

TLA Quarterly

OCTOBER 2009

President's Letter

Mid-September 2009 has been an unusually terrific time to live on these three lakes! Unlike the cooler weather in July and August, it's been a great time for campfires, s'mores, sunset cruises, swimming, and tubing.

At the July 22nd Annual Meeting, the following objectives were accomplished:

- Adopted updated By-Laws (now posted on our Website: www.3lakes.com)
- Elected a new slate of Directors, thanked Dorothy Clore and Alan Hickman for the many years of service on TLA Board
- Ratified the Board's 2009 actions
- Heard about important legislative initiatives in Lansing from Representative Wayne Schmidt
- Enjoyed a nice meal and music by Shawn & Patrick Ryan at Shanty Creek Resort.

TLA's Board is especially pleased with three recent accomplishments. (1) After considerable discussion by TLA's ad hoc Investment Task Force, we conservatively invested a consolidation of TLA's various unrestricted funds with Old Mission Investment Company in Traverse City. Thank you Len Franseen for chairing this Task Force. Our expectation is to harvest additional earnings annually from these investments - compared to previous earning from CDs and money market accounts - without jeopardizing ongoing programs. We envision more people may consider end-of-the-year donations to TLA's new endowment-like fund because their gift will keep on giving year after year. (2) One of our newest ongoing programs expected to benefit from these additional earnings from this endowment-like investments in future years is our new Environmental Education Outreach Partnership Program with four school districts within our watershed; Central Lake, Bellaire, Kalkaska, and Mancelona. A synopsis of the first year of this Environmental Education Outreach Program was presented at the second Freshwater Summit in Traverse City on October 2nd. (3) A third recent accomplishment is the wrap up of this year's High School Summer Internship Project that involved six outstanding students from four different schools. A synopsis of this year's summer internship project is an article in this Newsletter.

As part of TLA's 2009 Goals, we anticipate additional work this fall providing technical support to local townships in their efforts to develop an ordinance requiring an inspection of septic systems at the point of sale. As part of Kalkaska County's recently adopted ordinance, property owners in Clearwater Township are already subject to such an inspection at the point of sale. Torch Lake and Milton Townships have invited follow-up discussions. We also anticipate some involvement in supporting the objectives of a new Regional Stakeholders Group to help address the Bay Harbor Cement Kiln Dust Leachate issue, another water quality-related issue.

*Sincerely,
Dean Branson*

In this issue

President's Letter
this page

Environmental Education Outreach
by Patricia Roush
Page 2

TLA High School Internship Program
by Norton Bretz
Page 3

Rainforest Fauna and Ecology
by Derek Walton
Page 3

E. Coli Sampling Results
by Bob Oswald and Becky Norris
Page 4

**Lake Bellaire: Investigation of
Unusually Low Water Clarity**
by Dean Branson
Page 5

Joint TLA/TLPA/GRNA Education Event
by Norton Bretz
Page 5

**Current Stocking Program for Intermediate,
Bellaire, Clam and Torch Lakes**
by Tod Kalish
Page 6

Dead Ducks & Diazinon Insecticide Misuse
by Dean Branson
Page 6

Help Stop Invasives
by Laraine Mottern
Page 7

The Mission of the Three Lakes Association is to provide leadership to preserve, protect, and improve the environmental quality of the Elk River Chain of Lakes, especially Torch Lake, Clam Lake, and Lake Bellaire, for all generations



THREE LAKES ASSOCIATION

Founded 1966

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Environmental Education Outreach: Year Two, 2009/10

by Patricia Roush

November 15th is the deadline for the 90 teachers in the following four school districts to submit their "Wish-List" to TLA, as part of the second year of TLA's new Environmental Education Outreach Partnership Program: Central Lakes Schools, Bellaire Schools, Kalkaska Schools, and Mancelona Schools

TLA launched the second year of this new program mid-September, which is several months ahead of the launching of last year's program. The idea is to enable teachers to receive teaching materials they wished for in time to use them during this school year.

Although only about half the teachers submitted Wish-List items last year, we are expecting a larger response this year because of the overwhelmingly positive feedback we received from the teachers, students, school administrations, TLA's Board, and residents living within the Three Lakes watersheds. Last year's program was summarized on page 3 of TLA's July Newsletter, which is posted on our Website: www.3lakes.com.

