

Figure 62. Location of surface-water stations in the Snake River Basin, including the Grande Ronde River, Asotin Creek, Tucannon River, and Palouse River Basins.

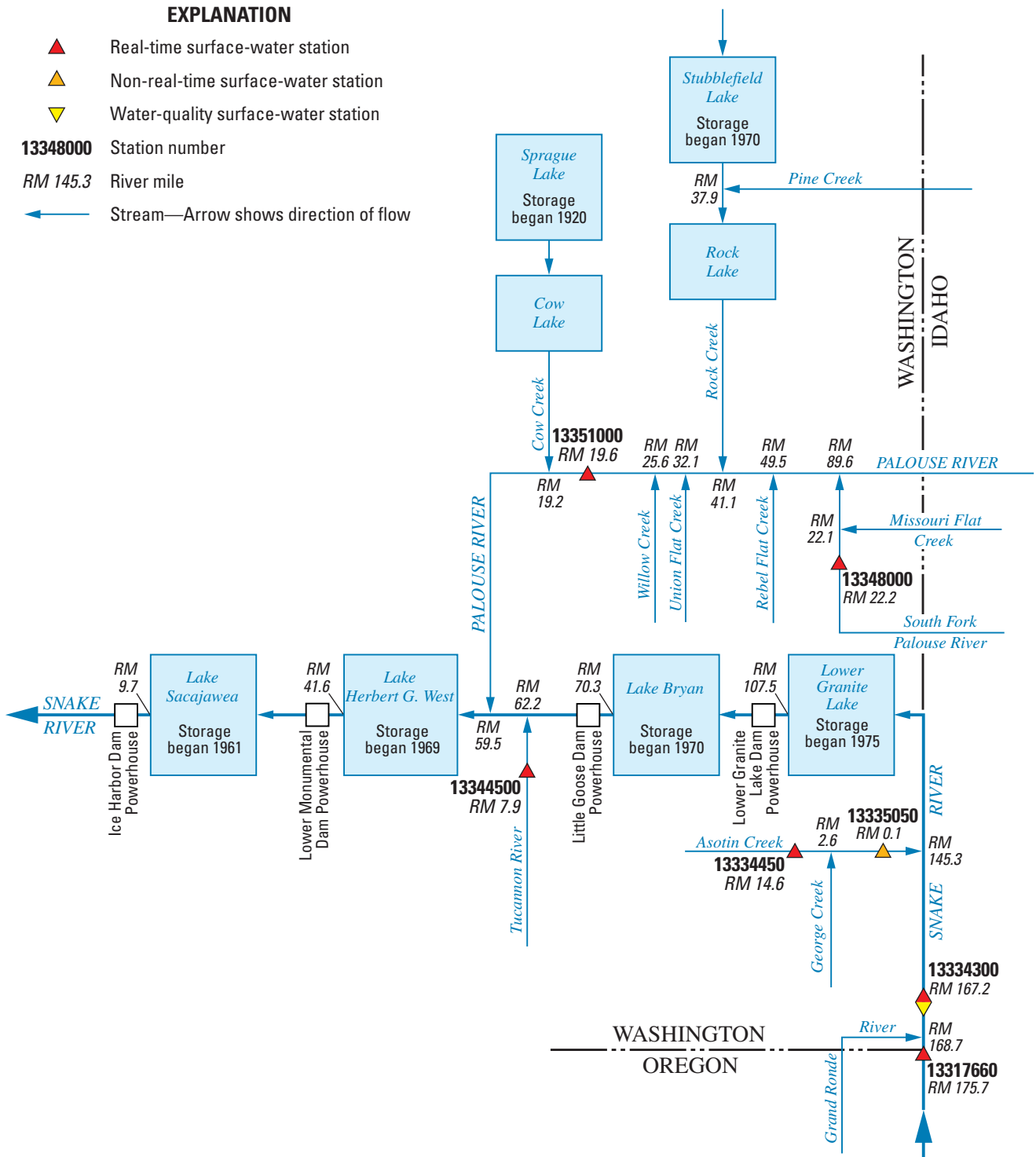


Figure 63. Schematic diagram showing surface-water stations in the Snake River Basin, including the Grande Ronde River, Asotin Creek, Tucannon River, and Palouse River Basins.

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 1, 2003, to current year.

