SOUTHEAST ALASKA

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.

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 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2 3 4 5	760 473 240 154 512	263 252 348 679 468	573 4110 3600 1240 483	222 222 220 220 224	87 79 71 64 61	66 65 84 76 61	63 63 64 67	60 60 60 60 60	59 60 60 60 60	81 86 87 102 279	208 168 163 189 395	797 417 243 150 120
6 7 8 9 10	738 884 1310 762 430	269 230 226 226 223	248 232 228 228 228	220 218 218 216 217	60 60 80 78 77	60 61 64 65 92	65 63 63 63 66	59 59 59 59 59	60 60 60 61	502 652 533 391 353	644 511 408 316 199	227 1800 1790 1010 471
11 12 13 14 15	253 461 1620 856 405	222 222 225 260 258	250 248 238 242 235	217 216 215 214 214	70 64 61 60 59	79 75 68 65 63	64 63 62 62 61	59 59 59 60 59	61 61 63 62	322 283 313 405 565	184 172 160 151 140	285 215 478 473 274
16 17 18 19 20	254 224 222 181 219	258 247 239 259 1080	204 207 260 588 524	215 214 183 102 69	100 76 66 63 60	61 60 59 58 57	60 60 103 159 123	59 59 58 58 59	61 61 61 61 62	481 700 1710 1240 664	141 136 286 389 300	160 161 1340 3360 1990
21 22 23 24 25	222 227 221 232 225	2860 1120 507 463 394	314 277 1800 3900 1360	70 72 67 67 64	59 59 59 59 59	57 57 58 55 55	71 67 66 65	59 59 59 59 59	64 63 85 124 124	422 359 291 248 211	229 884 880 421 421	930 495 931 3520 2870
26 27 28 29 30 31	221 229 262 297 264 246	314 275 293 271 313	503 264 248 241 228 224	66 66 66 72 76	58 59 65 	57 58 59 60 65	64 63 62 61	59 59 59 59 59 59	124 124 87 78 79	274 538 579 416 311 245	511 358 228 159 566 1100	1250 627 1200 1880 1380
TOTAL MEAN MAX MIN AC-FT CFSM IN.	13604 439 1620 154 26980 11.3 12.98	13264 442 2860 222 26310 11.3 12.65	23525 759 4110 204 46660 19.5 22.44	4808 155 224 64 9540 3.98 4.59	1873 66.9 100 58 3720 1.72 1.79	1978 63.8 92 55 3920 1.64 1.89	2105 70.2 159 60 4180 1.80 2.01	1833 59.1 60 58 3640 1.52 1.75	2166 72.2 124 59 4300 1.85 2.07	13643 440 1710 81 27060 11.3 13.01	11017 355 1100 136 21850 9.11 10.51	30844 1028 3520 120 61180 26.4 29.42
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2005, BY WATER YEAR (WY)#												
MEAN MAX (WY) MIN (WY)	723 1204 1938 354 1923	465 998 1936 78.5 2002	270 818 1931 50.1 1951	171 500 1942 29.9 1956	161 644 1935 33.1 1951	125 365 1947 24.8 1922	195 663 1936 61.5 1948	506 861 1936 59.1 2005	667 1179 1936 53.9 2002	634 976 1935 87.0 2003	637 1235 1939 114 2004	747 1287 1947 359 1941

See Period of Record; partial years were used in monthly statistics and breaks in record.

DRAINAGE AREA.--39.0 mi².

SOUTHEAST ALASKA

15088000 SAWMILL CREEK NEAR SITKA-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1920 - 2005#
ANNUAL TOTAL	94712	120660	
ANNUAL MEAN	259	331	447
HIGHEST ANNUAL MEAN			715 1936
LOWEST ANNUAL MEAN			182 2004
HIGHEST DAILY MEAN	4110 Dec 2	4110 Dec 2	5500 Oct 22 1937
LOWEST DAILY MEAN	53 Mar 3	a55 Mar 24	11 Mar 30 1922
ANNUAL SEVEN-DAY MINIMUM	68 Feb 11	57 Mar 20	12 Mar 25 1922
MAXIMUM PEAK FLOW		7210 Dec 2	b10700 Nov 19 1993
MAXIMUM PEAK STAGE		18.22 Dec 2	18.26 Aug 12 2002
INSTANTANEOUS LOW FLOW		a53 Mar 24	C
ANNUAL RUNOFF (AC-FT)	187900	239300	324000
ANNUAL RUNOFF (CFSM)	6.64	8.48	11.5
ANNUAL RUNOFF (INCHES)	90.34	115.09	155.82
10 PERCENT EXCEEDS	464	715	930
50 PERCENT EXCEEDS	121	183	310
90 PERCENT EXCEEDS	96	59	64

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See Period of Record; partial years were used in monthly statistics and breaks in record. Mar. 24 and 25 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. Undetermined a b

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