Last year TLA received \$68,000 of Wish-List items from the teachers and was able to award \$14,200 in wishes to the teachers in these four school districts. The wishes granted included items in the following general categories:

- 16 Maps of the Chain of Lakes are now in school libraries and classrooms.
- 4 Classrooms went on an Inland Seas Schoolship excursion, one from each of the four school districts. TLA has communicated our intent to continue granting this wish in the future because teachers plan their teaching curriculum around this field trip, which is aligned with Michigan's Science Benchmarks.
- 6 Teachers participated in science workshops and joined a national environmental education organization.
- 6 Classrooms are receiving science publications.
- 420 students went on field trips to Grass River Natural Area or S. Manitou Island.
- Microscopes, phosphate kits, sensors, and other water quality-related supplies are now in classrooms.

In light of the schools' current economic situation, budgets for environmental education are more constrained this year. TLA Board's biggest concern about this program is obtaining sufficient funds to continue granting the teacher's wishes that are aimed at the hearts and minds of the future stewards of this and other watersheds. In addition to TLA's share of the proceeds from the annual golf outing, jointly sponsored by Grass River Natural Area and TLA, we rely on the generosity our members. It is reassuring to know that more than half of our membership adds a donation to their annual \$50 membership renewal. These donations go to support this and other TLA programs. You can either earmark your donation for a specific TLA program or make a generic donation, which will be used to support the existing profile of TLA programs. Your renewal letter should arrive in your mailbox in by mid-December 2009. Donations received by December 31st are eligible for a 2009 tax deduction.

TLA High School Internship Program

by Norton Bretz

The six high school interns Braden Ackerman (Elk Rapids HS), Billy Bohannon (Bellaire HS), Jordan Gunderson (Kalkaska HS), Wilhelmina Witt (Central Lake HS), David Witt (Central Lake HS), and Alisha Youmans (Central Lake HS) finished their field work, data analysis, and report writing at the beginning of September. Their report is entitled Lake Bottom Survey 2009: Torch Lake and Lake Bellaire and gives the results of sampling the lake bottoms with a dredge and a video camera. The purpose of the study was to document the density and depth range of the main food source for deep dwelling fish, a small (0.3 cm) crustacean called Diporeia, and the density and depth range of zebra mussels. In Lake Michigan Diporeia have diminished as zebras have taken over. But the students have documented that Diporeia populations are still high in Lake Bellaire and Torch Lake possibly because the two creatures do not inhabit the same depth range. Zebras prefer to live in water shallower than 40 feet while Diporeia prefer deep water. Zebra mussels are now rare in Lake Michigan because a more aggressive cousin, the quagga mussel, has taken over. No quaggas were seen in the samples taken this summer but we expect that they will come soon, and when they do, they will inhabit shallow and deep water as they do in Lake Michigan, overlapping the range of the native Diporeia. In the future, after quaggas have taken over, the same survey will be repeated.

The interns used the month of August to analyze data, write a report, and prepare a PowerPoint presentation on the Lake Bottom Survey. The report is complete and the presentation was

premiered at the Sept. 15, TLA Board Meeting. Arrangements are being made for the six students to give the same presentation to their own school boards starting in October.

TLA volunteers this year included Norton Bretz, Trish Narwold, Dean Branson, and Bob Kollin. The Antrim County Conservation District contributed the use of their activity room where the interns worked on their samples and wrote their report. Anyone who wants to participate in this program next year should contact Norton. The program next year will be to conduct a survey of cladophora along the shorelines of all three of our lakes.



2009 TLA High School Interns left to right: Jordan Gunderson, Alisha Youmans, Braden Ackerman, Wilhelmina Will, David Witt, Billy Bohannon.

Rainforest Fauna and Ecology

by Derek Walton, 2005 TLA summer intern.

Derek attends Kalamazoo College majoring in chemistry. This will be his Senior year. Derek spent his Junior year in Ecuador, lived with a local family, studied cane toads in an Environment and Ecology Program in Lima, visited the Amazon rain forest, and traveled to the Galapagos Islands. This summer Derek completed research for his senior thesis on the distribution and treatment of phragmites in the region around Elk Rapids working with Elk-Skegemog Lake Association and Thom Yocum.

Study abroad programs like those integrated into the curriculum of nearly 90% of all students attending Kalamazoo College represent the forefront of education focused on immersive or experiential teaching. As a student looking forward to this type of experience, it may represent many things: a chance to live independent of one's natural family, an opportunity to meet students or natives of other nationalities, first-hand experience with customs and traditions of cultures that share little or nothing with the student's own, and ultimately a daunting challenge to be overcome both physically and emotionally. Though the trip in and of itself might sound intimidating to many students and parents alike, the benefits from doing so have been well documented and I will firmly attest to their existence.

