What’s happening

**ZEBRA MUSSELS FOUND IN LAKE RILEY**

Zebra mussels, an aquatic invasive species (AIS) were discovered in Lake Riley in October 2018. This is the first lake within the Riley Purgatory Bluff Creek Watershed District where they have been spotted. Zebra mussels live in dense clusters and can spread quickly. They attach to docks, boats, rocks, logs, and other surfaces in the lake, and can threaten recreation and the underwater ecosystem.

The District will continue to monitor the zebra mussel population in Lake Riley, and work with our partners to try to prevent this species from spreading to other lakes.

You can help!

Remember to always clean, drain, and dry any watercraft and equipment when leaving a lake.

Dive deeper

Interested in learning more? Explore the following reports on our website.

**Aquatic plants**


**Watershed study**


**Stormwater ponds**

RPBCWD. 2013. Stormwater pond project.

**Carp management**


**Adopt a Dock Volunteer Program**

Join others in your community in helping to prevent the spread of invasive mussels.

Do you live on a lake? The Adopt-A-Dock program needs your help monitoring for zebra mussels. Volunteers receive a set of monitoring plates, which they hang from the end of their docks, and check once a month for the presence of mussels. They’ll submit observations to the RPBCWD, and we will compile data from Adopt-a-Dock volunteers to better understand where zebra mussels are living.

As zebra mussels were found within the boundaries of the watershed district for the first time in 2018, participation in this program will be especially important in the coming years.

Interested in joining the team? Contact Maya: mswope@rpbcwd.org

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Lake Riley

At 297 acres, and with an average depth of 23 ft, Lake Riley is one of the largest lakes in the Riley Purgatory Bluff Creek Watershed District. It is located on the boundary of the cities of Chanhassen and Eden Prairie and is a popular summer recreation stop.

**Characteristics**

- **Size**: 297 acres
- **Volume**: 6230 acre-ft
- **Average depth**: 23 ft
- **Max depth**: 49 ft
- **Watershed size**: 1776 acres
- **Land draining directly into**: 818 acres
- **MPCA lake classification**: Deep
- **Impairment listing**: Mercury & Nutrients
- **Trophic status**: Eutrophic
- **Common fish**: Bluegill, Northern Pike, Yellow Perch, Yellow Bullhead
- **Invasive species**: Curlyleaf Pondweed, Eurasian Watermilfoil, Zebra Mussels

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**Watershed Boundaries**

Water that falls anywhere within the white border drains to Lake Riley.

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**Contact us**

and find out how you can get involved

**District Office**

18681 Lake Drive East
Chanhassen, MN 55317

**Contact Info**

952.607.6512 info@rpbcwd.org

**Find us on**

instagram facebook twitter

Celebrating our 50th Anniversary in 2019. Learn more at www.rpbcwd.org/50years

LAND USE in the Lake Riley Watershed

- **1% Commercial**
- **9% Farmland**
- **32% Residential**
- **39% Open Space**
- **20% Open Water**
How healthy is Lake Riley?

Water quality in Lake Riley has improved since 2014, meeting all three clean water standards set by the Minnesota Pollution Control Agency (MPCA). Continued monitoring will determine if these trends persist.

During the growing season (June - September), district staff visit Lake Riley every other week to collect water samples and take measurements. Samples are sent to a lab where they are tested for several compounds including total phosphorous (TP) and chlorophyll a (Chl-a). Staff also measure how clear the water is using a disk that is lowered into the water until it can no longer be seen. All three of these tests help indicate if the water is clean.

Lake Riley is classified as a “Deep Lake”, meaning it is over 15 feet deep and light cannot reach the bottom in most of the lake. To be considered healthy by the MPCA, it needs to be clear enough to see 1.4 meters down, and have very low TP and Chl-a levels.

The graphs on the next page show the trends over time. The red line on each graph marks the MPCA standard. The goal for each graph is for the average values (the dots) to be below the red line.

Water quality graphs 1972 - 2018
Points are growing season (Jun-Sep) averages. Thin lines are the min and max values for each year.

Rainwater runoff, the water that flows across yards, parking lots, and streets into stormdrains, is one of the main causes of pollution in urban areas. You can take simple actions to help protect Lake Riley.

Keep the curb clean
Sweep up leaves, grass clippings, and fertilizer from driveways and streets.

Water with care
Grass requires 1-inch of water per week, about one hour of sprinkling per week if it has not rained.

Salt smart
The salt we use to melt ice can pollute our lakes and creeks. Use salt sparingly and always shovel first.

Reuse the rain
Collect and reuse rainwater with a rain barrel.

Build a raingarden
Raingardens soak up water and filter out pollution. Visit our website for help.

Phosphorus is a nutrient that plants and algae need for growth. It is often measured as total phosphorous (TP). Too much phosphorous can cause algae blooms.

Chlorophyll-a is the main pigment in algae, so measuring chl-a can tell us how much algae there is. Too much chl-a means that there are too many nutrients in the water.

Water clarity is measured using a Secchi Disk, a black and white disk the size of a dinner plate. It is lowered into the water, and the depth at which it is no longer visible is recorded.

Summary table

<table>
<thead>
<tr>
<th></th>
<th>MPCA standard</th>
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<th>2018</th>
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<tr>
<td></td>
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<td>min</td>
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<td>TP</td>
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<tr>
<td>Chl-a</td>
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<td>Secchi</td>
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</table>

Help keep Lake Riley healthy

A beautiful day on the lake.

A staff member collects water level data from a sensor installed on Lake Riley. These data are available through the DNR Lake Finder Website.

Chlorophyll-a is the main pigment in algae, so measuring chl-a can tell us how much algae there is. Too much chl-a means that there are too many nutrients in the water.