Water-Data Report 2006

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA

Puget Sound Basin
Dungeness-Elwha Subbasin

LOCATION.--Lat 48°03′18″, long 123°34′55″ referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.33, T.30 N., R.7 W., Clallam County, WA, Hydrologic Unit 17110020, Olympic National Forest, on right bank near the site of the McDonald Bridge (removed), 0.7 mi upstream from Little River, 1.1 mi upstream of highway 101 Bridge, 4.9 mi below Glines Canyon Dam, 8 mi southwest of Port Angeles, and at mile 8.6.

DRAINAGE AREA.--269 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1897 to December 1901, October 1918 to current year. Published as "at McDonald" October 1897 to December 1901.

REVISED RECORDS.--WSP 1246: Drainage area. WSP 1286: 1898, 1899(M), 1900-1902, 1919, 1920-31(M), 1932, 1933(M). WSP 1566: 1957(M).

GAGE.--Water-stage recorder. Datum of gage is 200.00 ft above NGVD of 1929. Oct. 1, 1897, to Dec. 31, 1901, nonrecording gage at McDonald Bridge at different datum. Dec. 9, 1918, to May 1, 1936, water-stage recorder under McDonald Bridge at datum 7.4 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Water is diverted through Glines Canyon powerhouse and returned to river upstream from gage. Flow partly regulated by Lake Mills 4.9 mi upstream (station 12045000). Chemical analyses July 1959 to June 1960, July 1960 to September 1970 (partial-record station), October 1971 to September 1986. Water temperatures April 1976 to August 1977, October 1994 to April 1998. Suspended sediment discharge April 1994 to September 1995. Miscellaneous sediment measurements October 1995 to September 1997. Prior to 1962, published as Elwha River near Port Angeles. October 1971 to September 1974 published as Elwha River below Little River, near Port Angeles. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--92 years (water years 1898-1901, 1919-2006), 1,507 ft^3/s, 76.08 in/yr, 1,091,800 acre-ft/yr, adjusted for storage since April 1927.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,600 ft^3/s, Nov. 18, 1897, gage height, 14.5 ft, from graph based on gage readings, site and datum then in use, from rating curve extended above 3,300 ft^3/s, on basis of two determinations of flow over dam at discharge 26,700 ft^3/s and 30,100 ft^3/s, referred to 1897 datum; minimum daily discharge, 10 ft^3/s, Oct. 3, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft^3/s, Dec 25, gage height, 17.68 ft; minimum discharge, 284 ft^3/s, Sep 16, gage height, 9.89 ft.

