05451785 Iowa River at Wetlands Reserve Property near Tama, IA

Iowa Basin
Middle Iowa Subbasin

LOCATION.--Lat 41°57'18.41", long 92°35'50.92" referenced to North American Datum of 1983, in NE ¼ NW ¼ SE ¼ sec.33, T.83 N., R.15 W., Tama County, IA, Hydrologic Unit 07080208, 1.2 mi upstream from bridge on U.S. Highway 63, 0.3 mi west of Tama, 2.7 mi downstream of Bennett Creek, 0.7 mi upstream of Deer Creek, and 180.7 mi upstream from mouth.

DRAINAGE AREA.--1,896 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2006-2007, 2010-2011, 2013.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Discharge, instanta-neous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conduc-tance, water, unfiltered, laboratory, µS/cm at 25°C (90095)	Specific conduc-tance, water, unfiltered, µS/cm at 25°C (00095)	Tempera-ture, water, °C (00010)
10-22-2012	**1030**	736	--	9.3	8.0	8.3	598	600	14.1
04-22-2013	**0945**	741	3,470	10.9	7.8	8.1	588	573	8.6
05-21-2013	**0920**	732	4,750	7.8	7.7	8.1	507	512	18.5
06-25-2013	**1200**	736	6,000	7.1	7.5	7.9	382	378	20.2
07-23-2013	**0945**	739	--	7.8	8.2	8.5	613	611	24.4
08-20-2013	**1030**	741	299	9.6	8.6	8.5	530	537	22.7

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 2 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	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)	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery (99584)	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery (99585)	Diazinon-d10, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91063)	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery (99586)	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)
10-22-2012	1030	28	98.2	77.9	52.1	104	74.2	199	241
04-22-2013	0945	58	93.3	78.7	38.4	86.6	74.6	164	194
05-21-2013	0920	270	112	77.2	23.3	96.9	79.2	165	199
06-25-2013	1200	1,200	92.2	50.4	50.3	84.4	79.0	121	147
07-23-2013	0945	36	99.1	70.7	27.7	84.0	70.0	234	279
08-20-2013	1030	26	98.2	72.8	39.1	86.2	72.3	205	233

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 3 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Carbonate, water, filtered, inflection-point incremental titration method, field, mg/L (00452)	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)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, filtered, mg/L as P (00666)
10-22-2012	1030	0.8	0.49	0.92	0.103	3.85	0.032	0.700	0.754
04-22-2013	0945	2.8	.74	1.3	.112	15.9	.058	.171	.175
05-21-2013	0920	.7	.64	2.8	.083	13.6	.058	.126	.125
06-25-2013	1200	.3	.63	6.3	.099	8.52	.052	.157	.130
07-23-2013	0945	3.2	.38	1.0	< .010	7.67	.027	.163	.161
08-20-2013	1030	8.2	.31	1.4	.011	3.55	.031	.053	.060

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 4 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Phosphorus, water, unfiltered, mg/L as P (00665)	Escherichia coli, Defined Substrate Technology, water, MPN/100 mL (50468)	Aluminum, water, filtered, µg/L (01106)	Barium, water, filtered, µg/L (01005)	Beryllium, water, filtered, µg/L (01010)	Cadmium, water, filtered, µg/L (01025)	Chromium, water, filtered, µg/L (01030)	Cobalt, water, filtered, µg/L (01035)	Copper, water, filtered, µg/L (01040)
10-22-2012	**1030**	0.881	400	3.3	97.7	< .006	< .016	0.10	0.963	1.4
04-22-2013	**0945**	.403	110	17.1	121	< .006	< .016	.14	.325	< .80
05-21-2013	**0920**	.912	12,000	26.2	117	< .006	.017	.12	1.05	1.1
06-25-2013	**1200**	1.97	32,000	31.9	97.1	.007	.017	.14	.180	1.1
07-23-2013	**0945**	.300	190	4.4	127	< .006	.026	.10	.505	< .80
08-20-2013	**1030**	.264	10	2.8	91.2	< .006	.027	.12	.414	.93

