

The shoreline trend that's spreading faster than weeds

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"We're starting a trend that we hope that spreads faster than invasive species," said Marie Segar.

Aitkin County features about 900 miles of streams and rivers, plus over 350 lakes covering thousands of acres ... that equals many miles of shoreline.

For instance, McGregor's Big Sandy Lake is approximately 6,000 to 9,000 acres depending on water levels, with about 58 miles of shoreline; Cedar Lake spans nearly 1,500 acres and offers 30 miles of shoreline; Farm Island Lake features 2,054 acres of surface water and 14.6 miles of shoreline and Big Pine Lake covers 638 surface acres and features approximately 6.44 miles of shoreline.

Shorelines erode due to a combination of water-based forces (waves, currents and tides), land-based terrestrial forces (groundwater seepage and soil creep) and human activities (devegetation and boat wakes).

"A healthy shoreline is a dynamic, natural ecosystem where land meets water," according to the Minnesota Department of Natural Resources. "It features deep-rooted native vegetation, fallen wood and untouched aquatic zones. Unlike manicured lawns or solid rip-rap, natural shores filter pollutants and protect against wave and ice erosion."

Recently Rich and Marie Segar, who live on Big Pine Lake in Aitkin County, began the process of a three-part restoration project. "We began this journey two years ago as we were experiencing significant lakeshore erosion from natural and recreational waves, ice dams and topside water run-off from an adjacent hill and buildings," explained Rich. "There is 30 feet of shoreline which is a steep 6-foot drop to the water. We had initially considered rip rap to protect the shoreline, but due to shoreline accessibility and cost, we needed to consider other options."

The duo contacted the Aitkin County Soil & Water Conservation District. A shoreline audit was completed in 2024 and recommended natural shoreline restoration to address the cause of the top water run-off and provide improved soil stability and natural water plants to reduce erosion from water and ice.

In fact, Rich added that, Watershed Management & Wetland Specialist with Aitkin County Soil and Water Conservation District Ellie Joing was instrumental in securing a cost share grant for their project.

AITKIN COUNTY SOIL & WATER CONSERVATION DISTRICT

On May 16, 1957, the Aitkin County Soil and Water Conservation District was established by local farmers and others to "provide technical and financial assistance to landowners."

Aitkin SWCD offers information and advice to landowners of all kinds, assisting in water planning, shoreland buffers/vegetation protection, educational activities, cost-share assistance programs and provides forest management direction.

The SWCD provided initial consulting to the Segars on potential alternatives to rip rap. "Ellie also championed a cost share grant through SWCD," said Rich.

The Aitkin County SWCD has cost-share reimbursement programs operated mainly through clean water funds, which are delegated through different watershed groups.

"Watersheds give water bodies priorities and based on the priority of the lake, you may be eligible for project funds," said Joing. "Project funding also depends on the benefits to water quality, the severity of erosion and the capacity of the SWCD office."

Those interested in seeing if they qualify for cost-share assistance can set up a time for a site visit. Reach out to Joing at 218-927-7284 or aitkinswcdall@gmail.com.

To see more about the Aitkin County SWCD, go to www.aitkincountyswcd.org/.

Fast forward to 2025 ... the Segars met Laura Mendoza at a Big Pine Lake Association Board meeting.

SHORELINE SUCCESS ONE WILLOW WATTLE AT A TIME

Mendoza is owner/consultant of Great Roots LLC specializing in environmentally friendly shoreline restoration projects and education.

Mendoza explained that in 2021, she met a long-time shoreline restoration consultant, Shelley Larson (Hayland Woods) and the women began working together. After nearly 20 years of restorations, Larson retired, passing her knowledge to Laura. "Then I got going," said Mendoza.

Mendoza started Great Roots in 2022, helping landowners achieve their goals of protecting their shoreline and creating habitat for pollinators and other wildlife in Aitkin, Cass, Crow Wing and Pine Counties.

Mendoza provided the Segars with up front community education, project designs and a proposal, materials and supplies and project supervision during implementation. She will also provide annual follow-up for two years.

Mendoza sourced native plants which can adapt naturally to the area's specific climate and soil. "She

selected a mixture of water plants, shoreline plants and upland plants which could proliferate with low maintenance," said Rich.

Mendoza also brought erosion control fabrics and something called willow wattle. Willow wattle is a bundle of dry willow that is installed along the shoreline, a way to help manage water energy to prevent further erosion while also protecting new plantings from wave action. Mendoza uses dry willow to lower the chances of it sprouting.

Assisting the Segars were volunteers from the lake association and neighbors guided by Mendoza and Aitkin County Soil and Water Conservation District Project Coordinator Brian Roulet.

This collaborative approach makes workshops a space where family, friends and neighbors learn and help install the projects, while being guided every step of the way to ensure the success of the project.

Segar said that a total of 45 volunteer hours helped restore the 30 feet of lakeshore. "I think that it (cost) about \$4,000 for materials and design," said Rich. "It's a lot less expensive than a rip wrap option and ideally you gain shoreline back on natural shoreline. There's also things that you don't think about, like, if we would have just put in rip wrap, we wouldn't have addressed any of the top side issues

we have. So this becomes a much more holistic way of looking at shoreline and restoration."

For more information about Great Roots and Mendoza, go to (<https://greatrootsllc.com/>).

SHORELAND RESTORATION GUIDELINES

The Minnesota DNR shoreland restoration guidelines prioritize native vegetation buffers to stop erosion and filter run-off. While the DNR creates minimum statewide standards, restorations are administered directly by local governments. In Aitkin County, shoreland vegetation and alteration ordinances mandate specific rules.

The DNR works with local governments to ensure that their shoreland ordinances and ordinance amendments comply with the state shoreland rules and to provide them with administrative assistance. Local governments have authority for making land use decisions, not the DNR. For questions about regulations and permit requirements that apply to properties within lake and river shoreland please contact your county, city or township.

The DNR has more information available at "Restore Your Shore" on its website at <https://www.dnr.state.mn.us/rys/index.html>.

boundaries.

- Submit a permit application for review under WCA, if necessary.

Landowners considering any construction or alteration within wetland areas should contact the Aitkin County Planning & Zoning Department.

In almost all cases, draining, filling or altering a wetland will require a permit or some other authorization in Minnesota; applicants will often need to show efforts to avoid wetlands and may be required to replace drained or filled wetland areas. This includes the digging of or maintenance of ponds and drainage ditches.

The Minnesota Lake Steward Program, run by Minnesota Lakes and Rivers Advocates (MLR), empowers lakeshore property owners to protect local water quality. By promoting natural shorelines, reducing fertilizer use and preserving buffer zones, the program curbs erosion and filters runoff. For more information go to <https://mnlake-sandrivers.org/lake-steward/>.

The Aitkin County Lakes and Rivers Association represents 20 lake associations in Aitkin County. The ACLARA meets on the second Saturday of the month at 9:30 a.m., April through October at the Aitkin Library.



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