

Water-Data Report 2012

05464765 Cedar River at Highway 30 near Bertram, IA

Iowa Basin
Lower Cedar Subbasin

LOCATION.--Lat 41°55'33.8", long 91°33'03.1" referenced to North American Datum of 1927, in SE ¼ SW ¼ NW ¼ sec.9, T.82 N., R.6 W., Linn County, IA, Hydrologic Unit 07080206, at bridge on U.S. Highway 30 in Cedar Rapids, 0.3 mi downstream from Big Creek, 3.3 mi downstream from Indian Creek, and 75.6 mi upstream from mouth.

DRAINAGE AREA.--6,960 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2001-2002, 2008, 2011-2012. Period of record includes water-quality data published in USGS annual reports and various project reports.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 1 of 12

[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, water, unfiltered, µS/cm at 25°C (90095)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	alpha-HCH-d6, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91065)
09-27-2012 1545	516	19.7	9.4	8.9	621	571	20.2	20	100

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 2 of 12

[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Diazinon-d10, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91063)	Dissolved solids, dried at 180°C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, mg/L (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Non-carbonate hardness, water, filtered, mg/L as CaCO ₃ (00904)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
09-27-2012 1545	109	342	334	168	39	45	28.9	23.2	5.90

05464765 Cedar River at Highway 30 near Bertram, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 12

[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Sodium adsorption ratio, water, number (00931)	Sodium fraction of cations, water, percent in equivalents of major cations (00932)	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Carbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)
09-27-2012 1545	2.02	43	60.3	129	157	10.1	0.3	71.8	0.23

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Organic nitrogen, water, unfiltered, mg/L (00605)
09-27-2012 1545	< .03	0.181	60.3	0.72	3.3	< .010	1.00	0.078	< 3.3

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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Sample date-time	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Esche- richia coli, Defined Substrate Technology, water, MPN/100 mL (50468)	Total coliform, Defined Substrate Technology, water, MPN/100 mL (50569)	Chloro- phyll a, phyto- plankton, chromato- graphic- fluorometric method, µg/L (70953)	Pheo- phytin a, phyto- plankton, µg/L (62360)	Iron, water, filtered, µg/L (01046)
09-27-2012 1545	0.193	1.71	0.232	0.740	15	12,000	216	102	11.8

05464765 Cedar River at Highway 30 near Bertram, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 6 of 12

[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Manga- nese, water, filtered, µg/L (01056)	2,6- Diethyl- aniline, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82660)	2-Chloro-4- isopropyl- amino-6- amino-s- triazine, water, filtered, recover- able, µg/L (04040)	Aceto- chlor, water, filtered, recover- able, µg/L (49260)	Alachlor, water, filtered, recover- able, µg/L (46342)	alpha- HCH, water, filtered, recover- able, µg/L (34253)	Atrazine, water, filtered, recover- able, µg/L (39632)	Azinphos- methyl, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82686)	Benfluralin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82673)
	09-27-2012 1545	4.11	<.0060	E .047	<.010	<.008	<.0040	0.073	<.120

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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Sample date-time	Butylate, water, filtered, recover- able, µg/L (04028)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82680)	Carbofuran, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82674)	Chlor- pyrifos, water, filtered, recover- able, µg/L (38933)	cis- Permeth- rin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82687)	Cyanazine, water, filtered, recover- able, µg/L (04041)	DCPA, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82682)	Desulfinyl- fipronil amide, water, filtered, recover- able, µg/L (62169)	Desulfinyl- fipronil, water, filtered, recover- able, µg/L (62170)
	09-27-2012 1545	<.0040	<.060	<.060	<.0036	<.010	<.022	<.0076	<.029

05464765 Cedar River at Highway 30 near Bertram, IA—Continued

WATER-QUALITY DATA
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[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Diazinon,	Dieldrin,	Disulfoton,	EPTC,	Ethal-	Ethoprop,	Fipronil	Fipronil	Fipronil
	water, filtered, recover- able, µg/L (39572)	water, filtered, recover- able, µg/L (39381)	(0.7 micron glass fiber filter), recover- able, µg/L (82677)	(0.7 micron glass fiber filter), recover- able, µg/L (82668)	fluralin, water, filtered, recover- able, µg/L (82663)	water, filtered, recover- able, µg/L (82672)	sulfide, water, filtered, recover- able, µg/L (62167)	sulfone, water, filtered, recover- able, µg/L (62168)	water, filtered, recover- able, µg/L (62166)
09-27-2012 1545	< .0060	< .008	< .040	< .0056	< .006	< .016	0.006	< .024	E .011

WATER-QUALITY DATA
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[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Fonofos,	Lindane,	Linuron,	Malathion,	Methyl	Metola-	Metri-	Molinate,	Naprop-
	water, filtered, recover- able, µg/L (04095)	water, filtered, recover- able, µg/L (39341)	(0.7 micron glass fiber filter), recover- able, µg/L (82666)	water, filtered, recover- able, µg/L (39532)	parathion, water, filtered, recover- able, µg/L (82667)	chlor, water, filtered, recover- able, µg/L (39415)	buzin, water, filtered, recover- able, µg/L (82630)	(0.7 micron glass fiber filter), recover- able, µg/L (82671)	amide, water, filtered, recover- able, µg/L (82684)
09-27-2012 1545	< .0048	< .0040	< .060	< .016	< .008	0.080	< .012	< .0040	< .008

05464765 Cedar River at Highway 30 near Bertram, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	p,p'-DDE, water, filtered, recoverable, µg/L (34653)	Parathion, water, filtered, recoverable, µg/L (39542)	Pendi-	Pebulate,	methalin,	Phorate,	Prometon, water, filtered, recoverable, µg/L (04037)	Propa-	Propanil,	Propargite,
			(0.7 micron glass fiber filter), recoverable, µg/L (82669)	water, filtered, (0.7 micron glass fiber filter), recoverable, µg/L (82683)	water, filtered, (0.7 micron glass fiber filter), recoverable, µg/L (82664)	chlor, water, filtered, recoverable, µg/L (04024)		water, filtered, (0.7 micron glass fiber filter), recoverable, µg/L (82679)	water, filtered, (0.7 micron glass fiber filter), recoverable, µg/L (82685)	
09-27-2012 1545	< .002	< .020	< .0160	< .012	< .020	0.073	< .006	< .010	< .020	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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Sample date-time	Propyz-	Tebu-	Terbacil,	Terbufos,	Thioben-	Triallate,	Trifluralin,	Organic carbon, suspended sediment, total, mg/L (00689)	
	amide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82676)	thiuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82670)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82665)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82675)	carb, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82681)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82678)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661)		
09-27-2012 1545	< .0036	0.016	< .028	< .024	< .018	< .016	< .0046	< .018	10.1

05464765 Cedar River at Highway 30 near Bertram, IA—Continued**WATER-QUALITY DATA****WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 12 of 12

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Sample date-time	Organic carbon, water, filtered, mg/L (00681)	Suspended sediment concen- tration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
09-27-2012 1545	237	21	29