

98 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433843096450500 Big Sioux River near Renner, SD (site US1, fig. 1)		433600096442400 Sioux Falls pump station intake from Big Sioux River at Sioux Falls, SD (site US2, fig. 1)				
Date of sample collection (month–day–year)			05–18–2004	05–31–2004	08–15–2001	09–09–2002	01–22–2003	03–19–2003	06–26–2003
Time of sample collection (24-hour)			1500	1800	1405	1200	1105	1130	0930
Compound									
1,4-Dichlorobenzene, dissolved	4	0.08	<0.5	<0.5	--	--	--	--	--
1,4-Dichlorobenzene, whole water	3	ND	<.5	<.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene, bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
2,2',4,4'-Tetrabromodiphenyl ether , whole water	3	.5	<.5	<.5	--	<10	<10	<10	--
2,2',4,4'-Tetrabromodiphenyl ether , bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
3,4-Dichlorophenyl isocyanate, whole water	4	ND	<.5	<.5	--	<.5	<.5	<.5	--
3,4-Dichlorophenyl isocyanate, bottom sediment	3	100 µg/kg	--	--	--	<100 µg/kg	--	--	--
3-Methyl-1H-indole (skatol), dissolved	5	.02	<1	<1	--	--	--	--	--
3-Methyl-1H-indole (skatol), whole water	3	.019	<1	<1	<1	<1	<1	<1	<1
3-Methyl-1H-indole (skatol), bottom sediment	5	30 µg/kg	--	--	--	51 µg/kg	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , dissolved	4	5	<5	<5	--	--	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , whole water	3	ND	<5	<5	<5	<5	<5	<5	<5
4-Cumylphenol , dissolved	5	1	<1	<1	--	--	--	--	--

102 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433843096450500 Big Sioux River near Renner, SD (site US1, fig. 1)		433600096442400 Sioux Falls pump station intake from Big Sioux River at Sioux Falls, SD (site US2, fig. 1)				
Compound—Continued									
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB), bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Indole, dissolved	4	0.042	<0.5	<0.5	--	--	--	--	--
Indole, whole water	3	.015	<.5	<.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indole, bottom sediment	5	1.9 µg/kg	--	--	--	e42 µg/kg	--	--	--
Isoborneol, dissolved	4	.5	<.5	<.5	--	--	--	--	--
Isoborneol, whole water	3	.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Isoborneol, bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Isophorone, dissolved	4	.047	e.054	<.5	--	--	--	--	--
Isophorone, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Isophorone, bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Isopropylbenzene (cumene), dissolved	4	ND	<.5	<.5	--	--	--	--	--
Isopropylbenzene (cumene), whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Isopropylbenzene (cumene), bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Isoquinoline, dissolved	4	.5	<.5	<.5	--	--	--	--	--
Isoquinoline, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Isoquinoline, bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Menthol, dissolved	4	.5	<.5	<.5	--	--	--	--	--
Menthol, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Menthol, bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Metalaxyl, dissolved	4	.5	<.5	<.5	--	--	--	--	--
Metalaxyl, whole water	3	.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Metalaxyl, bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433843096450500 Big Sioux River near Renner, SD (site US1, fig. 1)		433600096442400 Sioux Falls pump station intake from Big Sioux River at Sioux Falls, SD (site US2, fig. 1)				
Compound—Continued									
Methyl salicylate, dissolved	4	0.5	<0.5	<0.5	--	--	--	--	--
Methyl salicylate, whole water	3	.017	<.5	<.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl salicylate, bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--
Nonylphenol diethoxylate (NP2EO) , dissolved	4	3.5	<5	<5	--	--	--	--	--
Nonylphenol diethoxylate (NP2EO) , whole water	3	.66	<5	<5	<5	<5	<5	<5	<5
Nonylphenol diethoxylate (NP2EO) , bottom sediment	5	65 µg/kg	--	--	--	<500 µg/kg	--	--	--
Nonylphenol monoethoxylate (NP1EO) , whole water	3	.55	<2	<2	--	<5	<5	<5	--
Nonylphenol monoethoxylate (NP1EO) , bottom sediment	5	500 µg/kg	--	--	--	<500 µg/kg	--	--	--
Octylphenol diethoxylate (OP2EO) , dissolved	4	.19	<1	<1	--	--	--	--	<1
Octylphenol diethoxylate (OP2EO) , whole water	3	.14	<1	<1	<1	<1	<1	<1	--
Octylphenol diethoxylate (OP2EO) , bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--
Octylphenol monoethoxylate (OP1EO) , dissolved	4	.39	<1	<1	--	--	--	--	<1

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433843096450500 Big Sioux River near Renner, SD (site US1, fig. 1)		433600096442400 Sioux Falls pump station intake from Big Sioux River at Sioux Falls, SD (site US2, fig. 1)				
Compound—Continued									
Tributyl phosphate, bottom sediment	5	50 µg/kg	--	--	--	<50 µg/kg	--	--	--
Triclosan , dissolved	4	0.16	<1	<1	--	--	--	--	--
Triclosan , whole water	3	.15	<1	<1	<1	<1	<1	<1	<1
Triclosan , bottom sediment	5	2.9 µg/kg	--	--	--	<50 µg/kg	--	--	--
Triethyl citrate (ethyl citrate), dissolved	4	.21	<.5	<.5	--	--	--	--	--
Triethyl citrate (ethyl citrate), whole water	3	.051	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Triphenyl phosphate, dissolved	4	.066	<.5	<.5	--	--	--	--	--
Triphenyl phosphate, whole water	3	.033	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Triphenyl phosphate, bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--
Tri(2-butoxyethyl) phosphate, dissolved	4	.4	<.5	<.5	--	--	--	--	--
Tri(2-butoxyethyl) phosphate, whole water	3	.13	<.5	<.5	e.13	<.5	<.5	e.24	<.5
Tri(2-butoxyethyl) phosphate, bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--
Tri(2-chloroethyl) phosphate, dissolved	4	.074	e.079	<.5	--	--	--	--	--
Tri(2-chloroethyl) phosphate, whole water	3	.1	<.5	<.5	<.5	<.5	<.5	<.5	1.4
Tri(2-chloroethyl) phosphate, bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--
Tri(dichloroisopropyl) phosphate, dissolved	4	.13	<.5	<.5	--	--	--	--	--
Tri(dichloroisopropyl) phosphate, whole water	3	.071	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Tri(dichloroisopropyl) phosphate, bottom sediment	5	100 µg/kg	--	--	--	<100 µg/kg	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)				
			433419096434200 Sioux Falls water treatment plant finished drinking water at Sioux Falls, SD (site FDW, fig. 1)				
Date of sample collection (month–day–year)			08–15–2001	09–09–2002	01–22–2003	03–19–2003	06–27–2003
Time of sample collection (24-hour)			1100	1440	1330	1445	0915
			Compound				
1,4-Dichlorobenzene, dissolved	4	0.08	--	--	--	--	--
1,4-Dichlorobenzene, whole water	3	ND	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene, bottom sediment	5	50 $\mu\text{g}/\text{kg}$	--	--	--	--	--
2,2',4,4'-Tetrabromodiphenyl ether , whole water	3	.5	--	<10	<10	<10	--
2,2',4,4'-Tetrabromodiphenyl ether , bottom sediment	5	50 $\mu\text{g}/\text{kg}$	--	--	--	--	--
3,4-Dichlorophenyl isocyanate, whole water	4	ND	--	<.5	<.5	<.5	--
3,4-Dichlorophenyl isocyanate, bottom sediment	3	100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
3-Methyl-1H-indole (skatol), dissolved	5	.02	--	--	--	--	--
3-Methyl-1H-indole (skatol), whole water	3	.019	<1	<1	<1	<1	<1
3-Methyl-1H-indole (skatol), bottom sediment	5	30 $\mu\text{g}/\text{kg}$	--	--	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , dissolved	4	5	--	--	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , whole water	3	ND	<5	<5	<5	<5	<5
4-Cumylphenol , dissolved	5	1	--	--	--	--	--
4-Cumylphenol , whole water	3	1	<1	<1	<1	<1	<1
4-Cumylphenol , bottom sediment	5	50 $\mu\text{g}/\text{kg}$	--	--	--	--	--
4-normal-Octylphenol , dissolved	4	1	--	--	--	--	--
4-normal-Octylphenol , whole water	3	1	<1	<1	<1	<1	<1
4-normal-Octylphenol , bottom sediment	5	50 $\mu\text{g}/\text{kg}$	--	--	--	--	--
4-tert-Octylphenol , dissolved	4	1	--	--	--	--	--
4-tert-Octylphenol , whole water	3	.26	<1	<1	<1	<1	<1

