



The Acton-Shapleigh Youth
Conservation Corps
2012 Season Report

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I. Executive Summary

The Acton-Shapleigh Youth Conservation Corps (ASYCC) is completing its twelfth season of serving the towns of Acton and Shapleigh, Maine. The ASYCC “is committed to protecting the waterways within the Mousam Lake and Square Pond Watershed. This is achieved by providing education, community outreach, courtesy boat inspections, technical assistance, and the installation of effective erosion control practices to the communities of Acton and Shapleigh. The ASYCC continues to work to sustain and protect the valuable waterways of Goose Pond, Loon Pond, Mousam Lake, and Square Pond for the enjoyment of the community and its visitors.¹ Since it was founded in 2001 ASYCC programs have successfully raised awareness and improved the watershed’s health. The ASYCC consists of two overarching programs, the Erosion Control Crew (ECC) and Courtesy Boat Inspections (CBI).

The first program is the ECC program which implements conservation projects on lake front properties to reduce erosion and prevent run-off, specifically phosphorus, from entering the watershed. The overall objective is to improve the water quality of the lakes by reducing phosphorus intrusion via non-point source pollution. This year, the ECC completed 26 projects, each uniquely addressing the property’s run-off problem without compromising the homeowner’s ability to use and enjoy the camp site. Each project successfully addressed the erosion that was occurring by implementing a variety of the EPA’s Best Management Practices (BMPs). Each BMP is a low-impact, environmentally friendly solution to non-point source pollution.

Efficiency of the ECC program continues to improve. Although 27 projects were completed in 2011, the total number of conservation projects completed in one season is not necessarily the most important indicator of the overall impact of the program. The amount of time and energy required to effectively stop run-off from eroding a property and polluting a lake with phosphorus intrusion varies from job to job, some taking several days while others just an afternoon. Because we enjoyed an experienced crew in 2012 we were able to complete several projects that required as many as six BMPs. The crew leader was an experienced four-year veteran of the ASYCC’s ECC program and many of the crew members were in their second or third year. This experience level had a positive impact on the efficiency, quality and execution of work. Additionally, the technical director, now on his third year with the program, returned with new and improved methods to manage an effective program.

The Courtesy Boat Inspections program is the ASYCC’s second overarching program. The program completed another extremely successful season. The goal of the CBI program is to prevent the introduction of all aquatic plants and marine species, especially invasives, from entering the watershed. This is more important today than ever before because of the increase in invasive plants and mussels that have been introduced in neighboring lakes. If Mousam Lake and Square Pond were to be invaded by such plants the economic impact on the towns of Acton and Shapleigh, and the property values of local residents, would be catastrophic.

CBIs inspect each boat and trailer before entering the public boat launches of Mousam Lake and Square Pond. They are instructed to also educate, to an appropriate extent, each boat owner on the importance of not transplanting plant and marine species from one lake to the next by inspecting their own boats and trailers.

Once again CBI coverage increased from the previous year. In 2012 CBIs covered the Mousam Lake boat launch 98 hours per week during the peak season, 36 hours per week during the pre-

¹ asycc.com, 2012.

season, and 40 hours per week during the post-season. Square Pond's boat launch was covered 60 hours per week during the peak season, 16 hours per week during the pre-season and 22 hours per week during the post-season. While the peak season hours have remained the same as 2011 hours at both ramps, 14 hours per day at Mousam and 8.5 hours per day at Square, pre and post season hours have increased substantially at both ramps. Mousam Lake was covered as early as mid-April and over a few weekends of the following month for the bass tournaments and sunny, warm weekends.



Figure 1 The Erosion Control Crew showing the ASYCC Board of Directors one of their 2012 projects.

II. The Acton-Shapleigh Youth Conservation Corps

Introduction

The Acton-Shapleigh Youth Conservation Corps (ASYCC) is a non-profit organization founded in 2001, working to protect the immediate watersheds of Mousam Lake, Square Pond, Goose Pond, and Loon Pond. The ASYCC is committed to providing education, community outreach, technical assistance, courtesy boat inspections, and the installation of erosion control practices in the towns of Acton and Shapleigh. The goal of the ASYCC is to sustain and protect the valuable water resources for its ecological importance as well as for the enjoyment of the local community, businesses, and its visitors.

