



PRESIDENT'S REPORT

A Place to Love - Forever

In the IRLC Summer 2014 Newsletter, my President's Report titled "A Place to Love" told a personal story about why my wife Margie and I are so actively and passionately involved in the IRLC. We are the third generation owners of our cottage on Butterfield Lake, which has been in the family since 1914. When we talked about our commitment to the IRLC we quickly realized that it is really on behalf of the fourth and fifth generations of our family that now visit the cottage regularly and the sixth and seventh generations yet to come. It is about the future. We are working to protect this place we love so that it will still be "A Place to Love" many generations from now. When our family celebrates 200 years in this special place we want them to still be able to enjoy a relaxing paddle or swim, watch a beautiful moonrise over the lake in awe, listen to the loons and wonder what they are saying to each other (or to us), or catch a three inch fish with a three inch worm and squeal with delight.

Many years ago the IRLC adopted three

Elliott Hillback, IRLC President

key words to define both the focus and the breadth of our mission and, thereby, of our activities. They are **Protect - Learn - Enjoy**. They still resonate today. For each of these areas, I'll highlight a few of the activities we are involved in RIGHT NOW. You will find more details about a number of them elsewhere in this newsletter.

Protect

Water Quality: With increasing concerns about water quality, algae blooms and weed proliferation in our lakes we have built an IRLC Water Task Force. The mission of that group is to bring together and lead The Indian River and Lakes Water Project which will include cottage owners; engineers and other technical experts; scientists; members of governments at the town, county and state level; and other interested parties. They will quickly identify key issues and opportunities; develop appropriate action plans; and work to educate, motivate and assist all the parties involved in order to implement significant changes that can positively impact the quality of water in our lakes. We are applying for significant grant

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President's Letter *cont. from p. 1*

support from the New York State Conservation Partnership Program (NYSCPP) for this project and need matching fund help. This is a critical long-term major project for the IRLC and our allies. See Ed Robertson's article on p. 4 for more information.

Bird habitat remediation and demonstration site. An exciting North Country collaboration with opportunities for long lasting impact.

Acquisition of additional important wetlands along the Indian River. We will have a story in our next newsletter.

Learn

Our program of outdoor, expert led events is continuing to expand. See a sneak peek at a couple of our new ideas for 2015 on p. 7.

A fifty plus acre wooded parcel next to our office is being donated to the IRLC. We will construct an outdoor Family Environmental Education Center and education oriented family trails. We are also applying for significant NYSCPP grant support here and will need matching funds.

Enjoy

The Boyd Pond "Access for All" or "All Person Trails" project is moving forward. We continue finalizing construction plans and schedules as well as developing sources for in-kind donations and other support. Our grant request from the State is pending. Seasonal water and land based events are likely to include another paddle on the Indian River. Check our website and watch for announcements of our expanded schedule.

While these three keywords help us focus on crucial areas of our fundamental conservation mission, there is a fourth word that clearly defines our commitment and as a result also defines our organization building task. That keyword is **FOREVER**. When we accept a parcel of land to conserve we agree to care for it in perpetuity. We often joke that this is a really long time...but it actually is! The

IRLC has the responsibility to build an effective and long lasting organization that can fulfill that obligation. We have significantly accelerated the process to do that.

Late last year we began the exhaustive process to achieve national accreditation by the Land Trust Alliance. This requires reviewing and updating every policy, bylaw or procedure we have. It includes a review of all our transactions and an in-depth analysis of each of our programs. We will learn and grow from this exercise and be a much stronger organization **FOREVER** when we complete it in two to three years.

In May of this year we hired our first employee, April Frederick, as Coordinator of Public Programs and Administration. She brings a wealth of experience and knowledge and is quickly having an impact on strengthening our processes, procedures, programs and capabilities. As she learns more about us and the Indian River Lakes area she will spend an increasing part of her time on outreach, on education and on increasing our pool of volunteers -- all areas particularly crucial to building an effective **FOREVER** organization.

To build a thriving **FOREVER** land trust we must also build a strong financial base. We have successfully worked with grant making agencies and organizations at the state (primarily NYSCPP) and federal level and been awarded a number of important grants. We have raised the significant matching funds required by each of those grants. This approach has provided us with a sizeable percentage of the resources we have used to achieve many of our major successes to date. We expect to continue to obtain important grant support, but we understand this is not a reliable, predictable or adequate long term approach for **FOREVER** success.

