12472800 COLUMBIA RIVER BELOW PRIEST RAPIDS DAM, WA

LOCATION.--Lat 46°37'44", long 119°51'49", in SE 1/4 NW 1/4 sec.7, T.13 N., R.24 E., Grant County, Hydrologic Unit 17020016, on left bank 2.6 mi downstream from Priest Rapids Dam, 14.7 mi south of Beverly, and at mile 394.5.

DRAINAGE AREA.--96,000 mi^2, approximately.

PERIOD OF RECORD.--January 1917 to current year. January 1917 to September 1930, at site 3.4 mi downstream, published as "at Vernita." October 1930 to July 27, 1959, at site 46.5 mi upstream, published as "at Trinidad."

REVISED RECORDS.--WSP 1933: Drainage area. WDR WA-82-2: 1965(m), 1971(m).

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Oct. 1, 1930, nonrecording gages at site 3.4 mi downstream at datum 388.7 ft above sea level. Oct. 1, 1930, to July 27, 1959, water-stage recorder at site 46.5 mi upstream at datum 499.3 ft above sea level (river-profile survey).

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 600,000 acres upstream from station. Flow regulated by 10 major reservoirs and numerous smaller reservoirs and powerplants. U.S. Geological Survey satellite telemeter at station. Water temperatures March 1980 to April 1993. Temperature records for site "at Vernita Bridge, near Priest Rapids Dam" (station 12472900) for period July 1974 to September 1980 are equivalent.

AVERAGE DISCHARGE.--87 years (water years 1918-2004), 118,900 ft^3/s, 86,160,000 acre-ft/yr, unadjusted. 45 years (water years 1960-2004), 118,700 ft^3/s, 86,020,000 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 692,600 ft^3/s June 12, 1948, gage height, 59.35 ft, site and datum then in use; minimum discharge, 4,120 ft^3/s Feb. 10, 1932, due to construction at Rock Island Dam, site and datum then in use; minimum daily discharge prior to construction of Rock Island Dam (1932), 22,000 ft^3/s Feb. 1-7, 1930, site and datum then in use; minimum daily discharge after completion of Rock Island Dam (1932), 20,000 ft^3/s Jan. 31 to Feb. 10, 1937, site and datum then in use; minimum discharge since completion of Priest Rapids Dam (1959), 16,300 ft^3/s Nov. 7. 1998, due to emergency flow reduction at Priest Rapids Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1894, reached a discharge of about 740,000 ft^3/s, based on a rating extension for a Weather Bureau gage at Wenatchee.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 213,000 ft^3/s June 20, elevation, 412.40 ft; minimum discharge, 38,700 ft^3/s Oct. 19, elevation, 396.77 ft; minimum daily discharge, 48,800 ft^3/s Aug. 7.

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	88,700	112,000	84,100	94,200	87,300	88,600	73,700	102,000	134,000	131,000	80,800	148,000
2	78,600	113,000	90,000	96,900	88,600	86,600	93,400	104,000	108,000	103,000	93,600	74,000
3	68,400	93,400	122,000	108,000	101,000	90,400	83,600	122,000	141,000	102,000	93,900	72,700
4	58,200	92,500	121,000	101,000	98,300	101,000	72,000	133,000	155,000	96,200	86,700	53,500
5	52,400	111,000	114,000	135,000	96,500	102,000	71,500	123,000	127,000	133,000	85,700	55,000
6	76,300	122,000	97,700	136,000	109,000	71,700	71,600	105,000	117,000	117,000	81,600	72,600
7	74,900	115,000	94,800	150,000	100,000	71,100	71,400	120,000	118,000	120,000	48,800	94,000
8	81,600	111,000	87,900	124,000	75,100	70,800	71,000	116,000	110,000	136,000	62,700	95,600
9	84,200	74,100	114,000	119,000	73,600	71,000	71,400	104,000	119,000	126,000	84,700	87,300
10	82,200	91,100	129,000	97,900	96,800	81,400	72,700	138,000	144,000	99,400	108,000	91,400
11	71,600	90,400	129,000	87,300	106,000	82,300	71,700	154,000	167,000	105,000	123,000	77,600
12	59,400	105,000	112,000	93,600	98,500	70,800	73,400	123,000	146,000	131,000	102,000	60,100
13	82,400	107,000	108,000	123,000	116,000	70,500	77,500	125,000	142,000	122,000	100,000	64,700
14	73,700	97,800	120,000	105,000	78,500	70,700	103,000	146,000	165,000	120,000	92,700	59,900
15	93,000	90,500	133,000	97,900	72,600	71,000	101,000	126,000	166,000	118,000	92,600	58,300
16	84,500	83,000	127,000	96,400	78,200	71,500	103,000	134,000	138,000	82,000	95,500	67,600
17	80,900	95,400	127,000	83,500	80,900	72,000	91,600	129,000	138,000	89,600	107,000	73,600
18	64,100	91,800	121,000	75,200	86,200	71,900	97,200	136,000	146,000	85,300	114,000	64,400
19	64,400	97,500	117,000	81,300	82,000	78,400	121,000	141,000	138,000	95,100	116,000	52,100
20	63,100	114,000	115,000	94,600	78,800	71,800	150,000	133,000	137,000	76,800	115,000	62,400
21	66,000	124,000	85,100	90,600	72,600	71,100	131,000	118,000	161,000	95,600	95,900	85,800
22	86,400	122,000	113,000	112,000	72,100	71,500	109,000	122,000	155,000	78,600	61,400	97,200
23	111,000	82,700	130,000	116,000	72,800	71,800	108,000	120,000	124,000	87,600	69,600	109,000
24	109,000	90,600	111,000	85,100	70,900	73,300	109,000	93,800	111,000	79,700	68,900	97,200
25	112,000	102,000	86,700	77,700	71,300	82,700	105,000	134,000	120,000	70,200	96,000	81,700
26	85,300	103,000	81,600	106,000	95,800	82,500	102,000	130,000	128,000	87,800	113,000	71,000
27	90,800	84,200	109,000	110,000	87,500	72,400	113,000	139,000	113,000	107,000	126,000	84,700
28	111,000	72,100	110,000	96,000	72,400	71,700	126,000	136,000	143,000	111,000	92,600	89,800
29	107,000	69,600	126,000	95,200	71,200	71,600	117,000	108,000	171,000	118,000	110,000	84,300
30	95,100	71,300	132,000	88,500	---	71,300	94,100	121,000	158,000	108,000	121,000	90,000
31	98,000	---	123,000	78,800	---	73,300	---	115,000	---	100,000	135,000	---
TOTAL	2,554,200	2,929,000	3,470,900	3,155,700	2,490,500	2,378,700	2,855,800	3,850,800	4,140,000	3,231,900	2,973,700	2,375,500
MEAN	82,390	97,630	112,000	101,800	85,880	76,730	95,190	124,200	138,000	104,300	95,930	79,180
MAX	112,000	124,000	133,000	150,000	116,000	102,000	150,000	154,000	171,000	136,000	135,000	148,000
MIN	52,400	69,600	81,600	75,200	70,900	70,500	71,000	93,800	108,000	70,200	48,800	52,100
AC-FT	5,066,000	5,810,000	6,885,000	6,259,000	4,940,000	4,718,000	5,664,000	7,638,000	8,212,000	6,410,000	5,898,000	4,712,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2004, BY WATER YEAR (WY)

MEAN	72,270	73,780	78,040	80,570	81,530	82,390	104,200	190,800	264,000	195,800	119,900	82,090
MAX	119,800	121,200	163,800	168,400	195,000	201,800	196,500	348,500	590,700	385,400	192,000	131,700
(WY)	(1928)	(1991)	(1996)	(1996)	(1996)	(1983)	(1934)	(1934)	(1948)	(1950)	(1920)	(1927)
MIN	45,950	32,290	26,840	21,710	20,900	26,500	37,160	61,840	78,810	56,650	66,740	60,050
(WY)	(1932)	(1937)	(1937)	(1937)	(1937)	(1937)	(1944)	(2001)	(1977)	(2001)	(1985)	(1994)

12472800 COLUMBIA RIVER BELOW PRIEST RAPIDS DAM, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1918 - 2004	
ANNUAL TOTAL	36,819,300		36,406,700			
ANNUAL MEAN	100,900		99,470		118,900	
HIGHEST ANNUAL MEAN					165,600	1997
LOWEST ANNUAL MEAN					78,070	1944
HIGHEST DAILY MEAN	182,000	Jun 13	171,000	Jun 29	690,000	Jun 12, 1948
LOWEST DAILY MEAN	42,600	Sep 14	48,800	Aug 7	20,000	Jan 31, 1937
ANNUAL SEVEN-DAY MINIMUM	56,100	Sep 6	62,600	Sep 14	20,100	Jan 30, 1937
ANNUAL RUNOFF (AC-FT)	73,030,000		72,210,000		86,160,000	
10 PERCENT EXCEEDS	143,000		133,000		228,000	
50 PERCENT EXCEEDS	97,500		96,400		93,900	
90 PERCENT EXCEEDS	70,800		71,200		46,900	

Figure 8. Location of surface-water stations in the Owyhee and Malheur River Basins.

13181000 OWYHEE RIVER NEAR ROME, OR

LOCATION.--(Revised)Lat 42°51'59", long 117°38'57", in SE ¼ NE ¼ sec.14, T.31 S., R.41 E., Malheur County, Hydrologic Unit 17050107, on right bank 0.5 mi downstream from Jordan Creek, 2.6 mi north of Rome, and at mile 122.4.

DRAINAGE AREA.--About 8,000 mi^2.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,344.20 ft above NGVD of 1929. Prior to Feb 10, 1960, at datum 0.24 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Antelope Reservoir, capacity, 70,000 acre-ft, increased in 1970, and Wild Horse Reservoir, capacity, 32,690 acre-ft, and numerous small reservoirs. Diversions upstream from station for irrigation. Continuous water-quality records for the period October 1972 to June 1977 have been collected at this location. U. S. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--55 years (water years 1950-2004), 931 ft^3/s, 674,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,700 ft^3/s Mar. 18, 1993, gage height, 20.11 ft; minimum discharge, 42 ft^3/s Aug. 12, 1954, July 28, Aug. 5, 1961, July 31, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,800 ft^3/s Mar. 20, gage height, 11.14 ft; minimum daily discharge, 81 ft^3/s Oct. 1.