Each year the ASYCC strives to improve upon its previous successes. The ASYCC hires local residents who, through their work, come to have a vested interest in protecting the local waterways. Between the two programs, CBI and ECC, and administrative roles the ASYCC hired 24 employees during the 2012 season. Of those 24, 22 were local residents. Hiring locally is extremely important to us. We want to have the residents of Acton and Shapleigh learn how to protect this vital resource. Furthermore, with the exception of three adults, all are young people. We believe in employing and educating our youth to help produce future leaders in our efforts to protect valuable resources like watersheds and better care for the planet.

The ASYCC was created for the purpose of helping to restore Mousam Lake. In the early 1990's the EPA placed Mousam Lake on the list of Maine "Lakes at Risk." Understanding the importance the lake has on the town's economy and recreation, there began a major effort on the part of many of the local residents who were able to partner with the Maine Department of Environmental Protection to launch a campaign to restore Mousam to a healthy lake. One of our two programs, the Erosion Control Crew (ECC), continues to target residential remediation projects to prevent phosphorus intrusion into the lake. After much time, hard work, educational outreach, and nearly a million dollars from the region, Mousam Lake was removed from the 'Lakes at Risk' list in 2007.

With invasive species threatening New England water bodies more and more every year, our second overarching program, the Courtesy Boat Inspection (CBI) program, was designed to prevent the transportation of any aquatic species, both plants and animals, from entering Mousam Lake and Square Pond. The emphasis is on invasive species, but we collect and send to the state all plant and animal fragments taken off boats and trailers at the two boat launches.

Educational outreach and community involvement is the underlying foundation of our mission. Education is the most critical piece of the puzzle. Generally speaking, there is a lack of education among the public on the importance our actions have on the larger ecosystem. Our CBI program helps boaters understand how vital it is to inspect their own boats each time they are going to or leaving a water body. The ECC program and technical director spend a lot of time with homeowners and town residents to help educate them on how properties contribute to phosphorus intrusion and what it means to the health of a lake. The homeowners that host an ECC project take great satisfaction in knowing they're doing their part in caring for the lake.

A brief historical overview:

Goose Pond, Loon Pond, Square Pond, and Mousam Lake are located in the towns of Acton and Shapleigh, in York County, Maine. The towns of Acton and Shapleigh have significantly changed since being established in 1772 and 1830, respectively. The shores along the Shapleigh side of Mousam Lake were first developed for industrial use by the sawmill, merchant and service businesses, as well as a few residential homes. Over time, Mousam Lake became a more populated residential community. This resulted in the loss of naturally forested areas, the addition of dirt and paved roads, lawns, and un-vegetated properties all having a negative impact on the lake's water quality. When residential developers used phosphorus, nitrate, nitrite, fertilizers, and on top of that rapidly clear-cut natural buffers for residential development the water quality suffered dramatically. These factors have led to a decrease in dissolved oxygen (DO), clarity of water, and an increase in turbidity. Indicator species such as frogs, salmon, cranes, loons, and other native birds and wildlife left the area due to both the poor water quality and the loss of their native habitat and breeding ground to residential development.

It was not until the early 1990's that the Maine Department of Environmental Protection noticed a decrease in water quality of Mousam Lake and placed it on the "Lakes at Risk" list. Due to Mousam Lake being classified as an "Impaired Water Body", the town received funding and special attention from the state and local governments to help fix the poor water quality. After many years, much local effort and significant resources, Mousam Lake was taken off the list in 2007. In turn, indicator species such as loon, salmon, and other native species have started to return back to the area. Mousam Lake being off list cannot be taken for granted. Without proper management and further protection from invasive species and harmful elements such as phosphorus, Mousam Lake will relapse to its previous impaired state. The ASYCC works hard to help educate the local residents to prevent such a recurrence.