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 5 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Lead, water, filtered, µg/L (01049)	Manganese, water, filtered, µg/L (01056)	Mercury, water, unfiltered, recoverable, µg/L (71900)	Molybdenum, water, filtered, µg/L (01060)	Nickel, water, filtered, µg/L (01065)	Silver, water, filtered, µg/L (01075)	Zinc, water, filtered, µg/L (01090)	Antimony, water, filtered, µg/L (01095)	Arsenic, water, filtered, µg/L (01000)
10-22-2012	**1030**	0.033	114	< .005	1.98	2.2	< .005	2.4	0.185	1.9
04-22-2013	**0945**	< .025	13.5	.008	1.94	1.5	< .005	2.1	.183	1.4
05-21-2013	**0920**	< .025	2.91	.024	1.57	1.6	< .005	< 1.4	.276	1.3
06-25-2013	**1200**	< .025	1.77	.060	1.43	1.4	< .005	< 1.4	.455	1.8
07-23-2013	**0945**	< .025	1.85	< .005	2.43	1.3	< .005	< 1.4	.276	2.1
08-20-2013	**1030**	< .025	2.04	< .005	2.56	1.5	< .005	< 1.4	.284	1.8

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 6 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Selenium, water, filtered, µg/L (01145)	1,4-Dichloro-benzene, water, filtered, recover-able, µg/L (34572)	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)
10-22-2012	1030	0.42	< .040	< .0060	E .024	< .010	< .008	< .0040	0.027	< .120
04-22-2013	0945	3.8	< .040	< .0060	E .038	.072	< .008	< .0040	.036	< .120
05-21-2013	0920	2.6	< .040	< .0060	E .223	1.83	.014	< .0040	E 8.30	< .120
06-25-2013	1200	1.6	< .040	< .0060	E .558	.956	< .008	< .0040	E 20.8	< .120
07-23-2013	0945	1.6	.005	< .0060	E .072	.017	< .008	< .0040	.190	< .120
08-20-2013	1030	1.2	< .040	< .0060	E .051	.023	< .008	< .0040	.133	< .120

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 7 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Benfluralin, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (82673)	Bromacil, water, filtered, recover-able, µg/L (04029)	Butylate, water, filtered, recover-able, µg/L (04028)	Camphor, water, filtered, recover-able, µg/L (62070)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (82680)	Carbazole, water, filtered, recover-able, µg/L (62071)	Carbofuran, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (82674)	Chlor-pyrifos, water, filtered, recover-able, µg/L (38933)
10-22-2012	1030	< .014	< .36	< .0040	0.035	< .060	< .030	< .060	< .0100
04-22-2013	0945	< .014	< .36	< .0040	< .044	< .060	< .030	< .060	< .0100
05-21-2013	0920	< .014	< .36	< .0040	.012	< .060	< .030	< .060	< .0100
06-25-2013	1200	< .014	< .36	< .0040	< .044	< .060	< .030	< .060	< .0100
07-23-2013	0945	< .014	< .36	< .0040	.012	< .060	< .030	< .060	< .0100
08-20-2013	1030	< .014	< .36	< .0040	< .044	< .060	< .030	< .060	< .0100

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 8 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	Cyanazine, water, filtered, recoverable, µg/L (04041)	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82682)	Desulfinylfipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfinylfipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dieldrin, water, filtered, recoverable, µg/L (39381)	Disulfoton, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82677)	EPTC, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82668)
10-22-2012	1030	< .010	< .022	< .0076	< .029	0.002	< .0060	< .008	< .040	< .0056
04-22-2013	0945	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
05-21-2013	0920	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
06-25-2013	1200	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
07-23-2013	0945	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008	< .040	< .0056
08-20-2013	1030	< .010	< .022	.0013	< .029	.002	< .0060	< .008	< .040	< .0056

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 9 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Ethalfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82663)	Ethoprop, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82672)	Fipronil sulfide, water, filtered, recoverable, µg/L (62167)	Fipronil sulfone, water, filtered, recoverable, µg/L (62168)	Fipronil, water, filtered, recoverable, µg/L (62166)	Fonofos, water, filtered, recoverable, µg/L (04095)	Lindane, water, filtered, recoverable, µg/L (39341)	Linuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82666)	Malathion, water, filtered, recoverable, µg/L (39532)
10-22-2012	1030	< .006	< .016	< .016	< .024	E .002	< .0048	< .0040	< .060	< .016
04-22-2013	0945	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
05-21-2013	0920	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
06-25-2013	1200	< .006	< .016	< .016	< .024	< .018	< .0048	< .0100	< .060	< .016
07-23-2013	0945	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016
08-20-2013	1030	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040	< .060	< .016

