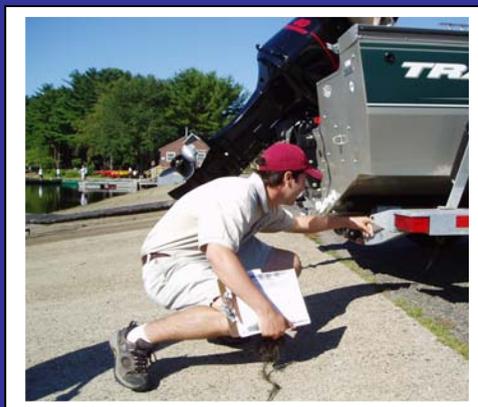


# 2008 Boat Ramp Monitor Program Report



dcr  
Massachusetts



Department of Conservation and Recreation ~ Lakes and Ponds Program

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Department of Conservation & Recreation  
Lakes and Ponds Program  
**Boat Ramp Monitoring Program**

In response to the increasing spread of invasive non-native aquatic species throughout Massachusetts water bodies, the Department of Conservation and Recreation (DCR) Lakes and Ponds Program established a Boat Ramp Monitoring Program in 2004. The DCR Boat Ramp Monitoring Program achieves its goal - to slow, and where possible prevent the spread of aquatic invasive species- in three ways. First, placing ramp monitors at un-infested water bodies helps to prevent introductions and protect their pristine state. Second, placing ramp monitors at already infested lakes reduces the spread of non-native plants from these water bodies to new locations, and reduces the risk that an additional non-native species will enter. Third, boater awareness is increased through a voluntary survey and informational materials. The program is now in its fifth year, and this report provides a summary of the results from the 2008 season.

Non-native or exotic species are plants or animals that are indigenous to other parts of the country or world, and when they are introduced to a new area, they have the potential to disrupt the balance of that ecosystem. These species frequently develop monocultures by driving out native plants and animals. Some non-native plants reproduce very rapidly, displacing native species and developing mats at the water's surface that render boating, fishing, swimming and other recreational activities impossible or dangerous.

Non-native plants arrive in our region by a variety of ways, including accidental escape from the aqua-gardening/aquarium trade, intentional release, or by hitching rides from foreign countries in ship ballast water. Once introduced, they are further spread to additional water bodies by hitching rides on boat motors, trailers, fishing gear and in bait buckets. Some non-native plants reproduce vegetatively. This means, that when just one small plant fragment enters a new water body it has the potential to grow into a mature plant and potentially infest the entire lake or pond. When a non-native species is established it is very expensive to control and nearly impossible to eradicate. **Prevention is the key!**

During the 2008 season, six boat ramp monitors were placed at both infested and un-infested water bodies state-wide, and their goal was to inspect every boat entering or leaving to make sure that no plant fragments or animals (ex. Zebra Mussels) were attached to the boat, trailer or gear. Boaters were given an informational brochure, invited to participate in a voluntary boat inspection and asked to complete a brief survey. The ramp monitors were posted at boat ramps each Friday, Saturday and Sunday from Memorial Day to Labor Day. Five of the six ramp monitors rotated between two or three ramps, and one ramp monitor conducted separate 1-2 day visits at several ramps.

## Boat Ramp Monitor Locations

The ramps were selected based on how busy they are (in order to reach as many boaters as possible), and their location (in an effort to achieve statewide distribution). One lake was chosen to protect because it currently does not have an infestation of non-native plants, and eleven ramps were chosen that already have invasive species, with the goal of preventing these non-native species from spreading to additional lakes. Placing ramp monitors evenly between infested and non-infested waters was preferred; however, our higher priority was to reach and educate as many boaters as possible. Unfortunately, the majority of the high use ramps in the Commonwealth are located on water bodies that are already infested with non-native invasive species. In addition to the main ramps, one monitor also performed one or two day surveys at five other ramps.

### Protection

#### Wallum Lake

Located in the heart of Douglas State Forest (Douglas, MA), this 322-acre water body has deep clarity and a maximum depth of 78 feet. A 2002 plant survey showed that, with the exception of Purple Loosestrife along the shore, there were no non-native aquatic species present, and plant growth in general was scarce. This boat ramp is heavily used, and due to its proximity to Rhode Island and Connecticut, draws numerous out of state boaters. A 2008 fall survey showed that the lake continues to remain free of non-native invasive species, with the exception of the Purple Loosestrife.

Note: The monitor split his time evenly between Wallum Lake, Webster Lake and Whitehall Reservoir.

Years Monitored: 2004, 2005, 2006, 2007, 2008

### Prevention

#### Lake Cochituate

Sprawled across three towns (Natick, Wayland and Framingham), this 650-acre lake draws over 200,000 visitors annually to Cochituate State Park, many of whom are boaters. Additionally, this is a favorite location for bass tournaments, water skiing competitions and other public events. As of 2002, this water body has had a large infestation of three non-native species: Eurasian Milfoil (*M. spicatum*), Variable Milfoil (*M. heterophyllum*) and Curly-leaved Pondweed (*P. crispus*). In 2007 a few Water Chestnut (*T. natans*) plants were also reported in the south basin of the lake. The ramp monitor's main goal is to prevent the spread of these species to other water bodies in the area, and to educate the large number of boaters who frequent the lake.

Note: The monitor spent two thirds of the time at his ramp, and the other one third of his time was spent at Lake Quinsigamond.

Years Monitored: 2004, 2005, 2006, 2007, 2008

### **Congamond Lakes**

This 465-acre lake in the town of Southwick has access via a public ramp and is a popular boating and fishing location for residents from both Massachusetts and Connecticut. The lake is divided into three basins, and there are ramps located on both the north and south basins. In 2005, Asian Clams (*Corbicula*) were documented, and the lake is also infested with both Eurasian Milfoil (*M. spicatum*) and Curly-leaved Pondweed (*P. crispus*).

Note: The ramp monitor spent 100% of his time at this ramp.

Years Monitored: 2006, 2007, 2008

### **Connecticut River**

In 2007 Rock Snot (*Didymosphenia geminata*), an invasive algae, was discovered in Vermont's White River and Battenkill River and in portions of the Connecticut River in both Vermont and New Hampshire. Since Didymo has not been reported in Massachusetts, the ramp informed boaters on the Connecticut River about the threat of Didymo, how to reduce the risk of spread and how to report a sighting.

Note: The ramp monitor rotated between the Oxbow Ramp (Gill, MA) and the Barton's Cove Ramp (Easthampton, MA).

Year Monitored: 2008

### **Long Pond**

This enormous, shallow 1,721-acre lake is the largest natural water body in Massachusetts. It sprawls across the towns of Lakeville and Freetown, with the public access ramp located in Freetown. This pond is a favorite location for bass tournaments, and the pond is heavily infested with both Fanwort (*C. caroliniana*) and Variable Milfoil (*M. heterophyllum*). During 2006, a new infestation of Asian Clam (*Corbicula*) was detected.

Note: The ramp monitor only spent a few days at this ramp.

Years Monitored: 2006, 2007, 2008

### **Mashpee/Wakeby Ponds**

Mashpee and Wakeby Ponds are connected kettle ponds located in the towns of Mashpee and Sandwich. Together, they cover 729 acres and have an average depth of 28 feet and maximum depth of 87 feet. Aquatic vegetation in these ponds is fairly scarce and there are no non-native aquatic plants; however, the pond has an infestation of Asian Clams (*Corbicula*).

