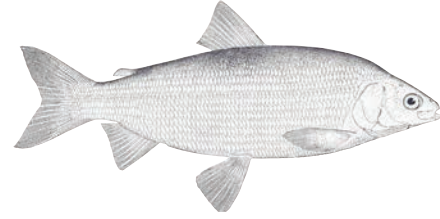


ARGYROSOMUS TULLIBEE (RICHARDSON, 1836)



What is a tullibee lake?

The Minnesota DNR and University of Minnesota scientists have identified 600 tullibee lakes of which 176 are most likely to protect the cold-water tullibee fish as average temperatures rise due to climate change. The deepest, clearest and least developed of them have been targeted for conservation.

Why that fish?

Tullibee are a high energy source of food for predator fish like walleye, pike and muskies, making them a linchpin of the aquatic food chain and the surrounding wildlife that depends on it. In short, they are key to sustaining the clear, cold northern Minnesota lakes—and the walleye fisheries—that we love.

Why are those lakes at risk?

With climate change, rising temperatures can make a lake too warm for tullibee — they die at 75 degrees. At the same time, those beautiful cold-water lakes are, not surprisingly, attracting development. Big lake homes, lawns, streets, and parking lots warm the water and send pollutants like phosphorus and nitrogen into the water. That depletes oxygen from the depths of the lake where the tullibee go to escape the heat.

How does conservation help?

If most of the watershed around a lake is preserved in forests and wetlands, the water will remain clear and oxygenated enough for tullibee to survive in its depths even during heat waves. In other words, protecting tullibee protects the lake and Minnesota's "Up North" tradition. The Land Trust works with lakeshore landowners to conserve their properties and draft management plans to strengthen the resiliency of their land in the face of a changing climate.

What happens if we do nothing?

Over time, those lakes will change dramatically, losing their water quality and cold temperatures, resulting in murkier, warmer lakes that attract less-desirable species like carp. And our cold-water fisheries—a major economic, recreational and cultural engine for the state—could be lost.

—J.M.



Adding to a lifetime of conservation with a legacy gift

A large-animal veterinarian, Dick Huston has worked diligently over the years to restore a mile-long corridor of wetlands and prairie in the Faribault area. Dick first connected with the Land Trust in the year 2000 after noting some troubling trends in the area.

"As I drove around the countryside, I watched wetlands get drained and soils start to erode. It was disheartening — not just for the water quality, but for the effect on wildlife and outdoor recreation activities."

That impact on water and wildlife led Dick to the Land Trust, which helped him protect over 181 acres of land.

The perpetual nature of the Land Trust's protection further inspired Dick to commit a planned gift to the organization.

"In my life I've seen songbirds like meadowlarks and bobolinks disappear from our lands. A planned gift to the Minnesota Land Trust helps ensure the future of wildlife habitat. It's so important — we need to pay attention to our natural resources; they're not going to continue as they are unless we take care of them."

Explore planned giving options at www.mnland.org/plannedgiving or contact Director of Development Alex Tsatsoulis at 651-917-6289



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Updates from the Minnesota Land Trust

RETIRING



ANN THIES

Congratulations to Ann Thies who retired March 1. We are grateful for her eight years of dedicated service and guidance in the stewardship department.

FUN FACTS ABOUT OUR NEWEST STAFF MEMBERS



BILL PENNING
Conservation Programs
Consultant
Is a wood turner.



SUE STEINWALL
Director of Conservation
Stewardship
Has visited both the Arctic and Antarctica.



HALEY GOLZ
Program Manager:
Private Lands Restoration
Is a lichen artist.



RUURD SCHOOLDERMAN
Program Manager:
Mississippi Headwaters
Skied across Lake Superior this winter.



JOCELYN WALTERS-HIRD
Staff Attorney
Has lived in six states on the Canadian border.

