



# East Pond News

East Pond Association  
SUMMER 2016 VOL XIX NO 1

## EAST POND WATERSHED-BASED PLAN UPDATE

By Charlie Baider, Executive Director, Belgrade Regional Conservation Alliance

In 2016, East Pond Association, Kennebec County Soil & Water Conservation District (KCSWCD), Belgrade Regional Conservation Alliance (BRCA), Colby College, Maine DEP, and outside consultants began work to update the East Pond watershed-based plan. The project will describe actions needed to improve East Pond’s water quality.

East Pond is considered impaired under Maine law and the Federal Clean Water Act. The project will use updated water quality and land-use data, and will propose strategies to improve the water quality of East Pond over the next 10 years. The update will include a plan for fundraising to address the most feasible future management options. The goal is to complete the updated plan by May 2017.

Project activities will include: an updated water quality analysis; an updated watershed and pollutant load analysis, incorporating updated water quality data; steering committee meetings; technical review committee meetings; public meetings; and an updated watershed-based plan.

### WATER QUALITY HISTORY

The East Pond Watershed-based Plan (2007) is moving toward the end of the first phase of implementation (10 years). Although strategies have been successfully implemented over this time period, water quality has not improved adequately, and East Pond continues to experience algal blooms on an annual basis. East Pond is listed as “impaired” by Maine DEP due to failure to meet water quality standards of Secchi disc transparencies of 2m or more and absence of nuisance blue-green algal blooms. East Pond has suffered persistent algal blooms since 1993.

Several physical characteristics of East Pond make it vulnerable to algal blooms. It is spring fed, with no permanent flowing inlet and only one outlet. It has a very low flushing rate, and occasionally back flushes at the outlet, Serpentine Stream. The pond is relatively shallow, which has a significant effect on lake chemistry. In addition to the watershed’s agricultural history, developed areas contributed to an excess phosphorus in the sediments which can be released into the water column when the lake stratifies and turns anoxic (*Watershed, continued on page 5*)

## OLD WIVES’ TALES AND THE BOTTOM OF EAST POND

I’m sure most of you have heard many old wives’ tales. There are gazillions of them out there, and when I was a kid I believed most of them. For instance if a black cat walks toward you, it brings good luck. If it walks away from you, it takes the luck with it. Geeze, they were always running away from me during my youth which explains why I have never been very lucky. There’s one I remember very well from when my newborn sister came home from the hospital; cats can steal the air from a baby’s mouth. Our poor cat didn’t get back into the house until sis was over a year old. A google search found one I was not familiar with, which clearly explains why I don’t catch a lot of fish; if the cows are standing, the fish are biting. I must live around a bunch of lazy cows that spend their days lying on their backs in the pastures, probably with little glasses filled with ice, their preferred drink, and little pink umbrellas.

Here’s one that I learned when I moved here; there are two deep holes in East Pond. Wrong! In truth our lake is shaped like a big old oblong bathtub-with the exception of the Miller Islands and a couple more small islands sticking up in the middle. The deepest part of the lake is just southeast of Ram Island, coming in at about 7 meters-depending upon the lake level which is a function of the dam and amount of rain we get. The transition from shoreline to deep water is quite gentle on the northwest and southeast ends of the lake, whereas the transition is more dramatic on the southwest and most of the northeast sides of the lake. I was told when I moved here that there was a deep hole between Ram Island and the eastern shore, and another one southwest of Ram Island-where Colby used to have its buoy. I fished those two locations quite often and actually caught some nice sized white perch there, but as you can see from the map there are no deep holes at either of those locations.

One must also take into account what constitutes the lake bottom. Much of it in the deeper portions of the lake consists of about 3-4 feet of mush. Colby College (*Bottom, Continued on page 7*)

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## COURTESY BOAT INSPECTION PROGRAM

By Toni Pied, Milfoil/Stewardship Director, Belgrade Regional Conservation Alliance

This past summer, 15,967 boat inspections were conducted by Courtesy Boat Inspectors at seven public boat launches in the Belgrade Lakes watershed. This is a record number of inspections, partly due to an increase in coverage hours (+28 hours/week) and a hot, dry summer (lots of boating activity). The Courtesy Boat Inspection Program is the first line of defense against invasive aquatic species and this summer, 31 invasive variable milfoil fragments were collected off boats leaving Messalonskee Lake (a highly infested lake). Those 31 fragments could have travelled to other waterbodies, creating new infestations, had they not been intercepted by our CBI's. Early Detection is also important when protecting our lakes and streams from invasive aquatic species. If an infestation is caught early, there is a higher likelihood that it can be eradicated. This past summer, surveys were done on each of the lakes in the Belgrade Lakes watershed to search for new infestations. I am happy to report that NO new infestations were discovered. Thank you to all the volunteers that participate in this program, particularly North Pond Association, East Pond Association, and McGrath Pond/Salmon Lake Association for helping to coordinate volunteers on each of their lakes. ♦