My choice to go to Ecuador, and particularly to participate in the Environment and Ecology program while there was influenced by

my prior experience in the Spanish language, my interest in sciences in general, and my desire, like many college students, to branch out a bit from their intended major and experience a bit more of what a liberal arts education has to offer. I will say confidently that it is the best decision I have ever made, as the changes that I took place within myself while there were both positive and unforgettable.

Aside from climbing six volcanoes, two glaciers, living in the Amazon rainforest for two weeks, bungee jumping, bathing in volcanic hot springs, leaving the village of Williamsburg for a city more than 1,000 times as massive, becoming a third son to my host family in only four short months, and spending the best two weeks of my life in the Galapagos Islands, I was given the chance to advance my education as well. While there we composed three lengthy research projects on tropical rainforest ecology, amphibian biology, and biodiversity, all having taken place in locations both secluded and well off the beaten path of your typical college curriculum.

It is understandably hard to synthesize a transformation that took me a full six months into a few short paragraphs. This would be the reason that only after more than 7 months back in the United States am I able to look back on who I was and who I am now. I am more confident, more culturally competent, and more understanding of the way environmental issues are handled elsewhere in the world. I see with wider eyes, appreciate what it means to be an American on a new level, and am increasingly confident that all those articles championing experiential education have hit the nail on the head. It's the defining event in my college career and I cannot stress enough how beneficial it was to me.

E.Coli Tributary Sampling Results

by Bob Oswald and Becky Norris

TLA's Environmental Lake Watch program continued its stream monitoring for e. coli in 2009 with two sampling events, one in June and one in August. Twenty three sites were sampled on both occasions. On the first sampling event there were two streams, Meggison Creek at North East Torch Lake Drive and Eastport Creek at M-88, with e. coli counts in excess of 300 colonies per 100 ml (the Michigan water quality standard (WQS) upper limit for body contact with water). On the second sampling event the two streams with high readings were back below the WQS limits but three different streams had elevated counts above the WQS. Because the E.Coli counts are sometimes elevated, it is wise to avoid contact, especially by children, with the water in the streams. The risk of illness from contact with lake water diminishes rapidly away from the streams because of dilution. Two of the streams with elevated counts in 2009, Eastport Creek and an unnamed creek just south of McLachlan Road have a history of intermittently elevated E.coli counts. We have focused attention

this year on mapping Eastport Creek upstream of our sampling site in an effort to identify remediable causes of elevated E.coli counts. If and when we find remediable causes we will confer with

Streams	2007 Geometric Mean	2008 Geometric Mean	2009 Geometric Mean	2009 Range
Eastport Creek	206	264	433	210-1414
Unnamed creek South of McLachlan Rd	437	116	202	99-411
Wilkinson Creek	158	218	106	77-147
Meggison Creek	220	45	119	36-365
West Butler Creek	164	32	28	11-70
Cedar River at Burrell Road	68	24	22	13-36
Shanty Creek at M-88	26	26	24	12-48
Maury Creek at Fisherman's Paradise			158	150-166
Cold Creek at Tyler Road	22	28	14	14-15
Finch Creek at Alden Highway	20	10	8	7-10
Spencer Creek at Alden Harbor	144	83	78	51-119

E.coli counts 2007, 2008, and 2009 [colonies per 100 ml]

Lake Bellaire: Investigation of Unusually Low Water Clarity

by Dean Branson

The water clarity in Lake Bellaire was unusually low and the reason remains a mystery. Duane Drake's weekly readings of water clarity based on Secchi Disk depths started showing less water clarity late June 2009 and continued through September. Typically the mid-summer water clarity readings show 10 to 12 feet of clarity, that indicates the depth where the Secchi Disk is no longer visible. During this past summer, Duane's readings were only 5 to 6 feet.

Coincidentally while the clarity of water in Lake Bellaire was less than usual, several riparians living on Lake Bellaire were asking questions about the usual amount of near shore reddish suspended material being carried with the wave action.

Early in September we launched an investigation in an effort to explain the low water clarity. We started by obtaining the concentration of total phosphorus (less than 3 parts per billion) as measured in May as part of the Cooperative Lakes Monitoring Program. Concentrations of total phosphorus greater than 8 to 9 parts per billion may have provided a clue to help explain the lower than usual water clarity.

