

Figure 36. Location of surface-water stations in the Nooksack River and Samish River Basins.

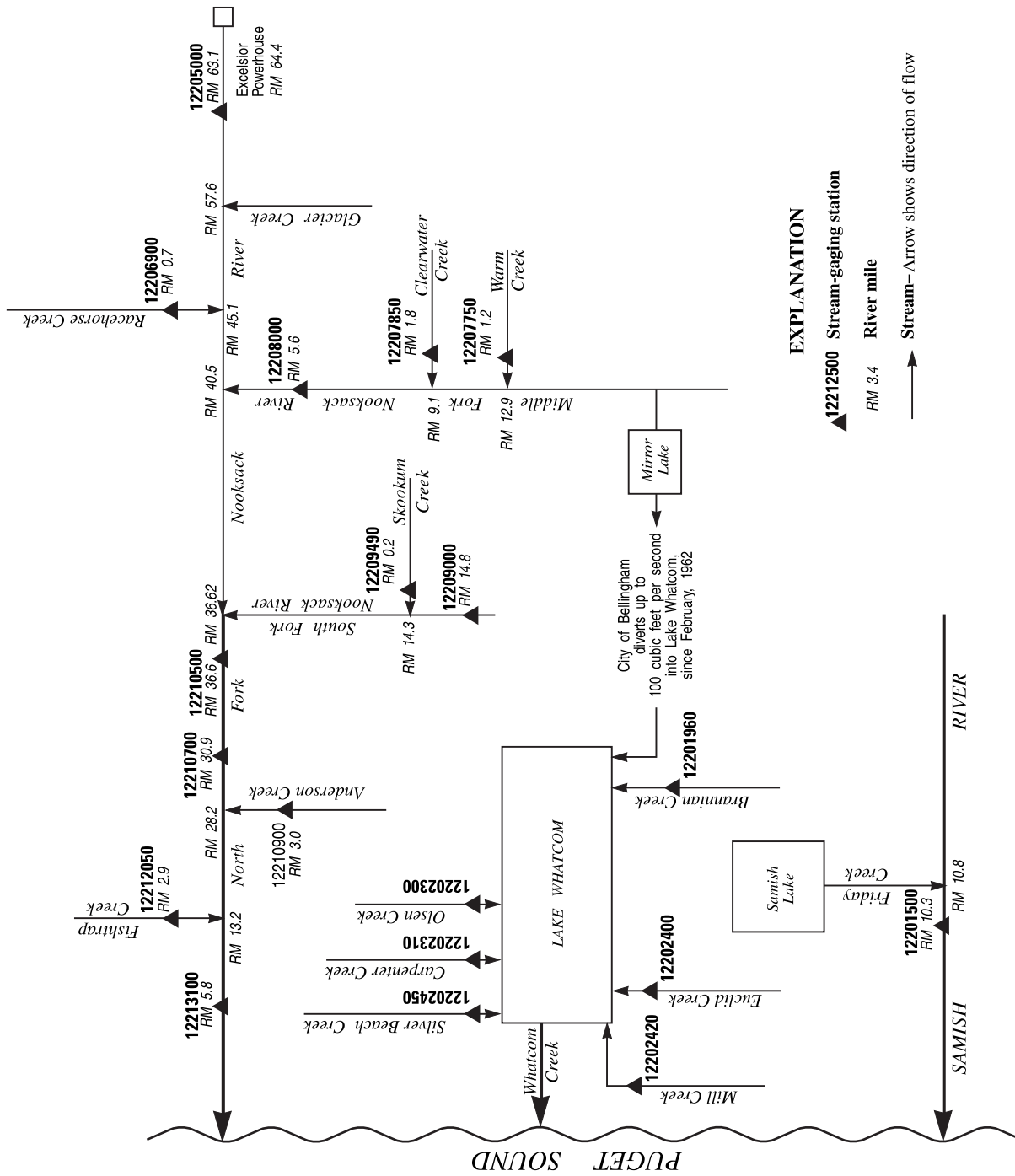


Figure 37. Schematic diagram showing surface-water stations in the Nooksack River and Samish River Basins.

SAMISH RIVER BASIN

12201500 SAMISH RIVER NEAR BURLINGTON, WA

LOCATION.--Lat 48°32'46", long 122°20'13", in SE 1/4 SE 1/4 sec.6, T.35 N., R.4 E., Skagit County, Hydrologic Unit 17110004, on left bank, 0.5 mi downstream from Friday Creek, 300 ft downstream from bridge on U.S. Highway 99, 5.0 mi north of Burlington, and at mile 10.3.

DRAINAGE AREA.--87.8 mi².

PERIOD OF RECORD.--July 1943 to September 1971, annual maximum water years 1972-79, miscellaneous discharge measurements 1972-74, 1976-96, October 1996 to current year.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1286: 1944(M), 1945.

GAGE.--Water-stage recorder. Elevation of gage is 45 ft above NGVD of 1929, from topographic map. Prior to Dec. 1, 1948, at site 500 ft upstream at datum 0.75 ft higher. Dec. 1, 1948, to Jan. 7, 1949, nonrecording gage 200 ft upstream at datum 3.14 ft higher than present datum.

REMARKS.--Records good except estimated discharges, which are poor. State fish hatchery on Friday Creek diverts about 4 ft³/s, which is returned upstream from station. Slight regulation and there may be some pumping for irrigation. Chemical analyses 1959-70, 1973-74, 1977 to June 1980. Water temperatures March 1973 to April 1974.

AVERAGE DISCHARGE.--35 years (water years 1944-71, 1971-2003), 245 ft³/s, 37.88 in/yr, 177,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,830 ft³/s Dec. 28, 1949, gage height, 11.89 ft; minimum discharge, 11 ft³/s July 10, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 21	1829	*1,050	*7.36

Minimum discharge, 13 ft³/s, Sept. 18, gage height, 4.09 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	25	76	189	814	204	529	161	63	41	22	16
2	28	25	73	300	773	192	416	153	61	38	22	16
3	45	26	70	282	594	186	401	144	58	36	22	16
4	33	26	69	294	443	171	576	146	56	35	21	16
5	33	26	72	326	365	173	528	183	55	35	21	15
6	37	27	68	261	310	169	663	155	53	34	23	15
7	36	31	66	224	271	161	491	138	51	33	22	18
8	33	31	63	196	243	152	458	128	49	32	e22	19
9	36	43	62	176	216	206	711	120	48	32	e22	17
10	40	52	64	161	197	235	554	115	50	31	e21	17
11	34	50	91	149	182	398	434	111	50	30	20	21
12	34	55	136	367	169	556	373	106	48	30	19	20
13	31	65	133	331	158	461	367	100	48	30	19	18
14	29	73	127	459	147	380	337	98	48	30	19	18
15	28	66	207	346	141	314	294	94	46	29	18	18
16	25	63	362	277	221	264	274	83	44	28	18	21
17	25	68	503	229	372	303	257	93	43	28	18	21
18	25	66	417	201	286	269	263	93	42	27	17	19
19	30	495	302	183	244	241	242	88	41	27	17	19
20	33	445	235	171	400	244	218	83	42	27	17	18
21	31	267	194	174	714	290	205	81	49	26	17	17
22	31	187	169	237	766	374	192	82	54	26	17	17
23	30	146	152	648	514	488	207	82	50	25	17	18
24	27	122	141	581	371	437	311	84	45	24	17	17
25	27	107	140	419	300	344	330	94	42	24	17	17
26	25	98	155	690	260	402	270	86	41	24	17	17
27	27	92	164	734	227	408	229	77	39	24	18	17
28	28	87	192	583	223	350	204	72	38	23	17	17
29	27	83	177	529	---	300	184	69	38	23	16	16
30	27	80	167	501	---	292	172	67	40	22	16	17
31	26	---	160	568	---	577	---	66	---	22	16	---
TOTAL	951	3,027	5,007	10,786	9,921	9,541	10,690	3,252	1,432	896	585	528
MEAN	30.7	101	162	348	354	308	356	105	47.7	28.9	18.9	17.6
MAX	45	495	503	734	814	577	711	183	63	41	23	21
MIN	25	25	62	149	141	152	172	66	38	22	16	15
AC-FT	1,890	6,000	9,930	21,390	19,680	18,920	21,200	6,450	2,840	1,780	1,160	1,050
CFSM	0.35	1.15	1.84	3.96	4.04	3.51	4.06	1.19	0.54	0.33	0.21	0.20
IN.	0.40	1.28	2.12	4.57	4.20	4.04	4.53	1.38	0.61	0.38	0.25	0.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	143	310	456	508	460	355	287	179	108	59.0	37.9	45.3
MAX	497	649	893	992	988	698	477	328	208	156	83.5	134
(WY)	(1957)	(1946)	(2000)	(1971)	(1961)	(1950)	(1959)	(2000)	(2000)	(1999)	(1954)	(1959)
MIN	25.5	30.4	89.2	203	236	173	151	84.3	41.2	23.0	18.9	17.6
(WY)	(1953)	(1953)	(1953)	(1949)	(1963)	(1970)	(1944)	(1958)	(1958)	(1958)	(2003)	(2003)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1943 - 2003
ANNUAL TOTAL	80,558	56,616	
ANNUAL MEAN	221	155	245
HIGHEST ANNUAL MEAN			340
LOWEST ANNUAL MEAN			123
HIGHEST DAILY MEAN	2,240	814	5,020
LOWEST DAILY MEAN	24	15	15
ANNUAL SEVEN-DAY MINIMUM	26	16	16
ANNUAL RUNOFF (AC-FT)	159,800	112,300	177,300
ANNUAL RUNOFF (CFSM)	2.51	1.77	2.79
ANNUAL RUNOFF (INCHES)	34.13	23.99	37.88
10 PERCENT EXCEEDS	507	411	536
50 PERCENT EXCEEDS	133	73	171
90 PERCENT EXCEEDS	28	18	31

e Estimated

12201960 BRANNIAN CREEK AT SOUTH BAY DRIVE NEAR WICKERSHAM, WA—Continued

WHATCOM CREEK BASIN

12201960 BRANNIAN CREEK AT SOUTH BAY DRIVE NEAR WICKERSHAM, WA

LOCATION.--Lat 48°40'08", long 122°16'48", in SE 1/4 NW 1/4 sec.27, T.37 N., R.3 E., Whatcom County, Hydrologic Unit 17110002, on right bank 200 ft downstream from South Bay Road on the southeast shore of Lake Whatcom, 11 mi southeast of Bellingham and at mile 0.3.

DRAINAGE AREA.--3.36 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 330 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair, except for discharges below 3 ft³/s and above 100 ft³/s, and estimated discharges, which are poor.

AVERAGE DISCHARGE.--2 year (water years 2002-03) 9.2 ft³/s, 37.39 in/yr, 6,700 acre-ft/yr.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 44 ft³/s Jan. 26, gage height 5.48 ft; minimum daily discharge, no flow, July 21-Sept. 30.

REVISIONS.--The daily mean discharge for Sept. 30, 2002, should be considered an estimated value, e0.84 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.57	e0.31	e1.4	e16	30	8.9	26	6.8	1.3	0.60	0.00	0.00
2	e0.25	e0.33	e1.3	e26	28	8.2	21	6.2	1.2	0.44	0.00	0.00
3	e1.6	e0.35	e1.3	e19	23	7.4	19	5.9	1.1	0.40	0.00	0.00
4	e0.75	e0.36	e1.2	18	18	6.4	22	6.8	1.1	0.36	0.00	0.00
5	e0.35	e0.41	e1.1	17	15	6.7	22	7.7	0.98	0.36	0.00	0.00
6	e0.35	e0.62	e1.0	13	12	6.2	25	5.7	0.89	0.33	0.00	0.00
7	e0.32	e0.78	e0.75	11	11	5.8	23	5.0	0.84	0.29	0.00	0.00
8	e0.30	e0.80	e0.70	9.2	9.5	5.4	21	4.5	0.77	0.29	0.00	0.00
9	e0.35	e1.2	e0.95	8.0	8.4	9.0	29	4.0	0.73	0.28	0.00	0.00
10	e0.65	e1.2	e1.8	7.0	7.6	10	21	3.7	0.79	0.25	0.00	0.00
11	e0.49	e1.3	e5.3	6.5	7.0	21	18	3.4	0.77	0.22	0.00	0.00
12	e0.31	e3.2	e7.3	15	6.4	27	15	3.0	0.72	0.20	0.00	0.00
13	e0.28	e2.3	e11	15	5.9	19	16	2.8	0.78	0.25	0.00	0.00
14	e0.25	e1.9	e9.4	19	5.4	16	15	2.8	0.71	0.33	0.00	0.00
15	e0.23	e1.3	e19	14	5.2	13	13	2.7	0.64	0.24	0.00	0.00
16	e0.24	e1.9	e23	12	10	12	12	2.8	0.62	0.20	0.00	0.00
17	e0.24	e2.1	e21	9.9	18	14	12	3.3	0.60	0.17	0.00	0.00
18	e0.25	e1.4	e15	8.6	13	12	11	2.9	0.59	0.13	0.00	0.00
19	e0.26	e26	e11	7.7	11	11	11	2.4	0.58	0.08	0.00	0.00
20	e0.27	e17	e9.8	7.0	21	12	9.5	2.2	0.68	0.03	0.00	0.00
21	e0.26	e9.0	e8.2	7.1	32	14	8.8	2.2	0.98	0.00	0.00	0.00
22	e0.25	e6.5	e7.0	9.6	30	24	8.2	2.3	0.76	0.00	0.00	0.00
23	e0.24	e5.0	e5.9	27	21	29	9.4	2.1	0.64	0.00	0.00	0.00
24	e0.23	e4.2	e5.1	24	16	25	17	2.5	0.55	0.00	0.00	0.00
25	e0.22	e2.7	e5.0	18	14	19	18	2.7	0.50	0.00	0.00	0.00
26	e0.22	e2.5	e9.5	33	12	23	13	2.1	0.46	0.00	0.00	0.00
27	e0.25	e2.3	e12	31	10	21	11	1.8	0.42	0.00	0.00	0.00
28	e0.35	e2.2	e14	24	9.8	18	9.5	1.7	0.40	0.00	0.00	0.00
29	e0.31	e2.0	e11	25	---	15	8.4	1.5	0.41	0.00	0.00	0.00
30	e0.30	e1.5	e11	25	---	16	7.6	1.4	0.89	0.00	0.00	0.00
31	e0.30	---	e13	27	---	29	---	1.4	---	0.00	0.00	---
TOTAL	11.24	102.66	245.00	509.6	410.2	464.0	472.4	106.3	22.40	5.45	0.00	0.00
MEAN	0.36	3.42	7.90	16.4	14.7	15.0	15.7	3.43	0.75	0.18	0.000	0.000
MAX	1.6	26	23	33	32	29	29	7.7	1.3	0.60	0.00	0.00
MIN	0.22	0.31	0.70	6.5	5.2	5.4	7.6	1.4	0.40	0.00	0.00	0.00
AC-FT	22	204	486	1,010	814	920	937	211	44	11	0.00	0.00
CFSM	0.11	1.02	2.35	4.89	4.36	4.45	4.69	1.02	0.22	0.05	0.00	0.00
IN.	0.12	1.14	2.71	5.64	4.54	5.14	5.23	1.18	0.25	0.06	0.00	0.00

CAL YR 2002 TOTAL 2,984.30 MEAN 8.18 MAX 130 MIN 0.12 AC-FT 5,920 CFSM 2.43 IN. 33.04
WTR YR 2003 TOTAL 2,349.25 MEAN 6.44 MAX 33 MIN 0.00 AC-FT 4,660 CFSM 1.92 IN. 26.01

e Estimated

WHATCOM CREEK BASIN

12202300 OLSEN CREEK NEAR BELLINGHAM, WA

LOCATION.--Lat 48°45'05", long 122°21'08", in NW 1/4 SW 1/4 sec.30, T.38 N., R.4 E., Whatcom County, 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 mi².

