

METHOW RIVER BASIN

12448000 CHEWUCH RIVER AT WINTHROP, WA

LOCATION.--Lat 48°28'38", long 120°11'07", SW 1/4 NW 1/4 sec.2, T.34 N., R.21 E., Okanogan County, Hydrologic Unit 17020008, on right bank, 80 ft downstream from State Road 20 bridge crossing, at northwest end of Winthrop, WA, and at mile 0.18.

DRAINAGE AREA.--525 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1912 to 1913, seasonal records only. October 1991 to current year. Prior to October 1991 published as "Chewack River at Winthrop, WA".

GAGE.--Water-stage recorder. Datum of gage is 1,736.26 ft above NGVD of 1929 (Okanogan County Public Works benchmark). Prior to November 1991, nonrecording gage 10 ft upstream from bridge, and at datum 8.74 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. No known regulation. Several diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--11 years (water years 1992-2002), 392 ft³/s, 283,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,480 ft³/s June 16, 1999, gage height, 8.92 ft; maximum gage height, 9.79 ft June 16, 1999, from outside high-water mark; minimum discharge, 20 ft³/s Sept. 18 and 19, 2001, gage height, 2.24 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s and maximum (*):

Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)
May 21	0730	2,110	6.01	June 6	0530	2,690	6.51
May 30	0500	*3,010	6.77	June 16	0430	2,680	6.50
May 30	0500	--	(a) *7.02				

Minimum discharge, 30 ft³/s Feb. 12, but may have been less during periods of ice effect, gage height 2.48 ft.

(a) From crest-stage gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	63	e67	55	e51	53	79	448	2410	748	112	51
2	58	59	66	57	51	54	77	575	2280	660	106	50
3	54	56	64	54	50	52	78	626	2230	583	103	48
4	51	55	62	52	48	52	81	597	2320	532	100	47
5	50	55	e55	53	48	52	87	552	2470	493	99	47
6	49	54	e59	55	47	51	95	503	2470	450	97	47
7	49	52	e58	58	48	51	105	498	2040	418	101	48
8	48	49	e58	62	48	50	111	444	1760	510	100	51
9	48	50	e53	64	47	48	115	403	1610	536	90	56
10	49	50	e54	60	46	53	118	380	1590	462	85	57
11	53	50	e55	58	46	54	128	372	1620	413	81	57
12	52	50	e55	58	e44	54	141	397	1810	388	76	54
13	51	52	56	56	e46	51	168	496	2040	358	72	51
14	51	68	60	e55	e50	50	265	635	2280	339	69	49
15	51	79	e53	e48	e49	50	304	671	2420	311	66	47
16	51	95	e57	e52	e46	52	281	637	2390	284	67	46
17	51	101	e60	e50	e48	48	261	706	2000	267	61	46
18	51	85	e56	e50	46	48	244	828	1770	249	60	46
19	50	76	e54	e51	47	50	235	853	1510	229	60	45
20	50	83	e50	e54	47	50	239	1480	1340	217	62	45
21	49	84	e54	e53	49	50	249	2010	1270	205	64	45
22	51	84	e57	e49	51	49	271	1720	1260	191	63	45
23	57	79	e54	e49	58	50	279	1500	1250	177	60	44
24	57	72	e56	e52	e54	55	267	1380	1170	166	57	44
25	58	69	e54	e55	e41	60	266	1460	1090	155	58	42
26	57	67	e53	e53	e46	62	264	1600	1020	160	74	43
27	56	63	e51	e50	59	63	260	1760	1000	155	68	42
28	55	68	e60	e48	59	63	255	2260	956	142	63	42
29	53	65	60	e47	---	65	273	2690	996	133	59	41
30	55	e62	57	e50	---	67	336	2760	860	125	56	41
31	61	---	56	e53	---	72	---	2630	---	118	54	---
TOTAL	1632	1995	1762	1661	1370	1679	5932	33871	51232	10174	2343	1417
MEAN	52.65	66.50	56.84	53.58	48.93	54.16	197.7	1093	1708	328.2	75.58	47.23
MAX	61	101	67	64	59	72	336	2760	2470	748	112	57
MIN	48	49	50	47	41	48	77	372	860	118	54	41
AC-FT	3240	3960	3490	3290	2720	3330	11770	67180	101600	20180	4650	2810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	92.36	98.33	82.08	70.36	72.17	103.9	387.9	1454	1568	530.3	157.0	72.98
MAX	176	210	148	111	102	169	761	2671	3348	1414	349	130
(WY)	1998	2000	2000	2000	2000	1996	1996	1998	1999	1999	1999	1999
MIN	52.6	63.4	44.1	40.2	48.9	48.5	59.9	348	278	115	40.2	26.2
(WY)	2002	1995	1993	1993	2002	1993	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1992 - 2002
ANNUAL TOTAL	36600	115068	
ANNUAL MEAN	100.3	315.3	391.7
HIGHEST ANNUAL MEAN			630
LOWEST ANNUAL MEAN			101
HIGHEST DAILY MEAN	930	2760	6010
LOWEST DAILY MEAN	20	41	20
ANNUAL SEVEN-DAY MINIMUM	22	42	22
ANNUAL RUNOFF (AC-FT)	72600	228200	283700
10 PERCENT EXCEEDS	247	1120	1080
50 PERCENT EXCEEDS	55	60	103
90 PERCENT EXCEEDS	30	48	50

e Estimated