

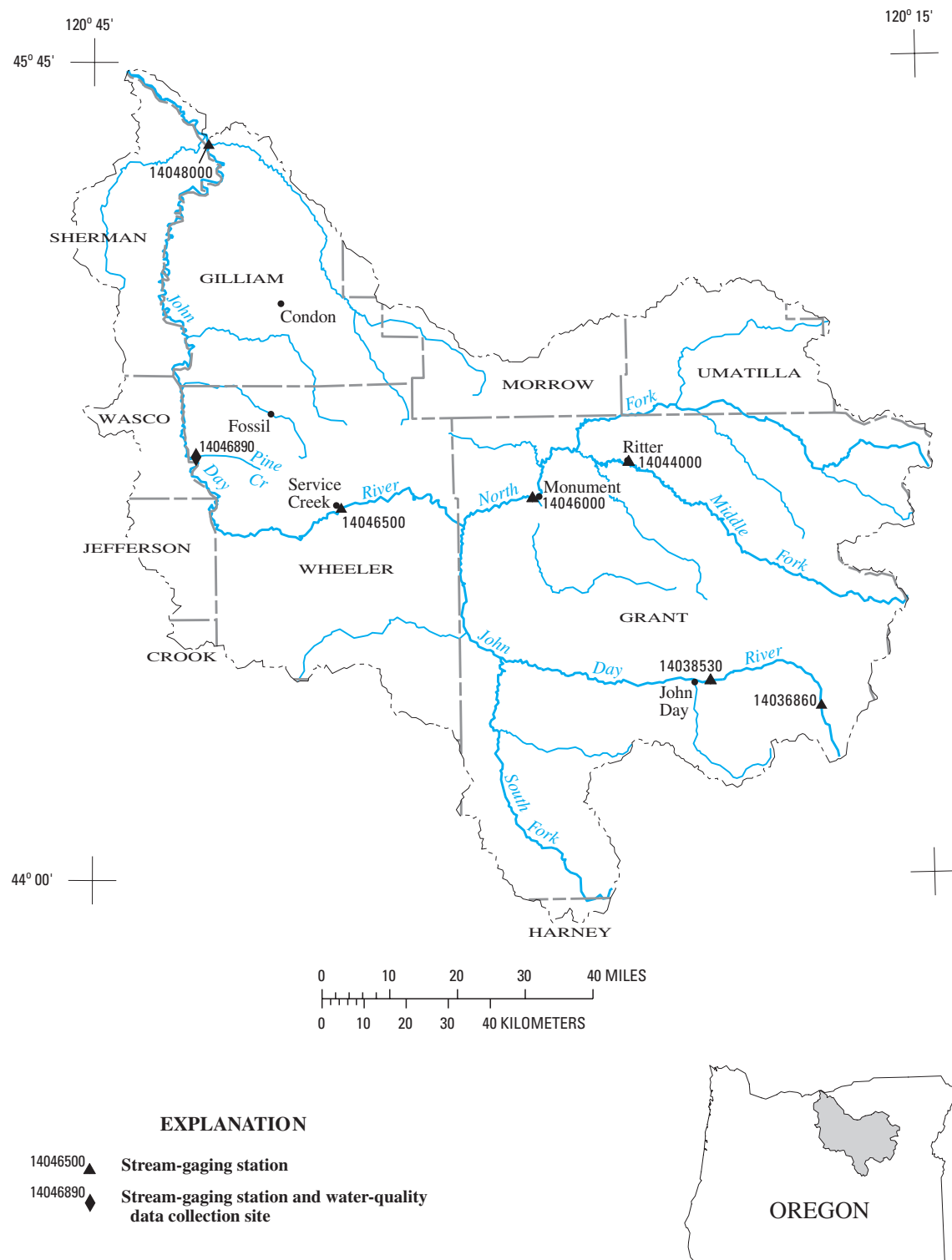


Figure 13. Location of surface-water and water-quality stations in the John Day River Basin.

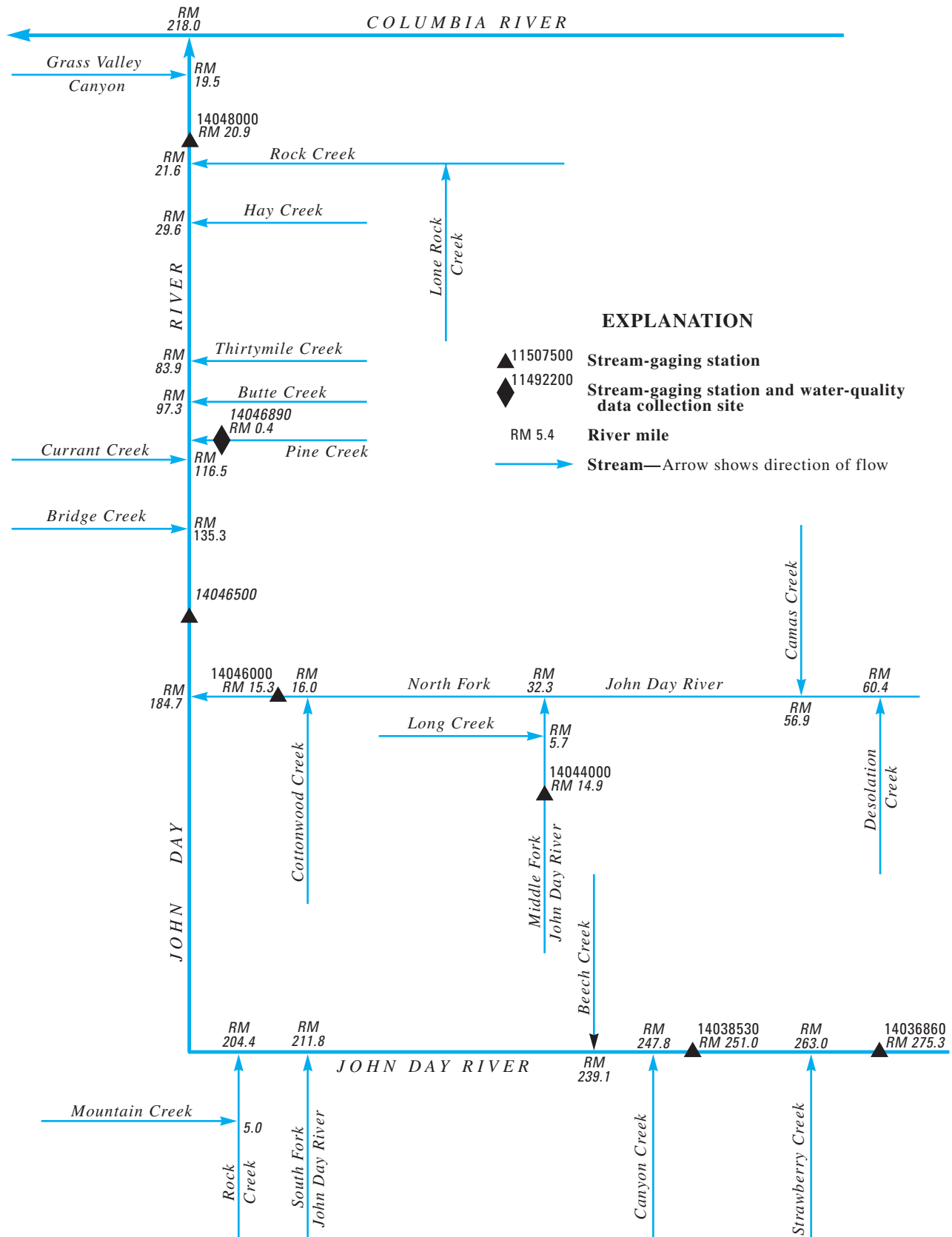


Figure 14. Schematic diagram showing gaging stations in the John Day River Basin.

14036860 JOHN DAY RIVER AT BLUE MOUNTAIN HOT SPRINGS, NEAR PRAIRIE CITY, OR

LOCATION.--Lat 44°21'29", long 118°34'30", in SE ¼ NW ¼, sec. 13, T.14 S., R.34 E., Grant County, Hydrologic Unit 17070201, on right bank at private road crossing, 0.25 mi downstream from Blue Mountain Hot Springs, 0.6 mi downstream from Rail Creek, 8 mi southeast of Prairie City, and at mile 275.3.

DRAINAGE AREA.--40.14 mi².

PERIOD OF RECORD.--October 1996 to September 2000, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,200 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation. Some diversions for irrigation.

AVERAGE DISCHARGE.--6 years (water years 1997-2000, 2003-04), 53.4 ft³/s, 38,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 950 ft³/s May 25, 1998, gage height, 3.90 ft, from crest-stage gage, from rating curve extended above 300 ft³/s; minimum daily discharge, 24 ft³/s Jan. 5, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151 ft³/s May 28, gage height, 2.55 ft; minimum daily discharge, 24 ft³/s Jan. 5.

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	26	31	33	28	28	28	48	76	101	47	29	28
2	27	30	33	28	28	28	45	92	97	42	28	28
3	27	30	33	e27	27	28	46	118	93	40	28	28
4	27	30	31	e26	27	28	50	131	93	37	27	28
5	27	30	32	e24	26	27	57	140	91	36	27	28
6	27	30	35	e28	26	27	68	136	85	36	27	28
7	27	30	33	33	26	28	71	121	78	34	27	28
8	27	30	31	28	26	31	73	109	74	34	27	28
9	27	31	30	28	25	37	73	100	69	34	27	28
10	27	31	30	27	26	40	71	99	71	34	26	28
11	28	31	30	27	26	40	71	91	64	33	26	28
12	28	30	29	27	27	41	75	82	61	33	26	29
13	28	30	32	27	26	43	80	73	58	32	26	31
14	28	30	33	27	26	44	78	67	54	31	26	31
15	29	31	31	27	26	46	70	69	53	31	26	30
16	29	31	30	27	27	44	62	79	51	31	27	29
17	29	32	29	27	35	45	57	80	50	30	29	29
18	28	31	29	27	44	49	53	83	48	31	27	29
19	28	31	29	27	38	51	49	96	47	31	26	29
20	28	30	29	27	35	47	48	103	47	31	26	30
21	28	30	29	26	33	50	49	109	45	30	26	30
22	28	30	28	26	32	59	48	113	43	30	34	30
23	28	30	28	28	32	66	48	125	41	29	33	30
24	28	30	30	28	31	67	49	131	40	29	30	29
25	28	30	29	28	31	61	49	127	40	30	32	29
26	28	30	29	26	30	56	53	131	39	30	33	29
27	28	30	29	26	30	51	62	141	38	30	31	29
28	28	30	28	26	29	45	78	146	39	29	30	29
29	30	40	28	27	28	45	76	137	44	29	29	29
30	30	34	e26	29	---	49	72	122	43	29	29	29
31	30	---	e28	28	---	51	---	107	---	29	28	---
TOTAL	866	924	934	845	851	1,352	1,829	3,334	1,797	1,012	873	868
MEAN	27.9	30.8	30.1	27.3	29.3	43.6	61.0	108	59.9	32.6	28.2	28.9
MAX	30	40	35	33	44	67	80	146	101	47	34	31
MIN	26	30	26	24	25	27	45	67	38	29	26	28
AC-FT	1,720	1,830	1,850	1,680	1,690	2,680	3,630	6,610	3,560	2,010	1,730	1,720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	35.0	37.0	38.9	43.1	37.7	52.5	80.0	130	81.0	40.0	33.0	31.9
MAX	40.3	49.8	64.6	84.7	47.8	62.6	101	174	119	53.0	39.4	36.8
(WY)	(2000)	(1997)	(1997)	(1997)	(1997)	(1999)	(1997)	(1998)	(1999)	(1998)	(1997)	(1997)
MIN	26.7	27.5	28.6	27.3	29.3	43.6	61.0	88.1	46.7	31.6	27.4	25.9
(WY)	(2003)	(2003)	(2003)	(2004)	(2004)	(2004)	(2004)	(2000)	(2000)	(2000)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1997 - 2004

