

**2016**

**State of Maine**

**Courtesy Boat Inspector Handbook**





**CBI Cam Dufour at Pleasant Pond on Memorial Day Weekend**

## **Sources of help and information**

Maine Department of Environmental Protection Invasive Aquatic Species Program –DEP staff: John McPhedran, Karen Hahnel, Paul Gregory, and Denise Blanchette - Bureau of Land and Water Quality, Maine Department of Environmental Protection, 17 State House Station, Augusta ME 04333. 207-287-3901, [milfoil@maine.gov](mailto:milfoil@maine.gov).

### **Web sites with information about invasive aquatic species:**

- Maine DEP: [www.maine.gov/dep/water/invasives](http://www.maine.gov/dep/water/invasives).
- Lakes Environmental Association (LEA): [www.mainelakes.org](http://www.mainelakes.org).
- Maine Department of Inland Fisheries and Wildlife: [www.eregulations.com/maine/fishing/](http://www.eregulations.com/maine/fishing/)
- Maine Volunteer Lakes Monitoring Program: [www.mainevlmp.org](http://www.mainevlmp.org)

**Courtesy boat inspector workshops and supplies:** Ziploc ID bags, T-shirts, winch stickers.

- Lakes Environmental Association (LEA), Peter Lowell, executive director, 207-647-8580, [lakes@leamaine.org](mailto:lakes@leamaine.org), [www.mainelakes.org](http://www.mainelakes.org).

### **Workshops for:**

- Invasive Plant Patrol; Hand Removal of Plants
- Conducting Lake Plant Surveys
- CBI Training

Contact Roberta Hill, 207-783-7733, Maine Volunteer Lake Monitoring Program, 24 Maple Hill Road, Auburn ME 04210. [vlmp@mainevlmp.org](mailto:vlmp@mainevlmp.org).

**Maine Public Safety Dispatch** numbers – Use for an emergency or an immediate complaint:

- Augusta : 1-800-452-4664
- Bangor : 1-800-432-7381
- Gray: 1-800-228-0857
- Houlton: 1-800-924-2261

**List of fishing tournaments:** [www.maine.gov/ifw/fishing/derbies\\_tournaments](http://www.maine.gov/ifw/fishing/derbies_tournaments).

**Maine Warden Service:** [http://www.maine.gov/ifw/warden\\_service/index.html](http://www.maine.gov/ifw/warden_service/index.html)

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*Efforts to prevent, detect and manage invasive aquatic species are made possible by boater participation in the Maine Lake and River Protection sticker program.*

# Courtesy Boat Inspection Program

Invasive aquatic plants such as variable leaf and Eurasian water milfoil, hydrilla, water chestnut and Brazilian elodea are a serious threat to Maine's waters. These plants are so vigorous and propagate so fast that they can crowd out native plants, affect fish populations, and make swimming and boating difficult, if not impossible. When that happens, costly control measures are needed.

Many new infestations occur in shallow waters near public boat launching facilities, so it's obvious invasive plants move from lake to lake on the boats and equipment of unsuspecting boaters. If people are the cause, they can also be the cure.

One critical control point to halt the spread of these plants is at Maine's public boat launching sites. Accordingly, the state has developed a program to educate boaters so they won't spread plants through lack of information. It's the Courtesy Boat Inspection Program, and it's our lakes' first line of defense.

The Maine Department of Environmental Protection (DEP) oversees the inspection programs in the state and distributes funding to organizations trying to protect lakes. While DEP provides training, protocol, and funding, none of this prevention work can be done without the hard work of local residents.

## Maine's 'Milfoil law'

The first bill involving invasive aquatic plants passed in 2000. Several related bills have passed since, including the sticker funding mechanism in 2001.

Funding for education, prevention, eradication and enforcement comes from the sale of stickers required for motorized boats used on inland waters. Failure to display the appropriate sticker (see Page 5) can result in a fine. MRSA Title 12, Sections 13056 and 13058.

## Serious Consequences

It is illegal to transport ANY aquatic plant, native or non-native, on the outside of a vehicle, boat, trailer or equipment. Violations may result in fines up to \$500, and \$2,500 for subsequent violations (MRSA Title 38, Section 419-C).

Launching a boat carrying invasive aquatic plants, as defined in MRSA 38 Section 410-N, carries a more serious fine of between \$500 and \$5,000 (MRSA Title 12, Section 13068-A).

## Courtesy Boat Inspectors do the following:

- Discuss with boaters how invasive aquatic plants spread
- Show boaters how to inspect boats and equipment for plant fragments
- Urge boaters to inspect before and after every launch
- Distribute information about invasive plants
- Articulate Maine law regarding the transport of these plants.

