

DESCHUTES RIVER BASIN

1

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 mi².

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. Elevation of gage is 75 ft above sea level, from topographic map. 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. Some small diversions for irrigation and domestic use upstream from station. No regulation. Miscellaneous discharge measurement site 1971-72, 1975, 1977-90.

AVERAGE DISCHARGE.--25 years (water years 1946-54, 1958-63, 1991-2000), 415 ft³/s, 34.78 in/yr, 300,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s Feb. 9, 1996, gage height, 34.17 ft, on basis of slope-area measurement of peak flow; minimum discharge, 51 ft³/s Sept. 22-24, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 13	0800	3,800	29.68	Dec. 16	1415	*4,220	*30.04
Nov. 26	1000	4,010	29.86				

Minimum discharge, 88 ft³/s Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	223	805	360	791	941	380	316	225	155	113	102
2	93	194	1070	388	1880	922	369	311	216	154	112	103
3	92	185	1260	387	1250	776	366	312	210	153	110	99
4	91	153	877	740	897	911	e360	335	203	161	111	98
5	90	148	728	1070	717	1160	e360	334	198	160	111	101
6	91	164	744	767	617	931	373	328	204	151	112	100
7	105	256	1020	612	568	758	384	312	214	148	121	97
8	124	211	846	587	682	654	362	308	210	144	116	101
9	121	200	835	867	1300	597	344	338	206	143	113	100
10	126	954	908	1080	997	537	319	468	202	143	111	104
11	114	959	783	934	769	520	302	512	215	144	111	105
12	110	2010	937	796	647	508	298	455	301	139	109	108
13	109	3290	1640	714	583	494	309	405	616	136	108	100
14	107	1590	1400	740	554	550	405	372	461	136	106	98
15	104	817	1960	998	580	575	542	336	357	136	105	96
16	103	543	3620	934	563	610	641	312	301	132	105	96
17	102	530	2360	968	520	691	533	298	271	131	106	94
18	102	492	2210	822	475	719	450	288	248	128	106	95
19	101	403	1800	693	440	850	397	292	234	127	108	93
20	101	782	1270	638	413	805	368	279	224	128	111	93
21	100	993	967	642	401	684	341	266	213	124	109	93
22	100	760	785	739	422	633	340	261	205	121	105	93
23	100	580	669	659	587	695	345	251	198	122	104	93
24	100	525	588	581	557	657	367	243	192	124	102	92
25	104	1880	527	529	506	597	361	235	189	121	102	91
26	104	3680	479	515	502	538	360	234	181	121	103	90
27	116	2230	436	480	584	500	342	233	176	120	102	90
28	134	1200	398	446	627	482	337	231	171	121	106	90
29	276	858	373	418	698	456	340	228	163	116	111	91
30	218	825	352	393	---	424	329	227	156	115	108	96
31	193	---	341	390	---	397	---	227	---	113	102	---
TOTAL	3623	27635	32988	20887	20127	20572	11324	9547	7160	4167	3359	2902
MEAN	117	921	1064	674	694	664	377	308	239	134	108	96.7
MAX	276	3680	3620	1080	1880	1160	641	512	616	161	121	108
MIN	90	148	341	360	401	397	298	227	156	113	102	90
AC-FT	7190	54810	65430	41430	39920	40800	22460	18940	14200	8270	6660	5760
CFSM	.72	5.69	6.57	4.16	4.28	4.10	2.33	1.90	1.47	.83	.67	.60
IN.	.83	6.35	7.58	4.80	4.62	4.72	2.60	2.19	1.64	.96	.77	.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2000, BY WATER YEAR (WY)

MEAN	167	516	739	782	860	616	476	308	197	133	109	102
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	242	346	244	245	296	140	110	77.1	69.8	57.2
(WY)	1953	1994	1953	1994	1993	1992	1994	1994	1992	1992	1992	1995

DESCHUTES RIVER BASIN

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

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1945 - 2000	
ANNUAL TOTAL	231999		164291		415	
ANNUAL MEAN	636		449		658	
HIGHEST ANNUAL MEAN					235	
LOWEST ANNUAL MEAN					8150	
HIGHEST DAILY MEAN	4230	Feb 25	3680	Nov 26	8150	
LOWEST DAILY MEAN	88	Sep 23	90	Oct 5	8150	
ANNUAL SEVEN-DAY MINIMUM	90	Sep 19	91	Sep 23	8150	
ANNUAL RUNOFF (AC-FT)	460200		325900		300400	
ANNUAL RUNOFF (CFSM)	3.92		2.77		2.56	
ANNUAL RUNOFF (INCHES)	53.27		37.73		34.78	
10 PERCENT EXCEEDS	1670		925		901	
50 PERCENT EXCEEDS	398		318		256	
90 PERCENT EXCEEDS	101		101		95	

e Estimated