PERIOD OF RECORD.--November 1967 to September 1969, annual maximum, water years 1970-1974. 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 good, except for flows above 150 ft³/s, which are poor. No known regulation. Diversion rights above station for irrigation and domestic use.

AVERAGE DISCHARGE.--3 years (Water years 1969, 2002-03) 9.24 ft³/s, 33.21 in/yr, 6,690 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 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 PERIOD OF RECORD.--Maximum discharge, unknown Dec. 14, 2001, gage height 6.03 ft; minimum discharge, 0.15 ft³/s Sept. 5-6, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 81 ft³/s Jan. 26, 81 ft³/s, gage height 5.21 ft; minimum daily discharge 0.15 ft³/s Sept. 5-6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.57	0.46	0.87	10	28	5.9	25	4.2	2.1	1.5	0.21	0.18
2	0.40	0.48	0.86	28	23	5.7	18	3.8	1.9	0.98	0.21	0.18
3	1.6	0.50	0.80	19	18	5.4	14	3.7	1.6	0.81	0.21	0.17
4	0.83	0.51	0.85	19	14	4.9	12	4.3	1.5	0.71	0.20	0.17
5	0.54	0.56	0.87	17	12	4.8	10	6.4	1.3	0.77	0.21	0.15
6	0.56	0.79	0.78	13	9.6	4.5	10	4.4	1.1	0.73	0.35	0.15
7	0.50	0.86	0.73	9.4	8.2	4.3	10	4.1	1.0	0.63	0.31	0.38
8	0.46	0.86	0.70	7.4	7.0	4.0	11	4.0	0.94	0.59	0.27	0.35
9	0.56	1.2	0.88	6.1	6.2	5.7	21	3.6	0.90	0.57	0.32	0.25
10	0.72	1.2	1.7	5.1	5.4	7.3	16	3.3	0.95	0.49	0.32	0.24
11	0.61	1.3	4.4	4.7	4.9	12	12	3.0	0.93	0.45	0.28	0.47
12	0.48	3.0	6.0	14	4.3	16	10	2.8	0.89	0.45	0.26	0.36
13	0.43	2.1	9.7	14	3.8	14	9.4	2.6	1.0	0.70	0.23	0.28
14	0.40	1.9	6.0	13	3.5	12	8.2	2.6	0.92	1.1	0.21	0.60
15	0.37	1.3	21	11	3.5	10	7.2	2.4	0.82	0.62	0.21	0.57
16	0.37	1.8	24	9.0	4.7	8.5	6.7	2.4	0.75	0.53	0.21	1.2
17	0.34	2.0	21	7.5	8.2	10	6.9	4.6	0.71	0.48	0.21	0.84
18	0.34	1.3	13	6.3	7.4	9.2	6.1	3.8	0.65	0.43	0.19	0.55
19	0.41	33	9.0	5.5	7.0	8.3	5.6	3.4	0.63	0.38	0.19	0.68
20	0.44	16	6.5	4.9	13	8.3	5.1	3.3	1.2	0.34	0.19	0.47
21	0.41	6.0	5.0	5.0	34	9.9	4.9	3.4	1.8	0.33	0.18	0.35
22	0.40	3.9	4.2	6.5	28	24	4.5	3.5	1.8	0.33	0.19	0.31
23	0.39	2.9	3.6	29	17	22	5.0	3.4	1.4	0.31	0.18	0.28
24	0.38	2.2	3.4	21	13	16	7.5	4.2	0.99	0.30	0.18	0.25
25	0.38	1.7	3.4	15	10	13	8.8	4.8	0.82	0.28	0.18	0.22
26	0.38	1.4	5.7	45	8.5	12	7.7	3.9	0.73	0.27	0.20	0.21
27	0.41	1.3	9.5	36	7.1	12	7.1	3.5	0.67	0.27	0.23	0.20
28	0.53	1.1	12	25	6.9	12	6.2	3.1	0.60	0.25	0.21	0.19
29	0.48	1.0	8.5	20	---	10	5.3	2.7	0.59	0.24	0.20	0.17
30	0.45	0.93	8.5	17	---	13	4.7	2.5	2.6	0.23	0.19	0.17
31	0.45	---	8.6	20	---	39	---	2.4	---	0.22	0.18	---
TOTAL	15.59	93.55	202.04	463.4	316.2	343.7	285.9	110.1	33.79	16.29	6.91	10.52
MEAN	0.50	3.12	6.52	14.9	11.3	11.1	9.53	3.55	1.13	0.53	0.22	0.35
MAX	1.6	33	24	45	34	39	25	6.4	2.6	1.5	0.35	1.2
MIN	0.34	0.46	0.70	4.7	3.5	4.0	4.5	2.4	0.59	0.22	0.18	0.15
AC-FT	31	186	401	919	627	682	567	218	67	32	14	21
CFSM	0.13	0.82	1.72	3.95	2.99	2.93	2.52	0.94	0.30	0.14	0.06	0.09
IN.	0.15	0.92	1.99	4.56	3.11	3.38	2.81	1.08	0.33	0.16	0.07	0.10
CAL YR	2002	TOTAL 2,960.58	MEAN 8.11	MAX 271	MIN 0.27	AC-FT 5,870	CFSM 2.15	IN. 29.14				
WTR YR	2003	TOTAL 1,897.99	MEAN 5.20	MAX 45	MIN 0.15	AC-FT 3,760	CFSM 1.38	IN. 18.68				

12202310 CARPENTER CREEK AT BELLINGHAM, WA

LOCATION.--Lat 48°45'15", long 122°21'10", in SW ¼ NW ¼ sec.30, T.38 N., R.4 E., Whatcom County, Hydrologic Unit 17110002, on left bank 60 ft upstream from North Shore Drive, 8.2 mi east of Bellingham, and 0.1 mi upstream from Lake Whatcom.

DRAINAGE AREA.--1.17 mi².

PERIOD OF RECORD.--May 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23 ft³/s Jan. 12, 2003, gage height 7.94 ft; minimum daily discharge, no flow on many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 23 ft³/s, Jan. 12 gage height 7.94 ft; minimum discharge, no flow on many days of year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.01	0.06	2.4	7.7	1.5	7.7	1.4	0.45	0.17	e0.01	e0.00
2	0.01	0.01	0.06	11	7.0	1.5	5.2	1.2	0.40	0.07	e0.01	e0.00
3	0.06	0.01	0.06	7.4	5.3	1.5	4.1	1.1	0.34	0.04	e0.01	e0.00
4	0.03	0.01	0.06	9.0	3.7	1.3	3.0	1.4	0.28	0.03	e0.01	e0.00
5	0.02	0.01	0.08	7.7	2.7	1.3	2.5	2.6	0.22	0.03	e0.01	e0.00
6	0.02	0.01	0.07	4.7	2.2	1.2	2.8	1.6	0.18	0.03	e0.03	e0.00
7	0.02	0.01	0.05	3.0	1.9	1.1	2.4	1.4	0.15	0.02	0.01	e0.03
8	0.02	0.01	0.05	2.1	1.6	0.95	2.2	1.3	0.12	0.03	0.01	e0.01
9	0.02	0.01	0.08	1.6	1.4	1.7	6.0	1.1	0.11	0.02	0.02	e0.01
10	0.02	0.01	0.20	1.3	1.2	1.8	4.2	0.96	0.13	0.02	0.02	e0.03
11	0.01	0.02	0.81	1.1	1.0	2.4	3.2	0.87	0.12	0.02	0.01	0.02
12	0.01	0.09	2.3	9.3	0.89	3.5	2.8	0.76	0.12	0.02	0.01	0.01
13	0.01	0.06	3.7	7.3	0.81	4.4	3.0	0.66	0.12	0.04	0.01	e0.01
14	0.01	0.08	1.7	6.7	0.71	4.3	2.6	0.66	0.11	0.04	e0.01	e0.10
15	0.01	0.04	6.8	4.1	0.74	3.4	2.1	0.62	0.08	0.03	e0.01	0.03
16	0.01	0.09	8.9	2.8	1.3	2.6	2.0	0.61	0.07	0.02	e0.01	0.13
17	0.01	0.08	5.4	2.1	4.5	2.5	2.2	1.9	0.05	0.02	e0.01	0.06
18	0.01	0.06	2.8	1.7	3.4	2.3	1.8	1.3	0.04	0.02	e0.00	0.05
19	0.02	4.2	1.7	1.4	2.5	2.0	1.7	0.96	0.04	0.01	e0.00	0.03
20	0.01	2.3	1.1	1.2	4.3	2.0	1.5	0.83	0.06	0.01	e0.00	0.02
21	0.01	0.67	0.71	1.2	10	2.2	1.5	0.87	0.13	0.01	e0.00	0.02
22	0.01	0.33	0.52	2.4	9.3	6.1	1.4	0.86	0.14	0.01	e0.00	0.02
23	0.01	0.21	0.41	10	5.3	6.3	1.7	0.84	0.09	0.01	e0.00	0.01
24	0.01	0.15	0.36	7.7	3.5	5.0	2.9	1.1	0.06	0.01	e0.00	0.01
25	0.01	0.11	0.44	5.0	2.6	3.8	3.7	1.5	0.04	0.01	e0.00	0.01
26	0.01	0.10	1.0	7.8	2.1	3.6	2.8	1.0	0.03	0.01	e0.00	e0.02
27	0.01	0.08	3.0	8.5	1.7	3.9	2.4	0.86	0.03	0.01	e0.00	0.01
28	0.01	0.08	3.7	6.7	1.8	3.1	2.0	0.75	0.02	0.01	e0.00	e0.01
29	0.01	0.08	2.2	6.1	---	2.6	1.7	0.64	0.03	0.01	e0.00	e0.01
30	0.01	0.07	1.9	5.7	---	3.5	1.5	0.56	0.26	0.01	e0.00	e0.01
31	0.01	---	1.7	6.9	---	8.9	---	0.51	---	0.01	e0.00	---
TOTAL	0.46	9.00	51.92	155.9	91.15	92.25	84.6	32.72	4.02	0.80	0.21	0.67
MEAN	0.015	0.30	1.67	5.03	3.26	2.98	2.82	1.06	0.13	0.026	0.007	0.022
MAX	0.06	4.2	8.9	11	10	8.9	7.7	2.6	0.45	0.17	0.03	0.13
MIN	0.01	0.01	0.05	1.1	0.71	0.95	1.4	0.51	0.02	0.01	0.00	0.00
AC-FT	0.9	18	103	309	181	183	168	65	8.0	1.6	0.4	1.3
CFSM	0.01	0.26	1.43	4.30	2.78	2.54	2.41	0.90	0.11	0.02	0.01	0.02
IN.	0.01	0.29	1.65	4.96	2.90	2.93	2.69	1.04	0.13	0.03	0.01	0.02
WTR YR	2003	TOTAL 523.70	MEAN 1.43	MAX 11	MIN 0.00	AC-FT 1,040	CFSM 1.23	IN. 16.65				

e Estimated

WHATCOM CREEK BASIN

12202400 EUCLID CREEK AT EUCLID AVENUE AT BELLINGHAM, WA

LOCATION.--Lat 48°44'56", long 122°24'29", in SW 1/4 SW 1/4 sec.27, T.38 N., R.3 E., Whatcom County, Hydrologic Unit 17110002, on left bank 50 ft upstream from Euclid Avenue, 3.2 mi east of the City of Bellingham, and 320 ft upstream from mouth at Lake Whatcom.

DRAINAGE AREA.--0.54 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those above 30 ft³/s, those below 0.3 ft³/s, and estimated discharges, which are poor. Natural flow may be affected by upstream urbanization.