Similar to Mousam Lake, Square Pond has experienced extensive residential growth along its shore banks. Although Square Pond is not an impaired water body, without proper management by the Square Pond Improvement Association and the ASYCC it too may become impaired. It costs less to prevent endangering a water body than to fix one that is already impaired. Prevention in this case is far less expensive than reacting to problems once they exist and that is why the towns fund the ASYCC.



Figure 2 One of the many examples of erosion caused by residential development. Photo taken at Mousam Lake on one of the properties we implemented Best Management Practices.

Geography of Mousam Lake Watershed:

Mousam Lake stretches 926 acres, with over 700 residences inhabiting its shorelines. Square Pond covers 896 acres, with nearly 500 residences inhabiting its shoreline. Both Loon Pond and Goose Pond are significantly smaller water bodies, both in size and development. Loon Pond has just over 200 residences while Goose Pond has 40. The watershed of Mousam Lake, Square Pond, Loon Pond, and Goose Pond, known as the Mousam Lake Watershed, covers 22 square miles and is home to over 2,200 seasonal and full time residents.²



Figure 3. Courtesy of EPA's National Lakes Assessment: a Collaborative Survey of the Nation's Lake

² Mousam Lake Water Quality Improvement Project, #2000R-40-WIFAP. Viewed on August 13, 2011, retrieved from http://www.maine.gov/dep/blwq/docgrant/319_files/reports/2004pg34_43.pdf.

Problems Affecting the Mousam Lake Watershed

The Mousam Lake watershed is a valuable resource not only to the lake front property owners but also to the livelihood of economic and social development for the greater area. The Mousam Lake Watershed and its valuable resources are threatened every year by erosion and invasive aquatic plants.

Erosion is a natural process in which the elements breakdown the earth's materials, usually rock and soil, over time. Erosion creates run-off and run-off creates erosion; it is a self-perpetuating cycle. When rainwater and melting snow are not absorbed into vegetation or deposited into a water body right away, it will travel down hill until it is absorbed or deposited. As it runs down hill, the run-off gathers together increasing in volume as well as velocity. The effect is erosion. Often times, once erosion begins, it penetrates substrates in the soil that are not as compact allowing for accelerated erosion. As the erosion is occurring, the run-off transports what it has eroded, which in this region is a general sandy gravel composition. Further perpetuating again, when the run-off transports this composition, it then has the ability to erode more of the land because of the sand and gravel churning up more of the land as it travels downhill. Unfortunately, the downhill topography of the four lakes means that the erosion and run-off ends up in the lake.

When the erosion is deposited into the lakes, it brings in phosphorus. Phosphorus is a natural nutrient that is necessary for plant life, but it is classified as a limited nutrient. Phosphorus is healthy to a certain amount, but overabundance is detrimental. With all of the development over the last several decades, the removal of natural vegetation along the shorelines has resulted in excess amounts of phosphorus entering the watershed.

The results of erosion from waterfront properties such as those found in the watershed boundaries of the ASYCC can be on several levels. It affects the biology of lakes by introducing excessive nutrient loading which leads to algal blooms, lower dissolved oxygen leading to the loss of native marine life, as well as decreased water quality and increased turbidity. From an economical standpoint, the less healthy the lakes are the lower the property values are valued. Recreational use can decrease as well. Property owners who remove vegetation and do not address the run-off appropriately can get gullies running through their land, mass amounts of soil removed exposing the roots of trees, water problems in their homes, and the water can degrade the structural integrity of structures such as walls, stairs, pathways, and porches. The ECC's conservation projects are designed to reduce harmful erosion and prevent run-off from entering the watershed by allowing it to naturally percolate into the ground like it is theoretically suppose to do.

The second major issue threatening the watershed is the introduction of invasive species. Invasive species can be plants or marine animals, both of which greatly threaten the biodiversity of an ecosystem. These species are native to far away regions of the world: Asia, Europe, and Africa, and even regions of the United States. They have been unintentionally transported to faraway waterways, usually through industry shipping methods; however, it is also common for non-native species to be dumped out of fish tanks into nearby water bodies. Once brought into a region, boats are the most likely source of transporting them from water body to water body. When plant fragments attach themselves to a boat or any type of boating equipment, they are known as "hitch hikers".