2015 Summary	Paid Hours	Volunteer Hours	Total Staffed Hours	Number of Inspections	Inspections per Hour	Fragments	Invasive?
<b>East Pond</b>	911.00	233.00	1144.00	1,635	1.43	2	0
<b>North Pond</b>	809.70	69.35	879.05	1,580	1.80	118	0
<b>McGrath Pond/Salmon Lake</b>							
Public Launch	560.45	13.00	573.45	783	1.37	2	0
Whisperwood Lodge	0.00	103.33	103.33	620		0	0
<b>Great Pond</b>	1039.90	3.00	1042.90	4,090	3.92	10	0
<b>Long Pond</b>	1020.75	0.00	1020.75	2,632	2.58	3	0
<b>Messalonskee Lake</b>							
Sidney	766.45	0.00	766.45	2,122	2.77	20	17
Oakland	783.25	0.00	783.25	2,505	3.20	25	14
<b>TOTALS:</b>	<b>5891.50</b>	<b>421.68</b>	<b>6313.18</b>	<b>15,967</b>	<b>2.47</b>	<b>180</b>	<b>31</b>

2015 Coverage	North Pond	East Pond	Salmon Lake	Messalonskee-Oakland	Messalonskee-Sidney	Long Pond	Great Pond
<b>Sunday</b>	7am-7pm	7am-7pm	7am-3pm	9am-7pm	9am-7pm	7am-7pm	7am-7pm
<b>Monday</b>	7am-11am	7am-2pm	9am-2pm	1pm-7pm	1pm-7pm	7am-3pm	7am-3pm
<b>Tuesday</b>	3pm-7pm	7am-2pm	9am-2pm	1pm-7pm	1pm-7pm	7am-3pm	7am-3pm
<b>Wednesday</b>	3pm-7pm	7am-2pm	9am-2pm	1pm-7pm	1pm-7pm	7am-3pm	7am-3pm
<b>Thursday</b>	3pm-7pm	7am-2pm	9am-2pm	1pm-7pm	1pm-7pm	7am-3pm	7am-3pm
<b>Friday</b>	7am-7pm	7am-3pm	9am-2pm	1pm-7pm	1pm-7pm	7am-7pm	7am-7pm
<b>Saturday</b>	7am-7pm	7am-7pm	7am-3pm	9am-7pm	9am-7pm	7am-7pm	7am-7pm
<b>Total hrs/wk</b>	52	60	41	50	50	68	68

## CBI ACHIEVEMENTS 2015

- Hired CBI Coordinator
- Hired 28 CBI's (12 HS students, 10 college students, 6 community members)
- Increased Coverage on Messalonskee, Great & Long Ponds. (total +28/week)
- Significant increase in invasive fragments collected (4 in 2014 vs. 31 in 2015!)
- Record number of inspections (12,310 in 2014 vs. 15,967 in 2015)
- Need *VOLUNTEERS* to help with early and late season coverage.



## THE AMERICAN MINK

My husband and I were recently volunteer Courtesy Boat Inspectors at the state owned East Pond Boat Launch. It was an extremely windy day with white capped waves pounding onto the shore. Boaters were wise to stay home as it was not really safe for them to be on the lake thus it was a very quiet afternoon for us.

I was stunned to see several young men from Camp Manitou dash out with arms loaded and hop onto the large party boat owned by the camp. To our amazement, we soon discovered their excitement as they were kite boarders and these were ideal conditions. They skimmed across the rough water and sailed thirty feet above the water as they switched directions. It was a delight to behold as I had never seen kite boarders on East Pond. It looked like so much fun!!!!

While photographing those daring young men, I saw a small creature run across the road in front of me. It was sleek, black in color and carried a large silver object in its mouth. I quickly captured a photo of this little guy and decided to learn more about the American Mink.

They can be found from coast to coast, north in the arctic tundra and south in the deserts of North America and in Canada. They are said to be the cutest member of the weasel family. They have long, slender bodies, short legs, and fur covered webbed feet. The long bushy tail is one third of their body weight. Their soft underneath fur is covered with waterproof, glossy, dark brown to black oily hair except for a tiny white patch under their chin or on the throat. Adult males weight 2 to 4 pounds while adult females are only 1 3/4 to 3 1/2 pounds.

Mink usually live alone meeting only briefly between late February to early April, their breeding season. They are sexually mature at 10 months and reproduce for 7 years or more. When threatened they will snarl, hiss and emit a very strong, musky liquid, but when happy they purr like a cat.



Babies, called a cub or kit, are born during the last week of April into mid May. A litter is 1 to 8 with 4 the average. Their eyes open and they start eating solid food at 3 weeks. They are 40% of their adult weight and 60% of their adult length in just 7 weeks. About 2/3s of the young die between birth and the fall, but if they survive to adulthood, the average life span of a wild mink is 3 to 7 years.

Mink tend to be shy and avoid people and our pets. They are semi aquatic and spend a lot of time in the water of river banks, creeks, streams, lakes, ditches, swamps and marshes hunting for prey. They are active all year long, nocturnal, usually hunting at night, but can be seen during the day especially near dawn or dusk. Mink tend to move into beaver and muskrat lodges, burrows by streams or natural dens but will also use docks, old boat houses or stone jetties as homes. They are carnivores and will eat most any small animal that they can kill by biting them on the throat. Dinner includes birds, fish, muskrats, rabbits, chipmunks and frogs. Preys are often larger than the hunter. They will kill snakes but do not eat them.