A plan for collecting a few water samples was designed to allow interpretation of the test results by comparing the results with those obtained in 2006 as part of TLA's comprehensive set of data used to develop a predictive water quality model for Lake Bellaire. One set of samples were collected on September 3rd and another on September 15th. None of the values for phosphorus concentrations indicate anything unusual. All values were

in the range of 2.2 to 2.5 parts per billion. Similarly the values for chlorophyll A, 2.6 and 1.9 parts per billion were similar to those found in September 2006.

Since one of possible explanations for the loss in water quality was additional growth of bluegreen algae, we also submitted samples for bluegreen algae cell count and for microcystin analysis. Values for these water quality parameters were also similar to those found in 2006. Therefore the loss of water clarity in Lake Bellaire and the unusually high amount of near-shore suspended material remains a mystery.

New TLA Members since July Newsletter

- | | |
|-------------------------------|----------------------------|
| Russ and Donna Abbott | Anne Nordberg |
| Willis G. Ashby (life member) | Brook and Jean Smith |
| Carl and Mary Ann Maus Block | John Spotts |
| Charles and Lynn Dee Davis | Jon and Janet Koch |
| Richard and Mary Gilbert | Jaimson and Kristin Tatman |
| Brandon and Elisser Lassiter | Andrew Stuart |
| Chad and Erika Stuart | Cudney Stuart |
| Joey and Catie Fifer | Rodney and Patricia Pease |

Joint TLA/TLPA/GRNA Education Event

by Norton Bretz

The summer's second Education Event, In the Drink VI, occurred at the Shanty Creek Beach Club on Aug. 18. Former Bellaire resident Jim Lynn recounted his experience as a 10 year old in 1951, as he accompanied two uncles spearing fish on Grass River. After collecting a number of legal fish that Jim put in a bag in the back of the boat, they speared the last known sturgeon in the Elk Rapids Chain-of-Lakes. Then they wrestled it onto shore, towed it across Lake Bellaire, and winched it into a pickup truck. This fish was 77" long and estimated to weigh over 350 lbs. If it had been legal and recorded properly, it would have been the largest fish ever caught in Michigan. Jim spoke in front of a full sized photographic reproductions of the sturgeon taken from an old photo he brought. This full sized reproductions and the two original photos are now located in the Antrim County Conservation Office on Stover Rd. Jim and his uncles made a pact not to tell anyone about this event, but the death of the uncles many years ago, the passage of time, and the magnitude of the event prompted Jim to divulge the secret he had kept for so long. He has given a written description of his experience to Betty Hoover at the Bellaire Historical Society.

TLA had posters on the Education Outreach and the Summer Internship programs. Mike Meriweather spoke about the fish cover program and gave out maps of the fish cover GPS locations in Lake Bellaire. These materials are also available at the Antrim County Conservation District Office. Bob Bagley summarized the M-DNR fish stocking program from notes supplied by Tod Kalish, DNR Fisheries Biologist (see accompanying article). Russ Cecil demonstrated fly tying. As usual, TLA, TLPA, and GRNA volunteers served hors d'oeuvres and wine for the guests, estimated to be about 70.



Russ Cecil
tying flies



Jim Lynn and
the sturgeon

Cement Kiln Dust Leachate: Regional Stakeholder Group

by Dean Branson

As described in TLA's July 2009 Newsletter, we were very pleased to learn about EPA's positive response to a joint request by TLA and Walloon Lake Association, for assistance to form a Regional Stakeholders Group that would serve as a neutral facilitator for community organizations with a stake in the outcome of Bay Harbor's cement kiln dust leachate problem. Since July, the following developments have occurred:

- EPA issued a Technical Directive to Ecology & Economics Inc. (E²), under its TASC grant program, (TASC = Technical Assistance in Support of Communities). This authorization of funding from EPA enabled E²'s Melinda Holland during the week of August 10th to conduct a series of private and confidential interviews with dozens of individuals in the area representing a variety of stakeholder organizations in the area, including TLA.
- A week after Melinda Holland's interviews, Judge 13th Circuit Court Judge, Thomas Power, issued a stay against drilling a leachate disposal well in Alba and directed the parties to work out a solution.

- On August 29th, Melinda Holland and EPA held an informational meeting in Petoskey to develop a regional stakeholders group. E² expects to provide a document, "Community Assessment and Recommendations" by mid-October and to convene a meeting of representatives of stakeholder's organizations shortly thereafter. Based on EPA's timeline, this new regional stakeholders group will have less than one year to review the options and to obtain answers to their questions.

