

## Water-Data Report 2007

**12202300 OLSEN CREEK NEAR BELLINGHAM, WA**

Puget Sound Basin  
Strait of Georgia Subbasin

LOCATION.--Lat 48°45'05", long 122°21'08" referenced to North American Datum of 1927, in NW ¼ SW ¼ sec.30, T.38 N., R.4 E., Whatcom County, WA, Hydrologic Unit 17110002, on left bank at downstream side of bridge on North Shore Road, 500 ft upstream from mouth and Lake Whatcom, and 5.8 mi east of Court House in Bellingham.

DRAINAGE AREA.--3.78 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--November 1967 to September 1969, annual maximum, water years 1970-74. October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 311.8 ft above NGVD of 1929, from survey to Lake Whatcom, City of Bellingham Lake elevation. Prior to 1975 gage at elevation 5.49 ft lower.

REMARKS.--Records fair except for periods Nov. 17 to Jan. 1, and flows above 200 ft<sup>3</sup>/s, which are poor. No known regulation. Diversion rights above station for irrigation and domestic use.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--7 years (water years 1969, 2002-07) 9.99 ft<sup>3</sup>/s, 35.92 in./yr, 7,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,840 ft<sup>3</sup>/s, Nov. 19, 2003, gage height, 7.41 ft, (backwater effected from bridge at North Shore Road); maximum gage height, 7.70 ft, Nov. 24, 2004; minimum discharge, 0.13 ft<sup>3</sup>/s, Oct. 1, 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 10, 1983, was the highest ever seen by local residents and included flow over the road at gage, elevation 15 ft. Flood documented in USGS letter report by G.T. Higgins, Jan. 16, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 2	1345	*244	*5.89
No other peak greater than base discharge			

Minimum discharge, 0.17 ft<sup>3</sup>/s, Sept. 11, gage height, 4.01 ft.

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## 12202300 OLSEN CREEK NEAR BELLINGHAM, WA—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**