Your Indian River Lakes Conservancy is asking you to think deeply about this Place We Love. Please think about the broad based efforts we are undertaking together. The IRLC is

having a big impact NOW while we are making major investments to build an effective organization that will protect and preserve the Indian River Lakes area **FOREVER**.

As 2014 winds down and you enjoy time with your family and friends or you take some time to reflect on the past year or the future years to come, please consider making a significant gift to the IRLC. This is an opportune moment, a critical time in the growth of the IRLC. We ask that you make a substantial financial investment in our efforts to get things done NOW and to provide support as we build a truly **FOREVER** Indian River Lakes Conservancy. The return on our investment will be an Indian River Lakes area that will continue to be a "PLACE TO LOVE". Please help to build a better **FOREVER** for the Indian River Lakes by supporting the IRLC financially today.

We appreciate all your support.

Thank you,
Elliott



Did You Know?

Did you know that 70.9% of the earth's surface is covered by water? Most of that water, about 97%, is salt water. Only 3% of all of the water on earth is fresh water. Of that 3%, about 68.7% is trapped in glaciers and the polar ice caps, about 30% is underground and about 1.3% is surface water. And, of all the freshwater on the earth, less than 1% is clean and available for human consumption.

A Great Year for Enjoying the Indian River Lakes Area



It has been a great year for programs and events at IRLC! Our seasonal hikes have been very popular this year. A large crowd of adults and families turned out on a crisp, sunny February afternoon to experience the Grand Lake Reserve under a fluffy white blanket for our annual snowshoe hike. One group of adventurous hikers set off to challenge their skills on the Eagle Marsh trail with trail guide Mark Scarlett. A second group of families and scouts, some strapping on snow shoes for the very first time, opted to hike the Butterfield Lake Trail with naturalist Kim Cullen. Afterward, both groups gathered beside a warm fire to share stories while sipping hot cocoa and roasting marshmallows for s'mores. Many thanks to Minna Anthony Nature Center for the use of the center's snowshoes. In May, a record group celebrated the arrival of Spring at Grand Lake Reserve on our Birds, Blooms and Bugs Hike. Ornithologist Mary Beth Warburton led our annual bird hike down the Butterfield Lake Trail in hopes of spotting a golden winged warbler. The hikers were greeted almost before they got started with the *bee-buzz-buzz-buzz* of this

elusive warbler! It was perched high in a treetop and was easily seen, even with the naked eye. The golden winged warbler remediation project that was outlined in our summer newsletter is well under way at the Butterfield Lake Trailhead. In the future we hope to hear and see many of these threatened birds along the Butterfield Lake Trail. The same day a large group hiked the Eagle Marsh with Steve and Vici Diehl as guides, pointing out the many spring blooms and bugs seen at that time of year. In October a hardy group of hikers braved gray skies and a chilling drizzle to enjoy the sights and scents of fall on the Grass Lake Trail to the overlook. Hikers' feet rustled through a thick carpet of fallen leaves as Kim Cullen and April Frederick looked for signs that plants and animals were preparing for winter. The group learned the difference between hibernation and torpor, which was new information to many that attended that day. Thanks to Kim Cullen for supporting the Conservancy as a hike leader volunteer!

For those more interested in aqueous pursuits, IRLC hosted several paddles this year. Memorial Day

weekend saw kayaks, canoes and boats of various sorts all making their way across Grass Lake for the dedication of the new dock at the Marc A.F. Baker Island Preserve. The dock funds were donated by the Rizzo family in memory of Sam Rizzo and now lake visitors can easily tie up to explore the IRLC trails on this scenic island. Early in the summer a group of paddlers gathered to explore beautiful Moon Lake. Kingfishers scolded from their perches as the group wondered about historic cabins on the lakeshore and thrilled at the site of Eastern Amberwing dragonflies dipping at the water's edge. A stop for a break on tiny, rocky Margaret McArthur Bonney Island was appreciated by all. In August, autos bristling with brightly colored canoes and kayaks filled the NYS fishing access lot on the Indian River in Theresa. The late afternoon light dappled the water's surface as paddlers enjoyed a leisurely float down stream. As the day faded to evening, quiet conversations and laughter accompanied the kayakers as they paddled back upstream against the lazy Indian River current.



