

# 2024\* Water Quality Report

177,000 Constituents | 58% Rely on Private Wells for Drinking Water

## PFAS Sources and Detects

There are 61 presumed PFAS sources, and 29% of state-tested wells had at least one of the chemicals in 2023.

## Nitrate Exceedances

From 2022 to 2024, 34% of public and 7% of private wells sampled exceeded the Preventive Action Limit for nitrate in drinking water.

## Neonicotinoid Detects

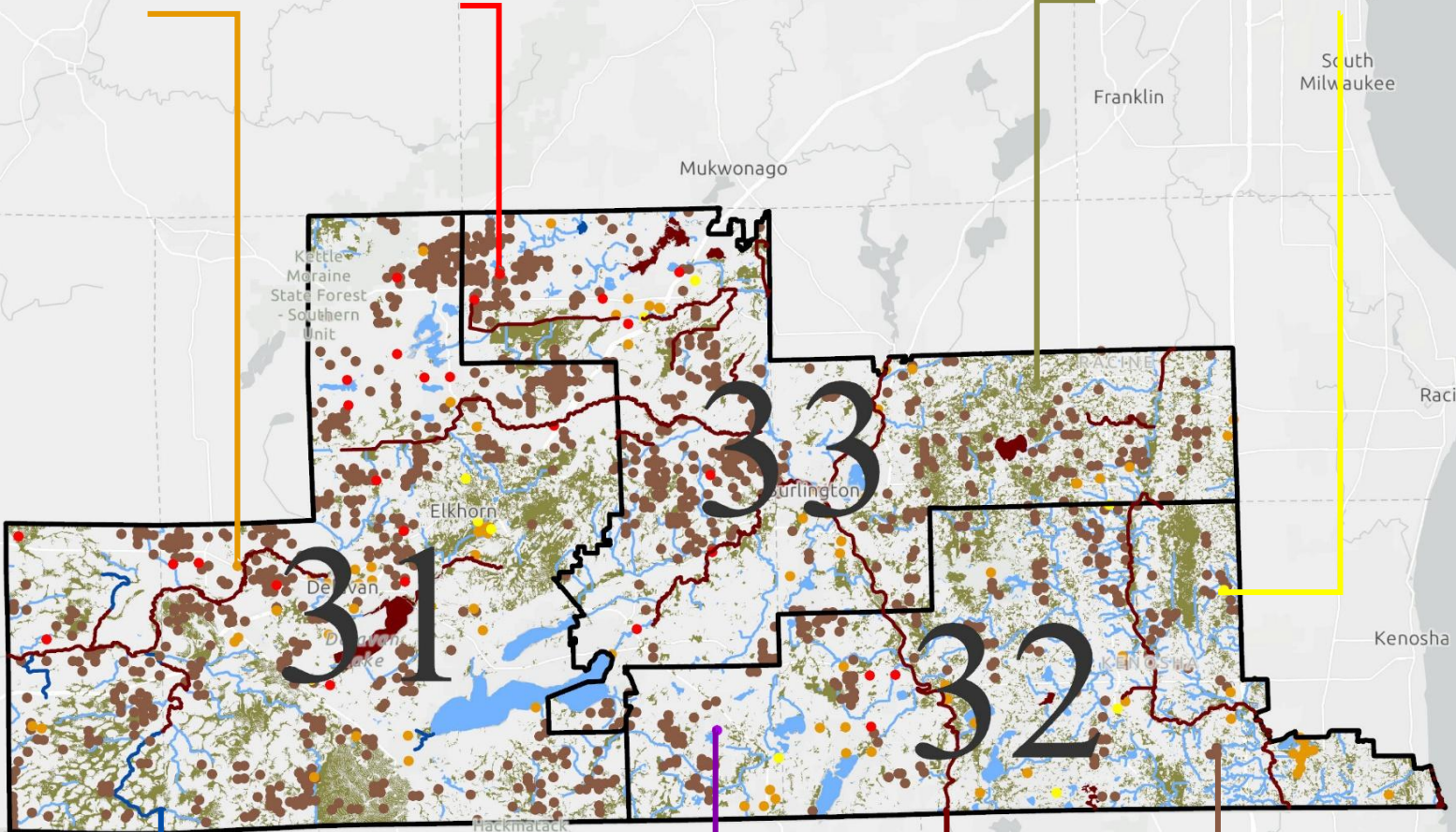
Between 2019 and 2023, no state-tested wells contained neonicotinoids.

## Wetland Loss

More than 115,900 acres of wetlands are categorized as lost but potentially restorable.

## Groundwater Contamination Sites

Eleven groundwater sites are listed as contaminated.



## Outstanding/Exceptional Surface Waters

Almost 4% of river and stream miles and 0.5% of lake acres are classified as quality surface water.

## Drinking Water Quality Violations

Approximately 0.5% of public water systems reported contaminant violations between 2022 and 2024.

## Impaired Surface Waters

Over 21% of total lake acres and 23% of river and stream miles are listed as impaired.

## Biosolids/Waste Landspreading Sites

Septage, municipal, and industrial wastes are applied to over 42,000 acres.

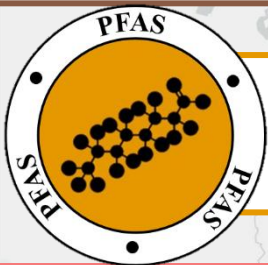




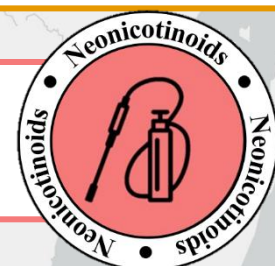
- Six private and 42 public wells sampled exceeded the Preventative Action Limit from 2022-2024.<sup>1</sup>
- Elevated levels of nitrate are generally due to agricultural runoff and industrial discharges.
- Nitrate has been linked to blue baby syndrome, colon cancer, thyroid disease, and neural tube defects.



- Current permit holders have applied over 328 million gallons of waste to over 1,500 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.



- Seven private and 30 municipal wells tested by the state had detectable levels of PFAS in 2023.<sup>3</sup>
- The 61 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, no private nor monitoring wells sampled contained 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, heavy metals, and bacteria violations occurred in two public water systems from 2022-2024.<sup>6</sup>
- These contaminants often enter drinking water from natural sources and agricultural operations.
- Sustained ingestion at high levels can cause cancer, neurological disorders, and gastrointestinal issues, respectively.



- Eleven groundwater sites are contaminated with solvents, gasoline, heavy metals, PAHs, and/or VOCs.<sup>7</sup>
- These chemical mixtures enter water through industrial/military discharges, storage tank leaks, and landfill leachate.
- If ingested through drinking water, the pollutants pose cancer, organ damage, and/or other serious health risks.



- Of the thousands of wetland acres lost, 20% 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 7,300 acres and 150 miles of surface waters are listed as impaired under the Clean Water Act.<sup>3</sup>
- The mercury, phosphorus, lead, 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 25 miles and 95 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.

<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)