

2024* Water Quality Report

729,000 Constituents | 39% Rely on Private Wells for Drinking Water

**Wetland Loss**

Markesan
More than 210,000 acres of wetlands are categorized as lost but potentially restorable.

**PFAS Sources and Detects**

There are 188 presumed PFAS sources, and 36% of state-tested wells had at least one of the chemicals in 2023.

**Nitrate Exceedances**

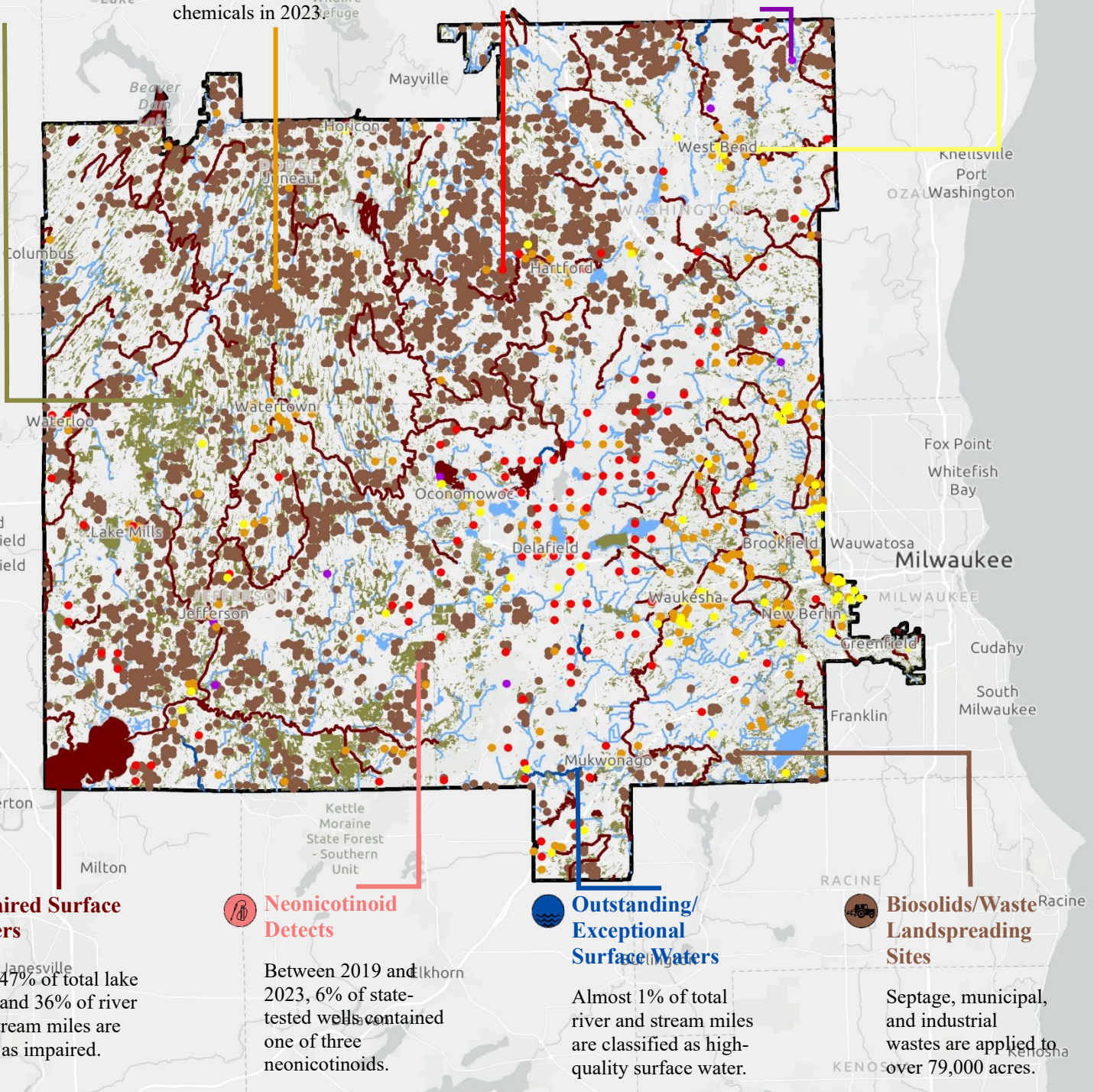
From 2022 to 2024, 32% of public and 28% of private wells sampled exceeded the Preventive Action Limit for nitrate in drinking water.

