

2024* Water Quality Report

729,000 Constituents | 61% Rely on Private Wells for Drinking Water

**Drinking Water Quality Violations**

Approximately 1% of public water systems reported contaminant violations between 2022 and 2024.

**Wetland Loss**

More than 1.4 million acres of wetlands are categorized as lost but potentially restorable.

**Nitrate Exceedances**

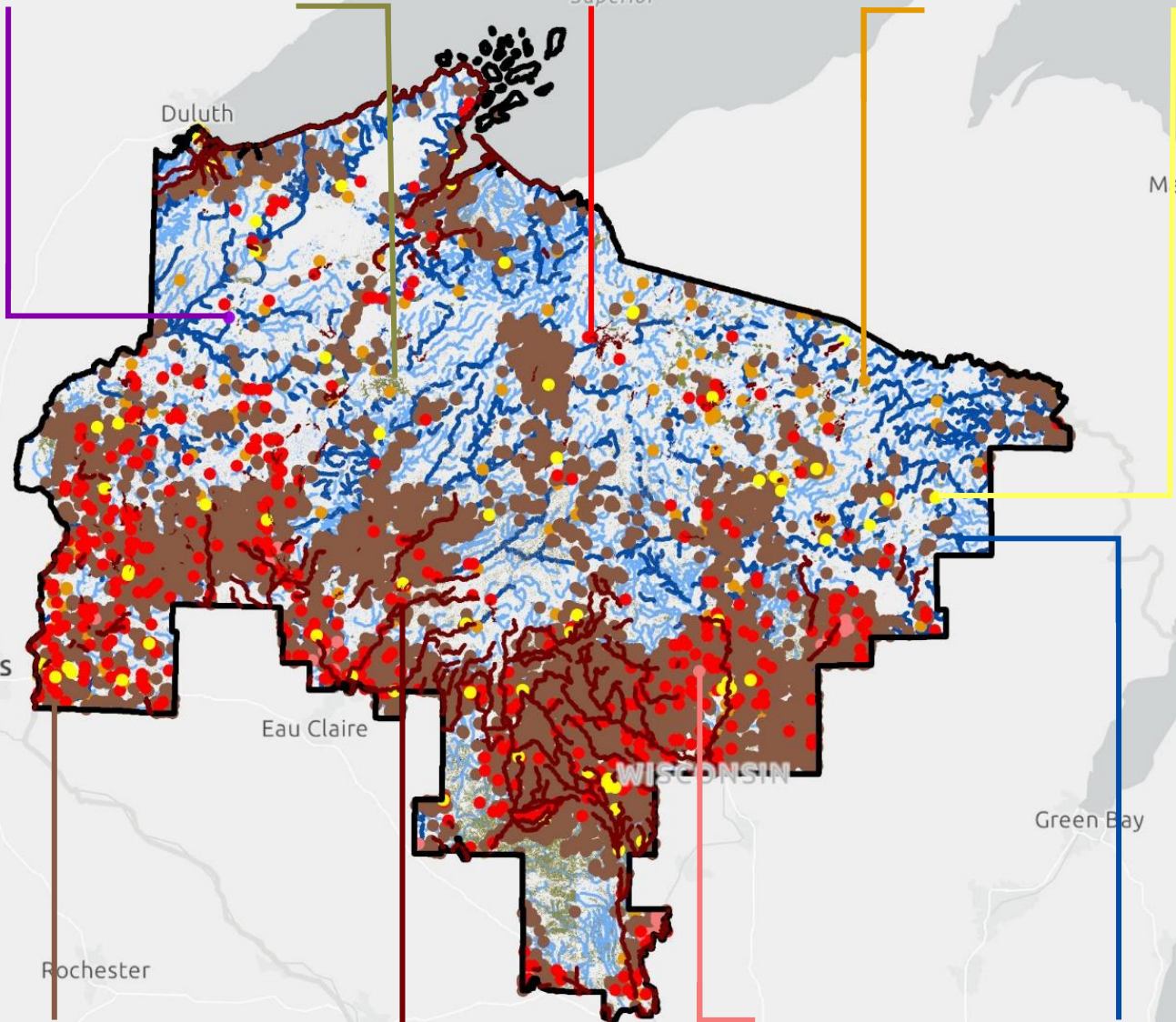
From 2022 to 2024, 43% of public and 53% of private wells sampled exceeded the Preventive Action Limit for nitrate in drinking water.

**PFAS Sources and Detects**

There are 147 presumed PFAS sources, and 52% of state-tested wells had at least one of the chemicals in 2023.

**Groundwater Contamination Cleanup Sites**

Seventy-eight groundwater sites are listed as contaminated.

**Biosolids/Waste Landspreading Sites**

Septage, municipal, and industrial wastes are applied to over 430,000 acres.

**Impaired Surface Waters**

Over 26% of total lake acres and 11% of river and stream miles are listed as impaired.

**Neonicotinoid Detects**

Between 2019 and 2023, 19% of state-tested wells contained one of three neonicotinoids.

**Outstanding/Exceptional Surface Waters**

Almost 11% of total lake acres and 23% of river and stream miles are classified as high-quality surface water.

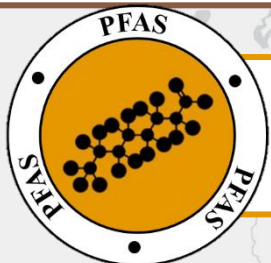




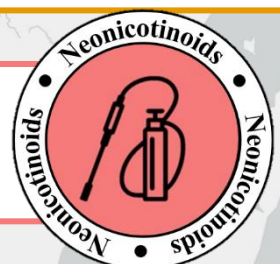
- **Twenty-four private and 547 public wells sampled exceeded the Preventative Action Limit from 2022-2024.¹**
- Elevated levels of nitrate are generally due to agricultural runoff and industrial discharges.
- Nitrate has been linked to blue baby syndrome, colon cancer, thyroid disease, and neural tube defects.



- **Current permit holders have applied over 3 billion gallons of waste to over 15,000 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.



- **Three hundred twelve private and municipal wells tested by the state had detectable levels of PFAS in 2023.³**
- The 147 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, forty-two private and monitoring well samples contained one or more neonicotinoids.⁵**
- 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.



- **Lead, radium, bacteria, TTHM, and/or nitrate at violation levels were found in three 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.



- **Seventy-eight groundwater sites are contaminated with solvents, gasoline, TCE, PAHs, metals, VOCs, and/or more.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, organ damage, and/or other serious health risks.



- **Of the thousands of wetland acres lost, over 9% 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 10,300 acres and 320 miles of surface waters are listed as impaired under the Clean Water Act.³**
- 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 1,900 miles and 270,000 acres of surface waters are classified as Outstanding or Exceptional 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



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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)