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)				
			433419096434200 Sioux Falls water treatment plant finished drinking water at Sioux Falls, SD (site FDW, fig. 1)				
Compound—Continued							
4-tert-Octylphenol , bottom sediment	5	50 µg/kg	--	--	--	--	--
5-Methyl-1H-benzotriazole, dissolved	4	ND	--	--	--	--	--
5-Methyl-1H-benzotriazole, whole water	3	0.33	<2	<2	<2	<2	<2
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , dissolved	4	.23	--	--	--	--	--
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , whole water	3	.048	<.5	<.5	<.5	<.5	<.5
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , bottom sediment	5	50 µg/kg	--	--	--	--	--
Acetophenone, dissolved	4	.5	--	--	--	--	--
Acetophenone, whole water	3	.08	<.5	<.5	<.5	<.5	<.5
Acetophenone, bottom sediment	5	50 µg/kg	--	--	--	--	--
Anthraquinone, dissolved	4	.12	--	--	--	--	--
Anthraquinone, whole water	3	.098	<.5	<.5	<.5	<.5	<.5
Anthraquinone, bottom sediment	5	4 µg/kg	--	--	--	--	--
Benzophenone , dissolved	4	.066	--	--	--	--	--
Benzophenone , whole water	3	ND	<.5	<.5	<.5	<.5	<.5
Benzophenone , bottom sediment	5	50 µg/kg	--	--	--	--	--
Bis(2-ethylhexyl) phthalate, whole water	3	ND	--	<.5	<.5	<.5	<.5
Bis(2-ethylhexyl) phthalate, bottom sediment	5	100 µg/kg	--	--	--	--	--
Bisphenol-A , dissolved	4	ND	--	--	--	--	--
Bisphenol-A , whole water	3	ND	<1	<1	<1	<1	<1
Bisphenol-A , bottom sediment	5	100 µg/kg	--	--	--	--	--
Bromacil, dissolved	4	ND	--	--	--	--	--
Bromacil, whole water	3	.068	<.5	<.5	<.5	<.5	<.5
Bromacil, bottom sediment	5	100 µg/kg	--	--	--	--	--
Camphor, dissolved	4	.029	--	--	--	--	--
Camphor, whole water	3	.5	<.5	<.5	<.5	<.5	<.5

108 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)				
			433419096434200 Sioux Falls water treatment plant finished drinking water at Sioux Falls, SD (site FDW, fig. 1)				
Compound—Continued							
Camphor, bottom sediment	5	50 µg/kg	--	--	--	--	--
Carbaryl , dissolved	4	0.14	--	--	--	--	--
Carbaryl , whole water	3	ND	<1	<1	<1	<1	<1
Chlorpyrifos , dissolved	4	.5	--	--	--	--	--
Chlorpyrifos , whole water	3	.014	<.5	<.5	<.5	<.5	<.5
Chlorpyrifos , bottom sediment	5	50 µg/kg	--	--	--	--	--
N,N-Diethyl- <i>meta</i> -toluamide (DEET), dissolved	4	.034	--	--	--	--	--
N,N-Diethyl- <i>meta</i> -toluamide (DEET), whole water	3	.042	<.5	<.5	<.5	<.5	<.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), bottom sediment	5	100 µg/kg	--	--	--	--	--
Diazinon , dissolved	4	.5	--	--	--	--	--
Diazinon , whole water	3	.027	<.5	<.5	<.5	<.5	<.5
Diazinon , bottom sediment	5	50 µg/kg	--	--	--	--	--
Dichlorvos, dissolved	4	ND	--	--	--	--	--
Dichlorvos, whole water	3	ND	<1	<1	<1	<1	<1
Diethyl phthalate , whole water	3	ND	--	<.5	<.5	<.5	--
Diethyl phthalate , bottom sediment	5	50 µg/kg	--	--	--	--	--
D-Limonene, dissolved	4	ND	--	--	--	--	--
D-Limonene, whole water	3	ND	<.5	<.5	<.5	<.5	<.5
D-Limonene, bottom sediment	5	50 µg/kg	--	--	--	--	--
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , dissolved	4	.061	--	--	--	--	--
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , whole water	3	.045	<.5	<.5	<.5	<.5	<.5
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , bottom sediment	5	50 µg/kg	--	--	--	--	--
Indole, dissolved	4	.042	--	--	--	--	--
Indole, whole water	3	.015	<.5	<.5	<.5	<.5	<.5
Indole, bottom sediment	5	1.9 µg/kg	--	--	--	--	--
Isoborneol, dissolved	4	.5	--	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)				
			433419096434200 Sioux Falls water treatment plant finished drinking water at Sioux Falls, SD (site FDW, fig. 1)				
Compound—Continued							
Isoborneol, whole water	3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isoborneol, bottom sediment	5	50 µg/kg	--	--	--	--	--
Isophorone, dissolved	4	.047	--	--	--	--	--
Isophorone, whole water	3	ND	<.5	<.5	<.5	¹ 36	<.5
Isophorone, bottom sediment	5	50 µg/kg	--	--	--	--	--
Isopropylbenzene (cumene), dissolved	4	ND	--	--	--	--	--
Isopropylbenzene (cumene), whole water	3	ND	<.5	<.5	<.5	<.5	<.5
Isopropylbenzene (cumene), bottom sediment	5	50 µg/kg	--	--	--	--	--
Isoquinoline, dissolved	4	.5	--	--	--	--	--
Isoquinoline, whole water	3	ND	<.5	<.5	<.5	<.5	<.5
Isoquinoline, bottom sediment	5	50 µg/kg	--	--	--	--	--
Menthol, dissolved	4	.5	--	--	--	--	--
Menthol, whole water	3	ND	<.5	<.5	<.5	<.5	<.5
Menthol, bottom sediment	5	50 µg/kg	--	--	--	--	--
Metalaxyl, dissolved	4	.5	--	--	--	--	--
Metalaxyl, whole water	3	.5	<.5	<.5	<.5	<.5	<.5
Metalaxyl, bottom sediment	5	100 µg/kg	--	--	--	--	--
Methyl salicylate, dissolved	4	.5	--	--	--	--	--
Methyl salicylate, whole water	3	.017	e.014	<.5	<.5	<.5	<.5
Methyl salicylate, bottom sediment	5	100 µg/kg	--	--	--	--	--
Nonylphenol diethoxylate (NP2EO), dissolved	4	3.5	--	--	--	--	--
Nonylphenol diethoxylate (NP2EO), whole water	3	.66	<5	<5	<5	<5	<5
Nonylphenol diethoxylate (NP2EO), bottom sediment	5	65 µg/kg	--	--	--	--	--
Nonylphenol monoethoxylate (NP1EO), whole water	3	.55	--	<5	<5	<5	--
Nonylphenol monoethoxylate (NP1EO), bottom sediment	5	500 µg/kg	--	--	--	--	--
Octylphenol diethoxylate (OP2EO), dissolved	4	.19	--	--	--	--	<1

