Water-Data Report 2013

05464420 Cedar River at Blairs Ferry Road at Palo, IA

Iowa Basin
Middle Cedar Subbasin

LOCATION.--Lat 42°04′09″, long 91°47′06″ referenced to North American Datum of 1927, in SE ¼ SE ¼ SW ¼ sec.21, T.84 N., R.8 W., Linn County, IA, Hydrologic Unit 07080205, on right bank 5 ft downstream from bridge on Blairs Ferry Road in Palo, 0.6 mi downstream from Bear Creek, 800 ft upstream from Dry Creek, and 100 mi upstream from mouth.

DRAINAGE AREA.--6,342 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from March 2009 to current year.

GAGE.--Water-stage recorder. Datum of gage is 725.71 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Geological Survey data collection platform with satellite telemetry at station.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 05464420, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/05464420.2013.pdf

05464420 Cedar River at Blairs Ferry Road at Palo, IA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	533	1,000	715	e439	e1,280	e992	10,200	7,600	65,300	24,800	5,370	2,100
2	536	868	715	e332	e1,180	e1,020	11,700	7,400	61,000	19,900	4,840	2,030
3	531	827	749	e386	e961	e967	12,400	7,510	44,900	16,300	4,500	1,940
4	534	798	736	e375	e843	e918	11,400	10,700	35,200	13,800	4,240	1,870
5	525	777	739	e346	e837	e874	7,950	15,100	31,100	12,200	4,140	1,810
6	524	775	742	e373	e701	e936	6,140	16,900	28,700	10,900	4,240	1,770
7	520	779	720	e388	e831	e973	5,330	18,300	25,000	10,000	4,030	1,750
8	517	774	687	e423	e781	e948	5,000	20,300	23,100	9,200	4,410	1,710
9	510	759	708	e428	e750	e1,210	5,370	23,800	21,500	8,560	5,000	1,700
10	518	749	712	e466	e1,180	9,030	6,330	25,000	18,800	8,140	4,660	1,640
11	528	844	729	e493	e2,300	23,600	7,880	24,800	16,400	7,550	4,260	1,590
12	513	909	735	e493	e2,820	28,200	9,510	22,000	15,600	7,190	3,900	1,570
13	561	919	674	e517	e2,820	28,300	11,100	18,900	15,500	6,750	e4,000	1,570
14	680	761	635	e486	e2,500	27,200	11,600	15,900	16,000	6,390	4,270	1,460
15	1,010	804	676	e463	e2,370	22,900	11,200	13,400	17,900	6,070	4,400	1,450
16	1,240	797	727	e473	e2,290	18,600	10,800	11,500	23,000	7,260	4,310	1,450
17	1,000	776	788	e522	e2,190	14,200	11,700	10,200	30,700	8,420	4,000	1,430
18	893	765	788	e504	e1,920	12,200	22,200	9,190	29,100	7,880	3,710	1,470
19	835	761	791	e406	e1,760	11,200	23,900	8,730	22,600	7,150	3,480	1,560
20	794	769	809	e443	e1,540	8,980	21,100	10,600	17,900	6,500	3,270	1,720
21	773	791	e321	e479	e1,180	6,560	17,300	14,800	15,400	5,960	3,000	1,700
22	784	784	e252	e377	e1,250	5,470	14,900	18,900	15,900	5,570	2,920	1,560
23	801	749	e317	e343	e1,360	4,850	12,900	23,000	15,600	5,280	2,880	1,480
24	818	741	e521	e419	e1,330	4,640	11,200	33,200	14,100	4,980	2,860	1,400
25	821	726	e572	e441	e1,170	4,870	10,300	39,500	18,400	4,720	2,730	1,350
26	981	727	e492	e408	e1,100	4,750	10,300	33,000	26,600	5,400	2,670	1,330
27	829	688	e403	e463	e1,070	4,350	10,300	30,700	38,500	6,050	2,600	1,300
28	802	714	e461	e499	e930	4,590	9,620	32,200	41,000	6,290	2,500	1,310
29	804	686	e503	e533	---	5,430	8,630	37,800	35,400	6,580	2,410	1,310
30	814	698	e481	e607	---	6,530	7,970	54,900	30,000	6,410	2,370	1,220
31	982	---	e444	e1,670	---	8,480	---	58,100	---	6,060	2,190	---
Total	22,511	23,515	19,342	14,995	41,244	273,768	336,230	673,930	810,200	268,260	114,160	47,550
Mean	726	784	624	484	1,473	8,831	11,210	21,740	27,010	8,654	3,683	1,585
Max	1,240	1,000	809	1,670	2,820	28,300	23,900	58,100	65,300	24,800	5,370	2,100
Min	510	686	252	332	701	874	5,000	7,400	14,100	4,720	2,190	1,220
Ac-ft	44,650	46,640	38,360	29,740	81,810	543,000	666,900	1,337,000	1,607,000	532,100	226,400	94,320
Cfsm	0.11	0.12	0.10	0.08	0.23	1.39	1.77	3.43	4.26	1.36	0.58	0.25
In.	0.13	0.14	0.11	0.09	0.24	1.61	1.97	3.95	4.75	1.57	0.67	0.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2009 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3,383	3,854	2,270	2,134	3,012	10,630	7,917	11,500	12,810	7,960	4,037	2,248
Max	6,639	9,617	3,975	3,717	6,397	19,360	11,210	21,740	27,010	15,740	8,022	5,063
(WY)	(2010)	(2010)	(2010)	(2010)	(2011)	(2010)	(2013)	(2013)	(2013)	(2010)	(2010)	(2010)
Min	726	784	624	484	1,451	2,819	3,556	5,077	2,397	1,084	675	582
(WY)	(2013)	(2013)	(2013)	(2013)	(2012)	(2012)	(2012)	(2012)	(2012)	(2012)	(2012)	(2012)

