

Come explore the many natural wonders of our 167-acre Lake District Preserve! There is no better place to go hear the call of a sandhill crane, watch the tall prairie grasses swaying in the breeze, or chance upon a family of turtles basking in the sun along the edges of the rehabilitated marshes.

Visitors can hike the mowed trails and pause at any of several information kiosks describing the history and unique features of the property (and the important role it plays in protecting Lake Ripley!).



A part of the recently acquired land adjoining Lake Ripley's only inlet stream, this former farmland next to County Rd. A has been converted to a field of prairie grasses and brilliantly-colored wildflowers. The 4.5-acre restoration was paid for entirely by grants. A similar effort is scheduled for this fall on a 26-acre tract that is currently in soybeans. The Lake District is partnering with the U.S. Fish & Wildlife Service and Wisconsin DNR to finance the restoration work. Photos by James Daly (converted to black-and-white for publishing)

Ripples
Lake Ripley Management District
N4450 County Rd. A
Cambridge, WI 53523

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Ripples

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Summer 2010

FROM THE HELM



In the summer of 2008, new legislation concerning the placement of piers on Wisconsin waterways went into effect. The new legislation identifies pier configurations that would be exempt from permitting, and creates a free registration process to grandfather piers placed before 2004 that no longer meet today's standards. As in the past, Wisconsin DNR's "Pier Planner" establishes size, shape and number of boat spots that are exempt from needing a permit (see inset box). Most piers around Lake Ripley meet these standards and do not require any action by the property owner.

When the new rules were adopted, provisions were made to "grandfather" certain piers that exceeded the limits of the guidelines. Large community piers with lots of boats or those with expansive decks might fall into this category. Most piers that are not exempt are eligible to be grandfathered through the DNR's one-time registration process that ends April 1, 2011. At this point, we are encouraging affected pier owners to start the registration process. There may be modifications you have to make to get your approval, but if you wait until after the deadline, your options will be limited. A copy of the registration form, Pier Planner, and other information are available at <http://www.dnr.wi.gov/waterways/recreation/piers.html>. The Lake District will be happy to assist you with the application, and, if necessary, hold a meeting to help walk you through the pier-registration process.

On another matter, we have received many questions regarding the state of the lake. We have had what seems to be more aquatic vegetation and algae this year than in the past. There are several factors that may help explain these conditions. First, we had a very early and unusually warm spring (preceded by years with heavy flooding and nutrient runoff), giving the weeds and algae at least a three-week head start. Secondly, the zebra mussel infestation has severely reduced the suspended green algae and plankton that usually clouds the water, dramatically improving water clarity. This allows more sunlight to reach the bottom of the lake and increases weed growth in areas where there were no weeds before. Lastly, the severe reduction of the free-floating, green algae has stimulated the growth of other forms of algae. These other forms of algae have always been in the lake, but have been limited by competition for sunlight and nutrients.

This is a simplified explanation of the changes in the lake. But you should be aware that we are doing all we can to cope with the new challenges. We started weed harvesting early and have been working in areas we previously have not had to harvest. We continue to monitor any and all new science that might control invasive species with the hope of finding new solutions. Please stay in contact with us regarding your concerns and questions. If you are not already a subscriber to our e-bulletin, please consider it. We use e-bulletins to make important announcements and share time-sensitive information between these newsletters.

John Molinaro, Chair

LAKE DISTRICT OFFICE

Oakland Town Hall
N4450 County Rd. A
Cambridge, WI 53523
(608) 423-4537
ripley@charterinternet.com
WWW.LAKERIPLEY.ORG

BOARD OF DIRECTORS

John Molinaro
Chair
(608) 423-4743

Mike Sabella
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(608) 423-4603

Jane Jacobsen-Brown
Secretary
(608) 423-3319

Georgia Gomez-Ibanez
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(608) 423-9898

Dennis McCarthy
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(608) 575-1264

Gene Kapsner
Town of Oakland Rep.
(608) 423-4723

Walt Christensen
Jefferson County Rep.
(920) 723-1320

LAKE MANAGER/ RIPPLES EDITOR

Paul Dearlove
(608) 423-4537

SEASONAL SUPPORT STAFF

Ted Teske & Bill Ratzburg
Weed-harvesting operators

James Daly
Summer intern

EXEMPT PIER STANDARDS

Width: Maximum 6 feet wide
Length: The length needed to moor your boat, use a boat lift, or to reach a 3-ft. water depth, whichever is greater
Location: Does not interfere with the rights of other riparian owners
Number of Boats: 2 for the first 50 feet of frontage, 1 for every additional full 50 feet