## Trouble by the Bucketful!

That's what the illegal introduction of exotic species brings to Maine's Waters.

Some thoughtless individuals are attempting to destroy the future of Maine's native fisheries. These non-sportsmen illegally stock the type of fish they prefer to catch, without regard for the environmental havoc they inflict on the resource. Illegal stocking selfishly denies the people of Maine the right to decide what is best for our waters.

Black Crappie



\*In 2014 a CBI from Friends of Cobbossee Watershed stopped a boater transporting Black Crappie from Pleasant Pond in Litchfield.

Please help us fight this serious problem by telling boaters:

- It is illegal to transport live with without a permit.
- It is illegal to dump unused baitfish into any waterway.
- There is a \$10,000 fine for a conviction of illegal stocking.
- Always keep you ears and eyes open for those who are committing these senseless acts.

Northern Pike



**There is a \$2,000 reward for information leading to a conviction**

To report information about an illegal introduction please call:  
1-800-ALERT-US (253-7887) - In-State  
(207) 287-6057 - Out-of-State

# The ideal inspection

A courtesy boat inspector can — and should — do much more than help boaters inspect their boats, trailers and equipment. Each inspection also is an opportunity to create a change in boater behavior, so that he or she automatically conducts an inspection without relying on an inspector. It's also a chance to educate the boater about why inspections are so important.

“CBIs need to engage boaters in discussion – have a dialogue – rather than to quietly inspect their boat without explaining the importance of the boater inspecting on their own,” says John McPhedran of DEP’s Invasive Aquatic Species Program.

See the box below for questions that can help “break the ice” and establish a dialogue with boaters. They are designed to provide an idea of how well a person understands the invasive aquatic plant problem and how well they grasp and implement the inspection process. It’s important to encourage boaters to ask questions. But that also means the courtesy boat inspector should know the facts and figures about invasive plant efforts and issues.

In addition to being familiar with the ‘milfoil law’ (page 1), know how much money the milfoil sticker generates (about \$1 million annually; 80 percent for DEP and 20 percent for the Department of Inland Fisheries and Wildlife). And be ready to talk about nearby or newly infested waters.

The more interesting you are, the more likely someone will listen. You might be the first — perhaps the only

— person to talk to a boater about protecting Maine’s waters. Don’t miss this chance to make a friend for your lake.

## Approaching the boater

Smile and be friendly as you approach the boater in the staging area, before he or she is on the boat ramp. Avoid delaying boaters or causing a backup.

In order to instill a “self-inspection” ethic among boaters, invite boaters to get out of their vehicles and conduct the boat and trailer inspection WITH you. If a boater is reluctant to take the time, simply offer the known infestations brochure, and record whatever information you can.

Make a note to approach this same boater again as he or she is leaving the launch to conduct a complete survey and inspection at that time. Ideally, you will inspect each boat and trailer TWICE — entering and leaving the water.

Sample Script: “Good Morning / Afternoon. I am a volunteer from \_\_\_\_\_. We are trying to prevent the spread of invasive plants such as milfoil and hydrilla in Maine lakes. The plants are spread from lake to lake when they become lodged on boats, gear and trailers. May I have just a few minutes of your time to give you some general information and to show you how to inspect for fragments? If you would walk around your boat with me, I can show you some areas to check for hitchhiking plants.”

### How to ‘break the ice’ with boaters

These questions relate to inspection issues directly:

- “Have you ever noticed plants on your boat, motor, trailer or gear?”
- “Are there particular places on your boat, motor, trailer or gear where you might expect to find plant fragments?”
- “Have you encountered Courtesy Boat Inspectors before?” . . . “Did they do a good job?”
- “Do you check your boat and gear yourself if an inspector is not present?”

More general questions:

- “Did you notice any weed beds as you were boating?”

- “Were they easy to spot and were they easy to avoid?”
- “Did you drop anchor, and if you did, were there any plants on the anchor or line when you brought it back in?”
- “Did you notice fragments floating on the surface of the water?”
- “Do you fish weed beds?”
- “Have you ever seen milfoil growing?”
- “Do you boat out of state (if Maine registered)?”
- “Do you travel to a number of lakes or stick to one or two?”

## Where and What to inspect

The purpose of inspections is to remove plants, animals, and mud before boats are launched and as they leave the water. Currently Maine's focus is on invasive plants and fish but many of our neighboring states are dealing with invasive small bodied organisms such as spiny water flea and zebra mussels to name a few. To prevent their spread into Maine lakes, boaters should be aware of the problem and be instructed to remove all debris. (See page 13 for more information on invaders in the northeast.)