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

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 located 109.5 mi upstream. Diurnal fluctuations caused by Hells Canyon Dam powerplant. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--2 years (water years 2004-05) 20,910 ft³/s, 15,150,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft³/s, May 21, 2005, gage height, 20.16 ft; minimum recorded discharge, 11,200 ft³/s, Dec. 22, 2003, Jan. 25, 2004, gage height, 4.71 ft, but may have been lower during period of missing record Oct. 1 to Dec. 3, 2003; minimum recorded gage height, 4.69 ft, Sept. 4, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 95,600 ft³/s, May 21, gage height, 20.16 ft; minimum discharge, 11,500 ft³/s, Sept. 4, gage height, 4.69 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14,000	14,000	13,000	13,700	16,800	12,700	25,200	29,700	60,600	33,600	18,100	12,100
2	14,000	13,800	12,700	13,600	17,700	13,500	23,900	26,400	59,300	28,400	18,500	13,500
3	13,700	13,800	13,000	16,300	17,000	13,900	23,100	26,000	54,400	27,600	15,000	13,500
4	13,800	13,800	13,200	15,600	18,400	14,200	22,900	30,700	44,400	25,700	14,300	11,700
5	14,100	13,800	13,000	17,800	17,200	14,500	24,900	34,300	48,400	26,800	17,600	11,700
6	13,600	13,800	12,900	19,700	16,100	17,300	22,600	34,900	47,800	29,800	19,600	11,900
7	16,300	13,800	12,900	16,400	15,900	14,600	20,500	38,700	45,400	29,500	19,100	13,700
8	16,700	13,700	13,100	14,100	14,600	14,800	19,000	40,600	39,300	27,800	16,000	13,800
9	13,700	13,700	13,600	13,200	13,200	13,300	21,000	37,600	35,500	24,400	17,400	12,500
10	13,600	13,700	13,600	14,500	13,200	13,500	21,500	45,100	33,400	18,800	15,800	12,900
11	13,400	13,800	14,000	14,900	12,800	13,800	22,900	46,500	31,200	19,300	13,200	11,900
12	13,200	13,900	14,600	19,200	12,700	14,100	20,100	44,600	32,500	21,200	13,200	12,200
13	13,200	13,900	17,000	19,200	12,800	14,300	19,600	45,300	33,800	22,900	12,800	12,300
14	13,200	13,700	20,600	19,000	13,200	14,400	21,500	45,600	34,300	21,400	12,400	12,300
15	13,200	13,800	18,600	18,300	13,800	15,500	20,600	45,200	29,800	18,300	12,200	12,400
16	13,200	13,700	14,800	15,400	14,000	15,800	18,800	50,600	28,200	21,800	12,200	13,600
17	13,200	13,700	14,500	13,800	15,000	17,700	20,100	62,600	28,700	19,000	12,100	12,100
18	13,300	13,800	14,300	16,700	13,800	16,900	21,700	67,900	31,100	16,400	12,500	12,000
19	13,400	13,700	14,200	14,000	13,400	15,500	22,200	69,800	34,700	20,500	12,000	12,200
20	13,600	13,700	15,900	14,100	12,800	15,700	21,800	84,300	33,400	21,200	12,000	12,400
21	13,700	13,600	19,100	14,100	13,100	17,600	21,200	87,900	35,500	19,500	12,100	12,400
22	13,800	13,300	17,200	14,100	13,200	16,400	20,900	79,900	32,500	19,300	12,300	16,300
23	13,900	13,100	17,800	14,000	13,300	16,600	21,300	76,000	30,400	16,800	12,200	15,700
24	13,900	13,200	16,800	16,200	13,200	16,500	21,700	72,000	33,600	14,700	12,200	13,500
25	13,900	13,900	16,100	16,000	13,000	17,000	22,600	67,400	32,500	15,900	12,200	12,300
26	13,800	14,200	15,300	15,100	12,800	17,500	24,300	62,400	28,300	15,200	12,900	15,400
27	13,700	14,100	16,900	17,200	12,600	16,300	26,500	58,700	28,900	14,500	13,100	15,700
28	13,600	13,900	14,400	17,800	12,700	18,500	29,000	58,000	37,700	17,900	13,300	12,700
29	13,700	13,600	13,300	15,500	---	27,100	30,200	57,300	40,600	24,500	14,600	12,900
30	13,900	13,300	13,100	16,400	---	27,100	32,100	52,400	37,100	18,900	13,100	12,600
31	14,100	---	13,200	16,300	---	26,000	---	52,800	---	15,800	12,100	---
TOTAL	428,400	411,800	462,700	492,200	398,300	512,600	683,700	1,631,200	1,123,300	667,400	436,100	390,200
MEAN	13,820	13,730	14,930	15,880	14,220	16,540	22,790	52,620	37,440	21,530	14,070	13,010
MAX	16,700	14,200	20,600	19,700	18,400	27,100	32,100	87,900	60,600	33,600	19,600	16,300
MIN	13,200	13,100	12,700	13,200	12,600	12,700	18,800	26,000	28,200	14,500	12,000	11,700
AC-FT	849,700	816,800	917,800	976,300	790,000	1,017,000	1,356,000	3,235,000	2,228,000	1,324,000	865,000	774,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY)

MEAN	13,150	12,880	13,850	16,190	16,620	20,920	23,440	46,200	37,570	20,760	14,120	15,100
MAX	13,820	13,730	14,930	16,500	18,940	25,310	24,090	52,620	37,700	21,530	14,170	17,180
(WY)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)	(2004)	(2005)	(2004)	(2005)	(2004)	(2004)
MIN	12,470	12,030	12,780	15,880	14,220	16,540	22,790	39,780	37,440	19,990	14,070	13,010
(WY)	(2004)	(2004)	(2004)	(2005)	(2005)	(2005)	(2005)	(2004)	(2005)	(2004)	(2005)	(2005)

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

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2004 - 2005	
ANNUAL TOTAL	7,809,500		7,637,900			
ANNUAL MEAN	21,340		20,930		20,910	
HIGHEST ANNUAL MEAN					20,930	2005
LOWEST ANNUAL MEAN					20,900	2004
HIGHEST DAILY MEAN	54,900	May 30	87,900	May 21	87,900	May 21, 2005
LOWEST DAILY MEAN	11,900	Jan 1	11,700	Sep 4	11,400	Nov 8, 2003
ANNUAL SEVEN-DAY MINIMUM	12,500	Aug 13	12,100	Aug 19	11,700	Oct 22, 2003
ANNUAL RUNOFF (AC-FT)	15,490,000		15,150,000		15,150,000	
10 PERCENT EXCEEDS	36,000		36,100		35,900	
50 PERCENT EXCEEDS	18,000		15,500		16,400	
90 PERCENT EXCEEDS	13,300		12,800		12,200	

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.--No estimated daily discharges. Records good. 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.--61 years (water years 1945-2005), 3,034 ft³/s, 2,198,000 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 17	0400	*10,700	*7.88	No other peak greater than base discharge.			