Piers Eligible for Registration

-Must have been placed before Feb. 6, 2004
-Must have a main stem that is a maximum 8 feet wide
-Must have a loading platform at the end of the pier that is a maximum of 200 sq. ft. or a maximum of 300 sq. ft. if it is 10 feet wide or less
-Cannot interfere with the rights of other riparian (waterfront) landowners

Wisconsin DNR

We are very pleased to welcome James Daly as our newest, volunteer intern. James has been a resident of Cambridge for the last 12 years. He is a 2009 graduate of Cambridge High School and will be entering his sophomore year at St. Olaf College (MN) where he is majoring in environmental studies.

"Water quality became an interest of mine several years ago with my involvement in the Cambridge Aquatic Environmental Club, and it was through CAEC that I was first introduced to Paul Dearlove," says Daly. "I decided that interning for the Lake District for the summer would be an enriching experience that would prepare me for future positions in limnology and resource management." He adds that one of his goals is to eventually secure a summer research position at the University of Wisconsin's Trout Lake Research Station in Vilas County.

James is currently assisting the Lake District in a number of areas: public outreach; boater surveys to raise awareness about aquatic invasive species; water quality testing; and researching strategies for monitoring and controlling Canada geese populations. His journalistic skills are also being utilized, and these talents are showcased in some of the articles contained in this edition of *Ripples*. "Photography and journalism are two interests of mine that I have been able to incorporate into the internship," says Daly.



James prepares to head off onto Lake Ripley to help with a fishery survey.

We are grateful to James for all his enthusiasm and contributions to date, and look forward to his continued assistance in the weeks ahead.

Walk out to the end of any pier on Lake Ripley and look down into the water. Clear, isn't it? In fact, this year Lake Ripley had its highest water clarity readings since records began. While good water clarity can indicate good water quality, in the case of Lake Ripley, the increased clarity coincides with the 2005 introduction of a non-native aquatic species – the zebra mussel. The ubiquitous mussels feed by filtering particles from the water at a rate of up to one gallon per day per mussel.

Another noticeable change this year is a green carpet of algae growing attached to rocks and plants in the shallows, a result of sunlight reaching further into the water and feeding this type of algae growth. Deeper-penetrating sunlight also raises water temperatures, and fish that prefer colder water (like walleye) may be forced into deeper, more oxygen-depleted water that can affect their survival. The type of domino effect caused by zebra mussels characterizes the introduction of any invasive species.

The ability for aquatic invasive species to cause extensive, irreversible harm to lake ecosystems is the reason prompt action was taken when an unconfirmed report was received that a new invader had been introduced to Lake Ripley. A recreational diver, in this case, had reported seeing a school of round gobies, an invasive fish, while diving in the lake. Within two weeks, a team of fisheries biologists had been assembled to investigate the sighting.



Daly (left) works a seine net in search of the round goby. These non-native and invasive fish, which currently plague the Great Lakes, were thought to have been seen in Lake Ripley by a recreational diver.

Wading through shallow water, one of the investigators probed around plant beds and submerged boulders armed with an apparatus that delivers a weak electric current to the water. The other team members stood at the ready with nets to quickly capture and identify any temporarily-stunned fish. >>