Plant fragments and other debris may be found anywhere on the outside of the boat, but especially on and behind propellers, license plate holders, rollers or 'bunks' that the boats ride on, the trailer frame, and any gear on the outside of the boat (see diagram below for inspection hot spots).

Ask permission to check gear inside the boat – such as anchors and lines, chains, fishing tackle, the floor of the boat, and live wells. Ask the boater to drain the bilge,

live wells, and bait containers before leaving the ramp.

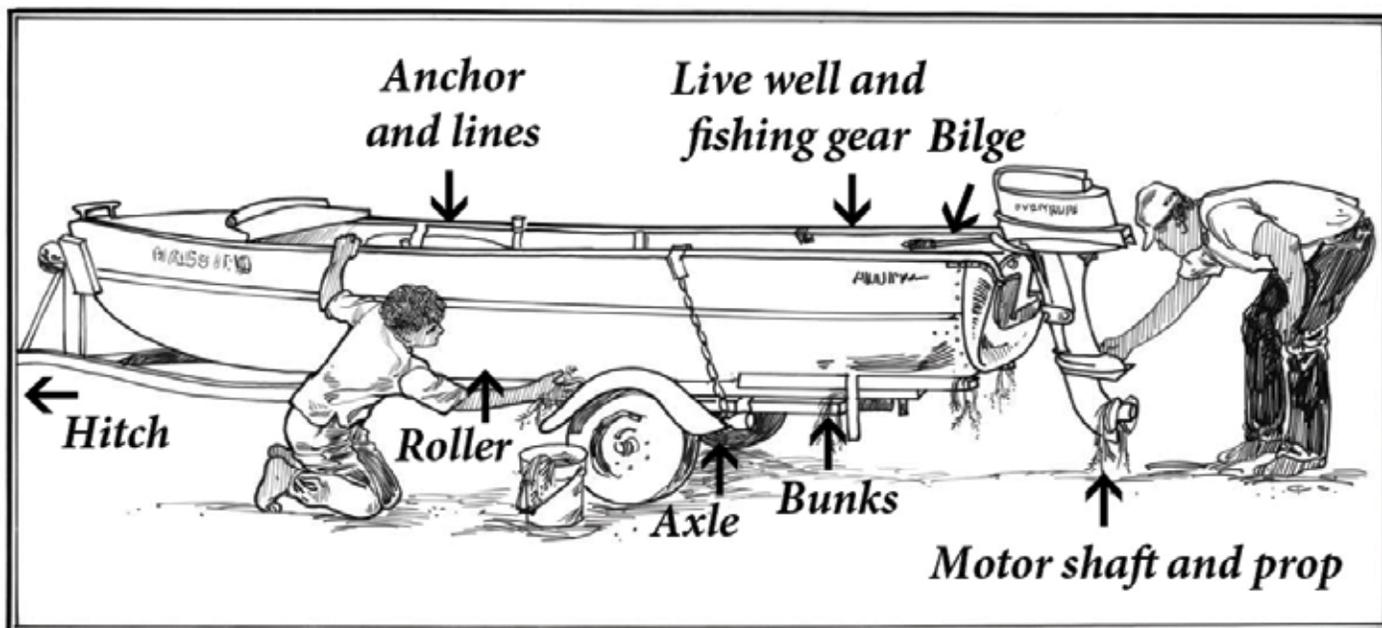
Wakeboard boats have ballast tanks which should also be drained before leaving the lake.

Check jet boats and personal watercraft (PWCs) intake grates. Ask them to run the engine 5-10 seconds to blow out excess water and vegetation from internal drive before leaving the water.

Some boats contain live wells designed to keep fish alive. However, it is illegal in Maine to transport live fish without a permit except legal baitfish or smelts, so ask to check the live well and be sure it is drained of all water.

Remember, ask the boater to join you in the inspection showing them how to properly clean their equipment so they don't inadvertently transport invasive plants from one lake to another.

A thorough inspection can take between 1 and 3 minutes, not much time considering it could prevent an infestation.



**Watercraft checkpoints:** Look for hitchhiking plants anywhere on the boat and trailer where they could be caught by rough edges.

Follow these steps and ask boaters to do the same on their own:

- ✓ **Clean** off any mud, plants (even small fragments), and animals from boats, trailers and equipment.
- ✓ **Drain** boat and equipment away from water.
- ✓ **Dry** anything that comes into contact with water.
- ✓ **Never** leave waters with live fish, or release plants or animals into a body of water unless they came out of that body of water.