Note: The ramp monitor only spent a few days at this ramp.

Year Monitored: 2006, 2008

### **Lake Onota**

Lake Onota in Pittsfield, MA is 617 acres, has a maximum depth of 66 feet and an average depth of 22 feet. Non-native species present include Water Chestnut (*T. natans*), European Naiad (*N. minor*), Eurasian Milfoil (*M. spicatum*), and Curly-leaved Pondweed (*P. crispus*). Due to Lake Onota's water chemistry and location, there is a high risk for an invasion of Zebra Mussels (*Dreissena polymorpha*) from infested water bodies nearby in New York and Vermont. The ramp monitor distributed Zebra Mussel specific brochures and emphasized the importance of emptying bait buckets, live wells and cooling water on dry land away from shore.

Note: The ramp monitor rotated evenly between this ramp and Pontoosuc Reservoir.

Year Monitored: 2006, 2008

### **Pontoosuc Lake**

This 480-acre lake, located in Pittsfield and Lanesborough, is heavily used and is choked with several non-native species including Water Chestnut (*T. natans*), European Naiad (*N. minor*), Eurasian Milfoil (*M. spicatum*), and Curly-leaved Pondweed (*P. crispus*). This is another lake that is at high risk for an invasion of Zebra Mussels (*Dreissena polymorpha*), and boaters here received an additional zebra mussel specific brochure.

Note: The ramp monitor rotated evenly between this ramp and Lake Onota.

Year Monitored: 2006, 2008

### **Lake Quinsigamond**

Lake Quinsigamond is a 772-acre urban water body nestled between Shrewsbury and Worcester. Due to its size, location, presence of two boat ramps and waterfront restaurants, Quinsigamond draws a diverse crowd, including recreational boaters, sail boaters, crew teams, jet skis and kayakers. There are several non-native plants in Lake Quinsigamond, including Variable Milfoil (*M. heterophyllum*), Eurasian Milfoil (*M. spicatum*), Fanwort (*C. caroliniana*) and Curly-leaved Pondweed (*P. crispus*).

Note: The ramp monitor spent one-third of his time at Quinsigamond and two-thirds of his time at Lake Cochituate.

Years Monitored: 2004, 2005, 2006, 2007, 2008

### **Webster Lake**

Webster Lake, located in the town of Webster, is over 1,270 acres, with two public boat ramps. This water body receives very heavy boat use, especially on the weekends during the summer. Unfortunately, in addition to several species of non-native plants (Fanwort, Variable Milfoil and Eurasian Milfoil), Webster is also infested with non-native Asian Clams (*Corbicula*). In an effort to prevent the spread of *Corbicula* to additional water bodies, the ramp monitor emphasized the importance of disposing of bait buckets, live well water and engine water well away from shore.

Note: The ramp monitor divided his between this ramp, Whitehall Reservoir and Wallum Lake.

Years Monitored: 2005, 2006, 2007, 2008

### **Whitehall Reservoir**

Located in Whitehall State Park (Hopkinton, MA) this 573-acre water body is a favorite location for fishermen. It is relatively shallow (average depth is 6 feet) and the speed limit on the water body limits waterskiing and other water sports. Unfortunately, a large infestation of non-native species (Variable Milfoil and Fanwort) threatens the health of the reservoir. The monitor's goal was to stop the spread of these species to other water bodies, to educate boaters, and to prevent the introduction of any additional non-native species.

Note: The monitor spent one third of their time at this ramp.

Years Monitored: 2004, 2005, 2006, 2007, 2008

## 1 Day Survey Ramps

### Ashumet Pond

Ashumet Pond is a 203-acre natural kettle-hole pond located in both Mashpee and Falmouth. Vegetation is scarce except in the coves, and non-native aquatic plants have not been documented here. Summer algae blooms in the summer are common, turning the usually clear water green. Recently Asian Clams (*Corbicula*) were discovered in Ashumet Pond.

Note: The ramp monitor performed a one-day survey at this location.

Years Monitored: 2008

### Johns Pond

Johns Pond is a 317 acre natural kettle-hole pond in Mashpee. The water has an average depth of 23 feet and a mean depth of 65 feet. The aquatic vegetation is native and fairly limited; however, Asian Clams (*Corbicula*) have been documented here.

Note: The ramp monitor performed a one-day survey at this location.

Years Monitored: 2008

### Peters Pond

Located in Sandwich, this 127-acre natural kettle hole pond is a favorite among fishermen. The transparency is excellent and aquatic vegetation is limited. Peters Pond has an average depth of 25 feet and a maximum depth of 54 feet. Access is provided by a medium sized ramp that has room for around twenty trailers. Peters Pond has a small stand of Common Reed (*Phragmites*) and recently, Asian Clams (*Corbicula*) were documented in this pond.

Note: The ramp monitor performed a one-day survey at this location.

Years Monitored: 2008

### Snipatuit Pond

This 710-acre pond is located in Rochester and forms the headwaters of the Mattapoisett River. Snipatuit is shallow through out, with an average depth of only five feet, and a maximum depth of 6 feet. The pond has a muddy bottom, and the brown stained water has minimal transparency. The pond is infested with non-native Fanwort (*Cabomba caroliniana*).

Note: The ramp monitor performed a one-day survey at this location.

Years Monitored: 2008

### South Wattuppa Pond

This is a large 1,283 acre pond in Fall River and Westport. South Wattuppa has an average depth of 15 feet and a maximum depth of 22 feet. There is minimal aquatic vegetation, but during the summer the pond often has serious algae blooms. The water is generally stained brown with poor transparency. This pond was free of invasive species in 2007.

Note: The ramp monitor performed a one-day survey at this location.

Year Monitored: 2008

## Results

During the fifth season of the Boat Ramp Monitoring Program, 3537 surveys were collected from boaters statewide at 17 ramps on 16 different waterbodies.

The survey results are summarized below, with details presented in Tables A and B.

- **78% of boaters were aware of invasive species.** (see [Graph 1](#))
- **Milfoil was the non-native species that people were most familiar with.** Other species, in order of familiarity, included: Zebra Mussels, Hydrilla, Water Chestnut, Snakehead Fish, Asian Clam, Purple Loosestrife, Didymo (Rock Snot) and Fanwort. (see [Graph 2](#))
- **81% of boaters understood that plants are spread by boats.** (see [Graph 3](#))
- **98% of all boaters surveyed were willing to wash their boats.** (see [Graph 4](#))
- **Over 94% (3371) of boaters surveyed were willing and able to participate in the voluntary boat inspection.** (see [Graph 5](#))
- **21% of all the inspected boats had plant fragments.** (see [Graph 6](#))  
Many boats were transporting more than one species at a time.
- **40% of the plant fragments removed from inspected boats were non-native.** (see [Graph 7](#)) **This resulted in 279 saves.**  
A save occurred when non-native plants were removed from a boat/gear prior to it entering the water, or leaving the ramp.

### Number of Surveys per Ramp

The total number of surveys collected at each ramp are listed below. (See [Table A](#)) Overall, the greatest number of surveys were collected at Congamond Lakes (1063), followed by the two ramps on the Connecticut River (649), Lake Quinsigamond (335), Onota Lake (319), Lake Cochituate (308), Wallum Lake (219), Whitehall Reservoir (215), Pontoosuc (205), Mashpee/Wakeby (69), Long Pond (68), Webster Lake (43), Five ponds were monitored for a few days, including Ashumet (13), Snipatuit (11), South Wattuppa (10), Johns Pond (4) and Peters Pond (6).