*(Mink, continued on page 4)*

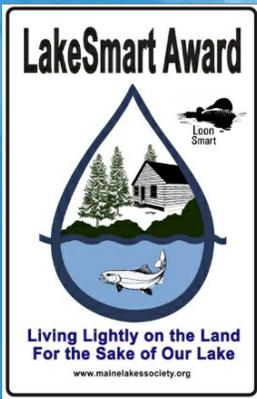
## BUILDING BUFFERS - A REMINDER *Courtesy Maine DEP*

**The Buffer zone:** The strip of land and water at the water's edge. A properly cared for buffer acts like a sponge filtering pollutants and keeps water clean and clear.

*Quick Tips for a healthier Maine*

- **Stop mowing to the edge.** Let the grass grow. It will help filter pollutants.
- **Preserve.** Keep what's growing naturally in your buffer zone.
- **Don't bare all.** Plant or mulch bare soil.
- **Do not rake up the "DUFF".** It's nature's mulch (twigs, needles & leaves that fall between the buffer plants).
- **Mix it up.** Plant a mix of species of different heights including shrubs and trees. Make sure they're suited to your soil and sunlight conditions. Try native plants.
- **Forgo the fertilizer frenzy.** Keeping lakes clean means using fertilizers sparingly and only when the existing ground cover is too thin or sparse. If you must: use small amounts (spoonfeed) of slow or timed release fertilizers or composted organic fertilizers, and unless a soil test indicates a need, always say NO to organic or conventional fertilizers containing phosphorus. Follow the regional landscape plant fertilizer guidelines [A Gardeners Guide to Fertilizing Trees and Shrubs](http://content.ces.ncsu.edu/a-gardeners-guide-to-fertilizing-trees-and-shrubs) (<http://content.ces.ncsu.edu/a-gardeners-guide-to-fertilizing-trees-and-shrubs>).
- **The wider the better.** Bigger is better when it comes to building a buffer, but any buffer is better than no buffer at all!
- **What about my view?** Let's put it this way, if you don't buffer and your neighbors don't buffer, then you're ruining your view anyway. Planting a buffer protects water, but it also protects your property value. Try groundcovers and low growing trees and shrubs.
- **Plan your path.** Paths should be winding to interrupt the flow of rainwater. Cover bare soil with bark mulch or crushed stone.
- **Shrink surfaces.** Minimize hard surfaces like pavement, patios, decks, roofs, compacted gravel and compacted lawns. Direct runoff from these surfaces into a buffer.
- **Stop soil from taking a swim.** Mulch exposed soil on slopes or use erosion control netting. Water new plantings carefully, use a silt fence or hay bales during construction (schedule work for dry season). Try retaining walls or terraces (local and state permits required). ♦





## YOU CAN BE LAKE SMART, AND LOON SMART TOO!

East Pond's participation in the LakeSmart program began in 2009. LakeSmart is a program that offers **FREE** opportunities for homeowners to learn how to manage their home and yard to improve water quality in their lake and maintain the value of their shoreline property. We began the program with a bang that continued for the first couple seasons, but we need more volunteers to have their properties evaluated.

New this year, LakeSmart Award Winners may now qualify for a new honor recognizing their contribution to chick survival. Habitat criteria added to LakeSmart evaluations can qualify homeowners for the new LoonSmart distinction and will be shown by adding a LoonSmart sticker to the blue and white LakeSmart Award sign. LoonSmart hopes to boost the number of surviving chicks each year in Maine by drawing attention to the significance of physical and behavioral stewardship elements. It is the product of a partnership between the Maine Lakes Society which runs LakeSmart and Maine Audubon's Loon Project.

There are over 30 properties on East Pond that have been granted the coveted LakeSmart award, and we are very thankful to those who have volunteered for the evaluation. Many tips and best practices have been shared with owners of lake-front properties and numerous improvements have been made to keep phosphorous out of the lake.

I am soliciting volunteers to have their property evaluated. The process is simple. Once you show an interest in having your property evaluated, I will either call you or visit you in order to explain how I conduct the evaluation. This usually provides the property owner with enough information to move forward with the evaluation. But if for any reason you decide to not participate, that is perfectly fine. Your name is not sent to anyone or any organization.

Once the property owner agrees to the LakeSmart evaluation we will arrange a date and time for me to do the evaluation. It generally takes about two hours, and when I complete the evaluation I'll review the results with you before I leave the site. Once home I will transcribe my scribbled notes to a LakeSmart evaluation sheet and either email the final product to you or send you a hard copy. If you pass the evaluation you will receive a beautiful LakeSmart sign to post on your water-front, and if you wish a second sign for your driveway. You will also become eligible for the LoonSmart award. If you do not pass LakeSmart, the form goes no further than me. I do not send it to anyone or any organization. If you wish I will work with you to help you make the required improvements necessary to receive the award.

