



Figure 35. Location of surface-water stations in the Snake River Basin, including the Grande Ronde River, Asotin Creek, Tucannon River, and Palouse River Basins.

13317660 SNAKE RIVER BELOW MCDUFF RAPIDS, AT CHINA GARDENS, ID

LOCATION.--Lat 46°00'11", long 116°55'01", in sec.26, T.31 N., R.5 E., Nez Perce County, Idaho, Hydrologic Unit 17060103, on right bank, 350 ft upstream from Corral Creek, and at mile 175.7.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 2003 to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 850 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Diversions upstream from station for irrigation of about 4,090,000 acres, of which about 750,000 acres are irrigated by withdrawals from ground water. Flow regulated by many reservoirs upstream from station with a total usable capacity of more than 10,000,000 acre-ft, the most effective of which is Brownlee Reservoir located 109.5 mi upstream. Diurnal fluctuations caused by Hells Canyon Dam powerplant. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,100 ft³/s, May 31, gage height, 15.77 ft; minimum recorded discharge, 11,200 ft³/s, Dec. 22, Jan. 25, but may have been lower during period of missing record, Oct. 1 to Dec. 3.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e15,500	e12,100	e12,200	11,900	15,900	18,300	26,300	24,000	52,500	23,500	13,600	19,000
2	e15,300	e11,700	e12,400	12,100	16,200	21,900	24,900	25,100	49,000	25,100	14,300	17,500
3	e14,700	e11,700	e12,500	12,900	19,300	22,600	22,000	29,100	50,700	25,100	15,400	16,300
4	e13,900	e11,800	12,100	14,000	18,000	24,700	26,200	34,200	48,900	22,400	12,700	16,000
5	e13,000	e12,000	12,100	16,100	17,100	24,300	25,900	40,200	49,000	20,000	17,900	13,300
6	e13,800	e11,900	12,100	22,400	21,100	20,100	26,600	43,000	47,000	20,700	14,000	13,500
7	e14,200	e11,700	12,500	19,800	17,800	18,000	23,000	40,500	50,300	21,500	13,200	13,700
8	e11,600	e11,400	13,000	17,500	15,000	19,400	24,700	38,400	50,700	22,300	12,900	14,300
9	e11,700	e11,500	13,000	16,600	18,000	22,800	26,800	37,300	49,400	21,300	13,100	21,300
10	e13,900	e11,800	12,600	15,500	19,200	23,300	24,700	36,100	46,700	19,200	14,600	17,800
11	e12,000	e12,400	12,400	16,000	18,800	25,200	24,400	37,300	44,300	20,100	16,400	14,200
12	e12,000	e12,700	12,200	19,200	20,000	22,500	25,300	35,400	42,500	23,300	15,600	14,900
13	e11,800	e12,600	12,300	21,200	21,500	20,100	30,400	33,900	40,500	25,400	12,400	20,600
14	e11,800	e12,300	12,400	19,900	21,900	18,600	32,100	33,300	44,000	23,300	12,200	25,300
15	e11,800	e12,200	14,000	16,600	17,700	19,200	33,700	35,400	41,500	23,700	12,100	24,200
16	e11,700	e12,000	14,200	19,400	19,500	25,100	24,900	34,900	35,200	21,600	12,100	29,800
17	e11,900	e12,000	12,700	17,300	21,500	25,400	23,300	38,500	33,200	20,500	13,200	19,500
18	e12,000	e12,300	11,900	18,800	16,600	28,900	22,100	36,200	31,700	21,200	12,200	15,400
19	e12,000	e12,400	11,800	18,500	19,100	28,000	21,300	36,000	27,600	17,500	13,000	14,800
20	e12,000	e12,200	11,900	16,200	20,300	27,200	20,700	40,000	26,400	20,200	13,500	15,100
21	e11,900	e12,400	11,600	14,000	20,500	27,100	20,500	43,000	26,500	17,000	15,100	15,400
22	e11,800	e12,400	11,500	17,400	19,600	28,200	20,100	42,500	29,400	20,900	13,900	15,500
23	e11,700	e12,100	11,800	16,700	18,200	31,000	19,600	44,000	28,000	20,500	13,000	17,300
24	e11,700	e11,800	12,300	13,200	17,600	31,500	19,400	47,400	35,000	15,600	13,800	18,500
25	e11,600	e11,700	12,400	13,500	20,300	33,100	19,500	46,300	29,400	16,400	14,400	15,900
26	e11,700	e11,800	12,100	13,500	21,600	34,500	19,700	44,900	25,000	16,800	14,600	14,500
27	e11,700	e12,000	12,200	15,600	20,800	31,200	22,000	45,100	25,000	15,200	16,000	15,000
28	e11,700	e11,900	12,600	15,200	19,800	28,300	23,700	49,700	24,800	13,500	16,400	15,700
29	e11,900	e12,000	18,400	16,800	16,400	27,700	24,600	52,500	23,400	15,600	14,100	16,200
30	e12,100	e12,100	17,400	18,000	---	30,300	24,300	54,900	23,500	16,600	14,100	15,000
31	e12,300	---	13,500	15,700	---	26,100	---	54,000	---	13,600	19,400	---
TOTAL	386,700	360,900	396,100	511,500	549,300	784,600	722,700	1,233,100	1,131,100	619,600	439,200	515,500
MEAN	12,470	12,030	12,780	16,500	18,940	25,310	24,090	39,780	37,700	19,990	14,170	17,180
MAX	15,500	12,700	18,400	22,400	21,900	34,500	33,700	54,900	52,500	25,400	19,400	29,800
MIN	11,600	11,400	11,500	11,900	15,000	18,000	19,400	24,000	23,400	13,500	12,100	13,300
AC-FT	767,000	715,800	785,700	1,015,000	1,090,000	1,556,000	1,433,000	2,446,000	2,244,000	1,229,000	871,200	1,022,000
WTR YR	2004	TOTAL	7,650,300	MEAN	20,900	MAX	54,900	MIN	11,400	AC-FT	15,170,000	

e Estimated

13333000 GRANDE RONDE RIVER AT TROY, OR

LOCATION.--Lat 45°56'45", long 117°27'00", in NE¼NW¼, sec.4, T.5 N., R.43 E., Wallowa County, Hydrologic Unit 17060106, on left bank, on upstream side of bridge at Troy, 100 ft downstream from Wenaha River, and at mile 45.3.

DRAINAGE AREA.--3,275 mi².

PERIOD OF RECORD.--August 1944 to current year. Monthly discharge only August 1944, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1946(M), 1948-50.

GAGE.--Water-stage recorder. Datum of gage is 1,585.98 ft above NGVD of 1929. Aug. 17, 1944, to Sept. 30, 1949, nonrecording gage at datum 10.85 ft lower. Oct. 1, 1949, to Sept. 5, 1963, water-stage recorder at datum 1.15 ft higher. Sept. 6, 1963, to Oct. 19, 1994, water-stage recorder at site 500 ft downstream, at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow slightly regulated by Wallowa Lake and small reservoirs. Diversions for irrigation upstream from station, chiefly in vicinity of LaGrande, Enterprise, and Wallowa; transbasin diversions for irrigation from Big Sheep Creek and tributaries in Imnaha River Basin to Wallowa River Basin, and from South Fork Catherine Creek to the Powder River Basin. U.S. Geological Survey satellite telemeter and National Weather Service telemeter at station.

AVERAGE DISCHARGE.--60 years (water years 1945-2004), 3,053 ft³/s, 2,212,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,800 ft³/s, Feb. 9, 1996, gage height, 13.76 ft, from rating curve extended above 20,000 ft³/s; minimum discharge, 321 ft³/s, Nov. 25, 1993; result of freezeup, but may have been less during period of ice effect that day.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0030	*11,900	*8.20	No other peak greater than base discharge.			

Minimum discharge, 498 ft³/s, Oct. 1, 2, Nov. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	517	594	1,020	e740	4,030	2,980	5,970	5,230	8,760	3,910	663	867
2	507	582	1,050	e780	3,190	2,780	5,360	5,400	8,050	3,560	661	865
3	519	599	1,040	e740	2,630	2,630	5,050	6,100	7,730	3,260	712	868
4	516	608	1,010	e680	2,280	2,540	5,120	6,720	8,180	3,050	736	853
5	550	587	954	e580	2,030	2,660	5,620	7,030	8,700	2,810	702	810
6	559	566	1,060	e520	1,820	2,760	5,980	6,860	8,810	2,560	688	784
7	560	580	1,180	e600	1,700	2,780	6,380	6,550	7,580	2,410	691	775
8	559	612	1,110	e660	1,600	2,910	6,540	6,510	7,360	2,250	689	753
9	558	637	1,030	e680	1,510	3,610	6,420	6,060	6,750	2,020	676	728
10	554	650	963	e740	1,440	4,780	6,200	5,650	6,280	1,860	653	723
11	557	848	940	e840	1,350	5,280	6,030	5,300	6,050	1,810	604	716
12	597	772	927	e780	1,310	5,320	6,020	5,040	5,760	1,680	582	756
13	608	700	1,050	e780	1,230	5,890	6,260	4,780	5,470	1,530	572	845
14	600	668	1,640	e800	1,150	5,840	6,430	4,500	5,380	1,430	567	921
15	619	654	1,510	e900	1,240	6,090	6,220	4,280	5,240	1,340	560	1,040
16	663	700	1,290	1,030	1,280	6,100	5,700	4,360	4,870	1,240	562	1,120
17	663	805	1,150	1,000	1,430	6,620	5,280	4,430	4,620	1,180	593	1,150
18	641	756	1,060	1,000	1,820	7,210	4,900	4,480	4,530	1,200	632	1,100
19	626	736	991	1,010	2,680	7,690	4,570	5,120	4,410	1,250	645	1,090
20	609	751	971	1,010	3,120	6,930	4,470	6,050	4,280	1,540	686	1,080
21	606	747	960	1,000	3,080	6,400	4,460	6,460	4,240	1,500	636	1,060
22	598	705	975	976	2,830	6,630	4,440	6,740	4,220	1,320	668	1,020
23	591	660	953	971	2,650	7,390	4,400	6,670	4,340	1,180	971	988
24	588	659	971	928	2,660	7,860	4,460	6,530	4,490	1,080	1,080	928
25	600	676	1,020	943	2,790	7,330	4,420	6,490	4,360	1,010	1,070	895
26	603	672	1,040	976	2,760	7,280	4,520	6,590	4,190	943	1,320	849
27	601	657	1,000	995	3,050	6,910	4,980	9,160	4,450	866	1,370	836
28	612	673	938	1,080	3,090	6,320	5,700	11,200	4,330	797	1,170	810
29	649	849	927	1,920	3,060	5,880	5,520	11,300	4,200	745	1,050	793
30	643	1,050	e800	4,450	---	5,910	5,250	10,500	3,980	713	975	781
31	619	---	e700	4,590	---	6,420	---	9,700	---	687	902	---
TOTAL	18,292	20,753	32,230	34,699	64,810	167,730	162,670	201,790	171,610	52,731	24,086	26,804
MEAN	590	692	1,040	1,119	2,235	5,411	5,422	6,509	5,720	1,701	777	893
MAX	663	1,050	1,640	4,590	4,030	7,860	6,540	11,300	8,810	3,910	1,370	1,150
MIN	507	566	700	520	1,150	2,540	4,400	4,280	3,980	687	560	716
AC-FT	36,280	41,160	63,930	68,830	128,600	332,700	322,700	400,300	340,400	104,600	47,770	53,170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