It is important to note that these numbers are not a true reflection of how busy the individual ramps are. Five of the boat ramp monitors divided their time between two to four ramps, and the sixth monitor remained at Lake Congamond all of the time. Additionally, in June the program dropped down from six to five ramp monitors. Therefore Mashpee/Wakeby Ponds and Long Pond were only monitored for one month.

The ramps with the highest number of visiting boaters (boats from other water bodies) were the two ramps on the Connecticut River and the Congamond Pond ramp. (See [Appendix A](#))

### Zebra Mussel Tracking (See Appendix A)

Based on data from the eleven primary boat ramps (excluding the one day survey ramps) at *every single ramp*, there were boats that were last used in a water body known to be infested with Corbicula. More alarming than this, at every single ramp except Mashpee/Wakeby, boats were launched that had last been used in water bodies known to be infested with Zebra Mussels.

At the higher risk ramps (Pontoosuc Reservoir, Lake Onota and Congamond Ponds) the actual number of boats that had last been used in Zebra Mussel infested water bodies was recorded. These ramps are considered to be at a greater risk for Zebra Mussel invasion because of their water chemistry and proximity to known populations of Zebra Mussels nearby in NY, VT and CT.

- At Pontoosuc Lake 21 boats that were last used in the Hudson River, Lake Champlain (VT) or Lake George (NY) were launched.
- At Lake Onota, 27 boats that were last used in the Hudson River, Lake Champlain (VT) or Lake George (NY) were launched.
- At the Congamond Ponds ramp, 48 boats that were last used in Lake George (NY), Twin Lakes (CT), Lake Ontario or Lake Champlain (VT) were launched.

### Water Chestnut Hand Pulling

For the second year in a row, the DCR Lakes and Ponds Program partnered with the U.S. Fish and Wildlife Silvio O. Conte National Fish and Wildlife Refuge to manually remove non-native invasive Water Chestnuts (*Trapa natans*) from water bodies in the Connecticut River Watershed. Water Chestnut is a very aggressive non-native floating leaved plant that spreads rapidly, choking waterways, hampering navigation and driving out native species. Unlike many non-native aquatic plants that spread primarily by fragmentation, Water Chestnut reproduces and spreads with sharp barbed seeds (chestnuts). If the plants are removed prior to seed formation, overtime, the Water Chestnut infestations can be controlled and occasionally eradicated. Several DCR boat ramp monitors worked along side USFWS staff to hand pull Water Chestnuts (*Trapa natans*) from eight water bodies in the Connecticut River Watershed.

Participating ramp monitors contributed 127 on-site hours and hand-pulled **2.6 tons** of Water Chestnut plants. Collectively, 14.8 tons (29,600 pounds) of Water Chestnut plants were removed by USFWS staff and DCR Boat Ramp monitors during the 2008 season.

## Cumulative Results

Since the commencement of this program in 2004, 26 ramps throughout the Commonwealth have been monitored.

- 11, 572 surveys have been collected
- 10, 941 boats have been inspected
- 2,132 boats were found to be carrying plant fragments
- 879 of these fragments were non-native

Over the five years, based on boater responses to the survey questions:

- 77.5% of boaters were aware of invasive species
- 75.8% of boaters were aware invasive species can be spread on boats/gear
- 97.5% of boaters were willing to wash or inspect their boats
- 19.5% of the boats inspected were transporting plant fragments
- Of these fragments, 46.9% were native, 41.2% were exotic and the rest were too dried to identify.

**Table A** Total results

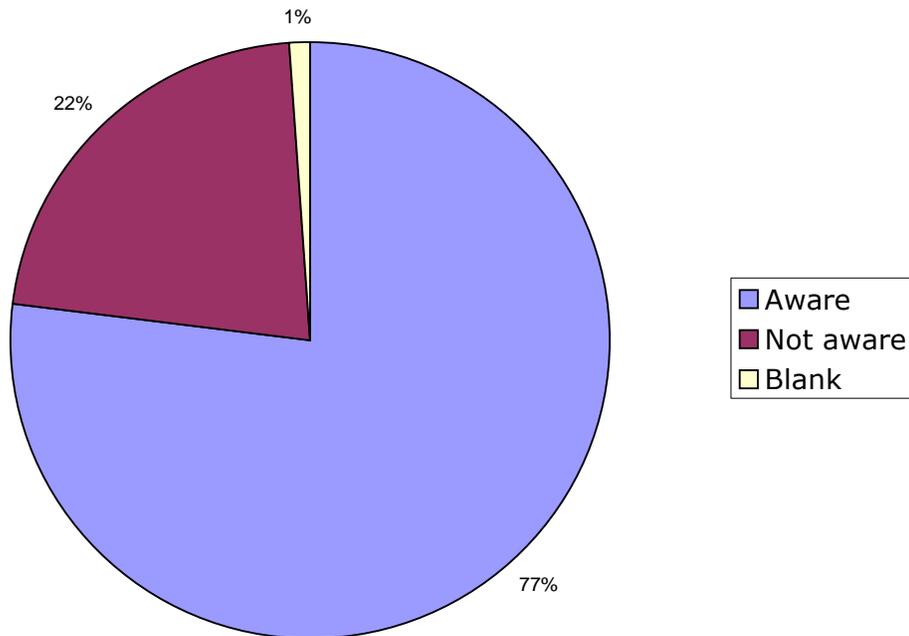
Question	yes	no	blank	total
Prior to today, have you heard of AIS?	2726	767	44	3537
Are you aware boats spread AIS?	2824	670	43	3537
Are you willing to wash/inspect your boat?	3420	55	62	3537
Permission obtained to inspect boat and trailer?	3371	31	136	3537
Were any plant fragments found?	701	2670	0	3371
Were the fragments found non-native?	354	279	68	701