110 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

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	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)				
			433419096434200 Sioux Falls water treatment plant finished drinking water at Sioux Falls, SD (site FDW, fig. 1)				
Compound—Continued							
Octylphenol diethoxylate (OP2EO), whole water	3	0.14	<1	<1	<1	<1	--
Octylphenol diethoxylate (OP2EO), bottom sediment	5	100 µg/kg	--	--	--	--	--
Octylphenol monoethoxylate (OPIEO), dissolved	4	.39	--	--	--	--	<1
Octylphenol monoethoxylate (OPIEO), whole water	3	5.2	<1	<1	<1	<1	--
Octylphenol monoethoxylate (OPIEO), bottom sediment	5	100 µg/kg	--	--	--	--	--
<i>para</i> -Cresol, dissolved	4	.079	--	--	--	--	--
<i>para</i> -Cresol, whole water	3	1	<1	<1	<1	<1	<1
<i>para</i> -Cresol, bottom sediment	5	21 µg/kg	--	--	--	--	--
<i>para</i>-Nonylphenol (NP), dissolved	4	.83	--	--	--	--	--
<i>para</i>-Nonylphenol (NP), whole water	3	.64	<5	<5	<5	<5	<5
<i>para</i>-Nonylphenol (NP), bottom sediment	5	500 µg/kg	--	--	--	--	--
Pentachlorophenol, dissolved	4	.42	--	--	--	--	--
Pentachlorophenol, whole water	3	ND	<2	<2	<2	<2	<2
Pentachlorophenol, bottom sediment	5	200 µg/kg	--	--	--	--	--
Phenol, dissolved	4	.34	--	--	--	--	--
Phenol, whole water	3	.94	<.5	<.5	<.5	<.5	<.5
Phenol, bottom sediment	5	19 µg/kg	--	--	--	--	--
Tetrachloroethylene, dissolved	4	ND	--	--	--	--	--
Tetrachloroethylene, whole water	3	ND	<.5	<.5	<.5	<.5	<.5
Tetrachloroethylene, bottom sediment	5	50 µg/kg	--	--	--	--	--
Tributyl phosphate, dissolved	4	.18	--	--	--	--	--
Tributyl phosphate, whole water	3	.059	<.5	<.5	<.5	<.5	<.5
Tributyl phosphate, bottom sediment	5	50 µg/kg	--	--	--	--	--
Triclosan, dissolved	4	.16	--	--	--	--	--
Triclosan, whole water	3	.15	<1	<1	<1	<1	<1
Triclosan, bottom sediment	5	2.9 µg/kg	--	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)				
			433419096434200 Sioux Falls water treatment plant finished drinking water at Sioux Falls, SD (site FDW, fig. 1)				
Compound—Continued							
Triethyl citrate (ethyl citrate), dissolved	4	0.21	--	--	--	--	--
Triethyl citrate (ethyl citrate), whole water	3	.051	<0.5	<0.5	<0.5	<0.5	<0.5
Triphenyl phosphate, dissolved	4	.066	--	--	--	--	--
Triphenyl phosphate, whole water	3	.033	<.5	<.5	<.5	<.5	<.5
Triphenyl phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Tri(2-butoxyethyl)phosphate, dissolved	4	.4	--	--	--	--	--
Tri(2-butoxyethyl)phosphate, whole water	3	.13	<.5	<.5	<.5	<.5	<.5
Tri(2-butoxyethyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Tri(2-chloroethyl)phosphate, dissolved	4	.074	--	--	--	--	--
Tri(2-chloroethyl)phosphate, whole water	3	.1	<.5	<.5	<.5	<.5	<.5
Tri(2-chloroethyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Tri(dichloroisopropyl)phosphate, dissolved	4	.13	--	--	--	--	--
Tri(dichloroisopropyl)phosphate, whole water	3	.071	<.5	<.5	<.5	<.5	<.5
Tri(dichloroisopropyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)			
			433408096432000 Big Sioux River diversion channel at North Drive, at Sioux Falls, SD (site US3, fig. 1)		06482020 Big Sioux River at North Cliff Avenue, at Sioux Falls, SD (site US4, fig. 1)	
Date of sample collection (month–day–year)			05–18–2004	05–31–2004	05–17–2004	05–30–2004
Time of sample collection (24-hour)			1130	1145	1000	1530
Compound						
1,4-Dichlorobenzene, dissolved	4	0.08	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene, whole water	3	ND	<.5	<.5	<.5	<.5
1,4-Dichlorobenzene, bottom sediment	5	50 µg/kg	--	--	--	--
2,2',4,4'-Tetrabromodiphenyl ether , whole water	3	.5	<.5	<.5	<.5	<.5
2,2',4,4'-Tetrabromodiphenyl ether , bottom sediment	5	50 µg/kg	--	--	--	--
3,4-Dichlorophenyl isocyanate, whole water	4	ND	<.5	e.053	e.35	<.5
3,4-Dichlorophenyl isocyanate, bottom sediment	3	100 µg/kg	--	--	--	--
3-Methyl-1H-indole (skatol), dissolved	5	.02	<1	<1	<1	<1
3-Methyl-1H-indole (skatol), whole water	3	.019	<1	<1	<1	<1
3-Methyl-1H-indole (skatol), bottom sediment	5	30 µg/kg	--	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , dissolved	4	5	<5	<5	<5	<5
3-tert-Butyl-4-hydroxy anisole (BHA) , whole water	3	ND	<5	<5	<5	<5
4-Cumylphenol , dissolved	5	1	<1	<1	<1	<1
4-Cumylphenol , whole water	3	1	<1	<1	<1	<1
4-Cumylphenol , bottom sediment	5	50 µg/kg	--	--	--	--
4-normal-Octylphenol , dissolved	4	1	<1	<1	<1	<1
4-normal-Octylphenol , whole water	3	1	<1	<1	<1	<1
4-normal-Octylphenol , bottom sediment	5	50 µg/kg	--	--	--	--
4-tert-Octylphenol , dissolved	4	1	<1	<1	<1	<1
4-tert-Octylphenol , whole water	3	.26	<1	<1	e.23	<1
4-tert-Octylphenol , bottom sediment	5	50 µg/kg	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)			
			433408096432000 Big Sioux River diversion channel at North Drive, at Sioux Falls, SD (site US3, fig. 1)		06482020 Big Sioux River at North Cliff Avenue, at Sioux Falls, SD (site US4, fig. 1)	
Compound—Continued						
5-Methyl-1H-benzotriazole, dissolved	4	ND	<2	<2	<2	<2
5-Methyl-1H-benzotriazole, whole water	3	0.33	<2	<2	<2	<2
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , dissolved	4	.23	<.5	<.5	<.5	<.5
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , whole water	3	.048	<.5	<.5	<.5	<.5
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , bottom sediment	5	50 µg/kg	--	--	--	--
Acetophenone, dissolved	4	.5	<.5	<.5	<.5	<.5
Acetophenone, whole water	3	.08	<.5	<.5	<.5	<.5
Acetophenone, bottom sediment	5	50 µg/kg	--	--	--	--
Anthraquinone, dissolved	4	.12	<.5	<.5	e.14	<.5
Anthraquinone, whole water	3	.098	<.5	<.5	e.10	<.5
Anthraquinone, bottom sediment	5	4 µg/kg	--	--	--	--
Benzophenone , dissolved	4	.066	<.5	<.5	<.5	e.12
Benzophenone , whole water	3	ND	<.5	<.5	<.5	<.5
Benzophenone , bottom sediment	5	50 µg/kg	--	--	--	--
Bis(2-ethylhexyl) phthalate, whole water	3	ND	<2	<2	<2	<2
Bis(2-ethylhexyl) phthalate, bottom sediment	5	100 µg/kg	--	--	--	--
Bisphenol-A , dissolved	4	ND	<1	<1	<1	<1
Bisphenol-A , whole water	3	ND	<1	<1	<1	<1
Bisphenol-A , bottom sediment	5	100 µg/kg	--	--	--	--
Bromacil, dissolved	4	ND	<.5	<.5	<.5	<.5
Bromacil, whole water	3	.068	<.5	<.5	<.5	<.5
Bromacil, bottom sediment	5	100 µg/kg	--	--	--	--
Camphor, dissolved	4	.029	<.5	<.5	e.029	<.5
Camphor, whole water	3	.5	<.5	<.5	<.5	<.5
Camphor, bottom sediment	5	50 µg/kg	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)			
			433408096432000 Big Sioux River diversion channel at North Drive, at Sioux Falls, SD (site US3, fig. 1)		06482020 Big Sioux River at North Cliff Avenue, at Sioux Falls, SD (site US4, fig. 1)	
Compound—Continued						
Carbaryl, dissolved	4	0.14	<1	<1	<1	<1
Carbaryl, whole water	3	ND	<1	<1	<1	<1
Chlorpyrifos, dissolved	4	.5	<.5	<.5	<.5	<.5
Chlorpyrifos, whole water	3	.014	<.5	<.5	<.5	<.5
Chlorpyrifos, bottom sediment	5	50 µg/kg	--	--	--	--
N,N-Diethyl- <i>meta</i> -toluamide (DEET), dissolved	4	.034	e.051	<.5	e.085	<.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), whole water	3	.042	<.5	<.5	<.5	<.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), bottom sediment	5	100 µg/kg	--	--	--	--
Diazinon, dissolved	4	.5	<.5	<.5	<.5	<.5
Diazinon, whole water	3	.027	<.5	<.5	<.5	<.5
Diazinon, bottom sediment	5	50 µg/kg	--	--	--	--
Dichlorvos, dissolved	4	ND	<1	<1	<1	<1
Dichlorvos, whole water	3	ND	<1	<1	<1	<1
Diethyl phthalate, whole water	3	ND	<.5	<.5	<.5	<.5
Diethyl phthalate, bottom sediment	5	50 µg/kg	--	--	--	--
D-Limonene, dissolved	4	ND	e.068	<.5	<.5	<.5
D-Limonene, whole water	3	ND	<.5	<.5	<.5	e1.8
D-Limonene, bottom sediment	5	50 µg/kg	--	--	--	--
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB), dissolved	4	.061	<.5	<.5	<.5	<.5
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB), whole water	3	.045	<.5	<.5	<.5	<.5
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB), bottom sediment	5	50 µg/kg	--	--	--	--
Indole, dissolved	4	.042	<.5	<.5	e.080	<.5
Indole, whole water	3	.015	<.5	<.5	<.5	<.5
Indole, bottom sediment	5	1.9 µg/kg	--	--	--	--
Isoborneol, dissolved	4	.5	<.5	<.5	<.5	<.5

