



## AN ENVIRONMENTAL PUBLIC HEALTH TRACKING STORY

# INCREASING WELL WATER TESTING AND IDENTIFYING CONTAMINATION SOURCES

Clark County, Wisconsin

## THE PROBLEM

Clark County Health Department staff noticed that nitrate contamination in private well water has been increasing over time. According to their well testing data, in 2010, about 6% of wells had unsafe nitrate levels. In 2017, this number was up to 20%. In their 2017 County Environmental Health Profile, the average concentration of nitrate in private wells was more than two times greater than the Wisconsin average. They identified a need for more testing data, a response plan for contaminated wells, and increased community education.

## WHAT THE HEALTH DEPARTMENT DID

Health department staff worked with partners to aggregate well testing data from four sources into one, cohesive database. This new, aggregated database has nearly 7,000 Clark County well water test results during the period 1974–2019. Staff used the database to identify higher risk areas using geospatial analyses. With this information, they investigated these higher risk areas to locate possible contamination sources, provided on-site education, and connected homeowners with resources for correcting issues. Along with these efforts, staff encouraged well testing via five community events and a press release. They collected 121 well water tests; more than a quarter of which were either unsafe to drink because of nitrate contamination ( $\geq 10$  mg/L) or were at-risk of becoming unsafe in the near future (between 8.0-9.9 mg/L).

## THE PUBLIC HEALTH IMPACT

Through this project, staff identified possible contamination sources and worked with partners and homeowners to correct the issues. In addition to testing 121 wells, staff made a number of referrals to eliminate hazards or reduce their impact on groundwater. They made 16 referrals to Clark County Planning and Zoning for improperly constructed private onsite wastewater treatment systems. They made 26 referrals to Clark County Land Conservation for abandoned wells, problematic manure pits, concentrated animal feeding operations (CAFO) issues, and enrolled farmers in nutrient management plans. Seven homeowners installed reverse osmosis systems to correct nitrate issues, and health department staff connected two homeowners with grant resources to eliminate public health hazards on their properties.

EXPLORE YOUR COUNTY'S  
WATER QUALITY DATA:

[dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)

WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM

Bureau of Environmental and Occupational Health

[dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht) | APRIL 2020 | [dhstracking@wi.gov](mailto:dhstracking@wi.gov)

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