16242500 Manoa Stream at Kanewai Field, Honolulu, Oahu, HI

LOCATION.--Lat 21°17'35.6", long 157°48'45.8" referenced to North American Datum of 1983, Honolulu County, HI, Hydrologic Unit 20060000, on left bank, 0.5 miles northeast of Kaimuki High School, 0.4 miles northwest of St. Louis High School, and 0.3 miles upstream from confluence with Palolo Stream.

DRAINAGE AREA.--5.76 mi^2, (15.5 km^2) from automated delineation using 10-meter National Elevation Dataset digital elevation model data dated September 2006 and Watershed Boundary Dataset dated May 2008, using UTM Zone 4 projection, NAD 83 horizontal datum.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Continuous-record station January 1999 to September 2005, October 2008 to current year. Miscellaneous discharge measurement site April 1997 to January 1999 and October 2005 to September 2008.

GAGE.--Water stage recorder. Elevation of gage is 38.0 feet above mean sea level (by stadia survey).

REMARKS.--Records computed by M.T. Jamison. Records fair.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--10 years (water years 2000-2005, 2009-2012), 10.8 ft^3/s (7,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,870 ft^3/s, October 30, 2004, gage height, 19.40 feet; minimum, 0.66 ft^3/s, June 7, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 1	0645	1,000	12.92
Dec 10	2300	704	12.21
Mar 5	0345	*3,090	*16.34
Mar 6	1600	1,730	14.33
Sep 7	1350	758	12.35
Sep 8	1820	1,380	13.70

Minimum discharge, 1.0 ft^3/s, Oct. 8.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 16242500, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/16242500.2012.pdf

16242500 Manoa Stream at Kanewai Field, Honolulu, Oahu, HI—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.0	85	7.3	2.8	2.2	5.7	3.1	4.7	5.6	7.0	3.9	3.3
2	1.9	20	7.7	2.7	2.1	15	2.9	6.1	5.5	5.1	3.4	4.6
3	1.8	29	5.9	2.6	2.1	38	2.9	5.3	5.0	19	3.5	3.3
4	6.1	e17	5.0	2.6	2.2	53	3.0	15	5.0	6.8	3.8	3.0
5	2.4	10	5.8	2.5	2.2	318	3.2	7.9	4.8	15	4.7	5.3
6	2.5	7.8	5.4	2.4	2.8	399	9.3	6.2	6.7	9.5	5.0	4.1
7	3.7	8.0	6.0	2.3	5.8	e76	4.7	7.8	5.6	11	4.1	78
8	3.1	6.7	5.3	2.3	3.0	e203	27	5.8	5.6	6.8	5.9	83
9	3.5	10	11	2.2	2.5	50	50	5.6	5.0	5.9	3.9	17
10	3.6	8.3	57	2.7	2.6	6.5	28	5.3	4.5	6.0	3.4	6.3
11	3.1	39	33	2.4	2.7	5.3	16	6.4	4.6	5.1	3.6	4.7
12	2.6	11	e83	2.9	3.1	20	7.3	5.8	4.9	4.7	3.5	4.7
13	2.9	7.4	e260	2.4	5.5	5.1	5.2	5.5	5.8	6.2	3.3	3.8
14	8.8	6.8	14	2.2	3.1	4.4	4.6	5.3	4.4	4.9	3.5	4.2
15	26	6.2	11	2.6	2.8	4.1	4.3	5.1	4.6	5.2	3.0	6.2
16	3.4	5.8	5.7	2.4	2.9	3.6	3.9	5.0	4.2	6.7	3.0	5.7
17	6.4	5.9	16	2.3	3.0	3.2	3.6	5.0	4.0	6.7	3.0	3.2
18	4.9	5.4	8.8	2.3	5.6	5.2	3.4	4.9	4.3	6.9	2.9	4.9
19	4.1	6.1	7.2	2.1	12	9.3	3.3	4.6	9.7	5.6	3.6	4.6
20	3.1	13	11	2.1	3.8	3.7	3.2	4.6	12	5.1	3.7	6.7
21	7.5	12	18	2.1	3.3	e7.7	3.2	4.4	5.3	4.6	3.1	3.2
22	13	21	6.3	2.0	11	e11	6.8	4.1	5.5	4.0	3.2	2.8
23	9.4	7.1	5.0	2.0	6.6	e6.2	18	4.2	12	4.5	12	19
24	4.6	6.0	7.8	2.6	12	e8.1	4.7	4.6	6.6	3.6	3.4	21
25	3.4	6.4	5.1	2.1	6.4	e15	4.6	4.9	9.5	3.6	3.0	5.5
26	2.9	7.1	4.3	2.1	5.9	e7.6	6.0	5.5	17	3.3	3.0	5.0
27	2.9	5.8	3.8	2.1	5.5	e7.2	5.1	6.9	8.0	3.4	6.5	3.4
28	5.0	5.3	3.4	2.0	4.9	e5.7	5.9	5.5	9.0	8.0	7.3	6.9
29	3.1	5.4	3.1	3.6	8.6	e4.9	5.2	5.0	7.7	33	9.1	3.7
30	4.0	7.4	3.2	3.2	---	3.4	4.9	5.3	5.8	5.9	4.7	5.8
31	6.7	---	3.2	2.4	---	3.2	---	7.9	---	4.5	3.9	---
Total	158.4	391.9	629.3	75.0	136.2	1,308.1	253.3	180.2	198.2	227.6	133.9	332.9
Mean	5.11	13.1	20.3	2.42	4.70	42.2	8.44	5.81	6.61	7.34	4.32	11.1
Max	26	85	260	3.6	12	399	50	15	17	33	12	83
Min	1.8	5.3	3.1	2.0	2.1	3.2	2.9	4.1	4.0	3.3	2.9	2.8
Ac-ft	314	777	1,250	149	270	2,590	502	357	393	451	266	660

