

# SOUTHEAST ALASKA

## 15052500 MENDENHALL RIVER NEAR AUKE BAY

LOCATION.--Lat 58°25'47", long 134°34'22", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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.--No estimated daily discharge. Records good. 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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage<br>Height<br>(ft) | Date     | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|------------------------|----------|------|-----------------------------------|---------------------|
| July 18 | 1630 | 5130                              | 6.69                   | Sept. 01 | 0015 | 5170                              | 6.71                |
| July 29 | 0730 | 5480                              | 6.88                   | Sept. 08 | 1015 | *7260                             | *7.74               |
| Aug. 05 | 2115 | 6690                              | 7.48                   | Sept. 19 | 1745 | 5770                              | 7.03                |
| Aug. 26 | 0545 | 5430                              | 6.85                   | Sept. 24 | 2130 | 5000                              | 6.62                |

### 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     | 3450  | 357   | 288   | 321  | 130  | 195   | 118   | 1130  | 1910   | 2950   | 2290   | 4240   |
| 2     | 3310  | 342   | 485   | 256  | 132  | 240   | 111   | 1100  | 1730   | 3780   | 2060   | 2560   |
| 3     | 2150  | 383   | 654   | 213  | 123  | 245   | 106   | 1220  | 1750   | 3680   | 2470   | 2050   |
| 4     | 2130  | 466   | 520   | 183  | 111  | 242   | 102   | 1350  | 1980   | 3360   | 3940   | 1860   |
| 5     | 3210  | 387   | 406   | 165  | 97   | 245   | 98    | 996   | 2040   | 3100   | 6180   | 1770   |
| 6     | 3570  | 326   | 340   | 152  | 86   | 228   | 98    | 869   | 1940   | 2960   | 5750   | 2900   |
| 7     | 2390  | 272   | 301   | 137  | 81   | 209   | 98    | 946   | 1980   | 2690   | 3750   | 4900   |
| 8     | 1860  | 226   | 266   | 126  | 84   | 210   | 97    | 1050  | 2130   | 2490   | 3480   | 6700   |
| 9     | 1850  | 195   | 229   | 116  | 90   | 247   | 97    | 1140  | 2230   | 2670   | 3760   | 4230   |
| 10    | 1880  | 166   | 192   | 110  | 92   | 353   | 100   | 1280  | 2140   | 2580   | 3960   | 3090   |
| 11    | 1450  | 145   | 172   | 101  | 100  | 500   | 102   | 1400  | 1950   | 2570   | 4030   | 2720   |
| 12    | 1000  | 130   | 176   | 91   | 94   | 468   | 101   | 1390  | 1920   | 2570   | 4120   | 2420   |
| 13    | 1740  | 125   | 162   | 86   | 86   | 438   | 104   | 1410  | 1970   | 2710   | 4240   | 2610   |
| 14    | 2450  | 139   | 180   | 83   | 77   | 384   | 108   | 1850  | 2130   | 2790   | 4110   | 2460   |
| 15    | 2410  | 180   | 174   | 80   | 71   | 335   | 111   | 2140  | 1950   | 3140   | 3640   | 1930   |
| 16    | 2070  | 233   | 242   | 80   | 69   | 301   | 115   | 2010  | 1880   | 3330   | 2870   | 1580   |
| 17    | 1820  | 248   | 421   | 90   | 67   | 282   | 122   | 1940  | 2240   | 3800   | 2770   | 2200   |
| 18    | 1040  | 236   | 603   | 92   | 64   | 277   | 134   | 1940  | 2810   | 4960   | 3460   | 3440   |
| 19    | 663   | 242   | 714   | 91   | 60   | 274   | 208   | 2030  | 3190   | 4030   | 4240   | 5340   |
| 20    | 496   | 423   | 579   | 85   | 56   | 235   | 397   | 1820  | 3070   | 3160   | 3650   | 4590   |
| 21    | 396   | 760   | 452   | 78   | 53   | 192   | 724   | 1680  | 2920   | 3030   | 2990   | 2880   |
| 22    | 343   | 556   | 408   | 80   | 54   | 166   | 846   | 1590  | 2320   | 2830   | 3540   | 1960   |
| 23    | 300   | 440   | 697   | 91   | 72   | 146   | 743   | 1670  | 2080   | 2730   | 3120   | 2560   |
| 24    | 274   | 409   | 991   | 93   | 84   | 131   | 782   | 1750  | 2090   | 2520   | 2440   | 4070   |
| 25    | 254   | 400   | 755   | 91   | 83   | 121   | 865   | 1640  | 2280   | 2550   | 3640   | 4810   |
| 26    | 231   | 397   | 584   | 92   | 82   | 115   | 1010  | 1820  | 2450   | 2750   | 5310   | 3280   |
| 27    | 238   | 337   | 499   | 95   | 90   | 117   | 1310  | 2200  | 2660   | 4180   | 4230   | 1940   |
| 28    | 289   | 290   | 472   | 93   | 121  | 124   | 1590  | 2040  | 3100   | 5310   | 2890   | 2210   |
| 29    | 472   | 262   | 463   | 91   | ---  | 120   | 1620  | 2010  | 3510   | 4720   | 2700   | 3530   |
| 30    | 478   | 249   | 470   | 96   | ---  | 113   | 1320  | 2120  | 3200   | 2890   | 3750   | 4020   |
| 31    | 412   | ---   | 400   | 113  | ---  | 116   | ---   | 2130  | ---    | 2510   | 4970   | ---    |
| TOTAL | 44626 | 9321  | 13295 | 3671 | 2409 | 7369  | 13337 | 49661 | 69550  | 99340  | 114350 | 94850  |
| MEAN  | 1440  | 311   | 429   | 118  | 86.0 | 238   | 445   | 1602  | 2318   | 3205   | 3689   | 3162   |
| MAX   | 3570  | 760   | 991   | 321  | 132  | 500   | 1620  | 2200  | 3510   | 5310   | 6180   | 6700   |
| MIN   | 231   | 125   | 162   | 78   | 53   | 113   | 97    | 869   | 1730   | 2490   | 2060   | 1580   |
| AC-FT | 88520 | 18490 | 26370 | 7280 | 4780 | 14620 | 26450 | 98500 | 138000 | 197000 | 226800 | 188100 |
| CFSM  | 16.9  | 3.65  | 5.04  | 1.39 | 1.01 | 2.79  | 5.22  | 18.8  | 27.2   | 37.7   | 43.3   | 37.2   |
| IN.   | 19.51 | 4.07  | 5.81  | 1.60 | 1.05 | 3.22  | 5.83  | 21.71 | 30.40  | 43.42  | 49.99  | 41.46  |

### STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)#

|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1376 | 347  | 173  | 119  | 93.5 | 95.1 | 149  | 691  | 1918 | 3041 | 3369 | 2677 |
| MAX  | 2649 | 920  | 563  | 600  | 254  | 379  | 445  | 1602 | 2819 | 3835 | 4701 | 4100 |
| (WY) | 1987 | 1977 | 2003 | 1981 | 1977 | 1992 | 2005 | 2005 | 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 |

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

# SOUTHEAST ALASKA

## 15052500 MENDENHALL RIVER NEAR AUKE BAY—Continued

| SUMMARY STATISTICS       | FOR 2004 CALENDAR YEAR |        | FOR 2005 WATER YEAR |        | WATER YEARS 1965 - 2005# |             |
|--------------------------|------------------------|--------|---------------------|--------|--------------------------|-------------|
| ANNUAL TOTAL             | 494510                 |        | 521779              |        |                          |             |
| ANNUAL MEAN              | 1351                   |        | 1430                |        | 1182                     |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 1547                     |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 758                      |             |
| HIGHEST DAILY MEAN       | 8410                   | Jul 29 | 6700                | Sep 8  | 13700                    | Sep 8 1981  |
| LOWEST DAILY MEAN        | 63                     | Mar 24 | 53                  | Feb 21 | 19                       | Mar 1 1969  |
| ANNUAL SEVEN-DAY MINIMUM | 70                     | Mar 19 | 60                  | Feb 16 | 19                       | Mar 5 1974  |
| MAXIMUM PEAK FLOW        |                        |        | 7260                | Sep 8  | 16000                    | Sep 11 1995 |
| MAXIMUM PEAK STAGE       |                        |        | 7.74                | Sep 8  | a11.18                   | Sep 11 1995 |
| INSTANTANEOUS LOW FLOW   |                        |        | 52                  | Sep 8  | b19                      | Mar 1 1969  |
| ANNUAL RUNOFF (AC-FT)    | 980900                 |        | 1035000             |        | 856600                   |             |
| ANNUAL RUNOFF (CFSM)     | 15.9                   |        | 16.8                |        | 13.9                     |             |
| ANNUAL RUNOFF (INCHES)   | 216.17                 |        | 228.09              |        | 188.78                   |             |
| 10 PERCENT EXCEEDS       | 3570                   |        | 3550                |        | 3250                     |             |
| 50 PERCENT EXCEEDS       | 498                    |        | 743                 |        | 400                      |             |
| 90 PERCENT EXCEEDS       | 113                    |        | 93                  |        | 50                       |             |

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

a From flood marks

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