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	81	99	145	173	213	784	2,460	703	827	215	96	138
2	86	101	147	179	219	716	2,220	692	677	211	93	140
3	85	101	156	178	238	638	1,970	666	553	244	86	137
4	88	103	170	178	236	602	1,890	632	460	270	90	133
5	100	102	177	151	227	605	1,960	591	364	259	94	132
6	97	100	173	131	221	602	2,090	565	329	257	87	123
7	96	104	174	152	204	781	2,340	535	323	248	86	117
8	109	105	190	170	240	1,020	2,520	498	309	235	85	115
9	108	109	190	182	217	1,560	2,570	475	288	225	84	120
10	104	116	180	183	209	2,320	2,290	460	282	213	87	120
11	104	115	177	187	201	3,070	2,020	475	283	205	95	117
12	111	115	192	187	185	3,290	1,830	498	298	204	110	120
13	112	116	189	184	188	3,630	1,580	527	294	201	109	113
14	109	118	181	191	185	4,150	1,480	610	351	192	113	104
15	109	120	195	186	195	5,340	1,370	621	359	184	107	101
16	112	119	206	183	219	6,270	1,220	577	336	174	103	104
17	114	123	170	196	254	6,780	1,110	517	298	165	103	107
18	103	124	196	188	786	7,440	1,020	463	264	159	102	107
19	98	129	168	183	1,660	9,080	946	431	243	164	113	104
20	96	133	147	201	1,600	12,700	893	410	219	179	114	107
21	94	131	188	194	1,380	9,460	887	389	201	168	108	108
22	92	131	208	186	1,160	8,280	956	361	187	156	179	111
23	95	131	198	155	1,000	7,610	986	341	191	140	146	113
24	98	130	199	178	1,070	7,030	1,070	318	188	130	140	117
25	96	110	207	192	1,030	6,340	1,090	352	185	124	138	115
26	94	128	196	169	1,010	4,990	1,000	420	178	113	136	116
27	96	128	193	172	1,050	4,030	926	506	177	109	126	119
28	97	126	183	182	967	3,280	837	519	165	111	124	119
29	98	133	189	223	849	2,840	789	842	170	113	125	117
30	99	138	177	222	---	2,560	720	937	213	110	124	116
31	100	---	181	211	---	2,510	---	881	---	97	133	---
TOTAL	3,081	3,538	5,642	5,647	17,213	130,308	45,040	16,812	9,212	5,575	3,436	3,510
MEAN	99.4	118	182	182	594	4,203	1,501	542	307	180	111	117
MAX	114	138	208	223	1,660	12,700	2,570	937	827	270	179	140
MIN	81	99	145	131	185	602	720	318	165	97	84	101
AC-FT	6,110	7,020	11,190	11,200	34,140	258,500	89,340	33,350	18,270	11,060	6,820	6,960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2004, BY WATER YEAR (WY)

MEAN	160	210	371	658	1,197	2,485	2,807	1,921	857	250	150	136
MAX	442	593	2,898	4,461	8,820	9,404	16,960	10,470	4,870	1,035	452	361
(WY)	(1976)	(1971)	(1965)	(1971)	(1986)	(1972)	(1952)	(1984)	(1984)	(1984)	(1984)	(1984)
MIN	85.3	107	104	114	129	233	144	86.5	89.6	61.2	56.0	62.5
(WY)	(1955)	(1955)	(1955)	(1955)	(1955)	(1977)	(1992)	(1992)	(1992)	(1968)	(1992)	(1955)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1950 - 2004	
ANNUAL TOTAL	102,823		249,014			
ANNUAL MEAN	282		680		931	
HIGHEST ANNUAL MEAN					3,400	1984
LOWEST ANNUAL MEAN					162	1992
HIGHEST DAILY MEAN	3,650	May 11	12,700	Mar 20	46,900	Mar 18, 1993
LOWEST DAILY MEAN	60	Sep 8	81	Oct 1	44	Aug 1, 1968
ANNUAL SEVEN-DAY MINIMUM	67	Sep 6	87	Aug 3	47	Jul 26, 1968
ANNUAL RUNOFF (AC-FT)	203,900		493,900		674,300	
10 PERCENT EXCEEDS	504		1,590		2,460	
50 PERCENT EXCEEDS	180		187		230	
90 PERCENT EXCEEDS	81		101		106	

2004 Water Year

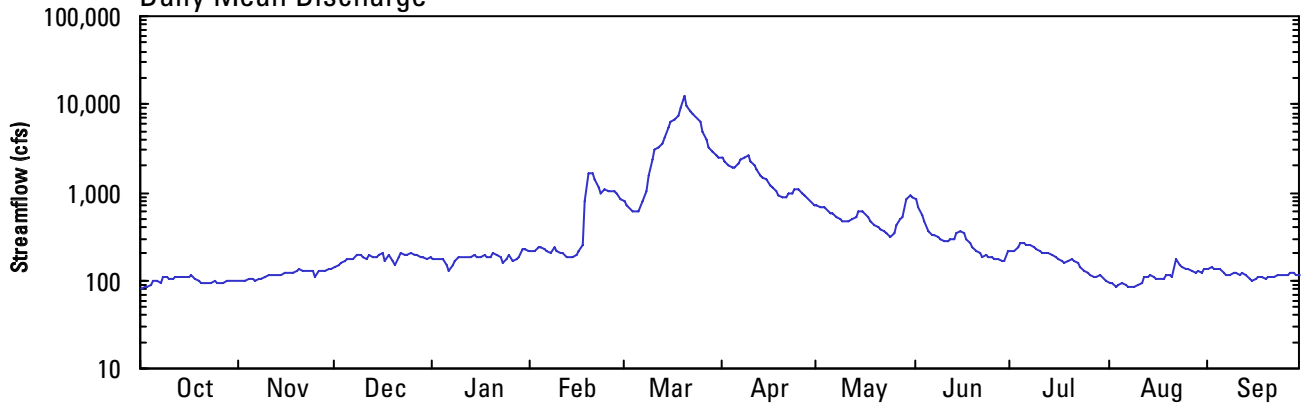
OWYHEE RIVER BASIN

13181000 OWYHEE RIVER NEAR ROME, OR

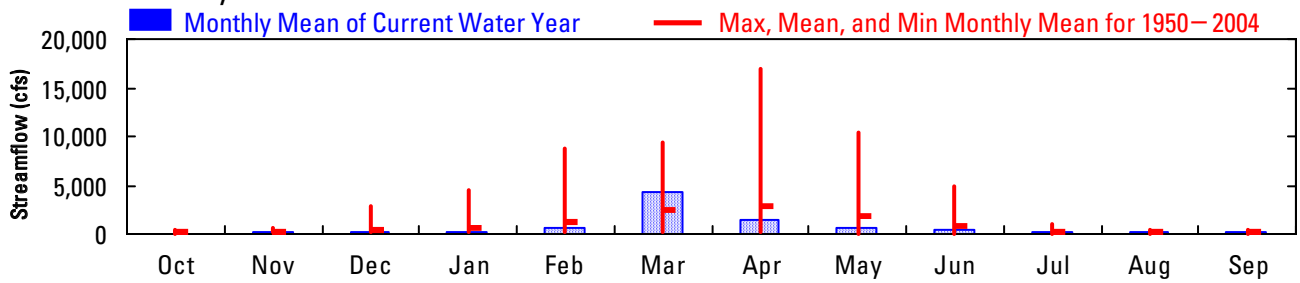
Latitude: 42° 51' 59" Longitude: 117° 38' 57" Hydrologic Unit Code: 17050107

Malheur County Datum: 3,344.20 feet Drainage Area: 8,000 square miles

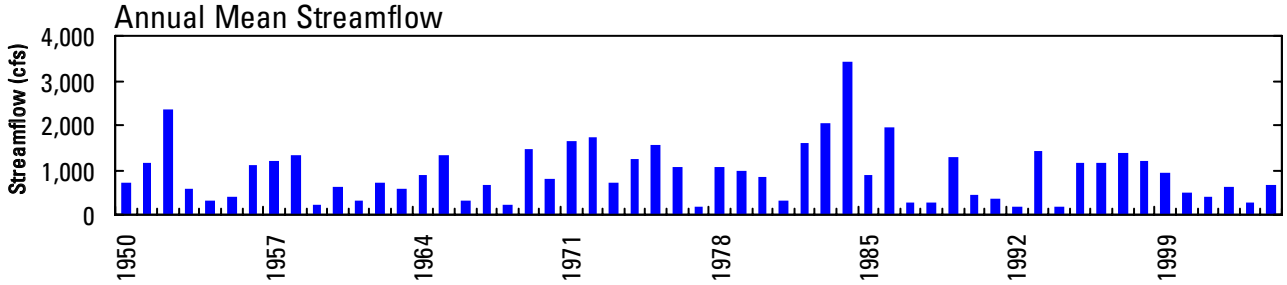
Daily Mean Discharge



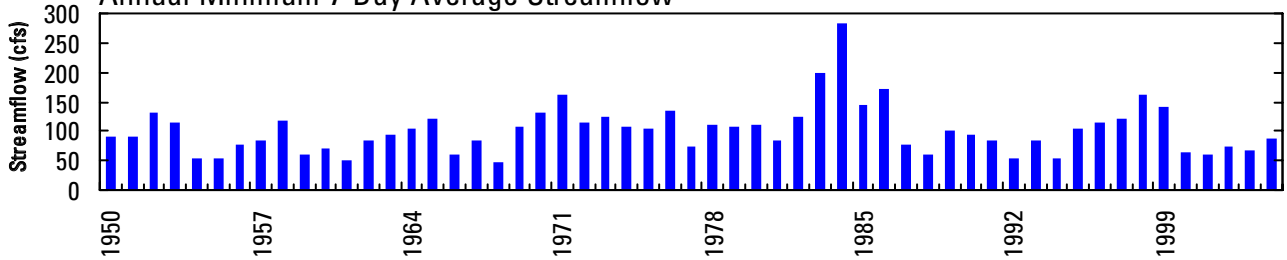
Monthly Statistics



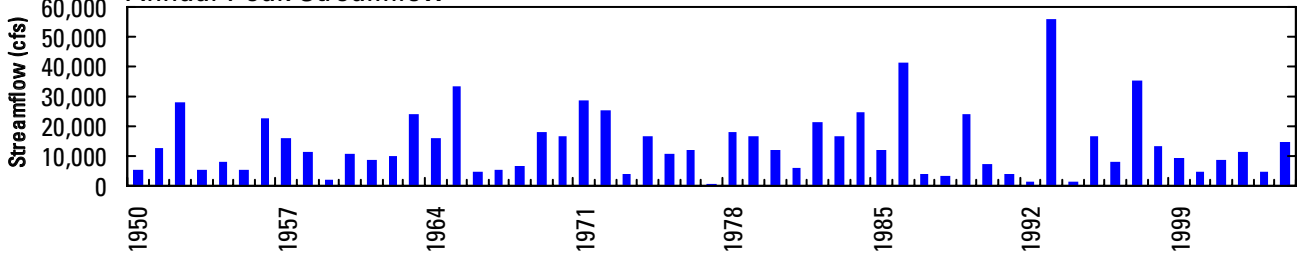
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



13183000 OWYHEE RIVER BELOW OWYHEE DAM, OR

LOCATION.--(Revised)Lat 43°39'16", long 117°15'21"(NAD83), in SE 1/4 sec.18, T.22 S., R.45 E.,Malheur County, Hydrologic Unit 17050110, on left bank 0.8 mi downstream from Owyhee Dam, 20 mi southwest of Nyssa, and at mile 27.3.