Something positive has come from every LakeSmart evaluation I have done. Perhaps it's as simple as adding some mulch or crushed stone to a spot with bare soil, diverting water away from the lake, planting shrubbery and ground cover, or pumping your septic system more regularly.

To learn more about LakeSmart and LoonSmart, please contact EPA's LakeSmart Coordinator Mel Croft at 207-362-5340, or [mcroftnlw@yahoo.com](mailto:mcroftnlw@yahoo.com). If your property is already LakeSmart, then ask your neighbor to call me. We're all in this together-we want East Pond water to be clear and beautiful all year long, and every little bit helps.

Mel Croft: East Pond Lake Smart Evaluator ♦

*(Mink. Continued from page 3)* American mink have a very distinctive gait, are really good swimmers and divers and can even climb trees. They can swim for up to 3 hours in warm water, but only short times when the water gets cold. Their eyesight is better on land than in the water so while hunting they rely mostly on auditory senses. Surprisingly, they have a weak sense of smell. Predators include wolves, foxes and great horned owls.

Mink pelts are still in demand for coats, caps and jackets. The animals do molt twice a year in April and August or September. Because of the popularity of their fur, mink farms were developed in the late 19<sup>th</sup> century. By 2005 America was the 4<sup>th</sup> largest producer of American Mink fur with Denmark, China and the Netherlands leading the production. They are very intelligent and can be tamed but it does take a long, long time. They are likely to dominate cats and do chase rats away.

Domestic mink are larger than wild mink and usually live longer; however, if the domestic ones escape into the wild problems arise. If there is a population explosion in a habitat area, they will either kill each other or drive some of the animals out of the territory.

Maine has about 38,000 miles of mink habitat which could support up to 80,000 mink. Spraying herbicides or using certain fertilizers does reduce the population. They can carry fleas, mites and lice and get the viral disease distemper.

We were fortunate to see this clever little hunter carrying its prize fish into the stream by Camp Manitou and even more fortunate to capture its picture. Watch closely and you too may find a mink on the East Pond shoreline. ♦



*(Watershed, continued from page 1)* in summer. Annual algal blooms have shifted phosphorus loading from terrestrial sources to internal sources (sediment).

Colby College is currently conducting intensive water quality monitoring in East Pond and the other Belgrade Lakes that will provide valuable In 2016, East Pond Association, Kennebec County Soil & Water Conservation District (KCSWCD), Belgrade Regional Conservation Alliance (BRCA), Colby College, Maine DEP, and outside consultants began work to update the East Pond watershed-based plan. The project will describe actions needed to improve East Pond's water quality.

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Project activities will include: an updated water quality analysis; an updated watershed and pollutant load analysis, incorporating updated water quality data; steering committee meetings; technical review committee meetings; public meetings; and an updated watershed-based plan.

### **WATER QUALITY HISTORY**

The East Pond Watershed-based Plan (2007) is moving toward the end of the first phase of implementation (10 years). Although strategies have been successfully implemented over this time period, water quality has not improved adequately, and East Pond continues to experience algal blooms on an annual basis. East Pond is listed as "impaired" by Maine DEP due to failure to meet water quality standards of Secchi disc transparencies of 2m or more and absence of nuisance blue-green algal blooms. East Pond has suffered persistent algal blooms since 1993.

Several physical characteristics of East Pond make it vulnerable to algal blooms. It is spring fed, with no permanent flowing inlet and only one outlet. It has a very low flushing rate, and occasionally back flushes at the outlet, Serpentine Stream. The pond is relatively shallow, which has a significant effect on lake chemistry. In addition to the watershed's agricultural history, developed areas contributed to an excess phosphorus in the sediments which can be released into the water column when the lake stratifies and turns anoxic in summer. Annual algal blooms have shifted phosphorus loading from terrestrial sources to internal sources (sediment).

Colby College is currently conducting intensive water quality monitoring in East Pond and the other Belgrade Lakes that will provide valuable information to help update the watershed plan so that restoration strategies in the implementation phase are successful.

In response to annual algal blooms, East Pond Association, in collaboration with other lake associations in the Belgrade Lakes watershed, founded the Youth Conservation Corps (YCC) in 1996. BRCA took over management of the program in 2001. Over 100 Best Management Practices (BMPs) have been installed in the East Pond watershed by the YCC since 1996. A nonpoint source (NPS) pollution survey was conducted by BRCA in 1999, followed by three 319 implementation projects between 1999 and 2012 that addressed 64 NPS sites identified in the watershed survey.

A Total Maximum Daily Load (TMDL) report for East Pond was submitted by the State and approved by EPA in 2001. The TMDL estimated that phosphorus loading from the watershed and the contribution from internal loading were both significant contributors to the poor water quality. Based on estimates of phosphorus assimilation capacity of the lake and current loading, the target concentration of phosphorus was set at 15 ppb.

In 2007, the District completed a watershed-based plan for East Pond in cooperation with the BRCA, the East Pond Association and Maine DEP. Recommended strategies for phosphorus reduction included:

- Continued external phosphorus load reduction through site work at existing sources;
- Local site development ordinances to prevent or reduce future loading; and
- Significant internal load reduction through in-lake treatment. Aluminum treatment, biomanipulation through fish removal, and thermocline disruption through mixing/aeration were listed as considerations to reduce internal load.