Minimum discharge, 410 ft³/s, Sept. 4, gage height, 3.16 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	771	844	824	1,020	1,450	1,020	3,520	3,740	4,920	2,360	500	461
2	770	830	865	1,010	1,380	1,040	3,360	3,440	4,420	2,240	505	463
3	761	889	875	951	1,350	1,050	3,390	3,440	3,980	2,030	501	439
4	755	896	815	839	1,350	1,070	4,080	3,660	3,690	1,840	499	421
5	747	854	789	830	1,340	1,070	3,850	4,060	3,610	1,680	501	427
6	725	861	751	882	1,300	1,080	3,560	5,580	3,690	1,570	499	434
7	741	853	868	877	1,230	1,110	3,500	8,370	3,440	1,500	460	441
8	725	853	1,010	950	1,180	1,190	3,790	7,900	3,120	1,380	453	447
9	737	842	1,130	978	1,130	1,250	3,610	7,930	2,840	1,380	452	436
10	784	841	1,250	945	1,110	1,340	3,310	8,250	2,650	1,570	453	474
11	775	849	1,890	900	1,070	1,370	3,110	7,740	2,530	1,390	457	509
12	757	852	2,280	860	1,130	1,400	3,090	7,020	2,490	1,230	457	501
13	753	858	2,160	880	1,210	1,420	3,150	6,520	2,460	1,200	452	507
14	735	866	2,020	879	1,200	1,400	3,020	6,220	2,360	1,120	456	499
15	715	850	2,060	831	1,090	1,370	2,850	6,670	2,380	1,030	450	484
16	705	851	1,930	804	983	1,340	2,750	9,180	2,440	945	443	493
17	714	846	1,770	867	969	1,360	3,360	10,100	2,610	888	438	486
18	826	827	1,630	1,520	991	1,320	3,650	9,160	2,660	861	451	474
19	889	837	1,540	2,940	1,000	1,280	3,600	8,980	2,500	799	451	475
20	835	825	1,450	2,620	1,080	1,310	3,460	8,370	2,370	766	439	471
21	861	798	1,360	2,420	1,080	1,340	3,390	7,820	2,510	722	435	473
22	920	765	1,260	2,230	1,040	1,340	3,360	7,310	2,830	678	433	477
23	960	810	1,190	2,070	1,000	1,370	3,430	7,230	2,860	668	425	471
24	934	894	1,080	1,940	982	1,390	3,620	6,580	2,650	665	434	477
25	893	1,190	1,090	1,830	974	1,360	3,890	5,990	2,450	639	449	497
26	867	1,300	1,110	1,750	974	1,330	4,320	5,570	2,430	617	466	515
27	876	1,110	1,130	1,700	973	3,010	4,630	5,330	2,400	590	457	518
28	868	1,020	1,070	1,660	990	6,820	4,750	5,370	2,840	576	447	506
29	858	921	1,080	1,610	---	5,490	4,440	5,450	2,640	556	447	510
30	870	837	1,110	1,550	---	4,650	4,060	5,660	2,480	520	451	527
31	867	---	1,110	1,510	---	3,910	---	5,210	---	508	459	---
TOTAL	24,994	26,669	40,497	42,653	31,556	56,800	107,900	203,850	87,250	34,518	14,220	14,313
MEAN	806	889	1,306	1,376	1,127	1,832	3,597	6,576	2,908	1,113	459	477
MAX	960	1,300	2,280	2,940	1,450	6,820	4,750	10,100	4,920	2,360	505	527
MIN	705	765	751	804	969	1,020	2,750	3,440	2,360	508	425	421
AC-FT	49,580	52,900	80,330	84,600	62,590	112,700	214,000	404,300	173,100	68,470	28,210	28,390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2005, BY WATER YEAR (WY)

MEAN	868	1,215	1,936	2,146	3,139	4,315	6,263	7,301	5,592	2,112	830	758
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)

13333000 GRANDE RONDE RIVER AT TROY, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1945 - 2005	
ANNUAL TOTAL	999,090		685,220			
ANNUAL MEAN	2,730		1,877		3,034	
HIGHEST ANNUAL MEAN					5,253	
LOWEST ANNUAL MEAN					1,136	
HIGHEST DAILY MEAN	11,300	May 29	10,100	May 17	42,200	Feb 9, 1996
LOWEST DAILY MEAN	520	Jan 6	421	Sep 4	344	Aug 20, 1977
ANNUAL SEVEN-DAY MINIMUM	577	Aug 11	435	Sep 3	361	Aug 18, 1977
ANNUAL RUNOFF (AC-FT)	1,982,000		1,359,000		2,198,000	
10 PERCENT EXCEEDS	6,440		4,070		7,360	
50 PERCENT EXCEEDS	1,270		1,080		1,600	
90 PERCENT EXCEEDS	727		472		680	

SNAKE RIVER MAIN STEM

13334300 SNAKE RIVER NEAR ANATONE, WA

LOCATION.--Lat 46°05'50", long 116°58'36", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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.--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.--47 years (water years 1958-2005), 34,780 ft³/s, 25,200,000 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, 107,000 ft³/s, May 20, gage height, 15.72 ft; minimum discharge, 12,000 ft³/s, Sept. 4, gage height, 3.08 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14,800	14,900	13,900	14,800	18,100	13,900	29,200	34,300	66,900	36,900	18,300	12,500
2	14,900	14,800	13,700	14,800	19,400	14,600	27,600	30,400	65,400	31,400	19,200	e14,000
3	14,500	14,700	13,900	17,000	18,400	15,200	26,800	29,700	60,200	29,600	15,500	e14,000
4	14,600	14,800	14,200	16,700	19,800	15,300	26,800	34,400	49,400	27,900	14,700	12,100
5	14,900	14,800	14,000	18,600	19,100	15,500	29,200	39,000	53,400	28,500	17,800	12,100
6	14,400	14,700	13,700	20,700	17,700	18,900	26,600	40,400	52,900	31,700	19,800	12,300
7	16,300	14,700	13,800	17,300	17,000	15,500	24,400	48,000	50,300	31,700	19,800	14,000
8	18,300	14,700	14,200	15,200	16,100	16,400	23,000	50,200	43,600	29,300	16,600	14,200
9	14,500	14,700	14,800	14,200	14,600	14,700	24,800	46,900	39,500	26,800	17,400	12,800
10	14,400	14,600	14,900	15,200	14,500	15,000	25,100	55,000	36,800	20,400	16,400	13,400
11	14,300	14,700	15,500	16,100	14,100	15,300	26,400	56,300	34,500	20,800	13,500	12,400
12	14,100	14,800	16,900	20,000	14,000	15,500	23,400	53,800	35,400	22,600	13,500	12,600
13	14,000	14,800	18,900	19,500	14,200	15,800	22,900	53,600	36,800	24,000	13,200	12,900
14	14,000	14,700	23,000	20,700	14,600	15,900	24,400	53,500	37,600	23,000	12,700	12,800
15	14,000	14,700	21,100	19,000	15,100	17,000	23,900	53,100	32,900	e19,000	12,600	12,800
16	14,000	14,700	16,900	16,800	15,100	17,300	22,000	60,300	30,800	22,800	12,600	14,000
17	14,000	14,600	16,500	14,400	16,100	18,800	23,200	74,300	31,500	20,200	12,500	12,800
18	14,100	14,700	16,100	17,900	14,900	18,600	25,500	79,300	34,100	17,000	12,800	12,600
19	14,400	14,600	15,900	16,900	14,700	17,100	26,100	80,500	37,700	21,300	12,400	12,700
20	14,500	14,600	17,200	16,900	14,000	16,900	25,600	94,600	36,600	22,100	12,400	12,800
21	14,600	14,500	20,600	16,800	14,400	19,000	24,900	98,900	38,500	20,400	12,400	12,800
22	14,800	14,200	18,700	16,500	14,500	18,100	24,600	90,100	35,900	19,900	12,700	16,500
23	14,900	14,000	19,300	16,300	14,500	18,000	24,800	85,200	33,700	17,900	12,600	16,300
24	14,900	14,100	18,100	18,000	14,400	17,900	25,500	80,500	36,800	15,400	12,600	14,200
25	14,900	14,900	17,300	18,300	14,200	18,600	26,500	75,200	35,900	16,500	12,600	12,800
26	14,800	15,600	16,600	16,800	14,000	18,800	28,700	70,000	31,300	15,700	13,200	15,400
27	14,600	15,400	18,100	19,100	13,800	18,000	31,400	65,700	31,000	14,900	13,600	16,700
28	14,600	15,000	15,700	19,700	13,900	25,200	34,300	65,100	40,900	18,200	13,600	13,200
29	14,600	14,700	14,500	17,500	---	33,300	35,100	64,200	44,500	24,800	14,900	13,300
30	14,800	14,300	14,400	17,900	---	32,600	37,200	59,500	40,400	19,800	13,500	13,300
31	15,000	---	14,600	18,100	---	30,600	---	59,400	---	16,000	12,600	---
TOTAL	455,500	441,000	507,000	537,700	435,200	573,300	799,900	1,881,400	1,235,200	706,500	448,000	404,300
MEAN	14,690	14,700	16,350	17,350	15,540	18,490	26,660	60,690	41,170	22,790	14,450	13,480
MAX	18,300	15,600	23,000	20,700	19,800	33,300	37,200	98,900	66,900	36,900	19,800	16,700
MIN	14,000	14,000	13,700	14,200	13,800	13,900	22,000	29,700	30,800	14,900	12,400	12,100
AC-FT	903,500	874,700	1,006,000	1,067,000	863,200	1,137,000	1,587,000	3,732,000	2,450,000	1,401,000	888,600	801,900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2005, BY WATER YEAR (WY)