AVERAGE DISCHARGE.--2 years (water year 2002-2003) 0.43 ft³/s, 10.88 in/yr, 313 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 15 ft³/s Dec. 14, 2001; maximum gage height, 4.86 ft Dec 14, 2001, discharge not determined; minimum discharge, no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 4.6 ft³/s Dec. 16, gage height 4.18 ft; minimum discharge, no flow many days during year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.06	0.04	1.0	1.0	0.34	0.85	e0.20	0.02	0.01	0.00	0.00
2	0.00	0.07	0.04	1.5	0.78	0.34	0.75	e0.14	0.02	0.00	0.00	0.00
3	0.08	0.08	0.04	1.0	0.62	0.29	0.68	e0.17	0.01	0.00	0.00	0.00
4	0.00	0.09	0.07	1.3	0.53	0.26	0.56	e0.23	0.01	0.00	0.00	0.00
5	0.00	0.09	0.07	1.0	0.47	0.24	0.55	e0.30	0.01	0.00	0.00	0.00
6	0.01	0.10	0.06	0.70	0.39	0.22	0.61	e0.15	0.00	0.00	0.00	0.00
7	0.00	0.08	0.06	0.53	0.35	0.19	0.51	0.12	0.00	0.00	0.00	0.00
8	0.01	0.13	0.07	0.42	0.31	0.18	0.50	0.10	0.00	0.00	0.00	0.00
9	0.00	0.19	0.09	0.33	0.28	0.43	0.94	0.09	0.00	0.00	0.00	0.00
10	0.01	0.14	0.16	0.28	0.24	0.40	0.65	0.07	0.01	0.00	0.00	0.00
11	0.00	0.16	0.38	0.27	0.22	0.60	0.52	0.07	0.00	0.00	0.00	0.00
12	0.00	0.70	0.35	1.3	0.20	0.77	0.46	0.06	0.00	0.00	0.00	0.00
13	0.00	0.07	0.35	1.1	0.19	0.76	0.49	0.05	0.00	0.13	0.00	0.00
14	0.00	0.13	0.31	1.1	0.17	0.77	0.40	0.07	0.00	0.00	0.00	0.00
15	0.00	0.06	1.3	0.75	0.22	0.61	0.33	0.05	0.00	0.00	0.00	0.00
16	0.00	0.19	1.6	0.59	0.48	0.46	0.30	0.04	0.00	0.00	0.00	0.02
17	0.00	0.06	0.88	0.49	0.94	0.41	0.36	0.25	0.00	0.00	0.00	0.00
18	0.00	0.22	0.58	0.41	0.63	0.42	0.26	0.10	0.00	0.00	0.00	0.00
19	0.03	1.6	0.42	0.35	0.52	0.38	0.22	0.07	0.00	0.00	0.00	0.00
20	0.02	0.23	0.33	0.31	0.97	0.39	0.20	0.06	0.02	0.00	0.00	0.00
21	0.03	0.09	0.26	0.34	1.7	0.45	0.20	0.06	0.03	0.00	0.00	0.00
22	0.04	0.07	0.21	0.53	1.5	0.86	0.18	0.07	0.03	0.00	0.00	0.00
23	0.04	0.06	0.19	1.7	0.93	0.91	0.37	0.06	0.01	0.00	0.00	0.00
24	0.05	0.05	0.19	1.2	0.71	0.77	0.61	0.06	0.00	0.00	0.00	0.00
25	0.05	0.04	0.25	0.87	0.59	0.61	0.66	0.06	0.00	0.00	0.00	0.00
26	0.06	0.04	0.35	1.4	0.49	0.62	0.49	0.05	0.00	0.00	0.00	0.00
27	0.06	0.04	0.71	1.4	0.41	0.64	0.41	0.04	0.00	0.00	0.00	0.00
28	0.03	0.04	0.69	1.1	0.41	0.51	0.32	0.04	0.00	0.00	0.00	0.00
29	0.03	0.04	0.48	1.2	---	0.45	0.26	0.03	0.00	0.00	0.00	0.00
30	0.04	0.04	0.60	1.3	---	0.56	e0.23	0.03	0.08	0.00	0.00	0.00
31	0.04	---	0.48	1.3	---	0.92	---	0.03	---	0.00	0.00	---
TOTAL	0.63	4.96	11.61	27.07	16.25	15.76	13.87	2.92	0.25	0.14	0.00	0.02
MEAN	0.020	0.17	0.37	0.87	0.58	0.51	0.46	0.094	0.008	0.005	0.000	0.001
MAX	0.08	1.6	1.6	1.7	1.7	0.92	0.94	0.30	0.08	0.13	0.00	0.02
MIN	0.00	0.04	0.04	0.27	0.17	0.18	0.18	0.03	0.00	0.00	0.00	0.00
AC-FT	1.2	9.8	23	54	32	31	28	5.8	0.5	0.3	0.00	0.04
CFSM	0.04	0.31	0.69	1.62	1.07	0.94	0.86	0.17	0.02	0.01	0.00	0.00
IN.	0.04	0.34	0.80	1.86	1.12	1.09	0.96	0.20	0.02	0.01	0.00	0.00
CAL YR	2002	TOTAL 138.31	MEAN 0.38	MAX 6.4	MIN 0.00	AC-FT 274	CFSM 0.70	IN. 9.53				
WTR YR	2003	TOTAL 93.48	MEAN 0.26	MAX 1.7	MIN 0.00	AC-FT 185	CFSM 0.47	IN. 6.44				

e Estimated

12202420 MILL CREEK AT BELLINGHAM, WA

LOCATION.--Lat 48°45'19", long 122°24'55", in SE ¼ NW ¼ sec.27, T.38 N., R.4 E., Whatcom County, Hydrologic Unit 17110002, on left bank 30 ft upstream from Lakeview Avenue, 50 ft downstream from small dam and pond, 3.0 mi from City of Bellingham and 0.2 mi upstream from mouth at Lake Whatcom.

DRAINAGE AREA.--0.79 mi².

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Regulation and diversion at the upstream dam and pond during summer months. Basin affected by urbanization.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 8.6 ft³/s Jan. 23, 2003, gage height, 2.28 ft; minimum discharge, no flow, many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 8.6 ft³/s Jan. 23, gage height 2.28 ft; minimum discharge, no flow several days in Oct., Nov., Aug., and Sept.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.05	2.3	2.5	0.90	2.0	0.45	0.10	0.12	e0.03	0.00
2	0.00	0.00	0.05	3.2	2.1	0.91	1.9	0.36	0.10	0.07	e0.03	0.00
3	0.00	0.00	0.05	2.0	1.6	0.86	1.7	0.40	0.09	0.06	e0.03	0.00
4	0.00	0.00	0.05	2.8	1.3	0.71	1.4	0.55	0.09	0.06	e0.02	0.00
5	0.00	0.00	0.07	2.3	1.1	0.65	1.4	0.85	0.09	0.06	e0.02	0.00
6	0.00	0.00	0.08	1.7	0.99	0.58	1.7	0.39	0.08	0.05	0.02	0.00
7	0.00	0.00	0.08	1.4	0.91	0.50	1.4	0.29	0.07	0.05	0.02	0.00
8	0.00	0.00	0.08	1.1	0.81	0.44	1.4	0.26	0.06	0.05	0.02	0.00
9	0.00	0.00	0.08	0.93	0.72	1.3	2.7	0.22	0.05	0.05	0.02	0.00
10	0.00	0.00	0.28	0.78	0.65	1.0	1.8	0.19	0.06	0.05	0.02	0.00
11	0.00	0.00	1.2	0.76	0.62	1.4	1.4	0.18	0.06	0.05	0.02	0.00
12	0.00	0.34	0.98	3.3	0.54	1.6	1.3	0.16	0.06	0.05	0.02	0.00
13	0.00	0.18	1.0	2.5	0.48	1.6	1.4	0.12	0.06	0.31	0.01	0.00
14	0.00	0.19	0.81	2.5	0.46	1.6	1.1	0.16	0.06	0.15	0.01	0.00
15	0.00	0.10	2.5	1.8	0.59	1.3	0.98	0.12	0.06	0.09	0.00	0.01
16	0.00	0.16	3.2	1.5	1.0	1.0	0.91	0.09	0.05	0.08	0.00	0.06
17	0.00	0.16	1.4	1.2	2.2	0.96	1.2	1.0	0.05	e0.08	0.00	0.13
18	0.00	0.15	1.0	1.1	1.3	1.0	0.84	0.47	0.05	e0.07	0.01	0.13
19	0.00	2.6	0.73	0.98	1.1	0.90	0.71	0.34	0.04	e0.07	0.01	0.12
20	0.00	0.64	0.63	0.93	2.2	0.94	0.61	0.27	0.05	e0.07	0.01	0.10
21	0.00	0.26	0.54	1.0	3.6	0.96	0.64	0.31	0.06	e0.06	0.01	0.09
22	0.00	0.19	0.48	1.6	3.3	1.8	0.56	0.36	0.08	e0.06	0.01	0.08
23	0.00	0.14	0.38	4.4	2.5	1.8	1.1	0.33	0.08	e0.06	0.01	0.07
24	0.00	0.10	0.46	3.3	1.9	1.5	1.8	0.29	0.07	e0.05	0.01	0.07
25	0.00	0.08	0.78	2.6	1.5	1.3	1.8	0.31	0.06	e0.05	0.00	0.06
26	0.00	0.07	1.5	3.6	1.3	1.4	1.4	0.21	0.06	e0.05	0.00	0.05
27	0.00	0.06	2.7	3.4	1.0	1.5	1.2	0.19	0.06	e0.05	0.00	0.05
28	0.00	0.05	2.4	2.7	1.1	1.1	0.93	0.16	0.05	e0.04	0.00	0.05
29	0.00	0.05	2.0	3.2	---	1.1	0.73	0.14	0.05	e0.04	0.00	0.04
30	0.00	0.05	2.9	3.2	---	1.5	0.55	0.12	0.14	e0.04	0.00	0.04
31	0.00	---	1.0	3.2	---	2.3	---	0.11	---	e0.03	0.00	---
TOTAL	0.00	5.57	29.46	67.28	39.37	36.41	38.56	9.40	2.04	2.17	0.36	1.15
MEAN	0.000	0.19	0.95	2.17	1.41	1.17	1.29	0.30	0.068	0.070	0.012	0.038
MAX	0.00	2.6	3.2	4.4	3.6	2.3	2.7	1.0	0.14	0.31	0.03	0.13
MIN	0.00	0.00	0.05	0.76	0.46	0.44	0.55	0.09	0.04	0.03	0.00	0.00
AC-FT	0.00	11	58	133	78	72	76	19	4.0	4.3	0.7	2.3
CFSM	0.00	0.24	1.20	2.75	1.78	1.49	1.63	0.38	0.09	0.09	0.01	0.05
IN.	0.00	0.26	1.39	3.17	1.85	1.71	1.82	0.44	0.10	0.10	0.02	0.05

WTR YR 2003 TOTAL 231.77 MEAN 0.63 MAX 4.4 MIN 0.00 AC-FT 460 CFSM 0.80 IN. 10.91

e Estimated

12205000 NORTH FORK NOOKSACK RIVER BELOW CASCADE CREEK, NEAR GLACIER, WA

LOCATION.--Lat 48°54'22", long 121°50'35", in SE 1/4 SW 1/4 sec.36, T.40 N., R.7 E., Whatcom County, Hydrologic Unit 17110004, Mt. Baker National Forest, on right bank 0.2 mi downstream from Cascade Creek, 0.3 mi downstream from Deadhorse Creek, 4.8 mi east of Glacier, 5.5 mi upstream from Glacier Creek, and at mile 63.1.

DRAINAGE AREA.--105 mi².

PERIOD OF RECORD.--October 1937 to current year. Published as "Nooksack River above Cascade Creek, near Glacier" 1937-58 and as "Nooksack River below Cascade Creek, near Glacier" 1958-66.

REVISED RECORDS.--WSP 1092: 1946.

GAGE.--Water-stage recorder. Elevation of gage is 1,245 ft above NGVD of 1929, from river-profile map. Supplementary gage on left bank, at datum 1.19 ft lower, used as principal gage prior to Oct. 1, 1953, and Oct. 8, 1958, to Sept. 30, 1959.

REMARKS.--Records fair. No diversion upstream from station. Some regulation at low flow by powerplant at Excelsior. Summer flows augmented by glacier melt. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--66 years (water years 1938-2003), 782 ft³/s, 101.15 in/yr, 566,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s Nov. 10, 1989, gage height, 9.56 ft; minimum discharge, 60 ft³/s Mar. 12, 1969; minimum daily, 98 ft³/s Jan. 8, 1979, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 14	2200	4,400	7.69	Mar 13	1845	5,620	8.30
Jan 26	1315	*6,130	*8.54				

Minimum discharge, 158 ft³/s, Nov. 3, 4, gage height, 3.15 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	166	337	340	1,170	284	1,140	716	1,590	1,550	885	466
2	252	164	310	951	910	280	856	851	1,340	991	748	492
3	436	162	291	1,220	774	273	721	816	1,210	845	662	559
4	337	160	279	1,590	665	268	642	696	1,350	863	621	574
5	305	165	269	1,480	593	281	582	660	1,790	992	649	557
6	303	352	258	896	535	278	541	560	2,380	996	637	534
7	311	406	248	784	495	265	552	501	2,720	1,060	575	678
8	295	433	240	685	461	257	709	468	2,620	1,060	589	553
9	286	379	237	617	434	292	1,160	477	2,190	918	607	462
10	276	316	286	547	411	347	846	629	2,020	1,070	612	493
11	255	327	290	495	393	422	923	696	1,610	1,280	557	618
12	239	1,460	1,290	616	378	738	842	765	1,470	1,260	482	515
13	229	1,200	1,020	532	367	4,030	793	760	1,660	1,210	449	444
14	219	603	1,900	566	357	4,030	742	770	1,580	1,020	449	489
15	216	438	2,250	485	351	2,080	671	755	1,170	941	516	445
16	222	521	1,440	444	384	1,370	625	620	1,110	882	549	507
17	221	545	929	417	378	1,050	618	545	1,340	777	538	455
18	214	522	678	410	350	837	573	489	1,640	805	553	504
19	217	1,870	564	404	338	714	529	449	1,290	873	538	635
20	224	1,700	497	390	364	711	520	435	983	905	469	475
21	214	1,210	446	379	385	732	562	449	894	882	490	433
22	210	882	412	452	384	1,290	587	627	747	893	503	465
23	203	598	381	1,120	354	983	589	1,030	671	928	446	486
24	195	474	359	772	329	759	622	2,080	675	839	397	456
25	189	411	417	690	318	653	599	2,510	808	753	418	491
26	184	372	492	3,950	310	607	553	1,630	1,170	761	479	531
27	185	350	464	2,160	299	557	529	1,400	1,660	785	e430	581
28	187	346	441	1,260	294	513	523	1,990	1,600	783	e410	629
29	180	359	388	996	---	487	553	1,970	1,600	872	e460	629
30	169	362	366	901	---	742	623	1,760	2,390	929	508	602
31	167	---	341	1,370	---	1,760	---	1,890	---	950	503	---
TOTAL	7,413	17,253	18,120	27,919	12,781	27,890	20,325	29,994	45,278	29,673	16,729	15,758
MEAN	239	575	585	901	456	900	678	968	1,509	957	540	525
MAX	436	1,870	2,250	3,950	1,170	4,030	1,160	2,510	2,720	1,550	885	678
MIN	167	160	237	340	294	257	520	435	671	753	397	433
AC-FT	14,700	34,220	35,940	55,380	25,350	55,320	40,310	59,490	89,810	58,860	33,180	31,260
CFSM	2.28	5.48	5.57	8.58	4.35	8.57	6.45	9.21	14.4	9.12	5.14	5.00
IN.	2.63	6.11	6.42	9.89	4.53	9.88	7.20	10.63	16.04	10.51	5.93	5.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

MEAN	656	752	639	516	474	415	566	1,117	1,534	1,310	804	581
MAX	1,358	2,143	1,354	1,161	1,401	1,061	930	1,794	2,459	2,112	1,582	1,122
(WY)	(1968)	(1991)	(1940)	(1997)	(1991)	(1972)	(1990)	(1997)	(1948)	(1974)	(1999)	(1978)
MIN	210	216	232	147	165	191	253	686	893	725	473	353
(WY)	(1988)	(1953)	(1979)	(1979)	(1956)	(1948)	(1975)	(1962)	(1941)	(1940)	(1941)	(1989)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1938 - 2003

ANNUAL TOTAL	290,877	269,133	782
ANNUAL MEAN	797	737	1,090
HIGHEST ANNUAL MEAN			1997
LOWEST ANNUAL MEAN			540
HIGHEST DAILY MEAN	5,490	4,030	8,620
LOWEST DAILY MEAN	160	160	98
ANNUAL SEVEN-DAY MINIMUM	165	165	108
ANNUAL RUNOFF (AC-FT)	577,000	533,800	566,300
ANNUAL RUNOFF (CFSM)	7.59	7.02	7.44
ANNUAL RUNOFF (INCHES)	103.05	95.35	101.15
10 PERCENT EXCEEDS	1,840	1,460	1,550
50 PERCENT EXCEEDS	484	557	596
90 PERCENT EXCEEDS	249	273	260

e Estimated

12202450 SILVER BEACH CREEK AT MAYNARD PLACE AT BELLINGHAM, WA

LOCATION.--Lat 48°46'10", long 122°24'19", in SW ¼ NE ¼ sec.22, T.38 N., R.3 E., Whatcom County, Hydrologic Unit 17110002, on left bank at Maynard Place subdivision, 3.5 mi east of Post Office in Bellingham and 0.1 m upstream from mouth at Lake Whatcom.

