1340	1080	1630	699
22	e440	e250	e190	e160	e130	e120	e120	3610	1240	1110	1460	687
23	e430	e250	e190	e150	e130	e120	e120	5720	1180	2110	1350	679
24	e420	e250	e190	e150	e130	e120	e120	5780	1070	15300	1250	660
25	e410	e240	e190	e150	e130	e120	e120	4070	991	10700	1210	645
26	e400	e240	e180	e150	e130	e120	e120	3390	927	6480	1180	635
27	e390	e240	e180	e150	e130	e110	e120	3700	882	4850	1140	613
28	e380	e230	e180	e150	e130	e110	e130	3460	893	4190	1090	591
29	e380	e230	e180	e150	---	e110	e130	2430	861	5560	1020	578
30	e370	e230	e180	e150	---	e110	e130	2030	883	6720	966	554
31	e360	---	e180	e150	---	e110	---	2380	---	4920	939	---
TOTAL	18278	8470	6210	5010	3870	3730	3480	54130	64097	91980	54555	25907
MEAN	590	282	200	162	138	120	116	1746	2137	2967	1760	864
MAX	1070	360	230	180	150	130	130	5780	3980	15300	3790	1450
MIN	360	230	180	150	130	110	110	130	861	1010	939	554
AC-FT	36250	16800	12320	9940	7680	7400	6900	107400	127100	182400	108200	51390
CFSM	0.63	0.30	0.22	0.17	0.15	0.13	0.12	1.88	2.29	3.19	1.89	0.93
IN.	0.73	0.34	0.25	0.20	0.15	0.15	0.14	2.16	2.56	3.68	2.18	1.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)#

	MEAN	463	250	171	122	94.0	76.5	197	2117	1678	1346	1629	1137
MAX	590	282	215	162	138	120	120	500	3143	3054	2967	3103	1780
(WY)	2001	2001	1998	2001	2001	2001	1998	1997	2000	2001	2000	1995	1995
MIN	293	194	126	51.7	25.4	17.2	28.2	912	759	532	800	543	543
(WY)	2000	2000	1999	1999	1999	1999	1999	1999	1996	1996	1994	1996	1996

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1991 - 2001#	
ANNUAL TOTAL	435211		339717			
ANNUAL MEAN	1189		931		875	
HIGHEST ANNUAL MEAN					1152	
LOWEST ANNUAL MEAN					445	
HIGHEST DAILY MEAN	12000		15300		15300	
LOWEST DAILY MEAN	a85		b110		c16	
ANNUAL SEVEN-DAY MINIMUM	85		110		16	
MAXIMUM PEAK FLOW			d20400		d20400	
MAXIMUM PEAK STAGE			41.92		41.92	
ANNUAL RUNOFF (AC-FT)	863200		673800		633900	
ANNUAL RUNOFF (CFSM)	1.28		1.000		0.94	
ANNUAL RUNOFF (INCHES)	17.39		13.57		12.77	
10 PERCENT EXCEEDS	3200		2410		2420	
50 PERCENT EXCEEDS	380		300		292	
90 PERCENT EXCEEDS	90		120		75	

See Period of Record; partial years used in monthly statistics

a Mar. 16 to Apr. 9

b Mar. 27 to Apr. 15

c Mar. 20 to Apr. 14

d From rating curve extended above 6000 ft³/s on basis of slope-area measurement of peak flow at gage height 40.42 ft

e Estimated

15388030 NATION RIVER NEAR NATION—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	558	e200	e110	e82	e74	e72	e70	e74	2650	903	985	2300
2	562	e200	e110	e82	e74	e72	e70	e76	2320	839	859	2270
3	542	e190	e110	e82	e74	e70	e70	e76	1950	975	789	2060
4	542	e180	e100	e82	e74	e70	e70	e78	1530	2000	717	1860
5	544	e180	e100	e80	e72	e70	e70	e78	1370	1790	664	1700
6	585	e170	e100	e80	e72	e70	e70	e80	1390	1450	625	1610
7	781	e170	e100	e80	e72	e70	e70	e84	1310	1810	607	1940
8	808	e170	e100	e80	e72	e70	e70	e90	1190	1400	647	2110
9	741	e160	e98	e80	e72	e70	e68	e96	1100	1190	853	1920
10	695	e160	e98	e78	e72	e70	e68	e110	1120	1750	1320	1860
11	643	e160	e96	e78	e72	e70	e68	e120	3240	1500	1320	1980
12	606	e150	e96	e78	e72	e70	e68	e140	5030	1290	1340	1810
13	547	e150	e94	e78	e72	e70	e68	e170	2920	1080	1550	1640
14	464	e150	e94	e78	e72	e70	e68	e210	2020	924	2240	1500
15	401	e140	e92	e76	e72	e70	e68	e400	2160	828	2790	1400
16	e370	e140	e92	e78	e72	e70	e68	e750	1510	788	6430	1310
17	e350	e140	e92	e76	e72	e70	e68	e1500	1100	731	14900	1230
18	e340	e130	e90	e76	e72	e70	e68	e4000	875	669	17600	1180
19	e320	e130	e90	e76	e72	e70	e68	6000	738	696	9770	1130
20	e310	e130	e90	e76	e72	e70	e68	6520	689	768	6970	1090
21	e300	e130	e88	e76	e72	e70	e68	6590	2020	838	5070	1030
22	e280	e120	e88	e76	e72	e70	e68	5480	2510	792	4290	978
23	e270	e120	e86	e76	e72	e70	e68	4810	2210	698	3840	936
24	e260	e120	e86	e76	e72	e70	e70	4220	1430	694	3360	916
25	e250	e120	e84	e74	e72	e70	e70	3790	1140	677	3520	907
26	e240	e120	e84	e74	e72	e70	e70	3900	1050	889	3110	898
27	e240	e110	e84	e74	e72	e70	e72	2900	898	2370	2630	907
28	e230	e110	e84	e74	e72	e70	e74	1320	772	3260	2360	950
29	e220	e110	e82	e74	---	e70	e74	e900	1160	2320	2130	949
30	e210	e110	e82	e74	---	e70	e74	e870	1020	1550	2090	e960
31	e210	---	e82	e74	---	e70	---	1500	---	1190	2020	---
TOTAL	13419	4370	2882	2398	2024	2174	2084	56932	50422	38659	107396	43331
MEAN	433	146	93.0	77.4	72.3	70.1	69.5	1837	1681	1247	3464	1444
MAX	808	200	110	82	74	72	74	6590	5030	3260	17600	2300
MIN	210	110	82	74	72	70	68	74	689	669	607	898
AC-FT	26620	8670	5720	4760	4010	4310	4130	112900	100000	76680	213000	85950
CFSM	0.46	0.16	0.10	0.08	0.08	0.08	0.07	1.97	1.81	1.34	3.72	1.55
IN.	0.54	0.17	0.12	0.10	0.08	0.09	0.08	2.27	2.01	1.54	4.29	1.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)#

MEAN	457	230	155	113	89.7	75.2	172	2070	1678	1338	1782	1168
MAX	590	282	215	162	138	120	500	3143	3054	2967	3464	1780
(WY)	2001	2001	1998	2001	2001	2001	1998	1997	2000	2001	2002	1995
MIN	293	146	93.0	51.7	25.4	17.2	28.2	912	759	532	800	543
(WY)	2000	2002	2002	1999	1999	1999	1999	1999	1996	1996	1994	1996

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1991 - 2002#

ANNUAL TOTAL	327430	326091	
ANNUAL MEAN	897	893	879
HIGHEST ANNUAL MEAN			1152
LOWEST ANNUAL MEAN			445
HIGHEST DAILY MEAN	15300	17600	17600
LOWEST DAILY MEAN	a82	b68	c16
ANNUAL SEVEN-DAY MINIMUM	83	68	16
MAXIMUM PEAK FLOW		20000	d20400
MAXIMUM PEAK STAGE		41.82	41.92
ANNUAL RUNOFF (AC-FT)	649500	646800	636500
ANNUAL RUNOFF (CFSM)	0.96	0.96	0.94
ANNUAL RUNOFF (INCHES)	13.08	13.03	12.82
10 PERCENT EXCEEDS	2410	2220	2400
50 PERCENT EXCEEDS	180	160	280
90 PERCENT EXCEEDS	110	70	70

See Period of Record; partial years used in monthly statistics

a Dec. 29 to 31

b Apr. 9 to 23

c Mar. 20 to Apr. 14

d From rating curve extended above 6000 ft³/s on basis of slope-area measurement of peak flow at gage height 40.42 ft

e Estimated

15388030 NATION RIVER NEAR NATION—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	977	---	---	---	---	---	---	---	e3300	634	4250	7960
2	969	---	---	---	---	---	---	---	e3300	612	2980	7720
3	998	---	---	---	---	---	---	---	e3000	693	2380	5600
4	e1000	---	---	---	---	---	---	---	e5700	957	2160	5000
5	875	---	---	---	---	---	---	---	e4400	900	1990	4260
6	762	---	---	---	---	---	---	---	e3300	784	2780	3540
7	761	---	---	---	---	---	---	---	e6000	796	3110	2970
8	---	---	---	---	---	---	---	---	e6200	1030	2470	2580
9	---	---	---	---	---	---	---	---	e6000	1060	2080	2320
10	---	---	---	---	---	---	---	---	e5700	908	1810	2160
11	---	---	---	---	---	---	---	---	e4000	884	1620	2040
12	---	---	---	---	---	---	---	---	e3000	936	1490	2350
13	---	---	---	---	---	---	---	---	e2300	1380	1590	2250
14	---	---	---	---	---	---	---	---	e1900	2630	1650	1920
15	---	---	---	---	---	---	---	---	e1600	4580	1500	1720
16	---	---	---	---	---	---	---	---	e1400	5120	1390	1640
17	---	---	---	---	---	---	---	---	e1200	4210	1550	1480
18	---	---	---	---	---	---	---	---	e1050	3200	2160	e1400
19	---	---	---	---	---	---	---	---	e930	2430	2420	e1300
20	---	---	---	---	---	---	---	---	840	1960	3440	e1300
21	---	---	---	---	---	---	---	---	766	1650	2760	e1200
22	---	---	---	---	---	---	---	---	710	1540	2510	e1200
23	---	---	---	---	---	---	---	---	672	1370	2280	e1100
24	---	---	---	---	---	---	---	---	649	1210	2090	e1100
25	---	---	---	---	---	---	---	---	673	1100	2180	e1100
26	---	---	---	---	---	---	---	---	661	1050	2130	e1000
27	---	---	---	---	---	---	---	---	714	1120	1910	e1000
28	---	---	---	---	---	---	---	---	740	1970	1730	e1000
29	---	---	---	---	---	---	---	---	736	2190	1590	e900
30	---	---	---	---	---	---	---	---	679	1790	1470	e900
31	---	---	---	---	---	---	---	---	---	3300	1570	---
TOTAL	---	---	---	---	---	---	---	---	72120	53994	67040	72010
MEAN	---	---	---	---	---	---	---	---	2404	1742	2163	2400
MAX	---	---	---	---	---	---	---	---	6200	5120	4250	7960
MIN	---	---	---	---	---	---	---	---	649	612	1390	900
AC-FT	---	---	---	---	---	---	---	---	143000	107100	133000	142800
CFSM	---	---	---	---	---	---	---	---	2.58	1.87	2.32	2.58
IN.	---	---	---	---	---	---	---	---	2.88	2.16	2.68	2.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)#

MEAN	457	230	155	113	89.7	75.2	172	2070	1751	1369	1811	1280
MAX	590	282	215	162	138	120	500	3143	3054	2967	3464	2400
(WY)	2001	2001	1998	2001	2001	2001	1998	1997	2000	2001	2002	2003
MIN	293	146	93.0	51.7	25.4	17.2	28.2	912	759	532	800	543
(WY)	2000	2002	2002	1999	1999	1999	1999	1999	1996	1996	1994	1996

SUMMARY STATISTICS

WATER YEARS 1991 - 2003#

ANNUAL MEAN	879
HIGHEST ANNUAL MEAN	1152
LOWEST ANNUAL MEAN	445
HIGHEST DAILY MEAN	17600
LOWEST DAILY MEAN	a16
ANNUAL SEVEN-DAY MINIMUM	16
MAXIMUM PEAK FLOW	b20400
MAXIMUM PEAK STAGE	41.92
ANNUAL RUNOFF (AC-FT)	636500
ANNUAL RUNOFF (CFSM)	0.94
ANNUAL RUNOFF (INCHES)	12.82
10 PERCENT EXCEEDS	2400
50 PERCENT EXCEEDS	280
90 PERCENT EXCEEDS	70

See Period of Record; partial years used in monthly statistics

a Mar. 20 to Apr. 14, 1999

b From rating curve extended above 6000 ft³/s on basis of slope-area measurement of peak flow at gage height 40.42 ft

e Estimated

15388070 KANDIK RIVER BELOW THREEMILE CREEK NEAR NATION

LOCATION.--Lat 65°23'08", long 142°26'41", in SW¹/₄ SW¹/₄ sec.32, T.6 N., R.25 E.(Charley River B-3 quad), Hydrologic Unit 19040401, in Yukon-Charley Rivers National Preserve, on right bank, 0.4 mi downstream from Threemile Creek, 2.8 mi upstream from mouth, 23 mi northwest of Nation townsite, and 55 mi northwest of Eagle.

DRAINAGE AREA.--1176 mi²

PERIOD OF RECORD.--June to September 2002.

GAGE.--Water-stage recorder. Elevation of gage is 770 ft above sea level, from topographic map.

EXTREMES FOR CURRENT PERIOD.--June 15 to September 30: Maximum discharge not determined, highest daily mean 30,900 ft³/s, August 18, 2002 from rating curve extended above 3220 ft³/s, gage height 49.27 ft; minimum discharge not determined, occurs during winter.

REMARKS.--Records fair, except for discharges above 8000 ft³/s and estimated daily discharges, which are poor.

DISCHARGE, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	556	918	1650
2	---	---	---	---	---	---	---	---	---	502	748	2010
3	---	---	---	---	---	---	---	---	---	537	633	2080
4	---	---	---	---	---	---	---	---	---	1640	559	1720
5	---	---	---	---	---	---	---	---	---	3850	502	1470
6	---	---	---	---	---	---	---	---	---	2190	447	1320
7	---	---	---	---	---	---	---	---	---	2010	409	1930
8	---	---	---	---	---	---	---	---	---	1850	401	2830
9	---	---	---	---	---	---	---	---	---	1390	498	2530
10	---	---	---	---	---	---	---	---	---	1090	1270	2070
11	---	---	---	---	---	---	---	---	---	1040	1790	1920
12	---	---	---	---	---	---	---	---	---	1060	1530	1770
13	---	---	---	---	---	---	---	---	---	861	1610	1540
14	---	---	---	---	---	---	---	---	---	738	2150	1360
15	---	---	---	---	---	---	---	---	e2300	740	2860	1220
16	---	---	---	---	---	---	---	---	e1700	729	4990	1110
17	---	---	---	---	---	---	---	---	e1200	691	25400	1020
18	---	---	---	---	---	---	---	---	e900	613	30900	949
19	---	---	---	---	---	---	---	---	e750	619	12300	906
20	---	---	---	---	---	---	---	---	680	749	7220	868
21	---	---	---	---	---	---	---	---	1320	905	5110	821
22	---	---	---	---	---	---	---	---	4680	856	4010	775
23	---	---	---	---	---	---	---	---	3500	746	3880	708
24	---	---	---	---	---	---	---	---	2180	668	3330	656
25	---	---	---	---	---	---	---	---	1440	711	2950	638
26	---	---	---	---	---	---	---	---	1170	929	2850	628
27	---	---	---	---	---	---	---	---	1060	1170	2460	625
28	---	---	---	---	---	---	---	---	901	2290	2070	628
29	---	---	---	---	---	---	---	---	753	2520	1800	667
30	---	---	---	---	---	---	---	---	636	1650	1640	680
31	---	---	---	---	---	---	---	---	---	1150	1590	---
TOTAL	---	---	---	---	---	---	---	---	---	37050	128825	39099
MEAN	---	---	---	---	---	---	---	---	---	1195	4156	1303
MAX	---	---	---	---	---	---	---	---	---	3850	30900	2830
MIN	---	---	---	---	---	---	---	---	---	502	401	625
AC-FT	---	---	---	---	---	---	---	---	---	73490	255500	77550

e Estimated

**15388960 PORCUPINE RIVER NEAR INTERNATIONAL BOUNDARY
(International Gaging Station)**

LOCATION.--Lat 67°25'27", long 140°53'28", 3.1 mi upstream from old townsite of Ramparts House, at Alaska-Yukon Territory Boundary.

DRAINAGE AREA.--23,100 mi², approximately.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 600 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Differences between data published herein and corresponding data in the reports of the Water Survey of Canada are due to variations in automated program techniques. After December 1978, data published in reports of the Water Survey of Canada are in International System (SI) units, and have been converted to inch-pound units for this report. Formerly the data reported in the USGS Water-Data Report were one year prior to those reported for U.S. gages because the Water Survey of Canada discharge records for the calendar year were not received until the following year. Starting with the 2003 water year, periods of record for this station will be current with U.S. gage reports.

COOPERATION.--Discharge records furnished by the Water Survey of Canada.

DISCHARGE, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5830	e2660	e1600	e1030	e738	e664	e660	e636	22700	32900	18800	17500
2	5610	e2620	e1570	e1020	e734	e667	e664	e636	17800	32100	15800	15800
3	5370	e2570	e1560	e1020	e731	e667	e664	e636	15900	31100	13100	14500
4	5190	e2520	e1530	e999	e724	e664	e660	e636	19400	29200	11100	14200
5	5010	e2480	e1510	e982	e717	e664	e660	e639	25700	29100	9750	14400
6	4870	e2440	e1490	e968	e710	e664	e660	e643	31000	31400	8860	15300
7	4870	e2390	e1470	e964	e699	e664	e660	e650	35300	31200	8330	17500
8	4700	e2350	e1450	e946	e703	e660	e660	e660	36700	33700	9890	17400
9	e4480	e2310	e1430	e932	e699	e664	e657	e674	37800	37400	15500	16200
10	e4410	e2270	e1410	e915	e696	e664	e653	e692	37400	41000	16300	14900
11	e4240	e2230	e1390	e900	e692	e667	e653	e713	35700	37400	14500	13600
12	e3950	e2190	e1370	e886	e689	e667	e653	e742	33500	29800	15800	12800
13	e3850	e2150	e1360	e883	e685	e667	e650	e784	32300	23900	22500	12300
14	e3990	e2110	e1340	e876	e685	e664	e650	e855	32300	21600	29800	14500
15	e3850	e2080	e1320	e862	e685	e671	e650	e1170	34800	22800	33500	21900
16	e3600	e2040	e1300	e855	e667	e671	e650	e2470	39500	21600	34400	21200
17	e3530	e2000	e1280	e844	e681	e671	e650	e17700	40300	19500	35000	18500
18	e3320	e1970	e1260	e837	e681	e674	e650	e26500	38100	18400	36400	16200
19	e3330	e1940	e1240	e830	e677	e678	e646	e33900	40300	17800	40300	14300
20	e2830	e1900	e1230	e826	e678	e678	e639	e42400	41700	16900	45200	12800
21	e2660	e1880	e1210	e816	e674	e674	e639	e51200	39500	15300	49100	11700
22	e2860	e1840	e1190	e809	e671	e671	e639	e57200	41700	13300	46600	10800
23	e3140	e1810	e1180	e798	e667	e671	e639	e60700	45600	11600	41700	10200
24	e3100	e1780	e1160	e784	e664	e644	e639	e63600	47700	10400	37100	9960
25	e3030	e1760	e1140	e780	e664	e660	e636	e62100	45200	9850	32400	9820
26	e2980	e1730	e1130	e777	e664	e657	e636	e60000	41300	9850	28900	9570
27	e2920	e1700	e1120	e766	e664	e657	e636	e56500	36700	10500	27300	9290
28	e2870	e1670	e1100	e759	e660	e653	e636	e52300	33200	15600	25600	8860
29	e2810	e1650	e1090	e749	---	e657	e636	e44100	31500	26500	23600	8580
30	e2760	e1620	e1080	e745	---	e653	e636	37400	31300	25800	21500	8690
31	e2710	---	e1060	e738	---	e657	---	29800	---	22100	19500	---
TOTAL	118670	62660	40570	26896	19299	20604	19461	708636	1041900	729600	788130	413270
MEAN	3828	2089	1309	868	689	665	649	22860	34730	23540	25420	13780
MAX	5830	2660	1600	1030	738	678	664	63600	47700	41000	49100	21900
MIN	2660	1620	1060	738	660	644	636	636	15900	9850	8330	8580
AC-FT	235400	124300	80470	53350	38280	40870	38600	1406000	2067000	1447000	1563000	819700
CFSM	0.17	0.09	0.06	0.04	0.03	0.03	0.03	0.99	1.50	1.02	1.10	0.60
IN.	0.19	0.10	0.07	0.04	0.03	0.03	0.03	1.14	1.68	1.17	1.27	0.67

e Estimated

15388960 PORCUPINE RIVER NEAR INTERNATIONAL BOUNDARY—Continued
(International Gaging Station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

MEAN	4462	1778	1083	811	683	649	764	33970	43940	15540	19270	16620
MAX	8241	3161	1479	1049	966	870	1711	63160	86470	29580	37940	34320
(WY)	1996	1999	1999	2001	2001	2001	1998	1990	1992	1994	1991	1995
MIN	2571	1122	870	551	398	383	562	1369	20410	6041	10090	7697
(WY)	2000	1997	2000	1997	1997	1997	1997	2001	1999	1999	1994	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1988 - 2002		
ANNUAL TOTAL	3507903			3989696					
ANNUAL MEAN	9611			10930			11670		
HIGHEST ANNUAL MEAN							16090		
LOWEST ANNUAL MEAN							6569		
HIGHEST DAILY MEAN	108000	Jun	8	63600	May	24	248000	Jun	1 1992
LOWEST DAILY MEAN	a809	Apr	23	b636	Apr	25	c367	Mar	3 1997
ANNUAL SEVEN-DAY MINIMUM	811	Apr	20	636	Apr	25	369	Mar	1 1997
MAXIMUM PEAK FLOW				d			250000	Jun	1 1992
MAXIMUM PEAK STAGE							50.76	Jun	1 1992
INSTANTANEOUS LOW FLOW							470	Mar	19 1990
ANNUAL RUNOFF (AC-FT)	6958000			7914000			8452000		
ANNUAL RUNOFF (CFSM)	0.42			0.47			0.51		
ANNUAL RUNOFF (INCHES)	5.65			6.42			6.86		
10 PERCENT EXCEEDS	24400			36000			33700		
50 PERCENT EXCEEDS	1730			2110			1920		
90 PERCENT EXCEEDS	847			659			639		

a From Apr. 23 to 24

b From Apr. 25 to May 4

c From Mar. 3 to 6, 1997

d Undetermined, see highest daily mean

15388960 PORCUPINE RIVER NEAR INTERNATIONAL BOUNDARY—Continued
(International Gaging Station)

DISCHARGE, in CFS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9460	e3780	e2030	e1210	e826	e632	e650	e1190	78700	13900	23600	34100
2	10500	e3740	e1990	e1190	e816	e629	e653	e1260	73000	15000	23200	31300
3	12000	e3670	e1950	e1180	e805	e625	e660	e1330	68300	15300	23500	29000
4	13000	e3570	e1910	e1160	e794	e625	e664	e1410	68000	13200	23600	27000
5	13000	e3510	e1870	e1140	e784	e621	e671	e1530	65800	11300	22000	27400
6	12000	e3420	e1840	e1130	e777	e621	e678	e1660	59700	9940	20200	30800
7	10900	e3340	e1800	e1120	e770	e621	e681	e1800	54000	9160	18800	30500
8	e9180	e3260	e1760	e1100	e763	e621	e689	e1960	47800	9380	21000	29100
9	e8470	e3190	e1730	e1090	e756	e618	e696	e2100	41800	10100	23700	26900
10	e7770	e3120	e1700	e1080	e749	e618	e703	e2240	36700	13200	24400	24900
11	e6000	e3040	e1670	e1060	e745	e621	e710	e2670	33100	19800	23300	23000
12	e4590	e2970	e1650	e1050	e738	e621	e713	e2900	29700	24100	21200	21400
13	e4240	e2910	e1620	e1030	e724	e621	e724	e3150	26000	24200	20000	19700
14	e5120	e2840	e1600	e1020	e710	e621	e734	e3430	22400	22700	31300	19300
15	e5830	e2770	e1570	e1010	e703	e621	e745	e4100	19100	21700	44000	18600
16	e5720	e2720	e1540	e999	e699	e621	e759	e4590	16500	30700	44200	18200
17	e5330	e2670	e1510	e989	e692	e625	e773	e5120	14200	41500	39200	17600
18	e5230	e2620	e1480	e975	e685	e625	e787	e5830	12300	41300	33400	15900
19	e5050	e2570	e1450	e964	e678	e625	e798	e7450	11200	37500	29700	14300
20	e4910	e2520	e1440	e950	e674	e625	e812	e8400	11800	33700	28100	12800
21	e4730	e2480	e1420	e939	e667	e625	e823	e9430	13800	30600	26300	11600
22	e4660	e2430	e1400	e925	e664	e629	e833	e11700	13700	26600	24200	10800
23	e4560	e2380	e1380	e915	e660	e629	e847	e16500	13400	22000	22800	9980
24	e4450	e2340	e1370	e904	e653	e629	e855	e18500	12200	18000	23700	9330
25	e4340	e2290	e1350	e890	e650	e629	e886	e20800	11000	14800	27600	8850
26	e4240	e2240	e1330	e876	e646	e632	e911	e27600	9950	12300	32400	8430
27	e4170	e2190	e1310	e858	e643	e632	e950	e35300	9350	10900	43200	7920
28	e4060	e2150	e1290	e851	e636	e636	e989	e42400	9060	9870	45500	7460
29	e3990	e2110	e1280	e847	---	e639	e1030	54000	9540	10000	43500	7150
30	e3920	e2070	e1270	e840	---	e643	e1110	63600	11900	14900	39900	6880
31	e3850	---	e1250	e833	---	e646	---	76400	---	22700	37100	---
TOTAL	205270	84910	48760	31125	20107	19426	23534	440350	904000	610350	904600	560200
MEAN	6622	2830	1573	1004	718	627	784	14200	30130	19690	29180	18670
MAX	13000	3780	2030	1210	826	646	1110	76400	78700	41500	45500	34100
MIN	3850	2070	1250	833	636	618	650	1190	9060	9160	18800	6880
AC-FT	407200	168400	96720	61740	39880	38530	46680	873400	1793000	1211000	1794000	1111000
CFSM	0.29	0.12	0.07	0.04	0.03	0.03	0.03	0.61	1.30	0.85	1.26	0.81
IN.	0.33	0.14	0.08	0.05	0.03	0.03	0.04	0.71	1.46	0.98	1.46	0.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	4597	1844	1114	823	685	648	765	32730	43070	15800	19890	16750
MAX	8241	3161	1573	1049	966	870	1711	63160	86470	29580	37940	34320
(WY)	1996	1999	2003	2001	2001	2001	1998	1990	1992	1994	1991	1995
MIN	2571	1122	870	551	398	383	562	1369	20410	6041	10090	7697
(WY)	2000	1997	2000	1997	1997	1997	1997	2001	1999	1999	1994	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	4106736		3852632			
ANNUAL MEAN	11250		10560		11600	
HIGHEST ANNUAL MEAN					16090	
LOWEST ANNUAL MEAN					6569	
HIGHEST DAILY MEAN	63600	May 24	78700	Jun 1	248000	Jun 1 1992
LOWEST DAILY MEAN	a636	Apr 25	b618	Mar 9	c367	Mar 3 1997
ANNUAL SEVEN-DAY MINIMUM	636	Apr 25	620	Mar 5	369	Mar 1 1997
MAXIMUM PEAK FLOW			79800	Jun 1	250000	Jun 1 1992
MAXIMUM PEAK STAGE			41.41	May 15	50.76	Jun 1 1992
INSTANTANEOUS LOW FLOW					470	Mar 19 1990
ANNUAL RUNOFF (AC-FT)	8146000		7642000		8402000	
ANNUAL RUNOFF (CFSM)	0.49		0.46		0.50	
ANNUAL RUNOFF (INCHES)	6.61		6.20		6.82	
10 PERCENT EXCEEDS	36000		30500		33400	
50 PERCENT EXCEEDS	2770		3040		1970	
90 PERCENT EXCEEDS	659		652		639	

a From Apr. 25 to May 4
b From Mar. 9 to 10
c From Mar. 3 to 6, 1997
e Estimated

15453500 YUKON RIVER NEAR STEVENS VILLAGE

LOCATION.--Lat 65°52'32", long 149°43'04", in SE¹/₄ SW¹/₄ sec. 7, T. 12 N., R. 10 W. (Livengood D-6 quad), Hydrologic Unit 19040404, on right bank, 115 ft upstream from bridge at MP 56.0 on Dalton Highway, 0.5 mi downstream from Woodcamp Creek, 2.5 mi upstream from Ray River, and 21 mi southwest of Stevens Village.

DRAINAGE AREA.--196,300 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder and supplementary water-stage recorder on bridge pier at same site and datum. Datum of gage is 240.68 ft above sea level (revised).

REMARKS.--Records good except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed, 950,000 ft³/s, June 15-16, 1964, "at Rampart" (station 15468000), drainage area, 199,400 mi², approximately.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140000	e86000	e41000	e31000	e27000	e26000	e26000	e36000	222000	189000	197000	210000
2	138000	e87000	e41000	e30000	e27000	e26000	e26000	e41000	244000	184000	197000	213000
3	135000	e87000	e41000	e30000	e27000	e26000	e26000	e48000	266000	179000	195000	208000
4	133000	e87000	e41000	e30000	e27000	e26000	e26000	e60000	288000	176000	195000	207000
5	132000	e85000	e40000	e30000	e27000	e26000	e26000	e77000	301000	175000	196000	227000
6	130000	e83000	e40000	e30000	e27000	e26000	e26000	e100000	305000	178000	194000	245000
7	129000	e81000	e39000	e29000	e27000	e26000	e26000	e130000	304000	185000	188000	248000
8	127000	e78000	e38000	e29000	e27000	e26000	e26000	e170000	298000	190000	184000	242000
9	125000	e76000	e38000	e29000	e27000	e26000	e26000	e200000	295000	189000	182000	234000
10	123000	e75000	e37000	e29000	e27000	e26000	e26000	e210000	301000	194000	180000	227000
11	119000	e75000	e37000	e29000	e27000	e26000	e26000	e210000	309000	202000	178000	219000
12	114000	e77000	e36000	e29000	e27000	e26000	e26000	e210000	309000	205000	176000	211000
13	110000	e84000	e36000	e29000	e27000	e26000	e26000	e210000	301000	203000	174000	205000
14	107000	e88000	e36000	e29000	e27000	e26000	e26000	203000	293000	201000	170000	198000
15	105000	e94000	e35000	e29000	e27000	e26000	e26000	e210000	286000	204000	165000	191000
16	99200	e96000	e35000	e29000	e27000	e26000	e26000	e230000	278000	206000	161000	186000
17	e98000	e91000	e35000	e29000	e27000	e26000	e26000	e240000	268000	206000	161000	181000
18	e96000	e85000	e35000	e29000	e27000	e26000	e26000	e250000	258000	207000	167000	175000
19	e96000	e78000	e34000	e28000	e27000	e26000	e26000	e250000	247000	212000	180000	168000
20	e94000	e71000	e34000	e28000	e27000	e26000	e26000	243000	236000	220000	192000	161000
21	e93000	e57000	e34000	e28000	e27000	e26000	e26000	e240000	223000	230000	195000	154000
22	e93000	e50000	e34000	e28000	e27000	e26000	e26000	e240000	210000	236000	193000	147000
23	e91000	e47000	e34000	e28000	e27000	e26000	e26000	e240000	197000	235000	188000	140000
24	e90000	e44000	e33000	e28000	e27000	e26000	e26000	e230000	188000	227000	183000	134000
25	e90000	e42000	e33000	e28000	e26000	e26000	e26000	e220000	188000	214000	176000	128000
26	e89000	e41000	e33000	e28000	e26000	e26000	e27000	e210000	198000	205000	172000	124000
27	e88000	e41000	e33000	e28000	e26000	e26000	e27000	e200000	203000	199000	170000	119000
28	e88000	e41000	e32000	e28000	e26000	e26000	e28000	e190000	202000	197000	170000	115000
29	e87000	e41000	e32000	e28000	---	e26000	e30000	192000	199000	200000	177000	112000
30	e87000	e41000	e31000	e28000	---	e26000	e32000	196000	195000	200000	189000	110000
31	e87000	---	e31000	e28000	---	e26000	---	207000	---	198000	202000	---
TOTAL	3333200	2109000	1109000	893000	752000	806000	794000	5693000	7612000	6246000	5647000	5439000
MEAN	107500	70300	35770	28810	26860	26000	26470	183600	253700	201500	182200	181300
MAX	140000	96000	41000	31000	27000	26000	32000	250000	309000	236000	202000	248000
MIN	87000	41000	31000	28000	26000	26000	26000	36000	188000	175000	161000	110000
AC-FT	6611000	4183000	2200000	1771000	1492000	1599000	1575000	11290000	15100000	12390000	11200000	10790000
CFSM	0.55	0.36	0.18	0.15	0.14	0.13	0.13	0.94	1.29	1.03	0.93	0.92
IN.	0.63	0.40	0.21	0.17	0.14	0.15	0.15	1.08	1.44	1.18	1.07	1.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

	MEAN	100000	51460	36800	29970	25530	22570	22270	205700	336000	231300	199700	165500
MAX	164500	70300	48450	37680	32140	28970	28170	373000	614100	320200	255100	229500	
(WY)	2001	2003	1983	1977	1981	1981	1981	1991	1992	1992	2000	2000	
MIN	75340	34530	26770	23550	19320	16000	14800	90680	226800	178900	142400	116500	
(WY)	1993	1990	1990	1996	1999	1999	1997	1992	1995	1996	1989	1989	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1977 - 2003

ANNUAL TOTAL	42478200	40433200	
ANNUAL MEAN	116400	110800	119300
HIGHEST ANNUAL MEAN			144400
LOWEST ANNUAL MEAN			93910
HIGHEST DAILY MEAN	461000	May 26	309000
LOWEST DAILY MEAN	a19000	Apr 12	b26000
ANNUAL SEVEN-DAY MINIMUM	19000	Apr 12	26000
MAXIMUM PEAK FLOW			312000
MAXIMUM PEAK STAGE			39.30
ANNUAL RUNOFF (AC-FT)	84260000	80200000	86460000
ANNUAL RUNOFF (CFSM)	0.59	0.56	0.61
ANNUAL RUNOFF (INCHES)	8.05	7.66	8.26
10 PERCENT EXCEEDS	256000	227000	276000
50 PERCENT EXCEEDS	81000	87000	58000
90 PERCENT EXCEEDS	20000	26000	22000

a From Apr. 12 to Apr. 28
b From Feb. 25 to Apr. 25
c From Apr. 14 to 25
e Estimated

15453500 YUKON RIVER NEAR STEVENS VILLAGE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-72, 1978, and 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample location, cross section ft from rt bank (72103)	Specif. conduc- tance, wat unf 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
MAR								
26...	1850	250.0	--	7.4	0.0	768	8.3	--
26...	1945	400.0	286	7.4	0.0	771	10.2	69
26...	2000	475.0	286	7.5	0.0	770	8.4	57
26...	2005	925.0	286	7.5	0.0	770	9.5	64
26...	2015	1600	287	7.5	0.0	772	8.8	59
MAY								
29...	1755	1650	156	7.6	9.5	761	10.3	91
29...	1800	1250	156	7.6	9.5	761	10.4	91
29...	1803	950.0	156	7.6	9.5	761	10.5	92
29...	1806	650.0	154	7.6	9.5	761	9.9	87
29...	1809	270.0	150	7.6	9.6	761	10.3	91
JUN								
12...	1345	350.0	179	7.8	14.6	761	9.3	92
12...	1405	750.0	179	7.7	14.7	761	9.3	92
12...	1420	1040	179	7.7	14.7	761	9.3	92
12...	1430	1345	181	7.8	14.7	761	9.3	92
12...	1445	1685	180	7.8	14.7	761	9.1	90
JUL								
15...	1710	1700	223	8.0	16.8	752	9.9	104
15...	1715	1350	224	8.0	16.8	752	9.3	98
15...	1720	1050	215	8.0	16.8	752	9.3	97
15...	1725	700.0	222	8.0	16.8	752	9.0	94
15...	1730	350.0	223	8.0	16.8	752	8.9	93
24...	1500	1700	230	7.9	18.0	761	8.7	92
24...	1505	1350	228	7.9	18.0	761	8.9	94
24...	1510	1050	230	8.0	18.1	761	8.9	94
24...	1515	700.0	226	7.9	18.0	761	8.9	95
24...	1520	350.0	229	7.9	18.0	761	8.9	95
AUG								
21...	1441	1680	226	8.2	14.3	752	9.1	90
21...	1443	1300	226	8.2	14.3	752	9.1	90
21...	1447	1000	226	8.2	14.3	752	9.1	90
21...	1450	680.0	226	8.2	14.3	752	9.1	90
21...	1452	380.0	227	8.2	14.3	752	9.1	90
SEP								
11...	1715	350.0	217	8.0	8.8	760	10.0	86
11...	1718	700.0	218	8.1	8.8	760	9.9	86
11...	1722	1020	218	8.1	8.8	760	9.9	86
11...	1725	1350	218	8.1	8.8	760	9.9	85
11...	1727	1700	218	8.1	8.8	760	9.9	85

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Type of sample related QA data, code (99111)	Specif. conduc- tance, wat unf 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)
MAR													
26...	1900	9	9	1900	--	26500	20	3060	30	286	7.5	-8.0	.0
MAY													
29...	1600	9	9	2030	32.00	192000	20	3056	30	156	7.6	--	9.5
JUN													
12...	1420	9	9	2000	39.17	310000	20	3056	10	179	7.8	--	14.7
JUL													
15...	1600	9	9	--	32.88	204000	20	3056	1	221	8.0	--	16.8
24...	1410	9	9	--	34.35	227000	20	3056	1	230	8.0	--	18.0
AUG													
21...	1330	9	9	--	32.25	195000	20	3056	1	226	8.2	--	14.3
SEP													
11...	1610	9	9	2080	33.78	218000	20	3056	30	217	8.1	9.0	8.8

15453500 YUKON RIVER NEAR STEVENS VILLAGE—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)
MAR 26...	8.0	.039	.028	770	8.4	57	150	41.6	10.4	3.19	.91	145	.0
MAY 29...	48	.500	.376	761	10.3	90	89	25.7	6.12	1.98	.93	77	.0
JUN 12...	110	.229	.172	761	9.3	92	94	26.5	6.66	2.59	.82	80	.0
JUL 15...	220	.149	.110	752	9.3	97	110	31.1	8.32	2.87	1.29	95	.0
JUL 24...	390	.155	.114	761	8.9	94	110	30.6	8.07	2.88	1.31	98	.0
AUG 21...	210	.131	.095	752	9.1	90	110	32.2	7.73	2.64	1.12	101	.0
SEP 11...	35	.251	.185	760	9.9	85	100	28.4	7.92	2.13	.73	84	.0

Date	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Alkalinity, wat flt fxd end field, mg/L as CaCO3 (39036)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue, water, fltrd, sum of constituents mg/L (70301)	Nitrite, water, fltrd, mg/L as N (00613)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Ammonia, water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
MAR 26...	119	120	34.2	.65	.13	7.06	187	170	<.002	.109	<.015	E.10	E.08
MAY 29...	63	64	21.7	.96	<.2	4.34	134	100	.003	.025	<.015	.50	.36
JUN 12...	66	66	23.9	.54	<.2	4.33	113	105	<.002	.040	<.015	.65	.17
JUL 15...	78	78	31.8	1.20	<.2	6.36	144	130	<.002	.028	<.015	.33	.14
JUL 24...	81	81	34.0	1.41	<.2	5.80	143	133	<.002	.041	<.015	.41	.18
AUG 21...	83	83	34.6	.79	<.2	5.65	143	135	<.002	.035	<.015	.29	.11
SEP 11...	69	71	31.6	.81	<.2	5.48	149	119	<.002	.080	<.015	.29	.18

Date	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, suspnd sedimnt total, percent (30292)	Aluminum, suspnd sedimnt total, percent (30221)	Aluminum, water, fltrd, ug/L (01106)	Antimony, suspnd sedimnt total, ug/g (29816)	Antimony, water, fltrd, ug/L (01095)	Arsenic, suspnd sedimnt total, ug/g (29818)	Arsenic, water, fltrd, ug/L (01000)	Barium, suspnd sedimnt total, ug/g (29820)	Barium, water, fltrd, ug/L (01005)	Beryllium, suspnd sedimnt total, ug/g (29822)
MAR 26...	.006	E.003	<.007	.100	6.5	2	1.2	<.30	16	.4	940	74	2
MAY 29...	.175	.008	<.007	.096	6.4	36	1.2	<.30	11	.5	970	42	2
JUN 12...	.44	.006	<.007	.098	6.6	25	1.6	<.30	13	.5	920	40	2
JUL 15...	.36	E.004	<.007	.100	7.2	24	1.5	E.17	14	.6	790	43	1
JUL 24...	.49	E.004	<.007	.093	7.1	27	1.8	E.20	14	.6	770	44	1
AUG 21...	.29	<.004	<.007	.092	7.0	22	1.6	E.17	13	.5	710	41	1
SEP 11...	.106	<.004	<.007	.085	6.4	24	1.5	<.30	11	.5	830	44	1

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, suspnd sedimnt total, ug/g (29826)	Cadmium, water, fltrd, ug/L (01025)	Chromium, suspnd sedimnt total, ug/g (29829)	Chromium, water, fltrd, ug/L (01030)	Cobalt, suspnd sedimnt total, ug/g (35031)	Cobalt, water, fltrd, ug/L (01035)	Copper, suspnd sedimnt total, ug/g (29832)	Copper, water, fltrd, ug/L (01040)	Iron, suspnd sedimnt total, percent (30269)	Iron, water, fltrd, ug/L (01046)	Lead, suspnd sedimnt total, ug/g (29836)
MAR 26...	<.06	12	1.3	<.04	120	<.8	19	.093	49	1.0	4.1	E7	18
MAY 29...	<.06	8	1.1	E.02	110	<.8	15	.138	34	3.4	3.6	175	18
JUN 12...	<.06	E7	.7	<.04	110	<.8	14	.105	32	2.5	3.6	72	13
JUL 15...	<.06	9	.5	<.04	93	<.8	18	.079	45	2.2	4.6	10	10
JUL 24...	<.06	10	.7	<.04	95	<.8	18	.082	46	2.2	4.6	19	11
AUG 21...	<.06	8	.6	<.04	110	<.8	19	.098	41	2.0	4.4	20	13
SEP 11...	<.06	15	.4	<.04	110	<.8	15	.105	28	1.9	3.5	68	15

15453500 YUKON RIVER NEAR STEVENS VILLAGE—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, fltrd, ug/L (01049)	Lithium suspnd sedimnt total, ug/g (35050)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, suspnd sedimnt total, ug/g (29839)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury suspnd sedimnt total, ug/g (29841)	Molyb- denum, suspnd sedimnt total, ug/g (29843)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, suspnd sedimnt total, ug/g (29845)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, suspnd sedimnt total, ug/g (29847)	Selen- ium, water, fltrd, ug/L (01145)	Silver, suspnd sedimnt total, ug/g (29850)
MAR 26...	<.08	31	3.3	2200	8.5	.25	3	1.2	76	1.28	M	.6	M
MAY 29...	.09	32	2.7	790	7.2	.08	5	.6	59	2.72	M	E.4	<.5
JUN 12...	E.06	30	2.6	750	4.7	.09	3	.7	54	1.62	M	E.3	<.5
JUL 15...	<.08	29	3.1	850	1.1	.03	2	1.0	59	1.98	M	E.3	<.5
JUL 24...	<.08	31	3.6	800	1.0	.03	3	1.1	61	2.00	M	.5	M
AUG 21...	<.08	31	3.6	810	1.4	.03	3	.9	60	2.17	M	E.3	<.5
SEP 11...	<.08	26	3.6	750	3.4	.14	3	.8	54	1.93	M	E.3	<.5

Date	Silver, water, fltrd, ug/L (01075)	Stront- ium, suspnd sedimnt total, ug/g (35040)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, suspnd sedimnt total, ug/g (49955)	Titan- ium, suspnd sedimnt total, percent (30317)	Vanad- ium, suspnd sedimnt total, ug/g (29853)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, suspnd sedimnt total, ug/g (29855)	Zinc, water, fltrd, ug/L (01090)	Uranium suspnd sedimnt total, ug/g (35046)	Uranium natural water, fltrd, ug/L (22703)	Organic carbon, water, fltrd, mg/L (00681)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)
MAR 26...	<.2	280	173	<50	--	130	.7	280	2	<50	1.20	1.8	<.1
MAY 29...	<.2	250	93.6	<50	.420	140	.7	160	2	<50	.63	12.9	.2
JUN 12...	<.2	260	99.9	<50	.410	130	.8	150	M	<50	.61	5.9	.3
JUL 15...	<.2	310	137	<50	.490	140	.9	120	<1	<50	.82	4.8	3.4
JUL 24...	<.2	300	137	<50	.490	140	.6	120	M	<50	.69	5.0	6.2
AUG 21...	<.2	280	136	<50	.450	140	.5	120	M	<50	.67	4.0	4.0
SEP 11...	<.2	280	119	<50	.400	120	.4	110	<1	<50	.67	7.1	.3

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Total carbon, suspnd sedimnt total, percent (30244)	Organic carbon, suspnd sedimnt percent (50465)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Suspnd. sedimnt conc, flow through cntrfug mg/L (50279)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
MAR 26...	.5	.5	--	--	<.02	6	10	716	--
MAY 29...	2.7	2.9	3.2	2.2	.16	--	158	81900	53
JUN 12...	2.7	3.0	2.4	1.5	.19	356	353	295000	74
JUL 15...	3.6	7.0	2.5	.9	.20	299	326	180000	83
JUL 24...	4.3	10.5	2.5	.8	.23	468	470	288000	90
AUG 21...	2.4	6.5	2.3	1.0	.18	267	310	163000	80
SEP 11...	1.7	1.9	2.3	1.5	.09	114	117	68900	57

15477730 LIESE CREEK NEAR BIG DELTA

LOCATION.--Lat 64°26'53", long 144°52'59", in SW¹/₄ sec.25, T.5 S., R.14 E., (Big Delta B-2 quad), Hydrologic Unit 19040503, on right bank, 1.7 mi upstream from mouth, 1.5 mi east of Teck Cominco Corp, Pogo Mine Camp site, and 34 mi northeast of Big Delta.

DRAINAGE AREA.--1.08 mi².

PERIOD OF RECORD.--October 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2200 ft above sea level, from topographic map.

REMARKS.--Records fair except for discharges below 0.1 cfs and estimated daily discharges which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.47	e0.05	e0.01	e0.01	e0.01	e0.01	e0.01	e1.0	e0.52	0.08	0.92	7.9
2	0.46	e0.05	e0.01	e0.01	e0.01	e0.01	e0.01	e0.40	e0.44	0.09	0.77	9.6
3	0.45	e0.04	e0.01	e0.01	e0.01	e0.01	e0.01	e0.26	e0.38	0.25	0.80	7.4
4	e0.36	e0.04	e0.01	e0.01	e0.01	e0.01	e0.01	e0.16	e0.36	0.20	1.5	5.7
5	e0.30	e0.04	e0.01	e0.01	e0.01	e0.01	e0.01	e0.10	e0.34	0.15	1.6	5.3
6	e0.26	e0.03	e0.01	e0.01	e0.01	e0.01	e0.01	e0.16	e0.48	0.14	1.6	4.7
7	e0.28	e0.03	e0.01	e0.01	e0.01	e0.01	e0.01	e0.20	e0.64	0.15	1.1	4.0
8	e0.29	e0.03	e0.01	e0.01	e0.01	e0.01	e0.01	e0.50	e0.56	0.13	0.90	3.5
9	e0.30	e0.02	e0.01	e0.01	e0.01	e0.01	e0.01	e0.80	e0.44	0.12	0.78	3.0
10	e0.30	e0.02	e0.01	e0.01	e0.01	e0.01	e0.01	e1.4	e0.34	0.12	0.68	2.6
11	e0.29	e0.02	e0.01	e0.01	e0.01	e0.01	e0.01	e1.2	e0.28	0.13	0.59	2.5
12	e0.28	e0.02	e0.01	e0.01	e0.01	e0.01	e0.01	e1.1	e0.22	0.12	0.55	2.8
13	e0.27	e0.01	e0.01	e0.01	e0.01	e0.01	e0.01	e1.1	0.15	0.14	0.54	e2.1
14	e0.26	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.84	0.11	4.2	0.50	e1.8
15	e0.25	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.70	0.07	2.3	0.47	e1.6
16	e0.23	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.52	0.06	4.5	0.44	e1.4
17	e0.20	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.40	0.05	5.5	0.43	e1.2
18	e0.18	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.32	0.07	3.3	0.49	e1.1
19	e0.16	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.30	0.06	2.0	0.48	e1.0
20	e0.15	e0.01	e0.01	e0.01	e0.01	e0.01	e0.02	e0.30	0.05	1.3	0.46	e0.92
21	e0.13	e0.01	e0.01	e0.01	e0.01	e0.01	e0.03	e0.32	0.05	0.90	0.43	e0.88
22	e0.12	e0.01	e0.01	e0.01	e0.01	e0.01	e0.05	e0.36	0.04	0.72	0.42	e0.82
23	e0.11	e0.01	e0.01	e0.01	e0.01	e0.01	e0.08	e0.50	0.04	0.57	0.40	e0.80
24	e0.10	e0.01	e0.01	e0.01	e0.01	e0.01	e0.20	e0.70	0.05	0.48	0.43	e0.78
25	e0.09	e0.01	e0.01	e0.01	e0.01	e0.01	e0.50	e0.66	0.05	0.44	0.45	e0.74
26	e0.08	e0.01	e0.01	e0.01	e0.01	e0.01	e1.2	e0.60	0.06	0.41	0.44	e0.70
27	e0.08	e0.01	e0.01	e0.01	e0.01	e0.01	e3.0	e0.60	0.09	0.45	0.42	e0.70
28	e0.07	e0.01	e0.01	e0.01	e0.01	e0.01	e4.0	e0.56	0.08	1.7	0.39	e0.68
29	e0.06	e0.01	e0.01	e0.01	---	e0.01	e3.0	e0.52	0.08	1.0	0.39	e0.68
30	e0.06	e0.01	e0.01	e0.01	---	e0.01	e1.6	e0.54	0.08	0.74	0.38	e0.68
31	e0.05	---	e0.01	e0.01	---	e0.01	---	e0.58	---	1.1	0.68	---
TOTAL	6.69	0.57	0.31	0.31	0.28	0.31	13.93	17.70	6.24	33.43	20.43	77.58
MEAN	0.22	0.019	0.010	0.010	0.010	0.010	0.46	0.57	0.21	1.08	0.66	2.59
MAX	0.47	0.05	0.01	0.01	0.01	0.01	4.0	1.4	0.64	5.5	1.6	9.6
MIN	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.10	0.04	0.08	0.38	0.68
MED	0.23	0.01	0.01	0.01	0.01	0.01	0.02	0.52	0.08	0.45	0.49	1.5
AC-FT	13	1.1	0.6	0.6	0.6	0.6	28	35	12	66	41	154
CFSM	0.20	0.02	0.01	0.01	0.01	0.01	0.43	0.53	0.19	1.00	0.61	2.39
IN.	0.23	0.02	0.01	0.01	0.01	0.01	0.48	0.61	0.21	1.15	0.70	2.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2000	2000	2000	2000	2000	2000	2000	2000	2000
MEAN	0.22	0.043	0.009	0.005	0.005	0.005	0.13	1.26	1.11	0.96	1.53	1.40
MAX	0.37	0.083	0.025	0.010	0.010	0.010	0.46	1.62	2.31	1.34	2.31	2.59
(WY)	2001	2001	2002	2002	2002	2002	2003	2000	2000	2001	2002	2003
MIN	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.57	0.21	0.39	0.66	0.43
(WY)	2000	2000	2000	2000	2000	2000	2000	2003	2003	2000	2003	2001

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 2000 - 2003

ANNUAL TOTAL	228.63	177.78	
ANNUAL MEAN	0.63	0.49	0.56
HIGHEST ANNUAL MEAN			0.66 2000
LOWEST ANNUAL MEAN			0.45 2001
HIGHEST DAILY MEAN	6.8 Aug 19	9.6 Sep 2	9.6 Sep 2 2003
LOWEST DAILY MEAN	a0.01 Jan 1	b0.01 Nov 13	c0.00 Oct 30 1999
ANNUAL SEVEN-DAY MINIMUM	0.01 Jan 1	0.01 Nov 13	0.00 Oct 30 1999
MAXIMUM PEAK FLOW		11 Sep 2	11 Sep 2 2003
MAXIMUM PEAK STAGE		20.43 Sep 2	20.43 Sep 2 2003
MAXIMUM PEAK STAGE			d22.8 May 18 2000
ANNUAL RUNOFF (AC-FT)	453	353	405
ANNUAL RUNOFF (CFSM)	0.58	0.45	0.52
ANNUAL RUNOFF (INCHES)	7.88	6.12	7.03
10 PERCENT EXCEEDS	2.1	1.1	1.6
50 PERCENT EXCEEDS	0.06	0.06	0.07
90 PERCENT EXCEEDS	0.01	0.01	0.00

a Jan. 1 to Apr. 26
b Nov. 13 to Apr. 13
c Oct. 30, 1999 to May 7, 2000 and Nov. 30, 2000 to Apr. 21, 2001
d Backwater from ice
e Estimated

15477740 GOODPASTER RIVER NEAR BIG DELTA

LOCATION.--Lat 64°27'02", long 144°56'32", in SE¹/₄ sec.27, T.5 S., R.14 E., (Big Delta B-2 quad), Hydrologic Unit 19040503, on left bank, 0.2 mi northwest of Pogo Mine Camp site, 7 mi upstream from Central Creek, and 34 mi northeast of Big Delta.

DRAINAGE AREA.--677 mi².

PERIOD OF RECORD.--August 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1350 ft above sea level, from topographic map. Prior to August 14, 2000, at site 1000 ft upstream at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	575	e210	e180	e86	e72	e64	e60	1560	938	453	1160	3710
2	590	e190	e170	e86	e72	e64	e60	820	677	415	1010	8890
3	581	e190	e170	e86	e72	e64	e60	622	536	468	959	5450
4	533	e180	e170	e84	e70	e64	e60	398	530	547	1180	3790
5	507	e180	e170	e84	e70	e64	e60	330	521	479	1250	2970
6	410	e170	e160	e84	e70	e64	e60	317	1090	445	1450	2420
7	463	e160	e160	e82	e70	e64	e60	340	1560	538	1330	2090
8	510	e150	e150	e82	e70	e64	e60	336	922	646	1110	1810
9	461	e140	e150	e80	e70	e64	e60	477	709	604	982	1520
10	431	e120	e140	e80	e70	e62	e60	790	620	501	892	1350
11	368	e110	e140	e78	e70	e62	e60	868	604	457	827	1290
12	447	e100	e130	e78	e70	e62	e62	775	610	442	788	2150
13	421	e90	e130	e78	e70	e62	e64	764	501	430	781	1810
14	396	e90	e120	e76	e70	e62	e66	606	428	1640	735	1370
15	386	e100	e120	e76	e70	e62	e68	507	383	3370	695	1270
16	394	e110	e110	e76	e70	e62	e72	448	362	3630	670	1170
17	379	e120	e110	e76	e68	e62	e76	361	360	3800	647	1130
18	364	e130	e110	e74	e68	e62	e80	334	401	2390	668	930
19	e350	e140	e100	e74	e68	e62	e84	340	410	1590	664	940
20	e330	e150	e100	e74	e66	e62	e90	339	370	1270	663	790
21	e300	e160	e100	e74	e66	e62	e110	337	337	1070	640	841
22	e280	e170	e98	e74	e66	e62	e180	343	315	1260	723	754
23	e280	e170	e96	e72	e66	e62	e300	351	305	1110	716	696
24	e290	e180	e94	e72	e66	e62	e500	433	309	879	736	680
25	e290	e180	e94	e72	e66	e62	e700	477	326	781	788	683
26	e280	e180	e92	e72	e64	e62	e1000	465	355	728	758	639
27	e280	e180	e92	e72	e64	e62	e1500	592	1030	745	707	592
28	e270	e180	e90	e72	e64	e62	e2100	649	791	1490	661	583
29	e260	e180	e90	e72	---	e62	e3000	716	682	1460	627	583
30	e250	e180	e88	e72	---	e62	e2500	795	539	1140	605	649
31	e230	---	e88	e72	---	e62	---	938	---	1130	632	---
TOTAL	11906	4590	3812	2390	1918	1940	13212	17428	17521	35908	26054	53550
MEAN	384	153	123	77.1	68.5	62.6	440	562	584	1158	840	1785
MAX	590	210	180	86	72	64	3000	1560	1560	3800	1450	8890
MIN	230	90	88	72	64	62	60	317	305	415	605	583
AC-FT	23620	9100	7560	4740	3800	3850	26210	34570	34750	71220	51680	106200
CFSM	0.57	0.23	0.18	0.11	0.10	0.09	0.65	0.83	0.86	1.71	1.24	2.64
IN.	0.65	0.25	0.21	0.13	0.11	0.11	0.73	0.96	0.96	1.97	1.43	2.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)#

MEAN	259	117	84.6	59.6	48.2	43.7	155	895	915	844	1036	816
MAX	384	153	123	90.6	82.2	76.4	440	1488	1993	1158	1651	1785
(WY)	2003	2003	2003	2001	2001	2001	2003	2002	2000	2003	2000	2003
MIN	149	90.1	57.5	28.9	13.6	10.5	52.7	562	468	419	590	421
(WY)	2000	1999	1999	1999	1999	1999	2002	2003	1998	1999	1999	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1997 - 2003#		
ANNUAL TOTAL	205578			190229					
ANNUAL MEAN	563			521			449		
HIGHEST ANNUAL MEAN							595		
LOWEST ANNUAL MEAN							272		
HIGHEST DAILY MEAN	4950			Aug 18			8890		
LOWEST DAILY MEAN	a38			Mar 20			b60		
ANNUAL SEVEN-DAY MINIMUM	38			Mar 20			60		
MAXIMUM PEAK FLOW							11300		
MAXIMUM PEAK STAGE							17.97		
ANNUAL RUNOFF (AC-FT)	407800			377300			325600		
ANNUAL RUNOFF (CFSM)	0.83			0.77			0.66		
ANNUAL RUNOFF (INCHES)	11.30			10.45			9.02		
10 PERCENT EXCEEDS	1430			1160			1060		
50 PERCENT EXCEEDS	240			290			170		
90 PERCENT EXCEEDS	40			64			38		

See Period of Record; partial years used in monthly statistics

a From Mar. 20 to Apr. 18

b From Apr. 1 to 11

c From Mar. 8 to 24, 1999

d 19.49 ft recorded Aug. 14, 2000 at previous gage location but corresponds to a lower peak flow

e Estimated

15477768 SONORA CREEK ABOVE TRIBUTARY NEAR BIG DELTA

LOCATION.--Lat 64°23'22", long 144°46'40", in SW¹/₄ sec.16, T.6 S., R.15 E. (Big Delta B-2 quad), Hydrologic Unit 19040503, on right bank, 2.5 miles upstream from mouth, 6.3 miles southeast of Pogo Mine Camp site, and 35 miles northeast of Big Delta.

DRAINAGE AREA.--6.05 mi².

PERIOD OF RECORD.--May, 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1650 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.3	e3.3	e3.4	e1.7	e1.6	e1.5	e1.5	4.7	2.5	1.9	3.9	17
2	e7.5	e3.1	e3.3	e1.7	e1.6	e1.5	e1.5	4.5	2.3	2.0	3.5	15
3	e7.3	e2.9	e3.2	e1.7	e1.6	e1.5	e1.5	4.2	2.3	2.2	3.6	11
4	e6.9	e2.7	e3.1	e1.7	e1.6	e1.5	e1.5	3.7	2.2	2.2	4.6	8.8
5	e6.3	e2.5	e3.0	e1.6	e1.6	e1.5	e1.5	3.6	2.1	2.1	4.5	8.1
6	e5.6	e2.3	e3.0	e1.6	e1.6	e1.5	e1.5	3.7	3.1	2.0	4.6	7.5
7	e6.7	e2.2	e2.9	e1.6	e1.6	e1.5	e1.5	3.9	3.3	2.0	4.1	7.1
8	e6.4	e2.1	e2.8	e1.6	e1.6	e1.5	e1.6	4.2	2.6	2.0	3.7	6.8
9	e6.0	e2.0	e2.7	e1.6	e1.6	e1.5	e1.5	5.8	2.3	1.9	3.5	6.5
10	e5.5	e1.9	e2.6	e1.6	e1.6	e1.5	e1.6	6.5	2.1	1.9	3.3	6.2
11	e5.1	e1.8	e2.5	e1.6	e1.6	e1.5	e1.6	5.6	2.0	1.9	3.2	6.9
12	e4.7	e1.8	e2.4	e1.6	e1.6	e1.5	e1.6	6.4	1.8	1.9	3.2	8.9
13	e4.8	e1.9	e2.4	e1.6	e1.6	e1.5	e1.7	5.7	1.9	2.0	3.1	8.1
14	e4.9	e2.0	e2.3	e1.6	e1.6	e1.5	e1.7	4.5	2.0	3.8	3.0	7.1
15	e4.9	e2.1	e2.3	e1.6	e1.6	e1.5	e1.8	4.0	1.9	4.2	3.0	6.7
16	e4.8	e2.3	e2.2	e1.6	e1.6	e1.5	e1.8	3.5	1.8	8.2	2.9	6.6
17	e4.6	e2.5	e2.2	e1.6	e1.6	e1.5	e1.9	3.0	1.8	7.6	2.9	6.5
18	e4.4	e2.8	e2.1	e1.6	e1.5	e1.5	e2.0	2.8	1.9	5.1	3.4	5.9
19	e4.2	e3.0	e2.1	e1.6	e1.5	e1.5	2.2	2.6	1.8	3.8	3.3	6.1
20	e4.0	e3.2	e2.0	e1.6	e1.5	e1.5	2.3	2.5	1.8	3.2	3.2	5.8
21	e3.8	e3.4	e2.0	e1.6	e1.5	e1.5	2.7	2.5	1.8	2.9	3.2	6.0
22	e3.5	e3.5	e2.0	e1.6	e1.5	e1.5	3.7	2.6	1.8	2.7	3.3	5.8
23	e3.6	e3.6	e2.0	e1.6	e1.5	e1.5	5.3	3.7	1.8	2.5	3.2	5.7
24	e3.7	e3.7	e1.9	e1.6	e1.5	e1.5	7.9	3.8	1.9	2.4	3.2	5.8
25	e3.8	e3.8	e1.9	e1.6	e1.5	e1.5	11	3.3	1.8	2.4	3.0	5.7
26	e3.8	e3.8	e1.9	e1.6	e1.5	e1.5	15	3.0	2.0	2.4	3.0	5.6
27	e3.7	e3.8	e1.8	e1.6	e1.5	e1.5	17	2.8	2.2	2.6	2.9	5.5
28	e3.7	e3.7	e1.8	e1.6	e1.5	e1.5	15	2.6	2.1	4.4	2.8	5.6
29	e3.6	e3.6	e1.8	e1.6	---	e1.5	9.5	2.5	2.1	3.8	2.8	5.7
30	e3.5	e3.5	e1.8	e1.6	---	e1.5	6.4	2.5	2.0	3.5	2.8	5.7
31	e3.4	---	e1.7	e1.6	---	e1.5	---	2.7	---	4.1	3.5	---
TOTAL	152.0	84.8	73.1	50.0	43.7	46.5	127.3	117.4	63.0	95.6	104.2	219.7
MEAN	4.90	2.83	2.36	1.61	1.56	1.50	4.24	3.79	2.10	3.08	3.36	7.32
MAX	7.5	3.8	3.4	1.7	1.6	1.5	17	6.5	3.3	8.2	4.6	17
MIN	3.4	1.8	1.7	1.6	1.5	1.5	1.5	2.5	1.8	1.9	2.8	5.5
MED	4.7	2.9	2.2	1.6	1.6	1.5	1.8	3.7	2.0	2.4	3.2	6.5
AC-FT	301	168	145	99	87	92	252	233	125	190	207	436
CFSM	0.81	0.47	0.39	0.27	0.26	0.25	0.70	0.63	0.35	0.51	0.56	1.21
IN.	0.93	0.52	0.45	0.31	0.27	0.29	0.78	0.72	0.39	0.59	0.64	1.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)#

	4.59	2.80	2.05	1.59	1.47	1.38	2.50	6.94	3.02	3.46	5.99	6.99
MEAN	4.59	2.80	2.05	1.59	1.47	1.38	2.50	6.94	3.02	3.46	5.99	6.99
MAX	6.03	3.89	2.63	2.03	1.68	1.50	4.24	10.7	3.95	4.58	7.97	9.42
(WY)	2001	2001	2001	2001	2001	2003	2003	2002	2000	2001	2002	2000
MIN	2.84	1.67	1.16	1.12	1.16	1.14	1.23	3.79	2.10	2.58	3.36	3.68
(WY)	2002	2002	2002	2002	2002	2002	2002	2003	2003	2000	2003	2001

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 2000 - 2003#

ANNUAL TOTAL	1462.77	1177.3	
ANNUAL MEAN	4.01	3.23	3.40
HIGHEST ANNUAL MEAN			3.64
LOWEST ANNUAL MEAN			3.23
HIGHEST DAILY MEAN	32 Aug 19	17 Apr 27	32 Aug 19 2002
LOWEST DAILY MEAN	a0.94 Apr 20	b1.5 Feb 18	0.94 Apr 20 2002
ANNUAL SEVEN-DAY MINIMUM	0.95 Apr 20	1.5 Feb 18	0.95 Apr 20 2002
MAXIMUM PEAK FLOW		30 Apr 27	49 May 14 2002
MAXIMUM PEAK STAGE		21.09 Apr 27	21.56 May 14 2002
INSTANTANEOUS LOW FLOW			c0.58 Mar 21 2000
ANNUAL RUNOFF (AC-FT)	2900	2340	2460
ANNUAL RUNOFF (CFSM)	0.66	0.53	0.56
ANNUAL RUNOFF (INCHES)	8.99	7.24	7.64
10 PERCENT EXCEEDS	7.9	6.0	6.4
50 PERCENT EXCEEDS	2.5	2.4	2.5
90 PERCENT EXCEEDS	1.1	1.5	1.2

See Period of Record; partial years used in monthly statistics

a Apr. 20 and 26

b Feb. 18 through Apr. 9

c Minimum observed outside period of record, result of discharge measurement

d May have been higher, during period of missing record, Aug. 19, 2002

e Estimated

15477770 SONORA CREEK NEAR BIG DELTA

LOCATION.--Lat 64°22'40", long 144°48'41", in SE¹/₄ sec.20, T.6 S., R.15 E. (Big Delta B-2 quad), Hydrologic Unit 19040503, on left bank, 1.2 mi upstream from mouth, 6.5 mi southeast of Pogo Mine Camp site, and 34 mi northeast of Big Delta.

DRAINAGE AREA.--10.5 mi².

PERIOD OF RECORD.--August 1997 to current year.

REVISED RECORDS.--WDR AK-00-1: 1998 (M). WDR AK-01-1: 2000.

GAGE.--Water-stage recorder. Elevation of gage is 1450 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	e4.7	e5.1	e2.1	e1.6	e1.5	e1.5	e9.0	3.7	2.3	7.3	47
2	9.1	e4.6	e4.9	e2.1	e1.6	e1.5	e1.5	e8.0	3.4	2.6	6.5	32
3	9.4	e4.4	e4.8	e2.0	e1.6	e1.5	e1.5	e6.5	3.2	2.9	6.6	23
4	9.3	e4.2	e4.6	e2.0	e1.6	e1.5	e1.6	e5.6	3.1	2.9	8.4	18
5	8.8	e4.0	e4.5	e1.9	e1.6	e1.5	e1.6	e5.0	2.9	2.7	8.4	16
6	7.5	e3.7	e4.3	e1.9	e1.6	e1.5	e1.6	e5.2	4.3	2.7	8.2	15
7	9.2	e3.4	e4.2	e1.9	e1.6	e1.5	e1.6	5.7	4.7	2.6	7.2	14
8	8.7	e3.1	e4.0	e1.9	e1.6	e1.5	e1.7	7.1	3.7	2.5	6.5	13
9	8.1	e2.9	e3.9	e1.9	e1.6	e1.5	e1.7	9.6	3.2	2.4	6.2	13
10	e7.7	e2.6	e3.7	e1.8	e1.6	e1.5	e1.7	11	2.9	2.4	5.8	12
11	e7.3	e2.5	e3.6	e1.8	e1.6	e1.5	e1.7	9.8	2.7	2.4	5.7	13
12	e6.7	e2.4	e3.5	e1.8	e1.6	e1.5	e1.7	11	2.6	2.4	5.6	17
13	e6.8	e2.5	e3.3	e1.8	e1.6	e1.5	e1.8	10	2.6	2.6	5.4	16
14	e6.8	e2.7	e3.2	e1.8	e1.6	e1.5	e1.9	7.9	2.6	5.7	5.2	13
15	e6.6	e2.9	e3.1	e1.8	e1.6	e1.5	e2.0	6.8	2.4	7.2	5.1	12
16	e6.5	e3.1	e3.0	e1.7	e1.6	e1.5	e2.0	5.8	2.4	16	4.9	12
17	e6.3	e3.4	e2.9	e1.7	e1.6	e1.5	e2.1	5.0	2.4	15	4.9	12
18	e6.1	e3.8	e2.8	e1.7	e1.6	e1.5	e2.2	4.5	2.5	10	5.7	10
19	e5.8	e4.1	e2.8	e1.7	e1.6	e1.5	e2.4	4.2	2.4	6.8	5.3	11
20	e5.6	e4.5	e2.7	e1.7	e1.6	e1.5	e2.7	4.0	2.3	5.5	5.2	10
21	e5.4	e5.0	e2.6	e1.7	e1.6	e1.5	e4.0	4.0	2.3	4.5	5.3	11
22	e5.2	e5.3	e2.6	e1.7	e1.6	e1.5	e5.5	4.1	2.3	4.1	5.3	9.8
23	e5.1	e5.5	e2.5	e1.7	e1.5	e1.5	e8.0	6.1	2.3	3.8	5.3	9.7
24	e5.2	e5.6	e2.4	e1.7	e1.5	e1.5	e12	6.2	2.4	3.6	5.5	10
25	e5.3	e5.7	e2.4	e1.7	e1.5	e1.5	e17	5.5	2.4	3.6	5.6	9.4
26	e5.3	e5.7	e2.3	e1.7	e1.5	e1.5	e26	4.8	2.8	3.6	5.5	9.1
27	e5.2	e5.6	e2.3	e1.7	e1.5	e1.5	e40	4.3	2.9	4.4	5.2	9.0
28	e5.1	e5.5	e2.2	e1.7	e1.5	e1.5	e33	3.9	2.6	8.1	5.1	9.0
29	e5.0	e5.4	e2.2	e1.6	---	e1.5	e25	3.7	2.6	7.3	5.1	8.9
30	e4.9	e5.2	e2.1	e1.6	---	e1.5	e15	3.7	2.4	6.5	5.1	8.7
31	e4.8	---	e2.1	e1.6	---	e1.5	---	4.0	---	7.7	6.5	---
TOTAL	207.5	124.0	100.6	55.4	44.2	46.5	222.0	192.0	85.0	156.8	183.6	423.6
MEAN	6.69	4.13	3.25	1.79	1.58	1.50	7.40	6.19	2.83	5.06	5.92	14.1
MAX	9.4	5.7	5.1	2.1	1.6	1.5	40	11	4.7	16	8.4	47
MIN	4.8	2.4	2.1	1.6	1.5	1.5	1.5	3.7	2.3	2.3	4.9	8.7
AC-FT	412	246	200	110	88	92	440	381	169	311	364	840
CFSM	0.64	0.39	0.31	0.17	0.15	0.14	0.70	0.59	0.27	0.48	0.56	1.34
IN.	0.74	0.44	0.36	0.20	0.16	0.16	0.79	0.68	0.30	0.56	0.65	1.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)#

	4.42	2.55	1.73	1.20	1.06	0.97	2.59	9.57	4.58	4.75	8.01	8.68
MEAN	4.42	2.55	1.73	1.20	1.06	0.97	2.59	9.57	4.58	4.75	8.01	8.68
MAX	8.88	4.26	3.25	1.79	1.58	1.50	7.40	16.4	7.65	6.83	16.0	18.5
(WY)	2001	2001	2003	2003	2003	2003	2003	2000	2000	2001	2000	2000
MIN	1.63	1.31	0.98	0.71	0.56	0.45	0.91	4.27	1.74	3.11	4.29	2.69
(WY)	2000	2000	1998	1998	1998	1998	1998	1998	1998	1998	1998	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1997 - 2003#
ANNUAL TOTAL	1968.6	1841.2	
ANNUAL MEAN	5.39	5.04	4.25
HIGHEST ANNUAL MEAN			5.91
LOWEST ANNUAL MEAN			2.07
HIGHEST DAILY MEAN			e49
LOWEST DAILY MEAN	a1.3	b1.5	0.40
ANNUAL SEVEN-DAY MINIMUM	1.3	1.5	0.40
MAXIMUM PEAK FLOW		72	72
MAXIMUM PEAK STAGE		29.64	29.64
ANNUAL RUNOFF (AC-FT)	3900	3650	c33.40
ANNUAL RUNOFF (CFSM)	0.51	0.48	3080
ANNUAL RUNOFF (INCHES)	6.97	6.52	0.40
10 PERCENT EXCEEDS	10	9.8	5.50
50 PERCENT EXCEEDS	3.3	3.6	9.2
90 PERCENT EXCEEDS	1.4	1.5	2.4

See Period of Record; partial years used in monthly statistics
a From Apr. 13 to 27
b From Feb. 23 to Apr. 3
c Backwater from snow and ice
e Estimated

15477790 CENTRAL CREEK NEAR BIG DELTA

LOCATION.--Lat 64°22'37", long 144°56'35", in SE¹/₄ sec. 22, T. 6 S., R. 14 E. (Big Delta B-2 quad), Hydrologic Unit 19040503, on right bank, 0.5 mi upstream from mouth, 5 mi south of Pogo Mine Camp site, and 31 mi northeast of Big Delta.

DRAINAGE AREA.--115 mi².

PERIOD OF RECORD.--August 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1250 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	e35	e29	e9.4	e5.4	e4.2	e4.0	150	76	34	111	997
2	105	e33	e28	e9.2	e5.2	e4.2	e4.0	124	63	30	94	969
3	108	e33	e27	e9.0	e5.2	e4.2	e4.0	101	56	36	85	632
4	98	e33	e26	e8.8	e5.2	e4.2	e4.0	80	54	40	128	414
5	85	e32	e25	e8.6	e5.2	e4.2	e4.0	66	49	37	131	292
6	67	e31	e24	e8.4	e5.0	e4.2	e4.0	63	70	32	143	231
7	81	e28	e23	e8.2	e5.0	e4.2	e4.0	77	109	29	119	193
8	85	e25	e22	e8.0	e5.0	e4.2	e4.0	88	78	28	95	169
9	74	e20	e22	e7.8	e5.0	e4.2	e4.0	133	59	26	80	151
10	70	e15	e21	e7.6	e4.8	e4.2	e4.0	214	48	24	70	138
11	59	e11	e20	e7.4	e4.8	e4.2	e4.0	181	40	23	63	146
12	e58	e11	e20	e7.2	e4.8	e4.2	e4.2	164	36	22	59	418
13	e60	e12	e19	e7.2	e4.8	e4.2	e4.2	157	32	22	58	282
14	e60	e13	e18	e7.0	e4.8	e4.2	e4.2	121	28	120	53	197
15	e59	e15	e17	e7.0	e4.6	e4.0	e4.2	101	24	175	48	162
16	e57	e17	e16	e6.8	e4.6	e4.0	e4.4	87	22	595	45	145
17	e55	e19	e15	e6.6	e4.6	e4.0	e4.4	66	21	583	42	134
18	e52	e21	e15	e6.6	e4.6	e4.0	e4.6	58	21	280	46	110
19	e50	e24	e14	e6.4	e4.6	e4.0	e5.0	56	21	141	47	111
20	e46	e27	e14	e6.4	e4.6	e4.0	e6.0	54	21	96	46	93
21	e42	e29	e13	e6.2	e4.4	e4.0	e7.0	55	20	71	46	107
22	e38	e30	e13	e6.2	e4.4	e4.0	e11	56	19	59	79	93
23	e41	e30	e12	e6.0	e4.4	e4.0	e20	72	19	51	79	88
24	e42	e31	e12	e6.0	e4.4	e4.0	36	101	20	44	76	84
25	e43	e31	e12	e5.8	e4.4	e4.0	91	96	26	38	73	89
26	e42	e31	e11	e5.8	e4.4	e4.0	158	88	27	35	67	83
27	e41	e31	e11	e5.6	e4.4	e4.0	402	86	70	37	64	77
28	e40	e30	e11	e5.6	e4.2	e4.0	593	80	53	84	60	76
29	e39	e30	e10	e5.6	---	e4.0	423	76	50	106	56	77
30	e38	e30	e10	e5.4	---	e4.0	227	77	43	90	54	78
31	e36	---	e9.6	e5.4	---	e4.0	---	84	---	102	61	---
TOTAL	1869	758	539.6	217.2	132.8	126.8	2053.2	3012	1275	3090	2278	6836
MEAN	60.3	25.3	17.4	7.01	4.74	4.09	68.4	97.2	42.5	99.7	73.5	228
MAX	108	35	29	9.4	5.4	4.2	593	214	109	595	143	997
MIN	36	11	9.6	5.4	4.2	4.0	4.0	54	19	22	42	76
AC-FT	3710	1500	1070	431	263	252	4070	5970	2530	6130	4520	13560
CFSM	0.52	0.22	0.15	0.06	0.04	0.04	0.60	0.84	0.37	0.87	0.64	1.98
IN.	0.60	0.25	0.17	0.07	0.04	0.04	0.66	0.97	0.41	1.00	0.74	2.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)#

	MEAN	32.5	14.0	6.73	3.44	2.44	2.02	18.8	152	88.6	85.5	121	101
MAX	60.3	30.9	17.4	11.3	8.74	7.10	68.4	266	170	128	237	228	
(WY)	2003	2001	2003	2001	2001	2001	2003	2002	2000	2001	2000	2003	
MIN	13.8	4.71	0.75	0.026	0.000	0.000	3.83	81.6	26.3	47.8	70.1	37.2	
(WY)	2000	1999	1999	1999	1999	1999	2002	1998	1998	1999	1998	1999	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1997 - 2003#

ANNUAL TOTAL	29190.60	22187.6	
ANNUAL MEAN	80.0	60.8	
HIGHEST ANNUAL MEAN			53.7
LOWEST ANNUAL MEAN			26.8
HIGHEST DAILY MEAN	992	997	997
LOWEST DAILY MEAN	a0.10	b4.0	c0.00
ANNUAL SEVEN-DAY MINIMUM	0.10	4.0	0.00
MAXIMUM PEAK FLOW		d1720	d1720
MAXIMUM PEAK STAGE		45.73	45.73
ANNUAL RUNOFF (AC-FT)	57900	44010	38940
ANNUAL RUNOFF (CFSM)	0.70	0.53	0.47
ANNUAL RUNOFF (INCHES)	9.44	7.18	6.35
10 PERCENT EXCEEDS	181	126	131
50 PERCENT EXCEEDS	32	30	21
90 PERCENT EXCEEDS	0.10	4.2	0.10

See Period of Record; partial years used in monthly statistics

a From Mar. 6 to Apr. 25

b From Mar. 15 to Apr. 11

c From Jan. 8 to Apr. 17, 1999 and Feb. 18 to Apr. 17, 2000

d From rating extended above 395 ft³/s

e Estimated

15478040 PHELAN CREEK NEAR PAXSON

LOCATION.--Lat 63°14'27", Long 145°28'03", in SW¹/₄ sec. 28, T. 19 S., R. 12 E. (Mt.Hayes A-3 quad), Hydrologic Unit 19020102, on left bank about 1 mi downstream from terminus of Gulkana Glacier and 14.5 mi north of Paxson, Alaska.

DRAINAGE AREA.--12.2 mi².

PERIOD OF RECORD.--October 1966 to September 1978, annual maximums, water years 1984-85, October 1989 to current year. Water year 1994 not published, daily mean values of discharge are available from the computer files of the Alaska Science Center. Prior to October 1968, published as Gulkana Creek near Paxson.