DRAINAGE AREA.--11,160 mi^2, approximately.

PERIOD OF RECORD.--February 1929 to current year.

REVISED RECORDS.--WSP 983: 1941-42. WSP 1397: 1930, 1933, 1946.

GAGE.--Water-stage recorder. Datum of gage is 2,343.67 ft above NGVD of 1929 (levels by Bureau of Reclamation).

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1932 by Lake Owyhee (station 13182500), and by many smaller reservoirs. Diversion of up to 457,000 acre-ft from Lake Owyhee during the year for irrigation of lands downstream from station and outside the basin. Many smaller diversions upstream from Lake Owyhee for irrigation upstream from station. Computation of monthly and annual adjusted flows discontinued in 1991.

AVERAGE DISCHARGE.--72 years (water years 1933-2004), 403 ft^3/s, 292,300 acre-ft/yr, not adjusted for storage or diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft^3/s Apr. 15, 1952, gage height, 15.70 ft; no flow for part of Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 223 ft^3/s Aug. 24, 26; minimum daily discharge, 7.9 ft^3/s Oct. 11-22.

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	161	8.1	9.4	9.7	10	11	11	201	204	211	211	209
2	160	8.1	9.5	9.7	10	11	11	201	204	211	211	200
3	159	8.1	9.7	9.7	10	11	11	202	204	211	210	200
4	158	8.1	9.7	9.7	10	11	11	203	204	211	210	200
5	157	8.1	9.7	10	11	11	100	203	204	211	210	200
6	151	8.1	9.7	10	10	11	171	204	204	211	210	200
7	155	8.1	9.7	10	10	11	168	206	204	211	209	199
8	155	8.1	9.7	10	10	11	168	206	205	211	209	200
9	154	8.4	9.7	10	10	11	167	205	206	211	209	201
10	80	8.4	9.7	10	10	11	166	206	206	212	209	192
11	7.9	8.4	9.7	10	10	11	177	206	206	212	209	184
12	7.9	8.4	9.7	10	10	11	186	206	206	211	208	186
13	7.9	8.4	9.7	10	10	11	185	206	206	211	208	184
14	7.9	8.4	9.7	10	10	11	184	206	207	211	208	183
15	7.9	8.4	9.7	10	10	11	183	206	206	205	208	183
16	7.9	8.4	9.7	10	10	11	182	205	206	211	208	184
17	7.9	8.4	9.7	10	10	11	193	204	207	211	208	185
18	7.9	8.4	9.7	10	10	11	202	204	207	211	206	185
19	7.9	8.5	9.7	10	10	11	201	204	207	211	206	185
20	7.9	8.7	9.7	10	10	11	201	204	208	212	206	185
21	7.9	8.7	9.7	10	10	11	202	204	208	212	206	184
22	7.9	8.7	9.7	10	10	11	200	204	208	211	214	185
23	8.1	8.8	9.7	10	11	11	199	203	208	211	221	185
24	8.1	9.0	9.7	10	11	11	201	201	209	211	223	186
25	8.1	9.0	9.7	10	11	11	200	202	210	211	222	186
26	8.1	9.0	9.7	10	11	11	198	203	211	211	223	187
27	8.1	9.0	9.7	10	11	11	200	203	211	211	222	187
28	8.1	9.3	9.7	10	11	11	200	204	211	211	221	186
29	8.1	9.4	9.7	10	11	11	199	204	199	211	221	184
30	8.1	9.4	9.7	10	---	11	200	204	210	211	221	185
31	8.1	---	9.7	10	---	11	---	204	---	211	221	---
TOTAL	1,657.7	256.3	300.2	308.8	298	341	4,877	6,324	6,196	6,539	6,588	5,700
MEAN	53.5	8.54	9.68	9.96	10.3	11.0	163	204	207	211	213	190
MAX	161	9.4	9.7	10	11	11	202	206	211	212	223	209
MIN	7.9	8.1	9.4	9.7	10	11	11	201	199	205	206	183
AC-FT	3,290	508	595	613	591	676	9,670	12,540	12,290	12,970	13,070	11,310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2004, BY WATER YEAR (WY)

MEAN	69.3	9.83	23.7	141	379	1,010	1,602	828	328	174	157	132
MAX	242	196	703	2,751	5,198	7,799	12,790	8,565	3,246	618	312	248
(WY)	(1986)	(1933)	(1985)	(1971)	(1986)	(1972)	(1984)	(1984)	(1984)	(1933)	(1933)	(1933)
MIN	2.80	1.00	1.31	1.17	1.13	1.66	28.2	39.5	45.8	44.3	22.4	8.00
(WY)	(1955)	(1953)	(1993)	(1993)	(1993)	(1992)	(1955)	(1955)	(1948)	(1948)	(1948)	(1948)

13183000 OWYHEE RIVER BELOW OWYHEE DAM, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1933 - 2004	
ANNUAL TOTAL	28,904.2		39,386.0			
ANNUAL MEAN	79.2		108		403	
HIGHEST ANNUAL MEAN					2,991	1984
LOWEST ANNUAL MEAN					22.3	1948
HIGHEST DAILY MEAN	173	Jun 11	223	Aug 24	21,800	Apr 16, 1952
LOWEST DAILY MEAN	7.9	Oct 11	7.9	Oct 11	1.0	Oct 18, 1952
ANNUAL SEVEN-DAY MINIMUM	7.9	Oct 11	7.9	Oct 11	1.0	Oct 18, 1952
ANNUAL RUNOFF (AC-FT)	57,330		78,120		292,300	
10 PERCENT EXCEEDS	162		211		532	
50 PERCENT EXCEEDS	14		156		85	
90 PERCENT EXCEEDS	8.4		8.4		2.7	

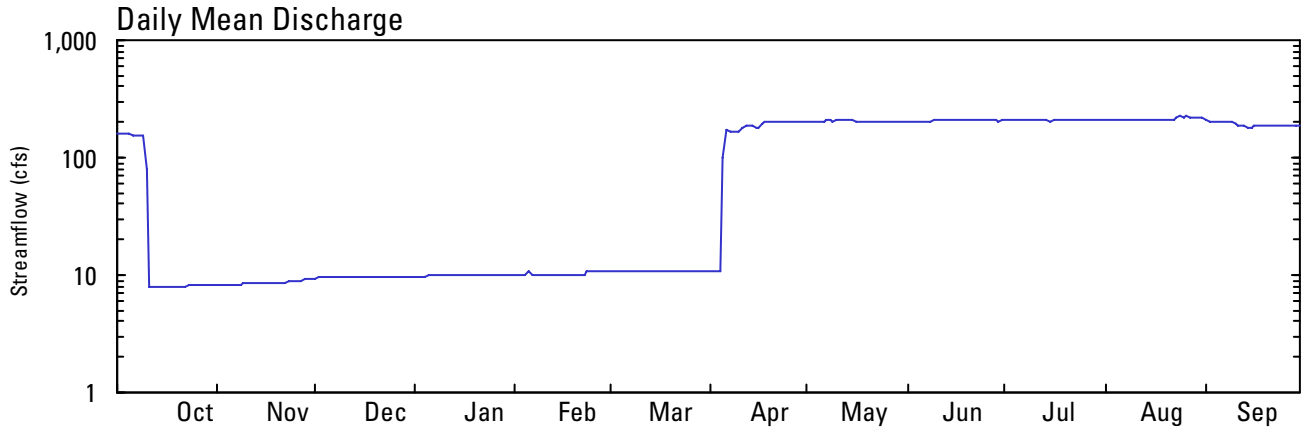
2004 Water Year

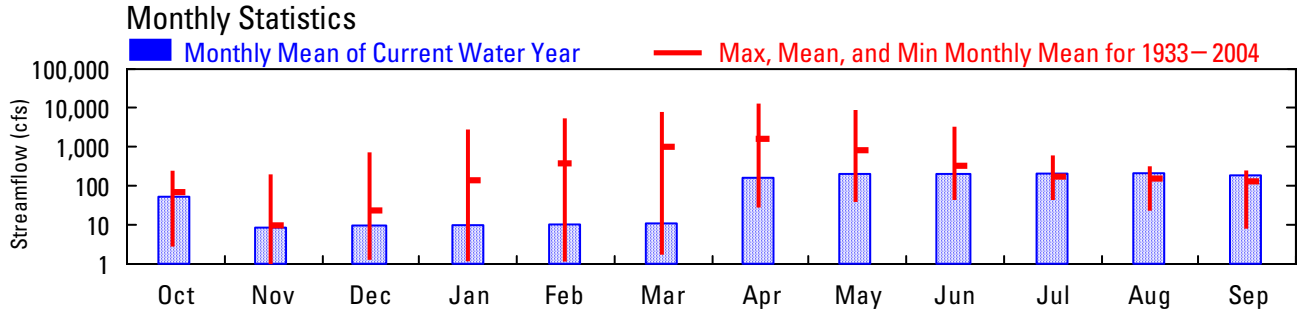
OWYHEE RIVER BASIN

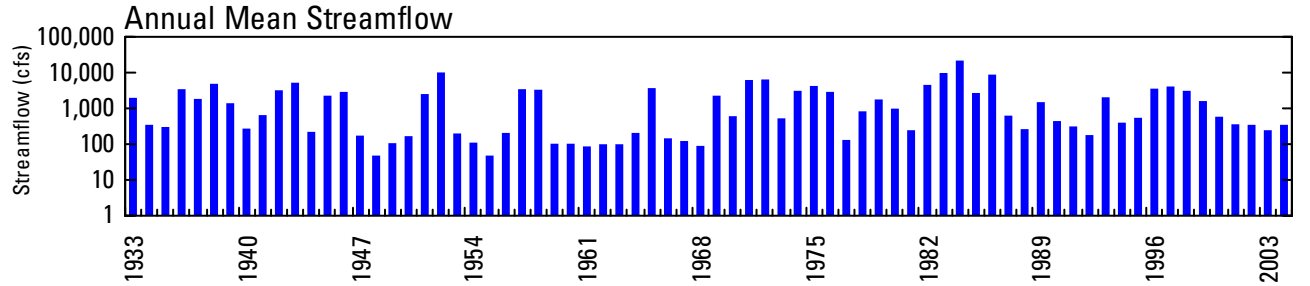
13183000 OWYHEE RIVER BELOW OWYHEE DAM, OR