MEAN	869	1,220	1,946	2,159	3,172	4,356	6,307	7,313	5,636	2,128	836	762
MAX	2,559	3,766	7,212	6,280	14,390	11,520	11,390	13,820	11,610	4,951	1,385	1,291
(WY)	(1960)	(1996)	(1996)	(1974)	(1996)	(1972)	(1997)	(1948)	(1974)	(1975)	(1984)	(1984)
MIN	528	618	673	702	769	888	2,257	2,368	1,501	520	438	409
(WY)	(1988)	(1988)	(2003)	(1979)	(1977)	(1977)	(1968)	(1977)	(1992)	(1977)	(1992)	(2001)

GRANDE RONDE RIVER BASIN

13333000 GRANDE RONDE RIVER AT TROY, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	962,979		978,205			
ANNUAL MEAN	2,638		2,673		3,053	
HIGHEST ANNUAL MEAN					5,253	
LOWEST ANNUAL MEAN					1,136	
HIGHEST DAILY MEAN	12,100	May 31	11,300	May 29	42,200	Feb 9, 1996
LOWEST DAILY MEAN	450	Aug 21	507	Oct 2	344	Aug 20, 1977
ANNUAL SEVEN-DAY MINIMUM	465	Aug 16	533	Oct 1	361	Aug 18, 1977
ANNUAL RUNOFF (AC-FT)	1,910,000		1,940,000		2,212,000	
10 PERCENT EXCEEDS	6,360		6,440		7,390	
50 PERCENT EXCEEDS	1,040		1,160		1,610	
90 PERCENT EXCEEDS	543		607		684	

e Estimated

13334300 SNAKE RIVER NEAR ANATONE, WA

LOCATION.--Lat 46°05'50", long 116°58'36", in SE¼SE¼NE¼ sec.12, T.7 N., R.46 E., Asotin County, Hydrologic Unit 17060103, on left bank 1.2 mi downstream from Grande Ronde River, 7.8 mi east of Anatone, 22 mi south of Clarkston, and at mile 167.2.

DRAINAGE AREA.--92,960 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

REVISED RECORDS.--WDR WA-76-1: 1974 and 1975.

GAGE.--Water-stage recorder. Datum of gage is 806.78 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station for irrigation of about 4,090,000 acres, of which about 750,000 acres are irrigated by withdrawals from ground water. Flow regulated by many reservoirs upstream from station with a total usable capacity of more than 10,000,000 acre-ft, the most effective of which is Brownlee Reservoir, 117.8 mi upstream. Diurnal fluctuations caused by Hells Canyon powerplant. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--46 years (water years 1958-2004), 35,030 ft³/s, 25,380,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft³/s, June 18, 1974, gage height, 24.45 ft; minimum discharge, 6,010 ft³/s, Sept. 2, 1958, gage height, 1.29 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77,700 ft³/s, May 31, gage height, 12.62 ft; minimum discharge, 11,700 ft³/s, Nov. 8, gage height, 3.08 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16,000	12,700	13,200	12,900	20,200	20,900	32,600	29,100	66,900	27,200	14,300	19,800
2	15,800	12,300	13,400	13,100	19,300	24,900	30,700	30,200	61,400	28,300	14,900	18,300
3	15,200	12,300	13,500	13,800	22,000	24,900	26,600	35,200	63,200	29,000	16,000	16,800
4	14,400	12,400	13,400	15,100	20,500	27,500	31,900	41,600	61,200	25,300	13,400	17,300
5	13,500	12,600	13,300	16,300	18,800	26,600	31,100	49,300	62,100	22,600	18,300	14,200
6	14,400	12,500	13,300	22,700	22,800	23,000	33,200	53,100	59,500	23,000	14,900	14,300
7	14,800	12,300	13,800	20,900	19,800	21,200	29,100	49,800	62,100	23,300	13,900	14,400
8	12,200	12,000	14,300	18,400	17,000	21,500	31,100	46,800	62,500	24,700	13,600	14,800
9	12,300	12,100	14,300	17,500	19,100	26,200	33,600	45,200	61,000	23,200	13,800	21,600
10	14,500	12,500	13,800	16,500	20,800	27,500	31,000	43,100	56,900	20,800	15,200	18,800
11	12,600	13,200	13,600	16,900	20,200	31,000	30,500	44,500	53,400	21,800	16,500	15,000
12	12,600	13,500	13,400	19,600	21,200	27,700	30,900	41,800	51,100	24,400	16,500	15,400
13	12,400	13,300	13,400	22,300	22,700	26,200	37,400	39,700	48,200	26,800	13,100	20,500
14	12,400	13,000	14,000	21,000	23,200	25,300	39,200	38,600	52,000	24,900	12,900	26,200
15	12,400	12,800	15,600	17,200	18,900	25,000	41,900	40,800	49,400	24,800	12,800	24,700
16	12,400	12,700	15,800	20,400	20,300	31,500	31,200	40,300	41,600	22,800	12,700	31,300
17	12,600	12,800	14,200	18,100	23,200	32,400	28,700	44,500	38,500	21,600	13,900	21,300
18	12,600	13,100	13,300	19,700	18,200	36,900	27,100	42,100	37,000	22,500	12,800	16,500
19	12,600	13,100	13,100	19,700	21,100	36,900	25,900	42,000	32,200	18,200	13,600	15,800
20	12,600	13,000	13,100	17,300	23,100	35,000	25,100	48,000	30,600	21,700	14,100	16,100
21	12,500	13,100	12,900	15,000	23,600	34,300	24,800	52,300	30,400	18,400	15,800	16,300
22	12,400	13,100	12,800	18,200	23,000	35,200	24,400	52,100	34,000	21,600	14,500	16,500
23	12,300	12,800	13,000	17,900	20,400	39,300	23,800	53,800	32,200	21,600	13,800	17,800
24	12,300	12,500	13,400	14,100	20,500	40,600	23,600	58,000	40,200	17,000	14,800	19,300
25	12,200	12,400	13,700	14,700	22,700	42,000	23,800	56,500	34,400	17,300	15,400	17,000
26	12,300	12,500	13,400	14,600	24,400	43,400	24,000	54,800	29,000	17,500	15,700	15,400
27	12,300	12,600	13,500	16,200	23,600	39,600	26,600	56,800	29,000	16,100	16,900	15,500
28	12,300	12,600	13,600	16,400	23,100	35,700	29,000	64,900	29,200	14,300	17,900	16,600
29	12,500	12,800	19,000	18,000	19,600	33,700	30,200	69,500	27,500	16,200	15,200	16,600
30	12,700	13,100	18,300	21,500	---	36,900	29,600	71,300	27,300	17,300	15,000	16,000
31	12,900	---	14,600	20,300	---	32,500	---	69,600	---	14,400	19,800	---
TOTAL	405,000	381,700	434,000	546,300	613,300	965,300	888,600	1,505,300	1,364,000	668,600	462,000	540,100
MEAN	13,060	12,720	14,000	17,620	21,150	31,140	29,620	48,560	45,470	21,570	14,900	18,000
MAX	16,000	13,500	19,000	22,700	24,400	43,400	41,900	71,300	66,900	29,000	19,800	31,300
MIN	12,200	12,000	12,800	12,900	17,000	20,900	23,600	29,100	27,300	14,300	12,700	14,200
AC-FT	803,300	757,100	860,800	1,084,000	1,216,000	1,915,000	1,763,000	2,986,000	2,705,000	1,326,000	916,400	1,071,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	21,030	21,680	24,500	28,970	32,920	39,340	48,220	65,890	70,800	30,260	17,930	19,290
MAX	31,540	36,960	41,630	71,930	72,520	90,400	88,700	118,700	134,200	63,860	29,140	31,730
(WY)	(1985)	(1985)	(1965)	(1997)	(1965)	(1972)	(1974)	(1984)	(1984)	(1982)	(1997)	(1997)
MIN	13,060	12,720	12,940	16,140	15,780	18,680	18,880	20,610	16,850	12,830	9,765	10,180
(WY)	(2004)	(2004)	(2003)	(2001)	(2001)	(1977)	(1977)	(1977)	(1992)	(1977)	(1992)	(1992)

SNAKE RIVER MAIN STEM

13334300 SNAKE RIVER NEAR ANATONE, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	9,603,300		8,774,200		35,030	
ANNUAL MEAN	26,310		23,970		59,030	
HIGHEST ANNUAL MEAN					18,050	
LOWEST ANNUAL MEAN					1997	
HIGHEST DAILY MEAN	147,000	May 31	71,300	May 30	191,000	Jun 18, 1974
LOWEST DAILY MEAN	12,000	Nov 8	12,000	Nov 8	6,630	Sep 1, 1958
ANNUAL SEVEN-DAY MINIMUM	12,300	Oct 22	12,300	Oct 22	7,150	Aug 28, 1958
ANNUAL RUNOFF (AC-FT)	19,050,000		17,400,000		25,380,000	
10 PERCENT EXCEEDS	43,600		42,400		73,000	
50 PERCENT EXCEEDS	18,100		19,600		25,500	
90 PERCENT EXCEEDS	12,600		12,700		15,000	

13334300 SNAKE RIVER NEAR ANATONE, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to May 1984, October 1985 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1959 to May 1984, April 1986 to current year.

INSTRUMENTATION.--Temperature recorder since October 1959.