GAGE.--Water-stage recorder. Datum of gage is 3,690.67 ft above sea level.

REMARKS.--Records are poor. Streamflow augmented by Gulkana Glacier and other glaciers that cover 7.5 mi² and 1.1 mi², respectively, of the drainage basin. A recording air temperature and precipitation gage at 4,860 ft above sea level, plus 3 snow and ice balance measurement sites, are located in the basin. Combined snow, ice, and water balances of the basin are published in other reports of the Geological Survey. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	e8.6	e5.9	e3.8	e3.1	e2.9	e2.9	e3.0	67	312	160	216
2	16	e8.5	e5.7	e3.8	e3.1	e2.9	e2.9	e3.6	65	328	188	204
3	16	e8.3	e5.6	e3.8	e3.1	e2.9	e2.9	e4.5	67	332	342	161
4	18	e8.3	e5.5	e3.7	e3.1	e2.9	e2.9	e5.0	61	345	296	132
5	29	e8.2	e5.4	e3.7	e3.1	e2.9	e2.9	e4.7	67	283	161	160
6	27	e8.1	e5.3	e3.7	e3.1	e2.9	e2.9	e4.0	82	313	199	306
7	23	e8.0	e5.2	e3.7	e3.1	e2.9	e2.9	e3.7	92	359	224	194
8	22	e7.9	e5.1	e3.7	e3.0	e2.9	e2.9	e3.6	95	431	238	163
9	21	e7.9	e5.0	e3.7	e3.0	e2.9	e2.9	e3.5	85	326	265	135
10	21	e7.8	e5.0	e3.7	e3.0	e2.9	e2.9	e3.6	71	330	182	112
11	19	e7.7	e4.9	e3.7	e3.0	e2.9	e2.9	e3.8	64	341	187	93
12	e18	e7.6	e4.8	e3.7	e3.0	e2.9	e2.9	e4.0	68	307	228	79
13	e17	e7.6	e4.7	e3.7	e3.0	e2.9	e2.9	e5.0	72	272	241	72
14	e16	e7.5	e4.6	e3.6	e3.0	e2.9	e2.9	e6.5	109	279	170	72
15	e16	e7.4	e4.6	e3.6	e3.0	e2.9	e2.9	e9.0	125	306	136	63
16	e15	e7.4	e4.5	e3.6	e3.0	e2.9	e2.9	e15	145	431	111	58
17	e14	e7.3	e4.4	e3.6	e3.0	e2.9	e2.9	e25	181	432	109	54
18	e14	e7.3	e4.4	e3.6	e3.0	e2.9	e2.9	e40	202	373	115	53
19	e13	e7.2	e4.3	e3.6	e3.0	e2.9	e2.9	e80	214	350	164	55
20	e13	e7.1	e4.3	e3.5	e3.0	e2.9	e2.9	e150	183	330	155	49
21	e12	e7.1	e4.2	e3.5	e3.0	e2.9	e2.9	174	160	421	416	47
22	e12	e7.0	e4.2	e3.5	e3.0	e2.9	e2.9	169	186	330	329	46
23	e11	e7.0	e4.1	e3.4	e3.0	e2.9	e2.9	70	181	271	166	45
24	e11	e6.9	e4.1	e3.4	e3.0	e2.9	e2.9	54	241	359	190	80
25	e10	e6.8	e4.0	e3.4	e3.0	e2.9	e2.9	52	250	361	269	119
26	e10	e6.7	e4.0	e3.3	e3.0	e2.9	e2.9	86	189	240	171	97
27	e9.8	e6.5	e4.0	e3.3	e3.0	e2.9	e2.9	122	228	201	177	90
28	e9.6	e6.4	e3.9	e3.3	e3.0	e2.9	e2.9	120	302	178	162	71
29	e9.3	e6.2	e3.9	e3.2	---	e2.9	e2.9	97	349	192	176	50
30	e9.0	e6.0	e3.9	e3.2	---	e2.9	e2.9	86	386	156	184	44
31	e8.8	---	e3.8	e3.2	---	e2.9	---	76	---	152	202	---
TOTAL	477.5	222.3	143.3	110.2	84.7	89.9	87.0	1483.5	4587	9641	6313	3120
MEAN	15.4	7.41	4.62	3.55	3.02	2.90	2.90	47.9	153	311	204	104
MAX	29	8.6	5.9	3.8	3.1	2.9	2.9	174	386	432	416	306
MIN	8.8	6.0	3.8	3.2	3.0	2.9	2.9	3.0	61	152	109	44
AC-FT	947	441	284	219	168	178	173	2940	9100	19120	12520	6190
CFSM	1.26	0.61	0.38	0.29	0.25	0.24	0.24	3.92	12.5	25.5	16.7	8.52
IN.	1.46	0.68	0.44	0.34	0.26	0.27	0.27	4.52	13.99	29.40	19.25	9.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY) #

	MEAN	11.0	5.74	4.09	3.23	2.71	2.38	2.27	17.4	143	305	249	62.8
	MAX	17.4	9.57	6.87	5.32	4.50	4.00	4.00	48.2	247	460	411	129
	(WY)	1996	1996	1996	1996	1972	1971	1971	1995	1969	1976	1972	1995
	MIN	5.55	2.50	2.00	1.48	1.00	1.00	1.00	2.39	72.9	181	73.6	14.3
	(WY)	1999	1978	1978	1967	1967	1967	1967	1992	1975	1991	1992	1992

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1967 - 2002#

ANNUAL TOTAL	23867.5	26359.4	
ANNUAL MEAN	65.4	72.2	68.1
HIGHEST ANNUAL MEAN			91.6
LOWEST ANNUAL MEAN			43.0
HIGHEST DAILY MEAN	616	Jul 22	432
LOWEST DAILY MEAN	a2.0	Apr 15	b2.9
ANNUAL SEVEN-DAY MINIMUM	2.1	Apr 13	2.9
MAXIMUM PEAK FLOW			1420
MAXIMUM PEAK STAGE			9.79
MAXIMUM PEAK STAGE			df14.70
ANNUAL RUNOFF (AC-FT)	47340	52280	49300
ANNUAL RUNOFF (CFSM)	5.36	5.92	5.58
ANNUAL RUNOFF (INCHES)	72.78	80.37	75.79
10 PERCENT EXCEEDS	224	245	250
50 PERCENT EXCEEDS	7.4	7.6	6.0
90 PERCENT EXCEEDS	2.3	2.9	2.0

See Period of Record

a From Apr. 15 to Apr. 17

b From Mar. 1 to Apr. 30

c For many days in the winter and spring during water years 1967, 1969, 1978, and 1991

d Backwater from snow and ice

e Estimated

f Occurred in early Jun. as a result of flow over ice

15478040 PHELAN CREEK NEAR PAXSON—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	e20	e11	e5.7	e3.1	e2.5	e2.4	e2.3	e6.0	159	289	88
2	37	e19	e11	e5.5	e3.1	e2.5	e2.4	e2.3	e8.0	213	265	79
3	e35	e19	e11	e5.4	e3.0	e2.5	e2.4	e2.3	e11	262	220	101
4	e33	e19	e11	e5.2	e3.0	e2.5	e2.4	e2.3	e15	218	230	88
5	e31	e19	e11	e5.1	e3.0	e2.5	e2.4	e2.3	e22	186	224	72
6	e30	e18	e10	e5.0	e2.9	e2.5	e2.4	e2.3	e30	170	244	65
7	e29	e18	e10	e4.9	e2.9	e2.5	e2.4	e2.3	e45	207	282	57
8	e26	e18	e10	e4.7	e2.9	e2.5	e2.4	e2.3	e65	223	326	55
9	e25	e17	e9.9	e4.7	e2.9	e2.5	e2.4	e2.3	e100	237	294	50
10	e24	e17	e9.7	e4.5	e2.8	e2.5	e2.4	e2.3	142	233	330	45
11	e25	e16	e9.5	e4.4	e2.8	e2.5	e2.3	e2.3	200	250	327	46
12	e24	e16	e9.4	e4.4	e2.8	e2.5	e2.3	e2.3	237	282	756	46
13	e24	e15	e9.2	e4.3	e2.7	e2.5	e2.3	e2.3	181	314	744	e40
14	e23	e15	e9.1	e4.2	e2.7	e2.5	e2.3	e2.3	119	311	588	e34
15	e23	e15	e8.9	e4.1	e2.7	e2.5	e2.3	e2.3	97	271	420	e29
16	e23	e14	e8.7	e4.0	e2.7	e2.5	e2.3	e2.4	104	e400	333	e25
17	e22	e14	e8.6	e4.0	e2.7	e2.5	e2.3	e2.4	128	e340	267	e21
18	e22	e14	e8.4	e3.9	e2.6	e2.5	e2.3	e2.4	134	e360	204	e18
19	e22	e14	e8.2	e3.9	e2.6	e2.5	e2.3	e2.5	147	e400	148	e15
20	e22	e13	e8.1	e3.8	e2.6	e2.5	e2.3	e2.5	142	e460	111	e12
21	e21	e13	e7.9	e3.7	e2.6	e2.5	e2.3	e2.6	125	530	120	e9.0
22	e21	e13	e7.7	e3.6	e2.6	e2.5	e2.3	e2.7	129	456	107	e8.5
23	e21	e13	e7.6	e3.6	e2.6	e2.4	e2.3	e2.8	133	493	80	e8.0
24	e21	e12	e7.4	e3.5	e2.6	e2.4	e2.3	e2.9	134	522	102	e8.0
25	e21	e12	e7.1	e3.4	e2.5	e2.4	e2.3	e3.0	117	493	105	e8.5
26	e20	e12	e7.0	e3.3	e2.5	e2.4	e2.3	e3.2	107	525	175	e12
27	e20	e12	e6.7	e3.3	e2.5	e2.4	e2.3	e3.4	108	596	144	e15
28	e20	e12	e6.5	e3.3	e2.5	e2.4	e2.3	e3.6	130	690	127	24
29	e20	e12	e6.3	e3.2	---	e2.4	e2.3	e3.9	143	747	106	82
30	e20	e11	e6.1	e3.2	---	e2.4	e2.3	e4.2	153	409	102	148
31	e20	---	e5.9	e3.1	---	e2.4	---	e4.8	---	359	98	---
TOTAL	766	452	268.9	128.9	76.9	76.6	70.0	83.8	3212.0	11316	7868	1309.0
MEAN	24.7	15.1	8.67	4.16	2.75	2.47	2.33	2.70	107	365	254	43.6
MAX	41	20	11	5.7	3.1	2.5	2.4	4.8	237	747	756	148
MIN	20	11	5.9	3.1	2.5	2.4	2.3	2.3	6.0	159	80	8.0
AC-FT	1520	897	533	256	153	152	139	166	6370	22450	15610	2600
CFSM	2.03	1.23	0.71	0.34	0.23	0.20	0.19	0.22	8.78	29.9	20.8	3.58
IN.	2.34	1.38	0.82	0.39	0.23	0.23	0.21	0.26	9.79	34.50	23.99	3.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)#

MEAN	11.6	6.10	4.26	3.26	2.71	2.39	2.27	16.8	142	307	249	62.1
MAX	24.7	15.1	8.67	5.32	4.50	4.00	4.00	48.2	247	460	411	129
(WY)	2003	2003	2003	1996	1972	1971	1971	1995	1969	1976	1972	1995
MIN	5.55	2.50	2.00	1.48	1.00	1.00	1.00	2.39	72.9	181	73.6	14.3
(WY)	1999	1978	1978	1967	1967	1967	1967	1992	1975	1991	1992	1992

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1967 - 2003#

ANNUAL TOTAL	27003.2	25628.1	
ANNUAL MEAN	74.0	70.2	68.1
HIGHEST ANNUAL MEAN			91.6
LOWEST ANNUAL MEAN			43.0
HIGHEST DAILY MEAN	432	756	1330
LOWEST DAILY MEAN	a2.9	b2.3	c1.0
ANNUAL SEVEN-DAY MINIMUM	2.9	2.3	1.0
MAXIMUM PEAK FLOW		1550	2320
MAXIMUM PEAK STAGE		9.88	11.51
MAXIMUM PEAK STAGE			df14.70
ANNUAL RUNOFF (AC-FT)	53560	50830	49360
ANNUAL RUNOFF (CFSM)	6.06	5.76	5.58
ANNUAL RUNOFF (INCHES)	82.34	78.14	75.88
10 PERCENT EXCEEDS	245	240	249
50 PERCENT EXCEEDS	15	10	6.0
90 PERCENT EXCEEDS	2.9	2.4	2.0

See Period of Record

a From Mar. 1 to Apr. 30

b From Apr. 11 to May 15

c For many days in the winter and spring during water years 1967, 1969, 1978, and 1991

d Backwater from snow and ice

e Estimated

f Occurred in early Jun. as a result of flow over ice

15484000 SALCHA RIVER NEAR SALCHAKET

LOCATION.--Lat 64°28'22", long 146°55'26", in NE¹/₄ sec. 22, T. 5 S., R. 4 E. (Big Delta B-6 quad), Fairbanks North Star Borough, Hydrologic Unit 19040505, on right bank 0.2 mi upstream from bridge on Richardson Highway, 0.5 mi east of Sno-Shu Inn, 2 mi upstream from mouth, and 6 mi southeast of Salchaket.

DRAINAGE AREA.--2,170 mi², approximately.

PERIOD OF RECORD.--July 1909 to August 1910, published as "at mouth" (no winter records), October 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 631.85 ft above sea level. Prior to August 10, 1910, nonrecording gage at site 1.5 mi downstream at different datum. October 1, 1948, to April 24, 1953, nonrecording gage, and April 25, 1953 to October 16, 1967, water-stage recorder at site 800 ft downstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage Height	Date	Time	Discharge (ft ³ /s)	Gage Height
July 18	1330	11,600	11.91	Sept 3	2000	* 23,100	*15.35
July 29	1500	17,300	13.78				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2200	e1200	e890	e450	e400	e325	e280	4220	2310	1170	6120	3230
2	2210	e1100	e870	e450	e400	e320	e280	3030	2360	1100	5510	10000
3	2350	e1100	e840	e450	e400	e320	e280	2460	1960	1070	4810	19700
4	2320	e1100	e820	e440	e400	e320	e280	2050	1700	1070	5050	17200
5	2200	e1100	e810	e440	e400	e320	e280	1680	1660	1130	6210	11100
6	2000	e1000	e800	e440	e400	e315	e280	1490	1610	1110	5550	9330
7	1880	e900	e780	e430	e400	e315	e280	1440	3320	1070	5170	8050
8	1990	e700	e750	e430	e400	e310	e280	1440	4770	1070	4520	6950
9	2210	e600	e730	e430	e400	e310	e280	1440	3060	1090	3960	6160
10	2080	e500	e700	e430	e400	e305	e285	1700	2280	1150	3540	5530
11	1890	e440	e680	e420	e400	e305	e290	2700	1900	1110	3230	5110
12	1800	e400	e650	e420	e400	e300	e295	3100	1710	1070	3000	6250
13	1840	e400	e610	e410	e400	e300	e300	3390	1590	1100	2860	7870
14	1860	e400	e600	e410	e400	e300	e310	3730	1420	1200	3090	6440
15	1760	e420	e590	e400	e400	e300	e325	3000	1280	3360	3020	5280
16	1750	e480	e560	e400	e390	e300	e350	2490	1190	7140	2800	4630
17	1720	e540	e550	e400	e390	e295	e360	2160	1120	8410	2720	4310
18	e1500	e580	e520	e400	e390	e295	e380	1780	1100	10800	2810	3910
19	e1200	e660	e500	e400	e380	e290	e390	1610	1190	7540	2690	3540
20	e1000	e700	e500	e400	e370	e290	e400	1550	1250	5010	2610	3370
21	e900	e750	e500	e400	e370	e290	e450	1560	1150	3730	2550	3160
22	e1000	e800	e490	e400	e360	e290	e500	1560	1070	2980	2540	3060
23	e1200	e850	e490	e400	e350	e290	e600	1580	1020	3360	2730	2860
24	e1300	e890	e490	e400	e340	e290	e700	1570	990	2920	2890	2680
25	e1300	e900	e480	e400	e330	e285	e800	1590	962	2450	4090	2600
26	e1300	e910	e480	e400	e330	e285	e1000	1600	954	2180	5200	2580
27	e1300	e910	e470	e400	e330	e285	e1500	1610	996	2190	4400	2440
28	e1200	e900	e470	e400	e325	e285	e3000	1970	1110	6900	3780	2330
29	e1200	e900	e460	e400	---	e280	e5700	2130	1320	15600	3360	2270
30	e1200	e890	e460	e400	---	e280	6360	2430	1280	9400	3060	2260
31	e1200	---	e460	e400	---	e280	---	2430	---	6540	2920	---
TOTAL	50860	23020	19000	12850	10655	9275	26815	66490	49632	116020	116790	174200
MEAN	1641	767	613	415	381	299	894	2145	1654	3743	3767	5807
MAX	2350	1200	890	450	400	325	6360	4220	4770	15600	6210	19700
MIN	900	400	460	400	325	280	280	1440	954	1070	2540	2260
AC-FT	100900	45660	37690	25490	21130	18400	53190	131900	98450	230100	231700	345500
CFSM	0.76	0.35	0.28	0.19	0.18	0.14	0.41	0.99	0.76	1.72	1.74	2.68
IN.	0.87	0.39	0.33	0.22	0.18	0.16	0.46	1.14	0.85	1.99	2.00	2.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)#

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
MEAN	1092	508	358	261	212	191	408	4237	3763	2675	3088	2514
MAX	1969	1028	730	471	449	377	1373	8666	8640	7330	13350	6186
(WY)	1994	1994	1994	1992	1994	1992	1993	1962	1964	1949	1967	1952
MIN	484	230	160	130	62.0	60.0	104	1564	963	568	717	636
(WY)	1959	1954	1954	1954	1953	1953	1974	1964	1969	1958	1966	1966

See Period of Record
e Estimated

15484000 SALCHA RIVER NEAR SALCHAKET—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003#	
ANNUAL TOTAL	770180		675607			
ANNUAL MEAN	2110		1851		1617	
HIGHEST ANNUAL MEAN					2957	1967
LOWEST ANNUAL MEAN					796	1999
HIGHEST DAILY MEAN	23900	Aug 19	19700	Sep 3	94100	Aug 14 1967
LOWEST DAILY MEAN	a140	Mar 17	b280	Mar 29	c60	Mar 1 1953
ANNUAL SEVEN-DAY MINIMUM	140	Mar 17	280	Mar 29	60	Mar 1 1953
MAXIMUM PEAK FLOW			23100	Sep 3	97000	Aug 14 1967
MAXIMUM PEAK STAGE			15.35	Sep 3	21.78	Aug 14 1967
INSTANTANEOUS LOW FLOW					60	Mar 1 1953
ANNUAL RUNOFF (AC-FT)	1528000		1340000		1172000	
ANNUAL RUNOFF (CFSM)	0.97		0.85		0.75	
ANNUAL RUNOFF (INCHES)	13.20		11.58		10.13	
10 PERCENT EXCEEDS	5420		4450		3950	
50 PERCENT EXCEEDS	1110		1070		650	
90 PERCENT EXCEEDS	140		310		170	

See Period of Record

a From Mar. 17 to Apr. 22

b From Mar. 29 to Apr. 9

c) Monthly mean published for Mar. 1953

15485500 TANANA RIVER AT FAIRBANKS

LOCATION.--Lat 64°47'34", long 147°50'20", in NE¹/₄ SW¹/₄ sec. 25, T. 1 S., R. 2 W. (Fairbanks D-2 quad), Fairbanks North Star Borough, Hydrologic Unit 19040507, on right bank at the end of Groin No. 1 on Corps of Engineers flood-protection levee, 1.0 mi south of Fairbanks International Airport, and 1.0 mi upstream from Chena River.

DRAINAGE AREA.--Undefined. Part of river flows through Salchaket Slough and is ungaged.

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 400 ft above sea level. Prior to September 14, 1973, nonrecording gage, and September 14, 1973 to June 14, 1985, water-stage recorder, at site 2.8 mi upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 16, 1967 reached a stage of 34.4 ft, from floodmarks at site then in use; discharge, about 125,000 ft³/s, contained in reports of the Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26000	17600	e11500	e6000	e6000	e6300	e6100	e34000	20500	32100	57700	31800
2	25900	17000	e11500	e6000	e6000	e6300	e6100	e32000	21400	33100	51000	34200
3	25600	16600	e11000	e6000	e6000	e6300	e6100	e28000	21800	36000	44800	42200
4	24900	16600	e10500	e6000	e6000	e6300	e6100	e26000	21200	40000	41400	48800
5	24000	17000	e10000	e6000	e6200	e6300	e6100	e25000	21100	40500	40500	45600
6	23100	17300	e9400	e6000	e6200	e6300	e6100	e25000	21700	40700	39400	39400
7	22700	17400	e8600	e6000	e6400	e6300	e6100	e22000	22300	42100	37900	35500
8	22500	e17000	e8200	e6000	e6400	e6300	e6100	19300	25400	44200	36600	32500
9	22500	e16000	e7600	e6000	e6400	e6300	e6100	18000	25500	45700	36100	30000
10	22200	e14000	e7400	e6000	e6400	e6300	e6100	18200	24400	47700	35700	28600
11	21600	e12000	e7200	e6000	e6600	e6200	e6100	18800	24300	49100	35400	27900
12	21000	e11000	e7000	e6000	e6600	e6200	e6100	19500	25300	50500	37100	27400
13	20700	e10500	e6800	e6000	e6600	e6200	e6200	19400	26900	53100	40900	28200
14	20600	e10000	e6800	e6000	e6600	e6200	e6200	19600	28000	55900	48700	27900
15	20300	e9800	e6800	e6000	e6400	e6200	e6300	19600	27800	59200	53800	26300
16	20200	e9600	e7000	e6000	e6400	e6200	e6300	18800	27300	64700	52900	24800
17	20000	e9600	e7000	e6000	e6300	e6200	e6400	17900	27200	72100	50400	23700
18	e19500	e9800	e6800	e6000	e6300	e6200	e6600	17000	27800	80500	47900	23100
19	e19000	e9800	e6600	e6000	e6300	e6200	e6900	16700	28500	79300	43400	22200
20	e18800	e10000	e6600	e6000	e6300	e6200	e7200	16600	29400	71500	38900	21400
21	e18500	e10000	e6400	e6000	e6300	e6200	e7800	16600	29500	66600	36100	20800
22	e19100	e10000	e6400	e6000	e6300	e6100	e8600	16800	28900	65700	34200	20400
23	19800	e10500	e6400	e6000	e6300	e6100	e9600	17000	28900	65300	33300	19900
24	19200	e10500	e6200	e6000	e6300	e6100	e10500	16800	30400	63600	32300	19500
25	18900	e10500	e6200	e6000	e6300	e6100	e11500	16600	31700	62500	30700	19200
26	18800	e11000	e6200	e6000	e6300	e6100	e13500	16800	31600	62900	31100	19000
27	18500	e11000	e6000	e6000	e6300	e6100	e16000	17100	31200	62900	31100	18700
28	18400	e11000	e6000	e6000	e6300	e6100	e19000	17500	30500	64000	31300	18400
29	18000	e11000	e6000	e6000	---	e6100	e25000	18100	30700	76300	30900	18200
30	17900	e11500	e6000	e6000	---	e6100	e32000	18600	31300	74500	30200	18500
31	17900	---	e6000	e6000	---	e6100	---	19600	---	64700	30100	---
TOTAL	646100	375600	232100	186000	176800	192200	278800	622900	802500	1767000	1221800	814100
MEAN	20840	12520	7487	6000	6314	6200	9293	20090	26750	57000	39410	27140
MAX	26000	17600	11500	6000	6600	6300	32000	34000	31700	80500	57700	48800
MIN	17900	9600	6000	6000	6000	6100	6100	16600	20500	32100	30100	18200
AC-FT1282000	745000	460400	368900	350700	381200	553000	1236000	1592000	3505000	2423000	1615000	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)#

MEAN	13780	7867	6210	5624	5443	5389	7451	22500	36050	52810	48860	27440
MAX	20840	12520	8090	7135	6700	6761	12700	36290	51350	66090	70080	44880
(WY)	2003	2003	1986	1986	1991	1993	1995	1991	1992	1992	1997	1990
MIN	8669	5000	4500	4016	3207	3100	4230	14810	25120	39550	34680	16950
(WY)	1997	1977	1977	1974	1974	1974	1974	1998	1978	1996	1996	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1973 - 2003#
ANNUAL TOTAL	8640600	7315900	
ANNUAL MEAN	23670	20040	20130
HIGHEST ANNUAL MEAN			22970
LOWEST ANNUAL MEAN			16080
HIGHEST DAILY MEAN	70500	Aug 20	92400
LOWEST DAILY MEAN	a6000	Dec 27	c3100
ANNUAL SEVEN-DAY MINIMUM	6060	Dec 25	3100
MAXIMUM PEAK FLOW		83000	96400
MAXIMUM PEAK STAGE		25.42	26.25
ANNUAL RUNOFF (AC-FT)	17140000	14510000	14580000
10 PERCENT EXCEEDS	55400	42100	50100
50 PERCENT EXCEEDS	17000	17000	10000
90 PERCENT EXCEEDS	6200	6000	5000

See Period of Record, partial years used in monthly statistics
a From Dec. 27 to Dec. 31
b From Dec. 27 to Feb. 4
c From Feb. 14 to Mar. 31, 1974
e Estimated

15493000 CHENA RIVER NEAR TWO RIVERS

LOCATION.--Lat 64°54'10", long 146°21'25", in NE $\frac{1}{4}$ sec. 20, T. 1 N., R. 7 E. (Big Delta D-5 quad), Fairbanks North Star Borough, Hydrologic Unit 19040506, on left bank about 200 ft upstream from bridge at mi 39.5 on the Chena Hot Springs Highway, 15 mi upstream from South Fork Chena River, 22 mi east of Two Rivers, and 41 mi east of Fairbanks.

DRAINAGE AREA.--937 mi².

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 719.7 ft above sea level from datum used by Alaska Department of Transportation and Public Facilities. Prior to April 25, 1994, water stage recorder at site 2.5 mi downstream at datum of 700 ft.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Corps of Engineers meteor-burst and GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 13, 1967 reached a stage of 26.6 ft at site and datum of gage in use prior to April 25, 1994, from floodmarks, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	615	e390	e190	e160	e150	e140	1890	913	367	4880	2420
2	1160	577	e390	e190	e160	e150	e140	e1400	967	363	3680	7400
3	1220	560	e380	e190	e160	e150	e140	e1100	841	374	3250	7260
4	1190	615	e360	e190	e160	e150	e140	985	794	391	3710	5300
5	1100	631	e340	e190	e170	e150	e140	860	723	391	3450	4400
6	913	568	e310	e180	e170	e150	e140	796	883	371	3090	3960
7	974	530	e280	e180	e170	e150	e130	817	2890	428	2750	3410
8	1120	e420	e260	e180	e170	e150	e130	760	1860	467	2420	3060
9	1100	e330	e240	e180	e170	e150	e130	965	1270	427	2170	2770
10	1030	e280	e230	e180	e170	e150	e130	1510	996	397	1980	2540
11	902	e270	e230	e170	e170	e150	e130	1830	842	393	1840	2550
12	964	e280	e230	e170	e170	e150	e140	1820	759	385	1740	4040
13	926	e300	e230	e170	e170	e150	e150	2250	664	388	1660	3660
14	858	e320	e220	e170	e170	e150	e160	2000	582	459	1580	2970
15	846	e350	e220	e170	e160	e140	e170	1590	527	1970	1490	2550
16	803	e380	e220	e170	e160	e140	e180	1300	487	4080	1410	2350
17	775	e400	e220	e170	e160	e140	e200	1000	462	3980	1390	2160
18	706	e430	e210	e170	e150	e140	e230	873	443	3980	1450	1960
19	690	e450	e210	e170	e150	e140	e280	800	426	2390	1370	1860
20	648	e460	e210	e170	e150	e140	e350	805	410	1730	1300	1740
21	685	e460	e210	e170	e150	e140	e450	808	392	1380	1270	1690
22	666	e450	e200	e170	e150	e140	e550	803	374	1170	1250	1590
23	665	e440	e200	e170	e150	e140	e750	747	360	1040	1230	1470
24	677	e430	e200	e160	e150	e140	e1000	790	356	940	1830	1410
25	670	e420	e200	e160	e150	e140	e2500	818	375	865	3800	1400
26	691	e420	e200	e160	e150	e140	e4500	782	403	885	3110	1350
27	691	e410	e200	e160	e150	e140	e4200	849	391	4430	2470	1280
28	678	e410	e200	e160	e150	e140	e4000	915	388	14200	2120	1220
29	658	e400	e200	e160	---	e140	3490	978	394	7690	1890	1210
30	656	e400	e200	e160	---	e140	2570	986	387	4470	1750	1200
31	631	---	e200	e160	---	e140	---	888	---	5540	1660	---
TOTAL	26443	13006	7590	5340	4470	4480	27360	34715	21559	66341	68990	82180
MEAN	853	434	245	172	160	145	912	1120	719	2140	2225	2739
MAX	1220	631	390	190	170	150	4500	2250	2890	14200	4880	7400
MIN	631	270	200	160	150	140	130	747	356	363	1230	1200
AC-FT	52450	25800	15050	10590	8870	8890	54270	68860	42760	131600	136800	163000
CFSM	0.91	0.46	0.26	0.18	0.17	0.15	0.97	1.20	0.77	2.28	2.38	2.92
IN.	1.05	0.52	0.30	0.21	0.18	0.18	1.09	1.38	0.86	2.63	2.74	3.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)#

	MEAN	575	276	188	133	108	95.3	241	1857	1341	1080	1336	1189
	MAX	1656	617	369	242	246	171	912	4210	4038	2505	3207	2739
	(WY)	1987	1987	1994	1994	1994	1991	2003	1971	1992	1984	1969	2003
	MIN	260	120	85.5	38.1	20.2	21.9	68.3	625	323	380	437	455
	(WY)	1969	1969	1977	1970	1970	1970	1982	1998	1969	1976	1976	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1968 - 2003#		
ANNUAL TOTAL	373464			362474					
ANNUAL MEAN	1023			993			706		
HIGHEST ANNUAL MEAN							1080		
LOWEST ANNUAL MEAN							398		
HIGHEST DAILY MEAN	9600			14200			17700		
LOWEST DAILY MEAN	a94			b130			c20		
ANNUAL SEVEN-DAY MINIMUM	94			133			20		
MAXIMUM PEAK FLOW				16000			20000		
MAXIMUM PEAK STAGE				23.56			d22.04		
ANNUAL RUNOFF (AC-FT)	740800			719000			511200		
ANNUAL RUNOFF (CFSM)	1.09			1.06			0.75		
ANNUAL RUNOFF (INCHES)	14.83			14.39			10.23		
10 PERCENT EXCEEDS	2450			2540			1660		
50 PERCENT EXCEEDS	631			430			330		
90 PERCENT EXCEEDS	96			150			86		

- a From Mar. 24 to Apr. 17
b From Apr. 7 to Apr. 11
c From Feb. 6 to Mar. 12, 1970
d At site and datum then in use
e Estimated

15511000 LITTLE CHENA RIVER NEAR FAIRBANKS

LOCATION.--Lat 64°53'10", long 147°14'50", in SW¹/₄ NE¹/₄ sec. 25, T. 1 N., R. 2 E. (Fairbanks D-1 quad), Fairbanks North Star Borough, Hydrologic Unit 19040506, on downstream side of left bridge abutment at mi 11.9 Chena Hot Springs Highway, 22.5 mi upstream from mouth, and 14 mi northeast of Fairbanks.

DRAINAGE AREA.--372 mi².

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 458.79 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are poor. Corps of Engineers meteor-burst and NOAA telephone telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	367	e190	e160	e85	e65	e60	e55	e520	155	90	1680	578
2	355	e200	e160	e85	e70	e60	e55	e420	170	89	1260	1130
3	348	e210	e155	e85	e70	e60	e55	e340	165	95	1060	1500
4	334	e220	e150	e85	e70	e60	e55	e300	156	103	1090	1370
5	312	e220	e140	e85	e70	e60	e55	e270	149	106	1050	1200
6	284	e220	e135	e80	e70	e60	e55	e240	153	100	953	1110
7	291	e210	e130	e80	e70	e60	e55	e220	349	102	858	1000
8	315	e190	e125	e80	e70	e60	e55	203	372	128	764	925
9	314	e180	e120	e80	e70	e60	e55	214	279	124	691	852
10	292	e150	e115	e80	e70	e60	e55	221	233	116	638	795
11	263	e125	e115	e80	e70	e60	e55	234	206	119	592	783
12	279	e110	e110	e80	e70	e60	e60	248	e180	120	562	1050
13	267	e105	e110	e80	e70	e60	e60	291	e160	120	541	1020
14	256	e100	e110	e75	e70	e60	e65	297	142	132	518	875
15	245	e100	e105	e75	e65	e60	e70	270	131	228	488	785
16	e235	e105	e105	e75	e65	e60	e75	243	122	749	459	734
17	e220	e110	e105	e75	e60	e60	e80	211	117	690	436	696
18	e210	e120	e100	e75	e60	e55	e90	199	113	586	421	650
19	e200	e130	e100	e75	e60	e55	e100	185	110	451	402	616
20	e205	e140	e100	e75	e60	e55	e110	178	106	354	385	596
21	e220	e140	e100	e75	e60	e55	e120	172	102	291	368	575
22	e230	e150	e100	e75	e60	e55	e160	169	99	252	359	549
23	e230	e155	e95	e75	e60	e55	e200	161	97	223	355	518
24	e230	e160	e95	e75	e60	e55	e200	159	96	203	499	508
25	e225	e170	e90	e75	e60	e55	e240	169	95	191	954	498
26	e220	e170	e90	e75	e60	e55	e300	164	97	192	980	479
27	e220	e170	e90	e70	e60	e55	e400	162	95	582	789	463
28	e215	e170	e90	e70	e60	e55	e660	160	94	2290	678	447
29	e210	e170	e90	e70	---	e55	e700	161	96	2900	608	444
30	e205	e165	e90	e65	---	e55	e600	160	93	1970	567	437
31	e200	---	e90	e65	---	e55	---	157	---	1600	539	---
TOTAL	7997	4755	3470	2380	1825	1790	4895	7098	4532	15296	21544	23183
MEAN	258	158	112	76.8	65.2	57.7	163	229	151	493	695	773
MAX	367	220	160	85	70	60	700	520	372	2900	1680	1500
MIN	200	100	90	65	60	55	55	157	93	89	355	437
AC-FT	15860	9430	6880	4720	3620	3550	9710	14080	8990	30340	42730	45980
CFSM	0.69	0.43	0.30	0.21	0.18	0.16	0.44	0.62	0.41	1.33	1.87	2.08
IN.	0.80	0.48	0.35	0.24	0.18	0.18	0.49	0.71	0.45	1.53	2.15	2.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)#

	MEAN	194	105	70.9	47.7	36.0	31.6	91.1	546	338	298	394	332
MAX	490	264	176	112	74.8	72.0	270	1217	932	665	2147	773	
(WY)	1987	1994	1986	1987	2001	1993	1993	1991	1992	1981	1967	2003	
MIN	69.8	32.0	22.5	7.90	6.00	3.23	19.1	147	99.2	85.0	124	107	
(WY)	1967	1967	1978	1970	1970	1967	1970	1998	1998	1997	1997	1966	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1966 - 2003#

ANNUAL TOTAL	91393	98765		
ANNUAL MEAN	250	271	209	
HIGHEST ANNUAL MEAN			414	1967
LOWEST ANNUAL MEAN			103	1997
HIGHEST DAILY MEAN	1300	Aug 18	2900	Jul 29
LOWEST DAILY MEAN	a26	Mar 22	b55	Mar 18
ANNUAL SEVEN-DAY MINIMUM	26	Mar 22	55	Mar 18
MAXIMUM PEAK FLOW			3020	Jul 29
MAXIMUM PEAK STAGE			26.43	Jul 29
ANNUAL RUNOFF (AC-FT)	181300	195900	151600	
ANNUAL RUNOFF (CFSM)	0.67	0.73	0.56	
ANNUAL RUNOFF (INCHES)	9.14	9.88	7.64	
10 PERCENT EXCEEDS	602	667	479	
50 PERCENT EXCEEDS	200	150	120	
90 PERCENT EXCEEDS	27	60	25	

See Period of Record; partial years used in monthly statistics

a From Mar. 22-30

b From Mar. 18 to Apr. 11

c From Mar. 11 to Apr. 15, 1967

d From rating curve extended above 3,000 ft³/s on basis of contracted-opening determination of peak flow

e Estimated

15514000 CHENA RIVER AT FAIRBANKS

LOCATION.--Lat 64°50'45", long 147°42'04", in NW¹/₄ sec. 11, T. 1 S., R. 1 W. (Fairbanks D-2 quad), Fairbanks North Star Borough, Hydrologic Unit 19040506, on right bank 100 ft downstream from Steese Highway Bridge, 800 ft upstream from Wendell Street bridge, 0.3 mi upstream from Noyes Slough, 11 mi upstream from mouth, and 11 mi downstream from Chena Slough.

DRAINAGE AREA.--1,995 mi².

PERIOD OF RECORD.--July 1947 to September 1948 (no winter records), October 1948 to current year.

GAGE.--Water-stage recorder and supplementary gage. Datum of gage is 422.92 ft above sea level. Supplementary gage, Chena River at Lathrop Street (15514003), 1.6 mi downstream on left bank, used during winter period. See WSP 1936 and 2136 for history of changes prior to April 27, 1968.

REMARKS.--Records are good except for estimated daily discharges, which are fair. Regulation during high-flow periods began July 9, 1981 at Moose Creek Dam 31.8 mi upstream. Flows on July 29 to August 2 and September 4-5 were regulated this year. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD--Outstanding floods occurred in early May 1905 and 1911, late August 1930, and May 11-14, 1937. See WDR AK-90-1 for more information.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	e1360	e980	e570	e480	e440	e360	3560	1360	785	9700	3150
2	2220	e1320	e980	e570	e480	e430	e360	2940	1330	781	9240	3680
3	2240	e1300	e960	e560	e490	e430	e350	2550	1370	779	7560	6760
4	2280	e1280	e930	e550	e500	e430	e350	2310	1340	777	6520	8830
5	2270	e1300	e930	e550	e520	e420	e350	1980	1290	785	6750	9210
6	2140	e1340	e930	e540	e530	e420	e350	1790	1280	789	6800	8290
7	1990	e1350	e920	e530	e540	e420	e340	1680	1290	783	6130	7290
8	1970	e1200	e900	e530	e540	e420	e340	1610	2420	780	5460	6400
9	2050	e840	e860	e530	e550	e420	e340	1550	2480	829	4860	5710
10	2050	e680	e820	e520	e550	e420	e350	1560	2040	848	4350	5200
11	1980	e530	e750	e520	e560	e420	e350	1730	1750	831	3940	4830
12	1880	e500	e700	e520	e560	e420	e360	2030	1560	815	3650	4850
13	1850	e500	e650	e520	e570	e410	e360	2220	1430	813	3430	6080
14	1830	e500	e650	e520	e560	e410	e370	2570	1340	824	3270	6390
15	1770	e510	e640	e520	e540	e410	e380	2560	1240	900	3150	5520
16	1730	e560	e640	e520	e500	e400	e390	2270	1160	1700	2980	4850
17	1670	e600	e630	e520	e470	e400	e410	2020	1100	4060	2820	4440
18	e1560	e680	e630	e520	e460	e390	e460	1790	1050	4640	2700	4170
19	e1430	e740	e620	e520	e450	e380	e490	1630	1010	4990	2650	3870
20	e1250	e780	e620	e520	e450	e380	e520	1520	976	3790	2570	3650
21	e1150	e830	e620	e520	e440	e380	e560	1470	935	2970	2470	3470
22	e1230	e880	e620	e520	e440	e380	e640	1430	900	2490	2380	3320
23	e1450	e940	e610	e520	e440	e370	e720	1400	871	2160	2340	3170
24	e1470	e980	e610	e520	e430	e370	e880	1370	845	1920	2370	3010
25	e1460	e1020	e600	e520	e430	e370	e1100	1340	823	1760	3040	2890
26	e1490	e1020	e600	e520	e430	e370	1490	1350	810	1680	4810	2800
27	e1490	e990	e600	e510	e430	e360	1860	1320	811	1770	4960	2720
28	e1470	e980	e590	e510	e440	e360	2640	1310	810	4450	4290	2640
29	e1460	e980	e590	e500	---	e360	4340	1340	795	8770	3810	2550
30	e1440	e980	e580	e480	---	e360	4670	1350	789	10200	3490	2500
31	e1430	---	e580	e470	---	e360	---	1380	---	9890	3280	---
TOTAL	53870	27470	22340	16240	13780	12310	26480	56930	37205	79359	135770	142240
MEAN	1738	916	721	524	492	397	883	1836	1240	2560	4380	4741
MAX	2280	1360	980	570	570	440	4670	3560	2480	10200	9700	9210
MIN	1150	500	580	470	430	360	340	1310	789	777	2340	2500
MED	1730	960	640	520	485	400	385	1630	1200	1680	3650	4300
AC-FT	106900	54490	44310	32210	27330	24420	52520	112900	73800	157400	269300	282100
CFSM	0.87	0.46	0.36	0.26	0.25	0.20	0.44	0.92	0.62	1.28	2.20	2.38
IN.	1.00	0.51	0.42	0.30	0.26	0.23	0.49	1.06	0.69	1.48	2.53	2.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)#

	MEAN	1200	597	450	344	286	262	473	3624	2532	2055	2517	2215
MAX	2413	1231	922	595	509	445	1406	10250	6721	6133	13120	5735	
(WY)	1962	1994	1994	1987	1968	1968	1993	1948	1949	1949	1967	1962	
MIN	461	297	194	163	120	120	209	1050	816	665	682	615	
(WY)	1967	1959	1977	1977	1953	1958	1977	1998	1969	1958	1957	1957	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1948 - 2003#

ANNUAL TOTAL	636225	623994	
ANNUAL MEAN	1743	1710	1365
HIGHEST ANNUAL MEAN			2603
LOWEST ANNUAL MEAN			713
HIGHEST DAILY MEAN	8890	Aug 21	10200
LOWEST DAILY MEAN	a215	Mar 20	b340
ANNUAL SEVEN-DAY MINIMUM	216	Mar 19	346
MAXIMUM PEAK FLOW			10400
MAXIMUM PEAK STAGE			9.58
ANNUAL RUNOFF (AC-FT)	1262000	1238000	989100
ANNUAL RUNOFF (CFSM)	0.87	0.86	0.68
ANNUAL RUNOFF (INCHES)	11.86	11.64	9.30
10 PERCENT EXCEEDS	4090	4220	3100
50 PERCENT EXCEEDS	1300	960	720
90 PERCENT EXCEEDS	225	416	235

See Period of Record

a Mar. 20 to 25

b April 7 to 9

c Monthly means published for Feb. 1953 and Mar. 1958

d Site then in use

e Estimated

15515500 TANANA RIVER AT NENANA

LOCATION.--Lat 64°33'55", long 149°05'30", in SE $\frac{1}{4}$ sec. 14, T. 4 S., R. 8 W. (Fairbanks C-5 quad), Hydrologic Unit 19040507, on left bank on east end of Alaska Railroad dock in Nenana, and 0.3 mi upstream from Nenana River.

DRAINAGE AREA.--25,600 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1962 to current year.

REVISED RECORDS.--WSP 2136: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 338.50 ft above sea level. Prior to March 10, 1965, on right bank 280 ft downstream from railroad bridge 0.5 mi upstream at present datum. March 10, 1965 to March 23, 1968, nonrecording gage on railroad bridge 0.5 mi upstream at present datum.

REMARKS.--Records fair. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1948 reached a stage of 15.9 ft, discharge, about 135,000 ft³/s, contained in reports of Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33200	20500	e14000	e8200	e7800	e7900	e7700	e40000	e25000	40100	82400	43000
2	32500	19400	e14000	e8200	e7800	e7900	e7700	e41000	e26900	41700	75500	46000
3	32400	e19000	e13500	e8200	e7800	e7900	e7700	31400	e26900	44800	68700	54200
4	31400	e19000	e13500	e8000	e7800	e7900	e7700	31100	e25600	48600	65100	66100
5	30100	e19000	e13000	e8000	e7800	e7900	e7700	31600	e24300	49100	62900	68600
6	28500	e19500	e12000	e8000	e7800	e7900	e7700	31200	25900	48500	60500	62300
7	27500	e20000	e11500	e8000	e7800	e7900	e7700	26900	28000	49100	56800	54600
8	26900	e20000	e11000	e8000	e8000	e7900	e7700	25200	31000	49800	54200	49200
9	26800	e19000	e10500	e7800	e8000	e7900	e7700	23700	34400	51500	52600	44800
10	26700	e18000	e9600	e7800	e8000	e7900	e7700	23200	32800	52900	51400	41600
11	25800	e16000	e9400	e7800	e8000	e7900	e7700	23500	32900	54200	50500	39300
12	25200	e13000	e9200	e7800	e8200	e7900	e7700	24000	35700	54500	51200	38800
13	24900	e12000	e9000	e7800	e8200	e7800	e7700	24300	38300	55700	55300	39900
14	24600	e11500	e9000	e7800	e8200	e7800	e7800	24400	38800	57700	61700	40900
15	24200	e11000	e9000	e7800	e8200	e7800	e7800	24900	37900	60700	66900	38100
16	23700	e11000	e8800	e7800	e8000	e7800	e8000	24200	36500	65200	67400	34600
17	e23000	e10500	e8800	e7800	e8000	e7800	e8000	22900	36100	78200	65200	31900
18	e22000	e10500	e9000	e7800	e7900	e7800	e8200	21600	36600	88400	65300	29900
19	e21500	e11000	e9000	e7800	e7900	e7800	e8400	20500	37600	92500	60400	28000
20	e21200	e11000	e8800	e7800	e7900	e7800	e8800	20100	38700	88100	54100	26200
21	e21000	e11500	e8600	e7800	e7900	e7800	e9200	20000	38900	79100	49200	25000
22	e21600	e11500	e8600	e7800	e7900	e7800	e9600	19900	38400	75900	45700	24100
23	e22000	e11500	e8600	e7800	e7900	e7800	e10000	20300	38100	74400	43300	23100
24	22100	e12000	e8400	e7800	e7900	e7700	e11000	20200	38900	72300	42300	22300
25	22400	e12000	e8400	e7800	e7900	e7700	e13000	20000	40400	69500	40400	21600
26	22400	e12500	e8400	e7800	e7900	e7700	e15000	20000	40900	68600	40900	21000
27	22000	e12500	e8400	e7800	e7900	e7700	e18000	20500	39300	71400	43600	20500
28	21400	e13000	e8200	e7800	e7900	e7700	e22000	21100	38600	81800	43600	19900
29	21000	e13000	e8200	e7800	---	e7700	e27000	21800	37700	94400	42500	19600
30	20900	e13500	e8200	e7800	---	e7700	e35000	22600	38700	96800	40700	20300
31	20800	---	e8200	e7800	---	e7700	---	23600	---	90800	39500	---
TOTAL	769700	433900	304800	244000	222300	242200	326900	765700	1039800	2046300	1699800	1095400
MEAN	24830	14460	9832	7871	7939	7813	10900	24700	34660	66010	54830	36510
MAX	33200	20500	14000	8200	8200	7900	35000	41000	40900	96800	82400	68600
MIN	20800	10500	8200	7800	7800	7700	7700	19900	24300	40100	39500	19600
MED	23700	12800	9000	7800	7900	7800	7900	23500	37100	65200	54100	36300
AC-FT1527000	860600	604600	484000	440900	480400	648400	1519000	2062000	4059000	3372000	2173000	
CFSM	0.97	0.56	0.38	0.31	0.31	0.31	0.43	0.96	1.35	2.58	2.14	1.43
IN.	1.12	0.63	0.44	0.35	0.32	0.35	0.48	1.11	1.51	2.97	2.47	1.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)#

	MEAN	17140	9432	7444	6778	6571	6504	8757	30880	47280	60090	56950	33720
MAX	26870	14460	10770	9065	8171	8161	15090	62210	87390	76770	98210	57690	
(WY)	2001	2003	1986	1986	1986	1993	1995	1963	1962	1988	1967	1990	
MIN	11420	5517	4532	4694	4421	4071	5870	16030	29750	44920	41510	21710	
(WY)	1977	1977	1977	1977	1974	1974	1974	1964	1970	1996	1996	1976	

See Period of Record, partial years used in monthly statistics
e Estimated

15515500 TANANA RIVER AT NENANA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003#	
ANNUAL TOTAL	10029200		9190800			
ANNUAL MEAN	27480		25180		24210	
HIGHEST ANNUAL MEAN					29310	1967
LOWEST ANNUAL MEAN					19530	1970
HIGHEST DAILY MEAN	80800	Aug 20	96800	Jul 30	183000	Aug 18 1967
LOWEST DAILY MEAN	a6800	Jan 22	b7700	Mar 24	c4000	Mar 6 1974
ANNUAL SEVEN-DAY MINIMUM	6800	Jan 22	7700	Mar 24	4000	Mar 6 1974
MAXIMUM PEAK FLOW			97700	Jul 29	186000	Aug 18 1967
MAXIMUM PEAK STAGE			12.79	Jul 29	d18.90	Aug 18 1967
ANNUAL RUNOFF (AC-FT)	19890000		18230000		17540000	
ANNUAL RUNOFF (CFSM)	1.07		0.98		0.95	
ANNUAL RUNOFF (INCHES)	14.57		13.36		12.85	
10 PERCENT EXCEEDS	60500		54900		58100	
50 PERCENT EXCEEDS	19500		20000		12000	
90 PERCENT EXCEEDS	6800		7800		6200	

See Period of Record, partial years used in monthly statistics

a From Jan. 22 to Apr. 5

b From Mar. 24 to Apr. 13

c From Mar. 6 to Mar. 20, 1974

d At site then in use

e Estimated

15515500 TANANA RIVER AT NENANA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954-57, 1963-64, 1966-75, 1978-1995, and 2001 to current year.

PERIOD OF RECORD.--

WATER TEMPERATURE: 1954 to 1956 (seasonal).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Location in X-sect. looking downstrm ft from l bank (00009)	Sample location, cross section ft from rt bank (72103)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
MAR									
19...	1712	75.0	--	321	7.3	.0	750	7.7	54
19...	1722	220	--	320	7.3	.0	750	7.8	54
19...	1732	400	--	319	7.3	.0	750	7.8	54
19...	1742	565	--	320	7.3	.0	750	7.8	54
19...	1752	735	--	320	7.3	.0	750	7.8	54
MAY									
08...	1535	135	--	248	8.0	5.7	765	12.1	96
08...	1538	245	--	248	8.0	5.8	765	11.8	94
08...	1541	330	--	248	8.0	5.8	765	12.0	96
08...	1544	430	--	248	8.0	5.8	765	12.0	96
08...	1547	540	--	248	8.0	5.7	765	12.1	96
JUN									
11...	1250	--	140.0	272	7.6	16.7	757	9.0	93
11...	1310	--	270.0	272	7.8	16.7	757	9.1	94
11...	1331	--	425.0	273	7.8	16.8	757	9.1	94
11...	1350	--	530.0	271	7.8	16.8	757	9.0	93
11...	1410	--	635.0	270	7.9	16.8	757	9.0	93
JUL									
22...	1312	--	340.0	222	7.9	16.7	775	9.7	98
22...	1322	--	260.0	221	7.9	16.7	775	9.6	97
22...	1332	--	215.0	220	7.9	16.7	775	9.5	96
22...	1342	--	155.0	221	7.9	16.7	775	9.5	96
22...	1352	--	110.0	220	7.9	16.7	775	9.4	95
AUG									
15...	1302	--	150.0	237	7.6	13.4	731	9.4	94
15...	1304	--	240.0	236	7.9	13.4	731	9.3	93
15...	1306	--	340.0	237	8.0	13.4	731	9.3	93
15...	1308	--	430.0	236	8.0	13.4	731	9.3	93
15...	1310	--	600.0	236	8.0	13.4	731	9.3	93
SEP									
12...	1302	576	--	242	7.8	7.2	768	11.0	90
12...	1322	500	--	242	7.9	7.2	768	10.9	90
12...	1342	425	--	242	7.9	7.2	768	10.7	88
12...	1402	330	--	243	7.9	7.3	768	10.7	88
12...	1422	225	--	243	7.9	7.3	768	10.6	87

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method code (82398)	Sampler type, code (84164)	Type of sample related QA code (99111)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)
MAR													
19...	1830	9	9	934	7740	20	3044	30	320	7.3	-4.0	.0	9.4
MAY													
08...	1440	9	9	638	26200	20	3056	1	248	8.0	--	5.7	180
28...	1530	9	9	--	19600	20	3056	1	256	7.8	--	12.4	32
JUN													
11...	1330	9	9	--	31500	20	3056	1	272	7.8	--	16.8	130
JUL													
22...	1330	9	9	638	76200	20	--	1	221	7.9	--	16.7	E930
AUG													
15...	1130	9	7	--	66100	20	3056	30	236	7.9	--	13.4	2000
SEP													
12...	1340	9	9	697	38800	20	3056	10	242	7.9	--	7.3	97

15515500 TANANA RIVER AT NENANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate wat fltrd incrm. titr., field, mg/L (00452)
MAR													
19...	.032	.023	750	7.8	54	140	42.3	8.80	3.95	127	2.01	156	.0
MAY													
08...	.107	.079	765	12.0	95	120	34.2	7.64	3.58	--	1.79	109	.0
28...	.108	.080	--	9.4	--	120	35.7	8.24	4.22	--	1.84	120	.0
JUN													
11...	.096	.071	757	9.0	93	130	35.5	8.80	4.36	--	1.99	107	.0
JUL													
22...	.056	.043	775	9.5	96	110	31.6	6.79	3.46	--	2.02	88	.0
AUG													
15...	.025	.018	731	9.3	93	120	34.1	7.19	3.60	--	2.98	90	.0
SEP													
12...	.104	.076	768	10.8	89	120	33.7	8.57	3.64	--	1.67	99	.0

Date	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Alka- linity, wat flt fxd end field, mg/L as CaCO3 (39036)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Flour- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180 deg C wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
MAR													
19...	128	130	34.2	.74	.13	14.5	200	185	<.002	.186	.047	E.09	E.08
MAY													
08...	90	90	32.8	1.77	<.17	10.2	154	146	.003	.135	.027	.43	.14
28...	98	98	35.4	2.20	<.2	10.0	164	157	.003	.054	<.015	.23	.11
JUN													
11...	88	89	40.6	2.63	<.2	9.13	163	156	E.002	.089	<.015	.36	E.07
JUL													
22...	72	72	37.3	1.86	<.2	7.01	138	134	E.002	.091	<.015	.87	<.10
AUG													
15...	74	74	40.4	1.43	<.2	5.88	143	141	<.002	.087	<.015	1.1	<.10
SEP													
12...	81	82	35.4	1.50	<.2	9.80	155	144	<.002	.145	E.009	.26	.11

Date	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, suspnd sedimnt total, percent (30292)	Alum- inum, suspnd sedimnt total, percent (30221)	Alum- inum, water, fltrd, ug/L (01106)	Anti- mony, suspnd sedimnt total, ug/g (29816)	Anti- mony, water, fltrd, ug/L (01095)	Arsenic suspnd sedimnt total, ug/g (29818)	Arsenic water, fltrd, ug/L (01000)	Barium, suspnd sedimnt total, ug/g (29820)	Barium, water, fltrd, ug/L (01005)	Beryll- ium suspnd sedimnt total, ug/g (29822)
MAR													
19...	.032	<.004	<.007	.099	7.1	E1	1.2	<.30	39	.4	890	46	2
MAY													
08...	.62	.007	<.007	.079	7.1	8	1.3	E.23	15	1.0	790	42	1
28...	.25	.005	<.007	.058	5.8	10	.8	E.22	8.5	1.2	640	38	1
JUN													
11...	.42	E.004	<.007	.078	7.5	17	1.6	E.25	18	1.1	830	39	2
JUL													
22...	1.55	E.004	<.007	.077	8.0	21	1.4	.42	15	1.1	960	32	1
AUG													
15...	1.72	<.004	<.007	.070	8.6	18	2.0	.56	19	.9	1100	37	2
SEP													
12...	.50	.007	<.007	.065	6.4	14	1.6	E.17	11	.9	700	30	1

15515500 TANANA RIVER AT NENANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium suspnd sedimnt total, ug/g (29826)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, suspnd sedimnt total, ug/g (29829)	Chrom- ium, water, fltrd, ug/L (01030)	Cobalt, suspnd sedimnt total, ug/g (35031)	Cobalt water, fltrd, ug/L (01035)	Copper, suspnd sedimnt total, ug/g (29832)	Copper, water, fltrd, ug/L (01040)	Iron, suspnd sedimnt total, percent (30269)	Iron, water, fltrd, ug/L (01046)	Lead, suspnd sedimnt total, ug/g (29836)
MAR													
19...	<.06	23	1.0	<.04	100	<.08	22	.228	53	1.0	5.4	27	17
MAY													
08...	<.06	19	.6	<.04	83	<.08	17	.201	45	2.2	4.1	57	14
28...	<.06	32	.4	<.04	70	<.08	12	.153	24	2.2	2.9	109	13
JUN													
11...	<.06	30	.4	.04	110	<.08	16	.164	46	2.3	4.1	28	16
JUL													
22	<.06	17	.4	<.04	92	<.08	18	.102	51	1.4	4.3	E5	14
AUG													
15...	<.06	20	.6	<.04	130	<.08	20	.089	55	.8	4.7	E6	20
SEP													
12...	<.06	17	.2	E.02	84	<.08	14	.168	30	1.7	3.3	63	13

Date	Lead water, fltrd, ug/L (01049)	Lithium suspnd sedimnt total, ug/g (35050)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, suspnd sedimnt total, ug/g (29839)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury suspnd sedimnt total, ug/g (29841)	Molyb- denum, suspnd sedimnt total, ug/g (29843)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, suspnd sedimnt total, ug/g (29845)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, suspnd sedimnt total, ug/g (29847)	Selen- ium, water, fltrd, ug/L (01145)	Silver, suspnd sedimnt total, ug/g (29850)
MAR													
19...	<.08	23	2.7	4000	83.2	.09	2	1.1	60	1.55	M	.5	<.5
MAY													
08...	E.04	23	2.6	930	41.0	.09	2	1.1	45	2.17	M	.6	<.5
28...	E.04	17	3.9	630	20.0	.02	2	1.3	33	2.12	M	.6	<.5
JUN													
11...	E.04	26	4.8	840	13.7	.06	2	1.1	51	1.53	M	E.5	<.5
JUL													
22...	<.08	24	3.6	720	5.4	.03	1	1.1	44	1.65	M	.6	<.5
AUG													
15...	<.08	35	4.6	840	1.3	.07	2	1.3	59	1.94	M	.8	<.5
SEP													
12...	E.06	19	3.4	670	21.7	.08	2	1.0	40	1.15	M	E.5	<.5

15515500 TANANA RIVER AT NENANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Stront- ium, suspnd sedimnt total, ug/g (35040)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, suspnd sedimnt total, ug/g (49955)	Titan- ium, suspnd sedimnt total, percent (30317)	Vanad- ium, suspnd sedimnt total, ug/g (29853)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, suspnd sedimnt total, ug/g (29855)	Zinc, water, fltrd, ug/L (01090)	Uranium suspnd sedimnt total, ug/g (35046)	Uranium natural water, fltrd, ug/L (22703)	Organic carbon, water, fltrd, mg/L (00681)	Inor- ganic carbon suspnd sedimnt total, mg/L (00688)
MAR													
19...	<.2	220	190	<50	.410	120	.4	180	5	<50	.78	1.6	<.1
MAY													
08...	<.2	250	156	<50	.400	120	1.3	89	3	<50	.85	3.5	.5
28...	<.2	220	176	<50	.340	86	2.0	72	2	<50	.92	3.0	<.1
JUN													
11...	<.2	250	146	<50	2.3	140	.8	130	3	<50	.95	2.8	.2
JUL													
22...	<.2	230	136	<50	.470	130	.6	100	<1	<50	.88	1.7	2.6
AUG													
15...	<.2	220	141	<50	.440	150	.9	120	M	<50	1.08	1.0	E12.0
SEP													
12...	<.2	220	140	<50	.410	110	.6	75	<1	<50	.73	3.2	.4

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Total carbon, suspnd sedimnt total, percent (30244)	Organic carbon, suspnd sedimnt percent (50465)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Suspnd. sedimnt conc, flow through cntrfug mg/L (50279)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
MAR									
19...	.3	.3	1.2	1.1	<.02	24	30	627	54
MAY									
08...	4.0	4.5	.70	.5	.25	870	976	69000	51
28...	1.0	1.0	.50	.4	.08	--	342	18100	30
JUN									
11...	1.8	2.1	.80	.5	.15	545	543	46200	55
JUL									
22...	6.9	9.4	.60	.4	.44	2600	2940	604000	62
AUG									
15...	E3.0	E15.0	.40	.4	E.64	3790	3960	707000	79
SEP									
12...	2.1	2.5	.60	.4	.14	654	806	84400	30

15518040 NENANA RIVER AT HEALY

LOCATION.--Lat 63°51'15", long 148°57'20", in SE $\frac{1}{4}$ sec. 20, T. 12 S., R. 7 W. (Healy D-4 quad), Denali Borough, Hydrologic Unit 19040508, on left bank upstream side of Healy Spur railroad bridge, 0.3 mi east of Parks Hwy in Healy, 0.4 mi downstream from Healy Creek, and 4 mi upstream of Lignite Creek.

DRAINAGE AREA.--2100 mi².

PERIOD OF RECORD.--April 1990 to September 1991, May to September 2003.

GAGE.--Water-stage-recorder. Datum of gage is 1244.17 ft above NGVD of 1929. Prior to Sept. 26, 1990, non-recording gage site 60 ft downstream at same datum. A National Weather Service wire-weight is attached to the down-stream edge of the highway bridge and was established in June 1972.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 31,200 ft³/s, September 15, 1990, gage height, 14.4 ft, from flood marks; minimum daily not determined, occurred during period of ice effect.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 31,000 ft³/s, July 28, 2003, gage height, 14.37 ft, may have been higher during period of no record; minimum daily not determined, occurred during period of ice effect.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR MAY TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e1900	6060	9060	13200	9910
2	---	---	---	---	---	---	---	e1800	5690	10400	10300	10500
3	---	---	---	---	---	---	---	e2100	4610	13900	9040	11200
4	---	---	---	---	---	---	---	e2000	4440	11500	8710	12600
5	---	---	---	---	---	---	---	e2000	4960	10100	7690	11400
6	---	---	---	---	---	---	---	e2000	6750	9310	7080	9450
7	---	---	---	---	---	---	---	e2200	7830	8780	6670	8230
8	---	---	---	---	---	---	---	e2400	7360	8980	6750	7500
9	---	---	---	---	---	---	---	e2600	6770	9440	6800	6920
10	---	---	---	---	---	---	---	e2500	7770	9910	6790	6520
11	---	---	---	---	---	---	---	e2900	10600	8890	7340	6180
12	---	---	---	---	---	---	---	e2600	12500	8690	8600	6120
13	---	---	---	---	---	---	---	e3000	12200	8660	10500	5990
14	---	---	---	---	---	---	---	e3000	10400	8960	e13000	5340
15	---	---	---	---	---	---	---	e3400	9580	9610	e15000	4910
16	---	---	---	---	---	---	---	3210	9310	16300	13100	4620
17	---	---	---	---	---	---	---	2850	8460	26000	16200	4430
18	---	---	---	---	---	---	---	2690	8870	22700	14400	4060
19	---	---	---	---	---	---	---	2620	9070	19900	10800	3790
20	---	---	---	---	---	‡950	---	2650	8630	16900	8720	3730
21	---	---	---	---	---	---	---	2630	8350	14800	7940	3720
22	---	---	---	---	---	---	---	2840	8280	13200	7570	3680
23	---	---	---	---	---	---	---	2740	8520	12100	6870	3550
24	---	---	---	---	---	---	---	2700	9230	10700	6400	3430
25	---	---	---	---	---	---	---	2840	9370	9870	6410	3490
26	---	---	---	---	---	---	---	3160	8750	9160	7550	3490
27	---	---	---	---	---	---	---	3390	7560	15100	8330	3390
28	---	---	---	---	---	---	---	3310	7340	27800	7880	3360
29	---	---	---	---	---	---	---	3770	7710	21400	7440	3980
30	---	---	---	---	---	---	---	4250	8280	17300	7250	5310
31	---	---	---	---	---	---	---	5100	---	16400	9300	---
TOTAL	---	---	---	---	---	---	---	87150	245250	415820	283630	180800
MEAN	---	---	---	---	---	---	---	2811	8175	13410	9149	6027
MAX	---	---	---	---	---	---	---	5100	12500	27800	16200	12600
MIN	---	---	---	---	---	---	---	1800	4440	8660	6400	3360
AC-FT	---	---	---	---	---	---	---	172900	486500	824800	562600	358600
CFSM	---	---	---	---	---	---	---	1.34	3.89	6.39	4.36	2.87
IN.	---	---	---	---	---	---	---	1.54	4.34	7.37	5.02	3.20

‡ Result of discharge measurement
e Estimated

15518080 LIGNITE CREEK ABOVE MOUTH NEAR HEALY

LOCATION.--Lat 63°54'17", long 148°59'01", in SE¹/₄ NE¹/₄ sec. 6, T. 11 S., R. 7 W. (Healy D-4 quad), Hydrologic Unit 19040508, on right bank 300 ft downstream from culverts on access road to Usibelli Coal Mine office, 1,000 ft upstream from mouth, and 3.5 mi north of Healy.

DRAINAGE AREA.--48.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,300 ft above sea level, from topographic map. Prior to May 22, 1987 on left bank, 400 ft upstream at same datum. From May 22, 1987 to September 30, 1997 on left bank, 300 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges which are poor. Precipitation gage at station; daily values of precipitation are available from the computer files of the Alaska Science Center, Water Resources Office. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	e21	e8.0	e9.4	e9.2	e8.2	e7.6	e9.8	79	105	63	63
2	24	e21	e7.8	e9.6	e9.0	e8.2	e7.6	e11	77	143	62	72
3	24	e21	e7.8	e9.6	e9.0	e8.2	e7.6	e12	76	e270	63	56
4	24	e20	e7.8	e9.8	e9.0	e8.2	e7.6	e13	74	e200	66	53
5	23	e20	e7.6	e9.8	e9.0	e8.2	e7.6	e15	72	e540	66	50
6	23	e20	e7.6	e9.8	e9.0	e8.0	e7.6	e18	72	e350	76	56
7	23	e20	e7.6	e10	e8.8	e8.0	e7.6	e22	74	e200	84	56
8	21	e18	e7.6	e10	e8.8	e8.0	e7.6	e32	73	e130	78	54
9	23	e18	e7.4	e10	e8.8	e8.0	e7.6	e43	70	e95	85	70
10	23	e18	e7.4	e10	e8.8	e8.0	e7.6	e65	68	74	116	68
11	20	e17	e7.4	e10	e8.8	e8.0	e7.6	e100	67	68	86	57
12	e19	e16	e7.4	e10	e8.8	e8.0	e7.6	e130	73	65	83	53
13	e18	e16	e7.4	e10	e8.8	e8.0	e7.6	e150	77	62	88	50
14	e18	e15	e7.4	e10	e8.6	e8.0	e7.6	e160	77	60	71	48
15	e18	e14	e7.6	e10	e8.6	e8.0	e7.6	e170	64	60	67	47
16	e18	e14	e7.6	e10	e8.6	e8.0	e7.6	e180	57	60	172	48
17	e18	e13	e7.6	e10	e8.6	e8.0	e7.6	e190	54	61	499	50
18	e18	e12	e7.6	e10	e8.6	e8.0	e7.8	e200	55	62	301	52
19	e18	e12	e7.6	e9.8	e8.6	e8.0	e7.8	e200	112	62	214	98
20	e18	e12	e7.8	e9.8	e8.4	e8.0	e8.0	e200	140	62	110	65
21	e18	e11	e7.8	e9.8	e8.4	e7.8	e8.0	e190	165	58	107	55
22	e18	e10	e8.0	e9.6	e8.4	e7.8	e8.0	e170	193	57	101	54
23	e19	e9.8	e8.2	e9.6	e8.4	e7.8	e8.0	e150	118	57	86	54
24	e19	e9.4	e8.2	e9.6	e8.4	e7.8	e8.0	130	109	59	81	58
25	e20	e9.0	e8.4	e9.4	e8.4	e7.8	e8.2	113	105	63	72	54
26	e20	e8.6	e8.6	e9.4	e8.2	e7.8	e8.2	90	101	60	64	52
27	e20	e8.4	e8.8	e9.4	e8.2	e7.8	e8.4	85	99	62	65	50
28	e20	e8.4	e8.8	e9.4	e8.2	e7.8	e8.6	78	97	74	67	48
29	e20	e8.2	e9.0	e9.2	---	e7.8	e9.0	77	96	68	62	52
30	e21	e8.2	e9.2	e9.2	---	e7.8	e9.4	87	95	64	57	48
31	e21	---	e9.4	e9.2	---	e7.6	---	80	---	62	54	---
TOTAL	630	429.0	246.4	301.4	242.4	246.6	236.6	3170.8	2689	3413	3266	1691
MEAN	20.3	14.3	7.95	9.72	8.66	7.95	7.89	102	89.6	110	105	56.4
MAX	24	21	9.4	10	9.2	8.2	9.4	200	193	540	499	98
MIN	18	8.2	7.4	9.2	8.2	7.6	7.6	9.8	54	57	54	47
MED	20	14	7.8	9.8	8.6	8.0	7.6	90	77	63	78	54
AC-FT	1250	851	489	598	481	489	469	6290	5330	6770	6480	3350
CFSM	0.42	0.30	0.17	0.20	0.18	0.17	0.16	2.13	1.86	2.29	2.19	1.17
IN.	0.49	0.33	0.19	0.23	0.19	0.19	0.18	2.45	2.08	2.64	2.53	1.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)#

	MEAN	22.7	15.9	12.0	9.98	8.44	8.44	22.4	78.5	65.5	48.0	53.3	43.2
MAX	47.4	25.4	20.0	18.7	20.6	19.1	45.5	166	145	110	112	134	
(WY)	1994	1994	1987	1995	1994	1994	1994	1992	1989	2002	2000	1990	
MIN	10.3	4.87	1.65	0.95	0.000	0.000	0.000	40.1	30.2	25.6	22.7	17.6	
(WY)	1988	1988	1988	1986	1986	1986	1986	1999	2001	1996	1999	1987	

See Period of Record, partial years used in monthly statistics
e Estimated

15518080 LIGNITE CREEK ABOVE MOUTH NEAR HEALY—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1985 - 2002#		
ANNUAL TOTAL	9721.4			16562.2					
ANNUAL MEAN	26.6			45.4			32.1		
HIGHEST ANNUAL MEAN							45.4		
LOWEST ANNUAL MEAN							21.1		
HIGHEST DAILY MEAN	191	Jul	31	e540	Jul	5	852	Jun	25 1989
LOWEST DAILY MEAN	a7.4	Dec	9	a7.4	Dec	9	b0.00	Feb	1 1986
ANNUAL SEVEN-DAY MINIMUM	7.4	Dec	8	7.4	Dec	8	0.00	Feb	1 1986
MAXIMUM PEAK FLOW				c780	Jul	5	d2400	Aug	21 1986
MAXIMUM PEAK STAGE				f5.20	Jul	5	g11.05	Aug	21 1986
MAXIMUM PEAK STAGE				h8.31	May	20			
ANNUAL RUNOFF (AC-FT)	19280			32850			23270		
ANNUAL RUNOFF (CFSM)	0.55			0.94			0.67		
ANNUAL RUNOFF (INCHES)	7.52			12.81			9.07		
10 PERCENT EXCEEDS	49			103			69		
50 PERCENT EXCEEDS	20			18			20		
90 PERCENT EXCEEDS	9.3			7.8			5.0		

a From Dec. 9 to 14

b From Feb. 1 to Apr. 30, 1986

c From rating curve extended above 110 ft³/s on basis of slope-area measurement at gage height of 5.20 ft.d Estimated discharge from rating curve extended above 280 ft³/s based on surface-float measurement at gage

e Estimated

f From floodmarks

g At site then in use, same datum

h Backwater from snow and ice

15518080 LIGNITE CREEK ABOVE MOUTH NEAR HEALY—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	51	e21	e15	e12	e10	e9.4	e14	47	17	e80	129
2	64	57	e21	e15	e12	e10	e9.4	e14	44	18	e70	298
3	53	56	e20	e15	e12	e10	e9.4	e14	43	20	e130	170
4	50	58	e20	e15	e12	e10	e9.4	e15	43	19	e160	122
5	39	56	e20	e15	e12	e10	e9.4	e15	43	16	97	101
6	55	57	e19	e15	e12	e10	e9.4	e16	45	17	70	78
7	58	56	e19	e15	e12	e10	e9.4	e17	88	18	56	70
8	57	47	e19	e14	e11	e9.8	e9.4	e18	57	15	51	65
9	48	e42	e19	e14	e11	e9.8	e9.4	e19	40	13	47	60
10	42	e38	e18	e14	e11	e9.8	e9.4	e20	37	13	44	57
11	53	e37	e18	e14	e11	e9.8	e9.8	e23	41	13	41	69
12	54	e38	e18	e14	e11	e9.8	e10	e26	34	11	40	135
13	52	e36	e18	e14	e11	e9.8	e11	e29	30	12	38	87
14	56	e34	e18	e14	e11	e9.8	e11	e32	26	13	37	64
15	52	e32	e18	e14	e11	e9.8	e11	e34	22	16	36	60
16	52	e31	e17	e14	e11	e9.6	e11	40	19	39	37	e55
17	48	e29	e17	e13	e11	e9.6	e11	42	18	93	42	e52
18	e43	e28	e17	e13	e11	e9.6	e11	47	18	88	39	e50
19	e39	e27	e17	e13	e11	e9.6	e11	41	21	64	36	e48
20	e40	e26	e17	e13	e11	e9.6	e11	39	28	57	34	e46
21	e44	e25	e17	e13	e11	e9.6	e11	42	30	57	34	e51
22	e56	e25	e17	e13	e11	e9.6	e11	39	29	56	48	e49
23	77	e24	e16	e13	e11	e9.6	e11	38	30	51	42	e46
24	87	e23	e16	e13	e11	e9.6	e12	38	24	50	52	e42
25	78	e23	e16	e13	e10	e9.6	e12	41	22	47	50	e40
26	72	e22	e16	e13	e10	e9.6	e12	43	23	49	43	36
27	63	e22	e16	e13	e10	e9.6	e13	42	21	95	39	34
28	57	e22	e16	e12	e10	e9.6	e13	39	21	e120	36	36
29	59	e21	e16	e12	---	e9.6	e13	41	20	e70	36	45
30	60	e21	e16	e12	---	e9.4	e13	41	18	e60	36	42
31	57	---	e15	e12	---	e9.4	---	43	---	e120	107	---
TOTAL	1718	1064	548	422	311	301.6	322.8	962	982	1347	1708	2237
MEAN	55.4	35.5	17.7	13.6	11.1	9.73	10.8	31.0	32.7	43.5	55.1	74.6
MAX	87	58	21	15	12	10	13	47	88	120	160	298
MIN	39	21	15	12	10	9.4	9.4	14	18	11	34	34
MED	54	32	17	14	11	9.6	11	38	29	39	42	56
AC-FT	3410	2110	1090	837	617	598	640	1910	1950	2670	3390	4440
CFSM	1.15	0.74	0.37	0.28	0.23	0.20	0.22	0.65	0.68	0.90	1.15	1.55
IN.	1.33	0.82	0.42	0.33	0.24	0.23	0.25	0.74	0.76	1.04	1.32	1.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)#

MEAN	24.5	17.0	12.3	10.2	8.59	8.51	21.7	75.9	63.8	47.8	53.4	44.9
MAX	55.4	35.5	20.0	18.7	20.6	19.1	45.5	166	145	110	112	134
(WY)	2003	2003	1987	1995	1994	1994	1994	1992	1989	2002	2000	1990
MIN	10.3	4.87	1.65	0.95	0.000	0.000	0.000	31.0	30.2	25.6	22.7	17.6
(WY)	1988	1988	1988	1986	1986	1986	1986	2003	2001	1996	1999	1987

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1985 - 2003#

ANNUAL TOTAL	18586.8	11923.4	
ANNUAL MEAN	50.9	32.7	32.1
HIGHEST ANNUAL MEAN			45.4
LOWEST ANNUAL MEAN			21.1
HIGHEST DAILY MEAN	e540	Jul 5	852
LOWEST DAILY MEAN	a7.6	Mar 31	c0.00
ANNUAL SEVEN-DAY MINIMUM	7.6	Mar 31	9.4
MAXIMUM PEAK FLOW			577
MAXIMUM PEAK STAGE			4.62
MAXIMUM PEAK STAGE			gh5.52
ANNUAL RUNOFF (AC-FT)	36870	23650	23290
ANNUAL RUNOFF (CFSM)	1.06	0.68	0.67
ANNUAL RUNOFF (INCHES)	14.37	9.22	9.08
10 PERCENT EXCEEDS	103	60	68
50 PERCENT EXCEEDS	40	21	20
90 PERCENT EXCEEDS	8.0	10	5.5

See Period of Record, partial years used in monthly statistics

a From Mar. 31 to Apr. 17

b From Mar. 30 to Apr. 10

c From Feb. 1 to Apr. 30, 1986

d Estimated discharge from rating curve extended above 280 ft³/s based on surface-float measurement at gage

e Estimated

f At site then in use, same datum

g Backwater from snow and ice

h From floodmarks

15518080 LIGNITE CREEK ABOVE MOUTH NEAR HEALY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1980 to 1981, 1986 to current year

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Medium code	Stream width, feet (00004)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Suspnd. sedi- ment, falldia dst wat percent (70337)	Suspnd. sedi- ment, falldia dst wat percent (70338)
JUN													
19...	1330	9	19.5	2.14	19	10	3001	12.4	--	294	15	41	54
JUL													
01...	1300	9	12.7	2.12	18	10	3001	--	--	166	7.9	--	--
17...	1424	9	24.7	2.87	113	10	3001	13.5	--	6900	2110	11	17
AUG													
05...	1315	9	24.5	2.68	87	10	3001	6.5	12.5	1120	264	18	26
SEP													
04...	1353	9	37.9	2.93	117	10	3001	7.0	--	1330	420	--	--
25...	1744	9	12.8	2.37	40	10	3001	2.0	1.0	88	9.5	--	--
Date			Suspnd. sedi- ment, falldia dst wat percent <.008mm (70339)	Suspnd. sedi- ment, falldia dst wat percent <.016mm (70340)	Suspnd. sedi- ment, falldia dst wat percent <.031mm (70341)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Suspnd. sedi- ment, sieve diametr percent <.125mm (70332)	Suspnd. sedi- ment, sieve diametr percent <.25mm (70333)	Suspnd. sedi- ment, sieve diametr percent <.5 mm (70334)	Suspnd. sedi- ment, sieve diametr percent <1 mm (70335)	Suspnd. sedi- ment, sieve diametr percent <2 mm (70336)	Sus- pended sedimnt sieve diametr percent <4mm (69314)	
JUN													
19...			72	83	85	87	91	96	99	100	--	--	
JUL													
01...			--	--	--	83	87	93	99	100	--	--	
17...			25	35	42	47	63	83	96	99	100	--	
AUG													
05...			35	43	49	51	60	73	93	97	98	100	
SEP													
04...			--	--	--	55	65	81	96	98	99	100	
25...			--	--	--	72	83	91	97	100	--	--	

15564879 SLATE CREEK AT COLDFOOT

LOCATION.--Lat 67°15'17", long 150°10'24", in NW¹/₄ sec. 15, T. 28 N., R. 12 W. (Wiseman B-1 quad), Hydrologic Unit 19040601, on left bank 40 ft downstream from bridge on Dalton Highway, 1.1 mi upstream from mouth and 0.1 mi north of Coldfoot.

DRAINAGE AREA.--73.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximums, water years 1981-94. May 1995 to current year (no winter records in water years 1995-98).

REVISED RECORDS.--WRD AK-99-1: 1984(M), 1989(M), 1993(M), 1994(M), 1998 (M).

GAGE.--Water-stage recorder. Elevation of gage is 1050 ft above sea level, from topographic map. Prior to May 5, 1995, nonrecording gage at site 105 ft upstream at same datum. May 5, 1995 to Present, recording gage at site 60 ft downstream at same datum.