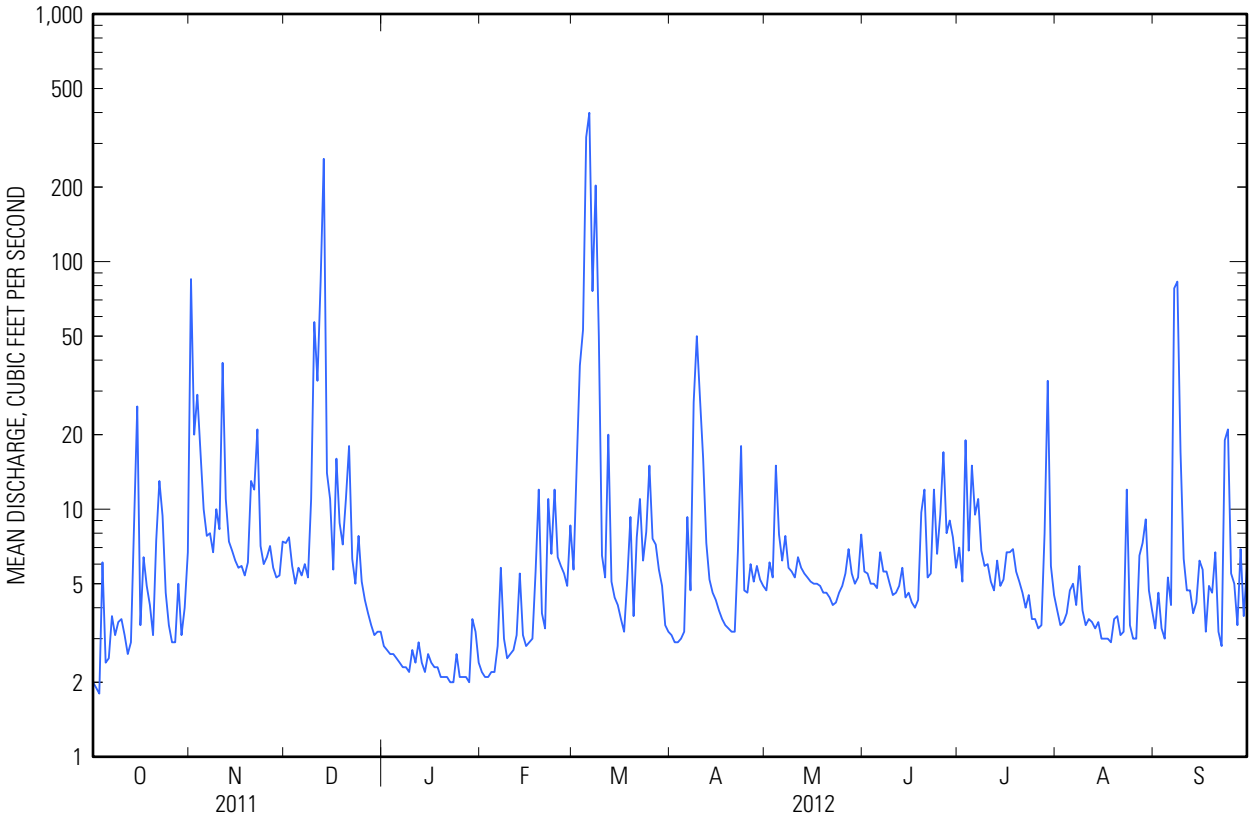
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	9.17	16.2	18.0	13.2	9.52	15.8	11.3	8.17	7.23	7.69	7.29	8.17
Max	25.7	32.5	32.4	26.8	18.4	42.2	18.7	16.9	16.5	14.3	10.7	17.0
(WY)	(2005)	(2005)	(2008)	(2000)	(2004)	(2012)	(2008)	(2011)	(2011)	(2005)	(2004)	(2005)
Min	3.40	6.52	3.46	2.42	4.64	4.45	4.38	2.25	1.87	2.97	2.52	3.93
(WY)	(2004)	(2003)	(2003)	(2012)	(2010)	(2000)	(2003)	(2003)	(2003)	(2003)	(2003)	(2009)