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)			
			433408096432000 Big Sioux River diversion channel at North Drive, at Sioux Falls, SD (site US3, fig. 1)		06482020 Big Sioux River at North Cliff Avenue, at Sioux Falls, SD (site US4, fig. 1)	
Compound—Continued						
Isoborneol, whole water	3	0.5	<0.5	<0.5	<0.5	<0.5
Isoborneol, bottom sediment	5	50 µg/kg	--	--	--	--
Isophorone, dissolved	4	.047	e.049	e.25	e.055	<.5
Isophorone, whole water	3	ND	<.5	<.5	<.5	<.5
Isophorone, bottom sediment	5	50 µg/kg	--	--	--	--
Isopropylbenzene (cumene), dissolved	4	ND	<.5	<.5	<.5	<.5
Isopropylbenzene (cumene), whole water	3	ND	<.5	<.5	<.5	<.5
Isopropylbenzene (cumene), bottom sediment	5	50 µg/kg	--	--	--	--
Isoquinoline, dissolved	4	.5	<.5	<.5	<.5	<.5
Isoquinoline, whole water	3	ND	<.5	<.5	<.5	<.5
Isoquinoline, bottom sediment	5	50 µg/kg	--	--	--	--
Menthol, dissolved	4	.5	<.5	<.5	<.5	<.5
Menthol, whole water	3	ND	<.5	<.5	<.5	<.5
Menthol, bottom sediment	5	50 µg/kg	--	--	--	--
Metalaxyl, dissolved	4	.5	<.5	<.5	<.5	<.5
Metalaxyl, whole water	3	.5	<.5	<.5	<.5	<.5
Metalaxyl, bottom sediment	5	100 µg/kg	--	--	--	--
Methyl salicylate, dissolved	4	.5	<.5	<.5	<.5	<.5
Methyl salicylate, whole water	3	.017	<.5	<.5	<.5	<.5
Methyl salicylate, bottom sediment	5	100 µg/kg	--	--	--	--
Nonylphenol diethoxylate (NP2EO), dissolved	4	3.5	e4.9	<5	e3.6	<5
Nonylphenol diethoxylate (NP2EO), whole water	3	.66	<5	<5	<5	<5
Nonylphenol diethoxylate (NP2EO), bottom sediment	5	65 µg/kg	--	--	--	--
Nonylphenol monoethoxylate (NP1EO), whole water	3	.55	<2	<2	<2	<2
Nonylphenol monoethoxylate (NP1EO), bottom sediment	5	500 µg/kg	--	--	--	--
Octylphenol diethoxylate (OP2EO), dissolved	4	.19	e.20	<1	e.19	<1

116 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)			
			433408096432000 Big Sioux River diversion channel at North Drive, at Sioux Falls, SD (site US3, fig. 1)		06482020 Big Sioux River at North Cliff Avenue, at Sioux Falls, SD (site US4, fig. 1)	
Compound—Continued						
Octylphenol diethoxylate (OP2EO), whole water	3	0.14	<1	<1	<1	<1
Octylphenol diethoxylate (OP2EO), bottom sediment	5	100 µg/kg	--	--	--	--
Octylphenol monoethoxylate (OP1EO), dissolved	4	.39	e.40	<1	e.39	<1
Octylphenol monoethoxylate (OP1EO), whole water	3	5.2	<1	<1	<1	<1
Octylphenol monoethoxylate (OP1EO), bottom sediment	5	100 µg/kg	--	--	--	--
<i>para</i> -Cresol, dissolved	4	.079	<1	<1	<1	<1
<i>para</i> -Cresol, whole water	3	1	<1	<1	<1	<1
<i>para</i> -Cresol, bottom sediment	5	21 µg/kg	--	--	--	--
<i>para</i>-Nonylphenol (NP), dissolved	4	.83	e.83	<5	e.88	<5
<i>para</i>-Nonylphenol (NP), whole water	3	.64	<5	<5	<5	<5
<i>para</i>-Nonylphenol (NP), bottom sediment	5	500 µg/kg	--	--	--	--
Pentachlorophenol, dissolved	4	.42	<2	<2	<2	<2
Pentachlorophenol, whole water	3	ND	<2	<2	<2	<2
Pentachlorophenol, bottom sediment	5	200 µg/kg	--	--	--	--
Phenol, dissolved	4	.34	<.5	<.5	<.5	<.5
Phenol, whole water	3	.94	<.5	<.5	<.5	<.5
Phenol, bottom sediment	5	19 µg/kg	--	--	--	--
Tetrachloroethylene, dissolved	4	ND	<.5	<.5	<.5	<.5
Tetrachloroethylene, whole water	3	ND	<.5	<.5	<.5	<.5
Tetrachloroethylene, bottom sediment	5	50 µg/kg	--	--	--	--
Tributyl phosphate, dissolved	4	.18	<.5	<.5	e.25	<.5
Tributyl phosphate, whole water	3	.059	<.5	<.5	e.12	<.5
Tributyl phosphate, bottom sediment	5	50 µg/kg	--	--	--	--
Triclosan, dissolved	4	.16	<1	<1	<1	<1
Triclosan, whole water	3	.15	<1	<1	<1	<1
Triclosan, bottom sediment	5	2.9 µg/kg	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)			
			433408096432000 Big Sioux River diversion channel at North Drive, at Sioux Falls, SD (site US3, fig. 1)		06482020 Big Sioux River at North Cliff Avenue, at Sioux Falls, SD (site US4, fig. 1)	
Compound—Continued						
Triethyl citrate (ethyl citrate), dissolved	4	0.21	<0.5	<0.5	<0.5	<0.5
Triethyl citrate (ethyl citrate), whole water	3	.051	<.5	<.5	<.5	<.5
Triphenyl phosphate, dissolved	4	.066	<.5	<.5	e.088	<.5
Triphenyl phosphate, whole water	3	.033	<.5	<.5	e.033	<.5
Triphenyl phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--
Tri(2-butoxyethyl)phosphate, dissolved	4	.4	<.5	<.5	.91	<.5
Tri(2-butoxyethyl)phosphate, whole water	3	.13	<.5	e.24	e.43	<.5
Tri(2-butoxyethyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--
Tri(2-chloroethyl)phosphate, dissolved	4	.074	e.074	<.5	e.085	<.5
Tri(2-chloroethyl)phosphate, whole water	3	.1	<.5	<.5	<.5	<.5
Tri(2-chloroethyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--
Tri(dichloroisopropyl)phosphate, dissolved	4	.13	<.5	<.5	<.5	<.5
Tri(dichloroisopropyl)phosphate, whole water	3	.071	<.5	<.5	<.5	<.5
Tri(dichloroisopropyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	--	--	--