DRAINAGE AREA.--1.20 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Probably some diversion upstream for domestic use, and other effects from urbanization.

AVERAGE DISCHARGE.--2 years (water year 2002-2003) 1.36 ft³/s, 15.40 in/yr, 985 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14 ft³/s Jan. 12, 2003, gage height 4.67 ft; minimum daily discharge 0.01 ft³/s on several days during Aug. and Sept. 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft³/s Jan. 12, gage height 4.67 ft; minimum daily discharge 0.01 ft³/s Aug. 8, 10-31, Sept. 1-6, 8, 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.07	0.19	0.11	1.6	2.6	0.89	3.4	0.63	0.13	e0.08	0.05	0.01
2	0.06	0.19	0.10	2.6	2.1	1.0	2.4	0.58	0.12	e0.08	0.05	0.01
3	0.35	0.20	0.10	1.7	1.7	0.97	1.9	0.58	0.12	e0.08	0.05	0.01
4	0.11	0.21	0.16	2.8	1.4	0.84	1.5	0.89	0.11	e0.07	0.05	0.01
5	0.08	0.24	0.15	2.0	1.2	0.79	1.4	1.6	0.10	e0.07	0.04	0.01
6	0.10	0.36	0.12	1.5	1.0	0.72	2.3	0.73	0.09	e0.07	0.05	0.01
7	0.07	0.33	0.10	1.2	0.90	0.65	1.6	0.60	0.09	e0.07	0.02	0.04
8	0.08	0.37	0.10	0.96	0.83	0.61	1.6	0.50	0.08	e0.07	0.01	0.01
9	0.08	0.41	0.18	0.76	0.79	1.4	3.8	0.43	0.08	e0.07	0.03	0.01
10	0.09	0.36	0.36	0.68	0.74	1.1	2.2	0.38	0.09	e0.06	0.01	0.02
11	0.06	0.55	0.73	0.68	0.69	1.7	1.7	0.35	0.09	e0.06	0.01	0.02
12	0.05	1.4	0.68	4.8	0.66	2.5	1.7	0.31	0.09	e0.08	0.01	0.02
13	0.05	0.29	0.77	3.5	0.65	2.5	1.7	0.28	0.09	e0.10	0.01	0.02
14	0.06	0.33	0.69	3.6	0.58	2.3	1.3	0.38	0.08	e0.09	0.01	0.24
15	0.06	0.16	2.4	2.3	0.71	1.7	1.1	0.31	0.08	e0.08	0.01	0.04
16	0.06	0.40	3.1	1.7	1.2	1.3	1.0	0.30	0.08	e0.08	0.01	0.18
17	0.07	0.24	1.5	1.3	2.5	1.1	1.7	2.2	0.07	e0.08	0.01	0.09
18	0.07	0.31	0.95	1.1	1.4	1.2	1.0	0.76	0.07	0.08	0.01	0.06
19	0.11	2.4	0.72	0.94	1.1	1.0	0.86	0.53	e0.07	0.07	0.01	0.05
20	0.10	0.81	0.58	0.86	2.2	1.2	0.79	0.46	e0.09	0.07	0.01	0.04
21	0.10	0.40	0.47	1.2	5.3	1.3	0.88	0.49	e0.09	0.06	0.01	0.03
22	0.09	0.29	0.41	2.7	3.4	2.3	0.79	0.59	e0.10	0.06	0.01	0.03
23	0.10	0.24	0.37	6.6	2.3	2.2	1.1	0.54	e0.08	0.06	0.01	0.03
24	0.11	0.18	0.40	3.9	1.8	1.7	2.7	0.53	e0.07	0.05	0.01	0.02
25	0.12	0.16	0.52	3.1	1.4	1.4	2.6	0.51	e0.07	0.05	0.01	0.02
26	0.12	0.16	0.80	4.7	1.2	1.5	1.6	0.37	e0.07	0.05	0.01	0.02
27	0.18	0.15	1.7	3.7	1.0	2.3	1.4	0.32	e0.06	0.05	0.01	0.02
28	0.22	0.12	1.3	2.8	1.1	1.5	1.1	0.29	e0.06	0.05	0.01	0.02
29	0.17	0.12	0.94	3.1	---	1.2	0.82	0.26	e0.15	0.05	0.01	0.02
30	0.17	0.12	1.1	3.4	---	2.1	0.71	0.15	e0.10	0.05	0.01	0.02
31	0.18	---	0.83	3.4	---	4.5	---	0.14	---	0.05	0.01	---
TOTAL	3.34	11.69	22.44	75.18	42.45	47.47	48.65	16.99	2.67	2.09	0.57	1.13
MEAN	0.11	0.39	0.72	2.43	1.52	1.53	1.62	0.55	0.089	0.067	0.018	0.038
MAX	0.35	2.4	3.1	6.6	5.3	4.5	3.8	2.2	0.15	0.10	0.05	0.24
MIN	0.05	0.12	0.10	0.68	0.58	0.61	0.71	0.14	0.06	0.05	0.01	0.01
AC-FT	6.6	23	45	149	84	94	96	34	5.3	4.1	1.1	2.2
CFSM	0.09	0.32	0.60	2.02	1.26	1.28	1.35	0.46	0.07	0.06	0.02	0.03
IN.	0.10	0.36	0.70	2.33	1.32	1.47	1.51	0.53	0.08	0.06	0.02	0.04
CAL YR	2002	TOTAL 554.14	MEAN 1.52	MAX 68	MIN 0.04	AC-FT 1,100	CFSM 1.27	IN. 17.18				
WTR YR	2003	TOTAL 274.67	MEAN 0.75	MAX 6.6	MIN 0.01	AC-FT 545	CFSM 0.63	IN. 8.51				

e Estimated

12206900 RACEHORSE CREEK AT NORTH FORK ROAD NEAR KENDALL, WA

LOCATION.--Lat 48°53'07", long 122°07'56", in SW 1/4 NW 1/4 sec.11, T.39 N., R.5 E., Whatcom County, Hydrologic Unit 17110004, on right bank on the downstream side of North Fork Road bridge, 2.2 mi south of Kendall, and at mile 0.7.

DRAINAGE AREA.--10.5 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those below 4 ft³/s and those above 300 ft³/s, which are fair, and estimated discharges, which are poor. No known diversions or regulation upstream of station.

AVERAGE DISCHARGE.--5 years (water year 1999-2003), 57.4 ft³/s, 74.32 in/yr, 41,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft³/s Jan. 8, 2002, gage height, 7.05 ft from rating curve extended above 189 ft³/s; minimum discharge, 1.3 ft³/s, Oct. 1, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s Jan. 26, gage height 6.84 ft from rating curve extended above 189 ft³/s; minimum discharge, 1.7 ft³/s, Aug. 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	3.5	15	45	139	21	124	52	41	e22	2.4	e1.7
2	5.5	3.5	14	222	99	21	82	54	36	e19	2.3	e1.7
3	22	3.4	13	123	78	19	64	50	33	e17	2.3	e1.8
4	12	3.3	13	245	63	19	56	47	35	e14	2.3	e1.9
5	9.0	3.5	12	137	53	22	49	65	40	e11	2.2	e1.8
6	8.3	13	11	81	45	21	44	44	41	9.2	2.5	e1.7
7	7.3	18	11	68	39	18	70	36	38	8.3	2.4	e2.1
8	6.6	28	10	57	35	16	137	31	31	7.8	2.2	e2.0
9	7.0	58	11	51	31	48	320	33	24	7.2	2.1	e1.9
10	8.5	49	20	42	28	73	114	45	24	6.4	2.1	e1.9
11	7.7	105	39	38	26	145	95	47	20	5.9	3.7	e2.0
12	6.5	108	104	121	24	163	81	50	18	5.7	6.9	e1.9
13	6.0	87	102	82	23	516	78	46	23	7.7	3.4	e1.9
14	5.5	88	82	108	21	256	68	56	21	12	2.7	e2.8
15	5.1	50	227	67	21	135	56	50	16	7.1	2.3	e2.2
16	4.8	75	125	52	32	95	53	40	14	6.1	2.2	e4.0
17	4.4	68	90	43	55	95	69	43	14	5.5	2.2	e2.7
18	4.2	140	61	40	39	82	57	42	13	5.0	2.0	e4.1
19	4.2	770	46	36	32	64	49	47	11	4.5	1.9	e4.2
20	4.5	185	38	33	73	70	49	43	12	4.2	1.8	e2.7
21	4.2	80	32	31	94	92	52	45	19	4.0	1.7	e2.4
22	e3.5	53	28	58	72	255	53	67	e15	3.7	e1.7	e2.3
23	3.7	40	24	257	47	118	48	75	e12	3.5	e1.6	e2.3
24	3.7	32	23	147	36	79	60	101	e10	3.3	e1.5	e2.2
25	3.5	26	26	112	30	62	56	88	e13	3.1	e1.6	e2.1
26	3.4	23	32	594	27	56	48	59	e17	3.0	e1.8	e2.0
27	3.5	21	58	166	24	50	44	59	e25	3.0	e1.7	e2.0
28	4.8	19	54	108	23	44	42	66	e24	2.9	e1.6	e1.9
29	5.0	17	36	e96	---	42	46	57	e23	2.7	e1.6	e1.9
30	4.1	16	34	e93	---	211	52	54	e35	2.6	e1.7	e1.9
31	3.7	---	32	e150	---	366	---	51	---	2.5	e1.8	---
TOTAL	189.0	2,186.2	1,423	3,503	1,309	3,274	2,216	1,643	698	219.9	70.2	68.0
MEAN	6.10	72.9	45.9	113	46.8	106	73.9	53.0	23.3	7.09	2.26	2.27
MAX	22	770	227	594	139	516	320	101	41	22	6.9	4.2
MIN	3.4	3.3	10	31	21	16	42	31	10	2.5	1.5	1.7
AC-FT	375	4,340	2,820	6,950	2,600	6,490	4,400	3,260	1,380	436	139	135
CFSM	0.58	6.94	4.37	10.8	4.45	10.1	7.03	5.05	2.22	0.68	0.22	0.22
IN.	0.67	7.75	5.04	12.41	4.64	11.60	7.85	5.82	2.47	0.78	0.25	0.24
CAL YR	2002	TOTAL 21,320.0	MEAN 58.4	MAX 948	MIN 2.9	AC-FT 42,290	CFSM 5.56	IN. 75.53				
WTR YR	2003	TOTAL 16,799.3	MEAN 46.0	MAX 770	MIN 1.5	AC-FT 33,320	CFSM 4.38	IN. 59.52				

e Estimated

NOOKSACK RIVER BASIN

12207750 WARM CREEK NEAR WELCOME, WA

LOCATION.--Lat 48°46'03", long 121°57'48", in NE ¼ SE ¼ sec.24, T.38 N., R.6 E., Whatcom County, Hydrologic Unit 17110004, on right bank, 10 mi southeast of Welcome, and at mile 1.2.

DRAINAGE AREA.--4.13 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,700 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good, except discharges above 104 ft³/s, which are fair. No diversions or regulation upstream of station. Records for water years 1991-1998 available in the files of Devine Tarbell & Associates, Inc., Bellingham, Washington.

