Water-Data Report 2012

12448000 CHEWUCH RIVER AT WINTHROP, WA

Upper Columbia Basin
Methow Subbasin

LOCATION.--Lat 48°28′38″, long 120°11′07″ referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.2, T.34 N., R.21 E., Okanogan County, WA, Hydrologic Unit 17020008, on right bank, 80 ft downstream from State Road 20 bridge crossing, at northwest end of Winthrop, WA, and at mile 0.2.

DRAINAGE AREA.--525 mi^2.

SURFACE-WATER 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 fair. No known regulation. Several diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station. Water temperature records April to September 2002.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--21 years (water years 1992-2012), 415 ft^3/s, 300,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,900 ft^3/s May 18, 2006, gage height, 9.61 ft; maximum gage height, 10.06 ft May 19, 2008, from outside high-water mark; minimum discharge, 20 ft^3/s Sept. 18 and 19, 2001, gage height, 2.24 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 18,100 ft^3/s May 29, 1948, determined by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 26	2000	3,240	7.37
Apr 30	0415	2,630	6.85
May 9	0315	2,520	6.75
May 16	0230	*4,190	*8.09
May 22	0515	3,100	7.26
Jun 5	1415	3,400	7.50

Minimum discharge, 46 ft^3/s, Feb. 27, result of freeze up.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 12448000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/12448000.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	119	125	e96	e85	e95	e70	126	2,170	2,550	1,180	272	91
2	142	121	e91	e80	e95	e72	121	1,960	2,690	1,100	257	89
3	143	122	e95	e86	e85	74	124	1,750	2,530	997	241	87
4	169	117	e95	e92	e78	75	127	1,540	2,150	914	230	85
5	194	110	e90	92	e70	81	125	1,380	2,950	828	219	84
6	192	104	e85	89	e70	80	126	1,300	2,530	770	212	81
7	180	106	e85	89	e72	73	123	1,460	2,040	743	207	78
8	170	109	e80	89	e76	79	125	1,840	1,890	732	199	76
9	161	110	e80	87	e78	76	130	2,200	1,750	735	189	78
10	161	110	e80	84	79	77	157	2,000	1,580	733	182	78
11	191	110	e85	e75	80	80	186	1,910	1,580	686	175	76
12	194	110	e80	e60	80	84	223	2,050	1,700	631	169	76
13	178	109	e80	e74	79	84	264	2,450	1,760	583	159	74
14	168	107	e85	e82	77	80	293	2,970	1,820	587	152	73
15	163	102	e85	e90	e72	82	292	3,370	1,640	597	146	70
16	159	93	e85	e81	e75	84	315	3,570	1,680	649	141	67
17	154	103	e85	e80	e75	84	303	3,250	1,780	547	137	65
18	150	113	e90	e78	76	81	310	2,990	1,790	518	133	63
19	148	105	e90	e74	75	81	319	2,700	1,600	463	128	61
20	145	e96	e90	e80	74	83	345	2,410	1,440	437	125	59
21	141	e102	e85	e88	75	82	431	2,540	1,450	495	119	60
22	141	108	e80	e85	76	83	541	2,790	1,490	434	116	77
23	164	118	e80	e84	75	82	984	2,450	1,650	405	116	73
24	161	129	e85	e88	75	83	1,700	2,210	1,590	411	113	74
25	150	115	e85	e90	75	84	2,000	2,050	1,430	376	112	65
26	141	108	e85	e90	73	85	2,730	2,020	1,460	421	109	56
27	136	108	e85	e84	e60	90	2,460	2,060	1,300	417	104	54
28	135	105	e90	e84	e65	98	2,010	2,300	1,190	384	100	53
29	136	104	e100	e90	e70	103	2,080	2,260	1,150	338	99	54
30	132	103	e95	e100	---	123	2,330	2,080	1,150	308	96	53
31	131	---	e85	e100	---	135	---	2,280	---	288	95	---
Total	4,849	3,282	2,687	2,630	2,205	2,628	21,400	70,310	53,310	18,707	4,852	2,130
Mean	156	109	86.7	84.8	76.0	84.8	713	2,268	1,777	603	157	71.0
Max	194	129	100	100	95	135	2,730	3,570	2,950	1,180	272	91
Min	119	93	80	60	60	70	121	1,300	1,150	288	95	53
Ac-ft	9,620	6,510	5,330	5,220	4,370	5,210	42,450	139,500	105,700	37,110	9,620	4,220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	107	111	89.2	79.0	77.0	116	463	1,635	1,573	489	149	78.5
Max	204	210	148	125	118	327	1,139	3,042	3,684	1,414	349	142
(WY)	(2004)	(2000)	(2000)	(2011)	(2007)	(2007)	(2007)	(2006)	(2011)	(1999)	(1999)	(2004)
Min	52.6	50.5	44.1	40.2	48.9	48.5	59.9	348	278	115	40.2	26.2
(WY)	(2002)	(2003)	(1993)	(1993)	(2002)	(1993)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)

