Protecting Drinking Water in the Great Lakes

Katie Rousseau, American Rivers

Great Lakes Legislative Caucus
Annual Meeting
September 22, 2018
American Rivers

- American Rivers protects wild rivers, restores damaged rivers, and conserves clean water for people and nature.

- Since 1973, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and an annual America’s Most Endangered Rivers® campaign.

- Headquartered in Washington, DC, American Rivers has offices across the country and more than 200,000 members, supporters, and volunteers.
ASBESTOS FOUND IN DULUTH WATER

By JANE E. BRODY    JUNE 16, 1973

The Environmental Protection Agency disclosed yesterday that “high concentrations” of poten
tially dangerous asbestos fibers had been found in the drinking water of Duluth and surro
unding Minnesota communities that use Lake Superior for their water supply.

The source of the fibers, the agency said, is believed to be the discharge of waste from the Reserve Mining Company, a
taconite processing plant that has been embroiled in an anti pollution suit for several
years.

The company, whose plant in Silver Bay, Minn., 55 miles northeast of Duluth, has been dumping 67,000 tons of
taconite tailings into the lake daily for 16 years, called the charges unfounded and said there was no indication that the
tailings presented any hazard to the drink ing
Cryptosporidium in Milwaukees water supply caused widespread illness

The 1993 Milwaukee cryptosporidiosis outbreak remains the largest epidemic of waterborne disease in U.S. history.

Toledo, Ohio

Photo Credit: Akron Beacon Journal

Photo Credit: CBS News

Photo Credit: Toledo Blade
Flint, Michigan

Photo Credit: inside-flint-pipes-min-tang-and-kelsey-pieper_2

Photo Credit: The Eagle Pittsburgh Barack Obama Academy of International Studies
Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that include PFOA, PFOS, GenX, and many other chemicals.
Report

Provide an overview to policy advocates, attorneys, legislators, and regulators regarding the federal Safe Drinking Water Act, how it is implemented by the 8 Great Lakes states, and how states are going above the floor set by the Safe Drinking Water Act to create more protective drinking water quality regulations.
## States Reviewed

<table>
<thead>
<tr>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>Illinois</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Indiana</td>
</tr>
<tr>
<td>Ohio</td>
<td>Minnesota</td>
</tr>
<tr>
<td></td>
<td>New York</td>
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<td></td>
<td>Pennsylvania</td>
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</tbody>
</table>
Listening Sessions

- 11 total: at least 1 in each state (2017 and 2018)

- Healing Our Waters Great Lakes Restoration Conference in Buffalo, NY

- Freshwater Future meeting in Detroit
Topics Addressed

1. Maximum contaminant levels, treatment techniques, and monitoring standards
2. Regulation of lead in drinking water
3. Consumer confidence reporting
4. Loans and grants
5. Public participation in standards development, permits, and enforcement
6. Operator certification
7. Management of drinking water emergencies
8. Management of toxic algae blooms
9. Private water supplies
The Safe Drinking Water Act (SDWA)

- Regulates Public Water Systems:
  - Provide water for human consumption through pipes or other constructed conveyances if such a system has at least 15 service connections or serves at least 25 individuals
- Allows regulation of contaminants to limit lawful amount of harmful substances delivered water may contain
- Establishes a cooperative federal-state arrangement allowing states to implement and enforce SDWA
Contaminants

The SDWA establishes national primary drinking water regulations for contaminants that pose risks to public health and that are likely to be found in public water supplies.

Standards for:
- Microorganisms
- Organic and inorganic chemicals
- Radionuclides
- Disinfectants and their byproducts

http://www.wellnesswithin.sg/index.php/2016/06/20/tap-boil-or-filtered/
## Contaminants (cont.)