LAKE RIPLEY MANAGEMENT DISTRICT 2011 PROPOSED BUDGET

	2009 ACTUAL	2010 JAN-JUNE ACTUAL	2010 JAN-DEC ESTIMATED	2011 PROPOSED BUDGET
Revenues:				
Real Estate Tax Levy	\$ 110,517	\$ 72,866	\$ 112,888	\$ 116,575
Grants		5,000	5,000	
Interest Income		374	750	
Carry-over	1,572	4,000	4,000	6,650
Other	4,824	1,977	3,934	
Total Revenues	116,913	84,217	126,572	123,225
Projects:				
Staff Payroll/Fringes/Taxes	63,358	32,488	64,977	67,275
Landowner Cost Sharing	16,663	7,509	10,000	10,000
Weed Harvesting	6,456	2,310	7,156	7,150
Lake District Preserve	5,180	2,566	3,000	4,500
Special Programs	112	--	--	250
Insurance:				
General Liability	1,956	--	2,200	2,300
Marine & Truck	1,149	--	1,350	1,400
Worker's Compensation	918	919	950	950
Operations:				
Legal Counsel	--	--	3,000	3,000
Dues & Conferences	410	55	400	1,400
Office & Community Outreach	4,391	3,203	6,330	6,800
Contingency	1,097	162	1,500	1,500
Commissioner Stipends	4,650	2,400	4,800	4,900
Rent	1,800	1,050	1,800	1,800
Capital Reserve, Land/Equipment Acquisition	10,000	--	10,000	10,000
Total Disbursements	118,140	52,662	117,463	123,225
Balance	\$ (1,227)	\$ 31,555	\$ 9,109	\$ --

Non-lapsible Fund:	Capital Reserve, Land & Equipment Acquisition	F.K. Elson Memorial	Friends of the Preserve	Preserve Restoration & Development
Est. Balance (12/31/09)	\$ 49,776	\$ 204	\$ 1,801	\$ 200
Add. 2009 activity:				
Increase				
Decrease	(2,016)			(200)
Final Balance (12/31/09)	47,760	204	1,801	0
2010 Est. Additions	73,012			
2010 Est. Interest	225	1	9	
2010 Est. Expenditures	63,012			
Est. Balance (12/31/10):	\$ 57,985	\$ 205	\$ 1,810	\$ 0

Budget Hearing
September 4, 2010
8:00 a.m.
Oakland Town Hall

Annual Meeting Agenda
September 4, 2010
9:00 a.m.
Oakland Town Hall

- I. Call to order
- II. Approve 2009 Annual Meeting minutes
- III. Nomination of board candidates (Names appearing on ballot: Mike Sabella and Jane Jacobsen-Brown, incumbents)
- IV. Chairman's report
- V. Treasurer's report
- VI. Budget and tax levy
- VII. Tabulation of vote and election of board members
- VIII. Adjournment

Water quality measurements like dissolved oxygen, temperature, and turbidity (material suspended in the water) all change day by day and hour by hour. This variability can be misleading and may result in false assessments in the absence of a long-term data record. It is why monitoring should not be a one-time event, but an ongoing responsibility if it is to effectively track trends and guide management decisions.

Another method of assessing general water quality conditions is through the presence or absence of biotic indicators, such as tiny aquatic insects (called "macroinvertebrates"). Some macroinvertebrates are sensitive to pollution, causing them to disappear from degraded lakes and streams. A "biotic index" can be calculated based on species presence or absence, and can be telling of general water quality conditions within particular stream segments or lake areas.



The stonefly larva is a species sensitive to pollutants. Its presence indicates good water quality. Photo by James Daly

This summer, a biotic index of 1.6 was calculated for Lake Ripley's only inlet stream. A biotic index of 3.6 or higher indicates the stream has excellent health, whereas a score of 2.0 or below suggests poor health. A 1993 biotic index performed at the inlet also showed that the stream had fair to poor water quality. The main cause of these findings was identified as sediment and fertilizer runoff from crop land, which accounts for nearly half of the land in the watershed that drains to the lake.

Until about 12 years ago, ditched and severely degraded wetlands were the



Volunteer Nathan Fosdick prepares to sample for macroinvertebrates in Lake Ripley's inlet stream. Photo by James Daly

only terrain that stood between eroding agricultural fields and Lake Ripley. Following the creation of the Lake District Preserve, many of these wetlands and their adjoining uplands were restored to function once again as natural runoff filters. While water quality improvements in the inlet stream would be expected as a result, it may be too early to observe these changes through biotic indexing alone. Further monitoring will help document changes in stream health over time. Meanwhile, improved land-use practices and additional conservation work should help move us in the right direction.

