Let's make healthy lakes together!

PAMELA TOSHNER

Native plant landscaper Lisa Reas and UW-Extension lakes specialist Patrick Goggin discuss the Thornton family shoreline.

LAKESHORE PROPERTY OWNERS IMPROVE HABITAT AND WATER QUALITY WITH SIMPLE AND INEXPENSIVE PROJECTS.

By Pamela Toshner, Amy Kowalski, Shelly Thomsen and Patrick Goggin

As a Chicago kid, Dan Butkus reveled in the opportunity to head north to Squash Lake in Oneida County where his parents owned a cabin. He filled his days fishing and swimming with his sister in the clear water and looking for critters in the grasses, shrubs and trees in the yard between the lake and the family's beloved home-away-from-home. He still remembers that fateful day over 50 years ago when his dad cleared the woods. Butkus' childhood stomping grounds, where his creativity simultaneously thrived with the frogs and songbirds depending on that habitat for food and shelter, haven't been the same until he took advantage of Healthy Lakes over the past couple years.

"Back then my parents wanted to see us playing by the shore, as well as have a vista of the lake. My sister and I were crushed," says Butkus, of the lot clearing.

After their parents' passing, the opportunity arose to bring back childhood memories and help fish and wildlife. Partnering with Oneida County Land and Water Conservation, Butkus and his sister swiftly made plans to replant the native vegetation suited to their sandy lakeshore, including wild strawberries and blueberries they picked back in the day. They also designed and installed an infiltration pit — a simple rock-filled area that captures dirty runoff before it makes its way to the lake. A new statewide initiative — Healthy Lakes — provided pivotal funding to help get the job done.

Wisconsin boasts more than 15,000 lakes. Ask any outdoor enthusiast how frequently he or she plays on our lakes and you won't be surprised to learn just how important lakes are to Wisconsin's culture and economy. According to the American Sportfishing Association, fishing generates a $2.3 billion economic ripple in the state, not to mention the additional revenues from other tourism activities and shoreland property taxes.

The Environmental Protection Agency's National Lakes Assessment identified lakeshore habitat loss as the major stressor for declining lake health across the United States. Lakes with poor habitat are more likely to also have poor water quality.

To combat this trend in Wisconsin, the Department of Natural Resources worked closely with citizens, University of Wisconsin-Extension, counties and business partners to develop Healthy Lakes, promoting five simple and inexpensive best practices that improve habitat and water quality. Lakeshore property owners may choose to do the practices on their own or reach out to their local lake group and other partners for technical and funding assistance.

>>> THE FIVE HEALTHY LAKES BEST PRACTICES

1. **Fish sticks create fish and wildlife habitat. Fish sticks are feeding, breeding and nesting areas for all sorts of critters — from fish to song birds. They can also prevent bank erosion, protecting lakeshore properties and your lake.**
2. **350-square-foot native plantings improve wildlife habitat, natural beauty and privacy, and decrease runoff. Native plantings include grasses and wildflowers with shrubs and trees. Lakeshore property owners choose a prescribed option with a list of suitable plants based on the owner's property and project goals — from bird/butterfly habitat to a low-growing garden showcasing the lake view.**
3. **Diversion practices prevent runoff from getting into your lake. Diversion practices move water to vegetated areas or an infiltration practice where it can soak into the ground instead of transporting dirt and pollutants into your lake. Depending on your property, multiple diversions may be necessary.**
4. **Rock infiltration practices capture and clean water runoff. Rock infiltration practices fit in nicely along roof drip lines and driveways and provide space for water runoff to filter into the ground. Infiltration pits and trenches work best if your soil is sandy or loamy.**
5. **Rain gardens create wildlife habitat and natural beauty while capturing and cleaning water runoff. Rain gardens multi-task — they improve wildlife habitat and filter water runoff while providing a naturally beautiful view.**

A statewide partnership

Forty-eight property owners on 15 lakes throughout the state received grant funding to implement 100 best practices in 2015 — Healthy Lakes debut year. The projects range from the Minong Flowage in Washburn and Douglas counties in the north, to Nagawicka Lake in Waukesha County in the south, and other lakes in between. The department provides Healthy Lakes grants to eligible applicants, including qualified lake associations, lake districts, nonprofit conservation organizations, tribal nations and local governments.

