

Newsletter

Volume 35, Issue 1

Summer 2022

President's Report

It is a privilege to serve you as the CLA president in this “watershed” year and present this timely report to the China Lake community. 2022 is emerging as a year of major change, growth, and achievement at the China Lake Association (CLA).

I succeed Scott Pierz, who stepped down in 2021 after serving as president since 2014; Scott continues to serve on CLA's board of directors, while he also provides ongoing leadership as Executive Director of CLA's sister organization, China Region Lakes Alliance.

In other leadership news, the CLA Board of Directors appointed Eric Lind as Vice President to support the growth of our organization. David Preston serves as Secretary, and Elaine Philbrook has served as Treasurer but is stepping down from the board altogether. We appreciate Elaine's dedication and diligence as LakeSmart Coordinator and poster contest coordinator as well.

It is also a pleasure to acknowledge board directors Robbie Bickford, Wayne Clark, Bruce Fitzgerald, Marie Michaud, Bob O'Connor, and Bill Powell, all of whom serve with the officers as volunteers managing the business and conducting the affairs of the CLA.

CLA officers and directors have convened monthly meetings to drive growth and development of the organization. Please contact me (stephencraiggreene@gmail.com) if you want to attend board meetings, become more involved, or discuss your thoughts about the CLA.

Moving forward, CLA will focus its attention and shall undertake leadership of the 2022-2031 China Lake Watershed-Based Management Plan (WBMP). The plan outlines management strategies and a 10-year schedule of action steps. The goals of the plan are to increase efforts to reduce the external phosphorus load by addressing existing nonpoint source (NPS) pollution throughout the watershed, limit new sources of phosphorus from future development and climate change, significantly reduce the internal phosphorus load through inactivation of phosphorus in lake bottom sediments, and monitor and assess improvements in China Lake's water quality over time. A full copy of the final plan is posted on our website <https://www.chinalakeassociation.org>.

The 2022 launch of the WBMP is the culmination of a two-year comprehensive watershed survey, performed with help from CLA volunteers in partnership with Maine Department of Environmental Protection (DEP) and technical leaders. The survey identified

(President's Letter continued on page 10)

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**“Preserving China Lake for Future Generations
Through Environmental Stewardship and Community Action”**

Maine



Rivers

Alewife Restoration Initiative Success With Thanks to CLA

by Landis Hudson, Maine Rivers

837,000! At a time when good news is in short supply, the great news from the China Lake Alewife Restoration Initiative (ARI) has been well-received and widely shared. This year for the first time since at least 1783 adult alewives made their way from the ocean to spawn in China Lake on their own volition and will be safely able to exit the lake to return to the ocean. Nate Gray, a scientist with the Maine Department of Marine Resources, whose work has been central to the project, counted 837,000 fish using an electronic counting array at the Outlet Dam — an astounding number and great news for this keystone species. This complex project involved the complete removal of three dams and the installation of technical fishways (fish ladders) at three other sites. Maine Rivers directed the project, working closely with a large number of partners and supporters, including the China Lake Association.

Joining a May 19 ribbon-cutting celebration to honor the success of the project was Governor Janet T. Mills. A crowd gathered at the Box Mill fishway to witness the event, about one hundred hardy souls who were not deterred by a light rain. A story about the project was carried on National Public Radio as well at Channel 8, the Portland Press Herald, and the Kennebec Journal. Good news for alewives, as well as those like loons, puffins, eagles, and osprey who enjoy dining on them.



Children join Landis Hudson (Maine Rivers), Governor Mills, and Nate Gray (DMR), at the Box Mill Fishway to celebrate the completion of the Alewife Restoration Project.

CLA Joins DEP and KWD for Sediment Sampling

by Stephen Greene, President, China Lake Association

There was a stunning, bright sunrise on China Lake at the Vassalboro boat launch on June 2, where I awaited the arrival of technical teams from the Maine Department of Environmental Protection (DEP) and the Kennebec Water District (KWD) for an unusual exercise: boating out to the East Basin of China Lake to retrieve samples of lakebed muck. I kid you not.