AVERAGE DISCHARGE.--5 years (water year 1999-2003), 27.8 ft³/s, 91.37 in/yr, 20,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 444 ft³/s Dec. 13, 1998, gage height 3.72 ft; maximum gage height, 3.81 ft Jan. 7, 2002; minimum discharge, 3.3 ft³/s Oct. 1, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 285 ft³/s, Mar. 13, gage height 3.45 ft from rating curve extended above 104 ft³/s; minimum discharge, 3.5 ft³/s Sept. 2-3, 5-6, 9-10, 13-14 and 30.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	4.9	12	14	46	8.4	50	25	51	33	9.1	3.7
2	5.5	4.8	11	50	40	8.2	36	28	43	23	8.1	3.7
3	16	4.7	11	48	34	7.9	29	29	39	21	7.5	3.7
4	8.4	4.7	10	82	28	7.9	26	26	43	20	6.9	3.7
5	7.3	5.3	9.9	61	25	8.0	23	26	54	22	6.9	3.6
6	6.9	10	9.3	42	23	7.6	21	22	68	22	6.9	3.6
7	6.5	9.7	9.0	40	21	7.2	23	20	74	21	6.4	5.0
8	6.4	12	8.6	35	19	6.8	33	18	68	21	6.1	4.1
9	6.4	12	8.5	32	18	9.5	47	18	56	20	6.2	3.6
10	6.6	13	11	27	16	11	36	19	52	23	6.1	3.8
11	6.0	15	13	25	15	17	38	22	45	24	5.8	4.8
12	5.8	47	38	32	15	46	35	23	40	24	5.3	3.9
13	5.6	23	30	26	14	228	36	24	41	23	4.9	3.5
14	5.5	20	65	29	13	161	33	26	38	20	4.9	6.8
15	5.3	17	74	24	13	87	30	24	31	18	5.1	4.6
16	5.1	22	52	21	14	58	28	22	30	17	5.3	8.4
17	5.0	18	35	20	14	44	27	20	36	15	5.2	6.0
18	4.8	33	27	20	12	35	25	19	38	14	5.0	8.5
19	5.2	140	22	19	12	30	23	18	30	15	4.7	8.6
20	5.0	61	20	18	13	31	23	18	25	15	4.5	5.9
21	4.9	41	18	18	14	33	25	18	24	14	4.4	5.0
22	5.1	31	16	25	13	56	25	25	21	13	4.5	4.5
23	5.0	24	15	45	11	39	24	38	19	12	4.2	4.3
24	4.9	21	14	34	10	30	27	80	17	11	4.0	4.1
25	4.9	18	17	34	9.4	26	25	87	19	10	4.0	3.9
26	4.9	16	16	124	9.1	24	24	55	27	10	4.2	3.8
27	5.3	15	20	74	8.8	22	22	48	36	10	4.1	3.8
28	5.4	14	17	47	8.7	20	21	66	36	9.8	3.9	3.7
29	4.8	13	14	42	---	19	23	62	35	10	3.8	3.7
30	4.8	13	13	40	---	44	25	60	51	9.9	3.8	3.6
31	4.9	---	12	61	---	86	---	61	---	9.8	3.9	---
TOTAL	184.2	683.1	648.3	1,209	489.0	1,218.5	863	1,047	1,187	530.5	165.7	139.9
MEAN	5.94	22.8	20.9	39.0	17.5	39.3	28.8	33.8	39.6	17.1	5.35	4.66
MAX	16	140	74	124	46	228	50	87	74	33	9.1	8.6
MIN	4.8	4.7	8.5	14	8.7	6.8	21	18	17	9.8	3.8	3.5
AC-FT	365	1,350	1,290	2,400	970	2,420	1,710	2,080	2,350	1,050	329	277
CFSM	1.44	5.51	5.06	9.44	4.23	9.52	6.97	8.18	9.58	4.14	1.29	1.13
IN.	1.66	6.15	5.84	10.89	4.40	10.98	7.77	9.43	10.69	4.78	1.49	1.26
CAL YR	2002	TOTAL 10,888.8	MEAN 29.8	MAX 234	MIN 4.7	AC-FT 21,600	CFSM 7.22	IN. 98.08				
WTR YR	2003	TOTAL 8,365.2	MEAN 22.9	MAX 228	MIN 3.5	AC-FT 16,590	CFSM 5.55	IN. 75.35				

NOOKSACK RIVER BASIN

12207850 CLEARWATER CREEK NEAR WELCOME, WA

LOCATION.--Lat 48°47'19", long 122°01'18", in NW ¼ NW ¼ sec.15, T.38 N., R.6 E., Whatcom County, Hydrologic Unit 17110004, on left bank, 7 mi southeast of Welcome, and at mile 1.8.

DRAINAGE AREA.--18.5 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,650 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except estimated daily discharges and those above 400 ft³/s, which are fair. No diversions or regulation upstream of station. Records for water years 1992-1998 are available in the files of Devine Tarbell & Associates, Bellingham, Washington.

AVERAGE DISCHARGE.--5 years (water years 1999-2003) 124 ft³/s, 90.66 in/yr, 89,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft³/s Dec. 29, 1998, gage height 6.14 ft; minimum discharge, 6.4 ft³/s Sept. 6, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge 1,750 ft³/s, Jan. 26, gage height 5.85 ft from rating curve extended above 315 ft³/s; minimum discharge, 6.4 ft³/s Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	14	37	59	273	36	244	153	154	68	12	7.3
2	22	14	35	303	200	37	158	172	132	45	12	7.3
3	e137	14	33	243	160	35	122	160	122	39	12	7.1
4	e80	14	33	376	125	35	105	140	138	37	11	7.0
5	e55	16	32	245	105	43	92	153	163	38	11	6.8
6	e40	48	29	149	92	39	86	109	178	35	11	6.7
7	e37	38	28	141	81	35	97	92	175	33	11	16
8	e35	75	26	120	73	33	207	83	148	32	11	14
9	e34	83	26	105	66	52	396	99	117	30	11	10
10	32	113	45	85	60	88	209	137	118	29	11	10
11	27	160	75	74	56	168	210	142	98	28	12	32
12	24	278	303	182	53	258	189	148	90	27	12	17
13	22	145	181	117	50	1,090	186	144	99	28	11	11
14	21	133	313	155	48	698	162	170	86	30	10	47
15	20	86	425	99	47	327	136	142	72	25	9.6	23
16	19	150	256	80	61	216	129	102	70	23	9.5	58
17	18	103	159	72	60	163	145	91	77	21	9.5	36
18	18	519	108	75	52	131	122	84	71	20	9.3	77
19	19	1,150	84	72	50	108	107	88	56	20	9.0	95
20	18	285	71	65	80	122	120	87	57	19	8.8	33
21	17	156	61	61	95	141	145	110	86	18	8.7	22
22	17	107	55	118	79	298	147	207	85	17	8.6	18
23	16	82	49	359	58	182	126	243	66	17	8.5	16
24	16	66	45	215	48	126	155	341	52	16	8.3	14
25	15	57	53	202	45	106	131	282	51	15	8.2	13
26	15	52	54	1,110	43	99	117	184	56	15	8.2	12
27	17	48	90	329	39	90	110	192	57	15	8.3	11
28	20	45	75	193	39	82	111	232	52	14	8.0	11
29	17	42	55	178	---	81	132	208	50	14	7.8	10
30	15	39	51	241	---	331	151	205	102	13	7.6	9.9
31	14	---	46	546	---	692	---	198	---	13	7.4	---
TOTAL	883	4,132	2,933	6,369	2,238	5,942	4,547	4,898	2,878	794	303.3	658.1
MEAN	28.5	138	94.6	205	79.9	192	152	158	95.9	25.6	9.78	21.9
MAX	137	1,150	425	1,110	273	1,090	396	341	178	68	12	95
MIN	14	14	26	59	39	33	86	83	50	13	7.4	6.7
AC-FT	1,750	8,200	5,820	12,630	4,440	11,790	9,020	9,720	5,710	1,570	602	1,310
CFSM	1.54	7.43	5.11	11.1	4.31	10.3	8.18	8.53	5.18	1.38	0.53	1.18
IN.	1.77	8.30	5.89	12.79	4.49	11.93	9.13	9.83	5.78	1.59	0.61	1.32
CAL YR	2002	TOTAL 49,951	MEAN 137	MAX 1,520	MIN 14	AC-FT 99,080	CFSM 7.39	IN. 100.28				
WTR YR	2003	TOTAL 36,575.4	MEAN 100	MAX 1,150	MIN 6.7	AC-FT 72,550	CFSM 5.41	IN. 73.43				

e Estimated

12208000 MIDDLE FORK NOOKSACK RIVER NEAR DEMING, WA

LOCATION.--Lat 48°46'46", long 122°06'19", in lot 7 or 8, in SW ¼ sec.13, T.38 N., R.5 E., Whatcom County, Hydrologic Unit 17110004, on left bank 0.5 mi upstream from Heislors 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.

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.

REMARKS.--No estimated daily discharges. Records good 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.

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

AVERAGE DISCHARGE.--17 years (water years 1921, 1935, 1965-68, 1993-2003), 499 ft³/s, 92.41 in/yr, 361,200 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 maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 13	0700	*5,780	*6.89	No other peak greater than base discharge.			

Minimum discharge, 87 ft³/s, Nov. 3, 4, gage height, 1.71 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	93	213	330	900	188	800	483	601	558	360	220
2	144	92	199	1,400	629	188	530	472	501	427	320	248
3	506	90	190	1,080	514	181	420	434	501	372	315	267
4	254	90	188	1,620	445	178	412	420	623	369	268	265
5	205	92	185	1,130	406	215	404	488	762	411	294	253
6	192	287	174	581	359	222	387	361	852	421	314	250
7	187	283	166	508	326	195	507	342	943	444	296	302
8	171	411	160	422	302	177	948	313	867	430	296	216
9	172	459	160	368	280	313	1,490	325	696	405	325	182
10	171	352	269	338	260	403	715	390	655	486	260	211
11	155	543	409	329	250	691	689	438	563	540	272	300
12	142	1,060	1,150	712	239	1,030	598	466	550	532	238	212
13	139	716	792	429	230	4,120	594	462	645	509	225	180
14	134	526	1,260	647	223	2,530	519	505	578	441	238	311
15	140	333	1,710	370	220	1,320	432	457	486	403	284	215
16	146	664	1,090	330	306	808	402	375	491	393	295	339
17	147	526	647	319	329	647	433	364	598	357	308	229
18	140	612	444	315	275	508	392	342	614	374	314	320
19	140	2,640	352	303	254	405	346	348	484	396	295	386
20	135	1,330	336	283	399	493	422	334	423	406	250	236
21	132	683	296	276	479	598	470	378	468	405	275	196
22	133	463	270	479	410	1,500	469	588	455	409	270	216
23	125	342	247	1,320	298	759	433	734	380	411	228	203
24	118	305	231	727	251	506	527	1,130	340	374	201	191
25	113	290	303	575	230	391	433	993	372	348	223	204
26	110	266	353	2,540	217	370	387	645	509	352	256	227
27	108	252	477	1,170	201	377	399	626	619	373	223	267
28	117	240	345	672	199	368	395	866	557	385	214	270
29	107	233	269	579	---	348	443	761	619	435	244	269
30	97	226	278	644	---	872	482	730	962	437	261	249
31	94	---	258	1,440	---	1,840	---	737	---	439	252	---
TOTAL	4,838	14,499	13,421	22,236	9,431	22,741	15,878	16,307	17,714	13,042	8,414	7,434
MEAN	156	483	433	717	337	734	529	526	590	421	271	248
MAX	506	2,640	1,710	2,540	900	4,120	1,490	1,130	962	558	360	386
MIN	94	90	160	276	199	177	346	313	340	348	201	180
AC-FT	9,600	28,760	26,620	44,110	18,710	45,110	31,490	32,340	35,140	25,870	16,690	14,750
CFSM	2.13	6.59	5.91	9.79	4.60	10.0	7.22	7.18	8.06	5.74	3.70	3.38
IN.	2.46	7.36	6.81	11.28	4.79	11.54	8.06	8.28	8.99	6.62	4.27	3.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY)

	489	587	571	574	464	393	441	614	679	484	315	333
MEAN	489	587	571	574	464	393	441	614	679	484	315	333
MAX	1,272	1,154	940	965	855	734	739	1,039	1,202	839	573	796
(WY)	(1921)	(1996)	(1999)	(1997)	(1921)	(2003)	(1966)	(1997)	(1921)	(1954)	(1954)	(1920)
MIN	156	215	237	271	175	237	127	385	327	311	174	120
(WY)	(2003)	(1994)	(1993)	(1993)	(2001)	(1992)	(1967)	(1992)	(1996)	(1970)	(1994)	(1965)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1920 - 2003

ANNUAL TOTAL	191,783	165,955	
ANNUAL MEAN	525	455	499
HIGHEST ANNUAL MEAN			665
LOWEST ANNUAL MEAN			362
HIGHEST DAILY MEAN	4,030	Jan 7	4,120
LOWEST DAILY MEAN	90	Nov 3	90
ANNUAL SEVEN-DAY MINIMUM	93	Oct 30	93
ANNUAL RUNOFF (AC-FT)	380,400		329,200
ANNUAL RUNOFF (CFSM)	7.17		6.20
ANNUAL RUNOFF (INCHES)	97.33		84.22
10 PERCENT EXCEEDS	1,070		761
50 PERCENT EXCEEDS	351		368
90 PERCENT EXCEEDS	171		178

NOOKSACK RIVER BASIN

12209000 SOUTH FORK NOOKSACK RIVER NEAR WICKERSHAM, WA

LOCATION.--Lat 48°39'52", long 122°07'56", in lot 2, SW 1/4 SW 1/4 sec.26, T.37 N., R.5 E., Whatcom County, Hydrologic Unit 17110004, on left bank 0.5 mi upstream from Skookum Creek, 3.7 mi east of Wickersham, and at mile 14.8.

DRAINAGE AREA.--103 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to October 1977, June to September 1978, October 1980 to September 1995 (seasonal records), October 1995 to current year. Monthly discharge only for October 1933 to April 1934, published in WSP 1316.

REVISED RECORDS.--WSP 832: 1935-36.

GAGE.--Water-stage recorder. Elevation of gage is 385 ft above NGVD of 1929, from river-profile map. Prior to July 9, 1934, nonrecording gage, at same site and datum.

