

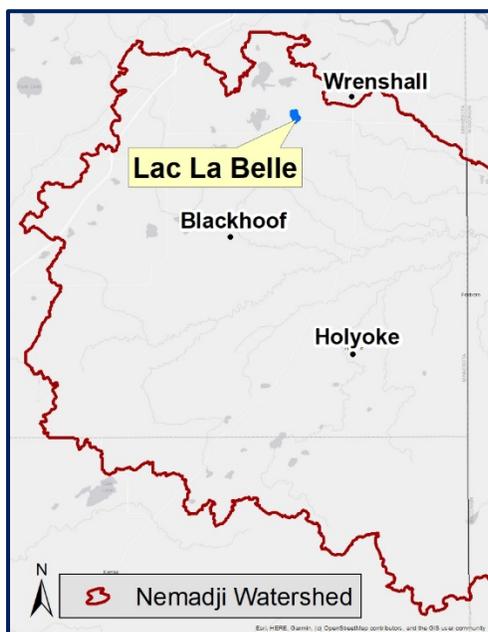


Lake La Belle Implementation Plan

In 2019-2020, Carlton and Pine Counties and Soil and Water Conservation Districts (SWCDs) partnered to develop the Nemadji River Comprehensive Watershed Management Plan.

The planning process consisted of:

- ✦ topic-focused stakeholder meetings that included citizens, businesses, state agencies, local experts, and local officials;
- ✦ prioritizing issues and concerns for the watershed;
- ✦ developing action items for specific watershed areas; and
- ✦ local agencies adopting a ten-year watershed plan for 2021-2031.



This Lac La Belle Implementation Plan is based on the Nemadji River Comprehensive Watershed Management Plan.

In this plan, Lac La Belle is a priority for reducing phosphorus to the lake.

The next few pages explain priority projects that will work to improve Lac La Belle in the future.



Why Does it Matter?

Want to learn more about taking care of lakes?
Watch a video here:
<https://youtu.be/dwjAoRwLrmM>



Property Values

What is your lake home worth? Studies on Minnesota lakes show that lake property values are directly tied to water quality. For a three-foot decrease in water clarity, prices were reduced up to \$594 per shoreline foot. For a three-foot increase in clarity, prices increased up to \$423 per shoreline foot. This change in value can be a significant financial loss or gain to an individual property owner as well and a community.



Fishing & Recreation

Do you enjoy fishing and swimming? Minnesota's native gamefish, such as walleyes, need clear water to see their prey, aquatic plants to hide and spawn in, and shade to keep cool. Keeping native plants in the lake and trees along the shoreline provide shade, spawning habitat, and protection for the game fish we love to catch. These plants and trees also help stop runoff and keep the lake clear for swimming and recreational activities.