REMARKS.--Records fair, except estimated daily discharges which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279	e28	e14	e6.3	e1.0	e0.00	e0.00	e0.00	e1500	54	195	206
2	216	e27	e14	e6.0	e0.90	e0.00	e0.00	e0.00	e1200	81	190	488
3	181	e26	e14	e5.8	e0.90	e0.00	e0.00	e0.00	e1000	267	190	902
4	156	e26	e14	e5.4	e0.80	e0.00	e0.00	e0.00	824	156	182	527
5	132	e25	e14	e5.1	e0.80	e0.00	e0.00	e0.00	621	114	179	433
6	e120	e24	e13	e4.9	e0.70	e0.00	e0.00	e0.00	721	94	170	370
7	e100	e24	e13	e4.6	e0.70	e0.00	e0.00	e0.00	649	83	155	328
8	e95	e23	e13	e4.4	e0.60	e0.00	e0.00	e0.00	392	73	142	294
9	e90	e23	e13	e4.1	e0.60	e0.00	e0.00	e0.00	287	66	133	283
10	e80	e22	e13	e4.0	e0.50	e0.00	e0.00	e0.00	251	62	125	263
11	e75	e21	e13	e3.8	e0.50	e0.00	e0.00	e0.10	241	58	138	246
12	e70	e21	e12	e3.7	e0.40	e0.00	e0.00	e0.10	211	55	198	226
13	e65	e20	e12	e3.5	e0.40	e0.00	e0.00	e0.10	162	54	457	209
14	e60	e20	e12	e3.3	e0.30	e0.00	e0.00	e0.20	136	53	419	191
15	e60	e19	e12	e3.1	e0.30	e0.00	e0.00	e0.20	128	51	339	180
16	e55	e19	e12	e2.9	e0.20	e0.00	e0.00	e0.30	142	50	333	170
17	e50	e18	e11	e2.8	e0.20	e0.00	e0.00	e0.50	125	51	404	158
18	e50	e18	e11	e2.6	e0.20	e0.00	e0.00	e0.70	115	47	319	e150
19	e47	e18	e11	e2.5	e0.10	e0.00	e0.00	e1.0	103	44	266	142
20	e45	e17	e10	e2.3	e0.10	e0.00	e0.00	e1.3	87	42	232	137
21	e43	e17	e10	e2.1	e0.10	e0.00	e0.00	e1.7	82	40	208	e126
22	e40	e17	e9.8	e2.0	e0.00	e0.00	e0.00	e2.4	77	39	191	e122
23	e39	e16	e9.4	e1.9	e0.00	e0.00	e0.00	e3.5	71	39	195	118
24	e37	e16	e9.0	e1.8	e0.00	e0.00	e0.00	e5.0	69	46	272	113
25	e36	e16	e8.7	e1.7	e0.00	e0.00	e0.00	e8.0	68	243	311	110
26	e35	e15	e8.3	e1.5	e0.00	e0.00	e0.00	e14	66	1940	366	106
27	e33	e15	e8.0	e1.4	e0.00	e0.00	e0.00	e25	62	606	356	e102
28	e32	e15	e7.6	e1.3	e0.00	e0.00	e0.00	e48	60	332	307	e100
29	e31	e15	e7.4	e1.2	---	e0.00	e0.00	e100	58	248	264	107
30	e30	e14	e7.0	e1.1	---	e0.00	e0.00	e200	54	218	237	107
31	e29	---	e6.7	e1.1	---	e0.00	---	e440	---	200	215	---
TOTAL	2411	595	342.9	98.2	10.30	0.00	0.00	852.10	9562	5506	7688	7014
MEAN	77.8	19.8	11.1	3.17	0.37	0.000	0.000	27.5	319	178	248	234
MAX	279	28	14	6.3	1.0	0.00	0.00	440	1500	1940	457	902
MIN	29	14	6.7	1.1	0.00	0.00	0.00	0.00	54	39	125	100
AC-FT	4780	1180	680	195	20	0.00	0.00	1690	18970	10920	15250	13910
CFSM	1.06	0.27	0.15	0.04	0.01	0.00	0.00	0.37	4.34	2.42	3.38	3.19
IN.	1.22	0.30	0.17	0.05	0.01	0.00	0.00	0.43	4.85	2.79	3.90	3.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	MEAN	49.8	15.1	8.05	3.93	2.38	1.85	2.90	196	220	108	196	157
MAX	88.5	30.0	17.3	12.1	9.07	7.13	9.32	378	319	184	435	234	
(WY)	1999	1999	1999	1999	1999	1999	1998	1998	2003	1995	1998	2003	
MIN	16.2	2.28	1.41	0.12	0.000	0.000	0.000	27.5	128	54.7	52.8	71.7	
(WY)	1997	1998	2002	2001	2001	2001	2001	2003	1997	1996	2002	1996	

e Estimated

15564879 SLATE CREEK AT COLDFOOT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	26501.90		34079.50			
ANNUAL MEAN	72.6		93.4		76.3	
HIGHEST ANNUAL MEAN					93.4	2003
LOWEST ANNUAL MEAN					65.9	2000
HIGHEST DAILY MEAN	1330	May 26	1940	Jul 26	a2850	May 26 1998
LOWEST DAILY MEAN	b0.00	Jan 21	c0.00	Feb 22	0.00	Jan 13 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 21	0.00	Feb 22	0.00	Jan 13 2001
MAXIMUM PEAK FLOW			2950	Jul 26	f4930	May 26 1998
MAXIMUM PEAK STAGE			18.52	Jul 26	19.73	May 26 1998
ANNUAL RUNOFF (AC-FT)	52570		67600		55310	
ANNUAL RUNOFF (CFSM)	0.99		1.27		1.04	
ANNUAL RUNOFF (INCHES)	13.43		17.27		14.13	
10 PERCENT EXCEEDS	183		263		197	
50 PERCENT EXCEEDS	20		16		18	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Revised in 1999 from 2740 ft³/s

b From Jan. 21 to Apr 25

c From Feb. 22 to May 10

f From rating curve extended above 2,190 ft³/s on basis of slope-area measurement at discharge 4,700 ft³/s, gage height 19.6 ft, at previous site 60 ft downstream

15564879 SLATE CREEK AT COLDFOOT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1998 to current year (seasonal).

INSTRUMENTATION.--Water-temperature recorder since May 11, 1998. Electronic water temperature recorder set for 1-hour recording interval.

REMARKS.--No record October 6 to May 21 due to probe frozen in ice. Records represent water temperature at sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross section on July 29th and September 11. Variation within the cross sections was less than 0.3°C. The variation found between mean stream temperature and sensor temperature was less than 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 14.5°C, July 5 and 21, 1998 and July 24, 2002; minimum, 0.0°C, on many days during spring break up and winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.0°C, July 8 and 21; minimum, 0°C, October 5, 2002, May 22-31, 2003, on many days during spring breakup and winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	Loca- tion in X-sect. looking downstr ft from l bank (00009)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling dis- method, code (82398)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)
JUL								
29...	0908	63.0	6.00	14.80	257	10	5.4	10.8
29...	0911	63.0	18.0	14.80	257	10	5.4	10.8
29...	0914	63.0	30.0	14.80	257	10	5.3	10.8
29...	0917	63.0	42.0	14.80	257	10	5.5	10.8
29...	0920	63.0	54.0	14.80	257	10	5.4	10.8
29...	0923	63.0	62.0	14.80	257	10	5.4	10.8
SEP								
07...	1837	65.0	2.00	14.98	319	10	4.8	9.5
07...	1838	65.0	17.0	14.98	319	10	4.8	9.5
07...	1839	65.0	32.0	14.98	319	10	4.8	9.5
07...	1840	65.0	47.0	14.98	319	10	4.8	9.5
07...	1841	65.0	62.0	14.98	319	10	4.8	9.5

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[illegible]

15564879 SLATE CREEK AT COLDFOOT—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	0.0	---
23	---	---	---	---	---	---	---	---	---	1.5	0.0	0.5
24	---	---	---	---	---	---	---	---	---	---	0.0	---
25	---	---	---	---	---	---	---	---	---	---	0.0	1.0
26	---	---	---	---	---	---	---	---	---	1.5	0.0	0.5
27	---	---	---	---	---	---	---	---	---	0.5	0.0	0.5
28	---	---	---	---	---	---	---	---	---	1.0	0.0	---
29	---	---	---	---	---	---	---	---	---	---	0.0	---
30	---	---	---	---	---	---	---	---	---	---	0.0	---
31	---	---	---	---	---	---	---	---	---	---	0.0	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	3.0	0.5	1.5	10.5	7.5	9.0	9.0	5.0	7.0	7.0	5.5	6.0
2	2.5	0.5	1.5	9.5	8.0	8.5	7.5	5.5	6.0	6.0	4.5	5.0
3	2.5	1.0	1.5	9.5	6.0	7.5	8.5	5.0	6.5	5.5	4.0	4.5
4	5.0	0.5	2.5	10.0	6.0	8.0	10.5	5.5	7.5	5.5	4.0	4.5
5	6.0	1.0	3.5	12.5	6.5	9.0	10.5	6.5	8.0	5.0	3.5	4.5
6	5.0	2.0	3.5	13.5	7.0	10.0	10.5	5.0	7.5	5.0	1.5	3.0
7	5.0	2.5	3.5	11.5	8.0	9.5	11.0	5.0	7.5	5.0	3.0	4.0
8	8.0	2.0	4.5	14.0	7.0	10.5	10.0	4.5	7.5	5.0	3.5	4.0
9	8.5	1.5	5.0	13.5	7.5	11.0	10.5	4.5	7.5	5.5	3.5	4.0
10	---	2.5	---	12.5	9.0	10.5	12.0	6.5	9.0	3.5	2.0	2.0
11	9.5	---	---	13.5	9.0	11.0	10.5	8.5	9.0	4.0	2.0	2.5
12	9.0	3.0	6.0	12.0	8.0	10.0	9.0	7.5	8.0	3.0	0.5	2.0
13	9.0	3.0	6.0	11.0	8.5	9.5	8.5	6.5	7.0	4.0	1.0	2.0
14	9.5	2.5	6.0	10.5	9.0	9.5	9.0	6.0	7.0	2.5	0.0	1.0
15	10.0	3.5	7.0	9.0	6.5	8.0	8.5	6.0	7.0	2.5	0.0	1.0
16	10.0	4.0	7.0	9.5	5.5	7.5	8.0	6.5	7.0	3.0	0.0	1.5
17	9.5	5.0	7.0	9.5	6.0	7.5	7.5	5.5	6.5	1.5	0.0	0.5
18	10.5	5.0	7.5	12.0	5.0	8.0	8.5	4.0	6.5	1.0	0.0	0.5
19	11.0	4.5	7.5	13.0	6.0	9.5	8.5	3.5	6.0	---	0.0	0.5
20	11.0	5.0	8.0	13.0	7.0	10.0	8.0	3.5	6.0	1.5	0.0	0.5
21	11.5	5.0	8.5	14.0	7.5	10.5	8.5	4.5	6.5	1.0	0.0	0.0
22	12.0	5.5	8.5	12.0	8.5	9.5	9.0	5.5	7.0	1.0	0.0	0.0
23	12.5	5.5	9.0	11.5	7.5	9.0	7.0	5.0	6.0	1.0	0.0	0.5
24	10.5	7.0	9.0	10.5	8.5	9.5	6.5	5.0	5.5	1.0	0.0	0.5
25	10.5	7.0	8.5	10.0	7.0	9.0	6.0	4.5	5.0	1.0	0.0	0.5
26	12.5	5.5	8.5	7.5	5.5	6.5	7.0	5.0	6.0	1.0	0.0	0.5
27	11.5	7.0	9.5	8.0	4.5	6.0	7.5	5.0	6.0	1.0	0.0	0.0
28	11.5	7.5	9.5	9.0	4.0	6.5	8.0	4.5	6.0	0.5	0.0	0.0
29	11.5	7.5	10.0	8.0	5.0	6.5	9.0	4.0	6.5	2.0	0.5	1.5
30	11.5	7.5	9.5	7.0	5.5	6.0	8.0	5.0	6.5	3.0	1.5	2.5
31	---	---	---	6.5	5.0	6.0	7.0	4.5	6.0	---	---	---
MONTH	---	---	---	14.0	4.0	8.7	12.0	3.5	6.8	---	0.0	---

15565400 ANVIK RIVER NEAR ANVIK

LOCATION.--Lat 63°47'22", long 160°41'49", in NW¹/₄ NW¹/₄ SE¹/₄ sec. 10, T.31 N., R.61 W. (Holy Cross D-4 quad), Hydrologic Unit 190401801, on the right bank, approximately 25 river mi upstream from mouth, 18 mi northwest of Anvik.

DRAINAGE AREA.-- Pending

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 160 ft above sea level from topographic map.

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e3100	2040	e2200
2	---	---	---	---	---	---	---	---	---	e3100	1910	e2200
3	---	---	---	---	---	---	---	---	---	e3200	e1800	e2100
4	---	---	---	---	---	---	---	---	---	e3300	e1700	e2200
5	---	---	---	---	---	---	---	---	---	e3200	e1700	e3300
6	---	---	---	---	---	---	---	---	---	e3000	e1600	e5400
7	---	---	---	---	---	---	---	---	---	e2800	e1600	e6600
8	---	---	---	---	---	---	---	---	---	e2700	e1500	e6100
9	---	---	---	---	---	---	---	---	---	e2700	e1800	e5500
10	---	---	---	---	---	---	---	---	---	e2800	e2000	e5000
11	---	---	---	---	---	---	---	---	---	e3100	e2100	e4500
12	---	---	---	---	---	---	---	---	---	3280	e2000	4220
13	---	---	---	---	---	---	---	---	---	3190	e2200	3930
14	---	---	---	---	---	---	---	---	---	3030	e2700	3660
15	---	---	---	---	---	---	---	---	---	2920	e3300	3450
16	---	---	---	---	---	---	---	---	---	3080	e3700	3270
17	---	---	---	---	---	---	---	---	---	3380	e3600	3090
18	---	---	---	---	---	---	---	---	---	3200	e3400	2950
19	---	---	---	---	---	---	---	---	---	3160	e3300	2830
20	---	---	---	---	---	---	---	---	---	3810	e3500	2720
21	---	---	---	---	---	---	---	---	---	4030	e3800	2620
22	---	---	---	---	---	---	---	---	---	3770	e3700	2500
23	---	---	---	---	---	---	---	---	---	3440	e3500	2370
24	---	---	---	---	---	---	---	---	---	3180	e3200	2260
25	---	---	---	---	---	---	---	---	---	2990	e2900	2130
26	---	---	---	---	---	---	---	---	---	2840	e2700	2020
27	---	---	---	---	---	---	---	---	---	2740	e2500	1930
28	---	---	---	---	---	---	---	---	---	2620	e2400	1890
29	---	---	---	---	---	---	---	---	---	2430	e2300	1890
30	---	---	---	---	---	---	---	---	---	2300	e2200	1780
31	---	---	---	---	---	---	---	---	---	2190	e2100	---
TOTAL	---	---	---	---	---	---	---	---	---	94580	78750	96610
MEAN	---	---	---	---	---	---	---	---	---	3051	2540	3220
MAX	---	---	---	---	---	---	---	---	---	4030	3800	6600
MIN	---	---	---	---	---	---	---	---	---	2190	1500	1780
MED	---	---	---	---	---	---	---	---	---	3100	2300	2770
AC-FT	---	---	---	---	---	---	---	---	---	187600	156200	191600

e Estimated

15565400 ANVIK RIVER NEAR ANVIK—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	e700	e380	e260	e210	e190	e160	e190	4660	1200	919	543
2	1670	e700	e360	e260	e210	e190	e160	e200	4510	1130	848	538
3	1630	e680	e360	e250	e210	e190	e160	e220	4840	1110	791	532
4	2010	e660	e360	e250	e210	e180	e160	e240	4870	1140	753	565
5	2490	e640	e340	e250	e210	e180	e160	e260	4410	1110	722	677
6	2300	e640	e340	e250	e210	e180	e160	e280	4050	1050	692	833
7	2090	e620	e340	e250	e200	e180	e160	e300	3710	1030	668	935
8	1900	e600	e340	e240	e200	e180	e160	e320	3540	1010	660	1180
9	1790	e580	e320	e240	e200	e180	e160	e360	3300	988	656	1270
10	1680	e560	e320	e240	e200	e180	e160	e400	3250	958	667	1170
11	e1500	e540	e320	e240	e200	e180	e160	e440	3170	949	718	1080
12	e1450	e540	e320	e240	e200	e180	e160	e500	3390	941	710	1240
13	e1300	e540	e300	e240	e200	e180	e160	e560	3440	936	665	2420
14	e1250	e520	e300	e230	e200	e180	e160	e660	3200	940	638	3410
15	e1200	e520	e300	e230	e200	e180	e160	e800	2960	947	622	2850
16	e1150	e500	e300	e230	e190	e170	e160	e1000	2920	916	614	2410
17	e1100	e500	e290	e230	e190	e170	e160	e1400	2850	879	609	2020
18	e1050	e480	e290	e230	e190	e170	e160	e1800	2730	863	621	1770
19	e1000	e480	e290	e220	e190	e170	e160	e2400	2580	874	631	1610
20	e1000	e460	e280	e220	e190	e170	e160	e3400	2350	848	656	1540
21	e960	e460	e280	e220	e190	e170	e160	e5000	2100	820	669	1480
22	e940	e440	e280	e220	e190	e170	e160	e7000	1860	796	642	1360
23	e920	e440	e280	e220	e190	e170	e160	e10000	1700	787	611	1310
24	e880	e420	e270	e220	e190	e170	e160	e15000	1600	789	588	1360
25	e860	e420	e270	e220	e190	e170	e160	16900	1490	826	577	1400
26	e840	e400	e270	e220	e190	e170	e160	13900	1440	913	587	1420
27	e800	e400	e270	e220	e190	e170	e170	13900	1480	1050	579	1980
28	e760	e400	e270	e220	e190	e170	e170	12500	1420	1300	568	4530
29	e720	e380	e260	e220	---	e170	e170	9340	1330	1250	559	5360
30	e720	e380	e260	e220	---	e170	e180	7260	1270	1150	552	5740
31	e700	---	e260	e210	---	e170	---	5730	---	1010	547	---
TOTAL	40350	15600	9420	7210	5530	5450	4850	132260	86420	30510	20339	54533
MEAN	1302	520	304	233	198	176	162	4266	2881	984	656	1818
MAX	2490	700	380	260	210	190	180	16900	4870	1300	919	5740
MIN	700	380	260	210	190	170	160	190	1270	787	547	532
MED	1150	510	300	230	200	170	160	1000	2940	949	642	1380
AC-FT	80030	30940	18680	14300	10970	10810	9620	262300	171400	60520	40340	108200

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	412472
ANNUAL MEAN	1130
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	16900 May 25
LOWEST DAILY MEAN	a160 Apr 1
ANNUAL SEVEN-DAY MINIMUM	160 Apr 1
MAXIMUM PEAK FLOW	20700 May 25
MAXIMUM PEAK STAGE	27.40 May 25
INSTANTANEOUS LOW FLOW	160 Apr 1
ANNUAL RUNOFF (AC-FT)	818100
10 PERCENT EXCEEDS	2530
50 PERCENT EXCEEDS	540
90 PERCENT EXCEEDS	170

a From Apr. 1 to Apr. 26

e Estimated

15565400 ANVIK RIVER NEAR ANVIK—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5230	e1700	e780	e400	e250	e220	e210	4040	7930	3190	2910	3760
2	4410	e1600	e780	e380	e250	e220	e210	5430	8410	4000	2710	3540
3	3880	e1600	e760	e380	e250	e220	e210	7340	8020	4490	2560	3380
4	3480	e1500	e740	e380	e260	e220	e210	7410	7230	4110	2500	3300
5	3160	e1500	e760	e360	e260	e220	e210	6390	7090	3520	2330	3350
6	2960	e1400	e760	e360	e250	e220	e210	5250	6730	3180	2160	3270
7	2890	e1400	e700	e360	e250	e220	e210	4830	6370	2930	2040	3060
8	2950	e1400	e680	e360	e250	e220	e220	5800	5920	2750	2230	2920
9	2840	e1300	e660	e340	e230	e220	e220	9700	5570	2610	2350	2820
10	2600	e1300	e640	e340	e230	e220	e220	12400	5960	2460	2080	2720
11	2530	e1300	e600	e340	e230	e210	e220	8910	5670	2350	1980	2630
12	2840	e1200	e600	e320	e230	e210	e220	5980	6100	2360	2160	2590
13	2950	e1200	e580	e320	e230	e210	e230	5780	6080	2270	2730	2760
14	2830	e1200	e580	e320	e230	e210	e250	5100	5360	2060	3470	2680
15	2750	e1200	e560	e300	e230	e210	e280	4060	4530	1980	5130	2460
16	2640	e1100	e540	e300	e230	e210	e320	3370	3940	2220	6100	2310
17	e2200	e1100	e540	e300	e230	e210	e360	3200	3750	2210	4820	2210
18	e1900	e1100	e520	e300	e230	e210	e420	3490	3490	1940	4040	2100
19	e1800	e1000	e520	e280	e230	e210	e500	4100	3640	1740	3770	2010
20	e1700	e1000	e500	e280	e230	e210	e580	5250	4000	1600	3570	1920
21	e1700	e1000	e500	e280	e230	e210	e680	6280	3770	1500	3360	1800
22	e1800	e980	e480	e280	e230	e210	e800	6630	3430	1460	3130	1700
23	e1900	e960	e480	e280	e230	e210	e960	6000	3380	1490	3000	1630
24	e2000	e960	e460	e280	e230	e210	e1200	5210	4000	1770	3150	1620
25	e2000	e1000	e460	e260	e230	e210	e1500	5020	4130	2350	3730	1550
26	e1900	e1000	e440	e260	e220	e210	e1900	4690	3470	2510	4650	1520
27	e1900	e960	e440	e260	e220	e210	e2400	5400	3130	3250	4810	1470
28	e1800	e860	e420	e260	e220	e210	e4600	5680	2970	5800	4360	1440
29	e1800	e820	e420	e260	---	e210	4680	6510	2940	4470	3910	1460
30	e1700	e800	e400	e260	---	e210	3700	6870	2920	3490	3640	1540
31	e1700	---	e400	e260	---	e210	---	7260	---	3160	3540	---
TOTAL	78740	35440	17700	9660	6590	6610	27930	183380	149930	85220	102920	71520
MEAN	2540	1181	571	312	235	213	931	5915	4998	2749	3320	2384
MAX	5230	1700	780	400	260	220	4680	12400	8410	5800	6100	3760
MIN	1700	800	400	260	220	210	210	3200	2920	1460	1980	1440
MED	2530	1150	540	300	230	210	300	5680	4330	2460	3150	2380
AC-FT	156200	70300	35110	19160	13070	13110	55400	363700	297400	169000	204100	141900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)#

	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
MEAN	1921	851	437	272	216	195	546	5091	3939	2261	2172	2474
MAX	2540	1181	571	312	235	213	931	5915	4998	3051	3320	3220
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2001	2003	2001
MIN	1302	520	304	233	198	176	162	4266	2881	984	656	1818
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 2001 - 2003#

	2002	2003	2001-2003
ANNUAL TOTAL	478982	775640	
ANNUAL MEAN	1312	2125	1628
HIGHEST ANNUAL MEAN			2125
LOWEST ANNUAL MEAN			1130
HIGHEST DAILY MEAN	16900	May 25	16900
LOWEST DAILY MEAN	a160	Apr 1	a160
ANNUAL SEVEN-DAY MINIMUM	160	Apr 1	160
MAXIMUM PEAK FLOW		13200	20700
MAXIMUM PEAK STAGE		25.53	27.40
ANNUAL RUNOFF (AC-FT)	950100	1538000	1179000
10 PERCENT EXCEEDS	2960	5240	4130
50 PERCENT EXCEEDS	668	1600	721
90 PERCENT EXCEEDS	170	220	190

See Period of Record: partial year used in monthly statistics

a From Apr. 1 to Apr. 26

b From Mar. 3 to Apr. 7

e Estimated

15565447 YUKON RIVER AT PILOT STATION

LOCATION.--Lat 61°56'04", long 162°52'50", in SW¹/₄ SE¹/₄ sec. 5, T.21 N., R.74 W. (Marshall D-3 quad), Hydrologic Unit 19040805, on the right bank, .2 mi downstream from village of Pilot Station, 2.4 mi downstream from Atchuelinguk River, and 19 mi upstream from Andreafsky River.

DRAINAGE AREA.--321,000 mi² approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to September 1996, April 2001 to current year.

REVISED RECORDS.--WRD-AK-99-1: 1998.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above sea level from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360000	e261000	e110000	e75000	e58000	e52000	e48000	e55000	432000	429000	421000	396000
2	352000	e259000	e100000	e70000	e58000	e52000	e48000	e60000	428000	420000	417000	397000
3	345000	e257000	e100000	e70000	e58000	e52000	e48000	e70000	423000	410000	414000	398000
4	338000	e256000	e95000	e70000	e58000	e52000	e48000	e80000	420000	401000	407000	400000
5	332000	e254000	e95000	e70000	e58000	e52000	e48000	e90000	418000	393000	411000	402000
6	326000	e252000	e95000	e70000	e58000	e52000	e48000	e100000	418000	386000	415000	404000
7	323000	e250000	e90000	e70000	e58000	e52000	e48000	e130000	422000	378000	415000	408000
8	320000	e248000	e90000	e70000	e58000	e52000	e48000	e153000	430000	370000	419000	412000
9	314000	e245000	e90000	e70000	e56000	e52000	e48000	e183000	441000	360000	421000	419000
10	311000	e240000	e85000	e70000	e56000	e52000	e48000	e215000	455000	352000	420000	425000
11	307000	e235000	e85000	e65000	e56000	e52000	e48000	e260000	472000	346000	414000	432000
12	305000	e230000	e85000	e65000	e56000	e52000	e48000	e300000	490000	344000	411000	439000
13	303000	e225000	e85000	e65000	e56000	e52000	e48000	e340000	506000	343000	407000	447000
14	300000	e220000	e85000	e65000	e56000	e52000	e48000	e390000	518000	360000	402000	455000
15	296000	e215000	e80000	e65000	e56000	e52000	e48000	e440000	527000	365000	396000	459000
16	292000	e210000	e80000	e65000	e56000	e50000	e48000	495000	532000	370000	388000	462000
17	284000	e205000	e80000	e65000	e56000	e50000	e48000	506000	537000	380000	379000	462000
18	276000	e200000	e80000	e60000	e54000	e50000	e48000	512000	541000	378000	372000	460000
19	e270000	e195000	e80000	e60000	e54000	e50000	e48000	508000	541000	382000	366000	457000
20	e269000	e194000	e80000	e60000	e54000	e50000	e48000	498000	539000	387000	361000	452000
21	e266000	e193000	e80000	e60000	e54000	e50000	e48000	485000	537000	387000	357000	446000
22	e266000	e191000	e75000	e60000	e54000	e50000	e48000	474000	533000	388000	353000	438000
23	e266000	e190000	e75000	e60000	e54000	e49000	e48000	466000	527000	392000	351000	431000
24	e265000	e189000	e75000	e60000	e54000	e49000	e48000	460000	519000	401000	352000	423000
25	e264000	e186000	e75000	e60000	e54000	e49000	e48000	454000	510000	407000	356000	412000
26	e265000	e183000	e75000	e60000	e54000	e49000	e48000	448000	500000	415000	363000	400000
27	e266000	e170000	e75000	e60000	e54000	e49000	e50000	449000	488000	421000	372000	387000
28	e265000	e150000	e75000	e60000	e54000	e49000	e50000	448000	473000	423000	379000	376000
29	e264000	e130000	e75000	e60000	---	e49000	e50000	445000	458000	425000	385000	361000
30	e262000	e120000	e75000	e60000	---	e49000	e55000	441000	443000	423000	391000	349000
31	e261000	---	e75000	e60000	---	e49000	---	437000	---	423000	394000	---
TOTAL	9133000	6353000	2600000	2000000	1562000	1571000	1453000	10392000	14478000	12059000	12109000	12609000
MEAN	294600	211800	83870	64520	55790	50680	48430	335200	482600	389000	390600	420300
MAX	360000	261000	110000	75000	58000	52000	55000	512000	541000	429000	421000	462000
MIN	261000	120000	75000	60000	54000	49000	48000	55000	418000	343000	351000	349000
AC-FT18120000	12600000	5157000	3967000	3098000	3116000	2882000	20610000	28720000	23920000	24020000	25010000	
CFSM	0.92	0.66	0.26	0.20	0.17	0.16	0.15	1.04	1.50	1.21	1.22	1.31
IN.	1.06	0.74	0.30	0.23	0.18	0.18	0.17	1.20	1.68	1.40	1.40	1.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)#

	MEAN	253800	130500	76220	61640	53230	48190	46210	275200	578700	447900	394300	362700
MAX	335900	211800	94840	76000	65360	56770	55000	501700	844600	563500	515800	481300	
(WY)	1991	2003	1986	1986	1994	1980	1989	1991	1985	1992	1981	1994	
MIN	170600	72500	50000	50000	38380	35160	38430	100200	364400	314000	315000	252700	
(WY)	1979	1989	1988	1988	1984	1984	1976	1985	1978	1996	1990	1976	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1976 - 2003#

ANNUAL TOTAL	83865000	86319000	
ANNUAL MEAN	229800	236500	227100
HIGHEST ANNUAL MEAN			253700
LOWEST ANNUAL MEAN			185300
HIGHEST DAILY MEAN	884000	May 26	a541000 Jun 18
LOWEST DAILY MEAN	c38000	Mar 29	d48000 Apr 1
ANNUAL SEVEN-DAY MINIMUM	38000	Mar 29	48000 Apr 1
MAXIMUM PEAK FLOW			a543000 Jun 18
MAXIMUM PEAK STAGE			a22.66 Jun 18
MAXIMUM PEAK STAGE			g27.50 Jun 9 1985
ANNUAL RUNOFF (AC-FT)	166300000	171200000	h36.25 May 25 1989
ANNUAL RUNOFF (CFSM)	0.72	0.74	0.71
ANNUAL RUNOFF (INCHES)	9.72	10.00	9.61
10 PERCENT EXCEEDS	441000	453000	500000
50 PERCENT EXCEEDS	225000	245000	130000
90 PERCENT EXCEEDS	40000	50000	48000

See Period of Record, partial years used in monthly statistics

a Jun. 18-19

b Jun. 5-8, 1985

c Mar. 29 to Apr. 24

d Apr. 1-26

e Estimated

f Feb. 23 to Mar. 27, 1984

g Maximum recorded, but may have been higher during period of estimated discharge, Jun. 5-8, 1985

h Backwater from ice

15565447 YUKON RIVER AT PILOT STATION—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954-1956, 1975-96 AND April 2001 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: 1976 and 1978, (seasonal).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Locatn	Specif.	pH,	Temper-	Baro-	Dis-	Dis-
		in X-sect. dwnstrm ft from l bank (00009)	conduc- tance, wat unf uS/cm 25 degC (00095)	water, unfltrd field, std units (00400)				
MAR 2003								
25...	1850	709	327	7.0	.0	766	3.6	25
25...	1840	1180	324	7.0	.0	766	3.5	24
25...	1815	1390	323	7.0	.0	766	3.6	24
25...	2040	1630	320	7.0	.0	766	3.6	25
25...	1918	1800	309	7.0	.0	766	3.7	25
MAY								
28...	1530	710	156	7.5	7.5	762	10.0	83
28...	1540	1210	156	7.5	7.5	762	10.0	83
28...	1545	1610	156	7.5	7.5	762	10.0	83
28...	1547	1910	155	7.6	7.5	762	10.0	83
28...	1549	2260	149	7.6	7.5	762	10.1	84
JUN								
17...	1900	2150	165	8.0	15.0	755	8.6	86
17...	1905	1850	165	7.8	15.0	755	8.0	80
17...	1908	1600	165	7.7	15.0	755	8.0	80
17...	1910	1220	165	7.8	15.0	755	8.0	80
17...	1912	700	165	7.8	15.0	755	8.0	80
JUL								
10...	2010	2000	196	7.7	17.5	764	8.9	93
10...	2013	1850	197	7.7	17.5	764	8.8	92
10...	2015	1600	206	7.7	17.5	764	8.7	91
10...	2018	1220	207	7.7	17.5	764	8.6	90
10...	2021	700	208	7.7	17.5	764	8.6	90
JUL								
24...	2110	650	222	8.0	16.5	757	9.0	93
24...	2112	1050	221	8.0	16.5	757	8.9	92
24...	2114	1400	222	8.1	16.5	757	8.9	92
24...	2116	1700	222	8.1	16.5	757	8.9	92
24...	2118	2000	220	8.1	16.5	757	8.9	92
AUG								
19...	1830	650	218	7.6	14.5	755	9.2	91
19...	1833	1050	218	7.6	14.5	755	9.1	90
19...	1836	1400	217	7.7	14.5	755	9.1	90
19...	1840	1700	217	7.7	14.5	755	9.1	90
19...	1843	2000	203	7.7	14.5	755	9.1	90
SEP								
23...	1900	2120	209	7.9	6.5	751	11.0	91
23...	1903	1820	213	8.0	6.5	751	11.0	91
23...	1905	1500	212	7.9	6.5	751	11.0	91
23...	1907	1130	213	7.9	6.5	751	10.9	90
23...	1910	600	213	7.9	6.5	751	10.9	90

Date	Time	Medium code	Sample type	Stream	Gage	Instan-	Sam-	Sampler	Type of	Specif.	pH	Tempera-	Tempera-
				width, feet (00004)	height, feet (00065)	taneous dis- charge cfs (00061)	pling method, code (82398)	type, code (84164)	sample related QA data, code (99111)	conduc- tance, wat unf uS/cm 25 deg C (00095)	water unfltrd field, std units (00400)		
MAR													
25...	1900	9	9	1990	--	54300	20	3060	30	323	7.0	-8.4	.0
MAY													
28...	1440	9	9	2410	19.59	447000	20	3055	30	156	7.5	11.0	7.5
JUN													
17...	1720	9	9	2600	22.53	539000	20	3055	30	165	7.8	18.0	15.0
JUL													
10...	1820	9	9	2200	17.80	350000	20	3055	30	206	7.7	14.0	17.5
24...	1950	9	9	2300	18.19	404000	20	3055	100	222	8.1	15.0	16.5
AUG													
19...	1710	9	7	2300	18.32	364000	20	3055	100	217	7.7	15.5	14.5
SEP													
23...	1800	9	9	2400	18.98	429000	20	3055	30	213	7.9	5.0	6.5

15565447 YUKON RIVER AT PILOT STATION—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Turbid- ity wat unf lab, Hach 2100AN NTU (99872)	UV absorb- ance 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure mm Hg (00025)	Dis- solved oxygen mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm titr., field, mg/L (00453)
MAR													
25...	13	.069	.051	766	3.6	25	150	44.0	10.5	3.50	128	1.20	160
MAY													
28...	72	.458	.345	762	10.0	83	81	23.7	5.12	1.93	62	.97	74
JUN													
17...	150	.372	.279	755	8.0	80	82	24.2	5.09	1.64	68	.90	80
JUL													
10...	150	.183	.136	764	8.6	90	100	29.0	7.15	2.60	71	1.15	86
24...	E270	.149	.109	757	8.9	92	110	30.1	7.65	2.67	72	1.31	87
AUG													
19...	200	.183	.135	755	9.1	90	100	28.9	7.55	2.98	73	1.47	89
SEP													
23...	49	.284	.210	751	11.0	91	110	29.6	7.88	2.53	75	.93	92

Date	Carbon- ate, wat flt incrm. titr., field mg/L (00452)	Alka- linity wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N water, fltrd mg/L as N (00623)
MAR													
25...	.0	131	28.4	.90	.12	11.4	201	179	--	--	--	.19	.19
MAY													
28...	.0	60	16.7	1.05	<.2	4.87	112	92	.005	.083	<.015	.67	.36
JUN													
17...	.0	66	16.5	.60	<.2	4.74	112	94	E.002	.057	<.015	.81	.28
JUL													
10...	.0	70	27.2	1.31	<.2	6.29	130	118	E.002	.082	<.015	.55	.14
24...	.0	71	31.2	.99	<.2	6.04	140	123	--	--	--	--	--
AUG													
19...	.0	74	29.6	1.09	<.2	6.79	114	123	<.002	.079	<.015	.40	.17
SEP													
23...	.0	75	29.5	.83	<.2	7.11	155	125	<.002	.094	<.015	.42	.24

Date	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd mg/L as P (00671)	Phos- phorus, suspnd sedimnt total, percent (30292)	Alum- inum, suspnd sedimnt total percent (30221)	Alum- inum, water, fltrd, ug/L (01106)	Anti- mony, suspnd sedimnt total, ug/g (29816)	Anti- mony, water, fltrd, ug/L (01095)	Arsenic suspnd sedimnt total, ug/g (29818)	Arsenic water, fltrd, ug/L (01000)	Barium, suspnd sedimnt total, ug/g (29820)	Barium, water, fltrd, ug/L (01005)	Beryll- ium, suspnd sedimnt total, ug/g (29822)
MAR													
25...	.022	.006	--	--	--	3	--	<.30	--	.5	--	86	--
MAY													
28...	.28	.013	E.004	.095	7.0	21	1.1	E.18	12	.7	920	35	2
JUN													
17...	.37	.010	<.007	.073	6.7	18	1.7	E.17	15	.8	710	38	2
JUL													
10...	.24	.011	<.007	.100	7.9	--	1.9	--	18	.9	1100	--	2
24...	E.34	--	--	.090	8.2	12	2.1	E.20	20	.9	1100	44	2
AUG													
19...	.29	.007	<.007	.089	7.3	13	2.1	E.27	17	.9	880	41	1
SEP													
23...	.170	.010	E.005	.080	6.0	16	1.4	E.18	15	.9	190	37	1

15565447 YUKON RIVER AT PILOT STATION—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryll- ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium suspnd sedimnt total, ug/g (29826)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, suspnd sedimnt total, ug/g (29829)	Chrom- ium, water, fltrd ug/L (01030)	Cobalt, suspnd sedimnt total, ug/g (35031)	Cobalt, water, fltrd, ug/L (01035)	Copper, suspnd sedimnt total, ug/g (29832)	Copper, water, fltrd, ug/L (01040)	Iron suspnd sedimnt total, percent (30269)	Iron, water, fltrd, ug/L (01046)	Lead suspnd sedimnt total, ug/g (29836)
MAR													
25...	<.06	12	--	E.02	--	<.8	--	.214	--	.9	--	101	--
MAY													
28...	<.06	8	.8	E.02	110	<.8	15	.138	35	4.5	4.0	303	15
JUN													
17...	<.06	<7	.9	E.03	83	<.8	13	.126	30	4.5	3.0	173	18
JUL													
10...	--	8	.8	--	110	--	20	--	51	--	4.9	126	14
24...	<.06	E6	.6	<.04	110	<.8	20	.100	55	2.5	5.0	43	16
AUG													
19...	<.06	9	.5	<.04	110	<.8	19	.089	49	3.1	4.5	91	16
SEP													
23...	<.06	7	.4	<.04	93	<.8	16	.105	36	2.8	3.8	244	7.0

Date	Lead, water, fltrd, ug/L (01049)	Lithium suspnd sedimnt total, ug/g (35050)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, suspnd sedimnt total, ug/g (29839)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury suspnd sedimnt total, ug/g (29841)	Molyb- denum, suspnd sedimnt total, ug/g (29843)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, suspnd sedimnt total, ug/g (29845)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, suspnd sedimnt total, ug/g (29847)	Selen- ium, water, fltrd, ug/L (01145)	Silver, suspnd sedimnt total, ug/g (29850)
MAR													
25...	<.08	--	3.1	--	96.8	--	--	.8	--	1.64	--	.6	--
MAY													
28...	.28	31	1.8	790	14.0	.06	2	.6	50	2.54	M	<.5	<.5
JUN													
17...	.17	29	1.9	680	13.0	.02	1	.6	40	1.78	M	E.4	<.5
JUL													
10...	--	37	2.4	960	--	.09	2	--	64	--	M	<.5	<.5
24...	E.07	34	2.5	940	2.0	.09	2	1.0	57	1.26	M	E.5	<.5
AUG													
19...	.22	32	2.8	850	2.9	.07	3	1.0	59	1.81	M	E.4	<.5
SEP													
23...	.10	30	2.4	720	6.9	.06	3	.5	49	1.62	M	E.3	<.5

15565447 YUKON RIVER AT PILOT STATION—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Stront- ium, suspnd sedimnt total, ug/g (35040)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, suspnd sedimnt total, ug/g (49955)	Titan- ium, suspnd sedimnt total, percent (30317)	Vanad- ium, suspnd sedimnt total, ug/g (29853)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, suspnd sedimnt total, ug/g (29855)	Zinc, water, fltrd, ug/L (01090)	Uranium suspnd sedimnt total, ug/g (35046)	Uranium natural water, fltrd, ug/L (22703)	Organic carbon, water, fltrd, mg/L (00681)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)
MAR													
25...	<.2	--	195	--	--	--	1.8	--	4	--	.98	2.5	<.1
MAY													
28...	<.2	220	84.2	<50	.420	130	.7	130	2	<50	.50	11.6	<.1
JUN													
17...	<.2	180	93.1	<50	.450	110	.9	120	1	<50	.51	9.4	.2
JUL													
10...	--	240	128	<50	.500	160	.7	140	--	>50	--	5.6	.3
24...	<.2	230	130	<50	.480	150	.6	150	1	>50	.75	4.6	2.0
AUG													
19...	<.2	260	129	<50	.440	140	.8	130	2	<50	.68	5.5	.6
SEP													
23...	<.2	260	120	<50	.350	120	1.1	110	<1	<50	.59	8.7	<.1

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Total carbon, suspnd sedimnt total, percent (30244)	Organic carbon, suspnd sedimnt percent (50465)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Suspnd. sedimnt conc, flow through cntrfug mg/L (50279)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
MAR									
25...	.4	.4	--	--	.04	--	4	586	96
MAY									
28...	2.7	2.8	1.8	1.5	.20	--	276	333000	78
JUN									
17...	2.8	3.0	1.7	1.4	.17	405	402	585000	73
JUL									
10...	2.5	2.8	1.9	1.2	.14	222	233	220000	91
24...	6.0	7.9	1.5	1.0	.34	372	374	408000	93
AUG									
19...	3.9	4.5	2.0	1.2	.18	268	275	270000	89
SEP									
23...	2.2	2.3	2.8	2.2	.14	153	152	176000	77

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET

LOCATION.--Lat 63°56'06", long 160°18'18", in NW¹/₄ NE¹/₄ sec. 18, T.18 S., R.8 W. (Unalakleet D-3 quad), Hydrologic Unit 19050102, on the right bank, 3.5 mi upstream from mouth of the Chiroskey River, 28 mi upstream from mouth, 15 mi east of Unalakleet.

DRAINAGE AREA.--1,048 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to September 1999 (no winter record), October 1999 to current year.

REVISED RECORDS.--WRD-AK-99-1: 1998.

GAGE.--Water-stage recorder. Elevation of gage is 40 ft above sea level from topographic map.

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6070	1290	e450	e240	e160	e130	e120	e1200	6590	2080	2670	3510
2	5140	1220	e450	e240	e160	e130	e120	1530	7400	3780	2440	3260
3	4200	1130	e400	e240	e160	e130	e120	1940	7020	5660	2270	3000
4	3600	1130	e400	e240	e170	e130	e120	2320	6350	5190	2150	2920
5	3050	1130	e450	e240	e170	e130	e120	2580	5950	4030	2020	2800
6	2670	1090	e450	e240	e160	e130	e120	3030	5890	3300	1910	2620
7	2620	1040	e400	e220	e160	e130	e120	2770	5520	2830	1820	2480
8	2720	e1000	e400	e220	e160	e130	e120	3060	5170	2530	1780	2390
9	2500	e950	e400	e220	e140	e130	e120	5330	4530	2290	1750	2300
10	2280	e900	e400	e220	e140	e130	e120	7590	4210	2130	1650	2220
11	2210	e900	e350	e220	e140	e120	e120	6030	4220	2020	1630	2170
12	2100	e850	e350	e200	e140	e120	e120	4120	4150	1910	1750	2170
13	e2000	e800	e350	e200	e140	e120	e120	3700	3900	1800	1800	2130
14	1980	e800	e350	e200	e140	e120	e120	3780	3500	1710	2180	2050
15	1900	e750	e350	e200	e140	e120	e120	3050	3060	1720	4410	1960
16	1830	e750	e350	e200	e140	e120	e120	2400	2710	1750	5670	1900
17	1650	e700	e350	e200	e140	e120	e130	2090	2580	1650	4830	1840
18	e1520	e700	e300	e200	e140	e120	e140	1990	2490	1550	4220	1780
19	e1400	e650	e300	e180	e140	e120	e150	2320	2320	1450	3810	1730
20	e1310	e650	e300	e180	e140	e120	e160	3080	2270	1390	3430	1670
21	e1350	e600	e300	e180	e140	e120	e170	3920	2200	1330	3100	1600
22	e1460	e600	e300	e180	e140	e120	e200	4170	2130	1300	2840	1540
23	e1600	e550	e300	e180	e140	e120	e300	4070	2190	1320	2710	1500
24	1650	e550	e280	e180	e140	e120	e350	3780	2270	1550	3350	1460
25	1480	e600	e280	e180	e140	e120	e400	3660	2250	1940	4100	1420
26	1390	e600	e280	e180	e130	e120	e450	3750	2050	2370	5250	1370
27	1320	e550	e280	e180	e130	e120	e500	4520	1900	3950	5650	1340
28	1250	e500	e260	e160	e130	e120	e600	4410	1790	4910	5130	1320
29	1200	e500	e260	e160	---	e120	e700	4730	1730	3940	4420	1360
30	1180	e450	e260	e160	---	e120	e900	5150	1800	3340	3920	1420
31	1250	---	e260	e160	---	e120	---	5620	---	2990	3710	---
TOTAL	67880	23930	10610	6200	4070	3820	7070	111690	110140	79710	98370	61230
MEAN	2190	798	342	200	145	123	236	3603	3671	2571	3173	2041
MAX	6070	1290	450	240	170	130	900	7590	7400	5660	5670	3510
MIN	1180	450	260	160	130	120	120	1200	1730	1300	1630	1320
AC-FT	134600	47470	21040	12300	8070	7580	14020	221500	218500	158100	195100	121400
CFSM	2.09	0.76	0.33	0.19	0.14	0.12	0.22	3.44	3.50	2.45	3.03	1.95
IN.	2.41	0.85	0.38	0.22	0.14	0.14	0.25	3.96	3.91	2.83	3.49	2.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)#

	1997	1998	1999	2000	2001	2002	2003
MEAN	1465	591	268	164	128	112	142
MAX	2190	798	342	200	145	123	236
(WY)	2003	2003	2003	2003	2003	2003	2002
MIN	1037	394	198	147	116	98.2	105
(WY)	2002	2002	2002	2002	2001	2001	2001

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003#	
ANNUAL TOTAL	418968		584720			
ANNUAL MEAN	1148		1602		1389	
HIGHEST ANNUAL MEAN					1656	2001
LOWEST ANNUAL MEAN					1005	2002
HIGHEST DAILY MEAN	17000	May 24	7590	May 10	19600	Jun 8 2001
LOWEST DAILY MEAN	a110	Mar 29	b120	Mar 11	c95	Mar 21 2001
ANNUAL SEVEN-DAY MINIMUM	110	Mar 29	120	Mar 11	95	Mar 21 2001
MAXIMUM PEAK FLOW			7850	May 10	d19700	Jun 8 2001
MAXIMUM PEAK STAGE			93.07	May 10	98.41	Jun 8 2001
MAXIMUM PEAK STAGE					f99.58	May 23 2002
ANNUAL RUNOFF (AC-FT)	831000		1160000		1006000	
ANNUAL RUNOFF (CFSM)	1.10		1.53		1.33	
ANNUAL RUNOFF (INCHES)	14.87		20.76		18.01	
10 PERCENT EXCEEDS	2480		4110		3440	
50 PERCENT EXCEEDS	683		1220		655	
90 PERCENT EXCEEDS	120		120		110	

See Period of Record

a From Mar. 29 to Apr. 24

b From Mar. 11 to Apr. 16

c From Mar. 21 to Apr. 10

d From rating curve extended above 8800 ft³/s

e Estimated

f Backwater from ice

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1998 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for one-hour recording interval.

REMARKS.-- Records represent water temperature at the sensor within 0.5°C. No record October 11-13 and August 28 due to recorder problems. Temperature was compared with the stream average by cross section on July 17. No variation was found within the cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 14.5°C, July 11-12 2000 and July 19, August 2-3, 2002; minimum, 0.0°C, many days during winter and spring breakup periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 13.0°C, July 13, 20; minimum, 0.0°C, many days during fall, winter and spring breakup periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	STREAM WIDTH (FT) (00004)	SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK) (72103)	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)
JUL							
17...	1151	247	15.0	88.06	1630	8.0	27.0
17...	1153	247	55.0	88.06	1630	8.0	27.0
17...	1155	247	95.0	88.06	1630	8.0	27.0
17...	1157	247	135.0	88.06	1630	8.0	27.0
17...	1159	247	185.0	88.06	1630	8.0	27.0

TEMPERATURE, WATER, (DEGREES CELSIUS) WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4.5	0.5	4.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
2	3.5	3.0	3.5	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
3	3.5	2.5	3.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
4	2.5	2.0	2.5	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
5	2.0	1.5	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
6	1.5	1.5	1.5	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
7	2.0	1.5	2.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
8	2.0	2.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	2.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	2.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	2.5	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	2.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	1.5	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	1.5	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	2.5	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	2.5	1.5	2.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	---	---	---	1.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET—Continued

TEMPERATURE, WATER, (DEGREES CELSIUS) WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	2.5
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	2.5
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	2.5
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	2.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	2.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	1.5
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	1.5
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.5
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.0	2.5
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.0	2.5
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	2.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.0	1.5
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	2.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	2.5
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	2.5	3.5
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	4.5	5.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.0	4.5
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.5	3.5
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.5	3.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.5	4.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.0	4.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.5	4.5
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.5	4.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.0	3.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.0	3.5
29	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0	4.5	3.5	4.0
30	---	---	---	0.0	0.0	0.0	2.5	0.5	1.5	5.5	4.5	5.0
31	---	---	---	0.0	0.0	0.0	---	---	---	5.5	5.5	5.5
MONTH	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.1	5.5	0.5	2.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	6.0	5.0	5.5	9.5	9.0	9.0	9.0	8.0	8.5	8.5	8.0	8.5
2	5.5	4.5	5.0	9.0	8.0	8.0	8.5	7.5	8.0	8.0	8.0	8.0
3	5.0	4.5	4.5	8.0	7.0	7.5	8.5	7.0	7.5	8.0	7.0	7.0
4	5.5	5.0	5.5	8.0	7.5	8.0	9.0	8.5	9.0	7.0	6.5	6.5
5	6.5	5.5	6.0	9.0	7.5	8.0	9.5	8.5	9.0	6.5	6.0	6.5
6	6.5	6.5	6.5	9.5	8.5	9.0	10.5	8.5	9.5	7.0	6.0	6.5
7	7.0	6.0	6.5	10.0	9.0	9.5	10.5	10.0	10.0	6.5	6.5	6.5
8	7.0	6.0	6.5	11.5	9.5	10.5	11.5	9.5	10.0	6.5	6.0	6.0
9	7.5	7.0	7.5	11.5	10.5	11.0	12.5	10.5	11.5	6.5	6.0	6.0
10	7.0	6.5	6.5	11.0	10.0	10.5	12.0	11.0	11.5	6.0	5.5	5.5
11	7.5	6.5	7.0	10.5	10.0	10.0	11.5	10.5	11.0	6.0	5.5	5.5
12	8.5	7.5	8.0	11.5	9.0	10.0	10.5	10.0	10.0	6.5	6.0	6.0
13	9.0	8.5	8.5	13.0	10.5	11.5	10.0	9.5	9.5	6.0	5.0	5.5
14	10.0	9.0	9.5	12.5	10.5	11.5	9.5	9.0	9.0	5.0	4.0	4.5
15	10.0	9.0	9.5	10.5	9.0	9.5	9.5	8.5	9.0	4.5	3.5	4.0
16	9.5	9.0	9.0	9.5	8.5	9.0	8.5	8.0	8.0	4.5	3.0	4.0
17	9.5	8.0	9.0	9.5	7.5	8.5	8.0	7.0	7.5	4.5	3.5	4.0
18	10.5	9.0	9.5	11.0	8.5	9.5	7.0	6.5	6.5	4.0	3.0	3.5
19	10.0	9.0	10.0	12.5	10.5	11.5	7.0	6.5	6.5	4.0	3.0	3.5
20	9.5	8.5	9.0	13.0	11.0	12.0	8.0	6.5	7.5	3.5	2.5	3.0
21	9.5	9.0	9.0	12.5	11.0	11.5	9.0	8.0	8.5	2.5	1.5	2.5
22	11.0	9.0	9.5	11.0	9.5	10.0	8.5	7.0	8.0	2.5	1.5	2.0
23	11.0	10.0	10.5	10.0	9.5	9.5	7.5	7.0	7.0	2.5	1.5	2.0
24	10.5	10.0	10.0	10.5	9.5	10.0	8.0	7.5	7.5	2.5	1.5	2.0
25	10.0	9.0	9.5	11.5	10.0	10.5	8.0	7.0	7.5	2.0	1.5	2.0
26	10.5	8.5	9.5	11.0	9.0	10.0	8.0	7.0	7.5	2.0	1.5	2.0
27	11.5	9.5	10.5	9.0	8.0	8.5	8.0	7.5	8.0	3.0	2.0	2.5
28	11.0	9.5	10.5	8.5	8.0	8.0	---	---	---	3.0	2.5	2.5
29	10.5	10.0	10.5	9.0	8.5	9.0	8.0	7.5	8.0	3.5	3.0	3.0
30	10.0	9.5	9.5	8.5	8.0	8.5	8.0	7.5	8.0	4.0	3.5	3.5
31	---	---	---	8.5	8.0	8.0	8.5	8.0	8.0	---	---	---
MONTH	11.5	4.5	8.3	13.0	7.0	9.6	---	---	---	8.5	1.5	4.5

15743850 DAHL CREEK NEAR KOBUK

LOCATION.--Lat 66°56'46", long 156°54'32", in NW¼ SE¼ sec. 21, T. 18 N., R.9 E. (Shungnak D-2 quad), Hydrologic Unit 19050302, on right bank 25 ft downstream from culvert on road to Bornite at west end of Dahl Creek landing strip, 3.5 mi upstream from mouth and 3 mi north of Kobuk.

DRAINAGE AREA.--11.0 mi².

PERIOD OF RECORD.--Annual maximum, water years 1986-87, April 1988 to current year. (No winter record in water years 1989, 1991-92, 1994, and 1996.)

REVISED RECORDS.--WDR AK-88-1: 1986(M).

GAGE.--Water-stage recorder. Elevation of gage is 225 ft above sea level, from topographic map. July 16, 1986, to April 28, 1988, the water-stage recorder was operated to obtain annual maximums. Prior to August 17, 1994 at site 50 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	e16	e11	e6.2	e4.6	e4.0	e3.7	e3.7	37	19	21	18
2	26	e16	e11	e6.0	e4.6	e4.0	e3.7	e3.7	41	23	20	17
3	25	e15	e11	e6.0	e4.6	e4.0	e3.7	e3.8	47	22	20	18
4	27	e15	e10	e6.0	e4.5	e4.0	e3.7	e3.9	44	21	19	19
5	26	e15	e10	e5.8	e4.5	e4.0	e3.7	e4.1	43	20	19	24
6	28	e15	e9.8	e5.8	e4.5	e3.9	e3.7	e4.3	41	26	18	26
7	28	e14	e9.6	e5.8	e4.5	e3.9	e3.7	e4.5	38	47	18	26
8	26	e14	e9.4	e5.6	e4.4	e3.9	e3.7	e5.0	41	35	18	28
9	26	e14	e9.2	e5.6	e4.4	e3.9	e3.7	e5.4	37	34	18	29
10	26	e14	e9.0	e5.6	e4.4	e3.9	e3.7	e5.8	34	31	18	31
11	25	e14	e8.8	e5.6	e4.4	e3.9	e3.6	e7.0	32	30	17	37
12	25	e14	e8.6	e5.4	e4.3	e3.8	e3.6	e10	30	29	17	40
13	25	e13	e8.4	e5.4	e4.3	e3.8	e3.6	13	36	29	17	56
14	24	e13	e8.2	e5.4	e4.3	e3.8	e3.6	14	40	29	16	54
15	24	e13	e8.0	e5.4	e4.3	e3.8	e3.6	15	30	28	21	53
16	e23	e13	e8.0	e5.2	e4.3	e3.8	e3.6	18	28	27	26	51
17	e23	e13	e7.8	e5.2	e4.2	e3.8	e3.6	25	26	25	21	50
18	e22	e13	e7.6	e5.2	e4.2	e3.8	e3.6	34	25	25	20	49
19	e22	e13	e7.6	e5.2	e4.2	e3.8	e3.6	60	24	24	20	46
20	e21	e13	e7.4	e5.0	e4.2	e3.8	e3.6	105	23	34	19	43
21	e21	e12	e7.2	e5.0	e4.2	e3.7	e3.6	159	22	31	19	41
22	e20	e12	e7.2	e5.0	e4.1	e3.7	e3.6	231	23	26	19	39
23	e20	e12	e7.0	e4.9	e4.1	e3.7	e3.6	254	32	26	19	37
24	e19	e12	e7.0	e4.9	e4.1	e3.7	e3.6	212	25	25	19	35
25	e19	e12	e6.8	e4.9	e4.1	e3.7	e3.7	188	22	24	18	34
26	e18	e12	e6.8	e4.8	e4.1	e3.7	e3.7	173	22	24	18	33
27	e18	e11	e6.6	e4.8	e4.1	e3.7	e3.7	134	21	24	18	32
28	e17	e11	e6.4	e4.8	e4.0	e3.7	e3.7	90	21	23	19	32
29	e17	e11	e6.4	e4.7	---	e3.7	e3.7	63	20	22	19	58
30	e17	e11	e6.2	e4.7	---	e3.7	e3.7	52	20	22	18	67
31	e16	---	e6.2	e4.7	---	e3.7	---	43	---	21	18	---
TOTAL	700	396	254.2	164.6	120.5	118.3	109.6	1944.2	925	826	587	1123
MEAN	22.6	13.2	8.20	5.31	4.30	3.82	3.65	62.7	30.8	26.6	18.9	37.4
MAX	28	16	11	6.2	4.6	4.0	3.7	254	47	47	26	67
MIN	16	11	6.2	4.7	4.0	3.7	3.6	3.7	20	19	16	17
AC-FT	1390	785	504	326	239	235	217	3860	1830	1640	1160	2230
CFSM	2.05	1.20	0.75	0.48	0.39	0.35	0.33	5.70	2.80	2.42	1.72	3.40
IN.	2.37	1.34	0.86	0.56	0.41	0.40	0.37	6.57	3.13	2.79	1.99	3.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2002, BY WATER YEAR (WY)#

	MEAN	28.2	9.57	5.88	4.62	4.10	3.76	4.16	53.4	62.3	35.7	67.3	49.6
MAX	67.2	16.0	8.20	6.88	6.15	5.63	7.39	93.1	116	73.2	223	104	
(WY)	1994	1999	2002	1998	1998	1998	1997	1996	1992	1989	1994	1993	
MIN	9.65	3.70	2.55	2.00	2.00	1.63	1.50	6.21	13.1	10.6	17.3	19.8	
(WY)	1993	1993	1993	1993	1993	1993	1993	2001	1997	1997	1990	1991	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1986 - 2002#

	ANNUAL TOTAL	10290.1	7268.4										
ANNUAL MEAN	28.2		19.9										
HIGHEST ANNUAL MEAN													
LOWEST ANNUAL MEAN													
HIGHEST DAILY MEAN		449	Aug 14		254	May 23		1400	Aug 17	1994			
LOWEST DAILY MEAN		a2.9	Apr 19		b3.6	Apr 11		c1.5	Mar 9	1993			
ANNUAL SEVEN-DAY MINIMUM		2.9	Apr 19		3.6	Apr 11		1.5	Mar 9	1993			
MAXIMUM PEAK FLOW					393	May 22		d1840	Aug 17	1994			
MAXIMUM PEAK STAGE					5.77	May 22		6.73	Aug 17	1994			
MAXIMUM PEAK STAGE					f7.03	May 10		f7.03	May 10	2002			
ANNUAL RUNOFF (AC-FT)		20410			14420			17940					
ANNUAL RUNOFF (CFSM)		2.56			1.81			2.25					
ANNUAL RUNOFF (INCHES)		34.80			24.58			30.59					
10 PERCENT EXCEEDS		68			37			61					
50 PERCENT EXCEEDS		12			14			9.6					
90 PERCENT EXCEEDS		3.0			3.7			3.0					

See Period of Record; partial years used in monthly statistics

a From Apr. 19 to May 13

b From Apr. 11 to Apr. 24

c From Mar. 9 to Apr. 30, 1993

d From rating curve extended above 170 ft³/s on basis of slope-area measurement of peak flow

e Estimated

f Backwater from ice

15743850 DAHL CREEK NEAR KOBUK—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	e20	e11	e7.6	e5.8	e5.0	e4.2	e6.0	93	92	91	78
2	61	e20	e11	e7.4	e5.8	e5.0	e4.2	e6.2	102	98	85	74
3	60	e19	e11	e7.4	e5.8	e4.8	e4.2	e6.4	107	89	93	72
4	57	e19	e11	e7.2	e5.8	e4.8	e4.2	e6.6	119	82	85	74
5	54	e18	e11	e7.2	e5.8	e4.8	e4.2	e6.8	140	79	86	69
6	51	e18	e11	e7.0	e5.6	e4.8	e4.2	e7.0	160	76	80	65
7	49	e17	e11	e7.0	e5.6	e4.8	e4.2	e7.4	157	72	76	63
8	47	e17	e11	e7.0	e5.6	e4.8	e4.2	e8.0	149	68	71	79
9	43	e16	e10	e6.8	e5.6	e4.8	e4.2	e9.0	143	65	69	76
10	41	e16	e10	e6.8	e5.6	e4.8	e4.2	e10	143	64	67	73
11	39	e15	e10	e6.8	e5.4	e4.8	e4.2	e11	143	60	112	72
12	37	e15	e10	e6.6	e5.4	e4.6	e4.2	e12	136	57	128	68
13	35	e14	e9.8	e6.6	e5.4	e4.6	e4.2	e12	126	56	110	65
14	33	e14	e9.8	e6.6	e5.2	e4.6	e4.2	e13	114	56	158	62
15	32	e13	e9.6	e6.6	e5.2	e4.6	e4.2	e13	102	51	176	60
16	31	e13	e9.6	e6.4	e5.2	e4.4	e4.2	e13	92	50	186	58
17	e29	e13	e9.4	e6.4	e5.2	e4.4	e4.2	e13	86	47	167	55
18	e28	e13	e9.2	e6.4	e5.0	e4.4	e4.2	e14	81	45	151	53
19	e27	e13	e9.0	e6.4	e5.0	e4.4	e4.2	e14	75	44	136	51
20	e26	e13	e8.8	e6.2	e5.0	e4.4	e4.4	e15	70	43	122	49
21	e25	e12	e8.8	e6.2	e5.0	e4.4	e4.4	e17	66	42	110	47
22	e25	e12	e8.6	e6.2	e5.0	e4.4	e4.4	e20	62	41	99	45
23	e24	e12	e8.6	e6.2	e5.0	e4.4	e4.6	e23	60	44	115	44
24	e24	e12	e8.4	e6.2	e5.0	e4.4	e4.8	32	57	59	111	43
25	e23	e12	e8.4	e6.0	e5.0	e4.2	e5.2	38	54	83	106	41
26	e23	e12	e8.2	e6.0	e5.0	e4.2	e5.6	55	51	111	109	40
27	e22	e12	e8.0	e6.0	e5.0	e4.2	e5.8	84	49	84	102	38
28	e22	e12	e8.0	e6.0	e5.0	e4.2	e5.8	70	47	78	97	37
29	e21	e11	e7.8	e6.0	---	e4.2	e5.8	64	45	76	92	39
30	e21	e11	e7.8	e6.0	---	e4.2	e5.8	63	47	75	88	37
31	e21	---	e7.6	e6.0	---	e4.2	---	74	---	80	83	---
TOTAL	1096	434	293.4	203.2	149.0	140.6	136.4	743.4	2876	2067	3361	1727
MEAN	35.4	14.5	9.46	6.55	5.32	4.54	4.55	24.0	95.9	66.7	108	57.6
MAX	65	20	11	7.6	5.8	5.0	5.8	84	160	111	186	79
MIN	21	11	7.6	6.0	5.0	4.2	4.2	6.0	45	41	67	37
AC-FT	2170	861	582	403	296	279	271	1470	5700	4100	6670	3430
CFSM	3.21	1.32	0.86	0.60	0.48	0.41	0.41	2.18	8.72	6.06	9.86	5.23
IN.	3.71	1.47	0.99	0.69	0.50	0.48	0.46	2.51	9.73	6.99	11.37	5.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)#

MEAN	28.8	10.1	6.24	4.81	4.22	3.84	4.20	51.0	64.5	37.7	69.6	50.1
MAX	67.2	16.0	9.46	6.88	6.15	5.63	7.39	93.1	116	73.2	223	104
(WY)	1994	1999	2003	1998	1998	1998	1997	1996	1992	1989	1994	1993
MIN	9.65	3.70	2.55	2.00	2.00	1.63	1.50	6.21	13.1	10.6	17.3	19.8
(WY)	1993	1993	1993	1993	1993	1993	1993	2001	1997	1997	1990	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003#	
ANNUAL TOTAL	7741.6		13227.0			
ANNUAL MEAN	21.2		36.2		25.9	
HIGHEST ANNUAL MEAN					36.7	
LOWEST ANNUAL MEAN					18.8	
HIGHEST DAILY MEAN	254 May 23		186 Aug 16		1400 Aug 17 1994	
LOWEST DAILY MEAN	a3.6 Apr 11		b4.2 Mar 25		c1.5 Mar 9 1993	
ANNUAL SEVEN-DAY MINIMUM	3.6 Apr 11		4.2 Mar 25		1.5 Mar 9 1993	
MAXIMUM PEAK FLOW			224 Aug 15		d1840 Aug 17 1994	
MAXIMUM PEAK STAGE			5.36 Aug 15		6.73 Aug 17 1994	
MAXIMUM PEAK STAGE					f7.03 May 10 2002	
ANNUAL RUNOFF (AC-FT)	15360		26240		18770	
ANNUAL RUNOFF (CFSM)	1.93		3.29		2.36	
ANNUAL RUNOFF (INCHES)	26.18		44.73		32.01	
10 PERCENT EXCEEDS	42		92		67	
50 PERCENT EXCEEDS	14		13		10	
90 PERCENT EXCEEDS	3.7		4.4		3.0	

See Period of Record; partial years used in monthly statistics

a From Apr. 11 to May 13

b From Mar. 25 to Apr. 15

c From Mar. 9 to Apr. 30, 1993

d From rating curve extended above 170 ft³/s on basis of slope-area measurement of peak flow

e Estimated

f Backwater from ice

15744500 KOBUK RIVER NEAR KIANA

LOCATION.--Lat 66°58'25", long 160°07'51", in NW¹/₄ SE¹/₄ sec. 11, T. 18 N., R. 7 W. (Selawik D-3 quad), Northwest Arctic Borough, Hydrologic Unit 19050304, on left bank, 5.8 mi upstream from Portage Creek, 9.7 mi upstream from Squirrel River, and 7.8 mi east of Kiana.

DRAINAGE AREA.--9,520 mi², approximately.

PERIOD OF RECORD.--September 1976 to current year (discontinued).

REVISED RECORDS.--WDR AK-81-1: 1977 (M), 1978, 1979-80 (M), WDR AK-93-1: 1992.

GAGE.--Water-stage recorder. Elevation of gage is 35 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31200	e14000	e5900	e4000	e2600	e2300	e2100	e3000	44000	35400	27000	35400
2	36900	e13500	e5800	e4000	e2600	e2200	e2100	e3200	48100	55900	25600	32500
3	38000	e13000	e5700	e3900	e2600	e2200	e2100	e3600	51500	63700	25700	30300
4	37000	e12500	e5600	e3800	e2600	e2200	e2100	e4200	53900	57000	26100	29000
5	34600	e12000	e5500	e3700	e2600	e2200	e2100	e5000	63000	60100	26800	28400
6	31400	e11500	e5400	e3600	e2600	e2200	e2100	e6000	70300	63700	26900	28700
7	28600	e11000	e5400	e3600	e2500	e2200	e2100	e7500	78600	60500	26800	28800
8	26800	e10500	e5300	e3500	e2500	e2200	e2100	e10000	80700	51900	25100	28500
9	24800	e10000	e5300	e3400	e2500	e2200	e2100	e14000	83700	43900	23100	28300
10	22500	e9400	e5200	e3400	e2500	e2200	e2100	e19000	82900	38100	21300	29500
11	20300	e8800	e5100	e3300	e2500	e2200	e2100	e28000	84400	34400	20300	30900
12	19500	e8300	e5100	e3300	e2400	e2200	e2100	e40000	85500	31500	22200	30700
13	17900	e8000	e5000	e3200	e2400	e2200	e2100	e60000	84200	29300	30500	29700
14	16500	e7700	e5000	e3200	e2400	e2200	e2100	e68000	78300	27400	38400	28100
15	e15000	e7400	e4900	e3100	e2400	e2200	e2100	e67000	74600	25800	47100	26600
16	e14000	e7200	e4900	e3100	e2400	e2200	e2100	e63000	69600	24600	60500	25000
17	e13000	e7000	e4850	e3000	e2400	e2200	e2100	e58000	63000	23200	65500	23200
18	e12500	e6900	e4800	e3000	e2400	e2200	e2100	e53000	58600	22100	65700	22100
19	e12000	e6800	e4800	e3000	e2400	e2100	e2100	e50000	55800	21000	64400	21100
20	e11500	e6700	e4700	e2900	e2300	e2100	e2100	47600	51300	19900	59900	20100
21	e11000	e6700	e4700	e2900	e2300	e2100	e2100	49500	47900	18700	52800	19100
22	e10500	e6600	e4600	e2900	e2300	e2100	e2100	40700	45000	17800	46000	18200
23	e11000	e6600	e4600	e2800	e2300	e2100	e2100	31400	42400	17200	41800	17400
24	e11500	e6500	e4500	e2800	e2300	e2100	e2100	29200	39800	17700	42600	16800
25	e12000	e6500	e4500	e2800	e2300	e2100	e2100	27900	37600	20700	44400	16000
26	e12500	e6400	e4400	e2800	e2300	e2100	e2200	27300	36200	23500	44800	15200
27	e13000	e6300	e4400	e2700	e2300	e2100	e2200	29900	35000	27700	45900	14800
28	e13500	e6200	e4300	e2700	e2300	e2100	e2200	35800	34100	31700	45100	14100
29	e14000	e6100	e4200	e2700	---	e2100	e2300	38900	33100	34000	43200	14000
30	e14000	e6000	e4100	e2700	---	e2100	e2500	40100	32600	32800	41300	14300
31	e14000	---	e4100	e2700	---	e2100	---	41300	---	29800	38700	---
TOTAL	601000	256100	152650	98500	68000	67000	63900	1002100	1745700	1061000	1215500	716800
MEAN	19390	8537	4924	3177	2429	2161	2130	32330	58190	34230	39210	23890
MAX	38000	14000	5900	4000	2600	2300	2500	68000	85500	63700	65700	35400
MIN	10500	6000	4100	2700	2300	2100	2100	3000	32600	17200	20300	14000
AC-FT1192000	508000	302800	195400	134900	132900	126700	1988000	3463000	2104000	2411000	1422000	
CFSM	2.04	0.90	0.52	0.33	0.26	0.23	0.22	3.40	6.11	3.60	4.12	2.51
IN.	2.35	1.00	0.60	0.38	0.27	0.26	0.25	3.92	6.82	4.15	4.75	2.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

MEAN	14070	5555	3482	2624	2159	1908	1863	25400	46450	21640	30610	28060
MAX	29870	11050	6097	3965	2868	2600	3703	52250	87010	40130	78210	78190
(WY)	1994	1994	1994	1994	1994	1980	1980	2002	1989	1980	1994	1986
MIN	5003	2750	1926	1606	1331	1116	1000	1635	19690	9032	7809	9542
(WY)	1997	1981	1982	1982	1984	1984	1984	1992	1997	1997	2002	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1976 - 2003
ANNUAL TOTAL	5055060	7048250	
ANNUAL MEAN	13850	19310	15410
HIGHEST ANNUAL MEAN			24960
LOWEST ANNUAL MEAN			10020
HIGHEST DAILY MEAN	137000	May 22	85500
LOWEST DAILY MEAN	a1700	Apr 15	b2100
ANNUAL SEVEN-DAY MINIMUM	1700	Apr 15	2100
MAXIMUM PEAK FLOW			86700
MAXIMUM PEAK STAGE			53.75
MAXIMUM PEAK STAGE			64.26
ANNUAL RUNOFF (AC-FT)	10030000	13980000	11160000
ANNUAL RUNOFF (CFSM)	1.45	2.03	1.62
ANNUAL RUNOFF (INCHES)	19.75	27.54	22.00
10 PERCENT EXCEEDS	31300	51400	41500
50 PERCENT EXCEEDS	6850	10500	5400
90 PERCENT EXCEEDS	1800	2100	1700

See Period of Record; partial years used in monthly statistics

a From Apr. 15 to Apr. 25

b From Mar. 19 to Apr. 25

c From Apr. 1 to May 14, 1984

d From floodmarks

e Estimated

f Backwater from ice

15746900 WULIK RIVER ABOVE FERRIC CREEK NEAR KIVALINA

LOCATION.--Lat 68°04'42", long 163°11'15", in NW¹/₄ sec. 23, T. 31 N., R. 20 W. (DeLong Mts A-2 quad), Northwest Arctic Borough, Hydrologic Unit 19050404, on left bank 0.7 mi upstream from Ferric Creek, 9 miles west of Red Dog Mine site, and 43 miles northeast of Kivalina.

DRAINAGE AREA.--191 mi².

PERIOD OF RECORD.-- July 2000 to September 2003 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 500 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	366	e53	e25	e17	e4.8	e0.20	e0.00	e0.00	e1300	1810	505	322
2	355	e49	e24	e16	e4.6	e0.20	e0.00	e0.05	e2100	1800	554	299
3	318	e44	e24	e16	e4.4	e0.00	e0.00	e0.15	e2000	863	638	295
4	290	e43	e24	e16	e4.0	e0.00	e0.00	e0.35	2470	589	528	352
5	e265	e43	e24	e15	e3.8	e0.00	e0.00	e0.90	3590	538	575	351
6	e255	e42	e24	e15	e3.6	e0.00	e0.00	e2.8	4920	463	496	536
7	e260	e40	e23	e14	e3.2	e0.00	e0.00	e7.5	4550	381	405	568
8	e250	e38	e23	e14	e3.0	e0.00	e0.00	e17	4040	323	344	771
9	229	e37	e23	e13	e2.8	e0.00	e0.00	e38	3580	269	377	778
10	194	e36	e23	e13	e2.6	e0.00	e0.00	e54	3700	249	355	856
11	e195	e34	e22	e13	e2.4	e0.00	e0.00	e54	3700	254	332	733
12	e195	e33	e22	e12	e2.2	e0.00	e0.00	e50	4130	246	295	567
13	e175	e31	e22	e12	e2.0	e0.00	e0.00	e43	2920	223	261	468
14	e155	e30	e22	e11	e1.8	e0.00	e0.00	e37	2320	195	261	378
15	e140	e29	e22	e11	e1.6	e0.00	e0.00	e32	1860	175	289	375
16	129	e28	e21	e10	e1.4	e0.00	e0.00	e29	1430	158	352	336
17	e125	e28	e21	e10	e1.4	e0.00	e0.00	e26	1630	134	353	311
18	e105	e28	e21	e9.5	e1.2	e0.00	e0.00	e24	1670	119	326	321
19	e91	e27	e21	e9.0	e1.2	e0.00	e0.00	e23	1140	110	321	279
20	e80	e27	e21	e9.0	e1.0	e0.00	e0.00	e25	903	102	305	239
21	e75	e27	e21	e8.5	e1.0	e0.00	e0.00	e27	902	97	276	e210
22	e75	e27	e21	e8.0	e0.80	e0.00	e0.00	e31	987	114	289	e185
23	e78	e26	e20	e7.5	e0.80	e0.00	e0.00	e39	784	1130	747	e170
24	e82	e26	e20	e7.5	e0.60	e0.00	e0.00	e59	651	1410	836	e155
25	e83	e26	e19	e7.0	e0.60	e0.00	e0.00	e115	639	1000	642	e155
26	e83	e26	e19	e6.5	e0.40	e0.00	e0.00	e350	700	960	556	e125
27	e82	e25	e19	e6.0	e0.40	e0.00	e0.00	e690	515	661	481	e125
28	e77	e25	e18	e6.0	e0.20	e0.00	e0.00	e390	464	486	417	122
29	e71	e25	e18	e5.5	---	e0.00	e0.00	e295	653	453	414	116
30	e65	e25	e17	e5.5	---	e0.00	e0.00	e300	1340	444	389	123
31	e59	---	e17	e5.0	---	e0.00	---	e735	---	453	357	---
TOTAL	5002	978	661	328.5	57.80	0.40	0.00	3494.75	61588	16209	13276	10621
MEAN	161	32.6	21.3	10.6	2.06	0.013	0.000	113	2053	523	428	354
MAX	366	53	25	17	4.8	0.20	0.00	735	4920	1810	836	856
MIN	59	25	17	5.0	0.20	0.00	0.00	0.00	464	97	261	116
MED	129	28	21	10	1.7	0.00	0.00	32	1650	381	377	316
AC-FT	9920	1940	1310	652	115	0.8	0.00	6930	122200	32150	26330	21070
CFSM	0.84	0.17	0.11	0.06	0.01	0.00	0.00	0.59	10.7	2.74	2.24	1.85
IN.	0.97	0.19	0.13	0.06	0.01	0.00	0.00	0.68	12.00	3.16	2.59	2.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)#

MEAN	88.8	21.8	11.2	5.38	1.93	0.99	0.85	277	1528	418	746	664
MAX	161	32.6	21.3	10.6	3.74	2.96	2.52	690	2053	567	1147	947
(WY)	2003	2003	2003	2003	2001	2001	2001	2002	2003	2001	2000	2002
MIN	49.7	3.29	0.40	0.087	0.000	0.000	0.000	28.1	955	269	428	354
(WY)	2001	2002	2002	2002	2002	2002	2003	2001	2002	2002	2003	2003

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 2000 - 2003#

ANNUAL TOTAL	107015.20	112216.45	
ANNUAL MEAN	293	307	298
HIGHEST ANNUAL MEAN			307
LOWEST ANNUAL MEAN			280
HIGHEST DAILY MEAN	4800 May 26	4920 Jun 6	4920 Jun 6 2003
LOWEST DAILY MEAN	a0.00 Jan 25	b0.00 Mar 3	0.00 Jan 25 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 25	0.00 Mar 3	0.00 Jan 25 2002
MAXIMUM PEAK FLOW		6490 Jun 6	6520 May 25 2002
MAXIMUM PEAK STAGE		53.67 Jun 6	c53.68 May 25 2002
ANNUAL RUNOFF (AC-FT)	212300	222600	215800
ANNUAL RUNOFF (CFSM)	1.54	1.61	1.56
ANNUAL RUNOFF (INCHES)	20.84	21.86	21.19
10 PERCENT EXCEEDS	799	740	805
50 PERCENT EXCEEDS	27	31	24
90 PERCENT EXCEEDS	0.00	0.00	0.00

See period of record, partial years used in monthly statistics
a From Jan. 25 to Apr. 22
b From Mar. 3 to May 1
c From floodmarks
e Estimated

15746991 IKALUKROK CREEK BELOW RED DOG CREEK NEAR KIVALINA

LOCATION.--Lat 68°02'51", long 163°01'34", in NE¹/₄ NW¹/₄ sec.33, T.31 N., R.19 W. (DeLong Mountains A-2 quad) Northwest Arctic Borough, Hydrologic Unit 19050404, on left bank about 3.5 mi downstream from the mouth of Red Dog Creek, 2.5 mi upstream from the mouth of Dudd Creek, and 45 mi northeast of Kivalina.

DRAINAGE AREA.--98.6 mi².

PERIOD OF RECORD.--June 1995 to current year (no winter record).

