SOUTH-CENTRAL ALASKA

15226000 SOLOMON GULCH NEAR VALDEZ

LOCATION.--Lat 61°05'02", long 146°18'13", in NE¼ SE¼ SW¼ 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 mi^2.

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 2005 water year was 10.6 ft^3/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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e509	90	96	95	109	83	107	112	e187	e419	e520	199
2	e631	88	98	97	106	97	e102	95	e209	e412	e640	225
3	e711	104	88	85	115	95	88	115	e198	e618	e473	230
4	e655	99	92	86	103	99	68	121	e219	e410	e387	233
5	323	103	95	101	92	105	65	125	e208	e367	329	283
6	254	104	79	96	100	99	62	122	e207	e384	277	e878
7	222	92	71	93	93	112	58	115	e217	e444	259	e820
8	223	77	92	83	86	112	55	112	e205	e384	259	e380
9	219	85	98	89	80	111	53	125	e205	e386	276	275
10	219	84	94	111	84	99	55	121	e216	e412	275	e965
11	225	77	92	e108	79	95	58	91	e216	e355	290	e437
12	225	75	82	e102	80	84	57	95	e361	334	307	e401
13	230	71	87	e123	82	82	56	117	e401	308	276	e444
14	235	72	97	144	85	99	56	111	e431	296	267	254
15	194	77	91	93	81	105	54	98	e511	319	247	226
16	219	83	96	91	99	98	56	119	e525	314	241	304
17	215	92	104	85	104	116	58	118	e631	283	246	343
18	227	83	104	103	91	124	56	117	e716	262	248	259
19	176	73	96	115	79	116	59	116	e595	283	246	225
20	235	78	95	92	85	118	64	35	e534	278	240	223
21	221	76	87	87	93	103	59	15	e433	257	272	223
22	230	66	86	87	80	103	63	13	e510	245	e366	224
23	212	76	89	84	77	98	61	13	e379	230	e655	220
24	195	68	86	90	88	99	62	13	e379	251	e582	e1110
25	145	69	85	84	89	98	71	11	e403	278	e341	e508
26	79	72	115	105	85	96	69	11	e402	357	256	258
27	81	71	103	84	94	95	72	10	e491	325	233	235
28	84	80	102	88	95	95	109	9.6	e540	279	225	e440
29	80	91	106	80	---	104	105	9.4	e544	270	234	275
30	74	95	107	80	---	116	114	8.7	e526	255	254	223
31	80	---	102	89	---	110	---	6.0	---	e408	250	---
TOTAL	7628	2471	2915	2950	2534	3166	2072	2299.7	11599	10423	9971	11320
MEAN	246	82.4	94.0	95.2	90.5	102	69.1	74.2	387	336	322	377
MAX	711	104	115	144	115	124	114	125	716	618	655	1110
MIN	74	66	71	80	77	82	53	6.0	187	230	225	199
AC-FT	15130	4900	5780	5850	5030	6280	4110	4560	23010	20670	19780	22450

AJUSTED FOR CHANGE IN STORAGE IN SOLOMON LAKE

MEAN	194	31.9	33.8	8.9	18.5	10.6	50.8	396	498	338	310	386
AC-FT	11930	1900	2080	550	1030	650	3020	24380	29610	20770	19080	22950
CFSM	9.85	1.62	1.72	0.45	0.94	0.54	2.58	20.13	25.26	17.15	15.75	19.58
IN	11.37	1.81	1.98	0.52	0.98	0.62	2.88	23.23	28.21	19.79	18.18	21.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)#

MEAN	203	107	98.0	92.7	89.2	84.5	75.5	149	196	270	298	326
MAX	435	228	180	138	130	138	132	213	387	410	462	501
(WY)	2003	2003	2003	1995	1987	2003	2003	1993	2005	2001	1993	1989
MIN	97.2	77.1	69.0	63.0	58.9	5.08	26.2	74.2	145	177	152	152
(WY)	1997	1993	2002	2003	2002	1991	1991	2005	1988	1991	1996	1996

\# See Period of Record; partial years were used in monthly statistics and breaks in record, and Remarks
e Estimated

15226000 SOLOMON GULCH NEAR VALDEZ—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1986 - 2005#	
ANNUAL TOTAL	53721		69348.7			
ANNUAL MEAN	147		190		167	
ANNUAL MEAN	*147		*190		*167	
HIGHEST ANNUAL MEAN					197	1990
LOWEST ANNUAL MEAN					125	1996
HIGHEST DAILY MEAN	711	Oct 3	e1110	Sep 24	2270	Sep 24 1989
LOWEST DAILY MEAN	a54	Jan 9	6.0	May 31	1.0	Apr 12 1989
ANNUAL SEVEN-DAY MINIMUM	62	Jan 7	9.4	May 25	2.3	Mar 24 1991
ANNUAL RUNOFF (AC-FT)	106600		137400		120800	
ANNUAL RUNOFF (AC-FT)	*107200		*138000		*121000	
ANNUAL RUNOFF (CFSM)	*7.48		*9.63		*8.48	
ANNUAL RUNOFF (IN)	*102.15		*131.45		*115.12	
10 PERCENT EXCEEDS	242		409		287	
50 PERCENT EXCEEDS	98		107		122	
90 PERCENT EXCEEDS	68		69		68	

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	b2420	Sep 4	1951
MAXIMUM PEAK STAGE	c6.50	Sep 4	1951
INSTANTANEOUS LOW FLOW	d.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; partial years were used in monthly statistics and breaks in 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 Jan. 9 and Feb. 8
b From rating curve extended above 620 ft^3/s
c Site and datum then in use
d No flow sometime during period Feb. 20 to Mar. 3, 1954, caused by temporary storage upstream
e Estimated