

Water-Data Report 2012

14197900 WILLAMETTE RIVER AT NEWBERG, OR

Willamette Basin
Middle Willamette Subbasin

LOCATION.--Lat 45°17'05", long 122°57'37" referenced to North American Datum of 1927, in sec.68, T.3 S., R.2 W., Yamhill County, OR, Hydrologic Unit 17090007, on left bank, at Newberg and at mile 50.0.

DRAINAGE AREA.--8,350 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder and acoustic velocity meter (AVM). Datum of gage is NGVD of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by many reservoirs upstream. Gage pool elevations possibly affected by Portland General Electric Co. powerplant operations, paper mill operations at Willamette Falls and during summer months by U.S. Army Corps of Engineers locks operations.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--11 years (water years 2002-12), 25,490 ft³/s, 18,460,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 175,000 ft³/s Jan. 22, 2012, gage height, 82.46 ft; maximum gage height, 82.95 ft Jan. 22, 2012; minimum discharge, 5,180 ft³/s July 29, 2007.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 175,000 ft³/s Jan. 22, gage height 82.46 ft; maximum gage height, 82.95 ft Jan. 22; minimum daily discharge, 7,730 ft³/s Aug. 17.

14197900 WILLAMETTE RIVER AT NEWBERG, OR—Continued

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	12,500	13,900	23,900	87,900	88,200	40,500	125,000	40,200	18,800	e14,000	e8,240	e8,330
2	12,800	13,700	21,600	82,200	78,500	44,700	137,000	43,800	17,700	13,700	e8,210	e8,290
3	13,000	13,700	19,800	65,200	68,200	41,500	133,000	45,000	18,000	13,200	e8,180	e8,310
4	13,400	13,900	17,700	56,600	60,500	37,100	118,000	49,300	17,300	12,700	e8,450	e8,540
5	13,300	13,600	16,000	52,200	55,400	34,600	102,000	52,200	18,600	12,700	e8,440	e8,780
6	13,700	13,600	14,100	50,600	52,000	35,500	91,700	50,500	28,500	12,500	e8,400	e8,920
7	13,900	13,600	13,100	46,600	49,300	36,300	82,100	46,000	34,100	12,200	e8,250	e9,020
8	13,900	13,200	12,200	40,900	45,200	33,400	69,400	40,900	34,100	11,800	e8,170	e9,170
9	14,300	13,300	11,800	35,400	39,800	29,900	56,100	38,500	33,200	11,300	e8,170	e9,620
10	14,500	12,700	12,300	31,900	36,500	28,300	e47,700	35,000	34,700	e10,800	e8,120	e10,000
11	14,900	12,600	12,700	28,600	31,900	28,700	42,300	29,500	34,200	e10,600	e8,090	e10,200
12	15,900	12,500	12,200	24,800	30,600	32,600	e41,100	26,800	29,700	e10,400	e8,050	e10,300
13	16,300	12,100	11,800	22,200	28,100	44,400	e41,600	24,900	26,200	e10,200	e8,100	e10,300
14	15,600	11,800	11,700	20,100	26,200	57,900	40,200	23,900	23,500	e9,850	e8,080	e10,300
15	15,100	12,500	11,300	18,300	24,500	61,400	37,600	23,400	21,600	e9,690	e7,930	e10,400
16	14,600	12,800	11,100	17,400	23,000	79,700	35,500	23,500	20,000	e9,680	e7,800	e10,500
17	14,600	13,300	10,700	17,900	21,400	96,100	38,800	23,400	20,300	e9,540	e7,730	e10,700
18	14,300	19,500	9,830	32,100	21,200	99,300	44,800	23,200	19,300	e9,390	e7,840	e10,700
19	14,400	22,500	9,560	63,000	23,500	89,800	48,600	21,500	17,700	e9,400	e8,120	e11,000
20	14,200	21,700	9,440	99,700	24,100	73,100	51,200	19,800	16,400	e9,300	e8,360	e11,000
21	14,000	18,900	8,990	142,000	24,900	69,000	55,400	18,400	16,000	e9,200	e8,360	e11,100
22	14,100	19,700	8,930	164,000	31,000	82,900	53,300	19,100	15,000	e9,060	e8,310	e11,400
23	14,200	37,800	8,940	145,000	42,800	93,800	49,200	23,000	14,800	e9,080	e8,320	e11,600
24	14,200	46,400	8,840	121,000	45,500	99,000	e46,000	24,400	15,800	e8,960	e8,310	e11,300
25	13,800	42,900	8,790	e117,000	41,400	91,100	45,100	27,100	17,300	e8,810	e8,250	e11,000
26	14,000	38,000	8,930	120,000	40,900	78,000	49,100	30,800	17,200	e8,670	e8,220	e10,900
27	13,900	32,700	9,090	123,000	38,900	68,500	53,300	31,700	16,400	e8,520	e8,260	e10,800
28	13,700	30,000	11,200	122,000	34,000	63,900	54,300	30,600	16,000	e8,460	e8,170	e10,700
29	13,700	28,600	31,000	114,000	32,600	65,500	49,400	27,600	15,000	e8,480	e8,210	e10,700
30	13,700	26,000	54,900	104,000	---	81,100	42,600	24,300	14,200	e8,450	e8,280	e10,800
31	13,700	---	75,600	97,200	---	107,000	---	21,400	---	e8,320	e8,280	---
Total	438,200	607,500	508,040	2,262,800	1,160,100	1,924,600	1,881,400	959,700	641,600	318,960	253,700	304,680
Mean	14,140	20,250	16,390	72,990	40,000	62,080	62,710	30,960	21,390	10,290	8,184	10,160
Max	16,300	46,400	75,600	164,000	88,200	107,000	137,000	52,200	34,700	14,000	8,450	11,600
Min	12,500	11,800	8,790	17,400	21,200	28,300	35,500	18,400	14,200	8,320	7,730	8,290
Ac-ft	869,200	1,205,000	1,008,000	4,488,000	2,301,000	3,817,000	3,732,000	1,904,000	1,273,000	632,700	503,200	604,300