ANNUAL TOTAL	16,908	15,485	
ANNUAL MEAN	46.3	42.3	53.4
HIGHEST ANNUAL MEAN			65.8
LOWEST ANNUAL MEAN			42.3
HIGHEST DAILY MEAN	219	May 25	146
LOWEST DAILY MEAN	25	Aug 30	24
ANNUAL SEVEN-DAY MINIMUM	25	Sep 24	26
ANNUAL RUNOFF (AC-FT)	33,540		30,710
10 PERCENT EXCEEDS	83		78
50 PERCENT EXCEEDS	31		30
90 PERCENT EXCEEDS	27		27

e Estimated



2004 Water Year
JOHN DAY RIVER BASIN

14036860 JOHN DAY R AT BLUE MTN HOT SPGS, NR PRAIRIE CITY, OR

Latitude: 44° 21 ' 29"

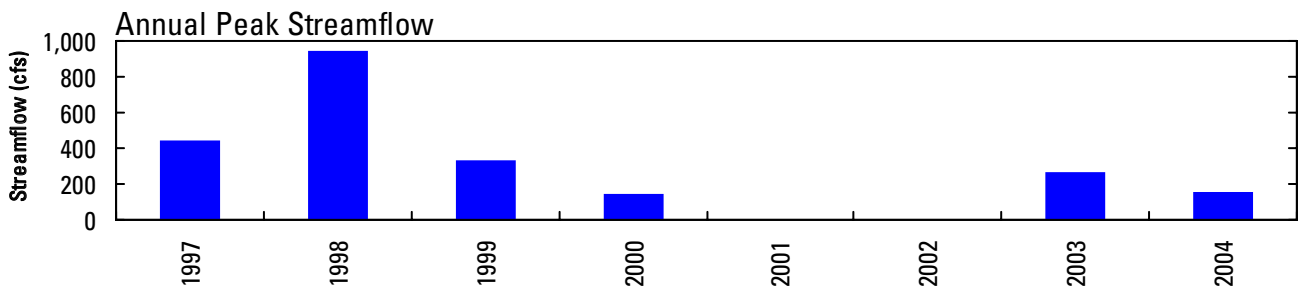
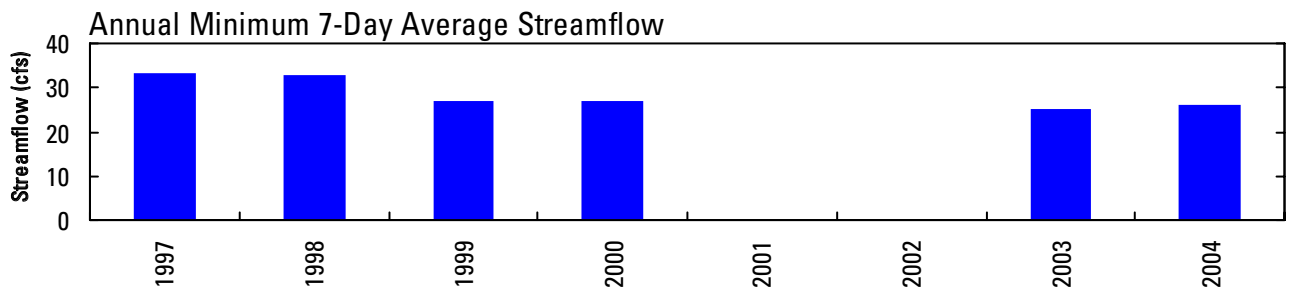
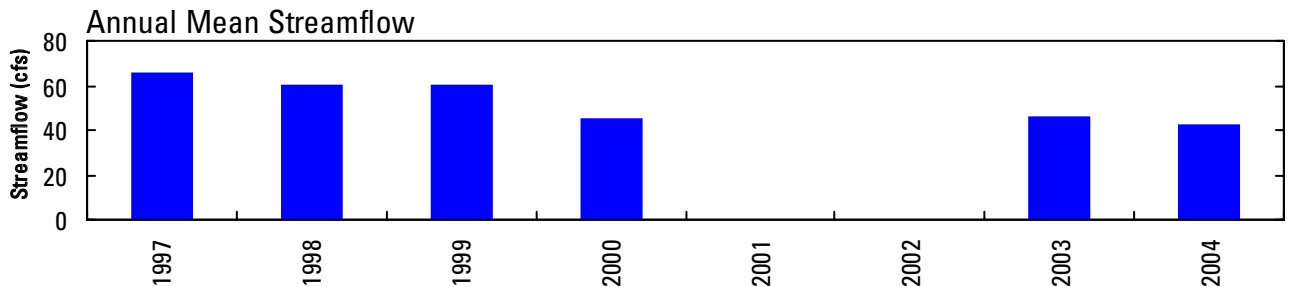
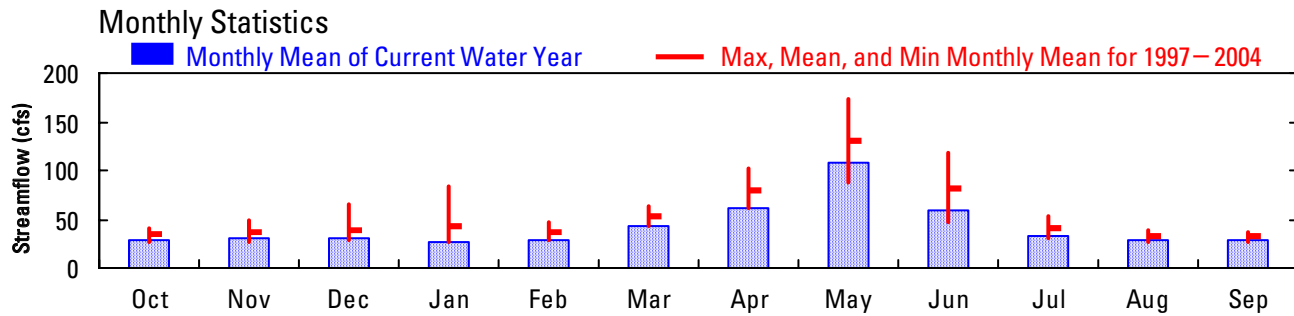
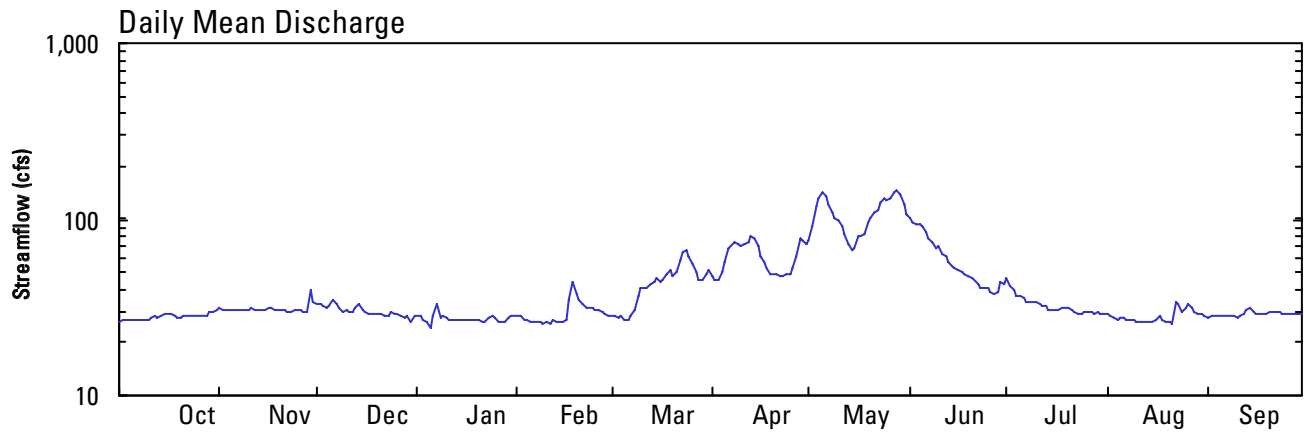
Longitude: 118° 34 ' 30"

Hydrologic Unit Code: 17070201

Grant County

Datum: 4,200 feet

Drainage Area: 40.1 square miles



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14038530 JOHN DAY RIVER NEAR JOHN DAY, OR

LOCATION.--Lat 44°25'07", long 118°54'19", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.13 S., R.32 E., Grant County, Hydrologic Unit 17070101, on left bank 1,200 ft downstream from Dog Creek, 2.5 mi east of John Day, and at mile 250.8.

DRAINAGE AREA.--386 mi².

PERIOD OF RECORD.--October 1968 to September 1994, May 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,130.56 ft above NGVD of 1929.

REMARKS.--Records good except for those below 20 ft³/s and above 500 ft³/s, which are fair, and estimated daily discharges, which are poor. No regulation upstream. Many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--34 years (water years 1969-94, 1997-2004), 199 ft³/s, 144,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,830 ft³/s June 9, 1969, gage height, 10.80 ft, from floodmark; minimum discharge, 3.5 ft³/s Aug. 26-28, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 28	2130	*870	*5.80				

No other peak greater than base discharge.

Minimum discharge, 24 ft³/s, Aug. 12-14.

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	67	79	115	e96	258	186	312	279	495	151	45	43
2	93	86	111	110	227	177	290	301	471	150	47	44
3	85	86	109	107	208	170	281	340	460	127	46	47
4	77	84	106	e96	201	193	291	377	490	117	46	48
5	79	84	105	e90	188	189	319	405	485	110	45	45
6	80	84	118	e98	178	200	352	384	473	104	45	44
7	80	85	121	e110	179	205	369	343	441	99	43	42
8	80	87	116	118	171	231	369	316	399	95	41	42
9	e76	87	109	160	159	287	357	282	368	90	42	42
10	77	89	108	215	147	318	345	313	396	88	39	44
11	80	90	107	174	147	321	341	321	349	87	34	45
12	87	e89	109	155	138	324	340	282	307	84	26	58
13	83	e88	137	155	138	348	348	249	274	76	25	68
14	82	88	143	156	145	350	350	216	259	71	25	88
15	86	89	123	153	152	364	331	207	240	67	27	83
16	91	91	114	171	167	340	307	261	226	64	28	79
17	84	98	113	170	389	348	296	244	204	62	32	75
18	80	92	110	149	678	362	275	287	190	63	30	81
19	77	92	110	144	477	388	258	405	178	79	27	79
20	76	95	115	140	337	359	254	410	158	79	29	85
21	75	93	113	136	286	362	274	422	146	70	30	90
22	77	90	109	126	253	422	259	497	133	65	39	81
23	77	91	108	161	237	458	242	637	128	64	69	78
24	78	92	115	300	242	464	232	584	124	63	49	76
25	e78	91	116	222	226	425	223	516	118	62	58	73
26	80	94	110	187	234	388	221	518	118	62	72	73
27	77	91	106	176	214	350	240	602	112	56	64	75
28	77	93	112	246	207	316	298	754	115	54	57	72
29	81	158	112	572	194	297	309	721	124	48	52	67
30	84	133	e88	538	---	312	286	603	135	43	49	69
31	84	---	e90	312	---	331	---	536	---	43	44	---
TOTAL	2,488	2,789	3,478	5,743	6,777	9,785	8,969	12,612	8,116	2,493	1,305	1,936
MEAN	80.3	93.0	112	185	234	316	299	407	271	80.4	42.1	64.5
MAX	93	158	143	572	678	464	369	754	495	151	72	90
MIN	67	79	88	90	138	170	221	207	112	43	25	42
AC-FT	4,930	5,530	6,900	11,390	13,440	19,410	17,790	25,020	16,100	4,940	2,590	3,840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