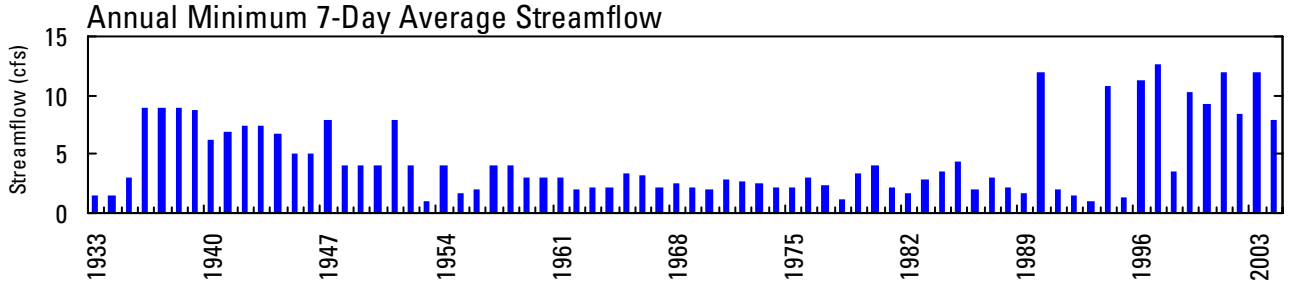
Latitude: 43°39'16" Longitude: 117°15'21" Hydrologic Unit Code: 17050110

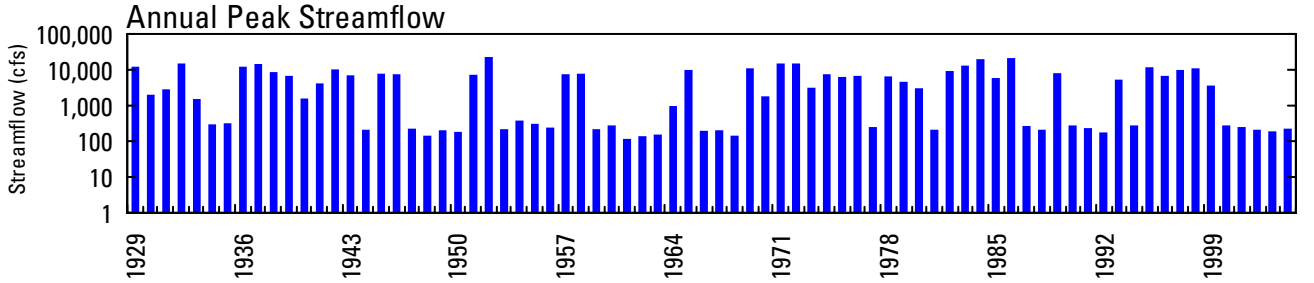
Malheur County Datum: 2,343.67 feet Drainage Area: 11,160 square miles











13213100 SNAKE RIVER AT NYSSA, OR

LOCATION.--Lat 43°52'34", long 116°58'53", in NW 1/4 SW 1/4 NE 1/4 sec.7, T.6 N., R.5 W., Canyon County, Hydrologic Unit 17050115, on right bank, 300 upstream from U.S. Highway 20-26 bridge at Nyssa, 2.3 mi downstream from Boise River and at mile 385.2.

DRAINAGE AREA.--58,700 mi^2, approximately.

PERIOD OF RECORD.--November 1974 to September 1986, February 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,170 ft above NGVD of 1929, from topographic map. Prior to 1989, station located on left bank, in Oregon.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry. Flow regulated by many reservoirs upstream from station.

AVERAGE DISCHARGE.--27 years (water years 1976-86, 1989-2004), 13,620 ft^3/s, 9,871,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,900 ft^3/s Apr. 19, 1984, gage height, 13.34 ft; minimum discharge, 4,110 ft^3/s June 7, 1992, gage height, 4.32 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 9,780 ft^3/s Oct. 6, 20; minimum daily discharge, 4,690 ft^3/s June 11.

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	7,780	7,770	8,320	8,410	8,110	9,270	7,080	6,660	9,280	5,800	5,520	6,820
2	7,350	7,960	8,540	8,080	8,330	9,500	7,110	6,640	9,040	5,930	5,860	6,550
3	7,540	8,300	8,090	7,940	8,110	8,250	8,200	6,990	8,740	5,740	5,640	6,150
4	7,670	7,830	7,860	8,020	8,240	8,080	7,840	6,750	7,500	5,760	5,610	6,280
5	8,000	7,970	7,640	8,090	8,080	8,190	7,250	6,830	7,370	6,070	5,640	6,630
6	7,800	8,170	8,450	8,070	7,830	8,250	7,420	6,900	7,320	5,600	5,630	6,920
7	7,970	8,240	8,180	7,970	8,040	8,070	8,030	7,120	7,020	5,740	5,680	7,080
8	7,720	8,140	8,560	7,940	8,170	8,010	7,910	7,080	6,940	5,470	5,860	6,940
9	7,770	7,560	8,340	7,690	7,600	8,550	7,790	6,990	6,540	5,490	5,700	6,810
10	7,980	8,030	8,600	8,130	7,940	8,560	7,410	7,010	6,650	5,490	6,000	6,800
11	8,170	7,960	7,890	7,820	8,020	8,400	7,330	7,470	6,910	5,440	5,860	6,780
12	8,010	7,700	7,340	7,900	7,760	9,250	7,100	7,680	6,920	5,500	5,870	6,820
13	8,350	7,980	8,480	7,620	8,120	9,160	7,040	8,050	6,920	5,520	5,930	7,580
14	8,380	8,620	8,840	7,860	7,540	9,230	7,190	9,230	6,870	5,370	5,730	7,660
15	9,480	7,410	8,200	7,630	7,440	9,170	6,640	8,480	6,530	5,420	5,930	8,240
16	8,730	8,060	7,830	7,890	7,890	9,040	6,730	9,140	6,360	5,460	6,020	8,160
17	8,730	7,920	8,320	7,970	8,050	9,390	6,610	9,010	6,030	5,280	5,930	7,740
18	8,340	7,940	8,360	7,860	9,170	9,180	6,430	8,030	5,260	5,340	6,300	7,630
19	8,280	8,110	7,640	7,380	8,790	9,220	6,500	8,970	5,230	5,520	6,270	8,330
20	8,290	8,360	7,900	7,560	10,200	9,070	6,890	8,800	5,490	5,920	6,350	8,350
21	8,080	7,510	8,180	7,590	10,700	9,430	7,460	8,320	5,250	6,080	6,450	8,420
22	8,240	7,980	7,870	7,850	10,200	9,550	7,560	8,920	5,580	5,980	6,560	8,480
23	7,690	7,760	8,070	7,850	8,590	9,230	7,750	8,580	5,690	6,020	6,900	8,820
24	7,780	8,140	8,100	7,800	9,120	8,670	7,500	8,710	5,490	6,210	6,520	8,460
25	7,900	7,760	8,070	7,330	9,320	9,290	7,420	8,560	5,850	6,040	7,180	8,930
26	8,030	7,780	8,240	7,660	9,830	9,590	7,310	8,670	5,780	5,950	6,990	8,420
27	7,700	8,280	7,590	8,070	9,490	8,260	7,540	8,760	5,580	5,690	7,090	8,320
28	6,970	7,980	7,770	7,980	9,080	8,630	6,960	8,930	5,720	5,720	7,140	8,500
29	7,480	8,020	8,080	8,020	8,980	8,340	7,060	9,600	5,740	5,650	7,350	8,480
30	7,460	7,960	8,170	8,120	---	8,780	6,830	9,100	5,780	5,670	7,360	8,230
31	7,400	---	7,950	8,590	---	8,040	---	9,510	---	5,710	6,830	---
TOTAL	247,070	239,200	251,470	244,690	248,740	273,650	217,890	251,490	195,380	176,580	193,700	229,330
MEAN	7,970	7,973	8,112	7,893	8,577	8,827	7,263	8,113	6,513	5,696	6,248	7,644
MAX	9,480	8,620	8,840	8,590	10,700	9,590	8,200	9,600	9,280	6,210	7,360	8,930
MIN	6,970	7,410	7,340	7,330	7,440	8,010	6,430	6,640	5,230	5,280	5,520	6,150
AC-FT	490,100	474,500	498,800	485,300	493,400	542,800	432,200	498,800	387,500	350,200	384,200	454,900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	11,980	12,450	12,900	13,990	14,930	17,280	19,420	18,410	15,740	8,573	8,528	10,410
MAX	21,360	24,660	24,320	30,290	38,580	40,010	43,970	49,060	41,100	16,480	12,620	17,110
(WY)	(1985)	(1985)	(1984)	(1984)	(1997)	(1986)	(1984)	(1984)	(1984)	(1983)	(1997)	(1997)
MIN	7,970	7,973	8,112	7,893	8,212	7,987	6,033	5,367	5,223	5,352	5,075	6,664
(WY)	(2004)	(2004)	(2004)	(2004)	(2002)	(2003)	(1992)	(1992)	(1992)	(2003)	(1992)	(1992)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	2,699,780		2,769,190			
ANNUAL MEAN	7,397		7,566		13,620	
HIGHEST ANNUAL MEAN					26,260	1984
LOWEST ANNUAL MEAN					7,365	1992
HIGHEST DAILY MEAN	9,520	May 13	10,700	Feb 21	57,400	Apr 20, 1984
LOWEST DAILY MEAN	4,690	Jun 11	5,230	Jun 19	4,240	Jun 7, 1992
ANNUAL SEVEN-DAY MINIMUM	4,930	Jul 12	5,410	Jul 12	4,520	Jun 6, 1992
ANNUAL RUNOFF (AC-FT)	5,355,000		5,493,000		9,871,000	
10 PERCENT EXCEEDS	8,420		8,940		25,100	
50 PERCENT EXCEEDS	7,720		7,810		10,400	
90 PERCENT EXCEEDS	5,680		5,740		7,010	

13215000 MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OR

LOCATION.--(Revised)Lat 43°34'28", long 118°12'35"(NAD 83), on line between NW ¼ SW ¼ and SW ¼ NW ¼ sec.17, T.23 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank 0.9 mi downstream from Warmsprings Dam, 3.0 mi upstream from South Fork, 4.0 mi northwest of Riverside, and at mile 113.