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above sea level, from topographic map. Prior to June 1, 1998 at site 1 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Runoff from 3.6 mi² is impounded in tailings ponds and released intermittently at a maximum rate of 25 ft³/s. Meteor-burst telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, undetermined, July 25, 1996; gage height, 12.22 ft, at site and datum then in use.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, undetermined, June 6, gage height, undetermined, occurred during backwater conditions; minimum not determined, occurs during the winter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	---	---	---	---	---	---	---	e595	907	305	203
2	201	---	---	---	---	---	---	---	e935	859	308	194
3	190	---	---	---	---	---	---	---	e915	e560	318	189
4	179	---	---	---	---	---	---	---	e975	e480	286	212
5	162	---	---	---	---	---	---	---	e1600	e380	277	204
6	119	---	---	---	---	---	---	---	e2200	293	252	225
7	e140	---	---	---	---	---	---	---	e2100	245	230	241
8	127	---	---	---	---	---	---	---	e1900	232	219	372
9	114	---	---	---	---	---	---	---	e1700	209	257	333
10	e120	---	---	---	---	---	---	---	e1600	186	261	404
11	119	---	---	---	---	---	---	---	e1700	220	231	359
12	103	---	---	---	---	---	---	---	e1900	216	221	306
13	e87	---	---	---	---	---	---	---	e1400	206	205	277
14	e79	---	---	---	---	---	---	---	e875	186	205	251
15	e78	---	---	---	---	---	---	---	e600	167	205	238
16	e73	---	---	---	---	---	---	---	473	152	241	223
17	e64	---	---	---	---	---	---	---	512	132	240	211
18	e53	---	---	---	---	---	---	---	489	116	222	208
19	e46	---	---	---	---	---	---	---	414	104	213	187
20	e40	---	---	---	---	---	---	---	362	96	200	166
21	e37	---	---	---	---	---	---	---	327	90	191	144
22	e38	---	---	---	---	---	---	---	316	118	196	140
23	e39	---	---	---	---	---	---	---	294	675	388	138
24	e41	---	---	---	---	---	---	---	263	661	361	124
25	e42	---	---	---	---	---	---	---	255	571	304	121
26	e42	---	---	---	---	---	---	---	223	533	290	120
27	e41	---	---	---	---	---	---	---	207	378	270	e150
28	e38	---	---	---	---	---	---	---	240	299	251	104
29	e36	---	---	---	---	---	---	---	326	308	244	94
30	e33	---	---	---	---	---	---	---	479	299	231	107
31	e30	---	---	---	---	---	---	---	---	296	216	---
TOTAL	2727	---	---	---	---	---	---	---	26175	10174	7838	6245
MEAN	88.0	---	---	---	---	---	---	---	872	328	253	208
MAX	216	---	---	---	---	---	---	---	2200	907	388	404
MIN	30	---	---	---	---	---	---	---	207	90	191	94
AC-FT	5410	---	---	---	---	---	---	---	51920	20180	15550	12390
CFSM	0.92	---	---	---	---	---	---	---	9.15	3.44	2.65	2.18
IN.	1.06	---	---	---	---	---	---	---	10.21	3.97	3.06	2.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	59.9	12.5	---	---	---	---	---	112	463	212	398	268
MAX	88.0	21.5	---	---	---	---	---	200	872	328	687	515
(WY)	2003	1999	---	---	---	---	---	1999	2003	2003	1998	2002
MIN	39.8	2.56	---	---	---	---	---	23.7	259	91.6	125	84.7
(WY)	2001	2000	---	---	---	---	---	2001	1999	1999	1995	1996

e Estimated

15747000 WULIK RIVER BELOW TUTAK CREEK NEAR KIVALINA

LOCATION.--Lat 67°52'34", long 163°40'28", in NW¹/₄ sec. 34, T. 29 N., R. 22 W. (Noatak D-4 quad), Northwest Arctic Borough, Hydrologic Unit 19050404, on left bank 0.1 mi downstream from Tutak Creek and 25 mi northeast of Kivalina.

DRAINAGE AREA.--705 mi².

PERIOD OF RECORD.--September 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 175 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1050	e210	e115	e80	e49	e29	e26	e26	3260	3160	1720	1090
2	e1200	e185	e115	e78	e48	e28	e26	e29	5250	5210	1690	1010
3	e1100	e170	e110	e78	e47	e28	e26	e32	5020	2700	2020	948
4	e1010	e165	e110	e76	e46	e28	e26	e34	5570	1880	1760	1020
5	e1000	e170	e110	e76	e45	e28	e26	e38	9290	1670	1700	1030
6	e950	e165	e110	e74	e44	e27	e25	e44	12600	1460	1520	1330
7	906	e155	e105	e74	e43	e27	e25	e51	11800	1220	1290	1590
8	896	e145	e105	e72	e42	e27	e25	e64	10300	1020	1110	1870
9	801	e135	e105	e72	e41	e26	e25	e98	8040	888	1190	2180
10	659	e130	e105	e70	e40	e26	e25	e140	8880	797	1210	2540
11	654	e130	e100	e70	e39	e26	e25	e140	8180	828	1130	2840
12	699	e130	e100	e68	e38	e26	e25	e130	9290	923	1010	2230
13	588	e125	e100	e68	e37	e26	e25	e110	7050	846	908	1800
14	515	e125	e98	e66	e36	e26	e25	e94	5170	756	885	1480
15	533	e120	e96	e66	e35	e26	e25	e83	4260	674	942	1380
16	e500	e120	e96	e64	e34	e26	e25	e74	3010	614	1160	1290
17	e460	e120	e94	e64	e34	e26	e24	e66	3210	544	1200	1150
18	e400	e120	e94	e62	e33	e26	e24	e60	3410	488	1110	1090
19	e345	e120	e92	e62	e33	e26	e24	e60	2630	442	1040	1010
20	e300	e120	e92	e60	e32	e26	e24	e63	2120	409	1030	879
21	e275	e115	e90	e60	e32	e26	e24	e70	1990	384	940	788
22	e285	e115	e90	e58	e31	e26	e24	e79	1980	390	916	696
23	e300	e115	e88	e58	e31	e26	e24	e100	1760	1800	2080	637
24	e315	e115	e88	e56	e30	e26	e24	e150	1450	3580	2970	e583
25	e330	e115	e86	e56	e30	e26	e24	e300	1360	2710	2330	e510
26	e330	e115	e86	e54	e29	e25	e24	e900	1370	3160	2050	e470
27	e320	e115	e84	e54	e29	e25	e24	1770	1140	2390	1890	e435
28	e305	e115	e84	e52	e29	e25	e24	996	953	1740	1580	502
29	e285	e115	e82	e52	---	e25	e24	753	1100	1540	1440	525
30	e265	e115	e82	e50	---	e25	e25	765	2630	1690	1360	610
31	e240	---	e80	e50	---	e26	---	1890	---	1570	1230	---
TOTAL	17816	4010	2992	2000	1037	815	742	9209	144073	47483	44411	35513
MEAN	575	134	96.5	64.5	37.0	26.3	24.7	297	4802	1532	1433	1184
MAX	1200	210	115	80	49	29	26	1890	12600	5210	2970	2840
MIN	240	115	80	50	29	25	24	26	953	384	885	435
AC-FT	35340	7950	5930	3970	2060	1620	1470	18270	285800	94180	88090	70440
CFSM	0.82	0.19	0.14	0.09	0.05	0.04	0.04	0.42	6.81	2.17	2.03	1.68
IN.	0.94	0.21	0.16	0.11	0.05	0.04	0.04	0.49	7.60	2.51	2.34	1.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)#

	MEAN	535	136	64.6	37.0	24.9	19.2	16.7	1783	3253	1688	2783	1699
MAX	1542	290	111	70.0	49.3	39.5	38.8	4856	6669	6144	8458	3076	
(WY)	1994	1994	1986	1986	1986	1991	1991	1993	1989	1989	1994	2002	
MIN	207	63.1	34.2	21.5	12.0	9.10	9.00	20.6	1372	424	496	386	
(WY)	1997	2002	1988	1992	1992	1992	1992	1989	1988	1999	1991	1991	

See Period of Record
e Estimated

15747000 WULIK RIVER BELOW TUTAK CREEK NEAR KIVALINA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003#	
ANNUAL TOTAL	309817		310101			
ANNUAL MEAN	849		850		1008	
HIGHEST ANNUAL MEAN					1843	
LOWEST ANNUAL MEAN					530	
HIGHEST DAILY MEAN	16800		12600		29400	
LOWEST DAILY MEAN	a20	May 26	b24	Jun 6	c9.0	Aug 17 1994
ANNUAL SEVEN-DAY MINIMUM	20	Apr 6	24	Apr 17	9.0	Apr 30 1985
MAXIMUM PEAK FLOW			15900		38500	
MAXIMUM PEAK STAGE			9.45		12.21	
ANNUAL PEAK STAGE					d13.5	
ANNUAL RUNOFF (AC-FT)	614500		615100		730000	
ANNUAL RUNOFF (CFSM)	1.20		1.21		1.43	
ANNUAL RUNOFF (INCHES)	16.35		16.36		19.42	
10 PERCENT EXCEEDS	2100		2030		2820	
50 PERCENT EXCEEDS	120		120		120	
90 PERCENT EXCEEDS	21		26		15	

See Period of Record

a From Apr. 6-25

b From Apr. 17-29

c From Apr. 30 to May 10, 1985, and Mar. 4 to May 17, 1992

d From floodmarks, backwater from snow and ice

e Estimated

15798700 NUNAVAK CREEK NEAR BARROW

LOCATION.--Lat 71°15'35", long 156°46'57", in SE $\frac{1}{4}$ sec. 18, T. 22 N., R. 18 W. (Barrow B-4 quad), North Slope Borough, Hydrologic Unit 19060202, 0.7 mi downstream from Emaiksoun Lake, 1.2 mi upstream from Nunavak Bay, and 2.3 mi south of Barrow Post Office.

DRAINAGE AREA.--2.79 mi², approximately.

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR AK-76-1: 1972.

GAGE.--Water-stage recorder. Elevation of gage is 19 ft above sea level, from topographic map. Prior to May 29, 1982, at site 10 ft downstream at datum about 29.6 ft higher.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.4	0.24	0.11
2	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	2.5	0.20	0.12
3	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	2.4	0.18	0.12
4	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	2.1	0.17	0.14
5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.1	2.4	0.19	0.15
6	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e6.0	3.2	0.17	0.14
7	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e10	3.1	0.16	0.17
8	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e14	3.2	0.13	0.64
9	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e25	3.0	0.13	0.67
10	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e17	2.8	0.17	17
11	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	11	2.8	0.16	12
12	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	7.7	4.2	0.14	7.5
13	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	6.2	3.5	0.12	3.5
14	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	4.6	3.5	0.11	4.5
15	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	3.2	2.2	0.19	7.5
16	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	2.6	1.7	0.18	5.5
17	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	2.1	1.3	0.20	e1.7
18	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.9	1.4	0.19	e1.1
19	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.8	2.3	0.18	e0.75
20	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.6	0.98	0.16	e0.55
21	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.5	0.44	0.15	e0.42
22	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.3	0.31	0.17	e0.34
23	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.2	0.33	0.18	e0.28
24	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.1	0.37	0.17	e0.24
25	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.1	0.28	0.16	e0.20
26	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.2	0.22	0.13	e0.18
27	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	1.1	0.19	0.12	e0.20
28	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.93	0.17	0.10	e0.17
29	e0.00	e0.00	e0.00	e0.00	---	e0.00	e0.00	e0.00	0.87	0.16	0.10	e0.15
30	e0.00	e0.00	e0.00	e0.00	---	e0.00	e0.00	e0.00	1.1	0.35	0.11	e0.13
31	e0.00	---	e0.00	e0.00	---	e0.00	---	e0.00	---	0.31	0.12	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	129.20	53.11	4.88	66.17
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.31	1.71	0.16	2.21
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	4.2	0.24	17
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.10	0.11
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	256	105	9.7	131
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54	0.61	0.06	0.79
IN.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.71	0.07	0.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	MEAN	0.029	0.000	0.000	0.000	0.000	0.000	0.27	8.27	1.99	0.86	1.05
MAX	0.22	0.000	0.000	0.000	0.000	0.000	0.000	3.55	17.3	9.93	6.79	8.34
(WY)	1980	1972	1972	1972	1972	1972	1972	1990	1999	1981	1994	1986
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.73	0.091	0.001	0.000
(WY)	1972	1972	1972	1972	1972	1972	1972	1992	1992	1983	1983	1975

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1972 - 2003

ANNUAL TOTAL	278.17	253.36	
ANNUAL MEAN	0.76	0.69	1.03
HIGHEST ANNUAL MEAN			2.26
LOWEST ANNUAL MEAN			0.26
HIGHEST DAILY MEAN	18 May 26	25 Jun 9	110 Jun 14 1994
LOWEST DAILY MEAN	a0.00 Jan 1	b0.00 Oct 1	c0.00 Oct 1 1971
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1971
MAXIMUM PEAK FLOW		d	f31 Jun 10 1980
MAXIMUM PEAK STAGE		g	h34.36 Jun 11 1994
ANNUAL RUNOFF (AC-FT)	552	503	748
ANNUAL RUNOFF (CFSM)	0.27	0.25	0.37
ANNUAL RUNOFF (INCHES)	3.71	3.38	5.03
10 PERCENT EXCEEDS	2.9	1.8	2.0
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

- a From Jan. 1 to May 22 and Oct. 1 to Dec. 31
b From Oct. 1 to Jun. 4
c No flow during winter months and at times during summer months
d Undetermined see highest daily mean
e Estimated
f At site and datum then in use, flow over snow
g Undetermined
h Backwater from snow and ice

15875000 COLVILLE RIVER AT UMIAT

LOCATION.--Lat 69°21'38", long 152°07'18", in NW¹/₄, sec. 15, T. 1 S., R. 1 W. (Umiat B-4 quad), Hydrologic Unit 19060303, on left bank, 1 mile upstream from Seabee Creek, and 1.0 mile east of Umiat.

DRAINAGE AREA.--13,830 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 275 ft above sea level, from topographic map.

EXTREMES FOR WATER YEAR 2002.-- Maximum discharge for period, August 20 to September 30, 37,300 ft³/s, August 20, gage-height, 50.53 ft. Minimum not determined, occurs during the winter.

REMARKS.--Records fair except for estimated daily discharges, which are poor. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	22300
2	---	---	---	---	---	---	---	---	---	---	---	19600
3	---	---	---	---	---	---	---	---	---	---	---	17200
4	---	---	---	---	---	---	---	---	---	---	---	15300
5	---	---	---	---	---	---	---	---	---	---	---	14000
6	---	---	---	---	---	---	---	---	---	---	---	13200
7	---	---	---	---	---	---	---	---	---	---	---	14700
8	---	---	---	---	---	---	---	---	---	---	---	22700
9	---	---	---	---	---	---	---	---	---	---	---	25100
10	---	---	---	---	---	---	---	---	---	---	---	26300
11	---	---	---	---	---	---	---	---	---	---	---	26100
12	---	---	---	---	---	---	---	---	---	---	---	24400
13	---	---	---	---	---	---	---	---	---	---	---	24700
14	---	---	---	---	---	---	---	---	---	---	---	23600
15	---	---	---	---	---	---	---	---	‡19800	---	---	22800
16	---	---	---	---	---	---	---	---	---	---	---	29800
17	---	---	---	---	---	---	---	---	---	---	---	29600
18	---	---	---	---	---	---	---	---	---	---	---	29000
19	---	---	---	---	---	---	---	---	---	---	---	30400
20	---	---	---	---	---	---	---	---	---	---	‡37300	28900
21	---	---	---	---	---	---	---	---	---	---	e31000	24000
22	---	---	---	---	---	---	---	---	---	---	28000	20000
23	---	---	---	---	---	---	---	---	---	---	25600	17000
24	---	---	---	---	---	---	---	---	---	---	24000	15000
25	---	---	---	---	---	---	---	---	---	---	21500	14000
26	---	---	---	---	---	---	---	---	---	---	18900	13200
27	---	---	---	---	---	---	---	---	---	---	16700	13600
28	---	---	---	---	---	---	---	---	---	---	15000	17200
29	---	---	---	---	---	---	---	---	---	---	13900	17900
30	---	---	---	---	---	---	---	---	---	---	15500	19300
31	---	---	---	---	---	---	---	---	---	---	21600	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	630900
MEAN	---	---	---	---	---	---	---	---	---	---	---	21030
MAX	---	---	---	---	---	---	---	---	---	---	---	30400
MIN	---	---	---	---	---	---	---	---	---	---	---	13200
AC-FT	---	---	---	---	---	---	---	---	---	---	---	1251000
CFSM	---	---	---	---	---	---	---	---	---	---	---	1.52
IN.	---	---	---	---	---	---	---	---	---	---	---	1.70

‡ Result of discharge measurement
e Estimated

15875000 COLVILLE RIVER AT UMIAT—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20100	e1800	e270	e14	e0.00	e0.00	e0.00	e0.00	e10000	22500	13700	19300
2	20900	e1700	e250	e12	e0.00	e0.00	e0.00	e0.00	e15000	18400	14400	17600
3	20300	e1600	e230	e11	e0.00	e0.00	e0.00	e0.00	e25000	27500	15300	17800
4	18200	e1500	e210	e10	e0.00	e0.00	e0.00	e0.00	e40000	101000	15200	19400
5	15900	e1400	e200	e9.0	e0.00	e0.00	e0.00	e0.00	63100	80100	20100	20200
6	13700	e1300	e180	e8.0	e0.00	e0.00	e0.00	e0.00	102000	53600	21700	23100
7	11500	e1300	e170	e7.0	e0.00	e0.00	e0.00	e0.00	173000	43300	25000	26200
8	9830	e1200	e160	e6.5	e0.00	e0.00	e0.00	e0.00	207000	33400	20300	24000
9	8480	e1100	e140	e5.5	e0.00	e0.00	e0.00	e1.0	217000	23700	15900	21800
10	7350	e1000	e130	e5.0	e0.00	e0.00	e0.00	e1.5	225000	17900	13100	22900
11	e6700	e1000	e120	e4.5	e0.00	e0.00	e0.00	e2.0	206000	14500	11400	23400
12	e6200	e900	e110	e4.0	e0.00	e0.00	e0.00	e3.0	160000	12500	12000	19500
13	e5700	e850	e100	e3.5	e0.00	e0.00	e0.00	e5.0	106000	11300	29700	15800
14	e5100	e800	e95	e3.0	e0.00	e0.00	e0.00	e8.0	69300	10600	45800	13000
15	e4800	e750	e85	e2.5	e0.00	e0.00	e0.00	e15	49700	10000	43400	11000
16	e4500	e700	e80	e2.0	e0.00	e0.00	e0.00	e25	43100	10400	40300	9700
17	e4200	e680	e75	e1.5	e0.00	e0.00	e0.00	e50	39700	11800	39700	9220
18	e4000	e620	e65	e1.0	e0.00	e0.00	e0.00	e80	32700	13800	62200	8850
19	e3800	e600	e60	e0.00	e0.00	e0.00	e0.00	e150	28000	14900	77700	8320
20	e3600	e550	e52	e0.00	e0.00	e0.00	e0.00	e250	26600	13700	61600	7700
21	e3500	e520	e48	e0.00	e0.00	e0.00	e0.00	e400	19800	12100	44100	6990
22	e3200	e500	e42	e0.00	e0.00	e0.00	e0.00	e600	16900	11000	33700	5990
23	e3000	e470	e38	e0.00	e0.00	e0.00	e0.00	e800	16100	9960	28200	5150
24	e2900	e430	e34	e0.00	e0.00	e0.00	e0.00	e900	16200	9150	32200	4700
25	e2800	e400	e31	e0.00	e0.00	e0.00	e0.00	e850	15300	8860	43200	4230
26	e2600	e380	e28	e0.00	e0.00	e0.00	e0.00	e800	15100	13700	47600	3840
27	e2500	e350	e25	e0.00	e0.00	e0.00	e0.00	e750	16200	38200	39500	3540
28	e2300	e330	e22	e0.00	e0.00	e0.00	e0.00	e700	20800	37800	36400	3250
29	e2200	e310	e20	e0.00	---	e0.00	e0.00	e3000	29000	25900	32600	3130
30	e2100	e290	e18	e0.00	---	e0.00	e0.00	e5000	29200	18700	27300	3200
31	e1900	---	e16	e0.00	---	e0.00	---	e7000	---	14600	22600	---
TOTAL	223860	25330	3104	110.00	0.00	0.00	0.00	21390.50	2032800	744870	985900	382810
MEAN	7221	844	100	3.55	0.000	0.000	0.000	690	67760	24030	31800	12760
MAX	20900	1800	270	14	0.00	0.00	0.00	7000	225000	101000	77700	26200
MIN	1900	290	16	0.00	0.00	0.00	0.00	0.00	10000	8860	11400	3130
AC-FT	444000	50240	6160	218	0.00	0.00	0.00	42430	4032000	1477000	1956000	759300
CFSM	0.52	0.06	0.01	0.00	0.00	0.00	0.00	0.05	4.90	1.74	2.30	0.92
IN.	0.60	0.07	0.01	0.00	0.00	0.00	0.00	0.06	5.47	2.00	2.65	1.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)#

MEAN	7221	844	100	3.55	0.000	0.000	0.000	690	67760	24030	31800	16900
MAX	7221	844	100	3.55	0.000	0.000	0.000	690	67760	24030	31800	21030
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002
MIN	7221	844	100	3.55	0.000	0.000	0.000	690	67760	24030	31800	12760
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 2002 - 2003#

ANNUAL TOTAL	4420174.50	
ANNUAL MEAN	12110	12110
HIGHEST ANNUAL MEAN		12110
LOWEST ANNUAL MEAN		12110
HIGHEST DAILY MEAN	225000	225000
LOWEST DAILY MEAN	a0.00	b0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00
MAXIMUM PEAK FLOW	c234000	c234000
MAXIMUM PEAK STAGE	c58.62	c58.62
MAXIMUM PEAK STAGE	c58.68	c58.68
ANNUAL RUNOFF (AC-FT)	8767000	8773000
ANNUAL RUNOFF (CFSM)	0.88	0.88
ANNUAL RUNOFF (INCHES)	11.89	11.90
10 PERCENT EXCEEDS	32400	32400
50 PERCENT EXCEEDS	550	550
90 PERCENT EXCEEDS	0.00	0.00

See Period of Record, partial years used in monthly statistics

a Jan. 19 to May 8

b No flow during winter months

c Peak discharge adjusted to exclude surge; peak stage not adjusted to exclude surge

e Estimated

WATER-QUALITY RECORDS

WATER TEMPERATURE: Maximum, 16.0°C, June 29-30, 2003; minimum 0.0°C on many days during winter.

[illegible]

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[illegible]

15875000 COLVILLE RIVER AT UMIAT—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1.0	0.0	0.0	15.5	14.0	14.5	9.5	8.0	9.0	8.0	7.0	7.5
2	2.0	0.5	1.0	14.0	13.0	13.5	9.5	8.5	9.0	7.0	6.5	6.5
3	3.0	1.0	2.0	13.0	10.0	11.5	9.0	8.0	8.5	7.0	6.5	6.5
4	2.5	1.5	2.0	10.0	8.5	9.5	10.0	8.0	9.0	7.0	6.5	6.5
5	3.5	0.5	2.0	9.5	9.0	9.5	9.5	8.5	9.0	6.5	6.0	6.0
6	4.0	2.0	3.0	11.5	9.5	10.5	9.5	8.0	8.5	6.0	5.5	5.5
7	4.0	3.0	3.5	11.5	10.5	11.0	9.5	8.5	9.0	6.0	5.5	6.0
8	5.0	3.5	4.0	13.0	11.5	12.0	10.5	8.0	9.0	6.0	5.5	6.0
9	6.0	4.5	5.5	15.0	12.5	13.5	11.5	10.0	11.0	5.5	4.5	5.0
10	6.5	5.0	5.5	14.5	13.5	14.0	12.0	11.5	11.5	5.0	4.0	4.0
11	6.5	5.5	6.0	14.5	13.0	13.5	11.5	9.5	10.5	4.0	3.0	3.5
12	6.5	5.5	5.5	14.5	12.5	13.5	9.5	8.5	8.5	3.0	2.0	2.5
13	7.0	5.5	6.0	15.0	12.5	13.5	8.5	7.0	7.5	2.5	2.5	2.5
14	7.5	6.0	7.0	13.5	11.5	12.0	7.0	6.0	6.5	3.0	2.5	2.5
15	9.0	7.0	8.0	11.5	10.0	10.5	8.5	7.0	7.5	3.0	3.0	3.0
16	10.5	8.5	9.5	10.5	9.0	10.0	9.5	8.0	8.5	3.0	3.0	3.0
17	11.0	9.5	10.0	10.0	9.0	9.5	9.5	9.0	9.0	3.0	2.5	2.5
18	10.5	9.0	9.5	12.0	9.0	10.0	9.0	8.5	8.5	2.5	2.0	2.0
19	9.5	8.5	9.0	13.5	11.0	12.0	8.5	8.0	8.5	2.5	2.0	2.0
20	10.0	8.0	9.0	15.0	12.5	13.5	9.0	8.5	8.5	2.5	2.0	2.0
21	11.0	8.0	9.5	15.5	13.5	14.5	9.0	8.0	8.5	2.5	2.0	2.0
22	12.5	9.5	11.0	15.0	14.0	14.5	9.0	8.0	8.5	2.5	2.0	2.0
23	13.5	11.5	12.5	14.0	13.5	13.5	8.5	8.0	8.5	2.5	2.0	2.0
24	13.5	11.5	12.5	13.5	13.0	13.5	8.5	7.5	8.0	2.0	1.5	2.0
25	15.0	12.0	13.5	13.0	11.0	12.0	7.5	6.5	7.0	2.0	1.5	2.0
26	14.5	13.5	14.5	11.0	10.5	11.0	7.0	6.0	6.5	2.0	1.5	1.5
27	15.5	14.0	14.5	11.0	8.5	9.5	6.5	6.0	6.0	2.0	1.5	1.5
28	15.5	14.0	14.5	9.0	7.5	8.0	7.5	6.0	6.5	1.5	0.5	1.0
29	16.0	14.5	15.5	9.0	8.0	8.5	8.5	7.0	7.5	2.5	0.5	1.0
30	16.0	14.5	15.0	8.5	8.0	8.0	8.5	8.0	8.0	1.0	0.5	0.5
31	---	---	---	9.0	8.0	8.5	8.5	8.0	8.0	---	---	---
MONTH	16.0	0.0	8.0	15.5	7.5	11.6	12.0	6.0	8.4	8.0	0.5	3.4

15896000 KUPARUK RIVER NEAR DEADHORSE

LOCATION.--Lat 70°16'54", long 148°57'35", in NE¹/₄ sec. 25, T. 11 N., R. 12 E. (Beechey Point B-4 quad), North Slope Borough, Hydrologic Unit 19060401, on right bank, 1.8 mi northeast of SE Eileen State No. 1, 2.1 mi south of Frontier Service City Camp, 10 mi upstream from mouth on Gwyder Bay, 3 miles upstream of the Spine Road, and 13 mi northwest of Deadhorse.

DRAINAGE AREA.--3,130 mi².

PERIOD OF RECORD.--June 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is at sea level (levels by private engineering firm).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Winter low flow may be discontinuous as the flow probably varies significantly along the main stem of the river due to the formation of aufeis in the vicinity of springs. Flow may cease at other points. GOES satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5680	e200	e9.0	e0.0	e0.0	e0.0	e0.0	e0.0	e500	1180	3480	3090
2	4940	e180	e8.0	e0.0	e0.0	e0.0	e0.0	e0.0	e2000	1060	3170	2870
3	4340	e160	e8.0	e0.0	e0.0	e0.0	e0.0	e0.0	e4000	1020	2970	2750
4	3890	e150	e7.0	e0.0	e0.0	e0.0	e0.0	e0.0	e9000	1020	2960	2700
5	3500	e140	e6.0	e0.0	e0.0	e0.0	e0.0	e0.0	e20000	3830	2920	2680
6	e3100	e120	e6.0	e0.0	e0.0	e0.0	e0.0	e0.0	e38000	7050	2660	2780
7	e2800	e110	e5.0	e0.0	e0.0	e0.0	e0.0	e0.0	e43000	5380	2620	2880
8	e2600	e100	e5.0	e0.0	e0.0	e0.0	e0.0	e0.0	31400	4590	2410	3200
9	e2300	e90	e4.0	e0.0	e0.0	e0.0	e0.0	e0.0	21400	4050	2300	3390
10	e2100	e80	e4.0	e0.0	e0.0	e0.0	e0.0	e0.0	16500	4390	2190	3500
11	e1900	e70	e3.0	e0.0	e0.0	e0.0	e0.0	e0.0	12100	3690	2180	3490
12	e1700	e65	e3.0	e0.0	e0.0	e0.0	e0.0	e0.0	9150	3010	2380	3480
13	e1500	e60	e3.0	e0.0	e0.0	e0.0	e0.0	e0.0	7090	2490	2800	3360
14	e1400	e55	e3.0	e0.0	e0.0	e0.0	e0.0	e0.0	5780	2160	4500	3180
15	e1200	e48	e2.0	e0.0	e0.0	e0.0	e0.0	e0.0	4900	2170	6370	2940
16	e1100	e44	e2.0	e0.0	e0.0	e0.0	e0.0	e0.0	4330	2250	5960	2670
17	e1000	e39	e2.0	e0.0	e0.0	e0.0	e0.0	e0.0	3950	3110	4710	2460
18	e890	e35	e2.0	e0.0	e0.0	e0.0	e0.0	e0.0	3630	3670	3780	e2200
19	e800	e31	e2.0	e0.0	e0.0	e0.0	e0.0	e0.0	3320	3200	3670	e2000
20	e750	e29	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	3000	3140	4530	e1900
21	e650	e26	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	2760	3280	4310	e1750
22	e580	e23	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	2490	2720	3780	e1600
23	e520	e21	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	2190	2320	3310	e1500
24	e470	e19	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	1930	1970	2970	e1400
25	e420	e17	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	1780	1780	2780	e1300
26	e380	e15	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	1650	1790	2920	e1250
27	e340	e14	e1.0	e0.0	e0.0	e0.0	e0.0	e0.0	1550	2810	3540	e1200
28	e310	e13	e0.0	e0.0	e0.0	e0.0	e0.0	e0.0	1490	7440	3610	e1150
29	e280	e11	e0.0	e0.0	---	e0.0	e0.0	e0.0	1440	6680	3510	e1100
30	e250	e10	e0.0	e0.0	---	e0.0	e0.0	e10	1350	5090	3540	e1050
31	e230	---	e0.0	e0.0	---	e0.0	---	e100	---	4230	3410	---
TOTAL	51920	1975	92.0	0.0	0.0	0.0	0.0	110.0	261680	102570	106240	70820
MEAN	1675	65.8	2.97	0.000	0.000	0.000	0.000	3.55	8723	3309	3427	2361
MAX	5680	200	9.0	0.0	0.0	0.0	0.0	100	43000	7440	6370	3500
MIN	230	10	0.0	0.0	0.0	0.0	0.0	0.0	500	1020	2180	1050
MED	1100	46	2.0	0.0	0.0	0.0	0.0	0.0	3790	3110	3310	2680
AC-FT	103000	3920	182	0.00	0.00	0.00	0.00	218	519000	203400	210700	140500
CFSM	0.54	0.02	0.00	0.00	0.00	0.00	0.00	0.00	2.79	1.06	1.09	0.75
IN.	0.62	0.02	0.00	0.00	0.00	0.00	0.00	0.00	3.11	1.22	1.26	0.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)#

	MEAN	280	22.2	2.68	0.96	0.94	0.94	0.94	1640	10420	1183	1797	1591
MAX	1675	174	24.3	10.0	10.0	10.0	10.0	10.0	8877	26360	3309	5229	4863
(WY)	2003	1973	1973	1972	1972	1972	1972	1972	1996	1982	2003	2002	1997
MIN	10.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	726	300	127	192
(WY)	1975	1977	1977	1976	1976	1975	1975	1975	1975	1990	1971	1990	1974

See Period of Record, partial years used in monthly statistics
e Estimated

5896000 KUPARUK RIVER NEAR DEADHORSE—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003#	
ANNUAL TOTAL	651133.0		595407.0			
ANNUAL MEAN	1784		1631		1395	
HIGHEST ANNUAL MEAN					2304 1982	
LOWEST ANNUAL MEAN					658 1974	
HIGHEST DAILY MEAN	50000	May 24	43000	Jun 7	100000	Jun 7 1978
LOWEST DAILY MEAN	a0.0	Jan 1	b0.0	Dec 28	c0.0	Mar 1 1975
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Dec 28	0.00	Mar 1 1975
MAXIMUM PEAK FLOW			d		118000	Jun 7 1978
MAXIMUM PEAK STAGE			f36.0	Jun 7	37.60	Jun 7 1978
ANNUAL RUNOFF (AC-FT)	1292000		1181000		1011000	
ANNUAL RUNOFF (CFSM)	0.57		0.52		0.45	
ANNUAL RUNOFF (INCHES)	7.74		7.08		6.06	
10 PERCENT EXCEEDS	3940		3780		2870	
50 PERCENT EXCEEDS	31		11		10	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

See Period of Record, partial years used in monthly statistics

a From Jan. 1 to May 20

b From Dec. 28 to May 29

c No flow during winter months

d Not determined, occurred during period of backwater from ice and snow, see highest daily mean

f From floodmarks, backwater from snow and ice

15906000 SAGAVANIRKTOK RIVER TRIBUTARY NEAR PUMP STATION 3

LOCATION.--Lat 68°41'13", long 149°05'42", in SW¹/₄ sec. 4, T. 9 S., R. 13 E. (Phillip Smith Mountains C-4 quad), Hydrologic Unit 19060402, on right bank 30 ft downstream from culvert, at mi 297.9 Dalton Highway, 14 mi south of Pump Station 3, and 16.5 mi upstream from mouth.

DRAINAGE AREA.--28.4 mi².

PERIOD OF RECORD.--Annual maximums, water years 1979-87. October 1987 to current year.(No winter record in water year 1989.)

REVISED RECORDS.--WDR AK-96-1:1992(M), 1994(M), 1995(M).

GAGE.--Water stage recorder. Elevation of gage is 2,475 ft above sea level, from topographic map. Crest-stage gage only, August 15, 1979 to September 12, 1987, 30 ft upstream of culvert at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	21	53	9.2	46
2	e3.8	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	18	44	8.4	39
3	e3.4	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	16	54	7.6	34
4	e3.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	16	51	6.5	30
5	e2.8	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	16	65	6.3	28
6	e2.5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	16	74	7.2	28
7	e2.2	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	16	108	7.1	113
8	e2.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.20	14	94	7.1	122
9	e1.8	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.0	13	68	9.6	84
10	e1.6	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.8	16	55	12	60
11	e1.5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.4	15	46	16	44
12	e1.3	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.3	12	37	34	34
13	e1.2	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.3	11	36	60	30
14	e1.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.3	37	39	48	26
15	e0.90	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.2	54	33	489	23
16	e0.80	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.2	42	28	871	22
17	e0.70	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.4	31	24	467	20
18	e0.60	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e2.0	24	18	241	20
19	e0.50	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.0	18	16	165	19
20	e0.50	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e7.0	17	16	116	18
21	e0.40	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e20	17	40	88	17
22	e0.30	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e50	45	39	80	18
23	e0.20	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e140	71	39	75	17
24	e0.20	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e280	78	33	81	16
25	e0.10	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	249	54	26	91	14
26	e0.10	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	142	33	23	93	14
27	e0.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	76	25	19	84	22
28	e0.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	51	52	16	69	27
29	e0.0	e0.00	e0.00	e0.00	---	e0.00	e0.00	40	78	14	74	23
30	e0.0	e0.00	e0.00	e0.00	---	e0.00	e0.00	24	64	12	71	20
31	e0.0	---	e0.00	e0.00	---	e0.00	---	26	---	10	56	---
TOTAL	37.40	0.00	0.00	0.00	0.00	0.00	0.00	1122.10	940	1230	3450.0	1028
MEAN	1.21	0.000	0.000	0.000	0.000	0.000	0.000	36.2	31.3	39.7	111	34.3
MAX	4.0	0.00	0.00	0.00	0.00	0.00	0.00	280	78	108	871	122
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	10	6.3	14
AC-FT	74	0.00	0.00	0.00	0.00	0.00	0.00	2230	1860	2440	6840	2040
CFSM	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.27	1.10	1.40	3.92	1.21
IN.	0.05	0.00	0.00	0.00	0.00	0.00	0.00	1.47	1.23	1.61	4.52	1.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)#

	MEAN	2.62	0.000	0.000	0.000	0.000	0.000	0.000	36.0	53.7	34.7	49.6	28.3
MAX	6.84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	95.6	150	81.6	111	77.4
(WY)	1999	1988	1988	1988	1988	1988	1988	1988	1995	1992	1999	2002	1997
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	10.4	8.19	3.17	9.56
(WY)	1988	1988	1988	1988	1988	1988	1988	1988	2001	1988	1990	1990	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1988 - 2002#
ANNUAL TOTAL	5314.60	7807.50	
ANNUAL MEAN	14.6	21.4	17.4
HIGHEST ANNUAL MEAN			27.9
LOWEST ANNUAL MEAN			7.49
HIGHEST DAILY MEAN	199 Jun 8	871 Aug 16	871 Aug 16 2002
LOWEST DAILY MEAN	a0.00 Jan 1	b0.00 Oct 27	c0.00 Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 27	0.00 Oct 1 1987
MAXIMUM PEAK FLOW		de1810 Aug 15	de1810 Aug 15 2002
MAXIMUM PEAK STAGE		21.90 Aug 15	21.90 Aug 15 2002
ANNUAL RUNOFF (AC-FT)	10540	15490	12590
ANNUAL RUNOFF (CFSM)	0.51	0.75	0.61
ANNUAL RUNOFF (INCHES)	6.96	10.23	8.31
10 PERCENT EXCEEDS	49	55	49
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

See Period of Record, partial years used in monthly statistics

a From Jan. 1 to Jun. 5

b From Oct. 27 to May 12

c No flow during winter months

d Estimated, from rating extended above 450 ft³/s on basis of slope-area measurement of peak discharge.

e Estimated

15906000 SAGAVANIRKTOK RIVER TRIBUTARY NEAR PUMP STATION 3—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	e0.20	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e70	12	92	e60
2	16	e0.20	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e150	11	85	e70
3	e13	e0.10	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	266	49	76	e60
4	e11	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	322	84	72	e45
5	e9.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	440	62	72	e38
6	e8.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	526	43	70	e34
7	e7.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	494	111	67	e30
8	e6.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	415	130	74	e26
9	e5.2	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	312	77	63	e24
10	e4.6	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	200	51	62	e22
11	e4.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	129	42	194	e20
12	e3.5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	86	38	452	e19
13	e3.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	59	48	433	e18
14	e2.6	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	43	70	e250	e17
15	e2.3	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	35	94	e150	e16
16	e2.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	38	89	e100	e15
17	e1.7	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	37	75	e150	e14
18	e1.5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	34	73	e140	e13
19	e1.3	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	30	76	e110	e13
20	e1.1	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	24	56	e80	e12
21	e1.0	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	21	41	e60	e12
22	e0.90	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	19	33	e55	e11
23	e0.80	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	16	31	e60	e11
24	e0.70	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	15	33	e60	e10
25	e0.60	e0.00	e0.00	e0.00	e0.00	e0.00	e0.10	e0.00	14	103	e60	e9.5
26	e0.50	e0.00	e0.00	e0.00	e0.00	e0.00	e0.10	e0.20	15	332	e65	e9.0
27	e0.50	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.50	16	244	e70	e9.0
28	e0.40	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e1.2	16	183	e60	e8.5
29	e0.40	e0.00	e0.00	e0.00	---	e0.00	e0.00	e3.0	14	124	e50	e12
30	e0.30	e0.00	e0.00	e0.00	---	e0.00	e0.00	e8.0	13	103	e45	e10
31	e0.30	---	e0.00	e0.00	---	e0.00	---	e20	---	95	e40	---
TOTAL	126.20	0.50	0.00	0.00	0.00	0.00	0.20	32.90	3869	2613	3417	668.0
MEAN	4.07	0.017	0.000	0.000	0.000	0.000	0.007	1.06	129	84.3	110	22.3
MAX	17	0.20	0.00	0.00	0.00	0.00	0.10	20	526	332	452	70
MIN	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	11	40	8.5
AC-FT	250	1.0	0.00	0.00	0.00	0.00	0.4	65	7670	5180	6780	1320
CFSM	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.04	4.54	2.97	3.88	0.78
IN.	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.04	5.07	3.42	4.48	0.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)#

MEAN	2.71	0.001	0.000	0.000	0.000	0.000	0.000	33.7	58.7	37.8	53.4	28.0
MAX	6.84	0.017	0.000	0.000	0.000	0.000	0.007	95.6	150	84.3	111	77.4
(WY)	1999	2003	1988	1988	1988	1988	2003	1995	1992	2003	2002	1997
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	10.4	8.19	3.17	9.56
(WY)	1988	1988	1988	1988	1988	1988	1988	2001	1988	1990	1990	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR				FOR 2003 WATER YEAR				WATER YEARS 1988 - 2003#			
ANNUAL TOTAL	7896.80				10726.80							
ANNUAL MEAN	21.6				29.4				18.2			
HIGHEST ANNUAL MEAN									29.4			
LOWEST ANNUAL MEAN									7.49			
HIGHEST DAILY MEAN	871				526				871			
LOWEST DAILY MEAN	a0.00				b0.00				c0.00			
ANNUAL SEVEN-DAY MINIMUM	0.00				0.00				0.00			
MAXIMUM PEAK FLOW					664				de1810			
MAXIMUM PEAK STAGE					20.92				21.90			
ANNUAL RUNOFF (AC-FT)	15660				21280				13170			
ANNUAL RUNOFF (CFSM)	0.76				1.03				0.64			
ANNUAL RUNOFF (INCHES)	10.34				14.05				8.70			
10 PERCENT EXCEEDS	55				76				51			
50 PERCENT EXCEEDS	0.00				0.00				0.00			
90 PERCENT EXCEEDS	0.00				0.00				0.00			

See Period of Record, partial years used in monthly statistics

a From Jan. 1 to May 7

b From Nov. 4 to Apr. 24 and from Apr. 27 to May 25

c No flow during winter months

d Estimated, from rating extended above 450 ft³/s on basis of slope-area measurement of peak discharge

e Estimated

15908000 SAGAVANIRKTOK RIVER NEAR PUMP STATION 3

LOCATION.--Lat 69°00'54", long 148°49'02", in NW¹/₄ sec. 16, T. 5 S., R. 14 E. (Sagavanirktok River A-4 quad), North Slope Borough, Hydrologic Unit 19060402, on left bank 600 ft east of Dalton Highway at mi 324.7, 6.0 mi upstream from Lupine River, and 15 mi north of Pump Station 3.

DRAINAGE AREA.--1,860 mi², approximately.

PERIOD OF RECORD.--September 1982 to current year.

GAGE.--Water-stage recorder. Elevation is 1,150 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Precipitation gage and air temperature recorder at station, daily values of precipitation and air temperature are available from the computer files of the Alaska Science Center, Water Resources Office. GOES satellite telemetry at station.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. The daily discharge for July 18, 1999 has been revised to 32,000 ft³/s. These figures supersede those published in the reports for 1991, 1992 and 1999.

Date	Discharge (ft ³ /s)	Gage Height (ft)	Date	Discharge (ft ³ /s)	Gage Height (ft)
Jun 24, 1991	18,000	18.28	Jul 18, 1999	34,500	20.43
Aug 27, 1992	36,600	20.67			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e850	e310	e220	e180	e160	e150	e140	e130	e1900	4150	1830	2590
2	e810	e310	e220	e180	e160	e150	e140	e130	e1800	3730	1860	2430
3	e770	e300	e220	e180	e160	e150	e140	e130	e1700	3520	2130	2260
4	e730	e300	e210	e180	e160	e150	e140	e130	e2000	3230	2300	2200
5	e700	e300	e210	e180	e160	e150	e140	e130	e2600	2860	2500	2350
6	e670	e290	e210	e180	e160	e150	e140	e130	2930	2930	2750	3980
7	e640	e290	e210	e180	e160	e150	e140	e130	3040	3930	2370	10400
8	e620	e280	e210	e180	e160	e150	e140	e130	3430	5250	2090	9450
9	e590	e280	e210	e170	e160	e150	e140	e130	3700	5410	2030	6190
10	e570	e270	e200	e170	e160	e150	e140	e130	3910	5050	2180	4810
11	e560	e270	e200	e170	e150	e140	e140	e130	3290	4450	2360	3860
12	e530	e270	e200	e170	e150	e140	e140	e130	2590	3900	2720	3320
13	e520	e260	e200	e170	e150	e140	e140	e130	2250	4410	3250	3040
14	e500	e260	e200	e170	e150	e140	e140	e130	3330	5020	3270	2750
15	e480	e260	e200	e170	e150	e140	e140	e130	4480	4670	8530	2610
16	e470	e260	e200	e170	e150	e140	e140	e130	3790	4270	33000	2460
17	e460	e250	e200	e170	e150	e140	e140	e130	3870	4010	13800	2320
18	e440	e250	e190	e170	e150	e140	e140	e130	3440	4220	8680	2200
19	e430	e250	e190	e170	e150	e140	e130	e140	2740	4060	6530	2120
20	e420	e240	e190	e170	e150	e140	e130	e170	2890	4390	5180	2020
21	e410	e240	e190	e170	e150	e140	e130	e230	2600	4540	4240	1870
22	e400	e240	e190	e170	e150	e140	e130	e460	2320	4820	3640	1760
23	e390	e230	e190	e160	e150	e140	e130	e1000	2890	4690	3170	1710
24	e380	e230	e190	e160	e150	e140	e130	e2500	3860	4410	2890	1640
25	e370	e230	e190	e160	e150	e140	e130	e8000	3650	4070	2750	1610
26	e360	e230	e190	e160	e150	e140	e130	e7000	4260	3690	2780	1570
27	e350	e230	e190	e160	e150	e140	e130	e6000	4690	3040	2920	1770
28	e340	e220	e180	e160	e150	e140	e130	e4700	5450	2620	2970	2100
29	e330	e220	e180	e160	---	e140	e130	e3400	5320	2330	3040	1850
30	e330	e220	e180	e160	---	e140	e130	e2600	4400	2100	3100	1710
31	e320	---	e180	e160	---	e140	---	e2000	---	1940	2810	---
TOTAL	15740	7790	6140	5260	4300	4440	4080	40540	99120	121710	143670	90950
MEAN	508	260	198	170	154	143	136	1308	3304	3926	4635	3032
MAX	850	310	220	180	160	150	140	8000	5450	5410	33000	10400
MIN	320	220	180	160	150	140	130	130	1700	1940	1830	1570
AC-FT	31220	15450	12180	10430	8530	8810	8090	80410	196600	241400	285000	180400
CFSM	0.27	0.14	0.11	0.09	0.08	0.08	0.07	0.70	1.78	2.11	2.49	1.63
IN.	0.31	0.16	0.12	0.11	0.09	0.09	0.08	0.81	1.98	2.43	2.87	1.82

e Estimated

15908000 SAGAVANIRKTOK RIVER NEAR PUMP STATION 3—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)#

MEAN	570	211	82.0	42.7	28.9	24.5	25.5	1264	5791	4756	3934	1927
MAX	1172	358	233	180	154	143	136	3588	9737	7370	6252	3984
(WY)	1996	1996	1998	1998	2002	2002	2002	1993	1992	1995	1987	1997
MIN	279	76.0	4.03	0.000	0.000	0.000	0.000	4.77	3304	2839	1897	883
(WY)	1983	1984	1991	1983	1983	1983	1984	1986	2002	1991	1990	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002#	
ANNUAL TOTAL	537696		543740			
ANNUAL MEAN	1473		1490		1563	
HIGHEST ANNUAL MEAN					2071	
LOWEST ANNUAL MEAN					993	
HIGHEST DAILY MEAN	10900	Jun 11	33000	Aug 16	33000	Aug 16 2002
LOWEST DAILY MEAN	a74	May 20	b130	Apr 19	c0.00	Dec 25 1982
ANNUAL SEVEN-DAY MINIMUM	74	May 20	130	Apr 19	0.00	Dec 25 1982
MAXIMUM PEAK FLOW			d48300	Aug 16	d48300	Aug 16 2002
MAXIMUM PEAK STAGE			21.94	Aug 16	21.94	Aug 16 2002
MAXIMUM PEAK STAGE					f25.68	Jun 8 2000
ANNUAL RUNOFF (AC-FT)	1067000		1079000		1133000	
ANNUAL RUNOFF (CFSM)	0.79		0.80		0.84	
ANNUAL RUNOFF (INCHES)	10.75		10.87		11.42	
10 PERCENT EXCEEDS	5190		4100		4930	
50 PERCENT EXCEEDS	220		240		200	
90 PERCENT EXCEEDS	82		140		0.00	

See Period of Record, partial years used in monthly statistics

a From May 20 to 30

b From Apr. 19 to May 18

c No flow during winter months water years 1983 to 1995

d From rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow at 21.94 ft

e Estimated

f From floodmarks, backwater from ice and snow

15908000 SAGAVANIRKTOK RIVER NEAR PUMP STATION 3—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1590	e570	e280	e180	e130	e96	e72	e62	e700	6240	5080	3490
2	1540	e550	e270	e180	e130	e94	e72	e62	e1500	6860	4850	3520
3	1540	e540	e260	e180	e130	e94	e72	e62	e3500	11800	4570	3860
4	1500	e520	e260	e170	e120	e92	e72	e60	e8000	11400	4310	3740
5	e1400	e510	e250	e170	e120	e92	e72	e60	e10000	7160	4130	3330
6	e1300	e500	e250	e170	e120	e92	e70	e60	e12000	6140	4470	3020
7	e1180	e490	e250	e170	e120	e90	e70	e60	e13000	12800	3950	2750
8	e1050	e470	e240	e170	e120	e90	e70	e60	e14000	14900	4410	2540
9	e980	e460	e240	e160	e120	e90	e70	e60	14000	8840	3980	2380
10	e920	e450	e230	e160	e120	e88	e68	e60	13700	6630	4210	2200
11	e880	e440	e230	e160	e110	e88	e68	e58	12800	6810	7350	2100
12	e860	e420	e230	e160	e110	e86	e68	e58	11600	6360	14100	1950
13	e840	e410	e220	e160	e110	e86	e68	e58	8630	7450	16100	1810
14	e820	e400	e220	e160	e110	e84	e68	e58	6920	7660	12800	1800
15	e800	e390	e220	e150	e110	e84	e66	e58	6540	8270	9470	1750
16	e780	e380	e220	e150	e110	e84	e66	e58	8420	6780	7610	1820
17	e770	e370	e210	e150	e110	e82	e66	e58	8770	5750	11200	1650
18	e760	e370	e210	e150	e110	e82	e66	e58	7740	4950	12700	e1500
19	e740	e360	e210	e150	e100	e82	e66	e58	6660	4810	9540	e1440
20	e730	e350	e210	e150	e100	e80	e66	e58	6240	5090	7380	e1380
21	e720	e340	e200	e140	e100	e80	e64	e58	5660	4910	5750	e1340
22	e700	e330	e200	e140	e100	e80	e64	e58	5630	4740	4900	e1300
23	e690	e330	e200	e140	e100	e78	e64	e58	5240	4760	4490	e1240
24	e680	e320	e200	e140	e100	e78	e64	e58	5510	4430	4120	e1200
25	e670	e310	e190	e140	e100	e76	e64	e60	6250	4990	3880	e1180
26	e660	e310	e190	e140	e98	e76	e64	e66	6590	9990	3520	e1160
27	e650	e300	e190	e140	e98	e76	e64	e74	6710	10600	3430	e1140
28	e640	e290	e190	e130	e96	e76	e62	e82	7100	8640	3730	e1120
29	e620	e290	e190	e130	---	e74	e62	e94	6830	6720	3810	e1120
30	e620	e280	e180	e130	---	e74	e62	e120	7100	5930	3680	e1160
31	e590	---	e180	e130	---	e74	---	e300	---	5370	3490	---
TOTAL	28220	12050	6820	4750	3102	2598	2010	2214	237340	227780	197010	59990
MEAN	910	402	220	153	111	83.8	67.0	71.4	7911	7348	6355	2000
MAX	1590	570	280	180	130	96	72	300	14000	14900	16100	3860
MIN	590	280	180	130	96	74	62	58	700	4430	3430	1120
AC-FT	55970	23900	13530	9420	6150	5150	3990	4390	470800	451800	390800	119000
CFSM	0.49	0.22	0.12	0.08	0.06	0.05	0.04	0.04	4.25	3.95	3.42	1.08
IN.	0.56	0.24	0.14	0.10	0.06	0.05	0.04	0.04	4.75	4.56	3.94	1.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)#

MEAN	587	220	88.6	48.0	32.8	27.3	27.5	1207	5892	4879	4049	1931
MAX	1172	402	233	180	154	143	136	3588	9737	7370	6355	3984
(WY)	1996	2003	1998	1998	2002	2002	2002	1993	1992	1995	2003	1997
MIN	279	76.0	4.03	0.000	0.000	0.000	0.000	4.77	3304	2839	1897	883
(WY)	1983	1984	1991	1983	1983	1983	1984	1986	2002	1991	1990	1983

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003#	
ANNUAL TOTAL	561160		783884			
ANNUAL MEAN	1537		2148		1591	
HIGHEST ANNUAL MEAN					2148	
LOWEST ANNUAL MEAN					993	
HIGHEST DAILY MEAN	33000	Aug 16	16100	Aug 13	33000	Aug 16 2002
LOWEST DAILY MEAN	a130	Apr 19	b58	May 11	c0.00	Dec 25 1982
ANNUAL SEVEN-DAY MINIMUM	130	Apr 19	58	May 11	0.00	Dec 25 1982
MAXIMUM PEAK FLOW			23800	Jul 7	d48300	Aug 16 2002
MAXIMUM PEAK STAGE			19.50	Jul 7	21.94	Aug 16 2002
MAXIMUM PEAK STAGE					f25.68	Jun 8 2000
ANNUAL RUNOFF (AC-FT)	1113000		1555000		1153000	
ANNUAL RUNOFF (CFSM)	0.83		1.15		0.86	
ANNUAL RUNOFF (INCHES)	11.22		15.68		11.63	
10 PERCENT EXCEEDS	4100		7100		5020	
50 PERCENT EXCEEDS	350		290		200	
90 PERCENT EXCEEDS	140		66		0.00	

See Period of Record, partial years used in monthly statistics

a From Apr. 19 to May 18

b From May 11 to May 24

c No flow during winter months water years 1983 to 1995

d From rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow at 21.94 ft

e Estimated

f From floodmarks, backwater from ice and snow

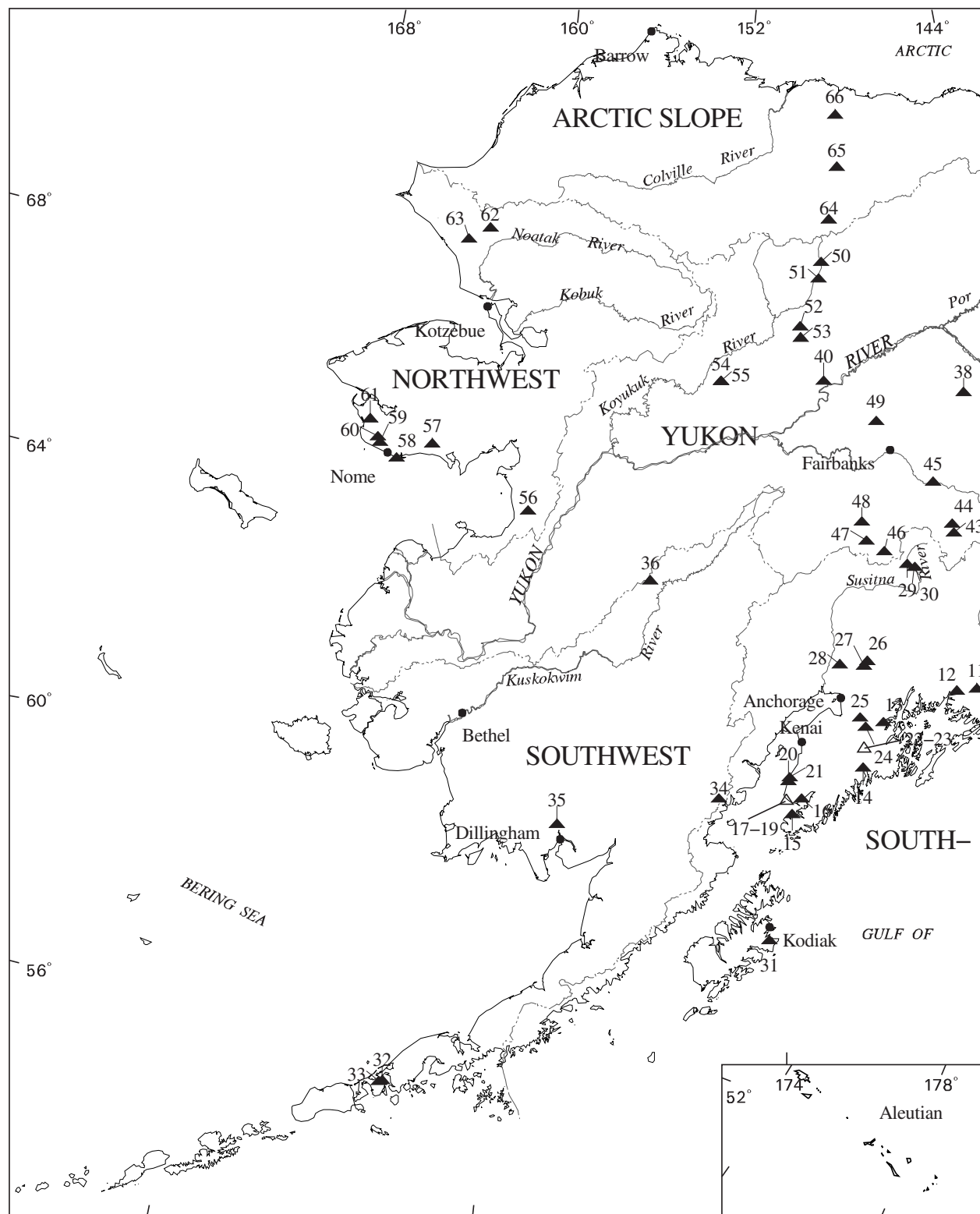
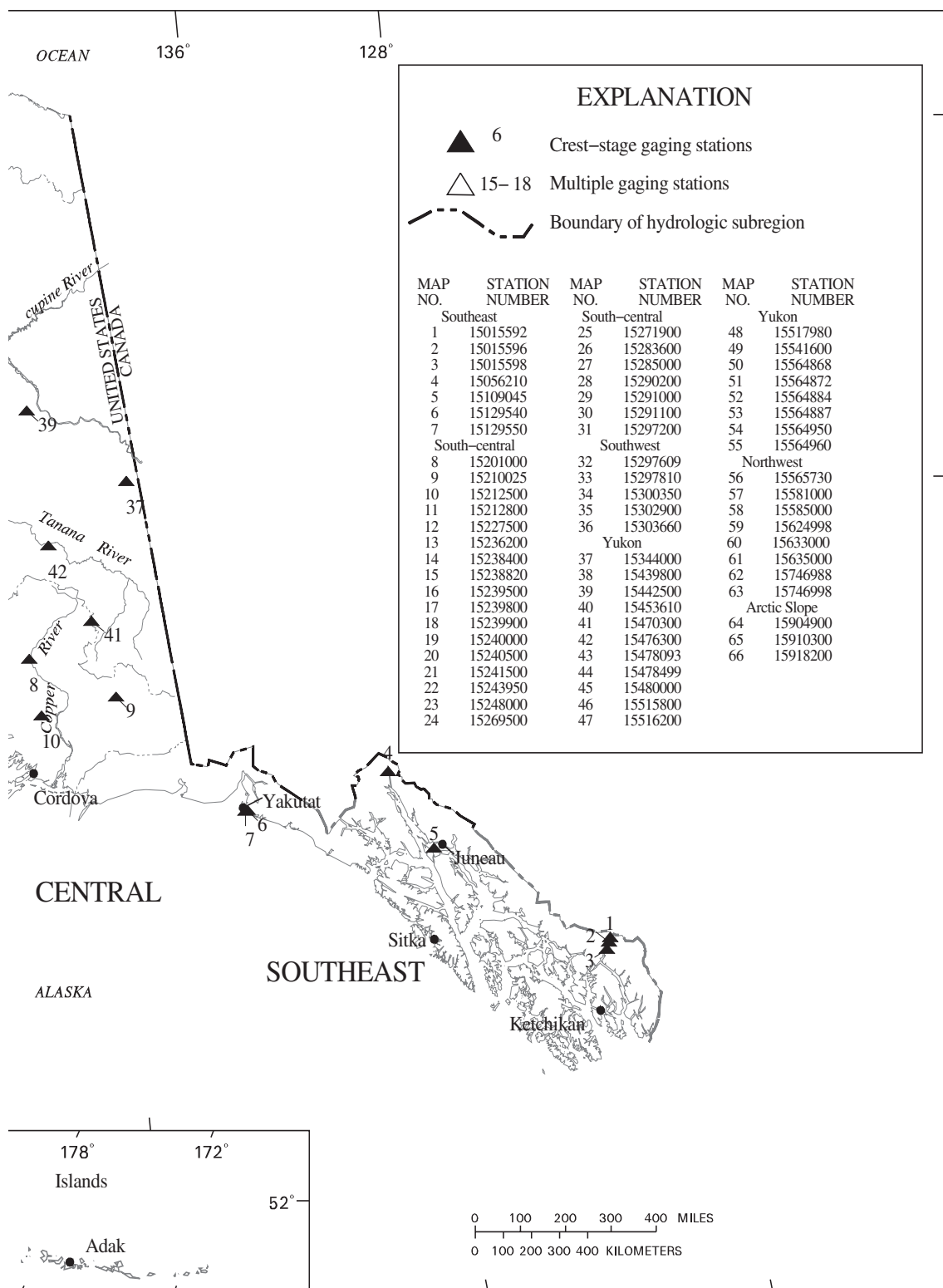


Figure 2. Locations of crest-stage partial-record stations



DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records of partial-record stations are presented in the table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a second table.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. The maximum discharge for each water year is given. The maximum discharge for the current water year and the maximum for the period of record are presented in the table below. However, at some stations the maximum discharge from spring runoff and from rainfall are shown by the symbols S/ and R/, respectively. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Maximum discharge at crest-stage partial-record stations
[Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTHEAST ALASKA								
Cripple Creek near Mouth near Wrangell (15015592)	Lat 56°15'55", long 130°47'14", in NE ¹ / ₄ SW1/4 NW ¹ / ₄ sec. 6, T. 65 S., R. 95 E. (Bradfield Canal B-3 quad), Misty Fiords National Monument, on right bank 0.5 mi upstream from confluence with Unuk River, 19 mi upstream of Burroughs Bay, and 62 mi south-east of Wrangell. Drainage area is 11.3 mi ² .	2003	09-02-03	64.24	n			
Gene Creek above Gene Lake near Wrangell (15015596)	Lat 56°12'44", long 130°05'27", in NE ¹ / ₄ NE ¹ / ₄ NW ¹ / ₄ sec. 27, T. 65 S., R. 94 E. (Bradfield Canal A-3 quad), Misty Fiords National Monument, on right bank 0.2 mi upstream from Gene Lake, 0.9 mi upstream of confluence with Unuk River, 8.8 mi upstream of Burroughs Bay, and 63 mi south-east of Wrangell. Drainage area is 9.55 mi ² .	2003	09-02-03	u	u			

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTHEAST ALASKA—Continued								
Clear Creek at Mouth near Wrangell (15015598)	Lat 56°07'33", long 130°58'03", in SE ¹ / ₄ SW ¹ / ₄ SW ¹ / ₄ sec. 24, T. 66 S., R. 93 E. (Bradfield Canal A-3 quad), Misty Fiords National Monument, on left bank 0.5 mi upstream from confluence with Lake Creek, 0.3 mi upstream of confluence of Lake Creek and Unuk River, 5.5 mi upstream of Burroughs Bay, and 58 mi south-east of Wrangell. Drainage area 14.6 mi ² .	2003	09-02-03	24.13	1,200	09-02-03	24.13	1,200
Taiya River near Skagway (15056210)	Lat 59°30'43", long 135°20'40", in NE ¹ / ₄ SE ¹ / ₄ sec. 22, T. 27 S., R. 59 E. (Skagway B-1 quad), on the downstream side of highway bridge, 1.0 mi downstream from West Creek, 2.2 mi upstream from mouth, and 4 mi north of Skagway. Drainage area is 179 mi ² .	1970-78, 2002-03	08-15-03	18.91	13,900	7-23-02	19.86	b18,600
North Fork Peterson Creek near Auke Bay (15109045)	Lat 58°17'02", long 134°39'49", in SE ¹ / ₄ NW ¹ / ₄ SW ¹ / ₄ , sec. 29, T. 41 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, on Douglas Island, Tongass National Forest, on left bank, 300 ft upstream from mouth, 7.3 mi south of Auke Bay, and 9.5 mi west of Douglas. Drainage area is 1.59 mi ² ., revised.	1997-2003	10-21-02	23.08	R/135	11-01-99 and 12-28-99	23.38	160
Drain at Airport Approach 29 near Yakutat (15129540)	Lat 59°29'42", long 139°37'56", in S/E ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ sec. 15, T. 28 S., R. 34 E. (Yakutat B-5 quad), at Yakutat Airport, in Tongass National Forest, on right bank, 1.5 mi upstream from Lost River, 5.5 mi southeast of Yakutat.Drainage area not determined.	2002-03	11-27-02	z >19.13	u	11-27-02	z >19.13	u
Drain at Airport Approach 2 near Yakutat (15129550)	Lat 59°29'35", 139°41'17", in SW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ , sec. 17, T. 28 S., R. 34 E. (Yakutat B-5 quad), at Yakutat Airport, in Tongass National Forest, on right bank, 0.4 mi upstream from Tawah Creek, 5.3 mi southeast of Yakutat. (Drainage area not determined.)	2002-03	11-27-02	z 10.70	u	11-27-02	x10.70	u

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA								
Dry Creek near Glennallen (15201000)	Lat 62°08'49", long 145°28'31", in NE ¹ / ₄ sec. 7, T. 4 N., R. 1 W. (Gulkana A-3 quad), on left bank 135 ft upstream from culvert at mi 119 Richardson Highway and 3.3 mi north of Glennallen. Drainage area is 11.4 mi ² .	1963-2003	4-27-03 8-30-03	f15.69 <14.80	u R/<45	5- -72	d25.88	546
McCarthy Creek at McCarthy (15210025)	Lat 61°25'54", long 142°55'02", in NW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ sec. 19, T. 5 S., R. 14 E. (McCarthy B-6 quad), on right bank 1100 ft upstream from large boulder near footbridge at trail crossing at McCarthy, 0.8 mi upstream from mouth. Drainage area is 79.0 mi ² .	1994-2003	10- -02 6-26-03 8-04-03	f70.59 70.39 70.22	u S/953 R/776	9-27-00	dj80.27	e4,000
Boulder Creek near Tiekell (15212500)	Lat 61°20'08", long 145°18'26", in SE ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ sec. 19, T. 6 S., R. 1 E. (Valdez B-4 quad), on left downstream wingwall of bridge at mi 51.4 of old Richardson Highway, 0.2 mi downstream from culvert on present Richardson Highway, and 0.7 mi north of Tiekell. Drainage area is 9.80 mi ² .	1964-2003	4- -03 6-14-03 6-20-03	10.89 10.47 10.36	u S/324 R/244	8-07-81	11.72	1,330
Ptarmigan Creek Tributary near Valdez (15212800)	Lat 61°08'12", long 145°44'32", in NW ¹ / ₄ NE ¹ / ₄ sec 34, T. 8 S., R. 3 W. (Valdez A-5 quad), on left bank 275 ft upstream from Richardson Highway, 21 mi east of Valdez. Drainage area is 0.72 mi ² .	1965-70 1996-2003	6-14-03 7-03-03	77.57 77.38	S/44 R/23	9- -65	d10.82	85
Mineral Creek near Valdez (15227500)	Lat 61°08'30", long 146°21'42", in SW ¹ / ₄ NE ¹ / ₄ SE ¹ / ₄ sec. 30, T. 8 S., R. 6 W. (Valdez A-7 quad), on right bank 120 ft upstream from bridge, 1.8 mi upstream from mouth, and 0.5 mi northwest of Valdez. Drainage area is 44.0 mi ² .	i1976-81, 1990-2003	6-06-03 8-17-03	11.11 12.42	S/1,340 R/2,630	6- -76	di 90.81	5,570
Shakespeare Creek at Whittier (15236200)	Lat 60°46'35", long 148°43'35", in NE ¹ / ₄ sec. 22, T. 8 N., R. 4 E. (Seward D-5 quad), on upstream right wingwall of concrete bridge 0.5 mi upstream from mouth, and 1.8 mi west of the Alaska Railroad terminal building at Whittier. Drainage area is 1.61 mi ² .	1970-80, 1984-2003	10-24-02 6-05-03	11.41 10.25	R/434 S/272	9-20-95	14.90	690

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued								
Rudolph Creek at Seward (15238400)	Lat 60°07'24", long 149°26'43", in SE ¹ / ₄ NE ¹ / ₄ NE ¹ / ₄ sec. 4, T. 1 S., R. 1 W. (Seward A-7 quad), on right bank, 10 ft. upstream from Chiswell St. culvert at intersection with Barwell St, 0.3 mi upstream from mouth, and in Seward. Drainage area 1.00 mi ² .	1987, 1990-95, 2003	10-24-02	12.83	R/49	10-11-86	u	1,020
Barabara Creek near Seldovia (15238820)	Lat 59°28'50", long 151°38'42", in SW ¹ / ₄ sec. 15, T. 8 S., R. 14 W. (Seldovia B-5 quad), Kenai Peninsula Borough, on left bank 0.5 mi upstream from mouth and 3.7 mi northeast of Seldovia Drainage area is 20.7 mi ² .	‡1972-92 1993 2003	10-23-02	4.0	R/1,450	11-29-83	6.08	2,050
Fritz Creek near Homer (15239500)	Lat 59°42'30", long 151°20'35", in SW ¹ / ₄ SW ¹ / ₄ sec. 28, T. 5 S., R. 12 W. (Seldovia C-4 quad), Kenai Peninsula Borough, on right bank 25 ft downstream from culvert under East End Road, 8 mi northeast of Homer. Drainage area is 10.4 mi ² .	1963-85, ‡1986-92, 1993-2003	10-24-02 4-24-03	j12.1 6.42	R/700e S/16	10-22-80	d 18.53	852
Diamond Creek near Homer (15239800)	Lat 59°40'10", long 151°40'00", in SE ¹ / ₄ sec. 9, T. 6 S., R. 14 W. (Seldovia C-5 quad), Kenai Peninsula Borough, on right bank upstream wingwall of culvert on Sterling Highway (milepost 167.5), 1.3 mi upstream from mouth and 4.6 mi northwest of Homer. Drainage area is 5.35 mi ² .	1963-81 2003	10-24-02	j15.50	R/357	10-24-02	j15.50	357
Anchor River near Anchor Point (15239900)	Lat 59°44'50", long 151°45'11", in NE ¹ / ₄ sec. 13, T. 5 S., R. 15 W., (Seldovia C-5 quad), Kenai Peninsula Borough, on right bank at downstream side of bridge on Sterling Highway, 4.3 mi southeast of Anchor Point. Mile post 161. Drainage area is 137 mi ² .	‡1965-73 1974 ‡1978-86 1987 ‡1991-92 2000-03	11-23-02 4-27-03	vj9.10 2.64	R/9,000 S/ 846	11-23-02	j9.10	9,000

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued								
Anchor River at Anchor Point (15240000)	Lat 59°46'21", long 151°50'05", in NW ¹ / ₄ SE ¹ / ₄ sec. 4, T. 5 S., R. 15 W., (Seldovia D-5 quad), Kenai Peninsula Borough, at Old Sterling Highway Bridge at Anchor Point, 0.1 mi downstream from North Fork, and 1.0 mi upstream from mouth. Drainage area is 226 mi ² .	‡1953-66 1984-92 2003	11-23-02	9.60	R/14,500	11-23-02	9.60	14,500
Cook Inlet Tributary near Ninilchik (15240500)	Lat 59°58'45", long 151°43'20", in NE ¹ / ₄ sec. 29, T. 2 S., R. 14 W., (Kenai A-5 quad), Kenai Peninsula Borough, on upstream culvert wingwall on Sterling Highway, 0.2 mi upstream from mouth and 5.4 mi southwest of Ninilchik. Drainage area is 5.19 mi ² .	1966-81 2003	10-24-02	j17.16	R/359	10-24-02	j17.16	359
Deep Creek near Ninilchik (15241500)	Lat 60°01'50", long 151°40'50", on line between sec. 3 and 4, T. 2 S., R. 14 W., Kenai Peninsula Borough, at bridge on Sterling Highway, 1 mi upstream from mouth and 1.5 mi southwest of Ninilchik. Drainage area is 220 mi ² .	2003	10-24-02	j23.30	R/22,000	10-24-02	j23.30	22,000
Porcupine Creek near Primrose (15243950)	Lat 60°20'30", long 149°22'15", in NW ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ sec. 24, T. 3 N., R. 1 W. (Seward B-7 quad), Kenai Peninsula Borough, on right bank 300 ft upstream from 18 mi campground, 0.4 mi upstream from mouth, and 0.8 mi west of Primrose. Drainage area is 16.8 mi ² .	1963-89, 2003	10-24-02	j20.64	R/1,540	10-11-86	jd13.03	4,000
Trail River near Lawing (15248000)	Lat 60°26'01", long 149°22'19", in SW ¹ / ₄ sec. 13, T. 4 N., R. 1 W. (Seward B-7 quad), Kenai Peninsula Borough, at bridge site on old Seward-Anchorage Highway, 0.2 mi upstream from Falls Creek, 0.2 mi downstream from lower Trail Lake, 1.9 mi upstream from mouth, and 2.1 mi north of Lawing. Drainage area is 181 mi ² .	‡1947-74 1975-77 1987 2003	10-24-02	j11.09	R/8,200	10-24-02	j11.09	8,200
Granite Creek near Portage (15269500)	Lat 60°43'40", long 149°17'00", in SW ¹ / ₄ NE ¹ / ₄ sec. 4, T. 7 N., R. 1 E. (Seward C-7 quad), Kenai Peninsula Borough, at bridge on Seward Highway, 0.7 mi upstream from Sixmile Creek and 12 mi southwest of Portage. Drainage area is 28.2 mi ² .	1967-1980 1995 2003	10-24-02	10.85	R/1,800	10-06-69	12.46	2,040

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued								
Cub Creek near Hope (15271900)	Lat 60°52'12", long 149°26'02", in NW ¼ sec. 15, T. 9 N., R. 1 W. (Seward D-7 quad), Kenai Peninsula Borough, on right wingwall of culvert on Hope Highway crossing, 0.1 mi upstream from mouth at Sixmile Creek and 7.7 mi southeast of Hope. Drainage area is 1.8 mi ² .	1965-79, 1980-83, 1995, 2003	10-24-02	12.54	R/36	9- -67	12.09	54
Premier Creek near Sutton (15283600)	Lat 61°42'40", long 149°05'12", in SE¼ NE¼ sec. 28, T. 19 N., R. 2 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, 10 ft downstream from culvert on Buffalo Mine Road (called Moose Creek Road on Anchorage C-6 quad), 4 mi north from the Glenn Highway, 6 mi west of Sutton, and 7 mi northeast of Palmer. Drainage area is 3.38 mi ² .	1997-2003	5-02-03 08-13-03	6.61 7.20	S/9.8 R/55	08-13-03	7.20	55
Wasilla Creek near Palmer (15285000)	Lat 61°38'37", long 149°11'46", in SE¼ SW¼ sec. 13, T. 18 N., R. 1 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, on right bank 20 ft downstream from culverts on Palmer-Fishhook Road, and 4.1 mi northeast of Palmer. Drainage area is 16.8 mi ² .	1971, 1976-2003	10-02-02 11-30-02 02-05-03	7.31 f7.29 7.21	R/83 u S/71	8-10-71	d17.74	700
Nancy Lake Tributary near Willow (15290200)	Lat 61°41'17", long 149°57'58", in SE¼ SE¼ sec. 34, T. 19 N., R. 4 W. (Tyonek C-1 quad), Matanuska-Susitna Borough, on left bank 150 ft upstream from culvert at Parks Highway, 0.3 mi upstream from mouth and 4.5 mi southeast of Willow. Drainage area is 8.00 mi ² .	1980, 1983-87, 1989-2003	5-22-02 8-13-02 10-02-02 4- -03 4-26-03	10.81 10.72 10.52 f11.51 <10.02	gS/88 gR/80 R/64 u S/<33	10-11-86	13.21	465
Susitna River near Denali (15291000)	Lat 63°06'14", long 147°30'57", in NE¼ sec. 10, T. 21 S., R. 1 E.(Healy A-2 quad), Matanuska-Susitna Borough, on right pier of bridge on Denali Highway, 0.2 mi downstream from Windy Creek, 3.3 mi upstream from Butte Creek, and 5.3 mi southwest of Denali. Drainage area is 950 mi ² , approximately.	1957-66, 1968-86, 2003	7-28-03	j12.7	R/27,800	8-10-71	13.32	38,200

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued								
Raft Creek near Denali (15291100)	Lat 63°03'04", long 147°16'22", in SE ¹ / ₄ sec. 36, T. 21 S., R. 2 E.(Healy A-1 quad), Matanuska-Susitna Borough, on right bank 30 ft upstream from culvert at mi 68.9 Denali Highway, and 10.7 mi southeast of Denali. Drainage area is 4.33 mi ² .	1963-2003	4-26-03 5-25-03 7-17-03	f14.41 <10.68 10.50	u S/<76 R/59	6- -64	11.72	133
Myrtle Creek near Kodiak (15297200)	Lat 57°36'12", long 152°24'12", in NW ¹ / ₄ SW ¹ / ₄ sec. 6, T. 30 S., R. 19 W. (Kodiak C-2 quad), Kodiak Island Borough, on left bank 0.1 mi upstream from bridge, 0.3 mi upstream from mouth, and 13 mi south of Kodiak. Drainage area is 4.74 mi ² .	‡1963-86, 1987-2003	11-26-02 5-03-03	5.72 3.42	R/823 S/118	1-03-77	6.93	1,350
SOUTHWEST ALASKA								
Stapp Creek near Cold Bay (15297609)	Lat 55°11'17", long 162°42'47", in SE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ sec. 1, T. 58 S., R. 89 W. (Cold Bay A-3 quad), Aleutians East Borough, on left bank, 0.9 mi upstream from mouth, and 1 mi. south of Cold Bay. Drainage area is 1.68 mi ² .	2001-2003	10-13-02 1-21-03 3-15-03	15.07 <14.96 f16.04	R/5.5 S/<4.0 u	5-24-02	15.85	34
Frosty Creek near Cold Bay (15297810)	Lat 55°09'59", long 162°48'22", in SE ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ sec. 8, T. 58 S., R. 89 W. (Cold Bay A-3 quad), Aleutians East Borough, on left bank, 2.8 mi upstream from mouth, and 4.5 mi southwest of Cold Bay. Drainage area is 5.92 mi ² .	2001-2003	10-13-02 1-08-03 1-21-03	10.98 f11.51 11.39	R/218 u S/325	10-24-00	11.92	497
Chinkelyes Creek Tributary near Pedro Bay (15300350)	Lat 59°44'02", long 153°48'40", in SE ¹ / ₄ NE ¹ / ₄ NE ¹ / ₄ sec. 23, T. 5 S., R. 27 W. (Iliamna C-3 quad), on left bank 60 ft upstream from culvert, 8 mi east of Pile Bay, and 11 mi east of Pedro Bay. Drainage area is 0.40 mi ² .	1997-2003	5-02-03 11-23-02	<10.94 13.90	S/<11.0 R/e217	11-23-02	13.90	e217
Moody Creek at Aleknagik (15302900)	Lat 59°16'34", long 158°35'42", in SE ¹ / ₄ sec. 30, T. 10 S., R. 55 W. (Dillingham B-7 quad), on left bank 10 ft upstream from culvert entrance, and 500 ft upstream from mouth at Wood River at the Aleknagik Mission. Drainage area is 1.28 mi ² .	1969-73, 1975-85, 1988-2003	10-22-02 5-03-03	17.82 17.33	R/16 S/ 4.7	6-07-71	19.60	55