These invasive plants are dangerous because they grow at abnormally high rates and are extremely difficult to control, often times being impossible to completely eradicate from lakes and rivers. Invasive plants have the ability to take over the entire littoral zone of a water body. This is due to their inherit trait of being from a foreign ecosystem where they are a part of the natural system of checks in balances that occur in any well-functioning ecosystem. When introduced into foreign lands,

they do not have any predators, enabling them to reproduce at rapid rates, taking over the local flora and fauna that must compete amongst each other. Furthermore, when erosion and run off occurs along shoreline properties, this brings in excess nutrients, especially with the illegal use of fertilizer, and accelerates growth.

The CBI program is dedicated to inspecting all boating equipment entering in and out of the boat launches of Mousam Lake and Square Pond to prevent the introduction of the aggressive invasive plant and animal species. The state of Maine has banned 11 invasive aquatic plants that have been documented in Maine public waters as of 2012: Brazilian elodea, Curly-leap pondweed, Eurasian water milfoil, European frog-bit, European naiad, Fanwort, Hydrilla, Parrot Feather, Variable-leaf water milfoil, Water Chestnut, and Yellow floating heart. As of March of 2012, there are 23 water systems in Maine that have one of these invasive plants. Nearby New Hampshire is up the low 70's. Massachusetts is even worse. There are three lakes within 30 minutes from the Mousam Lake Watershed that have documented infestations. The threat of invasive plants being transported from nearby lakes is very real and our CBI's primary objective is to stop the plants from ever entering.

Mousam Lake and Square Pond provide a significant percentage of each town's tax revenue. If a lake were to be invaded by invasive plant species, there would be enormous and potentially irreversible degradation not only to the lake but also to property values, and therefore the tax revenue. Lakes with extreme infestations can reach a point where they can no longer be used recreationally because the plant has overtaken so much. The CBI program is the best way to counter the threats of aquatic invasive plants by inspecting boats entering the Mousam Lake and Square Pond boat launches each summer.



Figure 4 ASYCC Courtesy Boat Inspector thoroughly looking over a boat before entering Mousam Lake.

III. Acton-Shapleigh Youth Conservation Corps Working and Support

Acton-Shapleigh Youth Conservation Corps Supporters

- Town of Acton, Maine
- Town of Shapleigh, Maine
- Mousam Lake Region Association
- Square Pond Improvement Association
- Maine Department of Environmental Protection
- Lakes Environmental Association
- Private Donors
- Province Lake Golf Course for their annual golf tournament

Acton-Shapleigh Youth Conservation Corps Staff

- Pat Jackson, Technical Director
- Amanda Loomis, Assistant Technical Support

Erosion Control Crew:

- Norris Johnson (Shapleigh), Erosion Control Crew Leader
- Aaron Rivard (Acton), ECC Crew
- Ben Yeaton (Acton), ECC Crew
- Colin Boisvert (Acton), ECC Crew
- Ronnie Cartwright (Acton), ECC Crew
- Morgan Johnson (Shapleigh), ECC Crew

Courtesy Boat Inspectors:

- Alyssa Clarke-Cartwright (Acton)
- Natalie Dionne (Acton)
- Keegan Simons (Acton)
- Sarah Stanley (Sanford)
- Bryan Levanie (Sanford)
- Don Lelievre (Acton)
- Gail Boisvert (Acton)
- Jenny Supinski (Acton)
- Jacquelyn Archambault (Acton)
- Kady Lemelin (Shapleigh)
- Sarah Stanley (Springvale)
- Sue Mrazik (Acton)
- John Coleman (Acton)
- Zach Lemelin (Shapleigh)
- Cassandra Tremblay (Acton)
- Melissa Carmichael (Shapleigh)
- Paige Tranchemontagne (Acton)



Figure 5 The Erosion Control Crew showing off their Loon shaped Rain Garden.