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 10 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Metalaxyl, water, filtered, recoverable, µg/L (50359)	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82667)	Metolachlor, water, filtered, recoverable, µg/L (39415)	Metribuzin, water, filtered, recoverable, µg/L (82630)	Molinate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82671)	DEET, water, filtered, recoverable, µg/L (62082)	Napropamide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82684)	p,p'-DDE, water, filtered, recoverable, µg/L (34653)	Parathion, water, filtered, recoverable, µg/L (39542)
10-22-2012	1030	< .12	< .008	0.015	< .012	< .0080	0.02	< .010	< .005	< .020
04-22-2013	0945	< .12	< .008	.105	< .012	< .0080	.01	< .010	< .005	< .020
05-21-2013	0920	< .12	< .008	1.55	.043	< .0080	.02	< .010	< .005	< .020
06-25-2013	1200	< .12	< .008	E 17.1	.062	< .0080	1.28	< .010	< .005	< .020
07-23-2013	0945	< .12	< .008	.097	< .012	< .0080	.05	< .010	< .005	< .020
08-20-2013	1030	< .12	< .008	.087	< .012	< .0080	.02	< .010	< .005	< .020

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 11 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	p-Cresol, water, filtered, recoverable, µg/L (62084)	Pebulate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82669)	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82683)	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82664)	Prometon, water, filtered, recoverable, µg/L (04037)	Propachlor, water, filtered, recoverable, µg/L (04024)	Propanil, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82679)	Propargite, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82685)	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82676)
10-22-2012	1030	< .08	< .0160	< .012	< .020	0.009	< .006	< .010	< .020	< .0080
04-22-2013	0945	< .08	< .0160	< .012	< .020	< .012	< .006	< .010	< .020	< .0080
05-21-2013	0920	< .08	< .0160	< .012	< .020	.017	< .006	< .010	< .020	< .0080
06-25-2013	1200	< .08	< .0160	< .012	< .020	.015	< .006	< .010	< .020	< .0080
07-23-2013	0945	< .08	< .0160	< .012	< .020	.007	< .006	< .010	< .020	< .0080
08-20-2013	1030	< .08	< .0160	< .012	< .020	.015	< .006	< .010	< .020	< .0080

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 12 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Simazine, water, filtered, recoverable, µg/L (04035)	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82670)	Terbacil, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82665)	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82675)	Thiobencarb, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82681)	Triallate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82678)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661)	1-Methylnaphthalene, water, filtered, recoverable, µg/L (62054)	2,6-Dimethylnaphthalene, water, filtered, recoverable, µg/L (62055)
10-22-2012	**1030**	0.009	< .028	< .024	< .018	< .016	< .0046	< .018	< .022	< .06
04-22-2013	**0945**	.005	< .028	< .024	< .018	< .016	< .0046	< .018	< .022	< .06
05-21-2013	**0920**	.126	< .028	< .024	< .018	< .016	< .0046	.002	< .022	< .06
06-25-2013	**1200**	.060	< .028	< .024	< .018	< .016	< .0046	< .018	< .022	< .06
07-23-2013	**0945**	< .006	< .028	< .024	< .018	< .016	< .0046	< .018	< .022	< .06
08-20-2013	**1030**	< .006	< .028	< .024	< .018	< .016	< .0046	.001	< .022	< .06

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 13 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	2-Methylnaphthalene, water, filtered, recoverable, µg/L (62056)	3-beta-Coprostanol, water, filtered, recoverable, µg/L (62057)	3-Methyl-1H-indole, water, filtered, recoverable, µg/L (62058)	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, µg/L (62059)	4-Cumylphenol, water, filtered, recoverable, µg/L (62060)	4-n-Octylphenol, water, filtered, recoverable, µg/L (62061)	4-Nonylphenol (sum of all isomers), water, filtered, recoverable, µg/L (62085)	4-Nonylphenol diethoxylate (sum of all isomers), water, filtered, recoverable, µg/L (62083)	4-tert-Octylphenol diethoxylate, water, filtered, recoverable, µg/L (61705)
10-22-2012	**1030**	< .036	< 1.8	< .036	--	< .060	< .06	< 2	E .4	< 1.0
04-22-2013	**0945**	< .036	< 1.8	< .036	--	< .060	< .06	< 2	< 5.0	< 1.0
05-21-2013	**0920**	< .036	< 1.8	< .036	--	< .060	< .06	M	< 5.0	< 1.0
06-25-2013	**1200**	< .036	< 1.8	< .036	< .6	< .060	< .06	M	< 5.0	< 1.0
07-23-2013	**0945**	< .036	< 1.8	< .036	--	< .060	< .06	M	< 5.0	< 1.0
08-20-2013	**1030**	< .036	< 1.8	< .036	--	< .060	< .06	M	< 5.0	< 1.0