	MEAN	94.8	124	156	202	226	309	341	427	313	105	41.5	54.7
MAX	156	244	435	613	689	746	718	845	810	314	116	145	
(WY)	(1983)	(1974)	(1997)	(1997)	(1982)	(1984)	(1984)	(1984)	(1982)	(1982)	(1984)	(1984)	
MIN	65.8	78.2	89.6	88.1	88.8	88.6	88.1	85.4	53.9	25.9	10.4	24.2	
(WY)	(1989)	(2003)	(2003)	(1977)	(1977)	(1977)	(1977)	(1992)	(1992)	(1973)	(1973)	(1990)	

14038530 JOHN DAY RIVER NEAR JOHN DAY, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1969 - 2004	
ANNUAL TOTAL	63,231		66,491		199	
ANNUAL MEAN	173		182		393	1984
HIGHEST ANNUAL MEAN					73.5	1977
LOWEST ANNUAL MEAN					2,640	May 19, 1991
HIGHEST DAILY MEAN	1,190	May 30	754	May 28	3.5	Aug 27, 1969
LOWEST DAILY MEAN	14	Aug 28	25	Aug 13	4.3	Aug 24, 1969
ANNUAL SEVEN-DAY MINIMUM	15	Aug 28	28	Aug 12		
ANNUAL RUNOFF (AC-FT)	125,400		131,900		144,400	
10 PERCENT EXCEEDS	393		371		445	
50 PERCENT EXCEEDS	110		118		128	
90 PERCENT EXCEEDS	30		48		39	

e Estimated



2004 Water Year
JOHN DAY RIVER BASIN

14038530 JOHN DAY RIVER NEAR JOHN DAY, OR

Latitude: 44° 25 ' 07"

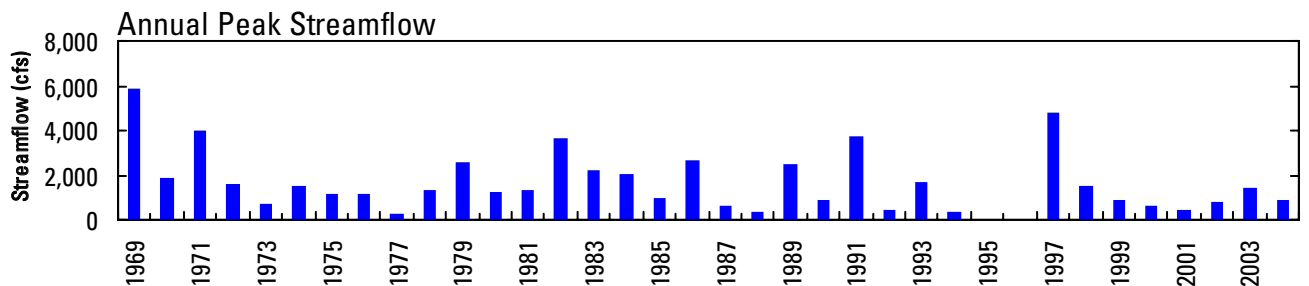
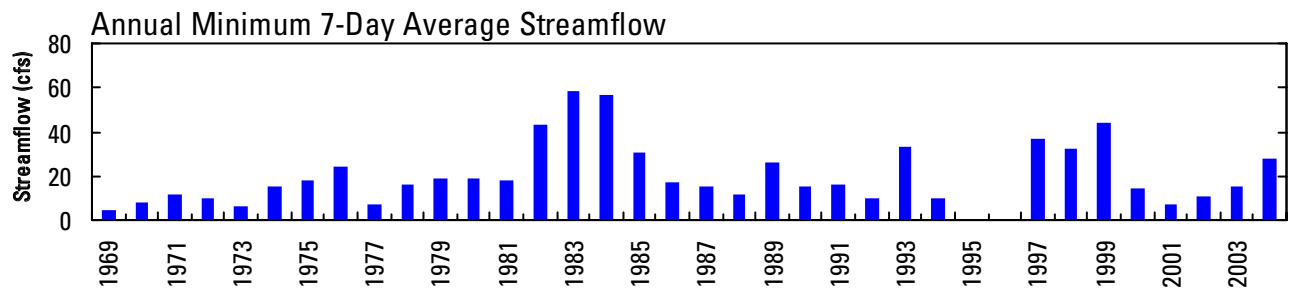
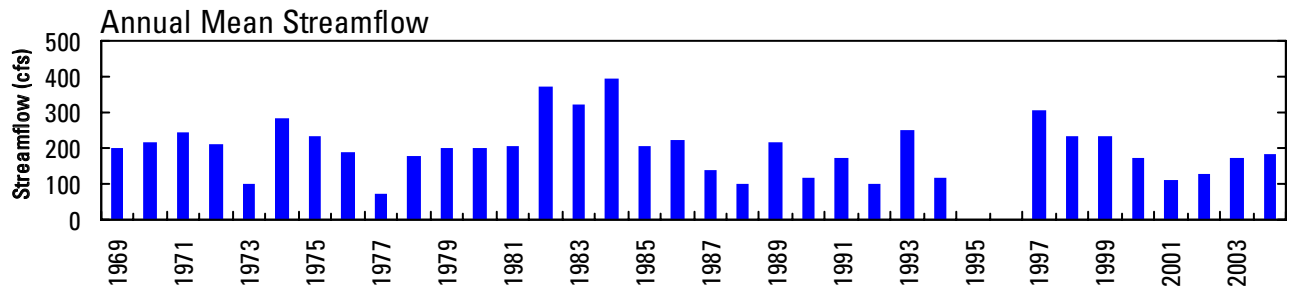
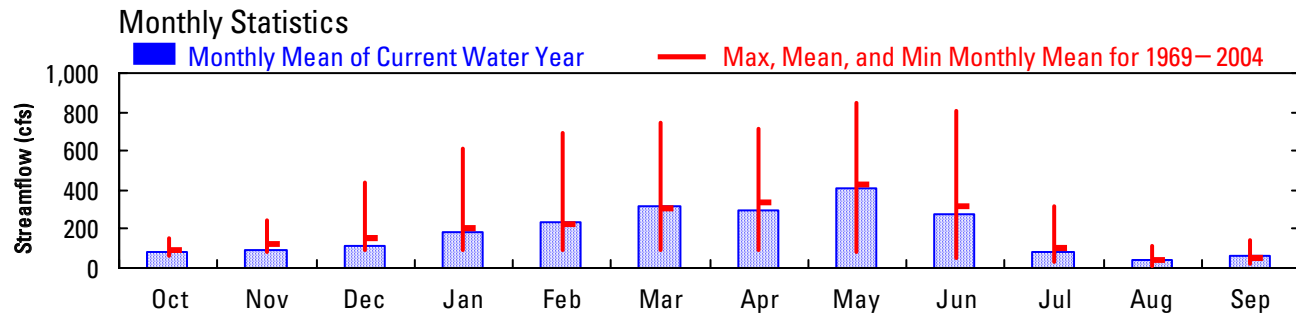
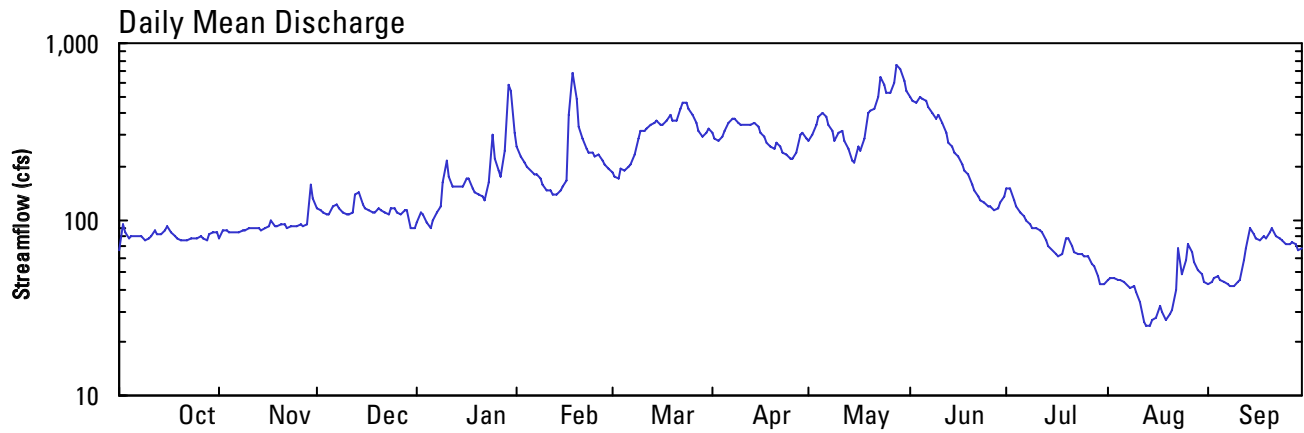
Longitude: 118° 54 ' 19"

Hydrologic Unit Code: 17070201

Grant County

Datum: 3,130.56 feet

Drainage Area: 386 square miles



14044000 MIDDLE FORK JOHN DAY RIVER AT RITTER, OR

LOCATION.--Lat 44°53'20", long 119°08'25", in SW ¼ NW ¼ sec.8, T.8 S., R.30 E., Grant County, Hydrologic Unit 17070203, on left bank 0.2 mi south of Ritter, 0.8 mi downstream from Twelvemile Creek, and at mile 14.9.

DRAINAGE AREA.--515 mi².

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

REVISED RECORDS.--WSP 739: 1931. WSP 1218: 1950. WSP 1448: 1930-32, 1937, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,544.56 ft above NGVD of 1929.

REMARKS.--Records good except those for the period Oct. 31 to Feb. 17, which are fair, and estimated daily discharges, which are poor. No regulation. Diversions for irrigation upstream from station. Continuous water-quality records for the period July 1966 to September 1968 have been collected at this location.

AVERAGE DISCHARGE.--75 years (water years 1930-2004), 256 ft³/s, 185,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,730 ft³/s Jan. 30, 1965, gage height, 8.39 ft, from rating curve extended above 2,200 ft³/s; maximum gage height, 9.13 ft Feb. 1, 1963, ice jam; minimum discharge, 0.90 ft³/s Aug. 19, 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 24	0430	1,920	5.87	May 23	2000	2,340	6.14
Apr 7	0730	1,100	5.22	May 28	1800	*2,390	*6.19
May 20	0230	1,150	5.27				

Minimum discharge, 20 ft³/s Nov. 1, result of freezeup.