Acton-Shapleigh Youth Conservation Corps Board of Directors

- George Emery, President
- Norm Lambert, Vice President
- Bill Sherman, Treasurer
- Jane Thomas, Secretary
- Beth Matthews,
- Nancy Deans
- Peter Beck

Overview of ASYCC Hired Positions

Technical Director: The Technical Director is a full time position responsible for running all operations of the ASYCC. Duties for the ECC program include assisting landowners in the technical design of environmental improvements to their properties, direct supervision of the ECC and its crew leader, ordering all supplies, payroll and billing, and public outreach and education. Duties for the CBI program include scheduling and overseeing the program, tracking the number of inspected boats, and acquiring grants with the Lakes Environmental Association. In addition to running the ECC and CBI programs, the technical director serves as the liaison between the ASYCC Board of Directors, ECC, and CBI programs. During the “off season” the Technical Director maintains equipment and prepares for the coming season, improving upon the ASYCC’s operations in any way necessary. This position is 40 hours per week, paying \$17.00 per hour.

Erosion Control Crew Leader: The Erosion Control Crew Leader is in charge of overseeing the members of the ECC through leading by example, training, and educating. The priorities of the ECC crew leader are safety, efficiency, effectiveness of project implementation, managing crew member’s abilities, and to have fun while doing it, all in that order. Safety is always job number one on an ASYCC job site. This position is for 35 hours per week, Monday through Friday, at \$13.00 an hour.

Erosion Control Crew Member: The ECC consists of five hard working, full-time members and one alternate member. All ECC members are residents of the towns Acton or Shapleigh. ECC members install the erosion and run-off control practices designed by the Technical Director. The crew uses only hand tools during the construction of the project. This position is a 30 hour per week, Monday through Friday position paying between \$9.00-\$10.00 an hour depending on how long they’ve been with the program.

Courtesy Boat Inspector Member: The CBIs’ main job is to protect the Mousam Lake and Square Pond boat launches from boats and trailers transporting plant and animal species into the lakes. The broader reason is to prevent invasive plants and animals from entering the watershed. Their duties include educating boat owners about the potential dangers of invasive species within waterways, inspecting boats, trailers, and equipment within the boat. In the 2012 season, a total of 16 CBIs were hired to work, most working between 15 to 20 hours each week, with some joining the ASYCC in late August to work the post-season. CBIs are paid \$10.00 per hour, and work on both boat ramps.

IV. ASYCC Courtesy Boat Inspection Program

CBI Program Overview

The goal of the ASYCC Courtesy Boat Inspection Program (CBI) is to prevent the introduction of invasive aquatic plants from entering the local watershed. While obvious emphasis is on invasive aquatic plants, we also put our resources toward preventing all plants and marine animals from being introduced to the Mousam Lake watershed.

Invasive aquatic plants threaten the ecology of the freshwater lakes and rivers, the regional economy, and wildlife populations in the area. The ASYCC CBI program works with boat owners to inspect boats and trailers for transported plant fragments as well as providing boat owners with knowledge about invasive aquatic plants. Boat inspections and public education are the best ways to protect Mousam Lake, Square Pond, Loon Pond, and Goose Pond from the attack of invasive aquatic plants. Once an invasive aquatic plant enters a waterway it is very costly and often unsuccessfully treated or removed. The result of an invasive aquatic plant inhabiting a water body is several-fold: drastic decreases in nearby property values, degraded water quality, decrease in marine life biodiversity, and restricted recreational opportunities. Both ecologically and economically, it often leads to devastating destruction. There are several lakes in the region that have fallen victim to invasive plant fragments entering their water body, which is why the ASYCC CBI program works very hard to prevent invasive aquatic plants from infesting the Mousam Lake watershed.

CBIs are located on the Mousam Lake and Square Pond public boat ramps to check all boats, trailers, and other items within the boats such as fishing tackle, lines, ropes, water toys, etc. for invasive aquatic plants and fragments. If plants are found in or on the boat the CBI removes the plant or fragment and sends it to the state lab for identification.