**Table B** Results by ramp

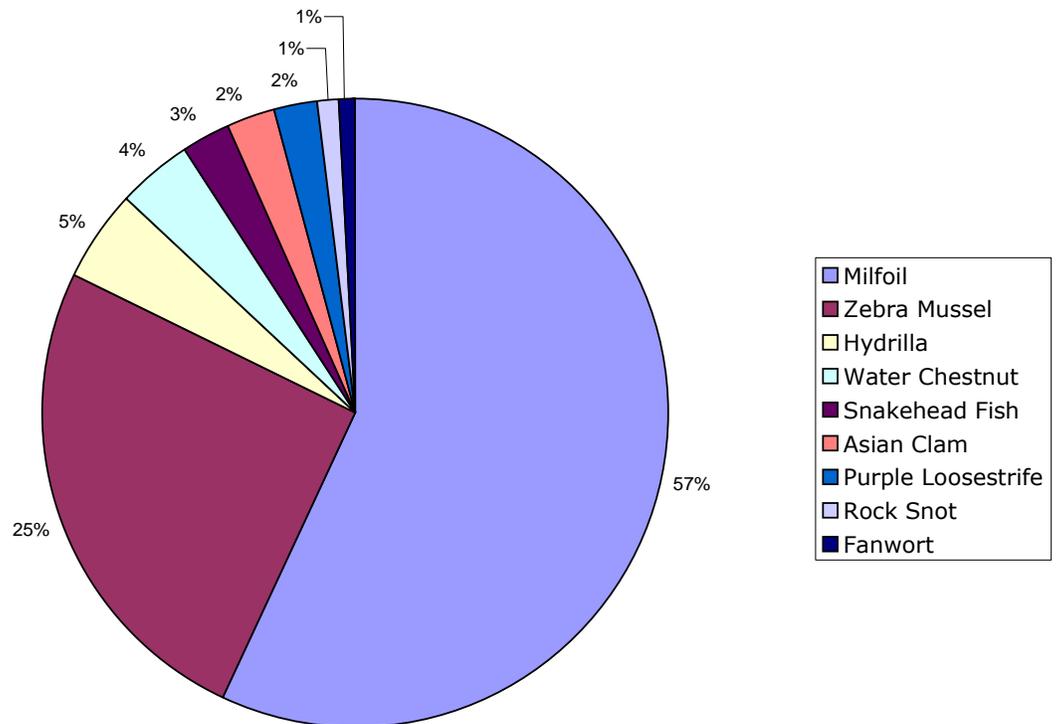
Water body	Ramp	Aware of AIS?			Aware boats carry AIS?			Willing to wash/inspect boat?		
		YES	NO	Blank	YES	NO	Blank	YES	NO	Blank/ Maybe
Ashumet	13	11	2	0	12	1	0	13	0	0
Cochituate	308	251	41	16	255	37	16	290	1	17
Congamond	1063	814	245	4	799	260	4	1042	16	5
CT River	649	500	149	0	511	138	0	608	27	14
Johns & Peters	10	8	2	0	8	2	0	10	0	0
Long Pond	68	55	13	0	58	10	0	68	0	0
Mashpee	69	53	16	0	64	5	0	69	0	0
Onota	319	230	85	4	263	52	4	308	5	6
Pontoosuc	205	146	59	0	158	47	0	202	2	1
Quinsigamond	335	245	75	15	250	70	15	318	2	15
Snipatuit	11	9	1	1	10	0	1	10	0	1
South Wattuppa	10	8	2	0	9	1	0	9	1	0
Wallum	219	170	45	4	186	30	3	216	0	3
Webster	43	33	10	0	38	5	0	43	0	0
Whitehall	215	193	22	0	203	12	0	214	1	0
Total	3537	2726	767	44	2824	670	43	3420	55	62

Water body	Ramp	# Boats Inspected	# Boats Declined	In water/ Blank	Number of Boats			Fragments were:		
					w / plants	w/o plants	Blank	Native	Exotic	Unknown
Ashumet	13	12	0	1	0	12	0	0	0	0
Cochituate	308	257	16	35	31	226	0	2	29	0
Congamond	1063	1063	0	0	342	721	0	223	95	24
CT River	649	610	3	36	61	549	0	46	15	0
Johns & Peters	10	10	0	0	0	10	0	0	0	0
Long Pond	68	64	0	4	1	63	0	0	1	0
Mashpee	69	67	0	2	0	67	0	0	0	0
Onota	319	312	0	7	59	253	0	12	43	4
Pontoosuc	205	204	0	1	28	176	0	12	15	1
Quinsigamond	335	294	11	30	26	268	0	4	18	4
Snipatuit	11	10	0	1	0	10	0	0	0	0
South Wattuppa	10	8	0	2	0	8	0	0	0	0
Wallum	219	211	1	8	25	186	0	20	0	5
Webster	43	43	0	0	16	27	0	6	4	6
Whitehall	215	206	0	9	112	94	0	29	59	24
Total	3537	3371	31	136	701	2670	0	354	279	68

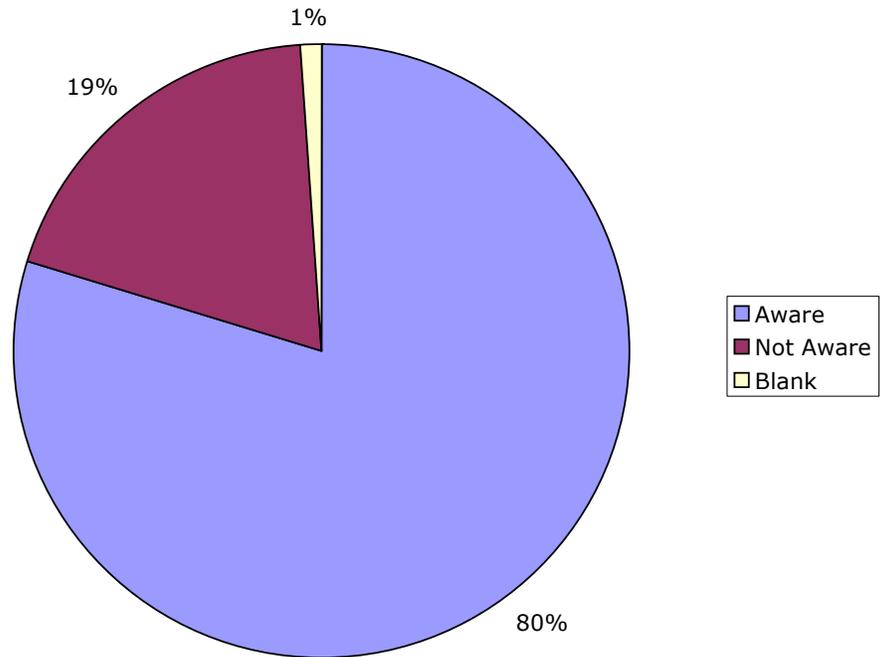
**Graph 1** Prior to today, were you aware of invasive species?



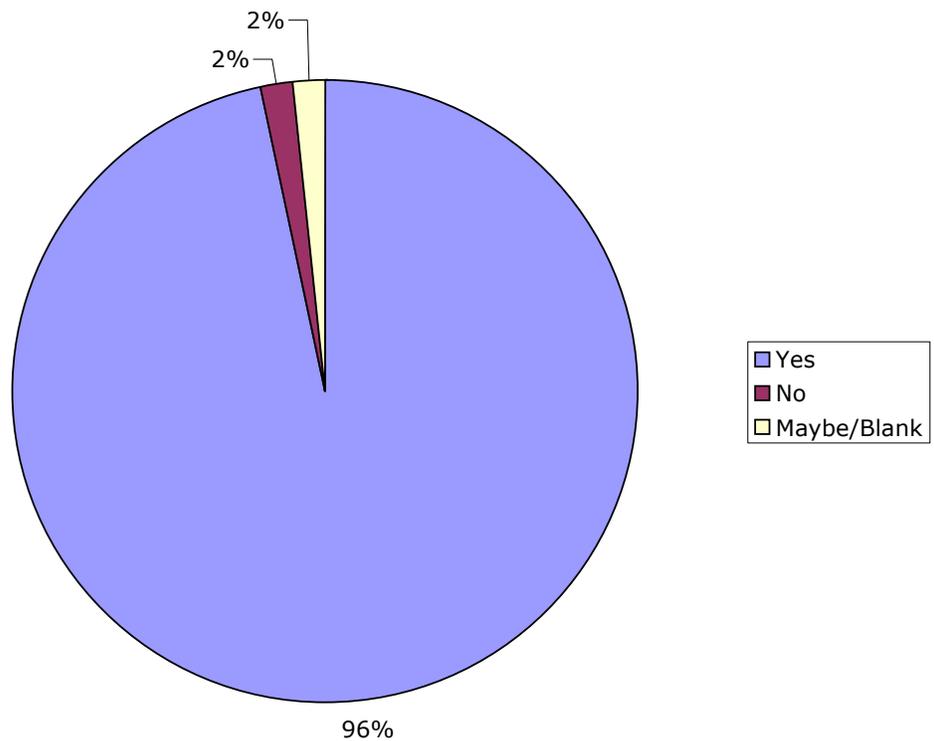
**Graph 2** If so, which species?



