

Table 17. Analytical results for major agricultural herbicides (MAHs) 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; 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 | | | | | | | | | |
| Atrazine , whole water | 3 | 0.0002 | <0.5 | 2.5 | -- | e0.024 | <0.5 | e0.051 | 0.17 |
| Atrazine , bottom sediment | 5 | 100 µg/kg | -- | -- | -- | <100 µg/kg | -- | -- | -- |
| Metolachlor, dissolved | 4 | .071 | e.071 | e.35 | -- | -- | -- | -- | -- |
| Metolachlor, whole water | 3 | .004 | <.5 | e.30 | e0.013 | <.5 | <.5 | e.12 | e.10 |
| Metolachlor, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | <50 µg/kg | -- | -- | -- |
| Prometon, dissolved | 4 | .13 | <.5 | <.5 | -- | -- | -- | -- | -- |
| Prometon, whole water | 3 | .02 | <.5 | <.5 | <.5 | <.5 | <.5 | <.5 | <.5 |
| Prometon, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | <50 µg/kg | -- | -- | -- |

| | 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 (site FDW, fig. 1) | | | | |
| Date of sample collection (month–day–year) | | | 08–15–2001 | 09–09–2002 | 01–22–2003 | 03–19–2003 | 6–27–2003 |
| Time of sample collection (24-hour) | | | 1100 | 1440 | 1330 | 1445 | 0915 |
| Compound | | | | | | | |
| Atrazine , whole water | 3 | 0.0002 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Atrazine , bottom sediment | 5 | 100 µg/kg | -- | -- | -- | -- | -- |
| Metolachlor, dissolved | 4 | .071 | -- | -- | -- | -- | -- |
| Metolachlor, whole water | 3 | .004 | e0.0040 | <.5 | <.5 | <.5 | <.5 |
| Metolachlor, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | -- | -- |
| Prometon, dissolved | 4 | .13 | -- | -- | -- | -- | -- |
| Prometon, whole water | 3 | .02 | <.5 | <.5 | <.5 | <.5 | <.5 |
| Prometon, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | -- | -- |

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Table 17. Analytical results for major agricultural herbicides (MAHs) 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) | | | |
|--|--------------------------|---|--|------------|--|------------|
| | | | 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 | | | | | | |
| Atrazine, whole water | 3 | 0.0002 | <0.5 | 2.7 | e0.30 | 2.2 |
| Atrazine, bottom sediment | 5 | 100 µg/kg | -- | -- | -- | -- |
| Metolachlor, dissolved | 4 | .071 | e.080 | .51 | e.13 | .95 |
| Metolachlor, whole water | 3 | .004 | <.5 | e.37 | e.065 | .65 |
| Metolachlor, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | -- |
| Prometon, dissolved | 4 | .13 | <.5 | <.5 | <.5 | <.5 |
| Prometon, whole water | 3 | .02 | <.5 | <.5 | <.5 | <.5 |
| Prometon, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | -- |

| | 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 | | | | | | | | |
| Atrazine, whole water | 3 | 0.0002 | <0.5 | <0.5 | e0.062 | 0.083 | <0.5 | e0.26 |
| Atrazine, bottom sediment | 5 | 100 µg/kg | -- | -- | -- | -- | -- | -- |
| Metolachlor, dissolved | 4 | .071 | -- | -- | -- | -- | <.5 | <.5 |
| Metolachlor, whole water | 3 | .004 | <.5 | <.5 | <.5 | e.072 | <.5 | <.5 |
| Metolachlor, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | -- | -- | -- |
| Prometon, dissolved | 4 | .13 | -- | -- | -- | -- | <.5 | <.5 |
| Prometon, whole water | 3 | .02 | e.030 | <.5 | <.5 | e.10 | <.5 | <.5 |
| Prometon, bottom sediment | 5 | 50 µg/kg | -- | -- | -- | -- | -- | -- |

Table 17. Analytical results for major agricultural herbicides (MAHs) 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) | | | | | |
|--|--------------------------|---|--|------------|------------|--|--|--|
| | | | 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 | | | | | | | | |
| Atrazine , whole water | 3 | 0.0002 | e0.018 | e0.27 | 2.2 | | | |
| Atrazine , bottom sediment | 5 | 100 µg/kg | <100 µg/kg | -- | -- | | | |
| Metolachlor, dissolved | 4 | .071 | -- | e.11 | .78 | | | |
| Metolachlor, whole water | 3 | .004 | <.5 | e.048 | .65 | | | |
| Metolachlor, bottom sediment | 5 | 50 µg/kg | <50 µg/kg | -- | -- | | | |
| Prometon, dissolved | 4 | .13 | -- | e.13 | <.5 | | | |
| Prometon, whole water | 3 | .02 | e.020 | <.5 | <.5 | | | |
| Prometon, bottom sediment | 5 | 50 µg/kg | <50 µg/kg | -- | -- | | | |

| | 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 | | | | | | | | | |
| Atrazine , whole water | 3 | 0.0002 | -- | <0.5 | <0.5 | e0.054 | 0.41 | e0.28 | 2 |
| Atrazine , bottom sediment | 5 | 100 µg/kg | -- | <100 µg/kg | -- | -- | -- | -- | -- |
| Metolachlor, dissolved | 4 | .071 | -- | -- | -- | -- | -- | e.12 | .50 |
| Metolachlor, whole water | 3 | .004 | <0.5 | <.5 | <.5 | e.052 | e.34 | e.052 | e.40 |
| Metolachlor, bottom sediment | 5 | 50 µg/kg | -- | <50 µg/kg | -- | -- | -- | -- | -- |
| Prometon, dissolved | 4 | .13 | -- | -- | -- | -- | -- | e.16 | <.5 |
| Prometon, whole water | 3 | .02 | <.5 | <.5 | <.5 | <.5 | e.40 | e.076 | <.5 |
| Prometon, bottom sediment | 5 | 50 µg/kg | -- | <50 µg/kg | -- | -- | -- | -- | -- |