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	32	28	81	e48	296	247	780	602	849	139	44	48
2	31	34	72	e46	234	236	668	656	767	147	45	47
3	30	41	65	e66	205	218	643	744	723	131	49	48
4	30	38	60	e70	188	222	695	799	754	120	50	48
5	32	e24	57	e66	172	208	834	819	713	111	47	47
6	33	e26	64	e58	156	213	963	771	661	105	46	45
7	32	e30	83	e52	148	232	1,040	681	591	99	45	44
8	31	42	76	e60	143	361	998	629	543	94	43	42
9	31	39	63	e100	128	636	966	572	506	92	41	41
10	31	41	59	e150	116	722	903	553	585	88	38	41
11	33	45	62	e120	113	749	859	564	559	86	36	41
12	39	48	58	e100	104	754	857	507	476	83	34	44
13	41	43	83	e88	93	953	879	465	437	79	33	51
14	38	e32	125	e86	111	903	839	439	408	75	34	61
15	40	40	100	e84	116	1,070	783	433	376	71	36	65
16	43	43	73	96	116	878	683	442	348	68	36	57
17	44	48	68	116	119	1,060	619	429	325	66	46	53
18	41	48	65	105	285	1,180	568	453	303	66	52	52
19	38	44	58	98	464	1,410	522	584	280	75	43	52
20	37	47	70	94	391	1,120	499	926	259	80	40	51
21	36	45	73	90	329	1,110	527	865	240	73	37	51
22	34	39	62	72	292	1,500	554	787	220	65	45	50
23	33	36	63	83	289	1,730	529	1,460	206	61	102	48
24	33	37	64	127	301	1,750	504	1,540	195	58	74	46
25	33	e38	68	114	271	1,370	491	990	181	55	63	45
26	33	e40	64	110	295	1,160	514	864	184	52	84	44
27	34	e42	57	107	271	935	596	960	164	50	101	44
28	34	44	60	120	269	803	705	1,770	150	49	73	43
29	36	62	62	652	256	762	646	1,720	147	48	61	42
30	39	110	e60	712	---	848	590	1,220	147	47	55	41
31	36	---	e58	385	---	889	---	988	---	45	51	---
TOTAL	1,088	1,274	2,133	4,275	6,271	26,229	21,254	25,232	12,297	2,478	1,584	1,432
MEAN	35.1	42.5	68.8	138	216	846	708	814	410	79.9	51.1	47.7
MAX	44	110	125	712	464	1,750	1,040	1,770	849	147	102	65
MIN	30	24	57	46	93	208	491	429	147	45	33	41
AC-FT	2,160	2,530	4,230	8,480	12,440	52,030	42,160	50,050	24,390	4,920	3,140	2,840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	44.1	72.6	127	163	247	477	749	706	346	79.8	32.7	32.5
MAX	99.5	231	482	727	1,073	1,214	1,426	1,457	1,127	285	98.4	108
(WY)	(1983)	(1974)	(1956)	(1997)	(1996)	(1972)	(1984)	(1984)	(1984)	(1984)	(1984)	(1984)
MIN	17.4	20.2	29.0	23.4	31.3	69.8	175	79.2	56.6	17.4	3.75	10.0
(WY)	(1937)	(1937)	(1933)	(1937)	(1937)	(1977)	(1968)	(1934)	(1992)	(1973)	(1966)	(1935)

14044000 MIDDLE FORK JOHN DAY RIVER AT RITTER, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004	
ANNUAL TOTAL	85,661		105,547			
ANNUAL MEAN	235		288		256	
HIGHEST ANNUAL MEAN					538	1984
LOWEST ANNUAL MEAN					85.1	1977
HIGHEST DAILY MEAN	1,360	Jan 31	1,770	May 28	4,360	Jan 30, 1965
LOWEST DAILY MEAN	24	Nov 5	24	Nov 5	0.90	Aug 20, 1966
ANNUAL SEVEN-DAY MINIMUM	28	Sep 1	31	Oct 2	1.1	Aug 19, 1966
ANNUAL RUNOFF (AC-FT)	169,900		209,400		185,400	
10 PERCENT EXCEEDS	664		848		725	
50 PERCENT EXCEEDS	70		89		90	
90 PERCENT EXCEEDS	31		37		26	

e Estimated



2004 Water Year
JOHN DAY RIVER BASIN

14044000 MIDDLE FORK JOHN DAY RIVER AT RITTER, OR

Latitude: 44° 53 ' 20"

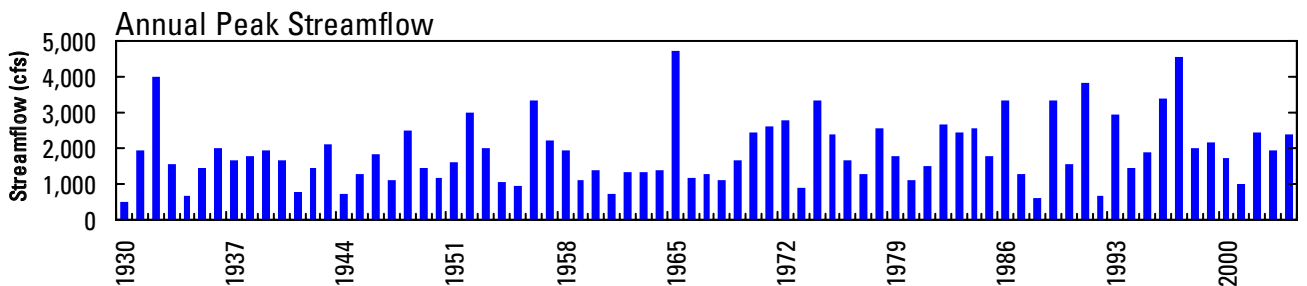
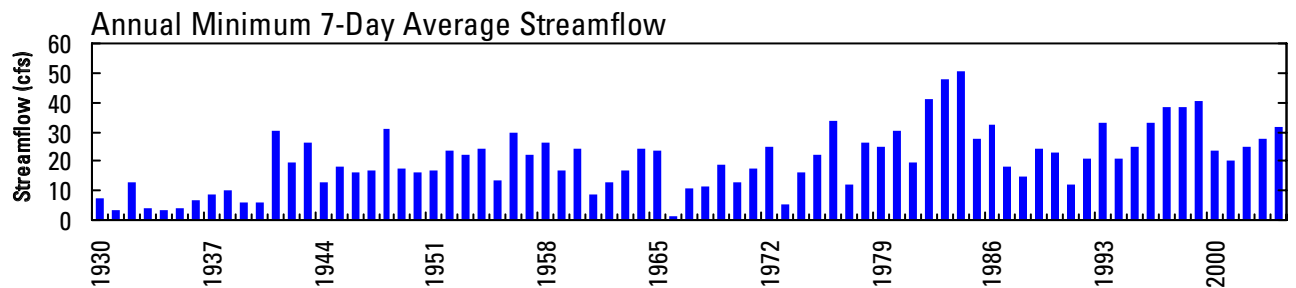
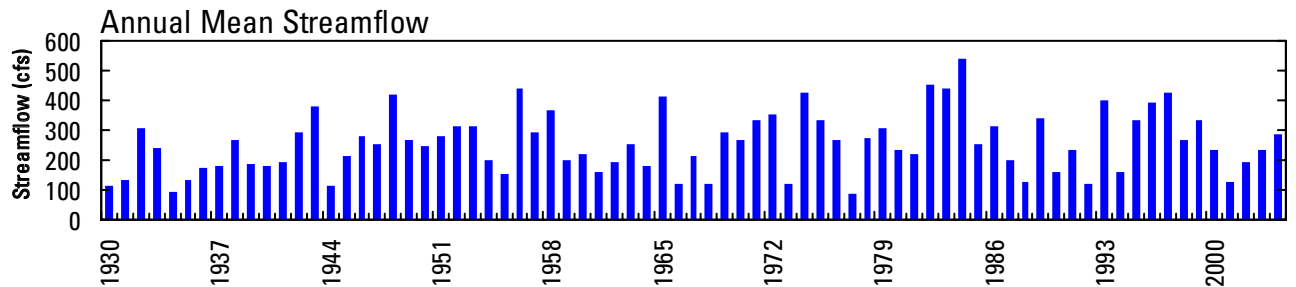
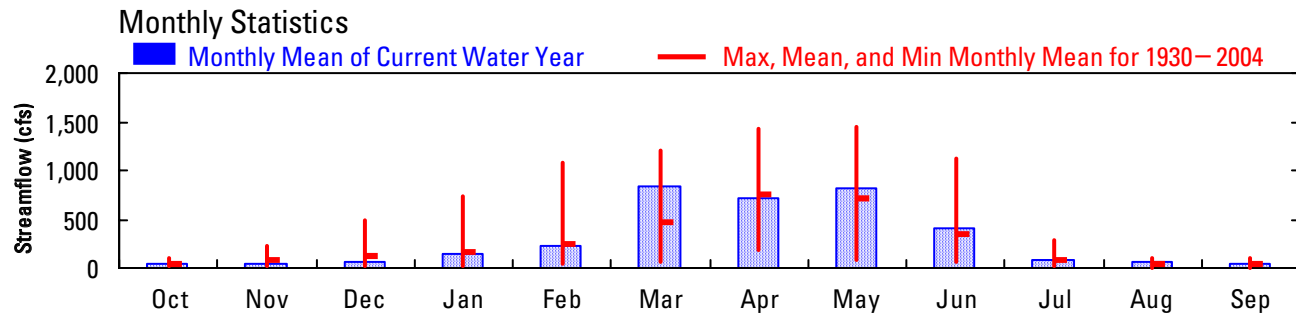
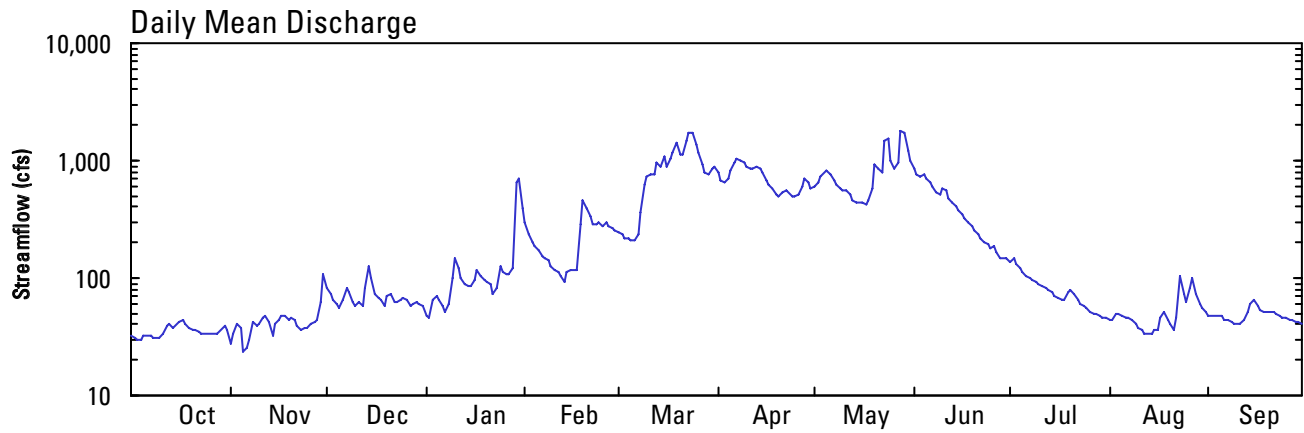
Longitude: 119° 08 ' 25"

Hydrologic Unit Code: 17070203

Grant County

Datum: 2,544.56 feet

Drainage Area: 515 square miles



14046000 NORTH FORK JOHN DAY RIVER AT MONUMENT, OR

LOCATION.--Lat 44°48'50", long 119°25'50", in SE ¼ sec.2, T.9 S., R.27 E., Grant County, Hydrologic Unit 17070202, on right bank just downstream from entrance to canyon, 0.7 mi downstream from Cottonwood Creek, 0.8 mi west of Monument, and at mile 15.3.

DRAINAGE AREA.--2,520 mi², approximately.

PERIOD OF RECORD.--March 1925 to current year. Monthly discharge only for some periods 1925-28, published in WSP 1318.

REVISED RECORDS.--WSP 754: 1932(M). WSP 1448: 1927, 1931(M), 1949.

GAGE.--Water-stage recorder. Datum of gage is 1,959.64 ft above NGVD of 1929. Prior to Nov. 24, 1925, nonrecording gage and Nov. 24, 1925, to Oct. 16, 1928, water-stage recorder at datum 1.10 ft higher. Oct. 17, 1928, to Sept. 30, 1930, water-stage recorder at datum 1.00 ft higher.

REMARKS.--Records good except those for the period November to February, which are fair and estimated daily discharges, which are poor. Very slight regulation by small reservoirs upstream. Many small diversions for irrigation upstream from station. Continuous water-quality records for the period July 1966 to September 1968 have been collected at this location. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--76 years (water years 1929-2004), 1,293 ft³/s, 936,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s Jan. 30, 1965, gage height, 18.45 ft, from rating curve extended above 17,000 ft³/s; minimum discharge, 6 ft³/s sometime during period Nov. 2-13, 1936 (result of freezeup); minimum daily, 17 ft³/s Dec. 12, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 30	0545	6,200	8.15	May 24	0130	9,010	9.52
Mar 24	0745	6,610	8.35	May 29	0045	*9,970	*9.99

Minimum discharge, 54 ft³/s, Nov. 6.