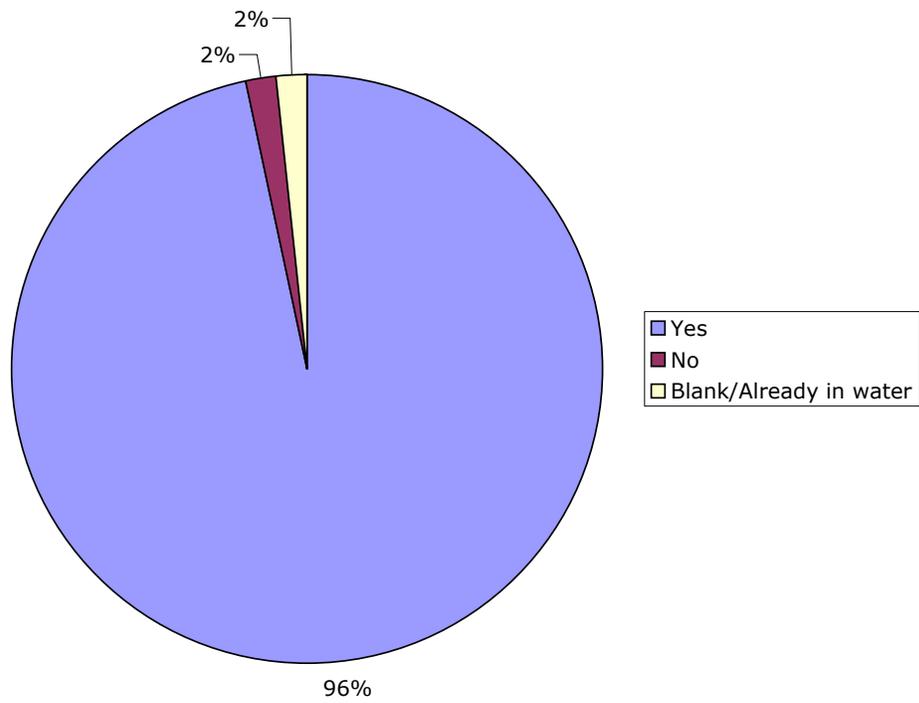
**Graph 3** Prior to today, were you aware that one of the main ways that invasive plants enter a lake or pond is by hitching rides on boat motors, trailers and other gear?



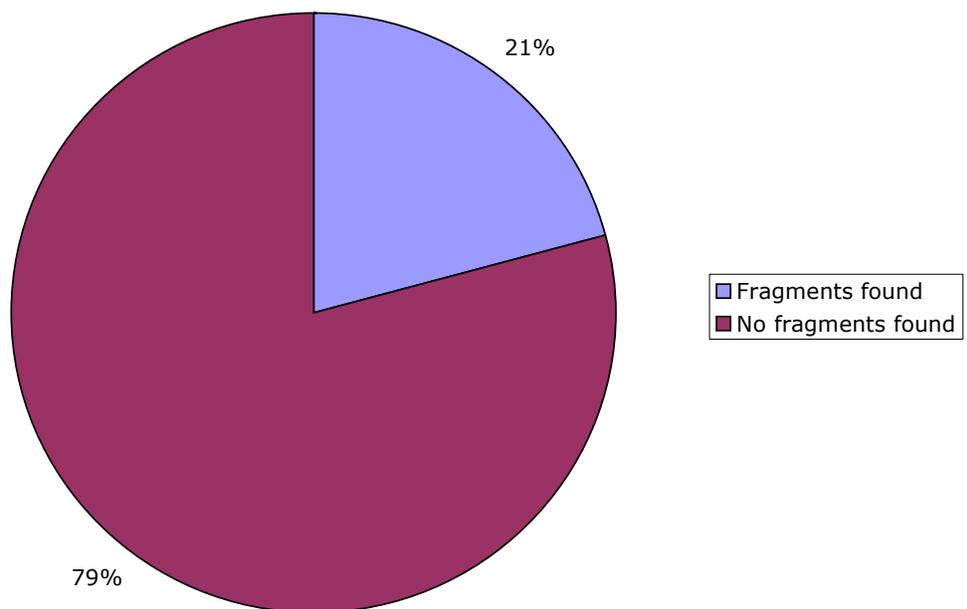
**Graph 4** Are you willing to inspect and wash your boat after visiting a lake or pond?



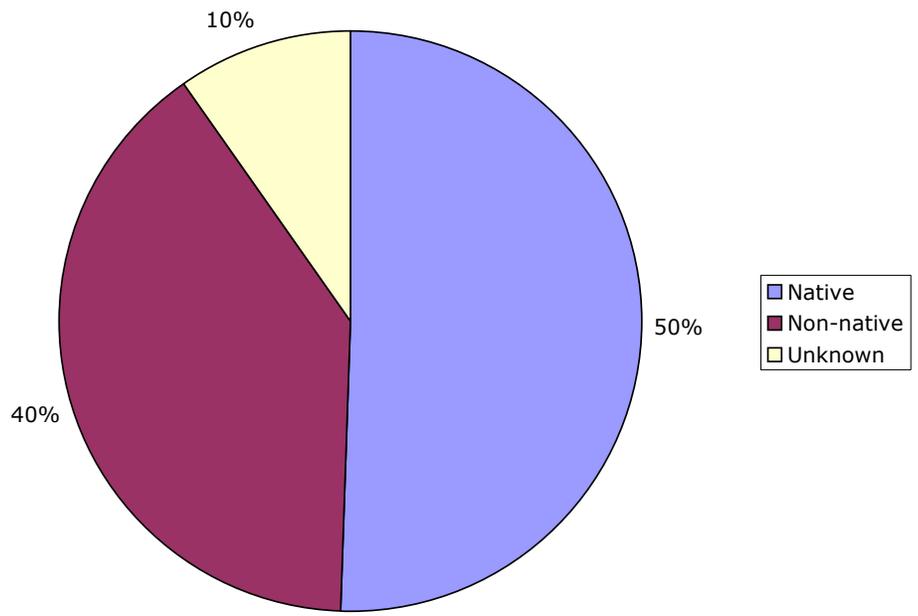
**Graph 5** Did you obtain permission to inspect the boat and trailer?



**Graph 6** Were any plant fragments present on the boat or trailer?



**Graph 7** Were any of the plant fragments non-native?



## Discussion

Based on the responses from the 2008 survey, it appears that 2,726 of the boaters (78%) were aware of non-native species; however, some boaters did not realize that non-native species can be spread by boats, trailers and gear.

The species that boaters were most familiar with were milfoil and zebra mussels. Many survey participants mentioned learning about these species through the media, fishing clubs, from other ramp monitors, the Auxiliary Coast Guard and from visits to Maine. Other aquatic species mentioned by boaters, included Fanwort, Water Chestnut, Hydrilla, Asian Clams, Purple Loosestrife, Snakehead Fish, Didymo, Spiny Flea, snails, crayfish, Gobies, Lampreys, Quagga Mussels and Didymo. In addition, several boaters were familiar with terrestrial non-native species including Norway Maple, Oriental Bittersweet, Giant Hogweed, Japanese Knotweed and Burning Bush.

