Located in Shorewood, Silver Lake sits at the edge of the watershed district. It is the only lake in the district that has wild rice, a rare plant to find in metro area lakes!

**CHARACTERISTICS**

- **Size**: 71 acres
- **Volume**: 190 acre-ft
- **Average depth**: 5 ft
- **Max depth**: 14 ft
- **Watershed size**: 407 acres
- **MPCA lake classification**: Shallow
- **Impairment listing**: Not Listed
- **Trophic status**: Hypereutrophic
- **Common fish**: Unknown
- **Invasive species**: Curlyleaf Pondweed, Purple Loosestrife

**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.

**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

**DIVE DEEPER**

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

- **Aquatic plants**

- **Stormwater ponds**
  RPBCWD. 2013. Stormwater pond project.

- **Watershed study**

- **Paleolimnology**

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How healthy is Silver Lake?

Water quality in Silver Lake has increased since 2016, now meeting all three clean water standards set by the Minnesota Pollution Control Agency (MPCA). The graphs on the next page show the trends over time. The red line on each graph marks the MPCA standard. The goal is for the averages (the dots) to fall below the red line.

During the growing season (June - September), district staff visit Silver Lake every other week to collect water samples and take measurements. The water 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.

Silver is classified as a “Shallow Lake”, which means that it is generally less than 15 feet deep and light can reach the bottom in most of the lake. To be considered healthy by the MPCA, shallow lakes need to be clear enough to see one meter down, and have low TP and Chl-a levels.

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 Silver Lake.

**Help Keep Silver healthy**

- **Keep the curb clean** Sweep up leaves, grass clippings, and fertilizers 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 first.
- **Build a raingarden** Raingardens soak up water and filter out pollution. Visit our website for help.
- **Salt smart** The salt we use to melt ice can pollute our lakes and creeks. Use salt sparingly and always shovel first.

**Phosphorus** is a nutrient that plants and algae need for growth. It is often measured as total phosphorus (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 quality graphs 1996 - 2018**

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

**Summary table**

<table>
<thead>
<tr>
<th></th>
<th>MPCA standard</th>
<th>1996 - 2017</th>
<th>2018</th>
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<tr>
<td></td>
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<td>min</td>
<td>average</td>
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<td>TP</td>
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<td>Chl-a</td>
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<td>Secchi</td>
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</tr>
</tbody>
</table>

**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.