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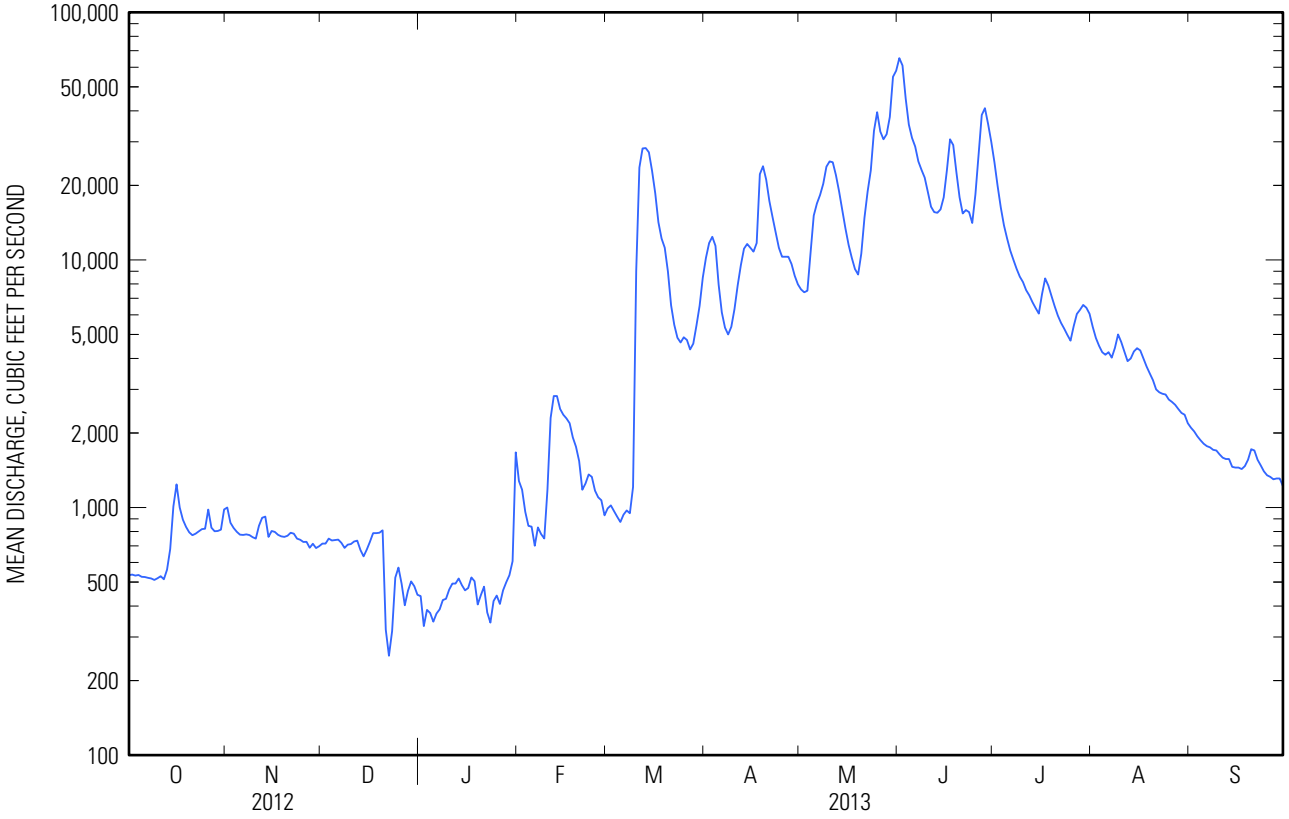
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 2009 - 2013	
Annual total	642,900		2,645,705			
Annual mean	1,757		7,249		6,067	
Highest annual mean					8,975	2010
Lowest annual mean					1,933	2012
Highest daily mean	9,600	May 10	65,300	Jun 1	65,300	Jun 1, 2013
Lowest daily mean	252	Dec 22	252	Dec 22	252	Dec 22, 2012
Annual seven-day minimum	411	Dec 21	375	Jan 2	375	Jan 2, 2013
Maximum peak flow			68,100	Jun 1	68,100	Jun 1, 2013
Maximum peak stage			15.67	Jun 1	15.67	Jun 1, 2013
Annual runoff (ac-ft)	1,275,000		5,248,000		4,395,000	
Annual runoff (cfsm)	0.277		1.14		0.957	
Annual runoff (inches)	3.77		15.52		13.00	
10 percent exceeds	3,760		22,400		14,700	
50 percent exceeds	1,210		2,100		3,270	
90 percent exceeds	562		512		749	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1992, 2001-2002, 2004, 2011-2012. Period of record includes water-quality data published in USGS annual reports and various project reports.