REMARKS.--Records good. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--51 years (water years 1935-77, 1996-2003), 747 ft³/s, 98.50 in/yr, 540,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Nov. 23, 1990, gage height, 13.20 ft, from rating curve extended above 11,000 ft³/s; minimum discharge, 59 ft³/s Oct. 20-25, 30, 31, 1987, gage height, 1.79 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 19	1700	*6,020	7.06	Mar 13	0900	5,450	6.79
Jan 26	1100	6,020	*7.09				

Minimum discharge, 76 ft³/s, Nov. 5, Sept. 5, 6, 7, gage height, 0.99 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	91	275	474	1,980	315	1,090	692	650	428	131	80
2	130	90	260	1,670	1,310	308	791	709	581	302	127	80
3	549	88	245	1,630	1,070	298	692	704	536	262	123	79
4	308	87	240	2,350	858	286	659	660	588	250	118	78
5	213	88	249	1,900	711	390	629	843	684	262	115	78
6	204	226	224	1,060	617	487	684	614	780	260	121	76
7	179	386	214	894	548	399	868	515	802	250	115	109
8	160	855	205	753	492	343	1,540	473	714	257	111	125
9	179	1,250	194	666	445	589	2,320	487	591	234	110	96
10	175	1,080	345	577	412	916	1,270	594	529	226	112	93
11	166	1,430	642	515	381	1,530	1,130	649	463	240	116	262
12	149	1,640	1,500	1,760	362	1,610	1,060	690	427	238	109	179
13	137	1,360	1,250	1,100	345	4,100	1,050	637	498	233	105	121
14	126	1,280	1,470	1,460	327	2,860	1,000	656	492	215	102	122
15	119	757	2,930	899	315	1,710	854	675	380	194	99	157
16	113	1,160	1,720	694	487	1,240	809	538	356	187	98	297
17	109	1,230	1,260	591	564	1,180	815	540	392	179	98	258
18	106	1,100	944	543	461	934	739	495	426	171	96	182
19	106	4,470	718	513	417	755	643	488	346	169	95	317
20	107	2,190	595	475	820	873	637	472	316	169	94	198
21	104	1,160	506	466	972	1,170	724	549	522	164	93	145
22	102	831	446	843	794	2,960	717	655	492	161	90	122
23	99	641	403	2,560	572	1,700	685	883	399	158	89	109
24	97	524	371	1,540	465	1,130	940	1,150	319	153	88	101
25	96	446	406	1,260	414	886	844	1,120	303	147	87	95
26	95	395	559	4,490	379	870	684	763	329	142	87	89
27	95	361	673	2,020	351	784	610	707	369	139	87	87
28	113	330	741	1,290	342	677	607	894	348	137	85	85
29	108	305	520	1,120	---	622	663	842	336	134	84	83
30	98	291	462	1,220	---	800	709	825	551	135	83	81
31	94	---	422	2,570	---	1,870	---	812	---	134	82	---
TOTAL	4,601	26,142	20,989	39,903	17,211	34,592	26,463	21,331	14,519	6,330	3,150	3,984
MEAN	148	871	677	1,287	615	1,116	882	688	484	204	102	133
MAX	549	4,470	2,930	4,490	1,980	4,100	2,320	1,150	802	428	131	317
MIN	94	87	194	466	315	286	607	472	303	134	82	76
AC-FT	9,130	51,850	41,630	79,150	34,140	68,610	52,490	42,310	28,800	12,560	6,250	7,900
CFSM	1.44	8.46	6.57	12.5	5.97	10.8	8.56	6.68	4.70	1.98	0.99	1.29
IN.	1.66	9.44	7.58	14.41	6.22	12.49	9.56	7.70	5.24	2.29	1.14	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

	MEAN	1,013	1,052	947	790	704	841	1,064	874	447	207	268
MAX	1,806	3,341	2,164	2,092	1,847	1,745	1,456	1,666	1,740	1,075	501	791
(WY)	(1968)	(1991)	(1976)	(1953)	(1951)	(1972)	(1959)	(1936)	(1937)	(1999)	(1954)	(1959)
MIN	68.6	126	500	194	288	324	401	540	263	123	81.5	79.7
(WY)	(1988)	(1937)	(1953)	(1937)	(1956)	(1955)	(1975)	(1994)	(1992)	(1940)	(1958)	(1998)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1934 - 2003
ANNUAL TOTAL	287,738	219,215	
ANNUAL MEAN	788	601	747
HIGHEST ANNUAL MEAN			1,001
LOWEST ANNUAL MEAN			488
HIGHEST DAILY MEAN	9,240	4,490	14,000
LOWEST DAILY MEAN	87	76	59
ANNUAL SEVEN-DAY MINIMUM	91	79	60
ANNUAL RUNOFF (AC-FT)	570,700	434,800	540,900
ANNUAL RUNOFF (CFSM)	7.65	5.83	7.25
ANNUAL RUNOFF (INCHES)	103.92	79.17	98.50
10 PERCENT EXCEEDS	1,520	1,260	1,480
50 PERCENT EXCEEDS	531	446	560
90 PERCENT EXCEEDS	120	96	149

NOOKSACK RIVER BASIN

12209000 SOUTH FORK NOOKSACK RIVER NEAR WICKERSHAM, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 2001 to current year.

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

REMARKS.--Records good except those for Mar. 8, 9, Sept. 19, and Oct. 1 to Nov. 12, which are fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 23.5°C, July 30, 2003; minimum, 0.1°C, Mar. 20, 2002.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C July 30; minimum, 1.0°C Nov. 3.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.8	7.8	9.2	3.3	1.3	2.3	5.1	4.2	4.6	4.4	3.5	4.1
2	10.0	8.2	9.1	3.1	1.2	2.1	6.1	5.0	5.6	4.9	4.2	4.5
3	10.8	9.3	10.0	3.0	1.0	2.0	5.7	4.0	4.7	5.1	4.1	4.6
4	11.6	10.3	10.9	3.3	1.1	2.1	5.6	4.1	4.9	5.7	4.3	5.0
5	11.1	10.4	10.7	5.8	2.8	4.1	5.8	4.8	5.4	5.2	4.4	4.8
6	12.5	10.2	11.2	7.2	5.8	6.6	5.4	3.7	4.6	4.6	3.8	4.2
7	12.2	10.7	11.4	7.2	6.4	6.8	4.0	2.9	3.5	4.3	3.7	4.0
8	12.0	10.3	11.2	7.2	6.6	7.0	3.5	2.5	3.0	4.0	3.3	3.6
9	11.8	10.6	11.2	6.8	6.5	6.7	4.2	2.6	3.2	3.7	3.0	3.3
10	11.0	8.7	10.2	6.8	6.3	6.6	5.4	4.2	5.1	3.0	2.2	2.5
11	9.9	7.7	8.5	7.2	6.6	6.9	5.4	5.0	5.1	4.4	2.1	2.9
12	8.8	6.3	7.4	7.3	7.0	7.2	6.2	5.4	5.8	4.8	4.1	4.6
13	8.8	5.9	7.2	7.3	6.8	7.1	5.9	5.3	5.5	5.5	3.9	4.6
14	8.9	6.0	7.3	7.3	6.8	7.1	6.3	5.9	6.1	5.5	4.2	4.7
15	9.4	6.4	7.7	7.1	6.3	6.8	6.1	5.9	6.0	4.2	3.4	3.8
16	9.9	7.0	8.3	7.1	6.3	6.9	6.0	5.3	5.7	4.6	3.7	4.1
17	9.9	7.2	8.4	6.9	6.3	6.6	5.3	5.0	5.1	4.3	3.4	3.8
18	9.7	7.1	8.4	6.8	6.5	6.7	5.1	4.2	4.8	4.1	3.2	3.6
19	10.2	8.7	9.4	7.5	6.7	7.1	4.7	4.2	4.4	4.8	3.5	4.1
20	11.2	9.6	10.3	7.8	7.4	7.6	4.8	4.1	4.5	5.6	4.8	5.1
21	11.3	10.3	10.8	8.2	7.2	7.8	4.6	3.9	4.2	4.9	4.2	4.5
22	11.5	10.1	10.8	8.5	8.1	8.3	4.9	4.1	4.5	5.5	4.6	4.9
23	10.1	7.9	8.9	8.3	6.1	7.6	4.1	2.3	3.0	5.7	5.1	5.4
24	8.7	6.8	7.8	6.1	4.4	5.1	3.1	2.0	2.4	5.6	5.2	5.4
25	7.6	5.6	6.6	4.4	3.6	4.0	4.3	3.1	3.8	6.5	5.5	5.9
26	7.6	6.3	6.9	4.2	3.3	3.7	4.3	3.4	4.0	6.6	5.5	6.0
27	6.9	5.3	6.1	4.6	3.5	3.9	4.4	3.4	3.8	5.8	5.2	5.5
28	7.9	6.9	7.4	5.3	4.0	4.6	3.8	3.1	3.5	5.5	4.7	5.1
29	7.4	5.0	6.6	5.4	4.5	4.8	3.6	3.1	3.3	5.1	4.4	4.7
30	5.0	3.0	3.8	5.5	4.4	4.8	3.9	3.2	3.5	5.7	4.8	5.2
31	3.6	1.8	2.7	---	---	---	3.6	3.3	3.4	5.7	5.2	5.5
MONTH	12.5	1.8	8.6	8.5	1.0	5.7	6.3	2.0	4.4	6.6	2.1	4.5
	FEBRUARY			MARCH			APRIL			MAY		
1	5.4	4.8	5.2	5.0	2.8	3.7	5.7	4.4	5.0	9.3	6.9	8.1
2	5.4	5.1	5.3	4.3	3.3	3.8	6.2	4.0	5.1	9.8	6.6	8.2
3	5.3	4.4	5.0	5.9	3.9	4.7	5.2	3.3	4.3	9.0	6.8	7.7
4	4.4	3.2	3.7	5.2	4.2	4.7	5.5	2.9	4.2	8.2	6.7	7.4
5	3.8	2.8	3.3	4.7	3.9	4.5	4.8	3.4	4.3	8.0	5.8	6.9
6	3.8	2.6	3.1	3.9	2.7	3.2	6.4	4.0	5.0	7.7	5.1	6.6
7	3.7	2.5	3.0	4.2	2.4	3.1	5.6	4.7	5.1	9.0	5.1	7.0
8	3.5	2.3	2.9	---	---	2.9	5.9	4.3	5.1	9.9	6.1	7.9
9	3.1	2.4	2.8	---	---	3.6	5.9	4.1	5.1	10.8	7.0	8.8
10	3.7	2.6	3.0	4.8	3.9	4.3	6.1	4.7	5.4	11.2	7.0	9.2
11	3.4	1.9	2.5	4.4	3.6	4.2	7.6	5.4	6.3	11.6	7.6	9.7
12	3.8	2.0	2.7	5.2	3.6	4.3	6.5	4.9	5.6	10.5	7.6	9.3
13	4.3	2.4	3.2	4.8	3.2	3.8	6.1	4.9	5.5	10.7	6.7	8.7
14	5.0	3.6	4.2	4.7	4.1	4.4	7.7	4.9	6.1	9.8	7.2	8.3
15	5.2	3.9	4.6	5.9	4.4	5.2	7.2	5.4	6.4	7.3	5.9	6.6
16	5.3	4.6	5.0	5.7	4.7	5.2	7.4	5.7	6.6	7.8	5.4	6.4
17	4.9	4.0	4.4	5.8	4.1	5.1	7.1	5.8	6.5	7.3	5.5	6.3
18	5.2	3.8	4.4	5.2	4.5	4.8	7.0	5.3	6.1	9.3	5.7	7.3
19	5.3	4.5	4.9	5.4	3.9	4.6	7.5	5.4	6.5	10.1	5.8	7.9
20	5.0	4.2	4.5	5.6	5.0	5.3	9.0	6.0	7.4	9.0	7.7	8.2
21	4.6	3.9	4.2	5.4	4.5	5.0	8.1	6.8	7.3	9.8	7.2	8.5
22	4.8	3.8	4.2	5.2	4.1	4.5	7.1	6.3	6.8	9.3	7.9	8.6
23	3.9	2.4	3.2	4.9	3.8	4.2	6.8	5.8	6.3	10.7	7.6	9.1
24	3.0	1.3	2.1	5.2	3.0	4.2	6.5	5.3	6.0	10.0	8.0	9.1
25	3.3	1.1	2.1	6.0	4.1	5.1	8.3	4.6	6.2	8.8	7.1	7.9
26	4.2	2.0	3.0	5.3	4.3	4.9	7.9	4.9	6.5	10.7	6.6	8.6
27	4.4	2.4	3.3	5.8	4.1	4.9	8.8	6.2	7.4	12.2	8.6	10.4
28	4.7	3.2	3.8	6.4	3.6	5.1	9.7	5.6	7.8	11.1	8.6	9.7
29	---	---	---	6.9	5.4	6.2	9.3	6.9	8.1	12.8	7.9	10.3
30	---	---	---	6.8	5.8	6.3	8.8	6.7	7.8	12.1	8.5	10.3
31	---	---	---	5.8	4.5	5.3	---	---	---	11.0	8.6	9.8
MONTH	5.4	1.1	3.7	6.9	2.4	4.6	9.7	2.9	6.1	12.8	5.1	8.3

12209490 SKOOKUM CREEK ABOVE DIVERSION NEAR WICKERSHAM, WA

LOCATION.--Lat 48°40'18", long 122°08'18", in NE 1/4 NE 1/4 sec.27, T.37 N., R.5 E., Whatcom County, Hydrologic Unit 17110004, on right bank, 200 ft upstream of hatchery diversion, 3.6 mi northeast of Wickersham, and at mile 0.25.

DRAINAGE AREA.--23.0 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good, except estimated daily discharges, which are poor. No regulation or diversion upstream from station. Records for water years 1992-1998 are available in the files of Devine Tarbell & Associates, Bellingham, Washington.

AVERAGE DISCHARGE.--5 years (water years 1999-2003) 144 ft³/s, 84.83 in/yr, 104,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,190 ft³/s Mar. 13, 2003, gage height 7.62 ft; minimum discharge, 14 ft³/s, Oct. 1, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,190 ft³/s Mar. 13, gage height, 7.62 ft, from rating curve extended above 1,360 ft³/s; minimum discharge, 16 ft³/s Nov. 2-4, Sept. 6,7.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	18	45	99	e690	56	208	112	111	103	33	18
2	26	18	43	567	e620	56	158	115	97	73	32	18
3	135	17	41	340	e585	54	137	115	93	62	30	17
4	54	17	42	820	e500	53	129	111	100	59	29	18
5	43	18	42	330	e390	59	121	131	112	62	28	17
6	41	70	38	182	e300	58	118	100	128	59	30	17
7	36	71	36	e163	e215	53	247	86	130	56	28	33
8	33	140	35	e120	e100	48	397	79	120	55	27	25
9	38	167	36	e95	e85	114	654	84	104	52	27	20
10	40	130	87	e90	e80	144	261	95	96	53	27	21
11	36	137	132	e85	e75	238	240	102	85	55	26	39
12	31	264	303	e525	e70	285	208	106	79	56	25	27
13	28	160	214	e205	e60	1,720	205	102	98	59	24	22
14	27	150	286	e415	e57	730	173	108	87	54	23	36
15	25	96	637	e175	e53	351	148	97	74	49	22	28
16	24	283	291	e160	e90	223	137	87	72	46	23	82
17	23	178	194	e135	e100	201	140	96	77	43	23	44
18	22	146	145	e105	e90	166	131	98	75	42	22	34
19	23	739	119	e95	72	143	120	107	65	42	22	43
20	23	277	104	e83	112	202	122	98	65	41	21	33
21	22	155	90	e75	143	257	128	108	120	42	21	28
22	21	120	80	e390	123	915	122	130	125	41	21	26
23	20	98	71	e885	91	308	115	158	90	39	20	24
24	20	81	66	e675	76	198	176	213	68	38	20	23
25	19	70	83	e550	70	160	147	178	64	36	19	22
26	19	63	100	e1,140	66	155	123	128	71	35	19	21
27	19	58	145	e695	61	142	111	127	77	35	20	20
28	27	54	126	e580	61	128	112	155	74	34	19	20
29	24	51	93	e490	---	125	121	136	74	34	18	20
30	20	48	86	e515	---	302	121	133	154	34	18	19
31	18	---	77	e855	---	458	---	130	---	34	18	---
TOTAL	968	3,894	3,887	11,639	5,035	8,102	5,330	3,625	2,785	1,523	735	815
MEAN	31.2	130	125	375	180	261	178	117	92.8	49.1	23.7	27.2
MAX	135	739	637	1,140	690	1,720	654	213	154	103	33	82
MIN	18	17	35	75	53	48	111	79	64	34	18	17
AC-FT	1,920	7,720	7,710	23,090	9,990	16,070	10,570	7,190	5,520	3,020	1,460	1,620
CFSM	1.36	5.64	5.45	16.3	7.82	11.4	7.72	5.08	4.04	2.14	1.03	1.18
IN.	1.57	6.30	6.29	18.82	8.14	13.10	8.62	5.86	4.50	2.46	1.19	1.32
CAL YR	2002	TOTAL 49,914	MEAN 137	MAX 1,840	MIN 17	AC-FT 99,000	CFSM 5.95	IN. 80.73				
WTR YR	2003	TOTAL 48,338	MEAN 132	MAX 1,720	MIN 17	AC-FT 95,880	CFSM 5.76	IN. 78.18				

e Estimated

NOOKSACK RIVER BASIN

12210500 NOOKSACK RIVER AT DEMING, WA

LOCATION.--Lat 48°48'38", long 122°12'13", in lot 12, NE ¼ SE ¼ sec.6, T.38 N., R.5 E., Whatcom County, Hydrologic Unit 17110004, on left bank 800 ft downstream from South Fork, 1.1 mi southeast of Deming, and at mile 36.6.