The DEP and KWD technicians were present and ready to perform a special task set forth in the China Lake Watershed-Based Management Plan (WBMP): venturing out to multiple spots in the East Basin of China Lake where they would take deep water sediment samples for laboratory analysis. The sampling plan was prepared by DEP's Lake Assessment Section and called for twenty-seven samples of sediment.

You may ask, "Why do this?" Well, it is a short, but important back-story about how the science behind the WBMP will help CLA address the "internal load" of algal-causing phosphorus in China Lake. In plain language, we know that soil erosion and water runoff from around the lake and the greater watershed drains sediment, bringing lots of phosphorus into the lake. The sediment then settles over time on the lake bottom and is a "key factor in the dynamics causing elevated phosphorus in the lake, which fuels recurring nuisance algal blooms." Thus, the WBMP finds:

"The internal load will need to be reduced to meet desired water quality targets and conditions in the lake."

According to the WBMP, there are several ways to address algal blooms caused by internal phosphorus loading directly, with an acceptable degree of reliability from past research and experience. One approach is phosphorus "inactivation." In lake settings and public water body reservoirs, phosphorus inactivation is used to bind phosphorus in surface sediments and makes such reserves less susceptible to release in problematic areas. A treatment using aluminum compounds binds the phosphorus and reduces conditions that cause blooms.

So, let's get back to the sampling exercise. I was privileged to accompany the group as a China Lake Association observer. The DEP team included specialists Ryan Burton, Patrick Lind and Matt Farragher. Darrell Field and Frank Cronkite represented the KWD.

The sediment samples were collected according to DEP protocols, and have been forwarded to Colby College's Department of Chemistry for laboratory analysis to determine phosphorus load. The data from the Colby analysis will then be forwarded to lake water quality expert, Dr. Ken Wagner, who will determine whether the sample data can justify an area and dosage design for alum treatment for China Lake. We will see recommendations later this year.

DEP specialists (left to right) Ryan Burton, Matt Farragher, and Patrick Lind sample the sediment in China Lake.





Update from the Kennebec Water District

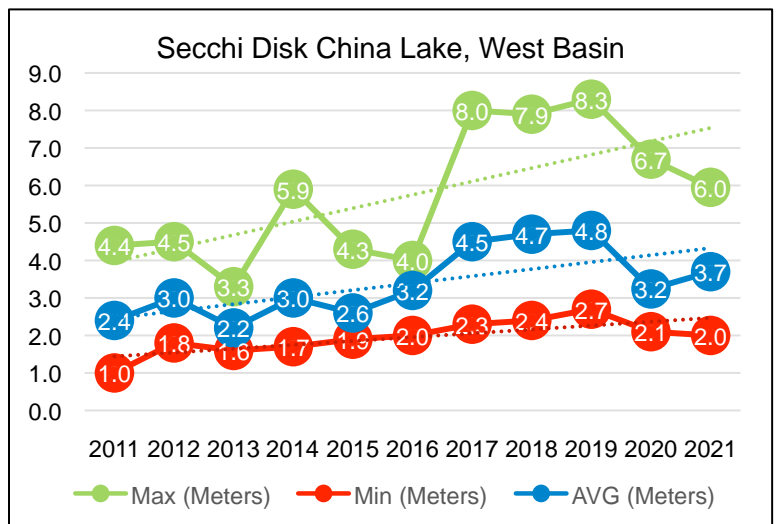
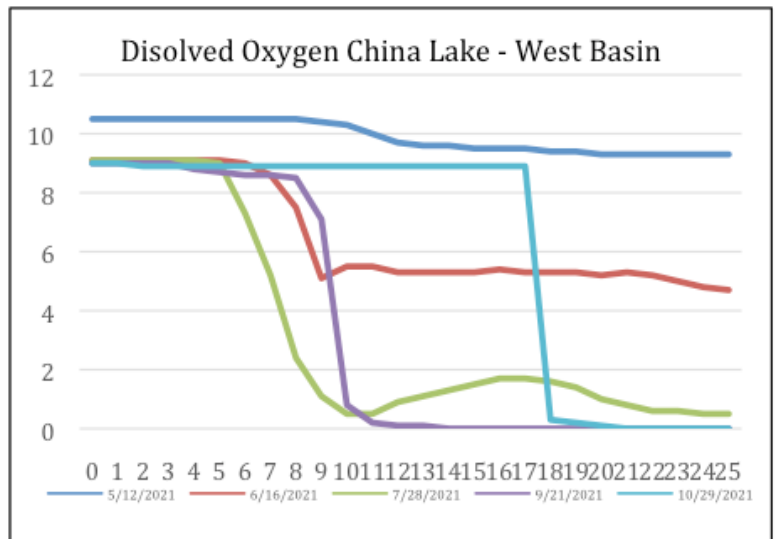
by Robert Bickford, Water Quality Manager