PERIOD OF DAILY RECORD.--
NITRATE + NITRITE: October 2012 to current year, records fragmentary.
WATER TEMPERATURE: October 2012 to current year, records fragmentary.

NITRATE PLUS NITRITE, WATER, IN SITU, MILLIGRAMS PER LITER AS NITROGEN
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	---	---	---	---	---	---	12.7	10.6	12.7	8.59	---
2	---	---	---	---	---	---	---	12.0	10.8	12.4	7.99	---
3	---	---	---	---	---	---	---	---	12.9	12.2	7.49	---
4	---	---	---	---	---	---	---	---	14.3	12.0	7.02	---
5	---	---	---	---	---	---	---	---	13.7	11.6	6.36	---
6	---	---	---	---	---	---	---	---	13.2	11.1	5.83	---
7	---	---	---	---	---	---	---	15.7	13.8	10.8	2.74	---
8	---	---	---	---	---	---	---	---	14.0	10.3	5.88	---
9	---	---	---	---	---	---	---	---	14.4	9.86	6.03	---
10	---	---	---	---	---	---	---	18.3	14.5	9.39	6.20	---
11	---	---	---	---	---	---	---	18.5	14.3	8.86	6.57	---
12	---	---	---	---	---	---	---	18.3	13.7	8.30	6.54	---
13	---	---	---	---	---	---	---	17.9	12.9	8.08	---	---
14	1.78	---	---	---	---	---	---	17.3	12.3	7.96	---	---
15	2.29	---	---	---	---	---	---	16.5	11.5	7.68	6.15	---
16	2.06	---	---	---	---	---	---	15.7	8.44	7.59	6.37	---
17	1.27	---	---	---	---	---	---	14.9	8.67	7.15	6.56	---
18	---	---	---	---	---	---	---	14.1	10.8	8.01	6.43	---
19	---	---	---	---	---	---	---	13.2	12.2	8.16	6.02	---
20	---	---	---	---	---	---	---	12.2	12.5	7.98	5.56	---
21	---	---	---	---	---	---	---	12.6	12.1	7.71	5.17	---
22	1.60	---	---	---	---	---	---	13.6	11.2	7.32	5.06	---
23	1.39	---	---	---	---	---	---	11.9	11.1	6.84	4.88	---
24	1.33	---	---	---	---	---	---	9.98	10.4	6.37	4.63	---
25	---	---	---	---	---	---	---	11.2	8.71	6.17	4.35	2.39
26	---	---	---	---	---	---	---	13.5	8.15	5.79	---	2.52
27	---	---	---	---	---	---	15.5	13.7	---	5.97	---	2.55
28	---	---	---	---	---	---	15.4	12.9	---	6.10	---	2.61
29	---	---	---	---	---	---	14.4	11.4	11.1	7.09	---	2.66
30	---	---	---	---	---	---	13.9	8.82	12.4	7.63	---	2.43
31	---	---	---	---	---	---	---	10.8	---	8.57	---	---
Mean	---	---	---	---	---	---	---	---	---	8.63	---	---
Max	---	---	---	---	---	---	---	---	---	12.7	---	---
Min	---	---	---	---	---	---	---	---	---	5.79	---	---