DRAINAGE AREA.--1,100 mi^2, approximately.

PERIOD OF RECORD.--January 1906 to March 1907 and December 1908 (gage heights only), January 1909 to September 1910, December 1914 to July 1917, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1317. Figures of discharge for January 1906 to March 1907, published in WSP 272 and 370, have been found to be unreliable and should not be used. Published as Middle Fork of Malheur River at Riverside 1906-7, as Middle Fork of Malheur River above South Fork, at Riverside 1909-10, as Malheur River above South Fork, at Riverside in WSP 370, 1906-10, and as Malheur River at Warmsprings reservoir site, near Riverside 1914-17.

REVISED RECORDS.--WSP 833: 1936. WSP 1063: 1942-45. WSP 1397: 1909-10, 1917. WSP 1447: 1955. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,305 ft above NGVD of 1929, by barometer. See WSP 1317 or 1737 for history of changes prior to Sept. 29, 1949.

REMARKS.--No estimated daily discharges. Records good except for those below 40 ft^3/s, which are poor. Flow completely regulated since November 1919 by Warmsprings Reservoir (station 13214500). Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--85 years (water years 1920-2004), 189 ft^3/s, 136,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,200 ft^3/s Mar. 1, 1910, gage height, 10.7 ft, site and datum then in use, from rating curve extended above 820 ft^3/s; maximum discharge since storage began November 1919, 3,150 ft^3/s Mar. 22, 1984, gage height, 9.70 ft, from floodmark; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 526 ft^3/s June 25; minimum daily discharge, 0.04 ft^3/s Oct. 26, Nov. 15, 16, 20-29, Feb. 14-16, Mar. 19.

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	21	0.06	0.05	0.05	0.07	0.07	0.06	395	207	492	438	300
2	22	0.06	0.05	0.06	0.07	0.07	0.06	395	286	489	456	259
3	22	0.06	0.05	0.06	0.07	0.07	0.06	393	296	483	457	222
4	24	0.06	0.05	0.06	0.07	0.07	0.06	407	355	477	453	178
5	23	0.06	0.05	0.06	0.07	0.07	0.06	415	424	476	460	104
6	23	0.06	0.05	0.05	0.07	0.07	0.06	415	443	473	461	54
7	25	0.06	0.05	0.05	0.07	0.07	0.06	415	420	478	457	32
8	27	0.06	0.05	0.05	0.07	0.07	0.06	407	393	482	453	27
9	29	0.06	0.05	0.06	0.07	0.06	123	400	383	476	452	22
10	31	0.06	0.05	0.06	0.07	0.06	128	398	393	474	459	18
11	31	0.05	0.05	0.06	0.06	0.06	128	383	392	472	470	15
12	33	0.05	0.05	0.06	0.05	0.06	144	375	387	472	474	15
13	34	0.05	0.05	0.06	0.05	0.06	153	371	382	469	472	16
14	36	0.05	0.05	0.06	0.04	0.06	153	360	379	469	471	19
15	20	0.04	0.05	0.06	0.04	0.06	153	339	395	432	467	21
16	0.08	0.04	0.05	0.06	0.04	0.06	175	329	429	420	466	24
17	0.06	0.05	0.05	0.06	0.05	0.14	239	317	454	421	464	26
18	0.05	0.05	0.05	0.06	0.06	0.06	269	311	456	421	460	26
19	0.05	0.05	0.05	0.06	0.09	0.04	273	241	457	416	455	28
20	0.05	0.04	0.05	0.06	0.09	0.05	273	175	457	412	446	21
21	0.05	0.04	0.05	0.07	0.08	0.05	273	161	471	412	437	18
22	0.06	0.04	0.05	0.07	0.08	0.05	273	161	492	402	429	21
23	0.05	0.04	0.05	0.07	0.07	0.05	283	161	513	400	412	23
24	0.05	0.04	0.05	0.07	0.07	0.05	288	161	522	401	398	24
25	0.05	0.04	0.06	0.07	0.07	0.05	288	161	526	399	377	26
26	0.04	0.04	0.05	0.07	0.07	0.06	288	164	521	406	362	27
27	0.05	0.04	0.05	0.07	0.07	0.06	288	176	521	413	342	27
28	0.05	0.04	0.05	0.07	0.07	0.06	323	186	504	426	320	28
29	0.06	0.04	0.05	0.09	0.07	0.06	344	173	496	431	308	27
30	0.06	0.05	0.05	0.09	---	0.06	377	168	494	434	314	28
31	0.06	---	0.05	0.08	---	0.06	---	168	---	437	326	---
TOTAL	401.87	1.48	1.56	1.98	1.92	1.94	5,236.48	9,081	12,848	13,765	13,216	1,676
MEAN	13.0	0.05	0.05	0.06	0.07	0.06	175	293	428	444	426	55.9
MAX	36	0.06	0.06	0.09	0.09	0.14	377	415	526	492	474	300
MIN	0.04	0.04	0.05	0.05	0.04	0.04	0.06	161	207	399	308	15
AC-FT	797	2.9	3.1	3.9	3.8	3.8	10,390	18,010	25,480	27,300	26,210	3,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2004, BY WATER YEAR (WY)

MEAN	35.1	0.75	6.79	17.9	37.6	83.9	316	426	350	434	351	194
MAX	138	19.8	323	452	763	1,440	1,603	1,162	570	677	575	398
(WY)	(1953)	(1920)	(1984)	(1971)	(1983)	(1983)	(1984)	(1958)	(2000)	(1945)	(1946)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.4	92.0	30.3	0.04	0.00
(WY)	(1934)	(1933)	(1933)	(1933)	(1933)	(1933)	(1935)	(1932)	(1942)	(1992)	(1988)	(1988)

13215000 MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1920 - 2004	
ANNUAL TOTAL	39,644.82		56,233.23			
ANNUAL MEAN	109		154		189	
HIGHEST ANNUAL MEAN					566	1983
LOWEST ANNUAL MEAN					46.8	1930
HIGHEST DAILY MEAN	476	Jun 15	526	Jun 25	3,030	Mar 22, 1984
LOWEST DAILY MEAN	0.00	Feb 19	0.04	Oct 26	0.00	Oct 5, 1932
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 19	0.04	Nov 20	0.00	Oct 5, 1932
ANNUAL RUNOFF (AC-FT)	78,640		111,500		136,700	
10 PERCENT EXCEEDS	432		457		503	
50 PERCENT EXCEEDS	0.06		20		3.1	
90 PERCENT EXCEEDS	0.00		0.05		0.00	

2004 Water Year

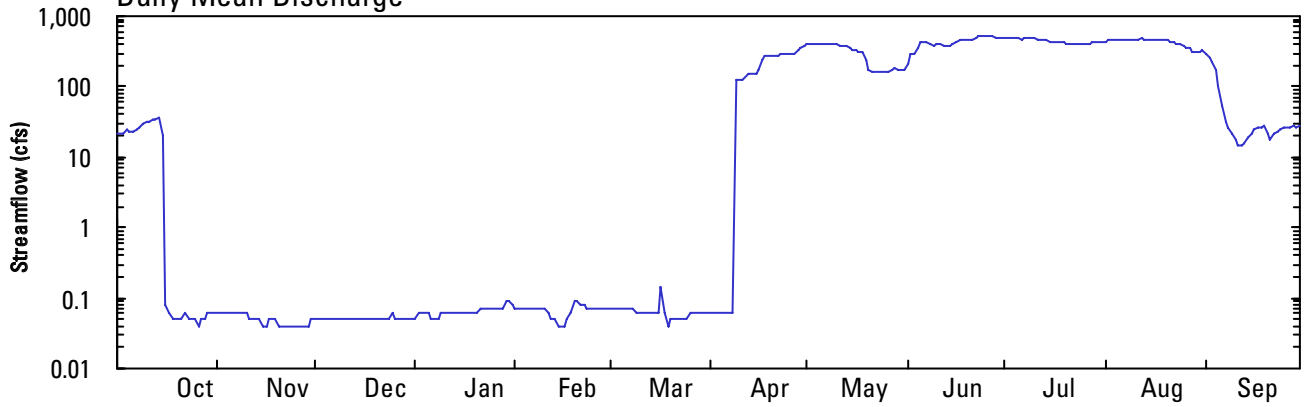
MALHEUR RIVER BASIN

13215000 MALHEUR RIVER BLW WARM SPRINGS RESERVOIR, NR RIVERSIDE, OR

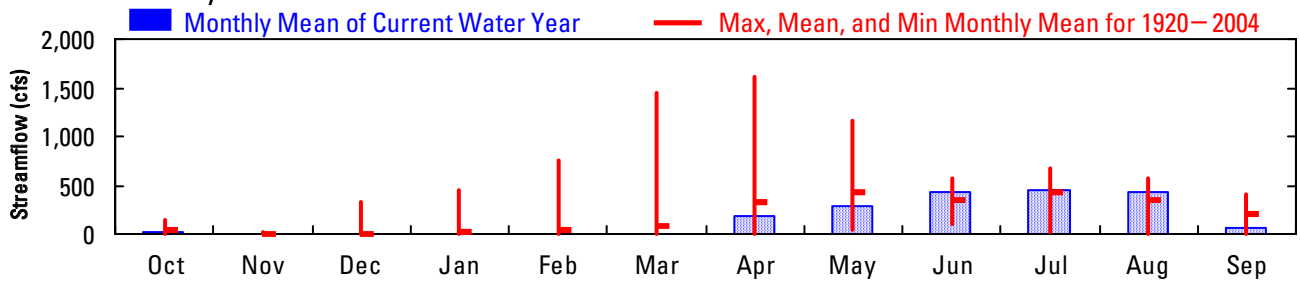
Latitude: 43°34'28" Longitude: 118°12'35" Hydrologic Unit Code: 17050116