Starting in May 2021 and continuing through the end of October 2021, KWD sampled three locations (one point in each Basin) every two weeks for water quality parameters such as Secchi Disk transparency, water temperature gradient, dissolved oxygen gradient, and phosphorus within the water column. The results from this testing indicate that China Lake has maintained a steady state with a slight improvement in water quality over the past 10 years. This can be qualitatively observed as well by the absence of a nuisance algae bloom (Secchi Disk transparency <2m) for the past 6 summers. Unfortunately, the deepest parts of the lake continue to reach anoxic status (dissolved oxygen at 0ppm) by July due to lake stratification and biological activity within the lower layers of the lake.

Apart from the routine lake water quality monitoring, KWD worked with the Kennebec County Soil and Water Conservation District and many other community partners to complete the China Lake Watershed-Based Management Plan by collecting and analyzing additional water quality samples, completing scientific review of the plan, and providing input on draft documents. KWD also provided support to China Region Lakes Alliance programs protecting China Lake such as the Courtesy Boat Inspection Program and the Gravel Road Rehabilitation Program.

In 2021, KWD contracted with Comprehensive Land Technologies (CLT) to develop a harvest plan for the South Peninsula in line with KWD’s Forest Management Plan developed in 2019. To help complete this Harvesting Plan, KWD held a public informational session in the Fall of 2021 with phenomenal engagement and input from community stakeholders. Regrettably, due to some unexpected delays and a warmer than average spring, the selective harvest of the south peninsula was postponed until Winter 2022-2023 to ensure favorable ground conditions.

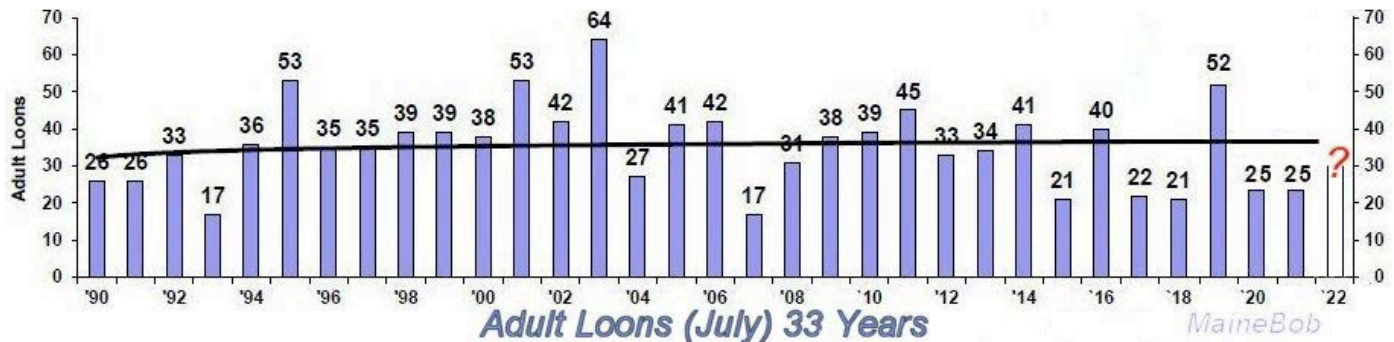
For more information on KWD’s activities within the watershed, please visit www.KennebecWater.org or follow us on Facebook.