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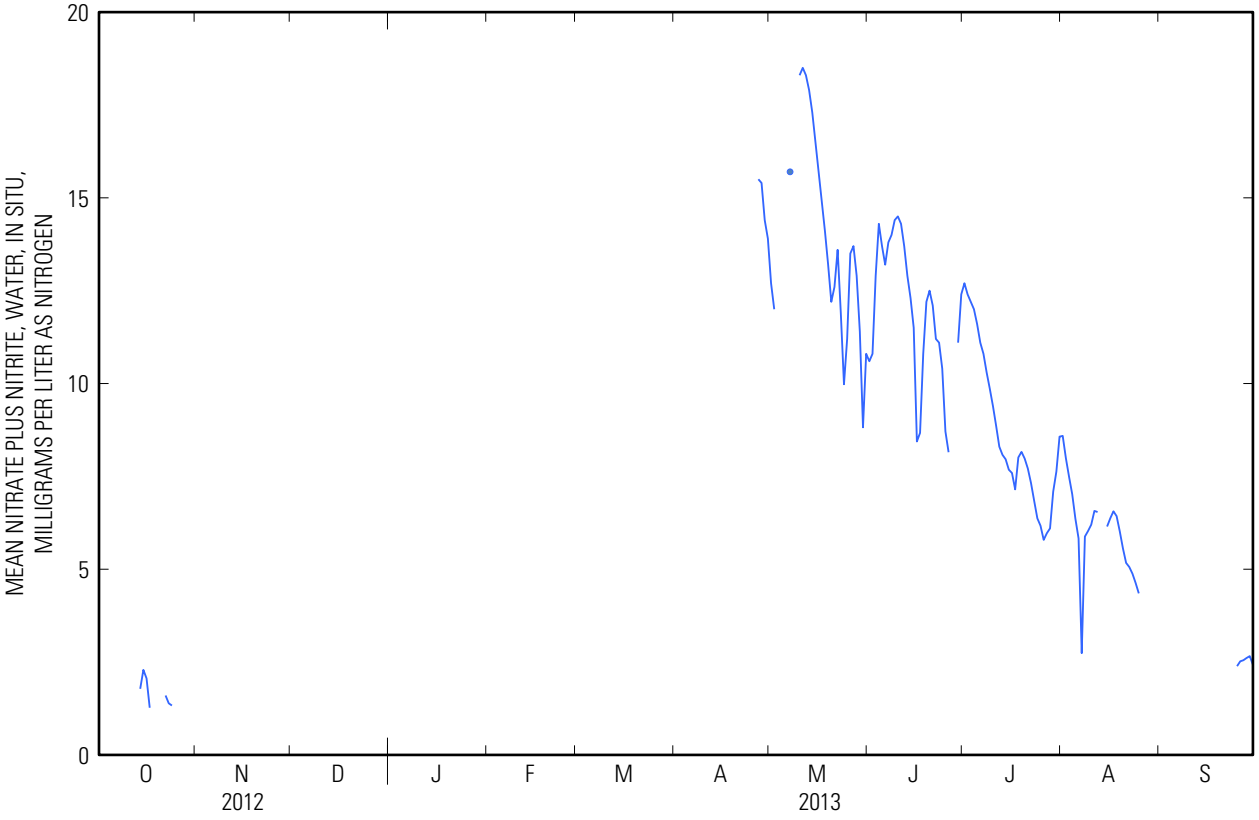