Malheur County Datum: 3,305.00 feet Drainage Area: 1,100 square miles

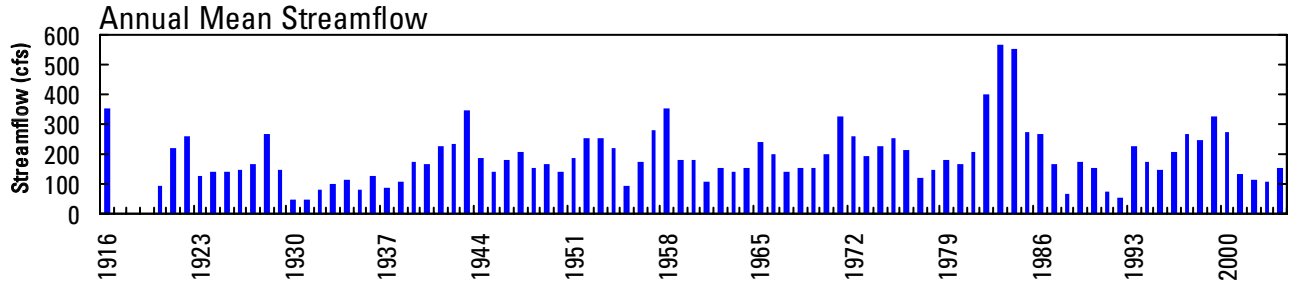
Daily Mean Discharge



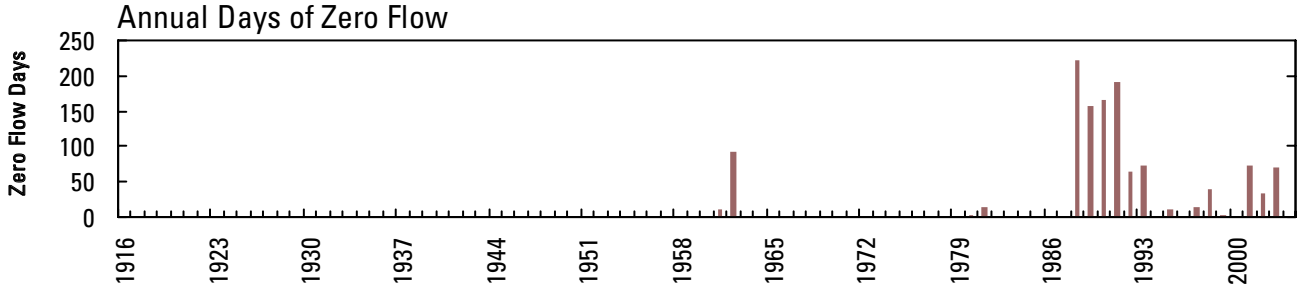
Monthly Statistics



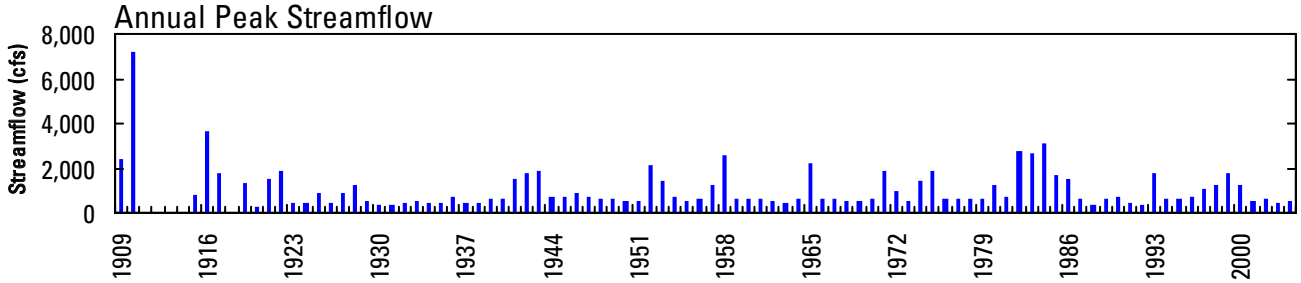
Annual Mean Streamflow



Annual Days of Zero Flow



Annual Peak Streamflow



13217500 NORTH FORK MALHEUR RIVER AT BEULAH, OR

LOCATION.--(Revised)Lat 43°54'27", long 118°09'12" (NAD 83), in NW ¼ NE ¼ sec.22, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank at Beulah, 0.3 mi downstream from Agency Valley Dam, 12 mi northwest of Juntura, and at mile 14.5.

DRAINAGE AREA.--440 mi^2, approximately.

PERIOD OF RECORD.--June 1926 to current year. Published as "near Beulah" June 1926 to September 1935.

REVISED RECORDS.--WSP 1397: 1927-32, 1934, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,261.20 ft above NGVD of 1929. Prior to Apr. 25, 1936, water-stage recorder at site 1 mi downstream at different datum. Apr. 25, 1936, to Sept. 30, 1949, nonrecording gage at site 20 ft downstream at datum 1.0 ft higher. Oct. 1, 1949, to June 30, 1964, at present site at datum 1.0 ft higher.

REMARKS.--Records good except those below 20 ft^3/s and estimated daily discharges, which are poor. Flow regulated since 1935 by Beulah Reservoir (station 13217000). Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--69 years (water years 1936-2004), 143 ft^3/s, 103,800 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft^3/s May 7, 1942, gage height, 9.4 ft, present datum, from floodmark, caused by failure of gates at Agency Valley Dam, from rating curve extended above 1,100 ft^3/s on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 392 ft^3/s July 31, Aug. 1, gage height, 3.39 ft; minimum daily discharge, no flow Dec. 22-24, Jan. 17-21.

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	31	0.20	0.02	0.01	0.04	0.02	0.64	382	144	290	389	285
2	24	0.10	0.02	0.01	0.05	0.02	0.65	381	186	290	386	267
3	26	0.07	0.02	0.01	0.05	0.03	0.80	380	205	278	384	293
4	30	0.05	0.02	0.01	0.05	0.02	1.1	380	223	276	382	280
5	34	0.05	0.01	0.01	0.05	0.02	1.3	382	252	275	381	232
6	31	0.04	0.01	0.01	0.05	0.02	1.4	375	261	275	384	73
7	e42	0.04	0.01	0.01	0.05	0.04	1.6	371	261	275	383	50
8	45	0.04	0.02	0.01	0.05	0.05	1.7	358	261	274	382	49
9	46	0.03	0.01	0.01	0.05	0.06	1.9	353	261	272	379	45
10	50	0.03	0.01	0.01	0.05	0.06	2.4	347	261	272	375	47
11	51	0.03	0.01	0.01	0.05	0.06	3.0	324	259	272	372	44
12	53	0.03	0.01	0.01	0.05	0.06	102	315	261	272	368	42
13	55	0.03	0.01	0.01	0.05	0.05	153	315	261	276	372	46
14	56	0.03	0.02	0.01	0.05	0.05	153	296	269	287	377	54
15	18	0.03	0.02	0.01	0.05	0.05	153	286	272	327	376	57
16	3.2	0.03	0.01	0.01	0.05	0.05	178	283	272	343	372	54
17	3.6	0.03	0.01	0.00	0.04	0.04	190	275	271	350	368	49
18	4.2	0.02	0.01	0.00	0.02	0.04	189	254	270	353	362	50
19	4.9	0.02	0.01	0.00	0.02	0.04	235	228	269	353	356	48
20	4.2	0.02	0.01	0.00	0.02	0.04	282	183	267	351	352	49
21	3.7	0.02	0.01	0.00	0.02	0.04	314	156	275	349	367	50
22	4.3	0.02	0.00	0.01	0.02	0.04	322	145	278	347	370	51
23	4.7	0.02	0.00	0.01	0.02	0.04	321	141	301	333	358	51
24	4.9	0.02	0.00	0.01	0.02	0.09	334	141	310	327	350	51
25	4.9	0.02	0.01	0.01	0.02	0.31	340	140	318	337	345	50
26	5.2	0.02	0.01	0.01	0.02	0.40	331	138	324	355	324	51
27	5.9	0.01	0.01	0.01	0.02	0.48	314	137	324	358	312	49
28	6.3	0.01	0.01	0.01	0.02	0.56	347	137	305	355	305	50
29	3.2	0.01	0.01	0.02	0.02	0.59	360	135	292	369	298	49
30	0.22	0.02	0.01	0.04	---	0.65	375	134	290	375	300	49
31	0.22	---	0.01	0.04	---	0.69	---	134	---	385	306	---
TOTAL	655.64	1.09	0.35	0.33	1.07	4.71	5,009.49	8,006	8,003	9,851	11,135	2,615
MEAN	21.1	0.04	0.01	0.01	0.04	0.15	167	258	267	318	359	87.2
MAX	56	0.20	0.02	0.04	0.05	0.69	375	382	324	385	389	293
MIN	0.22	0.01	0.00	0.00	0.02	0.02	0.64	134	144	272	298	42
AC-FT	1,300	2.2	0.7	0.7	2.1	9.3	9,940	15,880	15,870	19,540	22,090	5,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

MEAN	36.0	0.95	1.59	10.1	28.4	84.7	291	353	284	277	216	132
MAX	134	35.5	62.7	287	478	936	856	810	510	402	399	341
(WY)	(1954)	(1936)	(1943)	(1943)	(1965)	(1983)	(1958)	(1983)	(1974)	(1979)	(1980)	(1945)
MIN	0.09	0.00	0.00	0.00	0.00	0.00	2.29	120	53.7	39.5	30.4	31.9
(WY)	(1974)	(1938)	(1938)	(1936)	(1938)	(1938)	(1981)	(1977)	(1939)	(1992)	(1992)	(1961)