MEAN	20,900	21,530	24,320	28,720	32,560	38,900	47,760	65,780	70,170	30,110	17,850	19,170
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	15,540	18,490	18,880	20,610	16,850	12,830	9,765	10,180
(WY)	(2004)	(2004)	(2003)	(2001)	(2005)	(2005)	(1977)	(1977)	(1992)	(1977)	(1992)	(1992)

13334300 SNAKE RIVER NEAR ANATONE, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1958 - 2005	
ANNUAL TOTAL	8,957,000		8,425,000			
ANNUAL MEAN	24,470		23,080		34,780	
HIGHEST ANNUAL MEAN					59,030	
LOWEST ANNUAL MEAN					18,050	
HIGHEST DAILY MEAN	71,300	May 30	98,900	May 21	191,000	1997
LOWEST DAILY MEAN	12,700	Aug 16	12,100	Sep 4	6,630	1992
ANNUAL SEVEN-DAY MINIMUM	13,100	Aug 13	12,500	Aug 15	7,150	Jun 18, 1974
ANNUAL RUNOFF (AC-FT)	17,770,000		16,710,000		25,200,000	
10 PERCENT EXCEEDS	42,400		40,400		72,500	
50 PERCENT EXCEEDS	19,800		16,700		25,300	
90 PERCENT EXCEEDS	14,300		13,500		14,800	

e Estimated

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 good. 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, 23.7°C, Aug. 6; minimum, 2.3°C, Feb. 18.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.9	17.1	17.5	10.5	10.1	10.3	5.7	5.4	5.5	4.0	3.8	3.9
2	17.7	17.0	17.3	10.6	10.1	10.3	5.8	5.4	5.6	3.8	3.5	3.6
3	17.6	16.7	17.1	10.8	10.2	10.5	5.5	5.2	5.4	3.8	3.4	3.6
4	17.6	16.7	17.1	10.3	9.8	10.1	5.2	4.9	5.1	3.9	3.4	3.8
5	17.6	16.7	17.0	9.9	9.4	9.6	4.9	4.5	4.6	3.6	3.4	3.4
6	16.9	16.6	16.7	9.8	9.2	9.5	4.8	4.5	4.6	3.8	3.5	3.7
7	17.4	16.5	16.9	9.9	9.2	9.5	5.1	4.7	4.9	3.7	3.3	3.6
8	17.8	16.8	17.4	9.9	9.4	9.6	5.3	5.0	5.2	3.6	3.0	3.4
9	16.8	16.1	16.5	9.5	9.1	9.3	5.5	5.1	5.2	3.3	2.9	3.1
10	16.2	15.5	15.9	9.5	9.0	9.2	6.3	5.5	6.0	3.3	3.0	3.1
11	15.6	15.1	15.3	9.3	9.0	9.2	6.4	6.3	6.3	3.5	3.1	3.4
12	15.6	14.8	15.2	9.1	9.0	9.0	6.3	5.9	6.1	4.0	3.1	3.6
13	15.6	14.8	15.2	9.1	9.0	9.0	6.1	5.8	5.9	4.0	3.7	3.8
14	15.6	14.8	15.2	9.3	8.9	9.1	6.4	5.9	6.2	4.2	3.3	3.9
15	15.4	14.9	15.1	9.2	8.9	9.1	6.6	5.8	6.3	3.5	3.2	3.4
16	15.3	15.1	15.2	9.4	9.1	9.3	5.8	5.2	5.6	3.6	3.1	3.5
17	15.3	14.9	15.1	9.6	9.0	9.3	5.6	5.1	5.3	3.6	3.0	3.2
18	14.9	14.3	14.7	9.0	8.4	8.7	5.6	5.0	5.3	4.7	3.6	4.3
19	14.3	13.6	14.0	8.4	8.1	8.3	5.5	5.1	5.3	4.9	4.6	4.7
20	13.6	13.4	13.5	8.3	7.7	8.0	5.3	4.9	5.1	4.6	4.3	4.5
21	13.8	13.4	13.6	7.7	7.3	7.5	5.4	5.0	5.3	4.6	4.1	4.3
22	13.7	13.1	13.4	7.4	7.2	7.3	5.1	4.7	5.0	4.3	4.1	4.2
23	13.2	12.6	13.0	7.5	7.2	7.4	4.8	4.0	4.5	4.5	3.9	4.2
24	12.6	12.2	12.4	8.2	7.4	7.8	4.2	4.0	4.1	4.1	3.7	3.9
25	12.2	11.6	12.0	8.3	7.9	8.2	4.2	4.0	4.1	4.0	3.6	3.8
26	11.8	11.4	11.6	7.9	7.2	7.6	4.2	3.9	4.1	3.9	3.5	3.7
27	12.0	11.4	11.7	7.2	6.6	6.9	4.1	3.6	3.9	4.5	3.8	4.2
28	11.9	11.3	11.6	6.6	5.9	6.3	3.7	3.2	3.5	4.6	4.2	4.3
29	11.5	11.3	11.4	5.9	5.3	5.6	3.5	3.2	3.3	4.6	4.1	4.3
30	11.6	11.2	11.4	5.6	5.2	5.4	3.9	3.3	3.6	5.0	4.2	4.5
31	11.2	10.5	10.9	---	---	---	3.9	3.7	3.8	4.8	4.2	4.5
MONTH	17.9	10.5	14.5	10.8	5.2	8.6	6.6	3.2	5.0	5.0	2.9	3.9