E² expects about 20 to 25 stakeholder organizations to participate in this new stakeholders group, including township governments, county governments, property owner associations, health departments, Little Traverse Bay Bands of Odawa Indians, real estate agencies, watershed organizations, and lake associations. Gary Knapp will be TLA's official representative with Dean and Norton as back up. Minutes of meetings will be posted on TLA's Website and updates provided at TLA Board Meetings.

Current Stocking Program for Intermediate, Bellaire, Clam and Torch Lakes

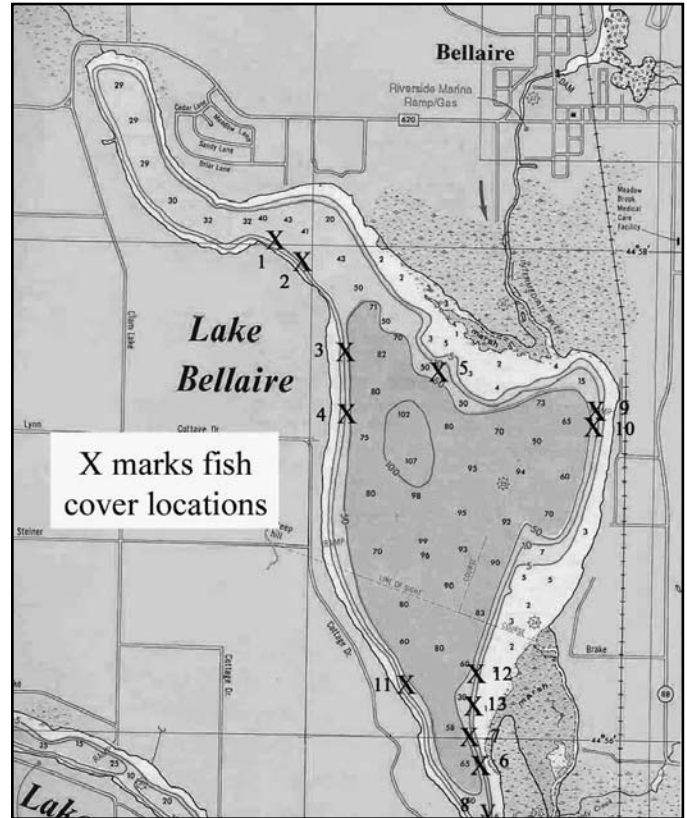
submitted by Tod Kalish, MDNR Fisheries Biologist

Intermediate Lake: The fisheries prescription for Intermediate Lake recommends stocking 76,000 (50/acre) spring fingerling walleye every other year. An increase in the amount and frequency of walleyes stocked into Intermediate Lake was prescribed in 2008 based on angler comments and the 2008 fisheries survey. The last time Intermediate Lake was stocked was 2006 due to the VHS (Viral Hemorrhagic Septicemia) stocking restrictions imposed in 2007. Fisheries Division will determine statewide stocking priorities and allocations by December of this year, and Intermediate Lake is a high priority stocking location for the Central Lake Michigan Management Unit. However, VHS stocking restrictions may again preclude the stocking of walleye into Intermediate Lake in 2010.

Lake Bellaire: The fisheries prescription for Lake Bellaire recommends stocking 88,750 (50/acre) spring fingerling walleye every other year. An increase in the amount and frequency of walleyes stocked into Lake Bellaire was prescribed in 2008 based on angler comments and the 2006 Fisheries survey. The last time Lake Bellaire was stocked was 2006 due to the VHS related stocking restrictions imposed in 2007. Fisheries Division will determine statewide stocking priorities and allocations by December of this year, and Lake Bellaire is a high priority stocking location for the Central Lake Michigan Management Unit. We are also currently conducting a creel census of Lake Bellaire. However, VHS stocking restrictions may again preclude the stocking of walleye into Lake Bellaire in 2010.

Clam Lake: Clam Lake is currently not stocked by the DNR, and was last surveyed in 2005.

Torch Lake: Torch Lake currently receives surplus Atlantic salmon fall fingerlings from Lake Superior State University (LSSU). The numbers stocked vary from 15,000-25,000 annually. The DNR fisheries prescription for Torch Lake recommends stocking 35,000 yearling Atlantic salmon annually. However, due to budget constraints, the Fisheries Division is unable to currently fulfill this prescription. As the budget constraints persist, we will continue to stock Torch Lake with as many fall fingerling Atlantic salmon as we can get from LSSU.



Fish Cover Locations on Lake Bellaire

Here are the major regulation changes: 1) Anglers may now use up to three rods or tip-ups while angling, regardless of species. This allows use of three separate lines and up to six total hooks. 2) A new two-gallon possession limit has been placed on smelt regardless of method of take. 3) The northern pike and muskellunge spearing season through the ice has been extended. The season now runs from Dec. 1-March 15.