# 2016 Maine Courtesy Boat Inspection Form

Check here if you encouraged self-inspection \_\_\_\_\_

Lake Name \_\_\_\_\_ Town \_\_\_\_\_ Launch Name/Location \_\_\_\_\_ Host Agency \_\_\_\_\_  
 Date \_\_\_\_\_ Shift Time: From \_\_\_\_\_ To \_\_\_\_\_ Inspector Name \_\_\_\_\_

Use Military Time

1	2	3	4	5	6	7	8	9	10	Time of Inspection? Trailer, Boat, Motor		**Is the Plant Suspicious?		Who Identified? ***see bottom of page
										Entering	Leaving	Any Plants Found? (Circle Y/N)	Was the Plant Identified as Invasive?	
If Motorized State Abbr. *Entire BOW #: alphanumeric boat registration #		Current Year's Sticker Present? Circle Y/N/NM (non-motorized)	Previous Waterbody Visited Lake Name      Town      State		Military TIME									
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	
		Yes No NM								Entering		Yes No	Yes No	
		Yes No NM								Leaving		Yes No	Yes No	

Comments:

**DO NOT CHANGE THIS FORM!**

**\*IMPORTANT**— Record the entire boat's *bow* registration number.

**\*\*Invasive plant identification must be done by VLMP so send all suspicious plants to VLMP for identification. Keep Inspection Form until contacted by VLMP.**

# The inspection form

The Inspection Form accommodates up to 10 inspections. It is important that each boat inspector has his/her own survey form. NO SHARING PLEASE!

## Recording information on the inspection form

- Fill in the top two lines of the form completely. Failure to do so may render the entire form useless.
- Coordinators may want to fill in generic parts on these lines before photocopying a blank form.
- Be consistent when filling in the Launch Name/Location. This is important for data retrieval.
- Many of the columns can be filled in before you approach the boater.

## Description of inspection form questions

**If Motorized:** This box is for recording the boat's state abbreviation and the entire alphanumeric **bow registration number** (see below), not the annual registration sticker number. Motorized boats include any boat with any type of motor including canoes with electric motors and personal watercraft. **Note:** Massachusetts boats use MS.

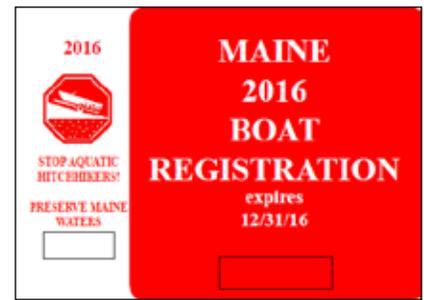


**Sticker Present?:** Circle “yes” if the boat displays the current years sticker (see right). The sticker color changes each year. This is also where you indicate if the boat is non-motorized by circling “NM”. **You are encouraged to inspect non-motorized watercraft.** If “yes” or “no” is circled then it is understood that the boat is motorized. It is important that one of these three options is circled.

The sticker reads “Stop Aquatic Hitchhikers -Preserve Maine Waters” and is physically attached to the Maine watercraft annual registration sticker. Owners of Maine-registered watercraft automatically pay the com-

bined cost of the sticker (\$10) and the annual registration when the boat is registered for use on inland waters.

Owners of motorized boats with out-of-state registration are required to purchase and affix a separate nonresident sticker (see right) annually. The cost is \$20.



What does this mean for you, the CBI? For Maine-registered boats, look for the rectangular “Stop Aquatic Hitchhikers – Preserve Maine Waters” sticker attached to the boat's annual registration sticker (above).

For non Maine-registered boats, look for a white, square sticker (above) with colored text matching the wording and color of the Maine sticker. This should be located beside the out-of-state bow registration number.



What if a Maine registered boat has the current annual registration but lacks the attached “Stop Aquatic Hitchhikers” sticker? Owners of Maine-registered watercraft used only in tidal waters may declare such use to their town clerk. The \$10 fee will be deducted from the annual watercraft registration fee and the “Stop Aquatic Hitchhikers” sticker will be removed from the watercraft registration, since boats used exclusively in tidal waters do not require a sticker. But if tidal boaters later decide to boat on inland waters their municipal office can issue (for \$10) a new Maine watercraft registration that includes the milfoil sticker.

What if the boat does not have the current year's registration and sticker? You do not have the authority to stop boaters from launching. However, you may inform them they risk a fine if a warden stops them. This is a good opportunity to explain where the money from the sale of the sticker goes.

## Where can boaters buy a milfoil sticker in your town?

Contact the Department of Inland Fisheries and Wildlife by calling: 207-287-8000 or Purchase online at [https://www10.informe.org/webshop\\_ifw/?storeID=2](https://www10.informe.org/webshop_ifw/?storeID=2)

A key point to remember is that all the funds go to dedicated accounts at DEP and DIFW for preventing and managing invasive aquatic species. Eighty percent of the sticker funds go to DEP and twenty percent to DIFW. For more information on how the money is spent, see Pages 17-19.