Minnesota Made

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Keeping our lakes cool



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MID-YEAR REVIEW | SPRING 2019

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A link between fish and forest

MITIGATING THE IMPACTS OF A CHANGING CLIMATE

It's prophetic, in a way, that Candace Gouze's birthday falls on Earth Day. After all, she's led her family's extraordinary efforts to protect their own little piece of the earth on Washburn Lake in Cass County.

Over time, little by little, bit by bit they've acquired property around their family cabin — wetlands where loons nest, a patch of peaceful woods, neighboring waterfront lots, land along a creek that flows between Washburn and Lake George. Today it adds up to three miles of shoreline and 236 acres of forest that are all protected forever through a conservation easement with the Minnesota Land Trust.

"My mom has always been a conservation-minded person," said

By Josephine Marcotty

Candace's daughter, Katie Bliss. As a little girl, Katie was never allowed to buy anything packaged in plastic and even her sandwich had to be wrapped in wax paper, she said. That tradition of conservation has now permeated the whole family, especially when it comes to protecting Washburn Lake.

"This project was a dream for both of us."
—Steve Gouze



Candace and Steve Gouze

Beginning in the early 1990s, they focused on buying contiguous tracts of sensitive land that had a clear impact on the lake's ecosystem. What drove them was the promise of protecting nesting sites for loons and the subtle beauty of the northern forest.

A perfect fit for their goals and their family, the Gouzes decided to put their accumulated property into a conservation easement with the Minnesota Land Trust. "My mom was very excited about the prospect of protecting it in perpetuity," said Katie. "Creating the legacy was very important to them. They want this work to be bigger than this generation."

Now, they are part of a much larger legacy project to protect one of Minnesota's greatest treasures: our cold-water lakes. The Minnesota Land Trust and its partner, the Northern Waters Land Trust, are working to protect lakes in Minnesota that, like

Washburn, are cold and deep enough to act as a refuge for a sentinel species of fish — tullibee. Also known as herring and cisco, the silver fish are a rich food source for predators like walleye and a key link in the food chain for aquatic species.

"They call it the canary in the coal mine," said Kathy Moore, executive director of Northern Waters Land Trust. "Once tullibee start being impacted, it impacts the entire food chain in a big way."

Minnesota has more of these deep cold lakes than any other state in the country, which makes it even more imperative in a warming climate to help preserve their cold-water condition and the fish that depend on it. Scientists have determined that if 75 percent of land around those lakes are preserved in native forests, the water will remain clean, clear and cold enough for tullibee to survive during the heat waves that have already caused fish kills in shallower lakes.

The two land trusts are working together to target potential conservation land around 50 deep lakes in the Upper Mississippi Watershed that are surrounded by forest, but which are threatened by development. Progress is slow but steady.

To advance this important effort, the Minnesota Land Trust is in

part relying on funding provided by the Outdoor Heritage Fund as recommended by Lessard-Sams Outdoor Heritage Council. "The tullibee lakes partnership is now in the fifth phase of state funding for the project. A new proposal, which if approved by the Legislature in the 2019 session, would add thousands more acres and feet of protected shoreline," said Ruurd Schoolderman, Minnesota Land Trust program manager for the region.

This project will result in a true "legacy" of keeping our northern forests wild and our cold-water fisheries world class. And it provides a great model for using a scientific, targeted approach to conservation while simultaneously helping individual lakeshore property owners achieve their own goals of long-term protection for the places that they love.



