

12208000 MIDDLE FORK NOOKSACK RIVER NEAR DEMING, WA

Puget Sound Basin
Nooksack Subbasin

LOCATION.--Lat 48°46'46", long 122°06'19" referenced to North American Datum of 1927, in SW ¼ sec.13, T.38 N., R.5 E., Whatcom County, WA, Hydrologic Unit 17110004, on left bank 0.5 mi upstream from Heislars Creek, 6.0 mi southeast of Deming, and at mile 5.6.

DRAINAGE AREA.--73.3 mi², Area at site 1910-11, 1920-21, 1954, 75.4 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1910 to March 1911 (fragmentary gage heights and discharge measurements only), August 1920 to September 1921, February 1934 to September 1935, June to October 1954, October 1964 to November 1968, July 1969 to July 1970, January 1992 to current year.

REVISED RECORDS.--WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 580 ft above NGVD of 1929, from river-profile map. Oct. 11, 1910, to Mar. 14, 1911, Aug. 28, 1920, to Sept. 30, 1921, June 3 to Oct. 31, 1954, nonrecording gages at site 0.8 mi downstream at different datums. Feb. 18 to Apr. 6, 1934, Nov. 16, 1934, to Sept. 30, 1935, nonrecording gage at present site and datum. Prior to January 1992 at same site, different datum.

COOPERATION.--Records for the 1992-97 water years were provided by the City of Bellingham and were reviewed by the U.S. Geological Survey.

REMARKS.--Records fair except for discharges above 4,000 ft³/s, which are poor. Since February 1962, the City of Bellingham sometimes diverts up to about 100 ft³/s for municipal use at dam 1.8 mi upstream. Some regulation. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--20 years (water years 1921, 1935, 1965-68, 1993-2006), 510 ft³/s, 94.46 in/yr, 369,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined, probably occurred Nov. 5, 1934, gage height, 15.0 ft, from floodmarks, present site at different datum; minimum discharge, 30 ft³/s, Oct. 3, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,800 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 17	1100	4,210	5.36
Dec 25	1115	*4,470	*5.66

Minimum discharge, 109 ft³/s, Sep 17, gage height, 1.60 ft.

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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	520	1,560	272	588	545	263	282	401	1,090	587	225	174
2	310	1,010	253	458	542	262	272	368	1,360	582	220	193
3	293	1,050	229	392	450	243	265	345	953	600	228	223
4	225	936	213	397	1,500	219	343	388	1,120	632	231	250
5	191	743	214	1,360	825	209	328	460	1,480	628	241	260
6	405	670	206	2,250	519	211	336	490	900	554	273	253
7	1,350	533	193	1,610	436	228	295	509	760	473	304	240
8	399	452	183	878	443	239	340	440	657	486	289	230
9	262	399	177	1,140	389	231	405	376	591	535	309	260
10	387	1,310	186	2,190	340	202	399	365	588	526	316	201
11	347	997	226	1,320	307	186	368	389	695	442	261	212
12	253	631	227	960	286	176	467	387	726	507	239	219
13	614	658	201	1,520	288	171	403	355	911	763	241	170
14	319	597	181	941	269	168	507	400	929	547	256	150
15	423	422	169	565	243	166	397	802	733	452	249	134
16	609	436	161	550	229	172	352	1,620	788	400	243	121
17	3,030	445	154	1,330	214	176	301	1,660	1,040	386	257	120
18	1,540	459	146	592	227	172	273	1,570	685	344	255	267
19	1,230	677	157	450	209	162	271	1,320	551	330	256	218
20	1,150	713	1,180	422	195	158	320	1,340	522	359	262	245
21	607	634	1,840	351	189	156	501	1,000	489	527	254	424
22	478	597	2,230	312	190	209	377	1,280	458	582	256	236
23	542	497	1,610	334	206	242	352	1,130	480	602	221	195
24	518	439	2,530	332	181	370	407	1,030	551	560	207	197
25	425	807	2,830	361	173	317	449	964	681	486	235	196
26	555	560	1,660	359	199	251	440	748	850	453	244	197
27	360	361	1,190	316	331	224	403	722	835	453	248	224
28	394	316	1,170	326	346	233	560	718	655	375	255	211
29	792	295	767	351	---	242	855	696	577	311	215	184
30	631	300	582	1,430	---	251	610	633	584	320	231	161
31	1,750	---	797	563	---	261	---	716	---	253	172	---
Total	20,909	19,504	22,134	24,948	10,271	6,770	11,878	23,622	23,239	15,055	7,693	6,365
Mean	674	650	714	805	367	218	396	762	775	486	248	212
Max	3,030	1,560	2,830	2,250	1,500	370	855	1,660	1,480	763	316	424
Min	191	295	146	312	173	156	265	345	458	253	172	120
Ac-ft	41,470	38,690	43,900	49,480	20,370	13,430	23,560	46,850	46,090	29,860	15,260	12,620
Cfs/m	9.20	8.87	9.74	11.0	5.00	2.98	5.40	10.4	10.6	6.63	3.39	2.89
In.	10.61	9.90	11.23	12.66	5.21	3.44	6.03	11.99	11.79	7.64	3.90	3.23