13217500 NORTH FORK MALHEUR RIVER AT BEULAH, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1936 - 2004	
ANNUAL TOTAL	34,200.53		45,282.68			
ANNUAL MEAN	93.7		124		143	
HIGHEST ANNUAL MEAN					335	1983
LOWEST ANNUAL MEAN					54.6	1936
HIGHEST DAILY MEAN	407	Aug 7	389	Aug 1	3,700	May 7, 1942
LOWEST DAILY MEAN	0.00	Dec 22	0.00	Dec 22	0.00	Dec 22, 1935
ANNUAL SEVEN-DAY MINIMUM	0.01	Dec 18	0.00	Jan 15	0.00	Dec 22, 1935
ANNUAL RUNOFF (AC-FT)	67,840		89,820		103,800	
10 PERCENT EXCEEDS	302		355		362	
50 PERCENT EXCEEDS	4.2		30		43	
90 PERCENT EXCEEDS	0.02		0.01		0.08	

e Estimated

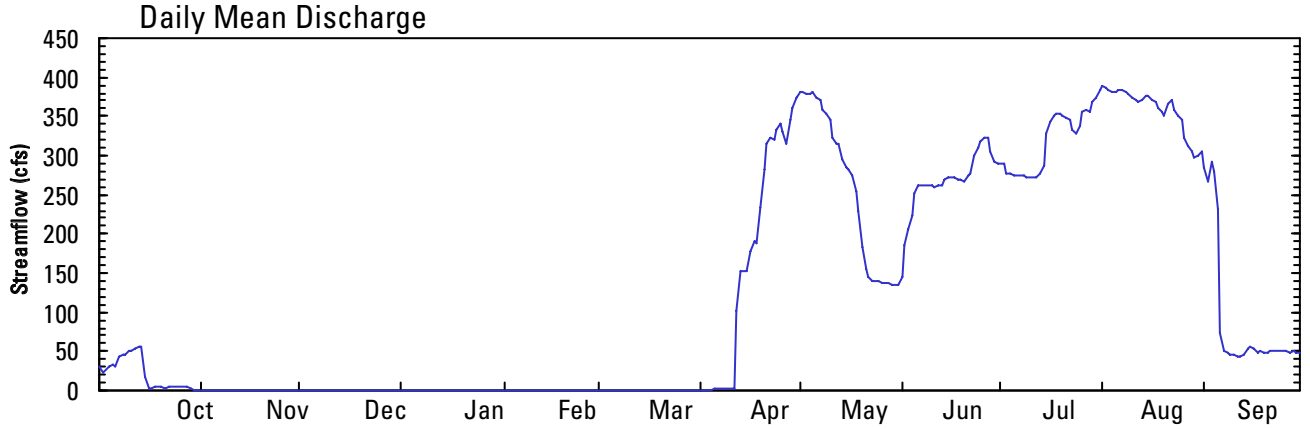
2004 Water Year

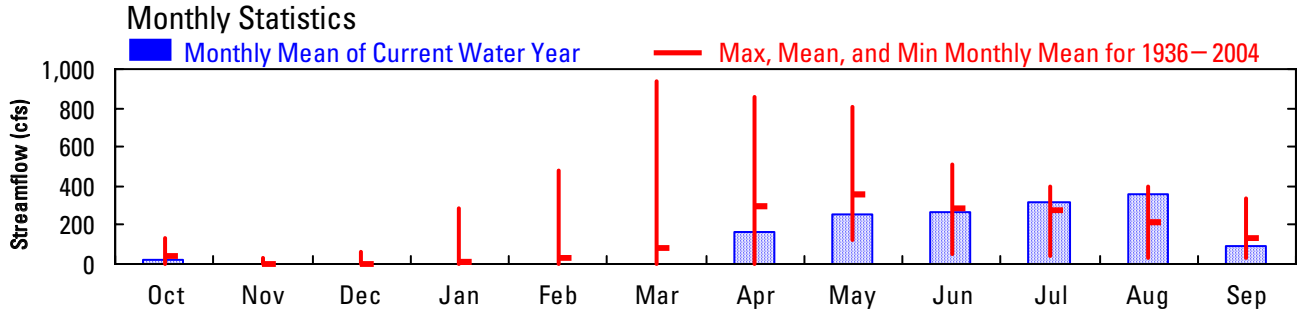
MALHEUR RIVER BASIN

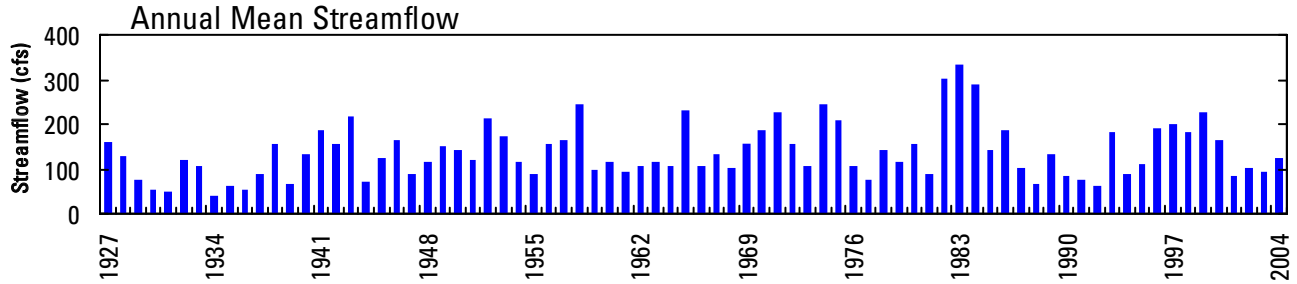
13217500 NORTH FORK MALHEUR RIVER AT BEULAH, OR

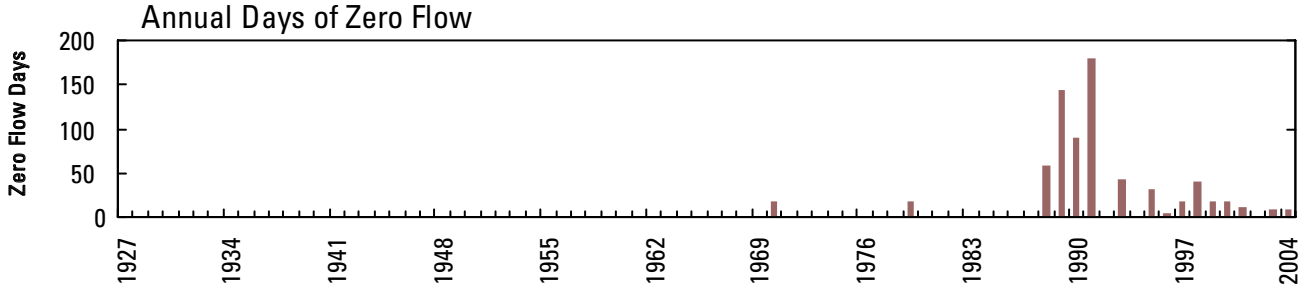
Latitude: 43° 54 ' 27" Longitude: 118° 09 ' 12" Hydrologic Unit Code: 17050116

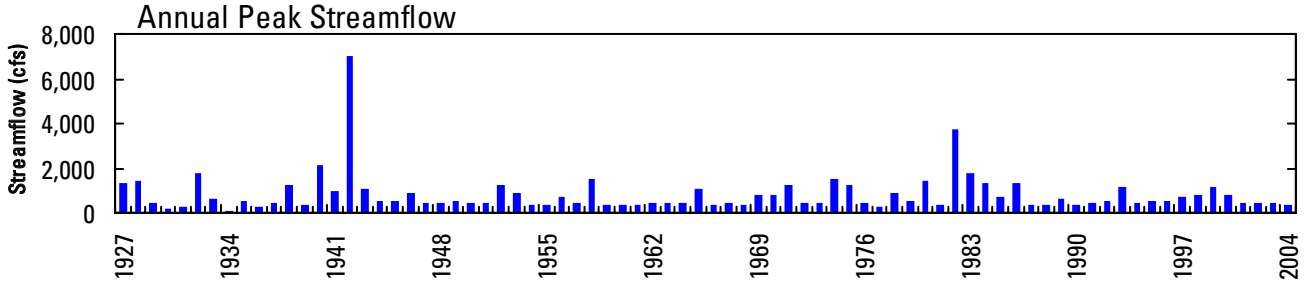
Malheur County Datum: 3,261.20 feet Drainage Area: 440 square miles











13233300 MALHEUR RIVER BELOW NEVADA DAM, NEAR VALE, OR

LOCATION.--(Revised)Lat 43°59'15", long 117°13'08"(NAD83), in NE ¼ SW ¼ sec.21, T.18 S., R.45 E.,Malheur County, Hydrologic Unit 17050117, on right bank, 510 ft downstream from dam and headgates of Nevada Canal, and 1.5 mi northeast of Vale.

DRAINAGE AREA.--3,880 mi^2, approximately.

PERIOD OF RECORD.--June 1926 to September 1934, April 1936 to March 1942, March 1944 to September 1954, October 1993 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Elevation of gage is 2,220 ft above NGVD of 1929, from topographic map. Prior to Nov. 17, 1930, at datum 1.00 ft higher. U.S. Geological Survey satellite telemetry at station.

REMARKS.--Records fair. Many diversions for irrigation upstream from station. Since March 1930, Vale-Oregon Canal has diverted in sec.31 T.20 S., R.41 E., for irrigation upstream from station and on Willow Creek, a tributary which enters partly above and partly below station. Gilleman-Frohman Canal diverts on left bank in sec.8 T.19 S., .44 E., for irrigation above and below station. Nevada Canal diverts on right bank 300 ft above station for irrigation below station. Flow regulated by Warmsprings Reservoir and, since December 1935, by Beulah Reservoir.

AVERAGE DISCHARGE.--11 years (water years 1994-2004), 232 ft^3/s, 167,700 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,530 ft^3/s Feb. 28, 1940, gage height, 8.88 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 24, 1957 reached a stage of 14.6 ft, discharge 21,000 ft^3/s. Flood of Mar. 19, 1993 reached a stage of 13.31 ft, discharge 16,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 762 ft^3/s Mar. 11; minimum daily discharge, 0.40 ft^3/s Oct. 1-3.