118 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)					
			433531096394200 Sioux Falls wastewater treatment plant effluent (site WWE, fig. 1)					
Date of sample collection (month–day–year)			09–10–2002	01–24–2003	03–21–2003	06–26–2003	05–18–2004	05–30–2004
Time of sample collection (24-hour)			1400	0930	1045	1135	1020	2020
			Compound					
1,4-Dichlorobenzene, dissolved	4	0.08	--	--	--	--	e0.16	e0.53
1,4-Dichlorobenzene, whole water	3	ND	<0.5	<0.5	e0.084	e0.11	e.094	e.20
1,4-Dichlorobenzene, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
2,2',4,4'-Tetrabromodiphenyl ether , whole water	3	.5	<10	<10	<10	--	<.5	<.5
2,2',4,4'-Tetrabromodiphenyl ether , bottom sediment	5	50 µg/kg	--	--	--	--	--	--
3,4-Dichlorophenyl isocyanate, whole water	4	ND	e.32	e.21	e.23	--	e3.9	e2.7
3,4-Dichlorophenyl isocyanate, bottom sediment	3	100 µg/kg	--	--	--	--	--	--
3-Methyl-1H-indole (skatol), dissolved	5	.02	--	--	--	--	<1	<1
3-Methyl-1H-indole (skatol), whole water	3	.019	<1	<1	e.019	<1	<1	<1
3-Methyl-1H-indole (skatol), bottom sediment	5	30 µg/kg	--	--	--	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , dissolved	4	5	--	--	--	--	<5	<5
3-tert-Butyl-4-hydroxy anisole (BHA) , whole water	3	ND	<5	<5	<5	<5	<5	<5
4-Cumylphenol , dissolved	5	1	--	--	--	--	<1	<1
4-Cumylphenol , whole water	3	1	<1	<1	<1	<1	<1	<1
4-Cumylphenol , bottom sediment	5	50 µg/kg	--	--	--	--	--	--
4-normal-Octylphenol , dissolved	4	1	--	--	--	--	<1	<1
4-normal-Octylphenol , whole water	3	1	<1	<1	<1	<1	<1	<1
4-normal-Octylphenol , bottom sediment	5	50 µg/kg	--	--	--	--	--	--
4-tert-Octylphenol , dissolved	4	1	--	--	--	--	<1	<1
4-tert-Octylphenol , whole water	3	.26	<1	<1	<1	<1	e.19	<1
4-tert-Octylphenol , bottom sediment	5	50 µg/kg	--	--	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)					
			433531096394200 Sioux Falls wastewater treatment plant effluent (site WWE, fig. 1)					
Compound—Continued								
5-Methyl-1H-benzotriazole, dissolved	4	ND	--	--	--	--	--	--
5-Methyl-1H-benzotriazole, whole water	3	0.33	0.33	1.9	e0.52	<2	e0.72	<2
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , dissolved	4	.23	--	--	--	--	2.1	1.7
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , whole water	3	.048	.66	1.3	.84	1.1	1.9	.88
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Acetophenone, dissolved	4	.5	--	--	--	--	<.5	<.5
Acetophenone, whole water	3	.08	<.5	<.5	<.5	e.12	<.5	<.5
Acetophenone, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Anthraquinone, dissolved	4	.12	--	--	--	--	<.5	e.12
Anthraquinone, whole water	3	.098	<.5	<.5	<.5	<.5	<.5	<.5
Anthraquinone, bottom sediment	5	4 µg/kg	--	--	--	--	--	--
Benzophenone , dissolved	4	.066	--	--	--	--	e.20	e.14
Benzophenone , whole water	3	ND	e.12	e.23	e.077	e.15	e.14	e.064
Benzophenone , bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate, whole water	3	ND	e27	<.5	<.5	<.5	<2	5.5
Bis(2-ethylhexyl) phthalate, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Bisphenol-A , dissolved	4	ND	--	--	--	--	<1	<1
Bisphenol-A , whole water	3	ND	<1	<1	<1	<1	<1	<1
Bisphenol-A , bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Bromacil, dissolved	4	ND	--	--	--	--	<.5	<.5
Bromacil, whole water	3	.068	<.5	<.5	<.5	<.5	<.5	<.5
Bromacil, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Camphor, dissolved	4	.029	--	--	--	--	<.5	<.5
Camphor, whole water	3	.5	<.5	<.5	<.5	<.5	<.5	<.5
Camphor, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Carbaryl , dissolved	4	.14	--	--	--	--	<1	e.14

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)					
			433531096394200 Sioux Falls wastewater treatment plant effluent (site WWE, fig. 1)					
Compound—Continued								
Isoborneol, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Isophorone, dissolved	4	.047	--	--	--	--	<0.5	<0.5
Isophorone, whole water	3	ND	<0.5	<0.5	<0.5	<0.5	<.5	<.5
Isophorone, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Isopropylbenzene (cumene), dissolved	4	ND	--	--	--	--	<.5	<.5
Isopropylbenzene (cumene), whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5
Isopropylbenzene (cumene), bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Isoquinoline, dissolved	4	.5	--	--	--	--	<.5	<.5
Isoquinoline, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5
Isoquinoline, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Menthol, dissolved	4	.5	--	--	--	--	<.5	<.5
Menthol, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5
Menthol, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Metalaxyl, dissolved	4	.5	--	--	--	--	<.5	<.5
Metalaxyl, whole water	3	.5	<.5	<.5	<.5	<.5	<.5	<.5
Metalaxyl, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Methyl salicylate, dissolved	4	.5	--	--	--	--	<.5	<.5
Methyl salicylate, whole water	3	.017	<.5	<.5	<.5	<.5	<.5	<.5
Methyl salicylate, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Nonylphenol diethoxylate (NP2EO), dissolved	4	3.5	--	--	--	--	e4.3	e1.6
Nonylphenol diethoxylate (NP2EO), whole water	3	.66	e1.4	e6.2	e6.2	e2.1	<5	e.66
Nonylphenol diethoxylate (NP2EO), bottom sediment	5	65 µg/kg	--	--	--	--	--	--
Nonylphenol monoethoxylate (NP1EO), whole water	3	.55	e.43	e1.5	e1.7	e.94	<2	e.50
Nonylphenol monoethoxylate (NP1EO), bottom sediment	5	500 µg/kg	--	--	--	--	--	--
Octylphenol diethoxylate (OP2EO), dissolved	4	.19	--	--	--	--	<1	<1
Octylphenol diethoxylate (OP2EO), whole water	3	.14	<1	<1	<1	e.13	e.067	<1

122 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)					
			433531096394200 Sioux Falls wastewater treatment plant effluent (site WWE, fig. 1)					
Compound—Continued								
Octylphenol diethoxylate (OP2EO) , bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Octylphenol monoethoxylate (OPIEO) , dissolved	4	.39	--	--	--	--	<1	<1
Octylphenol monoethoxylate (OPIEO) , whole water	3	5.2	<1	<1	<1	<1	<1	--
Octylphenol monoethoxylate (OPIEO) , bottom sediment	5	100 µg/kg	--	--	--	--	--	--
<i>para</i> -Cresol, dissolved	4	.079	--	--	--	--	e.11	e.079
<i>para</i> -Cresol, whole water	3	1	<1	<1	<1	<1	<1	<1
<i>para</i> -Cresol, bottom sediment	5	21 µg/kg	--	--	--	--	--	--
<i>para</i>-Nonylphenol (NP) , dissolved	4	.83	--	--	--	--	e1.9	e1.1
<i>para</i>-Nonylphenol (NP) , whole water	3	.64	<5	<5	<5	<5	<5	e.64
<i>para</i>-Nonylphenol (NP) , bottom sediment	5	500 µg/kg	--	--	--	--	--	--
Pentachlorophenol , dissolved	4	.42	--	--	--	--	<2	e.42
Pentachlorophenol , whole water	3	ND	e.040	<2	<2	<2	<2	<2
Pentachlorophenol , bottom sediment	5	200 µg/kg	--	--	--	--	--	--
Phenol, dissolved	4	.34	--	--	--	--	e.30	.72
Phenol, whole water	3	.94	e1.8	<.5	<.5	e.38	<.5	e.15
Phenol, bottom sediment	5	19 µg/kg	--	--	--	--	--	--
Tetrachloroethylene, dissolved	4	ND	--	--	--	--	<.5	e.087
Tetrachloroethylene, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5
Tetrachloroethylene, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Tributyl phosphate, dissolved	4	.18	--	--	--	--	e.25	e.19
Tributyl phosphate, whole water	3	.059	e.21	e.46	e.25	e.28	e.11	e.059
Tributyl phosphate, bottom sediment	5	50 µg/kg	--	--	--	--	--	--
Triclosan , dissolved	4	.16	--	--	--	--	e.24	e.16
Triclosan , whole water	3	.15	e.097	e.18	e.17	e.14	e.14	<1
Triclosan , bottom sediment	5	2.9 µg/kg	--	--	--	--	--	--
Triethyl citrate (ethyl citrate), dissolved	4	.21	--	--	--	--	1.1	e.32

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds.

Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)					
			433531096394200 Sioux Falls wastewater treatment plant effluent (site WWE, fig. 1)					
Compound—Continued								
Triethyl citrate (ethyl citrate), whole water	3	0.051	e0.27	0.86	0.77	0.61	0.86	e0.17
Triphenyl phosphate, dissolved	4	.066	--	--	--	--	e.12	e.074
Triphenyl phosphate, whole water	3	.033	<.5	<.5	<.5	e.079	<.5	<.5
Triphenyl phosphate, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Tri(2-butoxyethyl)phosphate, dissolved	4	.4	--	--	--	--	<.5	<.5
Tri(2-butoxyethyl)phosphate, whole water	3	.13	<.5	e3.2	.85	<.5	<.5	<.5
Tri(2-butoxyethyl)phosphate, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Tri(2-chloroethyl)phosphate, dissolved	4	.074	--	--	--	--	.69	2.9
Tri(2-chloroethyl)phosphate, whole water	3	.1	e.34	e.36	e.32	e.34	.58	1.7
Tri(2-chloroethyl)phosphate, bottom sediment	5	100 µg/kg	--	--	--	--	--	--
Tri(dichloroisopropyl)phosphate, dissolved	4	.13	--	--	--	--	e.42	e.47
Tri(dichloroisopropyl)phosphate, whole water	3	.071	e.25	e.39	e.16	e.24	e.24	e.32
Tri(dichloroisopropyl)phosphate, bottom sediment	5	100 µg/kg	--	--	--	--	--	--

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)		
			433559096390700	Big Sioux River downstream from Sioux Falls wastewater discharge (site DS1, fig. 1)	
Date of sample collection (month–day–year)			09–10–2002	05–17–2004	05–30–2004
Time of sample collection (24-hour)			1030	1100	1630
Compound					
1,4-Dichlorobenzene, dissolved	4	0.08	--	<0.5	<0.5
1,4-Dichlorobenzene, whole water	3	ND	<0.05	<.5	<.5
1,4-Dichlorobenzene, bottom sediment	5	50 $\mu\text{g}/\text{kg}$	<50 $\mu\text{g}/\text{kg}$	--	--
2,2',4,4'-Tetrabromodiphenyl ether , whole water	3	.5	<10	<.5	<.5
2,2',4,4'-Tetrabromodiphenyl ether , bottom sediment	5	50 $\mu\text{g}/\text{kg}$	<50	--	--
3,4-Dichlorophenyl isocyanate, whole water	4	ND	e.050	e4.3	<.5
3,4-Dichlorophenyl isocyanate, bottom sediment	3	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--
3-Methyl-1H-indole (skatol), dissolved	5	.02	--	e.020	<1
3-Methyl-1H-indole (skatol), whole water	3	.019	<1	<1	<1
3-Methyl-1H-indole (skatol), bottom sediment	5	30 $\mu\text{g}/\text{kg}$	59 $\mu\text{g}/\text{kg}$	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , dissolved	4	5	--	<5	<5
3-tert-Butyl-4-hydroxy anisole (BHA) , whole water	3	ND	<5	<5	<5
4-Cumylphenol , dissolved	5	1	--	<1	<1
4-Cumylphenol , whole water	3	1	<1	<1	<1
4-Cumylphenol , bottom sediment	5	50 $\mu\text{g}/\text{kg}$	<50 $\mu\text{g}/\text{kg}$	--	--
4-normal-Octylphenol , dissolved	4	1	--	<1	<1
4-normal-Octylphenol , whole water	3	1	<1	<1	<1
4-normal-Octylphenol , bottom sediment	5	50 $\mu\text{g}/\text{kg}$	<50 $\mu\text{g}/\text{kg}$	--	--
4-tert-Octylphenol , dissolved	4	1	--	<1	<1
4-tert-Octylphenol , whole water	3	.26	<1	<1	<1

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)		
			433559096390700 Big Sioux River downstream from Sioux Falls wastewater discharge (site DS1, fig. 1)		
Compound—Continued					
4-tert-Octylphenol , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
5-Methyl-1H-benzotriazole, dissolved	4	ND	--	<2	<2
5-Methyl-1H-benzotriazole, whole water	3	0.33	<2	<2	<2
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , dissolved	4	.23	--	e.27	<.5
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , whole water	3	.048	e.14	e.21	<.5
7-Acetyl-1,1,3,4,4,6-hexamethyl tetrahydronaphthalene (AHTN) , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Acetophenone, dissolved	4	.5	--	<.5	<.5
Acetophenone, whole water	3	.08	<.5	<.5	<.5
Acetophenone, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Anthraquinone, dissolved	4	.12	--	e.12	<.5
Anthraquinone, whole water	3	.098	<.5	e.1	<.5
Anthraquinone, bottom sediment	5	4 µg/kg	e4.55 µg/kg	--	--
Benzophenone , dissolved	4	.066	--	e.066	e.11
Benzophenone , whole water	3	ND	<.5	<.5	<.5
Benzophenone , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Bis(2-ethylhexyl) phthalate, whole water	3	ND	e7.5	<2	<2
Bis(2-ethylhexyl) phthalate, bottom sediment	5	100 µg/kg	240 µg/kg	--	--
Bisphenol-A , dissolved	4	ND	--	<1	<1
Bisphenol-A , whole water	3	ND	<1	<1	<1
Bisphenol-A , bottom sediment	5	100 µg/kg	<100 µg/kg	--	--
Bromacil, dissolved	4	ND	--	<.5	<.5
Bromacil, whole water	3	.068	<.5	<.5	<.5
Bromacil, bottom sediment	5	100 µg/kg	<100 µg/kg	--	--
Camphor, dissolved	4	.029	--	e.033	<.5
Camphor, whole water	3	.5	<.5	<.5	<.5

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)		
			433559096390700 Big Sioux River downstream from Sioux Falls wastewater discharge (site DS1, fig. 1)		
Compound—Continued					
Camphor, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Carbaryl , dissolved	4	0.14	--	<1	<1
Carbaryl , whole water	3	ND	<1	<1	<1
Chlorpyrifos , dissolved	4	.5	--	<.5	<.5
Chlorpyrifos , whole water	3	.014	<.5	<.5	<.5
Chlorpyrifos , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
N,N-Diethyl- <i>meta</i> -toluamide (DEET), dissolved	4	.034	--	e.10	<.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), whole water	3	.042	e.064	e.051	<.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), bottom sediment	5	100 µg/kg	<100 µg/kg	--	--
Diazinon , dissolved	4	.5	--	<.5	<.5
Diazinon , whole water	3	.027	<.5	<.5	<.5
Diazinon , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Dichlorvos, dissolved	4	ND	--	<1	<1
Dichlorvos, whole water	3	ND	<1	<1	<1
Diethyl phthalate , whole water	3	ND	<.5	<.5	<.5
Diethyl phthalate , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
D-Limonene, dissolved	4	ND	--	<.5	<.5
D-Limonene, whole water	3	ND	<.5	<.5	<.5
D-Limonene, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , dissolved	4	.061	--	e.065	<.5
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , whole water	3	.045	<.5	e.045	<.5
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Indole, dissolved	4	.042	--	e.097	<.5
Indole, whole water	3	.015	<.5	<.5	<.5
Indole, bottom sediment	5	1.9 µg/kg	56 µg/kg	--	--
Isoborneol, dissolved	4	.5	--	<.5	<.5