REMARKS.--Records poor Oct. 1 to Mar. 21; excellent Mar. 22 to Sept. 30. Prior to October 1990, records furnished by U.S. Army Corps of Engineers. Prior to October 2003, records rounded to nearest half degree.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.5°C (rounded), Aug. 26, 28, 1991, Aug. 2-4, 1994, Aug. 14, 1998; minimum, 0.0°C, several days during some winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.0°C, July 24, 25, Aug. 13, 14; minimum, 2.0°C, Jan. 5.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	19.7	18.6	19.1	10.4	9.5	9.9	7.5	6.9	7.1	3.7	3.1	3.5
2	19.7	18.7	19.1	10.5	9.6	9.9	7.6	7.1	7.2	3.5	2.9	3.2
3	19.9	18.5	19.0	10.0	9.6	9.8	7.5	6.7	7.1	4.0	3.2	3.5
4	19.7	18.5	18.9	10.2	9.2	9.6	6.7	6.1	6.3	3.3	2.3	3.0
5	19.5	18.4	18.8	9.6	8.5	8.9	6.4	6.1	6.3	2.7	2.0	2.3
6	19.7	18.2	18.8	9.1	8.0	8.5	6.8	6.3	6.6	3.4	2.7	3.1
7	19.3	18.3	18.8	9.0	7.8	8.2	6.7	6.4	6.5	3.6	2.8	3.2
8	18.9	17.7	18.2	9.0	7.9	8.3	6.7	6.2	6.5	3.5	3.0	3.3
9	18.6	17.1	17.6	8.9	8.1	8.5	6.3	5.9	6.1	3.9	3.4	3.6
10	17.6	16.6	17.1	8.8	8.4	8.7	6.1	5.9	6.0	3.8	3.4	3.5
11	16.7	16.0	16.3	9.5	8.7	9.0	6.2	5.9	6.0	3.8	3.2	3.4
12	16.2	15.7	16.0	9.3	8.5	8.8	6.3	5.9	6.1	3.6	3.1	3.4
13	16.6	15.4	15.9	9.0	8.0	8.4	6.4	6.1	6.2	4.1	3.5	3.7
14	15.8	15.2	15.5	8.6	7.6	8.0	6.6	5.9	6.2	4.1	3.4	3.7
15	15.3	14.6	15.0	8.5	7.6	8.0	6.2	5.7	5.9	3.6	3.3	3.5
16	14.9	14.4	14.6	8.6	8.1	8.3	6.0	5.6	5.8	4.1	3.6	3.8
17	15.6	14.1	14.8	8.9	8.3	8.5	5.9	5.3	5.6	4.3	3.7	3.9
18	15.8	14.4	15.0	9.3	8.4	8.8	5.6	4.8	5.1	4.2	3.7	4.0
19	15.5	14.7	15.1	9.1	8.4	8.8	5.3	4.5	4.8	4.6	4.0	4.3
20	15.9	14.9	15.3	8.7	8.2	8.4	5.1	4.7	4.9	4.4	4.1	4.2
21	16.2	14.9	15.5	8.8	7.5	8.0	5.5	4.9	5.2	4.7	4.2	4.3
22	16.2	15.0	15.5	7.6	6.9	7.2	6.1	5.2	5.5	4.3	3.9	4.1
23	15.9	14.7	15.2	7.3	6.7	6.9	5.5	5.0	5.2	4.1	3.9	4.0
24	15.2	13.9	14.5	7.4	6.6	6.9	5.1	4.8	4.9	4.1	3.7	3.9
25	14.5	13.3	13.8	7.0	6.4	6.6	5.4	4.8	5.0	4.2	3.6	3.8
26	14.2	13.0	13.4	7.3	6.5	6.7	5.4	4.7	5.0	4.1	3.5	3.8
27	13.8	12.9	13.4	7.2	6.2	6.6	4.7	4.1	4.4	4.2	3.7	4.0
28	14.2	13.5	13.9	7.1	6.5	6.7	4.5	3.9	4.1	4.4	4.1	4.3
29	13.9	13.0	13.6	7.1	6.7	6.8	4.6	4.0	4.3	4.8	4.3	4.6
30	13.1	11.4	12.4	7.0	6.6	6.9	4.2	3.8	4.1	4.9	3.9	4.5
31	11.5	9.9	10.8	---	---	---	4.3	3.6	3.9	4.0	3.6	3.8
MONTH	19.9	9.9	15.8	10.5	6.2	8.2	7.6	3.6	5.6	4.9	2.0	3.7

SNAKE RIVER MAIN STEM

13334300 SNAKE RIVER NEAR ANATONE, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.7	3.3	3.5	5.1	4.7	4.9	8.6	7.8	8.2	13.3	11.2	12.2
2	3.3	2.9	3.0	5.2	4.6	4.8	8.9	7.2	8.1	13.8	11.9	12.9
3	3.0	2.8	2.9	4.7	4.0	4.3	9.8	8.2	9.0	14.0	12.5	13.2
4	3.5	2.9	3.2	4.5	4.0	4.2	11.1	9.3	10.1	13.9	12.5	13.1
5	4.2	3.2	3.6	4.5	4.2	4.4	10.6	9.9	10.3	13.4	12.2	12.8
6	3.4	3.0	3.2	5.3	4.1	4.6	11.0	9.4	10.2	12.9	12.0	12.4
7	3.5	3.0	3.2	5.4	4.5	4.9	11.5	10.1	10.8	12.9	11.6	12.2
8	3.6	3.1	3.4	6.3	4.9	5.5	11.2	10.2	10.7	12.8	11.9	12.3
9	3.9	3.4	3.6	5.7	5.4	5.6	11.1	9.7	10.4	12.9	11.4	12.1
10	3.9	3.2	3.5	6.4	5.5	5.9	11.0	9.4	10.2	12.2	11.1	11.7
11	3.6	2.8	3.2	6.1	5.1	5.6	11.1	9.4	10.2	11.1	10.5	10.8
12	3.4	2.6	2.9	6.7	5.4	6.0	11.3	9.8	10.6	10.9	10.0	10.5
13	3.1	2.4	2.6	7.4	5.9	6.5	11.5	10.4	10.9	11.5	10.0	10.8
14	3.1	2.5	2.7	7.2	5.9	6.5	11.0	10.0	10.5	12.8	11.0	11.9
15	3.4	2.6	3.0	7.2	6.3	6.7	10.4	9.6	9.9	12.5	11.9	12.1
16	3.1	2.7	2.9	7.5	6.2	6.8	10.1	8.7	9.4	11.9	11.5	11.7
17	3.4	3.0	3.2	7.9	6.9	7.4	10.4	9.1	9.8	13.0	11.3	12.1
18	4.1	3.3	3.6	7.7	7.0	7.3	10.1	9.3	9.8	13.0	12.4	12.8
19	4.9	3.7	4.2	7.5	6.7	7.2	10.3	9.4	9.9	13.4	12.0	12.7
20	5.1	4.2	4.6	7.4	6.3	6.8	10.6	9.7	10.1	13.3	12.6	13.0
21	4.5	3.8	4.2	8.1	6.7	7.4	10.8	9.8	10.3	12.8	12.3	12.5
22	4.3	3.5	3.8	9.0	7.6	8.2	11.2	9.4	10.4	13.1	12.3	12.6
23	4.4	3.5	3.9	9.2	8.2	8.7	11.5	10.3	10.9	12.3	11.7	12.0
24	4.5	4.0	4.3	8.6	7.7	8.3	---	10.3	---	12.9	11.6	12.2
25	4.5	3.9	4.2	8.1	7.4	7.8	12.6	10.8	11.7	12.8	12.0	12.5
26	5.0	4.0	4.4	8.4	7.7	8.0	13.4	11.4	12.4	13.1	12.5	12.8
27	5.5	4.5	4.9	8.6	7.5	8.0	13.6	12.4	13.0	13.1	12.4	12.7
28	5.2	4.8	4.9	8.9	7.5	8.2	12.9	11.4	12.0	12.4	11.2	11.8
29	5.6	4.7	5.1	9.3	7.8	8.6	12.0	10.3	11.2	11.2	10.6	10.9
30	---	---	---	9.8	8.6	9.2	12.5	10.6	11.5	11.5	10.8	11.2
31	---	---	---	9.4	8.6	9.2	---	---	---	12.4	11.4	11.9
MONTH	5.6	2.4	3.6	9.8	4.0	6.7	---	7.2	---	14.0	10.0	12.1
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.8	12.3	13.0	20.2	19.0	19.7	23.7	22.6	23.1	22.0	20.9	21.5
2	14.6	13.4	13.9	20.3	18.9	19.6	23.5	22.5	23.0	20.9	20.0	20.5
3	15.4	14.3	14.8	20.4	19.0	19.7	22.9	22.1	22.5	20.1	19.6	19.9
4	16.6	15.0	15.7	20.4	19.1	19.8	22.9	22.0	22.5	20.6	19.6	20.1
5	16.1	14.8	15.6	20.6	19.0	19.8	22.8	21.9	22.2	20.5	19.5	20.0
6	15.3	14.0	14.7	20.7	19.5	20.1	22.7	21.7	22.1	20.7	19.6	20.1
7	14.3	13.4	13.8	20.5	19.5	20.0	22.7	21.6	22.1	20.8	19.8	20.2
8	14.2	13.3	13.7	20.4	18.8	19.6	22.8	21.4	22.0	20.8	19.9	20.3
9	14.0	13.1	13.5	20.5	18.9	19.7	23.0	21.6	22.2	21.0	20.3	20.6
10	13.2	12.9	13.0	20.9	19.4	20.1	23.2	22.0	22.5	21.2	20.3	20.7
11	13.8	12.6	13.2	21.0	19.4	20.2	23.6	22.2	22.8	20.5	20.2	20.4
12	14.5	13.3	13.9	21.1	19.5	20.3	23.8	22.4	23.1	20.5	19.9	20.2
13	15.2	13.9	14.5	21.3	19.9	20.5	24.0	22.7	23.3	19.9	19.4	19.5
14	15.7	14.5	15.0	22.2	20.4	21.2	24.0	23.0	23.4	19.5	19.1	19.3
15	15.8	14.6	15.2	22.6	21.0	21.8	23.8	23.1	23.4	19.3	18.9	19.1
16	16.0	14.5	15.2	23.0	21.3	22.1	23.3	22.8	23.0	19.6	18.9	19.3
17	16.6	14.8	15.6	23.0	21.9	22.4	23.0	22.6	22.8	19.5	17.7	18.6
18	16.4	15.4	15.9	22.7	22.1	22.5	23.8	22.6	23.1	17.8	17.3	17.6
19	16.7	15.0	15.8	23.2	22.2	22.6	23.3	22.8	23.1	17.4	16.5	16.9
20	17.3	15.4	16.4	23.3	21.7	22.5	23.7	22.5	23.1	16.6	16.1	16.4
21	17.9	15.9	16.9	23.3	21.8	22.5	23.8	22.8	23.2	16.8	15.9	16.3
22	18.6	16.7	17.6	23.1	21.8	22.5	23.1	22.0	22.6	16.8	15.9	16.3
23	19.3	17.2	18.2	23.5	21.7	22.6	22.0	21.2	21.7	17.5	16.3	16.8
24	19.4	18.0	18.7	24.0	22.2	23.1	21.2	20.5	20.8	18.1	16.9	17.5
25	19.1	17.9	18.6	24.0	23.1	23.5	20.7	19.9	20.4	18.0	17.3	17.6
26	20.1	18.2	19.1	23.5	22.7	23.1	20.1	19.7	19.9	18.1	17.2	17.6
27	20.4	19.0	19.7	23.1	22.2	22.6	20.6	19.2	19.8	18.1	17.3	17.7
28	19.8	18.7	19.1	23.2	22.0	22.6	21.0	20.0	20.4	18.3	17.6	17.9
29	19.1	17.7	18.4	23.3	22.2	22.7	21.3	19.9	20.5	18.4	17.5	17.8
30	19.9	18.0	18.9	23.4	22.4	22.8	21.8	20.4	21.0	18.4	17.5	17.9
31	---	---	---	23.6	22.2	22.9	22.1	21.0	21.4	---	---	---
MONTH	20.4	12.3	15.9	24.0	18.8	21.5	24.0	19.2	22.2	22.0	15.9	18.8

13334450 ASOTIN CREEK BELOW CONFLUENCE, NEAR ASOTIN, WA

LOCATION.--Lat 46°16'25", long 117°17'29", in SW¼NW¼, sec.10, T.9 N., R.44 E., Asotin County, Hydrologic Unit 17060103, on left bank 0.1 mi downstream from confluence of North Fork and South Forks of Asotin Creek, at upstream side of county road bridge 11 mi southwest of Asotin, and at mile 14.6.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--January 2001 to current year.