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
SOUTHWEST ALASKA—Continued								
Gold Creek at Takotna (15303660)	Lat 62°59'20", long 156°04'08", in SE ¹ / ₄ SE ¹ / ₄ sec. 34, T. 34 N., R. 36 W. (Iditarod D-1 quad), at Takotna, on right bank, 350 ft upstream from bridge, and 400 ft upstream from mouth. Drainage area is 6.31 mi ² .	1987-2003	10-22-02 5-28-03	7.66 7.63	R/82 S/80	5-16-99	8.30	131
YUKON ALASKA								
King Creek near Dome Creek (15344000)	Lat 64°23'38", long 141°24'43", in NE ¹ / ₄ SW ¹ / ₄ sec. 16, T. 6 S., R. 32 E. (Eagle B-1 quad), on left bank 1,100 ft upstream from culvert at mi 119.8 Taylor Highway, 0.4 mi upstream from mouth, 4.9 mi east of Dome Creek, and 28 mi south of Eagle. Drainage area is 5.87 mi ² .	1975-82, ‡1983-90, 1991-2003	4/29/03 9/01/03	fj16.52 15.41	S/u R/50.2	6-13-97	j17.65	n
Boulder Creek near Central (15439800)	Lat 65°34'05", long 144°53'13", in NW ¹ / ₄ sec. 32, T. 9 N., R. 14 E. (Circle C-2 quad), on right bank 2,000 ft upstream from bridge at mi 125.4 Steese Highway, 0.7 mi upstream from mouth, and 2.3 mi west of Central. Drainage area is 31.3 mi ² .	1964-65, ‡1966-82, 1983, ‡1984-86, 1987-2003	5-13-03 5-13-03 9-02-03	f 7.16 d 38.69 6.54	u S/285 R/358	6-25-89	10.01	1,460
Quartz Creek near Central (15442500)	Lat 65°37'09", long 144°28'55", in SW ¹ / ₄ sec. 7, T. 9 N., R. 16 E. (Circle C-1 quad), on left bank 10 ft upstream from culvert at mi 138.1 on Steese Highway, 1 mi upstream from mouth, 19 mi southwest of Circle, and 10 mi east of Central. Drainage area is 17.2 mi ² .	1967, 1969-79, 1989-2003	5-13-03 9-2-03	f19.06 17.96	S/u R/292	7-15-95	dj23.08	700
Ray River Tributary near Stevens Village (15453610)	Lat 65°56'57", long 149°54'55", in SE ¹ / ₄ sec. 17, T. 13 N., R. 11 W. (Livengood D-6 quad), on right bank 10 ft upstream from culvert at mi 63.6 on the Dalton Highway, and 22 mi west of Stevens Village. Drainage area is 8.00 mi ² .	1977-2003	5-26-03 5-31-03 6-06-03	f18.50 17.48 18.16	u S/73 R/114	5- -79	d 21.10	860

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
YUKON ALASKA—Continued								
Little Jack Creek near Nabesna (15470300)	Lat 62°32'39", long 143°19'22", in SW ¹ / ₄ NW ¹ / ₄ SE ¹ / ₄ sec. 22, T. 9 N., R. 11 E. (Nabesna C-5 quad), on left bank 8 ft upstream from the culvert at mi 25.8 Nabesna Road, and 15.6 mi northeast of Nabesna (previously 0.2 mi upstream on left bank). Drainage area is 6.73 mi ² .	1975-2003	4-28-03 9-21-03	f20.67 <17.58	u R/<65	c7-25-01	c21.42	c254
Berry Creek near Dot Lake (15476300)	Lat 63°41'23", long 144°21'47", in NW ¹ / ₄ sec. 13, T. 22 N., R. 5 E. (Mt. Hayes C-1 quad), on left bank 100 ft upstream from former bridge site, at mi 1371.4 on abandoned section of Alaska Highway, 1.9 mi upstream from mouth, and 6.0 mi west of Dot Lake. Drainage area is 65.1 mi ² .	1964-71, ‡1972-81, 1982-2003	u 5-18-02 6-11-02 5-07-03 7-16-03	f12.36 12.12 12.22 11.82 d11.14	u S/560 R/608 S/424 R/174	7-19-64	15.49	2,800
Suzy Q Creek near Pump-Station 10 (15478093)	Lat 63°29'43", long 145°51'27", in SW ¹ / ₄ sec. 29, T. 16 S., R. 10 E. (Mt. Hayes B-4 quad), on right bank 30 ft upstream from bridge at mi 224.8 on Richardson Highway, 0.1 mi upstream from mouth, and 6 mi north of Pump Station 10. Drainage area is 1.29 mi ² .	1987, 1989-2003	n	n	n	7-14-87	33.83	1,070
Ruby Creek above Richardson Highway near Donnelly (15478499)	Lat 63°37'54", long 145°52'14", in NE ¹ / ₄ sec. 7, T. 15 S., R. 10 E. (Mt. Hayes C-4 quad), on right bank 0.2 mi upstream from Trans-Alaska Pipeline, 0.5 mi upstream from bridge at mi 234.8 on Richardson Highway, 2.2 mi upstream from mouth, and 2.3 mi south of Donnelly. Drainage area is 4.89 mi ² .	1987-2003	n	n	n	7-14-87	16.95	1,660
Banner Creek at Richardson (15480000)	Lat 64°17'24", long 146°20'56", in SW ¹ / ₄ sec. 22, T. 7 S., R. 7 E. (Big Delta B-5 quad), on left bank 400 ft upstream from bridge at mi 295.4 Richardson Highway, 0.2 mi upstream from mouth, and 0.4 mi northwest of Richardson. Drainage area is 20.2 mi ² .	1964-2003	4-29-03 9-01-03	f,j19.10 14.04	S/u R/92	6-26-89	16.38	950

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft³/s)	Date	Gage height (ft)	Discharge (ft³/s)
YUKON ALASKA—Continued								
Seattle Creek near Cantwell (15515800)	Lat 63°19'32", long 148°14'49", on line between sec 25 and 26, T. 18 S., R. 4 W. (Healy B-3 quad), Matanuska-Susitna Borough, at bridge at mi 110.9 Denali Highway, and 22.4 mi southeast of Cantwell. Drainage area 36.2 mi².	‡1964-75, 1977-89, 2003	7-17-03	5.66	875	6- -64	13.43	3,100
Slime Creek near Cantwell (15516200)	Lat 63°30'34", long 148°48'39", in SE¼ sec. 24, T. 16 S., R. 7 W. (Healy C-4 quad), on right bank 25 ft downstream from culverts at mi 219.9 George Parks Highway, and 9.1 mi northeast of Cantwell. Drainage area is 6.90 mi².	1966-2003	4-26-03 5-31-03 7-28-03	f18.81 16.93 17.54	u S/68 R/174	7- -67	d14.52	685
Dragonfly Creek near Healy (15517980)	Lat 63°47'45", long 148°55'19", in SW¼SE¼SW¼ sec. 9, T. 13 S., R. 7 W., (Healy D-4 quad), on left bank at mi 242.6 George Parks Highway 100 ft upstream from highway bridge, and 6 mi southeast of Healy. Drainage area is 0.71 mi².	1990-2003	4-26-03 6-07-03 7-28-03	f39.05 36.22 36.50	u S/3.8 R/22	7-12-90	d7.59	535
Globe Creek near Livengood (15541600)	Lat 65°17'08", long 148°07'56", in SE¼ sec. 3, T. 5 N., R 3 W. (Livengood B-3 Quad), 0.1 mi upstream from culvert at mi 37.6 Elliot Highway, 9 mi upstream from mouth, and 19 mi southeast of Livengood. Drainage area is 23.0 mi².	1964-2003	7-27-03	17.75	R/1850	7-27-03	17.75	1,850
Snowden Creek near Wiseman (15564868)	Lat 67°44'20", long 149°44'24", in SW¼ sec. 26, T. 34 N., R. 10 W. (Chandalar C-6 quad), on right bank 0.25 mi upstream from culvert at mi 213.5 of the Dalton Highway, and 24.5 mi northeast of Wiseman. Drainage area is 16.7 mi².	1968, d1977-79, 1992-2003	n	n	n	1968	u	1,200
Nugget Creek near Wiseman (15564872)	Lat 67°29'25", long 149°52'20", in NW¼ sec. 30, T. 31 N., R. 10 W. (Chandalar B-6 quad), on left bank 1,000 ft upstream from culvert at mi 195.6 Dalton Highway, and 8.7 mi northeast of Wiseman. Drainage area is 9.47 mi².	d1975-88, d1990-92, 1993-2003	6-1-03 9-2-03	38.54 39.15	S/71 R/186	5-26-98	40.17	540

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
YUKON ALASKA—Continued								
Prospect Creek near Prospect Camp (15564884)	Lat 66°46'56", long 150°41'06", in NW ¹ / ₄ sec. 31, T. 23 N., R. 14 W. (Bettles D-2 quad), on left bank 200 ft upstream from bridge at mi 135.2 on the Dalton Highway, 0.4 mi downstream from Trans-Alaska Pipeline crossing, 1.5 mi upstream from mouth, 2.1 mi south of Pump Station 5, and 1.5 mi southeast of Prospect Camp. Drainage area is 110 mi ² .	1968, 1975-2003	5-31-03 9-2-03	7.33 8.72	S/1090 R/2320	1968	d10.22	6,800
Bonanza Creek Tributary near Prospect Camp (15564887)	Lat 66°36'52", long 150°41'24", in SE ¹ / ₄ sec. 25, T. 21 N., R. 15 W. (Bettles C-2 quad), on right bank 0.3 mi downstream from culverts at mi 121 on the Dalton Highway, 3.4 mi upstream from mouth, 13.5 mi south of Pump Station 5, and 12.6 mi south of Prospect Camp. Drainage area is 11.7 mi ² .	1975-2003	n	n	n	5-15-93	19.89	290
Indian River at Utopia (15564950)	Lat 65°59'49", long 153°41'31", in NW ¹ / ₄ sec. 19, T. 7 N., R. 25 E. (Melozitna D-2 quad), on right bank, 200 ft downstream of bridge at mi 0.2 on road to Indian Mountain. Drainage area is 38.8 mi ² .	1998-2003	6-3-03 8-16-03	17.88 18.91	S/515 R/906	8-16-03	18.91	906
Utopia Creek at Utopia (15564960)	Lat.65°59'26", long 153°41' 44", in SW ¹ / ₄ sec. 19, T. 7 N., R. 25 E. (Melozitna D-2 quad), on right bank, 460 ft downstream of 4 wheeler crossing west of airstrip, 1.2 mi above mouth, .3 mi south-southeast of Utopia, 5.4 mi south of Indian Mt, and 16 mi east-southeast of Hughes. Drainage area is 5.18 mi ² .	1999-2003	6-3-03 7-26-03	7.28 7.09	S/152 R/119	6-3-03	7.28	152
NORTHWEST ALASKA								
Chiroskey River near Unalakleet (15565730)	Lat 63°55'06", long 160°18'58", in NW ¹ / ₄ sec. 19, T. 18 S., R. 8 W. (Unalakleet D-3 quad), on left bank 1 mile upstream from mouth, 14 miles northeast of Unalakleet. Drainage area is 296 mi ² .	1998-2003	4- -03 6-02-03 8-27-03	f48.25 46.25 46.07	u S/1130 R/1040	9-07-00	47.03	1,520

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
NORTHWEST ALASKA—Continued								
Hugh Rowe Creek near Council (15581000)	Lat 64°44'35", long 163°53'44", in NW ¹ / ₄ NW ¹ / ₄ sec. 4, T. 09 S, R. 26 W. (Solomon C-4 quad), on left bank 150 ft upstream from culvert on Nome-Council Road, 0.1 miles upstream from mouth and 60 mi East of Nome. Drainage area is 2.34 mi ² .	2001-2003	6-05-03 6-13-03 8-26-03	f73.04 72.58 71.67	u S/n R/n	5-26-02	73.07	n
Goldengate Creek near Nome (15585000)	Lat 64°26'51", long 165°03'14", in SW ¹ / ₄ sec. 15, T. 12 S., R. 32 W. (Nome B-1 quad), on right bank 80 ft upstream from culvert on Nome-Council Road, and 11 mi southeast of Nome. Drainage area is 1.55 mi ² .	1965, 1977-84, 1986-2003	5-31-03 8-26-03	11.44 10.94	S/30 R/12	9-08-65	d11.70	63
Arctic Creek above Tributary near Nome (15624998)	Lat 64°38'16", long 165°42'42", in NE ¹ / ₄ sec. 8, T. 10 S., R. 35 W. (Nome C-2 quad), on right bank 300 ft upstream from culvert on Nome-Teller Road, 2 mi upstream from mouth, and 13 mi northwest of Nome. Drainage area is 1.13 mi ² .	1975, 1979-2003	5-31-03 6-05-03 8-12-03	f18.62 18.10 18.12	u S/35 R/37	8-20-98	19.06	182
Washington Creek near Nome (15633000)	Lat 64°42'52", long 165°49'13", in NW ¹ / ₄ sec. 14, T. 9 S., R. 35 W. (Nome C-2 quad), on left bank, 400 ft upstream from culvert on Nome-Teller Road, and 19 mi northwest of Nome. Drainage area is 6.34 mi ² .	1964-2003	5-31-03 8-26-03	19.93 19.81	S/34 R/28	7-10-75	d19.35	620
Eldorado Creek near Teller (15635000)	Lat 64°57'38", long 166°11'59", in NE ¹ / ₄ NE ¹ / ₄ sec. 20, T. 6 S., R. 37 W. (Nome D-3 quad), on right bank 30 ft downstream from bridge at mi 46.3 on Nome-Teller Road, 0.5 mi upstream from mouth at Tisuk River, and 21 mi south of Teller. Drainage area is 5.83 mi ² .	1986-87, ‡1988-90, 1991, ‡1992-98, 1999-2003	5-31-03 6-05-03 8-26-03	f9.97 8.63 8.81	u S/136 R/200	9-04-86	9.42	600
North Fork Red Dog Creek near Kivalina (15746988)	Lat 68°05'03", long 162°52'52", in NW ¹ / ₄ SW ¹ / ₄ sec. 18, T. 31 N., R. 18 W. (DeLong Mts. A-2 quad), on left bank 500 ft upstream from mouth, 1.1 mi northwest of Red Dog Mine mill site, 36 mi north of Noatak, and 50 mi northeast of Kivalina. Cominco Station 12. Drainage area is 15.9 mi ² .	‡1991-94, 1995-2003	05-25-03 06-05-03 07-01-03	f,j 6.4 f 5.86 4.88	u S/u R/274	8-17-94	6.03	900

Maximum discharge at crest-stage partial-record stations--Continued
 [Footnotes at end of table on p. 338]

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
NORTHWEST ALASKA								
Tutak Creek near Kivalina (15746998)	Lat 67°52'28", long 163°40'14", in NW ¹ / ₄ NE ¹ / ₄ sec. 34, T. 29 N., R. 22 W. (Noatak D-4 quad), on left bank, 1,000 ft upstream from mouth, 25 mi northeast of Kivalina, and 28 mi northwest of Noatak. Drainage area is 119 mi ² .	1992-2003	06-01-03 07-01-03	12.14 13.46	S/835 R/1670	6-15-92	15.00	3,100
ARCTIC SLOPE ALASKA								
Atigun River Tributary near Pump Station 4 (15904900)	Lat 68°22'25", long 149°18'48", in NE ¹ / ₄ SE ¹ / ₄ sec. 28, T. 12 S., R. 12 E. (Phillip Smith Mt. B-4 quad), on right bank 0.2 mi upstream from bridge at mi 265 on Dalton Highway, 0.9 mi upstream from mouth, and 4 mi south of Pump Station 4. Drainage area is 32.6 mi ² .	1976, ‡1977-86, 1987-2003	6-28-02 8-16-02 6-17-03 7-03-03	g12.41 g13.94 13.43 j14.52	g S/270 g R/746 S/554 R/1010	7-17-99	15.51	1,650
Sagavanirktok River Tributary near Happy Valley Camp (15910300)	Lat 69°09'38", long 148°49'40", in NE ¹ / ₄ sec. 30, T. 3 S., R. 14 E. (Sagavanirktok A-4 quad), North Slope Borough, on right bank 500 ft upstream from culvert at mi 335.2 on the Dalton Highway, 0.8 mi upstream from mouth, 0.8 mi north of Happy Valley Camp, and 16 mi south of Sagwon. Drainage area is 12.7 mi ² .	1997-2003	n	n	n	6-8-01	24.21	860
Sagavanirktok River Tributary near Dead-horse (15918200)	Lat 69°57'14", long 148°43'48", in NW ¹ / ₄ NE ¹ / ₄ sec. 19, T. 1 N., R. 14 E. (Sagavanirktok D-3 quad), on right bank 6 ft upstream from culvert at mi 386.2 on the Dalton Highway, 0.4 mi upstream from mouth, and 23 mi south of Dead-horse. Drainage area is 12 mi ² , approximately.	1986, 1988-2003	5-29-03 7-03-03	9.36 <6.65	S/66 R/<7.6	5-24-96	j11.8	142

FOOTNOTES

‡ Operated as a continuous record station
 < Less than
 > Greater than
 R/ Rainfall
 S/ Spring runoff
 a Approximately
 c Corrected
 d At different site or datum

e Estimated
 f Ice affected
 g Not previously published
 i Data collected by Dept. of Transportation and Public Facilities
 j From floodmarks
 n To be determined
 r Revised
 u Unknown
 v Peak stage at station 15239900 occurred Oct. 24, 2003 at a discharge of 8,000 ft³/s.

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTHEAST ALASKA						
15015592 Cripple Creek near Mouth near Wrangell	Unuk River	Lat 56°15'55", long 130°47'14", in NE ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ sec. 6, T. 65 S., R. 95 E. (Bradfield Canal B-3 quad), in Misty Fiords National Monument, on right bank 0.5 mi upstream from confluence with Unuk River, 19 mi upstream of Burroughs Bay, and 62 mi southeast of Wrangell.	11.3	--	6-04-03 8-26-03	111 66
15015595 Unuk River below Blue River near Wrangell	Burroughs Bay	Lat 56°14'26", long 130°52'49", in NW ¹ / ₄ NE ¹ / ₄ sec. 16, T. 65 S., R. 94 E. (Bradfield Canal A-3 Quad), in Misty Fiords National Monument, on right bank 17 miles upstream from the Post (Bishop Ranch), near the mouth of Burroughs Bay and approximately 60 miles SE of Wrangell.	745	--	4-30-03 6-05-03 6-07-03 8-26-03	5,250 7,350 11,400 5,320
15015596 Gene Creek above Gene Lake near Wrangell	Unuk River	Lat 56°12'44", long 130°51'27", in NE ¹ / ₄ NE ¹ / ₄ NW ¹ / ₄ sec. 27, T. 65 S., R. 94 E. (Bradfield Canal A-3 quad), in Misty Fiords National Monument, on right bank 0.2 mi upstream from Gene Lake, 0.9 mi upstream of confluence with Unuk River, 8.8 mi upstream of Burroughs Bay, and 63 mi southeast of Wrangell.	9.55	--	6-03-03 8-27-03	56 26
15015597 Lake Creek above Clear Creek near Wrangell	Unuk River	Lat 56°09'44", long 130°54'23", in SW ¹ / ₄ SW ¹ / ₄ NE ¹ / ₄ sec. 8, T. 66 S., R. 94 E. (Bradfield Canal A-3 quad), in Misty Fiords National Monument, on right bank 3.2 mi upstream from Clear Creek, 0.3 mi upstream from confluence with Unuk River, 5.5 mi upstream from Burroughs Bay, and 58 mi southeast of Wrangell.	81.6	--	6-05-03 6-07-03 8-25-03	1,060 1,270 405
15015598 Clear Creek at Mouth near Wrangell	Lake Creek	Lat 56°07'33", long 130°58'03", in SE ¹ / ₄ SW ¹ / ₄ SW ¹ / ₄ sec. 24, T. 66 S., R. 93 E. (Bradfield Canal A-3 quad), in Misty Fiords National Monument, on left bank 0.5 mi upstream from confluence with Lake Creek, 0.3 mi upstream of confluence of Lake Creek and Unuk River, 5.5 mi upstream of Burroughs Bay, and 58 mi southeast of Wrangell.	14.6	--	6-05-03 8-25-03	353 44
15015599 Eulachon River near Wrangell	Unuk River	Lat 56°07'13", long 131°07'26", in NW ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ sec. 25, T. 66 S., R. 92 E. (Bradfield Canal A-4 quad), in Misty Fiords National Monument, on left bank 2.7 mi upstream of confluence with Unuk River, 1.0 mi upstream of Burroughs Bay, and 55 mi southeast of Wrangell.	23.5	--	6-06-03 8-25-03	477 93

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTHEAST ALASKA—Continued						
15049900 Gold Creek near Juneau	Gastineau Channel	Lat 58°18'26", long 134°23'12", in NW ¹ / ₄ NE ¹ / ₄ , sec. 24, T. 41 S., R. 67 E. (Juneau B-2 SE quad), City and Borough of Juneau, at Old Ebner Dam site, at head of Last Chance Basin, 0.6 mi upstream from Basin Road bridge, and 1.1 mi east of Juneau.	8.41	(‡)1984-97, 1998-2002	10-31-02 12-17-02 01-15-03 02-26-03 03-31-03 04-23-03 05-23-03 07-09-03 08-29-03 09-29-03	65 64 30 13 21 24 154 89 49 136
15052020 Lemon Creek at bridge near Juneau	Gastineau Channel	Lat 58°21'27", long 134°29'56", in SW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ , sec. 34, T. 40 S., R. 66 E. (Juneau B-2 SE quad), City and Borough of Juneau, 4.6 mi northwest of Juneau, 5.7 mi southeast of Auke Bay and 0.4 mi upstream from mouth.	24.3	1951-52, 1954, 1956- 64, 1966-68, 1970, 2002	11-27-02 3-25-03 6-03-03 9-11-03 9-27-03	874 27 291 853 1820
15052475 Jordan Creek below Egan Drive near Auke Bay	Gastineau Channel	Lat 58°21'59", long 134°34'34", in SW ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ , sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, at foot- bridge, 50 ft downstream from Egan Drive, 0.4 mi southeast of intersection of Egan Drive and Mendenhall Loop Road and 3.0 mi east of Auke Bay Post Office. Currently operated as a continuous-record station.	2.60	h1984,88, h1989, h1995-96, (‡)1997-2002	10-02-02 12-04-02 2-21-03 3-13-03 4-28-03 6-05-03 7-19-03 9-19-03	9.9 10 1.3 0.91 2.5 0.86 0.60 8.4
15052900 + Mendenhall River at Brotherhood Bridge near Auke Bay	Fritz Cove	Lat 58°22'15", long 134°36'00", in NW ¹ / ₄ SE ¹ / ₄ , sec. 25, T. 40 S., R. 65 E. (Juneau B-2 SW quad), City and Borough of Juneau, at Egan Expressway bridge, 1.0 mi upstream from mouth, and 2.3 mi southeast of Auke Bay.	104	1950, 1961- 66, 1968, 1984, 1989, 1997, 1999- 2002	3-05-03 6-04-03 8-06-03 9-03-03	212 1500 2320 6450
15053200 Duck Creek below Nancy Street near Auke Bay	Mendenhall River	Lat 58°22'31", long 134°34'38", in SW ¹ / ₄ NE ¹ / ₄ , sec. 30, T.40 S., R. 66 E. (Juneau B-2 NW quad), City and Borough of Juneau, 50 ft south of intersection of Nancy Street and Mendenhall Loop Road, 0.4 mi north of intersection of Egan Drive and Mendenhall Loop Road, 1.4 mi upstream from mouth, 2.7 mi southeast of Auke Bay, and 8 mi northwest of Juneau. Currently operated as a continuous-record station.	1.30	(‡)1994-2002	10-04-02 10-16-02 11-27-02 2-21-03 4-19-03 5-06-03 6-02-03 7-09-03 8-07-03	3.7 17 14 1.4 0.75 0.49 1.3 1.3 1.5
15053210 Duck Creek at Mendenhall Mall Road near Auke Bay	Mendenhall River	Lat 58°22'21", long 134°35'02" in NW ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ , sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, 1.1 mi upstream from mouth, 2.6 mi southeast of Auke Bay, and 8 mi northwest of Juneau.	1.40	1993, 1995, 1997-98, 2002	4-26-03 5-03-03 5-08-03 5-17-03 5-25-03 6-02-03 8-10-03 8-20-03	no flow no flow no flow no flow no flow no flow no flow 2.6
15053215 Duck Creek at Egan Drive near Auke Bay	Mendenhall River	Lat 58°22'13", long 134°35'06", in SE NW ¹ / ₄ SW ¹ / ₄ , sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, at Egan Drive, 1.0 mi upstream from mouth, 2.6 mi southeast of Auke Bay and 8 mi northwest of Juneau.	1.44	1997-98, 2000, 2002	5-25-03 8-20-03	no flow 1.2

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTHEAST ALASKA—Continued						
15053220 Duck Creek at Delrae Road near Auke Bay	Mendenhall River	Lat 58°22'04", long 134°35'16", in SW ¹ / ₄ SW ¹ / ₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, 0.8 mi upstream from mouth, 2.6 mi southeast of Auke Bay, and 8 mi northwest of Juneau.	1.49	1988-89, 1993-02	4-19-03 4-26-03 5-03-03 5-14-03 5-17-03 5-25-03 6-02-03 7-06-03 8-10-03 8-20-03	no flow no flow no flow no flow no flow no flow no flow no flow no flow no flow
						0.41
15053230 Duck Creek at Berners Avenue near Auke Bay	Mendenhall River	Lat 58°21'50", long 134°35'08", in NW ¹ / ₄ NW ¹ / ₄ , sec. 31, T. 40 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, 0.5 mi upstream from mouth, 2.8 mi southeast of Auke Bay, and 8 mi northwest of Juneau.	1.52	1994-00, 2002	10-16-02 11-27-02 4-19-03 4-26-03 5-03-03 5-08-03 5-14-03 5-17-03 5-25-03 6-02-03 6-11-03 6-21-03 7-06-03 8-10-03 8-20-03 9-02-03	9.5 14 no flow no flow no flow no flow no flow no flow no flow no flow no flow no flow no flow no flow no flow no flow
						4.6
15053235 Duck Creek below Cessna Drive near Auke Bay	Mendenhall River	Lat 58°21'43", long 134°35'12", in NW ¹ / ₄ NW ¹ / ₄ , sec. 31, T. 40 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, at the corner of Alex Holden Way and Cessna Drive, 0.4 mi upstream from mouth, 2.9 mi southeast of Auke Bay, and 8 mi northwest of Juneau.	1.66	1997-00, 2002	c4-19-03 c4-26-03 c5-03-03 c5-08-03 c5-14-03 c5-17-03 c5-21-03 c5-25-03 c6-02-03 c6-11-03 c6-21-03 c7-06-03 c8-10-03 8-20-03	b no flow d no flow d no flow d no flow b no flow b no flow no flow d no flow b no flow no flow no flow no flow d no flow b no flow b no flow
						0.01
15055700 Antler River at Mouth near Auke Bay	Berner's Bay	Lat 58°49'15", long 134°56'14", in NE ¹ / ₄ NW ¹ / ₄ SE ¹ / ₄ sec. 20, T. 35 S., R. 63 E. (Juneau D-3 quad), in Tongass National Forest, on right bank, 1.2 mi above mouth, 3.5 mi downstream from mouth of Gilkey River, and 31.7 mi north- west of Auke Bay.	--	--	4-14-03 5-07-03 5-27-03 7-15-03	333 1060 3540 8800
15055850 Lace River at Mouth near Auke Bay	Berner's Bay	Lat 58°50'42", long 134°55'55", in NW ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ sec. 08, T. 35 S., R. 63 E. (Juneau D-3 quad), in Tongass National Forest, on left bank, about 4.0 mi upstream from mouth at Berner's Bay, and 34.3 mi northwest of Auke Bay.	--	--	4-16-03 5-15-03 5-27-03 7-15-03	622 2170 3720 8230

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTHEAST ALASKA—Continued						
15055900 Berners River at Mouth near Auke Bay	Lace River	Lat 58°51'11", long 134°59'05", in SW ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ sec. 07, T. 35 S., R. 63 E. (Juneau D-3 quad) at Berners Bay, in Tongass National Forest, 200 ft upstream from mouth, and 34.5 mi northwest of Auke Bay.	--	--	4-15-03 5-15-03 5-27-03 7-15-03	168 192 439 622
15081607 Threemile Creek Tributary below canyon near Klawock	Threemile Creek	Lat 55°32'26", long 132°57'08", in SE ¹ / ₄ SW ¹ / ₄ NE ¹ / ₄ , sec. 16, T. 73 S., R. 82 E. (Craig C-3 quad), on Prince of Wales Island, in Tongass National Forest, at mouth of canyon, 0.37 mi upstream from mouth, and 5.2 mi east of Klawock.	1.41	2000-2002	4-01-03	6.7
15081611 Threemile Creek below Highway near Klawock	Klawock Lake	Lat 55°31'54", long 132°59'05", in NE ¹ / ₄ NE ¹ / ₄ NW ¹ / ₄ , sec. 20, T. 73 S., R. 82 E. (Craig C-3 quad), on Prince of Wales Island, in Tongass National Forest, at Hollis Highway crossing, 3,000 ft upstream from mouth, and 4.0 mi east of Klawock.	8.05	2000-2002	4-01-03	44
15081616 Halfmile Creek below Highway near Klawock	Klawock Lake	Lat 55°32'59", long 133°01'44", in SW ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ , sec. 12, T. 73 S., R 81 E.(Craig C-4 quad) On Prince of Whales Island, in Tongass National Forest, at Hollis Highway crossing, about 800 ft upstream from mouth, and 2.7 mi east of Klawock.	5.26	2000-2002	4-01-03	18
15087638 Granite Creek at Sitka	Western Channel	Lat 57°06'05", long 135°23'52", in SE ¹ / ₄ SW ¹ / ₄ NE ¹ / ₄ , sec. 16, T. 55 S., R. 63 E. (Sitka A-5 quad), on Baranof Island, in the Tongass National Forest, 200 ft downstream from Gran- ite Creek Road Bridge, 400 ft upstream from mouth, and about 3.9 mi northwest of Sitka.	2.42	2002	11-08-02 12-11-02 1-10-03 3-01-03 4-16-03 6-19-03	3.4 12 6.4 30 4.9 28
15088400 Cupola Peak Creek at Bear Cove near Sitka	Bear Cove	Lat 57°00'39", long 135°09'11", in NE ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ , sec. 13, T. 56 S., R. 64 E. (Sitka A-4 quad), on Baranof Island, in the Tongass National Forest, 200 ft downstream from Green Lake Road crossing, 400 ft upstream from mouth at south shore of Bear Cove in Silver Bay, and about 7.1 mi southeast of Sitka.	0.43	†2000-2003	11-08-02 3-01-03 4-17-03 8-25-03	d no flow d no flow d no flow d no flow
15109045 North Fork Peterson Creek near Auke Bay	Peterson Creek	Lat 58°17'02", long 134°39'49", in SE ¹ / ₄ NW ¹ / ₄ SW ¹ / ₄ , sec. 29, T. 41 S., R. 66 E. (Juneau B-2 SW quad), City and Borough of Juneau, on Douglas Island, Tongass National Forest, 300 ft upstream from mouth, 7.3 mi south of Auke Bay, and 9.5 mi west of Douglas.	1.59	(†)1985-87, (†)1997-2002	10-16-02 1-06-03 4-28-03 6-16-03 7-25-03 9-05-03	20. 17 2.6 .75 .35 1.5
15129300 Dangerous River at Harlequin Lake Outlet near Yakutat	Gulf of Alaska	Lat 59°25'03", long 139°01'03", in SE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ , sec. 10, T. 29S. R. 38E. (Yakutat B-3 NW quad), @ the end of Forest Hwy. 10 @ 29 mile.	--	--	6-26-03	9640
15129400 Ahrnklin River at Forest Hwy. 10 near Yakutat	Gulf of Alaska	Lat 59°27'34", long 139°06'04", in NE ¹ / ₄ NW ¹ / ₄ SW ¹ / ₄ sec. 26, T.28 S., R. 37E. (Yakutat, B-3 NW quad), in Tongass National Forest, at the intersection of Ahrnklin R. and Forest Hwy. 10 @ 25 mile.	--	--	6-26-03	536

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTHEAST ALASKA—Continued						
15129540 Drain at Airport Approach 29 near Yakutat	Lost River	Lat 59°29'42", long 139°37'56", in SE ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ sec. 15, T. 28 S. R. 34 E. (Yakutat B-5 quad), at Yakutat Airport, in Tongass National Forest, 1.5 mi upstream from mouth, and 5.5 mi southeast of Yakutat.	--	-2002	10-17-02 12-12-02 3-12-03 5-30-03 6-27-03 8-14-03	2.5 2.3 no flow 1.6 3.9 2.8
15129550 Drain at Airport Approach 2 near Yakutat	Tawah Creek	Lat 59°29'35", long 139°41'17", in SW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ , sec. 17, T. 28 S., R. 34 E. (Yakutat B-5 quad), at Yakutat Airport, in Tongass National Forest, 0.4 mi upstream from mouth, and 5.3 mi southeast of Yakutat.	--	-2002	10-09-02 12-13-02 3-11-03 4-30-03 5-30-03 6-25-03 8-14-03	26 29 10 7.3 14 9.3 8.2
15129585 Ophir Creek at gravel pit road near Yakutat	Tawah Creek	Lat 59°32'26", long 139°42'06", in SW ¹ / ₄ SW ¹ / ₄ SW ¹ / ₄ sec.29, T.27 S., R.34 E. (Yakutat C-5 SW quad), in Tongass National Forest, at gravel road crossing, 3.5 mi upstream from Summit Lake, and 1.4 mi southeast of Yakutat.	--	1992-2000, 2002	3-12-03 4-30-03	1.8 no flow
15129590 Ophir Creek at Airport Road at Yakutat	Tawah Creek	Lat 59°32'28", long 139°43'18", in SE ¹ / ₄ SE ¹ / ₄ SW ¹ / ₄ sec. 30, T. 27 S., R. 34 E. (Yakutat C-5 SW quad), in Tongass National Forest, at airport road crossing 2.5 mi upstream from Summit Lake, and 0.9 mi south of Yakutat.	--	1989, 1992- 2001	3-12-03 4-30-03	1.8 no flow
15129592 Ophir Creek above new excavation site near Yakutat	Tawah Creek	Lat 59°32'17", long 139°43'48", in NW ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ sec. 31, T. 27 S., R. 34 E. (Yakutat C-5 SW quad), in Tongass National Forest, about 200 ft upstream from tributary entering left bank, 2.1 mi upstream from Summit Lake, and 1.0 mi south of Yakutat.	--	1998,1999, 2002	3-12-03 4-30-03	1.48 no flow
15129593 Ophir Creek Tributary at new excavation near Yakutat	Ophir Creek	Lat 59°32'14", long 139°43'45", in SW ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ sec. 31, T. 27 S., R. 34 E. (Yakutat C-5 SW quad), in Tongass National Forest, 50 ft upstream from Summit Lake road, 100 ft upstream from mouth, and 1.1 mi south of Yakutat.	--	1998-2000, 2002	3-12-03 4-30-03	no flow no flow
15129595 Ophir Creek at Mile 1.0 near Yakutat	Tawah Creek	Lat 59°31'48", long 139°43'56", in SE ¹ / ₄ NE ¹ / ₄ SE ¹ / ₄ sec. 36, T. 27 S., R. 33 E. (Yakutat C-5 SW quad), in Tongass National Forest, at crossing at mi 1.0 of Summit Lake road, 1.5 mi upstream from Summit Lake, and 1.5 mi south of Yakutat.	--	1989, 1992-97, 1999	3-12-03 4-30-03	3.8 1.4
15129600 Ophir Creek near Yakutat	Tawah Creek	Lat 59°31'26", long 139°44'37", in SW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ , sec. 1, T. 28 S., R. 33 E. (Yakutat C-5 SW quad), in Tongass National Forest, 0.8 mi upstream from Summit Lake, and 2 mi south of Yakutat. Currently operated as a continuous-record station.	a2.5	(‡)1992-2002	10-08-02 12-12-02 3-12-03 4-20-03 5-29-03 6-25-03 8-14-03	26 29 6.8 2.9 6.5 3.4 2.4

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTHEAST ALASKA—Continued						
15129615 Ophir Creek tributary at confluence near Yakutat	Ophir Creek	Lat 59°31'04", long 139°44'43", in NW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ sec. 1, T. 28 S., R. 33 E. (Yakutat C-5 SW quad), in Tongass National Forest, at confluence with Ophir Creek, and 2.3 mi south of Yakutat.	--	1992-2001, 2002	3-12-03 4-30-03	0.85 0.1
SOUTH-CENTRAL ALASKA						
15201000 Dry Creek near Glennallen	Copper River	Lat 62°08'49", long 145°28'31", in NE ¹ / ₄ , sec. 7, T. 4 N., R. 1 W. (Gulkana A-3 quad), 135 ft upstream from culvert at mi 119 Richardson Highway and 3.3 mi north of Glennallen.	11.4	†1963-2002	5-14-03	25
15210025 McCarthy Creek at McCarthy	Kennicott River	Lat 61°25'54", long 142°55'02", in NW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄ , sec. 19, T. 5 S., R. 14 E. (McCar- thy B-6 quad), 1100 ft upstream from large boulder near footbridge at trail crossing at McCarthy, 0.8 mi upstream from mouth.	79.0	†1993-2002	5-23-03 6-27-03 7-20-03 8-12-03	141 314 500 420
15212500 Boulder Creek near Tiegel	Tiegel River	Lat 61°20'08", long 145°18'26", in SE ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ , sec. 19, T. 6 S., R. 1 E. (Valdez B-4 quad), at mi 51.4 on the former Richardson Highway.	9.80	†1964-2002	5-22-03 6-11-03 6-25-03 7-17-03 8-12-03	11 180 95 60 35
15212800 Ptarmigan Creek Tributary near Valdez	Ptarmigan Creek	Lat 61°08'12", long 145°44'32", NW ¹ / ₄ NE ¹ / ₄ , sec. 34, T. 8 S., R. 3 W. (Valdez A-5 quad), 275 ft upstream from Richardson Highway, 21 mi east of Valdez.	0.72	†1965-70 †1995-2002	6-25-03 7-17-03 8-14-03	9.5 4.2 2.6
15227500 Mineral Creek near Valdez	Port Valdez	Lat 61°08'30", long 146°21'42", in SW ¹ / ₄ NE ¹ / ₄ SE ¹ / ₄ , sec. 30, T. 8 S., R. 6 W. (Valdez A-7 quad), 120 ft upstream from bridge, 1.8 mi above mouth, and 0.5 mi northwest of Valdez.	44.0	1913, 1948-50, 1972-73, †1990-2002	5-21-03 6-25-03 7-18-03 8-13-03 8-13-03	288 782 1,210 1,970 2,000
15236200 Shakespeare Creek at Whittier	Passage Channel	Lat 60°46'35", long 148°43'35", in NE ¹ / ₄ , sec. 22, T. 8 N., R. 4 E. (Seward D-5 quad), at bridge 0.5 mi upstream from mouth, and 1.8 mi west of the Alaska Railroad terminal building at Whittier.	1.61	1969, †1970-80, †1985-2002	10-17-02 11-06-02 02-06-03 04-24-03 07-10-03	33 154 13 7.2 61
15237550 Mount Alice Creek near Seward	Resurrection Bay	Lat 60°07'19", long 149°21'33", in NE ¹ / ₄ SE ¹ / ₄ , sec. 1, T. 1 S., R. 1 W. (Seward A-7 quad), 700 ft. upstream from Nash Road, 2.8 mi northeast of Seward.	2.12	†1987 †1990-94	10-31-02	42
15237700 Resurrection River near Seward	Resurrection Bay	Lat 60°08'30", long 149°25'00", in NE ¹ / ₄ sec. 24, T. 1 N., R. 1 W. (Seward A-7 quad), Kenai Pen- insula Borough, at Seward Highway, 1.5 mi upstream from mouth, and 2.7 mi north of Seward	169	‡1965-67 1987 1995	10-24-02	12,400
15238400 Rudolph Creek at Seward	Resurrection Bay	Lat 60°07'24", long 149°26'43", in SE ¹ / ₄ NE ¹ / ₄ NE ¹ / ₄ sec. 4, T. 1 S., R. 1 W. (Seward A-7 quad), 10 ft. upstream from Chiswell St. culvert at intersection with Barwell St., 0.3 mi from mouth, and in Seward.	1.00	†1987, †1990-95	10-31-02	18

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued						
15238820 Barabara Creek near Seldovia	Kachemak Bay	Lat 59°28'50", long 151°38'42", in SW ¹ / ₄ , sec. 15, T.8 S., R. 14 W. (Seldovia B-5 quad), Kenai Peninsula Borough, 0.5 mi upstream from mouth and 3.7 mi northeast of Seldovia.	20.7	‡1972-91 1992	11-02-02	257
15239500 Fritz Creek near Homer	Kachemak Bay	Lat 59°42'30", long 151°20'35", in SW ¹ / ₄ SW ¹ / ₄ sec. 28, T. 5 S., R. 12 W. (Seldovia C-4 quad), 25 ft downstream from culvert under East Road, and 8 mi northeast of Homer.	10.4	†1963-66, †f 1967-70, †1971-77, †f 1978-80 †+1981-85, ‡1986-92 †1993-2002	10-07-02 10-24-02 10-24-02 10-30-02 11-08-02 11-23-02 11-27-02 12-05-02 4-21-03 4-24-03	31 ep700 284 88 37 p530 59 49 11 16
15239800 Diamond Creek near Homer	Cook Inlet	Lat 59°40'10", long 151°40'00", in SE ¹ / ₄ sec. 9, T. 6 S., R. 14 W. (Seldovia C-5 quad), Kenai Peninsula Borough, at culvert on Sterling High- way (mile post 167.5), 1.3 mi upstream from mouth at Cook Inlet and 4.6 mi northwest of Homer.	5.35	1962 †1963-77 †f+1978-80 †1981 1990	10-24-02	88
15239900 Anchor River near Anchor Point	Cook Inlet	Lat 59°44'50", long 151°45'11", in NE ¹ / ₄ sec. 13, T. 5 S., R. 15 W. (Seldovia C-5 quad), Kenai Peninsula Borough, at bridge on Sterling Highway (mile post 161), 4.3 mi southeast of Anchor Point.	137	‡1965-73 †1974 ‡1978-86 †1987 ‡1991-92 1996, 1999, 2002	10-09-02 10-24-02 10-25-02 11-21-02 11-23-02 11-25-02 4-10-03 4-21-03 6-03-03 7-09-03 9-15-03	223 p8,000 1,540 315 p9,000 1,360 125 238 165 83 63
15240000 Anchor River at Anchor Point	Cook Inlet	Lat 59°46'21", long 151°50'05", in NW ¹ / ₄ SE ¹ / ₄ sec. 4, T. 5 S., R. 15 W. (Seldovia D-5 quad), Kenai Peninsula Borough, at Old Sterling High- way Bridge at Anchor Point, 0.1 mi down- stream from North Fork, and 1.0 mi upstream from mouth.	226	‡1953-66 f 1978-80 †1985-91 2001	10-24-02 10-29-02	p13,400 1,360
15240500 Cook Inlet Tributary near Ninilchik	Cook Inlet	Lat 59°58'45", long 151°43'20", in NE ¹ / ₄ sec. 29, T. 2 S., R. 14 W. (Kenai A-5 quad), Kenai Pen- insula Borough, Sterling Highway, 0.2 mi upstream from mouth at Cook Inlet and 5.4 mi southwest of Ninilchik.	5.19	†1967-77 †f 1980 f 1981	10-29-02	38
15241500 Deep Creek near Ninilchik	Cook Inlet	Lat 60°01'50", long 151°40'50", on line between sec. 3 and 4, T. 2 S., R. 14 W., Kenai Peninsula Borough, at bridge on Sterling Highway, 1 mi upstream from mouth, and 1.5 mi southwest of Ninilchik.	220	1951-52 1954 1960 1965-68 1978-80	10-24-02	p22,000
15242000 Kasilof River near Kasilof	Cook Inlet	Lat 60°19'05", long 151°15'35", in SW ¹ / ₄ sec. 30, T. 3 N., R. 11 W. (Kenai B-4 quad), Kenai Peninsula Borough, at bridge, mi 67.1 Sterling Highway, 5 mi south of Kasilof.	738	‡1949 - 70 2002	10-26-02 9-5-03	7,510 8,830

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued						
15243950 Porcupine Creek near Primrose	Kenai Lake	Lat 60°20'30", long 149°22'30", in NW ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ sec. 24, T. 3 N., R. 1 W. (Seward B-7 quad), Kenai Peninsula Borough, 300 ft upstream from 18 mi campground, 0.4 mi upstream from mouth, and 0.8 mi west of Primrose.	16.8	†1963-89	10-30-02	269
15244000 Ptarmigan Creek near Lawing	Kenai Lake	Lat 60°24'20", long 149°21'45" in SE ¹ / ₄ sec. 25, T. 4 N., R. 1 W. (Seward B-7 quad), 200 ft upstream from Seward Highway, 0.2 mi north of Lawing, 0.3 mi upstream from mouth, and 3 mi downstream from Ptarmigan Lake.	32.6	‡1947-58	11-01-02	448
15248000 Trail River near Lawing	Kenai Lake	Lat 60°26'01", long 149°22'19" in SW ¹ / ₄ sec. 13, T. 4 N., R. 1 W. (Seward B-7 quad), at bridge site on old Seward-Anchorage Highway, 0.2 mi upstream from Falls Creek, 0.2 mi downstream from lower Trail lake, 1.9 mi upstream from mouth, and 2.1 mi north of Lawing.	181	‡1947-74 *1977	10-26-02	4,640
15250000 Falls Creek near Lawing	Trail River	Lat 60°25'50", long 149°22'10" in SW ¹ / ₄ SE ¹ / ₄ sec. 13, T. 4 N., R. 1 W. (Seward B-7 quad), Kenai Peninsula Borough, at Seward Highway bridge, 0.1 mi upstream from mouth and 2 mi north of Lawing.	11.8	†1963-70	11-01-02	74
15269500 Granite Creek near Portage	Sixmile Creek	Lat 60°43'40", long 149°17'00" in SW ¹ / ₄ NE ¹ / ₄ sec. 4, T. 7 N., R. 1 E. (Seward C-7 quad), Kenai Peninsula Borough, at Seward Highway, 0.7 mi upstream from mouth at Sixmile Creek and 12 mi southwest of Portage.	28.2	†1967-80 1999 2003	10-24-02 10-29-02	1,600 310
15271900 Cub Creek near Hope	Sixmile Creek	Lat 60°52'12", long 149°26'02" in NW ¹ / ₄ sec. 15, T. 9 N., R. 1 W. (Seward D-7 quad), Kenai Peninsula Borough, at Hope Highway, 0.1 mi upstream from mouth at Sixmile Creek and 7.7 mi southeast of Hope.	1.80	†1965-79, c†1980-83, 1995	10-29-02	10
15274796 +South Branch of South Fork Chester Creek at tank trail near Anchorage	South Fork Chester Creek	Lat 61°11'25", long 149°42'13" in SE ¹ / ₄ NW ¹ / ₄ , sec. 30, T. 13 N., R. 2 W. (Anchorage A-8 quad), Municipality of Anchorage, 100 ft upstream from bridge on tank trail (Bulldog Trail), and 6.5 mi east of Anchorage.	4.30	1968, 72 1980 1998-2002	10-12-02 06-12-03 07-22-03 08-28-03 09-04-03	12 4.6 3.1 1.8 2.4
15275100 Chester Creek at Arctic Boulevard at Anchorage	Knik Arm	Lat 61°12'19", long 149°53'43", on line between sec. 19, R. 3 W., and sec. 24, R. 4 W., T. 13 N. (Anchorage A-8 quad), Municipality of Anchorage, 50 ft downstream from bridge on Arctic Boulevard in Anchorage and 0.8 mi upstream from mouth.	27.4	1966-2002	10-01-02 10-01-02	288 298
15276360 Ship Creek at Elemendorf - Ft. Richardson Border near Anchorage	Knik Arm	Lat 61°14'37", long 149°44'48", in SW ¹ / ₄ NW ¹ / ₄ , sec. 1, T. 13 N., R. 3 W. (Anchorage A-8 quad), Municipality of Anchorage, 2.2 mi downstream from Glenn Highway bridge, and 7.6 mi east of Anchorage.	pending	2002	12-14-02 01-17-03 02-21-03 03-17-03 04-18-03	105 61 47 47 33

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued						
15280100 Eklutna River above Thunderbird Creek near Eklutna	Knik Arm	Lat 61°26'44", long 149°21'16", in NW ¹ / ₄ SW ¹ / ₄ , sec. 30, T. 16 N., R. 1 E. (Anchorage B- 7 quad), Municipality of Anchorage, 800 ft upstream from Thunder Bird Creek, 3.3 mi upstream from mouth, and 1.6 mi southeast of Eklutna.	--	1954-56 2002	1-17-03 4-07-03 5-13-03 6-18-03 9-12-03	7.5 6.5 7.5 6.1 4.6
15283600 Premier Creek near Sutton	Moose Creek	Lat 61°42'40" long 149°05'12", in SE ¹ / ₄ NE ¹ / ₄ , sec. 28, T. 19 N., R. 2 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, 10 ft downstream from culvert on Buffalo Mine Road (called Moose Creek Road on Anchorage C-6 quad), 4 mi north from Glenn Highway, 6 mi west of Sutton, and 7 mi northeast of Palmer.	3.38	†1996-2002	5-14-03 8-25-03	2.2 2.0
15285000 Wasilla Creek near Palmer	Knik Arm	Lat 61°38'37", long 149°11'46", in SE ¹ / ₄ SW ¹ / ₄ , sec. 13, T. 18 N., R. 1 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, 20 ft downstream from culverts on Palmer-Fishhook Road, and 4.1 mi northeast of Palmer.	16.8	†1971, f†1976-83, †1984-2002	10-02-02 04-30-03 05-22-03	74 13 16
15290200 Nancy Lake Tributary near Willow	Nancy Lake	Lat 61°41'17", long 149°57'58", in SE ¹ / ₄ SE ¹ / ₄ , sec. 34, T. 19 N., R. 4 W. (Tyonek C-1 quad), Matanuska-Susitna Borough, 150 ft upstream from culvert at Parks Highway, 0.3 mi upstream from mouth, and 4.5 mi southeast of Willow.	8.00	f1978-79, †1980, f1981, †1983-86, †1990-2002	10-02-02 4-29-03 5-22-03 7-01-03 9-30-03	64 6.2 6.3 0.9 34
15291000 Susitna River near Denali	Cook Inlet	Lat 63°06'14", long 147°30'57", in NE ¹ / ₄ sec 10, T. 21 S., R. 1 E. (Healy A-2 quad), Matanuska- Susitna Borough, at bridge on Denali Highway, 0.2 mi downstream from Windy Creek, 3.3 mi upstream from Butte Creek, and 5.3 mi south- west of Denali.	a950	1956 ‡1957-66 1967 ‡1968-86	8-26-03	7,200
15291100 Raft Creek near Denali	Susitna River	Lat 63°03'04", long 147°16'22", in SE ¹ / ₄ , sec. 36, T. 21 S., R. 2 E., (Healy A-1 quad), Mata- nuska-Susitna Borough, 30 ft upstream from culvert at mi 68.9 Denali Highway, and 10.7 mi southeast of Denali.	4.33	†1963-67, †1971-75, †1977-82, †1984-90, †1993-2002	5-16-03 6-26-03 8-26-03	3.6 17 8.8
15292400 Chulitna River near Talkeetna	Susitna River	Lat 62°33'31", long 150°14'02", in SE ¹ / ₄ , sec. 32, T. 29 N., R. 5 W., (Talkeetna C-1 quad), Matanuska-Susitna Borough, 0.5 mi down- stream from Parks Highway Bridge, 4.5 mi downstream from Troublesome Creek, 18 mi upstream from mouth, and 16 mi northwest of Talkeetna.	a2,570	‡1958-72 ‡1980-85 1998 2002	7-21-03	41,400
15294350 + Susitna River at Susitna Station	Susitna River	Lat 61°32'41", long 150°30'45", in SE ¹ / ₄ , sec. 22, T. 17 N., R. 7 W., Matanuska-Susitna Bor- ough, on left bank at Susitna Station, approxi- mately 1.5 mi down-stream from Yentna River, 12.5 mi above Alexander Creek.	19,400	1974-93	6-17-03 7-10-03 7-18-03 8-15-03 9-22-03	131,000 159,000 234,000 215,000 33,200

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
SOUTH-CENTRAL ALASKA—Continued						
15294630 North Fork Crescent River near Tuxedni Bay	Cook Inlet	Lat 60°26'06", long 152°53'52", in SE ¹ / ₄ , sec. 15, T. 4 N., R. 21 W., (Kenai B-8 quad), 500 ft upstream from unnamed tributary on left bank, 8.5 mi upstream of Lake Fork and North fork confluence, 6 mi southwest of Mt. Redoubt, and 50 mi northwest of Ninilchik.	34.2	--	5-16-03 8-01-03 10-23-03	90 537 145
15294640 Lake Fork Crescent River near Tuxedni Bay	Cook Inlet	Lat 60°21'31", long 152°48'59", in SW ¹ / ₄ , sec. 7, T. 3 N., R. 20 W., (Kenai B-8 quad), 1.0 mi downstream from lake outlet, 3.2 mi upstream of Lake Fork and North fork confluence, 9 mi south of Mt. Redoubt, and 46 mi northwest of Ninilchik.	125	--	5-16-03 7-19-03 10-23-03	462 2730 741
15294650 Crescent River near mouth near Tuxedni Bay	Cook Inlet	Lat 60°14'38", long 152°34'41", in SE ¹ / ₄ , sec. 21, T. 2 N., R. 19 W., (Kenai A-7 quad), 1.7 mi upstream from mouth at ADF&G fish camp, 18 mi south of Mt. Redoubt, 4.5 mi north of Chisik Is., and 34 mi northwest of Ninilchik.	249	--	5-16-03 8-01-03	737 3350
15297200 Myrtle Creek near Kodiak	Kalsin Bay	Lat 57°36'12", long 152°24'12" in NW ¹ / ₄ SW ¹ / ₄ , sec. 6, T. 30 S., R. 19 W. (Kodiak C-2 quad), Kodiak Island Borough, 0.1 mi upstream from bridge, 0.3 mi upstream from mouth, and 13 mi south of Kodiak.	4.74	‡1963-86, †1987-89, †1991-2002	12-10-02 2-07-03	88 152
SOUTHWEST ALASKA						
15297609 Stapp Creek near Cold Bay	Cold Bay	Lat 55°11'17", long 162°42'47", in SE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ , sec. 1, T.58 S., R. 89 W. (Cold Bay A-3 quad), Aleutians East Borough, 0.9 mi upstream from mouth, and 1 mi south of Cold Bay.	1.68	†2001-2002	11-25-02 2-26-03 5-08-03 5-08-03 6-26-03 8-25-03	1.8 3.2 0.92 0.93 1.0 0.63
15297810 Frosty Creek near Cold Bay	Izembek Lagoon	Lat 55°09'59", long 162°48'22", in SE ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄ , sec. 8, T.58 S., R. 89 W. (Cold Bay A-3 quad), Aleutians East Borough, 2.8 mi upstream from mouth, and 4.5 mi southwest of Cold Bay.	5.92	†2002	11-25-02 2-26-03 5-08-03 6-26-03 8-25-03	47 48 34 69 39
15300350 Chinkelyes Creek tributary near Pedro Bay	Chinkelyes Creek	Lat 59°44'02", long 153°48'40", in SE ¹ / ₄ NE ¹ / ₄ NE ¹ / ₄ , sec. 23, T. 5 S., R. 27 W. (Iliamna C-3 quad), Lake and Peninsula Borough, 60 ft upstream from culvert, 8 mi east of Pile Bay and 11 mi east of Pedro Bay.	0.40	†1998-2002	11-07-02 4-22-03 8-28-03	9.3 0.81 2.5
15302900 Moody Creek at Aleknagik	Wood River	Lat 59°16'34", long 158°35'42", in SE ¹ / ₄ , sec. 30, T. 10 S., R. 55 W. (Dillingham B-7 quad), 500 ft upstream from mouth at Wood River at the Aleknagik Mission.	1.28	1968 †1969-73, †1975-83, †1988-89 †1993-2002	4-14-03 9-10-03	1.6 3.3
15303660 Gold Creek at Takotna	Takotna River	Lat 62°59'20", long 156°04'08", in SE ¹ / ₄ SE ¹ / ₄ , sec. 34, T. 34 N., R. 36 W. (Iditarod D-1 quad), at Takotna, 350 ft upstream from bridge, and 400 ft upstream from mouth.	6.31	†1987-2002	7-10-03	10

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA						
15388030 Nation River near Nation	Yukon River	Lat 65°14'23", long 141°39'10" in NW ¼ sec. 30, T. 5N.,R. 30E., (Charley River A-2 quad), in Yukon-Charley Preserve, 3.75 mi upstream from mouth, 4.25 mi downstream from mouth of Hard Luck Creek, 5 mi northeast of Nation townsite, and 33 mi northwest of Eagle.	931	‡1991-2000, ‡2002	6-20-03 9-17-03	845 1420
651237141410700 Nation River near mouth near Eagle	Yukon River	Lat 65°12'37", long 141°41'07", in SW¼, sec. 36, T. 5 N., R. 29 E., (Charley River A-2 quad), 1.3 mi upstream from mouth, 3.7 mi northeast of Nation, and 35 mi northwest of Eagle.	--	--	6-13-02 8-23-02	2670 4220
652223142294100 Kandik River near mouth near Eagle	Yukon River	Lat 65°22'23", long 142°29'41", in SE¼, sec. 1, T. 6 N., R. 26 E., (Charley River B-3 quad), 1.0 mi upstream from mouth, 12 mi southeast of Snowy Peak, 23 mi northwest of Nation, and 60 mi northwest of Eagle.	--	-	6-15-02 8-24-02	2330 3220
651705142440400 Charley River near mouth near Circle	Yukon River	Lat 65°17'05", long 142°44'04", in SE¼, sec. 2, T. 5 N., R. 24 E., (Charley River B-4 quad), 5.8 mi upstream from mouth, 14 mi southwest of Kathul Mountain, 12.2 mi east of Slaven's Roadhouse, and 55 mi southeast of Circle.	1,720	--	6-16-02 8-24-02	2020 4960
652113143071500 Coal Creek near mouth near Circle	Yukon River	Lat 65°21'13", long 143°07'15", in NE¼, sec. 13, T. 6 N., R. 22 E., (Charley River B-5 quad), at mouth near Slaven's Roadhouse, 21 mi northeast of Twin Mountain, 18 mi southwest of Snowy Peak, and 45 mi southeast of Circle.	73.5	--	6-15-02 8-25-02	44 169
652108143193800 Woodchopper Creek near mouth near Circle	Yukon River	Lat 65°21'08", long 143°19'38", in NE¼, sec. 13, T. 6 N., R. 21 E., (Charley River B-5 quad), 0.6 mi upstream from mouth, 18 mi north of Twin Mountain, 21 mi southwest of Snowy Peak, and 40 mi southeast of Circle.	83.4	--	6-16-02 8-24-02	19 145
654335144032800 Yukon River near Circle	Norton Sound	Lat 65°43'35", long 144°03'28", in NE¼, sec. 6, T. 10 N., R. 18 E., (Circle C-1 quad), 8.1 mi upstream from Circle, 24 mi northeast of Central, and 34 mi west of Snowy Peak.	--	--	6-17-02 8-26-02	191000 223000
15389000 Porcupine River near Fort Yukon	Yukon River	Lat 66°59'26",long 143°08'16" in SW¼, sec. 16, T. 25N., R. 21E., (Black River D-5 quad), 1,000 ft upstream from John Herberts Village, and 65 mi northeast of Fort Yukon.	a29,500	‡1964-79, 2001-2002	4-4-03 6-9-03 6-19-03 7-23-03 8-19-03	1190 48400 18700 27000 35900
664424144321200 Sheenjek River near mouth near Fort Yukon	Porcupine River	Lat 66°44'24", long 144°32'12", in NE¼, sec. 17, T. 22 N., R. 15 E., (Fort Yukon C-2 quad), 1.0 mi upstream from mouth, 23.5 mi northeast of Fort Yukon, 55 mi southeast of Venetie, and 67 mi north of Circle.	4,750	--	6-20-02 8-28-02	9030 1440
15389980 Ptarmigan Creek near mouth near Central	Birch Creek	Lat 65°26'24", long 145°31'34", in NE¼, sec. 17, T. 7 N., R. 10 E. (Circle B-4 quad), at mi 101.5 Steese Highway, 0.2 mi upstream from mouth, 10.5 mi southeast of Miller House site, 11.7 mi west of Mastodon Dome, and 22.6 mi southwest of Central.	19.2	2001	7-22-03 9-2-03 9-4-03	16 236 89

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
 [Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
664036144352800 Black River near mouth near Fort Yukon	Porcupine River	Lat 66°40'36", long 144°35'28", in NW ¹ / ₄ , sec. 6, T. 21 N., R. 15 E., (Fort Yukon C-2 quad), 3.8 mi upstream from mouth, 20.5 mi northeast of Fort Yukon, 50 mi southeast of Venetie, and 60 mi north of Circle.	6,290	--	6-20-02 8-28-02	6180 7390
663821145060500 Porcupine River 9.5 miles upstream from mouth near Fort Yukon	Yukon River	Lat 66°38'21", long 145°06'05", in NW ¹ / ₄ , sec. 23, T. 21 N., R. 12 E., (Fort Yukon C-3 quad), 9.5 mi upstream from mouth, 6.9 mi northeast of Fort Yukon, 65 mi northwest of Circle, and 45 mi southeast of Venetie.	--	--	8-29-02	38200
663941145521600 Christian River near mouth near Fort Yukon	Yukon River	Lat 66°39'41", long 145°52'16", in NE ¹ / ₄ , sec. 7, T. 21 N., R. 9 E., (Fort Yukon C-2 quad), 6.5 mi upstream from mouth, 18 mi northwest of Fort Yukon, 32 mi south of Venetie, and 76 mi northwest of Circle.	2,470	--	6-22-02 8-30-02	580 353
664151146003000 Chandalar River near mouth near Fort Yukon	Yukon River	Lat 66°41'51", long 146°00'30", in SW ¹ / ₄ , sec. 27, T. 22 N., R. 8 E., (Fort Yukon C-2 quad), 12.5 mi upstream from mouth, 22 mi northwest of Fort Yukon, 30 mi south of Venetie, and 78 mi northwest of Circle.	10,100	--	6-22-02 8-30-02	10700 4010
15393900 North Fork 12 Mile Creek near Miller House	Birch Creek	Lat 65°24'03", long 145°44'18", in SW ¹ / ₄ , sec. 29, T. 7 N., R. 10 E. (Circle B-4 quad), at mi 93.4 Steese Highway, 0.5 mi upstream from confluence with Twelvemile Creek, 1.3 mi upstream from mouth of Twelvemile Creek, 17.2 mi southwest of Miller House site, 11.7 mi west of Mastodon Dome, and 29.4 mi south- west of Central.	23.2	1963-67 2001	7-22-03 9-2-03 9-4-03	6.5 247 70
15396100 Frying Pan Creek at mouth near Central	Birch Creek	Lat 65°16'58", long 145°33'33", in SE ¹ / ₄ , sec. 6, T. 5 N., R. 10 E. (Circle B-4 quad), 0.2 mi upstream from mouth, 19.4 mi southwest of Miller House site, 12.0 mi southwest of Mast- odon Dome, and 29.6 mi southwest of Central.	12.5	2002	8-7-03 9-18-03	24 8.3
15397500 Great Unknown Creek near Central	Birch Creek	Lat 65°17'38", long 145°24'00", in NW ¹ / ₄ , sec. 1, T. 5 N., R. 11 E. (Circle B-3 quad), 0.7 mi upstream from mouth of E. Fork Great Unkown Creek, 2.6 mi upstream from mouth of Great Unkown Creek, 16.8 mi south of Miller House site, 9.6 mi south of Mastodon Dome, and 25.9 mi southwest of Central.	18.6	2001-2002	8-7-03 9-17-03	28 20
15397700 East Fork Great Unknown Creek near Central	Birch Creek	Lat 65°17'36", long 145°23'20", in NW ¹ / ₄ , sec. 1, T. 5 N., R. 11 E. (Circle B-3 quad), 0.8 mi upstream from mouth. 2.8 mi upstream from mouth of of Great Unkown Creek, 16.7 mi south of Miller House site, 9.6 mi south of Mastodon Dome, and 25.7 mi southwest of Central.	20.4	2001-2002	8-7-03 9-17-03	31 34

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
15407200 South Fork Harrison Creek near Central	Birch Creek	Lat 65°21'52", long 145°15'25", in NW ¹ / ₄ , sec. 10, T. 6 N., R. 12 E. (Circle B-3 quad), 4.0 mi upstream from confluence with North Fork Harrison Creek, 20.0 mi upstream from mouth of Harrison Creek, 11.1 mi south of Miller House site, 5.1 mi southeast of Mastodon Dome, and 19.5 mi southwest of Central.	9.11	2001-2002	8-6-03 9-5-03	36 41
15407500 Harrison Creek near Central	Birch Creek	Lat 65°22'45", long 144°49'58", in NE ¹ / ₄ , sec. 3, T. 8 N., R. 14 E. (Circle B-2 quad), 0.4 mi upstream of mouth of Bottom Dollar Creek, 5.3 mi upstream from mouth of Harrison Creek, 15.0 mi southeast of Miller House site, 15.0 mi east of Mastodon Dome, and 13.5 mi south of Central.	71.6	2001-2002	9-3-03	411
15439800 Boulder Creek near Central	Crooked Creek	Lat 65°34'05", long 144°53'13", in NW ¹ / ₄ , sec. 32, T. 9 N., R. 14 E. (Circle C-2 quad), 2000 ft upstream from bridge at mi 125.4 Steese Highway, 0.7 mi upstream from mouth, and 2.3 mi west of Central.	31.3	†1964-65, ‡1966-82, †1983, ‡1984-86, †1988-2002	6-25-03 7-10-03 9-4-03	2.9 4.7 64
15442500 Quartz Creek near Central	Crooked Creek	Lat 65°37'09", long 144°28'55", in SW ¹ / ₄ , sec. 7, T. 9 N., R. 16 E. (Circle C-2 quad), at mi 138.1 Steese Highway, 1 mi upstream from mouth, and 10 mi east of Central.	17.2	†1990, †1992-2002	7-9-03 7-16-03 8-26-03 9-5-03	0.39 16 0.64 22
663050146065600 Upper Mouth Birch Creek near Fort Yukon	Yukon River	Lat 66°30'50", long 146°06'56", in SE ¹ / ₄ , sec. 31, T. 20 N., R. 8 E., (Fort Yukon C-2 quad), 0.6 mi upstream from mouth, 24 mi west of Fort Yukon, 35 mi south of Venetie, and 77 mi northwest of Circle.	4,200	--	6-21-02 8-31-02	883 1980
662642146375200 Lower Mouth Birch Creek near Beaver	Yukon River	Lat 66°26'42", long 146°37'52", in SW ¹ / ₄ , sec. 26, T. 19 N., R. 5 E., (Fort Yukon A-2 quad), 0.4 mi upstream from mouth at Lower Birch Creek Slough, 38.5 mi west of Fort Yukon, 40 mi southwest of Venetie, and 70 mi northeast of Stevens Village.	844	--	6-23-02 8-31-02	1670 3690
663032146500000 Hadweenzic River near mouth near Beaver	Yukon River	Lat 66°30'32", long 146°50'00", in NW ¹ / ₄ , sec. 2, T. 19 N., R. 4 E., (Fort Yukon C-6 quad), 5.3 mi upstream from Purgatory, 5.1 mi upstream from mouth at White Eye, 18.7 mi northeast of Beaver, and 44 mi west of Fort Yukon.	946	--	9-02-02	57
662437147060400 Yukon River at Devlin Island near Beaver	Norton Sound	Lat 66°24'37", long 147°06'04", in SW ¹ / ₄ , sec. 3, T. 18 N., R. 3 E., (Beaver B-1 quad), 12 mi upstream from Beaver, 52 mi west of Fort Yukon, 55 mi southwest of Venetie, and 62 mi northwest of Stevens Village.	--	--	9-02-02	245000
661236147322200 Beaver Creek near mouth near Beaver	Yukon River	Lat 66°12'36", long 147°32'22", in SE ¹ / ₄ , sec. 16, T. 16 N., R. 1 E., (Beaver A-2 quad), 6.2 mi upstream from mouth at Beaver Slough, 11.1 mi southwest of Beaver, 46 mi northeast of Stevens Village, and 68 mi southwest of Fort Yukon.	2,870	--	9-03-02	2537

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
661744147464000 Hodzana River near mouth near Beaver	Yukon River	Lat 66°17'44", long 147°46'40", in SW ¹ / ₄ , sec. 16, T. 17 N., R. 1 W., (Beaver B-2 quad), 5.3 mi upstream from Purgatory, 0.2 mi upstream from mouth at Hodzana Slough, 16 mi up- stream from Purgatory, 11.5 mi southwest of Beaver, and 42 mi northeast of Stevens Village.	1,650	--	6-24-02 9-03-02	918 365
661340147541000 Yukon River at Timber Point near Beaver	Norton Sound	Lat 66°13'40", long 147°54'10", in SE ¹ / ₄ , sec. 11, T. 16 N., R. 2 W., (Beaver C-2 quad), 5.3 mi upstream from Purgatory, 16.8 mi southwest of Beaver, 37 mi northeast of Stevens Village, and 80 mi southwest of Fort Yukon.	--	--	6-25-02 9-04-02	226000 243000
660051149153200 Dall River near mouth near Stevens Village	Yukon River	Lat 66°00'51", long 149°15'32", in NW ¹ / ₄ , sec. 28, T. 14 N., R. 8 W., (Beaver A-5 quad), 0.5 mi upstream from mouth, 4.8 mi west of Stevens Village, and 37 mi northwest of Liven- good.	1,170	--	9-04-02	206
655252149480800 Ray River near mouth near Stevens Village	Yukon River	Lat 65°52'52", long 149°48'08", in SE ¹ / ₄ , sec. 10, T. 12 N., R. 11 W., (Livengood D-6 quad), 0.2 mi above mouth, 2.3 mi downstream from Yukon River highway crossing, and 22 mi southwest of Stevens Village.	676	--	6-04-03 8-25-03	1340 184
653954149473500 Hess Creek 1.2 mi above mouth near Stevens Village	Yukon River	Lat 65°39'54", long 149°47'35", in SW ¹ / ₄ , sec. 26, T. 10 N., R. 11 W., (Livengood C-6 quad), 6 mi downstream from Crescent Island, 15 miles south of Yukon River highway crossing, and 31 mi southwest of Stevens Village.	1,190	--	6-04-03 8-25-03	989 1370
15453610 Ray River Tributary near Stevens Village	Ray River	Lat 65°56'57", long 149°54'50" in SE ¹ / ₄ , sec.17, T.13 N., R. 11 W. (Livengood D-6 quad), at mi 63.8 Dalton Highway and 22 mi west of Stevens Village.	8.00	†1977, †1979-80 †1982 †1987-88 †1990-2002	5-14-03 6-3-03 7-28-03	39 14 2.6
15470300 Little Jack Creek near Nabesna	Jack Lake	Lat 62°32'39", long 143°19'22", in SW ¹ / ₄ NW ¹ / ₄ SE ¹ / ₄ , sec. 22 T. 9 N., R. 11 E. (Nabesna C-5 quad), mi 25.8 Nabesna Road, and 15.6 mi northwest of Nabesna.	6.73	†1975-77, †1980, †1982-83, †1985-88, †1990-95, †1997-2002	5-15-03 8-25-03	4.0 4.1
15472000 Tanana River near Tok Junction	Yukon River	Lat 63°19'00", long 142°38'30", in NW ¹ / ₄ , sec. 25, T. 18 N., R. 14 E. (Tanacross B-4 quad) 1.4 mi west of junction of Alaska and Taylor High- ways, at bridge crossing.	6,800	‡1950-1953 2001	8-08-02 8-13-03	23,500 18,600
15476300 Berry Creek near Dot Lake	Tanana River	Lat 63°41'23", long 144°21'47", in NW ¹ / ₄ , sec. 13 T. 22 N., R. 5 E. (Mt. Hayes C-1 quad), 100 ft upstream from former bridge site at mi 1371.4 on abandoned section of Alaska High- way, 1.9 mi upstream from mouth, and 6.0 mi west of Dot Lake.	65.1	†1963-71, †1972-81, †1982,1984, †1988 †1990-94 †1997-2002	8-4-03	47

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
15478093 Suzy Q Creek near Pump Station 10	Delta River	Lat 63°29'43", long 145°51'27", in SW ¹ / ₄ , sec. 29, T. 16 S., R. 10 E. (Mt. Hayes B-4 quad), at mi 224.8 Richardson Highway, 0.1 mi upstream from mouth, and 6 mi north of Pump Station 10.	1.29	†1987, †1991-94, †1997-2002	7-9-03 7-17-03	5.5 26
15478499 Ruby Creek above Richardson Highway near Donnelly	Delta River	Lat 63°37'54", long 145°52'14", in NE ¹ / ₄ , sec. 7, T. 15 S., R. 10 E. (Mt. Hayes C-4 quad), 0.2mi upstream from trans-Alaska Pipeline, 0.5 mi upstream from bridge at mi 234.8 Richardson Highway, 2.2 mi upstream from mouth, and 2.3 mi south of Donnelly.	4.89	†1987-88, †1991-97, †1999-2000 2002	6-19-03 7-9-03 7-17-03 9-11-03	2.3 2.2 32 2.3
15480000 Banner Creek at Richardson	Tanana River	Lat 64°17'24" long 146°20'56", in SW ¹ / ₄ , sec. 22, T. 7 S., R. 7 E. (Big Delta B-5 quad), 400 ft upstream from bridge at mi 295.4 Richardson Highway 0.2 mi upstream from mouth, and 0.4 mi northwest of Richardson.	20.2	†1964-67, †1969-70, †1972, †1974-75, †1977, †1982-84, †1989-93, †1995-96 †1998-2002	6-16-03 7-9-03 7-17-03 9-4-03	3.0 2.6 47 26
1551400435 Noyes Slough at Illinois Street Bridge at Fairbanks	Chena River	Lat 64°51'16", long 147°42'50", in SE ¹ / ₄ , sec. 3, T.1 S., R.1 W., Fairbanks North Star Borough, (Fairbanks D-2 Quad), at Illinois Street Bridge at Fairbanks.	--	1993,1994, 2000, 2002	9-15-03	182
1551400550 Noyes Slough at Danby Street Bridge at Fairbanks	Chena River	Lat 64°51'41", long 147°44'30", in NW ¹ / ₄ , sec. 3, T.1 S., R.1 W., Fairbanks North Star Borough, (Fairbanks D-2 Quad), at Danby Street Bridge at Fairbanks.		1993,1994 2000, 2002	8-5-02	332
1551401580 Noyes Slough at Goldizen Avenue Bridge at Fairbanks	Chena River	Lat 64°50'38", long 147°48'24", in NW ¹ / ₄ , sec. 8, T.1 S., R.1 W., Fairbanks North Star Borough, (Fairbanks D-2 Quad), at Goldizen Avenue Bridge at Fairbanks.		2000	8-5-03	321
15515800 Seattle Creek near Cantwell	Nenana River	Lat 63°19'32", long 148°14'49", on line between sec. 25 and 26, T. 18 S., R.4 W. (Healy B-3 quad), Matanuska-Susitna Borough, at bridge at mi 110.9 Denali Highway, and 22.4 mi southeast of Cantwell.	36.2	c†1963-65, ‡1966-75, c†1977 c†1979-85 c†1988-89	8-26-03	58
15516000 Nenana River near Windy	Tanana River	Lat 63°27'28", long 148°48'11", in NE ¹ / ₄ sec. 12, T. 17 S. R. 7 W. (Healy B-4 quad), Matanuska-Susitna Borough, near left bank under bridge on Denali Highway, 0.8 mi upstream from Jack River, 1 mi southeast of Windy railroad station, and 2 mi downstream from Schist Creek.	710	‡1950-56 1957 ‡1958-73	7-21-03	4,160

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
15516200 Slime Creek near Cantwell	Nenana River	Lat 63°30'34", long 148°48'39", in SE ¹ / ₄ , sec. 24, T. 16 S., R. 7 W. (Healy C-4 quad), 25 ft. down stream of culverts at mi 219.9 George Parks Highway, 9.1 mi northeast of Cantwell.	6.90	†1990-2002	6-26-03 7-19-03 8-27-03	24 78 43
15517980 Dragonfly Creek near Healy	Nenana River	Lat 63°47'45", long 148°55'19", in SW ¹ / ₄ SE ¹ / ₄ SW ¹ / ₄ , sec. 9, T. 13 S., R. 7 W., (Healy D-4 quad), at mi 242.6 George Parks Highway, 6 mi southeast of Healy	0.71	†1990-95, †1997-2002	7-17-03 8-05-03	1.4 1.0
15541600 Globe Creek near Livengood	Tatilina River	Lat 65°17'08", long 148°07'56", in SE ¹ / ₄ , sec. 3, T. 5 N., R. 3 W. (Livengood B-3 quad), 0.2 mi upstream from culvert at mi 36.7 Elliott Highway.	23.0	†1964-70, †1972-74, †1976, †1982-83, †1985-86, †1989-91, †1993, †1995-2002	5-14-03 6-3-03 7-15-03 8-7-03	42 16 58 28
650813152250200 Tozitna River at mouth near Tanana	Yukon River	Lat 65°08'13", long 152°25'02", in NE ¹ / ₄ , sec. 34, T. 4 N., R. 24 W., (Tanana A-5 quad), 0.2 mi upstream from Tanana Slough, 10 miles downstream from Tanana, and 30 mi north of Nulato.	1,630	--	6-05-03 8-26-03	6940 7780
645408154143400 Nowitna River 2.3 mi above mouth near Ruby	Yukon River	Lat 64°54'08", long 154°14'34", in NE ¹ / ₄ , sec. 8, T. 7 S., R. 23 E., (Ruby D-3 quad), 38 mi north-east of Ruby, and 67 mi southwest of Tanana.	7,180	--	6-06-03 8-27-03	17600 8670
15564600 Melozitna River near Ruby	Yukon River	Lat 64°45'58", long 155°27'31", in SE ¹ / ₄ , sec. 29, T. 8 S., R. 17 E., (Ruby D-5 quad), 1500 ft upstream from mouth, 1 mile upstream from Ruby, and 44 miles east of Galena.	2,690	1962-73	6-06-03 8-27-03	10700 4350
15564800 Yukon River at Ruby	Norton Sound	Lat 64°44'52", long 155°29'41", in SE ¹ / ₄ , sec. 31, T. 8 S., R. 17 E., (Ruby C-5 quad), near old gaging station.	259,000	1957-78	6-08-03 8-28-03	414000 283000
643816156030100 Yuki River 12 mi above mouth near Ruby	Yukon River	Lat 64°38'16", long 156°03'01", in NW ¹ / ₄ , sec. 10, T. 10 S., R. 14 E., (Nulato C-1 quad), 17mi southwest of Ruby, and 30 mi southeast of Galena.	1,070	--	6-08-03 8-28-03	1410 3680
680856151443500 Little Contact Creek at mouth at Anaktuvuk Pass	Contact Creek	Lat 68°08'59", long 151°44'25", in NE ¹ / ₄ , sec. 18, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 30 ft upstream from mouth, 0.4 mi upstream of Contact Creek bridge at Main St, and 0.7 mi west of Eleanor Lake.	13.0	--	6-17-03 6-19-03 7-15-03 8-14-03	24 7.5 39 35
15564868 Snowden Creek near Wiseman	Dietrich River	Lat 67°44'20", long 149°44'24", in SW ¹ / ₄ , sec. 26, T. 34 N., R. 10 W. (Chandalar C-6 quad), upstream from culvert at mi 213.5 Dalton Highway and 24.5 mi northeast of Wiseman.	16.7	†1977-80, †1982, †1984-85, †1987-94, †1996-2002	6-11-03 7-29-03 9-8-03	82 30 40