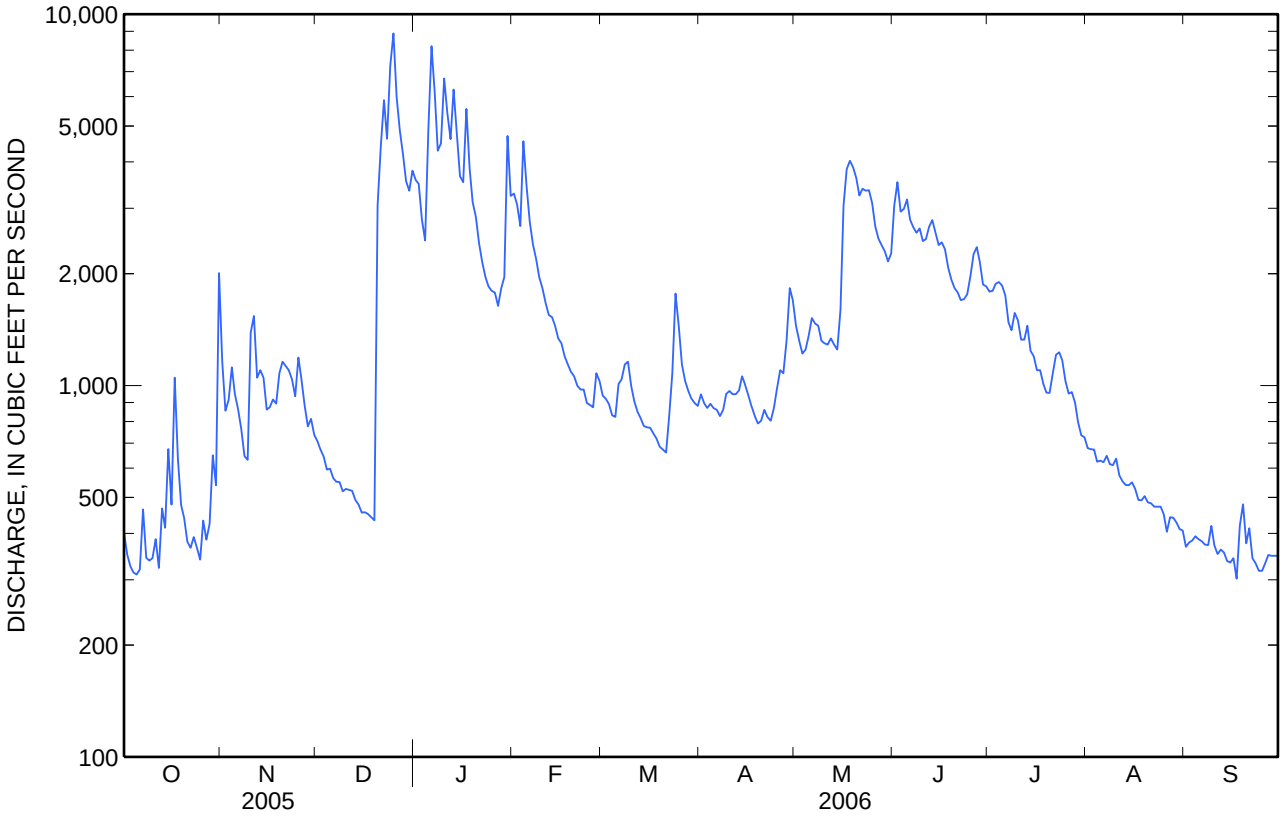
12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	403	1,160	708	3,580	3,290	940	947	1,450	3,050	1,790	679	368
2	351	856	673	3,490	3,070	922	897	1,320	3,530	1,800	674	378
3	326	915	644	2,800	2,690	892	871	1,220	2,940	1,880	673	383
4	314	1,120	594	2,460	4,550	832	893	1,250	2,990	1,900	624	393
5	310	949	597	4,850	3,450	824	870	1,360	3,170	1,860	628	386
6	320	864	563	8,200	2,760	1,010	860	1,520	2,800	1,750	622	381
7	464	764	551	6,150	2,400	1,040	828	1,470	2,670	1,480	647	373
8	344	646	550	4,290	2,190	1,140	861	1,450	2,580	1,410	614	372
9	338	631	519	4,490	1,960	1,160	950	1,320	2,650	1,570	611	419
10	343	1,390	527	6,710	1,830	997	967	1,300	2,450	1,500	636	371
11	386	1,540	524	5,410	1,670	905	948	1,290	2,480	1,330	573	352
12	323	1,050	521	4,610	1,550	849	948	1,340	2,680	1,330	552	362
13	467	1,100	492	6,270	1,530	817	971	1,290	2,790	1,450	540	355
14	414	1,050	478	4,780	1,450	778	1,060	1,250	2,580	1,240	539	337
15	675	862	455	3,660	1,340	772	998	1,600	2,390	1,200	549	334
16	478	874	456	3,530	1,300	770	943	3,050	2,430	1,100	527	343
17	1,050	918	451	5,560	1,200	743	873	3,830	2,330	1,100	492	302
18	634	894	442	3,850	1,140	720	829	4,030	2,080	1,010	491	420
19	477	1,080	434	3,120	1,090	685	791	3,870	1,930	958	504	479
20	440	1,160	3,060	2,850	1,060	673	804	3,620	1,830	956	485	376
21	380	1,130	4,410	2,420	1,000	660	860	3,250	1,780	1,080	482	413
22	366	1,100	5,870	2,150	976	834	823	3,390	1,700	1,210	472	343
23	391	1,040	4,620	1,960	976	1,080	804	3,350	1,710	1,230	472	332
24	366	936	7,250	1,850	898	1,770	871	3,360	1,760	1,170	472	317
25	340	1,190	8,880	1,800	887	1,450	981	3,100	1,970	1,030	451	317
26	433	1,040	5,980	1,780	874	1,140	1,100	2,690	2,260	952	404	332
27	385	885	4,860	1,640	1,080	1,030	1,080	2,490	2,360	960	442	350
28	424	777	4,220	1,830	1,030	967	1,320	2,390	2,150	900	441	348
29	649	814	3,550	1,960	---	923	1,830	2,300	1,870	797	428	348
30	539	737	3,350	4,700	---	898	1,700	2,160	1,850	735	411	348
31	2,010	---	3,790	3,240	---	882	---	2,270	---	726	407	---
Total	15,140	29,472	70,019	115,990	49,241	29,103	29,478	69,580	71,760	39,404	16,542	10,932
Mean	488	982	2,259	3,742	1,759	939	983	2,245	2,392	1,271	534	364
Max	2,010	1,540	8,880	8,200	4,550	1,770	1,830	4,030	3,530	1,900	679	479
Min	310	631	434	1,640	874	660	791	1,220	1,700	726	404	302
Ac-ft	30,030	58,460	138,900	230,100	97,670	57,730	58,470	138,000	142,300	78,160	32,810	21,680
Mean adjusted for change in contents in Lake Mills												
	491	982	2,259	3,741	1,759	939	983	2,244	2,392	1,271	533	359
CFSM adjusted for change in contents in Lake Mills												
	1.82	3.65	8.40	13.91	6.54	3.49	3.65	8.34	8.89	4.72	1.98	1.33
In. adjusted for change in contents Lake Mills												
	2.10	4.07	9.68	16.04	6.81	4.02	4.08	9.62	9.92	5.45	2.29	1.49
AC-FT adjusted for change in contents Lake Mills												
	30,200	58,430	138,900	230,100	97,670	57,730	58,470	138,000	142,300	78,160	32,810	21,340