The Loon Count - Will We See an Increase?

by Bob O'Connor, CLA



The Annual Loon Count on China Lake is part of the statewide count coordinated by the Maine Audubon Society on the third Saturday of every July since 1984. This year, the Audubon Society is continuing to improve its new digital portal for data entry. For the most part, the count will be done by volunteers with pen and paper, the same way as we have done for the past 39 years. They are still working out bugs.

In July 2021, twenty-five adult loons and three chicks were seen on China Lake. This is the same number of adult loons as in 2020, and this is below our average of thirty-seven loons. Google “Maine Audubon Loon” or go to [Maine Audubon](http://MaineAudubon.org) to find more great information about loons.

This year's loon count is on **Saturday, July 16th from 7:00 to 7:30 a.m.**

China Lake is divided into seven count areas, and every year there are usually one or two areas that need new counters. Contact Bob O'Connor, the China Lake Loon Count Coordinator, at 207-445-4140 if you are interested in volunteering for the Loon Count.

The report will available on the China Lake Association website: www.chinalakeassociation.org/loon/.



China Region Lakes Alliance Report

by Scott Pierz, Executive Director, CRLA

The China Region Lakes Alliance (CRLA) is a non-profit organization comprised of lake associations within the CRLA's service area, including the China Lake Association, the Three Mile Pond, and Webber Pond Associations. Also, the Towns of China and Vassalboro are represented, along with the interests of the Three-Cornered Pond Owner's Association in Augusta.

The CRLA operates a set of “core programs” that include the Courtesy Boat Inspection (CBI) Program, a LakeSmart Program and a Youth Conservation Corps (YCC), as well as a Gravel Road Rehabilitation Program (GRRP). CRLA's Mission is to operate its core programs to enhance and preserve our region's resources and their water quality.

The Courtesy Boat Inspection staff inspects boats entering and exiting the region's water bodies on the lookout for invasive aquatic plants like Hydrilla and Milfoil that can easily infest a lake or pond. Four boat launches within the region are monitored, two on China Lake and others on Three Mile Pond and Webber Pond. In 2021, CBI staff inspected 1,090 boats at the four boat launches. On China Lake, 702 boats were inspected, 415 along the Causeway at the head of lake and 287 at China Lake's East Vassalboro boat launch. Combined, these two boat launches represent nearly 65% of all boats accessing the water bodies within the region. Also, numbers for Three Mile

CRLA Report continued on page 6

CRLA Report continued from page 5

Pond totaled 184 inspections, while Webber Pond had 204. To date there is no known or documented evidence of any “invasives” in our region’s water bodies.

The CRLA is grateful for the funding to staff these public boat launches, which is received from the Towns of China and Vassalboro, the Kennebec Water District, and grant monies from the Maine Department of Environmental Protection. Lake Stewards of Maine has more information about how to protect our waters from invasive aquatic plants:

<https://www.lakestewardsofmaine.org/reporting-aquatic-species-6/>.

The **Youth Conservation Corps** is a labor force of young lake stewards responsible for working on environmental projects. The YCC’s work concentrates on the **China LakeSmart Program**, which evaluates shorefront properties and designs vegetated buffers to install along the shoreline. LakeSmart buffers help reduce the impact of non-point source pollutants found in stormwater runoff by absorbing them before they get into the lake. If you are interested to learn more about LakeSmart you can check out the Maine Lakes website at <https://www.lakes.me/>. I encourage you to contact the CRLA for a free LakeSmart evaluation. For more information please email: chinalakesmart@gmail.com or info@crlamaine.org.