REVISED RECORDS.--WDR WA-02-1: 2001 (maximum gage height).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,810 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair, except for discharges above 100 ft³/s, which are poor. No regulation. No diversions. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--3 years (water years 2002-04) 51.5 ft³/s, 6.73 in/yr, 37,310 acre ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 539 ft³/s, Apr. 14, 2002, gage height 3.17 ft; minimum discharge, 20 ft³/s, Sept. 18, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145 ft³/s, May 20, gage height, 2.28 ft; minimum discharge, 21 ft³/s, Oct. 3-5, 7, Sept. 5, 7-10, but may have been less during period of ice effect Jan. 5-6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	25	30	29	40	41	53	78	76	48	27	24
2	25	25	31	29	38	41	50	91	73	47	28	23
3	24	26	31	28	37	41	47	97	72	45	31	24
4	24	26	30	e26	36	40	49	99	69	43	29	24
5	23	25	31	e24	34	40	53	96	66	42	30	23
6	24	25	39	e23	33	39	55	93	65	41	29	23
7	24	27	36	e26	33	37	55	88	63	40	30	23
8	24	27	33	30	33	37	56	85	87	39	28	22
9	25	27	31	29	34	40	56	78	82	39	27	22
10	26	28	31	29	32	49	56	75	79	39	26	23
11	25	31	30	28	31	50	55	72	75	38	26	22
12	28	28	30	29	30	49	56	69	73	37	25	23
13	27	27	31	29	31	50	65	63	72	37	25	24
14	28	27	37	30	31	50	70	58	67	36	24	25
15	28	27	34	31	31	48	70	57	62	35	25	24
16	31	28	32	32	32	47	63	65	60	34	25	27
17	28	31	31	32	35	49	63	61	58	34	26	24
18	27	29	30	32	61	52	59	63	59	35	25	26
19	27	29	30	32	70	55	57	82	59	39	25	26
20	26	29	30	31	61	54	56	130	57	37	25	27
21	26	28	30	31	57	51	58	142	54	33	25	25
22	26	27	30	30	53	52	59	134	52	32	27	25
23	26	27	30	31	50	55	59	126	51	31	30	24
24	27	28	32	31	48	57	60	110	50	30	27	24
25	27	28	32	30	47	55	59	99	50	30	29	24
26	27	28	31	30	45	55	61	95	49	29	28	24
27	27	27	29	30	44	54	71	94	47	29	26	24
28	27	28	30	30	44	52	85	99	47	29	26	24
29	29	34	30	32	43	50	77	93	48	28	25	24
30	27	32	26	40	---	49	72	87	52	28	24	24
31	26	---	29	41	---	54	---	82	---	28	24	---
TOTAL	814	834	967	935	1,194	1,493	1,805	2,761	1,874	1,112	827	721
MEAN	26.3	27.8	31.2	30.2	41.2	48.2	60.2	89.1	62.5	35.9	26.7	24.0
MAX	31	34	39	41	70	57	85	142	87	48	31	27
MIN	23	25	26	23	30	37	47	57	47	28	24	22
AC-FT	1,610	1,650	1,920	1,850	2,370	2,960	3,580	5,480	3,720	2,210	1,640	1,430
CFSM	0.25	0.27	0.30	0.29	0.40	0.46	0.58	0.86	0.60	0.34	0.26	0.23
IN.	0.29	0.30	0.35	0.33	0.43	0.53	0.65	0.99	0.67	0.40	0.30	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	25.9	28.3	32.0	35.2	39.4	68.0	86.2	107	64.0	32.6	25.4	24.1
MAX	26.7	29.3	32.7	46.1	55.5	127	126	133	98.7	35.9	26.7	25.6
(WY)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2004)	(2004)	(2002)
MIN	24.8	27.8	31.2	23.8	25.3	30.8	49.7	88.3	36.8	30.8	23.8	22.4
(WY)	(2002)	(2004)	(2004)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(2001)

ASOTIN CREEK BASIN

13334450 ASOTIN CREEK BELOW CONFLUENCE, NEAR ASOTIN, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2001 - 2004	
ANNUAL TOTAL	20,774		15,337		51.5	
ANNUAL MEAN	56.9		41.9		57.1	
HIGHEST ANNUAL MEAN					41.9	
LOWEST ANNUAL MEAN					57.1	
HIGHEST DAILY MEAN	308	Mar 16	142	May 21	382	Apr 14, 2002
LOWEST DAILY MEAN	21	Aug 30	22	Sep 8	21	Sep 15, 2001
ANNUAL SEVEN-DAY MINIMUM	21	Aug 30	23	Sep 5	21	Aug 30, 2003
ANNUAL RUNOFF (AC-FT)	41,210		30,420		37,310	
ANNUAL RUNOFF (CFSM)	0.547		0.403		0.495	
ANNUAL RUNOFF (INCHES)	7.43		5.49		6.73	
10 PERCENT EXCEEDS	120		71		107	
50 PERCENT EXCEEDS	36		32		33	
90 PERCENT EXCEEDS	24		25		25	

e Estimated

13335050 ASOTIN CREEK AT ASOTIN, WA

LOCATION.--Lat 46°20'27", long 117°03'18", in SW¹/₄SW¹/₄, sec.16, T.10 N., R.46 E., Asotin County, Hydrologic Unit 17060103, on right bank near mouth, at upstream side of bridge on State Highway 129, at Asotin, and at mile 0.1.

DRAINAGE AREA.--323 mi².

PERIOD OF RECORD.--March 1991 to current year.

REVISED RECORDS.--WDR WA-93-1: 1992(M,m). WDR WA-96-1: 1991(M).

GAGE.--Water-stage recorder. Datum of gage is 742.57 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges, which are fair, and those above 300 ft³/s, which are poor. Several diversions for irrigation. Miscellaneous data from January through September 1989 are available in the Spokane Field Office.

AVERAGE DISCHARGE.--13 years (water years 1992-2004), 100 ft³/s, 4.21 in/yr, 72,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,050 ft³/s, Jan. 1, 1997, gage height, 7.50 ft, from high-water mark, from rating curve extended above 550 ft³/s, on basis of slope-area measurement of peak flow; minimum daily discharge, 17 ft³/s, Aug. 6, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 264 ft³/s, June 19, gage height, 2.89 ft; minimum discharge, 32 ft³/s, Aug. 1-2, 14-15, Sept. 24, 28-30, but may have been less during period of missing record Oct. 2-8 and Jan. 5-8.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	40	43	47	61	72	98	105	122	61	36	39
2	e36	41	43	46	59	70	91	113	118	66	36	39
3	e36	41	42	46	58	68	87	121	110	60	41	40
4	e36	41	e43	43	57	67	87	122	104	58	41	39
5	e34	41	e45	e38	55	67	94	119	101	56	42	38
6	e35	40	47	e36	53	65	99	115	102	54	42	36
7	e36	41	51	e38	52	60	101	108	99	52	45	36
8	e36	41	46	e40	52	61	102	105	152	51	42	36
9	37	42	44	47	51	68	101	100	164	49	39	36
10	38	41	44	46	51	84	99	98	148	49	37	36
11	37	42	44	46	50	88	97	99	135	49	36	36
12	39	41	43	46	49	89	97	95	123	47	36	37
13	39	40	44	46	48	90	101	88	115	46	36	37
14	39	40	53	47	49	90	110	81	107	45	35	38
15	40	40	50	48	49	91	114	79	100	43	36	38
16	43	40	48	49	49	91	104	86	95	42	36	39
17	41	43	47	50	50	95	103	84	90	42	36	37
18	40	42	46	50	78	105	100	82	85	42	38	38
19	39	42	46	50	104	116	99	e110	94	48	36	37
20	39	43	46	50	100	109	98	e160	87	51	38	39
21	38	42	47	49	93	102	99	169	79	45	37	37
22	39	41	46	49	88	102	102	181	75	43	50	37
23	37	41	46	49	84	108	101	177	71	41	52	36
24	39	42	47	49	82	117	100	159	68	40	48	35
25	39	42	48	49	82	113	98	143	67	39	47	34
26	38	41	48	48	79	107	97	134	65	38	49	34
27	38	39	46	48	77	102	103	129	63	39	45	34
28	38	40	46	48	75	96	119	141	60	39	44	33
29	39	44	48	50	74	91	115	152	60	38	42	33
30	41	45	43	57	---	91	106	139	63	38	41	33
31	40	---	46	62	---	101	---	128	---	37	39	---
TOTAL	1,182	1,239	1,426	1,467	1,909	2,776	3,022	3,722	2,922	1,448	1,258	1,097
MEAN	38.1	41.3	46.0	47.3	65.8	89.5	101	120	97.4	46.7	40.6	36.6
MAX	43	45	53	62	104	117	119	181	164	66	52	40
MIN	34	39	42	36	48	60	87	79	60	37	35	33
AC-FT	2,340	2,460	2,830	2,910	3,790	5,510	5,990	7,380	5,800	2,870	2,500	2,180
CFSM	0.12	0.13	0.14	0.15	0.20	0.28	0.31	0.37	0.30	0.14	0.13	0.11
IN.	0.14	0.14	0.16	0.17	0.22	0.32	0.35	0.43	0.34	0.17	0.14	0.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	37.8	48.6	83.3	101	134	153	183	205	132	54.8	35.7	35.5
MAX	51.4	74.0	235	435	420	367	382	442	429	90.2	49.0	43.1
(WY)	(2000)	(1999)	(1999)	(1997)	(1996)	(1999)	(1996)	(1997)	(1999)	(1999)	(1999)	(1998)
MIN	25.9	30.7	33.4	28.1	35.6	57.9	82.8	58.1	35.5	26.5	23.8	25.3
(WY)	(1999)	(1994)	(1993)	(1993)	(1993)	(2001)	(1992)	(1992)	(1992)	(1994)	(1994)	(1994)