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	79	115	352	215	2,380	1,680	3,720	2,700	4,650	703	146	168
2	80	107	307	311	1,910	1,580	3,120	2,830	4,010	753	145	159
3	78	116	283	328	1,660	1,470	2,910	3,130	3,570	678	155	161
4	79	141	256	e300	1,480	1,370	3,060	3,340	3,430	600	170	162
5	80	120	219	e240	1,330	1,360	3,630	3,370	3,230	548	171	159
6	82	76	230	e200	1,210	1,370	4,060	3,170	3,030	506	161	153
7	84	83	281	e240	1,150	1,370	4,400	2,820	2,730	475	159	143
8	83	130	336	384	1,080	2,060	4,370	2,580	2,610	444	154	137
9	82	150	289	560	973	3,270	4,210	2,370	2,390	420	144	131
10	82	155	225	1,150	896	3,790	3,960	2,240	2,610	400	133	127
11	84	152	232	967	797	3,780	3,750	2,410	2,790	384	125	128
12	94	160	257	843	736	3,750	3,730	2,280	2,340	373	117	129
13	106	164	256	782	642	4,390	3,840	2,210	2,110	346	110	142
14	121	137	499	767	756	4,040	3,800	1,980	1,950	321	110	170
15	120	111	506	747	818	4,370	3,600	1,890	1,800	298	110	221
16	131	159	396	778	823	3,970	3,200	2,090	1,660	281	110	230
17	148	175	320	866	1,120	4,450	2,830	2,110	1,530	262	115	202
18	147	179	307	812	2,730	4,900	2,590	2,200	1,440	254	130	186
19	132	163	242	773	3,760	5,690	2,380	2,980	1,360	292	132	178
20	121	162	289	734	2,780	4,730	2,290	4,450	1,250	375	123	179
21	114	170	351	702	2,270	4,450	2,490	4,750	1,160	331	117	173
22	110	155	332	627	1,940	5,270	2,760	4,890	1,100	280	131	175
23	107	133	271	608	1,810	6,090	2,740	6,390	1,030	249	202	171
24	113	122	307	1,240	1,800	6,240	2,660	7,950	981	228	353	162
25	113	130	383	1,390	1,750	5,270	2,570	5,830	940	211	256	156
26	115	134	350	1,210	1,880	5,010	2,600	4,940	916	195	240	150
27	116	138	302	1,100	1,940	4,260	2,900	5,490	853	185	344	144
28	119	157	297	1,110	1,850	3,650	3,390	7,360	777	173	352	140
29	121	179	306	3,100	1,760	3,420	3,330	8,870	752	165	259	137
30	124	274	e200	5,600	---	3,830	2,840	6,850	781	160	213	134
31	139	---	e210	3,390	---	4,210	---	5,540	---	151	184	---
TOTAL	3,304	4,347	9,391	32,074	46,031	115,090	97,730	122,010	59,780	11,041	5,371	4,807
MEAN	107	145	303	1,035	1,587	3,713	3,258	3,936	1,993	356	173	160
MAX	148	274	506	5,600	3,760	6,240	4,400	8,870	4,650	753	353	230
MIN	78	76	200	200	642	1,360	2,290	1,890	752	151	110	127
AC-FT	6,550	8,620	18,630	63,620	91,300	228,300	193,800	242,000	118,600	21,900	10,650	9,530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

MEAN	159	311	709	946	1,457	2,478	3,629	3,577	1,655	376	133	121
MAX	420	1,621	3,374	4,126	6,103	6,456	6,695	8,794	5,227	1,211	345	423
(WY)	(1983)	(1974)	(1965)	(1965)	(1996)	(1983)	(1943)	(1948)	(1948)	(1982)	(1984)	(1984)
MIN	58.5	64.5	96.6	75.8	134	345	822	378	259	97.4	36.6	45.2
(WY)	(1937)	(1937)	(1937)	(1937)	(1929)	(1977)	(1968)	(1934)	(1992)	(1973)	(1931)	(1934)

14046000 NORTH FORK JOHN DAY RIVER AT MONUMENT, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	391,320		510,976			
ANNUAL MEAN	1,072		1,396		1,293	
HIGHEST ANNUAL MEAN					2,608	1984
LOWEST ANNUAL MEAN					441	1977
HIGHEST DAILY MEAN	6,410	Jan 31	8,870	May 29	31,900	Jan 30, 1965
LOWEST DAILY MEAN	52	Sep 6	76	Nov 6	17	Dec 12, 1932
ANNUAL SEVEN-DAY MINIMUM	56	Sep 1	80	Oct 1	29	Aug 28, 1931
ANNUAL RUNOFF (AC-FT)	776,200		1,014,000		936,900	
10 PERCENT EXCEEDS	3,240		3,880		3,720	
50 PERCENT EXCEEDS	306		460		420	
90 PERCENT EXCEEDS	80		121		98	

e Estimated



2004 Water Year
JOHN DAY RIVER BASIN

14046000 NORTH FORK JOHN DAY RIVER AT MONUMENT, OR

Latitude: 44° 48 ' 50"

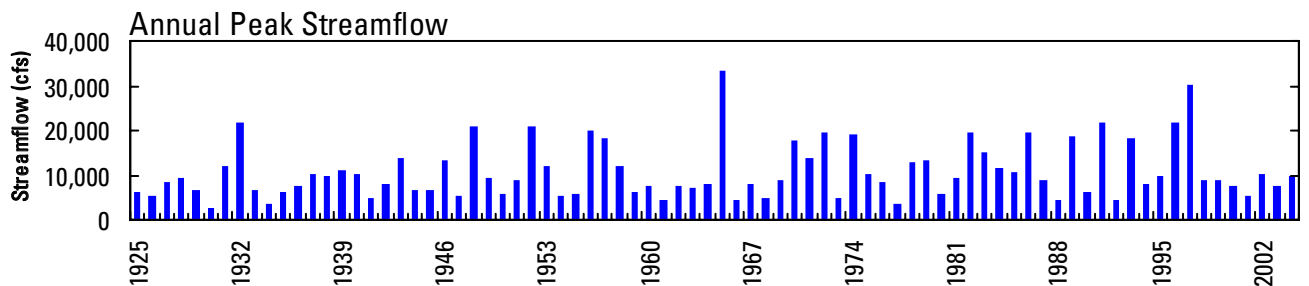
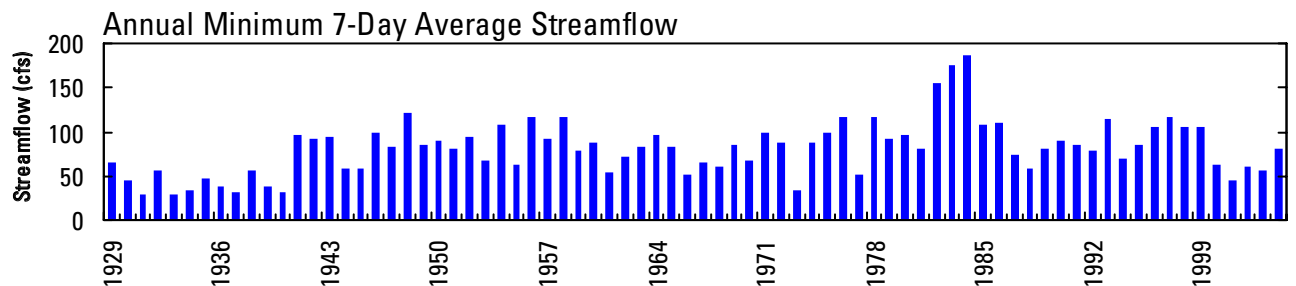
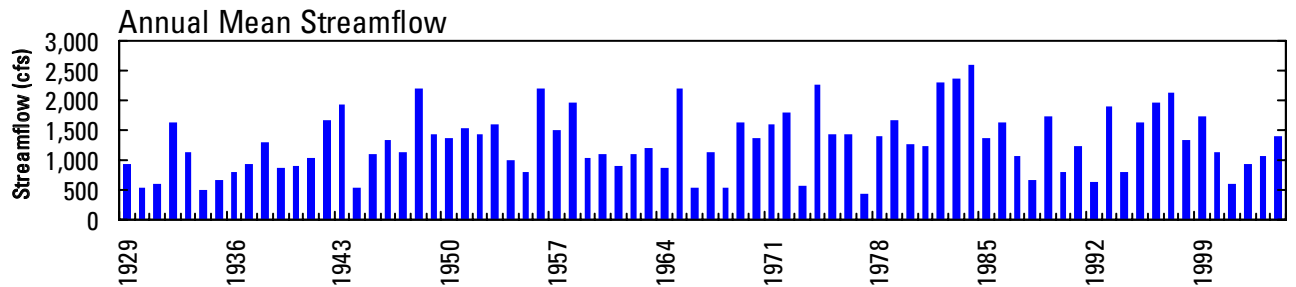
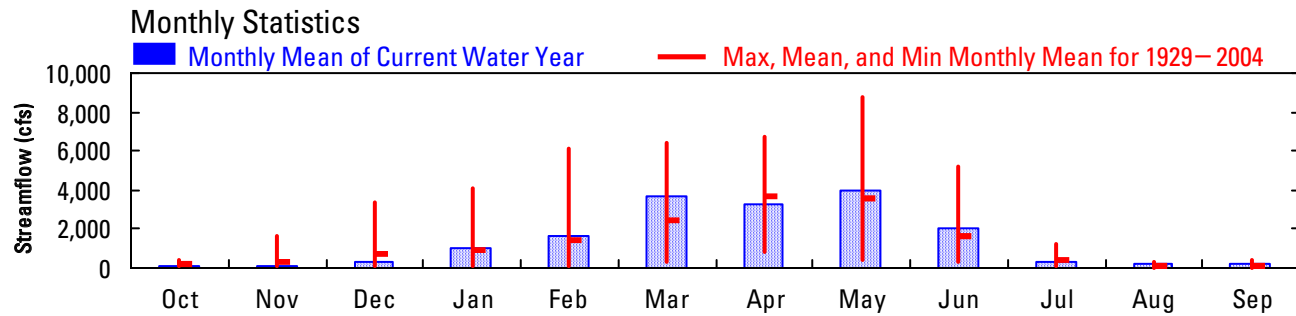
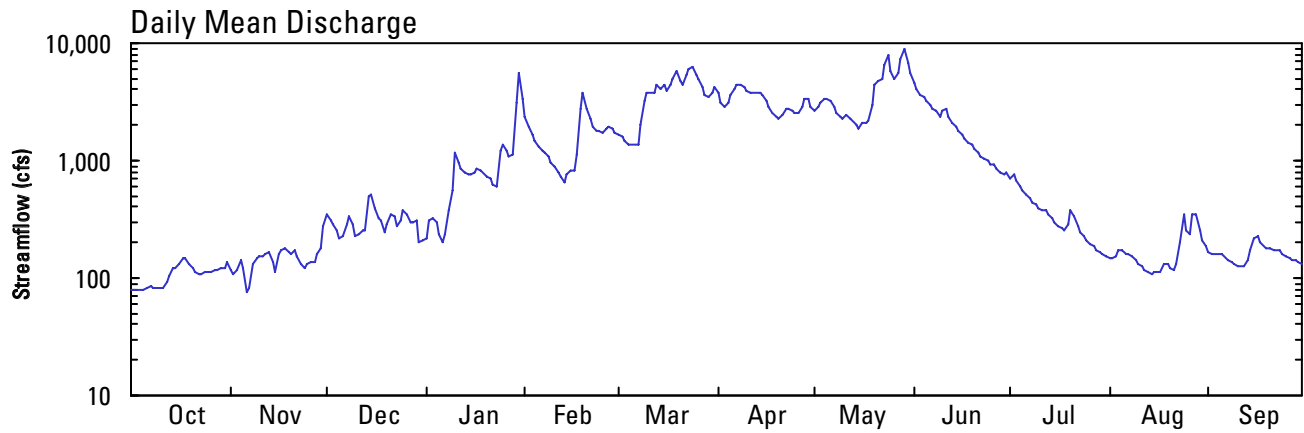
Longitude: 119° 25 ' 50"

Hydrologic Unit Code: 17070202

Grant County

Datum: 1,959.64 feet

Drainage Area: 2,520 square miles



14046500 JOHN DAY RIVER AT SERVICE CREEK, OR

LOCATION.--Lat 44°47'38", long 120°00'20", in NW ¼ NE ¼ sec.18, T.9 S., R.23 E., Wheeler County, Hydrologic Unit 17070204, on left bank 0.2 mi downstream from bridge on State Highway 207, 0.8 mi downstream from Service Creek, 0.5 mi southwest of town of Service Creek, and at mile 156.7.

