China's Pride
Keep It Alive

CHINA LAKE ASSOCIATION

Newsletter Winter 1993

President's Letter

As many of you may be aware, there has been a significant development in the China Lake Restoration Project. We learned this fall that $185,000 in federal funds needed to complement $233,000 in federal funds already appropriated would not be available for the 1993 calendar year. The East Basin Alum Treatment Project is a $568,000 project. $418,000 of that money was to come from the federal government with $150,000 coming from state and local matching funds. Initially, the state was to provide $78,000 funding in 1991. The Lake Association had stepped in and told the town that through a fund raising effort the Lake Association would attempt to raise approximately $100,000 thus providing a significant portion of the local share of money. The ground work for a large scale fund raiser has been laid through multiple meetings this fall. The Board of Directors felt that before asking the shorefront property owners to donate money, the federal funding should be lined up and the Phosphorus Control Ordinance that the State mandated should be approved by the voters. At the recent election, the Phosphorus Control Ordinance passed overwhelmingly, but the additional $185,000 that was needed from the federal govermnent is not available. It is hoped that the remaining federal funds will be available for 1994, but there is no guarantee of this.

We are now looking at the options that are available to the town, the state, and the Lake Association in regards to funding the Restoration Project. One option is to pass a state bond that would fund many needed, but yet unfunded, lake

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Lakefest '92 A Great Success

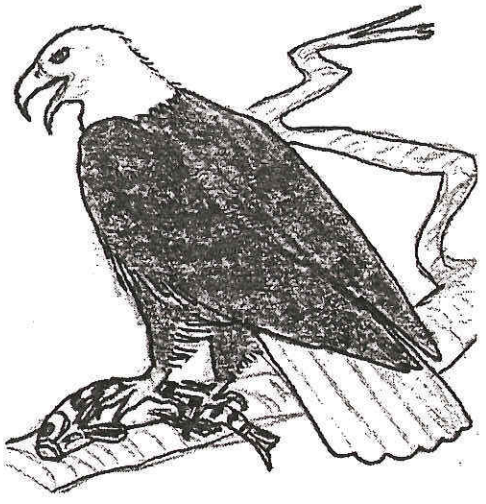
A perfect day in July provided the setting for **Lakefest '92.** It was held in conjunction with the annual Congress of Lake Associations meeting hosted this year by The China Lake Association. Approximately 500 people, summer residents, and people just passing by, enjoyed the festivities. A chicken barbeque was provided by the Boynton-Webber American Legion Post. "The Greens" from Dexter, Maine added to the festive atmosphere with bluegrass music. This event was held to increase community awareness about the Lake Restoration Project. Handouts were available regarding water quality and wetlands. Some of the long time residents of China loaned old photographs for a display table. Scenes around China Lake from years past provided a lot of memories and interesting stories. Because of the enthusiasm and postive response from those attending, Lakefest may become an annual event! Stay tuned....

Bruce Daniels

China Lake Association Named "Lake Association of the Year"

The Congress of Lake Associations has given its 1992 Lake Association of the Year Award to the China Lake Association, in recognition of our accomplishments. Joan Irish, director of the Congress of Lake Associations said "We wanted to recognize the outstanding work that your Association has done, and continues to do to help China Lake. We think you have done a great job!" COLA is a statewide organization, representing 112 member Lake Associations. Its purpose is to be an advocate for clean lakes in Maine, to help coordinate efforts, and to help educate the public and its members about ways of improving Maine's lakes. Each year, COLA sponsors an educational, day-long forum, which was held in China this past summer.

Your Lake Association continues to lead the way, to set an example for the entire region about what can be accomplished, with the support of the community and dedicated volunteers.



New Phosphorus Control Ordinance Passes

On November 3rd of this year, China voters overwhelmingly approved a new phosphorus control ordinance to protect China Lake further. The purpose of the law is to control *new* sources of phosphate runoff resulting from development. The phosphorus control ordinance will have *no* effect on any existing developed houselots in China. It addresses only new residential development and new or significant expansions to industrial or commercial facilities. The new ordinance sets a limit on how many additional pounds of phosphorus per acre will be allowed to drain into the lake from new developments in the China Lake or Three Mile Pond watersheds. From a practical standpoint, it mandates a vegetated buffer strip downhill from the proposed development. The width and extent of the buffer strip can be determined from a simple table provided in the law, or alternative plans can be submitted using DEP's *Phosphorus Control Guide* as a reference.