**Previous Waterbody Visited:** This question is primarily for the inspector. It's very helpful to know if a boat came from an infested or out-of-state lake so extra precautions can be taken. Ask which body of water the boat was previously on. You also need to record the state where the lake is located (see the table below for the state abbreviations). **Note:** If you find a suspicious plant be sure to record the previous waterbody.

**Boat Inspected at What Time?:** We need to know whether the boater is potentially introducing plants into the lake or bringing them out. Record the time the boat entered or left the lake in the appropriate line.

Please use **military time** and use the same survey line for each individual boat if you see it twice (entering and leaving the lake). See the table to the right for converting to military time.

**Any Plants Found?:** If any aquatic plant is found, record a "yes." If you find a suspicious plant – one you believe might be invasive – you must send it in to the Volunteer Lake Monitoring Program (VLMP) for identification or turn it in to the local program coordinator, who will either confirm it is not invasive or send it in to the VLMP for positive identification. **Note:** Remember to record the entire boat bow identification number in the "If Motorized" field.

Converting to Military Time			
Regular time	Military time	Regular time	Military time
Midnight	0	Noon	1200
1 a.m.	100	1 p.m.	1300
2 a.m.	200	2 p.m.	1400
3 a.m.	300	3 p.m.	1500
4 a.m.	400	4 p.m.	1600
5 a.m.	500	5 p.m.	1700
6 a.m.	600	6 p.m.	1800
7 a.m.	700	7 p.m.	1900
8 a.m.	800	8 p.m.	2000
9 a.m.	900	9 p.m.	2100
10 a.m.	1000	10 p.m.	2200
11 a.m.	1100	11 p.m.	2300

**Was the Plant Identified as Invasive?** Don't make your selection in this column until after a positive ID is made. **Note:** Only plants identified by VLMP as invasive will be recorded in the state database.

**Who Identified the Plant?:** Use this column to record the person and/or agency that identified the plant.

**List places in your area where nonresident boaters can buy milfoil stickers.**

1. \_\_\_\_\_

2. \_\_\_\_\_

<b>State abbreviations</b>			
Alabama AL	Idaho ID	Montana MT	Rhode Island RI
Alaska AK	Illinois IL	Nebraska NE	South Carolina SC
Arizona AZ	Indiana IN	Nevada NV	South Dakota SD
Arkansas AR	Iowa IA	New Hampshire NH	Tennessee TN
California CA	Kansas KS	New Jersey NJ	Texas TX
Colorado CO	Kentucky KY	New Mexico NM	Utah UT
Connecticut CT	Louisiana LA	New York NY	Vermont VT
Delaware DE	Maine ME	North Carolina NC	Virginia VA
District of Columbia DC	Maryland MD	North Dakota ND	Washington WA
Florida FL	Massachusetts MS	Ohio OH	West Virginia WV
Georgia GA	Michigan MI	Oklahoma OK	Wisconsin WI
Hawaii HI	Minnesota MN	Oregon OR	Wyoming WY
	Mississippi MS	Pennsylvania PA	
	Missouri MO	Puerto Rico PR	

# Dealing with suspicious plant fragments

Use the color pictures of plants found on Pages 21-25 to help determine if a plant fragment is suspicious. Suspicious means: Is there any possible chance the plant is an invasive? If yes:

Label and package the sample according to protocol **being sure to record the entire boat bow registration number for the sample ID (see box at right)**. Send the sample to the Volunteer Lake Monitoring Program (VLMP). Also please do the following:

- Hold the applicable survey form until contacted by VLMP, which will be within 72 hours of receipt of plant. Write the plant name on the bottom of the original inspection form. If ID takes longer than this, explain why in the comment section and submit the inspection form.
- Fill in the “Was the Plant Identified as Invasive?” column to indicate if the plant was identified as invasive or not.
- Fill in the “Who Identified?” column to indicate who conducted the plant identification.
- Send the inspection forms to LEA and keep a copy for your records.



**Invasive Aquatic Plant Sample**

ID# (state and registration) MS 9521AR  
Date collected 7-26-08  
Collector's name Cyndi Broyer  
Organization LPA  
Contact's phone/email 207-925-2322  
Waterbody Lovewell Pond  
Town/County Fryeburg ME Oxford  
Launch site name Fish + Game  
Mail moist sample to VLMP, 24 Maple Hill Rd., Auburn, ME 04210

## Preparing specimens for mailing

Keep the plant wet and cool; place it in the pre-labeled Ziploc bag provided to you at the beginning of the season. If the plant is delicate and/or flimsy, add enough water to the bag to cushion the plant and keep it wet.