These groups, in turn, reach out to interested property owners or vice versa to install Healthy Lakes practices on their properties. Butkus worked with the Squash Lake Association to get the ball rolling for his grant. Conversely, Shawano County's Cloverleaf Lakes Protective Association members reached out to the Town of Belle Plaine and the Belle Plaine Sportsman's Club while also surveying property owners to gauge participation interest.

"We were originally interested in doing just fish sticks to get back some of the woody habitat in the Cloverleaf Lakes," says Dennis Thornton, association president and town supervisor. "So we met with DNR fisheries biologist Al Niebur and lake biologist Brenda Nordin. Brenda introduced us to this new program Healthy Lakes and encouraged us to think more broadly about lakeshore habitat — to envision projects on the land adjacent to the shore, as well."

And that they did. In a matter of a couple months, the association recruited 12 interested property owners, the town and club committed to join forces, and DNR water resources and fisheries integrated to provide project support. This community-based partnership resulted in the town serving as grant applicant, the association as project and people managers, and the club as construction crew.

Working together to improve wildlife habitat and water quality in this small chain of three lakes — Pine, Grass and Round — the Healthy Lakes project forged new alliances where there was historically discord.

"I had to hold the guys back because they wanted more, more, more…" says Craig Ford, the club president, on members helping to install fish sticks on the chain. "Most of them don't live on the lake, but they use the lake as much as anyone else. They have the chainsaws and other equipment to get the work done."

The Belle Plaine Sportsman's Club has installed most of the fish sticks clusters along the permanently protected Gibson Island — another example of community partners leveraging grant funding for the benefit of the lakes and people and critters that depend on them — with plans to add as many as 35 clusters of whole trees, as the permit and grant funding provide for, when the project is done.

Most property owners committed to terrestrial shoreline restoration worked with native plant landscaper Lisa Reas of L.J. Reas Consulting to plant 350-square-foot native plant gardens along their lakeshores to improve wildlife habitat, natural beauty and privacy, and to decrease water runoff.

"Healthy Lakes is great for business. We can use the simplified guidance to work with landowners to create attractive sites that still meet the goals of Healthy Lakes," says Reas.

One of the Healthy Lakes measures of success is to increase property owner participation by 100 percent between 2015 and 2017. The Healthy Lakes team developed a detailed survey to prioritize the five best practices within the initiative's framework. Each of the best practices relies on existing technical guidance linked to the best current science available.

For example, the 350-square-foot native planting options prescribe a plant list that includes ground cover, shrub and tree species at specific planting densities based on a state standard. Studies in Wisconsin and from around the country repeatedly show that as lakeshore development increases, natural habitat decreases. The end result is fewer fish, frogs, loons and other features that draw us to lakeshores in the first place, as well as declining privacy and water quality.

Dennis Thornton and his wife Jan are not installing any Healthy Lakes projects. As you approach their property by boat, it's clear why. The songbird cacophony can be heard over the hum of the pontoon's motor. As the boat teases the dock with its graceful landing, finches, chickadees, woodpeckers, warblers and red-winged blackbirds make their way from the lush layers of vegetation hugging the hillside between the Thornton home and Grass Lake. A bald eagle lingers nearby, and Dennis shares the story of the nesting mallards who call the Thornton shoreline "home."

A glimpse into the clear water showcases turf-like plants such as quillwort, which is particularly sensitive to runoff and sediment coming off the land, but rarely noticed because of its diminutive size and appearance. The quillwort is thriving at the Thorntons' because their yard is almost entirely vegetated, providing habitat and preventing polluted water from making its way to the lake.

"We've been doing this (restoring the lakeshore) for years," explain the Thorntons. "It's good to see other people getting excited about it, too, and that the state is making it easier for us all."

Healthy Lakes workshop participants tour the Dan Butkus property three months after the initial restoration planting.

PATRICK GOGGIN

PAMELA TOSHNER

Dave Schleusner, who operates the district weed harvester, reviews a restoration plan of the Apple River Flowage Protection and Rehabilitation District.

