

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 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.--Records good, except for estimated daily discharges, which are fair. 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.--36 years (water years 1967-2002), 125 ft³/s, 25.45 in/yr, 90,500 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)
Nov. 14	1245	*725	5.53	Apr. 14	0800	460	4.95
Dec. 16	2245	650	*5.59				

Minimum discharge, 20 ft³/s Sept. 24, 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	63	287	184	301	198	159	127	72	50	31	26
2	29	59	288	208	270	187	153	122	71	44	29	26
3	26	54	297	191	249	179	148	119	69	43	33	29
4	27	50	281	178	231	173	144	115	68	44	35	23
5	26	59	261	170	225	170	139	117	71	43	34	24
6	24	54	262	177	226	167	139	113	66	42	31	24
7	24	48	242	314	234	159	134	113	64	43	31	26
8	26	45	221	366	334	151	129	109	66	52	30	26
9	26	42	217	312	295	147	133	106	66	46	31	26
10	28	41	226	260	255	143	171	108	62	42	34	22
11	29	40	229	229	227	206	199	104	59	40	34	21
12	28	43	216	224	210	e260	179	100	58	38	32	23
13	27	71	354	211	201	e240	245	97	55	38	27	23
14	35	506	529	195	195	210	437	101	53	38	27	24
15	35	583	460	183	187	194	372	95	53	37	27	25
16	34	451	539	174	174	195	300	92	50	35	27	26
17	32	329	593	167	170	206	264	91	47	35	29	24
18	30	246	481	164	173	193	233	90	52	35	29	24
19	30	226	416	191	174	210	209	89	55	36	29	24
20	30	245	361	222	170	352	193	94	50	35	26	23
21	32	238	316	239	237	343	180	92	46	35	27	24
22	36	275	283	214	303	293	172	88	45	34	28	25
23	35	327	258	194	333	257	161	85	44	31	26	24
24	e35	292	240	212	340	234	152	82	43	31	27	21
25	e40	249	223	365	291	216	145	81	41	31	27	21
26	45	219	211	402	252	202	141	79	40	32	27	23
27	60	195	202	343	227	191	158	78	40	34	23	23
28	e56	234	201	291	211	181	151	81	47	35	23	24
29	e52	285	190	255	---	174	140	87	72	34	23	27
30	46	284	180	258	---	168	132	80	58	31	22	26
31	66	---	181	290	---	162	---	75	---	31	25	---
TOTAL	1079	5853	9245	7383	6695	6361	5612	3010	1683	1175	884	727
MEAN	34.8	195	298	238	239	205	187	97.1	56.1	37.9	28.5	24.2
MAX	66	583	593	402	340	352	437	127	72	52	35	29
MIN	24	40	180	164	170	143	129	75	40	31	22	21
AC-FT	2140	11610	18340	14640	13280	12620	11130	5970	3340	2330	1750	1440
CFSM	0.52	2.93	4.47	3.57	3.58	3.08	2.80	1.46	0.84	0.57	0.43	0.36
IN.	0.60	3.26	5.16	4.12	3.73	3.55	3.13	1.68	0.94	0.66	0.49	0.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	42.7	90.9	25.9	1998	112	433	33.1	1994	215	401	58.0	1977
	252	535	84.3	1997	252	555	73.6	1977	242	453	102	2001
	209	343	80.5	1985	209	343	80.5	1985	154	174	57.0	1985
	154	343	80.5	1985	154	343	80.5	1985	96.9	150	34.7	1992
	96.9	150	34.7	1992	96.9	150	34.7	1992	71.5	78.6	22.8	1995
	71.5	78.6	22.8	1995	71.5	78.6	22.8	1995	44.6	46.8	22.8	1995
	44.6	46.8	22.8	1995	44.6	46.8	22.8	1995	32.9	33.2	20.4	1995
	32.9	33.2	20.4	1995	32.9	33.2	20.4	1995	884	884	1991	1991

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1967 - 2002

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1967 - 2002
ANNUAL TOTAL	37881	49707	
ANNUAL MEAN	104	136	125
HIGHEST ANNUAL MEAN			195
LOWEST ANNUAL MEAN			63.5
HIGHEST DAILY MEAN	593	593	3580
LOWEST DAILY MEAN	24	21	18
ANNUAL SEVEN-DAY MINIMUM	26	23	18
ANNUAL RUNOFF (AC-FT)	75140	98590	90500
ANNUAL RUNOFF (CFSM)	1.56	2.04	1.87
ANNUAL RUNOFF (INCHES)	21.13	27.72	25.45
10 PERCENT EXCEEDS	226	290	276
50 PERCENT EXCEEDS	75	95	81
90 PERCENT EXCEEDS	30	26	30

e Estimated