

## 2024\* Water Quality Report

177,000 Constituents | 54% Rely on Private Wells for Drinking Water

**Biosolids/Waste Landspreading Sites**

Septage, municipal, and industrial wastes are applied to over 134,000 acres.

**Wetland Loss**

More than 484,000 acres of wetland are categorized by the state as lost but potentially restorable.

**Impaired Surface Waters**

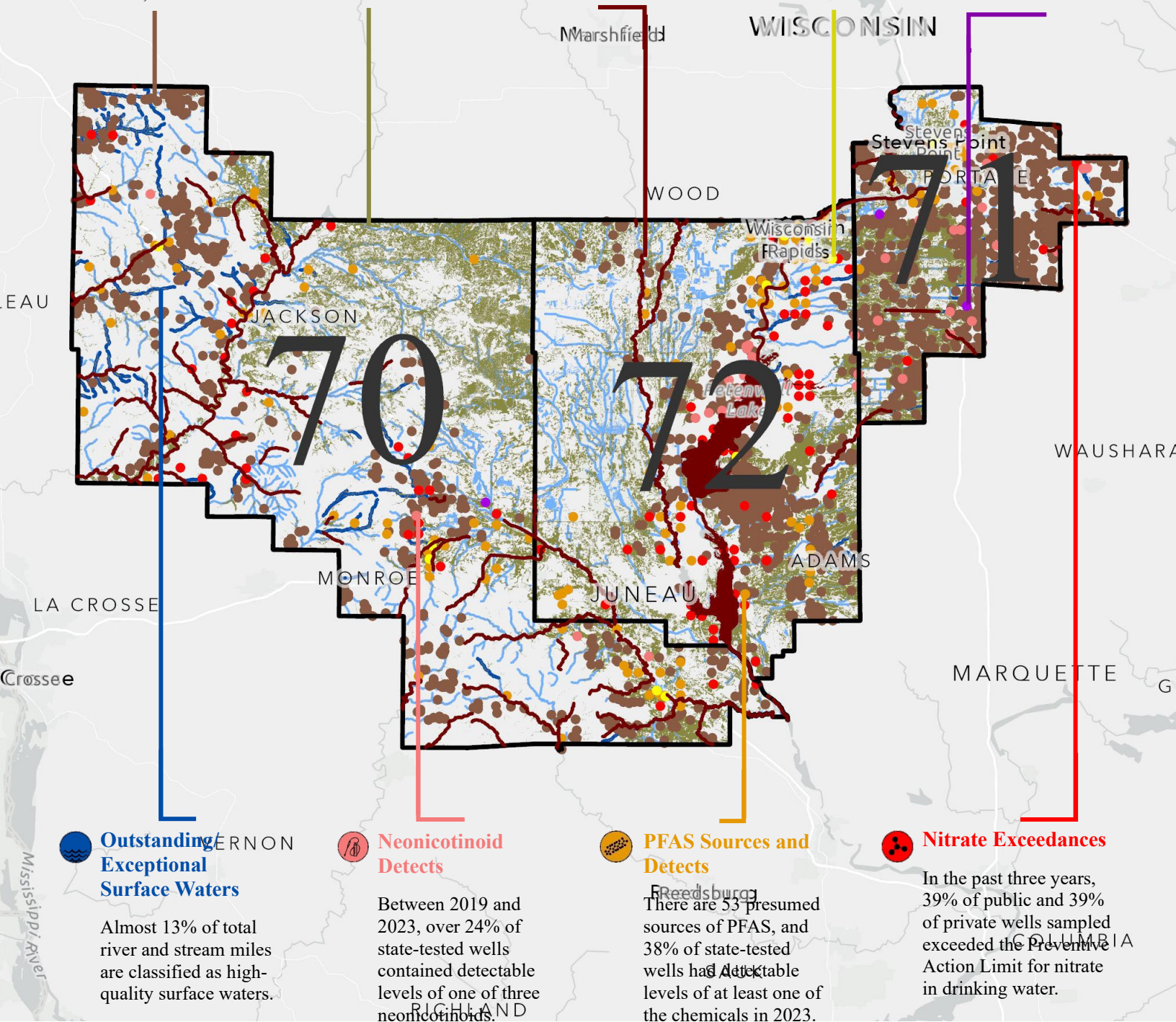
Over 60% of total lake acres and 23% of river and stream miles are listed as impaired.