05464420 Cedar River at Blairs Ferry Road at Palo, IA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	7.4	3.7	0.3	0.2	0.5	4.7	18.1	19.5	22.3	23.1	27.8
2	---	7.3	5.8	0.3	0.2	0.6	4.2	14.6	19.3	22.4	24.3	25.8
3	---	7.6	8.2	0.2	0.2	0.6	4.3	10.3	19.1	22.6	24.4	24.1
4	---	8.0	7.9	0.3	0.2	0.6	5.1	8.2	18.4	23.3	24.2	23.9
5	---	8.4	5.1	0.4	0.3	0.5	6.7	9.7	17.3	23.9	23.7	25.3
6	---	7.2	4.6	0.3	0.3	0.5	7.4	11.5	16.9	24.6	24.2	25.5
7	---	7.2	5.2	0.4	0.3	0.6	8.6	13.2	17.0	25.3	25.4	25.8
8	---	7.5	4.7	0.5	0.3	0.8	11.0	---	17.5	26.4	25.1	25.5
9	---	8.2	3.6	0.5	0.3	0.6	11.9	---	17.7	27.1	24.8	25.5
10	---	11.3	1.3	0.5	0.5	0.2	9.1	15.0	18.1	27.3	24.5	26.1
11	---	12.0	0.2	0.7	0.3	0.2	7.5	14.8	19.3	26.7	24.5	26.1
12	---	5.6	0.5	0.4	0.3	0.3	6.7	14.2	20.7	26.2	24.6	24.7
13	11.8	3.5	1.0	0.2	0.4	0.4	6.0	14.1	21.9	24.7	---	22.5
14	13.7	5.1	1.7	0.3	0.4	0.6	6.3	15.1	22.1	24.0	---	20.9
15	12.6	6.1	4.0	0.4	0.3	1.1	7.4	17.2	21.9	25.1	23.1	19.7
16	13.7	6.1	4.6	0.4	0.3	1.4	7.2	18.5	22.2	26.1	23.0	---
17	13.9	6.1	3.0	0.4	0.4	1.3	7.2	20.0	22.8	27.1	23.3	17.8
18	11.3	6.7	2.0	0.6	0.4	1.4	7.3	20.7	23.1	28.3	23.6	18.9
19	10.4	7.9	2.1	0.6	0.3	0.6	6.3	21.3	23.1	28.4	23.6	21.6
20	10.6	8.1	0.2	0.2	0.4	0.4	5.9	21.7	23.4	27.9	24.0	21.0
21	11.7	8.4	0.1	0.2	0.3	0.7	7.0	20.8	23.6	27.3	25.1	18.8
22	15.1	8.8	0.1	0.2	0.4	1.6	8.3	19.6	24.0	26.7	24.9	18.5
23	17.8	4.9	0.2	0.2	0.5	3.3	8.7	18.7	24.8	26.1	24.8	18.6
24	19.6	1.4	0.2	0.2	0.6	3.7	8.7	18.5	23.1	25.0	25.3	18.5
25	17.5	1.6	0.2	0.2	0.6	3.4	---	17.6	21.6	24.8	26.3	18.6
26	11.0	1.7	0.2	0.2	0.4	3.5	10.2	15.7	22.3	24.5	27.0	19.3
27	8.9	0.2	0.3	0.2	0.5	4.6	11.5	14.6	22.8	22.9	27.9	20.3
28	8.1	0.5	0.4	0.4	0.6	---	13.0	15.5	23.1	21.8	28.8	19.5
29	7.7	1.5	0.3	0.5	---	6.8	14.8	16.4	23.0	21.9	29.2	18.1
30	7.6	2.8	0.3	0.2	---	6.8	17.0	18.6	22.5	21.6	29.7	17.9
31	7.0	---	0.2	0.2	---	6.0	---	18.6	---	21.6	29.1	---
Mean	---	6.0	2.3	0.3	0.4	---	---	---	21.1	25.0	---	---
Max	---	12.0	8.2	0.7	0.6	---	---	---	24.8	28.4	---	---
Min	---	0.2	0.1	0.2	0.2	---	---	---	16.9	21.6	---	---