DRAINAGE AREA.--5,090 mi², approximately.

PERIOD OF RECORD.--March 1925 to September 1926, October 1929 to current year. Monthly discharge only March 1925 to September 1926, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,632.42 ft above NGVD of 1929. See WSP 1738 for history of changes prior to Feb. 24, 1957.

REMARKS.--No estimated daily discharges. Records fair. Slight regulation by several small reservoirs upstream from station. Many small diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--75 years (water years 1930-2004), 1,929 ft³/s, 1,398,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s Dec. 23, 1964, gage height, 17.85 ft, from rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 6.0 ft³/s Aug. 23, 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 30	1430	7,580	7.89	May 24	0900	11,700	9.56
Mar 24	1530	8,780	8.43	May 29	0800	*12,300	*9.81

Minimum discharge, 102 ft³/s, Aug. 14, 16-19.

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	106	280	559	468	3,720	2,530	5,390	3,560	6,380	1,060	154	254
2	120	272	581	484	2,920	2,440	4,660	3,580	5,550	1,060	143	229
3	146	267	536	562	2,530	2,320	4,200	3,830	4,960	1,050	143	216
4	192	276	507	574	2,260	2,150	4,190	4,130	4,650	954	143	225
5	211	293	481	509	2,070	2,160	4,650	4,260	4,500	876	159	229
6	209	284	448	466	1,890	2,090	5,280	4,160	4,210	805	171	224
7	210	246	470	412	1,780	2,110	5,700	3,810	3,950	729	157	220
8	212	238	546	479	1,690	2,520	5,800	3,420	3,710	673	157	213
9	212	280	565	704	1,590	4,100	5,610	3,160	3,440	628	145	204
10	210	306	520	1,030	1,450	5,300	5,320	2,940	3,360	583	138	197
11	211	319	453	1,380	1,320	5,440	5,030	3,150	3,860	556	126	193
12	214	319	476	1,220	1,260	5,360	4,890	3,100	3,320	536	119	185
13	228	325	513	1,150	1,150	5,970	4,920	3,010	2,960	509	113	185
14	244	329	561	1,100	1,140	5,970	4,990	2,720	2,700	471	105	188
15	267	312	872	1,140	1,280	6,240	4,890	2,530	2,510	426	107	224
16	272	284	768	1,170	1,360	6,070	4,530	2,570	2,320	389	102	292
17	278	328	653	1,270	1,880	6,140	4,040	2,820	2,130	370	102	324
18	297	349	581	1,330	3,790	6,680	3,740	3,230	1,980	350	103	309
19	296	356	556	1,240	6,210	7,510	3,430	4,570	1,850	445	109	289
20	278	342	500	1,190	4,810	7,050	3,240	5,690	1,740	520	124	284
21	264	342	557	1,150	3,810	6,300	3,400	6,320	1,610	495	120	292
22	259	347	608	1,110	3,210	6,830	3,770	6,460	1,510	426	124	289
23	248	337	580	1,030	2,850	7,960	3,740	7,630	1,410	351	157	289
24	241	316	526	1,410	2,740	8,450	3,660	10,900	1,320	304	246	273
25	247	304	590	2,250	2,770	7,630	3,510	8,380	1,250	271	401	258
26	251	314	645	1,900	2,750	6,980	3,420	6,850	1,200	238	337	245
27	255	315	599	1,720	2,910	6,300	3,570	7,020	1,160	216	334	232
28	260	322	569	1,610	2,750	5,440	4,050	8,090	1,070	200	439	219
29	261	360	587	2,450	2,660	4,910	4,420	11,600	1,030	183	428	231
30	263	405	542	6,700	---	5,020	3,900	9,200	1,090	172	344	228
31	266	---	453	5,550	---	5,630	---	7,500	---	168	287	---
TOTAL	7,228	9,367	17,402	44,758	72,550	161,600	131,940	160,190	82,730	16,014	5,837	7,240
MEAN	233	312	561	1,444	2,502	5,213	4,398	5,167	2,758	517	188	241
MAX	297	405	872	6,700	6,210	8,450	5,800	11,600	6,380	1,060	439	324
MIN	106	238	448	412	1,140	2,090	3,240	2,530	1,030	168	102	185
AC-FT	14,340	18,580	34,520	88,780	143,900	320,500	261,700	317,700	164,100	31,760	11,580	14,360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

	MEAN	328	586	1,182	1,580	2,358	3,765	5,211	4,894	2,386	559	179	182
MAX	811	2,284	5,540	6,553	8,239	9,773	10,280	12,050	8,327	1,850	594	862	
(WY)	(1985)	(1974)	(1965)	(1997)	(1996)	(1983)	(1984)	(1948)	(1948)	(1982)	(1984)	(1984)	
MIN	70.5	152	216	195	358	597	1,010	491	302	90.6	15.2	31.4	
(WY)	(1937)	(1937)	(1936)	(1937)	(1937)	(1977)	(1968)	(1934)	(1992)	(1973)	(1973)	(1935)	

14046500 JOHN DAY RIVER AT SERVICE CREEK, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004	
ANNUAL TOTAL	556,948		716,856		1,929	
ANNUAL MEAN	1,526		1,959		4,116	1984
HIGHEST ANNUAL MEAN					619	1977
LOWEST ANNUAL MEAN					36,400	Jan 30, 1965
HIGHEST DAILY MEAN	6,670	Jan 31	11,600	May 29		
LOWEST DAILY MEAN	42	Aug 21	102	Aug 16	6.2	Aug 23, 1973
ANNUAL SEVEN-DAY MINIMUM	44	Aug 16	106	Aug 13	7.7	Aug 19, 1973
ANNUAL RUNOFF (AC-FT)	1,105,000		1,422,000		1,398,000	
10 PERCENT EXCEEDS	4,680		5,470		5,360	
50 PERCENT EXCEEDS	576		688		741	
90 PERCENT EXCEEDS	90		203		134	



2004 Water Year
JOHN DAY RIVER BASIN

14046500 JOHN DAY RIVER AT SERVICE CREEK, OR

Latitude: 44° 47 ' 38"

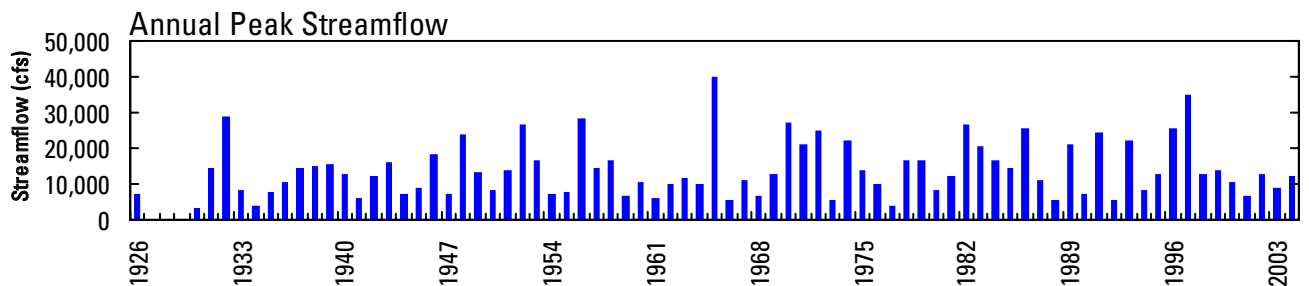
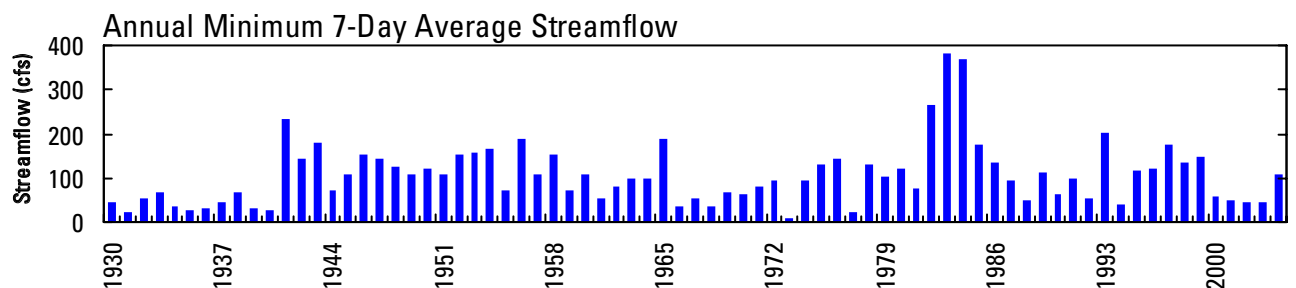
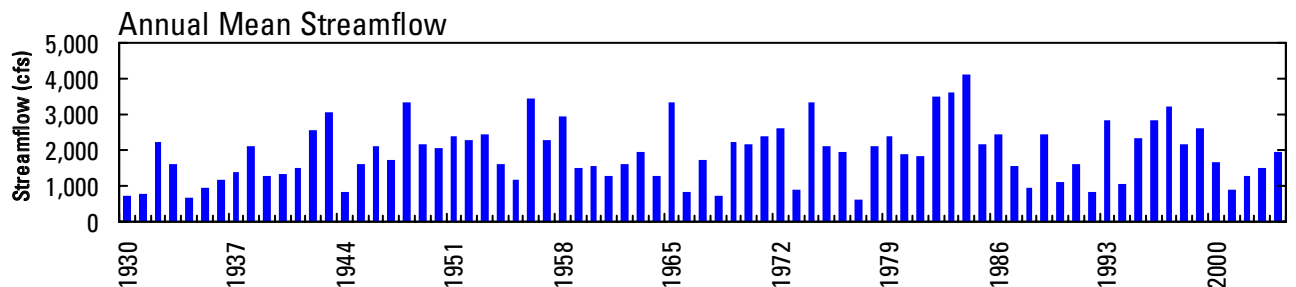
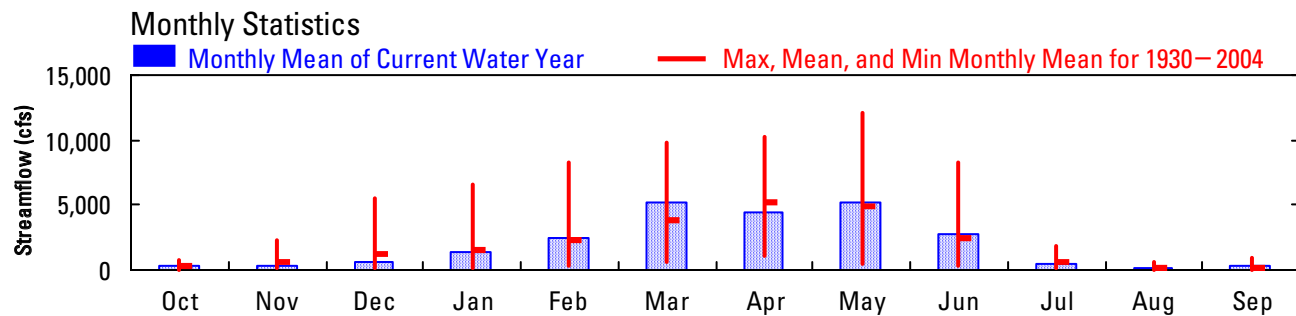
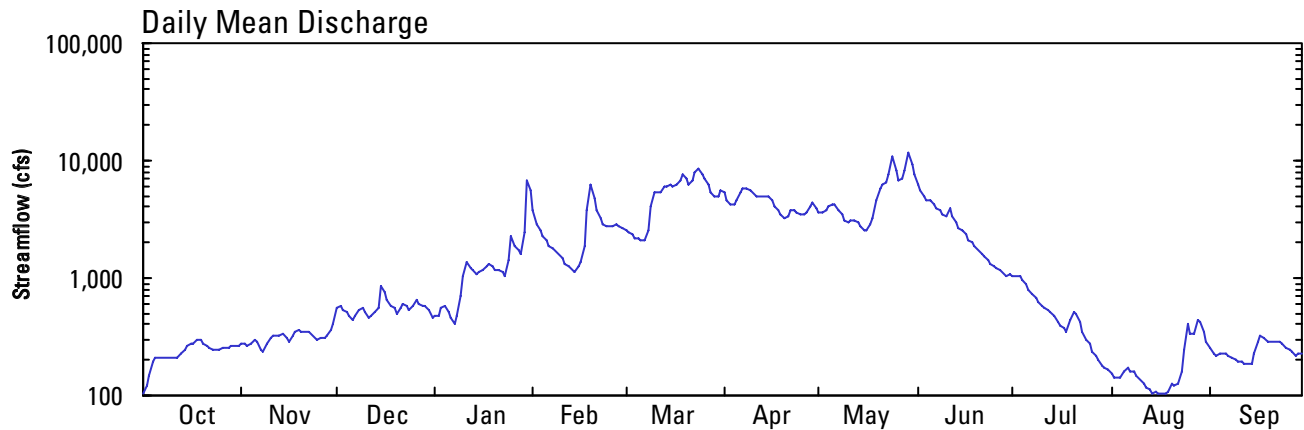
Longitude: 120° 00 ' 20"