REEBECCA FIELD

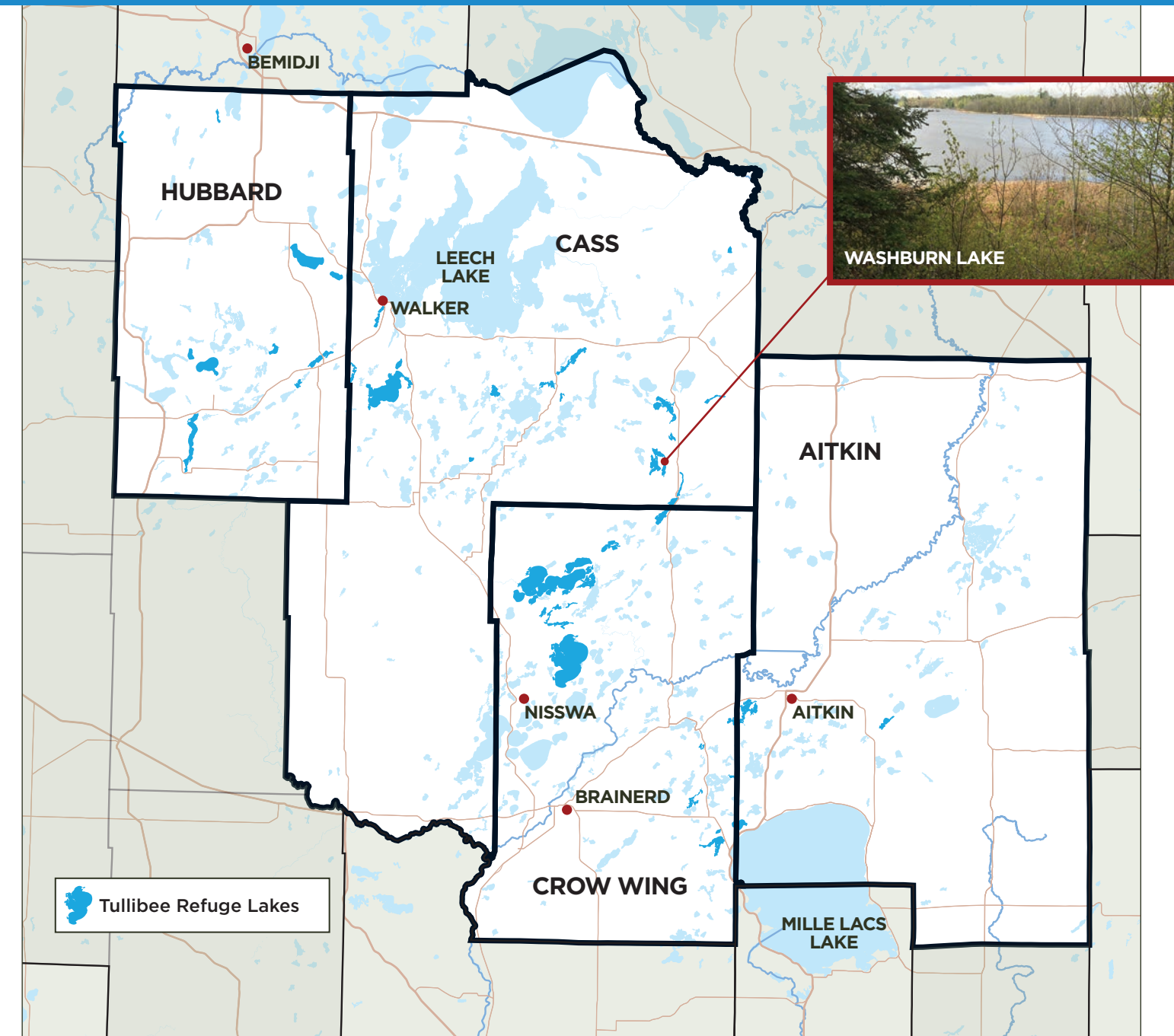


For people like Steve and Candace Gouze, their grandchildren will be the next generation in their family to spend summers catching walleyes and watching baby loons grow up in the protected bays and wetlands near their cabin. "I don't know what it's going to be like for them when they are adults," Candace said of her grandkids. "But this is one way that we can try to make sure that we will all be better off."

Josephine Marcotty is a former environmental reporter for the Star Tribune.



CONSERVATION FOCUS AREA FOR THE MINNESOTA LAND TRUST AND NORTHERN WATERS LAND TRUST PARTNERSHIP



Fifty deep, cold-water, well-oxygenated lakes are targeted for protection in the Upper Mississippi Watershed. Preserving the surrounding land is key to ensuring tullibee habitat continues to exist in the face of a changing climate.



Katie Bliss and son