Project Feeder Watch

Do you enjoy watching the birds that visit your backyard feeder all winter? Now is your chance to contribute to one of the most important sources of information about winter bird distribution and abundance. Project Feeder Watch is a winter-long survey of birds that visit feeders across North America. Anyone interested in birds can participate in this important research operated by the Cornell Lab of Ornithology and Bird Studies Canada. What a great way to keep your family engaged in nature throughout the cold, winter months! Visit www.feederwatch.org to learn more and sign up today!

Don't miss out!

Are you getting our emails about upcoming events? You can make sure that you don't miss a thing by subscribing to the IRLC email list. Just send an email to indianriverlakes@gmail.com with "Join List" in the subject line.

IRLC Works to Improve Water Quality

by Ed Robertson

The IRLC has initiated the Indian River and Lakes Water Project to help our community understand what is happening with the water in our lakes and river, what the root causes are and what we can do to turn the currently deteriorating situation around.

The insert in our last newsletter explained what we have learned about the severe challenge posed by the soil types around the lakes where cottages and septic systems have been allowed.

Our soil's permeability, shallow depth to bedrock, and the slope around the shore make it highly unlikely our septic systems keep phosphorous and other polluting nutrients that pass through them out of our lake waters.

Here on the Frontenac Arch we are not alone in facing these challenges. Across the St. Lawrence River in Ontario, Canada they have a very large lakes area with conditions similar to ours. For many years Ontario has put a lot of effort into dealing with the problems related to development and water based sanitary waste systems degrading lake waters.

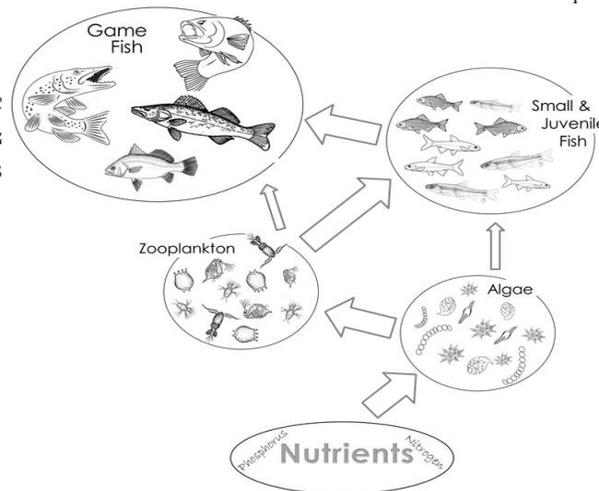
Mr. Bev Clark was guest speaker at the recent Friends of the Salmon River Watershed meeting in Erinsville, Ontario. Mr. Clark is retired from the Ontario Ministry of the Environment after 35 years of studying and teaching about water quality issues. His focus was on the effect of nutrients on ecological processes in Ontario's inland lakes. He has continued his mission the last six years by consulting in aquatic science.

The key point Mr. Clark made in his talk was that in the "good old days" the problem was pretty much just phosphorous, but that it is not so simple anymore. Two additional realities are complicating and worsening the situation: invasive species and climate change. His clear explanation of the effects of these two influences was a revelation.

He laid out how invasive species can

and are having an effect on the algae in our water with a graphic showing the main links of the food chain in a lake. At the bottom of the chain are thousands of species of algae that feed on available nutrients. The next link in the chain is the many species of zooplankton that eat the algae. Next are the small fish that eat the zooplankton and finally large fish that gobble up the small fish. From the bottom of the food chain to the top are nutrients, algae, zooplankton, small fish and large fish.

Anything that reduces the zooplankton allows the algae to proliferate and this can happen in many different ways.



If an invasive zooplankton comes along that is larger than, and a predator of other zooplankton (as is happening in Ontario now) the result is fewer zooplankton available to eat the algae. That in turn means more algae.

If the large fish population is reduced in a lake then the small fish expand in number and eat more zooplankton leaving fewer zooplankton to eat the algae. Again, the result is more algae. There are many possibilities for invasives to disrupt the food chain balance resulting in higher phosphorous levels in a lake.

According to Mr. Clark, climate change has reduced the average number of days of snow/ice cover on Ontario lakes by 28 days per year since 1970.

Fewer snow and ice days means a longer growing season. Algae and weeds are plants and grow more with a longer season. A longer season also means cottage owners spending more time at the lake (using their toilets and showers).

Warmer temperatures during the growing season enable the weeds and algae to grow faster and trigger hazardous algal blooms.