<table>
<thead>
<tr>
<th>Max Contaminant Levels (MCLs), Treatment Techniques, and Action Levels</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="#">Max Contaminant Levels (MCLs), Treatment Techniques, and Action Levels</a></td>
<td>Lead (12 ppb in 2025)</td>
<td>Microystins (0.3 µg/L action level)</td>
<td>Vinyl Chloride (0.0002 mg/L)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary MCLs</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
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</thead>
<tbody>
<tr>
<td><em>Secondary MCLs</em></td>
<td>Chloride, Calcium Carbonate, Iron, Sodium, Sulfate, Corrosivity</td>
<td>pH (less stringent) Fluoride (notify public) Iron and Manganese</td>
<td>Did not adopt pH Fluoride (notify public) Hydrogen Sulfide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Review and promulgation of MCLs</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Review and promulgation of MCLs</em></td>
<td>Only if needed</td>
<td>Review rules every 5 years</td>
<td>Only if needed</td>
</tr>
</tbody>
</table>
Monitoring

- MI, OH, and WI have gone beyond the federal regulatory requirements and have created more stringent state requirements in some form or fashion.
- How they have changed the requirements vary widely
  - Requiring more frequent monitoring
  - Requiring monitoring for contaminants that is not required under federal regulations
  - Stricter reduced monitoring requirements
  - Not allowing water systems to obtain a waiver in instances where a waiver is allowed per federal regulations
Federal Lead and Copper Rule

- 1 Liter compliance samples at Tier 1 homes
  - 50% at lead service line homes
  - 50% at copper with lead solder homes from early 1980s
- Consumer notice of tap sample results within 30 days
- When there is a lead action level exceedance:
  - Public Education within 60 days
  - Optimal corrosion control treatment
  - Begin lead service line replacement at 7% per year
<table>
<thead>
<tr>
<th><strong>Relationship to Federal Rule</strong></th>
<th><strong>Michigan</strong></th>
<th><strong>Ohio</strong></th>
<th><strong>Wisconsin</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Finalized revisions to the federal rule in June 2018</td>
<td>HB 512 updated several provisions in 2016-18</td>
<td>Adopted federal rule with no material revisions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Compliance sampling</strong></th>
<th><strong>Michigan</strong></th>
<th><strong>Ohio</strong></th>
<th><strong>Wisconsin</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Only LSL homes are tier 1 sites 2 sequential 1 L samples at LSL homes</td>
<td>Must describe tier 1 sampling sites for Ohio EPA</td>
<td>Per federal rule</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Consumer notice about individual house sampling results</strong></th>
<th><strong>Michigan</strong></th>
<th><strong>Ohio</strong></th>
<th><strong>Wisconsin</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Per federal rule, within 30 days of learning result</td>
<td>Labs analyze sample within 30 days, Provide notice to PWS by next day, To consumer in 2 days</td>
<td>Per federal rule</td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th><strong>Public education (PE) after action level exceedance (ALE)</strong></th>
<th><strong>Michigan</strong></th>
<th><strong>Ohio</strong></th>
<th><strong>Wisconsin</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Public advisory within 3 days of learning of ALE</td>
<td>Notice within 2 business days after ALE</td>
<td>Per federal rule, PE within 60 days of ALE</td>
<td>PE within 60 days of ALE</td>
</tr>
</tbody>
</table>
# Lead and Copper Rule (cont.)

<table>
<thead>
<tr>
<th>Service Line Inventories</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Line Inventories</td>
<td>Preliminary inventory by 1/1/2020 Verified inventory by 1/1/2025</td>
<td>Identify and map areas known or likely to contain LSLs</td>
<td>Per federal rule</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lead Service Line Replacement</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Service Line Replacement</td>
<td>7% per year if ALE Mandatory FLSLR replacement at 5% per year or as approved in an Asset Management Plan</td>
<td>Per federal rule</td>
<td>Per federal rule Allows financial assistance to property owners to replace LSLs on private property</td>
</tr>
</tbody>
</table>
# Lead in Schools and Child Care Facilities