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
15564872 Nugget Creek near Wiseman	Middle Fork Koyukuk River	Lat 67°29'25", long 149°52'20", in NW ¹ / ₄ , sec. 30, T. 31 N., R. 10 W. (Chandalar B-6 quad), upstream from culvert at mi 195.6 Dalton High- way, and 8.7 mi northeast of Wiseman.	9.47	†1975-79, †1982, †1985, †1987, †1989-2002	6-11-03 7-29-03	20 12
1556488224 Contact Creek below Little Contact Creek at Anaktuvuk Pass	John River	Lat 68°08'57", long 151°44'23", in NE ¹ / ₄ , sec. 18, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 400 ft downstream from confluence of Little Contact Creek, 0.3 mi upstream of Contact Creek bridge at Main St, and 0.7 mi west of Eleanor Lake.	90.3	--	6-18-02 7-17-02 9-10-02 6-17-03 6-19-03 7-15-03 8-14-03 9-09-03	60 107 62 106 85 172 287 38
680837151435000 Contact Creek at Main St. at Anaktuvuk Pass	John River	Lat 68°08'38", long 151°43'51", in NW ¹ / ₄ , sec. 17, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 40 ft upstream of Contact Creek bridge at Main St.	91.0	--	6-18-02 7-17-02 9-10-02 6-17-03 6-19-03 7-15-03 9-09-03	49 93 23 213 75 131 31
680827151434300 Contact Creek 0.2 mi below Main St. at Anaktuvuk Pass	John River	Lat 68°08'57", long 151°44'23", in SW ¹ / ₄ , sec. 17, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 0.2 mi downstream of Contact Creek bridge at Main St.	--	--	6-19-03 7-15-03 9-09-03	50 131 28
680820151433600 Contact Creek 0.4 mi below Main St. at Anaktuvuk Pass	John River	Lat 68°08'23", long 151°43'26", in SW ¹ / ₄ , sec. 17, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 0.4 mi downstream of Contact Creek bridge at Main St.	--	--	6-19-03 7-15-03 8-14-03 9-09-03	98 150 289 27
680754151442100 Contact Creek above Inukpasugruk Creek at Anaktuvuk Pass	John River	Lat 68°07'54", long 151°44'23", in NE ¹ / ₄ , sec. 19, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 0.6 mi above confluence with Inukpasugruk Creek, 1.3 mi southwest of Eleanor Lake, and 100 ft southeast of access road to south of run- way.	--	--	6-19-02 7-16-02 9-11-02 7-16-03 8-14-03 9-09-03	35 107 42 130 277 33
680811151443200 John River tributary above lagoons at Anaktuvuk Pass	John River	Lat 68°08'09", long 151°44'33", in NE ¹ / ₄ , sec. 19, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), outlet of pool 0.6 mi upstream of mouth, and 100 feet northwest from northwest corner of sewage lagoon.	1.9	--	6-17-03 7-17-03 8-13-03 9-11-03	1.2 2.7 8.9 1.8
680752151450200 John River tributary at Anaktuvuk Pass	John River	Lat 68°07'53", long 151°45'01", in NE ¹ / ₄ , sec. 19, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 0.25 mi above mouth, 40 ft below instream island, and 400 ft upstream of first culvert crossing of access road to northwest of runway.	2.0	--	9-11-02 6-17-03 7-17-03 8-13-03 9-11-03	0.73 1.3 3.2 7.4 1.2

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
680735151444400 Inukpasugruk Creek at Anaktuvuk Pass	John River	Lat 68°07'35", long 151°44'44", in SE ¹ / ₄ , sec. 19, T. 15 S., R. 2 E., (Chandler Lake A-3 quad), 0.5 mi above confluence with Contact Creek at ATV trail crossing, and 1.7 mi southwest of Eleanor Lake.	119	--	6-19-02 7-16-02 9-11-02 5-14-03 7-16-03 9-09-03	93 81 137 3.9 102 102
680715151463000 John River below Inukpasugruk Creek at Anaktuvuk Pass	Koyukuk River	Lat 68°07'13", long 151°46'30", in NE ¹ / ₄ , sec. 25, T. 15 S., R. 1 E., (Chandler Lake A-3 quad), 0.6 mi below confluence of Contact Creek and Inukpasugruk Creek on most northwestern channel, 0.4 mi upstream from start of single main channel, and 2.4 mi southwest of Eleanor Lake.	--	--	6-19-02 7-16-02 9-11-02 7-16-03 9-09-03	e127 e268 e179 e232 e135
680656151470600 John River 1 mi below Inukpasugruk Creek at Anaktuvuk Pass	Koyukuk River	Lat 68°06'59", long 151°46'57", in NE ¹ / ₄ , sec. 25, T. 15 S., R. 1 E., (Chandler Lake A-3 quad), 1 mi below confluence of Contact Creek and Inukpasugruk Creek, 50 ft downstream from start of single main channel, and 2.7 mi south- west of Eleanor Lake.	--	--	7-16-03	272
15564884 Prospect Creek near Prospect Camp	Jim River	Lat 66°46'56", long 150°41'06", in NW ¹ / ₄ , sec. 31, T. 23 N., R. 14 W. (Bettles D-2 quad), at mi 135.2 Dalton Highway, 0.4 mi downstream from Trans-Alaska Pipeline crossing, 1.5 mi upstream from mouth .	110	†1975-78, †1980 †1982 †1989 †1992-2002	6-11-03 7-28-03 9-11-03	225 261 273
15564887 Bonanza Creek Tributary near Prospect Camp	Bonanza Creek	Lat 66°36'52", long 150°41'24", in SE ¹ / ₄ , sec. 25, T. 21 N., R. 15 W., 0.3 mi downstream from culverts at mi 121.2 Dalton Highway, 3.4 mi upstream from mouth, and 13.5 mi south of pump station 5.	11.7	†1975-76, †1982, †1985-86, †1989-95, †1997-2002	5-14-03 7-28-03 9-11-03	58 8.5 37
15564950 Indian River at Utopia	Koyukuk River	Lat 65°59'49", long 153°41'31", in NW ¹ / ₄ , sec. 19, T. 7 N., R. 25 E. (Melozitna D-2 quad), at mi 0.2 on road to Indian Mountain, and 1.8 mi upstream from mouth of Flat Creek.	38.8	†1998-2002	6-10-03 8-6-03 9-17-03	210 77 29
15564960 Utopia Creek at Utopia	Indian River	Lat 65°59'26", long 153°41'44", in SW ¹ / ₄ , sec. 19, T. 7 N., R. 25 E. (Melozitna D-2 quad), 0.3 mi south of landing strip at Utopia, and 1.2 mi upstream from mouth.	5.18	†1998-2002	6-10-03 8-6-03 9-17-03	45 10 13
645725157334800 Koyukuk River 9.4 mi above mouth near Koyukuk	Yukon River	Lat 64°57'25", long 157°33'48", in NW ¹ / ₄ , sec. 24, T. 6 S., R. 6 E., (Nulato D-4 quad), 7 mi northeast of Koyukuk, and 28 mi northwest of Galena.	31,400	---	6-09-03 8-29-03	101000 70100
644226158080900 Nulato River at mouth near Nulato	Yukon River	Lat 64°42'26", long 158°08'09", in SE ¹ / ₄ , sec. 18, T. 9 S., R. 4 E., (Nulato C-5 quad), 1.3 mi downstream of Nulato.	883	--	6-09-03 8-30-03	6870 1990
15565200 Yukon River near Kaltag	Norton Sound	Lat 64°15'54", long 158°40'21", in NE ¹ / ₄ , sec. 21, T. 14 S., R. 1 E., (Nulato B-6 quad), 4.7 mi downstream of Kaltag.	296,000	1957-66	6-10-03 8-30-03	545000 358000

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
YUKON ALASKA—Continued						
623945160182800 Anvik River 4.7 mi above mouth near Anvik	Yukon River	Lat 62°39'45", long 160°18'28", in NW ¹ / ₄ , sec. 27, T. 30 N., R. 59 W., (Holy Cross C-3 quad), 3 mi west of Anvik, and 19 mi north of Para- dise.	1,780	--	6-11-03 9-01-03	6490 3870
623125160135800 Bonasila River 1.8 mi above mouth near Elkhorn Island near Anvik	Yukon River	Lat 62°31'25", long 160°13'58", in NW ¹ / ₄ , sec. 16, T. 28 N., R. 59 W., (Holy Cross C-3 quad), 1 mi above confluence with Bonasila Slough, 9.3 mi south of Anvik, and 9 mi northwest of Paradise.	1,160	--	6-11-03 9-01-03	2900 1870
621418159341000 Innok River 15 mi above mouth near Holy Cross	Yukon River	Lat 62°14'18", long 159°34'10", in SE ¹ / ₄ , sec. 24, T. 25N., R. 56 W., (Holy Cross A-2 quad), 1.5 mi above confluence with Paimut Slough near winter trail crossing, 7 mi northwest of Holy Cross, and 32 mi southeast of Anvik.	14,100	--	6-12-03 9-02-03	17100 20500
620239162343500 Atchuelinguk River 16 mi above mouth near Pilot Station	Yukon River	Lat 62°02'39", long 162°34'35", in NE ¹ / ₄ , sec. 36, T. 23N., R. 73 W., (Kwiguk A-2 quad), 12 mi northeast of Pilot Station, and 19 mi east of St Marys.	2,100	--	9-03-03	5930
15565450 Andreafsky River at St Marys	Yukon River	Lat 62°03'13", long 163°09'11", in SE ¹ / ₄ , sec. 26, T. 23N., R. 76 W., (Kwiguk A-3 quad), 1000 ft upstream from upstream confluence of Steamboat Slough at St Marys, and 1.2 mi downstream of confluence with East Fork Andreafsky River.	2,100	--	9-03-03	5670
NORTHWEST ALASKA						
15565730 Chiroskey River near Unalakleet	Unalakleet River	Lat 63°55'06", long 160°18'58", in NW ¹ / ₄ , sec. 19, T. 18 S., R. 8 W. (Unalakleet D-3 quad), on left bank, 1 mi upstream from mouth, 14 mi northeast of Unalakleet.	296	†1998, †2001-2002	8-27-03	1,100
15581000 Hugh Rowe Creek near Council	Fox River	Lat 64°44'35", long 163°53'44", in NW ¹ / ₄ NW ¹ / ₄ NW ¹ / ₄ , sec. 4, T. 9 S., R 26 W. (Solomon C-4 quad), 150 ft upstream from Nome-Council Road, 0.1 mi upstream from mouth, and 60 mi East of Nome.	2.34	2002	6-23-03 8-19-03	3.9 3.7
15583500 Etta Creek near Council	East Fork Solomon River	Lat 64°41'56", long 164°09'57", in NE ¹ / ₄ NE ¹ / ₄ , sec. 24, T. 9 S., R 28 W. (Solomon C-5 quad), 100 ft upstream from Nome-Council Road, 0.2 mi upstream from mouth, and 25 mi southwest of Council.	1.33	2002	10-16-02 6-23-03 8-19-03	3.3 2.1 2.3
15585000 Goldengate Creek near Nome	Norton Sound	Lat 64°26'51", long 165°03'14", in SW ¹ / ₄ , sec. 15, T. 12 S., R. 32 W. (Nome B-1 quad), 80 ft upstream from culvert on Nome-Council Road and 11 mi southeast of Nome.	1.55	†1965 1966 †1986-88 †1990-2002	5-23-03	11.6

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
NORTHWEST ALASKA—Continued						
15624998 Arctic Creek above tributary near Nome	Cripple River	Lat 64°38'16", long 165°42'42", in NE ¹ / ₄ , sec. 8, T. 10 S., R. 35 W. (Nome C-2 quad), 300 ft upstream from culvert on Nome-Teller Road, 2 mi upstream from mouth, and 13 mi northwest of Nome.	1.13	† 1975, † 1979-84, † 1986-2002	6-24-03 8-20-03	.81 1.7
15633000 Washington Creek near Nome	Sinuk River	Lat 64°42'52", long 165°49'13", in NW ¹ / ₄ , sec. 14, T. 9 S., R. 35 W. (Nome C-2 quad), 400 ft upstream from culvert on Nome-Teller Road, and 19 mi northwest of Nome.	6.34	† 1964-66, † 1968-78, † 1980-2002	8-20-03	.05
15635000 Eldorado Creek near Teller	Tisuk River	Lat 64°57'38", long 166°11'59", in NE ¹ / ₄ NE ¹ / ₄ , sec. 20, T. 6 S., R. 37 W. (Nome D-3 quad), 30 ft downstream from bridge at mi 46.3 of Nome-Teller Road, 0.5 mi upstream from mouth at Tisuk River and 21 mi south of Teller.	5.83	1986-87 ‡ 1988-90 1991 ‡ 1992-1998 † 1999-2002	05-21-03 06-24-03 08-20-03	8.9 18 14
15746890 Competition Creek near Kivalina	Wulik River	Lat 68°08'05", long 163°03'37", in NW ¹ / ₄ , sec. 32, T. 32 N., R. 19 W. (DeLong Mts A-2 quad), 600 ft upstream from mouth, 7 mi northwest of Red Dog Mine, 39 mi north of Noatak, and 48 mi northeast of Kivalina. TeckCominco station 202.	6.85	2000-02	7-2-03	34
15746980 Ikalukrok Creek above Red Dog Creek near Kivalina	Wulik River	Lat 68°05'38", long 162°56'47", in SE ¹ / ₄ , sec. 11, T. 31 N., R. 19 W. (DeLong Mts A-2 quad), 300 ft upstream from Red Dog Creek, 3 mi northwest of Red Dog Mine, 36 mi north of Noatak, and 50 mi northeast of Kivalina. Teck-Cominco Station 9.	59.2	‡ 1991-92, 1993-2002	6-1-03 6-29-03 9-7-03	436 212 171
15746983 Red Dog Mine Clean Water Ditch near Kivalina	Ikalukrok Creek	Lat 68°04'28", long 162°51'35", in NE ¹ / ₄ , sec. 19, T. 31 N., R. 18 W. (DeLong Mts A-2 quad), 500 ft downstream from outfall of clean water ditch, 300 ft northwest of Red Dog Mine (contribut-mill site, 0.4 mi upstream from South Fork Red Dog Creek, 36 mi north of Noatak, and 50 mi northeast of Kivalina. TeckCominco station 140.	4.74 (total) 4.3	‡ 1991-92, 1993-2002	6-3-03 6-28-03 9-6-03	21 8 5.3
15746988 North Fork Red Dog Creek near Kivalina	Ikalukrok Creek	Lat 68°05'03", long 162°52'52", in SW ¹ / ₄ , sec. 18, T. 31 N., R. 18 W. (DeLong Mts. A-2 quad), 500 ft upstream from mouth, 1.1 mi northwest of Red Dog Mine, 36 mi north of Noatak, and 50 mi northeast of Kivalina. Teck-Cominco station 12.	15.9	‡ 1991-94, † 1995-2002	6-2-03 6-29-03 7-2-03 9-6-03	131 20 63 26
15746990 Red Dog Creek above Mouth near Kivalina	Ikalukrok Creek	Lat 68°05'20", long 162°55'30", in NW ¹ / ₄ , sec. 13, T. 31 N., R. 19 W. (DeLong Mts. A-2 quad), 1000 ft upstream from mouth, 2.3 mi northwest of Red Dog Mine, 36 mi north of Noatak, and 50 mi northeast of Kivalina. Teck-Cominco Station 10.	24.6 (total) 21.4	‡ 1991-92, 1993-2002	6-3-03 6-29-03 9-7-03	134 56 36

Discharge measurements made at partial-record stations and miscellaneous sites during water year 2003
[Footnotes at end on table on page 359]

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
NORTHWEST ALASKA—Continued						
1574699020 Ikalukrok Creek 0.6 mi below Red Dog Creek near Kivalina	Wulik River	Lat 68°05'09", long 162°58'07", in NE ¹ / ₄ , sec. 15, T. 31 N., R. 19 W. (DeLong Mts. A-2 quad), 0.6 mi downstream from Red Dog Creek, 3 mi northwest of Red Dog Mine, 36 mi north of Noatak, and 48 mi northeast of Kivalina. TeckCominco Station 150.	n	2001-2002	6-30-03 9-8-03	489 391
15746995 Ikalukrok Creek 4.3 mi below Dudd Creek near Kivalina	Wulik River	Lat 67°58'06", long 163°09'44", in SE ¹ / ₄ , sec. 26, T. 30 N., R. 20 W. (Noatak D-3 quad), 4.3 mi blw Dudd Creek, 11 mi southwest of Red Dog Mine, 28 mi north of Noatak and 39 mi northeast of Kivalina. TeckCominco Station 160.	147 (total) 140 (contribut- ing)	2002	6-30-03 9-7-03	516 290
15746998 Tutak Creek near Kivalina	Wulik River	Lat 67°52'28", long 163°40'14", in NE ¹ / ₄ , sec. 34, T. 29 N., R. 22 W. (Noatak D-4 quad), 1,000 ft upstream from mouth, 28 mi northwest of Noatak, and 25 mi northeast of Kivalina.	119	1991, †1992-2002	6-2-03 9-8-03	539 150
ARCTIC SLOPE ALASKA						
15904900 Atigun River Tributary near Pump Station 4	Atigun River	Lat 68°22'25", long 149°18'48", in SE ¹ / ₄ , sec. 28, T. 12 S., R. 12 E. (Phillip Smith Mts. B-4 quad), 0.2 mi upstream from bridge at mi 265 on Dalton Highway, 0.9 mi upstream from mouth, and 4 mi south of Pump Station 4.	32.6	‡1977-86, †1987-91, †1994, †1996-99, †2001-02	6-4-03 7-29-03	68 115
15910300 Sagavanirktok River Tributary near Happy Valley Camp	Sagavanirktok River	Lat 69°09'38", long 148°49'40", in NE ¹ / ₄ , sec. 30, T. 3 S., R. 14 E. (Sagavanirktok A-4 quad), 500 ft upstream from culvert at mi 335.2 on Dalton Highway, 0.8 mi upstream from mouth, and 16 mi south of Sagwon.	12.7	†1997-2002	6-10-03 9-8-03	35 14
15918200 Sagavanirktok River Tributary near Deadhorse	Sagavanirktok River	Lat 69°57'14", long 148°43'48", in NE ¹ / ₄ , sec. 19, T. 1 N., R. 14 E. (Sagavanirktok D-3 quad), at mi 386.2 on Dalton Highway, 0.4 mi upstream from mouth, and 23 mi south of Deadhorse.	a 12	†1988-91, †1995-97 †1999-2001	6-4-03	25

FOOTNOTES

- | | |
|--|--|
| † Operated as a crest-stage partial-record station | f Low-flow partial-record station |
| ‡ Operated as a continuous-record station | g Not previously published |
| + See analysis of samples collected at miscellaneous water-quality sites | h Previously published as 15052482 Jordan Creek at Trout Street Bridge near Auke Bay |
| * Operated as a stage-only partial-record station | j Ice effect |
| a Approximately | m Discharge measurement provided by the Bureau of Land Management |
| b Ponded water but no flow | n To be determined |
| c Observations reported by Mendenhall Watershed Personnel. | o Discharge measurement provided by U.S. Fish and Wildlife Service |
| d Channel dry | p Peak flow |
| e Estimated | r Revised |

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

SOUTHEAST ALASKA

15049900 GOLD CREEK NEAR JUNEAU

Date	Time	Medium code	Sample type	Stream width, feet (000004)	Instantaneous discharge, cfs (000061)	Sampling method, code (82398)	Sampler type, code (84164)	Specific conductance, wat unfiltered, 25 degC (00095)	pH, water, unfiltered, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Color, water, filtered, Pt-Co units (00080)	Turbidity, water unfiltered, lab, Hach 2100AN NTU (99872)
OCT 31...	1355	9	9	37.5	65	10	3044	141	7.9	1.0	3.5	8	<1
DEC 17...	1150	9	9	38.0	64	10	3044	141	8.0	3.0	3.5	2	<1
JAN 15...	1145	9	9	36.0	30	10	3044	147	8.0	2.5	3.0	2	1
FEB 26...	1225	9	9	18.5	13	10	3044	169	7.4	3.5	3.0	5	<1
MAR 31...	1215	9	9	33.5	21	10	3044	134	8.0	-.5	2.0	2	<1
APR 23...	1200	9	9	19.5	24	10	3044	115	7.9	7.0	4.5	2	<1
MAY 23...	1400	9	9	47.0	154	10	3044	72	7.6	--	4.5	2	2
JUL 09...	1245	9	9	42.5	89	10	3044	94	7.7	14.5	10.5	2	<1
AUG 29...	1300	9	9	20.0	49	10	3044	119	7.9	11.0	9.0	<1	<1
SEP 29...	1015	9	7	48.0	136	10	3044	120	7.8	6.0	7.5	5	<1

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfiltered, mg/L as CaCO3 (00900)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Sodium, water, filtered, mg/L (00930)	Bicarbonate, water, filtered, incrm. titr., mg/L (00453)	Alkalinity, water, filtered, inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, filtered, mg/L (00945)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Bromide, water, filtered, mg/L (71870)
OCT 31...	757	13.7	104	65	18	4.8	.8	38	26	30.9	.47	<.17	<.016
DEC 17...	743	12.4	96	63	17	4.8	1.0	39	32	29.2	.44	<.17	<.016
JAN 15...	752	13.2	99	69	19	5.2	1.2	40	33	33.0	.32	<.17	<.016
FEB 26...	751	11.5	87	84	22	7.0	1.5	40	33	45.2	.32	<.17	<.016
MAR 31...	723	13.6	104	64	18	4.7	1.1	40	32	31.5	.40	.027	<.016
APR 23...	742	12.7	101	56	16	3.8	1.1	28	23	24.0	.30	<.17	<.016
MAY 23...	758	12.2	95	32	9.7	1.8	.5	21	17	14	.48	.06	<.01
JUL 09...	755	10.4	94	42	12.2	2.81	.76	26	21	18.9	.31	.08	<.01
AUG 29...	759	11.2	97	52	14.9	3.44	.79	33	27	25.4	.67	<.17	<.016
SEP 29...	761	11.6	97	56	15.8	3.84	.81	37	30	24.5	.35	<.17	<.016

Date	Silica, water, filtered, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Nitrite, water, filtered, mg/L as N (00613)	Nitrite + nitrate, water, filtered, mg/L as N (00631)	Ammonia, water, filtered, mg/L as N (00608)	Orthophosphate, water, filtered, mg/L as P (00671)	Arsenic, water, filtered, ug/L (01000)	Barium, water, filtered, ug/L (01005)	Beryllium, water, filtered, ug/L (01010)	Cadmium, water, filtered, ug/L (01025)	Chromium, water, filtered, ug/L (01030)	Cobalt, water, filtered, ug/L (01035)	Copper, water, filtered, ug/L (01040)
OCT 31...	2.6	80	<.008	.293	<.04	<.02	E1.1	33	<.5	<8	<.8	<8	<6
DEC 17...	2.8	81	<.008	.393	<.04	<.02	<1.9	36	<.5	<8	<.8	<8	<6
JAN 15...	2.7	90	<.008	.467	<.04	<.02	E1.0	36	<.5	<8	<.8	<8	<6
FEB 26...	2.9	108	<.008	.439	<.04	<.02	<1.9	39	<.5	<8	<.8	<8	<6
MAR 31...	2.6	76	<.008	.497	<.04	<.02	<1.9	36	<.5	<8	<.8	<8	<6
APR 23...	2.7	68	<.008	.542	<.04	<.02	<1.9	34	<.5	<8	<.8	<8	<6
MAY 23...	1.7	35	<.008	.152	<.04	<.02	<1.9	27	<.5	<8	<.8	<8	<6
JUL 09...	1.95	51	<.008	.154	<.04	<.02	E.9	28.5	<.4	<2	<.8	<3	<7
AUG 29...	2.36	70	<.008	.211	<.04	<.02	<2	35.1	<.4	<2	<.8	<3	<7
SEP 29...	2.36	67	<.008	.299	<.04	<.02	<2	33.4	<.4	<2	<.8	<3	<7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

SOUTHEAST ALASKA—Continued

15049900 GOLD CREEK NEAR JUNEAU—Continued

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront- ium, water, fltrd, ug/L (01080)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
OCT 31...	<10	<.08	<4	<2	<.018	<30	<30	<2.6	<9	94	<8	<24
DEC 17...	<10	.16	<4	<2	<.018	<30	<30	<2.6	<9	98	<8	<24
JAN 15...	<10	.09	<4	<2	<.018	<30	<30	<2.6	<9	110	<8	<24
FEB 26...	<10	<.08	<4	<2	<.018	<30	<30	<2.6	<9	130	<8	<24
MAR 31...	<10	<.08	<4	<2	<.018	<30	<30	<2.6	<9	97	<8	<24
APR 23...	<10	E.04	<4	<2	<.018	<30	<30	<2.6	<9	77	<8	<24
MAY 23...	<10	<.08	<4	<2	<.018	<30	<30	<2.6	<9	47	<8	<24
JUL 09...	<8	<.08	<3	.5	<.018	<4	<7	<3	<5	62.1	<6	5.6
AUG 29...	<8	<.08	<3	<.4	<.018	<4	<7	E1.5	<5	86.6	<6	5.3
SEP 29...	<8	<.08	<3	.4	<.018	E2	<7	<3	<5	86.3	<6	5.6

15052900 MENDENHALL RIVER AT BROTHERHOOD BROOK AT AUKE BAY

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, type, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)
DEC 03...	0930	9	9	192	9.84	2120	10	3044	51	7.5	.5	1.5	124
MAR 05...	0940	9	9	102	--	112	10	3044	652	7.0	--	.5	29
JUN 04...	1115	9	9	198	7.25	1500	10	3054	55	7.5	5.0	5.0	65
AUG 06...	1420	9	9	205	10.09	2320	10	3054	21	6.9	17.5	4.0	E43
SEP 03...	1330	9	9	219	12.80	6450	10	3054	20	7.8	11.5	3.0	157

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved percent of sat- uration (00301)	Calcium water, unfltrd recover- able, mg/L (00916)	Magnes- ium, water, unfltrd recover- able, mg/L (00927)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Ammonia + org-N, water, unfltrd as N (00625)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)
DEC 03...	763	14.0	100	6.8	3.2	15	12	<.1	<.22	5	6940	1	104
MAR 05...	734	11.3	82	<.03	<.01	34	28	.2	<.22	2	<16	E.7	62.5
JUN 04...	762	12.2	95	6.5	2.2	14	11	<.1	<.22	4	3900	1	63.0
AUG 06...	762	12.4	95	2.81	1.43	4	3	<.1	<.22	8	2750	E.9	46.1
SEP 03...	756	13.2	99	4.87	3.65	10	8	E.06	<.22	6	8220	1	133

Date	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, unfltrd recover- able, ug/L (01077)	Zinc, water, unfltrd recover- able, ug/L (01092)
DEC 03...	<2.6	<.26	34.1
MAR 05...	<2.6	<.26	<25
JUN 04...	<2.6	<.26	15.8
AUG 06...	<3	<.26	14.0
SEP 03...	<3	<.26	28.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

SOUTHEAST ALASKA—Continued

15053230 DUCK CREEK AT BERNERS AVENUE NEAR AUKE BAY

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
NOV 27...	1305	9	9	9.30	14.49	14	11	.42

SOUTH-CENTRAL ALASKA

15274796 SB OF SF CHESTER CREEK AT TANK TRAIL NEAR ANCHORAGE

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)
OCT 11...	1410	9	9	9.00	12	10	8010	99	7.4	4.0	3.5	746	13.8
JUN 12...	1000	0	9	10.4	4.6	--	--	128	7.4	--	8.5	746	--
JUL 22...	1310	9	7	7.50	3.1	10	3045	136	7.7	15.5	8.5	757	11.1
SEP 04...	1200	0	9	--	--	--	--	--	--	--	--	--	--
04...	1350	9	9	6.50	2.4	10	3045	136	7.7	12.0	8.0	754	11.3

Date	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Entero- cocci, m-E MF, water, col/ 100 mL (31649)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)
OCT 11...	106	E17	E14	E6	46	14.2	2.62	1.55	17	.44	20	.0	17
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	95	36	--	32	66	20.5	3.65	1.81	49	.37	59	.0	48
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	96	30	21	A17	63	19.5	3.57	1.76	51	.46	60	.0	49

Date	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)
OCT 11...	12.8	.89	<.17	10.3	76	55	E.002	.503	<.015	.21	.11	.014	E.003
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	13.3	.38	<.2	11.4	92	82	<.002	.380	<.015	.18	E.06	.019	.006
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	14.3	.47	<.2	11.0	94	82	<.002	.365	<.015	.18	.13	.013	.005

Date	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
OCT 11...	<.007	13	<2.0	3.0
JUN 12...	--	--	--	--
JUL 22...	E.005	E7	.7	1.9
SEP 04...	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

SOUTH-CENTRAL ALASKA—Continued

15294350 SUSITNA RIVER AT SUSITNA STATION

Date	Time	Stream width, feet (000004)	Location in X-sect. looking downstrm 1 bank ft from (000009)	Gage height, feet (00065)	Startng time, 24 hour clock, hr:min (82073)	Ending time, 24 hour clock, hr:min (82074)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Sampler type, code (84164)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
JUN													
17...	1625	1590	--	16.30	1625.00	1655.00	131000	20	3055	11.0	21.0	891	315000
17...	1722	1590	40.0	16.30	1722.00	1902.00	131000	1000	1110	11.0	21.0	--	--
JUL													
10...	1528	1560	--	17.39	1528.00	1600.00	159000	20	3055	12.0	14.5	1250	535000
10...	1615	1560	40.0	17.39	1615.00	1748.00	159000	1000	1110	12.0	14.5	--	--
18...	1609	1600	--	19.54	1609.00	1631.00	234000	20	3055	9.0	16.0	2100	1330000
AUG													
15...	1510	1570	--	18.61	1510.00	1527.00	215000	20	3055	8.5	--	2060	1200000
15...	1532	1570	80.0	18.61	1532.00	1611.00	215000	1000	1110	8.5	--	--	--
SEP													
22...	1521	1420	--	8.53	1521.00	1538.00	33200	20	3055	4.0	10.0	219	19600
22...	1602	1420	66.0	8.53	1602.00	1723.00	33200	1000	1110	4.0	10.0	--	--

Date	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Bedload sediment discharge, tons/d (80225)	Bedload sediment average unit composit t/d/ft (04122)	Compstd samples in x-sec bedload measmnt number (04118)	Number of samplings, points, count (00063)	Vertical calcs in composite sample, number (04119)	Horizontal width of vertical, feet (04121)	Rest time on bed for bed load sample, seconds (04120)	Bag mesh size, bedload sampler mm (30333)	Bedload sediment, sieve diameter percent <.063mm (80226)	Bedload sediment, sieve diameter percent <.125mm (80227)	Bedload sediment, sieve diameter percent <.25mm (80228)	Bedload sediment, sieve diameter percent <.5 mm (80229)
JUN													
17...	71	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	14900	9.37	2	1	19	80.0	10	.025	.0	1	16	78
JUL													
10...	80	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	13100	8.40	2	1	19	80.0	10	.025	.0	1	8	73
18...	72	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
15...	69	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	15000	9.55	1	1	19	80.0	15	.025	.0	1	4	51
SEP													
22...	36	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	1880	1.32	2	1	20	44.0	40	.025	.0	1	11	96

Date	Bedload sediment, sieve diameter percent <1 mm (80230)	Bedload sediment, sieve diameter percent <2 mm (80231)	Bedload sediment, sieve diameter percent <4 mm (80232)	Bedload sediment, sieve diameter percent <8 mm (80233)	Bedload sediment, sieve diameter percent <16 mm (80234)	Bedload sediment, sieve diameter percent <32 mm (80235)	Bedload sediment, sieve diameter percent <64 mm (80236)
JUN							
17...	--	--	--	--	--	--	--
17...	91	94	95	97	98	100	--
JUL							
10...	--	--	--	--	--	--	--
10...	84	88	91	94	98	100	--
18...	--	--	--	--	--	--	--
AUG							
15...	--	--	--	--	--	--	--
15...	70	77	50	84	90	98	100
SEP							
22...	--	--	--	--	--	--	--
22...	99	100	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA

15389000 PORCUPINE NEAR FORT YUKON

Date	Time	Loca- tion in X-sect. looking dwnstrm ft from l bank (00009)	Sample loc- ation, cross section ft from rt bank (72103)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
APR									
04...	1430	287	--	385	7.4	.0	758	5.2	36
04...	1450	235	--	385	7.4	.0	758	5.2	36
04...	1510	130	--	385	7.4	.0	758	4.9	34
04...	1532	370	--	380	7.4	.0	758	--	--
04...	1550	460	--	386	7.4	.0	757	5.0	34
JUL									
01...	1352	--	1000	217	8.2	19.5	740	7.9	89
01...	1412	--	890.0	217	8.2	19.7	740	7.9	89
01...	1432	--	780.0	215	8.2	19.7	740	7.9	89
01...	1452	--	630.0	218	8.2	19.5	740	7.8	88
01...	1512	--	420.0	219	8.2	19.5	740	7.8	88
23...	1502	1150	--	188	7.8	16.3	756	9.5	98
23...	1522	1000	--	189	7.8	16.3	756	9.5	98
23...	1542	800	--	184	7.8	16.1	756	9.6	98
23...	1602	650	--	184	7.8	16.2	756	9.6	98
23...	1622	400	--	184	7.8	16.4	756	9.8	101
AUG									
19...	1440	--	325.0	183	8.0	11.7	743	10.0	95
19...	1505	--	545.0	183	8.0	11.6	743	9.8	92
19...	1530	--	685.0	183	8.0	11.6	743	9.8	92
19...	1555	--	835.0	181	8.0	11.6	743	9.8	92
19...	1620	--	1035	180	7.8	11.7	743	9.7	92
SEP									
22...	1354	--	1073	230	8.3	1.4	764	12.9	92
22...	1356	--	833.0	230	8.3	1.4	764	12.8	91
22...	1358	--	593.0	230	8.3	1.4	764	12.8	91
22...	1400	--	353.0	230	8.3	1.4	764	12.7	90
22...	1402	--	113.0	230	8.3	1.4	764	12.7	90

Date	Time	Medium code	Sample type	Stream width, feet (00004)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Type of sample related QA data, code (99111)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Turbid- ity, wat unf lab, Hach 2100AN NTU (99872)
APR													
04...	1530	9	9	590	1190	20	3044	100	385	7.4	-20.0	.0	1.1
JUN													
09...	1510	9	9	--	48500	20	3055	1	120	7.8	--	12.2	40
19...	1420	9	7	1230	17400	20	3055	30	187	8.0	--	--	9.6
JUL													
01...	1430	9	9	--	16200	20	3055	1	217	8.2	--	19.6	3.0
23...	1540	9	9	--	27000	20	3055	30	184	7.8	--	16.1	34
AUG													
19...	1310	9	9	1260	35900	20	3055	1	182	8.0	--	11.6	40
SEP													
22...	1300	9	9	1170	13400	20	3044	1	230	8.3	--	1.4	6.7

Date	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)
APR													
04...	.042	.030	758	5.0	34	200	60.5	12.7	5.07	174	.53	213	.0
JUN													
09...	.357	.268	761	9.8	91	60	18.2	3.52	1.24	--	.58	56	.0
19...	.268	.196	753	--	--	93	28.2	5.37	1.94	--	.57	88	.0
JUL													
01...	--	--	740	7.9	89	110	31.8	6.35	3.07	--	.63	98	.0
23...	.403	.298	756	9.6	98	88	25.2	6.03	2.25	--	.46	71	.0
AUG													
19...	.305	.226	743	9.8	92	94	26.6	6.62	1.93	--	.39	65	.0
SEP													
22...	.278	.201	764	12.8	91	110	34.5	6.92	2.35	--	.36	105	.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

15389000 PORCUPINE NEAR FORT YUKON—Continued

Date	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Alka- linity, wat flt fxd end field, mg/L as CaCO3 (39036)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR 04...	175	170	31.9	4.03	.08	4.46	233	225	<.002	.208	<.015	E.08	E.07
JUN 09...	46	47	13.2	.66	<.2	2.41	96	68	E.002	.028	<.015	.61	.29
19...	72	72	20.0	1.13	<.2	3.05	115	104	E.002	<.022	<.015	.33	.24
JUL 01...	81	82	27.4	1.86	<.2	2.70	151	122	<.002	<.022	<.015	.30	.28
23...	59	59	29.1	1.16	<.2	3.45	128	103	E.002	.029	<.015	.38	.28
AUG 19...	53	53	32.2	.71	<.2	3.77	124	105	<.002	.035	<.015	.37	.23
SEP 22...	86	87	32.3	1.34	<.2	3.81	157	134	<.002	.026	<.015	.29	.28

Date	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, suspnd sedimnt total, percent (30292)	Alum- inum, suspnd sedimnt total, percent (30221)	Alum- inum, water, fltrd, ug/L (01106)	Anti- mony, suspnd sedimnt total, ug/g (29816)	Anti- mony, water, fltrd, ug/L (01095)	Arsenic suspnd sedimnt total, ug/g (29818)	Arsenic water, fltrd, ug/L (01000)	Barium, suspnd sedimnt total, ug/g (29820)	Barium, water, fltrd, ug/L (01005)	Beryll- ium, suspnd sedimnt total, ug/g (29822)
APR 04...	.004	<.004	<.007	--	--	2	--	<.30	--	E.2	--	86	--
JUN 09...	.109	.011	<.007	.100	7.3	27	1.3	<.30	16	.3	840	37	2
19...	.023	E.004	<.007	.058	3.1	22	1.8	<.30	17	.4	85	46	2
JUL 01...	.013	E.003	<.007	.110	5.5	20	1.6	<.30	16	.4	800	56	2
23...	.052	.007	<.007	.100	7.5	36	1.3	<.30	18	.3	1300	45	2
AUG 19...	.074	.005	<.007	.100	7.9	30	1.1	<.30	16	E.2	1000	40	2
SEP 22...	.015	.005	<.007	.069	4.1	28	1.0	<.30	13	.3	240	47	1

Date	Beryll- ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium suspnd sedimnt total, ug/g (29826)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, suspnd sedimnt total, ug/g (29829)	Chrom- ium, water, fltrd, ug/L (01030)	Cobalt, suspnd sedimnt total, ug/g (35031)	Cobalt water, fltrd, ug/L (01035)	Copper, suspnd sedimnt total, ug/g (29832)	Copper, water, fltrd, ug/L (01040)	Iron, suspnd sedimnt total, percent (30269)	Iron, water, fltrd, ug/L (01046)	Lead, suspnd sedimnt total, ug/g (29836)
APR 04...	<.06	9	--	<.04	--	<.8	--	.196	--	.6	--	11	--
JUN 09...	<.06	E5	.8	<.04	120	<.8	15	.114	28	2.0	3.9	172	21
19...	<.06	E5	1.4	<.04	110	<.8	9	.098	24	1.8	2.0	115	35
JUL 01...	<.06	8	2.2	<.04	170	<.8	14	.095	40	1.7	3.5	59	38
23...	<.06	8	.8	E.02	130	<.8	18	.121	34	2.3	4.2	137	24
AUG 19...	<.06	E6	1.0	<.04	130	<.8	17	.149	31	2.3	4.2	116	24
SEP 22...	<.06	E6	.9	<.04	99	<.8	15	.184	25	1.4	3.0	121	12

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

15389000 PORCUPINE NEAR FORT YUKON—Continued

Date	Lead, water, fltrd, ug/L (01049)	Lithium suspnd sedimnt total, ug/g (35050)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, suspnd sedimnt total, ug/g (29839)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury suspnd sedimnt total, ug/g (29841)	Molyb- denum, suspnd sedimnt total, ug/g (29843)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, suspnd sedimnt total, ug/g (29845)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, suspnd sedimnt total, ug/g (29847)	Selen- ium, water, fltrd, ug/L (01145)	Silver, suspnd sedimnt total, ug/g (29850)
APR 04...	<.08	--	7.2	--	13.7	--	--	.7	--	1.22	--	E.5	--
JUN 09...	.12	58	2.2	670	2.5	.07	3	E.3	60	2.33	1	<.5	<.5
JUN 19...	E.08	19	3.3	610	2.0	.21	6	.4	58	2.55	1	E.4	<.5
JUL 01...	<.08	41	4.6	1300	1.5	--	10	.5	90	2.64	1	<.5	<.5
JUL 23...	E.08	74	4.1	660	2.6	.08	4	.4	85	3.20	1	<.5	<.5
AUG 19...	E.06	67	3.9	710	3.4	.03	3	E.3	70	3.81	1	<.5	<.5
SEP 22...	<.08	44	4.5	710	6.0	<.01	5	E.3	67	3.19	1	<.5	<.5

Date	Silver, water, fltrd, ug/L (01075)	Stront- ium, suspnd sedimnt total, ug/g (35040)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, suspnd sedimnt total, ug/g (49955)	Titan- ium, suspnd sedimnt total, percent (30317)	Vanad- ium, suspnd sedimnt total, ug/g (29853)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, suspnd sedimnt total, ug/g (29855)	Zinc, water, fltrd, ug/L (01090)	Uranium suspnd sedimnt total, ug/g (35046)	Uranium natural water, fltrd, ug/L (22703)	Organic carbon, water, fltrd, mg/L (00681)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)
APR 04...	<.2	--	154	--	--	--	.4	--	2	--	.88	1.7	<.1
JUN 09...	<.2	130	54.1	<50	.430	190	.8	200	2	<50	.23	9.4	<.1
JUN 19...	<.2	85	79.5	<50	.230	85	1.0	150	M	<50	.40	7.8	<.1
JUL 01...	<.2	170	104	<50	--	150	.6	190	4	<50	.39	8.6	<.1
JUL 23...	<.2	140	81.3	<50	.470	230	.3	260	1	<50	.25	12.0	<.1
AUG 19...	<.2	130	98.9	<50	.440	210	.2	220	2	<50	.24	8.7	<.1
SEP 22...	<.2	310	109	<50	.230	110	.3	170	2	<50	.42	9.1	<.1

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Total carbon, suspnd sedimnt total, mg/L (00694)	Total carbon, suspnd sedimnt total, percent (30244)	Organic carbon, suspnd sedimnt percent (50465)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Suspnd. sedimnt conc, flow through cntrfug mg/L (50279)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
APR 04...	<.1	<.1	--	--	<.02	--	1	3.2	--
JUN 09...	2.4	2.4	3.4	3.2	.20	91	98	12800	95
JUN 19...	.7	.7	--	--	.05	10	13	611	90
JUL 01...	.6	.6	--	--	.06	7	6	262	92
JUL 23...	1.4	1.5	3.3	3.2	.14	41	48	3500	98
AUG 19...	2.0	2.0	3.7	3.6	.18	53	61	5910	94
SEP 22...	.5	.5	7.4	5.4	.03	11	10	362	93

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

15512000 CHENA SL NEAR FAIRBANKS

Date	Time	Medium code	Sample type	Sam- pling method, code (82398)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)
AUG													
13...	1920	9	9	--	--	--	--	--	--	--	--	--	--
16...	--	9	9	10	--	--	14.0	--	--	--	--	93	M3
29...	1300	9	9	10	341	8.0	18.0	8.9	748	11.7	103	2	M2
SEP													
10...	1200	9	9	--	--	--	--	--	--	--	--	--	--

Date	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite + nitrate water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)
AUG													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
10...	160	45.8	11.0	6.05	3.42	17.0	7.09	<.2	19.4	224	204	<.002	<.022

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)	Prome- ton, water, fltrd, ug/L (04037)
AUG													
13...	--	--	--	--	--	--	--	--	<1	<.5	<.5	<.5	<.5
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
10...	<.015	.11	E.05	.011	.008	E.004	21	87.7	<1	<.5	<.5	<.5	<.5

1551400415 NOYES SL INLET AT FAIRBANKS

Date	Time	Medium code	Sample type	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
SEP													
09...	1515	9	9	70	20.9	4.31	1.46	.87	14.6	.56	<.2	8.17	94

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite + nitrate water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia + org-N, water, unfltrd mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)
SEP													
09...	84	<.002	.216	<.015	.21	.23	.016	.008	E.004	283	25.8	<1	<.5

Date	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)	Prome- ton, water, fltrd, ug/L (04037)
SEP			
09...	<.5	<.5	<.5

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

644331147135900 CHENA SL 0.8 MI ABOVE FLOOD LEVEE NEAR NORTH POLE

Date	Time	Medium code	Sample type	Hard- ness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
AUG 13...	1810	9	9	--	--	--	--	--	--	--	--	--	--
SEP 09...	1145	9	9	190	56.4	12.6	5.01	3.86	8.9	2.53	.2	22.7	247

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	<1	<.5
SEP 09...	241	<.002	<.022	.040	.21	.20	.014	E.003	<.007	29	4060	<1	<.5

Date	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)	Prome- ton, water, fltrd, ug/L (04037)
AUG 13...	<.5	<.5	<.5
SEP 09...	<.5	<.5	<.5

644435147203100 BEAVER SPRINGS 850 FT BELOW REFINERY NEAR NORTH POLE

Date	Time	Medium code	Sample type	Hard- ness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
SEP 09...	1245	9	9	160	47.6	11.1	5.70	3.80	21.3	5.69	<.2	18.6	213

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)
SEP 09...	207	<.002	<.022	<.015	.12	.13	.007	E.004	<.007	19	54.2	<1	<.5

Date	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)	Prome- ton, water, fltrd, ug/L (04037)
SEP 09...	<.5	<.5	<.5

YUKON ALASKA—Continued

644539147204600 BEAVER SPRINGS AT DOUGHCHEE AVENUE NEAR NORTH POLE

Date	Time	Medium code	Sample type	Hard-	Calcium	Magnes-	Sodium,	Potas-	Sulfate	Chlor-	Fluor-	Silica,	Residue
				ness,	water,	ium,	water,	sium,	water,	ide,	ide,		on
				unfltrd	water,	water,	water,	water,	water,	water,	water,	water,	at
				mg/L as	fltrd,	fltrd,	fltrd,	fltrd,	fltrd,	fltrd,	fltrd,	fltrd,	180degC
				CaCO3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	wat
				(00900)	(00915)	(00925)	(00930)	(00935)	(00945)	(00940)	(00950)	(00955)	mg/L
													(70300)
AUG 13...	1720	9	9	--	--	--	--	--	--	--	--	--	--
SEP 09...	1330	9	9	160	46.1	11.4	6.22	3.78	27.6	5.40	<.2	19.8	219

Date	Residue water, fldrtd, sum of consti- tuents mg/L (70301)	Nitrite water, fldrtd, mg/L as N (00613)	Nitrite + nitrate water, fldrtd, mg/L as N (00631)	Ammonia water, fldrtd, mg/L as N (00608)	Ammonia + org-N, water, unfldrtd, mg/L as N (00625)	Ammonia + org-N, water, fldrtd, mg/L as N (00623)	Phos- phorus, water, unfldrtd, mg/L (00665)	Phos- phorus, water, fldrtd, mg/L (00666)	Ortho- phos- phate, water, fldrtd, mg/L as P (00671)	Iron, water, fldrtd, ug/L (01046)	Mangan- ese, water, fldrtd, ug/L (01056)	Car- baryl, water, fldrtd, ug/L (82680)	Chlor- pyrifos water, fldrtd, ug/L (38933)
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	<1	<.5
SEP 09...	208	<.002	<.022	<.015	E.09	.11	.014	.006	<.007	48	509	<1	<.5

Date	Diazinon, water, ftr/d, ug/L (39572)	Metolachlor, water, ftr/d, ug/L (39415)	Prometon, water, ftr/d, ug/L (40437)
AUG 13...	<.5	<.5	<.5
SEP 09...	<.5	<.5	<.5

644547147193100 CHENA SL 0.1 MI BELOW OUT HURST BLVD NEAR NORTH POLE

Date	Time	Medium code	Sample type	Sam-pling method, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, wat unf 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
JUN													
11...	1340	9	9	70	8010	342	8.0	21.0	13.3	760	9.5	91	86
AUG													
13...	1340	9	9	--	--	--	--	--	--	--	--	--	--
15...	1410	9	9	70	8010	--	--	--	--	--	--	--	25
29...	1350	9	9	70	8010	357	7.7	18.0	9.5	748	9.4	82	32
30...	1440	9	9	70	8010	362	7.7	17.0	10.0	743	9.3	83	11
SEP													
09...	1400	9	9	--	--	--	--	--	--	--	--	--	--
11...	1030	9	9	70	8010	--	--	--	--	--	--	--	14

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

644547147193100 CHENA SL 0.1 MI BELOW OUT HURST BLVD NEAR NORTH POLE—Continued

Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia + water, fltrd, mg/L as N (00608)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd, mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	--	--	--	--	--	--	--	--	--	<1	<.5	<.5	<.5
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.022	<.015	E.07	E.10	.004	<.004	<.007	14	163	<1	<.5	<.5	<.5
11...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Prome- ton, water, fltrd, ug/L (04037)
JUN 11...	--
AUG 13...	<.5
15...	--
29...	--
30...	--
SEP 09...	<.5
11...	--

644814147224200 CHENA SL AT WILIS CT NEAR NORTH POLE

Date	Time	Medium code	Sample type	Sam- pling method, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, wat un f uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
AUG 13...	1620	9	9	--	--	--	--	--	--	--	--	--	--
16...	0840	9	9	70	8010	--	--	--	--	--	--	--	72
29...	1330	9	9	70	8010	357	7.9	18.0	8.1	748	11.2	95	45
SEP 10...	1255	9	9	--	--	--	--	--	--	--	--	--	--
11...	1020	9	9	--	--	--	--	--	--	--	--	--	--

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Iron, water, fltrd, ug/L (01046)
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	2	--	--	--	--	--	--	--	--	--	--	--	--
29...	33	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	170	48.7	11.7	6.59	3.59	19.4	8.08	<.2	19.7	226	213	51
11...	--	160	47.0	11.3	6.48	3.60	21.4	7.25	<.2	19.1	220	208	27

Date	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)	Prome- ton, water, fltrd, ug/L (04037)
AUG 13...	--	<1	<.5	<.5	<.5	<.5
16...	--	--	--	--	--	--
29...	--	--	--	--	--	--
SEP 10...	169	<1	<.5	<.5	<.5	<.5
11...	118	--	--	--	--	--

YUKON ALASKA—Continued

645006147290600 CHENA SL AT PERSINGER DRIVE NEAR NORTH POLE

[illegible]

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Potas- sium, water, fltrd, mg/L (00935)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, water, fltrd, mg/L as N (00613)
JUN 11...	5	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	5	--	--	--	--	--	--	--	--	--	--	--	--
30...	8	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	170	47.5	11.5	6.59	3.63	15.9	7.65	.2	20.0	221	208	<.002

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Car- baryl, water, fltrd, ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (38933)	Diazi- non, water, fltrd, ug/L (39572)	Metola- chlor, water, fltrd, ug/L (39415)	
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUG 13...	--	--	--	--	--	--	--	--	--	<1	<.5	<.5	<.5	
19...	--	--	--	--	--	--	--	--	--	--	--	--	--	
30...	--	--	--	--	--	--	--	--	--	--	--	--	--	
SEP 10...	<.022	<.015	.12	E.07	.015	.010	E.005	64	43.6	<1	<.5	<.5	<.5	

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

680837151435000 CONTACT CREEK AT MAIN STREET AT ANAKTUVUK PASS

Date	Time	Medium code	Sample type	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Sampler type, code (84164)	Specific conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
JUN 17...	1515	9	9	213	10	3045	100	8.1	4.9	706	11.5	97	54
JUL 15...	1810	9	9	131	10	3045	133	7.9	4.7	699	12.0	102	67
AUG 14...	1510	9	9	289	10	3045	127	7.9	4.9	--	11.5	--	64
SEP 09...	1130	9	9	31	10	3045	150	8.3	.3	695	9.0	68	74

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)
JUN 17...	18.1	2.20	.19	48	E.12	60	46	--	--	--	.84	--	--
JUL 15...	21.7	3.14	.41	62	.27	78	60	5.6	.40	<.2	1.29	75	71
AUG 14...	20.5	3.12	.27	57	<.16	76	57	5.3	E.15	<.2	1.26	75	--
SEP 09...	23.2	3.94	.31	71	E.16	92	71	8.7	.24	<.2	1.48	86	--

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, unfltrd, mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
JUN 17...	<.002	.042	<.015	E.05	<.10	.028	E.003	<.007	9	.9	.8
JUL 15...	<.002	E.014	<.015	E.06	<.10	E.003	E.002	<.007	E6	E.4	1.1
AUG 14...	<.002	.035	<.015	<.10	<.10	.009	<.004	<.007	<8	.4	1.1
SEP 09...	<.002	<.022	<.015	<.10	<.10	E.003	<.004	<.007	E5	.6	1.2

680811151443200 JOHN RIVER TRIBUTARY ABOVE LAGOONS AT ANAKTUVUK PASS

Date	Time	Medium code	Sample type	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Sampler type, code (84164)	Specific conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
JUN 17...	1955	9	9	1.2	50	3070	19	7.3	--	9.0	--	10.4	--
JUL 17...	1240	9	9	2.7	70	--	25	7.0	3.5	7.0	703	11.3	101
AUG 13...	1952	9	9	8.9	70	--	45	7.3	4.5	6.3	698	11.4	101
SEP 11...	1000	9	9	1.8	70	--	38	7.0	--	.8	691	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

680811151443200 JOHN RIVER TRIBUTARY ABOVE LAGOONS AT ANAKTUVUK PASS—Continued

Date	Hard- ness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO ₃ (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
JUN 17...	9	2.20	.834	.14	9	.22	10	8	1.0	<.20	<.2	1.04	11
JUL 17...	15	3.84	1.30	.30	13	.20	15	12	1.3	E.12	<.2	1.28	29
AUG 13...	25	6.87	1.81	.14	20	E.08	24	19	1.6	<.20	<.2	1.94	40
SEP 11...	20	5.01	1.79	.14	16	E.10	20	15	2.3	<.20	<.2	2.16	37

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
JUN 17...	<.002	<.022	<.015	.16	.15	.006	E.003	<.007	222	2.1	4.1
JUL 17...	<.002	<.022	<.015	.23	.16	.004	E.004	<.007	206	3.8	5.5
AUG 13...	<.002	<.022	<.015	.22	.20	.004	E.004	<.007	128	1.8	6.9
SEP 11...	<.002	<.022	<.015	.19	.14	.004	E.002	<.007	113	10.4	5.5

680752151450200 JOHN RIVER TRIBUTARY AT ANAKTUVUK PASS

Date	Time	Medium code	Sample type	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JUN 17...	2115	9	9	1.3	20	3045	106	8.1	--	4.7	--	10.2	--
JUL 17...	1600	9	9	3.2	70	--	87	7.6	9.5	7.1	704	10.6	95
AUG 13...	2125	9	9	7.4	10	3045	80	7.3	5.8	6.2	697	11.1	98
SEP 11...	1115	9	9	1.2	70	--	84	7.9	--	2.0	691	--	--

Date	Hard- ness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO ₃ (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
JUN 17...	55	17.6	2.72	.43	54	<.16	69	53	2.2	.39	<.2	1.17	67
JUL 17...	46	14.5	2.43	.62	44	.34	55	42	2.6	.47	<.2	1.42	65
AUG 13...	43	12.8	2.63	.33	39	.18	49	38	2.4	.20	<.2	2.15	65
SEP 11...	42	12.4	2.59	.30	40	.16	51	39	2.9	.24	<.2	1.95	59

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

680752151450200 JOHN RIVER TRIBUTARY AT ANAKTUVUK PASS—Continued

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
JUN 17...	--	<.002	.270	<.015	.12	.10	.005	<.004	<.007	57	E.3	3.0
JUL 17...	51	<.002	.255	<.015	.18	.13	E.003	<.004	<.007	100	.7	4.4
AUG 13...	45	<.002	.109	<.015	.20	.17	.004	.005	<.007	83	.7	6.3
SEP 11...	46	<.002	.094	<.015	.21	.16	.009	<.004	<.007	31	1.2	4.9

680735151444400 INUKPASUGRUK CREEK AT ANAKTUVUK PASS

Date	Time	Medium code	Sample type	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
MAY 14...	1030	9	9	3.9	30	--	371	8.0	-2.5	.0	696	10.2	77
JUL 16...	1225	9	9	102	10	3045	165	7.8	5.5	5.0	699	13.0	111
SEP 09...	1630	9	9	102	10	3045	199	8.1	--	3.0	--	7.9	--

Date	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
MAY 14...	200	43.5	22.6	4.16	111	1.89	143	110	100	.39	<.17	5.43	274
JUL 16...	79	21.6	6.05	1.10	55	.42	72	55	27.1	<.20	<.2	1.98	99
SEP 09...	89	23.3	7.60	.95	60	.29	78	60	35.7	E.16	<.2	2.06	114

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
MAY 14...	248	.003	E.013	<.015	.21	.19	.014	.006	<.007	E8	15.1	4.8
JUL 16...	--	<.002	.027	<.015	<.10	<.10	E.002	<.004	<.007	E5	1.3	.8
SEP 09...	--	<.002	.024	<.015	<.10	<.10	.004	<.004	<.007	<8	1.2	1.0

680715151463000 JOHN RIVER BELOW INUKPASUGRUK CREEK AT ANAKTUVUK PASS

Date	Time	Medium code	Sample type	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Sampler type, code (84164)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JUL 16...	1513	9	9	232	10	3045	158	8.1	8.3	6.6	--	12.2	--
AUG 14...	1145	9	9	600	10	3045	148	7.8	11.5	5.5	698	9.9	86
SEP 09...	1415	9	9	135	10	3045	195	8.2	--	3.3	--	8.2	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

YUKON ALASKA—Continued

680715151463000 JOHN RIVER BELOW INUKPASUGRUK CREEK AT ANAKTUVUK PASS—Continued

Date	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL 16...	81	25.7	4.19	.69	72	.29	92	71	9.3	E.19	<.2	1.62	89
AUG 14...	73	22.3	4.33	.53	59	.22	74	57	13.4	E.13	<.2	1.84	91
SEP 09...	95	28.0	6.07	.79	76	.20	99	76	19.4	.26	<.2	1.82	115

Date	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
JUL 16...	--	<.002	.065	<.015	E.06	<.10	.004	.009	<.007	E6	.6	1.1
AUG 14...	--	<.002	.050	<.015	.11	<.10	.056	E.003	<.007	E5	1.4	1.3
SEP 09...	105	<.002	.066	<.015	<.10	<.10	E.003	<.004	<.007	<8	.6	1.2

NORTHWEST ALASKA

673610163540400 NEW HEART CREEK .8 MI ABOVE PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1030	H	9	1028	80020	325	1.8	.670	.700	1.7	.430	.08	.094

Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	3.4	.08	3.3	6.3	.8	9.8	810	1.9	1	.3	41	140	15

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	27	1	14	1	1	3.5	23	19	54	1200	.13	.8	23

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

673610163540400 NEW HEART CREEK .8 MI ABOVE PORT ACCESS ROAD NEAR KIVALINA—Continued

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	55	8	14	1.8	.3	120	1	1	10	2	.330	120	2
Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)										
JUN 26...	21	140	2.8										

673635164004600 NEW HEART CREEK 2 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1105	H	7	1028	80020	75	9.7	1.4	.600	1.7	.300	.07	.094
Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd total, ug/g (34845)
JUN 26...	3.0	.35	2.6	6.4	.6	10	860	1.8	1	.9	45	110	17
Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	21	1	14	1	1	3.7	24	32	58	900	.08	.9	25
Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	67	9	13	1.3	.2	140	1	1	9	2	.350	120	2

NORTHWEST ALASKA—Continued

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	23	320	2.3

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1435	H	9	1028	80020	525	8.4	.550	.790	1.4	.830	.05	.072

Date	Total carbon, sediment <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Aluminum, bed sed <62.5um wet fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet fld,tot ug/g (34800)	Barium, bed sed <62.5um wet fld,tot ug/g (34805)	Beryllium, bed sed <62.5um wet fld,tot ug/g (34810)	Bismuth bed sed <177um wet fld,tot ug/g (34816)	Cadmium bed sed <62.5um wet fld,tot ug/g (34825)	Cerium, bed sed <62.5um wet fld,tot ug/g (34835)	Chromium, bed sed <62.5um wet fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet fld,tot ug/g (34845)
JUN 26...	2.0	.04	2.0	5.9	.7	8.4	730	1.9	1	.4	52	87	15

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd field, fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd field, fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd field, fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34920)
JUN 26...	20	1	13	1	1	3.4	27	21	40	560	.05	.5	26

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26....	48	8	14	.4	.1	74	1	1	9	2	.370	100	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	16	120	2.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674054163465200 STRAIGHT CREEK 4 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)	
JUN 26...	1350	H	9	1028	80020	375	15.2	.480	.710	1.2	.860	.05	.057	
Date		Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	1.5	.03	1.5	5.6	.6	6.3	710	1.7	1	.4	54	82	14	
Date		Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	18	1	12	1	1	3.1	28	20	39	630	.04	.5	28	
Date		Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um wet svd dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wet svd rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	42	9	12	.3	.1	73	1	1	8	2	.400	97	2	
Date		Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)										
JUN 26...	15	120	2.3											

674220163572800 STRAIGHT CREEK 7.7 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi ² (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1245	H	9	1028	80020	175	23.6	.620	.800	1.4	.710	.05	.072

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674220163572800 STRAIGHT CREEK 7.7 MI BELOW PORT ACCESS ROAD NEAR KIVALINA—Continued

Date	Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum-inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet svd fld,tot percent (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll-ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom-ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd total, ug/g (34845)
JUN 26...	2.5	.05	2.5	6.3	.7	9.0	950	1.8	1	.7	55	95	19

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ-ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha-num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan-ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb-denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym-ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	23	1	14	1	1	4.1	27	26	48	1100	.06	.6	28

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand-ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen-ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront-ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant-alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall-ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, percent (34985)	Titan-ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad-ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb-ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	61	9	15	.6	.1	85	1	1	9	2	.390	120	3

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	18	180	2.4

674133163341500 SF OMIKVOROK RIVER 2.5 MI ABOVE ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col-lecting sample, code (00027)	Agency ana-lyzing sample, code (00028)	Alti-tude of land surface feet (72000)	Drain-age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes-ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas-sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos-phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1455	H	9	1028	80020	450	13.9	.510	.760	1.2	.840	.05	.070

Date	Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum-inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll-ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom-ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	1.6	.03	1.6	5.8	.8	8.7	790	1.6	1	.3	51	87	16

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674133163341500 SF OMIKVOROK RIVER 2.5 MI ABOVE ACCESS ROAD NEAR KIVALINA—Continued

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd field, fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	21	1	13	1	1	3.6	27	16	41	710	.05	.6	26
Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	47	9	13	.4	.1	70	1	1	9	2	.390	110	2
Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)										
JUN 26...	17	100	2.4										

674157164024300 OMIKVOROK RIVER 5.5 MI ABOVE MOUTH NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1215	H	7	1028	80020	75	146	.680	.780	1.2	.730	.05	.076
Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	2.3	.05	2.3	5.6	.7	10	900	1.7	1	.4	48	94	17
Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	22	1	13	1	1	3.7	25	20	44	960	.05	.6	25

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674157164024300 OMIKVOROK RIVER 5.5 MI ABOVE MOUTH NEAR KIVALINA—Continued

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	57	8	14	.6	.1	74	1	1	8	2	.360	110	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	18	140	2.2

674244163441100 OMIKVOROK RIVER TRAIL 2.3 MI BELOW ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1330	H	9	1028	80020	275	5.1	.610	.800	1.1	.900	.05	.069

Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot percent (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	2.1	.02	2.0	5.7	.7	9.6	990	1.6	1	.3	55	89	20

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	21	1	13	1	1	4.2	28	18	37	740	.04	.8	28

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	46	9	14	.4	.2	73	1	1	8	2	.420	110	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674244163441100 OMIKVOROK RIVER TRAIL 2.3 MI BELOW ACCESS ROAD NEAR KIVALINA—Continued

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	18	110	2.2

674324163243500 SB NF OMIKVOROK RIVER 6.5 MI ABOVE ACCESS NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1550	H	9	1028	80020	535	11.5	.670	.690	1.1	.860	.05	.073

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1.8	.04	1.7	5.3	.6	7.2	790	1.6	1	.3	46	84	14

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	17	1	11	1	1	3.0	24	19	38	780	.04	.5	25

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	46	8	12	.5	.1	69	1	1	8	2	.370	86	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	17	110	2.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674338163320500 NF OMIKVOROK RIVER 2.6 MI ABOVE ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1515	H	9	1028	80020	425	44.5	.600	.720	1.2	.790	.05	.075

Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	2.3	.03	2.2	5.7	.8	9.0	920	1.5	1	.5	45	89	17

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	21	1	13	1	1	3.5	24	21	43	1100	.05	.5	25

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wet svd rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	51	8	13	.5	.1	70	1	1	8	2	.360	100	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	16	140	2.2

674341163531500 OMIKVOROK RIVER 7 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1305	H	9	1028	80020	175	82.4	.660	.780	1.4	.610	.05	.083

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674341163531500 OMIKVOROK RIVER 7 MI BELOW PORT ACCESS ROAD NEAR KIVALINA—Continued

Date	Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum-inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet svd fld,tot percent (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll-ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom-ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	2.8	.06	2.7	6.4	.8	11	1100	1.8	1	.6	51	100	21

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ-ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha-num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan-ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb-denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym-ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	34	1	15	1	1	4.2	25	24	53	1500	.10	.7	26

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand-ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen-ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront-ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant-alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall-ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan-ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad-ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb-ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	64	9	16	.8	.2	76	1	1	9	3	.360	120	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	18	170	2.2

674406163235900 NF OMIKVOROK RIVER 6.5 MI ABOVE ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col-lecting sample, code (00027)	Agency ana-lyzing sample, code (00028)	Alti-tude of land surface feet (72000)	Drain-age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes-ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas-sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos-phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1605	H	9	1028	80020	535	17.2	.950	.840	1.8	.550	.06	.110

Date	Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum-inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll-ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom-ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	3.5	.13	3.3	7.4	.8	16	1400	2.4	1	.9	57	120	29

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674406163235900 NF OMIKVOROK RIVER 6.5 MI ABOVE ACCESS ROAD NEAR KIVALINA—Continued

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	32	2	18	1	1	5.3	31	26	61	2800	.08	.9	31
Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	85	9	18	1.0	.2	85	1	1	11	3	.390	140	2
Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)										
JUN 26...	23	200	2.8										

674641163171800 NB NF OMIKVOROK RIVER 9 MI ABOVE ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface, feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1625	H	9	1028	80020	775	5.4	.490	.620	1.6	.570	.05	.079
Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd field, total, percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	3.1	.05	3.1	6.4	.7	12	770	1.6	1	.4	53	100	17
Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	54	1	14	1	1	4.2	28	23	48	1100	.08	.8	27

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674641163171800 NB NF OMIKVOROK RIVER 9 MI ABOVE ACCESS ROAD NEAR KIVALINA—Continued

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	120	8	14	.8	.2	72	1	1	10	3	.370	120	2
Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)										
JUN 26	26	120	2.9										

674437163312500 MUD LAKE C 3.4 MI ABOVE PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1530	H	9	1028	80020	500	2.8	.620	.920	1.5	.770	.05	.068
Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot percent (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd total, ug/g (34845)
JUN 26...	3.5	.07	3.5	7.6	.9	11	1200	2.1	1	.3	57	110	17
Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	31	1	18	1	1	4.7	30	20	49	470	.05	.8	29
Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	57	11	18	.6	.2	82	1	1	10	3	.480	150	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674437163312500 MUD LAKE C 3.4 MI ABOVE PORT ACCESS ROAD NEAR KIVALINA—Continued

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	19	120	2.9

673956163490000 DEADMAN CREEK 2.5 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd field, total, percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1415	H	9	1028	80020	350	5.2	2.0	.560	1.4	.240	.14	.090

Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd total, ug/g (34816)	Cadmium bed sed <62.5um wet svd total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd total, ug/g (34845)
JUN 26...	3.4	.53	2.9	5.2	.6	8.5	580	1.7	1	1.4	38	81	17

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd total, ug/g (34860)	Gold, bed sed <62.5um wet svd total, ug/g (34870)	Holmium bed sed <62.5um wet svd total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd total, ug/g (34890)	Lithium bed sed <62.5um wet svd total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	17	1	12	1	1	3.4	21	47	45	950	.09	.9	21

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd total, ug/g (34980)	Tin, bed sed <62.5um wet svd total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	53	7	11	1.0	.1	130	1	1	8	2	.280	88	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	22	390	2.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

673705163491800 AUFELS CREEK 0.8 MI ABOVE PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi ² (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1000	H	9	1028	80020	375	4.4	.390	.640	2.2	.400	.17	.100

Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
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JUN 26...	4.0	.04	3.9	7.4	1.0	13	1000	2.3	1	.3	57	140	12
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Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
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JUN 26...	54	1	17	1	1	3.6	31	20	59	370	.17	1.2	32
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Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wet svd rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
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JUN 26...	51	10	16	4.3	.4	180	1	1	12	3	.380	140	3
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Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
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JUN 26...	23	140	3.7
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673911163552300 AUFELS CREEK 2.7 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi ² (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
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JUN 26...	1125	H	9	1028	80020	200	15.5	.750	.610	2.1	.280	.14	.120
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WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

673911163552300 AUFEIS CREEK 2.7 MI BELOW PORT ACCESS ROAD NEAR KIVALINA—Continued

Date	Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum-inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet svd fld,tot percent (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll-ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom-ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	2.9	.14	2.7	7.2	.7	13	860	2.0	1	.5	49	140	15

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ-ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha-num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan-ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb-denium, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym-ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	25	1	17	1	1	3.7	25	21	62	620	.08	1.0	25

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand-ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen-ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd field, total, ug/g (34955)	Stront-ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant-alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall-ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan-ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad-ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb-ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	61	10	15	1.5	.2	120	1	1	10	3	.390	140	3

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	23	200	3.0

674021163580300 DEADMAN CREEK 6.5 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col-lecting sample, code (00027)	Agency ana-lyzing sample, code (00028)	Alti-tude of land surface feet (72000)	Drain-age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes-ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas-sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phos-phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1200	H	9	1028	80020	125	12.8	2.8	.530	1.6	.240	.07	.086

Date	Total carbon, bed sed <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum-inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti-mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll-ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom-ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	3.2	.76	2.4	5.9	.6	11	750	1.7	1	.6	49	98	17

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTHWEST ALASKA—Continued

674021163580300 DEADMAN CREEK 6.5 MI BELOW PORT ACCESS ROAD NEAR KIVALINA—Continued

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd field, fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	20	1	13	1	1	3.6	26	23	56	890	.06	1.0	27

Date	Nickel, bed sed <62.5um wet svd field, total, ug/g (34925)	Niobium bed sed <62.5um wet svd field, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)
JUN 26...	60	8	13	1.2	.2	210	1	1	9	2	.310	110	2

Date	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
JUN 26...	24	220	2.1

674001164012100 AUFEIS CREEK 5.5 MI BELOW PORT ACCESS ROAD NEAR KIVALINA

Date	Time	Medium code	Sample type	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Alti- tude of land surface feet (72000)	Drain- age area, mi2 (81024)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnes- ium, bed sed <62.5um wet svd fld,tot percent (34900)	Potas- sium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd total, percent (34960)	Sulfur, bed sed <62.5um wet svd total, percent (34970)	Phos- phorus, bed sed <62.5um wet svd fld,tot percent (34935)
JUN 26...	1140	H	9	1028	80020	125	24.4	.540	.550	1.8	.340	.05	.110

Date	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Alum- inum, bed sed <62.5um wet svd fld,tot percent (34790)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd field, total, ug/g (34800)	Barium, bed sed <62.5um wet svd field, total, ug/g (34805)	Beryll- ium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Cadmium bed sed <62.5um wet svd field, total, ug/g (34825)	Cerium, bed sed <62.5um wet svd field, total, ug/g (34835)	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Cobalt, bed sed <62.5um wet svd field, total, ug/g (34845)
JUN 26...	2.6	.03	2.6	6.3	.7	12	800	2.1	1	.4	51	110	16

Date	Copper, bed sed <62.5um wet svd field, total, ug/g (34850)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd field, total, ug/g (34860)	Gold, bed sed <62.5um wet svd field, total, ug/g (34870)	Holmium bed sed <62.5um wet svd field, total, ug/g (34875)	Iron, bed sed <62.5um wet svd field, total, percent (34880)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd field, total, ug/g (34890)	Lithium bed sed <62.5um wet svd field, total, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mercury bed sed <62.5um wet svd field, total, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
JUN 26...	26	1	15	1	1	3.8	28	20	58	880	.08	.9	28

NORTHWEST ALASKA—Continued

[illegible]

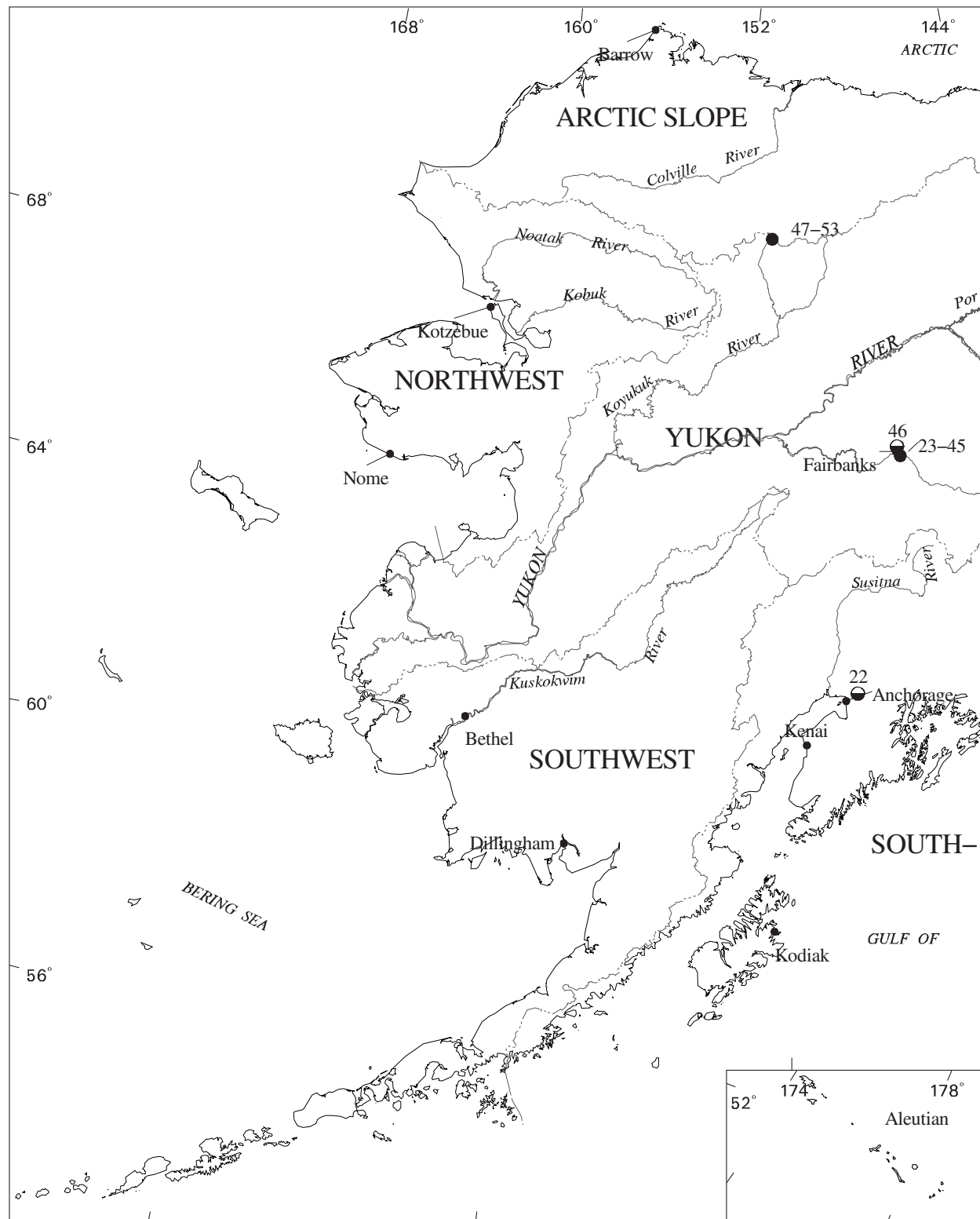
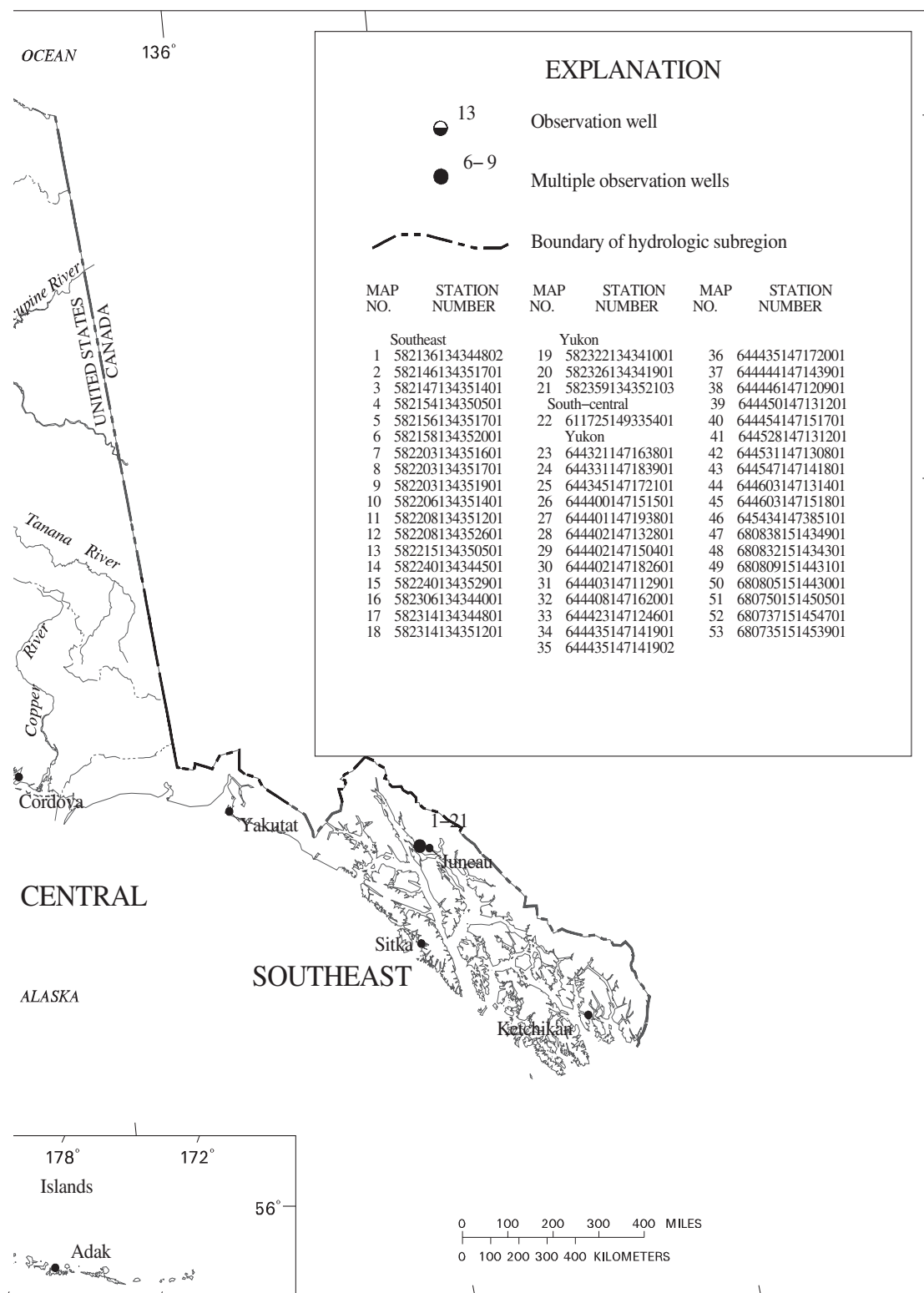
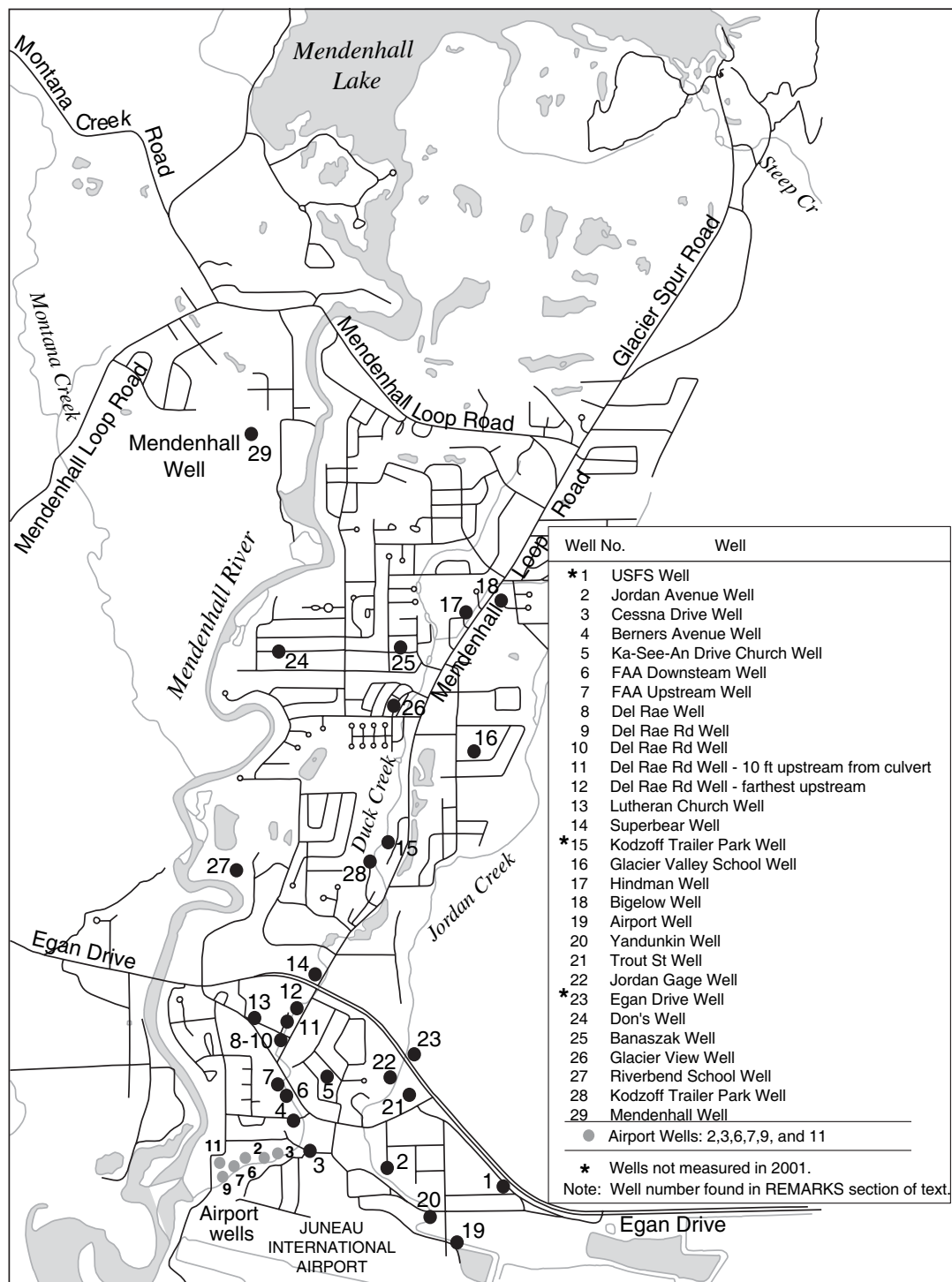


Figure 3. Locations of ground-water wells.





