

# 2024\* Water Quality Report

729,000 Constituents | 35% Rely on Private Wells for Drinking Water

## PFAS Sources and Detects

There are 180 presumed PFAS sources, and 33% of state-tested wells had at least one of the chemicals in 2023.

## Groundwater Contamination Cleanup Sites

Ninety-four groundwater sites are listed as contaminated.

## Wetland Loss

More than 561,000 acres of wetlands are categorized as lost but potentially restorable.

## Drinking Water Quality Violations

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

## Nitrate Exceedances

From 2022 to 2024, 48% of public and 26% of private wells sampled exceeded the Preventive Action Limit for nitrate in drinking water.

## Neonicotinoid Detects

Between 2019 and 2023, 12% of state-tested wells contained one of three neonicotinoids.

## Outstanding/Exceptional Surface Waters

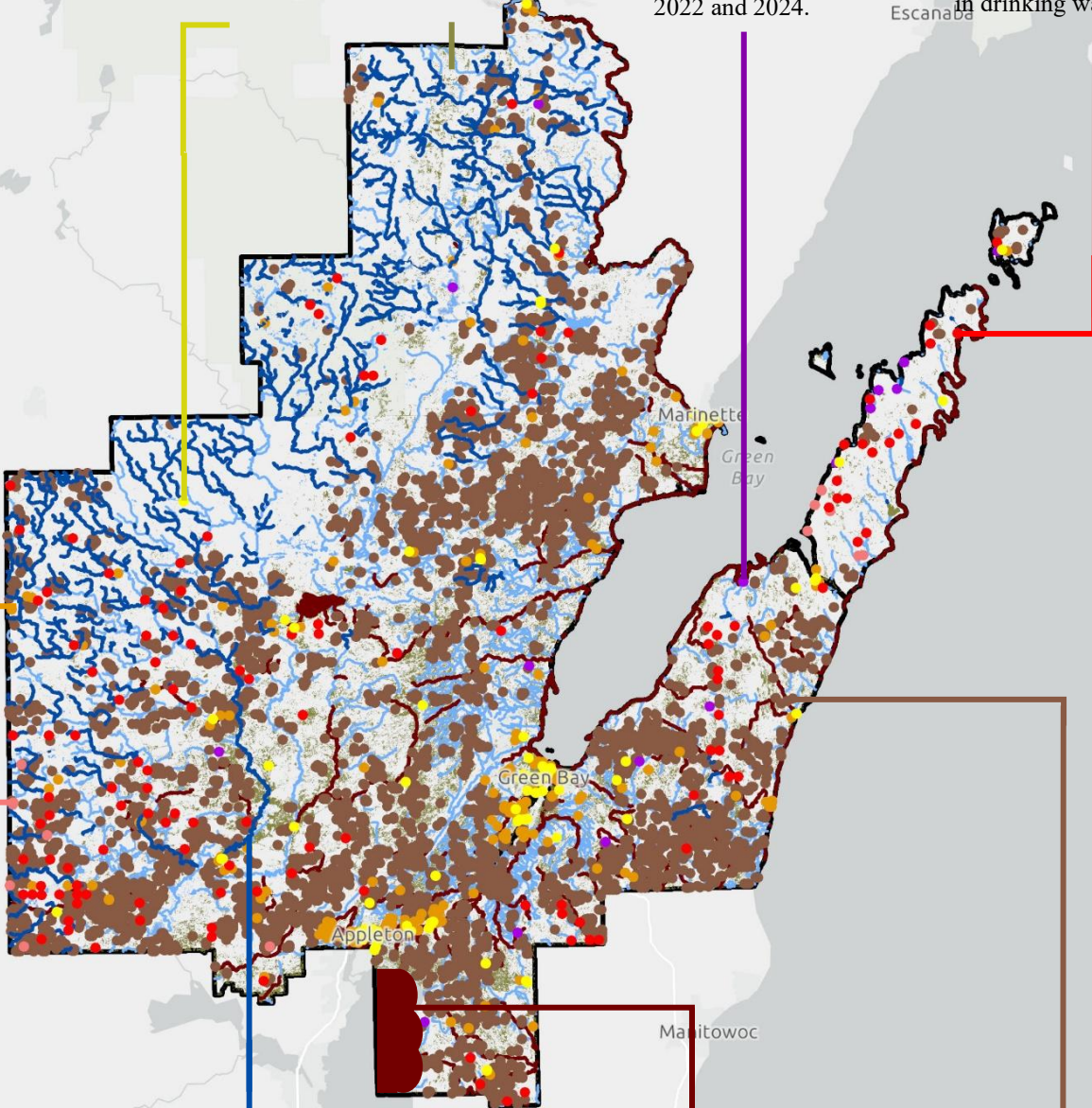
Almost 26% of river and stream miles and 2% of lake acres are classified as quality surface water.

## Impaired Surface Waters

Over 15% of total lake acres and 16% of river and stream miles are listed as impaired.

## Biosolids/Waste Landspreading Sites

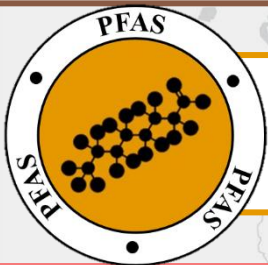
Septage, municipal, and industrial wastes are applied to over 150,000 acres.





- **Twenty-two private and 150 public wells sampled exceeded the Preventative Action Limit from 2022-2024.**<sup>1</sup>
- 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 1.5 billion gallons of waste to over 5,900 separate fields.**<sup>2</sup>
- 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.



- **Seventy-one private and municipal wells tested by the state had detectable levels of PFAS in 2023.**<sup>3</sup>
- The 180 presumed sources include facilities that manufacture, manage, and/or discharge PFAS materials.<sup>4</sup>
- PFAS consumption can cause developmental effects in children, decreased fertility, and some cancers.

- **From 2019-2023, fifteen private and monitoring well samples contained one or more neonicotinoids**<sup>5</sup>
- 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.



- **Radium, bacteria, arsenic, and/or nitrate violations occurred in nineteen public water systems from 2022-2024.**<sup>6</sup>
- 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.

- **Ninety-four groundwater sites are contaminated with solvents, gasoline, and/or volatile organic compounds.**<sup>7</sup>
- 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, 13% of the total land acreage has the potential for restoration.**<sup>3</sup>
- 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 14,000 acres and 1,000 miles of surface waters are listed as impaired under the Clean Water Act.**<sup>3</sup>
- The mercury, phosphorus, metal, 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 1,500 miles and 2,100 acres of surface waters are classified as Outstanding or Exceptional by the state.**<sup>3</sup>
- 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



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

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