

SOUTH-CENTRAL ALASKA

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 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 October 1-5, June 12 to August 15, August 21-26, September 5-14, 16-18, and 23-29.

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, 1,570 ft³/s, September 24, maximum gage height, 9.15 ft, September 24; minimum daily discharge, 2.4 ft³/s, February 1, 27, 28, and March 1 - 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e280	3.9	5.0	3.4	2.4	2.4	2.7	16	4.2	e190	e280	4.0
2	e400	3.8	6.1	3.4	2.5	2.4	e2.7	13	5.9	e190	e400	4.4
3	e480	6.7	5.0	3.6	2.5	2.4	2.6	11	5.7	e400	e240	4.1
4	e420	4.6	4.1	3.9	2.7	2.4	2.7	11	5.9	e190	e150	7.8
5	100	3.9	3.8	3.5	2.7	2.4	2.7	12	5.4	e140	97	65
6	17	3.8	3.8	3.4	2.7	2.4	2.7	11	4.7	e160	54	e650
7	5.9	3.7	3.4	3.4	2.6	2.5	2.8	12	4.5	e220	31	e600
8	4.8	3.7	3.2	3.7	2.7	2.8	2.8	13	4.1	e160	31	e150
9	4.5	3.6	3.2	3.7	2.8	3.4	2.7	13	3.9	e170	39	43
10	4.6	4.0	3.1	3.5	2.7	3.8	2.7	14	3.8	e190	38	e750
11	4.6	4.4	3.1	e3.0	2.6	8.8	2.8	14	4.3	e130	52	e220
12	7.8	4.1	3.1	e2.5	2.6	5.2	3.2	16	e160	117	68	e170
13	9.4	4.3	3.1	e3.0	2.6	4.1	3.3	15	e180	132	62	e220
14	13	3.9	3.1	2.9	2.6	3.5	3.3	16	e220	84	37	33
15	10	3.8	3.3	2.8	2.7	3.2	3.2	14	e300	90	15	5.4
16	6.4	3.7	3.3	2.8	2.6	3.0	3.4	12	e320	93	3.9	88
17	4.7	3.5	3.4	2.8	2.5	2.8	3.4	14	e460	65	3.2	133
18	4.2	3.6	4.5	2.8	2.5	2.7	3.2	14	e500	36	3.2	56
19	4.0	3.7	4.9	2.7	2.5	2.7	3.3	15	e400	64	3.2	7.0
20	3.9	3.6	3.8	2.7	2.5	2.7	4.1	12	e340	58	3.3	4.7
21	3.8	3.6	3.7	2.7	2.5	2.7	4.2	14	e220	70	29	4.5
22	3.7	3.6	3.8	2.6	2.5	2.6	10	12	e300	25	e120	4.8
23	3.6	3.6	5.9	2.6	2.5	2.7	9.2	11	e160	13	e420	7.2
24	3.6	3.6	5.1	2.6	2.5	2.6	12	10	e160	36	e380	e900
25	3.6	3.6	4.0	2.6	2.5	2.5	15	8.2	e190	33	e90	e300
26	3.8	3.5	3.8	2.6	2.5	2.6	14	7.4	e190	114	13	42
27	5.4	3.5	3.7	2.6	2.4	2.7	17	6.3	e280	83	4.1	11
28	5.8	11	3.7	2.5	2.4	2.7	36	5.8	e320	37	3.9	e220
29	5.2	5.4	3.5	2.5	---	2.6	18	5.7	e320	28	3.8	58
30	4.7	4.2	3.5	2.5	---	2.7	15	5.0	e300	16	3.7	5.2
31	4.2	---	3.4	2.5	---	2.7	---	4.3	---	e170	3.8	---
TOTAL	1832.2	125.9	120.4	91.8	71.8	94.7	210.7	357.7	5372.4	3504	2682.1	4768.1
MEAN	59.1	4.20	3.88	2.96	2.56	3.05	7.02	11.5	179	113	86.5	159
MAX	480	11	6.1	3.9	2.8	8.8	36	16	500	400	420	900
MIN	3.6	3.5	3.1	2.5	2.4	2.4	2.6	4.3	3.8	13	3.2	4.0
AC-FT	3630	250	239	182	142	188	418	709	10660	6950	5320	9460
CAL YR 2004	TOTAL	3599.6	MEAN	9.83	MAX	480	MIN	3.0	AC-FT	7140		
WTR YR 2005	TOTAL	19231.8	MEAN	52.7	MAX	900	MIN	2.4	AC-FT	38150		

e Estimated