



# Water Gremlin

HEALTH ASSESSMENT SERIES | PRIVATE WELL TESTING FOR 1,4-DIOXANE

**Low levels of 1,4-dioxane were detected in two private wells.  
These detections are not a health concern.**

In December 2019, the Minnesota Pollution Control Agency (MPCA) requested testing for a specific chemical, 1,4-dioxane, as part of the ongoing environmental investigations at Water Gremlin. 1,4-dioxane is used as a stabilizer in some chlorinated solvents. It is found primarily in trichloroethane (TCA), but sometimes in trichloroethylene (TCE). Both chemicals were used and eventually found in the groundwater at Water Gremlin. The testing found 1,4-dioxane in the shallow groundwater on the Water Gremlin property at concentrations above the Minnesota Department of Health (MDH) drinking water guidance value for this chemical.

At MPCA's request, MDH contacted nearby property owners who use private wells for drinking water to test for 1,4-dioxane in late January and early February.

## MDH 1,4-Dioxane Drinking Water Guidance

MDH developed a health-based guidance value of 1 parts per billion (ppb) for 1,4-dioxane in drinking water in 2013. The guidance value is protective against liver cancer seen in laboratory animals that were exposed to it. MDH guidance represents an amount of a contaminant that poses little or no health risk to those drinking the water daily for a lifetime, including sensitive or highly exposed people.

## Private Well Sampling Results

Eleven private wells were tested (see map on page 3). Results have been received for seven wells; results for the remaining four are pending. Two of the wells had detectable levels of 1,4-dioxane and five did not. The concentrations found were 0.06 and 0.1 ppb, which are significantly less than the 1 ppb health-based drinking water guidance value.

## Is the 1,4-Dioxane in Well Water from Water Gremlin?

It is unknown if the 1,4-dioxane detected in private wells is from Water Gremlin. Other businesses or activities in the area that use or released chemicals or products to the environment containing 1,4-dioxane in the past may also be sources of this contaminant. Additional investigation will be needed to confirm the source. MPCA is requiring Water Gremlin to investigate how far 1,4-dioxane has spread off their property.

## More About 1,4-Dioxane

In addition to its use as a stabilizer for chlorinated solvents, people can come into contact with 1,4-dioxane in other ways. It can be an unintended contaminant in consumer products including bubble bath, shampoo, laundry detergent, soap, skin cleanser, adhesives, and antifreeze. Some food products may also contain small amounts of 1,4-dioxane from some additives and packaging materials.

## Municipal Water Testing

Municipal drinking water in White Bear Township and White Bear Lake was tested for 1,4-dioxane in 2014 and 2015. 1,4-dioxane was not detected in samples from either system.

## Next Steps

MDH and MPCA are continuing to gather information:

- MPCA has required Water Gremlin to conduct additional groundwater sampling in order to learn more about the extent and source of the 1,4-dioxane contamination.
- MPCA has required Water Gremlin to conduct a well receptor survey, to identify all of the private wells within a one mile radius of the Water Gremlin facility. This will help MPCA and MDH determine if additional sampling of private drinking water wells is necessary.
- MDH will test additional municipal wells in White Bear Township for 1,4-dioxane.

An update will be provided to the community when more information is available.

## Questions?

For information about MDH activities at Water Gremlin, see the webpage for the [Water Gremlin Site](https://www.health.state.mn.us/communities/environment/hazardous/sites/watergremlininc.html)  
<https://www.health.state.mn.us/communities/environment/hazardous/sites/watergremlininc.html>