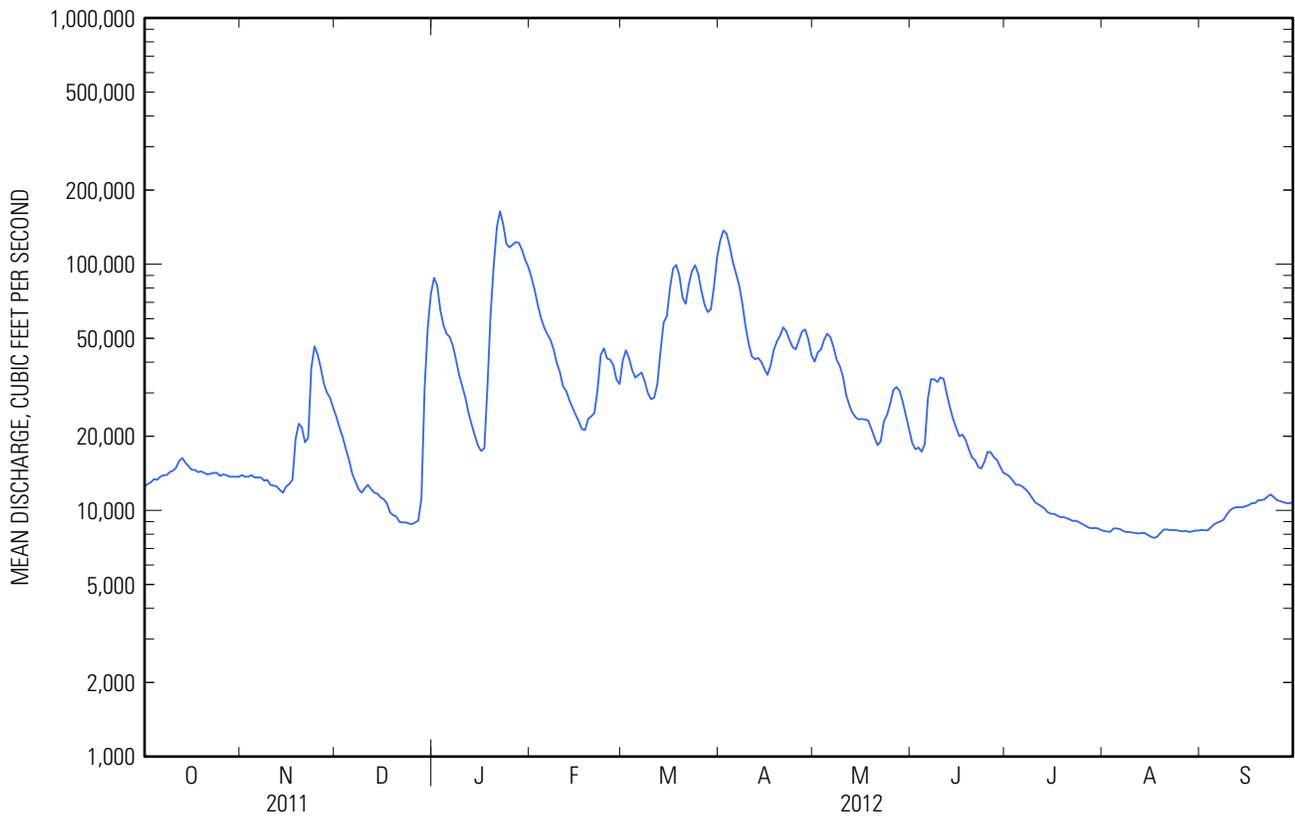
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	11,550	24,960	43,740	60,310	32,460	33,910	32,540	23,650	18,320	8,458	7,254	8,737
Max	15,070	55,860	70,860	124,500	50,190	62,080	62,710	33,450	38,010	11,550	8,191	10,160
(WY)	(2005)	(2007)	(2011)	(2006)	(2006)	(2012)	(2012)	(2008)	(2010)	(2010)	(2010)	(2012)
Min	7,610	11,470	16,390	17,040	11,030	14,600	20,180	16,160	10,510	6,530	6,054	6,917
(WY)	(2002)	(2004)	(2012)	(2005)	(2005)	(2005)	(2004)	(2007)	(2007)	(2007)	(2003)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 2002 - 2012	
Annual total	9,360,720		11,261,280			
Annual mean	25,650		30,770		25,490	
Highest annual mean					31,160	2011
Lowest annual mean					16,300	2005
Highest daily mean	114,000	Jan 19	164,000	Jan 22	164,000	Jan 22, 2012
Lowest daily mean	7,420	Aug 24	7,730	Aug 17	5,700	Aug 23, 2003
Annual seven-day minimum	7,560	Aug 18	7,930	Aug 12	5,980	Aug 10, 2003
Annual runoff (ac-ft)	18,570,000		22,340,000		18,460,000	
10 percent exceeds	52,000		70,500		56,500	
50 percent exceeds	18,900		18,400		17,400	
90 percent exceeds	8,820		8,460		7,160	