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 14 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	4-tert-Octylphenol monoethoxylate, water, filtered, recoverable, µg/L (61706)	4-tert-Octylphenol, water, filtered, recoverable, µg/L (62062)	5-Methyl-1H-benzotriazole, water, filtered, recoverable, µg/L (62063)	9,10-Anthraquinone, water, filtered, recoverable, µg/L (62066)	Acetophenone, water, filtered, recoverable, µg/L (62064)	Acetyl hexamethyl tetrahydronaphthalene, water, filtered, recoverable, µg/L (62065)	Anthracene, water, filtered, recoverable, µg/L (34221)	Benzo[a]pyrene, water, filtered, recoverable, µg/L (34248)	Benzophenone, water, filtered, recoverable, µg/L (62067)
10-22-2012	1030	< 1.0	< .14	< 1.2	< .16	< .4	0.008	< .010	< .06	0.03
04-22-2013	0945	< 1.0	< .14	< 1.2	< .16	< .4	.005	< .010	< .06	.12
05-21-2013	0920	< 1.0	< .14	< 1.2	< .16	< .4	.010	< .010	< .06	.03
06-25-2013	1200	< 1.0	< .14	< 1.2	< .16	< .4	E .007	< .010	< .06	E .03
07-23-2013	0945	< 1.0	E .02	< 1.2	< .16	< .4	.015	< .010	< .06	.05
08-20-2013	1030	< 1.0	< .14	< 1.2	< .16	< .4	.020	< .010	< .06	< .08

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 15 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	beta-Sitosterol, water, filtered, recoverable, µg/L (62068)	beta-Stigmastanol, water, filtered, recoverable, µg/L (62086)	Caffeine, water, filtered, recoverable, µg/L (50305)	Cholesterol, water, filtered, recoverable, µg/L (62072)	Cotinine, water, filtered, recoverable, µg/L (62005)	D-Limonene, water, filtered, recoverable, µg/L (62073)	Fluoranthene, water, filtered, recoverable, µg/L (34377)	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, µg/L (62075)	Indole, water, filtered, recoverable, µg/L (62076)
10-22-2012	1030	< 4	< 2.6	0.02	E .3	< .800	< .08	< .024	0.022	< .08
04-22-2013	0945	< 4	< 2.6	.03	< 2.0	< .800	< .08	< .024	.016	< .08
05-21-2013	0920	< 4	< 2.6	< .06	< 2.0	< .800	< .08	.003	.017	< .08
06-25-2013	1200	< 4	< 2.6	< .06	E .5	< .800	< .08	< .024	.010	< .08
07-23-2013	0945	< 4	< 2.6	.02	< 2.0	< .800	< .08	.005	.019	< .08
08-20-2013	1030	< 4	< 2.6	.02	< 2.0	< .800	< .08	< .024	.015	< .08

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 16 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Isoborneol, water, filtered, recoverable, µg/L (62077)	Isophorone, water, filtered, recoverable, µg/L (34409)	Isopropylbenzene, water, filtered, recoverable, µg/L (62078)	Isoquinoline, water, filtered, recoverable, µg/L (62079)	Menthol, water, filtered, recoverable, µg/L (62080)	Methyl salicylate, water, filtered, recoverable, µg/L (62081)	Naphthalene, water, filtered, recoverable, µg/L (34443)	Phenanthrene, water, filtered, recoverable, µg/L (34462)	Phenol, water, filtered, recoverable, µg/L (34466)
10-22-2012	1030	< .08	0.011	< .30	< .046	< .32	0.021	< .040	< .016	< .16
04-22-2013	0945	< .08	< .032	< .30	< .046	< .32	.011	.012	.008	< .16
05-21-2013	0920	< .08	.014	< .30	< .046	< .32	< .044	< .040	.006	< .16
06-25-2013	1200	< .08	< .032	< .30	< .046	< .32	< .044	< .040	.005	< .16
07-23-2013	0945	< .08	.007	< .30	< .046	.02	< .044	< .040	.011	< .16
08-20-2013	1030	< .08	.020	< .30	< .046	< .32	< .044	< .040	.006	< .16

