DESCHUTES RIVER BASIN

12080010 DESCHUTES RIVER AT E STREET BRIDGE, AT TUMWATER, WA

LOCATION.--Lat 47°00'43", long 122°54'07", in NW $^1/_4$ Land Grant parcel 60, T.18 N., R.2 W., Thurston County, Hydrologic Unit 17110016, on left bank at "E" Street bridge, 0.2 mi upstream from Capitol Boulevard, and at mile 2.4.

DRAINAGE AREA.--162 mi^2.

PERIOD OF RECORD.--April 1945 to November 1954, water years 1955-57 (annual maximum), June 1957 to June 1964, published as "12080000 Deschutes River near Olympia". October 1990 to current year.

REVISED RECORDS.--WDR WA-96-1: 1991(P), 1992(P).

GAGE.--Water-stage recorder. Datum of gage is 62.01 ft above NGVD of 1929. April 1945 to Nov. 1954, water-stage recorder, Nov. 1954 to June 1957, crest-stage gage, June 1957 to June 1964, water-stage recorder, at site 1 mi upstream, at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some small diversions for irrigation and domestic use upstream from station. No regulation. Miscellaneous discharge measurement site 1971-72, 1975, 1977-90.

AVERAGE DISCHARGE.--27 years (water years 1946-54, 1958-63, 1991-2002), 408 ft^3/s, 34.20 in/yr, 295,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s Feb. 9, 1996, gage height, 34.17 ft, on basis of slope-area measurement of peak flow; minimum discharge, 51 ft^3/s Sept. 22-24, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 15	0345	2,480	28.92	Jan 08	1715	3,430	29.92
Dec 02	1130	3,030	29.52	Jan 26	0145	2,880	29.32
Dec 14	1730	3,430	29.94	Mar 12	1115	2,580	28.98
Dec 17	2130	*5,170	*31.44				

Minimum discharge, 59 ft^3/s Oct. 6-9.

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	68	348	1730	432	743	561	397	310	222	179	e92	79
2	65	291	2690	483	691	525	385	308	211	164	e91	78
3	63	233	1660	519	675	497	373	302	204	155	e88	78
4	61	196	1150	483	724	476	360	294	196	149	e88	78
5	61	170	929	452	683	462	351	288	194	145	e90	79
6	60	154	850	486	684	460	358	297	192	139	e108	79
7	59	138	1030	1450	982	447	361	291	187	139	e114	79
8	61	126	849	3080	1250	428	357	283	184	141	e100	84
9	60	118	748	2010	1220	413	349	271	180	142	e96	83
10	69	110	660	1170	964	448	436	265	175	134	e94	80
11	67	104	612	886	855	906	539	258	168	128	e96	78
12	74	104	604	790	764	2290	615	254	166	125	e94	76
13	71	124	867	833	689	1700	774	254	162	124	e92	75
14	73	1020	2880	753	624	1280	1580	264	158	121	e92	74
15	72	1890	1810	662	578	979	1510	258	155	120	e90	74
16	75	1090	1740	591	551	813	1020	252	154	118	e90	75
17	72	667	3910	541	531	720	824	253	154	117	e89	74
18	69	462	2860	504	520	653	692	246	154	116	e87	76
19	68	384	1730	491	559	677	594	241	156	115	e87	75
20	68	547	1350	508	628	951	530	246	150	114	e87	74
21	70	832	1050	616	758	926	482	251	147	112	e85	73
22	80	1030	868	605	1230	782	444	253	142	109	e85	73
23	85	1800	743	567	1070	693	411	241	137	107	e83	73
24	147	1070	656	742	998	639	381	229	135	105	e83	72
25	146	690	594	1920	849	590	361	223	135	e104	e81	72
26	144	519	545	2220	740	547	348	218	133	e102	e81	72
27	147	418	509	1350	666	516	352	217	133	e100	e80	72
28	152	462	491	1020	608	488	350	232	146	e98	e80	71
29	143	1570	474	852	---	461	329	250	180	e98	e80	71
30	127	1570	447	765	---	435	315	267	218	e97	e79	71
31	156	---	434	737	---	416	---	242	---	e96	79	---
TOTAL	2733	18237	37470	28518	21834	22179	16178	8058	5028	3813	2761	2268
MEAN	88.2	608	1209	920	780	715	539	260	168	123	89.1	75.6
MAX	156	1890	3910	3080	1250	2290	1580	310	222	179	114	84
MIN	59	104	434	432	520	413	315	217	133	96	79	71
AC-FT	5420	36170	74320	56570	43310	43990	32090	15980	9970	7560	5480	4500
CFSM	0.54	3.75	7.46	5.68	4.81	4.42	3.33	1.60	1.03	0.76	0.55	0.47
IN.	0.63	4.19	8.60	6.55	5.01	5.09	3.71	1.85	1.15	0.88	0.63	0.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

MEAN	163	506	738	766	836	606	471	304	194	132	107	99.9
MAX	463	921	1480	1308	1753	1176	936	499	300	186	148	162
(WY)	1998	2000	1999	1953	1999	1950	1991	1948	1997	1997	1997	1997
MIN	76.8	84.1	239	195	244	236	283	140	110	77.1	69.8	57.2
(WY)	1953	1994	2001	2001	1993	2001	2001	1994	1992	1992	1992	1995

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1945 - 2002	
ANNUAL TOTAL	107807		169077			
ANNUAL MEAN	295		463		408	
HIGHEST ANNUAL MEAN					658	1999
LOWEST ANNUAL MEAN					178	2001
HIGHEST DAILY MEAN	3910	Dec 17	3910	Dec 17	8150	Feb 9 1996
LOWEST DAILY MEAN	59	Oct 7	59	Oct 7	52	Sep 22 1995
ANNUAL SEVEN-DAY MINIMUM	61	Oct 3	61	Oct 3	53	Sep 18 1995
ANNUAL RUNOFF (AC-FT)	213800		335400		295400	
ANNUAL RUNOFF (CFSM)	1.82		2.86		2.52	
ANNUAL RUNOFF (INCHES)	24.76		38.83		34.20	
10 PERCENT EXCEEDS	598		1020		904	
50 PERCENT EXCEEDS	181		258		251	
90 PERCENT EXCEEDS	68		75		94	

e Estimated