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

	Calendar Year 2005	Water Year 2006
Total	400,507	546,661
Mean	1,097	1,498
Max	8,880	8,880
Min	237	302
Ac-ft	794,400	1,084,000
Mean adjusted for change in contents in Lake Mills	1,097	1,497
CFSM adjusted for change in contents in Lake Mills	4.08	5.56
In. adjusted for change in contents Lake Mills	55.37	75.56
AC-FT adjusted for change in contents Lake Mills	794,400	1,084,000



WATER-QUALITY RECORDS

PERIOD OF RECORD.--
WATER TEMPERATURE: October 1994 to April 1998, April 2004 to September 2006 (discontinued).
TURBIDITY: August 2003 to September 2006 (discontinued).
SUSPENDED SEDIMENT DISCHARGE: April 1994 to September 1995. Miscellaneous sediment measurements October 1995 to September 1997.

INSTRUMENTATION.--Water-quality monitor since October 1994 to April 1998, July 2003. Temperature and turbidity sensors interfaced to an electronic data logger, with 15-minute logging interval. Any use of trade, product, or firm names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government.

REMARKS.--
WATER TEMPERATURE: Records excellent except for Nov. 23 to Dec. 14, which are good. TURBIDITY: Records good. Data collected using Analite NEP395 turbidity sensor. Manufacturer's stated precision is +/- 1 percent of reading at 25°C. Formazin Nephelometric Unit values below 10 are reported to nearest 0.1 FNU. Negative recorded values are reported as 0.0 FNU.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURE: Maximum 19.7°C, Aug. 24, 2005; minimum, 2.1°C, Dec. 18, 2005.
TURBIDITY: Maximum, 1,030 FNU, Nov. 19, 2003; minimum, 0.0 FNU, on several days during July to September 2005 and August to September 2006.
SUSPENDED SEDIMENT CONCENTRATION (April 1994 to September 1995): Maximum daily, 233 mg/L, Dec. 20 1994; minimum 1 mg/L, Oct. 3, 14, June 30, 1995.
SUSPENDED SEDIMENT DISCHARGE (April 1994 to September 1995): Maximum daily, 7,960 tons, Dec. 20, 1994; minimum daily, 0.76 tons, Sept. 28 - 30, Oct. 3, 14, June 30, 1995.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 18.0°C, Aug. 21; minimum, 2.1°C, Dec. 18.
TURBIDITY: Maximum, 640 FNU, Dec. 25; minimum, 0.0 FNU, Aug. 6-22, 30, 31, and Sept. 1-15.

