

DUWAMISH RIVER BASIN

12106700 GREEN RIVER AT PURIFICATION PLANT, NEAR PALMER, WA

LOCATION.--Lat 47°18'19", long 121°50'58", in NE 1/4 SE 1/4 sec.13, T.21 N., R.7 E., King County, Hydrologic Unit 17110013, on left bank at City of Tacoma purification plant, 0.7 mi downstream from diversion dam, 2 mi southeast of Palmer, and at mile 60.3.

DRAINAGE AREA.--231 mi².

PERIOD OF RECORD.--July 1963 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 859.53 ft above NGVD of 1929. Prior to Oct. 1, 1987, water-stage recorder at site 0.1 mi upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Since Dec. 5, 1961, flow regulated by Howard A. Hanson Reservoir (station 12105800), 4.1 mi upstream for flood control and during summer months to augment the natural river flow. City of Tacoma diverted an average daily discharge of about 64 ft³/s upstream from station for municipal supply, of which a small amount is returned to the river 300 ft upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--39 years (water years 1964-2002), 958 ft³/s, 693,900 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s Feb. 12, 1981, gage height, 12.05 ft, at site then in use; minimum discharge, 20 ft³/s part or all of each day Oct. 26, 27, Nov. 3, 4, 6, 1974, gage height, 3.90 ft, at site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 23, 1959, had a discharge of 27,800 ft³/s, on basis of slope-area measurement at site 0.5 mi downstream from present gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,760 ft³/s Jan 8, gage height, 9.41 ft; minimum discharge, 91 ft³/s Aug. 13.

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	227	1430	800	666	1010	585	1050	1620	1810	934	129	149
2	226	1480	819	662	830	521	1140	2060	1700	920	118	153
3	224	1450	962	652	832	533	1100	2160	1750	903	114	139
4	220	1410	916	597	823	465	1130	2000	1820	891	116	127
5	202	1310	794	563	748	424	1320	2010	1820	905	135	142
6	177	1140	854	580	702	450	1540	1830	1930	932	124	150
7	176	958	1100	2860	767	458	1630	1410	1780	930	117	158
8	182	806	1020	5400	812	511	1810	1300	1450	866	116	158
9	200	637	860	4430	813	550	1690	1260	1100	804	114	152
10	243	548	935	2830	815	553	1920	1230	1060	817	114	145
11	269	547	994	2090	814	710	2470	1350	1290	814	116	149
12	265	548	811	1910	798	969	3040	1340	1390	821	115	148
13	268	858	3070	1880	780	1170	3670	1350	1510	837	116	143
14	286	3740	4910	1570	756	1140	4900	1490	1600	831	114	142
15	315	3810	3040	1170	605	1050	4720	1670	1510	825	119	141
16	491	1770	3170	1020	502	886	3380	1580	1320	820	127	144
17	552	1420	3520	1030	516	863	2400	1430	1100	814	134	141
18	510	1460	2680	880	652	858	1870	1420	1020	771	136	143
19	688	1670	1780	804	725	897	1620	1420	1110	680	132	154
20	823	1450	1410	891	899	988	1610	1560	1060	629	124	163
21	812	1220	1180	1160	1630	893	1600	1750	957	625	120	163
22	814	1310	990	1530	3210	887	1580	2180	930	570	133	160
23	1290	1880	984	1430	3180	824	1480	2050	884	465	136	196
24	1730	2040	971	1880	2800	824	1380	1850	784	395	136	159
25	1890	1930	951	3050	2330	833	1260	1770	707	340	136	210
26	2030	1670	862	2290	1710	839	1200	1780	646	291	136	257
27	1940	1300	764	1430	1340	844	1260	1880	643	274	132	254
28	1780	1110	624	1170	970	850	1250	2610	707	275	139	254
29	1330	1120	540	1020	---	938	1210	2920	975	241	162	259
30	1040	930	545	1200	---	992	737	2640	1020	201	146	252
31	1210	---	626	1310	---	994	---	2130	---	195	150	---
TOTAL	22410	42952	43482	49955	32369	24299	56967	55050	37383	20616	3956	5105
MEAN	722.9	1432	1403	1611	1156	783.8	1899	1776	1246	665.0	127.6	170.2
MAX	2030	3810	4910	5400	3210	1170	4900	2920	1930	934	162	259
MIN	176	547	540	563	502	424	737	1230	643	195	114	127
AC-FT	44450	85200	86250	99090	64200	48200	113000	109200	74150	40890	7850	10130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

MEAN	473.0	1269	1572	1599	1456	1155	1325	1259	705.4	324.2	161.3	228.8
MAX	1198	4074	4591	3225	3481	3801	2376	2605	2514	809	306	757
(WY)	1996	1991	1976	1984	1982	1972	1985	1972	1974	1972	1974	1968
MIN	66.2	82.7	371	399	367	432	286	381	129	118	98.6	109
(WY)	1975	1988	1986	1979	1969	1981	1992	1994	1987	1965	1969	1979

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1963 - 2002
ANNUAL TOTAL	273799	394544	
ANNUAL MEAN	750.1	1081	957.8
HIGHEST ANNUAL MEAN			1562
LOWEST ANNUAL MEAN			573
HIGHEST DAILY MEAN	4910	5400	10900
LOWEST DAILY MEAN	106	114	20
ANNUAL SEVEN-DAY MINIMUM	112	115	22
ANNUAL RUNOFF (AC-FT)	543100	782600	693900
10 PERCENT EXCEEDS	1450	2020	2070
50 PERCENT EXCEEDS	547	897	616
90 PERCENT EXCEEDS	129	144	133