13334450 ASOTIN CREEK BELOW CONFLUENCE, NEAR ASOTIN, WA

LOCATION.--Lat 46°16'25", long 117°17'29", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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 Fork 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.--4 years (water years 2002-05) 47.3 ft³/s, 6.18 in/yr, 34,260 acre ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 539 ft³/s, Apr. 14, 2002, gage height, 3.17 ft; minimum discharge, 19 ft³/s, Jan. 6, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157 ft³/s, Mar. 28, gage height, 2.33 ft; minimum discharge, 19 ft³/s, Jan. 6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	24	25	24	30	28	52	53	48	34	25	22
2	24	24	25	24	30	28	50	52	46	33	25	22
3	24	25	24	23	30	28	50	52	47	32	24	22
4	24	23	e24	23	31	27	53	59	46	31	24	22
5	23	24	e24	23	30	27	50	66	51	31	24	21
6	23	25	e24	23	29	26	49	83	49	31	24	21
7	24	25	e24	26	29	27	51	98	49	30	24	21
8	24	25	e26	26	29	27	57	85	47	30	24	21
9	23	24	e28	25	28	27	53	93	46	34	24	21
10	24	25	e26	25	28	28	50	96	45	35	23	23
11	24	25	e28	25	28	27	47	108	45	32	22	24
12	23	25	e32	25	29	27	50	103	43	30	22	24
13	23	25	e30	25	29	27	48	91	42	29	23	23
14	23	25	e29	24	28	27	46	87	41	28	23	23
15	23	25	30	23	27	27	44	95	41	28	23	22
16	22	26	28	24	26	27	44	99	40	28	22	22
17	23	25	27	25	27	28	57	96	44	27	23	23
18	27	25	27	30	27	27	56	88	46	27	24	24
19	25	25	27	34	29	27	52	82	44	28	23	23
20	25	25	27	33	29	27	52	81	40	27	23	22
21	26	25	26	35	28	28	51	77	39	27	22	23
22	27	25	26	35	28	29	51	79	37	27	22	23
23	26	26	24	35	27	30	53	76	36	27	22	22
24	24	28	25	35	27	29	58	71	36	26	22	23
25	23	31	26	33	27	29	67	70	36	26	22	23
26	23	29	26	33	27	29	71	68	35	25	22	23
27	24	26	25	33	27	58	70	63	41	25	22	23
28	24	26	25	33	28	124	70	58	41	25	22	23
29	24	24	25	32	---	85	63	54	37	25	22	23
30	24	25	25	32	---	68	56	52	35	25	22	22
31	24	---	25	30	---	56	---	51	---	24	22	---
TOTAL	744	760	813	876	792	1,109	1,621	2,386	1,273	887	711	674
MEAN	24.0	25.3	26.2	28.3	28.3	35.8	54.0	77.0	42.4	28.6	22.9	22.5
MAX	27	31	32	35	31	124	71	108	51	35	25	24
MIN	22	23	24	23	26	26	44	51	35	24	22	21
AC-FT	1,480	1,510	1,610	1,740	1,570	2,200	3,220	4,730	2,520	1,760	1,410	1,340
CFSM	0.23	0.24	0.25	0.27	0.27	0.34	0.52	0.74	0.41	0.28	0.22	0.22
IN.	0.27	0.27	0.29	0.31	0.28	0.40	0.58	0.85	0.46	0.32	0.25	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)

MEAN	25.5	27.6	30.5	33.8	37.2	61.5	79.8	101	59.7	31.8	24.9	23.8
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	24.0	25.3	26.2	23.8	25.3	30.8	49.7	77.0	36.8	28.6	22.9	22.4
(WY)	(2005)	(2005)	(2005)	(2001)	(2001)	(2001)	(2001)	(2005)	(2001)	(2005)	(2005)	(2001)

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

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2001 - 2005	
ANNUAL TOTAL	15,039		12,646			
ANNUAL MEAN	41.1		34.6		47.3	
HIGHEST ANNUAL MEAN					57.1	2003
LOWEST ANNUAL MEAN					34.6	2005
HIGHEST DAILY MEAN	142	May 21	124	Mar 28	382	Apr 14, 2002
LOWEST DAILY MEAN	22	Sep 8	21	Sep 5	21	Sep 15, 2001
ANNUAL SEVEN-DAY MINIMUM	23	Sep 5	21	Sep 3	21	Aug 30, 2003
ANNUAL RUNOFF (AC-FT)	29,830		25,080		34,260	
ANNUAL RUNOFF (CFSM)	0.395		0.333		0.455	
ANNUAL RUNOFF (INCHES)	5.38		4.52		6.18	
10 PERCENT EXCEEDS	71		57		99	
50 PERCENT EXCEEDS	31		27		31	
90 PERCENT EXCEEDS	24		23		24	