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	0.40	71	67	58	52	174	105	14	68	184	23	106
2	0.40	69	66	58	59	168	114	39	51	112	24	e90
3	0.40	77	66	59	76	166	190	40	37	113	15	e100
4	0.80	74	63	51	76	160	195	30	28	99	20	e95
5	1.1	73	63	43	69	159	107	18	12	78	24	e90
6	1.2	72	63	53	68	147	34	23	13	62	28	e95
7	1.2	70	63	52	68	136	26	26	77	48	38	e110
8	1.4	71	63	55	68	158	28	27	133	48	40	e70
9	1.7	71	63	56	68	376	26	41	81	52	47	e45
10	1.8	71	63	55	68	676	24	59	48	45	29	e36
11	2.0	69	63	50	68	762	22	85	44	48	15	55
12	2.1	66	65	52	68	649	13	105	46	58	15	53
13	2.0	66	66	49	68	629	46	87	38	56	23	59
14	2.1	66	66	47	66	605	30	104	27	57	22	54
15	2.9	66	66	45	65	670	33	111	14	55	33	51
16	3.5	66	66	45	64	595	28	118	4.9	57	39	52
17	14	66	66	44	79	594	13	92	4.1	48	44	60
18	10	62	66	44	80	683	5.6	96	4.6	52	118	66
19	8.5	60	64	44	79	674	12	158	13	60	75	66
20	14	58	64	44	259	648	5.0	207	20	83	71	68
21	22	58	65	44	382	616	7.5	189	15	48	64	69
22	23	58	61	44	301	e520	9.7	140	12	44	65	64
23	22	57	61	44	245	e480	12	116	11	32	124	55
24	19	59	65	48	199	e420	7.1	105	24	36	196	47
25	18	62	70	45	129	368	3.8	101	44	38	190	41
26	18	62	63	50	138	302	11	85	56	33	173	34
27	18	61	61	50	139	281	1.9	75	60	e22	197	30
28	17	62	59	50	145	248	1.6	71	85	19	206	34
29	19	68	61	51	162	235	1.4	75	141	16	188	27
30	20	69	59	52	---	189	6.2	80	109	12	169	19
31	65	---	59	52	---	173	---	87	---	16	138	---
TOTAL	332.50	1,980	1,976	1,534	3,408	12,661	1,118.8	2,604	1,320.6	1,731	2,453	1,841
MEAN	10.7	66.0	63.7	49.5	118	408	37.3	84.0	44.0	55.8	79.1	61.4
MAX	65	77	70	59	382	762	195	207	141	184	206	110
MIN	0.40	57	59	43	52	136	1.4	14	4.1	12	15	19
AC-FT	660	3,930	3,920	3,040	6,760	25,110	2,220	5,170	2,620	3,430	4,870	3,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	138	131	132	271	412	529	489	246	138	92.4	91.2	124
MAX	228	175	314	1,589	1,322	1,881	1,695	988	541	179	220	300
(WY)	(2000)	(2001)	(1997)	(1997)	(1997)	(1999)	(1999)	(1998)	(1998)	(1998)	(1999)	(1998)
MIN	10.7	66.0	63.7	49.5	65.8	44.0	11.4	16.8	15.2	17.8	4.62	1.96
(WY)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2003)	(2003)

13233300 MALHEUR RIVER BELOW NEVADA DAM, NEAR VALE, OR—Continued

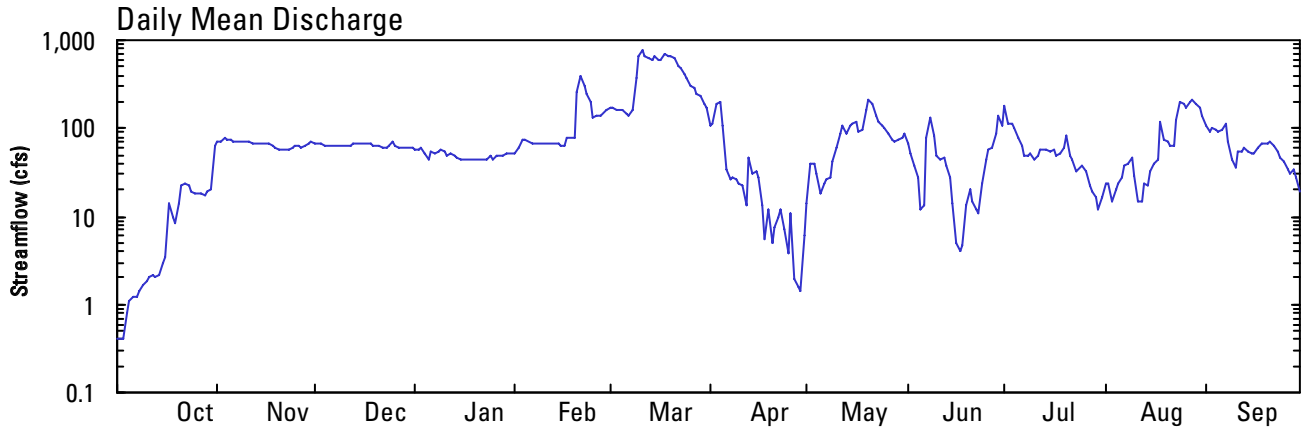
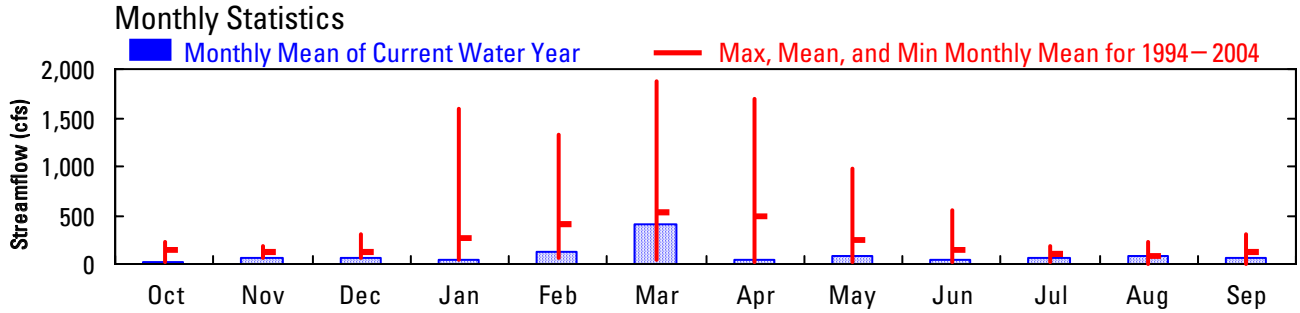
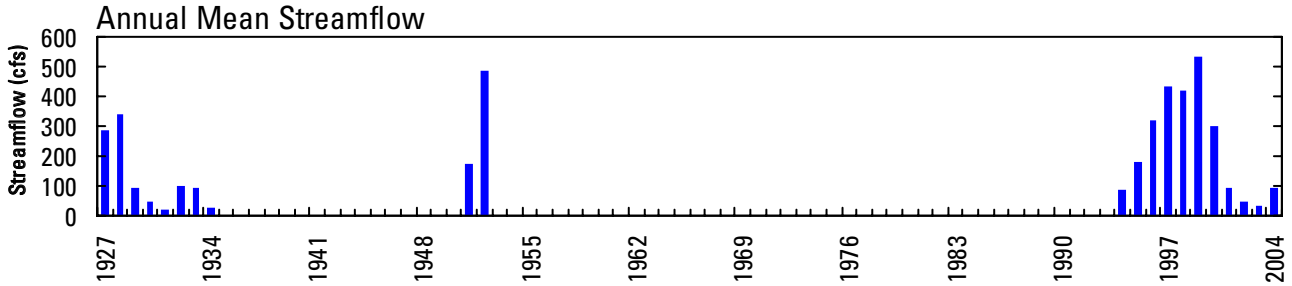
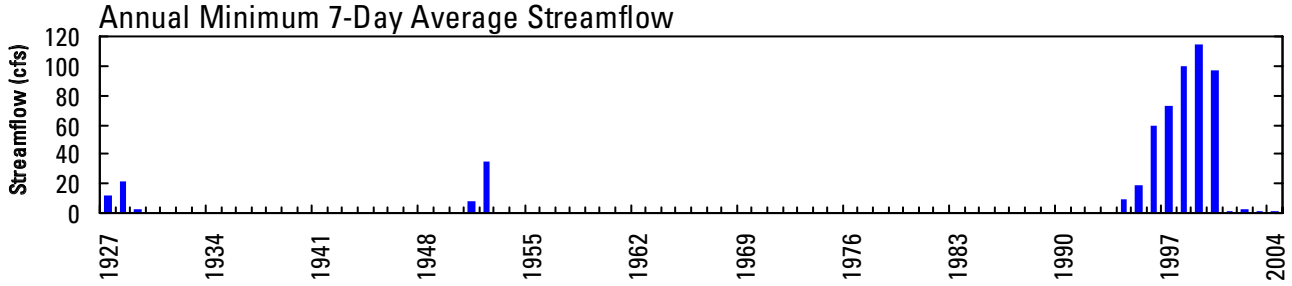
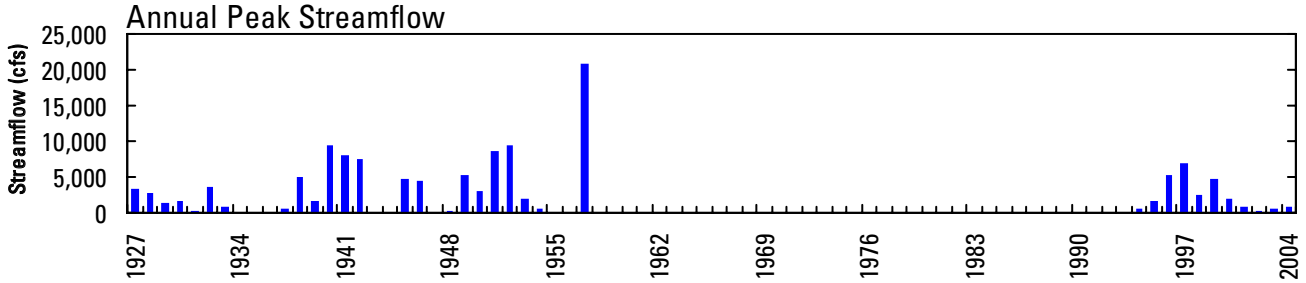
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL TOTAL	11,756.95		32,959.90			
ANNUAL MEAN	32.2		90.1		232	
HIGHEST ANNUAL MEAN					535	1999
LOWEST ANNUAL MEAN					36.5	2003
HIGHEST DAILY MEAN	191	Jul 27	762	Mar 11	6,230	Jan 3, 1997
LOWEST DAILY MEAN	0.32	Sep 30	0.40	Oct 1	0.32	Sep 30, 2003
ANNUAL SEVEN-DAY MINIMUM	0.39	Sep 27	0.79	Oct 1	0.39	Sep 27, 2003
ANNUAL RUNOFF (AC-FT)	23,320		65,380		167,700	
10 PERCENT EXCEEDS	67		185		536	
50 PERCENT EXCEEDS	18		59		129	
90 PERCENT EXCEEDS	1.8		12		13	

e Estimated

2004 Water Year

MALHEUR RIVER BASIN

13233300 MALHEUR RIVER BLW NEVADA DAM, NR VALE, OR

Latitude: 43° 59 ' 15" Longitude: 117° 13 ' 08" Hydrologic Unit Code: 17050117

Malheur County Datum: 2,220.00 feet Drainage Area: 3,880 square miles