Almost all the survey participants (98.4%) were willing to inspect/wash their boats prior to entering or leaving water body. Overall, only 55 boaters stated that they would not wash/inspect their vessel. The reasons given included (in order of frequency): only use the boat in one location, laziness, no place on site to wash the boat, inconvenience, they are too rushed, belief that the plants dry/die between uses, they don't own the boat (rented/borrowed), or they don't believe in invasive species. Some boaters were willing to inspect their boats, but because wash stations were not located near the ramp, they were not willing to wash their boats. Several boaters said they would wash their boat only if they were going to go to a new water body.

During 2008, 99.1% of the boaters surveyed were willing to participate in a voluntary inspection. In 136 cases, the boat ramp monitor left the survey blank, or explained that the boat was already in the water, and only 31 boaters out of 3,537 outright declined an inspection. There was 100% compliance at 11 of the 17 ramps, and at 2 of the ramps less than 3 people declined an inspection. The ramp with the highest resistance to a boat inspection was Lake Cochituate. The ramp monitors were asked to speculate why those boaters were unwilling to participate, and they indicated that some refusals may have been due to crowding at the ramp, the haste to launch during fishing tournaments, stress from boat mechanical issues and in several cases there was a language barrier.

**Of the 3,371 boats that were actually inspected, 701 (20.8%) were transporting plant fragments, and many of these boats were carrying more than one species. In 279 (39.8%) instances, the plants were identified as non-native and were removed and disposed of. These were considered “saves” because the removal/disposal of these plants prior to the boat entering or leaving a water body potentially prevented a new introduction or the additional spread of that species.**

These cost-saving measures potentially spared the Commonwealth thousands of dollars in invasive species management, had any of these 279 plants become established in the water body and had control measures been implemented. For instance, Wallum Lake is one of our “protection” lakes, and despite high boater use, a 2008 fall survey determined that this water body has remained free of non-native

aquatic species. Since 2004, more than 16 boats have attempted to launch while carrying non-native plants. Each time, the plants were removed and disposed of, before the boat entered the water body. The diligence of the Douglas State Forest park supervisor, the on-going effort of the ramp monitors, and the willingness of the boaters to participate in the inspection, together have played a key role in keeping Wallum Lake free of non-native species.

The two ramps on the Connecticut River and the ramp at Congamond Ponds (Southwick) attracted the largest diversity of boaters from other water bodies and/or states, whereas some of the other ramps tended to draw a more local crowd. (See Appendix A).

Many of the water bodies that boaters claimed their vessel was last in, are water bodies known to be infested with Zebra Mussels (ex. Lake Champlain, Twin Lakes, Lake George). At the high risk ramps (Pontoosuc, Onota and Congamond) the actual number of boats last used in water bodies infested zebra mussel infested waters was tracked. (See Appendix A).

## Recommendations

Several boaters mentioned the effectiveness of issuing a fine for transporting plant fragments. They were impressed with Maine's stringent regulations and thought that boaters would be more likely overcome their laziness, and endure the inconvenience associated with cleaning their boat, if they were aware that failure to do so could result in a \$5000 penalty.

Repeatedly, over the past five years, survey participants have suggested that at busy ramps, the implementation of a "Weed Check" area would be beneficial. A "Weed Check" area would serve both as a reminder to the boaters, and would provide boaters with a place to park safely, out of everyone's way, to conduct their inspection. They felt this was especially important at busy ramps where boats line up to launch and there is pressure on each boater to launch their boat and free up the ramp as quickly as possible. They also requested that plant fragment bins be made available for disposal of any removed plant/animal debris. Several boaters suggested that installing a foot-pump or solar powered washing station at the ramp would be helpful.

Another suggestion, made by the ramp monitors, was to hand out boat stickers to participants. These stickers could contain a message such as, "*I care about our lakes and check my boat for hitchhikers!*" This would help the ramp monitors identify boaters that they have already surveyed. Stickers may also remind boaters of the commitment they have made to protect our water bodies by inspecting/cleaning their boats each time they launch or leave a lake.

To determine the lasting impact that the Boat Ramp Monitor Program has had over the past five years, it may be interesting to observe boater behavior at several ramps that have been consistently monitored (ex. Cochituate, Whitehall, Douglas). During 2009 ramp monitors could be placed at these ramps for several days to discreetly document the percentage of boaters who check their boats without being reminded.

## Appendix A: Boat Traffic at Individual Ramps

The following are the responses given at each of the eleven primary ramps to the question, “*What was the last water body that your boat was in?*”. The responses were often hard to decipher, or were spelled phonetically. Additionally, it is not always clear what state the last water body visited was located in. Therefore the responses below have been entered exactly as they appeared on the survey forms. Water bodies that are known to be infested with Zebra Mussels are in red font, those with Asian Clams are in blue font.

### Cochituate

Ashburnkin  
Ashland Reservoir  
Beaver Pond  
Billington Sea  
Bodin Lake (NH)  
Bufferville Reservoir  
**Champlain, Lake**  
**Charles River**  
Chauncy  
Chebago  
Coccossee-contee (ME)  
Cochituate, Lake  
Concord River  
Conneticut River  
Conway  
Couendagua (NY)  
Damarscotta (ME)  
Erie, Lake  
Falls Pond  
**Fort Meadow Reservoir**  
Fort Pond  
**George, Lake (NY)**  
Grand Lake (ME)  
Great Herring Pond  
Greay  
Hamilton Reservoir  
Hens  
Hurds Pond  
Indian Lake  
Kuzar (ME)  
Long Lake (Harewich)  
Long Lake (ME)  
**Long Pond (Littleton)**  
Mascoma (NH)  
Maspenock  
**Masphee**  
Merrimack River  
Merrymeeting Lake (NH)  
Momona  
Mystic River  
Newfound Lake (NH)  
Norton Reservoir

Oldham Pond  
Opechi (NH)  
Ossippee  
Pearl, Lake  
Populatic Pond  
Providence River  
Quinsigamond, Lake  
Rohunta, Lake  
Saratoga  
Shirley Reservoir  
Silver Lake  
Singletary Lake  
Snipatuit  
Spy Pond  
St. Croix  
St. Lawrence River  
Sudbury River  
Tecon, Lake (MI)  
Tully Lake  
Wallum Lake  
Wapanog  
Washacum  
Weatherth (NH)  
**Webster Lake**  
Wequaquet lake  
Whitehall Reservoir  
Winnipausauki  
Winnisquam

**CT River (both ramps)**

Aldridge Lake  
Amhurst, Lake (VT)  
Ashmere, Lake  
Barber Pond  
Bearhill Pond  
Beaver Pond  
Belgrade lake (ME)  
Bellows Falls  
Big Alum  
Big Pond  
Blackstone River  
**Brimfield Reservoir**  
Buck Pond  
Buel, Lake  
Bufferville Reservoir  
Cedar Lake  
**Champlain, Lake**  
**Charles River**  
Chicopee Reservoir  
Chicopee River  
Coes Pond  
Coldbrook Reservoir  
**Congamond Ponds**  
Conneticut River  
Cranberry Pond  
Crystal Lake  
DAR  
Deer Isle (ME)  
Deerfield River  
Deleware River  
Dennis, Lake  
Devon Pond  
Ellis, Lake  
Erie, Lake  
Farrow, Lake (ME)  
**Five Mile Pond**  
Forge Pond  
Gail Meadows (VT)  
**George, Lake (NY)**  
Goose Pond  
Grand Lake (ME)  
Great Swamp River (RI)  
Hamilton Reservoir  
Hampden Pond  
Hapmden Reservoir  
Hermain Reservoir (VT)  
Hinnis Pond  
Hinsdale Reservoir  
Holland Pond  
Ipswich River  
Jacobs Pond