<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	0.28	0.34	3.3	4.5	7.4	7.3	6.4	9.8	1.2	1.0	0.40	0.38
<b>2</b>	0.26	0.49	2.7	81	6.6	6.7	5.9	8.5	1.1	0.89	0.36	0.33
<b>3</b>	0.24	4.3	2.3	83	6.2	7.5	5.2	7.1	1.0	0.82	0.34	0.34
<b>4</b>	0.25	11	4.5	54	7.0	7.6	4.7	6.6	1.1	0.75	0.34	0.41
<b>5</b>	0.24	8.2	6.6	40	7.3	11	4.3	5.6	1.1	0.70	0.34	0.43
<b>6</b>	0.25	81	7.9	48	7.1	11	3.8	5.1	1.8	0.63	0.32	0.35
<b>7</b>	0.25	29	12	65	6.6	13	3.5	4.9	1.6	0.60	0.34	0.31
<b>8</b>	0.27	13	19	53	6.4	17	3.4	4.4	1.3	0.56	0.40	0.30
<b>9</b>	0.26	5.6	18	39	5.7	18	5.1	3.9	1.4	0.56	0.36	0.26
<b>10</b>	0.23	5.1	15	33	5.2	15	4.1	3.5	1.7	0.51	0.34	0.23
<b>11</b>	0.22	7.7	16	23	5.0	37	3.6	3.2	1.9	0.44	0.33	0.22
<b>12</b>	0.22	20	18	18	4.4	72	3.2	2.9	1.5	0.41	0.31	0.23
<b>13</b>	0.22	66	26	14	4.0	38	3.1	2.7	1.4	0.43	0.31	0.25
<b>14</b>	0.23	28	32	12	4.9	24	3.5	2.6	1.3	0.44	0.29	0.26
<b>15</b>	0.51	19	39	10	9.8	15	2.9	2.4	1.4	0.41	0.29	0.26
<b>16</b>	0.62	19	18	9.5	10	15	3.0	2.1	1.4	0.40	0.27	0.32
<b>17</b>	0.32	9.0	11	8.5	8.9	19	4.7	2.0	2.0	0.55	0.28	0.49
<b>18</b>	0.31	6.2	7.2	9.5	9.7	40	4.1	1.9	1.9	0.70	0.28	0.76
<b>19</b>	0.44	6.1	5.7	14	16	29	3.8	2.2	1.5	1.3	0.66	1.2
<b>20</b>	0.46	5.9	5.3	14	41	22	3.5	2.6	1.3	1.1	0.66	0.61
<b>21</b>	0.35	6.8	7.2	13	23	17	3.2	5.0	1.2	1.2	0.64	0.58
<b>22</b>	0.31	6.3	5.7	16	16	16	3.0	2.7	1.2	2.0	0.61	0.79
<b>23</b>	0.28	7.8	6.6	46	14	17	2.7	2.3	1.3	1.3	0.46	0.60
<b>24</b>	0.28	10	7.3	37	12	48	2.9	2.0	1.7	1.3	0.38	0.49
<b>25</b>	0.29	9.7	19	27	11	51	2.8	1.9	1.8	0.87	0.45	0.47
<b>26</b>	0.31	6.3	14	21	10	28	2.9	1.7	1.3	0.70	0.80	0.45
<b>27</b>	0.32	4.9	11	16	9.0	18	7.5	1.8	1.1	0.59	0.60	0.50
<b>28</b>	0.33	3.5	7.6	13	8.0	13	30	1.7	1.1	0.54	0.44	1.1
<b>29</b>	0.83	4.2	6.0	11	---	11	17	1.5	1.1	0.53	0.37	0.74
<b>30</b>	0.50	3.7	5.6	9.5	---	8.6	12	1.4	1.3	0.50	0.34	3.0
<b>31</b>	0.40	---	5.2	8.4	---	7.5	---	1.3	---	0.43	0.34	---
<b>Total</b>	10.28	408.13	364.7	850.9	282.2	660.2	165.8	107.3	42.0	23.16	12.65	16.66
<b>Mean</b>	0.33	13.6	11.8	27.4	10.1	21.3	5.53	3.46	1.40	0.75	0.41	0.56
<b>Max</b>	0.83	81	39	83	41	72	30	9.8	2.0	2.0	0.80	3.0
<b>Min</b>	0.22	0.34	2.3	4.5	4.0	6.7	2.7	1.3	1.0	0.40	0.27	0.22
<b>Ac-ft</b>	20	810	723	1,690	560	1,310	329	213	83	46	25	33
<b>Cfsm</b>	0.09	3.60	3.11	7.26	2.67	5.63	1.46	0.92	0.37	0.20	0.11	0.15
<b>In.</b>	0.10	4.02	3.59	8.37	2.78	6.50	1.63	1.06	0.41	0.23	0.12	0.16

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2007, BY WATER YEAR (WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	8.58	24.4	19.3	20.5	15.4	12.0	10.3	3.72	2.51	1.28	1.04	2.15
<b>Max</b>	31.0	65.3	43.2	30.0	33.5	21.3	17.3	5.37	5.34	2.94	2.95	5.37
(WY)	(2004)	(2005)	(2002)	(2006)	(2002)	(2007)	(1969)	(1969)	(1968)	(2005)	(1968)	(1968)
<b>Min</b>	0.33	3.12	6.52	14.9	7.27	5.01	2.77	2.34	1.13	0.52	0.22	0.35
(WY)	(2007)	(2003)	(2003)	(1969)	(2005)	(2005)	(2004)	(2004)	(2003)	(2004)	(2003)	(2003)

**12202300 OLSEN CREEK NEAR BELLINGHAM, WA—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2006</b>	<b>Water Year 2007</b>	<b>Water Years 1968 - 2007</b>	
<b>Annual total</b>	2,889.69	2,943.98		
<b>Annual mean</b>	7.92	8.07	9.99	
<b>Highest annual mean</b>			13.3	2004
<b>Lowest annual mean</b>			5.20	2003
<b>Highest daily mean</b>	146	Jan 30	951	Nov 19, 2003
<b>Lowest daily mean</b>	0.21	Aug 28	0.15	Sep 5, 2003
<b>Annual seven-day minimum</b>	0.22	Sep 2	0.17	Aug 31, 2003
<b>Annual runoff (ac-ft)</b>	5,730	5,840	7,240	
<b>Annual runoff (cfsm)</b>	2.09	2.13	2.64	
<b>Annual runoff (inches)</b>	28.44	28.97	35.92	
<b>10 percent exceeds</b>	19	19	20	
<b>50 percent exceeds</b>	4.4	3.0	4.4	
<b>90 percent exceeds</b>	0.27	0.32	0.38	