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.--No estimated daily discharges. Records good except for 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.--14 years (water years 1992-2005), 96.9 ft³/s, 4.07 in/yr, 70,170 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, 224 ft³/s, May 10, gage height, 2.74 ft; minimum discharge, 23 ft³/s, Aug. 21, 22, Sept. 4, 5, 7.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	40	39	40	44	41	100	101	83	51	30	28
2	34	41	39	39	43	41	96	97	81	50	31	28
3	34	41	39	38	43	41	96	93	79	50	31	27
4	34	40	39	37	43	41	100	94	75	48	30	27
5	34	40	39	37	43	41	99	101	82	48	29	25
6	35	40	39	36	42	41	95	113	84	47	29	25
7	35	40	38	39	42	41	93	157	83	46	29	25
8	35	40	41	40	42	42	99	145	79	46	29	25
9	37	40	41	39	41	42	97	152	75	52	29	26
10	37	39	39	38	41	43	91	165	72	56	29	29
11	37	39	43	38	41	43	87	182	71	52	26	31
12	37	39	48	38	41	43	89	178	70	48	26	31
13	36	39	45	38	41	43	86	169	66	46	27	30
14	37	39	43	38	41	43	81	159	62	45	28	28
15	37	40	44	37	39	43	78	161	60	43	27	28
16	37	40	43	38	39	43	76	162	60	40	26	28
17	38	40	42	38	39	44	95	173	67	41	28	30
18	42	40	41	41	39	43	101	158	74	40	30	30
19	40	40	41	46	40	43	98	148	70	38	28	29
20	40	39	41	46	41	43	95	140	61	37	27	28
21	41	38	41	47	40	44	93	137	57	36	26	28
22	42	38	40	46	40	43	90	139	55	36	26	28
23	42	38	39	46	40	44	93	144	54	36	26	29
24	41	41	39	47	40	44	98	129	52	34	27	29
25	40	43	40	46	40	44	105	119	51	34	27	29
26	41	43	40	46	40	43	108	111	50	33	27	29
27	40	41	40	46	40	61	114	104	57	33	26	29
28	40	40	39	46	41	179	113	98	64	32	26	29
29	40	39	40	45	---	146	109	93	59	31	26	28
30	40	39	41	44	---	121	106	89	55	31	28	28
31	40	---	41	44	---	107	---	87	---	30	28	---
TOTAL	1,177	1,196	1,264	1,284	1,146	1,721	2,881	4,098	2,008	1,290	862	844
MEAN	38.0	39.9	40.8	41.4	40.9	55.5	96.0	132	66.9	41.6	27.8	28.1
MAX	42	43	48	47	44	179	114	182	84	56	31	31
MIN	34	38	38	36	39	41	76	87	50	30	26	25
AC-FT	2,330	2,370	2,510	2,550	2,270	3,410	5,710	8,130	3,980	2,560	1,710	1,670
CFSM	0.12	0.12	0.13	0.13	0.13	0.17	0.30	0.41	0.21	0.13	0.09	0.09
IN.	0.14	0.14	0.15	0.15	0.13	0.20	0.33	0.47	0.23	0.15	0.10	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

MEAN	37.8	48.0	80.3	96.3	127	146	177	200	127	53.9	35.2	35.0
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	55.5	82.8	58.1	35.5	26.5	23.8	25.3
(WY)	(1999)	(1994)	(1993)	(1993)	(1993)	(2005)	(1992)	(1992)	(1992)	(1994)	(1994)	(1994)

13335050 ASOTIN CREEK AT ASOTIN, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1991 - 2005	
ANNUAL TOTAL	23,258		19,771		96.9	
ANNUAL MEAN	63.5		54.2		197	
HIGHEST ANNUAL MEAN					1999	
LOWEST ANNUAL MEAN					1994	
HIGHEST DAILY MEAN	181	May 22	182	May 11	3,000	Jan 1, 1997
LOWEST DAILY MEAN	33	Sep 28	25	Sep 5	17	Aug 6, 1998
ANNUAL SEVEN-DAY MINIMUM	34	Sep 25	26	Sep 3	21	Jan 7, 1993
ANNUAL RUNOFF (AC-FT)	46,130		39,220		70,170	
ANNUAL RUNOFF (CFSM)	0.197		0.168		0.300	
ANNUAL RUNOFF (INCHES)	2.68		2.28		4.07	
10 PERCENT EXCEEDS	108		100		204	
50 PERCENT EXCEEDS	48		41		49	
90 PERCENT EXCEEDS	37		28		32	

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.--49 years (water years 1915-17, 1929-31, 1959-90, 1995-2005), 168 ft³/s, 121,500 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)
Mar. 28	1530	*286	*0.24				

Minimum discharge, 32 ft³/s, Aug. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	72	82	77	68	81	174	136	103	43	41	47
2	54	75	81	75	70	80	172	130	97	42	41	46
3	53	84	78	72	72	80	171	126	93	43	41	46
4	53	82	77	69	73	77	183	129	88	45	39	50
5	52	81	78	67	77	76	179	142	88	46	37	50
6	51	79	77	64	74	76	172	163	95	44	36	50
7	52	79	81	71	74	76	170	203	95	46	35	49
8	54	78	88	72	73	77	172	200	88	46	37	49
9	55	79	93	69	72	77	164	201	81	54	35	51
10	58	78	91	67	73	78	154	209	73	64	36	52
11	57	78	100	67	74	77	148	223	70	60	42	55
12	54	77	115	65	80	77	146	223	66	52	40	57
13	55	77	109	64	81	78	141	215	66	48	48	56
14	54	76	106	62	80	77	129	204	63	48	45	50
15	52	76	110	e56	78	73	124	214	59	49	45	46
16	54	78	106	e54	77	71	121	225	61	50	42	48
17	56	79	101	e56	72	76	139	225	59	52	43	57
18	58	80	98	73	74	76	141	220	64	49	44	59
19	60	81	97	90	76	74	136	218	63	47	44	55
20	60	78	96	86	78	76	139	213	58	45	44	53
21	65	76	93	86	78	77	133	202	53	43	46	55
22	72	76	90	87	79	79	128	190	51	46	45	53
23	72	77	87	85	81	80	132	185	48	49	43	54
24	69	83	85	84	82	87	164	171	45	47	44	58
25	70	99	85	82	82	90	164	158	43	46	44	57
26	69	100	83	79	82	91	160	142	43	44	40	56
27	70	89	81	78	81	109	158	132	46	42	40	55
28	69	85	78	76	81	246	152	121	54	41	43	54
29	69	81	78	76	---	244	138	113	49	41	46	53
30	69	80	79	73	---	210	137	107	46	41	47	59
31	70	---	78	71	---	184	---	103	---	42	48	---
TOTAL	1,856	2,413	2,781	2,253	2,142	3,030	4,541	5,443	2,008	1,455	1,301	1,580
MEAN	59.9	80.4	89.7	72.7	76.5	97.7	151	176	66.9	46.9	42.0	52.7
MAX	72	100	115	90	82	246	183	225	103	64	48	59
MIN	50	72	77	54	68	71	121	103	43	41	35	46
AC-FT	3,680	4,790	5,520	4,470	4,250	6,010	9,010	10,800	3,980	2,890	2,580	3,130
CFSM	0.14	0.19	0.21	0.17	0.18	0.23	0.35	0.41	0.16	0.11	0.10	0.12
IN.	0.16	0.21	0.24	0.19	0.18	0.26	0.39	0.47	0.17	0.13	0.11	0.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2005, BY WATER YEAR (WY)

