

13333000 GRANDE RONDE RIVER AT TROY, OR

Lower Snake Basin
Lower Grande Ronde Subbasin

LOCATION.--Lat 45°56'45", long 117°27'00" referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.4, T.5 N., R.43 E., Wallowa County, OR, 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.

SURFACE-WATER RECORDS

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, mainly 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.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--69 years (water years 1945-2013), 3,027 ft³/s, 2,193,000 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 (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 7	1915	*9,160	*7.42
May 14	0730	9,030	7.38

Minimum discharge, 485 ft³/s, Aug. 20, 21, gage height, 3.18 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	639	1,690	1,620	e1,000	2,390	2,000	5,350	4,610	3,290	4,210	606	558
2	633	1,570	2,900	e960	2,530	2,650	5,760	4,220	3,230	3,890	648	559
3	606	1,410	3,460	e940	2,390	3,690	5,990	4,050	3,320	3,670	704	605
4	610	1,290	3,090	e960	2,280	3,960	6,000	4,050	3,400	3,190	658	636
5	631	1,210	3,800	e980	2,200	3,600	6,560	4,220	3,480	2,800	660	682
6	628	1,160	3,510	e980	2,170	3,220	7,220	4,460	3,820	2,450	649	776
7	624	1,130	3,090	e1,100	2,110	3,030	8,230	5,010	4,310	2,190	631	777
8	630	1,100	2,820	e1,200	2,030	2,870	8,480	5,790	4,710	1,990	637	724
9	635	1,090	2,500	e1,300	1,910	2,700	7,490	6,510	4,550	1,890	616	731
10	629	1,050	2,290	e1,330	1,810	2,560	6,680	7,120	4,480	1,670	605	736
11	621	1,000	2,230	e1,200	1,710	2,570	6,230	7,330	4,060	1,510	618	690
12	617	995	2,190	e1,100	1,660	2,870	5,620	7,790	3,490	1,400	632	647
13	634	1,000	2,080	e1,050	1,670	3,650	5,720	8,420	3,110	1,270	618	643
14	643	994	1,910	e1,050	1,820	4,330	5,320	8,480	2,850	1,170	586	640
15	693	994	1,870	e1,000	1,860	5,080	4,910	7,260	2,660	1,040	587	616
16	866	980	1,790	e1,000	1,900	5,680	4,550	6,220	2,580	987	579	616
17	919	982	1,810	e980	2,070	5,620	4,150	5,460	2,660	959	570	657
18	789	1,060	1,730	e980	2,110	4,990	3,820	5,150	2,920	897	554	728
19	744	1,150	1,600	e960	2,070	4,360	3,860	4,650	3,340	830	554	718
20	872	1,300	1,420	e940	1,950	4,160	5,300	4,210	4,160	787	529	687
21	947	1,640	e1,400	e940	1,830	4,630	6,210	4,090	3,480	748	518	667
22	831	1,660	e1,350	e960	1,780	4,380	6,200	4,170	3,100	725	556	667
23	823	1,430	e1,300	e1,050	1,810	4,020	5,730	3,920	2,880	697	594	692
24	826	1,410	e1,350	e1,200	1,760	3,640	5,190	3,610	2,890	684	597	748
25	820	1,410	e1,200	1,290	1,720	3,340	4,800	3,420	3,650	675	578	793
26	821	1,340	e1,200	1,410	1,650	3,150	4,580	3,150	4,160	629	559	828
27	840	1,260	e1,150	1,580	1,600	3,100	4,670	3,140	4,270	642	568	848
28	1,100	1,230	e1,100	1,480	1,610	3,280	4,910	3,200	4,390	632	551	915
29	2,690	1,200	e1,100	1,410	---	3,940	5,200	3,240	4,590	629	548	1,090
30	2,610	1,350	e1,050	1,400	---	4,630	5,110	3,580	4,670	623	543	1,590
31	1,980	---	e1,050	2,030	---	5,010	---	3,430	---	597	551	---
Total	27,951	37,085	60,960	35,760	54,400	116,710	169,840	153,960	108,500	46,081	18,404	22,264
Mean	902	1,236	1,966	1,154	1,943	3,765	5,661	4,966	3,617	1,486	594	742
Max	2,690	1,690	3,800	2,030	2,530	5,680	8,480	8,480	4,710	4,210	704	1,590
Min	606	980	1,050	940	1,600	2,000	3,820	3,140	2,580	597	518	558
Ac-ft	55,440	73,560	120,900	70,930	107,900	231,500	336,900	305,400	215,200	91,400	36,500	44,160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	856	1,196	1,864	2,144	3,021	4,261	6,314	7,353	5,700	2,116	814	742
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)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1945 - 2013	
Annual total	1,150,593		851,915			
Annual mean	3,144		2,334		3,027	
Highest annual mean					5,253	1996
Lowest annual mean					1,136	1977
Highest daily mean	14,500	Apr 27	8,480	Apr 8	42,200	Feb 9, 1996
Lowest daily mean	480	Aug 14	518	Aug 21	344	Aug 20, 1977
Annual seven-day minimum	491	Aug 14	551	Aug 16	361	Aug 18, 1977
Annual runoff (ac-ft)	2,282,000		1,690,000		2,193,000	
10 percent exceeds	7,420		5,010		7,380	
50 percent exceeds	1,800		1,620		1,580	
90 percent exceeds	535		629		670	