**Groundwater Contamination Cleanup Sites**

There are 18 state-identified open groundwater contamination sites.

**Drinking Water Quality Violations**

Approximately 1% of public water systems reported contaminant violations from 2022 to 2024.

**Outstanding Exceptional Surface Waters**

Almost 13% of total river and stream miles are classified as high-quality surface waters.

**Neonicotinoid Detects**

Between 2019 and 2023, over 24% of state-tested wells contained detectable levels of one of three neonicotinoids.

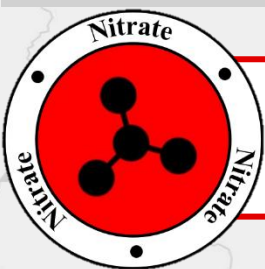
**PFAS Sources and Detects**

There are 53 presumed sources of PFAS, and 38% of state-tested wells had detectable levels of at least one of the chemicals in 2023.

**Nitrate Exceedances**

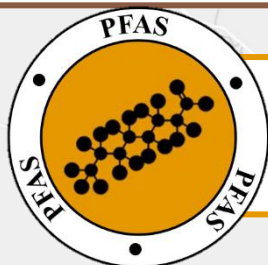
In the past three years, 39% of public and 39% of private wells sampled exceeded the Preventive Action Limit for nitrate in drinking water.





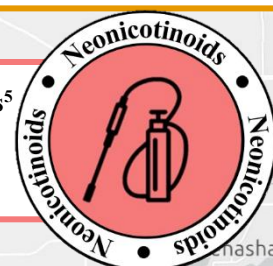
- Over 140 public and seven private wells sampled exceeded the Preventative Action Limit from 2022-2024<sup>1</sup>
- Elevated levels of nitrate are generally due to agricultural runoff and industrial discharges
- Nitrate has been linked to blue baby syndrome, colon cancer, thyroid disease, and neural tube defects

- Current permit holders have applied over 415 million gallons of waste to 3,305 separate fields<sup>2</sup>
- The liquid and solid waste is generated from paper mills, septic operations, and food processing plants
- Landspreading can transport contaminants by contaminating groundwater and crops grown in the area



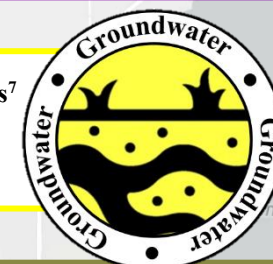
- More than 1/3 of private and municipal wells tested by the state had detectable levels of PFAS in 2023<sup>3</sup>
- The 53 presumed sources include facilities that manufacture, manage, or discharge PFAS materials<sup>4</sup>
- PFAS consumption can cause developmental effects in children, decreased fertility, and some cancers

- Nearly a quarter of state-tested private and monitoring wells 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 species, such as fish and birds, raise potential human health concerns



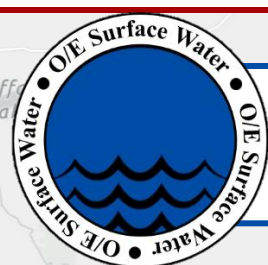
- Elevated levels of nickel and nitrate were found in three public water systems<sup>6</sup>
- These often enter drinking water from natural sources, agricultural operations, and septic systems
- Sustained ingestion at high levels can cause stomach ailments and many negative health impacts, respectively

- Eighteen groundwater sites are contaminated with solvents, gasoline, and volatile organic compounds<sup>7</sup>
- They enter the water through industrial discharges, underground storage tank leaks, and landfill leachate
- If ingested through drinking water, these pollutants pose serious cancer and organ damage health risks



- Of the thousands of wetland acres lost, 21.3% of the total land has the potential for restoration<sup>3</sup>
- Degradation and loss of Wisconsin wetlands is primarily due to development, drainage, and agriculture
- Wetlands absorb pollutants before they enter drinking water; without them, we lose natural water filters

- Approximately 73,700 acres and 589 miles of surface waters are impaired under the Clean Water Act<sup>3</sup>
- The phosphorus, heavy metal, and PCB contamination is often from agricultural and industrial discharges
- Ingestion of the pollutants can lead to organ damage, cardiovascular and reproductive issues, and cancer



- Three hundred and fifty miles 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
- As some drinking water is sourced from surface water, these are essential public health resources

<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)