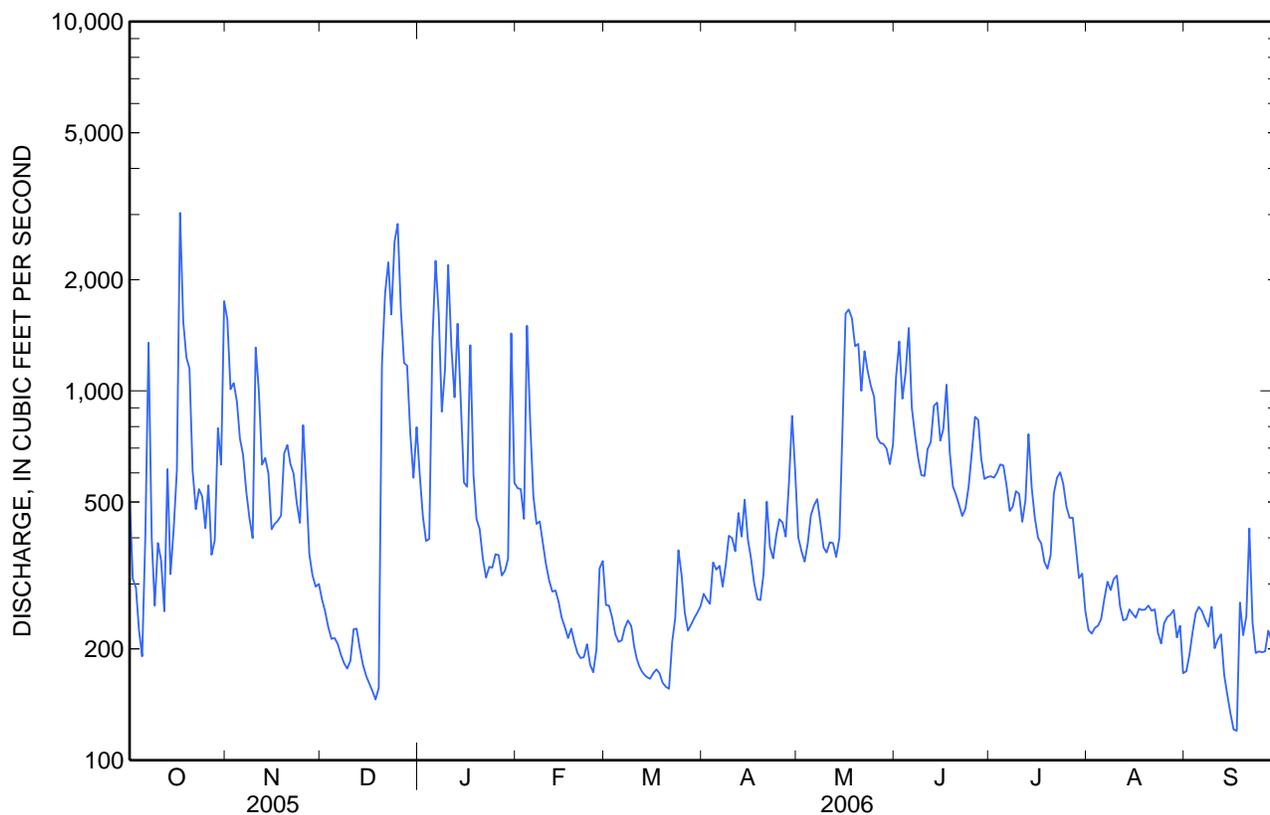
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	535	626	582	602	445	387	450	618	670	481	324	345
Max	1,379	1,154	940	965	855	734	739	1,039	1,202	839	619	796
(WY)	(2004)	(1996)	(1999)	(1997)	(1921)	(2003)	(1966)	(1997)	(1921)	(1954)	(2004)	(1920)
Min	156	215	237	271	175	218	127	385	327	311	174	120
(WY)	(2003)	(1994)	(1993)	(1993)	(2001)	(2006)	(1967)	(1992)	(1996)	(1970)	(1994)	(1965)

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SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1920 - 2006	
Annual total	188,090		192,388			
Annual mean	515		527		510	
Highest annual mean					665	1921
Lowest annual mean					362	1994
Highest daily mean	4,750	Jan 18	3,030	Oct 17	8,250	Oct 17, 2003
Lowest daily mean	88	Jan 14	120	Sep 17	32	Sep 29, 1965
Annual seven-day minimum	95	Jan 9	161	Sep 11	36	Sep 27, 1965
Annual runoff (ac-ft)	373,100		381,600		369,200	
Annual runoff (cfsm)	7.03		7.19		6.95	
Annual runoff (inches)	95.46		97.64		94.46	
10 percent exceeds	1,000		1,120		964	
50 percent exceeds	357		388		376	
90 percent exceeds	162		194		173	



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WATER-QUALITY RECORDS

COOPERATION.--Records for the 1992-97 water years were provided by the City of Bellingham and were reviewed by the U.S. Geological Survey.