Editor's note: On Sept. 27 Kyle Anderson of Rapid City caught a Michigan state record muskellunge in Torch Lake. The fish was 55 inches long and weighed 50 lbs. 8 oz. This beats the previous record 48 lb. muskie caught in 1984 on Lake Skegemog.

Dead Ducks and Diazinon Insecticide Misuse

by Dean Branson

Eight mallard ducks were found dead along a 300-foot shoreline on the northeast corner of Torch Lake on the evening of August 7th. DEQ's wildlife pathologist in Lansing, Dr. Cooley, determined that the cause of death was poisoning by diazinon insecticide. His diagnosis report, dated August 20, 2009, was based on his necropsy examination of the ducks, that included the pathological signs of the insecticide and the analytical evidence of diazinon in the gizzards of the dead ducks along with sunflower seeds. It is somewhat reassuring to know that the ducks did not die from a water quality-related issue, such as Cladophora harboring botulism.

According to Eric McCumber, Michigan Agricultural Department's Pesticide Inspector, diazinon insecticide is a Restricted-Use Pesticide, meaning it is currently available to

licensed applicators only. It seems very unlikely that the ducks died due to an approved use of diazinon. Prior to Dec. 31, 2004 diazinon was available to the general public. Therefore, it is not unreasonable to assume that the ducks died as the result of a misuse of the insecticide. Diazinon is an organophosphate insecticide commonly used more than 50 years ago.

At least two lessons can be learned from this incident...(1) negative consequences can result from misusing old pesticides, and (2) if you have an old bottle of diazinon in storage, the most prudent practice for its disposal is at the next scheduled collection of "Household Hazardous Waste". Another purpose of this note is to thank the people who found the dead ducks and notified the DNR officials who arranged for and conducted the necropsies. For further information about reporting dead wildlife, please contact MDNR at 231-533-8341.

Help Stop the Invasives

by Loraine Mottern

Invasive phragmites is beginning to show its ugly head in northern Michigan. Highly invasive strains of the common reed grass (*Phragmites australis*) are taking root on our Lake Michigan shoreline as well as inland lakes, streams and wetlands.

The "ugly head" is a very distinctive, large, dense, brownish-purple plume (seed head) borne on 12' - 15' grey-green stalks. Non-native (invasive) stands of phragmites become so dense that native plants are crowded out, wildlife habitat is reduced and shoreline access is blocked.

Rhizomes generate roots and stalks at regularly spaced nodes. An individual plant can multiply into a large stand through its rhizomes that may exceed 60 feet in length. Rhizomes can grow more than



6 feet per year and readily develop into new plants when fragmented. Because rhizomes deeply penetrate the soil, the plant can reach low-lying groundwater and tolerate a variety of growing conditions including dry upland sites and wetlands with water depths in excess of 2 feet.

Phragmites is native to much of the world, including the upper mid-west (Michigan) and is part of a well balanced ecosystem. However, the highly aggressive strains that form the dense impenetrable stands are believed to be non-native in origin. Genetic research has shown that non-native stands were introduced on the Atlantic Coast in the early twentieth century and have been spreading across the continent since then. If left unchecked in northern Michigan, it will undoubtedly spread from our Great Lakes shoreline, where we see more of it now, to our inland lakes, streams and wetlands as it has done downstate as well as in other parts of the country.

Phragmites is expensive and difficult to eradicate once it gets established. Therefore, early identification and rapid response (treatment) are the best methods of control. Field experience and research have shown that the most effective method of control is an initial application of herbicide in late summer or early fall after seed heads are fully emerged and the plant is mature. That should be followed by mechanical removal (cutting) after about three weeks. If applied properly and at the right time, a 97% mortality rate has been reported in some cases. Annual maintenance is required.

The MDEQ has produced an informational booklet, [A Landowner's Guide to Phragmites Control](http://www.michigan.gov/deq/inlandlakes) [www.michigan.gov/deq/inlandlakes], for Great Lakes property owners and other riparians. This booklet helps with identification, explains control methods, and explains permit requirements. A coordinated treatment program along the Grand Traverse Bay shoreline from Charlevoix County to Leelanau County was started this year. Call or visit your township office or Conservation District Office to learn what is being done in your area and how you can help.

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October 2009 issue of the TLA Quarterly

THREE LAKES
ASSOCIATION