<table>
<thead>
<tr>
<th>Sampling requirements for schools that receive water from a CWS</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary</td>
<td>Voluntary</td>
<td>Voluntary</td>
<td>Voluntary</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State guidance</th>
<th>MDEQ published new guidance in 2016</th>
<th>Guidance in May 2018 for a grant program to fund sampling and fixture replacement in schools</th>
<th>None found</th>
</tr>
</thead>
</table>

| Recommended lead level for taking action | 5 ppb | 15 ppb | 20 ppb (from EPA 3T’s guidance) |
Consumer Confidence Reports (CCRs)

- Federal rule:
  - Source water
  - Definitions
  - Regulated contaminant data from treatment plant and distribution system
  - Unregulated contaminant data from required monitoring
  - Statement about health risk
  - Mail or directly deliver annually, with exceptions for small systems

- Minor differences at state level:
  - Encouraged or mandatory statement on unregulated contaminant health risk
  - When translations are required
  - Delivery to systems serving <1,000
Loans and Grants

Drinking Water Revolving Fund

- Created through variety of statutory mechanisms at state level to receive federal assistance
- Ohio and Michigan receive more assistance through higher annual capitalization grants than Wisconsin
- Use constrained by federal requirements
- Flexibility in developing interest rates and scoring criteria at state level

Support to Disadvantaged Communities

- Michigan ($27,266,000)
  - Offers more points on application
  - Extended loan term
- Ohio ($27,935,000)
  - Increased loan term, lower interest rate, or other financial assistance at discretion of Ohio EPA
- Wisconsin ($18,931,000)
  - Lower interest rate available to small systems that are disadvantaged
Operator Certification

Authorizing Agencies

- IL – IEPA
- IN – IDEM
- MI – MDEQ
- MN – Dept. of Health (DOH)
- NY – DOH
- OH – Ohio EPA
- PA – DEP
- WI – Dept. of Natural Resources (DNR)

https://awwoa.ca/resources/certification-information
# Operator Certification

<table>
<thead>
<tr>
<th>Operator eligibility</th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Education and experience requirements; Experience not required at lowest level</td>
<td>Must have operating experience to sit for an examination or apply for operator in training (OIT)</td>
<td>Must have high school diploma or GED Waterworks operators can be OIT for 1 year</td>
</tr>
<tr>
<td>Oversight on the job</td>
<td>Can manage immediately without oversight</td>
<td>OIT cannot be operator of record</td>
<td></td>
</tr>
<tr>
<td>Renewal</td>
<td>Every 3 years, 9-24 hours required depending on level</td>
<td>Every 2 years, 8-24 hours required, half related to O&amp;M</td>
<td>Every 3 years, Water system op: 6 hours Waterworks op: 18 hours</td>
</tr>
</tbody>
</table>
## Algal Blooms and Cyanobacteria

<table>
<thead>
<tr>
<th></th>
<th>Michigan</th>
<th>Ohio</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monitoring</strong></td>
<td>No monitoring for microcystins or other cyanotoxins</td>
<td>Regular monitoring in raw, finished water for cyanobacteria, microcystins</td>
<td>Algal Blooms Surveillance Program, citizen-based reporting</td>
</tr>
<tr>
<td><strong>Nutrient control</strong></td>
<td>Modest limits on N and P in source water</td>
<td>Limit on algaecides in NPDES permits; Modest limits on P and N</td>
<td>Water quality standards for P</td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td>No design requirements to address microcystins</td>
<td>Action level determines frequency of monitoring, remedial measures, public notification</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

- Each state has picked its own issues to focus on
- Out of these 3 states:
  - Michigan has gone the farthest addressing lead
  - Michigan Lead and Copper Rule is the biggest change from the federal rule
  - Over all, Ohio has added more stringent requirements than the other states
  - Ohio is most aggressive on microcystin
  - Wisconsin is the closest match to federal requirements
Next Phase of the Project

- Will include all 8 Great Lakes states
- Will detail major differences on:
  - Consumer confidence reporting (mostly NY)
  - Protection of private wells from oil & gas
  - Lead (major amendments from MI, OH)
  - PFAS
Thank you

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