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	13.9	12.2	12.9	9.3	8.9	9.1	5.0	4.7	4.9	5.5	5.3	5.4
2	13.3	11.9	12.4	9.3	8.5	8.9	5.0	4.6	4.8	5.5	5.3	5.4
3	13.6	11.5	12.1	9.1	8.5	8.7	5.0	4.3	4.6	5.5	5.2	5.3
4	13.1	11.2	11.9	8.7	8.2	8.4	5.0	4.3	4.6	5.4	5.1	5.3
5	13.1	11.8	12.2	8.2	7.7	8.0	5.0	4.3	4.6	5.6	5.3	5.4
6	12.5	11.9	12.1	8.2	7.5	7.8	4.9	4.3	4.5	5.5	5.4	5.4
7	13.1	11.7	12.2	8.2	7.3	7.6	4.8	4.3	4.6	5.7	5.5	5.5
8	12.8	11.2	11.8	8.2	7.2	7.6	4.5	4.1	4.2	5.6	5.4	5.5
9	12.7	11.1	11.8	8.4	7.2	7.7	4.6	3.9	4.2	5.5	5.3	5.4
10	12.1	11.3	11.7	7.9	7.3	7.6	4.4	3.8	4.0	5.6	5.4	5.5
11	13.0	11.1	11.7	7.7	6.9	7.4	4.3	3.8	4.0	5.7	5.5	5.6
12	11.8	11.2	11.5	7.3	6.8	7.0	4.4	3.7	4.0	5.5	5.4	5.5
13	12.4	11.2	11.7	7.0	6.6	6.9	4.1	3.4	3.7	5.4	5.3	5.4
14	11.7	11.2	11.4	7.0	6.2	6.6	3.8	3.0	3.4	5.5	5.3	5.4
15	12.3	11.2	11.5	6.9	6.3	6.6	3.6	2.9	3.1	5.4	5.2	5.3
16	12.3	11.2	11.5	6.7	6.3	6.5	3.3	2.6	2.8	5.4	5.2	5.3
17	11.7	11.1	11.4	6.9	6.3	6.5	3.1	2.4	2.7	5.4	5.2	5.3
18	11.5	11.0	11.2	6.8	6.2	6.4	2.9	2.1	2.4	5.4	5.2	5.2
19	11.9	10.9	11.2	6.8	6.1	6.3	3.3	2.5	2.9	5.4	5.1	5.3
20	11.8	10.5	10.9	6.6	6.1	6.2	3.2	3.0	3.1	5.5	5.1	5.3
21	11.9	10.5	10.9	6.5	6.0	6.1	3.5	3.2	3.4	5.4	5.0	5.2
22	12.0	10.3	10.9	6.3	5.8	6.0	4.2	3.4	3.9	5.4	5.0	5.2
23	11.3	10.5	10.9	6.2	5.8	6.0	4.6	4.2	4.5	5.5	5.0	5.2
24	11.6	9.9	10.5	6.1	5.8	5.9	5.3	4.6	5.0	5.4	5.0	5.1
25	11.0	9.8	10.2	6.1	5.8	5.9	5.8	5.3	5.7	5.4	5.0	5.1
26	11.1	9.6	10.2	6.2	5.7	5.8	5.9	5.7	5.8	5.3	4.9	5.1
27	10.4	9.4	9.8	6.0	5.3	5.6	5.8	5.6	5.7	5.3	4.9	5.0
28	10.5	9.7	10.0	5.6	5.2	5.3	5.7	5.5	5.6	5.1	4.8	5.0
29	10.3	9.2	9.8	5.4	5.0	5.2	5.8	5.4	5.5	5.1	4.8	4.9
30	10.2	9.2	9.7	5.6	4.8	5.1	5.5	5.3	5.4	5.1	4.8	4.9
31	9.9	9.3	9.7	---	---	---	5.5	5.4	5.4	5.0	4.8	4.9
Month	13.9	9.2	11.2	9.3	4.8	6.8	5.9	2.1	4.3	5.7	4.8	5.3