George Lord, China Lake's Restoration Coordinator, explains the reasoning behind the law:

> "The China Lake Restoration Project is actually three distinct projects, each of which is dependent upon the other two. The first phase involves identifying and eliminating existing major sources of phosphorus-containing runoff in the lake's thirty-two square mile watershed. Over the past three years, most major sources have been addressed. Remaining sites will be eliminated within the next two years. The second phase is the in-lake application of alum which will settle excess phosphorus out of the water column and tie it up in the sediments where it can no longer support algae blooms. The third phase is the long-term maintenance of the watershed to assure that future phosphorus loading to the lake is not allowed to reach levels which allow annual nuisance algae blooms again. The phosphorus control ordinance will address the third phase and, thereby, serve to protect the great investment of time and money which has been spent on the lake restoration effort. The intent of the ordinance is to allow China to grow and prosper while preserving our lake water quality for future generations."

Those of you interested in obtaining a copy of the new ordinance can pick one up at the town office.

David Preston

Check Out the Signs!

We want you all to notice the educational signs erected last summer at the two boat launching sites on China Lake, at the head of the lake and in East Vassalboro. The signs, sponsored by the Lake Association, and built with the help of the State Department of Transportation and the Youth Conservation Corps, are designed to inform the public about China Lake.

Girlscouts Walk for Clean Water

Local Girl Scouts took an active role in the restoration of China Lake recently, when Troop 263 sponsored a Walkathon, which took place on October 18th. Girl Scouts, Brownies, Lake Association and community members could all be seen on Lakeview Drive that afternoon as they travelled the 6.5 mile route from South China Village to the head of the lake in China, in a joint effort to raise money for the Lake Restoration Project. Contributing to the positive spirit of the afternoon were the crisp fall weather, lots of brisk exercise and conversation, many support vehicles and people, and plenty of cider and donuts at the school "Pit Stop" and finish line. 67 participa[illegible] raised a total of $986 by enlist[illegible] sponsors for the event.

This energetic project earned Troop 263 the "Girl Scouts Care for the Earth" patch, recognizing their efforts toward environmental concerns. On November 12th, the troop, with leaders Nattie Haworth and Darlene Zimmerman, and scouts Amber Castle, Meneah Haworth, Martha McFarland, Tara Page, Jennie Thibodeau, and Sarah Zimmerman presented the money they raised to the China Lake Association Board of Directors. The CLA presented a plaque to the troop, commemorating their dedicated effort and successful completion of this important, first-of-its-type project.

Many thanks to Troop 263, the Walkathon participants, and the sponsors, who made this a tremendously enjoyable [illegible] successful event!

Carol Thibideau

China Lake Water Quality Summer, 1992

The Maine Department of Environmental Protection carried out its regular biweekly water quality sampling program again last summer as it has for the past several years. The program consists of gathering field information and water samples from the three deepest points in the lake; one located in the West Basin and one each in the northern and southern parts of the East Basin. Information that we receive from this effort is compared with earlier data in order to identify trends in the overall health of the lake. Roy Bouchard and Jeff Dennis of the DEP are now in the process of summarizing results of last summer's sampling effort and have offered the following general comments on each of the water quality parameters which have been measured.

TRANSPARENCY

Transparency, or the maximum depth at which you can see an object from the surface, was somewhat worse than in 1991. We noticed a rapid decline in transparency in all three basins from the end of July to mid-August. As the graph below illustarates, this condition persisted for about a month and was most severe in the West Basin, where the algae bloom caused transparency to be reduced to only five feet. The lake also became very green in color and produced large, fibrous colonies of algae, especially in the West Basin, where a visible scum formed on the surface.

CHLOROPHYLL

The concentration of chlorophyll in the water is directly related to the algae count. Early in the sampling season chlorophyll concentrations were moderate, and, by mid-August had shown a dramatic increase to a nuisance level of eleven parts per billion. We expect that results from the latest round of tests will be comparable to the highest levels measured during the mid-1980's.

DISSOLVED OXYGEN

In addition to the aesthetic effect of decreased water transparency and floating scum, the increased levels of phosphorus in the lake are directly responsible for a dramatic reduction in dissolved oxygen (DO), especially in the deeper water. This lack of available oxygen has made China Lake an unsuitable habitat for salmon and togue. These cold water fish require a minimum of five parts per million of dissolved oxygen in order to survive. By July 10, DO was less than one part per million at depths of thirty feet and below in the East Basin. By August 11, severe depletion was noted in all basine, to the point where more than half of the depth of the lake was essentially without oxygen.