ASOTIN CREEK BASIN

13335050 ASOTIN CREEK AT ASOTIN, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004	
ANNUAL TOTAL	31,333		23,468		100	
ANNUAL MEAN	85.8		64.1		197	
HIGHEST ANNUAL MEAN					1999	
LOWEST ANNUAL MEAN					1994	
HIGHEST DAILY MEAN	467	Mar 16	181	May 22	3,000	Jan 1, 1997
LOWEST DAILY MEAN	29	Aug 20	33	Sep 28	17	Aug 6, 1998
ANNUAL SEVEN-DAY MINIMUM	31	Aug 29	34	Sep 24	21	Jan 7, 1993
ANNUAL RUNOFF (AC-FT)	62,150		46,550		72,550	
ANNUAL RUNOFF (CFSM)	0.266		0.199		0.310	
ANNUAL RUNOFF (INCHES)	3.61		2.70		4.21	
10 PERCENT EXCEEDS	184		108		215	
50 PERCENT EXCEEDS	48		48		50	
90 PERCENT EXCEEDS	33		37		32	

e Estimated

13344500 TUCANNON RIVER NEAR STARBUCK, WA

LOCATION.--Lat 46°30'17", long 118°03'55", in NE¼SW¼, sec.21, T.12 N., R.38 E., Columbia County, Hydrologic Unit 17060107, on right bank, 180 ft downstream from County road bridge, 0.5 mi downstream from Smith Hollow, 3.0 mi east of Starbuck, 3.3 mi downstream from Pataha Creek, and at mile 7.9.

DRAINAGE AREA.--431 mi².

PERIOD OF RECORD.--November 1914 to September 1917, August 1928 to September 1931, October 1958 to September 1990, October 1994 to current year. Monthly discharge only for October and November 1914, published in WSP 1317.

REVISED RECORDS.--WSP 1347: 1930.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 735.9 ft above NGVD of 1929, from plane-table survey. Nov. 8, 1914, to Sept. 30, 1917, nonrecording gage at site 2.8 mi upstream at different datum. Aug. 9, 1928, to Sept. 30, 1931, nonrecording gages at site 2.5 mi upstream at various datums.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Many small diversions for irrigation upstream from station. Water temperatures and sediment records October 1962 to June 1970. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--48 years (water years 1915-17, 1929-31, 1959-90, 1995-2004), 169 ft³/s, 122,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,980 ft³/s, Dec. 22, 1964, gage height, 9.84 ft, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 15 ft³/s, July 11, 12, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 31	0030	---	*0.27	May 22	1900	*275	0.24

Minimum discharge, 40 ft³/s, Jan. 6, but may have been less during period of ice effect Jan. 6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	83	101	104	244	133	146	152	195	62	56	72
2	63	85	96	104	219	126	139	157	185	62	54	73
3	64	87	98	103	196	123	135	168	173	60	59	e71
4	65	85	97	92	180	123	133	175	163	59	56	e68
5	67	84	94	51	164	124	137	178	157	59	62	e66
6	67	83	100	e48	153	124	143	179	157	54	59	e64
7	66	85	109	e60	147	119	147	176	152	56	66	e63
8	68	89	101	e84	138	116	148	174	175	59	65	e60
9	68	89	96	121	131	120	147	171	188	64	62	55
10	70	89	95	116	127	132	145	164	183	67	59	57
11	71	95	97	114	120	145	143	175	175	64	57	55
12	74	93	95	116	115	151	144	171	166	62	58	60
13	76	88	109	118	111	151	147	151	160	57	60	62
14	72	88	147	120	110	152	156	137	151	56	63	70
15	75	85	124	123	110	150	165	131	141	53	63	68
16	82	88	113	137	110	148	160	139	127	53	64	64
17	78	94	109	139	116	146	153	139	116	56	67	65
18	73	89	106	139	134	151	148	136	110	60	70	68
19	69	90	104	140	165	157	142	154	115	64	70	67
20	70	96	104	140	178	159	140	202	106	65	71	66
21	67	89	105	138	178	151	140	248	98	60	70	62
22	67	86	106	135	173	148	139	268	88	58	77	62
23	69	85	105	141	166	152	134	264	83	56	89	59
24	72	88	107	181	161	159	135	244	78	56	89	58
25	72	86	113	179	156	159	136	220	75	54	94	57
26	73	86	111	159	151	156	134	207	71	52	97	55
27	73	84	108	149	145	156	139	208	70	51	89	55
28	74	84	108	147	140	151	159	219	68	51	84	55
29	81	96	108	166	136	142	165	221	68	49	82	53
30	84	114	102	232	---	140	156	212	66	47	80	52
31	84	---	103	261	---	146	---	204	---	47	75	---
TOTAL	2,218	2,663	3,271	4,057	4,374	4,410	4,355	5,744	3,860	1,773	2,167	1,862
MEAN	71.5	88.8	106	131	151	142	145	185	129	57.2	69.9	62.1
MAX	84	114	147	261	244	159	165	268	195	67	97	73
MIN	63	83	94	48	110	116	133	131	66	47	54	52
AC-FT	4,400	5,280	6,490	8,050	8,680	8,750	8,640	11,390	7,660	3,520	4,300	3,690
CFSM	0.17	0.21	0.24	0.30	0.35	0.33	0.34	0.43	0.30	0.13	0.16	0.14
IN.	0.19	0.23	0.28	0.35	0.38	0.38	0.38	0.50	0.33	0.15	0.19	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2004, BY WATER YEAR (WY)

MEAN	82.8	108	160	211	258	246	271	292	199	83.3	60.8	70.0
MAX	125	186	673	635	1,057	717	668	986	599	203	114	108
(WY)	(1960)	(1996)	(1965)	(1974)	(1996)	(1972)	(1917)	(1917)	(1974)	(1974)	(1974)	(1972)
MIN	51.7	60.0	66.8	49.3	84.0	103	114	93.9	58.9	32.9	21.5	42.2
(WY)	(1930)	(1930)	(1915)	(1930)	(1931)	(1977)	(1977)	(1977)	(1930)	(1930)	(1931)	(1931)

TUCANNON RIVER BASIN

13344500 TUCANNON RIVER NEAR STARBUCK, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1915 - 2004	
ANNUAL TOTAL	55,620		40,754			
ANNUAL MEAN	152		111		169	
HIGHEST ANNUAL MEAN					327	1974
LOWEST ANNUAL MEAN					89.6	1977
HIGHEST DAILY MEAN	830	Feb 1	268	May 22	5,000	Feb 10, 1916
LOWEST DAILY MEAN	47	Jul 31	47	Jul 30	15	Jul 11, 1930
ANNUAL SEVEN-DAY MINIMUM	50	Jul 27	50	Jul 25	18	Jul 24, 1931
ANNUAL RUNOFF (AC-FT)	110,300		80,840		122,800	
ANNUAL RUNOFF (CFSM)	0.354		0.258		0.393	
ANNUAL RUNOFF (INCHES)	4.80		3.52		5.34	
10 PERCENT EXCEEDS	296		172		326	
50 PERCENT EXCEEDS	105		104		117	
90 PERCENT EXCEEDS	56		59		58	

e Estimated

13348000 SOUTH FORK PALOUSE RIVER AT PULLMAN, WA

LOCATION.--Lat 46°43'57", long 117°10'48", in NE¹/₄NE¹/₄, sec.6, T.14 N., R.45 E., Whitman County, Hydrologic Unit 17060108, on right bank at State Street crossing in Pullman, 600 ft upstream from Missouri Flat Creek, and at mile 22.2.

DRAINAGE AREA.--132 mi².

PERIOD OF RECORD.--February 1934 to September 1942, December 1959 to September 1981, May 2001 to current year. Chemical analyses water years 1974, 1978 to June 1980.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,326.3 ft above NGVD of 1929. Prior to Mar. 19, 1934, nonrecording gage at site 30 ft upstream.

REMARKS.--Records fair. Minor diversions for domestic use above station. Slight regulation caused by pondage at Robinson Park Dam on headwaters and by Moscow sewage disposal plant on Paradise Creek. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--32 years (water years 1935-42, 1961-81, 2002-04), 38.8 ft³/s, 4.00 in/yr, 28,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,570 ft³/s, Jan. 21, 1972, gage height, 9.46 ft; minimum discharge, 0.1 ft³/s, Sept. 23, 1942, gage height, 0.50 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1910, 9.5 ft, Feb. 26, 1948, discharge, 5,000 ft³/s. Flood of Jan. 24, 1959, reached a stage of 6.5 ft from floodmarks, discharge, 1,860 ft³/s. Flood of Dec. 22, 1933, reached a stage of 6.0 ft from gage readings furnished by Washington State University, discharge, 1,800 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 730 ft³/s, Feb. 18, gage height, 4.63 ft; minimum discharge, 1.1 ft³/s, Aug. 4.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	7.5	15	e8.3	100	74	37	21	30	4.2	1.9	5.1
2	e5.0	7.5	16	e8.0	73	66	34	20	27	4.0	1.9	4.6
3	e6.0	7.7	15	e7.6	65	60	33	19	24	4.0	1.9	4.4
4	e6.0	7.4	11	e7.4	57	94	33	19	21	4.2	1.8	3.9
5	e5.0	7.2	12	e7.0	54	114	31	19	19	3.8	2.1	3.5
6	e5.0	7.0	19	e7.6	48	110	30	18	19	4.9	2.9	3.2
7	e5.0	7.4	14	e8.2	50	93	29	18	18	3.2	5.2	4.1
8	e4.0	7.6	11	e10	50	97	29	18	25	2.9	3.7	3.6
9	e4.0	7.8	10	17	50	102	28	17	22	3.0	2.8	3.2
10	3.7	9.9	10	24	48	100	27	18	22	3.2	2.4	3.2
11	4.1	16	12	23	44	82	27	28	21	3.4	2.2	3.5
12	4.6	9.0	12	25	40	76	26	27	19	3.5	1.8	3.7
13	4.8	8.1	29	25	38	69	26	24	16	3.2	1.9	7.4
14	4.3	7.6	45	24	39	63	27	21	14	2.6	2.4	10
15	7.5	8.1	25	25	39	59	34	20	12	2.6	2.7	8.0
16	10	14	18	28	43	57	36	39	11	2.6	2.5	8.8
17	9.3	17	13	28	94	55	31	35	10	2.5	7.2	6.2
18	5.6	15	12	25	589	56	29	27	9.3	3.1	4.4	11
19	5.4	12	11	24	349	52	28	31	8.5	5.1	7.0	10
20	5.4	11	13	24	173	48	32	30	8.0	5.4	7.0	9.1
21	5.1	9.2	16	22	129	46	30	37	7.8	4.3	5.5	6.2
22	5.2	8.4	14	21	104	45	28	51	6.9	3.7	11	5.8
23	5.0	7.0	13	20	94	45	26	61	6.2	2.8	16	5.4
24	5.3	7.3	16	24	116	44	25	48	6.3	2.9	11	5.8
25	5.6	7.9	17	24	139	43	24	37	5.6	2.9	14	5.2
26	5.5	8.6	15	23	112	44	23	37	5.7	2.7	17	4.8
27	6.4	8.5	12	24	105	51	22	50	5.9	2.3	8.2	4.4
28	8.0	8.8	11	68	93	43	23	66	5.3	1.6	7.3	4.9
29	10	35	9.6	361	83	39	22	67	4.7	1.8	6.4	4.1
30	10	18	9.0	547	---	38	21	46	4.3	1.6	5.7	4.2
31	8.0	---	e8.5	184	---	42	---	36	---	1.7	5.2	---
TOTAL	183.8	313.5	464.1	1,674.1	3,018	2,007	851	1,005	414.5	99.7	173.0	167.3
MEAN	5.93	10.4	15.0	54.0	104	64.7	28.4	32.4	13.8	3.22	5.58	5.58
MAX	10	35	45	547	589	114	37	67	30	5.4	17	11
MIN	3.7	7.0	8.5	7.0	38	38	21	17	4.3	1.6	1.8	3.2
AC-FT	365	622	921	3,320	5,990	3,980	1,690	1,990	822	198	343	332
CFSM	0.04	0.08	0.11	0.41	0.79	0.49	0.21	0.25	0.10	0.02	0.04	0.04
IN.	0.05	0.09	0.13	0.47	0.85	0.57	0.24	0.28	0.12	0.03	0.05	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2004, BY WATER YEAR (WY)