From 2007 thru 2014, Maine DEP conducted a biomanipulation project to control the perch population in the lake, designed to reduce phytoplankton population. Results from this study are inconclusive as to whether it was successful at altering the food web to the degree needed to improve water quality.

Since 2010, the East Pond Association has been working actively with residents to help address runoff at the shoreline through the Maine DEP (and now Maine Lakes Society's) LakeSmart program. There are currently 32 LakeSmart properties on the shores of East Pond, and the association is working with the Maine Lakes Society to increase the number of LakeSmart homes in 2016 and beyond.

In 2014, a watershed survey was completed by East Pond Association in coordination with BRCA, Maine DEP and FB Environmental. The survey was conducted to determine the extent of remaining external sources of phosphorus that could be addressed through future 319 implementation projects. The survey identified 124 sites in the East Pond watershed that are currently, or have the potential to negatively affect the water quality in East Pond. In general, the majority of NPS sites identified in the 2014 survey (60%) were considered low impact, and were largely related to lack of buffers on the shoreline of residential properties and roof driplines. As a result of this survey, East Pond Association is working with its members to increase LakeSmart participation, promote the YCC, and develop a buffer incentive program.

Despite the excellent efforts that have been put forth to address NPS pollution in the East Pond watershed over the past fifteen years, watershed stewards have not seen an improvement in water quality. This is largely due to the fact that recovery of water quality in East Pond is impeded by several physical factors, especially the low flushing rate, lack of stream inlet, and high phosphorus load in the lake sediment. A new direction is needed to bring East Pond back into compliance with state water quality standards that will require *(Watershed, Continued on page 6)*

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<http://www.EastPond.org>

*(Watershed, Continued from page 5)* utilizing existing science about the lake's dynamics, input from a team of qualified water quality experts, and a second phase of targeted watershed planning and implementation.

### **PROJECT PLAN**

The project will update the watershed-based management plan and describe actions needed to improve East Pond's water quality. East Pond is considered impaired under Maine law and the Federal Clean Water Act. This update of the plan will provide a road map for the second phase of restoration work in East Pond and its watershed over the next decade (2017 - 2026).

The goal will be elimination of annual algal blooms. Key components of the update include water quality analysis conducted by Colby College, results from trend analysis on 40-years of data, and recommendations for addressing the impairment and future water quality monitoring.

The project is funded in part by the United States Environmental Protection Agency under Section 604(b) of the Clean Water Act.

### **TASKS**

**Water Quality Analysis** - Historical data for East Pond will be combined with water quality and sediment data, being collected in 2015-2017 as part of a watershed-wide water quality study led by Colby College and BRCA, including lake-wide collection of phosphorus bottom grabs during periods of anoxia that develop as a result of three or more days of warm, calm weather. Data will be analyzed to determine water quality trends, and any statistically significant changes in water quality over the historical time period. Recommendations for addressing water quality impairment and future monitoring will be developed.

**Backflushing** - Backflushing of the Serpentine wetland, which connects East Pond with North Pond, has been identified as a potential contributor to phosphorus loading in East Pond. Yet, the extent of this influence has not been accurately estimated. To do so, a bottom-mounted acoustic Doppler current profiler (ADCP) will be deployed at the inlet to the Serpentine (the outlet of East Pond) to determine the speed and direction of flow from the Serpentine to East Pond over a period of one year, during periods of time when back flushing is most likely. Surface water will be collected and analyzed for nutrients (P and N) during baseflow and potential backflushing events (large rain storms) and compared to ADCP data. This information will be incorporated into the watershed model.

**Internal Recycling** - Internal recycling was identified as a major driver of total phosphorus loading in East Pond in the TMDL and Phase I watershed management plan. With higher resolution data collection and analysis being conducted in 2015 and 2016, including lakewide collection of phosphorus bottom grabs during periods of anoxia that develop as a result of three or more days of warm, calm weather, the project team will quantify internal loading and make specific recommendations for treatment options and alternatives.

**Watershed Modeling** - Watershed modeling will be conducted using an in-lake model such as the Lake Loading Response Model (LLRM). The model will utilize the most current land-use data, the water quality analysis, backflushing information, internal loading estimates, and pollutant loading reduction estimates from Phase I planning efforts. Modeling results will be presented to the water quality technical review committee, calibrated, and revised to update the lake's assimilative capacity analysis and water quality goal for the plan.

**Stakeholder, Steering Committee and Scientific Review Committee Meetings** - The East Pond Watershed Plan Steering Committee will convene to guide the development of the Phase II planning effort. The committee will include representatives from East Pond Association, watershed towns, the Brickett Point Association, BRCA, Maine DEP and the project consultant. A Water Quality Technical Review Committee will meet to review the water quality analysis, modeling results and action plan, and to make recommendations for Phase II, including feasibility of alternative BMPs proposed in Phase I. Members will include Colby College, Maine DEP, BRCA and the project consultants. The project will be presented to the public at the East Pond Association Annual Meeting in July 2016.