Finally, the **Gravel Road Rehabilitation Program** was initiated in 2019 and is focused on stormwater problems resulting from gravel camp roads around China Lake. Gravel camp roads can create stormwater runoff causing non-point source pollution and phosphorus loading into the lake. In 2021, the CRLA worked in partnership with camp road owners at the following Fire Roads: #36, #37, and #41, with work being completed at #36 and #41 last fall. Design plans are out to bid for work at #37 this construction season. Funding for the GRRP comes from the Town of China’s Tax Increment Financing (TIF) program, with a financial cost share borne by local road associations or individual groups of private citizens living along the gravel camp road.

The CRLA will continue to promote the environmental health of the region’s water bodies by protecting our resources from invasive aquatic plants, by installing lakeside buffers through the work of the YCC and the LakeSmart Program, and by rehabilitating gravel camp roads to help maintain and improve China Lake’s water quality.

To contribute to CRLA’s LakeSmart Program, or to support any of the core programs mentioned in this report, please mail your tax-deductible donation to: CRLA, P.O. Box 6339, China Village, Maine 04926.

For further information about the China Region Lakes Alliance, please visit our website, <https://www.crlamaine.org>, or email us at info@crlamaine.org.

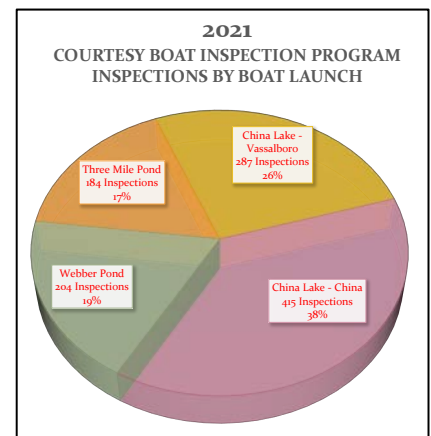
Respectfully submitted,

Scott A. Pierz, Executive Director

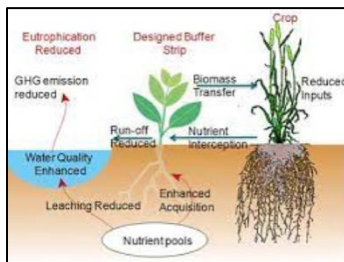
China Region Lakes Alliance



CBI Director Sage Hapgood-Belanger (left) and Jack Blais, YCC Director (right)



CBI Staff Gabe Pelletier (left) and Carson Appel (right)



You Can Make a Difference

by Eric Lind, Vice President, China Lake Association

“How’s the lake?”

Every lakefront property owner will hear this question countless times over the course of the summer. Well, what does it mean? Is the lake beautiful to look at, fun to fish, relaxing to swim, good for boating, or a safe spot to paddle? China Lake has created great joy, comfort, fun, and such fond memories, we may at times forget just how fragile the lake can be.

If you’re like me, there are times when you worry about the future of the lake. You see algae and your thoughts turn to water quality. When having these thoughts, you may ask, “What can I do? Can I make an impact?”

Some people have a tremendous impact, and their influence is easily seen and understood, while others have a subtle influence that is not so easily recognized. Do you think you can have an impact? Better yet, will you?

Improving the water quality of the entire lake may seem like a herculean task, but it is not an impossible one. We all can make a difference when it comes to preserving the lake for our kids and grandkids. How we conduct ourselves around the lake makes the biggest impact. First, everyone can learn how to stop the spread of invasive plants. You can become educated about the negative consequences of erosion and the importance of a good vegetative buffer. If you own property on the lake, you can learn how to lessen the negative effect of your septic system. If you boat, slowing down near the shore and maintaining headway speed helps prevent erosion and protect wildlife. Being a volunteer can be very impactful, and there are almost no limits to the ways you can volunteer.

Start now. Make a difference. Have an impact.