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	5.0	4.8	4.9	4.3	3.4	3.8	6.8	5.2	5.8	8.6	6.6	7.3
2	5.2	4.7	4.9	4.6	3.7	4.0	7.0	5.2	5.9	8.6	6.4	7.2
3	5.0	4.7	4.8	4.6	3.6	4.0	6.7	5.5	6.0	8.8	6.4	7.3
4	5.0	4.8	4.9	5.2	3.8	4.2	7.9	5.3	6.2	8.9	6.6	7.5
5	5.1	4.8	4.9	4.9	3.9	4.3	7.6	5.2	6.2	9.0	6.8	7.6
6	5.1	4.7	4.8	4.4	4.1	4.2	7.1	5.4	6.2	8.0	7.0	7.5
7	5.2	4.7	4.8	5.2	4.0	4.4	8.0	5.6	6.4	8.6	7.2	7.8
8	5.2	4.6	4.8	4.5	4.0	4.2	7.1	5.9	6.4	8.5	6.9	7.5
9	5.2	4.5	4.7	5.1	3.9	4.2	7.0	6.1	6.5	8.9	6.8	7.5
10	5.1	4.4	4.6	5.0	3.8	4.1	7.5	5.9	6.5	8.8	6.8	7.7
11	4.9	4.3	4.5	5.2	3.8	4.2	7.5	5.8	6.5	8.6	7.0	7.6
12	5.0	4.5	4.6	5.3	3.7	4.2	7.9	6.2	6.9	8.5	6.9	7.5
13	5.2	4.5	4.7	5.4	3.7	4.3	7.3	6.3	6.7	9.1	6.9	7.7
14	5.0	4.3	4.5	5.7	4.0	4.5	7.5	6.4	6.9	9.4	7.0	7.9
15	4.9	4.1	4.3	5.1	4.0	4.4	7.0	6.2	6.5	9.0	7.2	8.1
16	4.8	4.1	4.3	5.2	4.0	4.4	7.7	5.8	6.6	9.2	7.9	8.5
17	4.5	3.7	4.0	5.2	4.0	4.4	7.9	5.7	6.4	8.8	7.7	8.4
18	4.5	3.5	3.8	5.8	3.9	4.5	7.8	5.6	6.5	8.7	7.7	8.3
19	4.2	3.1	3.5	6.0	3.9	4.5	7.8	5.9	6.6	8.5	7.7	8.2
20	3.8	3.0	3.4	5.5	3.8	4.5	7.4	6.1	6.6	8.7	7.7	8.1
21	3.9	3.1	3.4	5.3	4.4	4.7	8.5	6.1	6.8	8.7	7.8	8.1
22	4.0	3.2	3.6	5.2	4.6	4.8	8.6	6.0	6.8	8.4	7.7	8.1
23	4.1	3.2	3.6	5.6	4.6	5.0	9.0	6.0	7.1	8.2	7.5	7.9
24	4.1	3.0	3.4	5.4	4.6	5.0	9.2	6.2	7.3	8.1	7.5	7.8
25	3.7	3.2	3.5	6.0	4.5	4.9	9.1	6.4	7.3	7.8	7.2	7.6
26	3.9	3.5	3.7	5.9	4.6	5.1	7.7	6.5	7.1	7.9	7.2	7.4
27	4.5	3.7	4.0	6.2	4.8	5.2	8.4	6.7	7.4	8.1	7.2	7.6
28	4.5	3.6	3.9	6.4	4.9	5.4	9.0	6.8	7.7	8.2	7.2	7.6
29	---	---	---	6.8	4.9	5.5	7.8	7.1	7.5	8.6	7.2	7.8
30	---	---	---	6.3	5.0	5.5	8.3	6.6	7.4	9.0	7.5	8.0
31	---	---	---	7.1	5.1	5.7	---	---	---	8.8	7.7	8.3
Month	5.2	3.0	4.2	7.1	3.4	4.6	9.2	5.2	6.7	9.4	6.4	7.8

