

HAWAII, ISLAND OF MOLOKAI

1

16405300 MOLOKAI TUNNEL AT WEST PORTAL

LOCATION.--Lat 21°07'27", long 156°59'50", Hydrologic Unit 20050000, on left bank 50 ft upstream from the west portal, 2.5 mi northeast of Kaunakakai, and 4.7 mi south of Kalauapapa.

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 970 ft above mean sea level, from tunnel plans.

REMARKS.--Records computed by Phillip Teeters. Records good. Tunnel diverts water from Waikolu Stream and two tributaries; diversion is augmented by water pumped from two wells and from the stream at elevation 728 ft in Waikolu Valley near the east portal and one well in the tunnel near east portal. Water is used for irrigation in west-central Molokai.

AVERAGE DISCHARGE.--37 years (water years 1966-2002), 7.37 ft³/s (5,340 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 39 ft³/s, April 8, 9, 1986, January 2, 26, 1988, and March 3, 1989; minimum daily, 1.8 ft³/s, October 15, 1967, August 27, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 32 ft³/s, October 28; minimum daily discharge, 3.1 ft³/s, September 4-7.

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	11	9.3	5.2	5.2	10	5.9	6.5	6.2	5.7	11	5.8	4.1
2	7.3	7.0	5.5	4.1	6.7	6.1	6.3	6.0	5.7	11	5.7	3.8
3	5.3	5.3	4.0	4.8	5.7	19	6.1	6.0	5.7	8.6	5.7	3.4
4	5.3	10	5.2	3.9	5.3	8.6	6.1	5.9	5.7	7.4	5.6	3.1
5	7.4	12	9.3	3.6	5.4	9.1	6.1	7.0	5.7	6.1	5.6	3.1
6	6.4	11	8.3	7.3	5.1	18	6.1	25	5.7	5.9	5.6	3.1
7	16	11	4.5	5.3	5.1	8.4	15	15	5.7	7.9	14	3.1
8	8.2	27	13	4.1	16	6.3	9.2	8.9	5.7	18	7.2	3.4
9	6.2	14	15	4.3	13	5.9	6.5	7.4	5.7	12	6.1	3.7
10	7.9	7.8	5.6	18	6.5	5.7	6.9	6.6	5.7	11	5.8	3.8
11	9.3	7.1	5.3	6.0	5.5	5.7	6.2	6.4	5.8	8.6	6.6	5.6
12	5.7	5.8	13	4.6	18	5.4	5.6	6.2	6.0	6.5	7.3	8.1
13	5.0	5.6	27	4.1	30	5.1	5.5	24	5.9	6.0	3.7	7.8
14	4.9	5.4	12	4.2	15	5.3	5.4	10	5.8	5.8	3.5	7.7
15	4.2	5.0	9.8	5.0	8.6	5.4	6.0	6.6	6.0	5.7	4.4	7.7
16	5.0	4.8	4.8	4.8	6.7	6.4	6.2	6.1	6.0	5.8	6.5	6.9
17	4.8	4.5	8.7	4.9	5.9	30	6.1	5.9	5.9	6.6	8.4	5.3
18	4.6	3.4	8.6	14	5.6	24	5.9	6.2	7.0	12	8.2	6.0
19	4.3	3.4	10	24	5.3	11	6.2	11	9.6	11	9.0	7.7
20	3.4	3.4	8.9	27	5.3	7.9	5.9	9.7	7.0	7.8	8.1	7.7
21	11	3.4	7.8	18	5.2	7.0	5.9	6.9	7.8	8.8	8.9	7.7
22	6.7	3.4	4.2	7.9	5.1	6.5	6.4	6.1	15	19	8.8	7.5
23	4.4	3.4	7.0	6.0	5.1	6.4	6.1	5.9	8.0	7.6	8.9	6.3
24	4.4	3.4	9.4	5.2	8.3	6.3	6.0	5.9	6.5	7.3	13	4.5
25	5.1	3.4	4.7	5.0	22	6.2	6.1	5.8	6.1	6.9	10	4.8
26	5.1	4.9	4.5	8.6	22	6.1	5.9	5.8	5.9	8.1	9.0	4.9
27	8.0	28	4.2	18	8.7	6.1	5.9	5.8	11	6.7	4.9	
28	32	7.5	3.8	10	6.4	6.1	5.9	5.7	5.8	7.6	5.2	4.8
29	9.5	4.2	16	29	---	6.3	7.1	5.7	5.8	7.0	3.9	3.2
30	6.7	4.0	8.4	15	---	11	10	5.8	5.8	6.1	8.2	3.2
31	5.3	---	12	17	---	7.7	---	5.7	---	5.8	7.6	---
TOTAL	230.4	228.4	265.7	298.9	267.5	274.9	199.1	251.2	194.5	269.9	223.0	156.9
MEAN	7.43	7.61	8.57	9.64	9.55	8.87	6.64	8.10	6.48	8.71	7.19	5.23
MAX	32	28	27	29	30	30	15	25	15	19	14	8.1
MIN	3.4	3.4	3.8	3.6	5.1	5.1	5.4	5.7	5.7	5.7	3.5	3.1
AC-FT	457	453	527	593	531	545	395	498	386	535	442	311

HAWAII, ISLAND OF MOLOKAI

16405300 MOLOKAI TUNNEL AT WEST PORTAL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

MEAN	6.56	8.19	8.01	7.55	7.45	8.19	8.34	7.25	6.88	7.26	6.47	5.94
MAX	10.6	14.0	13.8	14.4	15.9	15.5	15.6	15.8	12.8	13.2	10.2	9.21
(WY)	1996	1999	1991	1988	1990	1986	1986	1987	1998	1986	1985	1987
MIN	2.60	2.60	2.83	2.61	2.25	2.55	2.61	2.69	2.32	2.30	2.21	2.33
(WY)	1966	1966	1966	1966	1974	1967	1974	1974	1974	1974	1974	1974

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1965 - 2002

ANNUAL TOTAL	2690.6	2860.4	7.37	7.84	7.37
ANNUAL MEAN					
HIGHEST ANNUAL MEAN					11.4
LOWEST ANNUAL MEAN					3.46
HIGHEST DAILY MEAN	32	Feb 14	32	Oct 28	39
LOWEST DAILY MEAN	2.7	Mar 2	3.1	Sep 4	1.8
ANNUAL SEVEN-DAY MINIMUM	2.9	Mar 1	3.3	Sep 3	1.9
ANNUAL RUNOFF (AC-FT)	5340		5670		5340
10 PERCENT EXCEEDS	11		13		13
50 PERCENT EXCEEDS	6.5		6.1		6.2
90 PERCENT EXCEEDS	4.0		4.2		3.1