Location of Mendenhall Valley wells.

SOUTHEAST ALASKA

JUNEAU

582136134344802. Local number, CD04006631ACBC1015.

LOCATION.--Lat 58°21'36", long 134°34'48", in NW¹/₄ SW¹/₄ NE¹/₄ sec. 31, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301.

Well located about 20 ft southeast of a trail running between the intersection of Jordan Avenue and Teal Street, about 50 ft south of Teal Street, and about 20 ft northeast of a footbridge over Jordan Creek, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in. steel casing, depth 8 ft, screen opening from 6 to 8 ft using a sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 19.84 ft above sea level (determined by levels survey). Measuring point: Top of casing, 0.6 ft above land-surface datum.

REMARKS.--Well drilled May 1997 by USGS, designated as Duck Creek #2 (Jordan Avenue Well). Area near well is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.1 ft above land-surface datum, July 13, 1997; lowest, 3.96 ft below land-surface datum, June 11, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 26	3.32	May 25	3.48
May 03	3.53	June 02	3.60
May 08	3.70	Jun 11	3.96
May 14	3.54	Aug 20	2.77
May 17	3.41	Sep 27	0.52

582146134351701. Local number, CD04006631BBDD1016.

LOCATION.--Lat 58°21'46", long 134°35'17", in SE¹/₄ NW¹/₄ NW¹/₄ sec. 31, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301.

Well located near the left bank of Duck Creek, about 10 ft northwest of the intersection of Cessna Drive and Alex Holden Way, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 12 ft, screen opening from 10 to 12 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel June 1997 to current year.

DATUM.--Elevation of land-surface datum is 25.35 ft above sea level (determined by levels survey). Measuring point: Top of casing 0.88 ft above land-surface datum.

REMARKS.--Well drilled May 1997 by USGS, designated as Duck Creek #3 (Cessna Drive Well).

PERIOD OF RECORD.--June 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.9 ft below land-surface datum, July 13, 1997; lowest, 10.54 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	9.78	Jun 02	10.35
Apr 26	10.19	June 21	9.94
May 03	10.42	July 06	9.80
May 08	10.54	Aug 10	9.38
May 14	10.32	Aug 20	8.92
May 17	10.04	Sep 27	7.50
May 25	10.32		

SOUTHEAST ALASKA

JUNEAU—Continued

582147134351401. Local number, CD04006631BBDB1017.

LOCATION.--Lat 58°21'47", long 134°35'14", in SE¹/₄ NW¹/₄ NW¹/₄ sec. 31, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301.

Well located near the right bank of Duck Creek, about 70 ft downstream of the Berners Avenue crossing, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 8.8 ft, screen opening 6.8 to 8.8 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel June 1997 to current year.

DATUM.--Elevation of land-surface datum is 19.52 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.9 ft above land-surface datum.

REMARKS.--Well drilled 1997 by USGS, designated as Duck Creek #4 (Berners Avenue Well). Water from well was sampled for water quality on September 5, 1997, January 29, 1998, and September 3, 1998.

PERIOD OF RECORD.--June 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.20 ft below land-surface datum, September 3, 1998, and September 28, 2003; lowest, 4.58 ft below land-surface datum, May 08, 2003

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	3.87	Jun 11	4.55
Apr 26	4.24	Jun 21	3.90
May 03	4.44	Jul 06	3.70
May 08	4.58	Aug 10	3.22
May 14	4.36	Aug 20	2.65
May 17	4.18	Sep 27	0.77
May 25	4.34	Sep 28	0.20
Jun 02	4.34		

582154134350501. Local number, CD04006630CDCB1027.

LOCATION.--Lat 58°21'54", long 134°35'05", in SW¹/₄ SE¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301.

Well located 15 ft east of a tributary to Duck Creek and about 1,200 ft northwest of Jordan Creek, 90 ft southwest of the First Church of God on Ka-See-An Drive, Juneau. Owner: First Church of God.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in steel casing., depth 17.5 ft, screen opening from 15.5 to 17.5 ft using a sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, or U.S. Forest Service personnel June 1997 to current year.

DATUM.--Elevation of land-surface datum is 26.30 ft above sea level (determined by levels survey). Measuring point: Top of casing 2.05 ft above land-surface datum.

REMARKS.--Well drilled June 1997 by USGS, designated as Duck Creek #5 (Ka-See-An Drive Church Well).

PERIOD OF RECORD.--June 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.41 ft below land-surface datum, October 23, 1999; lowest, 10.43 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	10.00	Jun 02	10.25
Apr 26	10.14	Jun 11	10.33
May 03	10.29	Jun 21	9.80
May 08	10.43	Jul 06	9.28
May 14	10.38	Aug 10	8.66
May 17	10.19	Aug 20	7.95
May 25	10.22	Sep 27	5.53

SOUTHEAST ALASKA

JUNEAU—Continued

582156134351701. Local number, CD04006631BBBA1018.

LOCATION.--Lat 58°21'56", long 134°35'17", in NW¹/₄ NW¹/₄ NW¹/₄ sec. 31, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301. Well located in Duck Creek channel about 90 ft downstream from driveway crossing to Federal Aviation Administration building, about 50 ft southwest of Old Glacier Highway, Juneau. Owner: Federal Aviation Administration.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in. steel casing, depth 11 ft, screen opening from 9 to 11 ft using sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 18.48 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.86 ft above land-surface datum.

REMARKS.--Well drilled May 1997 by USGS, designated as Duck Creek #6 (FAA Downstream Well). Well is in stream channel and is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.7 ft above land surface datum, July 13 and August 14, 1997; lowest, 3.90 ft below land-surface datum, May 25, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	3.75	Jun 02	3.78
Apr 26	3.82	Jun 11	3.88
May 03	3.75	Jun 21	3.22
May 08	3.72	July 06	2.72
May 14	3.75	Aug 10	1.78
May 17	3.83	Aug 20	0.94
May 25	3.90		

582158134352001. Local number, CD04006630CCCD2017.

LOCATION.--Lat 58°21'58", long 134°35'20", in SW¹/₄ SW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301. Well is located in Duck Creek channel, 20 ft upstream from driveway crossing to Federal Aviation Administration building, about 50 ft southwest of Old Glacier Highway, Juneau. Owner: Federal Aviation Administration.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in. steel casing, depth 12 ft, screen opening from 10 to 12 ft using sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 19.62 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.2 ft above land-surface datum.

REMARKS.--Well drilled May 8, 1997 by USGS, designated as Duck Creek #7 (FAA Upstream Well). Well is in stream channel and is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.7 ft above land surface datum, July 13 and August 14, 1997; lowest, 4.89 ft below land-surface datum, June 11, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	3.42	Jun 02	4.84
Apr 26	3.89	Jun 11	4.89
May 03	4.30	Jun 21	4.74
May 08	4.53	Jul 06	4.36
May 14	4.75	Aug 10	4.06
May 17	4.78	Aug 20	3.10
May 25	4.88		

SOUTHEAST ALASKA

JUNEAU—Continued

582203134351601. Local number, CD04006630CCDB1028.

LOCATION.--Lat 58°22'03", long 134°35'16", in SE¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 quad), Hydrologic Unit 19010301.

Well located on left bank of Duck Creek about 55 ft downstream from Del Rae Road crossing, 25 ft from Mendenhall Loop Road, and 0.25 mi. south of the intersection of Mendenhall Loop Road and Egan Drive, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5-in. steel casing, depth 14 ft, screen opening from 12 to 14 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 23.10 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.56 ft above land-surface datum.

REMARKS.--Well drilled May 6, 1997 by USGS, designated as Duck Creek #10 (Del Rae Road Well). Well is in stream channel and is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.22 ft below land surface datum, December 30, 1999; lowest, 8.04 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 10	1.30	May 17	7.74
Apr 19	7.57	May 25	7.81
Apr 26	7.88	Jun 21	6.84
May 03	7.88	Jul 06	6.83
May 08	8.04	Aug 10	5.54
May 14	7.87	Aug 20	3.04

582203134351701. Local number, CD04006630CCBD3015.

LOCATION.--Lat 58°22'03", long 134°35'17", in NW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit

19010301. Well located on left bank of Duck Creek, 30 ft downstream from Del Rae Road crossing, and 0.25 mi. south of the intersection of Mendenhall Loop Road and Egan Drive, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5-in. PVC casing, depth 11 ft, perforated from 9 to 11 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 22.14 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.30 ft above land-surface datum.

REMARKS.--Well drilled May 6, 1997 by USGS, designated as Duck Creek #9 (Del Rae Road Well). Well is near stream channel and is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.50 ft above land surface datum, August 14, 1997; lowest, 8.39 ft below land-surface datum, May 6, 1997.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 10	0.20	May 25	7.06
Apr 19	6.90	Jun 02	6.90
Apr 26	7.08	Jun 11	6.94
May 03	7.16	Jun 21	6.06
May 08	7.30	Jul 06	5.15
May 14	7.14	Aug 10	4.82
May 17	7.00	Aug 20	1.98

SOUTHEAST ALASKA

JUNEAU—Continued

582203134351901. Local number, CD04006630CCBD2015.

LOCATION.--Lat 58°22'03", long 134°35'19", in NW¹/₄ SW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301. Well located on right bank of Duck Creek, 75 ft downstream from Del Rae Road crossing and 0.25 mi. south of the intersection of Mendenhall Loop Road and Egan Drive, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2 in. steel casing, depth 15 ft, screen opening from 12 to 15 ft using sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 33 ft above sea level (determined from topographic map). Measuring point: Top of casing 1.66 ft above land-surface datum.

REMARKS.--Well drilled May 6, 1997 by USGS, designated as Duck Creek #8 (Del Rae Well). Well is near stream channel and is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.15 ft above land surface datum, October 11, 2001, lowest, 9.40 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	9.02	May 25	9.20
Apr 26	9.18	Jun 02	9.06
May 03	9.32	Jun 11	9.08
May 08	9.40	Jun 21	8.24
May 14	9.32	Jul 06	7.24
May 17	9.15	Aug 20	4.20

582206134351401. Local number, CD04006630CCAC1029.

LOCATION.--Lat 58°22'06", long 134°35'14", in NE¹/₄ SW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301. Well located in Duck Creek stream channel, 12 ft upstream from Del Rae Road crossing, 900 ft southwest of intersection of Mendenhall Loop Road and Egan Drive, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5-in PVC casing., depth 12 ft, slotted from 10 to 12 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 21.25 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.8 ft above land-surface datum.

REMARKS.--Well drilled May 7, 1997 by USGS, designated as Duck Creek #11 (Del Rae Road Well, 10 ft upstream from culvert). Well is in stream channel and is intermittently flooded. Water level often above top of casing. Unknown debris placed inside well casing at about 3.6 ft below land surface sometime prior to March 12, 1998. Water levels cannot be determined below the obstruction, but water levels above the obstruction appear to representative of aquifer conditions.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.4 ft above land-surface datum, July 13, 1997; lowest, 5.35 ft below land-surface datum, May 15, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	O	May 25	O
Apr 26	O	Jun 02	O
May 03	O	Jun 21	O
May 08	O	Jul 06	O
May 14	O	Aug 10	O
May 17	O	Aug 20	0.00

O -- Obstruction at about 2.4 ft below land surface datum.

SOUTHEAST ALASKA

JUNEAU—Continued

582208134351201. Local number, CD04006630CCAB1030.

LOCATION.--Lat 58°22'08", long 134°35'12", in NE¹/₄ SW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301.

Well located mid-channel of Duck Creek, about 130 ft upstream from Del Rae Road crossing, and 700 ft southwest of the intersection of Mendenhall Loop Road and Egan Drive, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5-in. PVC casing, depth 11 ft, slotted from 7 to 10 ft.

INSTRUMENTATION.-- Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 21.22 ft above sea level (determined by levels survey). Measuring point: Top of casing 2.14 ft above land-surface datum.

REMARKS.--Well drilled May 7, 1997 by USGS, designated as Duck Creek #12 (Del Rae Road Well, farthest upstream). Well is in stream channel and is intermittently flooded. Water level often above top of casing.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.79 ft above land-surface datum, October 11, 2001; lowest, 5.96 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	5.48	Jun 02	5.51
Apr 26	5.75	Jun 11	5.49
May 03	5.80	Jun 21	4.42
May 08	5.96	Jul 06	3.24
May 14	5.65	Aug 10	3.24
May 17	5.58	Aug 20	-0.20
May 25	5.66		

Minus sign indicates water level above land-surface datum.

582208134352601. Local number, CD04006630CCBB1031.

LOCATION.--Lat 58°22'08", long 134°35'26", in NW¹/₄ SW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301. Well located near a church parking lot, 55 ft northeast of Del Rae Road, and 105 ft southeast of the Lutheran Church, Juneau. Owner: Lutheran Church.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in. steel casing, depth 15 ft, screen opening from 13 to 15 ft using sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel June 1997 to current year.

DATUM.--Elevation of land-surface datum is 26.74 ft above sea level (determined by levels survey). Measuring point: Top of steel coupling at top of casing 2.8 ft above land-surface datum.

REMARKS.--Well drilled June 1997 by USGS, designated as Duck Creek #13 (Lutheran Church Well). Well casing filled with sediment to about 12.2 ft.

PERIOD OF RECORD.--June 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.06 ft below land-surface datum, September 28, 2003; lowest, dry, March 21 and April 8, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 10	7.18	Jun 02	12.14
Apr 19	12.19	Jun 11	12.09
Apr 26	12.56	Jun 21	11.16
May 03	12.47	Jul 06	10.37
May 08	12.66	Aug 10	10.10
May 14	12.58	Aug 20	8.60
May 17	12.32	Sep 28	6.06
May 25	12.40		

SOUTHEAST ALASKA

JUNEAU—Continued

582215134350501. Local number, CD04006630CBAD1032.

LOCATION.--Lat 58°22'15", long 134°35'05", in NE¹/₄ NW¹/₄ SW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 SW quad), Hydrologic Unit 19010301.

Well located near right bank of Duck Creek, 20 ft upstream from a footbridge and 225 ft upstream from the intersection of Egan Drive and Mendenhall Loop Road, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in. steel casing, depth 12 ft, screen opening from 10 to 12 ft using sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel May 1997 to current year.

DATUM.--Elevation of land-surface datum is 25.04 ft above sea level (determined by levels survey). Measuring point: Top of casing 0.70 ft above land-surface datum.

REMARKS.--Well drilled May 21, 1997 by USGS, designated as Duck Creek #14 (Superbear Well).

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 1.16 ft below land-surface datum, September 28, 2003; lowest, 6.77 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Apr 19	6.07	Jun 02	5.81
Apr 26	6.38	Jun 11	5.78
May 03	6.60	Jun 21	4.58
May 08	6.77	Jul 06	2.90
May 14	6.35	Aug 10	2.83
May 17	6.13	Aug 20	2.74
May 25	5.91	Sep 28	1.16

582240134344501. Local number, CD04006630BADA2033.

LOCATION.--Lat 58°22'40", long 134°34'45", in SE¹/₄ NE¹/₄ NW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 NW quad) Hydrologic Unit 19010301.

Well located about 270 ft up a trail from the northern end of the road through Kodzoff #1 trailer Park, Juneau. Owner: Goldbelt Corporation

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2.0-in. steel casing, depth 18.5 ft. Two pipe wrenches are needed to open well.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS personnel February 2001 to September 2003; submersible pressure transducer/electric data logger from February 2001 to September 2002.

DATUM.--Elevation of land-surface datum is 40.57 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.70 ft above land-surface datum.

REMARKS.--Well drilled October 27, 2000, designated as Kodzoff Trailer Park Well.

PERIOD OF RECORD.--February 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.91 ft below land-surface datum, August 29-30, 2002; lowest, 12.05 ft below land-surface datum, May 8-10, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 8.15 ft below land-surface datum, September 29, 2003; lowest, 11.32 ft below land-surface datum, May 02, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 02	8.97	Jun 06	10.75
Dec 06	8.70	Jul 11	10.08
Mar 18	10.56	Aug 19	9.25
Apr 04	10.70	Sep 29	8.15
May 02	11.32		

SOUTHEAST ALASKA

JUNEAU—Continued

582240134352901. Local number, CD04006630BBCB1036.

LOCATION.--Lat 58°22'40", long 134°35'29", in SW¹/₄ NW¹/₄ NW¹/₄ sec. 30, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301. Well located at northeast edge of baseball field at Riverbend School on Riverside Drive, Juneau. Owner: City and Borough of Juneau.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.-- Diameter 2.0-in. PVC casing, depth 15.9 ft, slotted from 5 to 15 ft.

INSTRUMENTATION.-- Intermittent measurements with chalked steel tape by USGS personnel April 2001 to October 2003; submersible pressure transducer/electric data logger May 2001 to March 22, 2002 and August 22, 2002 to September 30, 2002.

DATUM.-- Elevation of land-surface datum is 31.95 ft above sea level (determined by survey grade GPS). Measuring point: Top of casing 0.20 ft below land-surface datum April 2001 to July 24, 2002; then 0.73 ft. above land-surface datum to current year.

REMARKS.-- Well drilled December 15, 1998 by Hart Crowser, Inc., designated as Riverbend School well.

PERIOD OF DAILY RECORD.-- April 2001 to March 22, 2002; August 22, 2002 to September 30, 2002.

EXTREMES FOR PERIOD OF RECORD.-- Highest water level recorded, 3.58 ft below land-surface datum, August 31, 2002; lowest, 11.49 ft. below land-surface datum, March 22-23, 2002, but may have been lower during period of missing record, March 23-28, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 5.12 ft below land-surface datum, September 30, 2003; lowest, 9.28ft. below land-surface datum, April 01, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 02	5.13	Jun 06	8.70
Dec 06	6.95	Jul 10	7.15
Mar 18	9.13	Aug 19	6.43
Apr 01	9.28	Sep 30	5.12
May 02	8.95		

582306134344001. Local number, CD04006619DBCB1056.

LOCATION.--Lat 58°23'06", long 134°34'40", in SW1/4 NW1/4 SE1/4 sec. 19, T.40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301, Well is the northernmost of two wells (southernmost has casing welded shut), located about 300 ft west of Duck Creek, about 300 ft north of Stephen Richards Drive, Juneau. Owner: Glacier View Trailer Park.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2.0 in., depth 52.7 ft.

INSTRUMENTATION.--Intermittent measurement with chalked steel tape by U.S. Geological Survey April 2000 to April 2001. Electronic data logger and submersible pressure transducer April 2001 to September 2001.

DATUM.--Elevation of land-surface datum is 45.4 ft above sea level (determined by survey-grade GPS). Measuring point: Top of casing 1.4 ft above land-surface datum.

REMARKS.--Record good. Well also known as Glacier View Well.

PERIOD OF RECORD.--April 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.78 ft below land-surface datum, July 22, 2001; lowest water level measured, 9.24 ft below land-surface datum, March 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 02	7.42	Jun 06	8.75
Oct 04	7.53	Jul 11	8.18
Dec 06	7.38	Aug 19	7.68
Mar 18	9.24	Sep 29	6.02
May 02	9.19		

SOUTHEAST ALASKA

JUNEAU—Continued

582314134344801. Local number, CD04006619BDDD1055.

LOCATION.--Lat 58°23'14", long 134°34'48", in SW¹/₄ SW¹/₄ NW¹/₄ sec. 19, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301. Well located near the northwest corner of garage at 9002 Gee Street, Juneau. Owner: Tim and Debbie Banaszak.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2.0 in., depth 44.2 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS personnel February 2001 to current year; submersible pressure transducer/electric data logger October 1, 2001 to current year.

DATUM.--Elevation of land-surface datum is 46.4 ft above sea level (determined by levels survey). Measuring point: Top of casing 0.80 ft above land-surface datum.

REMARKS.--Well designated as Banaszak well.

PERIOD OF RECORD.--February 2001 to April 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.19 ft below land-surface datum, October 22, 2002; lowest, 9.54 ft below land-surface datum, April 18, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level recorded, 4.19 ft below land-surface datum, October 22; lowest, 9.23 ft below land-surface datum, April 11 and 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.18	7.23	5.98	8.13	8.16	8.74	8.90	---	---	---	---	---
2	7.15	7.36	6.18	8.01	8.16	8.63	8.90	---	---	---	---	---
3	7.18	7.49	6.43	8.03	8.06	8.50	8.92	---	---	---	---	---
4	7.21	7.57	6.64	7.83	7.97	8.25	9.00	---	---	---	---	---
5	7.33	7.65	6.93	7.33	7.97	8.24	9.02	---	---	---	---	---
6	7.09	7.67	7.16	7.12	8.03	8.31	9.04	---	---	---	---	---
7	6.63	7.73	7.31	7.10	8.12	8.39	9.05	---	---	---	---	---
8	6.14	7.75	7.28	7.25	8.21	8.51	9.12	---	---	---	---	---
9	6.09	7.83	6.95	7.31	8.28	8.54	9.15	---	---	---	---	---
10	6.23	7.94	6.90	7.42	8.37	8.64	9.15	---	---	---	---	---
11	6.46	8.02	6.85	7.58	8.40	8.73	9.15	---	---	---	---	---
12	6.62	8.02	6.60	7.68	8.40	8.73	9.22	---	---	---	---	---
13	6.62	8.07	6.57	7.87	8.43	8.73	9.18	---	---	---	---	---
14	6.80	8.12	6.64	7.93	8.45	8.83	9.18	---	---	---	---	---
15	6.99	8.05	6.90	8.08	8.49	8.93	9.15	---	---	---	---	---
16	6.09	8.01	7.11	8.16	8.55	9.03	9.11	---	---	---	---	---
17	5.29	8.10	7.28	7.87	8.60	9.06	---	---	---	---	---	---
18	5.29	7.91	7.42	7.69	8.65	9.06	---	---	---	---	---	---
19	5.49	7.60	7.57	7.53	8.67	8.94	---	---	---	---	---	---
20	5.38	7.43	7.63	7.34	8.74	8.93	---	---	---	---	---	---
21	4.46	7.43	7.76	7.35	8.80	8.87	---	---	---	---	---	---
22	4.19	7.49	7.89	7.40	8.89	8.83	---	---	---	---	---	---
23	4.44	7.53	7.68	7.50	8.91	8.88	---	---	---	---	---	---
24	5.10	7.63	7.57	7.71	8.94	8.91	---	---	---	---	---	---
25	5.68	7.60	7.56	7.83	8.94	8.91	---	---	---	---	---	---
26	6.08	6.57	7.65	7.81	9.00	8.97	---	---	---	---	---	---
27	6.21	6.29	7.85	8.01	8.95	9.04	---	---	---	---	---	---
28	6.35	6.27	7.95	8.16	8.95	9.04	---	---	---	---	---	---
29	6.55	6.29	8.00	8.21	---	8.97	---	---	---	---	---	---
30	6.81	5.98	8.05	8.12	---	8.91	---	---	---	---	---	---
31	7.04	---	8.15	8.09	---	8.89	---	---	---	---	---	---

GROUND-WATER LEVEL DATA

SOUTHEAST ALASKA

JUNEAU—Continued

582314134351201. Local number, CD04006619BCDD2020.

LOCATION.--Lat 58°23'14", long 134°35'12", in SE¹/₄ SW¹/₄ NW¹/₄ sec. 19, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301.

Well located near the northwest corner of garage at 9220 Gee Street, Juneau. Owner: Don Thomas

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5-in. steel casing, depth 49.1 ft, screen opening from 46.1 to 49.1 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS personnel April 2000 to January 2001; submersible pressure transducer/electric data logger January 2001 to current year.

DATUM.--Elevation of land-surface datum is 43.09 ft above sea level (determined by levels survey). Measuring point: Top of casing 0.92 ft above land-surface datum.

REMARKS.--Well drilled 1974, designated as Don's well. Missing record October 1, 2002 to March 18, 2003, due to equipment malfunction.

Tranducer range was exceeded during periods of high water in July, August, and September 2003.

PERIOD OF RECORD.--April 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.40 ft below land-surface datum, August 13, 2002; lowest, 10.61 ft below land-surface datum, April 18, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level recorded, not determined, range of transducer exceeded during periods of highest water levels; lowest during period March to September, 10.55 ft below land-surface datum, April 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	10.25	9.70	9.02	7.58	7.28	---
2	---	---	---	---	---	---	10.23	9.65	8.93	7.55	7.37	---
3	---	---	---	---	---	---	10.26	9.66	8.93	7.36	7.37	---
4	---	---	---	---	---	---	10.31	9.69	8.98	---	7.58	---
5	---	---	---	---	---	---	10.32	9.65	8.94	---	7.68	---
6	---	---	---	---	---	---	10.30	9.65	8.65	7.51	7.81	---
7	---	---	#8.84	---	---	---	10.33	9.79	8.62	7.67	7.63	---
8	---	---	---	---	---	---	10.41	9.98	8.68	7.71	7.56	---
9	---	---	---	---	---	---	10.47	10.01	8.73	7.63	7.47	---
10	---	---	---	---	---	---	10.44	10.00	8.56	7.57	7.47	---
11	---	---	---	---	---	---	10.44	9.94	8.44	7.44	7.80	---
12	---	#9.25	---	---	---	---	10.48	9.82	8.41	7.42	7.86	---
13	---	---	---	---	---	---	10.42	9.70	8.45	7.42	7.81	---
14	---	---	---	---	---	---	10.41	9.61	8.43	7.54	7.32	---
15	---	---	---	---	---	---	10.38	9.57	8.58	7.70	---	---
16	---	---	---	---	---	---	10.32	9.62	8.71	7.80	---	---
17	---	---	---	---	---	---	10.28	9.71	8.49	7.87	---	7.50
18	---	---	---	---	---	---	10.25	9.75	8.18	7.69	---	7.72
19	---	---	---	---	---	10.25	10.29	9.73	7.79	7.62	#7.26	8.00
20	---	---	---	---	---	10.23	10.35	9.68	7.64	7.57	---	7.90
21	---	---	---	---	---	10.21	10.33	9.61	7.71	7.44	---	7.54
22	---	---	---	---	---	10.16	10.27	9.61	7.99	7.41	7.23	7.50
23	---	---	---	---	---	10.30	10.30	9.45	8.15	7.49	7.61	7.63
24	---	---	---	---	---	10.31	10.33	9.30	8.26	7.85	7.96	7.50
25	---	---	---	---	---	10.31	10.12	9.26	8.23	7.89	7.94	---
26	---	---	---	---	---	10.37	9.89	9.13	7.92	8.08	7.93	---
27	---	#7.55	---	---	---	10.46	9.83	9.06	7.76	7.86	8.14	---
28	---	---	---	---	---	10.36	9.75	8.99	7.76	7.69	8.12	---
29	---	---	---	---	---	10.30	9.74	8.99	7.88	---	8.06	---
30	---	---	---	---	---	10.26	9.73	8.98	7.90	---	7.63	---
31	---	---	---	---	---	10.22	---	9.01	---	---	---	---

-- Result of tape down.

SOUTHEAST ALASKA

JUNEAU—Continued

582322134341001. Local number, CD04006619ACAB1050.

LOCATION.--Lat 58°23'20", long 134°34'17", in NE¹/₄ SW¹/₄ NE¹/₄ sec. 19, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301.

Well located at 3737 North El Camino Street, 30 ft west of the southwest corner of the house and 70 ft from North El Camino Street, Juneau. Owner: Nicholas Hindman.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 15 ft, screen opening from 2.5 to 4.7 ft, open hole.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, University of Alaska-Southeast, and US Forest Service personnel July 1997 to current year.

DATUM.--Elevation of land-surface datum is 43.87 ft above sea level (determined from levels survey). Measuring point: Top of casing 1.2 ft above land-surface datum.

REMARKS.--Well drilled July 7, 1997 by USGS, designated as Duck Creek #17 (Hindman Well). Well sampled for water quality, September 3, 1997, January 26, 1998, and September 3, 1998.

PERIOD OF RECORD.--July 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.40 ft below land-surface datum, October 23, 1999; lowest, 3.10 ft below land-surface datum, May 08, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 10	1.20	May 25	2.25
Apr 19	2.35	Jun 21	1.88
Apr 26	2.68	Jul 06	1.97
May 03	2.93	Aug 10	2.16
May 08	3.10	Aug 20	1.58
May 14	O	Sep 28	1.00
May 17	2.08		

O -- Obstruction at about 4.25 bl. LSD.

582326134341901. Local number, CD04006619ADBA1011.

LOCATION.--Lat 58°23'36", long 134°34'19", in NW¹/₄ SE¹/₄ NE¹/₄ sec. 19, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301.

Well located 6 ft southeast of a bike path, 25 ft southeast of Mendenhall Loop Road, and about 450 ft southwest of intersection of Mendenhall Loop Road and Valley Boulevard, Juneau. Owner: Bruce B. Bigelow.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.25-in. galvanized iron casing, depth 15 ft, screen opening from 11 to 15 ft using sandpoint.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS and University of Alaska-Southeast personnel June 1997 to current year.

DATUM.--Elevation of land-surface datum is 45.76 ft above sea level (determined by levels survey). Measuring point: Top of casing 1.3 ft above land-surface datum.

REMARKS.--Well drilled June 23, 1997 by USGS, designated as Duck Creek #18 (Bigelow Well).

PERIOD OF RECORD.--June 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.01 ft above land-surface datum, July 25 and August 12, 1997; lowest, 2.55 ft below land-surface datum, April 23, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct 10	2.28	Jun 02	1.72
Apr 19	1.61	Jun 11	1.91
Apr 26	2.03	Jun 21	1.82
May 08	2.05	Jul 06	1.59
May 14	1.85	Aug 10	1.74
May 17	1.70	Aug 20	1.66
May 25	1.81	Sep 28	0.45

SOUTHEAST ALASKA

JUNEAU—Continued

582359134352103. Local number, CD04006618CBCA3019.

LOCATION.--Lat 58°23'59", long 134°35'21", SW¹/₄ NW¹/₄ SW¹/₄ sec.18, T. 40 S., R. 66 E. (Juneau B-2 NW quad), Hydrologic Unit 19010301,

Well is located in steel gage house by sewage treatment plant on Riverbend Road, 1/4 mile off of the Mendenhall Loop Road, Juneau. Owner: Harlan Olsen.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 6-in. PVC casing, depth 40 ft, screen opening from 30 to 40 ft.

INSTRUMENTATION.--Intermittent measurements with chalked steel tape by USGS, November 1983 to current year; continuous strip-chart recorder, November 1983 to August 1984; Digital recorder, August 1984 to April 1997; submersible pressure transducer/electric data logger, August 1997 to September 1998; electronic data logger and encoder, September 1998 to current year.

DATUM.--Elevation of land-surface datum is 50.53 ft above sea level (determined by levels survey). Measuring point: Top of casing 0.77 ft above land-surface datum.

REMARKS.--Well drilled November 3, 1983 by USGS, designated as Mendenhall well. Well sampled for water quality, May 17, 1984.

PERIOD OF RECORD.--November 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.89 ft below land-surface datum, September 25, 1990; lowest measured, 13.54 ft below land-surface datum, February 2, 1997.

EXTREMES FOR CURRENT YEAR.--Highest water level recorded, 5.24 ft below land-surface datum, October 22; lowest, 11.61 ft below land-surface datum, May 10, 11, 12, and 13.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.81	7.61	6.51	9.65	9.76	11.31	11.10	11.28	11.24	---	---	8.87
2	7.81	7.81	6.68	9.55	9.85	11.17	11.10	11.28	11.24	#10.36	---	8.45
3	7.87	8.03	6.89	9.55	9.75	10.90	11.10	11.28	11.21	---	---	8.26
4	7.99	8.26	7.16	9.25	9.57	10.31	11.17	11.30	11.21	---	---	8.25
5	8.17	8.48	7.47	8.23	9.56	10.19	11.22	11.33	11.18	---	---	8.33
6	7.56	8.57	7.71	7.81	9.57	10.19	11.28	11.34	#11.13	---	---	8.60
7	6.93	8.78	7.95	7.81	9.72	10.22	11.29	11.40	---	---	---	8.70
8	6.57	8.83	7.83	7.92	9.84	10.37	11.43	11.52	---	---	---	7.06
9	6.54	9.01	7.50	7.99	9.96	10.44	11.47	11.57	---	#10.34	---	6.95
10	6.69	9.20	7.50	8.17	10.10	10.59	11.52	11.60	---	#10.30	---	7.02
11	6.90	9.34	7.55	8.43	10.16	10.73	11.52	11.61	---	---	---	7.07
12	6.97	9.32	7.32	8.64	10.19	10.77	11.55	11.61	---	---	---	6.95
13	6.97	9.44	7.29	8.96	10.25	10.78	11.52	11.55	---	---	---	6.48
14	7.15	9.59	7.32	9.08	10.28	11.02	11.52	11.39	---	---	---	6.48
15	7.39	9.58	7.55	9.32	10.39	11.18	11.52	11.31	---	---	---	6.59
16	6.31	9.53	7.77	9.48	10.45	11.33	11.47	11.31	---	---	---	6.91
17	5.87	9.68	8.04	8.94	10.55	11.39	11.47	11.31	---	---	---	7.21
18	5.87	9.35	8.25	8.60	10.68	11.48	11.40	11.31	---	---	---	7.38
19	6.02	8.66	8.48	8.26	10.69	11.54	11.40	11.31	---	---	#9.68	7.70
20	5.96	8.43	8.57	7.93	10.81	11.52	11.45	11.31	#10.59	---	---	7.57
21	5.39	8.43	8.81	7.93	10.92	11.41	11.45	11.27	---	---	#9.33	7.35
22	5.24	8.45	9.01	8.06	11.04	11.38	11.40	11.27	---	---	#9.45	7.35
23	5.39	8.49	8.72	8.30	11.07	11.38	11.40	11.27	#10.58	---	---	7.52
24	5.78	8.70	8.42	8.60	11.12	11.38	11.49	11.27	---	---	---	7.05
25	6.19	8.60	8.41	8.86	11.14	11.36	11.45	11.27	#10.63	---	#9.88	7.02
26	6.49	7.08	8.59	8.89	11.24	11.38	11.34	11.27	---	---	#9.89	6.97
27	6.56	6.87	8.87	9.27	11.28	11.45	11.33	11.26	---	---	#10.13	6.14
28	6.71	6.81	9.04	9.46	11.34	11.46	11.28	11.18	---	---	10.13	6.10
29	6.88	6.83	9.14	9.52	---	11.36	11.28	11.21	---	---	10.13	6.11
30	7.16	6.51	9.25	9.67	---	11.20	11.28	11.21	#10.41	---	9.86	6.25
31	7.40	---	9.46	9.66	---	11.11	---	11.21	---	---	9.47	---

-- Result of tapdown

SOUTH-CENTRAL ALASKA

MUNICIPALITY OF ANCHORAGE.

611725149335401. Local number, SB01400223BCCD1003.

LOCATION.--Lat 61°17'26", long 149°35'39", in SE¹/₄ SW¹/₄ SW¹/₄ NW¹/₄ sec.23, T.14 N., R.2 W.(Anchorage B-7SW quad), Hydrologic Unit 19020401, at Anchorage Regional Landfill, Glenn Highway and Hiland Road interchange, Anchorage. Owner: Municipality of Anchorage.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 6 in., depth 132 ft, cased to 118 ft, open hole. Casing perforated from 111 to 117 ft. Bedrock from 117 ft. Driller's log notes casing break at 80 ft.

INSTRUMENTATION.--Monthly measurement with chalked steel tape by U.S. Geological Survey personnel July 1997 to September 1999. electronic data logger from September 3, 1999 to current year.

DATUM.--Elevation of land surface datum is 542.56 ft above sea level (determined by level survey). Measuring point: Top of casing 3.4 ft above land-surface datum.

REMARKS.--Observation well drilled by Municipality of Anchorage, designated as KB-6.

PERIOD OF RECORD.--August 1986, July 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107.88 ft below land-surface datum, June 7, 2000; lowest, 114.25 ft below land-surface datum, Aug. 21, 1986.

EXTREMES FOR CURRENT YEAR.--Highest water level recorded, 108.87 ft. below land-surface datum, November 26 and 29; lowest, 110.68 ft. below land-surface datum, September 25 and 30.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110.27	109.50	108.97	109.24	109.78	110.29	110.37	110.48	110.54	110.47	110.52	110.58
2	110.32	109.47	108.95	109.24	109.80	110.28	110.37	110.47	110.55	110.47	110.52	110.60
3	110.30	109.42	108.93	109.21	109.81	110.29	110.39	110.47	110.53	110.49	110.52	110.60
4	110.30	109.40	108.95	109.26	109.85	110.29	110.38	110.49	110.53	110.48	110.53	110.60
5	110.29	109.35	108.95	109.26	109.86	110.31	110.38	110.49	110.50	110.49	110.53	110.60
6	110.31	109.35	108.93	109.29	109.92	110.29	110.38	110.50	110.52	110.48	110.54	110.60
7	110.28	109.31	108.93	109.34	109.92	110.31	110.40	110.50	110.52	110.48	110.54	110.60
8	110.33	109.30	108.92	109.34	109.93	110.31	110.40	110.49	110.52	110.49	110.54	110.61
9	110.28	109.28	108.92	109.36	109.96	110.28	110.41	110.47	110.51	110.49	110.54	110.61
10	110.25	109.26	108.94	109.37	109.99	110.32	110.41	110.50	110.51	110.48	110.54	110.61
11	110.23	109.22	108.91	109.38	110.01	110.30	110.42	110.49	110.50	110.48	110.51	110.62
12	110.23	109.18	108.90	109.39	110.03	110.27	110.40	110.50	110.50	110.48	110.52	110.61
13	110.18	109.18	108.98	109.43	110.06	110.27	110.40	110.51	110.50	110.49	110.53	110.61
14	110.15	109.16	108.96	109.43	110.07	110.31	110.41	110.52	110.52	110.49	110.52	110.62
15	110.04	109.12	108.97	109.45	110.09	110.30	110.39	110.52	110.52	110.48	110.54	110.61
16	110.09	109.06	108.98	109.47	110.10	110.33	110.43	110.52	110.50	110.48	110.55	110.61
17	110.04	109.06	109.00	109.46	110.13	110.33	110.43	110.52	110.50	110.51	110.56	110.60
18	110.00	109.02	109.05	109.49	110.14	110.33	110.43	110.52	110.50	110.49	110.56	110.61
19	109.95	109.06	109.05	109.50	110.16	110.33	110.44	110.52	110.51	110.49	110.54	110.62
20	109.95	109.04	109.05	109.57	110.18	110.33	110.44	110.52	110.49	110.50	110.56	110.62
21	109.90	109.03	109.04	109.56	110.20	110.33	110.43	110.51	110.50	110.51	110.56	110.64
22	109.86	108.99	109.01	109.57	110.21	110.34	110.44	110.52	110.48	110.51	110.56	110.63
23	109.82	108.97	109.07	109.59	110.19	110.35	110.47	110.51	110.49	110.50	110.57	110.58
24	109.78	108.99	109.10	109.61	110.22	110.34	110.46	110.52	110.48	110.50	110.57	110.59
25	109.72	108.91	109.12	109.63	110.25	110.36	110.46	110.54	110.48	110.51	110.56	110.65
26	109.72	108.87	109.14	109.62	110.24	110.37	110.46	110.54	110.49	110.51	110.57	110.64
27	109.69	108.93	109.17	109.69	110.27	110.38	110.47	110.53	110.49	110.51	110.59	110.63
28	109.62	108.91	109.16	109.69	110.27	110.35	110.47	110.52	110.48	110.51	110.58	110.62
29	109.59	108.87	109.17	109.70	---	110.35	110.46	110.53	110.48	110.52	110.57	110.62
30	109.57	108.95	109.18	109.75	---	110.37	110.48	110.53	110.48	110.51	110.58	110.63
31	109.55	---	109.20	109.77	---	110.38	---	110.53	---	110.52	110.59	---
MEAN	110.02	109.14	109.02	109.47	110.06	110.32	110.42	110.51	110.50	110.49	110.55	110.61
MAX	110.33	109.50	109.20	109.77	110.27	110.38	110.48	110.54	110.55	110.52	110.59	110.65
MIN	109.55	108.87	108.90	109.21	109.78	110.27	110.37	110.47	110.48	110.47	110.51	110.58

GROUND-WATER LEVEL DATA

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH

644321147163801. Local number, FD00200223DDBA1003.

LOCATION.--Lat 64°43'21", long 147°16'38", in NW¹/₄ SE¹/₄ SE¹/₄, sec. 23, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 0.3 mi east of the Dyke Road, Old Richardson Highway and Levee Road intersection in city of North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 20.4 ft, screen opening from 15.4 to 19.9 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 510.14 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.57 ft above land surface datum.

REMARKS.--Observation well drilled April 10, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-14. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.29 ft below land-surface datum, July 28, 2003; lowest, 12.14 ft below land-surface datum, December 9-11, 2001.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 9.29 ft below land-surface datum, July 28, 2003; lowest, 11.99 ft below land-surface datum, November 12, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.05	11.54	11.03	11.54	11.07	10.94	11.13	10.57	11.83	11.48	9.42	10.08
2	11.08	11.55	11.01	11.52	11.06	10.94	11.12	10.55	11.81	11.44	9.54	9.89
3	11.11	11.58	11.01	11.50	11.03	10.94	11.12	10.56	11.79	11.38	9.34	9.81
4	11.16	11.72	11.03	11.49	11.02	10.94	11.12	10.59	11.78	11.33	9.42	9.73
5	11.19	11.80	11.08	11.49	11.01	10.94	11.12	10.70	11.78	11.29	9.61	9.71
6	11.20	11.85	11.10	11.47	11.00	10.93	11.12	10.87	11.71	11.22	9.66	9.75
7	11.24	11.89	11.11	11.40	10.99	10.93	11.12	11.01	11.70	11.15	9.79	9.83
8	11.23	11.92	11.15	11.33	10.98	10.94	11.13	11.11	11.68	11.11	9.93	9.91
9	11.26	11.94	11.19	11.27	10.97	10.94	11.14	11.20	11.66	11.07	10.03	10.02
10	11.30	11.96	11.24	11.24	10.97	10.94	11.13	11.27	11.66	10.91	10.13	10.12
11	11.31	11.98	11.29	11.20	10.95	10.94	11.11	11.34	11.67	10.82	10.22	9.91
12	11.33	11.98	11.33	11.16	10.95	10.95	11.07	11.39	11.67	10.77	10.27	9.95
13	11.36	11.96	11.36	11.12	10.95	10.95	11.03	11.44	11.65	10.67	10.26	10.08
14	11.36	11.86	11.40	11.09	10.94	10.96	10.96	11.48	11.64	10.57	10.19	10.19
15	11.41	11.76	11.41	11.06	10.94	11.00	10.91	11.52	11.63	10.31	10.13	10.27
16	11.41	11.65	11.41	11.03	10.94	11.02	10.89	11.56	11.63	10.12	10.09	10.33
17	11.45	11.56	11.40	11.01	10.94	11.04	10.85	11.60	11.62	10.01	10.06	10.39
18	11.47	11.48	11.41	11.01	10.94	11.05	10.81	11.62	11.62	9.93	10.06	10.47
19	11.50	11.42	11.43	11.00	10.94	11.06	10.77	11.66	11.62	9.88	10.12	10.53
20	11.51	11.38	11.43	11.00	10.94	11.06	10.73	11.69	11.61	9.88	10.20	10.60
21	11.55	11.35	11.44	10.98	10.95	11.08	10.71	11.72	11.61	9.94	10.31	10.65
22	11.57	11.32	11.44	10.96	10.96	11.09	10.69	11.74	11.59	9.98	10.38	10.71
23	11.48	11.29	11.45	10.96	10.95	11.11	10.68	11.77	11.57	9.99	10.17	10.76
24	11.46	11.27	11.49	10.95	10.95	11.11	10.67	11.78	11.54	10.01	10.01	10.79
25	11.45	11.24	11.52	10.97	10.95	11.11	10.66	11.81	11.53	10.02	10.07	10.84
26	11.45	11.21	11.53	11.00	10.94	11.13	10.60	11.83	11.51	9.82	10.21	10.90
27	11.46	11.18	11.53	11.06	10.94	11.14	10.57	11.86	11.50	9.31	10.32	10.93
28	11.48	11.14	11.50	11.12	10.94	11.11	10.57	11.86	11.50	9.29	10.44	10.97
29	11.49	11.09	11.49	11.13	---	11.10	10.56	11.86	11.49	9.35	10.50	10.99
30	11.50	11.07	11.50	11.12	---	11.11	10.57	11.86	11.49	9.31	10.52	11.02
31	11.51	---	11.52	11.11	---	11.12	---	11.85	---	9.32	10.35	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644331147183901. Local number, FD00200222DABD1006.

LOCATION.--Lat 64°43'31", long 147°18'39", in NW¹/₄ NE¹/₄ SE¹/₄, sec. 22, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian,

Hydrologic Unit 19040506. Well located on north side of Old Richardson Highway and VFW Road intersection in city of North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 17.1 ft, screen opening from 12.1 to 16.6 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 499.94 ft NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.66 ft above land surface datum.

REMARKS.--Observation well drilled April 9, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-16. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.73 ft below land-surface datum, July 30, 2003; lowest, 7.10 ft below land-surface datum, April 15-16, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 3.73 ft below land-surface datum, July 30; lowest, 6.84 ft below land-surface datum, November 13.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.96	6.71	5.24	6.10	5.84	5.68	5.92	5.28	6.65	5.85	3.89	4.82
2	5.99	6.74	5.21	6.08	5.83	5.71	5.91	5.35	6.60	5.81	4.04	4.66
3	6.01	6.72	5.23	6.05	5.80	5.72	5.91	5.41	6.58	5.75	4.01	4.48
4	6.02	6.71	5.29	6.04	5.79	5.72	5.92	5.50	6.57	5.65	4.05	4.36
5	6.04	6.71	5.38	6.03	5.74	5.73	5.91	5.66	6.57	5.58	4.23	4.33
6	6.06	6.71	5.41	5.99	5.68	5.73	5.91	5.81	6.53	5.51	4.32	4.35
7	6.10	6.72	5.43	5.93	5.60	5.74	5.92	5.94	6.48	5.43	4.43	4.44
8	6.13	6.73	5.49	5.87	5.59	5.75	5.96	6.05	6.39	5.36	4.55	4.55
9	6.17	6.75	5.55	5.80	5.58	5.75	5.95	6.14	6.35	5.30	4.65	4.67
10	6.19	6.75	5.62	5.77	5.57	5.75	5.91	6.22	6.34	5.20	4.72	4.78
11	6.21	6.77	5.69	5.73	5.56	5.76	5.89	6.30	6.33	5.11	4.78	4.77
12	6.24	6.79	5.74	5.71	5.56	5.77	5.84	6.34	6.30	5.05	4.82	4.78
13	6.28	6.74	5.81	5.68	5.56	5.78	5.79	6.38	6.24	4.95	4.74	4.87
14	6.31	6.51	5.85	5.66	5.59	5.81	5.72	6.41	6.20	4.86	4.59	4.93
15	6.34	6.33	5.84	5.64	5.58	5.84	5.67	6.44	6.18	4.69	4.50	4.99
16	6.37	6.15	5.81	5.63	5.58	5.84	5.65	6.48	6.17	4.53	4.47	5.05
17	6.41	6.02	5.81	5.63	5.62	5.83	5.60	6.52	6.16	4.35	4.45	5.12
18	6.43	5.91	5.83	5.64	5.66	5.83	5.56	6.57	6.14	4.18	4.45	5.18
19	6.45	5.84	5.87	5.66	5.67	5.85	5.51	6.62	6.12	4.13	4.50	5.25
20	6.47	5.78	5.89	5.65	5.69	5.86	5.49	6.67	6.09	4.13	4.59	5.32
21	6.50	5.72	5.91	5.63	5.74	5.89	5.43	6.69	6.08	4.19	4.73	5.39
22	6.51	5.68	5.95	5.61	5.77	5.90	5.40	6.72	6.06	4.26	4.83	5.46
23	6.52	5.63	5.99	5.62	5.74	5.92	5.37	6.75	6.05	4.27	4.85	5.52
24	6.53	5.59	6.05	5.64	5.74	5.93	5.32	6.76	6.01	4.31	4.74	5.56
25	6.55	5.55	6.10	5.68	5.74	5.94	5.28	6.79	5.96	4.33	4.78	5.62
26	6.57	5.50	6.12	5.75	5.70	5.95	5.26	6.81	5.94	4.21	4.88	5.70
27	6.59	5.45	6.09	5.87	5.70	5.94	5.27	6.82	5.93	3.79	4.94	5.75
28	6.63	5.38	6.06	5.93	5.68	5.90	5.27	6.81	5.92	3.76	5.00	5.80
29	6.65	5.31	6.06	5.94	---	5.89	5.29	6.80	5.90	3.74	5.04	5.83
30	6.67	5.28	6.07	5.91	---	5.89	5.28	6.76	5.88	3.73	5.07	5.88
31	6.69	---	6.10	5.88	---	5.92	---	6.71	---	3.75	5.03	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644345147172101. Local number, FD00200223BDAD1002.

LOCATION.--Lat 64°43'45", long 147°17'21", in NE¹/₄ SE¹/₄ NW¹/₄, sec. 23, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian,

Hydrologic Unit 19040506. Well located approximately 0.2 mi south on Dyke Road from intersection with Laurance Road in city of North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 13.0 ft, screen opening from 7.8 to 12.8 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 499.84 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.04 ft above land surface datum.

REMARKS.--Observation well drilled June 7, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-13. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.59 ft below land-surface datum, July 31, 2003; lowest, 8.00 ft below land-surface datum, April 16, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 5.59 ft below land-surface datum, July 31; lowest, 7.47 ft below land-surface datum, May 30 through June 1.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.81	7.33	6.29	6.78	6.72	6.64	6.89	6.43	7.46	7.09	5.60	6.06
2	6.83	7.35	6.26	6.79	6.71	6.66	6.88	6.44	7.45	7.07	5.65	5.88
3	6.85	7.23	6.24	6.78	6.70	6.67	6.88	6.45	7.44	7.05	5.60	5.80
4	6.86	7.13	6.25	6.78	6.69	6.66	6.89	6.47	7.43	7.02	5.59	5.74
5	6.87	7.10	6.26	6.79	6.69	6.69	6.89	6.53	7.43	6.98	5.63	5.73
6	6.88	7.09	6.27	6.78	6.67	6.68	6.89	6.61	7.40	6.94	5.67	5.73
7	6.91	7.09	6.27	6.77	6.62	6.68	6.89	6.68	7.39	6.90	5.73	5.75
8	6.93	7.08	6.30	6.73	6.60	6.69	6.90	6.75	7.36	6.86	5.79	5.79
9	6.96	7.09	6.32	6.69	6.58	6.69	6.91	6.81	7.33	6.82	5.85	5.85
10	6.98	7.10	6.34	6.67	6.57	6.70	6.91	6.86	7.30	6.76	5.89	5.91
11	6.99	7.10	6.39	6.65	6.56	6.70	6.90	6.92	7.30	6.69	5.93	5.91
12	7.01	7.11	6.42	6.63	6.55	6.70	6.86	6.96	7.29	6.64	5.96	5.90
13	7.04	7.12	6.45	6.61	6.55	6.70	6.82	7.00	7.28	6.58	5.98	5.92
14	7.06	7.07	6.50	6.59	6.56	6.72	6.76	7.04	7.26	6.52	5.94	5.97
15	7.09	7.00	6.51	6.57	6.54	6.75	6.72	7.08	7.26	6.43	5.91	6.01
16	7.10	6.91	6.54	6.56	6.54	6.75	6.69	7.12	7.25	6.32	5.92	6.03
17	7.13	6.84	6.54	6.54	6.55	6.77	6.64	7.15	7.24	6.21	5.90	6.07
18	7.15	6.78	6.56	6.54	6.57	6.78	6.60	7.18	7.23	6.12	5.90	6.11
19	7.17	6.72	6.58	6.55	6.59	6.80	6.57	7.21	7.22	6.05	5.91	6.14
20	7.19	6.67	6.59	6.55	6.59	6.80	6.54	7.24	7.22	6.02	5.94	6.19
21	7.21	6.63	6.60	6.55	6.62	6.81	6.51	7.27	7.21	6.01	6.00	6.23
22	7.24	6.58	6.62	6.52	6.65	6.82	6.49	7.30	7.20	6.02	6.04	6.27
23	7.21	6.54	6.62	6.52	6.65	6.83	6.47	7.33	7.18	6.01	6.05	6.30
24	7.20	6.51	6.66	6.53	6.64	6.85	6.45	7.35	7.17	6.01	5.96	6.32
25	7.21	6.47	6.70	6.54	6.66	6.86	6.44	7.37	7.15	6.01	5.95	6.36
26	7.22	6.43	6.72	6.56	6.65	6.87	6.43	7.39	7.14	5.97	5.99	6.42
27	7.24	6.41	6.75	6.61	6.65	6.88	6.43	7.42	7.13	5.79	6.03	6.45
28	7.27	6.39	6.75	6.67	6.64	6.88	6.43	7.44	7.12	5.66	6.09	6.48
29	7.27	6.34	6.74	6.70	---	6.87	6.43	7.45	7.11	5.62	6.11	6.50
30	7.29	6.32	6.75	6.72	---	6.87	6.43	7.46	7.10	5.60	6.13	6.54
31	7.31	---	6.76	6.73	---	6.88	---	7.47	---	5.59	6.13	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644401147193801. Local number, FD00200222BABA1005.

LOCATION.--Lat 64°44'01", long 147°19'38", in NW¹/₄ NE¹/₄ NW¹/₄ sec. 22, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian,

Hydrologic Unit 19040506. Well located at southeast corner of Laurance Road and Old Richardson Highway intersection in city of North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 14.1 ft, screen opening from 9.1 to 13.6 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 496.04 ft above sea level, NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 3.44 ft above land surface datum.

REMARKS.--Observation well drilled April 9, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-15. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.35 ft below land-surface datum, July 30, 2003; lowest, 6.43 ft below land-surface datum, November 13, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 3.35 ft below land-surface datum, July 30, 2003; lowest, 6.43 ft below land-surface datum, November 13, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.19	6.12	4.85	5.80	5.61	5.47	5.55	4.93	6.18	5.29	3.43	4.31
2	5.22	6.14	4.81	5.79	5.59	5.49	5.54	4.95	6.12	5.25	3.55	4.18
3	5.24	6.17	4.80	5.76	5.57	5.50	5.54	5.01	6.09	5.21	3.44	4.05
4	5.25	6.20	4.83	5.75	5.56	5.49	5.55	5.08	6.08	5.16	3.44	3.97
5	5.28	6.23	4.89	5.73	5.53	5.51	5.55	5.17	6.08	5.10	3.58	3.93
6	5.29	6.27	4.93	5.71	5.49	5.51	5.55	5.28	6.04	5.05	3.69	3.94
7	5.33	6.29	4.95	5.68	5.43	5.51	5.55	5.40	6.00	4.99	3.79	3.97
8	5.36	6.31	5.00	5.65	5.41	5.52	5.57	5.50	5.92	4.94	3.92	4.04
9	5.40	6.33	5.06	5.60	5.39	5.51	5.59	5.59	5.86	4.90	4.00	4.14
10	5.43	6.34	5.13	5.58	5.38	5.51	5.56	5.66	5.84	4.81	4.07	4.24
11	5.45	6.36	5.19	5.55	5.36	5.51	5.54	5.74	5.82	4.74	4.14	4.23
12	5.48	6.38	5.25	5.53	5.35	5.52	5.50	5.78	5.78	4.68	4.18	4.23
13	5.52	6.39	5.31	5.51	5.35	5.52	5.46	5.81	5.73	4.59	4.19	4.29
14	5.55	6.20	5.38	5.49	5.36	5.54	5.40	5.85	5.69	4.51	4.11	4.35
15	5.59	6.03	5.40	5.47	5.36	5.57	5.35	5.89	5.67	4.37	4.08	4.40
16	5.60	5.86	5.41	5.46	5.36	5.56	5.33	5.92	5.64	4.24	4.07	4.45
17	5.64	5.74	5.41	5.45	5.39	5.51	5.30	5.96	5.62	4.09	4.07	4.51
18	5.67	5.63	5.43	5.45	5.42	5.51	5.26	6.00	5.60	3.94	4.06	4.56
19	5.69	5.54	5.46	5.45	5.44	5.51	5.23	6.04	5.58	3.84	4.09	4.62
20	5.71	5.46	5.48	5.45	5.45	5.51	5.19	6.09	5.56	3.82	4.15	4.68
21	5.74	5.39	5.51	5.43	5.47	5.52	5.16	6.13	5.54	3.82	4.23	4.75
22	5.76	5.34	5.54	5.41	5.53	5.54	5.14	6.16	5.52	3.85	4.29	4.81
23	5.78	5.28	5.58	5.41	5.50	5.55	5.11	6.18	5.49	3.87	4.30	4.87
24	5.82	5.23	5.65	5.41	5.49	5.57	5.08	6.20	5.46	3.90	4.21	4.91
25	5.87	5.19	5.70	5.44	5.51	5.57	5.05	6.23	5.43	3.92	4.22	4.96
26	5.90	5.14	5.75	5.49	5.48	5.58	5.00	6.26	5.40	3.81	4.30	5.03
27	5.95	5.09	5.77	5.59	5.48	5.58	4.97	6.28	5.38	3.46	4.37	5.09
28	6.00	5.02	5.75	5.66	5.47	5.54	4.96	6.30	5.36	3.39	4.42	5.13
29	6.03	4.94	5.75	5.69	---	5.53	4.94	6.29	5.35	3.36	4.46	5.17
30	6.06	4.90	5.76	5.68	---	5.53	4.93	6.26	5.32	3.35	4.49	5.21
31	6.09	---	5.78	5.64	---	5.54	---	6.22	---	3.36	4.49	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644400147151501. Local number, FD00200224ABBB1001 51659.

LOCATION.--Lat 64°44'00", long 147°15'15", in NW¹/₄ NW¹/₄ NW¹/₄, sec. 24, T.2 S., R.2 E., (Fairbanks C-1) Fairbanks Meridian, Hydrologic Unit 19040506, in road right-of-way at intersection of Nelson and Laurence Roads near North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 4-in., depth 30 ft, screened from 27.5 to 30 ft using a 2-in. diameter well point.

INSTRUMENTATION.--Strip-chart recorder from June 1976 to May 1980. Digital recorder--1-hour punch interval, from November 1983 to June 1995. Electronic data logger from June 1995 to present.

DATUM.--Elevation of land-surface datum is 503.5 ft above sea level (determined by levels survey). Measuring point: top of casing 2.97 ft above land-surface datum.

REMARKS.--Observation well drilled by the U.S. Army Corps of Engineers designated as P-251. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; this may have affected ground water levels.

PERIOD OF RECORD.--June 1976 to May 1980 and November 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.84 ft below land-surface datum, June 7, 1992; lowest, 13.70 ft below land-surface datum, February 18-20, 1988.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 11.14 ft below land-surface datum, September 15-18; lowest, 12.92 ft below land-surface datum, June 27-28 and 30.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.77	12.32	12.01	12.30	12.38	12.39	12.57	12.26	12.78	12.90	11.85	11.38
2	11.82	12.34	11.99	12.31	12.38	12.39	12.56	12.25	12.80	12.90	11.80	11.36
3	11.83	12.29	11.98	12.32	12.38	12.40	12.57	12.24	12.81	12.90	11.75	11.33
4	11.83	12.24	11.98	12.32	12.39	12.40	12.58	12.23	12.82	12.89	11.69	11.30
5	11.83	12.20	11.97	12.35	12.40	12.42	12.58	12.24	12.83	12.88	11.65	11.27
6	11.84	12.19	11.96	12.35	12.41	12.41	12.59	12.25	12.84	12.87	11.60	11.24
7	11.86	12.19	11.96	12.37	12.40	12.41	12.59	12.27	12.85	12.85	11.57	11.21
8	11.88	12.19	11.96	12.38	12.39	12.42	12.59	12.30	12.85	12.83	11.54	11.19
9	11.90	12.20	11.96	12.37	12.38	12.42	12.60	12.32	12.85	12.82	11.51	11.18
10	11.92	12.20	11.97	12.37	12.38	12.42	12.61	12.34	12.85	12.80	11.49	11.17
11	11.93	12.20	11.98	12.36	12.38	12.42	12.62	12.38	12.85	12.77	11.48	11.17
12	11.94	12.21	11.98	12.36	12.38	12.42	12.61	12.39	12.86	12.74	11.47	11.16
13	11.96	12.21	12.01	12.36	12.38	12.41	12.61	12.42	12.86	12.71	11.46	11.15
14	11.98	12.23	12.05	12.35	12.37	12.41	12.58	12.44	12.87	12.68	11.45	11.15
15	11.99	12.22	12.06	12.35	12.36	12.43	12.55	12.47	12.87	12.63	11.44	11.14
16	12.00	12.19	12.08	12.34	12.35	12.43	12.54	12.50	12.88	12.59	11.45	11.14
17	12.03	12.18	12.10	12.31	12.36	12.45	12.50	12.52	12.87	12.54	11.44	11.14
18	12.04	12.17	12.13	12.31	12.36	12.46	12.47	12.54	12.88	12.49	11.44	11.14
19	12.05	12.16	12.15	12.31	12.35	12.47	12.44	12.56	12.88	12.44	11.43	11.15
20	12.07	12.15	12.15	12.32	12.35	12.47	12.40	12.57	12.89	12.40	11.43	11.18
21	12.09	12.14	12.16	12.32	12.35	12.47	12.38	12.59	12.89	12.36	11.43	11.20
22	12.12	12.12	12.16	12.30	12.37	12.48	12.36	12.60	12.90	12.33	11.44	11.23
23	12.13	12.10	12.17	12.30	12.36	12.49	12.35	12.62	12.89	12.30	11.44	11.23
24	12.15	12.09	12.20	12.30	12.36	12.50	12.33	12.63	12.89	12.27	11.42	11.22
25	12.18	12.07	12.21	12.30	12.38	12.51	12.32	12.65	12.89	12.24	11.40	11.25
26	12.19	12.04	12.23	12.30	12.37	12.52	12.30	12.67	12.89	12.21	11.39	11.32
27	12.23	12.04	12.26	12.31	12.38	12.53	12.29	12.69	12.89	12.16	11.39	11.35
28	12.25	12.04	12.26	12.34	12.38	12.54	12.29	12.71	12.91	12.09	11.40	11.36
29	12.26	12.01	12.27	12.35	---	12.54	12.27	12.72	12.91	12.02	11.39	11.36
30	12.28	12.01	12.28	12.36	---	12.55	12.27	12.74	12.91	11.96	11.40	11.39
31	12.31	---	12.29	12.37	---	12.56	---	12.76	---	11.90	11.40	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644402147132801. Local number, FD00200319BAAB1001.

LOCATION.--Lat 64°44'02", long 147°13'28", in NE¹/₄ NE¹/₄ NW¹/₄, sec. 19, T.2 S., R.3 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 1.2 mi east of gate at gravel road from U.S. Army Corps of Engineers office, then north of gravel road beneath power lines, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 24.3 ft, screen opening from 19.2 to 24.2 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 505.44 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 5.91 ft above land surface datum.

REMARKS.--Observation well drilled September 7, 1994 by the U.S. Army Corps of Engineers and designated as USAP-1. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.64 ft. below land-surface datum, September 24, 2003; lowest, 14.62 ft below land-surface datum, April 24-26, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 11.64 ft below land-surface datum, September 24; lowest, 13.84 ft. below land-surface datum, July 6 and July 9-10.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.25	12.68	12.66	12.92	13.16	13.26	13.48	13.30	13.60	13.80	13.20	12.13
2	12.28	12.69	12.65	12.93	13.17	13.27	13.49	13.29	13.61	13.80	13.13	12.12
3	12.31	12.65	12.64	12.93	13.17	13.28	13.49	13.27	13.63	13.81	13.07	12.11
4	12.31	12.60	12.65	12.94	13.19	13.29	13.50	13.27	13.64	13.82	13.01	12.09
5	12.29	12.56	12.65	12.97	13.20	13.30	13.51	13.27	13.64	13.82	12.94	12.06
6	12.29	12.56	12.63	12.99	13.21	13.30	13.52	13.27	13.65	13.83	12.86	12.02
7	12.30	12.57	12.63	13.01	13.22	13.30	13.52	13.27	13.66	13.83	12.80	11.98
8	12.32	12.58	12.63	13.03	13.21	13.32	13.53	13.28	13.68	13.83	12.73	11.96
9	12.35	12.59	12.63	13.03	13.21	13.32	13.54	13.27	13.69	13.82	12.67	11.93
10	12.36	12.60	12.63	13.03	13.22	13.33	13.54	13.28	13.69	13.82	12.60	11.90
11	12.36	12.59	12.64	13.04	13.22	13.33	13.56	13.30	13.70	13.81	12.54	11.88
12	12.36	12.59	12.64	13.05	13.23	13.32	13.57	13.31	13.70	13.80	12.50	11.85
13	12.39	12.60	12.66	13.06	13.23	13.32	13.57	13.32	13.70	13.79	12.45	11.83
14	12.40	12.61	12.69	13.07	13.23	13.32	13.57	13.34	13.71	13.77	12.40	11.81
15	12.40	12.63	12.70	13.08	13.23	13.33	13.56	13.36	13.72	13.75	12.37	11.77
16	12.40	12.60	12.72	13.08	13.23	13.34	13.56	13.39	13.73	13.73	12.35	11.75
17	12.45	12.60	12.73	13.07	13.24	13.35	13.55	13.42	13.73	13.71	12.33	11.72
18	12.46	12.62	12.75	13.08	13.24	13.36	13.52	13.42	13.73	13.67	12.30	11.69
19	12.46	12.62	12.78	13.09	13.24	13.37	13.49	13.44	13.73	13.64	12.28	11.68
20	12.47	12.65	12.78	13.10	13.24	13.37	13.45	13.45	13.75	13.60	12.26	11.68
21	12.49	12.65	12.79	13.11	13.25	13.38	13.40	13.47	13.75	13.58	12.25	11.68
22	12.52	12.64	12.78	13.10	13.25	13.39	13.38	13.47	13.76	13.54	12.23	11.68
23	12.53	12.63	12.79	13.10	13.23	13.40	13.37	13.48	13.77	13.52	12.22	11.65
24	12.53	12.64	12.82	13.11	13.23	13.41	13.36	13.48	13.77	13.49	12.22	11.64
25	12.54	12.64	12.83	13.11	13.25	13.42	13.35	13.50	13.78	13.46	12.21	11.65
26	12.55	12.61	12.85	13.11	13.25	13.43	13.33	13.52	13.78	13.44	12.19	11.71
27	12.58	12.62	12.87	13.12	13.25	13.45	13.32	13.54	13.79	13.41	12.19	11.74
28	12.61	12.65	12.88	13.13	13.26	13.45	13.32	13.56	13.79	13.38	12.18	11.73
29	12.61	12.62	12.88	13.13	---	13.45	13.31	13.56	13.80	13.34	12.16	11.73
30	12.63	12.63	12.90	13.14	---	13.46	13.30	13.57	13.80	13.30	12.15	11.75
31	12.65	---	12.90	13.15	---	13.48	---	13.58	---	13.25	12.14	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644402147150401. Local number, FD00200224ABBA1002.

LOCATION.--Lat 64°44'02", long 147°15'04", in NW¹/₄ NW¹/₄ NE¹/₄, sec. 24, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 0.1 mi east of Laurance Road and Nelson Road intersection, then 50 ft east of road behind grove of trees towards levy, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 19.4 ft, screen openings from 9.4 to 13.9 ft and 14.4 to 18.9 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 504.74 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.57 ft above land surface datum.

REMARKS.--Observation well drilled March 12, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-11. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.74 ft below land-surface datum, September 17-18, 2003; lowest, 13.31 ft below land-surface datum, April 19 and 21-25, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 10.74 ft below land-surface datum, September 17-18; lowest, 12.57 ft below land-surface datum, June 22-July 4.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.34	11.88	11.66	11.95	12.06	12.06	12.26	12.00	12.44	12.55	11.59	11.01
2	11.38	11.90	11.65	11.96	12.06	12.07	12.27	11.99	12.46	12.56	11.54	11.00
3	11.40	11.88	11.63	11.96	12.07	12.08	12.28	11.98	12.47	12.56	11.49	10.98
4	11.40	11.83	11.63	11.97	12.07	12.08	12.28	11.97	12.48	12.56	11.44	10.95
5	11.40	11.80	11.62	11.99	12.08	12.09	12.28	11.97	12.49	12.55	11.38	10.91
6	11.40	11.79	11.62	12.00	12.09	12.09	12.29	11.99	12.50	12.55	11.33	10.88
7	11.42	11.79	11.61	12.02	12.09	12.09	12.29	12.00	12.51	12.53	11.30	10.85
8	11.44	11.79	11.61	12.03	12.08	12.10	12.30	12.02	12.52	12.52	11.26	10.83
9	11.46	11.80	11.61	12.02	12.06	12.09	12.32	12.04	12.52	12.51	11.22	10.81
10	11.48	11.80	11.62	12.02	12.06	12.09	12.32	12.05	12.52	12.49	11.19	10.80
11	11.49	11.80	11.63	12.02	12.06	12.09	12.34	12.09	12.53	12.46	11.17	10.80
12	11.49	11.81	11.64	12.02	12.06	12.08	12.33	12.11	12.52	12.43	11.16	10.78
13	11.52	11.82	11.66	12.02	12.06	12.08	12.33	12.13	12.52	12.41	11.14	10.78
14	11.54	11.83	11.70	12.02	12.06	12.08	12.30	12.15	12.53	12.38	11.12	10.77
15	11.55	11.83	11.71	12.01	12.04	12.10	12.28	12.17	12.53	12.34	11.12	10.75
16	11.55	11.80	11.73	12.01	12.04	12.11	12.27	12.20	12.54	12.29	11.12	10.75
17	11.58	11.80	11.75	11.99	12.04	12.12	12.24	12.22	12.54	12.25	11.11	10.74
18	11.60	11.79	11.78	11.99	12.04	12.13	12.21	12.23	12.55	12.21	11.10	10.74
19	11.61	11.78	11.80	11.99	12.03	12.15	12.17	12.25	12.55	12.16	11.09	10.75
20	11.62	11.77	11.80	12.00	12.04	12.15	12.14	12.27	12.56	12.12	11.09	10.77
21	11.64	11.77	11.81	12.01	12.04	12.16	12.12	12.28	12.56	12.08	11.09	10.78
22	11.67	11.74	11.79	11.99	12.05	12.17	12.10	12.29	12.56	12.05	11.09	10.81
23	11.69	11.73	11.81	11.99	12.04	12.18	12.09	12.31	12.56	12.02	11.09	10.81
24	11.71	11.73	11.84	11.98	12.04	12.20	12.07	12.32	12.56	11.99	11.08	10.80
25	11.74	11.71	11.86	11.98	12.05	12.20	12.06	12.34	12.57	11.96	11.04	10.84
26	11.75	11.68	11.88	11.98	12.05	12.22	12.04	12.36	12.56	11.93	11.03	10.91
27	11.78	11.68	11.90	12.00	12.05	12.23	12.03	12.38	12.56	11.90	11.04	10.94
28	11.81	11.68	11.91	12.02	12.06	12.23	12.03	12.39	12.56	11.83	11.04	10.94
29	11.82	11.65	11.91	12.03	---	12.24	12.02	12.40	12.56	11.77	11.03	10.95
30	11.84	11.65	11.92	12.04	---	12.25	12.01	12.41	12.56	11.71	11.03	10.97
31	11.87	---	11.93	12.05	---	12.26	---	12.42	---	11.65	11.03	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644402147182601. Local number, FD00200222AAAA1004.

LOCATION.--Lat 64°44'02", long 147°18'26", in NE¹/₄ NE¹/₄ NE¹/₄, sec. 22, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 25 ft southeast of southeast corner of Laurance Road and Treaty Street intersection, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 15.0 ft, screen opening from 10.1 to 14.6 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 498.14 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point was changed from top of outer casing to top of inner casing (2.28 ft above land surface datum) in the 2002 Water Year.

REMARKS.--Observation well drilled April 10, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-12. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.51 ft below land-surface datum, August 3, 2003; lowest, lowest, 8.00 ft below land-surface datum, April 15-19, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 5.51 ft below land-surface datum, August 3, 2003; lowest, 7.81 ft below land-surface datum, November 13, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.80	7.64	6.66	7.22	7.10	7.06	7.24	6.69	7.76	7.14	5.59	6.05
2	6.83	7.66	6.63	7.23	7.09	7.08	7.23	6.70	7.73	7.12	5.66	5.95
3	6.85	7.70	6.62	7.21	7.07	7.09	7.24	6.73	7.71	7.09	5.51	5.89
4	6.87	7.69	6.62	7.21	7.06	7.09	7.24	6.76	7.70	7.06	5.52	5.85
5	6.89	7.68	6.65	7.20	7.05	7.11	7.24	6.82	7.70	7.02	5.61	5.82
6	6.91	7.68	6.66	7.20	7.03	7.10	7.22	6.90	7.66	6.97	5.68	5.83
7	6.95	7.69	6.67	7.17	6.98	7.11	7.22	6.98	7.63	6.93	5.75	5.85
8	6.97	7.69	6.70	7.13	6.96	7.12	7.24	7.05	7.59	6.89	5.84	5.89
9	7.00	7.70	6.73	7.09	6.94	7.11	7.24	7.11	7.55	6.84	5.91	5.96
10	7.02	7.72	6.75	7.06	6.93	7.13	7.24	7.16	7.52	6.76	5.95	6.02
11	7.04	7.73	6.79	7.03	6.92	7.13	7.22	7.23	7.50	6.68	6.00	5.98
12	7.07	7.75	6.81	7.02	6.91	7.12	7.17	7.28	7.47	6.64	6.03	5.98
13	7.10	7.79	6.85	6.99	6.91	7.11	7.14	7.31	7.45	6.57	6.05	6.03
14	7.13	7.71	6.90	6.97	6.91	7.12	7.07	7.35	7.42	6.51	6.02	6.09
15	7.17	7.59	6.91	6.96	6.90	7.15	7.02	7.38	7.40	6.37	5.99	6.14
16	7.18	7.47	6.93	6.94	6.90	7.15	7.00	7.41	7.38	6.28	5.99	6.17
17	7.21	7.37	6.93	6.93	6.92	7.16	6.96	7.43	7.36	6.19	5.98	6.21
18	7.24	7.27	6.94	6.93	6.95	7.16	6.92	7.46	7.35	6.11	5.97	6.25
19	7.26	7.19	6.97	6.93	6.96	7.20	6.89	7.49	7.34	6.05	5.99	6.29
20	7.28	7.12	6.98	6.94	6.97	7.20	6.86	7.53	7.31	6.03	6.01	6.34
21	7.30	7.05	6.99	6.92	6.99	7.20	6.82	7.56	7.30	6.03	6.07	6.38
22	7.33	6.98	7.01	6.90	7.04	7.21	6.79	7.58	7.29	6.03	6.11	6.43
23	7.35	6.92	7.04	6.90	7.03	7.23	6.77	7.61	7.27	6.03	6.08	6.47
24	7.40	6.88	7.09	6.90	7.03	7.25	6.74	7.64	7.25	6.03	5.97	6.49
25	7.43	6.83	7.12	6.92	7.05	7.25	6.71	7.67	7.23	6.04	5.98	6.53
26	7.46	6.79	7.15	6.95	7.05	7.26	6.71	7.71	7.21	5.95	6.05	6.59
27	7.49	6.78	7.17	7.02	7.06	7.27	6.71	7.74	7.20	5.60	6.11	6.63
28	7.54	6.75	7.16	7.08	7.06	7.25	6.70	7.77	7.18	5.56	6.17	6.67
29	7.56	6.71	7.16	7.11	---	7.22	6.70	7.79	7.17	5.58	6.20	6.69
30	7.59	6.69	7.17	7.12	---	7.22	6.69	7.79	7.15	5.56	6.22	6.73
31	7.61	---	7.20	7.11	---	7.24	---	7.78	---	5.56	6.21	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644403147112901. Local number, FD00200317CDDD1005.

LOCATION.--Lat 64°44'03", long 147°11'29", in SE¹/₄ SE¹/₄ SW¹/₄, sec. 17, T.2 S., R.3 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 2.2 mi east of gate at gravel road from U.S. Army Corps of Engineers office, then just beyond powerlines north of gravel road, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. pvc casing, depth 20.0 ft, screen opening from 14.9 to 19.9 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 503.44 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.52 ft above land surface datum.

REMARKS.--Observation well drilled September 7, 1994 by the U.S. Army Corps of Engineers and designated as USAP-2. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.80 ft below land-surface datum, September 13, 2003; lowest, 11.08 ft below land-surface datum, May 1, 2 and 17, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 1.80 ft below land-surface datum, September 13; lowest, 9.56 ft below land-surface datum, May 16.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.95	5.08	6.34	7.32	8.07	8.55	8.99	9.30	9.14	9.06	5.45	2.14
2	4.95	4.97	6.18	7.23	8.12	8.53	8.90	9.26	9.43	9.05	5.16	2.05
3	4.73	4.84	6.04	7.12	8.08	8.60	9.03	9.14	9.38	9.24	4.35	1.95
4	4.70	4.75	6.13	7.12	8.13	8.59	8.97	9.10	9.18	9.25	4.02	1.90
5	4.48	4.85	6.22	7.42	8.22	8.71	8.97	9.22	9.05	9.19	3.84	1.86
6	4.50	4.82	6.15	7.43	8.32	8.62	9.00	9.29	9.16	9.20	3.72	1.88
7	4.55	5.14	6.06	7.73	8.21	8.63	9.05	9.35	9.31	9.19	3.74	1.86
8	4.65	5.19	6.07	7.64	8.14	8.69	8.99	9.20	9.26	9.19	3.84	1.91
9	4.70	5.31	6.07	7.52	8.15	8.66	9.06	9.03	9.11	9.18	3.79	2.00
10	4.52	5.41	6.11	7.55	8.17	8.63	9.15	9.06	9.03	9.17	3.83	2.06
11	4.41	5.34	6.25	7.58	8.21	8.66	9.19	9.04	9.09	9.08	3.88	1.87
12	4.39	5.35	6.07	7.62	8.25	8.55	9.07	9.08	9.14	9.12	3.79	1.81
13	4.59	5.47	6.33	7.75	8.35	8.51	9.08	9.19	9.13	9.03	3.90	1.80
14	4.63	5.67	6.54	7.73	8.33	8.52	9.10	9.25	9.16	8.98	3.89	1.92
15	4.32	5.77	6.54	7.76	8.24	8.62	8.97	9.37	9.23	8.93	3.90	1.86
16	4.32	5.40	6.68	7.83	8.24	8.62	9.05	9.47	9.34	8.74	4.14	1.87
17	4.59	5.40	6.75	7.64	8.32	8.76	9.16	9.31	9.10	8.72	4.41	1.93
18	4.47	5.73	6.93	7.65	8.37	8.80	9.21	9.27	9.12	8.50	4.36	1.93
19	4.46	5.78	6.88	7.76	8.30	8.77	9.25	9.25	9.16	8.33	4.34	2.04
20	4.42	6.05	6.82	7.88	8.36	8.78	9.16	9.15	9.24	8.27	4.35	2.17
21	4.59	6.12	6.79	7.90	8.42	8.84	9.11	9.03	9.22	8.31	4.50	2.24
22	4.78	6.09	6.53	7.73	8.42	8.87	9.16	9.03	9.26	8.39	4.57	2.30
23	4.75	5.93	6.60	7.78	8.26	8.91	9.34	9.05	9.14	8.32	3.93	2.08
24	4.72	6.00	6.99	7.82	8.28	8.91	9.29	9.03	9.19	8.33	2.84	1.99
25	4.68	6.06	7.03	7.83	8.47	8.92	9.33	9.10	9.20	8.33	2.65	2.22
26	4.70	5.69	7.08	7.81	8.39	9.01	9.23	9.22	9.24	8.30	2.70	2.48
27	4.91	5.83	7.20	7.90	8.44	9.06	9.23	9.35	9.25	7.80	2.82	2.38
28	4.85	6.19	7.06	8.00	8.48	8.87	9.30	9.17	9.19	6.55	3.08	2.14
29	4.82	5.79	7.03	8.00	---	8.84	9.28	9.20	9.14	6.33	3.10	2.09
30	4.91	5.85	7.10	8.01	---	8.92	9.34	9.09	9.12	6.17	3.14	2.05
31	5.10	---	7.16	8.08	---	9.07	---	9.07	---	5.74	2.80	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644408147162001. Local number, FD00200214DDDA1003.