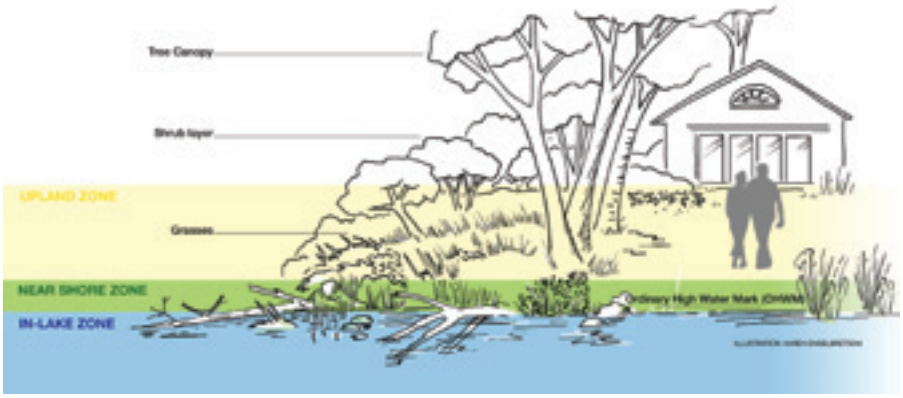

ILLUSTRATION BY KAREN ENGELBRETSON

Leading by example

Walking the talk about protecting and improving lakes is a strong theme for Healthy Lakes early adopters.

"The Apple River Flowage Protection and Rehabilitation District asked for volunteers to participate in Healthy Lakes projects, and I figured someone's gotta do it — I might as well be that person,'" explains Dave Schleusner, a state wrestling champion who operates the district's weed harvester. Schleusner and his wife Billie Jo own a former resort with relics of higher use times, including small cabins lining the water's edge and expanses of lawn and mowed hillsides on the impounded river system in Polk County.

The Apple River Flowage has complex management challenges, both because of its lake type and location. Flowages, in general, are more difficult to manage because they tend to be shallow and have larger areas of land draining to them — 111,000 acres, including other lakes, and urban and agricultural lands in the case of the Apple River Flowage. Aquatic invasive species are easily transferred to flowages via the river connection and difficult to reduce because of the water currents moving through them. The district decided to become a catalyst for the change they would like to see around their lake. These changes include more fish and wildlife habitat and cleaner water.

Says District Chair "Pete," or Roland Peterson, "We know there are bigger challenges like ag out there, but until we do what we can on our own properties, we can't expect others to change."

Peterson's sage words ring true when it comes to lake management, which becomes more complex the lower the lake moves in the landscape. Fortunately, in areas like the St. Croix River basin where the Apple River Flowage is nested, there are other new initiatives like farmer-led councils that build trust-based relationships to identify and implement innovative solutions to sophisticated issues like agricultural runoff. After all, farmers prefer to keep important nutrients like phosphorous and nitrogen on their fields to grow crops instead of losing them via water runoff to lakes where nutrients fuel algae.

Five Apple River Flowage property owners installed Healthy Lakes 350-square-foot native plantings in 2015, and many more participants are stepping forward to follow their lead. Schleusner made his own sign to showcase his project because so many folks cruising past on boats and crossing the nearby road bridge were curious to learn what he was up to.

"People are driving by and waving all the time. They pull up their boats when I'm out and ask me all about it. I saw hummingbirds right away, more butterflies, all sorts of stuff," Schleusner exclaims. "I can't wait to do more. I'm just happy I didn't put my phone number on that sign. I probably wouldn't get any sleep!"

Assistance is available but do-it-yourselfers encouraged

The team that designed Healthy Lakes originally did so to streamline grant funding. As it turns out, they also made it much easier for lakeshore property owners, or in the case of some of the best practices — any landowner — to install Healthy Lakes practices on their own. Each best practice includes an accompanying fact sheet describing cost ranges and averages, a materials list, time necessary to complete the project and general step-by-step instructions. If the facts seem reasonable, folks can turn to the more detailed technical guidance referenced in the fact sheet to complete a project. You can access all of these materials at healthylakeswi.com.

Eligible grant applicants can apply for up to $25,000 in Healthy Lakes grant funding on behalf of multiple lakeshore property owners. Each lakeshore property can get up to $1,000 per best practice to help with installation costs from the sponsor's grant.

Take it from Butkus who knows firsthand that you can help improve lake health while retaining the view.

"It turns out our Squash Lake property slopes to the water. My dad probably didn't need to clear it in the first place. But by choosing low-growing plants (a Healthy Lakes 350-square-foot native planting option) for the viewing and access area, we're sure to see the water, the kids swim, and explore the area in between," he says.

Pamela Toshner and Shelly Thomsen are DNR water resources management specialists, Patrick Goggin is a UW-Extension lakes specialist and Amy Kowalski works for UW-Extension.