Since 2008, the ASYCC has increased the number of hours on both the Mousam Lake boat ramp and the Square Pond boat ramp. In 2008, the Square Pond boat ramp was covered Saturday and Sunday for a total of 12 hours per week, running from the first weekend of July to the last weekend of August, with additional coverage on Columbus Day. A total of 173 boats were inspected during the 2008 CBI Season.

In 2012, coverage on Square Pond reached an all time high. Coverage began at the boat ramp on May 27th. This was the start of our pre-season, running until June 15th. From there the regular season began which ran until Labor Day, September 3rd. Coverage on the boat ramp was Monday through Thursday for four hours each morning, and 12 hours per day Friday through Sunday. After Labor Day we began our Post-Season, with hours again decreasing to just one Friday afternoon shift and nine hours per day of coverage during the weekend. This ran until October 14th. A total of 564 boats were inspected at Square Pond during the 2012 CBI Season.

Similar to Square Pond, Mousam Lake has also seen a significant increase in coverage since the 2008 CBI season. In 2008, the Mousam Lake boat ramp was covered Monday through Thursday for eight hours per day, and Friday through Sunday for ten hours per day, for a total of 62 hours per week. A total of 1,182 boats were inspected during the 2008 CBI Season.

In 2012, CBI coverage for the pre-season began earlier than ever, with bass tournaments in late April getting covered. Pre-season ran until June 15th where coverage was 12 hours per day Friday through Sunday. The regular season extended coverage to 14 hours per day every day for a total of 98 hours per week. During the post-season, September 4 through October 14, Mousam Lake CBI coverage reduced a Monday morning shift and to Friday through Sunday for 14 hours per day, 46 hours per week. A total 4,939 boats were inspected at Mousam during the 2012 CBI Season.

Below are tables representing the change in CBI coverage on both Mousam Lake and Square Pond since 2008. Included in this is the number of boats inspected, which also has an increasing trend.

Plant Fragments Collected

This year's CBIs collected an impressive 264 plant fragments off of boats entering and exiting the boat ramps of Mousam Lake and Square Pond. One of the samples was identified an invasive Water Chestnut. In 2011, there were 58 plant fragments collected. with two of them being invasive aquatic milfoil plant candidates. We were unable to confirm these two fragments as invasive because the plants had dried out past a point of identification.

The drastic increase of plant fragments collected off the boats and trailers is suggested to be a result of two reasons. We believe the biggest reason is due to the early thaw that occurred in early Spring this year. It is believed to have taken place about one month earlier than usual leading to an earlier than normal jump in plant growth. With warmer than normal temperatures prevalent in April and May and a hot summer, the plants grew to unusual length and to unusual numbers. With more plant matter in the lakes all over New England, more of it was getting caught in the props of engines, in the nooks and crannies of trailers, and wherever plants get caught.

The second reason we believe led to such an increase in plant fragments collected is how we trained our CBIs. In past years, we were not as adamant about bagging every piece of plant a CBI could find, but rather just those that look like real plants. Many of the samples in 2012 were forms of pond weed or just blades of grass. We can assume that in past years these samples may have been discarded as not worth collecting and therefore the final number of plant fragments collected was low. This year, however, we were very insistent that all plant matter be collected with the reasoning that we want experts to be the ones to verify if it is invasive or not instead of CBIs who may only look at it for a quick minute because they are busy inspecting other boats. Also, we wanted detailed records of exactly what was both coming in and out of the lakes. If we intercepted a fragment going in then we know what other lakes or bodies of water may have. In the case of an invasive we can notify the host lake to help detect it as early as possible. If we intercept a fragment on the way out of our lake it tells us what is in our watershed.

On July 14, 2012, one of our CBIs intercepted a Water Chestnut plant fragment at Mousam Lake's boat launch. It generated significant press from several surrounding newspapers, including a copy of the article from Fosters which is in the Appendix, lake association newsletters, and state organizations such as the Lakes Environmental Association. The CBI who found the seed pods of the Water Chestnut described the fragment to be underneath the boat near the bow where the boat sits on the trailer pads. The find was a tremendous accomplishment for not only the ASYCC, but a major success story for the towns of Acton and Shapleigh. If the plant were to have snuck into Mousam Lake it could have had devastating effects on the biology of the lake as well as the town's economy.