If the plant is relatively sturdy, remove all air from the bag and seal. DO NOT wrap the plant in a wet paper towel or other absorbent material.

Using a waterproof marker, label the bag with the following information: Date; Collector's name; Waterbody; Town; Launch site location; Submitted by (person's name) and contact info; ID# (state abbreviation and **the boat's full registration number**) which should also be on the inspection form.

Make sure the bag is sealed tight and place it in a small box with enough packing material (crumpled newspaper works well) to prevent movement.

Mail the specimen on a Monday or Tuesday, to minimize the possibility of weekend delays. Please contact VLMP at (207) 783-7733 or vlmp@mainevlmp.org to let them know the specimen is on its way.

Send packaged specimen to the following address:

Volunteer Lake Monitoring Program  
24 Maple Hill Road  
Auburn, Maine 04210

You will be contacted within 72 hours of receiving your plant sample. If the plant is invasive, the Maine Department of Environmental Protection will be notified. Remember to fill in the last two columns of the CBI Inspection Form once you learn if the plant specimen is invasive or not.

# Personal Safety

Nothing is of greater importance or concern than your personal safety. Please observe the following guidelines when you are at a launch site:

- If you have a cell phone, take it with you to the boat launch site.
- Always back away from a potentially dangerous or violent situation. Volunteers are not enforcers of rules and should never jeopardize their own safety.
- If you are ever suspicious of someone (such as a loiterer or someone who is not boating), do not hesitate to leave the launch site. It's a lot better to be safe than sorry! If you feel that a boat launch site is unsafe in any way, notify your coordinator or the host agency sponsoring inspections on your lake. It might be possible to request that the town send a police patrol car around on days that you are working, as they have a vested interest in the safety of their launch site as well. If it's that dangerous to be there, report the condition to the local, county or state police and cease operations.
- Do not allow a confrontation to develop, no matter how strong you feel about the threat of invasive plants.



Courtesy Boat Inspectors at Roxbury Pond

## Conduct at the launch site

Follow these few simple guidelines and both you and boaters will be comfortable.

- Always ask if boaters would mind answering a few questions and ask permission to inspect their boats with them.
- Always introduce yourself and say which organization you are working for and why you are at the

launch site. Do not just approach a boater and begin asking questions immediately, as they might be confused about who you are and why they should give you their time.

- Wear a CBI T-shirt or other organization shirt if available. It helps promote your message and reassures boaters that they're being approached by someone involved in a legitimate project.
- Maintain a positive attitude and wish all boaters a good day, no matter how irritable they may seem.

## Difficult Boaters

What if you meet with resistance and a boater refuses an inspection; or insists on launching even if they know there are plants on the boat or trailer; or doesn't have the current year's sticker? While most boaters are appreciative of your efforts to protect the lake, some simply do not want to be bothered or aren't convinced that invasive plants are a problem and therefore refuse to participate in an inspection. Remember these are courtesy boat inspections - always respect the boater's wishes. However you could:

- Politely explain the reason invasive plants and animals are a concern: "Invasive plants grow in dense mats that shade out native plants, block fish movement, entangle boat motor propellers, and interfere with swimming and other types of water recreation. Invasive plants grow rapidly and out-compete native vegetation needed by fish and wildlife".
- If the boat has a lot of plants, suggest the boater pull over and remove before launching. Caution the boater that Maine law prohibits the transportation of ANY plant on the outside of a boat, trailer, or equipment and prohibits launching a boat with invasive plants (see page 1 for more details about the law).
- Caution that all motorized boats using inland waters are required by law to affix the Lake and River Protection Sticker (see page 5 for more information) and risk a fine if the warden stops them.
- If the boater insists on launching or leaving with plants attached, note the vehicle license plate and boat bow registration numbers and communicate them to your coordinator or a Maine game warden (numbers are found on the front, inside cover).
- Most importantly, do nothing to jeopardize your safety!

## Tricky questions

Courtesy Boat Inspections have been around for a while, so most people are aware of the program, but here are some ideas in case someone asks: “Why are you out here wasting resources when the plant is going to come anyway?” You might say, “Even if we cannot keep the plants out completely, we can prevent a lot of widespread damage. Prevention gives us time to adopt new control methods as they are developed. Also, the longer we keep invasives out of a lake the longer we put off the enormous costs of management and property devaluation.”

“Aren’t all plants bad anyway?” It is important to clear up this misconception! Native plants are essential elements of an aquatic ecosystem, providing the basis for all life in the lake. The problem with invasive (non-native) plants is that they out-compete native plants, since they have no natural competition or predators.