LOCATION.--Lat 64°44'08", long 147°16'20", in SE¹/₄ SE¹/₄ SE¹/₄, sec. 14, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian,

Hydrologic Unit 19040506. Well located 10 ft off shoulder of northeast corner of Anton Road and Seavy Road intersection, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 15.2 ft, screen opening from 10.2 to 15.2 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 501.44 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 1.76 ft above land surface datum.

REMARKS.--Observation well drilled June 7, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-10. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.69 ft below land-surface datum, September 8, 2003; lowest, 10.95 ft below land-surface datum, March 31, April 1-4, 6-7, 16, 18 and 22-23, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 8.69 ft below land-surface datum, September 8; lowest, 10.33 ft below land-surface datum, June 4-9.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.37	9.94	9.54	9.86	9.92	9.84	10.02	9.67	10.29	10.23	9.03	8.88
2	9.39	9.95	9.52	9.87	9.93	9.85	10.01	9.66	10.30	10.22	9.00	8.85
3	9.41	9.93	9.49	9.87	9.92	9.86	10.02	9.65	10.31	10.22	8.96	8.80
4	9.41	9.89	9.48	9.88	9.93	9.85	10.02	9.65	10.32	10.20	8.91	8.77
5	9.43	9.86	9.48	9.90	9.93	9.86	10.02	9.66	10.33	10.19	8.88	8.74
6	9.43	9.85	9.47	9.90	9.93	9.86	10.03	9.68	10.33	10.17	8.85	8.72
7	9.45	9.85	9.47	9.92	9.91	9.86	10.03	9.71	10.33	10.15	8.84	8.70
8	9.46	9.85	9.46	9.91	9.89	9.86	10.03	9.75	10.32	10.13	8.84	8.69
9	9.49	9.86	9.47	9.89	9.88	9.85	10.03	9.78	10.31	10.12	8.84	8.71
10	9.51	9.86	9.49	9.89	9.87	9.86	10.04	9.80	10.31	10.09	8.85	8.73
11	9.52	9.86	9.51	9.89	9.85	9.88	10.05	9.84	10.30	10.04	8.86	8.75
12	9.53	9.87	9.52	9.88	9.85	9.88	10.03	9.86	10.29	10.01	8.86	8.74
13	9.55	9.88	9.54	9.88	9.84	9.87	10.01	9.89	10.30	9.97	8.88	8.73
14	9.57	9.89	9.58	9.87	9.84	9.88	9.96	9.92	10.30	9.93	8.88	8.75
15	9.60	9.87	9.60	9.86	9.82	9.89	9.93	9.95	10.30	9.88	8.87	8.76
16	9.60	9.83	9.62	9.85	9.82	9.89	9.89	9.98	10.30	9.82	8.88	8.76
17	9.62	9.81	9.64	9.83	9.82	9.91	9.85	10.01	10.29	9.76	8.90	8.78
18	9.64	9.79	9.66	9.83	9.82	9.92	9.83	10.03	10.28	9.70	8.89	8.79
19	9.65	9.77	9.69	9.82	9.81	9.93	9.80	10.05	10.29	9.65	8.88	8.81
20	9.67	9.74	9.69	9.83	9.82	9.94	9.78	10.07	10.29	9.61	8.89	8.85
21	9.69	9.72	9.70	9.83	9.83	9.95	9.76	10.10	10.29	9.56	8.90	8.87
22	9.71	9.69	9.69	9.81	9.84	9.95	9.74	10.11	10.28	9.54	8.93	8.91
23	9.73	9.67	9.71	9.81	9.83	9.96	9.73	10.13	10.27	9.51	8.93	8.92
24	9.75	9.65	9.74	9.81	9.83	9.97	9.71	10.15	10.27	9.49	8.89	8.92
25	9.77	9.63	9.76	9.81	9.85	9.98	9.71	10.16	10.26	9.46	8.86	8.95
26	9.79	9.61	9.79	9.82	9.84	9.99	9.70	10.19	10.26	9.44	8.85	9.01
27	9.82	9.60	9.82	9.84	9.84	10.00	9.69	10.21	10.25	9.39	8.86	9.04
28	9.86	9.59	9.83	9.87	9.85	10.00	9.69	10.23	10.25	9.26	8.88	9.06
29	9.87	9.56	9.83	9.89	---	10.00	9.68	10.25	10.24	9.19	8.89	9.06
30	9.89	9.55	9.84	9.90	---	10.01	9.67	10.26	10.24	9.13	8.90	9.09
31	9.92	---	9.85	9.91	---	10.01	---	10.27	---	9.07	8.91	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644423147124601. Local number, FD00200318DABC1006.

LOCATION.--Lat 64°44'23", long 147°12'46", in NW¹/₄ NE¹/₄ SE¹/₄, sec. 18, T.2 S., R.3 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located in Chena River Recreation Area, North Pole. From recreation area entrance station well is approximately 0.8 mi. southeast on dirt road from levee followed by 0.4 mi northeast on intersecting dirt road.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 20.0 ft, screen opening from 14.9 ft to 19.9 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 501.54 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 6.40 ft above land surface datum.

REMARKS.--Observation well drilled September 9, 1994 by the U.S. Army Corps of Engineers and designated as USAP-3. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.72 ft below land-surface datum, September 24, 2003; lowest, 11.37 ft below land-surface datum, April 22-28, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 7.72 ft below land-surface datum, September 24; lowest, 10.47 ft below land-surface datum, July 8.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.35	8.74	9.09	9.38	9.77	10.00	10.21	10.03	10.24	10.42	9.84	8.45
2	8.38	8.74	9.10	9.40	9.78	10.02	10.21	10.03	10.27	10.42	9.73	8.42
3	8.37	8.74	9.10	9.40	9.78	10.03	10.22	10.02	10.28	10.43	9.62	8.39
4	8.37	8.74	9.11	9.41	9.80	10.03	10.23	10.02	10.30	10.44	9.52	8.34
5	8.34	8.77	9.13	9.44	9.81	10.04	10.23	10.03	10.30	10.44	9.43	8.29
6	8.34	8.77	9.13	9.45	9.82	10.05	10.24	10.03	10.31	10.45	9.34	8.24
7	8.33	8.80	9.13	9.47	9.83	10.05	10.24	10.03	10.31	10.45	9.27	8.19
8	8.35	8.81	9.13	9.50	9.84	10.06	10.25	10.03	10.32	10.45	9.19	8.15
9	8.38	8.83	9.13	9.51	9.85	10.06	10.26	10.02	10.33	10.46	9.13	8.11
10	8.38	8.84	9.13	9.52	9.85	10.07	10.27	10.02	10.33	10.46	9.06	8.08
11	8.37	8.85	9.15	9.53	9.86	10.07	10.28	10.03	10.34	10.45	9.00	8.06
12	8.37	8.86	9.13	9.54	9.87	10.07	10.30	10.02	10.34	10.45	8.96	8.02
13	8.40	8.86	9.16	9.56	9.89	10.07	10.30	10.02	10.34	10.44	8.91	7.98
14	8.41	8.89	9.18	9.57	9.90	10.07	10.31	10.04	10.34	10.44	8.86	7.96
15	8.40	8.91	9.18	9.59	9.90	10.08	10.31	10.06	10.35	10.43	8.83	7.91
16	8.40	8.89	9.19	9.60	9.90	10.08	10.31	10.08	10.36	10.41	8.81	7.88
17	8.45	8.89	9.20	9.61	9.91	10.09	10.32	10.09	10.37	10.41	8.78	7.84
18	8.45	8.92	9.22	9.62	9.93	10.10	10.32	10.11	10.37	10.38	8.75	7.81
19	8.46	8.93	9.24	9.63	9.94	10.11	10.28	10.11	10.37	10.35	8.72	7.80
20	8.46	8.96	9.25	9.65	9.94	10.11	10.24	10.12	10.38	10.32	8.70	7.78
21	8.48	8.97	9.25	9.67	9.95	10.12	10.20	10.11	10.39	10.30	8.68	7.78
22	8.53	8.99	9.24	9.68	9.96	10.13	10.18	10.11	10.40	10.28	8.66	7.77
23	8.54	8.99	9.26	9.68	9.96	10.14	10.15	10.12	10.40	10.25	8.64	7.73
24	8.56	9.00	9.28	9.69	9.96	10.14	10.12	10.13	10.40	10.22	8.62	7.72
25	8.57	9.02	9.30	9.70	9.98	10.15	10.10	10.15	10.40	10.19	8.59	7.73
26	8.59	9.00	9.31	9.70	9.98	10.16	10.08	10.17	10.41	10.16	8.57	7.77
27	8.62	9.02	9.33	9.72	9.98	10.17	10.06	10.18	10.42	10.15	8.55	7.78
28	8.65	9.06	9.34	9.73	9.99	10.18	10.06	10.20	10.42	10.09	8.54	7.75
29	8.66	9.04	9.34	9.74	---	10.18	10.04	10.21	10.43	10.05	8.51	7.75
30	8.68	9.05	9.36	9.75	---	10.18	10.04	10.22	10.42	10.01	8.49	7.75
31	8.71	---	9.37	9.76	---	10.19	---	10.23	---	9.93	8.47	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644435147141901. Local number, FD00200213ADAD1007.

LOCATION.--Lat 64°44'35", long 147°14'19", in NE¹/₄ SE¹/₄ NE¹/₄, sec. 13, T.2 S., R.2 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located south on Gordon Road from the intersection with Lyle Road, south of shoulder where road veers west, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 19.15 ft, screen opening from 14.2 to 18.7 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 502.24 ft above NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.37 ft above land surface datum.

REMARKS.--Observation well drilled April 6, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-8S. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.20 ft below land-surface datum, September 24, 2003; lowest, 13.05 ft below land-surface datum, April 24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 10.20 ft below land-surface datum, September 24; lowest, 12.43 ft below land-surface datum, July 4 and July 6-8.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.76	11.26	11.46	11.73	11.98	12.09	12.26	12.01	12.27	12.41	11.69	10.61
2	10.79	11.27	11.45	11.74	11.98	12.10	12.26	12.00	12.29	12.40	11.61	10.60
3	10.81	11.27	11.44	11.74	11.98	12.11	12.27	11.98	12.31	12.41	11.53	10.58
4	10.82	11.28	11.45	11.75	12.00	12.11	12.27	11.97	12.31	12.42	11.44	10.55
5	10.79	11.29	11.45	11.78	12.01	12.12	12.27	11.97	12.32	12.42	11.36	10.52
6	10.80	11.29	11.45	11.79	12.03	12.12	12.28	11.97	12.33	12.42	11.28	10.49
7	10.81	11.31	11.44	11.82	12.03	12.13	12.28	11.97	12.33	12.42	11.21	10.44
8	10.83	11.32	11.44	11.83	12.03	12.14	12.29	11.97	12.34	12.42	11.14	10.42
9	10.86	11.33	11.44	11.83	12.03	12.13	12.30	11.97	12.33	12.41	11.07	10.39
10	10.88	11.35	11.44	11.84	12.04	12.14	12.30	11.97	12.33	12.41	11.01	10.37
11	10.88	11.36	11.45	11.85	12.04	12.14	12.31	11.98	12.34	12.39	10.96	10.36
12	10.88	11.36	11.45	11.86	12.04	12.13	12.31	11.99	12.34	12.38	10.92	10.34
13	10.91	11.37	11.47	11.87	12.05	12.13	12.32	12.01	12.34	12.36	10.88	10.32
14	10.93	11.39	11.49	11.88	12.05	12.13	12.31	12.03	12.34	12.35	10.84	10.31
15	10.92	11.40	11.50	11.89	12.04	12.14	12.30	12.05	12.35	12.33	10.82	10.28
16	10.92	11.39	11.52	11.90	12.04	12.15	12.30	12.07	12.36	12.31	10.80	10.26
17	10.97	11.39	11.53	11.89	12.05	12.15	12.28	12.08	12.35	12.28	10.79	10.24
18	10.98	11.41	11.55	11.89	12.06	12.16	12.27	12.09	12.36	12.25	10.76	10.23
19	10.98	11.42	11.58	11.90	12.05	12.16	12.23	12.11	12.37	12.21	10.74	10.22
20	10.98	11.43	11.58	11.92	12.06	12.17	12.19	12.12	12.38	12.17	10.73	10.22
21	11.01	11.44	11.59	11.93	12.07	12.18	12.16	12.13	12.38	12.14	10.73	10.22
22	11.04	11.43	11.58	11.92	12.07	12.18	12.15	12.13	12.38	12.12	10.72	10.24
23	11.06	11.42	11.59	11.92	12.06	12.19	12.13	12.15	12.38	12.09	10.71	10.21
24	11.07	11.43	11.62	11.93	12.06	12.20	12.10	12.15	12.39	12.06	10.70	10.20
25	11.09	11.44	11.63	11.93	12.08	12.20	12.09	12.17	12.39	12.04	10.68	10.22
26	11.11	11.40	11.65	11.93	12.07	12.21	12.07	12.20	12.40	12.01	10.67	10.28
27	11.14	11.42	11.67	11.94	12.08	12.23	12.06	12.22	12.40	11.99	10.67	10.31
28	11.18	11.45	11.68	11.95	12.09	12.23	12.05	12.23	12.41	11.92	10.66	10.30
29	11.18	11.42	11.68	11.95	---	12.23	12.03	12.24	12.41	11.88	10.64	10.31
30	11.21	11.42	11.70	11.96	---	12.24	12.02	12.25	12.41	11.82	10.63	10.32
31	11.24	---	11.71	11.97	---	12.25	---	12.26	---	11.76	10.63	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644435147141902. Local number, FD00200213ADAD2007.

LOCATION.--Lat 64°44'35", long 147°14'19", in NE¹/₄ SE¹/₄ NE¹/₄, sec. 13, T.2 S., R.2 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located 0.3 miles south on Gordon Road from the intersection with Lyle Road, south of shoulder where road veers west, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 64.39 ft, screen opening from 59.5 to 64.0 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 502.54 ft above NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.16 ft above land surface datum.

REMARKS.--Observation well drilled April 6, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-8D. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.52 ft below land-surface datum, September 24, 2003; lowest, 13.36 ft below land-surface datum, April 22-24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 10.52 ft below land-surface datum, September 24; lowest, 12.74 ft below land-surface datum, July 5 and July 7-10.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.00	11.52	11.72	11.99	12.24	12.39	12.58	12.34	12.58	12.72	12.00	10.93
2	11.06	11.54	11.71	12.00	12.25	12.39	12.58	12.32	12.60	12.71	11.92	10.92
3	11.08	11.53	11.70	12.01	12.25	12.41	12.59	12.31	12.61	12.72	11.84	10.90
4	11.08	11.54	11.71	12.01	12.26	12.41	12.59	12.30	12.62	12.73	11.75	10.87
5	11.06	11.55	11.71	12.04	12.27	12.42	12.59	12.30	12.62	12.73	11.67	10.84
6	11.07	11.55	11.71	12.05	12.29	12.42	12.61	12.29	12.63	12.73	11.59	10.80
7	11.08	11.57	11.70	12.08	12.29	12.44	12.61	12.30	12.64	12.73	11.52	10.76
8	11.09	11.58	11.70	12.09	12.29	12.44	12.62	12.30	12.65	12.74	11.45	10.74
9	11.13	11.60	11.70	12.10	12.30	12.44	12.62	12.29	12.65	12.73	11.38	10.71
10	11.15	11.61	11.71	12.11	12.31	12.45	12.64	12.30	12.65	12.72	11.32	10.69
11	11.14	11.62	11.72	12.12	12.31	12.46	12.64	12.31	12.66	12.71	11.27	10.68
12	11.15	11.62	11.71	12.12	12.32	12.45	12.64	12.31	12.66	12.70	11.23	10.66
13	11.18	11.63	11.73	12.14	12.33	12.45	12.65	12.33	12.66	12.68	11.19	10.64
14	11.19	11.65	11.75	12.14	12.33	12.45	12.64	12.35	12.66	12.67	11.15	10.63
15	11.19	11.66	11.76	12.15	12.32	12.46	12.63	12.37	12.67	12.64	11.13	10.60
16	11.19	11.65	11.78	12.16	12.32	12.46	12.64	12.39	12.68	12.61	11.12	10.58
17	11.24	11.65	11.79	12.15	12.33	12.47	12.62	12.40	12.67	12.59	11.11	10.56
18	11.25	11.67	11.81	12.15	12.35	12.48	12.60	12.41	12.67	12.55	11.09	10.54
19	11.25	11.68	11.83	12.17	12.34	12.48	12.56	12.43	12.68	12.51	11.07	10.54
20	11.26	11.69	11.84	12.18	12.35	12.49	12.53	12.43	12.68	12.48	11.06	10.54
21	11.28	11.70	11.85	12.19	12.35	12.50	12.50	12.44	12.69	12.45	11.05	10.54
22	11.31	11.70	11.84	12.18	12.36	12.50	12.48	12.45	12.69	12.42	11.05	10.56
23	11.32	11.69	11.85	12.18	12.35	12.51	12.46	12.47	12.69	12.39	11.04	10.53
24	11.34	11.69	11.88	12.19	12.35	12.52	12.44	12.47	12.68	12.37	11.03	10.52
25	11.36	11.70	11.89	12.19	12.37	12.52	12.42	12.49	12.70	12.34	11.01	10.54
26	11.37	11.67	11.90	12.19	12.36	12.54	12.40	12.51	12.71	12.33	10.99	10.60
27	11.41	11.68	11.93	12.20	12.38	12.55	12.38	12.54	12.71	12.30	10.98	10.63
28	11.44	11.71	11.94	12.21	12.38	12.55	12.38	12.55	12.72	12.25	10.97	10.62
29	11.45	11.68	11.95	12.22	---	12.55	12.36	12.56	12.72	12.19	10.96	10.63
30	11.47	11.69	11.96	12.22	---	12.56	12.35	12.56	12.72	12.13	10.95	10.64
31	11.50	---	11.97	12.23	---	12.57	---	12.57	---	12.07	10.95	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644435147172001. Local number, FD00200214ACBC1002.

LOCATION.--Lat 64°44'35", long 147°17'20", in NW¹/₄ SW¹/₄ NE¹/₄, sec. 14, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located 25 ft off shoulder of southeast corner of Newby Road and Newby Park intersection, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 16.9 ft, screen opening from 11.9 to 16.4 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 12, 2001 to current year.

DATUM.--Elevation of land-surface datum is 497.04 ft above NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey.). Measuring point: top of inner casing 2.56 ft above land surface datum.

REMARKS.--Observation well drilled April 8, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-9. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; this may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.96 ft below land-surface datum, August 26, 2002; lowest, 8.72 ft below land-surface datum, April 15-19, 22, 23, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 7.00 ft below land-surface datum, August 5-7; lowest, 8.52 ft below land-surface datum, June 3-6.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.64	8.25	8.06	8.29	8.24	8.17	8.25	8.05	8.49	8.31	7.13	7.24
2	7.65	8.27	8.04	8.29	8.25	8.18	8.25	8.03	8.50	8.29	7.11	7.21
3	7.67	8.28	8.02	8.28	8.25	8.19	8.25	8.02	8.51	8.29	7.04	7.18
4	7.68	8.30	8.01	8.28	8.24	8.18	8.25	8.02	8.51	8.28	7.01	7.16
5	7.70	8.32	8.00	8.30	8.25	8.18	8.25	8.03	8.52	8.27	7.00	7.13
6	7.70	8.32	7.99	8.31	8.25	8.18	8.26	8.05	8.50	8.24	7.00	7.12
7	7.73	8.34	7.99	8.32	8.22	8.18	8.26	8.07	8.49	8.22	7.00	7.11
8	7.73	8.34	7.99	8.31	8.21	8.19	8.26	8.09	8.48	8.21	7.03	7.17
9	7.76	8.35	7.99	8.29	8.19	8.19	8.27	8.11	8.47	8.20	7.05	7.31
10	7.77	8.36	8.00	8.28	8.18	8.19	8.28	8.13	8.46	8.15	7.07	7.36
11	7.78	8.37	8.02	8.28	8.17	8.19	8.27	8.16	8.46	8.11	7.09	7.39
12	7.79	8.38	8.04	8.27	8.16	8.18	8.26	8.17	8.46	8.07	7.11	7.39
13	7.81	8.39	8.05	8.26	8.15	8.18	8.24	8.19	8.46	8.03	7.12	7.39
14	7.83	8.40	8.08	8.25	8.15	8.18	8.19	8.22	8.45	7.99	7.11	7.41
15	7.85	8.39	8.10	8.23	8.14	8.19	8.15	8.24	8.45	7.92	7.11	7.43
16	7.86	8.35	8.11	8.21	8.14	8.19	8.11	8.26	8.44	7.87	7.12	7.43
17	7.87	8.33	8.13	8.19	8.14	8.20	8.07	8.28	8.42	7.82	7.15	7.45
18	7.89	8.31	8.15	8.19	8.15	8.20	8.06	8.30	8.41	7.78	7.15	7.46
19	7.90	8.29	8.17	8.18	8.14	8.20	8.07	8.32	8.41	7.73	7.15	7.48
20	7.91	8.27	8.18	8.18	8.14	8.20	8.06	8.33	8.41	7.70	7.15	7.51
21	7.93	8.25	8.18	8.18	8.14	8.20	8.06	8.34	8.40	7.67	7.16	7.53
22	7.95	8.22	8.18	8.16	8.16	8.21	8.06	8.35	8.39	7.65	7.17	7.56
23	7.97	8.20	8.19	8.16	8.16	8.23	8.06	8.37	8.38	7.63	7.15	7.58
24	8.03	8.19	8.21	8.15	8.16	8.24	8.08	8.37	8.37	7.62	7.10	7.58
25	8.08	8.16	8.23	8.16	8.17	8.24	8.08	8.39	8.37	7.59	7.10	7.60
26	8.11	8.14	8.25	8.16	8.16	8.24	8.08	8.41	8.36	7.55	7.10	7.63
27	8.14	8.13	8.27	8.17	8.16	8.25	8.07	8.43	8.36	7.41	7.10	7.66
28	8.17	8.11	8.28	8.20	8.17	8.25	8.07	8.44	8.34	7.31	7.12	7.68
29	8.19	8.08	8.28	8.21	---	8.24	8.06	8.46	8.33	7.26	7.12	7.69
30	8.21	8.07	8.29	8.23	---	8.24	8.05	8.47	8.32	7.21	7.15	7.70
31	8.23	---	8.29	8.24	---	8.25	---	8.48	---	7.16	7.26	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

64444147143901. Local number, FD00200213AACD1005.

LOCATION.--Lat 64°44'44", long 147°14'39", in SW¹/₄ NE¹/₄ NE¹/₄, sec. 13, T.2 S., R.2 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 0.2 mi south on Silver Street from the intersection with Lyle Road, then 15 ft south of road, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 17.15 ft, screen opening from 12.4 to 16.9 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 500.34 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.33 ft above land surface datum.

REMARKS.--Observation well drilled April 8, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-7. Missing daily values March 25 to April 5 due to equipment malfunction. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.74 ft below land-surface datum, September 24, 2003; lowest, 11.48 ft below land-surface datum, April 22-25, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 8.74 ft below land-surface datum, September 24; lowest, 10.88 ft below land-surface datum, June 28 to July 10.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.17	9.69	9.94	10.20	10.44	10.57	---	10.48	10.75	10.87	10.11	9.11
2	9.20	9.71	9.93	10.21	10.45	10.58	---	10.47	10.77	10.87	10.04	9.10
3	9.22	9.72	9.92	10.22	10.45	10.58	---	10.45	10.78	10.88	9.97	9.07
4	9.23	9.72	9.92	10.22	10.46	10.59	---	10.44	10.78	10.88	9.89	9.04
5	9.21	9.74	9.93	10.24	10.47	10.60	---	10.44	10.79	10.88	9.80	9.01
6	9.21	9.75	9.92	10.25	10.48	10.60	10.76	10.44	10.80	10.88	9.73	8.97
7	9.22	9.77	9.92	10.28	10.49	10.61	10.77	10.44	10.80	10.88	9.66	8.94
8	9.24	9.79	9.92	10.29	10.49	10.61	10.76	10.44	10.81	10.88	9.60	8.92
9	9.27	9.80	9.92	10.30	10.49	10.61	10.77	10.44	10.81	10.87	9.54	8.89
10	9.30	9.82	9.92	10.30	10.50	10.62	10.78	10.45	10.81	10.86	9.48	8.88
11	9.29	9.83	9.93	10.31	10.50	10.62	10.79	10.46	10.81	10.85	9.44	8.87
12	9.29	9.84	9.92	10.32	10.50	10.61	10.79	10.47	10.82	10.83	9.40	8.85
13	9.33	9.85	9.94	10.33	10.50	10.61	10.79	10.48	10.82	10.82	9.37	8.84
14	9.34	9.86	9.96	10.34	10.51	10.61	10.79	10.50	10.82	10.80	9.33	8.82
15	9.35	9.88	9.97	10.35	10.51	10.62	10.77	10.52	10.83	10.77	9.31	8.80
16	9.35	9.87	9.98	10.35	10.51	10.63	10.77	10.54	10.83	10.74	9.30	8.78
17	9.40	9.88	10.00	10.35	10.52	10.63	10.75	10.56	10.83	10.71	9.29	8.76
18	9.41	9.89	10.03	10.35	10.53	10.64	10.73	10.57	10.84	10.68	9.28	8.75
19	9.41	9.90	10.05	10.36	10.53	10.65	10.70	10.58	10.84	10.64	9.26	8.75
20	9.42	9.91	10.06	10.37	10.53	10.65	10.66	10.59	10.85	10.61	9.25	8.75
21	9.44	9.92	10.07	10.38	10.53	10.66	10.63	10.60	10.85	10.58	9.24	8.76
22	9.47	9.92	10.06	10.37	10.54	10.66	10.61	10.61	10.85	10.56	9.24	8.78
23	9.49	9.91	10.07	10.38	10.53	10.67	10.59	10.62	10.85	10.53	9.23	8.75
24	9.50	9.92	10.09	10.38	10.53	10.67	10.57	10.63	10.86	10.51	9.22	8.74
25	9.52	9.92	10.11	10.40	10.55	---	10.56	10.64	10.86	10.48	9.20	8.76
26	9.54	9.89	10.12	10.39	10.55	---	10.54	10.67	10.87	10.46	9.17	8.82
27	9.57	9.90	10.14	10.40	10.55	---	10.53	10.69	10.87	10.43	9.17	8.85
28	9.61	9.93	10.15	10.41	10.56	---	10.52	10.70	10.87	10.36	9.16	8.85
29	9.62	9.90	10.16	10.42	---	---	10.50	10.72	10.87	10.30	9.14	8.85
30	9.64	9.90	10.17	10.42	---	---	10.49	10.73	10.87	10.24	9.13	8.86
31	9.67	---	10.18	10.43	---	---	---	10.74	---	10.17	9.13	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644446147120901. Local number, FD00200317BBCA1001.

LOCATION.--Lat 64°44'46", long 147°12'09", in SW¹/₄ NW¹/₄ NW¹/₄, sec. 17, T.2 S., R.3 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located in Chena River Recreation Area, North Pole. From recreation area entrance station well is approximately 0.8 mi southeast on dirt road from levee followed by 0.8 mi northeast on intersecting dirt road.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 15.2 ft, screen opening from 10.1 ft. to 15.1 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 05, 2001 to current year.

DATUM.--Elevation of land-surface datum is 497.64 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 6.11 ft above land surface datum.

REMARKS.--Observation well drilled September 9, 1994 by the U.S. Army Corps of Engineers and designated as USAP-4. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.52 ft below land-surface datum, August 1, 2003; lowest, 11.81 ft below land-surface datum, April 27-28, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 0.52 ft below land-surface datum, August 1; lowest, 10.61 ft below land-surface datum, April 16-19.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.18	5.52	7.07	8.28	9.17	9.77	10.36	10.41	10.44	10.33	0.52	2.86
2	4.27	5.57	7.11	8.30	9.19	9.80	10.37	10.39	10.47	10.32	0.61	2.62
3	4.30	5.61	7.14	8.32	9.23	9.82	10.39	10.37	10.49	10.34	0.56	2.60
4	4.31	5.64	7.18	8.35	9.25	9.84	10.41	10.36	10.48	10.36	0.64	2.67
5	4.34	5.68	7.23	8.41	9.28	9.86	10.42	10.36	10.47	10.35	0.85	2.84
6	4.35	5.72	7.26	8.43	9.29	9.89	10.43	10.37	10.47	10.35	1.01	2.97
7	4.43	5.79	7.29	8.49	9.32	9.90	10.45	10.37	10.48	10.35	1.32	3.08
8	4.50	5.83	7.33	8.53	9.34	9.93	10.47	10.36	10.46	10.34	1.68	3.14
9	4.55	5.89	7.37	8.56	9.37	9.93	10.48	10.34	10.42	10.32	1.98	3.26
10	4.59	5.95	7.40	8.59	9.38	9.95	10.50	10.34	10.41	10.31	2.20	3.35
11	4.59	6.00	7.44	8.62	9.41	9.96	10.52	10.33	10.40	10.30	2.40	2.90
12	4.61	6.04	7.48	8.65	9.43	9.98	10.54	10.33	10.38	10.29	2.51	2.91
13	4.68	6.09	7.53	8.69	9.46	9.98	10.55	10.34	10.36	10.26	2.71	3.06
14	4.72	6.16	7.58	8.71	9.49	10.00	10.57	10.35	10.36	10.25	2.81	3.24
15	4.73	6.22	7.62	8.74	9.51	10.01	10.58	10.36	10.36	10.22	2.91	3.39
16	4.74	6.26	7.66	8.77	9.51	10.03	10.59	10.39	10.36	10.18	3.11	3.40
17	4.85	6.29	7.71	8.80	9.54	10.05	10.60	10.39	10.34	10.14	3.27	3.44
18	4.87	6.37	7.77	8.81	9.56	10.07	10.60	10.39	10.33	10.07	3.34	3.46
19	4.89	6.42	7.83	8.85	9.58	10.10	10.58	10.39	10.33	10.00	3.42	3.52
20	4.93	6.50	7.86	8.88	9.60	10.11	10.54	10.38	10.34	9.93	3.47	3.61
21	4.98	6.56	7.87	8.92	9.61	10.13	10.50	10.36	10.34	9.88	3.57	3.66
22	5.05	6.62	7.90	8.94	9.64	10.15	10.50	10.36	10.34	9.84	3.66	3.74
23	5.09	6.67	7.93	8.95	9.65	10.18	10.49	10.37	10.33	9.79	3.33	3.67
24	5.13	6.72	7.99	8.98	9.66	10.20	10.47	10.36	10.33	9.76	2.79	3.63
25	5.17	6.78	8.02	8.99	9.69	10.21	10.47	10.38	10.34	9.72	2.80	3.75
26	5.21	6.80	8.07	9.01	9.70	10.24	10.44	10.39	10.35	9.69	2.95	3.90
27	5.27	6.85	8.12	9.03	9.72	10.27	10.43	10.42	10.36	9.66	3.15	3.94
28	5.34	6.93	8.15	9.07	9.75	10.29	10.43	10.43	10.35	9.54	3.39	3.88
29	5.37	6.94	8.17	9.09	---	10.30	10.42	10.43	10.35	9.36	3.53	3.88
30	5.41	6.99	8.21	9.11	---	10.31	10.41	10.43	10.34	4.25	3.57	3.90
31	5.48	---	8.24	9.14	---	10.33	---	10.43	---	0.70	3.53	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644450147131201. Local number, FD00200318ABBD1005.

LOCATION.--Lat 64°44'50", long 147°13'12", in NW¹/₄ NW¹/₄ NE¹/₄, sec. 18, T.2 S., R.3 E., (Fairbanks C-1 NE quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located in Chena River Recreation Area, North Pole. From recreation area entrance station well is approximately 0.3 mi southeast on dirt road from levee.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. pvc casing, depth 24.8 ft, screen opening from 19.7 to 24.7 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; Submersible pressure transducer/electronic data logger from October 13, 2001 to current year.

DATUM.--Elevation of land-surface datum is 502.44 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 5.38 ft above land surface datum.

REMARKS.--Observation well drilled September 9, 1994 by the U.S. Army Corps of Engineers and designated as USAP-5. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5 which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.13 ft below land-surface datum, September 24, 2003; lowest, 14.81 ft below land-surface datum, April 15-19 and 21-28, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 11.13 ft below land-surface datum, September 24; lowest, 13.99 ft below land-surface datum, July 10.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.73	12.27	12.76	13.13	13.51	13.68	13.85	13.66	13.79	13.94	12.74	11.59
2	11.77	12.29	12.76	13.14	13.53	13.67	13.85	13.64	13.81	13.94	12.46	11.58
3	11.80	12.28	12.77	13.14	13.53	13.69	13.87	13.62	13.83	13.95	12.25	11.55
4	11.83	12.30	12.77	13.15	13.55	13.70	13.87	13.61	13.83	13.97	12.11	11.52
5	11.80	12.33	12.80	13.18	13.56	13.70	13.89	13.61	13.83	13.97	12.01	11.48
6	11.80	12.35	12.80	13.19	13.58	13.70	13.89	13.60	13.85	13.97	11.92	11.44
7	11.81	12.38	12.80	13.23	13.57	13.71	13.90	13.60	13.85	13.97	11.84	11.40
8	11.83	12.39	12.80	13.24	13.57	13.72	13.90	13.59	13.86	13.98	11.79	11.37
9	11.86	12.41	12.81	13.24	13.58	13.72	13.92	13.58	13.86	13.98	11.75	11.34
10	11.88	12.43	12.83	13.26	13.59	13.72	13.93	13.59	13.86	13.98	11.71	11.32
11	11.87	12.45	12.84	13.28	13.60	13.73	13.93	13.58	13.86	13.97	11.68	11.31
12	11.87	12.46	12.83	13.29	13.60	13.72	13.94	13.59	13.86	13.97	11.67	11.29
13	11.92	12.47	12.85	13.31	13.62	13.72	13.94	13.60	13.86	13.95	11.66	11.28
14	11.93	12.50	12.87	13.32	13.62	13.73	13.94	13.61	13.87	13.94	11.64	11.26
15	11.91	12.53	12.88	13.34	13.62	13.73	13.93	13.63	13.88	13.93	11.63	11.23
16	11.91	12.52	12.90	13.35	13.62	13.74	13.96	13.65	13.89	13.91	11.64	11.21
17	11.97	12.53	12.91	13.36	13.63	13.75	13.95	13.65	13.88	13.90	11.66	11.19
18	11.97	12.56	12.94	13.37	13.63	13.76	13.95	13.66	13.88	13.87	11.66	11.17
19	11.97	12.57	12.96	13.39	13.64	13.76	13.92	13.66	13.89	13.83	11.65	11.17
20	11.97	12.59	12.97	13.41	13.65	13.76	13.89	13.66	13.90	13.79	11.65	11.16
21	12.01	12.61	12.97	13.43	13.65	13.77	13.85	13.66	13.90	13.76	11.66	11.17
22	12.05	12.64	12.96	13.42	13.66	13.78	13.82	13.67	13.91	13.74	11.66	11.18
23	12.06	12.65	12.98	13.43	13.65	13.79	13.80	13.68	13.92	13.71	11.66	11.14
24	12.09	12.65	13.01	13.44	13.66	13.80	13.76	13.68	13.92	13.69	11.64	11.13
25	12.11	12.68	13.02	13.45	13.67	13.80	13.76	13.70	13.93	13.66	11.61	11.15
26	12.12	12.66	13.04	13.45	13.65	13.82	13.72	13.72	13.93	13.64	11.61	11.22
27	12.16	12.68	13.07	13.46	13.67	13.82	13.72	13.73	13.94	13.60	11.61	11.25
28	12.19	12.72	13.08	13.48	13.68	13.82	13.72	13.74	13.94	13.55	11.63	11.22
29	12.20	12.70	13.08	13.49	---	13.82	13.69	13.76	13.94	13.50	11.62	11.22
30	12.22	12.72	13.09	13.50	---	13.84	13.69	13.76	13.95	13.44	11.61	11.23
31	12.25	---	13.10	13.51	---	13.85	---	13.78	---	13.13	11.61	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644454147151701. Local number, FD00200213ABBB1006.

LOCATION.--Lat 64°44'54", long 147°15'17", in NW¹/₄ NW¹/₄ NE¹/₄, sec. 13, T.2 S., R.2 E., (Fairbanks C-1 NW quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 30 ft southeast of intersection of Nelson Rd and Lyle Rd, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 17.9 ft, screen openings from 12.6 to 17.6 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic datalogger from October 12, 2001 to current year.

DATUM.--Elevation of land-surface datum is 497.94 ft above NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.61 ft above land surface datum.

REMARKS.--Observation well drilled April 8, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-6. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.53 ft below land-surface datum, September 18-19, 2003; lowest, 10.13 ft below land-surface datum, April 22-24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 7.53 ft below land-surface datum, September 18-19; lowest, 9.60 ft below land-surface datum, April 10-14.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.96	8.54	8.84	9.11	9.34	9.44	9.56	9.23	9.49	9.55	8.67	7.88
2	7.99	8.56	8.83	9.12	9.35	9.45	9.56	9.22	9.51	9.55	8.62	7.85
3	8.01	8.57	8.82	9.13	9.37	9.45	9.56	9.20	9.52	9.55	8.55	7.82
4	8.01	8.59	8.82	9.13	9.37	9.46	9.57	9.20	9.52	9.56	8.47	7.78
5	8.00	8.61	8.83	9.15	9.38	9.47	9.57	9.19	9.52	9.56	8.40	7.73
6	8.00	8.63	8.82	9.17	9.39	9.47	9.57	9.19	9.53	9.56	8.34	7.70
7	8.02	8.65	8.81	9.19	9.40	9.47	9.58	9.20	9.54	9.55	8.29	7.67
8	8.03	8.67	8.81	9.20	9.40	9.48	9.58	9.21	9.54	9.55	8.24	7.65
9	8.07	8.68	8.81	9.21	9.40	9.48	9.59	9.21	9.53	9.55	8.21	7.63
10	8.09	8.70	8.81	9.22	9.40	9.48	9.59	9.21	9.53	9.53	8.17	7.62
11	8.09	8.72	8.83	9.22	9.40	9.48	9.59	9.22	9.53	9.51	8.14	7.62
12	8.09	8.73	8.83	9.23	9.40	9.46	9.59	9.22	9.53	9.49	8.12	7.60
13	8.12	8.74	8.84	9.25	9.41	9.46	9.59	9.24	9.53	9.47	8.09	7.59
14	8.14	8.76	8.87	9.26	9.41	9.46	9.58	9.25	9.53	9.45	8.07	7.58
15	8.15	8.78	8.88	9.26	9.40	9.47	9.55	9.27	9.54	9.41	8.05	7.56
16	8.14	8.77	8.89	9.27	9.40	9.47	9.55	9.29	9.54	9.37	8.04	7.54
17	8.18	8.78	8.91	9.27	9.41	9.48	9.52	9.31	9.54	9.33	8.04	7.54
18	8.20	8.79	8.92	9.27	9.41	9.49	9.49	9.32	9.54	9.29	8.02	7.53
19	8.20	8.80	8.95	9.28	9.41	9.50	9.45	9.34	9.54	9.26	8.01	7.53
20	8.21	8.81	8.95	9.29	9.41	9.50	9.42	9.35	9.55	9.22	8.01	7.54
21	8.23	8.82	8.97	9.30	9.41	9.50	9.39	9.36	9.55	9.20	8.01	7.55
22	8.27	8.82	8.97	9.29	9.41	9.51	9.37	9.36	9.56	9.17	8.00	7.58
23	8.28	8.82	8.98	9.29	9.41	9.51	9.36	9.38	9.56	9.15	7.99	7.56
24	8.31	8.82	9.00	9.30	9.41	9.52	9.34	9.39	9.55	9.13	7.98	7.54
25	8.34	8.83	9.01	9.30	9.42	9.53	9.31	9.40	9.55	9.11	7.95	7.57
26	8.36	8.80	9.03	9.30	9.42	9.54	9.30	9.41	9.55	9.08	7.93	7.63
27	8.41	8.81	9.05	9.31	9.43	9.54	9.28	9.43	9.56	9.02	7.93	7.66
28	8.45	8.83	9.06	9.32	9.44	9.54	9.27	9.45	9.56	8.93	7.92	7.66
29	8.46	8.80	9.07	9.33	---	9.54	9.26	9.46	9.56	8.86	7.91	7.66
30	8.49	8.81	9.08	9.34	---	9.54	9.24	9.47	9.56	8.79	7.90	7.68
31	8.52	---	9.09	9.34	---	9.55	---	9.48	---	8.73	7.90	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644528147131201. Local number, FD00200307ACBD1001 51660.

LOCATION.--Lat 64°45'28", long 147°13'12", NW¹/₄ SW¹/₄ NE¹/₄, sec. 7, T.2 S., R.3 E., (Fairbanks D-1) Fairbanks Meridian, Hydrologic Unit 19040506, inside Corps of Engineers Chena Lakes Project fenced compound, 120 ft west of headquarters building and 2 mi northeast of the intersection of Laurence and Nelson Roads.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 4-in., depth 31 ft, screened from 28.5 to 31 ft.

INSTRUMENTATION.--Continuous strip-chart recorder from June 1976 to May 1980. Digital recorder--1-hour punch interval, from October 1985 to April 1995. Electronic data logger from April 1995 to present.

DATUM.--Elevation of land-surface datum is 494.7 ft above sea level (determined by levels survey). Measuring point: top of casing 2.91 ft above land-surface datum.

REMARKS.--Observation well drilled by the U.S. Army Corps of Engineers, designated as P-252. Water levels from water years 1986 through 1990 were not previously published and are available from NWIS. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; this may have affected ground water levels.

PERIOD OF RECORD.--June 1976 to May 1980 and October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.85 ft below land-surface datum, June 8-9, 1992; lowest, 13.20 ft below land-surface datum September 15, 1976.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 7.09 ft below land-surface datum, September 17-19; lowest, 10.63 ft below land-surface datum, April 14-17.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.88	8.44	9.13	9.65	10.09	10.33	10.54	10.33	10.26	10.44	8.83	7.51
2	7.88	8.47	9.16	9.67	10.10	10.34	10.54	10.30	10.27	10.44	8.46	7.43
3	7.89	8.49	9.17	9.68	10.11	10.35	10.55	10.28	10.29	10.45	8.11	7.38
4	7.91	8.51	9.19	9.70	10.13	10.36	10.56	10.25	10.31	10.46	7.82	7.29
5	7.91	8.53	9.21	9.72	10.14	10.37	10.56	10.23	10.31	10.47	7.59	7.23
6	7.91	8.55	9.22	9.73	10.15	10.37	10.57	10.22	10.32	10.47	7.42	7.19
7	7.91	8.58	9.24	9.75	10.17	10.38	10.57	10.21	10.33	10.48	7.31	7.16
8	7.92	8.61	9.25	9.77	10.18	10.39	10.58	10.20	10.34	10.49	7.25	7.14
9	7.95	8.63	9.26	9.80	10.19	10.40	10.59	10.19	10.34	10.49	7.21	7.13
10	7.99	8.66	9.27	9.81	10.20	10.41	10.59	10.18	10.33	10.50	7.19	7.13
11	8.01	8.69	9.27	9.83	10.21	10.41	10.60	10.17	10.32	10.50	7.18	7.13
12	8.01	8.72	9.29	9.84	10.22	10.41	10.61	10.17	10.32	10.50	7.18	7.12
13	8.03	8.74	9.30	9.86	10.22	10.42	10.61	10.17	10.31	10.49	7.19	7.11
14	8.05	8.77	9.32	9.87	10.23	10.42	10.62	10.16	10.31	10.49	7.20	7.11
15	8.08	8.80	9.34	9.89	10.24	10.42	10.62	10.16	10.31	10.48	7.22	7.10
16	8.08	8.84	9.36	9.90	10.25	10.43	10.62	10.17	10.32	10.45	7.24	7.10
17	8.10	8.85	9.38	9.92	10.26	10.43	10.61	10.17	10.33	10.42	7.29	7.09
18	8.12	8.87	9.40	9.92	10.26	10.44	10.61	10.17	10.33	10.39	7.33	7.09
19	8.13	8.90	9.43	9.94	10.27	10.45	10.60	10.17	10.34	10.33	7.37	7.09
20	8.15	8.92	9.45	9.95	10.27	10.44	10.58	10.17	10.34	10.28	7.40	7.10
21	8.16	8.95	9.47	9.97	10.27	10.45	10.56	10.17	10.35	10.23	7.43	7.12
22	8.20	8.97	9.48	9.98	10.28	10.46	10.54	10.16	10.37	10.20	7.46	7.14
23	8.22	9.00	9.50	9.99	10.29	10.47	10.52	10.17	10.37	10.17	7.49	7.17
24	8.24	9.01	9.52	10.00	10.30	10.47	10.50	10.17	10.38	10.15	7.51	7.18
25	8.26	9.04	9.53	10.01	10.30	10.48	10.48	10.17	10.39	10.12	7.48	7.18
26	8.28	9.05	9.55	10.02	10.31	10.49	10.45	10.17	10.40	10.10	7.47	7.21
27	8.30	9.06	9.57	10.02	10.31	10.50	10.42	10.18	10.41	10.05	7.47	7.26
28	8.34	9.08	9.59	10.04	10.32	10.51	10.40	10.20	10.42	9.94	7.48	7.30
29	8.36	9.10	9.61	10.05	---	10.52	10.38	10.22	10.42	9.82	7.50	7.32
30	8.39	9.11	9.62	10.06	---	10.52	10.36	10.23	10.43	9.59	7.50	7.34
31	8.41	---	9.64	10.08	---	10.53	---	10.25	---	9.22	7.51	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644531147130801. Local number, FD00200307ACBA1007.

LOCATION.--Lat 64°45'31", long 147°13'08", NW¹/₄ SW¹/₄ NE¹/₄, sec. 7, T.2 S., R.3 E., (Fairbanks D-1 SE) Fairbanks Meridian, Hydrologic Unit 19040506. Well located approximately 60 feet from bunker door off gravel road near U.S. Army Corps of Engineers' facility south of Chena Lake Recreation Area entrance.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 17.6 ft, screen opening from 7.6 ft to 12.1 ft and 12.6 to 17.1 ft

INSTRUMENTATION.--Intermittent measurements by USGS personnel February 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 495.84 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.47 feet above land surface datum.

REMARKS.--Observation well drilled March 12, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-4. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; which may have affected ground water levels.

PERIOD OF RECORD.--February 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.46 ft below land-surface datum, August 9, 2003; lowest, 10.75 ft below land-surface datum, April 23-24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 6.46 ft below land-surface datum, August 9; lowest, 10.12 ft below land-surface datum, April 13-14.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.27	7.97	8.70	9.21	9.64	9.83	10.03	9.76	9.73	9.90	7.96	6.84
2	7.33	7.98	8.71	9.22	9.65	9.84	10.03	9.73	9.76	9.90	7.58	6.78
3	7.35	7.99	8.72	9.23	9.66	9.85	10.04	9.70	9.79	9.91	7.22	6.70
4	7.35	8.01	8.73	9.24	9.68	9.86	10.04	9.68	9.78	9.93	6.94	6.60
5	7.33	8.04	8.76	9.27	9.69	9.87	10.05	9.67	9.78	9.94	6.73	6.54
6	7.33	8.06	8.77	9.29	9.71	9.87	10.06	9.67	9.79	9.95	6.59	6.52
7	7.36	8.10	8.78	9.32	9.72	9.88	10.07	9.67	9.80	9.95	6.52	6.49
8	7.39	8.14	8.79	9.34	9.71	9.89	10.07	9.65	9.79	9.96	6.48	6.49
9	7.43	8.17	8.80	9.35	9.72	9.89	10.08	9.64	9.78	9.96	6.46	6.51
10	7.46	8.21	8.81	9.36	9.73	9.89	10.09	9.64	9.76	9.95	6.47	6.52
11	7.46	8.24	8.83	9.37	9.74	9.90	10.10	9.63	9.76	9.94	6.49	6.51
12	7.46	8.26	8.83	9.39	9.74	9.90	10.10	9.63	9.76	9.95	6.51	6.50
13	7.51	8.29	8.86	9.41	9.75	9.89	10.10	9.64	9.75	9.93	6.57	6.49
14	7.52	8.32	8.89	9.43	9.76	9.90	10.10	9.64	9.75	9.92	6.59	6.50
15	7.52	8.36	8.90	9.44	9.76	9.91	10.09	9.64	9.75	9.88	6.60	6.49
16	7.52	8.37	8.93	9.45	9.76	9.91	10.10	9.65	9.78	9.84	6.66	6.49
17	7.59	8.38	8.95	9.46	9.77	9.92	10.10	9.64	9.78	9.81	6.75	6.49
18	7.60	8.42	8.98	9.47	9.78	9.92	10.08	9.63	9.78	9.76	6.79	6.49
19	7.61	8.44	9.01	9.49	9.78	9.93	10.06	9.63	9.79	9.70	6.82	6.51
20	7.61	8.48	9.02	9.50	9.78	9.93	10.03	9.63	9.81	9.65	6.84	6.55
21	7.64	8.51	9.04	9.53	9.79	9.94	10.01	9.62	9.82	9.62	6.88	6.58
22	7.68	8.54	9.03	9.53	9.80	9.94	9.99	9.62	9.83	9.60	6.93	6.64
23	7.71	8.54	9.05	9.54	9.79	9.95	9.98	9.63	9.84	9.57	6.93	6.61
24	7.73	8.55	9.08	9.55	9.79	9.97	9.94	9.63	9.84	9.55	6.86	6.59
25	7.76	8.59	9.10	9.56	9.81	9.97	9.92	9.64	9.85	9.53	6.83	6.64
26	7.78	8.57	9.12	9.56	9.81	9.98	9.88	9.66	9.87	9.50	6.83	6.75
27	7.81	8.60	9.15	9.58	9.82	10.00	9.86	9.69	9.88	9.40	6.86	6.81
28	7.85	8.64	9.16	9.60	9.83	10.00	9.85	9.70	9.89	9.27	6.91	6.78
29	7.87	8.62	9.16	9.61	---	10.00	9.81	9.71	9.90	9.13	6.92	6.79
30	7.89	8.65	9.17	9.61	---	10.01	9.79	9.72	9.90	8.84	6.92	6.82
31	7.94	---	9.19	9.63	---	10.02	---	9.73	---	8.39	6.94	---

GROUND-WATER LEVEL DATA

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644547147141801. Local number, FD00200306CCCC1002.

LOCATION.--Lat 64°45'47", long 147°14'18", in SW¹/₄ SW¹/₄ SW¹/₄, sec. 6, T.2 S., R.3 E., (Fairbanks D-1 SE quad), Fairbanks Meridian, Hydrologic Unit 19040506, Well located 0.5 mi on Hurst Road from the intersection with Nelson Road, then 30 ft east of road, North Pole. Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in.PVC inner casing, depth 17.4 ft, screen opening from 12.4 ft to 16.9 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel August 2001 to current year; submersible pressure transducer/electronic data logger from October 12, 2001 to current year.

DATUM.--Elevation of land-surface datum is 493.64 ft above NGVD of 1929 (revised; levels by US Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey). Measuring point: top of inner casing 2.57 feet above land surface datum.

REMARKS.--Observation well drilled April 11, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-3. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; this may have affected ground water levels.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.82 ft below land-surface datum, September 18-19, 2003; lowest, 10.07 ft below land-surface datum, April 22-23, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 5.82 ft below land-surface datum, September 18-19; lowest, 9.74 ft below land-surface datum, April 12-14, 16-17.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.62	7.31	8.21	8.81	9.27	9.47	9.67	9.33	9.30	9.48	8.23	6.54
2	6.66	7.34	8.23	8.82	9.28	9.48	9.67	9.30	9.34	9.49	8.12	6.50
3	6.66	7.36	8.24	8.83	9.29	9.48	9.68	9.26	9.36	9.51	7.96	6.43
4	6.66	7.37	8.25	8.84	9.30	9.48	9.68	9.24	9.36	9.53	7.82	6.35
5	6.62	7.40	8.28	8.87	9.32	9.50	9.69	9.23	9.35	9.54	7.69	6.28
6	6.62	7.43	8.30	8.88	9.34	9.50	9.69	9.22	9.36	9.55	7.57	6.20
7	6.64	7.47	8.31	8.92	9.35	9.51	9.69	9.23	9.38	9.55	7.48	6.14
8	6.67	7.51	8.33	8.94	9.34	9.52	9.69	9.21	9.38	9.56	7.37	6.10
9	6.72	7.55	8.34	8.95	9.36	9.52	9.70	9.20	9.36	9.56	7.28	6.06
10	6.75	7.59	8.36	8.97	9.36	9.52	9.71	9.20	9.34	9.56	7.20	6.03
11	6.74	7.62	8.38	8.98	9.37	9.52	9.72	9.20	9.34	9.54	7.13	6.00
12	6.75	7.65	8.39	9.00	9.38	9.52	9.73	9.20	9.34	9.55	7.08	5.96
13	6.80	7.68	8.40	9.02	9.39	9.51	9.73	9.20	9.34	9.53	7.02	5.93
14	6.82	7.72	8.44	9.04	9.39	9.51	9.73	9.20	9.34	9.52	6.97	5.91
15	6.82	7.76	8.45	9.05	9.39	9.53	9.71	9.21	9.35	9.51	6.93	5.87
16	6.81	7.79	8.47	9.07	9.40	9.53	9.72	9.22	9.38	9.47	6.92	5.84
17	6.89	7.80	8.50	9.08	9.41	9.54	9.72	9.21	9.37	9.44	6.90	5.83
18	6.90	7.84	8.53	9.09	9.42	9.56	9.72	9.21	9.37	9.38	6.87	5.82
19	6.91	7.87	8.56	9.11	9.42	9.58	9.70	9.20	9.39	9.31	6.85	5.82
20	6.92	7.91	8.58	9.12	9.42	9.58	9.67	9.20	9.41	9.25	6.84	5.83
21	6.95	7.94	8.59	9.15	9.43	9.59	9.63	9.19	9.42	9.22	6.83	5.85
22	7.00	7.98	8.59	9.15	9.44	9.60	9.61	9.19	9.43	9.19	6.82	5.89
23	7.01	8.00	8.61	9.16	9.43	9.60	9.59	9.19	9.44	9.16	6.80	5.86
24	7.04	8.02	8.65	9.17	9.43	9.61	9.55	9.19	9.44	9.13	6.76	5.84
25	7.07	8.06	8.67	9.18	9.45	9.62	9.54	9.21	9.45	9.11	6.72	5.88
26	7.09	8.06	8.69	9.19	9.44	9.63	9.49	9.23	9.46	9.08	6.69	5.98
27	7.14	8.09	8.72	9.20	9.45	9.64	9.46	9.26	9.48	9.03	6.68	6.03
28	7.20	8.13	8.74	9.22	9.46	9.65	9.44	9.27	9.49	8.82	6.66	6.03
29	7.21	8.13	8.75	9.23	---	9.64	9.39	9.28	9.49	8.64	6.63	6.03
30	7.24	8.16	8.77	9.24	---	9.65	9.36	9.29	9.49	8.49	6.62	6.05
31	7.28	---	8.78	9.25	---	9.66	---	9.29	---	8.34	6.61	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644603147131401. Local number, FD00200306DBCA1001.

LOCATION.--Lat 64°46'03", long 147°13'14", in SW¹/₄ NW¹/₄ SE¹/₄, sec. 06, T.2 S., R.3 E., (Fairbanks D-1 SE quad), Fairbanks Meridian, Hydrologic Unit 19040506, Well located 0.6 mi west on turn off to Lake Park in Chena Lakes Recreation Area, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. pvc casing, depth 19.3 ft., screen open from 14.3 to 18.8 ft.

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 5, 2001 to current year.

DATUM.--Elevation of land-surface datum is 490.44 ft above NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey.). Measuring point: top of inner casing 2.52 ft above land surface datum.

REMARKS.--Observation well drilled April 6, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-1. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 4.81 ft below land-surface datum, September 16-17, 2003; lowest 8.49 ft below land-surface datum, March 18-21, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured 4.81 ft below land-surface datum, September 16-17; lowest 8.38 ft below land-surface datum, April 11-12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.71	6.63	7.23	7.70	8.02	8.15	8.31	7.96	7.86	8.20	6.78	5.48
2	5.87	6.64	7.24	7.71	8.03	8.16	8.31	7.91	7.89	8.21	6.58	5.45
3	5.90	6.67	7.25	7.72	8.04	8.17	8.32	7.87	7.90	8.23	6.36	5.38
4	5.91	6.68	7.26	7.73	8.05	8.17	8.32	7.85	7.91	8.26	6.16	5.29
5	5.93	6.71	7.27	7.76	8.07	8.19	8.32	7.84	7.91	8.27	5.99	5.20
6	5.94	6.73	7.28	7.76	8.08	8.18	8.33	7.83	7.92	8.29	5.84	5.12
7	5.97	6.77	7.29	7.79	8.08	8.19	8.33	7.82	7.93	8.30	5.72	5.05
8	6.00	6.80	7.30	7.80	8.08	8.20	8.33	7.81	7.93	8.31	5.61	5.01
9	6.04	6.83	7.31	7.81	8.08	8.19	8.34	7.79	7.91	8.32	5.53	4.98
10	6.06	6.86	7.32	7.82	8.09	8.20	8.35	7.80	7.89	8.31	5.47	4.96
11	6.07	6.89	7.34	7.83	8.09	8.21	8.36	7.78	7.90	8.30	5.43	4.91
12	6.09	6.90	7.34	7.84	8.09	8.20	8.36	7.77	7.91	8.31	5.41	4.89
13	6.13	6.93	7.37	7.86	8.09	8.19	8.36	7.76	7.92	8.30	5.40	4.87
14	6.15	6.96	7.39	7.87	8.09	8.19	8.33	7.75	7.93	8.29	5.39	4.85
15	6.17	6.99	7.41	7.89	8.09	8.21	8.32	7.75	7.94	8.24	5.39	4.82
16	6.17	7.00	7.43	7.90	8.09	8.21	8.32	7.75	7.97	8.21	5.42	4.81
17	6.22	7.01	7.45	7.90	8.10	8.22	8.31	7.73	7.98	8.18	5.46	4.81
18	6.23	7.04	7.48	7.90	8.11	8.23	8.30	7.73	7.98	8.12	5.47	4.82
19	6.25	7.05	7.51	7.92	8.11	8.24	8.27	7.72	8.00	8.05	5.50	4.83
20	6.26	7.08	7.52	7.92	8.12	8.24	8.25	7.72	8.04	7.99	5.52	4.87
21	6.29	7.10	7.53	7.95	8.12	8.25	8.23	7.72	8.06	7.95	5.56	4.90
22	6.33	7.12	7.53	7.94	8.13	8.25	8.22	7.72	8.08	7.92	5.60	4.94
23	6.35	7.13	7.55	7.95	8.12	8.26	8.21	7.74	8.08	7.89	5.62	4.96
24	6.37	7.14	7.58	7.96	8.12	8.27	8.19	7.74	8.09	7.87	5.58	4.96
25	6.40	7.16	7.60	7.97	8.14	8.27	8.18	7.76	8.11	7.85	5.55	5.01
26	6.44	7.14	7.62	7.97	8.14	8.28	8.14	7.78	8.13	7.80	5.55	5.10
27	6.47	7.17	7.64	7.98	8.14	8.29	8.12	7.81	8.15	7.66	5.55	5.14
28	6.51	7.19	7.65	7.99	8.14	8.29	8.09	7.81	8.17	7.54	5.56	5.16
29	6.53	7.17	7.65	8.00	---	8.28	8.05	7.83	8.18	7.42	5.55	5.18
30	6.56	7.20	7.67	8.01	---	8.29	8.00	7.84	8.19	7.20	5.55	5.22
31	6.60	---	7.68	8.02	---	8.31	---	7.85	---	6.98	5.55	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

644603147151801. Local number, FD00200201DBC1002.

LOCATION.--Lat 64°46'03", long 147°15'18", in SW¹/₄ NW¹/₄ SE¹/₄, sec. 1, T.2 S., R.2 E., (Fairbanks D-1 SW quad), Fairbanks Meridian, Hydrologic Unit 19040506. Well located east side of Nelson Road approximately 2.3 mi from Laurance Road. West of Chena Lakes Flood Control Project and Recreational Area, North Pole.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Chena Alluvium of Quaternary age.

WELL CHARACTERISTICS.--Diameter 2-in. PVC casing, depth 19.8 ft, screen openings from 14.8 ft to 19.3 ft

INSTRUMENTATION.--Intermittent measurements by USGS personnel July 2001 to current year; submersible pressure transducer/electronic data logger from October 12, 2001 to current year.

DATUM.--Elevation of land-surface datum is 493.04 ft above NGVD of 1929 (revised; levels by U.S. Army Corps of Engineers, adjusted to 1992 survey of benchmarks by U.S. Coast and Geodetic Survey.). Measuring point: top of inner casing 2.51 ft above land surface datum.

REMARKS.--Observation well drilled April 11, 1995 by the U.S. Army Corps of Engineers and designated as DSAP-2. Flows on the Chena River were regulated by the U.S. Army Corps of Engineers at Moose Creek Dam from July 29 to August 2 and September 4-5; which may have affected ground water levels.

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.49 ft below land-surface datum, September 24, 2003; lowest, 11.83 ft below land-surface datum, March 31, 2002

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 8.49 ft below land-surface datum, September 24; lowest, 11.63 ft below land-surface datum, April 10, and April 13-14.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.03	9.64	10.42	10.96	11.36	11.48	11.59	11.22	11.18	11.40	10.66	9.16
2	9.06	9.66	10.43	10.98	11.36	11.49	11.59	11.19	11.21	11.40	10.57	9.14
3	9.08	9.68	10.45	10.99	11.37	11.49	11.60	11.16	11.23	11.41	10.47	9.12
4	9.08	9.69	10.46	11.00	11.38	11.49	11.60	11.13	11.24	11.43	10.39	9.08
5	9.05	9.71	10.49	11.03	11.40	11.50	11.60	11.11	11.24	11.44	10.28	9.03
6	9.05	9.74	10.50	11.04	11.41	11.50	11.60	11.10	11.25	11.45	10.19	8.98
7	9.07	9.77	10.52	11.07	11.41	11.51	11.61	11.08	11.26	11.46	10.10	8.92
8	9.09	9.82	10.53	11.09	11.41	11.51	11.61	11.07	11.27	11.47	10.00	8.87
9	9.13	9.85	10.54	11.09	11.42	11.52	11.61	11.06	11.25	11.48	9.91	8.83
10	9.16	9.88	10.55	11.11	11.43	11.51	11.62	11.05	11.23	11.48	9.82	8.80
11	9.15	9.91	10.57	11.12	11.43	11.51	11.62	11.05	11.23	11.48	9.75	8.78
12	9.16	9.94	10.58	11.13	11.43	11.51	11.62	11.05	11.22	11.46	9.68	8.74
13	9.19	9.97	10.61	11.15	11.44	11.50	11.62	11.05	11.22	11.45	9.62	8.71
14	9.21	10.00	10.63	11.17	11.45	11.50	11.61	11.05	11.22	11.45	9.56	8.68
15	9.22	10.04	10.65	11.18	11.45	11.51	11.60	11.06	11.24	11.43	9.51	8.64
16	9.22	10.06	10.67	11.19	11.45	11.51	11.59	11.07	11.26	11.40	9.48	8.60
17	9.28	10.07	10.69	11.20	11.46	11.52	11.54	11.06	11.26	11.37	9.45	8.57
18	9.29	10.10	10.71	11.21	11.45	11.52	11.49	11.06	11.26	11.33	9.43	8.54
19	9.30	10.13	10.74	11.23	11.46	11.53	11.44	11.06	11.27	11.28	9.40	8.52
20	9.30	10.17	10.76	11.24	11.46	11.53	11.41	11.05	11.30	11.23	9.38	8.51
21	9.33	10.20	10.77	11.26	11.47	11.54	11.38	11.05	11.31	11.19	9.37	8.51
22	9.37	10.23	10.77	11.27	11.47	11.54	11.37	11.05	11.32	11.16	9.36	8.52
23	9.39	10.25	10.79	11.27	11.46	11.55	11.36	11.06	11.34	11.13	9.35	8.50
24	9.41	10.27	10.82	11.28	11.46	11.56	11.35	11.07	11.34	11.10	9.34	8.49
25	9.43	10.30	10.84	11.29	11.47	11.56	11.35	11.08	11.35	11.08	9.31	8.50
26	9.45	10.31	10.86	11.30	11.47	11.56	11.33	11.10	11.36	11.05	9.28	8.57
27	9.48	10.33	10.88	11.31	11.47	11.57	11.32	11.13	11.38	11.03	9.26	8.61
28	9.52	10.36	10.90	11.32	11.48	11.57	11.31	11.15	11.39	10.98	9.25	8.59
29	9.54	10.37	10.91	11.33	---	11.57	11.28	11.16	11.39	10.91	9.22	8.60
30	9.57	10.38	10.92	11.34	---	11.58	11.25	11.17	11.39	10.83	9.20	8.61
31	9.61	---	10.94	11.35	---	11.58	---	11.17	---	10.74	9.19	---

YUKON ALASKA

FAIRBANKS NORTH STAR BOROUGH—Continued

645434147385101. Local number, FB00100113DDBC2001 50673.

LOCATION.--Lat 64°54'34", long 147°38'51", in NW¹/₄ SE¹/₄ SE¹/₄, sec. 13, T.1 S., R.1 W., (Fairbanks D-2 NE quad), Fairbanks Meridian, Hydrologic Unit, 19040506, in road right-of-way at 2.3 mi McGrath Road, off Farmers' Loop Road near Fairbanks.

Owner: U.S. Geological Survey.

AQUIFER.--Quartz-mica schist of pre-Jurassic age.

WELL CHARACTERISTICS.--Diameter 6-in., depth 100 ft, metal casing to 98.5 ft, perforated openings from 88.5 ft to 98.5 ft, and open hole to 100 ft.

INSTRUMENTATION.--Digital recorder, from October 1983 to June 1995. Electronic data logger from June 1995 to May 1996. Digital recorder, from May 1996 to September 1997. Electronic data logger from October 1997 to present.

DATUM.--Elevation of land-surface datum is 740 ft above sea level (determined from topographic map). Measuring point: top of casing 1.00 ft above land-surface datum.

REMARKS.--Observation well drilled by the U.S. Geological Survey, designated as McGrath Well, replaces old McGrath Estates well, 645429147383801.

PERIOD OF RECORD.--June 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.13 ft below land-surface datum, October 28, 1983; lowest, 44.85 ft below land-surface datum, July 3, 1990.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 40.08 ft below land-surface datum, September 24; lowest, 42.58 ft below land-surface datum, October 03.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY HIGHEST WATER LEVEL

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42.41	42.23	41.65	41.15	41.12	41.01	41.07	40.95	41.28	41.13	40.87	40.53
2	42.42	42.12	41.62	41.15	41.15	41.10	40.97	40.94	41.25	41.11	40.84	40.48
3	42.52	41.96	41.56	41.06	41.17	41.08	40.97	40.87	41.18	41.10	40.79	40.49
4	42.47	41.87	41.56	41.03	41.15	41.04	40.95	40.82	41.12	41.14	40.80	40.55
5	42.37	41.85	41.53	41.04	41.16	41.08	40.95	40.83	41.05	41.19	40.74	40.52
6	42.35	41.82	41.48	41.16	41.21	41.08	40.94	40.86	41.05	41.18	40.72	40.52
7	42.42	41.94	41.39	41.26	41.22	41.05	41.01	40.92	41.03	41.13	40.72	40.42
8	42.43	41.88	41.37	41.35	41.12	41.06	40.96	40.91	41.06	41.13	40.73	40.38
9	42.49	41.91	41.38	41.16	41.11	41.03	40.94	40.78	40.99	41.18	40.74	40.39
10	42.47	41.96	41.37	41.14	41.10	41.04	40.98	40.75	40.95	41.21	40.67	40.41
11	42.34	41.81	41.36	41.14	41.05	40.99	41.05	40.83	40.96	41.12	40.63	40.41
12	42.31	41.76	41.24	41.26	41.04	40.91	41.08	40.79	40.98	41.09	40.53	40.44
13	42.36	41.78	41.25	41.31	41.06	40.83	41.03	40.79	40.97	41.13	40.57	40.49
14	42.44	41.80	41.44	41.26	41.13	40.80	41.05	40.80	41.02	41.10	40.62	40.50
15	42.30	41.79	41.40	41.23	41.09	40.87	40.88	40.84	41.04	41.05	40.57	40.47
16	42.25	41.63	41.48	41.23	41.06	40.92	40.88	40.92	41.17	40.99	40.58	40.33
17	42.30	41.57	41.46	41.14	41.11	40.99	40.96	41.00	41.23	40.98	40.71	40.32
18	42.26	41.67	41.49	41.10	41.08	40.97	40.98	40.97	41.16	41.05	40.79	40.27
19	42.20	41.69	41.52	41.15	40.99	40.96	41.00	40.96	41.13	41.10	40.73	40.27
20	42.17	41.72	41.39	41.18	40.98	40.91	41.03	40.91	41.19	41.05	40.70	40.33
21	42.19	41.73	41.33	41.28	41.01	40.91	40.88	40.84	41.20	41.07	40.69	40.38
22	42.33	41.74	41.15	41.11	41.04	40.94	40.86	40.81	41.24	41.14	40.72	40.43
23	42.25	41.61	41.13	41.11	40.92	41.01	40.88	40.82	41.20	41.05	40.68	40.23
24	42.19	41.61	41.20	41.09	40.88	41.07	40.99	40.83	41.19	41.05	40.72	40.08
25	42.18	41.63	41.24	41.09	40.96	41.02	40.97	40.85	41.15	40.99	40.71	40.09
26	42.18	41.45	41.23	41.09	40.98	41.04	41.01	41.10	41.19	40.92	40.61	40.21
27	42.22	41.48	41.29	41.15	40.97	41.09	40.96	41.19	41.22	40.87	40.61	40.40
28	42.28	41.64	41.19	41.15	41.01	41.07	41.02	41.09	41.30	40.91	40.65	40.33
29	42.17	41.49	41.13	41.17	---	40.98	41.00	41.08	41.20	40.93	40.62	40.24
30	42.17	41.49	41.14	41.15	---	41.00	40.99	41.15	41.22	40.90	40.56	40.22
31	42.21	---	41.13	41.15	---	41.04	---	41.29	---	40.89	40.59	---

YUKON ALASKA

ANAKTUVUK PASS

680838151434901. Local number, UB01500218CCDC1001.

LOCATION.--Lat 68°8'36" N, long 151°43'59" W; in SW¹/₄ SW¹/₄ NW¹/₄ sec. 17, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 180 feet on right side of gravel road vering north off Main Steet just northeast of Contact Creek bridge in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 6 in. steel casing, depth 138.7 ft., screened 130.7 to 138.7 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2122.08 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on north-side top of 2-in threaded-plug collar on top of steel casing, 2.81 ft. above land-surface datum.

REMARKS.--Observation well drilled June 23, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 1 near Anaktuvuk Pass, Alaska. Well is 620 ft. from City Supply Well. One water-quality sample collected on September 10, 2003.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.88 ft. below land-surface datum, July 14, 2003; lowest measured, 26.37 ft. below land-surface datum, June 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	WATER LEVEL	DATE	TIME	WATER LEVEL
JUN 18		26.37	JUL 14		16.90
JUN 19	26.12		JUL 17	12:21	17.08
JUN 20		25.83	JUL 17	12:44	17.06
			AUG 13		17.14

680832151434301. Local number, UC01500217BBDA1001.

LOCATION.--Lat 68°8'31" N, long 151°43'53" W; in NW¹/₄ NW¹/₄ SW¹/₄ sec. 17, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 56 feet northeast of Mekiana Road and Summer Street intersection in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5 in. PVC casing, depth 43 ft., perforated from 0 to 43 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2114.43 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on north-side top of PVC casing, 2.15 ft. above land-surface datum.

REMARKS.--Observation well drilled June 5, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 2 near Anaktuvuk Pass, Alaska. Well-water levels influenced by surface water. Well is 60 south of Contact Creek. One water-quality sample collected on September 10, 2003.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.39 ft. below land-surface datum, July 15, 2003; lowest measured, 18.56 ft. below land-surface datum, June 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	WATER LEVEL	DATE	TIME	WATER LEVEL
JUN 18		18.56	JUL 18		12.76
JUL 15	5:25	12.64	AUG 13		12.52
JUL 15	15:34	12.39	AUG 15		12.56

YUKON ALASKA

ANAKTUVUK PASS—Continued

680809151443101. Local number, UA01500219ABAB1001.

LOCATION.--Lat 68°8'9" N, long 151°44'31" W; in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 160 ft. east-southeast of fueling station and 260 ft. east-northeast of treatment lagoon on Access Road in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5 in. PVC casing, depth 40 ft., perforated from 0 to 40 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2079.61 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on northeast-side top of PVC casing, 3.95 ft. above land-surface datum.

REMARKS.--Observation well drilled June 3, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 3 near Anaktuvuk Pass, Alaska.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.78 ft. below land-surface datum, June 19 and July 15, 2003; lowest measured, 17.71 ft. below land-surface datum, July 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 19	10.78	AUG 13	16.12
JUL 15	10.78	AUG 15	15.52
JUL 18	17.71		

Note: Ice at depth of 15.50 ft. on June 19 and July 15. Well thawed on July 17.

680805151443001. Local number, UA01500219ABCC1001.

LOCATION.--Lat 68°8'4" N, long 151°44'40" W; in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 240 ft. south-southwest of treatment lagoon on Access Road in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5 in. PVC casing, depth 24 ft., perforated from 0 to 24 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2072.89 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on north-northeast-side top of PVC casing, 1.73 ft. above land-surface datum.

REMARKS.--Observation well drilled June 3, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 4 near Anaktuvuk Pass, Alaska. One water-quality sample collected on September 10, 2003.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.30 ft. below land-surface datum, June 19, 2003; lowest measured, 14.12 ft. below land-surface datum, July 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 19	7.30	AUG 13	12.77
JUL 15	No Water	AUG 15	12.32
JUL 18	14.12		

* Note: Ice at depth of 9.30 ft. on June 19 and 9.44 ft. on July 15. Well thawed on July 17.

YUKON ALASKA

ANAKTUVUK PASS—Continued

680750151450501. Local number, UA01500219CBDC1001.

LOCATION.--Lat 68°7'50" N, long 151°45'5" W; in NW¹/₄ SW¹/₄ NE¹/₄ sec. 19, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 1050 ft. south-southwest on old-access road parallel to runway off of Access Road in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5 in. PVC casing, depth 24 ft., perforated from 0 to 24 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2053.80 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on north-northeast-side top of PVC casing, 0.18 ft. above land-surface datum.

REMARKS.--Observation well drilled June 3, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 5 near Anaktuvuk Pass, Alaska.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.97 ft. below land-surface datum, August 13, 2003; lowest measured, 4.46 ft. below land-surface datum, June 19, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 19	4.46	AUG 13	3.97

680737151454701. Local number, UC01500219ABCC1001.

LOCATION.--Lat 68°7'38" N, long 151°45'47" W; in NW¹/₄ NE¹/₄ SW¹/₄ sec. 19, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 260 ft. north-northeast off Access Road 3910 ft. south-southwest of treatment lagoon in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5 in. PVC casing, depth 15 ft., perforated from 0 to 15 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2031.35 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on southwest-side top of PVC casing, 3.55 ft. above land-surface datum.

REMARKS.--Observation well drilled June 4, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 6 near Anaktuvuk Pass, Alaska.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.69 ft. below land-surface datum, August 15, 2003; lowest measured, 1.78 ft. below land-surface datum, July 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 19	No Water		
JUL 18	1.78	AUG 15	1.69

YUKON ALASKA

ANAKTUVUK PASS—Continued

680735151453901. Local number, UC01500219ACAB1001.

LOCATION.--Lat 68°7'36" N, long 151°45'39" W; in SW¹/₄ NE¹/₄ SW¹/₄ sec. 19, T.15 S., R. 2 E., (Chandler Lake A-3) Umiat Meridian, Hydrologic Unit 19040601. Well located 120 ft. east-southeast off Access Road 3910 ft. south-southwest of treatment lagoon in Anaktuvuk Pass, AK.

AQUIFER.--Sand and gravel of the Quaternary System.

WELL CHARACTERISTICS.--Diameter 1.5 in. PVC casing, depth 20 ft., perforated from 0 to 20 ft.

INSTRUMENTATION.--Intermittent measurements made by U.S. Geological Survey using an electric tape.

DATUM.--Elevation of land-surface is 2031.51 ft. above mean sea level (NAVD88). Horizontal coordinates are NAD83. (Elevation and horizontal coordinates determined using Survey-Grade Global Positioning System Static and Real-Time-Kinematic surveys). Measuring point: mark on southwest-side top of PVC casing, 5.92 ft. above land-surface datum.

REMARKS.--Observation well drilled June 5, 1994 by Tester Drilling. U.S. Geological Survey designated well as Observation Well 7 near Anaktuvuk Pass, Alaska.

PERIOD OF RECORD.--June to September 2003.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.01 ft. below land-surface datum, June 19, 2003; lowest measured, 1.21 ft. below land-surface datum, July 18, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 19	1.01	JUL 18	1.21
JUL 17	1.10	AUG 15	1.13

FAIRBANKS NORTH STAR BOROUGH

Station	number	Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, unfltrd mg/L (00665)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)
644321147163801	09-01-03	--	--	--	<.002	<.022	.145	.21	.20	.009	.007	<.007	<1
644345147172101	09-01-03	--	--	--	<.002	.119	<.015	E.05	E.07	E.003	E.003	<.007	<1
644402147182601	08-31-03	<1	<1	--	--	--	--	--	--	--	--	--	--
644402147182601	09-01-03	--	--	<.002	<.022	.073	.12	.12	.12	.013	.005	<.007	<1
644822147243001	09-01-03	--	--	E.002	.495	.700	.82	.83	.024	.007	<.007	<1	

Station	number	Date	Chlor- pyrifos water, fldrd, ug/L (38933)	Diazi- non, water, fldrd, ug/L (39572)	Metola- chlor, water, fldrd, ug/L (39415)	Prome- ton, water, fldrd, ug/L (04037)
644321	147163801	09-01-03	<.5	<.5	<.5	<.5
644345	147172101	09-01-03	<.5	<.5	<.5	<.5
644402	147182601	08-31-03	--	--	--	--
644402	147182601	09-01-03	<.5	<.5	<.5	<.5
644822	147243001	09-01-03	<.5	<.5	<.5	<.5

YUKON ALASKA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

NORTH SLOPE BOROUGH

Station number	Date	Time	Medium code	Sample type	Depth of well, feet below LSD (72008)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
680805151443001	09-10-03	1330	6	9	24.	252	7.8	1.7	686	12.0	96	130
680832151434301	09-10-03	1215	6	9	43	160	8.1	2.8	686	14.3	117	81
680837151435301	09-10-03	1500	6	9	100.	278	7.6	2.6	686	13.6	111	150
680838151434901	09-10-03	0945	6	9	138.7	90	7.0	3.5	686	7.0	59	36

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MULTIPLE STATION ANALYSES

Station number	Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
680805151443001	09-10-03	42.7	6.21	.61	128	.21	164	126	8.6	.44	<.2	1.88
680832151434301	09-10-03	25.2	4.35	.35	76	.19	99	76	7.5	.25	<.2	1.45
680837151435301	09-10-03	40.5	12.5	.56	132	.24	172	132	19.6	.40	<.2	4.22
680838151434901	09-10-03	7.63	4.01	1.01	28	.79	36	28	9.1	1.35	.2	.06

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MULTIPLE STATION ANALYSES

Station number	Date	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)
680805151443001	09-10-03	151	143	<.002	.399	<.015	.26	E.05	.27	.007	E.005	<8
680832151434301	09-10-03	94	89	<.002	.131	<.015	.22	<.10	.155	E.004	<.007	<8
680837151435301	09-10-03	172	163	<.002	.056	<.015	<.10	<.10	E.002	<.004	<.007	<8
680838151434901	09-10-03	40	42	<.002	<.022	.128	.44	.37	.013	E.002	<.007	25

Station number	Date	Manganese, water, fltrd, ug/L (01056)	Organic carbon, water, fltrd, mg/L (00681)
680805151443001	09-10-03	<.4	1.0
680832151434301	09-10-03	.7	.6
680837151435301	09-10-03	<.4	E.3
680838151434901	09-10-03	22.5	1.0

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