MEAN	82.3	107	159	208	255	243	268	289	196	82.5	60.4	69.7
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	76.5	97.7	114	93.9	58.9	32.9	21.5	42.2
(WY)	(1930)	(1930)	(1915)	(1930)	(2005)	(2005)	(1977)	(1977)	(1930)	(1930)	(1931)	(1931)

13344500 TUCANNON RIVER NEAR STARBUCK, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1915 - 2005	
ANNUAL TOTAL	39,652		30,803		168	
ANNUAL MEAN	108		84.4		84.4	
HIGHEST ANNUAL MEAN					327	1974
LOWEST ANNUAL MEAN					84.4	2005
HIGHEST DAILY MEAN	268	May 22	246	Mar 28	5,000	Feb 10, 1916
LOWEST DAILY MEAN	47	Jul 30	35	Aug 7	15	Jul 11, 1930
ANNUAL SEVEN-DAY MINIMUM	50	Jul 25	36	Aug 4	18	Jul 24, 1931
ANNUAL RUNOFF (AC-FT)	78,650		61,100		121,500	
ANNUAL RUNOFF (CFSM)	0.251		0.196		0.389	
ANNUAL RUNOFF (INCHES)	3.42		2.66		5.29	
10 PERCENT EXCEEDS	172		158		323	
50 PERCENT EXCEEDS	93		76		115	
90 PERCENT EXCEEDS	56		45		57	

e Estimated

13348000 SOUTH FORK PALOUSE RIVER AT PULLMAN, WA

LOCATION.--Lat 46°43'57", long 117°10'48", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.14 N., R.45 E., Whitman County, Hydrologic Unit 17060108, on left 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.--33 years (water years 1935-42, 1961-81, 2002-05), 38.0 ft³/s, 3.91 in/yr, 27,540 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, 128 ft³/s, Mar. 28, gage height, 2.71 ft; minimum daily discharge, 0.9 ft³/s, Aug. 6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	7.2	7.3	9.5	15	10	30	12	9.5	5.0	1.9	3.5
2	5.0	11	7.7	8.5	15	9.6	28	12	9.5	4.0	e1.7	2.9
3	4.5	12	8.1	7.9	14	9.5	27	12	9.9	3.5	e1.3	2.8
4	4.5	8.2	7.1	7.5	14	9.1	40	15	9.8	3.3	e1.0	2.6
5	3.9	7.1	7.1	7.4	14	8.7	36	14	22	3.4	e1.2	2.7
6	3.6	7.3	7.0	7.0	14	8.8	29	16	16	3.0	e0.90	3.2
7	4.3	6.9	9.4	7.5	13	8.9	27	17	12	2.6	e1.2	2.6
8	4.6	6.7	33	7.6	12	8.7	28	13	9.8	2.8	1.7	2.8
9	13	6.4	32	7.6	11	8.7	25	21	8.7	9.4	2.1	3.1
10	10	6.2	33	7.6	11	8.5	22	89	7.4	4.4	1.9	3.8
11	6.4	6.2	25	8.0	11	8.4	23	62	6.3	4.0	1.8	3.6
12	5.3	6.0	21	8.4	12	7.9	27	35	5.7	3.3	1.5	3.0
13	5.2	6.1	19	8.9	13	7.4	29	26	5.6	3.2	1.8	3.4
14	5.2	6.2	17	e8.5	12	7.2	24	23	5.5	2.5	1.9	3.6
15	4.9	6.5	15	e8.4	11	7.3	21	21	5.3	2.1	2.8	3.5
16	8.2	8.4	13	8.2	10	9.6	23	30	4.8	2.3	3.5	3.3
17	13	6.6	13	14	9.7	12	48	39	10	2.4	3.3	3.3
18	20	7.6	11	67	9.8	8.4	47	35	13	2.7	5.3	4.0
19	12	6.8	11	70	11	9.5	32	29	7.6	2.5	4.1	4.3
20	8.5	6.0	9.6	53	10	17	28	27	6.9	2.8	3.7	4.3
21	16	5.6	9.1	41	9.6	14	25	24	5.9	2.2	3.2	3.2
22	15	5.2	8.4	33	9.6	13	23	31	5.5	2.4	3.5	3.0
23	17	5.3	7.7	28	9.1	18	23	28	3.9	2.3	3.6	3.8
24	10	25	7.3	25	9.4	13	21	23	3.7	2.4	2.7	3.9
25	9.0	28	7.7	23	9.7	11	20	20	3.9	2.6	2.7	3.7
26	7.8	18	7.2	21	9.6	14	19	17	3.6	2.3	2.5	4.3
27	6.8	11	7.3	22	9.3	48	17	15	12	2.0	2.6	4.1
28	6.3	8.8	7.6	20	9.7	104	15	13	10	2.1	2.7	3.6
29	6.3	7.5	7.4	19	---	67	15	11	6.6	e1.6	3.0	3.5
30	7.0	7.2	7.8	17	---	49	14	10	5.7	1.7	2.9	12
31	7.3	---	9.3	16	---	35	---	10	---	1.9	3.1	---
TOTAL	254.6	267.0	393.1	597.5	318.5	571.2	786	750	246.1	92.7	77.10	111.4
MEAN	8.21	8.90	12.7	19.3	11.4	18.4	26.2	24.2	8.20	2.99	2.49	3.71
MAX	20	28	33	70	15	104	48	89	22	9.4	5.3	12
MIN	3.6	5.2	7.0	7.0	9.1	7.2	14	10	3.6	1.6	0.90	2.6
AC-FT	505	530	780	1,190	632	1,130	1,560	1,490	488	184	153	221
CFSM	0.06	0.07	0.10	0.15	0.09	0.14	0.20	0.18	0.06	0.02	0.02	0.03
IN.	0.07	0.08	0.11	0.17	0.09	0.16	0.22	0.21	0.07	0.03	0.02	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2005, BY WATER YEAR (WY)