**Watershed-Based Plan Development** - The 2007 watershed plan will be updated using information developed. A feasibility analysis will be completed by the project consultant for recommended BMPs, as well as a revised action plan. Watershed maps will be developed to highlight important lake and watershed characteristics such as bathymetry, land-use, habitat, and monitoring locations. A draft and final plan will be reviewed by both the steering committee and water quality technical review committee and approved by Maine DEP.

### **GOALS**

The goal is to eliminate annual algal blooms on East Pond. Although "external" issues like erosion and septic systems contribute to East Pond's algal problems, "internal" in-lake sediments must also be treated to eliminate algal blooms. Forty years of data, together with Colby's extensive data collection in 2015 and 2016, will provide the information needed to recommend the management actions needed to fix algal problems on East Pond.

It is still early to recommend the specific management actions ("fixes") needed to eliminate algal blooms, although a combination of external and internal loading reductions is likely. We expect to have that information to share with the public no later than May of 2017. If in-lake treatments are required, Maine DEP permitting and fundraising will be needed. Those issues will also be addressed in the updated management plan.

We encourage community, lake, and road association members interested in water quality issues on East Pond to find out more about this work. Please contact Rob Jones, East Pond Association president, 207-362-5685, or Charlie Baeder, BRCA, 207-458-1334, for more information. ♦

(Bottom, Continued from page 1) chemistry professor Whitney King, who has spent a lot of time on the bottom of the lake in SCUBA gear, claims that in the deeper portions of the lake he can stick his entire arm into the lake bottom with ease. So the definition of much of the lake bed is tenuous.

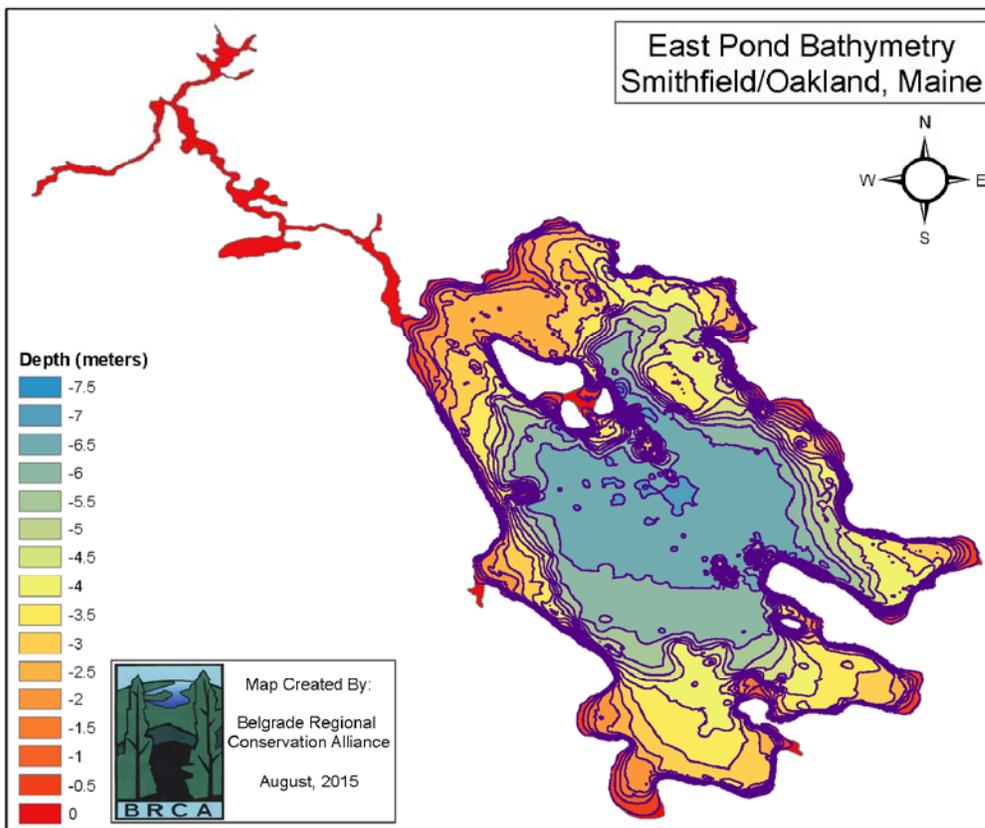
How does this impact us? Because we boat enthusiasts float on the surface of the water, the depth of the bottom doesn't really matter as long as we know where all the boat-eating rocks reside. But, if the data that Colby has been capturing support the application of alum to control algae blooms, then this new picture of the shape of the lake bottom shows us that a much larger area will need to be treated. Previously we believed we only had to treat the "two deep holes" which constituted a much smaller area. It now appears that a much larger area of the lake becomes depleted in oxygen in late July and August, which leads to the dreaded algal blooms that we've all learned to detest.

