

COWLITZ RIVER BASIN

14240525 NORTH FORK TOUTLE RIVER BELOW SEDIMENT RETENTION STRUCTURE, NEAR KID VALLEY, WA

LOCATION.--Lat 46°22'19", long 122°34'40", in NE 1/4 NE 1/4 sec.8, T.10 N., R.2 E., Cowlitz County, Hydrologic Unit 17080005, 1.3 mi downstream from Sediment Retention Structure, on left bank, 0.7 mi upstream from the mouth of the Green River, 1.8 mi east of Kid Valley, and at mile 12.0.

DRAINAGE AREA.--175 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to September 1998, October 2000 to September 2002 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--11 years (water years 1990-98, 2001-02), 774 ft³/s, 60.12 in/yr, 561,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s, Feb. 8, 1996, gage height, 62.13 ft; minimum discharge, 141 ft³/s, Sept. 24, 25, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--An outstanding flood occurred on May 18, 1980, from a mudflow caused by the eruption of Mount St. Helens.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 14	0815	2,350	57.25	Jan. 08	0100	*5,710	*59.66
Nov. 22	1800	2,910	57.75	Jan. 25	0830	2,650	57.51
Nov. 29	0600	1,980	56.89	Feb. 23	0715	2,360	57.26
Dec. 01	2030	2,550	57.42	Mar. 11	2000	2,810	57.66
Dec. 14	0015	3,270	58.05	Apr. 14	0545	3,320	58.09
Dec. 17	0100	5,260	59.42				

Minimum discharge, 178 ft³/s Oct. 4-6.

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	188	808	2210	889	973	1010	871	876	e840	558	344	230
2	187	720	1970	997	926	947	861	892	e800	541	339	232
3	186	563	1650	984	970	910	842	894	e780	530	343	233
4	186	489	1510	929	892	870	820	838	e750	523	339	227
5	184	500	1370	914	899	877	870	863	e740	524	338	221
6	184	427	1390	1080	980	903	909	827	e740	523	332	224
7	189	383	1270	3180	1260	847	973	776	e680	528	328	227
8	202	353	1190	3970	1310	813	934	734	e660	507	311	222
9	197	333	1180	2460	1150	822	1020	702	e580	486	299	219
10	265	312	1120	1840	1090	913	1440	665	e560	474	291	217
11	298	297	1130	1550	1010	1790	1530	645	574	468	286	220
12	264	314	1050	e1500	958	1880	1570	640	562	468	279	215
13	338	406	1730	e1400	906	1620	1710	677	592	472	273	214
14	318	1810	2510	e1300	862	1420	2840	682	626	466	279	214
15	284	1410	1790	e1200	836	1280	2330	649	637	464	276	215
16	282	1200	2820	e1100	844	1160	1990	643	626	455	272	224
17	275	1000	3600	e1050	823	1040	1720	685	623	451	266	219
18	251	820	2250	e980	844	952	1490	716	678	443	263	212
19	248	831	1790	e1150	1040	1180	1320	733	616	417	262	210
20	240	1030	1540	e1250	1020	1240	1200	794	586	403	265	212
21	253	1150	1350	e1400	1470	1110	1140	799	587	395	269	211
22	322	1960	1210	e1250	1790	1040	1080	797	575	392	256	204
23	584	2130	1100	e1100	2150	1020	1050	750	563	387	247	201
24	477	1610	1030	e1300	1870	1040	958	722	552	379	246	201
25	455	1310	973	2120	1560	1000	906	733	548	391	243	203
26	507	1090	935	1590	1370	974	908	731	541	379	248	202
27	567	965	910	1350	1220	942	918	747	540	378	243	201
28	513	1380	922	1160	1100	957	882	818	582	379	236	201
29	452	1750	874	1050	---	922	872	e1300	710	378	232	228
30	580	1620	854	994	---	913	847	e1100	592	367	235	225
31	875	---	880	1030	---	865	---	e950	---	350	232	---
TOTAL	10351	28971	46108	44067	32123	33257	36801	24378	19040	13876	8672	6484
MEAN	334	966	1487	1422	1147	1073	1227	786	635	448	280	216
MAX	875	2130	3600	3970	2150	1880	2840	1300	840	558	344	233
MIN	184	297	854	889	823	813	820	640	540	350	232	201
AC-FT	20530	57460	91460	87410	63720	65970	72990	48350	37770	27520	17200	12860
CFSM	1.91	5.52	8.50	8.12	6.56	6.13	7.01	4.49	3.63	2.56	1.60	1.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	433	934	1188	1108	1203	1005	1046	851	633	405	277	238	
MAX	929	1523	1810	1582	2323	1767	1461	1206	913	581	408	369	
(WY)	1998	1996	1996	1997	1996	1997	1991	1996	1990	1997	1997	1997	
MIN	218	404	497	448	402	539	658	515	278	225	182	173	
(WY)	1992	2001	2001	2001	1993	1992	1992	1992	1992	1992	1990	1990	

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1990 - 2002
ANNUAL TOTAL	215819	304128	
ANNUAL MEAN	591	833	774
HIGHEST ANNUAL MEAN			1074
LOWEST ANNUAL MEAN			465
HIGHEST DAILY MEAN	3600	Dec 17	11000
LOWEST DAILY MEAN	147	Sep 24	140
ANNUAL SEVEN-DAY MINIMUM	162	Sep 19	156
ANNUAL RUNOFF (AC-FT)	428100		561000
ANNUAL RUNOFF (CFSM)	3.38		4.76
10 PERCENT EXCEEDS	1110	1540	1440
50 PERCENT EXCEEDS	460	799	650
90 PERCENT EXCEEDS	223	229	232

e Estimated