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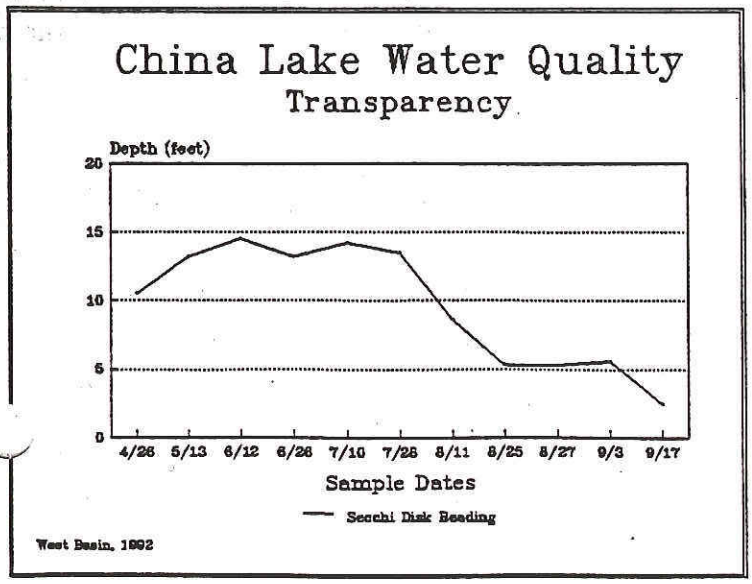

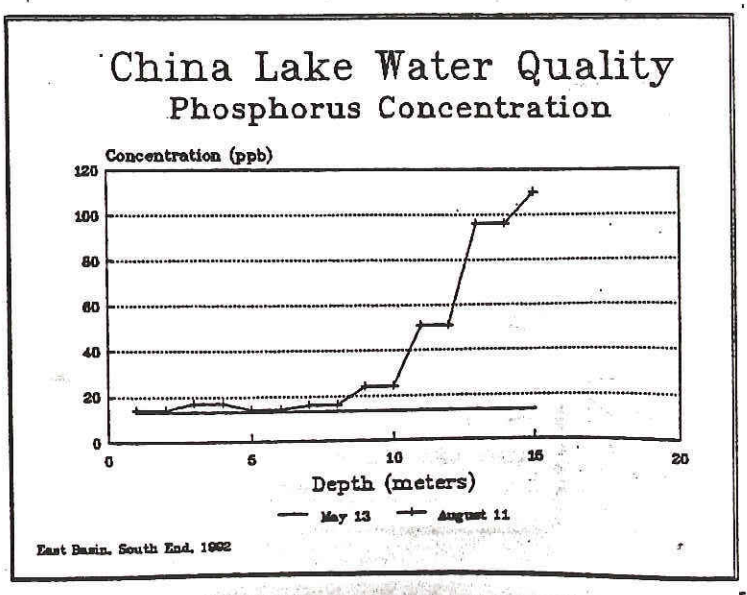

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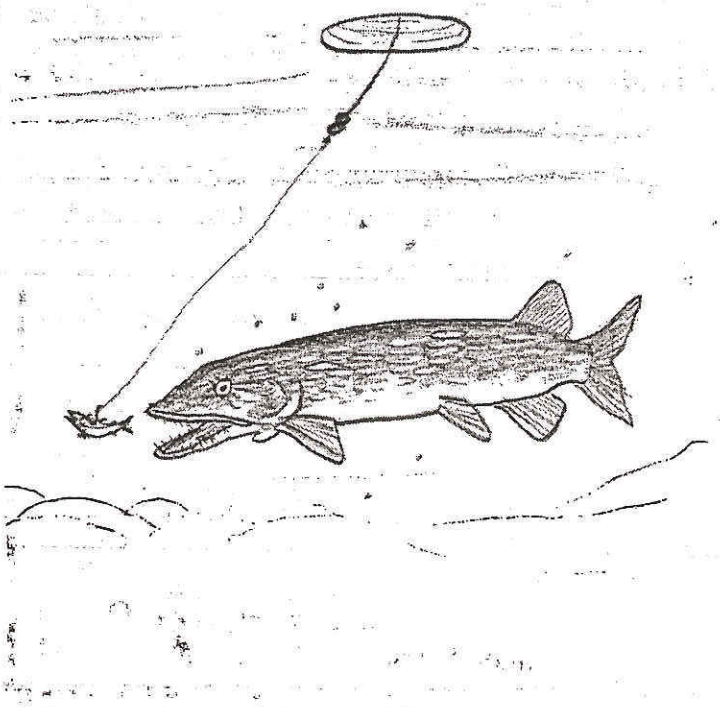
PHOSPHORUS