I have two suggestions. If you wish to actively volunteer, please contact a board member. If you are a lakefront property owner, you can start with one simple act. Plant a vegetative buffer. You can find information about landscaping to prevent erosion at: <https://www.maine.gov/dep/land/watershed/bufa.html>.

Often people may feel as if the ways they contribute to an effort are just a drop in the bucket. But in order to fill a bucket, you have to start with the first drop. And ultimately, what is China Lake if not a lot of drops in a very large bucket? As for me, I plan to shower the lake with my efforts one drop at a time so that, in the future, when asked, “how’s the lake,” I can simply say, “great” or better yet, “wicked good” without worry or concern.

I wish you all a safe, fun, and wicked good summer on China Lake!

Eric Lind

Vice President, China Lake Association



Thank You Tim And Elaine!

by David Preston

The China Lake Association has been very lucky to have had the services of Tim Axelson and Elaine Philbrook. Tim Axelson served ably as Treasurer of the CLA from 2011 to 2021 and donated countless hours to the organization and community. We can't thank him enough for his dedication and commitment to the lake. Elaine Philbrook took over the Treasurer's reins from Tim in 2021. A former teacher in the China Public Schools, Elaine brought her skills as an educator to the CLA Board of Directors more than 10 years ago. She was instrumental in running the Annual Poster Contest at the school helping to educate the next generation of lake stewards. Along with Marie Michaud, Elaine also helped to get the LakeSmart Program up and running in China and has served as a point person for invasive aquatic plant education. For the past year, Elaine has added Treasurer to her list of CLA roles. We thank both Tim and Elaine. We will miss their valuable input but trust that they will continue to be wonderful supporters of the China Lake Association!

CLA to Host Cardboard Boat Regatta at China Community Days!

The China Lake Association will be hosting a new event at China Community Days this year! The CLA challenge is to create a boat out of only cardboard and duct tape and participate in a race in the lake. Boats must be less than 5' x 8' in size, must have sides, and can be propelled only by oars or paddles. The race will take place during China Community Days on **Saturday, August 6, at 4:45 p.m.** at the China Baptist Church Park. CLA Directors will be the judges and will award winners according to five categories and age groups:

Award Categories

First Place for the Race winner
 Pride of the Regatta for the most spectacular boat
 Best-Dressed for the most creative team costume
 Spirit Award for the most spirited team, and
 Titanic Award for the most valiant effort at keeping their boat afloat while sinking.

Age Categories

Sunfish: Ages 7 and under
 Alewife: Ages 8 – 12
 Trout: Ages 13 - 16
 Pickerel: Ages 17 & up
 Loon: Any age mix (family)

Participant check-in/registration is at 4:00 pm at the China Baptist Church Park. Pre-race judging will take place at 4:15, and the race will begin at 4:45. Guidelines and registration form can be found on the [CLA website](#).

Start your boat design now, and share your progress photos @ [www.facebook.com/ChinaCommunityDays!](https://www.facebook.com/ChinaCommunityDays/)



China Lake Watershed Based Management Plan

by Janet Preston, CLA Newsletter Editor

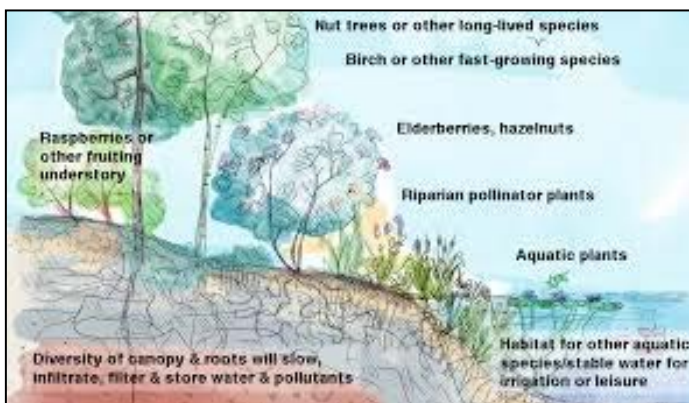
At last year's Annual Meeting, the China Lake Association reported that the China Lake Watershed Management study had been completed. Maine's Department of Environmental Protection (DEP) requires that watershed management plans be renewed every ten years; China's previous plan expired in May of 2019. These management plans serve as guides to identify and mitigate stormwater problems within watersheds that encourage algae growth in lakes. China Lake's water quality is categorized as below average due to recurring algae blooms.