More frequent gully-washers, another characteristic of climate change, create more peak-flow runoff events. Raindrops that pound directly on the ground on developed sites disturb the soil allowing the heavy runoff flow to pick up the loosened nutrient-rich soil particles and carry that sediment into the lake. That is why a wide verdant and absorbent shoreline buffer is so important on developed sites.

These peak-flow events also overwhelm septic leach fields and our highly nutrient-rich runoff into the lakes. This is especially true with the soil types around the Indian River lakes that are so unsuited for water used septic systems.

What can be done to stop the momentum of these trends harming lake water quality? That is the question the Indian River and Lakes Water Project is working on.

Ontario, Canada has spent decades studying and adjusting to the problem. Through that process they have created the Lakeshore Capacity Model (LCM). This tool can provide invaluable insights into past and future lake trophic status. This information can then be used to maintain water quality during future development, and to set realistic remediation goals. An LCM is employed by regulation, using a set of criteria to determine where new development will take place by weighing several factors including lake phosphorous and water clarity levels.

The Ontario Lakeshore Capacity Model has been widely and successfully

Continued on page 7

Volunteers Dip in to Monitor Lakes

The call of a loon, the sound of waves lapping on a shoreline, a canoe trip through the Adirondacks, or the tug of a bass or walleye on a freshly cast line – these are the reasons why people in New York are drawn to over 7500 lakes around the state. What they have in common are people committed to their lakes, who are willing to volunteer their time and effort to ensure that the enjoyment of their lake is passed on to future generations.

CSLAP in action

In 1985, the New York State Citizens Statewide Lake Assessment Program (CSLAP) was established as a cooperative program between the New York State Department of Environmental Conservation (DEC) and New York State Federation of Lake Associations (NYSFOLA). CSLAP has three major objectives: collect lake data for representative lakes throughout NYS, identify lake problems and changes in water quality, and educate the public about lake conservation. Trained CSLAP volunteers collect lake data following approved sampling methods and send water samples to a certified lab



A CSLAP volunteer measures Sechi Depth. The transparency of the water is measured by lowering the disk and measuring the depth at which it ceases to be visible.

for analysis. The lake water quality data are interpreted by professionals and provided back to the lake association as a yearly report showing water quality “health of the lake” trends. The data are also used to report water quality information to federal, state, and local governments and to document lake conditions for present or future management by lake associations and individuals. Lake residents and trained volunteers are in a position to observe lake changes and compare them to “normal” conditions to detect emerging

Not quite half of the 18 Indian River lakes participate in the CSLAP program: Black Lake, Butterfield Lake, Grass Lake, Hyde Lake, Lake of the Woods, Millsite Lake, Moon Lake and Sixberry Lake. If you live on one of these lakes and want to help with CSLAP sampling, contact your association to find out who manages the program. If you don’t see your lake on this list, find out how your lake association can become a part of CSLAP by contacting the NYSFOLA office at (800) 796-3652. If your lake does not currently have an association of concerned residents, contact the IRLC office to find out how we can help you get organized.

problems. The water quality data, along with user perception surveys, contribute to developing state water quality standards and build a framework for understanding the relationship between lake conditions and lake uses.

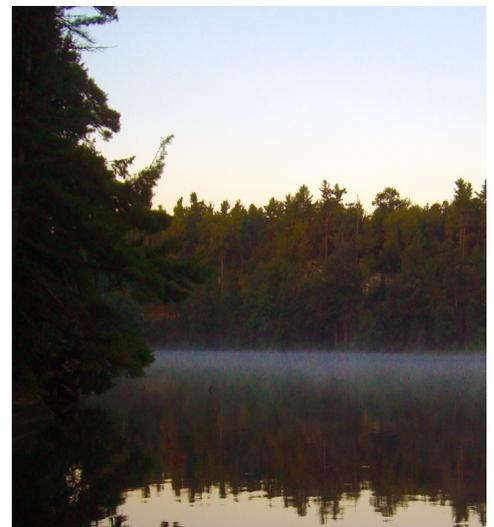
The information collected by dedicated volunteers has become the state’s primary lake water quality dataset and has recently expanded to include harmful algal bloom monitoring. More importantly, CSLAP volunteers want to know more about lake management. They ask the questions: Why are there more weeds? What do we do to stop these algae blooms? What does the CSLAP data tell us? Working on answers to these questions, lake associations in



A Kemmerer sampler is used to pull water from a lake. This device allows CSLAP volunteers to easily obtain a sample from a specific depth without risk of contamination as the sample is collected.