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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 2001 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--

WATER TEMPERATURE: Records poor.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 26.4°C July 30, 2009; minimum, 0.8°C Dec. 11, 2009.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 22.3°C July 11, 12, but may have been higher during period of missing record; minimum, 4.3°C Dec. 14, 15, but may have been lower during period of missing record.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	15.2	14.9	15.1	12.8	12.1	12.3	8.4	8.0	8.1	---	---	---
2	14.9	14.6	14.8	12.1	10.8	11.3	8.0	7.5	7.7	---	---	---
3	14.6	14.3	14.4	10.8	10.5	10.7	7.5	6.8	7.0	---	---	---
4	14.4	14.1	14.2	10.5	10.1	10.2	6.8	6.2	6.4	---	---	---
5	14.1	13.9	14.0	10.2	9.9	10.0	6.2	5.8	5.9	---	---	---
6	14.0	13.7	13.9	10.2	9.8	9.9	5.9	5.6	5.7	---	---	---
7	13.9	13.6	13.7	10.2	10.1	10.2	5.6	5.4	5.5	---	---	---
8	13.9	13.5	13.7	10.2	10.1	10.1	5.4	5.1	5.2	---	---	---
9	14.0	13.7	13.9	10.3	10.1	10.2	5.1	4.8	4.9	---	---	---
10	14.1	13.9	14.0	10.2	9.9	10.0	5.0	4.8	4.9	---	---	---
11	14.4	14.0	14.1	9.9	9.6	9.7	5.1	4.8	4.9	---	---	---
12	14.4	14.1	14.3	9.9	9.6	9.7	5.1	4.9	5.0	5.8	5.2	5.4
13	14.3	13.7	13.9	10.1	9.8	10.0	4.9	4.6	4.7	5.2	4.7	4.8
14	13.7	13.3	13.5	10.2	10.1	10.1	4.7	4.3	4.4	4.7	4.4	4.6
15	13.7	13.2	13.4	10.2	9.9	10.0	4.8	4.3	4.4	4.8	4.5	4.6
16	13.8	13.5	13.7	9.9	9.5	9.6	5.6	4.8	5.1	4.8	4.6	4.6
17	13.8	13.4	13.6	9.7	9.6	9.6	5.9	5.6	5.8	4.6	4.4	4.5
18	13.7	13.2	13.4	9.6	9.0	9.3	6.1	5.9	6.0	4.7	4.4	4.5
19	13.6	13.2	13.3	9.0	8.3	8.6	6.2	6.1	6.1	6.6	4.7	5.6
20	13.5	13.1	13.3	8.3	7.6	7.8	6.1	6.0	6.0	7.5	6.6	7.1
21	13.6	13.3	13.4	7.6	7.4	7.5	6.0	5.9	6.0	7.7	7.5	7.6
22	14.1	13.6	13.8	8.5	7.6	7.9	5.9	5.5	5.6	7.7	7.4	7.6
23	14.2	14.0	14.1	9.2	8.5	9.0	5.7	5.5	5.6	7.4	6.8	7.1
24	14.1	13.7	13.9	9.2	8.7	9.0	5.5	5.0	5.2	6.8	6.7	6.7
25	13.9	12.8	13.3	8.7	8.2	8.3	5.0	5.0	5.0	---	---	---
26	12.8	11.8	12.1	8.5	8.2	8.3	5.0	4.8	4.9	7.7	7.2	7.5
27	11.8	11.4	11.6	8.6	8.3	8.4	5.6	4.9	5.2	7.6	6.9	7.3
28	11.4	11.1	11.3	8.8	8.5	8.6	6.7	5.6	6.0	6.9	6.2	6.5