MEAN	4.50	9.13	33.8	81.0	109	115	56.6	23.8	10.2	3.66	3.04	3.37
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)

13348000 SOUTH FORK PALOUSE RIVER AT PULLMAN, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1934 - 2005	
ANNUAL TOTAL	10,324.3		4,465.20		38.0	
ANNUAL MEAN	28.2		12.2		111	
HIGHEST ANNUAL MEAN					1974	
LOWEST ANNUAL MEAN					7.73	
HIGHEST DAILY MEAN	589	Feb 18	104	Mar 28	3,200	Jan 21, 1972
LOWEST DAILY MEAN	1.6	Jul 28	0.90	Aug 6	0.30	Sep 1, 1942
ANNUAL SEVEN-DAY MINIMUM	1.8	Jul 28	1.3	Aug 2	0.31	Sep 1, 1942
ANNUAL RUNOFF (AC-FT)	20,480		8,860		27,540	
ANNUAL RUNOFF (CFSM)	0.214		0.093		0.288	
ANNUAL RUNOFF (INCHES)	2.91		1.26		3.91	
10 PERCENT EXCEEDS	60		27		92	
50 PERCENT EXCEEDS	12		8.4		8.4	
90 PERCENT EXCEEDS	3.3		2.7		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.--67 years (water years 1898-99, 1901-06, 1909-11, 1914-15, 1952-2005), 599 ft³/s, 434,100 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)
Mar. 29	1400	*3,020	*8.77				

Minimum discharge, 12 ft³/s, Aug. 17, 18, gage height, 2.71 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	101	214	e110	370	189	1,050	242	261	95	23	18
2	52	101	190	e100	354	188	841	232	245	91	20	17
3	52	109	177	e90	340	186	748	220	238	86	18	19
4	52	109	166	e85	324	187	709	214	230	81	18	20
5	52	118	159	e85	310	184	689	209	226	76	19	20
6	54	114	154	e90	303	181	887	208	241	69	16	19
7	55	135	154	e90	299	178	749	220	234	64	18	18
8	55	132	165	e90	294	176	665	218	226	61	17	20
9	55	122	184	e90	279	175	636	341	218	62	17	22
10	55	116	236	e90	266	174	637	374	198	64	17	22
11	57	112	290	e95	255	174	569	958	178	70	17	24
12	58	109	424	e95	244	175	516	1,290	165	69	16	23
13	66	107	607	e95	241	172	494	840	157	66	19	20
14	64	104	542	e90	243	170	483	639	149	59	17	18
15	67	102	433	e95	245	165	462	541	144	54	16	21
16	71	104	371	e100	236	160	431	490	138	49	15	24
17	73	102	417	112	217	159	403	446	132	49	13	27
18	73	103	399	140	202	158	404	606	128	49	13	29
19	76	105	356	265	200	162	694	745	125	42	17	30
20	85	106	321	1,950	205	169	580	614	122	40	17	26
21	102	106	294	1,310	214	175	505	563	126	38	17	25
22	130	106	273	989	211	183	452	524	131	36	18	25
23	126	102	247	845	202	222	412	498	113	34	17	25
24	120	106	215	733	197	242	384	497	100	34	15	25
25	142	108	210	659	194	227	360	479	92	33	15	26
26	163	114	206	586	192	227	330	415	89	31	17	28
27	147	299	219	522	190	255	308	379	82	31	16	27
28	130	420	190	476	189	401	288	349	90	29	16	27
29	120	299	171	447	---	2,750	269	318	97	27	20	29
30	112	249	e140	421	---	1,940	255	300	99	28	21	33
31	105	---	e120	392	---	1,420	---	278	---	25	19	---
TOTAL	2,618	4,120	8,244	11,337	7,016	11,524	16,210	14,247	4,774	1,642	534	707
MEAN	84.5	137	266	366	251	372	540	460	159	53.0	17.2	23.6
MAX	163	420	607	1,950	370	2,750	1,050	1,290	261	95	23	33
MIN	49	101	120	85	189	158	255	208	82	25	13	17
AC-FT	5,190	8,170	16,350	22,490	13,920	22,860	32,150	28,260	9,470	3,260	1,060	1,400

13351000 PALOUSE RIVER AT HOOPER, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
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 - 2005, BY WATER YEAR (WY)												
MEAN	68.0	145	443	1,010	1,700	1,803	1,261	625	253	82.5	33.5	38.9
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 2004 CALENDAR YEAR			FOR 2005 WATER YEAR			WATER YEARS 1898 - 2005		
ANNUAL TOTAL				145,763			82,973					
ANNUAL MEAN				398			227			599		
HIGHEST ANNUAL MEAN										1,595		
LOWEST ANNUAL MEAN										106		
HIGHEST DAILY MEAN				3,810			Feb 19			27,800		
LOWEST DAILY MEAN				18			Aug 22			0.00		
ANNUAL SEVEN-DAY MINIMUM				22			Aug 16			0.00		
ANNUAL RUNOFF (AC-FT)				289,100			164,600			434,100		
10 PERCENT EXCEEDS				1,130			518			1,600		
50 PERCENT EXCEEDS				202			144			178		
90 PERCENT EXCEEDS				45			20			30		

e Estimated