I'm sure most of you have heard many old wives' tales. There are gazillions of them out there, and when I was a kid I believed most of them. For instance if a black cat walks toward you, it brings good luck. If it walks away from you, it takes the luck with it. Geeze, they were always running away from me during my youth which explains why I have never been very lucky. There's one I remember very well from when my newborn sister came home from the hospital; cats can steal the air from a baby's mouth. Our poor cat didn't get back into the house until sis was over a year old. A google search found one I was not familiar with, which clearly explains why I don't catch a lot of fish; if the cows are standing, the fish are biting. I must live around a bunch of lazy cows that spend their days lying on their backs in the pastures, probably with little glasses filled with ice, their preferred drink, and little pink umbrellas.

Here's one that I learned when I moved here; there are two deep holes in East Pond. Wrong! In truth our lake is shaped like a big old oblong bathtub-with the exception of the Miller Islands and a couple more small islands sticking up in the middle. The deepest part of the lake is just southeast of Ram Island, coming in at about 7 meters-depending upon the lake level which is a function of the dam and amount of rain we get. The transition from shoreline to deep water is quite gentle on the northwest and southeast ends of the lake, whereas the transition is more dramatic on the southwest and most of the northeast sides of the lake. I was told when I'm sure most of you have heard many old wives' tales. There are gazillions of them out there, and when I was a kid I believed most of them. For instance if a black cat walks toward you, it brings good luck. If it walks away from you, it takes the luck with it. Geeze, they were always running away from me during my youth which explains why I have never been very lucky. There's one I remember very well from when my newborn sister came home from the hospital; cats can steal the air from a baby's mouth. Our poor cat didn't get back into the house until sis was over a year old. A google search found one I was not familiar with, which clearly explains why I don't catch a lot of fish; if the cows are standing, the fish are biting. I must live around a bunch of lazy cows that spend their days lying on their backs in the pastures, probably with little glasses filled with ice, their preferred drink, and little pink umbrellas.

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One must also take into account what constitutes the lake bottom. Much of it in the deeper portions of the lake consists of about 3-4 feet of mush.



Colby College chemistry professor Whitney King, who has spent a lot of time on the bottom of the lake in SCUBA gear, claims that in the deeper portions of the lake he can stick his entire arm into the lake bottom with ease. So the definition of much of the lake bed is tenuous.

How does this impact us? Because we boat enthusiasts float on the surface of the water, the depth of the bottom doesn't really matter as long as we know where all the boat-eating rocks reside. But, if the data that Colby has been capturing support the application of alum to control algae blooms, then this new picture of the shape of the lake bottom shows us that a much larger area will need to be treated. Previously we believed we only had to treat the "two deep holes" which constituted a much smaller area. It now appears that a much larger area of the lake becomes depleted in oxygen in late July and August, which leads to the dreaded algal blooms that we've all learned to detest.

The map included here was made by the Belgrade Regional Conservation Alliance from data collected by the state. It is a reasonable facsimile of the lake but **IT DOES NOT SHOW THE LOCATION OF ALL THE HAZARDOUS ROCKS** scattered throughout the lake. You should go slowly until you learn where all the dangerous rocks are located. ♦

## EAST POND ASSOCIATION ANNUAL MEETING JULY 19, 2015

Topic	Discussion	Action
Call to Order	Rob Jones called the meeting to order at 10:03 a.m.	
Attendance	<p>55 members of the community attended including board members. Guests: John McPhedran, DEP Charlie Baider, Director; BRCA</p> <p>Many thanks to Birchcrest, Camp Manitou, Camp Matoaka, Alden Camps, Sadulsky's Camps and D&amp;L Market for their ongoing support and collaboration!</p>	
2014 Annual Meeting Minutes	Motion was moved and seconded to approve the July 2014 Minutes with noted corrections.	Motion carried.
Treasurer's Report	David Jackson presented the annual budget report. Current merchandise stock is fully paid for and is now full profit. CBI/Invasives continue to be the largest expense of the budget at roughly \$10k annually. Motion was moved and seconded to accept the Treasurer's report.	Motion carried.
1949 Coffin Dam	Gordon Woods reported that water levels and rain events are monitored regularly with the dam gates adjusted accordingly to maintain flow and water levels.	
DEP Invasives	John McPhedran, Maine DEP presented information on reporting invasives and the process of Rapid Response for qualified invasives listed in statute. The Maine DEP has oversight of over 6000 water-bodies. Rapid response requires testing, survey and may include dive team exploration. He differentiated between eradication vs. controlling established infestations. Response is in accordance with statute and in collaboration with DIFW, MeVLMP, local associations, and property owners. Treatment options include: surface use restrictions, barriers, biological and manual measures with the goal of restoration of habitat. Reports can be directed to: milfoil@maine.gov.	
BRCA Water Quality Initiative	<p>Charlie Baider addressed water quality initiatives. Water quality and the health of the watershed affects not only folks on or using water-bodies but also the local tax-base and jobs &amp; businesses. Algae blooms continue to be a primary concern especially for East Pond, they are "fed" by phosphorus. Phosphorus is roughly 70% external entry. It can enter the water via roads, run-off, septics, erosion, and also sediment disruption that results in re-uptake into the water column. External load reduction practices and state mandated no-wake 200' from any shore were discussed as prevention. When anoxia is present (oxygen depletion in the water), turn over and release of phosphorus in sediments occurs. Treatment includes alum treatment and oxygenation treatment – both require permitting and fundraising for the \$500,000 - \$1 million estimated expense for a lake our size. Brenda Feteke has been and continues oversight and reporting of weekly data collection with Colby students, graphs were presented.</p> <p>Qualification and application for 319 grant funding continues.</p>	
Data Gathering	Jerry Tipper gave overview emphasizing the importance of EPA participating in its own data collection, especially when applying for funding or potential treatment permits. A brief description of the new oxygen meter capabilities was discussed.	
Alum Treatment	Mel Croft conveyed how important it will be to let the science of our data collection and collaboration with other study findings to support decisions related to potential treatment.	
Watershed Survey	Rob Jones presented summary of findings and noted the full report is available at <a href="http://www.eastpond.org">www.eastpond.org</a> .	
Miscellaneous	<ul style="list-style-type: none"> <li>• Complimentary BBQ &amp; LakeSmart Tour immediately followed meeting.</li> <li>• EPA will be participating in the BRCA Golf Tournament to raise grant funding.</li> </ul> <p>Special thanks to Peter &amp; Jane Redmond for their donation that allows our members to participate!</p> <ul style="list-style-type: none"> <li>• Thank you to Melissa Evers for making the port-a-loo available</li> <li>• EPA Weather Station is available with current readings at eastpond.org</li> </ul>	
Election of Board Members	Motion was moved and seconded to reappoint Peter & Jane Redmond, Gordon Woods & Christine Keller. Motion was moved and seconded to appoint new member Mark Roskos.	Motion carried.
Miscellaneous	Complimentary BBQ immediately followed meeting.	
Adjournment	The meeting adjourned at 11:41 a.m.	