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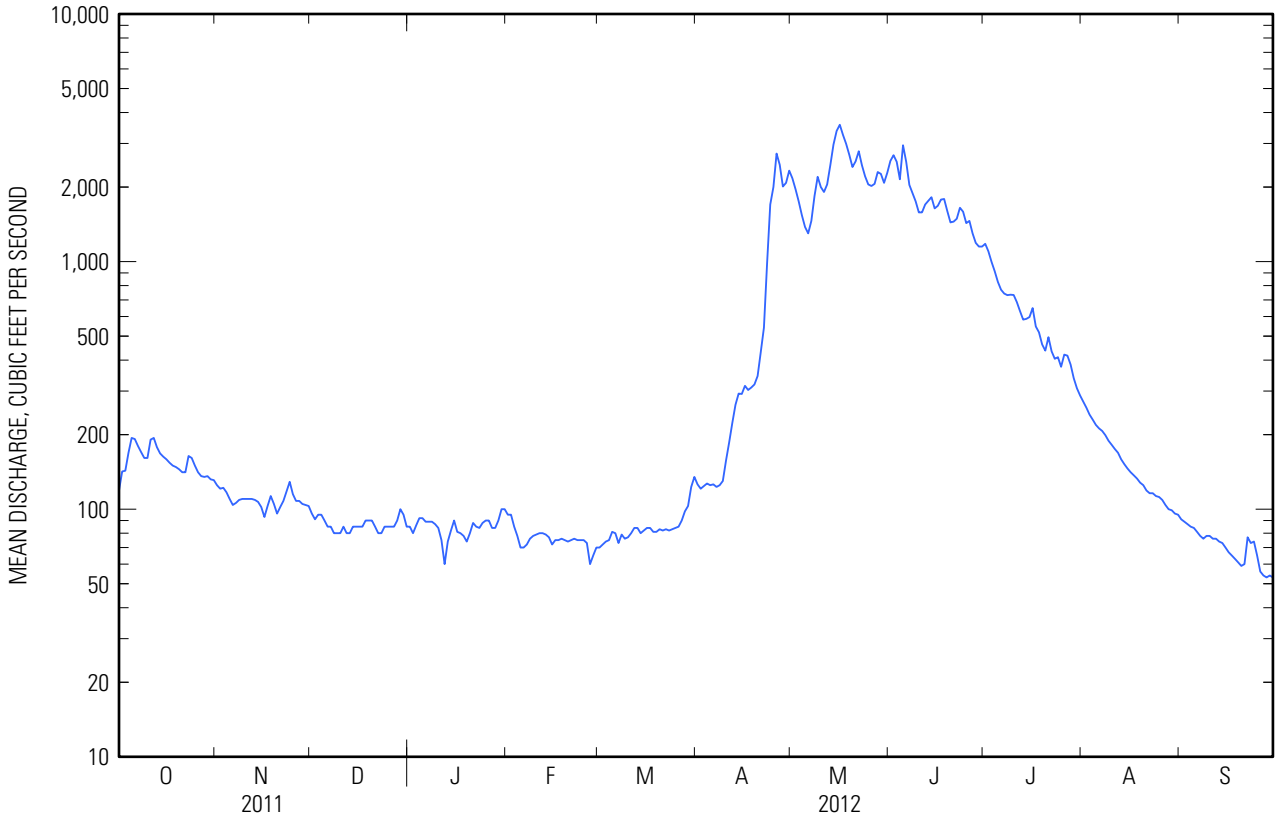
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1992 - 2012	
Annual total	256,723		188,990			
Annual mean	703		516		415	
Highest annual mean					707	2011
Lowest annual mean					101	2001
Highest daily mean	5,790	Jun 7	3,570	May 16	6,830	May 19, 2008
Lowest daily mean	75	Sep 25	53	Sep 28	20	Sep 18, 2001
Annual seven-day minimum	79	Sep 19	58	Sep 24	22	Sep 13, 2001
Annual runoff (ac-ft)	509,200		374,900		300,500	
10 percent exceeds	2,900		1,970		1,220	
50 percent exceeds	141		116		114	
90 percent exceeds	85		75		54