MEAN	4.39	9.14	34.5	82.8	112	118	57.5	23.8	10.3	3.68	3.06	3.36
MAX	9.43	40.9	219	401	360	313	137	58.4	40.5	7.81	8.89	6.03
(WY)	(1976)	(1974)	(1974)	(1974)	(1972)	(1969)	(1969)	(1975)	(1971)	(1975)	(1972)	(1972)
MIN	1.08	1.44	2.70	1.77	10.5	14.0	8.20	5.75	1.52	0.86	0.50	0.49
(WY)	(1940)	(1940)	(1937)	(1937)	(1977)	(1977)	(1977)	(1934)	(1940)	(1940)	(1940)	(1942)

PALOUSE RIVER BASIN

13348000 SOUTH FORK PALOUSE RIVER AT PULLMAN, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1934 - 2004	
ANNUAL TOTAL	14,709.3		10,371.0		38.8	
ANNUAL MEAN	40.3		28.3		111	
HIGHEST ANNUAL MEAN					1974	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	600	Jan 31	589	Feb 18	3,200	Jan 21, 1972
LOWEST DAILY MEAN	1.9	Jul 31	1.6	Jul 28	0.30	Sep 1, 1942
ANNUAL SEVEN-DAY MINIMUM	2.1	Jul 27	1.8	Jul 28	0.31	Sep 1, 1942
ANNUAL RUNOFF (AC-FT)	29,180		20,570		28,130	
ANNUAL RUNOFF (CFSM)	0.305		0.215		0.294	
ANNUAL RUNOFF (INCHES)	4.15		2.92		4.00	
10 PERCENT EXCEEDS	97		60		94	
50 PERCENT EXCEEDS	12		13		8.4	
90 PERCENT EXCEEDS	3.4		3.3		1.9	

e Estimated

13351000 PALOUSE RIVER AT HOOPER, WA

LOCATION.--Lat 46°45'31", long 118°08'52", in NE¼SE¼, sec.27, T.15 N., R.37 E., Whitman County, Hydrologic Unit 17060108, on left bank 150 ft downstream from bridge on State Highway 26 at Hooper, 0.3 mi upstream from Cow Creek, 3.5 mi downstream from right bank tributary, 6.0 mi downstream from Willow Creek, and at mile 19.6.

DRAINAGE AREA.--2,500 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to August 1897 (gage heights only), September 1897 to December 1899, April 1900 to April 1907, June 1908 to July 1912, March 1913 to March 1916, February 1951 to current year. Prior to 1904 sometimes published as "near Hooper."

REVISED RECORDS.--WSP 1287: 1897-1904, 1910(M), 1915-16(M). WSP 1447: 1910. WSP 1934: Drainage area. WSP 1447: 1906(M). WSP 1567: 1908-09(M).

GAGE.--Water-stage recorder. Datum of gage is 1,040.8 ft above NGVD of 1929. Apr. 1 to Aug. 31, 1897, nonrecording gage at site 2.5 mi upstream at different datum. Sept. 9, 1897, to March 1916, various nonrecording gages at site 1.5 mi upstream from present site at different datums. Feb. 8 to Mar. 28, 1951, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges which are fair. Diversions upstream from station for irrigation and municipal use. U. S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--66 years (water years 1898-99, 1901-06, 1909-11, 1914-15, 1952-2004), 605 ft³/s, 438,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,500 ft³/s, Feb. 4, 1963, gage height, 19.13 ft, from rating curve extended above 18,000 ft³/s on basis of slope-area measurement of peak flow; no flow part or all of each day June 25, 1910, Aug. 1-17, Aug. 28 to Sept. 4, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 30	1615	4,060	9.72	Feb 19	1215	*4,180	*9.82

Minimum discharge, 17 ft³/s, Aug. 22, gage height, 2.77 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	62	110	e105	2,120	1,340	867	345	710	105	27	71
2	34	67	142	e98	1,400	1,200	912	323	655	92	29	61
3	35	65	164	e92	1,000	1,080	791	308	576	86	30	56
4	38	e60	157	e90	853	999	703	292	514	84	29	52
5	39	e55	148	e90	754	1,180	666	280	461	84	27	51
6	40	e50	153	e98	672	1,320	670	273	414	79	27	49
7	41	e45	151	e110	623	1,310	687	266	375	71	28	48
8	42	e50	159	e120	579	1,250	665	254	364	70	28	45
9	44	65	164	e140	580	1,260	637	245	355	71	32	44
10	43	68	191	188	556	1,420	606	235	349	68	31	45
11	45	70	167	224	540	1,590	569	237	345	67	27	45
12	46	69	151	249	513	1,420	529	250	322	65	23	45
13	48	69	152	313	471	1,310	494	256	316	62	26	46
14	49	74	170	325	435	1,290	475	307	295	60	24	45
15	48	77	223	330	444	1,200	486	284	268	58	23	44
16	49	78	291	330	463	1,130	539	257	248	55	24	46
17	51	91	286	327	490	1,110	567	259	232	56	21	49
18	54	88	229	346	946	1,130	553	270	211	56	23	57
19	58	94	193	356	3,810	1,210	516	312	199	57	23	61
20	63	101	173	339	3,000	1,270	503	311	194	57	23	74
21	63	103	162	318	2,120	1,150	494	305	196	52	22	83
22	61	106	161	310	1,680	996	505	321	174	48	18	82
23	64	108	165	308	1,410	942	518	1,230	166	45	26	75
24	62	101	172	319	1,270	988	486	2,230	153	44	28	70
25	62	93	176	328	1,360	1,090	447	1,560	137	42	37	63
26	60	98	184	332	1,640	1,080	420	1,140	125	39	39	60
27	60	87	198	320	1,610	992	395	899	117	37	46	57
28	59	85	206	318	1,670	1,000	375	796	116	35	47	52
29	61	90	196	397	1,500	976	364	761	112	33	84	50
30	61	88	e125	2,930	---	866	358	802	110	31	100	49
31	59	---	e110	3,640	---	809	---	798	---	29	77	---
TOTAL	1,572	2,357	5,429	13,790	34,509	35,908	16,797	16,406	8,809	1,838	1,049	1,675
MEAN	50.7	78.6	175	445	1,190	1,158	560	529	294	59.3	33.8	55.8
MAX	64	108	291	3,640	3,810	1,590	912	2,230	710	105	100	83
MIN	33	45	110	90	435	809	358	235	110	29	18	44
AC-FT	3,120	4,680	10,770	27,350	68,450	71,220	33,320	32,540	17,470	3,650	2,080	3,320

PALOUSE RIVER BASIN

13351000 PALOUSE RIVER AT HOOPER, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2004, BY WATER YEAR (WY)												
MEAN	67.8	145	445	1,020	1,721	1,823	1,272	628	255	82.9	33.7	39.1
MAX	151	349	2,198	4,602	5,744	6,660	4,127	1,560	982	291	97.4	116
(WY)	(1960)	(1956)	(1974)	(1974)	(1996)	(1910)	(1913)	(1975)	(1990)	(1902)	(1997)	(1997)
MIN	17.7	39.6	36.9	46.6	162	216	203	102	41.6	3.72	0.06	3.90
(WY)	(1916)	(1905)	(1915)	(1915)	(1994)	(1977)	(1977)	(1992)	(1992)	(1968)	(1968)	(1967)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1898 - 2004	
ANNUAL TOTAL	163,205		140,139			
ANNUAL MEAN	447		383		605	
HIGHEST ANNUAL MEAN					1,595	
LOWEST ANNUAL MEAN					106	
HIGHEST DAILY MEAN	5,890	Feb 2	3,810	Feb 19	27,800	Mar 2, 1910
LOWEST DAILY MEAN	16	Aug 1	18	Aug 22	0.00	Jun 25, 1910
ANNUAL SEVEN-DAY MINIMUM	18	Aug 15	22	Aug 16	0.00	Aug 10, 1968
ANNUAL RUNOFF (AC-FT)	323,700		278,000		438,200	
10 PERCENT EXCEEDS	1,190		1,130		1,620	
50 PERCENT EXCEEDS	162		164		178	
90 PERCENT EXCEEDS	26		39		31	

e Estimated

13351000 PALOUSE RIVER AT HOOPER, WA—Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-71, 1993 to September 2004.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1961 to September 1971, August 1993 to September 1994, April 2002 to September 2004 (discontinued).

WATER TEMPERATURE: October 1961 to September 1971, August 1993 to September 2004 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: October 1961 to September 1971, October 1992 to September 1999; November 2000 to March 2001 (discontinued).

INSTRUMENTATION.--Water-quality monitor since August 1993. Electronic data logger with 60-minute recording interval except for period Nov. 15, 1994 to Oct. 20, 1995, when the recording interval was 72 minutes.