DRAINAGE AREA.--584 mi², includes 5 mi² in Canada.

PERIOD OF RECORD.--September 1910 to March 1911 (gage heights only), July 1935 to September 1957, October 1957 to September 1964 (discharges above 3,500 ft³/s only), October 1964 to current year. Published as "near Deming" 1910-11.

REVISED RECORDS.--WSP 1286: 1951. WSP 1736: 1937(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 204.2 ft above NGVD of 1929. Prior to Dec. 5, 1910, nonrecording gage at site 1.1 mi downstream at different datum. Dec. 5, 1910, to Mar. 31, 1911, nonrecording gage at site 5 mi downstream at different datum. July 20 to Sept. 19, 1935, nonrecording gage at same site and datum.

REMARKS.--Records poor. Slight regulation by powerplant at Excelsior. Since February 1962, City of Bellingham diverts at times up to about 100 ft³/s from the Middle Fork for municipal use. Summer flows augmented by glacier melt at source. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1936-57, 1965-2003), 3,339 ft³/s, 77.69 in/yr, 2,419,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft³/s Nov. 29, 1995, gage height, 14.80 ft; maximum gage height, 15.89 ft Dec. 3, 1975; minimum daily discharge, 430 ft³/s Oct. 29, Nov. 9, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak of Mar. 15, 1908, reportedly reached a stage of 20 ft, datum then in use. Peak of Feb. 27, 1932, reached a stage of 16.8 ft, from floodmarks, discharge, 49,300 ft³/s. Peak of November 1909 reached a stage about equal to that of the 1932 peak.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 19	1930	18,100	9.51	Mar 13	1030	20,100	10.07
Jan 26	1445	*20,900	*10.24				

Minimum discharge, 577 ft³/s, Nov. 4, 5, gage height, 2.07 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,040	606	1,720	1,800	6,440	1,670	5,330	2,940	3,700	3,560	2,190	1,460
2	961	601	1,630	4,940	5,090	1,630	4,110	3,050	3,390	2,680	2,000	1,480
3	2,060	591	1,570	5,010	4,350	1,600	3,610	3,090	3,170	2,330	1,880	1,590
4	1,590	580	1,520	6,050	3,690	1,550	3,480	2,850	3,320	2,260	1,770	1,650
5	1,200	580	1,520	6,980	3,260	1,630	3,270	3,240	3,730	2,430	1,810	1,580
6	1,120	842	1,460	4,180	2,910	1,800	3,200	2,700	4,230	2,460	1,890	1,540
7	1,080	1,700	1,410	3,540	2,660	1,660	3,270	2,440	4,540	2,510	1,770	1,730
8	1,020	1,840	1,380	3,070	2,460	1,550	4,670	2,270	4,520	2,530	1,750	1,640
9	998	3,000	1,360	2,720	2,290	1,900	6,910	2,220	4,020	2,340	1,820	1,400
10	973	2,520	1,610	2,410	2,160	2,600	4,780	2,590	3,790	2,450	1,740	1,340
11	935	3,240	2,100	2,190	2,050	3,560	4,330	2,730	3,450	2,720	1,740	1,730
12	910	4,030	4,230	3,970	1,960	4,540	4,050	2,900	3,230	2,770	1,600	1,600
13	899	4,910	4,630	3,370	1,890	15,400	3,910	2,850	3,370	2,760	1,510	1,370
14	869	3,530	4,270	4,240	1,830	13,200	3,730	2,890	3,440	2,530	1,510	1,500
15	836	2,620	8,920	e3,360	1,780	8,220	3,370	2,960	2,920	2,340	1,620	1,510
16	816	2,760	6,010	2,470	2,060	6,040	3,190	2,580	2,780	2,260	1,730	1,670
17	802	3,720	4,680	2,160	2,420	5,320	3,260	2,530	2,970	2,080	1,700	1,640
18	789	2,920	3,580	2,030	2,170	4,480	3,070	2,360	3,330	2,060	1,730	1,520
19	771	12,600	2,880	1,920	1,980	3,850	2,820	2,300	2,990	2,170	1,730	2,070
20	756	9,860	2,480	1,830	2,620	3,740	2,780	2,210	2,630	2,220	1,580	1,610
21	746	5,520	2,170	1,750	3,410	4,220	2,940	2,280	2,740	2,220	1,600	1,390
22	734	4,200	1,940	2,320	3,210	7,360	2,980	2,740	2,700	2,220	1,650	1,600
23	725	3,260	1,780	6,090	2,540	5,620	2,900	3,420	2,410	2,250	1,520	1,380
24	699	2,680	1,660	4,870	2,190	4,340	3,260	4,540	2,170	2,170	1,400	1,320
25	675	2,380	1,740	3,900	2,020	3,710	3,260	5,340	2,200	2,010	1,420	1,350
26	659	2,160	2,130	14,000	1,900	3,500	2,900	4,020	2,610	1,990	1,560	1,410
27	652	2,010	2,300	9,640	1,790	3,320	2,740	3,550	3,160	2,040	1,510	1,510
28	682	1,910	2,590	6,180	1,760	3,080	2,650	4,150	3,180	2,060	1,410	1,560
29	682	1,840	2,000	5,090	---	2,880	2,740	4,190	3,200	2,160	1,490	1,570
30	637	1,800	1,870	5,020	---	3,380	2,940	3,980	3,960	2,270	1,550	1,510
31	617	---	1,770	7,390	---	8,130	---	4,120	---	2,310	1,540	---
TOTAL	27,933	90,810	80,910	134,490	74,890	135,480	106,450	96,030	97,850	73,160	51,720	46,010
MEAN	901	3,027	2,610	4,338	2,675	4,370	3,548	3,098	3,262	2,360	1,668	1,534
MAX	2,060	12,600	8,920	14,000	6,440	15,400	6,910	5,340	4,540	3,560	2,190	2,070
MIN	617	580	1,360	1,750	1,760	1,550	2,650	2,210	2,170	1,990	1,400	1,320
AC-FT	55,410	180,100	160,500	266,800	148,500	268,700	211,100	190,500	194,100	145,100	102,600	91,260
CFSM	1.54	5.18	4.47	7.43	4.58	7.48	6.08	5.30	5.59	4.04	2.86	2.63
IN.	1.78	5.78	5.15	8.57	4.77	8.63	6.78	6.12	6.23	4.66	3.29	2.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

	2,626	4,006	4,226	3,683	3,335	2,963	3,326	4,413	4,621	3,314	1,979	1,719
MEAN	2,626	4,006	4,226	3,683	3,335	2,963	3,326	4,413	4,621	3,314	1,979	1,719
MAX	7,237	10,030	9,668	7,767	7,208	7,347	5,323	6,750	7,815	6,180	3,609	3,888
(WY)	(1968)	(1991)	(1976)	(1997)	(1961)	(1972)	(1988)	(1936)	(1937)	(1974)	(1999)	(1978)
MIN	595	672	1,265	957	1,349	1,585	1,584	2,669	2,368	1,652	1,159	941
(WY)	(1988)	(1937)	(1986)	(1937)	(1936)	(1985)	(1975)	(1978)	(1940)	(1940)	(1994)	(1989)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1935 - 2003

ANNUAL TOTAL	1,361,546		1,015,733	
ANNUAL MEAN	3,730		2,783	
HIGHEST ANNUAL MEAN				3,339
LOWEST ANNUAL MEAN				4,964
HIGHEST DAILY MEAN	32,300	Jan 8	15,400	Mar 13
LOWEST DAILY MEAN	580	Nov 4	580	Nov 4
ANNUAL SEVEN-DAY MINIMUM	602	Oct 30	602	Oct 30
ANNUAL RUNOFF (AC-FT)	2,701,000		2,015,000	
ANNUAL RUNOFF (CFSM)	6.39		4.77	
ANNUAL RUNOFF (INCHES)	86.73		64.70	
10 PERCENT EXCEEDS	6,910		4,540	6,000
50 PERCENT EXCEEDS	2,880		2,330	2,700
90 PERCENT EXCEEDS	1,080		1,330	1,270

e Estimated

12210900 ANDERSON CREEK AT SMITH ROAD NEAR GOSHEN, WA

LOCATION.--Lat 48°49'58", long 122°20'16", in SW ¼ SE ¼ sec.30, T.39 N., R.4 E., Whatcom County, Hydrologic Unit 17110004, on left bank on the downstream side of Smith Road bridge, 1.5 mi south of Goshen and at mile 3.0.

DRAINAGE AREA.--8.96 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. No known diversions or regulation upstream of station.

AVERAGE DISCHARGE.--5 years (water years 1999-2003) 19.5 ft³/s, 29.58 in/yr, 14,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 595 ft³/s Dec. 14, 2001, gage height, 10.22 ft; minimum discharge, no flow many days in August and September 2002 and 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 210 ft³/s Jan. 2, gage height 7.94 ft; minimum discharge, no flow Aug. 27 to Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	1.1	39	27	2.0	51	6.5	3.6	2.4	0.19	0.00
2	0.93	1.1	0.94	149	22	2.0	30	5.7	3.1	1.3	0.17	0.00
3	2.0	1.0	0.87	99	14	2.4	24	5.3	2.7	1.0	0.22	0.00
4	1.6	0.21	0.89	81	6.2	1.6	17	7.8	2.3	0.86	0.24	0.00
5	1.2	0.17	0.90	60	5.3	1.5	14	26	2.0	0.78	0.29	0.00
6	1.0	0.69	0.81	63	5.6	1.2	18	11	1.8	0.77	0.68	0.00
7	0.97	1.1	0.74	48	3.8	1.0	15	8.9	1.7	0.62	1.0	0.00
8	0.81	1.6	0.70	27	3.2	0.86	13	8.7	1.4	0.57	0.86	0.00
9	0.87	2.3	0.76	11	3.5	7.2	49	6.5	1.4	0.56	1.2	0.00
10	0.81	2.9	1.4	7.1	2.3	9.2	29	5.4	1.4	0.49	1.6	0.00
11	0.80	3.4	14	7.9	1.6	31	20	4.7	1.4	0.37	1.0	0.00
12	0.67	6.7	26	94	0.78	42	18	4.0	1.2	0.35	0.13	0.00
13	0.64	5.6	51	76	0.43	37	25	3.4	1.5	1.2	0.16	0.00
14	0.49	3.9	22	62	0.05	28	20	3.7	1.3	1.5	0.12	0.00
15	0.66	2.3	84	22	0.12	18	16	3.5	1.1	0.81	0.11	0.00
16	0.63	2.3	96	15	7.1	12	16	3.2	0.94	0.64	0.12	0.32
17	0.29	2.9	61	10	49	13	19	17	0.82	0.49	0.13	0.35
18	0.24	2.1	32	7.8	22	13	13	13	0.73	0.39	0.12	0.19
19	0.41	57	20	5.8	6.7	10	9.9	8.4	0.70	0.27	0.11	0.52
20	0.52	34	13	4.7	39	10	8.7	6.5	1.0	0.24	0.14	0.30
21	0.54	11	9.2	4.7	77	15	8.3	6.4	1.6	0.23	0.16	0.20
22	0.38	6.1	6.9	14	40	49	7.6	7.0	1.7	0.26	0.06	0.12
23	0.29	4.1	5.4	69	16	48	11	6.7	1.4	0.23	0.05	0.08
24	0.33	3.0	4.6	39	8.1	30	31	8.8	1.0	0.27	0.03	0.07
25	0.31	2.4	5.7	19	4.7	20	39	16	0.93	0.29	0.03	0.07
26	0.33	2.0	18	45	3.5	23	22	9.9	0.92	0.28	0.03	0.04
27	0.39	1.8	41	34	2.6	26	16	7.6	0.79	0.29	0.00	0.05
28	0.58	1.5	38	18	2.7	19	13	6.1	0.70	0.28	0.00	0.05
29	0.73	1.4	20	28	---	15	9.7	5.0	0.53	0.20	0.00	0.04
30	0.78	1.3	23	32	---	24	7.7	4.3	3.4	0.17	0.00	0.03
31	0.97	---	18	35	---	85	---	4.0	---	0.19	0.00	---
TOTAL	22.37	166.87	617.91	1,227.0	374.28	596.96	590.9	241.0	45.06	18.30	8.95	2.43
MEAN	0.72	5.56	19.9	39.6	13.4	19.3	19.7	7.77	1.50	0.59	0.29	0.081
MAX	2.0	57	96	149	77	85	51	26	3.6	2.4	1.6	0.52
MIN	0.24	0.17	0.70	4.7	0.05	0.86	7.6	3.2	0.53	0.17	0.00	0.00
AC-FT	44	331	1,230	2,430	742	1,180	1,170	478	89	36	18	4.8
CFSM	0.08	0.62	2.22	4.42	1.49	2.15	2.20	0.87	0.17	0.07	0.03	0.01
IN.	0.09	0.69	2.57	5.09	1.55	2.48	2.45	1.00	0.19	0.08	0.04	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	4.91	26.7	44.8	43.1	33.3	34.5	22.7	13.5	8.00	1.74	0.60	0.78
MAX	12.1	56.1	70.6	64.1	62.1	53.7	31.0	28.0	16.7	5.03	1.14	1.66
(WY)	(2002)	(2000)	(2002)	(2002)	(1999)	(1999)	(2002)	(2000)	(2000)	(1999)	(2001)	(2000)
MIN	0.72	5.56	19.9	27.4	13.4	19.3	13.2	6.52	1.50	0.59	0.10	0.081
(WY)	(2003)	(2003)	(2003)	(2001)	(2003)	(2003)	(2001)	(2002)	(2003)	(2003)	(2002)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1999 - 2003

ANNUAL TOTAL	6,402.20	3,912.03	
ANNUAL MEAN	17.5	10.7	19.5
HIGHEST ANNUAL MEAN			25.1
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	381	149	381
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		210	595
MAXIMUM PEAK STAGE		7.94	10.22
INSTANTANEOUS LOW FLOW		0.00	0.00
ANNUAL RUNOFF (AC-FT)	12,700	7,760	14,130
ANNUAL RUNOFF (CFSM)	1.96	1.20	2.18
ANNUAL RUNOFF (INCHES)	26.58	16.24	29.58
10 PERCENT EXCEEDS	46	32	54
50 PERCENT EXCEEDS	3.5	2.1	6.7
90 PERCENT EXCEEDS	0.21	0.12	0.45

12212050 FISHTRAP CREEK AT FRONT STREET AT LYNDEN, WA

LOCATION.--Lat 48°56'22", long 122°28'46", in SW ¼ SW ¼ sec.19, T.40 N., R.3 E., Whatcom County, Hydrologic Unit 17110004, on right bank on downstream side of Front Street bridge, and at mile 2.9.