29	11.9	11.4	11.6	8.6	8.3	8.4	8.0	6.7	7.5	6.2	6.1	6.1
30	12.9	11.9	12.3	8.4	8.2	8.3	8.3	8.0	8.1	6.6	6.2	6.4
31	13.0	12.8	12.9	---	---	---	8.3	7.4	7.9	7.0	6.6	6.8
Month	15.2	11.1	13.5	12.8	7.4	9.4	8.4	4.3	5.8	---	---	---

14197900 WILLAMETTE RIVER AT NEWBERG, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	7.2	7.0	7.1	5.8	5.4	5.6	8.1	7.9	8.0	11.7	11.0	11.3
2	7.1	6.9	7.1	6.1	5.6	5.8	---	---	---	11.0	10.1	10.4
3	6.9	6.5	6.8	7.2	6.1	6.6	---	---	---	10.4	9.8	10.1
4	6.5	6.3	6.4	8.0	7.1	7.5	---	---	---	10.7	10.0	10.3
5	6.4	6.1	6.2	8.0	7.7	7.8	---	---	---	10.4	9.8	10.0
6	6.4	6.0	6.1	7.7	7.3	7.4	---	---	---	10.6	9.4	9.9
7	6.2	5.9	6.1	7.3	6.7	6.9	8.4	7.7	8.0	11.8	10.2	10.9
8	6.3	6.0	6.1	7.1	6.4	6.7	9.0	8.1	8.5	13.0	11.4	12.1
9	7.1	6.3	6.7	7.8	6.8	7.2	9.9	9.0	9.4	13.0	12.3	12.7
10	7.9	7.1	7.5	8.3	7.7	7.9	10.4	9.7	10.0	12.8	12.0	12.4
11	8.2	7.7	7.9	8.4	8.1	8.2	10.5	10.0	10.2	12.9	11.7	12.2
12	8.3	8.0	8.1	8.2	7.5	7.8	10.4	9.9	10.1	13.5	12.0	12.6
13	8.2	7.8	8.0	7.5	6.7	7.0	10.5	9.7	10.1	14.6	12.8	13.5
14	7.8	7.5	7.6	6.7	6.3	6.5	10.5	9.7	10.1	15.7	14.1	14.7
15	7.5	7.1	7.2	7.4	6.6	6.9	10.8	9.9	10.3	16.0	14.7	15.3
16	7.1	6.6	6.8	7.9	7.4	7.6	11.2	10.5	10.8	16.0	14.8	15.4
17	7.0	6.6	6.8	8.1	7.7	7.9	11.1	10.2	10.6	15.6	14.1	14.7
18	7.3	6.8	7.0	8.0	7.7	7.9	10.2	9.3	9.5	15.0	13.7	14.2
19	7.4	7.0	7.2	7.7	7.2	7.4	9.5	9.0	9.3	14.5	13.3	13.8
20	7.4	7.1	7.2	7.2	6.9	7.0	9.8	9.3	9.5	14.0	13.3	13.5
21	7.9	7.3	7.5	6.9	6.2	6.7	10.8	9.7	10.2	13.5	13.2	13.3
22	8.4	7.9	8.1	6.2	5.3	5.5	11.9	10.5	11.1	13.3	12.7	13.0
23	8.2	7.7	8.0	6.4	5.3	5.8	13.0	11.5	12.2	12.8	12.1	12.5
24	7.7	7.3	7.5	7.6	6.4	6.9	13.1	12.5	12.8	12.5	12.0	12.2
25	7.3	6.9	7.1	8.2	7.6	7.9	12.8	11.6	12.1	12.6	11.4	12.0
26	7.1	6.7	6.9	8.1	7.7	7.9	11.6	10.9	11.1	12.9	11.9	12.3
27	6.7	6.3	6.5	8.1	7.6	7.9	10.9	10.0	10.4	12.9	12.2	12.4
28	6.5	6.3	6.3	8.3	8.0	8.1	10.3	9.7	10.0	12.6	11.9	12.3
29	6.3	5.8	5.9	8.3	8.1	8.2	11.2	10.0	10.5	13.5	12.2	12.7
30	---	---	---	8.5	8.3	8.4	11.8	11.0	11.3	14.3	12.9	13.4
31	---	---	---	8.5	8.0	8.2	---	---	---	15.1	14.0	14.4
Month	8.4	5.8	7.0	8.5	5.3	7.3	---	---	---	16.0	9.4	12.6