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 17 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Pyrene, water, filtered, recoverable, µg/L (34470)	Tetrachloroethene, water, filtered, recoverable, µg/L (34476)	Tribromomethane, water, filtered, recoverable, µg/L (34288)	Tributyl phosphate, water, filtered, recoverable, µg/L (62089)	Triclosan, water, filtered, recoverable, µg/L (62090)	Triethyl citrate, water, filtered, recoverable, µg/L (62091)	Triphenyl phosphate, water, filtered, recoverable, µg/L (62092)	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, µg/L (62093)	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, µg/L (62087)
10-22-2012	1030	< .042	< .12	< .10	< .16	< .20	< .16	< .12	< .8	0.06
04-22-2013	0945	< .042	< .12	< .10	< .16	< .20	< .16	< .12	< .8	.02
05-21-2013	0920	< .042	< .12	< .10	.02	< .20	< .16	< .12	.4	.09
06-25-2013	1200	< .042	< .12	< .10	< .16	< .20	< .16	< .12	< .8	< .10
07-23-2013	0945	.004	< .12	< .10	.02	< .20	< .16	.02	.3	.06
08-20-2013	1030	< .042	< .12	< .10	.01	< .20	< .16	.02	.4	< .10

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 18 of 18

[$CaCO_3$, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, µg/L (62088)	Uranium (natural), water, filtered, µg/L (22703)
10-22-2012	**1030**	0.08	1.41
04-22-2013	**0945**	< .16	3.07
05-21-2013	**0920**	< .16	2.11
06-25-2013	**1200**	< .16	1.98
07-23-2013	**0945**	< .16	2.98
08-20-2013	**1030**	.11	2.97

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 3

[<, less than]

Date	Sample start time	Water present, biota, tissue, recoverable, dry weight, percent (49273)	Aluminum, biota, tissue, recoverable, dry weight, milligrams per kilogram (49237)	Barium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49238)	Beryllium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49248)	Cadmium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49249)	Chromium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49240)	Cobalt, biota, tissue, recoverable, dry weight, milligrams per kilogram (49250)	Copper, biota, tissue, recoverable, dry weight, milligrams per kilogram (49241)	Iron, biota, tissue, recoverable, dry weight, milligrams per kilogram (49242)
10-15-2012	**1025**	78	510	3.5	< .1	5.4	1.5	0.32	100	1,200

05451785 Iowa River at Wetlands Reserve Property near Tama, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 2 of 3
[<, less than]

Date	Sample start time	Lead, biota, tissue, recoverable, dry weight, milligrams per kilogram (49251)	Manganese, biota, tissue, recoverable, dry weight, milligrams per kilogram (49243)	Molybdenum, biota, tissue, recoverable, dry weight, milligrams per kilogram (49252)	Nickel, biota, tissue, recoverable, dry weight, milligrams per kilogram (49253)	Silver, biota, tissue, recoverable, dry weight, milligrams per kilogram (49255)	Strontium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49244)	Vanadium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49465)	Zinc, biota, tissue, recoverable, dry weight, milligrams per kilogram (49245)	Antimony, biota, tissue, recoverable, dry weight, milligrams per kilogram (49246)
10-15-2012	**1025**	0.8	38	1.2	1.4	0.5	6.4	1.4	900	< .1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 3 of 3
[<, less than]

Date	Sample start time	Arsenic, biota, tissue, recoverable, dry weight, milligrams per kilogram (49247)	Boron, biota, tissue, recoverable, dry weight, milligrams per kilogram (49239)	Selenium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49254)	Uranium, biota, tissue, recoverable, dry weight, milligrams per kilogram (49257)
10-15-2012	**1025**	0.69	< 2.4	9.2	0.1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[g/m2, grams per square meter; mg/m2, milligrams per square meter]

Date	Sample start time	Biomass, periphyton, ash free dry mass, g/m2 (49954)	Biomass, periphyton, ash weight, grams per square meter (00572)	Biomass, periphyton, dry weight, grams per square meter (00573)	Chlorophyll a, periphyton, chromatographic-fluorometric method, mg/m2 (70957)	Pheophytin a, periphyton, mg/m2 (62359)
10-22-2012	**1115**	44.6	433.1	477.7	93.2	76.1