Mousam Lake CBI Data

Mousam Lake-Per day coverage over last five years

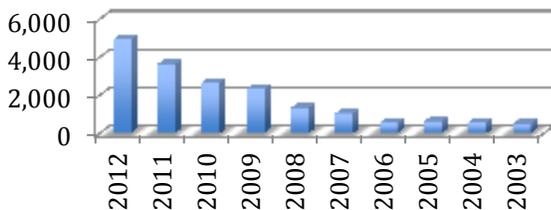
	2012	2011	2010	2009	2008
Pre-season	*Fri-Sun: 12	Fri-Sun: 12	Fri-Sun: 12	Mon-Thur: 12 Fri-Sun:14	NA
Reg. Season	Mon-Sun: 14	Mon-Sun: 14	Mon-Sun: 14	Mon-Thur: 12 Fri-Sun:14	-Mon-Thur: 8 -Fri-Sun: 12
Post-Season	Mon: 4 Fri-Sun: 12	Fri-Sun: 12	Fri-Sun: 12	Mon-Thur: 12 Fri-Sun:14	NA
Boats Inspected	4,939**	3,638	2,663	2,145	1,158
Plant Fragments Collected	234	34	0***	14	7

*In 2012, the pre-season began over a month earlier than in 2011 due to awareness over bass fishing tournaments, great weather on weekends, and a some extra money due to a successful golf tournament in 2011.

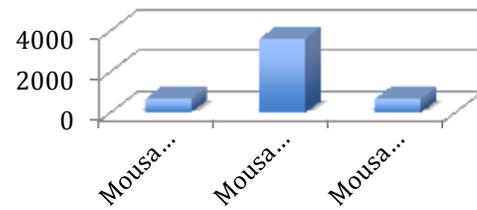
**Not accounted for is the amount of boats inspected after this report was submitted due to a late season Bass fishing tournament in which we had a CBI on duty to inspect all boats and trailers on entry and exit.

***Due to an error in record keeping.

Courtesy Boat Inspections on Mousam Lake



Coutesy Boat Inspections over 2012 Season: Mousam Lake

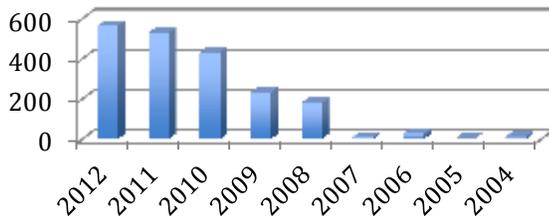


Square Pond CBI Data

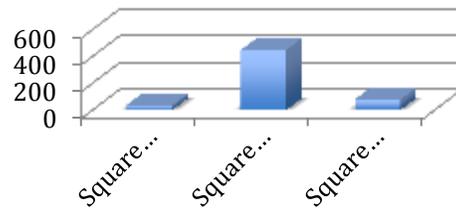
Square Pond-Per day coverage over last five years

	2012	2011	2010	2009	2008
Pre-season	Sat-Sun: 10	Fri-Sun: 6	Fri-Sun: 4	Fri-Sun: 7	NA
Reg. Season	Mon-Thurs: 4 Fri-Sun: 12	Mon-Thurs: 5 Fri-Sun: 12	Mon-Thurs: 6 Fri-Sun: 12	Fri-Sun: 7	Sat-Sun: 6
Post-Season	Fri: 4 Sat-Sun: 9	Fri-Sun: 6	Fri-Sun: 4	Fri-Sun: 7	NA
Boats Inspected	564	531	432	221	173
Plant Fragments Collected	30	24	3	3	1

Courtesy Boat Inspections on Square Pond



Courtesy Boat Inspections over 2012: Square Pond



News Article from Fosters:

Invasive plant stopped feet from Mousam Lake

Thursday, July 19, 2012

SHAPLEIGH — Last Saturday, Gail Boisvert, a courtesy boat inspector at the boat launch on Mousam Lake, intercepted an invasive plant fragment known as water chestnut stuck between a boat and its trailer.