Leverett Pond  
Littleville Dam  
Littleville Reservoir  
Long Lake (ME)  
Long Pond  
Long Pond  
Ludlow Reservoir  
Magintock (ME)  
Malminac  
Manchoag  
Mansfield Dam  
Massapaneck  
Massawappu  
Mattaw, Lake  
Memphremagog  
Merrimack River  
Metacomet Pond  
Mexico (all over)  
Mill River  
Millagoen  
Monamee, Lake  
Mt. Holyoke Ponds  
N. Hadley Pond  
Naragansett River  
Nashua River  
Nenambescott (NH)  
Newfound Lake (NH)  
North Pond  
North Pond (ME)  
Norwich Lake  
Numbanusik (NH)  
Ocean  
**Ontario, Lake**  
Ossipeakee, Lake  
Otis Reservoir  
Pawatuck River (RI)  
Pequot Pond  
Plainfield  
Pleasant  
Potauset  
Prospect Pond  
Providence (NH)  
Quabbin Reservoir  
**Quaboag**  
Quaboag  
Quinsigamond, Lake  
Rainbow Reservoir (CT)  
Red Bridge Pond  
Sebec Lake (ME)  
Seneca, Lake  
Shirley Reservoir  
Sommerville

Southwick  
Spafford Lake (NH)  
Spofford Lake (ME)  
Squam  
Squantz Pond (CT)  
St. Lawrence River  
Stillwater River  
Sudbury River  
Sunapee, Lake  
Sunset Lake  
Sweet Pond  
Swift River  
Thames River (CT)  
Tully Lake  
Tyrsgo (NJ)  
Walden Pond  
Walker Pond  
Walkewam, Lake (NH)  
Wampanog Pond  
Warner, Lake  
**Webster Lake**  
Westfield River  
Whalen  
Whitehall Reservoir  
Whites  
Whitinham (VT)  
Wicket Pond  
Willoby  
Windsor (CT)  
Winiteag  
Winnipausauki  
Woodward Res. (VT)  
Wymans Pond  
Wyola, Lake  
Zohr

## **Congamond Ponds**

Ashmere Reservoir  
Banyum Lake  
Bellows Falls  
Benedict Pond  
Besak, Lake  
Big Alum  
Big Benton Pond  
Bolton Lake  
Boule  
Broadside Pond  
Bufferville Reservoir  
Candlewood Lake  
Cedar Lake  
Center Lake

## **Champlain, Lake (7)**

### **Charles River** **Congamond Ponds**

Connecticut River  
Coventry  
Crystal Lake  
DAR State Forest  
Delaware River

### **East Brimfield Reservoir**

Farmington Reservoir  
Field Pond

### **Five Mile Pond**

Forge Pond  
Franklin Pierce  
Gardner, Lake  
Garfield, Lake

## **George, Lake (NY) (11)**

Glen Echo  
Goose Pond  
Great East Lake  
Hamilton Reservoir  
Hampden Pond  
Hariman Reservoir  
Haviland Pond  
Highland Lakes  
Horse Pond  
Hortonia Lake  
Indian Lake  
Kittaney Lake (PN)  
Lashaway, Lake  
Lilinoma, Lake  
Little Alum  
Littleville Lake  
Long Pond  
Loon Pond  
Lower Spectacle  
Manchoag  
Mansfield Hollow

## **Mashpee/Wakeby**

Mauries Pond  
McDonough, Lake  
Merrimack River  
Metacomet Pond  
Modest Lake  
Mooseup Lake  
Mootis  
Nashua River  
Niantic, Lake  
Norton Reservoir  
Ocean  
Old Saybrook  
Onota, Lake

## **Ontario, Lake (1)**

Otis Reservoir  
Oxbow  
Pamelton Reservoir  
Patchog  
Peelock Lake  
Pequot Pond  
Pine River Pond  
Pontoosuc, Lake  
Powers Pond  
Pyron Lake  
Quabbin Reservoir  
**Quaboag**

Queechy Lake  
Rainbow Reservoir (CT)  
Red Bridge Pond  
Richmond Pond  
Rogers Lake  
Sebago, Lake (ME)  
Seymore, Lake  
Shaw Pond  
Shirley Reservoir  
Shoemet Pond  
Silver Lake  
South Wattupa  
St. Lawrence River  
Stafford Lake  
Thompson  
Tiger River (OH)  
Tool Pond  
Tupper Lake

## **Twin Lakes (CT) (19)**

Wallum Lake  
White Pond (FL)  
Whitingham, Lake  
Wickibaug  
Wild Pond  
Winnipausauki  
Winter Reservoir

Winthrop Lake  
Wordens Pond  
Wyola, Lake  
Zoar

## **Mashpee/Wakeby**

Arrowhead, Lake  
Aschumet Pond  
Barry Pond  
Billington Sea  
Buffemville Reservoir  
**Charles River**  
**Congamond Ponds**  
Dark Brook Reservoir  
Great Herring Pond  
Hamilton Reservoir  
Hanson Town Hall Pond  
Indian Head Pond  
Johnson Pond  
Little Sandy Pond  
Long Pond  
Long Pond (Harwich)  
**Long Pond (Lakeville)**  
Long Pond (Plymouth)  
Lovells Pond  
**Mashpee/Wakeby**  
Monponsett Pond  
Naponset Reservoir  
Nashua River  
North Pond  
Norton Reservoir  
Norwell Pond  
Oldham Pond  
Pearl, Lake  
**Peter Pond**  
**Quabog Pond**  
Quinsigamond, Lake  
**Sampsons Pond**  
Santuit  
Shirley, Lake  
Slat Pond  
Snipatiut Pond  
South Wattupa Pond  
Squam Lake (NH)  
**Tispaquin Pond**  
Wallum Lake  
**Webster Lake**  
Wequaquet Pond  
Whitehall Reservoir  
**Winnicunnet Pond**  
Winnisquam

## **Onota**

Ashmere Reservoir  
Bartons Cove  
Berry Pond  
Bomoseen (VT)  
Borden Lake  
Buel, Lake  
Burden Lake  
Cedar Lake  
**Champlain, Lake (8)**  
Cherry Plain State Park  
Cheshire Reservoir  
Coventry  
**George, Lake (NY) (9)**  
Goose Pond  
Greewater Pond  
Hardwick Pond  
Hopeville (CT)  
Housatonic River  
**Hudson River (10)**  
Johnsons Pond  
Kinderhook Lake (NH)  
Laurel Lake  
Metachasmit (CT)  
Metacomet Pond  
Mohawk River  
Ocean  
October Mountain Lake  
Oneida  
Onota, Lake  
Otis Reservoir  
Plunket Reservoir  
Pontoosuc, Lake  
Racket Lake  
Richmond Pond  
Saratoga (NY)  
Schrone Lake  
Shaker Mill Pond  
Shaw Pond  
Somerset Reservoir (VT)  
St. Catherine (VT)  
Stockbridge Bowl  
Union Falls  
Warner  
Windsor Pond

