

DUWAMISH RIVER BASIN

12112600 BIG SOOS CREEK ABOVE HATCHERY, NEAR AUBURN, WA

LOCATION.--Lat 47°18'45", long 122°09'51", on west line NW $\frac{1}{4}$, sec.15, T.21 N., R.5 E., King County, Hydrologic Unit 17110013, on left bank 0.2 mi upstream from fish hatchery, 2.7 mi east of Auburn, and at mile 0.9.

DRAINAGE AREA.--66.7 mi², excludes 3.67 mi² in vicinity of Youngs Lake (flow from which has been diverted to Cedar River since about 1935).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 77.2 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. City of Seattle diverts probably less than 2 ft³/s from Youngs Lake into Little Soos Creek, a tributary, during low flows. Prior to October 1966, fish hatchery 0.5 mi upstream from station diverted up to 19 ft³/s which was returned downstream from the station. U.S Geological Survey satellite telemeter at station. Chemical analyses October 1962 to September 1971, at site 1.0 mi upstream.

AVERAGE DISCHARGE.--39 years (water years 1967-2005), 122 ft³/s, 24.95 in/yr, 88,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,200 ft³/s, Feb. 9, 1996, gage height, 8.88 ft, estimated from slope-area measurement of peak flow; minimum discharge, 11 ft³/s, Sept. 5, 1963, gage height, 1.07 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 440 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 18	1700	*528	*4.98	No other peak greater than base discharge.			

Minimum discharge, 24 ft³/s, Sept. 26-28; minimum gage height, 2.21 ft, Sept. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	42	120	102	144	96	186	146	99	49	34	27
2	37	70	109	96	141	94	187	129	113	50	31	27
3	38	86	101	90	137	93	191	126	100	50	30	30
4	37	72	98	86	138	89	193	119	96	48	30	31
5	35	61	102	82	135	89	165	114	97	47	30	30
6	39	57	105	80	144	88	149	108	105	58	29	29
7	37	55	125	87	162	85	143	105	102	54	30	26
8	50	53	168	85	144	81	141	103	104	56	30	26
9	71	49	193	81	133	80	133	107	95	66	30	25
10	60	48	271	78	126	80	125	150	90	59	30	36
11	49	47	363	76	123	78	150	135	89	55	31	37
12	43	47	312	74	121	79	159	121	96	52	31	33
13	41	47	254	75	119	77	149	113	93	51	33	29
14	40	47	269	73	115	73	135	112	87	49	33	28
15	39	49	242	71	113	69	129	129	84	46	32	28
16	44	53	206	78	109	72	238	151	81	46	29	28
17	79	52	181	189	106	76	279	133	98	45	30	31
18	80	63	165	471	104	73	226	148	78	43	31	32
19	66	61	152	486	104	76	191	169	70	39	30	30
20	58	56	146	400	102	81	168	185	65	39	31	27
21	54	53	136	345	100	79	152	235	61	39	32	27
22	51	52	126	292	96	74	139	228	60	40	30	27
23	49	52	118	264	95	71	134	191	59	43	27	27
24	48	82	116	234	93	68	145	160	56	40	27	30
25	47	126	112	211	91	67	135	140	56	38	27	29
26	44	125	112	196	93	115	126	127	55	35	26	25
27	42	117	105	189	92	273	120	117	56	34	29	24
28	41	113	99	180	92	257	115	111	53	33	30	26
29	41	103	106	169	---	240	135	106	51	34	30	29
30	42	109	116	159	---	211	169	103	50	35	28	37
31	42	---	107	151	---	180	---	100	---	35	28	---
TOTAL	1,480	2,047	4,935	5,250	3,272	3,264	4,807	4,221	2,399	1,408	929	871
MEAN	47.7	68.2	159	169	117	105	160	136	80.0	45.4	30.0	29.0
MAX	80	126	363	486	162	273	279	235	113	66	34	37
MIN	35	42	98	71	91	67	115	100	50	33	26	24
AC-FT	2,940	4,060	9,790	10,410	6,490	6,470	9,530	8,370	4,760	2,790	1,840	1,730
CFSM	0.72	1.02	2.39	2.54	1.75	1.58	2.40	2.04	1.20	0.68	0.45	0.44
IN.	0.83	1.14	2.75	2.93	1.82	1.82	2.68	2.35	1.34	0.79	0.52	0.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	43.2	109	208	246	237	204	153	96.6	70.7	43.8	32.5	33.0
MAX	90.9	433	401	535	555	453	343	174	150	78.6	46.8	57.9
(WY)	(1998)	(1991)	(1976)	(1997)	(1996)	(1972)	(1991)	(1984)	(1990)	(1997)	(1976)	(1978)
MIN	24.6	32.6	58.0	84.3	73.6	102	74.8	57.0	34.7	26.4	22.4	20.4
(WY)	(2003)	(2003)	(1977)	(1977)	(1977)	(2001)	(2004)	(1985)	(1992)	(1985)	(2003)	(1995)

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SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1967 - 2005
ANNUAL TOTAL	34,821	34,883	
ANNUAL MEAN	95.1	95.6	
HIGHEST ANNUAL MEAN			122
LOWEST ANNUAL MEAN			195
HIGHEST DAILY MEAN	565	Jan 30	63.5
LOWEST DAILY MEAN	23	Aug 17	1991
ANNUAL SEVEN-DAY MINIMUM	24	Aug 15	1977
ANNUAL RUNOFF (AC-FT)	69,070	69,190	3,580
ANNUAL RUNOFF (CFSM)	1.43	1.43	Feb 9, 1996
ANNUAL RUNOFF (INCHES)	19.42	19.45	Sep 16, 1995
10 PERCENT EXCEEDS	202	180	Sep 18, 1995
50 PERCENT EXCEEDS	64	81	270
90 PERCENT EXCEEDS	31	30	80
			30

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water Years 1963-1972, 1995-1998, August 2005 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1996 to September 1998.

WATER TEMPERATURE: March 1996 to September 1998.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 162 microsiemens, Oct. 17, 1996, but may have been higher during periods of missing record; minimum,

69 microsiemens, Dec. 29, 1996, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum, 22.0°C, July 28, 1998; minimum 2.5°C, Jan. 11, 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Medium code	Instantaneous discharge, cfs (00061)	Sampling depth, meters (00098)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfldd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Sulfate water, fltrd, mg/L (00945)	Mercury water fltrd, ng/L (50287)
AUG 25...	1310	9	27	.33	762	10.4	104	8.1	148	26.9	15.5	6.5	.33
25...	1310	H	--	.01	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Mercury suspnd sedimnt total, ng/L (62976)	Mercury solids, total, ng/g (62978)	Methyl-mercury water fltrd, ng/L (50285)	Methyl-mercury suspnd sediment total, ng/L (62977)	Suspnd. sediment, sieve diametr <.063mm (70331)	Sus-pended sediment concentration mg/L (80154)
AUG 25...	.218	--	.04	<.014	--	3
25...	--	14.1	--	--	6	--