New York are increasingly engaged in lake and watershed planning, on-site wastewater treatment, phosphorus reduction, aeration, and invasive species management.

Excerpted from “NYSFOLA: Lake Associations Organized for Action and Education” by Nancy Mueller, NYSFOLA and Holly Waterfield, SUNY Oneonta Biological Field Station. Originally published in the Summer 2014 edition of LakeLine Magazine.



Misty morning reflections on Sixberry Lake.

Lake Management Students Study Millsite and Sixberry

By: Richard Sauer and Jan Douglass

The Sixberry Lake Association and the Millsite Lake Property Owners Association elected to go beyond wondering about their lakes by using research and data to initiate positive action. We elected to apply for participation in SUNY Oneonta's Master's in Lake Management Program (MLMP). Each student enrolled in the MLMP at SUNY Oneonta chooses a lake to study over a two year period. Sixberry and Millsite Lakes were chosen by the students in the program beginning in the Fall of 2014.

The purpose of this program is to provide lake associations with a management plan from which to make decisions impacting water quality while giving students an opportunity for hands-on experience in lake management. In addition to obtaining frequent water samples during all seasons and varying conditions, the students will survey all lake residents about their observations and concerns. After all the data has been gathered and analyzed, each student will draft a lake management plan. The lake management plans will take approximately two years to complete, after which each of the lake associations must decide how to implement all or some of the recommendations.

The Sixberry Lake Association is very fortunate to be working with Kathleen Marean. Kathleen earned her B.S. in Natural Resources, with a concentration in Applied Ecology from Cornell University. She interned on Oneida Lake in Bridgeport, NY with the Warm Water Fisheries Unit. After graduation she went to work at the same facility interviewing anglers and assisting interns with their fieldwork. Kathleen then moved to Long Island to begin work with the Region 1 DEC Fisheries Office. During her two years there she studied the habits, movements and breeding of fish. She also assisted the DEC Wildlife Office stocking pheasants on state land and



Luke Gervase and Kathleen Marean taking samples on Millsite Lake.

worked with Piping Plovers and various waterfowl. Kathleen, along with about a dozen other students, interviewed lake associations throughout the state to determine where they wanted to serve. She selected Sixberry Lake and the Association is looking forward to this experience. Kathleen reinforced her passion for this assignment when she stated her desire to provide stakeholders with the data and facts they could use to advocate for the environmental health (which affects their own health) of their lake.

The Millsite Lake Property Owners Association is excited to be working with Luke Gervase. Luke earned his Bachelor of Science (BS) in Aquatics and Fisheries Science at SUNY College of Environmental Science and Forestry (ESF) in Syracuse, NY. He has worked with the New Jersey Department of Environmental Protection as a Biological aide for the NJDEP bureau of Freshwater and Biological monitoring, assisted in fish surveys, headwater surveys, National River and Stream assessments and Lake Parameter surveys. He also worked as a Fisheries Intern with NYDEC in Stony Brook NY. Luke was also a volunteer at Carpenters Brook Fish Hatchery in

Elbridge, NY. He has also been active as a Watershed Steward for the Village of Cooperstown checking boats for aquatic invasive species and educating the public on the threats of these species.

This program is supported financially by each lake association and IRLC. Grass Lake was the first of the Indian River lakes to participate in this program. The research and monitoring project was completed in the spring of this year and the Grass Lake Association should have a copy of the student's final report, including a lake management plan, soon.

About the IRLC

Formed in 1998 to conserve critical lands in the Indian River Lakes area of Northern New York, the IRLC is a non-profit land trust with 501(c) (3) tax exempt status operating in a manner consistent with the published standards of the Land Trust Alliance, a national organization

Visit our website to learn more!

www.IndianRiverLakes.org

Protect • Learn • Enjoy • Forever

Water Quality *cont. from p. 4*

used for over 30 years. The LCM is simple and robust, making it an ideal tool to study and test applications in the Indian River Lakes Region.

Do our local soils and leach-fields capture and retain the phosphorous our septic systems are putting into them?

Across the river in Ontario, at sites with detailed monitoring, 25% of those sites showed field evidence of significant, long-term retention of phosphorous. All of the sites showing long-term phosphorous retention have native soil depths of more than 19 feet- 6 inches to bedrock.