“I don’t think a sticker fee is fair because we boaters spend enough money as it is.” Maine lacks adequate funding to protect its waters. Most states do not offer free public boat launches and it would be a shame if Maine had to charge boaters to launch their boats.

Many states charge a lot more than Maine does, either in registration fees, charges to launch boats or additions to the gas tax. In Vermont, 25 percent of boat registration fees go toward fighting invasive plants that have become established there.

In other New England states, boaters face higher fees and contend with more infested waters. Hundreds of Massachusetts lakes are impaired for boating and swimming by invasive plants.

“I don’t have time for this . . . I know all about it already!” This is a fairly common remark. If the boater does not wish to help you with the survey, you must respect their rights and let them be. Just offer them a brochure and wish them a nice day.

“Who is really getting the money from the stickers anyway?” Except for the \$1 per sticker agent fee for each non-resident boat and costs associated with distribution, printing and administration at Inland Fisheries and Wildlife, all of the money is channeled directly into the dedicated invasive aquatic species accounts at DEP and DIFW.

The state uses some of the money to offer grants to municipalities and non-profit organizations that sponsor volunteer efforts and local programs such as courtesy boat inspections. Refer to Pages 17-19 for a breakdown of how sticker revenues are distributed and spent.



**Variable Leaf Milfoil flowering in the Songo River in Naples, Maine**

# Implementing the CBI Program on your lake

Beyond the immediate goal of protecting your lake, the benefits of running a CBI program are many: great PR for your association resulting in new members, greater donations, and even the emergence of new leaders within your group.

**Requirements:** Each organization receiving a grant from the DEP for CBI staffing must send a minimum of one representative to a CBI training session. That person, ideally the organization's CBI supervisor, will be responsible for training all inspectors who are hired or who volunteer for the organization. **The main training session is held after the annual Milfoil Summit in late February/early March.** Contact LEA to arrange training if you can't make the Summit. Contact information

is at on the back of the front cover, under "Sources of help and information."

In addition to CBI training and a CBI supervisor, you will need volunteers, a staffing schedule and a volunteer coordinator for each launch site if possible. Use the media and your organization's newsletter to publicize the need for volunteers, but realize you will probably not get enough people unless you make direct person-to-person requests.

Use your membership list, divide it up among volunteers, and call individuals you think would be willing to help protect the lake. Be sure telephone callers use the Volunteer Survey Form below. You'll be amazed how little you remember about each call after 5 or 10 minutes have passed. The call has four objectives: explain the problem (invasive aquatic plants); state your need (volunteers); get a commitment, and schedule the individual for CBI training.

## Volunteer survey

Sponsoring group \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Left message/ Date \_\_\_\_\_ Left message/ Date \_\_\_\_\_ Left message/Date \_\_\_\_\_

Will volunteer? \_\_\_\_\_ (yes/no)

Preferred Launch Site \_\_\_\_\_ Doesn't Matter \_\_\_\_\_

Preferred day \_\_\_\_\_ Doesn't matter \_\_\_\_\_

Preferred time \_\_\_\_\_ Doesn't matter \_\_\_\_\_

Weekends available for boat inspection (Please circle the weekends volunteer is available):

June 4 June 11 June 18 June 25 July 2 July 9 July 16 July 23

August 6 August 13 August 20 August 27

Can you work July 1? \_\_\_\_\_ July 2? \_\_\_\_\_ July 3? \_\_\_\_\_ July 4? \_\_\_\_\_

Can you suggest other property owners or interested persons who might volunteer?

What training session would you like to attend?

Can you take a friend to the launch site with you during your assigned time? \_\_\_\_\_

What size T-shirt do you prefer? Small \_\_\_ Medium \_\_\_ Large \_\_\_ Extra Large \_\_\_ XX Large \_\_\_

\_\_\_\_\_  
(Name of recruiter) (Phone) (Email) (Date)

Scheduling inspectors: You can use Excel to make a spreadsheet showing the days and times you plan to have inspectors at launch sites. Two or three-hour time slots work for most volunteers. It's a lot easier if you can schedule a volunteer into the same time slot each week or for a period of weeks.

The busy times vary from site to site. Generally, Fridays, Saturdays and Sundays are good to cover. Some organizations cover weekends first, and then schedule extra volunteers on weekdays.

## Reporting procedure

Inspection forms should be sent every two weeks to LEA, 230 Main Street, Bridgton, Maine 04009. Please be sure all inspection forms for the first half of the summer reach LEA by July 15 and by September 15 for the second half.