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	16.6	15.0	15.5	---	---	---	---	---	---	---	---	---
2	17.2	15.9	16.4	17.2	16.2	16.5	---	---	---	---	---	---
3	17.2	16.0	16.4	17.7	16.9	17.2	---	---	---	---	---	---
4	16.1	14.8	15.4	18.1	17.2	17.6	---	---	---	---	---	---
5	14.8	14.0	14.4	18.8	17.6	18.0	---	---	---	---	---	---
6	14.4	13.0	13.6	19.6	18.4	18.8	---	---	---	---	---	---
7	14.0	13.0	13.5	20.3	19.2	19.6	---	---	---	---	---	---
8	13.9	13.4	13.6	21.1	20.0	20.4	---	---	---	---	---	---
9	13.5	12.5	12.8	21.6	20.6	21.0	---	---	---	---	---	---
10	13.5	12.0	12.7	21.8	20.9	21.3	---	---	---	---	---	---
11	14.3	12.8	13.5	22.3	21.3	21.7	---	---	---	---	---	---
12	14.8	13.9	14.3	22.3	21.6	22.0	---	---	---	---	---	---
13	14.9	14.2	14.6	22.2	21.2	21.7	---	---	---	---	---	---
14	15.6	14.3	14.8	22.2	21.4	21.8	---	---	---	---	---	---
15	16.5	14.9	15.5	22.2	21.3	21.7	---	---	---	---	---	---
16	17.8	16.0	16.7	21.6	20.9	21.3	---	---	---	---	---	---
17	18.5	17.2	17.8	21.5	20.6	20.9	---	---	---	---	---	---
18	18.4	17.0	17.6	20.9	20.1	20.4	---	---	---	---	---	---
19	17.9	16.4	16.9	20.5	19.6	19.9	---	---	---	---	---	---
20	16.6	15.5	16.0	---	---	---	---	---	---	---	---	---
21	17.5	15.9	16.5	---	---	---	---	---	---	---	---	---
22	17.5	16.8	17.1	---	---	---	---	---	---	---	---	---
23	17.1	16.5	16.8	---	---	---	---	---	---	---	---	---
24	17.1	16.0	16.5	---	---	---	---	---	---	---	---	---
25	16.6	15.8	16.1	---	---	---	---	---	---	---	---	---
26	16.1	15.5	15.8	---	---	---	---	---	---	---	---	---
27	16.4	15.2	15.7	---	---	---	---	---	---	---	---	---
28	16.6	15.7	16.1	---	---	---	---	---	---	---	---	---
29	17.0	16.4	16.6	---	---	---	---	---	---	---	---	---
30	17.1	16.7	16.8	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	18.5	12.0	15.5	---	---	---	---	---	---	---	---	---