

13344500 TUCANNON RIVER NEAR STARBUCK, WA

Lower Snake Basin
Lower Snake-Tucannon Subbasin

LOCATION.--Lat 46°30'20", long 118°03'55" referenced to North American Datum of 1927, in NE ¼ SW ¼ sec.21, T.12 N., R.38 E., Columbia County, WA, 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.

SURFACE-WATER RECORDS

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 725.9 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, Oct. 1, 1931 to Oct. 1, 2007, at present site at datum 10 ft higher.

REMARKS.--Records good except those above 500 cfs, which are fair and estimated daily discharges which are poor. 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 FOR PERIOD OF RECORD.--55 years (water years 1915-17, 1929-31, 1959-90, 1995-2011), 170 ft³/s, 123,200 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 (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 18	0100	837	11.29
Apr 2	2230	922	11.46
Apr 6	0600	*1,230	*12.03
May 16	1245	867	11.35

Minimum discharge, 43 ft³/s, Nov. 25, gage height, 9.04 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	63	85	97	107	198	188	738	284	477	240	95	80
2	62	84	102	150	181	182	839	285	570	225	89	80
3	62	81	102	138	181	202	829	295	599	214	87	78
4	70	81	94	133	182	223	688	293	590	204	86	79
5	74	81	90	149	182	238	864	291	584	193	85	79
6	73	80	88	139	173	248	1,160	317	614	183	83	76
7	79	81	88	143	170	259	910	358	616	173	84	74
8	90	85	89	154	169	261	723	385	599	168	82	74
9	83	84	98	159	161	250	612	388	551	162	83	74
10	83	86	115	161	156	261	537	361	501	159	78	76
11	88	85	119	158	151	354	494	356	473	153	78	77
12	81	85	122	157	153	409	443	409	483	151	79	73
13	80	85	146	164	157	386	417	447	482	155	77	70
14	78	86	210	177	159	401	396	489	468	155	80	70
15	75	91	237	215	176	444	373	710	456	148	82	68
16	76	90	214	309	213	505	356	834	436	142	84	74
17	78	88	194	724	207	522	364	702	405	152	81	75
18	75	100	181	750	207	476	372	613	387	135	75	76
19	75	97	169	599	205	433	365	548	384	128	74	77
20	75	89	161	473	202	393	341	542	367	136	73	81
21	75	87	150	402	195	379	327	574	357	129	73	78
22	75	90	142	390	191	393	309	600	352	128	73	72
23	76	87	136	368	189	385	290	579	352	121	71	74
24	81	58	130	356	182	376	282	536	343	117	72	72
25	99	72	125	339	172	362	288	504	319	115	72	70
26	93	96	123	310	144	350	301	565	300	112	74	78
27	87	91	127	292	174	e325	281	530	279	112	72	77
28	82	89	133	272	172	e302	295	506	266	108	74	78
29	84	86	160	256	---	298	294	478	267	102	84	77
30	85	87	156	244	---	304	290	453	254	97	78	77
31	85	---	136	228	---	419	---	460	---	94	78	---
Total	2,442	2,567	4,234	8,616	5,002	10,528	14,778	14,692	13,131	4,611	2,456	2,264
Mean	78.8	85.6	137	278	179	340	493	474	438	149	79.2	75.5
Max	99	100	237	750	213	522	1,160	834	616	240	95	81
Min	62	58	88	107	144	182	281	284	254	94	71	68
Ac-ft	4,840	5,090	8,400	17,090	9,920	20,880	29,310	29,140	26,050	9,150	4,870	4,490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	82.0	107	156	209	245	244	280	304	206	84.0	60.8	69.3
Max	125	186	673	635	1,057	717	753	986	599	203	114	108
(WY)	(1960)	(1996)	(1965)	(1974)	(1996)	(1972)	(2009)	(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)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1915 - 2011	
Annual total	51,341		85,321			
Annual mean	141		234		170	
Highest annual mean					327	1974
Lowest annual mean					84.4	2005
Highest daily mean	460	Jun 5	1,160	Apr 6	5,000	Feb 10, 1916
Lowest daily mean	44	Aug 20	58	Nov 24	15	Jul 11, 1930
Annual seven-day minimum	48	Aug 17	69	Oct 1	18	Jul 24, 1931
Annual runoff (ac-ft)	101,800		169,200		123,200	
10 percent exceeds	258		504		328	
50 percent exceeds	122		159		117	
90 percent exceeds	62		75		58	