Ecological Instincts, a consulting firm founded and run by Jen Jespersen, performed the in-depth study necessary to update China's Plan. Funding came in part through the Kennebec County Soil and Water Conservation District from a Maine DEP grant. Other contributing stakeholders included the towns of China and Vassalboro, the China Lake Association, the China Region Lakes Alliance (CRLA), and the Kennebec Water District.

In October of 2020, local volunteers under the direction of technical leaders surveyed properties within the China Lake watershed to identify locations that are having a negative impact on water quality. Eroding banks and storm water run-off that end up in the lake carry phosphorus and other nutrients that contribute to algae blooms. Consequently, it is important to prevent these non-point source pollutants from entering the lake. Each landowner whose property was identified (161 of them) received a letter describing the issue and offering guidance for improvements to their land to help resolve the problem. LakeSmart volunteers and the Youth Conservation Corp, both now under the direction of the CRLA, are always available to do property inspections, offer advice, and provide the necessary labor if your property configuration allows non-point source run-off into the lake. This source of phosphorus loading is called external loading because it enters the lake from the watershed surrounding the lake.

Another source of phosphorus is internal. This is the phosphorus that is already in the lake sitting at the bottom. When this bottom sediment is disrupted, phosphorus is released and feeds the algae as well. One option to remedy this release of internal phosphorus is an alum treatment. Sediment samples are taken to determine the amount of phosphorus present and the dose needed to bind with the nutrient in order to keep it at the bottom of the lake. It is important to reduce external loading drastically before addressing the internal loading problem. If phosphorus continues to run into the lake, an alum treatment may prove to be a futile effort.

The China Lake Association has been working on reducing external loading of phosphorus since its inception over thirty years ago by encouraging residents to plant buffer strips, rain gardens, fix camp roads and driveways, and update septic systems. Much progress has been made, but there is always more work to be done, of course. So call the China Region Lakes Alliance now to set up your own property inspection, and learn what you can do to help prevent algae blooms!



Buffer strips slow and filter storm run-off and help to hold soil in place, reducing the amount of harmful phosphorus that reaches the lake.

The Benefits of Buffers

- Soil erosion – help hold soil in place
- Wildlife habitat – provide food and cover for wildlife
- Protect and extend lake health – prevent the filling of drainage ditches, lakes, and streams with loose sediment
- Lake shore integrity – added vegetation stabilizes the bank
- Aesthetically pleasing – beautifies the landscape

President's Letter continued from page 1

sources of pollution, which included an assessment of gravel roads and developed properties in the watershed. The information from the survey was used in China Lake's ten-year watershed management plan; the plan will help the CLA qualify for federal funding grants under the Clean Water Act. The anticipated receipt of federal grants will allow CLA to execute the WBMP and address lake water quality. Toward that end, CLA has retained the services of Jen Jespersen of Ecological Instincts to add professional resources to our mission. For more information, please see the December 2021 webinar we conducted on the WBMP, <https://youtu.be/K1RCFIW0sFw>.

In a major administrative change, management of CLA's core lake protection programs - China LakeSmart and Gravel Road Rehabilitation Program (GRRP) - have been transferred to the China Region Lakes Alliance (CRLA). Please see the CRLA Annual Report (p. 47 of the [Town Report](#)) to the Town of China for more details about the future of these programs, the CRLA's Courtesy Boat Inspection (CBI), and the Youth Conservation Corps (YCC).