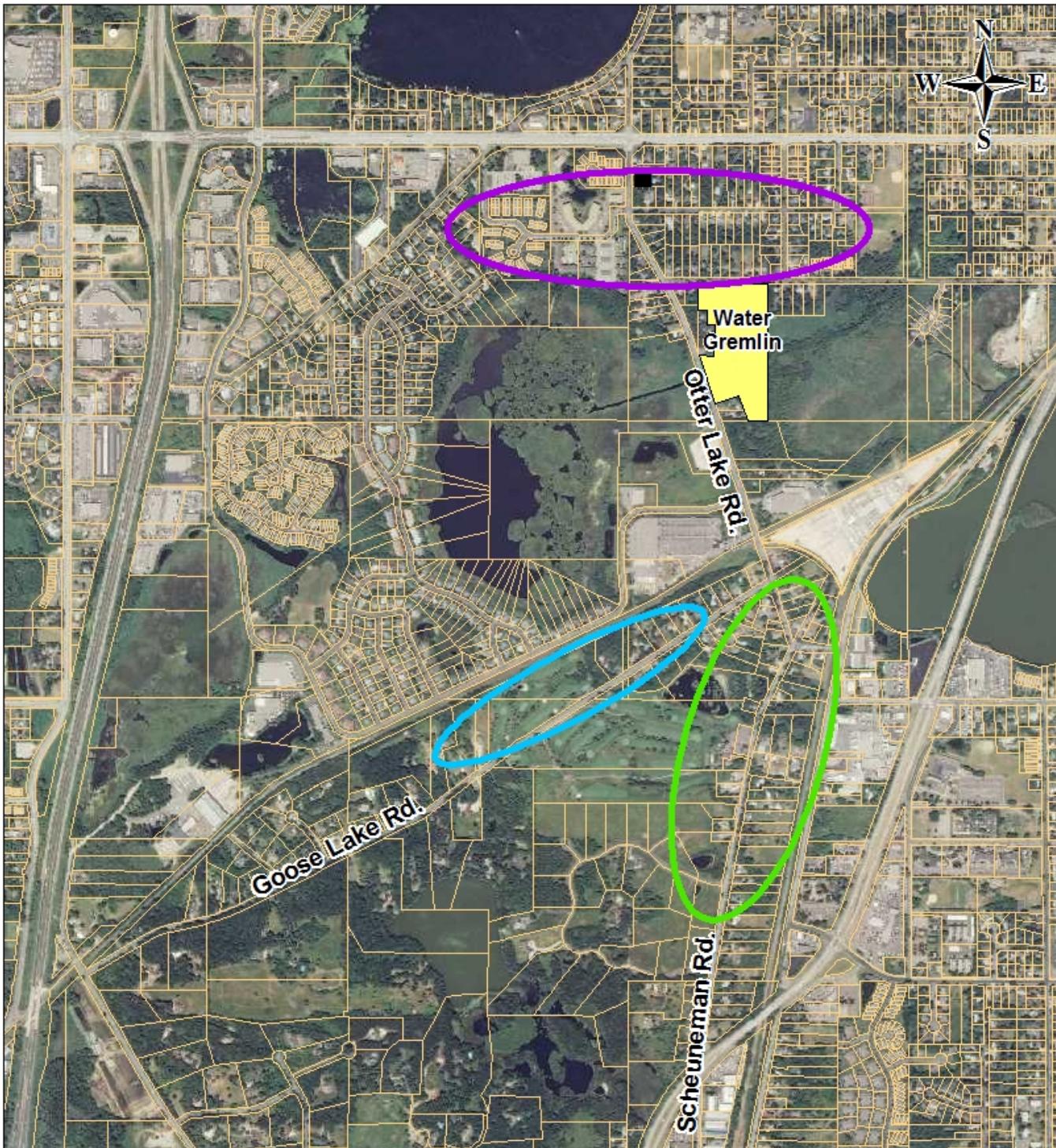
To contact MDH, call (651) 201-4897 and leave a message or email [health.hazard@state.mn.us](mailto:health.hazard@state.mn.us).

To contact MPCA, call 651-757-2998 or email [water.gremlin.mPCA@state.mn.us](mailto:water.gremlin.mPCA@state.mn.us).

Minnesota Department of Health | Site Assessment and Consultation Unit  
Phone: 651-201-4897 | Email: [health.hazard@state.mn.us](mailto:health.hazard@state.mn.us) | [www.health.state.mn.us](https://www.health.state.mn.us)

To obtain this information in a different format, call: 651-201-4897

Updated 03/09/2020



## 1,4-Dioxane Sampling - Jan-Feb 2020

3/3/2020



2 wells sampled, 1,4-Dx detected in both, 0.06 - 0.1 ppb (HRL = 1 ppb)



6 wells sampled, 1,4-Dx not detected (1 sample pending)



3 wells sampled - results pending

3 additional well owners (S of plant) contacted but did not respond or refused