PERIOD OF RECORD.--

WATER TEMPERATURE: July 1, 2006 to September 30, 2006.

INSTRUMENTATION.--Water-temperature sensor interfaced with a data collection platform for satellite telemetry.

REMARKS.--Record good, except for August 31 to September 13, which is fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 14.2 °C, July 24 and 26, 2006; minimum, 6.6 °C, Sept. 15 and 22, 2006.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.2 °C, July 24 and 26, 2006; minimum, 6.6 °C, Sept. 15 and 22, 2006.

**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	---	---	---	---	---	---	---	---	---	---	---	---
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14	---	---	---	---	---	---	---	---	---	---	---	---
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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	---	---	---	---	---	---	---	---	---	---	---	---
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Month	---	---	---	---	---	---	---	---	---	---	---	---

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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	---	---	---	12.8	7.8	10	12.7	8.1	10.2	12.1	8.1	9.8
2	---	---	---	13.2	8.0	10.2	13.4	8.5	10.8	12.3	8.1	9.9
3	---	---	---	13.3	8.3	10.4	13.3	8.6	10.9	12.1	8.6	10.0
4	---	---	---	12.9	8.4	10.2	13.3	8.6	10.8	12.0	8.7	10.1
5	---	---	---	11.8	8.3	9.8	13.7	8.7	11.0	11.7	8.3	9.7
6	---	---	---	9.4	7.9	8.3	13.7	8.8	11.0	11.5	8.0	9.5
7	---	---	---	12.3	6.9	9.2	13.8	8.8	11.0	11.2	8.0	9.4
8	---	---	---	12.9	7.6	10	12.3	8.7	10.4	11.4	8.0	9.4
9	---	---	---	11.7	8.5	10.1	10.9	9.5	10.1	10.1	8.9	9.4
10	---	---	---	11.9	9.0	10.1	11.0	8.9	9.7	10.9	7.6	9.0
11	---	---	---	10.6	8.0	9.2	11.9	9.0	10.0	11.2	7.8	9.2
12	---	---	---	9.5	8.3	8.9	12.6	8.2	10.1	11.5	8.1	9.4
13	---	---	---	10.2	8.6	9.2	13.2	8.4	10.5	9.6	8.3	9.0
14	---	---	---	10.9	8.2	9.3	13.2	8.7	10.7	9.1	8.0	8.5
15	---	---	---	11.8	8.4	9.9	12.9	8.8	10.6	8.8	6.6	7.8
16	---	---	---	13.1	7.8	10.2	12.8	8.8	10.5	9.3	6.9	8.0
17	---	---	---	12.1	8.3	10.0	13.0	8.5	10.4	9.2	6.9	8.0
18	---	---	---	12.4	8.0	9.9	12.7	8.4	10.3	10.0	8.3	9.1
19	---	---	---	11.6	8.3	9.8	13.0	8.2	10.3	10.0	8.3	9.0
20	---	---	---	13.6	8.4	10.7	12.8	8.4	10.3	9.0	8.2	8.5
21	---	---	---	14.1	9.2	11.3	12.9	8.4	10.4	8.6	7.9	8.4
22	---	---	---	12.3	9.3	10.5	12.3	8.6	10.2	9.1	6.6	7.8
23	---	---	---	14.1	9.0	11.1	11.8	8.4	9.9	9.7	7.3	8.4
24	---	---	---	14.2	9.2	11.2	11.8	9.2	10.2	10.3	7.6	8.7
25	---	---	---	13.2	8.8	10.7	12.4	8.0	9.9	10.6	7.9	9.0
26	---	---	---	14.2	8.9	11.2	12.7	8.6	10.3	10.5	8.1	9.0
27	---	---	---	14.1	9.3	11.3	12.7	8.4	10.2	10.6	8.1	9.0
28	---	---	---	11.6	8.7	10	12.6	8.3	10.2	10.6	7.9	9.0
29	---	---	---	11.4	8.6	9.8	9.9	8.3	8.8	10.1	7.5	8.6
30	---	---	---	10.3	8.6	9.3	10.3	8.3	9.1	9.1	7.3	8.2
31	---	---	---	10.4	8.1	9.3	11.4	7.6	9.4	---	---	---
Month	---	---	---	14.2	6.9	10.0	13.8	7.6	10.3	12.3	6.6	9.0