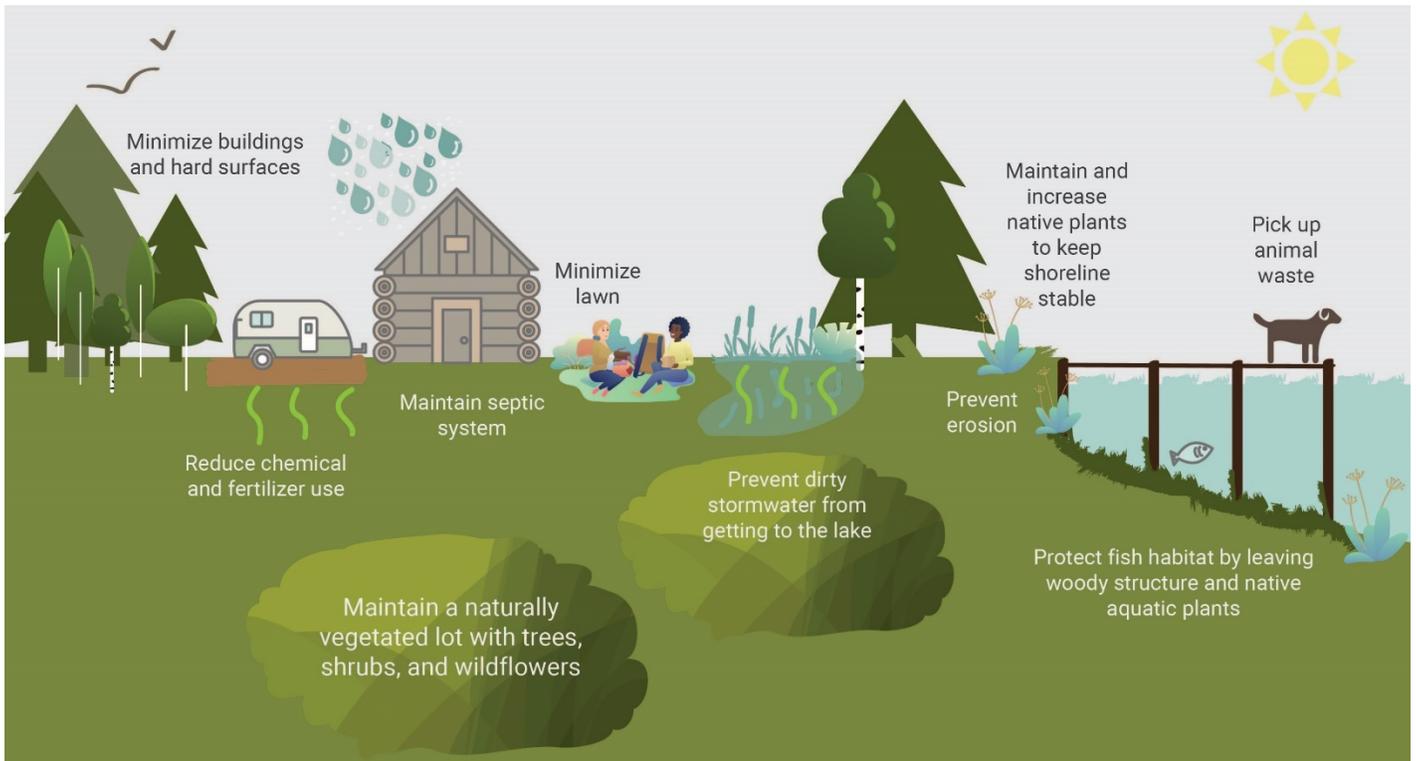


Habitat

Do you enjoy watching loons, bald eagles, turtles, butterflies, songbirds and other wildlife at the lake? These animals depend on shoreline plants for nesting and cover, trees and forests for their homes, and native plants and flowers for pollinating. Keeping some of your yard natural enhances the habitat for these animals, ensuring their survival.



Be a good steward • Leave a legacy • Take care of your lake!



Understanding Lac La Belle

Lake Characteristics	
Size	28 acres
Maximum Depth	16 feet
Public Access	No

Lac La Belle is a small shallow lake located in Carlton County. The lake has a long history as a stop with a guesthouse along the route from St. Paul to Duluth that was served by both rail and stagecoach. The immediate shoreline has lake homes and seasonal cabins along the western shore while marshland and undeveloped forest or woodland make up the remaining shoreline.

Lac La Belle Timeline

A lake reflects what has been done to it over time. Logging, shoreline development, roads, and fire all have the potential to affect the water quality of the lake. Below is a timeline of what has occurred around Lac La Belle over time.



We know from a lake study (2016) that:

- ✦ Cores from the lake bottom show that sedimentation in the lake increased around the 1880s when logging and land use change first occurred in the area.
- ✦ Since the 1950s, sedimentation has also been higher, showing the impact of erosion from development and farming around the lake.
- ✦ Phosphorus concentrations in the lake have remained fairly stable from the 1800s to present.
- ✦ Internal loading (phosphorus coming out of the lake sediment to fuel algae blooms) is stable or not a major problem.
- ✦ The lake is naturally tea-stained due to high dissolved organic carbon, so the monitored transparency doesn't truly reflect the lake's clarity.

What can we do?

Private landowners can help improve lake water quality and achieve watershed plan goals by implementing the following projects below. Technical and financial assistance is available to help with these projects through the local Soil and Water Conservation Districts. This assistance includes site visits, project design, plant advice, and cost share funding.



Contacts

Carlton SWCD 218-384-3891 https://carltonswcd.org	Pine SWCD 320-216-4240 www.pineswcd.com
Carlton County 218-384-9176 www.co.carlton.mn.us	Pine County 320-216-4220 www.co.pine.mn.us
Minnesota Land Trust 877-MLT-LAND https://mmland.org	DNR Forests www.dnr.state.mn.us/forests_tewardship/plan-writers.html

Watershed Plan Goal	Implementation Action	Minimum 10-year goal	Annual Goal	Where	Who
Phosphorus Reduction	Install rain gardens and stormwater management practices to capture rainwater and let it infiltrate instead of running off into the lake.	10 projects	1 projects/year	Map 1	Carlton SWCD, Lake Association, Landowners
	Monitor lake water quality.	Trend Analysis	5 water samples/yr	middle of the lake	Lake Volunteers
Shoreline Restoration	Install shoreline buffers of native plants to protect the shoreline from erosion and provide habitat for fish and wildlife.	2 projects	1 every 3 years	Map 1	Carlton SWCD, Lake Association, Landowners
Land Protection	<ul style="list-style-type: none"> Develop a Forest Stewardship Plan (minimum 20-acre area); or Sign up for Sustainable Forest Incentive Act (SFIA) to receive payments to keep wooded areas undeveloped (minimum 20-acre area); or Permanently protect undeveloped land and shoreline with conservation easements. 	None	None	Map 1	Carlton SWCD, DNR, Private Foresters, DNR, MLT Landowners