**Drinking Water Quality Violations**

Approximately 2% of public water systems reported contaminant violations between 2022 and 2024.

**Groundwater Contamination Cleanup Sites**

Eighty-nine groundwater sites are listed as contaminated.

**Impaired Surface Waters**

Over 47% of total lake acres and 36% of river and stream miles are listed as impaired.

**Neonicotinoid Detects**

Between 2019 and 2023, 6% of state-tested wells contained one of three neonicotinoids.

**Outstanding/
Exceptional
Surface Waters**

Almost 1% of total river and stream miles are classified as high-quality surface water.

**Biosolids/Waste
Landspreading
Sites**

Septage, municipal, and industrial wastes are applied to over 79,000 acres.

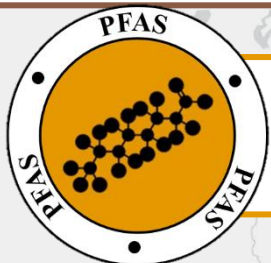




- **Forty-three private and 119 public wells sampled exceeded the Preventative Action Limit from 2022-2024.¹**
- Elevated levels of nitrate are generally due to agricultural runoff and industrial discharges.
- Nitrate has been linked to blue baby syndrome, colon cancer, thyroid disease, and neural tube defects.



- **Current permit holders have applied over 771 million gallons of waste to over 4,800 separate fields.²**
- The liquid and solid waste is generated from paper mills, septage operations, and food processing plants.
- Landspreading waste can transport contaminants by contaminating groundwater and food and feed crops in the area.



- **One hundred fourteen private and municipal wells tested by the state had detectable levels of PFAS in 2023.³**
- The 188 presumed sources include facilities that manufacture, manage, and/or discharge PFAS materials.⁴
- PFAS consumption can cause developmental effects in children, decreased fertility, and some cancers.



- **From 2019-2023, two private and monitoring well samples contained one or more neonicotinoids⁵**
- Neonicotinoid insecticides are applied to agricultural crops, lawns and gardens, golf courses, and more.
- Negative impacts to non-target insect species cause food chain issues in fish, birds, and potentially other taxa.



- **Arsenic, radium, DEHP, bacteria, and/or nitrate at violation levels were found in twenty public water systems.⁶**
- These contaminants often enter drinking water from natural sources, septic systems, and agricultural operations.
- Sustained ingestion at high levels can cause cancer, gastrointestinal issues, and/or numerous other health impacts.



- **Eighty-nine groundwater sites are contaminated with solvents, gasoline, and/or volatile organic compounds.⁷**
- These chemical mixtures enter water through industrial discharges, underground storage tank leaks, and landfill leachate.
- If ingested through drinking water, the pollutants pose serious cancer and organ damage health risks.



- **Of the thousands of wetland acres lost, over 14% of the total land acreage has the potential for restoration.³**
- Degradation and loss of Wisconsin wetlands is primarily due to invasives, development, and conversion to cropland.
- Wetlands absorb pollutants before they enter water, including drinking water; without them, we lose natural filters.



- **More than 33,700 acres and 620 miles of surface waters are listed as impaired under the Clean Water Act.³**
- The mercury, phosphorus, metals, bacteria, and/or PCBs throughout are often from agricultural and industrial discharges.
- Ingestion of these pollutants can lead to organ damage, cardiovascular and reproductive issues, cancer, and more.



- **Over 22 miles of surface waters are classified as Outstanding or Exceptional Waters by the state.³**
- These waterbodies support fisheries and wildlife and have high water quality from effective management and protection.
- As some drinking water is sourced from surface water, these are essential public health resources, too.

Waukegan



cleanwisconsin

¹Wisconsin Department of Natural Resources (WDNR) Groundwater Retrieval Network (GRN); ²WDNR data request; ³WDNR GIS Open Data Portal;

⁴Adapted from Salvatore et al. (2022); ⁵Department of Agriculture, Trade, and Consumer Protection (DATCP) data request; ⁶Environmental Protection Agency (EPA) Enforcement and Compliance History Online (ECHO); ⁷WDNR Bureau for Remediation and Redevelopment Tracking System (BRRTS)