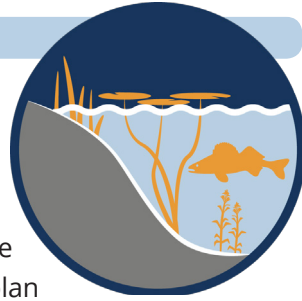


What's happening

Monitoring carp

In 2014, University of Minnesota researchers completed a management plan for invasive carp in the Riley Creek chain of lakes. The plan includes monitoring to estimate the number of carp over time. You may have seen district staff out on Lucy this summer in a noisy boat and holding long nets. The boat is an electro-fishing boat that shocks the water to stun fish. The nets are used to scoop up carp so they can be measured. These measurements are put into an equation to calculate the number of carp in the lake. With these data, the district can then decide whether carp need to be caught and removed from the lake.



Grants available for clean water projects

Decreasing pollution, beautifying your yard, and creating habitat are all possible through a cost-share grant with the watershed district. The District's cost-share grant program was created to help community members implement clean water projects. These could be projects that conserve water, like rainwater reuse systems, or projects that clean water, like raingardens.



Awards: up to \$3000 (25% homeowner match)

Technical help available

Contact: Michelle Jordan
952-607-6481
mjordan@rpbcwd.org

Lake Lucy 2015

Riley Purgatory Bluff Creek Watershed District



Quick facts

Size	88 acres
Volume	558 acre-ft
Average depth	6.5 ft
Maximum depth	20 ft
Watershed size	997 acres
Direct land draining	111 acres
MPCA lake classification	Shallow
Common fish	
Bluegill, Northern Pike, Yellow Bullhead	
Invasive Species	
Curlyleaf pondweed, Eurasian watermilfoil, Common carp	
Trophic status	Impairment
Eutrophic (rich in nutrients)	Mercury

Located in Chanhassen northwest of Highway 5 and Powers Blvd, Lake Lucy is connected to Lake Ann by a small channel in the southeast corner of the lake. Lake Lucy is primarily used for fishing and canoeing. There is no public boat access on the Lake, but the public is permitted to carry in small water craft (canoes or kayaks) via the channel that connects the two lakes.



Dive deeper Interested in learning more? Find the reports below on our website. Fish, plant, and sediment studies are just some of the research the district and its partners conduct. Can't find what you are looking for? Feel welcome to call or write.

Aquatic plants

JaKa, J. and Newman, R. 2014. Aquatic Plant Community of Lakes Ann, Lotus, Lucy, Mitchell, Susan, Riley and Staring within the Riley Purgatory Bluff Creek Watershed: Final Report 2009 - 2014. University of Minnesota.

Wenck Associates Inc. 2015. Lake Lucy Aquatic Plant Management Plan.

Watershed study

BARR Engineering. 2013. Lake Lucy and Lake Ann: Use Attainability Analysis.

Stormwater ponds

RPBCWD. 2013. Stormwater pond project.

Carp management

Bajer P.G., Headrick, M., Miller B. D. and Sorensen P. W. 2014. Development and implementation of a sustainable strategy to control common carp in Riley Creek Chain of Lakes. University of Minnesota.

Contact us

and find out how you can get involved

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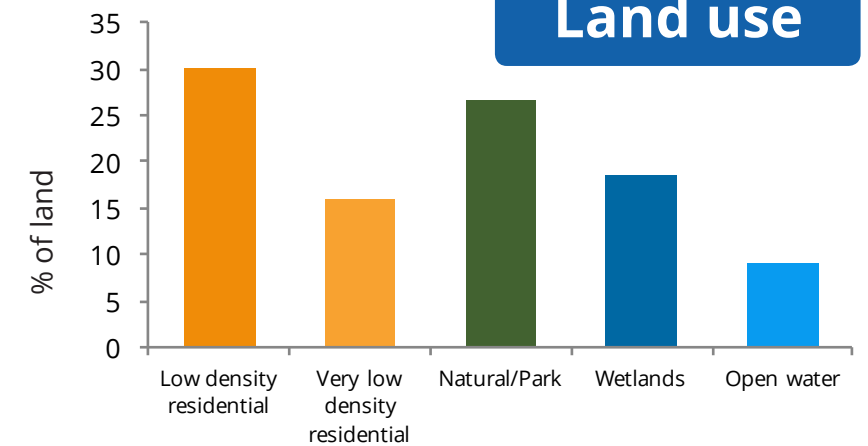
Did you know?

Water entering Lucy stays in the lake for five years before it flows to Lake Ann

Lakes Ann and Lucy are the headwaters to Riley Creek, which eventually flows into the Minnesota River

Though water flows out of Lucy through a channel, there are no streams that flow into it

Land use



The land area that drains into Lake Lucy is mostly developed. There may be more development in the southwest corner in the future.



How healthy is Lake Lucy?

For the past 40 years, Lake Lucy water quality has stayed relatively steady, oscillating around the clean water standards set by the Minnesota Pollution Control Agency (MPCA). Water quality decreased from 2014 to 2015, and only the standard for water clarity was met. Monitoring in 2016 will help us determine if this is an outlier year, or a trend.

During the growing season (May - September), district staff visit Lake Lucy 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. All three of these parameters help indicate whether the water is clean. Find out more about each on the next page.

Lucy 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 1 meters down, and have low TP and Chl-a levels. These shallow lake standards are listed in the summary table.