Acronyms: SWCD = Soil and Water Conservation District • MLT = Minnesota Land Trust • DNR = Department of Natural Resources

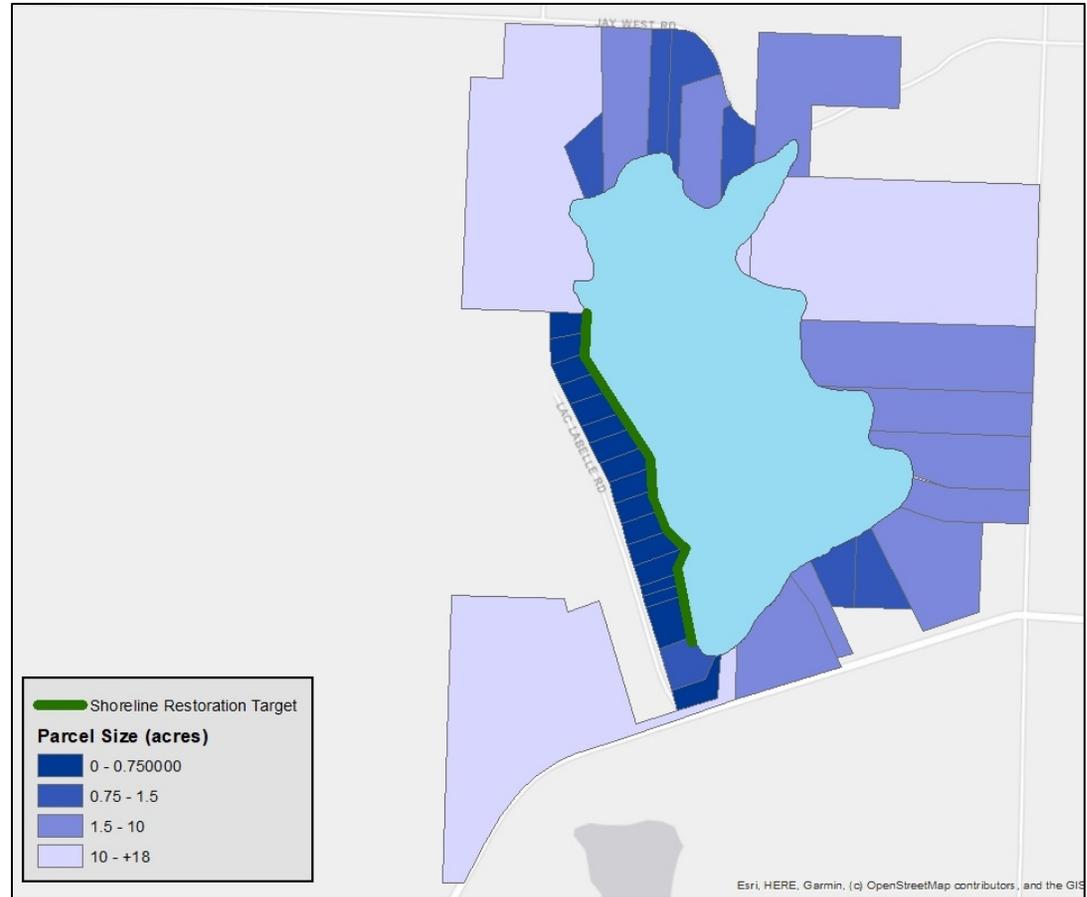
Map 1. Stormwater Best Management Practices

Impervious surface is where rain cannot soak into the ground and therefore runs over the surface, which includes roofs, driveways, sidewalks, and patios. When rainwater soaks into the ground it gets filtered; when it runs off the land into the lake it carries with it dirt and chemicals that can harm the lake.

The Carlton County shoreline ordinances allow up to 25% of a lake lot to be impervious (total square footage of impervious items such as the house, shed, sidewalks, etc divided by the total lot size). For example, a 100 ft wide x 1,000 ft deep lot = 100,000 sq. ft. To stay under 25% impervious, the total house + garage + sidewalk + driveway must remain below 25,000 square feet. Contact the Carlton County Planning and Zoning Department with any questions.

This map shows each parcel around the shoreline and its size. Smaller parcels are likely to be developed and be closest to the 25% impervious limit. Parcels that are navy blue are the highest priority for stormwater management such as rain gardens, shoreline buffers and tree planting to minimize runoff into the lake.

Large parcels that are light blue could be candidates for permanent protection. Landowners in these areas can contact the SWCD for protection options such as Forest Stewardship Plans, the Sustainable Forest Incentive Act, and Conservation Easements.



Want to learn more about rain gardens?
Watch a short video at:
<https://youtu.be/ZHeY6CUAS8s>