## **Pontoosuc**

Ashmere Reservoir  
Berry Pond  
Big Alum  
Bomoseen (VT)  
Candaman  
**Champlain, Lake (7)**  
**Charles River**  
Charleston Salt Pond (RI)  
Cheshire Reservoir  
Chitadon (VT)  
**Congamond Ponds**  
Conneticut River  
Crystal Lake (CT)  
Duck Lakes (NY)  
Dyken Pond  
**George, Lake (NY) (11)**  
Glass Lake  
Goose Pond  
Hariman Reservoir  
Hinsdale Reservoir  
Hoosac Pond  
Housatonic River  
**Hudson River (3)**  
Lashaway, Lake  
Laurel Lake  
Massapoag  
Mohawk River (NY)  
Moosehead Lake  
Onota, Lake  
Otis Reservoir  
Oxbow  
Plunket Reservoir  
Pontoosuc, Lake  
Quabbin Reservoir  
**Quaboag**  
Queechy Lake  
Red Bridge Pond  
Richmond Pond  
Saratoga (NY)  
Sasquahanan River  
Saybrook (CT)  
St. Catherine (VT)  
Stockbridge Bowl  
Swift River  
Walker Pond  
Warmog, Lake  
Warner  
Whitingham, Lake  
Winnipausauki  
Woods Pond

## **Quinsigamond**

Assabet River  
Bass River  
Bear  
Belgrade lake (ME)  
Belgrade lake (ME)  
Bomuseen (VT)  
Bottom Dam  
Buffemville Reservoir  
Cedar Lake

## **Charles River**

Chauncy  
Cochituate, Lake  
Comet

## **Congamond Ponds**

Crystal Lake  
Damon  
East Washacum  
Eddy's Pond  
Ellis  
Florida

## **Fort Meadow Reservoir**

Fort Pond  
Geist (ID)

## **George, Lake (NY)**

Hurace (NH)  
Indian Lake

## **Johns Pond (Cape Cod)**

Johns Pond (Webster)  
Lashaway, Lake  
Long Lake (ME)  
Long Pond (Harwich)

## **Long Pond (Lakeville)**

Mascoma (NH)  
Merrimack River  
Mommonoc  
Moosehead  
Mossy  
Mystic River  
Newfound Lake (NH)  
Ocean  
Ossipee  
Quabbin Reservoir  
Quinsigamond, Lake  
Rico, Lake  
Rocky Pond  
Sacadaga (NY)  
Singletary Lake  
Snake Pond  
South  
Squam  
Stiles

Stump Pond (RI)  
Sudbury River  
Sunapee, Lake  
Wallum Lake  
**Webster Lake**  
Whitehall Reservoir  
Wickabog  
Willis, Lake  
Winnipausauki  
Winnisquam

**Wallum Lake**

4th Lake (NY)  
 Ashland Reservoir  
 Asnacomet  
 Baker Pond  
 Bass River  
 Big Alum  
 Boston Harbor  
 Bowdish  
**Brimfield Reservoir**  
 Buffenville Reservoir  
 Cedar Lake  
 Cedar Meadow  
**Champlain, Lake**  
 Cochituate, Lake  
 Conneticut River  
 Echo Lake  
 Electric Pond  
 Falls Pond  
**Fort Meadow Reservoir**  
 Gailee  
**George, Lake (NY)**  
 Grand Lake (ME)  
 Great Pond (ME)  
 High Pond  
 Keech  
 Knopps Pond  
 Long Pond  
 Long Pond (Harwich)  
 Manchoag  
 Massapoag  
 Merrimack River  
 Moose Pond (ME)  
 Newfound Lake (NH)  
 Nipmuck, Lake  
 Ocean  
 Ossipee  
 Pascoag Reservoir  
 Pearl, Lake  
 Pratt Pond  
 Quabbin Reservoir  
**Quaboag**  
 Quaddick (CT)  
 Quinsigamond, Lake  
 Salt Pond  
 Sebago, Lake  
 Singletary Lake  
 Slatersville Pond (RI)  
 Smith-Sauyels  
 South Pond  
 South Wattupa  
 Spring Grove

Squam  
 Square Pond (MI)  
 Sudbury River  
 Thompsons Dam  
 Walker  
 Wallum Lake  
 Wardens Pond (RI)  
 Watemanic  
 Watermans Lake  
 Wautchtaug (RI)  
**Webster Lake**  
 Wequaquet Lake  
 Whalam Lake (NH)  
 Whallom Lake  
 Whitehall Reservoir  
 Wilson  
 Winnipausauki

**Webster Lake**

Bearhill Pond  
 Billington Sea  
 Chauncy  
 Cobacasonte  
 Cochituate, Lake  
**Congamond Ponds**  
 Dark Brook Reservoir  
 Electric Pond  
 High Pond  
 Indian Lake  
 Knopps Pond  
 Leech Pond  
 Mascuppic, Lake  
 Ontario, Lake  
 Quabbin Reservoir  
**Quaboag**  
 Quatic (CT)  
 Rock Pond  
**Sabatia, Lake**  
 Singletary Lake  
 South Wattupa  
**Twin Lakes** (CT)  
 Wallum Lake  
**Webster Lake**  
 Whalom  
 Winnipausauki

**Whitehall Reservoir**

Bass River  
Bearhill Pond  
Billington Sea  
Bound Pond (NH)

**Brimfield Reservoir****Champlain, Lake**

Charles River  
Chauncy, Lake  
China Lake (ME)  
Cochituate, Lake  
Comet  
Commet  
Concord River

**Conneticut River**

Delaney Pond  
Dudley Pond

**East Brookfield**

Erol, Lake  
Falls Pond  
Forge Pond  
Fort Pond

**Fort Meadow Reservoir**

Great Lake (ME)  
Hopkinton Reservoir  
Ipswich River  
Kezar Lake  
Long Lake (ME)

**Long Pond (Lakeville)**

Lost Lake  
Manchoag

**Mashpee/Wakeby**

Maspenock  
Massasecum, Lake  
Mill Pond  
Mooselook Pond (ME)  
Newfound Lake (NH)  
Newton Pond  
Newton Reservoir  
North Pond  
Norton Reservoir

Ocean  
Olney (RI)  
Otis Reservoir  
Pearl, Lake

**Peters Pond**

Populatic Pond  
Quabbin Reservoir

**Quaboag**

Quinsigamond, Lake  
Rocky Pond

**Sabatia, Lake****Sampsons Pond**

Sharon  
Shirley Reservoir  
Singletary Lake  
South  
South Pond  
Squam (NH)  
St. Lawrence River  
Stump Pond (RI)  
Sudbury River  
Sudbury River

**Tispaquin Pond**

Umbagog  
Walker

Wallum Lake

**Webster Lake**

Whitehall Reservoir  
Whitmans  
Wilson  
Winnipausauki  
Winthrop Lake



**Department of Conservation and Recreation  
Lakes and Ponds Program  
Boat Ramp Monitoring Program 2008**

Date \_\_\_\_\_  
Location \_\_\_\_\_

**Boater Survey**



- 1) What are the last two water bodies that your boat has been in? \_\_\_\_\_  
YES NO
- 2) Prior to today, had you heard of invasive species?  
If so, which species have you heard about? \_\_\_\_\_  
YES NO
- 3) Prior to today, were you aware that one of the main ways that invasive plants enter a lake or pond is by hitching rides on boat trailers, motors and other gear? YES NO
- 4) Are you willing to take the time to inspect and/or wash your boat after visiting a lake? YES NO  
If not, why? \_\_\_\_\_

*Thank you for your time!*

~~~~~

(Please do not write below this line. This area is to be completed by the boat ramp monitor.)

- Did you obtain permission to inspect the boat and trailer? YES NO
- Were any plant fragments or aquatic animals present on the boat? YES NO
- If so, were they non-native? YES NO
- What species did you find? \_\_\_\_\_
- Comments: \_\_\_\_\_