REMARKS.--Specific conductance record excellent except May 23, which is good. Temperature record excellent except Mar. 31 to Apr. 6 and May 27-31, which are good. In October 1996, station became a Central Columbia Plateau National Water-Quality Assessment Program (NAWQA) surface-water quality trend site.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 447 microsiemens, Aug. 14, 1994, but may have been higher during periods of missing record; minimum recorded, 92 microsiemens, recorded May 24, 2004, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum recorded, 32.5°C (rounded), July 24, 1994, but may have been higher during periods of missing record; minimum recorded, 0.0°C for several days during winter months.

SEDIMENT CONCENTRATION: Maximum daily mean, 10,100 mg/L, Feb. 8, 1996; minimum daily mean, 1 mg/L, Jan. 4, 2001.

SEDIMENT DISCHARGE: Maximum daily, 527,000 tons, Feb. 9, 1996; minimum daily, 0.04 tons, Aug. 16, 20, 1994.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 400 microsiemens, Sept. 5, but may have been higher during periods of missing record; minimum, 92 microsiemens, May 24.

WATER TEMPERATURE: Maximum, 29.0°C, July 16; minimum, 0.0°C, Nov. 6,7 and Dec. 29 to Jan. 17.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	375	372	374	348	324	334	320	312	317
2	---	---	---	378	374	376	324	315	321	323	318	320
3	---	---	---	383	378	381	315	302	305	320	311	316
4	---	---	---	385	379	382	304	290	296	322	312	315
5	---	---	---	379	371	376	313	297	306	334	322	330
6	---	---	---	371	359	366	331	313	316	351	334	341
7	384	375	379	360	351	356	366	331	355	363	351	356
8	381	371	376	354	348	352	352	289	317	364	358	361
9	376	365	371	354	348	352	289	276	279	360	354	357
10	371	361	366	354	351	352	278	276	277	354	340	347
11	368	359	363	354	345	350	277	274	275	341	333	336
12	366	358	362	358	349	353	274	272	273	334	326	330
13	364	356	360	359	349	355	281	272	275	326	313	318
14	365	357	360	359	350	355	289	281	286	317	310	313
15	364	357	360	361	353	358	283	267	272	331	316	324
16	366	360	363	368	358	362	272	257	264	321	294	306
17	367	363	365	373	365	370	273	257	263	294	285	288
18	369	364	366	374	364	369	332	273	293	285	280	283
19	369	366	368	369	357	363	348	325	339	283	281	282
20	372	369	371	369	361	363	325	302	315	287	281	283
21	374	370	372	370	361	366	302	291	294	291	287	290
22	378	372	376	362	353	357	293	291	292	291	287	289
23	384	378	381	368	355	358	295	293	293	288	286	287
24	384	377	381	372	368	371	296	293	295	287	284	285
25	380	372	377	371	338	354	300	296	298	295	287	290
26	377	370	374	338	318	325	305	299	302	297	295	296
27	375	368	372	328	320	322	306	304	305	300	296	297
28	373	370	372	344	328	335	309	304	306	304	300	301
29	375	369	372	357	344	349	309	306	308	320	304	310
30	375	370	373	357	348	353	308	301	305	320	202	275
31	375	372	374	---	---	---	312	304	308	202	166	178
MONTH	---	---	---	385	318	358	366	257	299	364	166	307

PALOUSE RIVER BASIN

13351000 PALOUSE RIVER AT HOOPER, WA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	169	166	168	195	189	191	167	157	164	247	241	244
2	201	169	186	202	194	197	157	153	155	250	243	248
3	220	201	209	204	201	202	157	153	156	257	248	255
4	236	220	229	212	204	209	169	155	163	259	253	256
5	256	236	249	216	202	213	175	165	171	261	257	258
6	261	256	259	239	202	220	177	175	176	263	260	262
7	270	260	264	243	227	233	176	173	175	267	263	266
8	280	270	276	243	233	236	173	169	171	270	267	269
9	285	280	283	244	236	240	172	168	170	272	269	270
10	294	285	290	245	219	233	174	170	172	272	271	272
11	298	290	295	219	184	198	178	171	174	272	270	271
12	304	298	302	184	173	177	185	174	179	272	270	271
13	305	302	304	179	174	176	192	180	185	275	272	274
14	309	305	308	180	177	179	197	184	189	274	261	268
15	313	309	311	179	172	174	199	188	192	263	255	258
16	314	307	311	176	174	175	197	189	194	272	257	263
17	312	306	309	178	173	176	196	188	191	280	259	270
18	311	280	301	176	168	172	204	188	193	260	249	254
19	281	179	218	169	157	163	215	203	209	253	247	250
20	179	169	173	158	146	151	214	205	209	248	240	244
21	193	172	186	146	142	144	217	205	210	---	---	---
22	216	193	206	155	145	150	217	210	213	---	---	---
23	231	216	221	163	155	161	220	206	212	228	143	199
24	236	228	231	167	158	164	221	215	217	143	92	103
25	239	230	236	160	146	155	223	209	214	121	98	108
26	235	224	230	147	140	143	225	211	216	138	121	127
27	227	209	212	148	141	145	233	216	222	149	133	142
28	209	194	201	154	148	151	236	219	230	156	140	151
29	194	189	191	159	151	154	238	229	233	171	142	158
30	---	---	---	164	158	161	243	237	240	172	169	171
31	---	---	---	165	159	163	---	---	---	175	167	171
MONTH	314	166	247	245	140	181	243	153	193	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	327	317	321	386	353	369
2	---	---	---	---	---	---	329	318	320	359	351	355
3	---	---	---	---	---	---	322	316	320	378	355	367
4	---	---	---	---	---	---	322	317	320	395	378	390
5	---	---	---	---	---	---	326	320	322	400	391	396
6	---	---	---	---	---	---	324	317	322	395	374	384
7	---	---	---	305	301	303	322	318	321	377	343	359
8	---	---	---	306	303	304	326	319	322	348	332	339
9	---	---	---	309	306	307	323	311	319	342	324	332
10	---	---	---	312	307	309	319	307	313	334	315	325
11	---	---	---	312	309	310	315	307	312	327	311	318
12	---	---	---	314	310	312	318	308	311	322	307	314
13	---	---	---	317	312	315	316	308	312	319	305	311
14	---	---	---	318	314	317	316	309	314	317	305	310
15	---	---	---	322	317	319	320	315	318	316	303	309
16	---	---	---	322	318	320	323	318	320	314	296	305
17	---	---	---	325	321	323	330	318	323	311	299	305
18	---	---	---	325	320	324	330	319	323	310	302	306
19	---	---	---	326	319	323	320	316	318	312	304	308
20	---	---	---	324	314	319	322	312	316	317	308	312
21	---	---	---	323	315	318	320	310	314	317	307	313
22	---	---	---	330	318	323	320	307	314	323	307	315
23	---	---	---	328	316	323	319	305	310	321	311	317
24	---	---	---	330	315	322	320	307	314	323	314	319
25	---	---	---	326	314	321	328	317	325	328	315	323
26	---	---	---	328	315	321	335	328	333	332	321	326
27	---	---	---	325	316	320	345	335	341	332	324	328
28	---	---	---	323	315	320	351	341	347	339	327	336
29	---	---	---	329	320	323	364	349	358	346	337	342
30	---	---	---	328	319	322	373	358	364	348	330	339
31	---	---	---	329	319	323	382	366	374	---	---	---
MONTH	---	---	---	---	---	---	382	305	325	400	296	332