# 2016 EAST POND ASSOCIATION MEMBERSHIP

*Please place a check mark next to the level of East Pond Membership you wish and then transfer the value shown for that level to the space provided in the right hand column:*

- Individual (\$15.00).....\$ \_\_\_\_\_
- Family (\$30.00).....\$ \_\_\_\_\_
- Supporting (\$50.00).....\$ \_\_\_\_\_
- Benefactor (\$100.00).....\$ \_\_\_\_\_
- Commercial (\$75.00).....\$ \_\_\_\_\_
- Invasive Plant Fund Contribution**.....\$ \_\_\_\_\_

This additional donation is used to help prevent invasive plants from getting into East Pond primarily by funding Courtesy Boat Inspections.

**Total Donation \$** \_\_\_\_\_

- Please contact me about becoming a volunteer Courtesy Boat Inspector for East Pond.
- Please contact me about the LakeSmart program.

**Name(s) and Address  
(a return address label works great):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**To help us keep our records up to date,  
please tell us your location on the pond:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Phone #:** \_\_\_\_\_

If you would like to receive occasional updates and East Pond news during the year, please fill in your email address. Your address will not be shared.

**E-mail:** \_\_\_\_\_

**Send this completed form along with your check for the total donation to:**

David Jackson, Treasurer  
East Pond Association  
83 Loon Lane  
Smithfield, ME 04978

**The East Pond Association is dedicated to promoting the protection and enhancement of water quality in East Pond and to preserving its ecological, economic, recreational, and aesthetic value.**

East Pond Association is a 501 (c) (3) charitable organization  
Visit our Website: [www.eastpond.org](http://www.eastpond.org)

## East Pond Association

c/o David Jackson  
83 Loon Lane  
Smithfield, ME 04978

Address Service Requested

## EAST POND ASSOCIATION ANNUAL MEETING

Saturday, July 16  
9:30 AM Refreshments, 10 AM Meeting  
The Birchcrest on Brickett Point  
Cook Out Lunch to Follow

The East Pond News is published yearly to provide residents and friends with the latest news. It is sent free of charge to any interested party as a service of the East Pond Association.

Comments, suggestions for articles, and photos are welcome and can be sent to the editors:

Val Schmitt	vschmitt@eastpondweb.com
Rob Jones	rjmoxie8@gmail.com

## JOIN THE EAST POND ASSOCIATION

Membership is open to all individuals and organizations.  
Send your name and address with a check to:

David Jackson, Treasurer, EPA,  
83 Loon Lane, Smithfield, ME 04978

*Individual: \$15 - Family: \$30 - Supporting: \$50  
Commercial: \$75 - Benefactor: \$100*

[HTTP://WWW.EASTPOND.ORG](http://www.EASTPOND.ORG)

## The East Pond Association

### OFFICERS

President: Rob Jones  
Vice President: Edie/Ed Cornwall  
Secretary: Christine Keller  
Treasurer: David Jackson

### Board of Directors

#### *Terms Expiring 2018*

Christine Keller  
Peter & Jane Redmond  
Gordon Woods

#### *Terms Expiring 2017*

Mel Croft  
David Jackson  
Chris Stevens

#### *Terms Expiring 2016*

Gary Allison  
Edie/Ed Cornwall  
Melissa Evers  
Rob Jones  
Cindy Reese  
Jerry Tipper