

Physical Environment Health Determinants  
Water Quality

Health Determinant: Water Quality

Physical Environment Component: Nitrate Levels in Water

Percent above 2 mg/L and Rank: 2007 - 58.5% (61)

2008 - 72.8% (63)

Healthiest Wisconsin 2010 Health Priority: Environmental and Occupational Health Hazards

Nitrate Levels in Water measures the presence of nitrates in private and municipal water supplies above the Preventative Action Level of 2 mg/L. The percentage identified here is the percent of population exposed to nitrate levels above 2 mg/L at any time during the year. Nitrates can have negative health effects, among them, nitrates in the drinking water can cause “blue baby syndrome”. This occurs when nitrates in the water bind the hemoglobin in the infant’s blood limiting the oxygen supply and causing the baby to become blue around the mouth and eyes. Birth defects have also been linked to high levels of nitrate in drinking water.

Waupaca County ranks in the bottom quartile for nitrates in water. Waupaca County, as a rural community, is comprised of much farmland which has been enriched with nitrogen. Wells can become contaminated with components of fertilizers. The Health Services Division of the Waupaca County Department of Health and Human Services provides fee exempt well testing kits for all homes with pregnant women and infants under age 1. Water samples are sent to the State Lab of Hygiene in Madison and the results are mailed back to the health department. High readings require a confirmatory test and additional interventions if the reading remains high.