16242500 Manoa Stream at Kanewai Field, Honolulu, Oahu, HI—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 2000 - 2012	
Annual total	3,955.8		4,025.0			
Annual mean	10.8		11.0		10.8	
Highest annual mean					15.7	2004
Lowest annual mean					4.58	2003
Highest daily mean	260	Dec 13	399	Mar 6	490	Oct 30, 2004
Lowest daily mean	1.8	Oct 3	1.8	Oct 3	0.98	Oct 4, 2003
Annual seven-day minimum	2.2	Sep 27	2.1	Jan 17	1.1	Jun 6, 2003
Annual runoff (ac-ft)	7,850		7,980		7,800	
10 percent exceeds	20		15		18	
50 percent exceeds	6.0		5.1		5.5	
90 percent exceeds	3.6		2.6		2.7	



WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2011 to September 2012.

16242500 Manoa Stream at Kanewai Field, Honolulu, Oahu, HI—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 1 of 2
[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters]

Date	Sample start time	Discharge, instantaneous, ft³/s (00061)	Sampler type (84164)	Sampling method (82398)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentration, mg/L (80154)
11-01-2011	**1204**	127	Peristaltic pump	Point sample	--	153
11-01-2011	**1206**	123	Peristaltic pump	Point sample	--	151
11-01-2011	**1210**	114	US DH-81	EWI	--	137
11-01-2011	**1213**	108	Peristaltic pump	Point sample	--	131
11-01-2011	**1318**	47	Peristaltic pump	Point sample	--	124
11-01-2011	**1319**	47	Peristaltic pump	Point sample	--	126
11-01-2011	**1322**	46	US DH-81	EWI	--	129
11-01-2011	**1328**	44	Peristaltic pump	Point sample	--	127
11-01-2011	**1330**	44	Peristaltic pump	Point sample	--	126
12-13-2011	**1700**	200	Peristaltic pump	Point sample	--	349
12-13-2011	**1845**	80	Peristaltic pump	Point sample	--	193
12-17-2011	**0700**	128	Peristaltic pump	Point sample	--	214
12-17-2011	**0745**	158	Peristaltic pump	Point sample	--	153
12-17-2011	**0815**	51	Peristaltic pump	Point sample	99	448
03-03-2012	**1045**	310	Peristaltic pump	Point sample	--	93
03-03-2012	**1130**	148	Peristaltic pump	Point sample	--	218
03-03-2012	**1330**	47	Peristaltic pump	Point sample	--	158
03-04-2012	**0915**	188	Peristaltic pump	Point sample	--	195
03-04-2012	**0925**	414	Peristaltic pump	Point sample	--	254
03-04-2012	**0945**	307	Peristaltic pump	Point sample	--	227
03-04-2012	**1000**	183	Peristaltic pump	Point sample	--	224
03-04-2012	**1145**	70	Peristaltic pump	Point sample	--	118
03-04-2012	**2330**	158	Peristaltic pump	Point sample	--	62
03-05-2012	**0000**	304	Peristaltic pump	Point sample	--	23
03-05-2012	**0030**	167	Peristaltic pump	Point sample	--	113
03-05-2012	**0245**	220	Peristaltic pump	Point sample	--	114
03-05-2012	**0300**	496	Peristaltic pump	Point sample	--	148
03-05-2012	**0305**	1,080	Peristaltic pump	Point sample	--	226
03-05-2012	**0310**	1,670	Peristaltic pump	Point sample	--	305
03-05-2012	**0315**	2,250	Peristaltic pump	Point sample	--	278
03-05-2012	**0320**	2,380	Peristaltic pump	Point sample	--	299
03-05-2012	**0345**	3,090	Peristaltic pump	Point sample	--	167
03-05-2012	**0400**	2,560	Peristaltic pump	Point sample	--	128
03-05-2012	**0410**	1,930	Peristaltic pump	Point sample	--	76
03-05-2012	**0415**	1,620	Peristaltic pump	Point sample	--	55
03-05-2012	**0420**	1,410	Peristaltic pump	Point sample	--	37
03-05-2012	**0425**	1,200	Peristaltic pump	Point sample	--	127
03-05-2012	**0435**	929	Peristaltic pump	Point sample	--	174
03-05-2012	**2200**	255	Peristaltic pump	Point sample	--	1,410
03-05-2012	**2250**	345	Peristaltic pump	Point sample	--	579