As always, we look forward to our next annual meeting scheduled on July 30, 2022, 9:00-10:30 at the China Middle School, 773 Lakeview Drive, South China. Please save the date and join us! This year, we will be celebrating 50 years of the Clean Water Act, authored by Maine Senator Muskie. We will also be giving out The Lake Book, a publication of Maine Lakes that is "jam-packed with helpful information for all who use, visit, and live on or near Maine's lakes and ponds. Check our website for additional information on membership (you can now contribute online) and updates on the annual meeting's agenda.

Thank you.

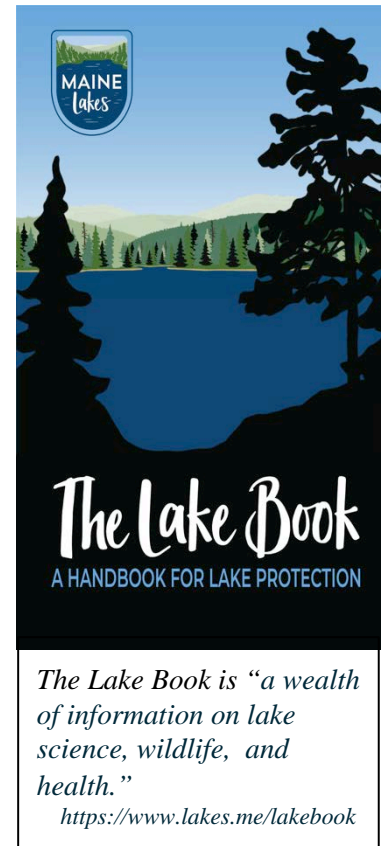
Stephen Greene, President
China Lake Association

China Lake Association Receives Major Donation

The China Lake Association is pleased to announce the May 13, 2022 receipt of a major financial gift of \$10,000 from the Burton G. and Anne C. Greenblatt Foundation. The \$10,000 donation by the Greenblatt Foundation was made in honor of President Stephen Greene "for the meaningful and much-needed work performed by [the China Lake Association]."

Steve informed CLA's board of directors at the May 25 board meeting that the Greenblatt Foundation focuses on charitable support of educational and environmental non-profit organizations. Steve and the CLA board agreed that the gift will be earmarked for long-term water quality restoration projects led by CLA under the Watershed Based Management Plan.

Steve and the CLA Board thank the Greenblatt Foundation trustees Ron and Melodie Greenblatt for this extraordinary donation. The gift shall be used wisely by the CLA and will set an example for other friends and donors to join CLA's cause and provide the financial resources to preserve and protect water and wildlife in China Lake.



China Lake Association Annual Meeting

Saturday, July 30, 9:00 - 10:30 a.m.

China Middle School

CELEBRATING THE 50TH ANNIVERSARY OF THE CLEAN WATER ACT

- 8:30 Hospitality Breakfast catered by *Sunrise Bagel* of Waterville, Sponsored by Margo and Stephen Greene
- 9:00 Welcoming Remarks: Stephen Greene, President, CLA
- 9:15 Water Quality Report: Robbie Bickford, WQ Manager, KWD; Director, CLA
- 9:25 Annual Loon Count: Bob O'Connor, Director, CLA
- 9:30 Alewife Restoration: Landis Hudson, Executive Director, Maine Rivers
- 9:45 China Lake Watershed Management Plan, Eric Lind, Vice President, CLA
- 10:10 *Forests, Buffers And Water Quality*, Judy Stone, Colby College Professor, Lake Smart Award Property Owner
- 10:20 Election of Officers and Directors, Treasurer's Report
- 10:30 Closing Remarks and Adjournment

This year marks the 50th anniversary of the **Clean Water Act**, passed in October 1972, thanks to Maine's Senator Ed Muskie, who worked passionately to protect and repair America's waterways. Before then, only a third of America's waters were considered clean enough to fish or swim in. Thank you, Senator Muskie!



CLA Thanks These Business Contributors!

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 207-872-5563
 Info@KennebecSavings.Bank

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 207-445-3276
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Hamlin's Marine
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