Hydrologic Unit Code: 17070204

Wheeler County

Datum: 1,632.42 feet

Drainage Area: 5,090 square miles



14046890 PINE CREEK NEAR CLARNO, OR

LOCATION.--Lat 44°54'38", long 120°26'23", in SW ¼ SW ¼ sec.34, T.7 N., R.19 E., Wheeler County, Hydrologic Unit 17070204, on left bank 1.5 mi east of Clarno, and at mile 0.4.

DRAINAGE AREA.--65.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2003 to September 2004.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,350 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. No known diversions or regulation

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28 ft³/s Feb. 19, gage height, 6.18 ft; minimum discharge, 0.26 ft³/s Jan. 9-11.

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	e1.1	e0.76	0.50	0.40	11	15	8.2	7.2	5.1	4.0	1.2	0.94
2	e1.1	e0.76	0.48	0.36	11	14	8.2	7.1	4.9	3.9	1.2	0.92
3	e1.1	e0.76	0.46	0.35	11	15	7.8	7.1	4.7	3.7	1.1	0.93
4	e1.1	e0.76	0.46	0.35	11	14	7.8	7.1	4.5	3.5	1.3	0.92
5	e1.1	e0.76	0.42	0.35	11	14	7.7	7.1	4.5	3.1	1.3	0.95
6	e1.1	e0.74	0.38	e0.34	11	14	7.7	e7.1	4.7	3.0	1.3	0.95
7	1.0	e0.74	0.37	e0.32	10	14	7.7	e7.1	4.6	2.6	1.1	0.93
8	0.99	e0.74	0.38	e0.30	10	13	7.7	e7.0	4.5	2.8	1.2	0.90
9	1.0	e0.74	0.39	e0.28	10	13	7.6	e7.0	5.3	2.6	1.2	0.78
10	0.98	e0.72	0.39	0.29	10	13	7.5	e6.6	5.7	2.7	1.1	0.81
11	1.1	e0.72	0.40	0.33	10	12	7.4	e6.0	5.8	2.5	1.2	0.82
12	1.1	e0.72	0.39	0.32	10	12	7.2	e6.2	5.8	2.4	1.2	0.84
13	1.0	e0.72	0.41	0.30	9.9	11	7.3	e6.0	5.7	2.3	1.3	0.84
14	1.0	e0.72	0.40	0.30	9.7	11	7.5	e5.8	5.9	2.3	1.5	0.83
15	1.0	e0.70	0.41	0.33	9.6	11	7.7	e5.6	5.9	2.4	1.3	0.82
16	0.96	e0.70	0.42	0.35	10	11	7.6	e5.4	5.6	2.4	1.3	0.80
17	0.99	e0.70	0.42	0.42	15	10	7.6	e5.3	5.4	2.3	1.3	0.79
18	0.98	e0.70	0.41	0.57	25	10	7.6	e5.2	5.3	2.2	1.3	0.76
19	0.91	e0.70	0.41	0.86	26	10	7.5	e5.2	5.0	2.2	1.2	0.78
20	0.95	e0.70	0.41	1.5	26	9.7	7.5	e5.2	4.8	2.2	1.3	0.79
21	0.99	0.68	0.41	2.4	25	8.9	7.7	5.2	4.7	2.0	1.3	0.79
22	1.0	0.67	0.40	3.6	25	8.7	7.5	5.6	4.6	2.0	1.3	0.78
23	1.0	0.66	0.43	5.4	25	8.6	7.6	6.0	4.4	1.9	1.2	0.74
24	1.0	0.65	0.43	10	25	8.0	7.6	5.8	4.6	1.8	1.1	0.74
25	0.94	0.61	0.43	12	25	8.1	7.5	5.8	4.5	1.6	1.0	0.71
26	0.87	0.58	0.42	12	22	8.2	7.4	6.0	4.1	1.6	0.87	0.69
27	0.88	0.58	0.42	11	18	7.9	7.4	5.8	4.0	e1.7	0.82	0.78
28	0.83	0.58	0.44	11	16	7.9	7.5	5.8	4.1	e1.4	0.99	0.78
29	e0.81	0.54	0.42	12	16	8.2	7.4	5.8	4.3	1.3	0.95	0.77
30	e0.78	0.53	0.40	12	---	8.6	7.3	5.5	4.2	1.3	0.90	0.76
31	e0.78	---	0.39	12	---	8.4	---	5.4	---	1.2	0.86	---
TOTAL	30.44	20.64	12.90	112.02	454.2	338.2	227.7	189.0	147.2	72.9	36.19	24.64
MEAN	0.98	0.69	0.42	3.61	15.7	10.9	7.59	6.10	4.91	2.35	1.17	0.82
MAX	1.1	0.76	0.50	12	26	15	8.2	7.2	5.9	4.0	1.5	0.95
MIN	0.78	0.53	0.37	0.28	9.6	7.9	7.2	5.2	4.0	1.2	0.82	0.69
AC-FT	60	41	26	222	901	671	452	375	292	145	72	49
CFSM	0.02	0.01	0.01	0.06	0.24	0.17	0.12	0.09	0.08	0.04	0.02	0.01
IN.	0.02	0.01	0.01	0.06	0.26	0.19	0.13	0.11	0.08	0.04	0.02	0.01

WTR YR2004 TOTAL 1,666.03 MEAN 4.55 MAX 26 MIN 0.28 AC-FT 3300 CFSM 0.07 IN. 0.95

e Estimated

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January to September 2004.

PRECIPITATION: June to September 2004.

INSTRUMENTATION.--Water-temperature recorder and precipitation gage.

REMARKS.--

WATER TEMPERATURE: Records excellent except for the period Mar. 10 to Apr. 4, which are good, and those for the period Jan. 16 to Mar. 9, which are fair.

PRECIPITATION: Records fair.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE FOR PERIOD JANUARY TO SEPTEMBER: Maximum 21.7°C June 4; minimum, 4.8°C Feb. 20.

PRECIPITATION FOR PERIOD JUNE TO SEPTEMBER: Maximum daily precipitation, 0.32 inches Aug. 22.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	10.1	---	---
17	---	---	---	---	---	---	---	---	---	10.2	8.6	9.2
18	---	---	---	---	---	---	---	---	---	11.2	8.4	9.4
19	---	---	---	---	---	---	---	---	---	10.6	8.5	9.3
20	---	---	---	---	---	---	---	---	---	10.1	8.7	9.3
21	---	---	---	---	---	---	---	---	---	9.0	7.7	8.2
22	---	---	---	---	---	---	---	---	---	8.6	7.2	7.8
23	---	---	---	---	---	---	---	---	---	8.2	7.3	7.8
24	---	---	---	---	---	---	---	---	---	7.8	5.5	7.0
25	---	---	---	---	---	---	---	---	---	7.2	5.3	6.2
26	---	---	---	---	---	---	---	---	---	7.7	5.9	6.6
27	---	---	---	---	---	---	---	---	---	8.5	6.1	7.3
28	---	---	---	---	---	---	---	---	---	9.0	7.5	8.2
29	---	---	---	---	---	---	---	---	---	10.4	8.4	9.2
30	---	---	---	---	---	---	---	---	---	8.7	6.0	7.5
31	---	---	---	---	---	---	---	---	---	7.3	5.3	6.4
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

