

## 12442500 SIMILKAMEEN RIVER NEAR NIGHTHAWK, WA

Upper Columbia Basin  
Similkameen Subbasin

LOCATION.--Lat 48°59'05", long 119°37'02" referenced to North American Datum of 1927, in NW ¼ sec.7, T.40 N., R.26 E., Okanogan County, WA, Hydrologic Unit 17020007, on left bank 1,000 ft upstream from Oroville-Tonasket Irrigation District canal intake, 1.6 mi northeast of Nighthawk, 3.8 mi downstream from Palmer Creek, and at mile 15.8.

DRAINAGE AREA.--3,550 mi<sup>2</sup>.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--May 1911 to current year (prior to September 1928, mean monthly discharge included Oroville-Tonasket Irrigation District canal). Published as "near Oroville" 1911-28. Water temperature April 1986 to September 1987.

REVISED RECORDS.--WSP 1183: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,137.70 ft above NGVD of 1929. Prior to Sept. 11, 1928, staff gages at sites 7 mi downstream (below Oroville-Tonasket Irrigation District canal) at various datums.

COOPERATION.--This station is maintained by the United States under agreement with Canada.

REMARKS.--Records good except for discharges below 600 ft<sup>3</sup>/s and estimated daily discharges, which are fair. Flow at high stages regulated by natural diversion into and release from Palmer Lake of about 6,000 acre-ft. Several small diversions upstream from station for irrigation of about 2,900 acres in the United States in 1946 and approximately 10,500 acres in Canada in 1957. U. S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--99 years (water years 1912-2010), 2,264 ft<sup>3</sup>/s, 1,640,000 acre-ft/yr. 82 years (water years 1929-2010), 2,283 ft<sup>3</sup>/s, 1,654,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,800 ft<sup>3</sup>/s, June 1, 1972; maximum gage height, 18.78 ft, May 31, 1972; minimum discharge, 65 ft<sup>3</sup>/s, Jan. 3, 1974; minimum gage height, 1.55 ft, Jan. 31, 1988, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,200 ft<sup>3</sup>/s, June 3, gage height, 10.24 ft; minimum discharge, 302 ft<sup>3</sup>/s, Oct. 13.

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	333	2,710	1,680	723	589	483	857	3,740	e11,100	5,810	1,150	e535
2	338	2,210	1,610	731	585	483	849	3,660	11,400	5,430	1,140	e550
3	343	1,870	1,260	748	577	488	846	3,520	11,800	5,140	1,090	e570
4	354	1,700	e1,100	769	573	500	830	3,380	11,800	4,720	1,070	532
5	366	1,570	e1,000	741	563	510	812	3,180	e11,000	4,410	1,130	485
6	365	1,490	e900	651	557	510	817	3,060	e10,200	4,200	1,110	467
7	362	1,670	e800	528	546	502	795	2,930	e9,800	3,970	1,050	495
8	355	1,580	e750	518	529	500	775	2,860	e9,640	3,810	993	560
9	349	1,470	e750	586	522	502	777	2,760	9,730	3,760	976	613
10	343	1,400	e750	676	522	488	766	2,710	9,980	3,710	960	612
11	334	1,370	e810	723	513	462	736	2,720	9,640	3,630	964	585
12	322	1,310	e840	738	507	504	741	2,850	9,320	3,470	995	552
13	308	1,130	e910	741	508	507	749	3,250	9,400	3,310	907	542
14	325	1,020	e990	778	502	494	760	3,860	9,850	3,100	837	543
15	341	1,060	e980	787	505	481	800	4,680	9,510	2,820	791	605
16	345	1,070	e1,030	748	504	478	910	5,610	8,730	2,580	749	593
17	357	1,230	e1,080	719	501	501	1,130	e7,030	8,530	2,440	712	571
18	479	1,640	e1,150	726	497	532	1,580	e8,820	8,580	2,300	680	581
19	1,570	1,570	1,020	703	485	552	2,150	e10,100	8,180	2,170	643	633
20	1,200	1,440	1,000	688	463	534	2,840	e10,700	8,190	2,060	611	700
21	987	1,370	1,020	677	438	532	3,840	e10,600	8,760	1,960	591	858
22	883	1,330	987	669	436	549	4,620	e9,270	9,390	1,870	572	1,140
23	858	1,260	856	640	443	578	4,530	8,180	9,060	1,780	555	1,070
24	927	1,210	758	600	460	594	4,310	7,410	8,920	1,710	542	921
25	1,350	1,170	644	586	492	612	4,080	6,860	8,580	1,600	529	847
26	1,290	1,160	564	602	502	661	3,880	6,490	8,080	1,510	507	833
27	1,170	1,390	476	593	504	695	3,840	6,760	7,580	1,430	482	783
28	1,220	1,610	499	554	485	721	4,020	e8,550	7,090	1,350	471	794
29	1,120	1,520	492	560	---	760	4,130	e10,500	6,780	1,310	479	762
30	1,050	1,490	515	602	---	841	3,920	e10,800	6,350	1,260	496	821
31	1,320	---	664	600	---	867	---	e10,800	---	1,180	e510	---
<b>Total</b>	21,264	44,020	27,885	20,705	14,308	17,421	61,690	187,640	276,970	89,800	24,292	20,153
<b>Mean</b>	686	1,467	900	668	511	562	2,056	6,053	9,232	2,897	784	672
<b>Max</b>	1,570	2,710	1,680	787	589	867	4,620	10,800	11,800	5,810	1,150	1,140
<b>Min</b>	308	1,020	476	518	436	462	736	2,710	6,350	1,180	471	467
<b>Ac-ft</b>	42,180	87,310	55,310	41,070	28,380	34,550	122,400	372,200	549,400	178,100	48,180	39,970

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	689	960	800	661	676	768	2,086	7,793	8,523	2,909	898	587
<b>Max</b>	2,265	4,531	3,480	2,099	2,235	3,541	13,510	15,360	24,910	8,495	2,625	1,614
<b>(WY)</b>	(1960)	(1991)	(1996)	(2005)	(1935)	(2007)	(1934)	(1972)	(1972)	(1972)	(1948)	(1954)
<b>Min</b>	239	254	231	215	217	341	427	2,788	2,508	665	279	191
<b>(WY)</b>	(1988)	(1988)	(1988)	(1930)	(1929)	(1988)	(1929)	(1984)	(1992)	(1940)	(2003)	(2003)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1929 - 2010	
<b>Annual total</b>	579,472		806,148			
<b>Annual mean</b>	1,588		2,209		2,283	
<b>Highest annual mean</b>					4,831	1972
<b>Lowest annual mean</b>					1,038	2001
<b>Highest daily mean</b>	11,100	Jun 1	11,800	Jun 3	44,800	Jun 1, 1972
<b>Lowest daily mean</b>	280	Jan 26	308	Oct 13	120	Jan 4, 1988
<b>Annual seven-day minimum</b>	331	Oct 10	331	Oct 10	141	Jan 5, 1974
<b>Annual runoff (ac-ft)</b>	1,149,000		1,599,000		1,654,000	
<b>10 percent exceeds</b>	3,820		7,780		6,640	
<b>50 percent exceeds</b>	744		858		794	
<b>90 percent exceeds</b>	401		487		369	