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	8.6	8.0	8.3	12.2	10.6	11.2	15.7	13.0	14.0	16.8	12.9	14.3
2	8.5	8.0	8.3	12.3	10.8	11.3	15.9	13.0	14.0	16.7	13.0	14.5
3	9.0	7.7	8.2	12.5	10.9	11.5	15.9	13.0	14.1	16.9	13.4	14.6
4	8.5	7.9	8.2	12.7	11.1	11.6	16.1	12.9	14.1	16.7	13.4	14.5
5	9.1	7.8	8.4	12.6	11.2	11.7	16.3	13.1	14.2	17.1	13.4	14.7
6	9.4	7.8	8.6	12.2	11.3	11.6	17.1	13.1	14.6	16.9	13.3	14.6
7	9.7	8.2	8.8	12.8	11.0	11.7	16.3	13.2	14.3	16.7	13.2	14.4
8	9.4	8.4	8.8	13.0	11.0	11.7	14.6	13.0	13.8	16.8	13.1	14.5
9	9.5	8.3	8.9	12.8	11.4	11.9	15.8	13.6	14.3	16.5	13.6	14.6
10	9.7	8.4	8.9	12.8	11.5	11.9	15.4	13.5	14.2	16.3	12.9	14.1
11	10.0	8.5	9.1	12.9	11.4	11.9	16.0	13.2	14.2	16.6	13.0	14.3
12	10.1	8.9	9.3	12.5	11.4	11.8	16.4	13.0	14.3	16.8	13.4	14.5
13	9.5	8.7	9.2	13.0	11.6	12.0	16.7	13.2	14.5	15.1	13.2	13.9
14	9.6	8.8	9.2	12.5	11.4	11.8	16.7	13.3	14.5	15.8	12.9	13.9
15	10.2	8.7	9.3	13.2	11.3	12.0	16.3	13.2	14.3	15.4	13.1	13.8
16	9.8	8.9	9.5	13.4	11.2	12.0	16.4	13.2	14.2	14.8	12.7	13.5
17	9.7	8.8	9.3	13.4	11.3	12.1	16.6	13.4	14.4	14.3	13.3	13.7
18	10.0	8.7	9.3	13.4	11.3	12.1	16.9	13.1	14.5	14.7	13.3	13.7
19	10.4	8.8	9.3	13.3	11.4	12.1	16.8	13.3	14.6	15.2	13.0	13.7
20	10.2	8.8	9.4	13.9	11.5	12.4	16.9	13.4	14.7	13.8	12.9	13.3
21	10.6	9.0	9.6	14.4	11.7	12.7	18.0	13.5	15.2	14.7	12.5	13.3
22	10.7	9.2	9.7	14.5	12.0	12.8	17.7	14.6	15.7	15.2	12.1	13.1
23	10.9	9.3	9.8	14.6	12.1	13.0	17.2	14.6	15.4	15.2	12.2	13.2
24	11.1	9.5	10.1	14.8	12.2	13.2	17.8	14.7	15.7	15.4	12.3	13.3
25	11.5	9.9	10.4	14.6	12.2	13.2	17.3	14.1	15.5	15.5	12.3	13.4
26	11.7	10.3	10.8	15.1	12.4	13.4	17.3	13.3	14.8	15.4	12.5	13.5
27	11.7	10.3	10.9	15.3	12.6	13.7	17.1	13.5	14.8	15.6	12.6	13.6
28	11.7	10.3	10.9	15.3	12.7	13.7	17.0	13.6	14.8	15.5	12.7	13.6
29	11.9	10.4	10.9	14.8	12.8	13.6	15.4	13.5	14.2	15.1	12.3	13.2
30	12.1	10.6	11.1	14.8	13.2	13.8	15.6	13.5	14.2	14.7	11.9	12.9
31	---	---	---	15.9	13.2	14.1	16.4	13.1	14.2	---	---	---
Month	12.1	7.7	9.4	15.9	10.6	12.4	18.0	12.9	14.5	17.1	11.9	13.9

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

MEDIAN FROM DCP (ANALITE 395)
TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/ -2.5 DEGREES, FNU
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		October			November			December			January	
1	89	38	62	16	8.2	12	3.3	1.5	2.1	190	130	160
2	80	26	52	13	5.8	9.7	2.8	1.6	2.0	160	110	140
3	49	18	28	11	4.4	6.6	2.9	1.6	2.1	130	87	110
4	38	13	19	9.3	5.4	6.6	6.6	1.8	2.2	120	72	93
5	27	12	17	9.3	5.0	6.5	3.7	0.9	2.0	150	74	110
6	27	10	14	9.0	5.0	6.5	2.1	0.7	1.5	300	140	250
7	21	9.3	14	8.3	3.8	5.4	1.9	0.7	1.4	360	250	310
8	18	8.8	11	7.1	2.9	4.7	2.0	0.7	1.4	300	200	270
9	17	6.9	10	7.2	3.1	4.6	2.3	0.9	1.7	260	190	220
10	14	7.1	9.0	12	3.4	5.1	1.8	0.5	1.1	240	170	210
11	14	6.3	9.1	8.6	3.3	4.7	1.6	0.5	0.9	220	170	190
12	11	5.7	7.8	8.3	3.4	5.1	1.6	0.5	0.9	190	150	170
13	13	5.4	7.9	6.8	3.5	4.5	1.4	0.5	0.9	170	130	150
14	9.4	5.1	6.4	6.7	2.7	4.5	26	0.5	1.0	160	110	140
15	14	5.7	7.7	6.7	3.1	4.3	2.7	0.7	1.3	140	94	110
16	11	4.8	6.6	5.7	3.1	3.9	2.0	1.2	1.4	250	74	90
17	14	6.0	8.2	49	3.0	3.8	6.4	1.3	1.5	130	80	97
18	14	7.0	9.1	5.4	3.0	3.7	79	1.5	1.8	110	76	92
19	14	7.1	8.6	5.0	2.7	3.5	4.1	1.5	2.0	100	62	78
20	12	5.3	8.1	4.6	2.7	3.2	36	1.9	11	82	52	66
21	11	5.1	7.0	4.7	2.4	3.0	83	36	67	71	45	59
22	8.8	4.5	6.1	4.4	2.4	3.0	190	67	130	60	38	47
23	8.7	4.0	5.8	14	2.3	2.9	220	160	180	55	33	41
24	7.3	3.8	5.1	4.2	2.2	2.6	390	180	270	44	30	37
25	6.7	3.5	4.5	4.0	2.2	2.7	640	330	500	40	26	32
26	6.8	3.4	4.8	3.6	2.1	2.4	610	470	550	31	21	26
27	6.4	2.9	4.2	3.5	2.0	2.3	590	380	490	26	19	22
28	6.0	2.7	3.9	3.7	1.9	2.3	440	310	360	29	16	21
29	7.0	3.0	4.6	4.3	1.6	2.3	360	210	290	48	16	19
30	6.1	2.6	3.7	3.1	1.6	2.2	280	180	230	44	23	31
31	59	4.3	9.0	---	---	---	220	160	180	37	22	29
Max	89	38	62	49	8.2	12	640	470	550	360	250	310
Min	6.0	2.6	3.7	3.1	1.6	2.2	1.4	0.5	0.9	26	16	19