14046890 PINE CREEK NEAR CLARNO, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.6	5.8	6.7	8.7	7.1	8.1	12.3	7.1	9.4	18.5	10.6	14.5
2	7.3	6.6	6.8	10.5	5.6	7.7	13.5	6.5	9.9	19.8	11.7	15.4
3	7.9	6.1	6.9	7.7	5.8	6.7	15.5	8.9	11.7	19.9	11.9	15.5
4	8.8	6.2	7.3	9.4	6.5	7.8	16.5	9.3	12.5	18.5	11.6	14.6
5	7.9	4.9	6.4	10.1	5.8	7.6	13.9	10.4	11.9	17.7	10.3	13.5
6	8.0	6.7	7.2	8.8	6.0	7.6	16.3	9.7	12.6	14.1	10.1	12.3
7	8.6	6.7	7.4	13.2	7.0	9.9	15.0	9.4	12.1	16.1	10.0	13.0
8	8.3	5.8	6.9	13.4	8.2	10.6	16.0	9.2	12.2	17.4	11.5	13.8
9	8.0	4.9	6.4	11.5	8.3	9.6	16.0	8.6	11.9	16.1	10.7	13.1
10	8.2	5.2	6.5	12.0	6.6	9.0	16.4	8.9	12.3	14.1	11.3	12.4
11	7.6	5.3	6.6	12.0	6.8	9.2	16.9	9.1	12.7	13.7	10.3	12.0
12	8.7	6.2	7.4	13.0	7.4	9.9	16.4	10.0	12.8	15.7	10.8	12.7
13	8.1	6.1	7.1	11.6	6.9	9.2	13.5	10.2	11.6	18.1	9.5	13.5
14	9.3	6.8	8.0	13.1	8.3	10.3	13.0	8.9	10.9	18.9	10.5	14.3
15	9.9	7.1	8.3	11.6	7.5	9.6	12.7	8.6	10.7	14.5	11.6	13.0
16	8.3	7.4	7.8	13.6	8.0	10.4	13.7	8.4	10.7	16.6	11.3	13.5
17	8.8	7.5	8.1	13.3	8.0	10.3	14.1	9.2	11.3	16.4	11.2	13.4
18	9.1	7.0	7.9	13.9	8.7	10.8	13.6	9.4	11.4	15.3	12.3	13.4
19	8.5	6.2	7.2	12.5	7.3	9.5	13.9	8.6	11.3	17.2	11.2	13.9
20	8.5	4.8	6.6	12.2	6.8	9.2	12.5	9.4	11.0	19.4	12.0	15.0
21	8.7	6.2	7.1	13.5	8.0	10.7	12.8	9.3	11.0	19.3	11.9	15.1
22	9.0	6.2	7.4	15.2	8.8	11.8	16.7	8.2	12.2	15.7	11.6	13.3
23	9.3	6.2	7.6	14.3	9.5	11.5	13.5	9.6	11.4	15.9	11.5	13.1
24	9.5	6.3	7.7	11.9	8.4	9.9	16.1	8.3	11.9	17.3	10.1	13.2
25	8.9	5.7	7.1	10.6	8.4	9.6	17.6	9.1	13.0	19.3	10.6	14.7
26	9.4	6.7	8.0	10.6	7.4	9.2	19.0	10.3	14.4	15.3	13.5	14.3
27	9.4	6.1	7.8	13.4	8.5	10.4	16.6	11.1	13.7	14.7	12.0	13.3
28	9.5	7.3	8.3	14.3	7.0	10.4	13.6	9.6	11.4	14.8	11.6	12.9
29	10.2	6.4	8.2	15.0	7.9	11.3	17.3	8.5	12.6	14.6	9.9	12.1
30	---	---	---	10.8	8.4	9.9	18.7	9.8	13.9	16.4	10.8	13.4
31	---	---	---	12.0	7.3	9.3	---	---	---	18.3	11.1	14.2
MONTH	10.2	4.8	7.3	15.2	5.6	9.6	19.0	6.5	11.9	19.9	9.5	13.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.4	10.8	14.8	20.1	13.9	17.1	19.1	14.4	16.7	17.1	14.0	15.5
2	20.4	11.8	15.8	19.7	13.7	16.7	18.2	14.8	16.3	15.1	12.7	13.9
3	20.7	13.3	16.7	19.6	14.7	17.0	19.0	14.7	16.7	16.5	12.1	14.2
4	21.7	13.4	17.3	19.8	13.4	16.6	18.7	14.5	16.3	17.2	12.6	14.6
5	17.9	13.8	15.7	19.9	12.9	16.4	17.9	14.9	16.2	17.1	12.6	14.6
6	16.1	12.0	13.9	19.1	13.8	16.6	17.0	14.6	15.5	16.7	11.8	14.1
7	17.1	11.9	14.0	18.7	14.0	16.2	18.1	13.3	15.5	16.5	12.1	14.2
8	15.5	12.0	13.5	18.6	12.2	15.4	18.4	13.5	15.9	17.2	12.4	14.6
9	15.8	12.3	13.9	18.8	13.0	15.9	18.9	14.2	16.4	15.5	13.2	14.4
10	18.0	12.4	14.7	18.6	12.9	15.7	19.3	14.7	16.8	16.9	12.3	14.5
11	16.7	11.2	13.9	18.8	12.5	15.7	19.3	14.8	16.9	15.6	13.8	14.7
12	17.8	11.0	14.2	19.4	13.0	16.3	19.2	14.5	16.6	15.4	13.4	14.3
13	18.7	12.9	15.6	20.0	14.0	17.0	19.4	14.7	16.9	15.4	12.8	13.8
14	18.9	12.0	15.3	20.0	14.3	17.2	17.0	15.5	16.3	15.9	12.3	13.9
15	18.8	11.7	15.0	20.0	14.6	17.3	18.7	14.5	16.4	15.9	13.1	14.4
16	19.4	10.9	15.0	19.8	14.2	17.0	18.1	16.1	16.9	15.8	12.5	14.1
17	20.0	11.8	15.8	19.6	15.2	17.3	19.5	15.3	17.1	14.4	12.8	13.5
18	19.8	12.6	16.0	17.9	15.5	16.8	19.2	14.9	16.9	15.1	12.2	13.3
19	20.0	12.2	15.9	18.1	14.8	16.4	19.6	14.9	17.0	14.9	10.7	12.6
20	20.1	12.1	16.0	19.3	13.8	16.5	19.8	15.7	17.4	14.2	12.0	13.0
21	20.8	12.3	16.5	19.2	14.0	16.5	17.8	15.0	16.3	15.2	10.7	12.7
22	21.4	13.7	17.4	19.1	13.4	16.2	15.8	14.1	15.2	15.6	10.9	13.1
23	21.6	14.5	17.9	19.5	13.8	16.7	16.4	13.2	14.8	16.2	11.9	13.8
24	20.4	14.1	17.4	20.1	14.7	17.4	15.4	14.2	14.7	16.2	11.7	13.8
25	20.9	13.8	17.3	20.2	15.6	17.7	16.6	13.8	14.9	16.4	11.9	14.0
26	20.5	13.8	17.1	19.1	13.8	16.4	15.5	13.9	14.6	16.5	12.3	14.1
27	20.0	13.3	16.6	19.0	14.2	16.6	18.0	13.4	15.5	16.5	12.1	14.0
28	20.4	13.4	16.9	19.3	14.4	16.8	18.1	13.5	15.6	15.9	12.0	13.8
29	20.5	14.2	17.1	19.5	15.1	17.2	18.5	13.7	15.8	16.1	12.0	13.7
30	21.0	15.1	17.7	19.6	15.1	17.2	18.6	13.7	15.9	15.4	11.1	13.1
31	---	---	---	19.4	14.6	16.9	18.4	13.9	16.0	---	---	---
MONTH	21.7	10.8	15.8	20.2	12.2	16.7	19.8	13.2	16.1	17.2	10.7	13.9

[illegible]

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR

LOCATION.--Lat 45°35'16", long 120°4'30", in NE 1/4 NW 1/4 sec.11, T.1 N., R.19 E., Sherman County, Hydrologic Unit 17070204, on left bank at McDonald Ferry, 0.8 mi downstream from Rock Creek, 10 mi east of Klondike, and at mile 20.9.

GAGE AREA.--7,580 mi², approximately.

PERIOD OF RECORD.--December 1904 to September 1996, October 1997 to current year. Prior to Oct. 1, 1930, published as "at McDonald."

REVISED RECORDS.--WSP 1094: 1894(M), 1932(M). WSP 1448: 1908-9, 1912, 1916, 1920(M), 1922, 1932.

GAGE.--Water-stage recorder. Datum of gage is 392.27 ft above NGVD of 1929. Prior to Aug. 30, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those below 60 ft³/s which are fair and estimated daily discharges, which are poor. No regulation. Many diversions for irrigation upstream from station. Additional water-quality data available for this site. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--98 years (water years 1906-96, 1998-2004), 2,066 ft³/s, 1,497,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s Dec. 24, 1964, gage height, 13.59 ft, from floodmark, from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow; no flow for part of Sept. 2, 1966, Aug. 15 to Sept. 16, 1973, Aug. 13, 14, 19-25, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1894 reached a stage of 12.8 ft, from floodmarks, discharge, 39,100 ft³/s, from rating curve extended above 22,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 31	1500	7,520	6.51	May 25	0700	11,600	8.07
Feb. 20	1200	7,270	6.40	May 30	0715	*12,100	*8.23
Mar. 25	1430	8,570	6.94				

Minimum daily discharge, 88 ft³/s, Oct. 4.

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	104	273	369	e500	5,820	3,040	5,640	4,250	7,610	1,120	208	370
2	101	275	393	e420	4,180	2,900	5,470	3,910	6,520	1,080	195	309
3	90	290	468	e440	3,410	2,790	4,820	3,870	5,710	1,020	186	276
4	88	297	542	e480	2,900	2,650	4,350	4,040	5,120	1,040	180	254
5	99	289	512	e480	2,570	2,480	4,270	4,310	4,770	1,010	188	247
6	114	278	488	e400	2,350	2,390	4,630	4,470	4,620	904	177	232
7	155	288	463	e340	2,180	2,340	5,230	4,420	4,370	813	174	233
8	200	303	448	e320	2,030	2,350	5,640	4,170	4,210	744	179	248
9	206	297	435	e380	1,930	2,540	5,750	3,790	3,920	662	191	238
10	206	269	497	e500	1,820	4,110	5,590	3,550	3,730	624	183	232
11	209	256	542	e800	1,680	5,390	5,340	3,270	3,550	590	178	232
12	221	287	507	e1,600	1,570	5,590	5,080	3,350	3,950	547	159	222
13	224	309	486	e1,500	1,450	5,500	4,930	3,450	3,600	519	139	223
14	226	315	470	e1,300	1,390	6,010	4,970	3,310	3,190	497	131	224
15	233	316	501	e1,200	1,280	6,080	5,110	3,040	2,860	466	129	216
16	251	330	524	e1,300	1,370	6,290	5,010	2,820	2,640	440	131	206
17	261	334	753	e1,400	1,660	6,170	4,720	2,730	2,440	405	128	201
18	273	315	692	e1,500	2,490	6,190	4,270	3,040	2,240	376	123	238
19	279	301	621	e1,600	4,260	6,690	4,000	3,350	2,060	362	122	303
20	287	344	570	e1,500	6,570	7,470	3,740	4,820	1,920	351	114	319
21	301	362	549	e1,400	5,330	7,070	3,560	5,730	1,810	351	104	309
22	299	357	500	e1,300	4,350	6,370	3,670	6,480	1,690	472	113	297
23	280	338	519	e1,200	3,780	6,830	4,020	6,630	1,570	464	128	292
24	266	344	585	1,530	3,370	7,880	4,030	8,010	1,470	413	155	298
25	261	345	575	1,870	3,220	8,320	3,960	10,800	1,380	367	167	295
26	255	332	530	2,510	3,240	7,620	3,830	8,480	1,300	320	171	294
27	251	314	550	2,450	3,130	7,020	3,740	7,070	1,240	296	253	280
28	254	308	622	2,190	3,300	6,370	3,790	7,180	1,210	274	365	273
29	260	329	643	2,120	3,150	5,580	4,200	8,260	1,160	250	318	261
30	260	336	e560	2,470	---	5,050	4,650	11,300	1,030	236	345	249
31	266	---	e580	6,610	---	5,090	---	9,060	---	222	430	---
TOTAL	6,780	9,331	16,494	43,610	85,780	162,170	138,010	162,960	92,890	17,235	5,764	7,871
MEAN	219	311	532	1,407	2,958	5,231	4,600	5,257	3,096	556	186	262
MAX	301	362	753	6,610	6,570	8,320	5,750	11,300	7,610	1,120	430	370
MIN	88	256	369	320	1,280	2,340	3,560	2,730	1,030	222	104	201
AC-FT	13,450	18,510	32,720	86,500	170,100	321,700	273,700	323,200	184,200	34,190	11,430	15,610

JOHN DAY RIVER BASIN

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2004, BY WATER YEAR (WY)												
MEAN	329	601	1,167	1,641	2,635	4,016	5,620	5,163	2,677	646	193	182
MAX	892	2,310	7,030	6,402	9,736	11,450	11,900	13,180	9,531	2,131	700	923
(WY)	(1985)	(1974)	(1965)	(1965)	(1996)	(1983)	(1984)	(1917)	(1948)	(1984)	(1984)	(1984)
MIN	59.9	157	221	217	374	557	964	533	285	88.0	5.70	23.8
(WY)	(1937)	(1937)	(1937)	(1937)	(1933)	(1977)	(1968)	(1934)	(1992)	(1926)	(1973)	(1934)
SUMMARY STATISTICS												
	FOR 2003 CALENDAR YEAR					FOR 2004 WATER YEAR			WATER YEARS 1906 - 2004			
ANNUAL TOTAL	571,029					748,895						
ANNUAL MEAN	1,564					2,046			2,066			
HIGHEST ANNUAL MEAN									4,724			
LOWEST ANNUAL MEAN									603			
HIGHEST DAILY MEAN	6,510					Mar 28			39,400			
LOWEST DAILY MEAN	40					Aug 26			Oct 4			
ANNUAL SEVEN-DAY MINIMUM	41					Aug 20			Oct 1			
ANNUAL RUNOFF (AC-FT)	1,133,000					1,485,000			1,497,000			
10 PERCENT EXCEEDS	4,740					5,590			5,760			
50 PERCENT EXCEEDS	576					652			780			
90 PERCENT EXCEEDS	86					206			141			

e Estimated



2004 Water Year
JOHN DAY RIVER BASIN

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR

Latitude: 45° 35 ' 16"

Longitude: 120° 24 ' 30"

Hydrologic Unit Code: 17070204

Sherman County

Datum: 392.27 feet

Drainage Area: 7,580 square miles