13351000 PALOUSE RIVER AT HOOPER, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	3.4	1.9	2.8	5.2	4.8	5.1	0.0	0.0	0.0
2	---	---	---	3.1	2.2	2.7	4.8	4.4	4.6	0.0	0.0	0.0
3	---	---	---	3.2	1.4	2.3	4.8	3.8	4.3	0.0	0.0	0.0
4	---	---	---	2.8	1.3	2.1	3.8	2.9	3.2	0.0	0.0	0.0
5	---	---	---	2.0	0.1	1.2	3.5	3.1	3.2	0.0	0.0	0.0
6	---	---	---	1.5	0.0	1.0	4.8	3.5	4.2	0.0	0.0	0.0
7	17.5	15.4	16.2	1.7	0.0	1.0	4.2	3.4	3.8	0.0	0.0	0.0
8	15.8	13.8	14.9	2.9	0.9	1.9	3.6	3.1	3.3	0.0	0.0	0.0
9	14.9	12.6	13.8	2.8	1.6	2.2	3.1	2.3	2.7	0.0	0.0	0.0
10	13.9	11.4	12.8	4.3	2.2	3.1	3.0	2.6	2.8	0.0	0.0	0.0
11	12.9	10.6	11.7	6.1	4.3	5.2	3.0	2.6	2.8	0.0	0.0	0.0
12	11.9	10.2	10.8	5.5	3.9	4.8	3.1	2.4	2.7	0.0	0.0	0.0
13	12.2	9.4	10.9	5.0	3.6	4.3	3.2	2.6	2.9	0.0	0.0	0.0
14	12.0	10.3	11.3	4.0	2.5	3.4	3.6	3.1	3.3	0.0	0.0	0.0
15	11.6	9.5	10.1	3.8	3.1	3.4	3.2	2.4	2.7	0.0	0.0	0.0
16	10.2	9.3	9.8	3.9	3.0	3.5	2.4	2.1	2.2	0.0	0.0	0.0
17	13.1	9.5	11.2	5.0	3.6	4.3	2.8	2.0	2.3	0.3	0.0	0.1
18	13.5	10.3	12.0	7.8	4.8	6.3	2.4	1.7	2.0	0.4	0.1	0.3
19	13.5	11.5	12.5	7.1	5.7	6.7	2.3	1.6	2.0	0.9	0.3	0.6
20	13.7	12.8	13.2	5.8	4.9	5.5	2.5	1.8	2.1	1.4	0.9	1.1
21	16.2	13.3	14.6	4.9	2.4	3.9	2.6	2.1	2.3	2.2	1.3	1.8
22	16.0	14.0	15.1	2.4	1.2	1.7	3.4	2.6	2.9	2.7	1.9	2.2
23	15.4	13.0	13.9	1.5	0.7	1.1	3.3	2.6	3.0	2.7	2.4	2.5
24	13.0	11.2	12.1	2.3	1.0	1.5	3.4	2.9	3.1	2.7	1.8	2.4
25	11.6	9.1	10.3	2.8	1.3	1.9	3.5	2.7	3.1	2.0	1.3	1.6
26	10.4	8.3	9.5	3.1	2.0	2.4	3.1	1.8	2.5	2.4	1.3	1.8
27	9.9	8.4	9.1	3.0	1.6	2.3	1.8	0.6	1.1	3.0	2.0	2.5
28	12.4	8.9	10.4	3.3	2.4	2.8	1.5	0.5	0.9	3.8	2.8	3.5
29	11.4	8.8	10.2	5.5	3.3	4.5	1.1	0.0	0.8	5.9	3.8	4.8
30	8.8	4.8	6.6	5.4	4.6	4.9	0.0	0.0	0.0	6.2	2.5	4.6
31	4.8	2.9	3.7	---	---	---	0.0	0.0	0.0	2.5	1.6	2.0
MONTH	---	---	---	7.8	0.0	3.2	5.2	0.0	2.6	6.2	0.0	1.0
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.1	1.2	1.6	6.2	4.2	5.2	11.4	9.6	10.4	19.4	16.4	17.8
2	2.2	0.7	1.4	6.4	4.0	5.3	12.3	9.1	10.5	20.2	17.6	18.7
3	2.2	1.5	1.8	6.3	3.5	4.3	12.3	10.5	11.2	20.2	17.8	18.9
4	2.0	1.7	1.8	5.1	3.5	4.1	13.4	11.8	12.5	19.8	17.7	18.6
5	1.8	1.0	1.4	5.1	3.3	4.0	13.7	12.1	12.8	17.7	15.7	17.0
6	2.3	1.7	1.9	5.2	2.5	3.7	13.8	11.8	12.6	17.3	14.8	16.1
7	2.6	2.3	2.5	7.7	3.4	5.2	14.1	13.2	13.6	18.8	15.4	17.1
8	3.2	2.3	2.7	9.2	5.6	7.2	14.0	13.3	13.7	19.0	16.7	17.7
9	3.1	2.6	2.9	9.2	6.9	8.1	14.3	13.0	13.8	18.1	15.4	16.7
10	3.5	3.0	3.2	9.3	6.9	8.2	14.6	13.8	14.2	16.3	14.8	15.6
11	3.5	2.8	3.1	9.0	6.4	7.8	15.0	14.1	14.6	14.8	13.1	13.7
12	3.8	2.5	3.3	8.5	6.5	7.6	15.6	14.4	14.9	15.7	12.3	14.0
13	2.9	1.7	2.4	8.2	6.1	7.2	16.0	14.9	15.5	17.9	13.6	15.6
14	3.4	1.8	2.7	9.0	5.7	7.4	15.1	13.9	14.6	18.3	14.9	16.5
15	4.0	2.8	3.5	8.9	6.5	7.4	14.0	11.0	12.8	17.6	16.1	16.8
16	3.8	3.2	3.5	9.2	6.5	7.7	12.5	10.2	11.2	16.2	15.2	15.6
17	4.2	3.3	3.9	10.1	7.7	8.8	13.0	12.0	12.6	18.3	14.4	16.2
18	5.9	4.2	4.8	10.4	8.8	9.7	12.7	11.8	12.2	19.7	16.6	18.0
19	5.4	3.1	4.0	10.0	7.2	8.6	13.2	11.6	12.3	19.4	17.1	18.2
20	3.5	2.4	2.9	9.2	6.4	7.9	13.4	12.2	12.9	21.1	18.2	19.5
21	4.4	2.2	3.1	10.3	6.8	8.5	13.1	11.9	12.3	20.4	18.7	19.5
22	5.0	2.4	3.6	11.9	8.2	9.7	13.9	11.7	12.7	18.7	16.9	17.8
23	6.1	3.4	4.6	12.1	10.1	11.1	14.8	13.2	14.1	17.8	16.4	16.9
24	6.0	4.4	5.1	12.1	9.6	10.5	13.8	12.2	13.1	17.1	13.5	15.3
25	5.6	4.1	4.8	10.8	8.5	9.8	15.6	13.4	14.4	17.5	13.8	15.6
26	6.2	4.1	5.0	10.7	8.4	9.4	17.6	14.6	16.1	17.3	15.0	16.0
27	6.8	4.7	5.7	10.2	8.7	9.6	17.4	14.2	16.5	17.5	16.1	16.7
28	6.7	5.3	6.0	11.4	8.1	9.6	14.4	13.1	13.7	17.4	15.2	16.0
29	6.5	4.8	5.7	12.6	9.0	10.5	16.5	13.1	14.8	15.8	14.0	14.8
30	---	---	---	12.6	10.5	11.5	17.9	15.1	16.4	15.8	14.5	15.3
31	---	---	---	12.3	10.3	10.9	---	---	---	16.6	15.0	15.7
MONTH	6.8	0.7	3.4	12.6	2.5	8.0	17.9	9.1	13.4	21.1	12.3	16.7

PALOUSE RIVER BASIN

13351000 PALOUSE RIVER AT HOOPER, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	25.8	22.6	24.4	23.2	19.6	21.5
2	---	---	---	---	---	---	26.2	23.9	25.0	19.6	17.4	18.4
3	---	---	---	---	---	---	24.4	21.3	23.0	18.9	16.5	17.8
4	---	---	---	---	---	---	25.1	21.7	23.4	19.4	16.2	17.9
5	---	---	---	---	---	---	24.6	22.7	23.4	19.8	15.8	18.0
6	---	---	---	24.7	---	---	22.8	20.9	21.8	20.3	15.9	18.3
7	---	---	---	23.5	20.7	21.8	23.4	19.8	21.6	20.4	16.5	18.7
8	---	---	---	23.4	18.6	20.9	24.3	20.9	22.8	20.3	16.6	18.8
9	---	---	---	23.8	19.0	21.5	25.7	21.2	23.7	19.9	17.4	18.4
10	---	---	---	23.1	19.3	21.2	26.4	22.4	24.8	19.7	15.8	17.9
11	---	---	---	24.2	18.9	21.4	26.4	22.8	25.0	19.6	17.7	18.7
12	---	---	---	25.4	19.8	22.6	26.8	23.2	25.2	18.8	16.8	17.8
13	---	---	---	25.7	20.9	23.3	27.0	23.4	25.5	17.6	15.5	16.4
14	---	---	---	27.6	21.7	24.6	26.8	23.8	25.4	17.1	14.7	16.1
15	---	---	---	27.8	23.5	25.8	27.4	24.0	25.7	16.6	15.0	16.0
16	---	---	---	29.0	23.5	26.3	27.1	24.8	26.2	16.4	14.4	15.6
17	---	---	---	27.8	24.2	26.1	25.9	24.0	25.1	16.0	14.7	15.3
18	---	---	---	27.0	24.6	25.4	26.5	22.8	24.7	16.3	14.0	15.1
19	---	---	---	26.8	23.5	25.1	26.9	24.2	25.7	15.9	12.8	14.4
20	---	---	---	26.0	22.7	24.5	26.9	24.6	25.7	16.0	13.6	14.8
21	---	---	---	26.8	21.9	24.4	25.9	23.6	24.8	16.4	13.0	14.7
22	---	---	---	27.0	22.1	24.7	23.6	20.5	22.1	17.0	13.6	15.2
23	---	---	---	27.8	22.7	25.4	21.1	18.6	20.1	18.2	15.1	16.4
24	---	---	---	28.9	23.7	26.4	20.5	18.6	19.5	19.0	15.1	17.0
25	---	---	---	28.0	24.4	26.2	19.1	17.7	18.4	19.4	15.4	17.5
26	---	---	---	26.2	22.8	24.8	19.3	16.7	18.1	19.3	15.8	17.7
27	---	---	---	25.5	22.6	24.4	21.2	17.1	19.2	19.5	15.9	17.9
28	---	---	---	25.6	22.1	24.3	21.6	17.5	19.8	19.5	16.1	18.0
29	---	---	---	26.1	23.2	24.9	23.2	18.7	20.8	19.0	16.5	18.0
30	---	---	---	25.7	23.9	24.6	23.7	19.6	21.6	18.7	15.9	17.5
31	---	---	---	25.1	22.7	23.9	24.2	19.9	21.9	---	---	---
MONTH	---	---	---	---	---	---	27.4	16.7	23.0	23.2	12.8	17.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
OCT 06...	1010	40	734	10.0	104	8.6	396	21.0	15.4	156	184	3	17.6
DEC 09...	1040	156	738	13.2	101	8.1	279	3.1	2.8	108	131	.0	12.4
FEB 02...	1010	1,390	732	13.0	95	7.9	184	1.2	.9	44	54	.0	4.97
MAR 01...	1040	1,350	733	12.3	99	8.1	192	7.8	4.7	57	69	.0	4.67
APR 06...	1040	665	736	10.9	105	8.4	180	11.1	12.1	70	83	1	4.39
MAY 04...	1110	290	730	9.6	108	8.4	250	14.5	18.8	106	126	1	6.02
JUN 01...	1020	707	736	9.5	101	8.0	177	24.8	16.3	63	76	.0	3.95
JUL 06...	1030	80	736	9.2	111	8.3	304	23.4	22.9	128	155	.0	7.25
AUG 02...	1030	26	730	8.8	111	9.2	319	27.7	24.5	138	147	10	8.75
SEP 11...	1100	28	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	1250	49	736	11.0	122	8.9	358	26.9	18.9	139	156	6	17.6

13351000 PALOUSE RIVER AT HOOPER, WA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Pendi- meth- alin, water, fltrd 0.7u GF (82683)	Phorate water fltrd 0.7u GF (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propy- zamide, water, fltrd 0.7u GF (82676)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF (82679)	Propar- gite, water, fltrd 0.7u GF (82685)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF (82670)	Terba- cil, water, fltrd 0.7u GF (82665)	Terbu- fos, water, fltrd 0.7u GF (82675)	Thio- bencarb water fltrd 0.7u GF (82681)	Tri- allate, water, fltrd 0.7u GF (82678)
OCT 06...	<.022	<.011	<.01	<.004	<.010	<.011	<.02	.008	<.02	<.034	<.02	<.005	<.002
DEC 09...	<.022	<.011	E.01	.012	<.010	<.011	<.02	.022	<.02	<.034	<.02	<.005	.006
FEB 02...	<.030	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	.031
MAR 01...	E.010	<.011	E.01	<.004	<.010	<.011	<.02	.017	<.02	E.008	<.02	<.005	.021
APR 06...	<.022	<.011	<.01	<.004	<.010	<.011	<.02	.012	<.02	<.034	<.02	<.005	<.002
MAY 04...	<.022	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
JUN 01...	<.022	<.011	<.01	<.004	<.010	<.011	<.02	.024	<.02	<.034	<.02	<.005	.013
JUL 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	<.022	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
SEP 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Tri- flur- alin, water, fltrd 0.7u GF (82661)	Sus- pended sediment concentration mg/L (80154)	Sus- pended sediment dis- charge, tons/d (80155)
OCT 06...	<.009	16	1.7
DEC 09...	E.006	11	4.6
FEB 02...	E.005	64	240
MAR 01...	E.005	30	109
APR 06...	<.009	12	22
MAY 04...	<.009	8	6.3
JUN 01...	<.009	42	80
JUL 06...	--	8	1.7
AUG 02...	<.009	20	1.4
SEP 11...	--	--	--
SEP 07...	--	7	.93