All of the monitoring sites that had native soil depths of less than 9 feet- 9 inches showed elevated phosphorous levels in the groundwater. Our Indian River Lakes "buildable" soil depths are 0 inches to 3 feet- 4 inches depth to bedrock.

What does this mean for us? If your cottage/home site has 20 feet deep native topsoil your septic system probably will keep the nutrients out of the lake. If you have less than 10 feet

depth to bedrock it most probably will not. And, around the Indian River lakes we have 0 to 4 feet to bedrock. Clearly our septic systems function as delivery systems for phosphorous and nitrates into our lake waters.

For Ontario municipalities using their Lakeshore Capacity Model, when the phosphorous level in a lake reaches 0.020 mg/l, the point at which hazardous blue-green algae blooms can occur, no further development is allowed. Then they work to reduce the phosphorous level to 0.010 mg/l, what they consider a very healthy level for human recreation and fish habitat. Please see the reference to the Ontario Lakeshore Capacity Assessment Handbook below and read the handbook.

Upcoming newsletters will look at the phosphorous and water clarity levels of some of the Indian River lakes. We will also consider what steps can be taken, in the face of polluting nutrients flowing into the water, invasive species and climate change, to reduce the damage being caused by excessive weed growth and toxic algae blooms.

Our health and the health of our pets, the fishery and the economic viability of the Indian River Lakes Region will depend on it.

IRLC is applying for a New York State Conservation Partnership Program (NYSCPP) catalyst grant to fund the education effort needed to help residents and regulatory authorities understand these issues and to take action to stop the water quality degradation occurring in the lakes.

The NYSCPP grant will require a cash match from IRLC of approximately \$8,000.00. We are asking for donations for this necessary cost. Your donations will be leveraged to enable the two-year approximately \$60,000 project that will lead to cleaner water for the Indian River and all of the Indian River Lakes. Please consider this challenging and very important effort in your year end giving.

Lakeshore capacity assessment handbook reference: <http://www.ontario.ca/environment-and-energy/lakeshore-capacity-assessment-handbook-protecting-water-quality-inland-lakes>

Watch for New Programs and Old Favorites in 2015

If you weren't able to join us for one of our great outings this year be sure to watch our website for our 2015 Calendar of Events or like us on Facebook to be notified of upcoming events. You can also subscribe to our email list by sending a message to indianriverlakes@gmail.com with "Join List" in the subject line. We are planning a number of new programs for 2015 that you won't want to miss! IRLC is working on a series of summer naturalist programs just for kids! These programs will introduce young people to the wonders of the natural world through hands-on activities and outdoor adventures! Don't miss out on warm weather outings including opportunities to paddle more of our beautiful lakes and new stretches of the Indian River as

well as naturalist and historian led hikes along IRLC trails that are scheduled throughout the year!



Winter & Spring Hikes

Join us for one of these upcoming hikes!

Feb. 21 Snow Shoe Hike

Enjoy a beautiful winter afternoon as we explore Grand Lake Reserve. We invite you to stay for a warm fire and s'mores!

Mar. 28 Sugar Shack Hike

Learn about the history of maple sugaring as we hike past the ruins of an old sugar shack on our way to the Grass Lake overlook.

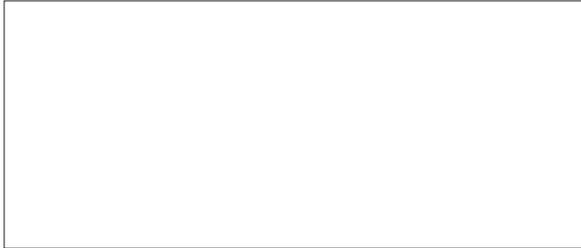
May 9 Spring Hike

Celebrate spring on Grand Lake Reserve as we look for the birds, blooms and bugs that return with warmer weather!

The goal of the Indian River Lakes Conservancy is to preserve the natural character of the area, with a focus on protecting clean water, fish and wildlife, and the scenic vistas along the shores of the lakes and the Indian River and to educate ourselves and the community about the natural habitat in which we live.

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We Need You! New Volunteer Opportunities in 2015



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Don't miss the Members Edition of the IRLC Newsletter this winter. We will highlight the important contributions our members have made throughout this year. If you are interested in volunteering, you can learn about new and exciting volunteer opportunities for the coming year!

Printed on paper certified by the
Forest Stewardship Council.

