

Water-Data Report 2011

12113347 MILL CREEK AT EARTHWORKS PARK, AT KENT, WA

Puget Sound Basin
Duwamish Subbasin

LOCATION.--Lat 47°23'00", long 122°13'25" referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.19, T.22 N., R.5 E., King County, WA, Hydrologic Unit 17110013, at control-manhole of flood-detention basin in Earthworks Park, 250 ft upstream from Titus St., and 0.6 mi east of Kent City Hall.

DRAINAGE AREA.--2.49 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1994 to June 18, 2008, October 2008 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929 (City of Kent benchmark).

REMARKS.--Records poor. Natural flow affected by urbanization and construction of flood-control catchments. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--16 years (water year 1995-2007, 2009-2011), 3.84 ft³/s, 20.97 in/yr, 2,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined Feb. 9, 1996, elevation, 47.52 ft, affected by backwater from debris caught on downstream culvert grates; maximum elevation, 48.05 ft, May 13, 1996, affected by backwater from debris caught on downstream culvert grates; minimum discharge, 0.31 ft³/s, July 5, 1995, Aug. 12, 1997, but may have been lower during periods of culvert maintenance.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48 ft³/s, Mar. 10, gage height, 44.70 ft; minimum discharge, 0.41 ft³/s, Aug. 20.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.0	17	5.4	2.8	2.9	7.6	14	3.4	3.0	1.3	1.1	1.2
2	1.0	11	3.1	2.5	2.7	5.4	17	4.8	3.0	1.2	1.0	1.1
3	1.0	7.1	2.4	2.3	2.6	5.4	13	3.6	1.9	1.2	1.0	1.2
4	1.0	4.2	2.1	2.2	3.3	4.9	11	3.3	1.8	1.2	1.0	1.1
5	0.98	3.1	1.9	3.1	2.7	4.3	9.8	4.1	1.7	1.2	1.1	1.1
6	0.99	9.1	1.8	3.8	3.1	3.3	9.7	4.0	1.7	1.2	1.0	1.1
7	1.1	9.8	2.7	9.1	3.0	2.9	8.8	4.1	2.2	1.2	1.0	1.1
8	1.0	4.8	7.7	5.4	2.7	3.8	6.4	3.8	2.4	1.1	1.0	1.1
9	3.8	4.5	12	4.3	2.3	14	5.4	2.8	1.7	1.1	1.0	1.1
10	12	3.2	8.8	3.1	2.1	23	5.2	2.5	1.6	1.1	1.0	1.1
11	3.9	2.9	13	2.7	2.1	13	5.6	4.4	1.6	1.1	1.0	1.1
12	2.0	2.4	32	13	5.4	11	4.4	3.5	1.5	1.7	1.0	1.1
13	1.6	2.5	27	20	6.3	11	4.4	2.5	1.8	2.7	1.0	1.2
14	1.5	5.1	26	15	7.8	11	5.8	5.7	1.5	1.3	1.0	1.2
15	1.4	6.0	19	13	5.3	11	4.9	19	1.7	1.2	e1.1	1.1
16	1.2	4.2	13	15	3.9	9.9	5.0	11	1.5	2.3	1.3	1.1
17	1.2	4.6	7.2	14	3.2	6.9	3.9	6.2	1.4	1.4	1.1	1.4
18	1.1	5.1	4.9	9.4	2.7	7.2	4.2	3.9	5.9	1.2	1.1	3.7
19	1.2	3.8	4.2	6.1	2.4	6.7	3.5	3.0	4.1	1.2	1.1	1.8
20	1.4	2.8	4.0	4.9	2.3	5.1	3.3	2.6	2.0	1.1	1.1	1.2
21	1.3	2.3	3.2	17	2.2	4.5	3.2	2.4	1.6	1.1	1.2	1.2
22	1.6	2.5	4.0	11	2.5	4.0	2.8	2.3	1.5	1.1	1.6	1.2
23	1.7	2.2	8.1	7.5	3.2	3.6	2.8	2.1	1.4	1.1	1.7	1.2
24	8.5	1.9	11	8.4	3.2	4.4	3.6	2.0	1.9	1.1	1.2	1.2
25	8.3	2.2	15	5.8	2.3	12	6.9	3.6	1.8	1.5	1.2	2.4
26	5.8	4.4	9.9	4.4	2.1	9.8	4.0	2.7	1.4	1.2	1.2	4.7
27	3.4	3.4	8.6	3.8	3.6	8.7	5.6	2.6	1.4	1.1	1.2	1.7
28	2.6	2.4	7.5	4.0	12	6.1	5.5	2.2	1.4	1.1	1.2	1.2
29	2.1	2.4	6.0	6.4	---	7.5	3.4	1.8	1.4	1.1	1.2	1.2
30	3.5	7.6	4.1	4.6	---	9.1	3.4	1.7	1.3	1.1	1.2	1.2
31	5.2	---	3.2	3.4	---	12	---	2.4	---	1.1	1.2	---
Total	84.37	144.5	278.8	228.0	99.9	249.1	186.5	124.0	59.1	39.6	35.1	43.3
Mean	2.72	4.82	8.99	7.35	3.57	8.04	6.22	4.00	1.97	1.28	1.13	1.44
Max	12	17	32	20	12	23	17	19	5.9	2.7	1.7	4.7
Min	0.98	1.9	1.8	2.2	2.1	2.9	2.8	1.7	1.3	1.1	1.0	1.1
Ac-ft	167	287	553	452	198	494	370	246	117	79	70	86
Cfsm	1.09	1.93	3.61	2.95	1.43	3.23	2.50	1.61	0.79	0.51	0.45	0.58
In.	1.26	2.16	4.17	3.41	1.49	3.72	2.79	1.85	0.88	0.59	0.52	0.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.21	6.60	7.08	8.05	5.53	4.70	3.35	2.23	1.83	1.10	1.05	1.28
Max	4.44	14.0	12.6	15.1	20.0	8.34	8.03	4.00	4.33	1.66	1.60	2.23
(WY)	(1998)	(2007)	(1996)	(1997)	(1996)	(1999)	(1996)	(2011)	(2010)	(1997)	(2004)	(2010)
Min	0.84	1.21	2.29	2.73	1.76	2.55	1.32	1.08	0.80	0.68	0.59	0.71
(WY)	(2003)	(2003)	(2001)	(2001)	(2009)	(2001)	(2004)	(1995)	(2003)	(2003)	(1994)	(2003)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1994 - 2011	
Annual total	1,461.82		1,572.27			
Annual mean	4.00		4.31		3.84	
Highest annual mean					6.32	1996
Lowest annual mean					2.21	2001
Highest daily mean	32	Dec 12	32	Dec 12	124	Nov 14, 2001
Lowest daily mean	0.91	Aug 26	0.98	Oct 5	0.44	Oct 24, 1994
Annual seven-day minimum	1.00	Sep 30	1.0	Aug 6	0.47	Aug 26, 1994
Annual runoff (ac-ft)	2,900		3,120		2,780	
Annual runoff (cfsm)	1.61		1.73		1.54	
Annual runoff (inches)	21.84		23.49		20.97	
10 percent exceeds	8.9		10		9.1	
50 percent exceeds	2.6		2.7		1.9	
90 percent exceeds	1.1		1.1		0.78	