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

MEDIAN FROM DCP (ANALITE 395)
TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/ -2.5 DEGREES, FNU
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		February			March			April			May	
1	43	33	38	6.7	3.3	4.6	4.6	2.5	3.6	2.5	1.3	1.8
2	40	31	35	6.5	3.3	4.5	4.5	2.3	3.3	3.5	1.3	2.0
3	36	25	31	5.8	2.7	3.9	4.3	2.3	3.3	4.9	2.2	2.7
4	42	28	33	5.9	2.2	3.7	4.0	1.8	2.8	7.0	1.2	3.5
5	42	30	37	5.2	2.2	3.2	3.4	1.6	2.4	2.4	1.1	1.7
6	40	29	34	7.4	2.3	3.8	3.3	1.6	2.3	2.2	1.3	1.8
7	36	27	31	4.4	2.2	3.2	3.2	1.4	2.1	2.1	1.1	1.7
8	33	24	28	6.4	2.1	3.8	2.6	1.2	1.9	2.6	1.1	1.9
9	26	17	22	5.1	2.7	3.7	2.5	1.0	1.7	2.4	1.2	1.8
10	24	17	20	6.6	2.7	4.0	2.4	1.2	1.7	2.1	1.1	1.4
11	22	15	18	7.5	3.5	5.3	39	0.8	1.5	1.9	0.9	1.3
12	21	13	16	7.0	3.5	5.4	1.9	0.7	1.4	1.7	0.8	1.3
13	18	11	14	6.9	3.7	5.2	1.7	0.6	1.2	1.8	0.8	1.2
14	16	10	13	7.2	3.4	5.2	1.6	0.7	1.2	3.1	1.0	2.0
15	14	8.6	11	6.7	3.1	4.8	49	0.5	1.1	7.2	2.4	4.1
16	12	5.8	8.7	20	3.2	4.6	1.4	0.5	1.0	11	4.9	6.6
17	10	5.2	7.3	5.6	2.8	4.5	1.6	0.7	1.0	21	4.9	9.3
18	10	5.6	7.7	5.7	2.6	4.3	1.6	0.5	1.0	32	12	18
19	11	4.3	6.4	5.2	2.3	3.9	1.2	0.4	0.9	35	20	26
20	8.3	4.3	5.7	4.8	2.2	3.5	5.1	0.4	0.8	38	27	31
21	8.2	3.6	5.2	4.5	1.9	3.0	1.2	0.3	0.7	40	27	32
22	7.2	3.7	5.0	4.9	2.0	3.3	1.0	0.2	0.7	35	26	30
23	7.1	3.5	5.0	4.1	2.1	3.1	1.0	0.1	0.7	34	25	29
24	7.1	3.5	4.6	5.4	2.5	3.5	1.1	0.3	0.6	34	25	28
25	6.3	2.6	4.2	5.3	2.7	3.8	1.0	0.2	0.7	32	23	27
26	5.7	2.7	3.9	5.2	3.1	3.9	1.3	0.3	0.7	30	22	26
27	31	3.4	7.4	5.6	3.1	4.1	1.1	0.4	0.7	29	19	22
28	8.9	3.6	5.6	5.3	2.8	4.1	1.7	0.5	0.9	28	17	20
29	---	---	---	4.9	2.8	3.8	1.8	0.8	1.1	21	15	17
30	---	---	---	4.9	2.7	3.8	2.3	0.8	1.2	19	11	15
31	---	---	---	4.8	2.4	3.6	---	---	---	15	9.9	12
Max	43	33	38	20	3.7	5.4	49	2.5	3.6	40	27	32
Min	5.7	2.6	3.9	4.1	1.9	3.0	1.0	0.1	0.6	1.7	0.8	1.2