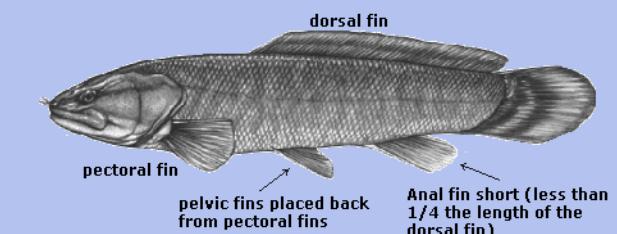
— James Daly

Lake Ripley Fishing Report

A comprehensive survey was completed on Lake Ripley in 2009. Generally the lake supports strong populations of game fish including largemouth bass, northern pike and walleye. Walleye are stocked and are present at two per acre. While Lake Ripley is famous for producing the state record largemouth bass in 1940, the population today is typical of most good Wisconsin bass fisheries. Heavy fishing pressure limits the number of big fish, but catch-and-release angling leaves lots of mid-size legal fish. Many year classes of bass are present, but there are very few over 20 inches. A few smallmouth bass are also present. The large number of predators in the lake keeps the bluegill population from becoming stunted. Bluegill are fast growing and present in good numbers up to eight inches long.

— Don Bush, Fisheries Supervisor, Wisconsin DNR

FEATURED FISH: BOWFIN



The serpent-like and sharp-toothed bowfin (or dogfish) is a Lake Ripley native. Described as a living fossil, it has survived since the Cretaceous period more than 100 million years ago. It commonly grows up to 2 feet and weighs an average of 2-5 pounds. With a tolerance for high temperatures and equipped with a modified air bladder, the bowfin is able to live in shallow, weedy and stagnant waters by taking in surface air for oxygen. Bowfin are excellent fighters and may be unintentionally caught by anglers wherever they are abundant. Once thought harmful to sport fish, it is now considered an asset to controlling rough fish (like carp) and stunted panfish populations.

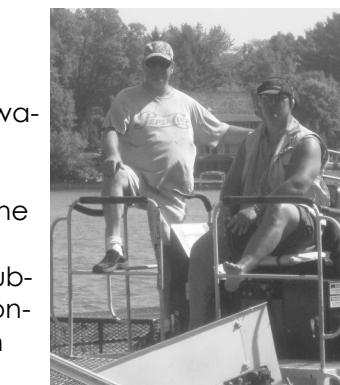
The investigators combed the rocky shallows along the south side of the lake, finding many small fish but no round gobies. Four to ten inches long with protruding eyes and dark colored markings on its body, the round goby, like so many invasive species, looks innocent. Currently, it is wreaking havoc in the Great Lakes by outcompeting native fish for food and spawning sites, and eating the eggs of native fish. After searching at three different sites that contain the type of habitat that gobies prefer, the party calls it a day. "If there were round gobies here, we likely would have found them," concludes John Lyons, a fisheries expert with the Wisconsin DNR.



Top Left: Dave Marshall (Underwater Habitat Investigations, LLC), John Lyons (Wisconsin DNR) and Paul Dearlove (LRMD) use electro-fishing equipment as part of the search. No round gobies were discovered as a result of these surveying efforts, suggesting the reported sighting may have been a case of mistaken identity. **Top Right:** The round goby is known to outcompete native fish for food and habitat.

Without diminishing the importance of monitoring for new infestations, the preferred scenario is to keep aquatic invasives species (AIS) from entering lakes in the first place, which is the goal of a new effort being piloted by the Lake District this summer. The program, called "Clean Boats, Clean Waters," aims to prevent the unintentional transport and spreading of AIS by encouraging boaters and anglers to remove plants attached and drain water from their boats before hitting the road. Simple steps such as these might have prevented the 2005 introduction of zebra mussels to Lake Ripley, and will be crucial in protecting it from future infestations.

AIS already found in Lake Ripley include: Eurasian watermilfoil and curly-leaf pondweed (lake weeds), the common carp, and the prolific zebra mussel that attaches to almost any submerged object. These non-native, aquatic pests can alter lake conditions and disrupt entire ecosystems. Today, thousands of dollars must be spent annually just



Bill Ratzburg (left) and Ted Teske take a quick break from weed harvesting to humor the photographer. Photo by Gina Ratzburg

to control rampant milfoil growth through harvesting. Even the tiny zebra mussel can add up to a big problem. These recent arrivals feast on small plankton, starving out young fish and other aquatic life higher in the food chain. They also encourage the growth of less desirable kinds of algae.