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)		
			433559096390700 Big Sioux River downstream from Sioux Falls wastewater discharge (site DS1, fig. 1)		
Compound—Continued					
Isoborneol, whole water	3	0.5	<0.5	<0.5	<0.5
Isoborneol, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Isophorone, dissolved	4	.047	--	<.5	<.5
Isophorone, whole water	3	ND	<.5	<.5	<.5
Isophorone, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Isopropylbenzene (cumene), dissolved	4	ND	--	<.5	<.5
Isopropylbenzene (cumene), whole water	3	ND	<.5	<.5	<.5
Isopropylbenzene (cumene), bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Isoquinoline, dissolved	4	.5	--	<.5	<.5
Isoquinoline, whole water	3	ND	<.5	<.5	<.5
Isoquinoline, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Menthol, dissolved	4	.5	--	<.5	<.5
Menthol, whole water	3	ND	<.5	<.5	<.5
Menthol, bottom sediment	5	50 µg/kg	<50 µg/kg	--	--
Metalaxyl, dissolved	4	.5	--	<.5	<.5
Metalaxyl, whole water	3	.5	<.5	<.5	<.5
Metalaxyl, bottom sediment	5	100 µg/kg	<100 µg/kg	--	--
Methyl salicylate, dissolved	4	.5	--	<.5	<.5
Methyl salicylate, whole water	3	.017	<.5	<.5	<.5
Methyl salicylate, bottom sediment	5	100 µg/kg	<100 µg/kg	--	--
Nonylphenol diethoxylate (NP2EO), dissolved	4	3.5	--	e5.0	<5
Nonylphenol diethoxylate (NP2EO), whole water	3	.66	<5	<5	<5
Nonylphenol diethoxylate (NP2EO), bottom sediment	5	65 µg/kg	e110 µg/kg	--	--
Nonylphenol monoethoxylate (NP1EO), whole water	3	.55	<5	<2	<2
Nonylphenol monoethoxylate (NP1EO), bottom sediment	5	500 µg/kg	<500 µg/kg	--	--
Octylphenol diethoxylate (OP2EO), dissolved	4	.19	--	e.24	<1
Octylphenol diethoxylate (OP2EO), whole water	3	.14	<1	<1	<1

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)		
			433559096390700 Big Sioux River downstream from Sioux Falls wastewater discharge (site DS1, fig. 1)		
Compound—Continued					
Octylphenol diethoxylate (OP2EO) , bottom sediment	5	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--
Octylphenol monoethoxylate (OP1EO) , dissolved	4	.39	--	e0.4	<1
Octylphenol monoethoxylate (OP1EO) , whole water	3	5.2	<1	e.43	<1
Octylphenol monoethoxylate (OP1EO) , bottom sediment	5	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--
<i>para</i> -Cresol, dissolved	4	.079	--	<1	<1
<i>para</i> -Cresol, whole water	3	1	<1	<1	<1
<i>para</i> -Cresol, bottom sediment	5	21 $\mu\text{g}/\text{kg}$	e65 $\mu\text{g}/\text{kg}$	--	--
<i>para</i> -Nonylphenol (NP), dissolved	4	.83	--	e1.2	<5
<i>para</i> -Nonylphenol (NP), whole water	3	.64	<5	<5	<5
<i>para</i> -Nonylphenol (NP), bottom sediment	5	500 $\mu\text{g}/\text{kg}$	<500 $\mu\text{g}/\text{kg}$	--	--
Pentachlorophenol , dissolved	4	.42	--	<2	<2
Pentachlorophenol , whole water	3	ND	<2	<2	<2
Pentachlorophenol , bottom sediment	5	200 $\mu\text{g}/\text{kg}$	<200 $\mu\text{g}/\text{kg}$	--	--
Phenol, dissolved	4	.34	--	e.26	<.5
Phenol, whole water	3	.94	<.5	<.5	<.5
Phenol, bottom sediment	5	19 $\mu\text{g}/\text{kg}$	e19 $\mu\text{g}/\text{kg}$	--	--
Tetrachloroethylene, dissolved	4	ND	--	<.5	<.5
Tetrachloroethylene, whole water	3	ND	<.5	<.5	<.5
Tetrachloroethylene, bottom sediment	5	50 $\mu\text{g}/\text{kg}$	<50 $\mu\text{g}/\text{kg}$	--	--
Tributyl phosphate, dissolved	4	.18	--	e.20	<.5
Tributyl phosphate, whole water	3	.059	e.082	e.094	<.5
Tributyl phosphate, bottom sediment	5	50 $\mu\text{g}/\text{kg}$	<50 $\mu\text{g}/\text{kg}$	--	--
Triclosan , dissolved	4	.16	--	<1	<1
Triclosan , whole water	3	.15	<1	<1	<1
Triclosan , bottom sediment	5	2.9 $\mu\text{g}/\text{kg}$	e6.27 $\mu\text{g}/\text{kg}$	--	--
Triethyl citrate (ethyl citrate), dissolved	4	.21	--	e.23	<.5

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)		
			433559096390700 Big Sioux River downstream from Sioux Falls wastewater discharge (site DS1, fig. 1)		
Compound—Continued					
Triethyl citrate (ethyl citrate), whole water	3	0.051	e0.051	e0.12	<0.5
Triphenyl phosphate, dissolved	4	.066	--	e.069	<.5
Triphenyl phosphate, whole water	3	.033	<.5	<.5	<.5
Triphenyl phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--
Tri(2-butoxyethyl)phosphate, dissolved	4	.4	--	e.41	<.5
Tri(2-butoxyethyl)phosphate, whole water	3	.13	e.13	<.5	<.5
Tri(2-butoxyethyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--
Tri(2-chloroethyl)phosphate, dissolved	4	.074	--	e.20	e.089
Tri(2-chloroethyl)phosphate, whole water	3	.1	e.10	e.15	<.5
Tri(2-chloroethyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--
Tri(dichloroisopropyl)phosphate, dissolved	4	.13	--	e.13	<.5
Tri(dichloroisopropyl)phosphate, whole water	3	.071	e.071	<.5	<.5
Tri(dichloroisopropyl)phosphate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	<100 $\mu\text{g}/\text{kg}$	--	--

130 Organic Wastewater Compounds in Drinking Water, Wastewater Effluent, and the Big Sioux River, 2001–2004

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433541096355800 Big Sioux River at Brandon, SD (site DS2, fig. 1)						
Date of sample collection (month–day–year)			08–16–2001	09–11–2002	01–23–2003	03–20–2003	06–25–2003	05–17–2004	05–31–2004
Time of sample collection (24-hour)			0930	1030	1125	1315	1630	1730	1230
			Compound						
1,4-Dichlorobenzene, dissolved	4	0.08	--	--	--	--	--	<0.5	<0.5
1,4-Dichlorobenzene, whole water	3	ND	<0.5	<0.5	<0.5	<0.5	<0.5	<.5	<.5
1,4-Dichlorobenzene, bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
2,2',4,4'-Tetrabromodiphenyl ether , whole water	3	.5	--	<10	<10	<10	--	<.5	<.5
2,2',4,4'-Tetrabromodiphenyl ether , bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
3,4-Dichlorophenyl isocyanate, whole water	4	ND	--	e.052	<.5	e.053	--	e2.0	<.5
3,4-Dichlorophenyl isocyanate, bottom sediment	3	100 µg/kg	--	<100 µg/kg	--	--	--	--	--
3-Methyl-1H-indole (skatol), dissolved	5	.02	--	--	--	--	--	<1	<1
3-Methyl-1H-indole (skatol), whole water	3	.019	<1	<1	<1	<1	<1	<1	<1
3-Methyl-1H-indole (skatol), bottom sediment	5	30 µg/kg	--	e34 µg/kg	--	--	--	--	--
3-tert-Butyl-4-hydroxy anisole (BHA) , dissolved	4	5	--	--	--	--	--	<5	<5
3-tert-Butyl-4-hydroxy anisole (BHA) , whole water	3	ND	<5	<5	<5	<5	<5	<5	<5
4-Cumylphenol , dissolved	5	1	--	--	--	--	--	<1	<1