16242500 Manoa Stream at Kanewai Field, Honolulu, Oahu, HI—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 2 of 2
[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters]

Date	Sample start time	Discharge, instanta-neous, ft³/s (00061)	Sampler type (84164)	Sampling method (82398)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concen-tration, mg/L (80154)
03-05-2012	**2255**	433	Peristaltic pump	Point sample	--	120
03-06-2012	**0015**	770	Peristaltic pump	Point sample	--	198
03-06-2012	**0020**	842	Peristaltic pump	Point sample	--	425
03-06-2012	**0115**	743	Peristaltic pump	Point sample	--	376
03-06-2012	**0140**	586	Peristaltic pump	Point sample	--	207
03-06-2012	**0215**	404	Peristaltic pump	Point sample	--	154
03-06-2012	**0300**	243	Peristaltic pump	Point sample	--	70
03-06-2012	**0530**	96	Peristaltic pump	Point sample	--	144
03-06-2012	**0645**	243	Peristaltic pump	Point sample	--	334
03-06-2012	**0710**	322	Peristaltic pump	Point sample	83	123
03-06-2012	**0720**	542	Peristaltic pump	Point sample	85	268
03-06-2012	**0725**	701	Peristaltic pump	Point sample	49	1,620
03-06-2012	**0730**	860	Peristaltic pump	Point sample	26	4,010
03-06-2012	**0835**	676	Peristaltic pump	Point sample	64	2,270
03-06-2012	**0855**	500	Peristaltic pump	Point sample	76	2,940
03-06-2012	**0925**	326	Peristaltic pump	Point sample	65	3,280
03-06-2012	**1015**	510	Peristaltic pump	Point sample	80	3,060
03-06-2012	**1145**	407	Peristaltic pump	Point sample	82	2,500
03-06-2012	**1245**	250	Peristaltic pump	Point sample	89	2,190
03-06-2012	**1430**	156	Peristaltic pump	Point sample	89	2,010
03-06-2012	**1525**	483	Peristaltic pump	Point sample	99	1,760
03-06-2012	**1530**	621	Peristaltic pump	Point sample	99	1,440
09-07-2012	**0315**	169	Peristaltic pump	Point sample	--	345
09-07-2012	**1200**	240	Peristaltic pump	Point sample	--	326
09-07-2012	**1330**	320	Peristaltic pump	Point sample	83	372
09-07-2012	**1340**	538	Peristaltic pump	Point sample	81	647
09-07-2012	**1345**	682	Peristaltic pump	Point sample	70	951
09-07-2012	**1430**	347	Peristaltic pump	Point sample	90	640
09-07-2012	**1515**	116	Peristaltic pump	Point sample	98	672
09-07-2012	**1815**	51	Peristaltic pump	Point sample	42	3,350
09-08-2012	**1830**	1,220	Peristaltic pump	Point sample	--	2,670
09-08-2012	**1845**	872	Peristaltic pump	Point sample	--	1,800
09-08-2012	**1915**	375	Peristaltic pump	Point sample	--	1,110
09-08-2012	**1945**	174	Peristaltic pump	Point sample	--	613
09-08-2012	**2015**	460	Peristaltic pump	Point sample	--	558
09-08-2012	**2100**	188	Peristaltic pump	Point sample	--	177