Due to the damage caused by AIS on ecosystems and economies, a new Wisconsin law makes it illegal to transport a boat or trailer with aquatic plants attached to it. Hopefully, the new law coupled with preventative action among boaters and anglers will keep invasive species from being spread, and, ultimately, ensure that future generations will be able to enjoy a healthy Lake Ripley. ♦

—Co-authored by James Daly

Lake Ripley Boater Surveys

Location: Public boat landing

Timeframe: 6/12 - 7/4 (11 weekend hours)

Number of boats inspected: 46

Boaters/passengers interviewed: 87

- 24% used their boat on another waterway within the last 5 days
- Only a few boaters claimed NOT to be aware of aquatic invasive species (AIS) laws
- Most claim to follow AIS preventative measures (i.e., cleaning boating equipment of plant fragments, disposing of unwanted bait in the trash, and draining water from boats and fish livewells)
- Attached lake weeds were spotted on 20% of the observed boats and trailers
- Most boaters prefer to get their AIS information from signs at the boat landing

It's the law...

1. **INSPECT** boats, trailers, and equipment.
2. **REMOVE** all attached aquatic plants, animals and mud attempting to hitch a ride. It is illegal to transport a vehicle, boat, boat trailer, or equipment of any type on a public highway which has an aquatic plant or animal attached to its exterior. Violators may be fined from \$263 to \$389.
3. **DRAIN** water from boats, vehicles and gear.
4. **NEVER MOVE** live fish away from a water body.
5. **BUY YOUR BAIT** only at Wisconsin bait dealers. You may take leftover minnows home in up to 2 gallons of water and use them again on the same water, or elsewhere if you have not added lake or river water to the bait container.

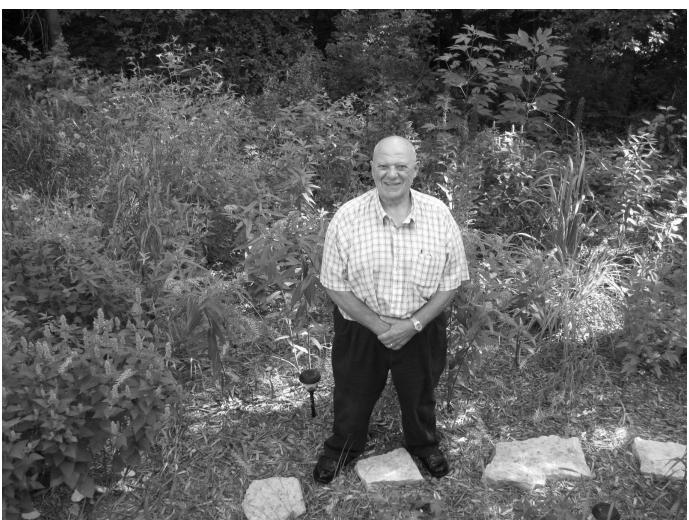
Trading Gullies for Gardens

Dave DeGidio had a problem with his yard off Whispering Pines Lane. Erosion behind his house left gullies that even truck loads of dirt could not ameliorate for long. To make matters worse, nothing he planted there would grow.

When he approached the Lake District for advice, it was recommended that he install a rain garden. He was referred to a professional installer and informed about a cost-share program in which the Lake District would pay part of the project costs. It was enough to convince him to give the idea a shot.

There was another compelling reason to consider a rain garden – water quality. DeGidio's property lies directly uphill of a state-owned wetland area and Lake Ripley's only inlet stream. To protect the stream, storm runoff draining from a roof downspout on his house was rerouted through a drain tile to the center of the rain garden. In addition, a stone swale was built to help divert additional water from elsewhere on the property into the garden, allowing the water that once raced unimpeded across his yard to be absorbed by the plants and into the soil.

What was once an area where nothing would grow is now lush with flowers and ferns. Standing in his rain garden amidst pink, purple, and red wildflowers, DeGidio comments that a little over a year ago there were only weeds and moss. "I had no idea this was going to turn out so good. I'm thrilled."



Dave DeGidio pauses on a flagstone path that winds through his rain garden. The new landscaping feature absorbs runoff while offering a backyard sanctuary frequented by butterflies and hummingbirds.

The beautiful condition of the rain garden, however, did not come without dedication on his part. DeGidio followed the instructions of the installer and regularly watered his rain garden during the initial two months. Now that the native plants in the rain garden are established, he only has to perform weed control every couple of weeks (eventually the plants will be dense enough to inhibit weed growth).

For anyone wanting a method to handle stormwater runoff, DeGidio resolutely believes that rain gardens are the way to go. He now enjoys the many birds and butterflies drawn to his backyard. He points behind me where a hummingbird has just arrived to sample some pink flowers. "You can't beat that," he says smiling.