The Phosphorous Concentration graph above illustrates how phosphorous is re-suspended from the sediments into the water column as the summer progresses and the dissolved oxygen level decreases. On May 13, the Concentration was thirteen parts per billion at all depths. Although this is a high level in comparison to other lakes, it is much lower than the readings taken at the same location on August 11. By that time the dissolved oxygen had become depleted at the mid to lower depths, setting the stage for that unnatural internal recycling event which causes large amounts of phosphorous to be stripped from the sediments and to become available for increased algae growth. The lakes biologists estimate that about half of the total amount of phosphorous in China Lake is recycling from the sediment. This is the phosphorous which would be removed from the system by the proposed alum treatment.

In summary last summer's China Lake water quality sampling program has once again confirmed that, in spite of all of our success in controlling erosion and sedimentation from the lake's thirty two square mile watershed, the existing high levels of phosphorous in the lake are continuing to allow massive algae blooms to occur. The problem will persist until the alum treatment is done.

George Lord
Lake Restoration Project Director



Septic Grar Money Available

Do you know someone wh or do *you* have, an outdated system and live on China Now is the time to replace th system, because some $21,(grant money is available to share the cost of making your system meet the required stan According to a DEP study of Lake, inefficient septic sy around the lake contribute abo of the phosphorus pollution lake. Unfortunately, shorefront landowners have de replacing their septic sy because of the cost. Well, no excuses, because financial h here. We urge you to do it before the money runs o someone makes you do it! George Lord at the China office for more information how to apply.

Also, there is still money ava for cost-sharing of erosion c projects around China Lake. summer, as in the past several the Youth Conservation Corps successful season repairing protecting eroded banks and sources of phosphorus runoff. labor is available to you *fr charge*, as well as some funds t for materials, etc., if your s identified as a priority.

China Lake Associatio

President	David Landry
Treasurer	Andre Boutin
Secretary	David Preston

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projects within Maine. Our newly elected State Representative Gail Chase and Senator Beverly Bustin have taken the lead and introduced legislation to permit a vote on a "lake bond." We thank them for their efforts and will follow this issue this year.

Despite the setback in federal funding, impressive gains have been made to date regarding restoration work. Over 100 possible lake pollution sites have been surveyed and corrections made at 80 of the worst sites on the lake through riprapping, controlling agricultural runoff, and addressing shorefront practices. The China Lake Restoration Project ranks among the most ambitious projects in the country. Still, with the amount of work that has been done, China Lake experienced another algae bloom this summer and the phosphorus levels in the lake were the highest ever recorded. The work done to date certainly decreases the amount of phosphorus that is getting into China Lake, but does not address the primary cause of China Lake's problems at this point. The largest contributor to the phosphorus fueled algae blooms in China Lake is a process known as internal recycling. This is a process where the phosphorus rich sediments in China Lake liberate vast amounts of phosphorus fertilizer to the water column every year. Until the sediment problem is addressed, no improvement in the water quality will be seen. In fact, one can expect continued significant algae blooms and even further decline in water quality could be seen.

What will be done now? Certainly the Lake Association will continue to explore alternate funding for an alum treatment and continue to work toward complete lake restoration. Our strong emphasis will remain on education with work taking place currently within the China schools. We plan on another Lakefest Annual Meeting in July. Also, questions have been raised regarding the lake water level which will be studied. There is much work to be done in the coming months, and we will keep you informed and welcome any thoughts you may have.

David E. Landry
President

Members! Special Meeting

Please take notice that there will be a special meeting of the members of the China Lake Association on **Thursday, March 11, 1993 at 7:30 p.m.** in the library of the China Middle School, Lakeview Drive, China, Maine. The purpose of the meeting is to vote upon Amended and Restated Articles of Incorporation and Bylaws. The revisions will set forth more clearly the purposes of the Association as a charitable organization and clarify ambiguities in the Articles and Bylaws. This will facilitating the Association's designation as a 501(c)(3) tax-exempt charitable organization by the U.S. Internal Revenue Service. The designation as a tax-exempt 501(c)(3) organization will assist the Association's efforts to raise money for the China Lake Restoration Project. The Board of Directors of the Association recommends the members' approval of the Amended and Restated Articles of Incorporation and Bylaws.

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