The invasive plant was nearly transported into the lake, just as many invasive plants have been introduced to hundreds of other lakes in New England.

Boisvert said the plant fragment was wedged under the carpeted area of the trailer that supports the boat sides. She said she saw a blob that looked like grease, but upon feeling it noticed it had hard spines. As she removed it, Boisvert said she discovered two more fragments.

Boisvert's find prevented an invasive plant from rapidly spreading, costing the lake its good health and recreational value, while potentially saving the town and state tens of thousands of dollars each year.

With thousands of visitors entering the lake every summer, it is essential to inspect boats and trailers to make sure invasive species are not entering the lake. Last year alone, there were 58 plant fragments taken off visitors' boats and trailers at Mousam, two of which were milfoil species. So far this year, 52 plant fragments have been intercepted by boat inspectors. The water chestnut is the only invasive plant discovered so far this season.

The boat inspection program is part of the Acton Shapleigh Youth Conservation Corps (ASYCC), a nonprofit organization based in Shapleigh and Acton. The goal of the program is to inspect every boat that enters and exits the Mousam Lake and Square Pond boat ramps to keep out invasive aquatic plant and animal species.

The ASYCC also manages a second program — the Erosion Control Crew (ECC), which completes nearly 30 projects a summer on residential lakefront properties to help prevent runoff and erosion pollution from entering the lakes.

The ASYCC was founded in 2001 in response to Mousam Lake's remediation efforts. In the early 1990s, the EPA put Mousam Lake on the 'Lake at risk' list. Since then, the region has put over \$1 million into protecting the lake and as a result, Mousam Lake was removed from that list in 2007, the first lake to accomplish that feat in over 20 years.

The towns of Shapleigh and Acton together allocate \$44,000 annually to fund Youth Conservation Corps programs, the majority of which is directed to courtesy boat inspections. As a result the Mousam Lake and Square Pond state boat ramps are monitored 14 hours a day from late June until Labor Day, and long-weekend coverage from early May through Columbus Day.



Photo from google images. Water chestnut, an invasive aquatic plant, was discovered on a boat trailer last Saturday by a courtesy boat inspector at Mousam Lake.

Invasive species are generally from regions far away and therefore have no natural predators to keep them in check when they are introduced to a new environment. With no natural predators they can rapidly reproduce and choke out the natural species of the waterbody. This causes the native plants, fish, and insects to die and has devastating effects on the waterbody's biology, as well as the region's economy.

When a lake goes belly up, property values drop and the local economy takes a major hit. The recreation of the lake diminishes to the point where swimming, boating and fishing may come to a halt. Remediation for the water chestnut can cost at least \$30,000 to \$50,000 a year — and there are no guarantees it will be eradicated.

Water chestnut is known as one of the worst invasive plants and is suspected to have come from the Charles River in Massachusetts where the boater went just two years ago. Maine has a watch list of 11 invasive plants that are believed to be major threats to the state's waterbodies.

Maine's Department of Environmental Protection has identified 23 water bodies in southern Maine that have invasive plants, while nearby New Hampshire has 78 infested water bodies. Within only 30 minutes of Mousam Lake, three lakes have been invaded by these plants: Lake Arrowhead in Waterboro has milfoil, Pickerel Pond in Limerick has hydrilla, and West Pond in Parsonsfield has curly leaf pond weed.

Plant fragments can be hiding in the tiniest and darkest of places so it is important to be very thorough when inspecting boats and trailers. Courtesy boat inspection programs are critical in preventing invasives from entering Maine lakes and ponds.

The ASYCC is committed to protecting the waterbodies within the Mousam Lake and Square Pond watershed. This is achieved by providing education, community outreach, courtesy boat inspections, technical assistance, and the installation of effective erosion control practices. In addition to the funding provided by the two towns the organization also receives contributions from the state, the Mousam Lake and Square Pond lake associations and an annual golf tournament.

Organizations like the ASYCC help keep Maine's bodies of waters invasive free for the enjoyment of everyone.