12045500 ELWHA RIVER AT MCDONALD BRIDGE, NEAR PORT ANGELES, WA—Continued

MEDIAN FROM DCP (ANALITE 395)
TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/ -2.5 DEGREES, FNU
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		June			July			August			September	
1	15	11	13	16	6.1	11	1.2	0.3	0.7	4.2	0.0	1.8
2	17	12	13	12	5.5	7.0	1.2	0.2	0.6	0.9	0.0	0.3
3	21	14	18	9.0	5.2	6.6	3.4	0.1	0.5	0.7	0.0	0.2
4	21	15	17	8.7	3.7	5.9	1.2	0.2	0.5	0.6	0.0	0.2
5	22	15	18	5.6	3.9	4.6	4.7	0.1	1.3	0.4	0.0	0.2
6	22	15	18	6.2	4.4	5.1	3.8	0.0	0.4	0.5	0.0	0.2
7	20	13	16	7.5	4.6	5.6	0.6	0.0	0.3	0.6	0.0	0.2
8	18	12	15	16	3.3	4.5	0.5	0.0	0.2	0.6	0.0	0.2
9	23	11	14	8.5	3.5	4.6	0.5	0.0	0.2	0.8	0.0	0.3
10	14	9.4	12	7.2	1.8	2.6	0.6	0.0	0.2	0.5	0.0	0.2
11	12	8.7	11	3.3	1.7	2.3	0.4	0.0	0.2	0.6	0.0	0.2
12	13	7.5	9.8	2.8	1.4	2.1	0.4	0.0	0.1	1.0	0.0	0.3
13	12	8.4	10	2.7	1.6	2.1	0.5	0.0	0.1	0.5	0.0	0.2
14	12	7.4	9.6	2.4	1.6	2.0	0.4	0.0	0.1	0.7	0.0	0.2
15	11	7.6	9.1	2.2	1.5	1.9	0.4	0.0	0.2	2.8	0.0	0.5
16	10	7.1	8.6	2.0	1.2	1.7	0.8	0.0	0.3	5.7	1.0	1.9
17	9.4	6.3	8.0	2.1	1.2	1.6	0.5	0.0	0.2	7.9	2.5	3.5
18	9.0	6.0	7.6	3.8	1.0	1.4	0.4	0.0	0.2	2.9	0.8	1.3
19	8.0	5.7	7.2	1.5	0.9	1.3	1.0	0.0	0.2	7.6	0.6	1.3
20	8.2	6.0	7.0	5.4	0.7	1.2	0.3	0.0	0.2	6.2	0.5	0.8
21	7.6	5.8	6.8	1.5	0.8	1.2	0.8	0.0	0.2	2.9	1.1	1.6
22	7.6	5.9	6.5	1.6	0.8	1.2	0.4	0.0	0.2	4.1	1.2	1.8
23	18	5.6	6.5	1.4	0.8	1.2	1.1	0.1	0.3	12	0.8	2.2
24	34	3.2	4.1	1.9	0.9	1.3	2.0	0.4	1.3	6.6	0.8	2.2
25	4.9	3.3	4.1	1.7	1.0	1.4	2.6	0.8	1.4	5.1	0.2	0.6
26	6.2	3.9	4.6	2.0	1.3	1.7	2.7	0.4	1.4	320	0.3	41
27	7.6	4.5	5.4	2.1	0.9	1.4	4.4	0.8	1.7	5.6	0.4	1.0
28	8.2	5.7	7.1	1.6	0.7	1.1	2.2	0.1	0.7	61	2.2	13
29	10	6.1	7.6	3.1	0.6	1.2	15	0.1	0.5	46	10	18
30	14	8.2	11	1.9	0.4	0.8	0.6	0.0	0.2	120	22	72
31	---	---	---	1.0	0.1	0.7	14	0.0	0.3	---	---	---
Max	34	15	18	16	6.1	11	15	0.8	1.7	320	22	72
Min	4.9	3.2	4.1	1.0	0.1	0.7	0.3	0.0	0.1	0.4	0.0	0.2