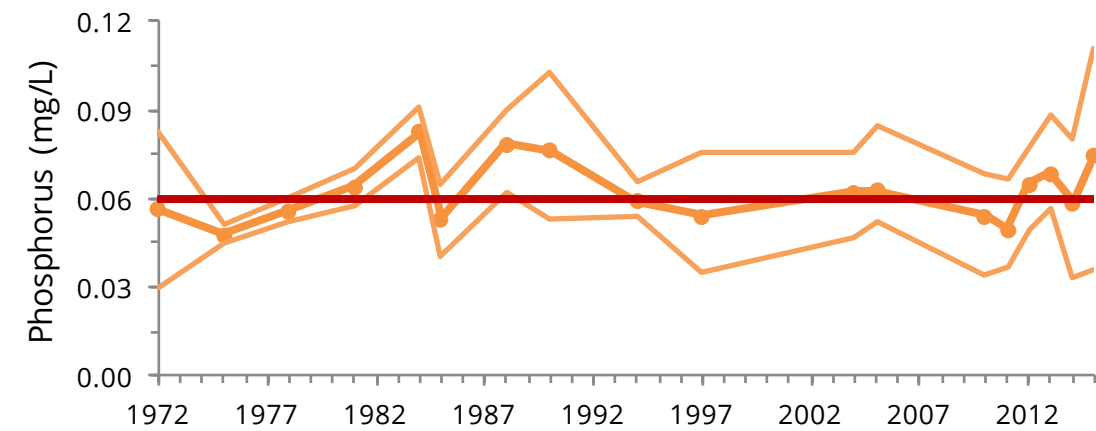


[Above] Staff use a canoe to collect data on Lake Lucy. [Left] Bottles with water samples being prepared. [Below] A family of ducks paddles Lake Lucy.

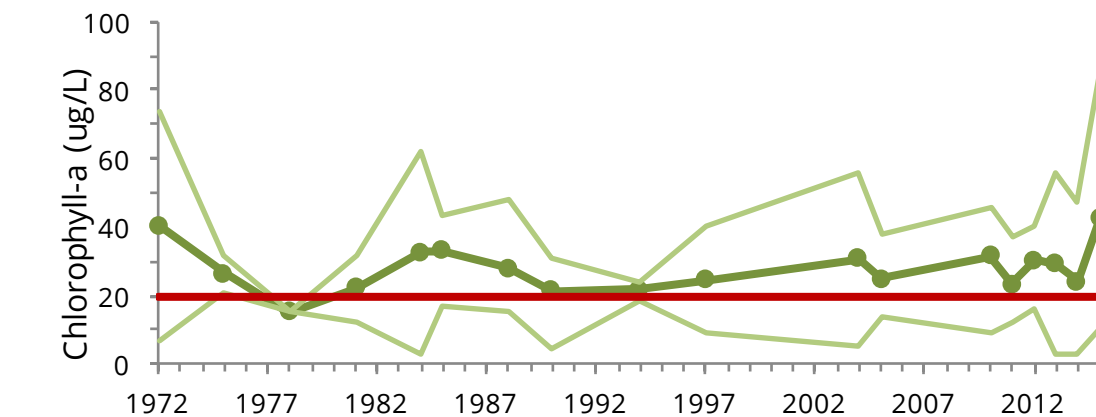
The graphs on the next page show the trends over time. The red line on each graph marks the MPCA standard. The goal for each graph is for the average values (the dots) to be below the red line.

Water quality graphs 1972 - 2015

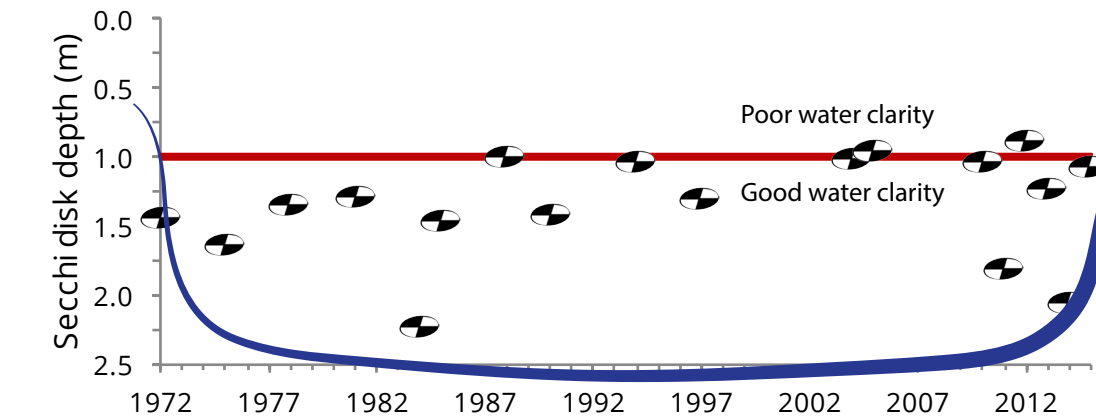
Points are growing season (May-Sep) averages. Thin lines are the minimum and maximum values for each year.



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.



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 Lucy.

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.

Summary table

	MPCA standard	Since 1972			2015		
		max	min	average	max	min	average
TP	<0.06 mg/l	0.103	0.03	0.062	0.111	0.036	0.075
Chl-a	<20 ug/l	73.8	2.7	26.9	87	11	42.5
Secchi	>1 m	6.9	0.5	1.4	2.4	0.5	1.1