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433541096355800 Big Sioux River at Brandon, SD (site DS2, fig. 1)						
Compound—Continued									
Chlorpyrifos , bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
N,N-Diethyl- <i>meta</i> -toluamide (DEET), dissolved	4	0.034	--	--	--	--	--	e.0.10	<0.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), whole water	3	.042	<0.5	e.0.094	e.0.076	<0.5	e.0.34	e.0.42	<.5
N,N-Diethyl- <i>meta</i> -toluamide (DEET), bottom sediment	5	100 µg/kg	--	<100 µg/kg	--	--	--	--	--
Diazinon , dissolved	4	.5	--	--	--	--	--	<.5	<.5
Diazinon , whole water	3	.027	<.5	<.5	<.5	<.5	e.0.089	<.5	<.5
Diazinon , bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
Dichlorvos, dissolved	4	ND	--	--	--	--	--	<1	<1
Dichlorvos, whole water	3	ND	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate , whole water	3	ND	--	<.5	<.5	<.5	--	<.5	<.5
Diethyl phthalate , bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
D-Limonene, dissolved	4	ND	--	--	--	--	--	<.5	<.5
D-Limonene, whole water	3	ND	<.5	<.5	<.5	<.5	<.5	<.5	<.5
D-Limonene, bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , dissolved	4	.061	--	--	--	--	--	e.0.061	<.5
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl cyclopenta-g-2-benzopyran (HHCB) , whole water	3	.045	<.5	<.5	e.0.13	<.5	<.5	<.5	<.5

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433541096355800 Big Sioux River at Brandon, SD (site DS2, fig. 1)						
Compound—Continued									
Metalaxyl, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	<100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Methyl salicylate, dissolved	4	0.5	--	--	--	--	--	<0.5	<0.5
Methyl salicylate, whole water	3	.017	<0.5	<0.5	<0.5	<0.5	<0.5	<.5	<.5
Methyl salicylate, bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	<100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Nonylphenol diethoxylate (NP2EO) , dissolved	4	3.5	--	--	--	--	--	<5	<5
Nonylphenol diethoxylate (NP2EO) , whole water	3	.66	<5	<5	e3.0	e2.9	<5	<5	<5
Nonylphenol diethoxylate (NP2EO) , bottom sediment	5	65 $\mu\text{g}/\text{kg}$	--	e65 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Nonylphenol monoethoxylate (NP1EO) , whole water	3	.55	--	<5	e.82	<5	<5	<2	<2
Nonylphenol monoethoxylate (NP1EO) , bottom sediment	5	500 $\mu\text{g}/\text{kg}$	--	<500 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Octylphenol diethoxylate (OP2EO) , dissolved	4	.19	--	--	--	--	--	<1	<1
Octylphenol diethoxylate (OP2EO) , whole water	3	.14	<1	<1	<1	<1	<1	<1	<1
Octylphenol diethoxylate (OP2EO) , bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	<100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Octylphenol monoethoxylate (OP1EO) , dissolved	4	.39	--	--	--	--	--	<1	<1

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). $\mu\text{g}/\text{kg}$, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433541096355800 Big Sioux River at Brandon, SD (site DS2, fig. 1)						
Compound—Continued									
Octylphenol monoethoxylate (OP1EO) , whole water	3	5.2	<1	<1	<1	e0.42	<1	<1	<1
Octylphenol monoethoxylate (OP1EO) , bottom sediment	5	100 $\mu\text{g}/\text{kg}$	--	<100 $\mu\text{g}/\text{kg}$	--	--	--	--	--
<i>para</i> -Cresol, dissolved	4	.079	--	--	--	--	--	<1	<1
<i>para</i> -Cresol, whole water	3	1	<1	<1	<1	<1	<1	<1	<1
<i>para</i> -Cresol, bottom sediment	5	21 $\mu\text{g}/\text{kg}$	--	e21 $\mu\text{g}/\text{kg}$	--	--	--	--	--
<i>para</i> -Nonylphenol (NP), dissolved	4	.83	--	--	--	--	--	<5	<5
<i>para</i> -Nonylphenol (NP), whole water	3	.64	<5	<5	<5	<5	<5	<5	<5
<i>para</i> -Nonylphenol (NP), bottom sediment	5	500 $\mu\text{g}/\text{kg}$	--	<500 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Pentachlorophenol , dissolved	4	.42	--	--	--	--	--	<2	<2
Pentachlorophenol , whole water	3	ND	<2	<2	<2	<2	e3.6	<2	<2
Pentachlorophenol , bottom sediment	5	200 $\mu\text{g}/\text{kg}$	--	<200 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Phenol, dissolved	4	.34	--	--	--	--	--	e.24	<.5
Phenol, whole water	3	.94	e.63	e.61	e.56	<.5	e.28	<.5	e.22
Phenol, bottom sediment	5	19 $\mu\text{g}/\text{kg}$	--	e32 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Tetrachloroethylene, dissolved	4	ND	--	--	--	--	--	<.5	<.5
Tetrachloroethylene, whole water	3	ND	<.5	<.5	e.069	<.5	<.5	<.5	<.5
Tetrachloroethylene, bottom sediment	5	50 $\mu\text{g}/\text{kg}$	--	<50 $\mu\text{g}/\text{kg}$	--	--	--	--	--
Tributyl phosphate, dissolved	4	.18	--	--	--	--	--	e.24	<.5
Tributyl phosphate, whole water	3	.059	<.5	e.092	e.25	<.5	e.63	e.12	<.5

Table 18. Analytical results for household, industrial, and minor agricultural use compounds (HIACs) in water and bottom-sediment samples.—Continued

[Bold text indicates suspected endocrine-disrupting compound (EDC). Shaded cells indicate concentrations greater than study reporting levels for compounds with acceptable quality assurance/quality control, and concentrations were used in analyses related to occurrence of organic wastewater compounds. Units are micrograms per liter unless otherwise noted. Analytical method number: 3, Lee and others (2004); 4, Zaugg and others (2002); 5, Burkhardt and others (2005). µg/kg, micrograms per kilogram; ND, not determined; e, estimated; <, less than; --, no data collected]

	Analytical method number	Study reporting level for data summary and analysis	Station identification number and name (site label)						
			433541096355800 Big Sioux River at Brandon, SD (site DS2, fig. 1)						
Compound—Continued									
Tributyl phosphate, bottom sediment	5	50 µg/kg	--	<50 µg/kg	--	--	--	--	--
Triclosan , dissolved	4	0.16	--	--	--	--	--	<1	<1
Triclosan , whole water	3	.15	<1	<1	<1	<1	<1	<1	<1
Triclosan , bottom sediment	5	2.9 µg/kg	--	e2.9 µg/kg	--	--	--	--	--
Triethyl citrate (ethyl citrate), dissolved	4	.21	--	--	--	--	--	e.21	<.5
Triethyl citrate (ethyl citrate), whole water	3	.051	<.5	e.084	e.38	e.070	<.5	e.10	<.5
Triphenyl phosphate, dissolved	4	.066	--	--	--	--	--	e.066	<.5
Triphenyl phosphate, whole water	3	.033	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Triphenyl phosphate, bottom sediment	5	100 µg/kg	--	<100 µg/kg	--	--	--	--	--
Tri(2-butoxyethyl) phosphate, dissolved	4	.4	--	--	--	--	--	e.40	<.5
Tri(2-butoxyethyl) phosphate, whole water	3	.13	e.22	<.5	.89	e.33	e.87	<.5	<.5
Tri(2-butoxyethyl) phosphate, bottom sediment	5	100 µg/kg	--	<100 µg/kg	--	--	--	--	--
Tri(2-chloroethyl) phosphate, dissolved	4	.074	--	--	--	--	--	e.20	e.095
Tri(2-chloroethyl) phosphate, whole water	3	.1	<.5	e.18	e.22	<.5	e.38	e.14	<.5
Tri(2-chloroethyl) phosphate, bottom sediment	5	100 µg/kg	--	<100 µg/kg	--	--	--	--	--
Tri(dichloroisopropyl) phosphate, dissolved	4	.13	--	--	--	--	--	e.13	<.5
Tri(dichloroisopropyl) phosphate, whole water	3	.071	<.5	e.075	e.26	.5	e.24	<.5	<.5
Tri(dichloroisopropyl) phosphate, bottom sediment	5	100 µg/kg	--	<100 µg/kg	--	--	--	--	--

¹Very high likelihood that detection of compound was due to contamination; value was ignored in analyses and discussion.