DRAINAGE AREA.--37.8 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 54 feet above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--5 years (water years 1999-2003) 50.1 ft³/s, 23.23 in/yr, 46,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 701 ft³/s Dec. 14, 2001, gage height, 7.71 ft from rating extended above 510 ft³/s; minimum daily discharge, 2.5 ft³/s Sept. 9, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 450 ft³/s Nov. 19, gage height, 6.06 ft; minimum daily discharge, 2.5 ft³/s Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	6.1	29	77	e90	47	151	50	32	21	e5.0	e2.9
2	4.1	6.0	27	215	e85	49	117	48	31	17	e5.0	e2.8
3	6.2	5.9	26	160	e80	47	96	47	30	15	e5.0	e2.8
4	5.2	5.8	26	214	e75	44	87	55	29	14	e5.5	e2.7
5	5.2	6.3	26	170	e70	43	79	59	28	13	e6.0	e2.7
6	5.5	22	24	125	e70	41	89	52	26	13	e7.5	e2.8
7	6.0	30	23	e110	e65	40	84	48	25	12	e9.0	e2.7
8	9.0	43	22	e105	e50	37	131	44	25	11	e8.5	2.6
9	6.7	85	23	e100	e50	43	158	42	25	11	e10	2.5
10	5.8	73	39	e70	e45	89	121	40	25	10	e15	3.0
11	5.3	130	66	e80	e40	133	94	40	26	9.5	e9.0	2.8
12	5.1	133	138	e240	e35	188	86	39	25	9.3	e5.0	2.6
13	5.2	114	137	e195	e30	185	94	37	24	21	e5.0	2.7
14	5.3	116	119	e145	e30	127	110	37	23	45	e4.5	3.8
15	5.2	75	212	e105	e30	97	84	36	23	29	e4.0	3.3
16	5.1	99	160	e90	e60	84	88	35	21	21	e4.5	5.0
17	5.3	97	132	e85	e115	72	94	57	20	e12	e4.5	4.4
18	5.5	126	99	e75	e80	70	80	52	19	e10	e4.0	7.0
19	5.3	366	79	e65	e60	73	71	45	18	e9.0	e4.0	6.1
20	5.5	183	68	e60	e100	73	66	42	20	e7.5	e5.0	6.6
21	5.0	112	60	e55	e205	90	62	42	21	e6.5	e5.5	5.1
22	5.4	82	55	e85	90	166	59	44	23	e6.0	e4.0	4.4
23	6.1	66	50	e130	70	163	65	43	24	e6.0	e3.8	4.0
24	5.8	54	47	e100	60	139	95	42	21	e6.5	e3.6	4.1
25	5.7	46	54	e90	55	105	121	44	18	e6.0	e3.4	4.4
26	5.6	42	62	e105	53	97	87	41	16	e6.0	e3.0	4.0
27	5.8	38	93	e95	48	91	74	38	15	e6.0	e3.0	3.8
28	7.9	35	92	e85	48	81	65	37	14	e5.5	e3.0	e3.8
29	8.3	33	68	e90	---	72	58	35	14	e5.5	e2.9	3.8
30	6.7	31	66	e95	---	83	53	34	18	e5.0	e2.8	3.5
31	6.1	---	62	e100	---	189	---	33	---	e5.0	e2.8	---
TOTAL	179.1	2,261.1	2,184	3,516	1,889	2,858	2,719	1,338	679	374.3	163.8	112.7
MEAN	5.78	75.4	70.5	113	67.5	92.2	90.6	43.2	22.6	12.1	5.28	3.76
MAX	9.0	366	212	240	205	189	158	59	32	45	15	7.0
MIN	4.1	5.8	22	55	30	37	53	33	14	5.0	2.8	2.5
AC-FT	355	4,480	4,330	6,970	3,750	5,670	5,390	2,650	1,350	742	325	224
CFSM	0.15	1.99	1.86	3.00	1.78	2.44	2.40	1.14	0.60	0.32	0.14	0.10
IN.	0.18	2.23	2.15	3.46	1.86	2.81	2.68	1.32	0.67	0.37	0.16	0.11
CAL YR	2002	TOTAL 20,688.9	MEAN 56.7	MAX 546	MIN 3.4	AC-FT 41,040	CFSM 1.50	IN. 20.36				
WTR YR	2003	TOTAL 18,274.0	MEAN 50.1	MAX 366	MIN 2.5	AC-FT 36,250	CFSM 1.32	IN. 17.98				

e Estimated

NOOKSACK RIVER BASIN

12213100 NOOKSACK RIVER AT FERNDAL, WA

LOCATION.--Lat 48°50'42", long 122°35'17", in NE 1/4 NW 1/4 sec.29, T.39 N., R.2 E., Whatcom County, Hydrologic Unit 17110004, on right bank 300 ft downstream from Main Street bridge at Ferndale, and at mile 5.8.

DRAINAGE AREA.--786 mi², of which 48.9 mi² is in Canada.

PERIOD OF RECORD.--Annual maximum stage only, water years 1918, 1922, 1932, 1935. Annual maximum, water years 1946, 1950-66. October 1966 to current year.

REVISED RECORDS.--WDR WA-83-1: 1971(M), 1976(M), WDR WA-94-1: 1976(M), 1980(M), 1984(M), 1990(M), 1991, 1991(M).

GAGE.--Water-stage recorder. Datum of gage is 4.61 ft above NGVD of 1929. Prior to July 18, 1968, at site 220 ft upstream at datum 4.21 ft higher.

REMARKS.--Records good. City of Bellingham diverts up to about 100 ft³/s at times from Middle Fork Nooksack River for municipal use. Cities of Ferndale and Lynden divert about 10 ft³/s for municipal use. Numerous small diversions located upstream for irrigation. Chemical analyses October 1961 to September 1970. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--37 years (water years 1967-2003), 3,800 ft³/s, 65.69 in/yr, 2,753,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded discharge, 57,000 ft³/s Nov. 10, 1990, gage height, 23.56 ft; minimum discharge, 463 ft³/s Oct. 26, Nov. 9, 10, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 20	0330	18,600	15.11	Mar 13	1915	19,200	15.37
Jan 26	2330	*20,100	*15.73				

Minimum discharge, 574 ft³/s, Nov. 4, 5, gage height, 2.66 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,090	608	1,690	2,210	8,490	1,960	7,190	3,140	4,330	4,500	2,140	1,190
2	1,020	600	1,590	5,580	6,640	1,860	5,270	3,250	3,890	3,030	1,920	1,130
3	1,310	593	1,500	7,650	5,550	1,840	4,380	3,340	3,530	2,490	1,780	1,210
4	1,880	579	1,430	6,050	4,710	1,770	4,040	3,100	3,530	2,310	1,660	1,320
5	1,310	575	1,410	10,800	4,130	1,750	3,780	3,490	3,900	2,360	1,600	1,290
6	1,180	608	1,350	5,930	3,670	1,970	3,650	3,080	4,620	2,500	1,700	1,230
7	1,140	1,420	1,290	4,750	3,310	1,880	3,530	2,720	5,190	2,490	1,630	1,290
8	1,120	1,470	1,240	4,110	3,030	1,730	5,190	2,510	5,410	2,520	1,560	1,430
9	1,070	2,550	1,210	3,630	2,780	1,790	7,980	2,380	4,810	2,380	1,610	1,160
10	1,040	2,640	1,300	3,220	2,570	2,870	6,440	2,620	4,300	2,340	1,570	1,000
11	1,030	2,840	1,960	2,910	2,390	3,370	5,290	2,820	4,040	2,630	1,570	1,220
12	1,010	3,010	3,530	3,990	2,260	6,000	4,960	2,970	3,580	2,780	1,460	1,370
13	950	6,090	6,400	5,090	2,150	13,200	4,660	3,010	3,510	2,800	1,330	1,110
14	906	3,820	4,360	4,850	2,060	16,200	4,630	2,950	3,900	2,690	1,290	1,010
15	868	3,110	11,200	4,160	1,980	10,500	4,060	3,130	3,280	2,430	1,310	1,290
16	849	2,450	8,460	3,400	2,110	7,220	3,760	2,780	2,980	2,280	1,460	1,150
17	842	4,270	7,090	3,020	2,880	5,920	3,740	2,710	3,000	2,110	1,450	1,440
18	820	2,950	5,340	2,770	2,780	5,070	3,600	2,600	3,480	2,000	1,460	1,160
19	782	9,380	4,140	2,610	2,400	4,320	3,280	2,460	3,290	2,090	1,490	1,580
20	799	13,800	3,480	2,460	2,680	3,890	3,110	2,340	2,830	2,130	1,370	1,470
21	790	6,530	2,990	2,300	3,860	4,530	3,190	2,330	2,690	2,160	1,300	1,140
22	774	4,770	2,630	2,520	4,200	7,480	3,250	2,620	2,920	2,130	1,370	1,010
23	758	3,700	2,360	6,120	3,280	7,960	3,180	3,360	2,670	2,150	1,310	1,020
24	725	2,980	2,140	6,830	2,750	5,630	3,490	4,380	2,300	2,110	1,170	1,020
25	698	2,570	2,130	5,200	2,440	4,550	4,030	6,370	2,220	1,950	1,100	992
26	683	2,280	2,520	11,500	2,270	4,080	3,480	5,020	2,450	1,880	1,200	993
27	669	2,070	2,480	13,900	2,110	3,880	3,180	4,050	3,070	1,920	1,260	1,020
28	675	1,930	3,520	7,990	2,020	3,600	3,020	4,530	3,300	1,930	1,130	1,080
29	693	1,830	2,710	6,000	---	3,270	2,990	5,040	3,280	1,970	1,120	1,120
30	659	1,770	2,410	6,160	---	3,090	3,120	4,640	3,650	2,110	1,200	1,140
31	626	---	2,390	8,600	---	9,040	---	4,770	---	2,160	1,240	---
TOTAL	28,766	93,793	98,250	166,310	91,500	152,220	125,470	104,510	105,950	73,330	44,760	35,585
MEAN	928	3,126	3,169	5,365	3,268	4,910	4,182	3,371	3,532	2,365	1,444	1,186
MAX	1,880	13,800	11,200	13,900	8,490	16,200	7,980	6,370	5,410	4,500	2,140	1,580
MIN	626	575	1,210	2,210	1,980	1,730	2,990	2,330	2,220	1,880	1,100	992
AC-FT	57,060	186,000	194,900	329,900	181,500	301,900	248,900	207,300	210,200	145,500	88,780	70,580
CFSM	1.18	3.98	4.03	6.83	4.16	6.25	5.32	4.29	4.49	3.01	1.84	1.51
IN.	1.36	4.44	4.65	7.87	4.33	7.20	5.94	4.95	5.01	3.47	2.12	1.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

	2,595	4,914	5,148	4,786	4,293	3,747	3,709	4,535	4,868	3,501	2,091	1,813
MEAN	2,595	4,914	5,148	4,786	4,293	3,747	3,709	4,535	4,868	3,501	2,091	1,813
MAX	6,815	13,980	9,992	8,720	8,197	9,339	5,723	6,526	8,285	6,218	4,006	4,074
(WY)	(1968)	(1991)	(1976)	(1984)	(1982)	(1972)	(1988)	(1974)	(1969)	(1999)	(1999)	(1978)
MIN	629	1,276	1,539	1,149	1,719	1,864	1,746	2,998	2,411	1,988	1,338	917
(WY)	(1988)	(1988)	(1986)	(1979)	(2001)	(1985)	(1975)	(1978)	(1992)	(1977)	(1987)	(1989)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1967 - 2003

ANNUAL TOTAL	1,409,930	1,120,444	
ANNUAL MEAN	3,863	3,070	3,800
HIGHEST ANNUAL MEAN			5,152
LOWEST ANNUAL MEAN			2,536
HIGHEST DAILY MEAN	27,500	Feb 23	16,200
LOWEST DAILY MEAN	575	Nov 5	575
ANNUAL SEVEN-DAY MINIMUM	598	Oct 31	598
ANNUAL RUNOFF (AC-FT)	2,797,000		2,222,000
ANNUAL RUNOFF (CFSM)	4.91		3.91
ANNUAL RUNOFF (INCHES)	66.73		53.03
10 PERCENT EXCEEDS	6,850		6,730
50 PERCENT EXCEEDS	3,210		3,080
90 PERCENT EXCEEDS	1,110		1,360

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