Bringing Nature Back to the Lakeshore

It is a hot, windy day, and Liz Fischer is gazing out on the white-capped waves of Lake Ripley, a lake she spent her summer vacations at as a child. She fondly recalls a reed bed that used to stretch the entire shoreline and extend 30 feet out into the water. It teemed with wildlife—from frogs and turtles, to many varieties of fish. With wispy, grass-like stalks peaking above the water line, the reeds provided a sanctuary for aquatic life, and once helped dissipate the waves that continuously claw at the shoreline.

One summer particularly stands out in her memory. That year, a lake resident poisoned the entire reed bed and the reeds never grew back. Now, over 40 years later, Fischer owns shoreline property and is currently restoring its natural habitat. She speaks with understanding of those who have already converted their shorelines to native plants. "People want to have the habitat they experienced as kids, and they want their grandkids to experience it as well," she says.

Last year, she and her husband, Tom Schabowski, came to the Lake District for advice on how to protect and restore their lakeshore. With the support of Lake District cost sharing, rocks were added to the shoreline over this past winter to abate erosion. Native trees, grasses and flowers were then planted, adding to the tree-fall, a feature Fischer enthusiastically describes as "instant habitat."

The dying tree was cut down over the winter and allowed to fall on the ice. When spring came, the tree became "a fish magnet" and also attracted turtles and frogs. Fischer states that "the fish know it is

Trendsetters (cont.)

there," and her own research explains why: the fish feed on the insects and microorganisms that decompose the tree and use it for shelter. It wasn't long before anglers started arriving to take advantage of the prime fishing habitat. "Fishermen come all the time," says Fischer, including one she recently observed catch a beautiful largemouth bass.



Liz Fischer and Tom Schabowski stand on a hillside overlooking their restored shoreline on Ripley Road. The tree-fall is barely visible below the moored sailboat seen in the background.

Encouraged by the early success of the restoration, Fischer is now trying to re-establish those long-lost reed beds to complete her lakeshore transformation. Ultimately, she hopes the restored habitat will inspire others to do similar projects. "This needs to happen everywhere."

Paradise Found

What do you get when you add a rain garden and restore the shoreline on the same lakefront property? The answer is in Carrie and Steve Andersen's backyard. Within a span of two years, the Andersen's converted a 1,575-sq.-ft. section of their backyard from 3-inch lawn grass to a butterfly and hummingbird paradise. In addition, they replaced their flagstone-armored shoreline with a natural one composed of three tiers of specially-engineered bags filled with soil and installed with plants. They chose native vegetation over rock because they wanted something more natural looking and safer for their kids.

The native shoreline vegetation and rain garden work together to filter the water that runs off the Andersen's house and yard. Any lawn fertilizers or other pollutants are now absorbed by the rain garden and

shoreline plantings instead of washing directly into Lake Ripley. As eager as the Andersen's were to make their property more natural and aesthetically pleasing, they say that the project was made affordable by matching grants from Jefferson County and the Lake District, which together paid for at least half the expenses.



Carrie and Steve Andersen enjoy the beauty and tranquility of their transformed lakeshore. It began with nearly 1000 native flowers and grasses encompassing 33 species planted, extraordinarily, in one day.

By all appearances the Andersen's investment was a wise one. Their shoreline has remained unscathed after two winters of ice heaving, while the 33 species of native flowers and grasses in their rain garden are so dense that the mid-July day I interviewed them was their first weeding day of the year. For anyone interested in a sizeable rain garden such as theirs, they recommended planting smaller gardens one at a time to get an idea of how well the plants grow in the soil and rearrange them if necessary. In the Andersen's case, many of their flowers grew taller than expected. Nonetheless, Carrie Andersen leaves no doubt about her opinion regarding the rain garden. "I'd do it again in a heartbeat."

— James Daly

\$62,682 Grant Award Secured on Behalf of Hoard-Curtis Scout Camp!

The Hoard-Curtis Scout Camp is working with the Lake District to restore 870 feet of shoreline (61,000 sq. ft. of shorelands) using a combination of glacial rock and native aquatic/upland plantings. We are pleased to report securing the necessary permits and this DNR Lake Protection Grant—which is in addition to several thousand dollars in cost sharing already dispersed via the Jefferson County Land & Water Conservation Department.