Keep photocopies of your completed forms in case the originals are lost. Please review forms before sending to make sure the inspector is writing legibly and has filled out the forms properly. Inspection forms received later than two months after the season may not be entered into the state's database.

PROGRAM COORDINATORS ARE URGED TO REVIEW INSPECTION FORMS BEFORE SENDING THEM IN! It is much easier to correct mistakes or omissions when things are still fresh in your mind.

## What has worked well?

- Signs like the one shown at right let boaters know what's ahead, making them more receptive to inspections.
- Using an online scheduler lets CBIs enter or change their work shifts from a computer connected to the internet.
- Wearing the CBI T-shirt immediately identifies you to boaters.
- Provide all inspectors with list of phone numbers to call.
- Know where boaters can buy stickers locally.
- Using a Mystery Boater program can help identify issues with individual CBIs.

## What is a Mystery Boater?

A mystery boater will observe the CBI inspecting their boat and report back to your organization about their performance. The boater will fill out an easy form to turn in to the CBI coordinator. This allows supervisors to assist inspectors who are having difficulties with the job. (See form on Page 12)



# Mystery Boater Evaluation for Courtesy Boat Inspectors (CBI):

Your Name: \_\_\_\_\_

Date: \_\_\_\_\_

Lake: \_\_\_\_\_

1. Did the CBI tell you his/her name? If so, what was their name? (first name is ok)
2. Did the CBI ask if they could do an inspection to look for invasive aquatic plants?
3. Did the CBI do a thorough check of your boat including the trailer, motor, and did they ask about your anchor line or any fishing gear (if applicable)?
4. Was the CBI friendly, polite, engaging, and professional?
5. Did they offer you any materials on milfoil or about infested lakes in Maine

Submit Report Form to:

# Please watch out for these other invaders

Although this manual is focused on preventing the spread of invasive aquatic plants through courtesy boat inspections, it is important to realize there are also invasive aquatic animals that threaten Maine's water bodies. Species such as Quagga mussel (*Dreissena bugensis*), Zebra mussel (*Dreissena polymorpha*), Chinese mystery snail (*Cipangopaludina chinensis malleatus*), Chinese mitten crab (*Eriocheir sinensis*), Northern pike (*Esox lucius*), Asian clam (*Corbicula fuminea*), Rusty crayfish (*Orconectes rusticus*), the Spiny water flea (*Bythotrephes cederstroemi*) and Viral Hemorrhagic Septicemia (VHS) are among the most threatening to Maine.

**Control methods** for invasive aquatic animals vary greatly depending on the species, but following the five simple steps below can help to greatly reduce their spread into Maine.

1. Learn how to identify invasive aquatic species. Attend an Invasive Plant Patrol workshop.
2. Remove mud, plants, fish, and animals from all of your equipment and drain all water from the bilge and live wells before leaving launch areas. Many unwanted organisms (plants, animals, and diseases) can easily be transported and then unintentionally introduced into waters via recreational boater's bilge water and fish live wells. Bilge water and live well water should be drained prior to leaving a lake and if possible allowed to dry for 5 days before entering a new water body.
3. Clean your equipment with hot water or a pressure washer and allow it to dry for five days before transporting it into a new body of water.
4. If you have snails, plants, fish or other animals in an aquarium and you no longer wish to care for them, find a new aquarium home for them. Do not release them into the wild!
5. Never release any plants or animals into a different body of water from which they came.

The following pages describe some of Maine's most threatening aquatic animal invaders. The descriptions and photos are taken from the *Maine Field Guide to Invasive Aquatic Plants and their common native look-alikes* by the Maine Center for Invasive Aquatic Plants and the Maine Volunteer Lake Monitoring Program. Additional source references for individual species are listed after each description.

## Chinese Mystery Snail

*Cipangopaludina chinensis malleatus*

Chinese mystery snails, native to parts of Southeast Asia, were brought to this country as a food source for Asian markets. It is believed that imported snails were intentionally released in some areas to create a locally harvestable supply.



Since their introduction, Chinese mystery snails have spread to many parts of the United States, and can now be found in a number of Maine lakes and ponds. Chinese mystery snails are distinctively large — the size of a walnut or golf ball and half-again as large as Maine's largest native freshwater snail.

Though they spend a good portion of their lives under the water surface, half buried in the bottom sediments, Chinese mystery snails may also be encountered with their trap doors sealed up tight, floating along at the water's surface. When these large snails die, they often wash up on shore, where their dark, olive-colored shells can be easily seen and (unpleasantly) smelled. Chinese mystery snails prefer the quiet water of lakes, ponds, roadside ditches and streams.

Chinese mystery snails may be transported, as adults or tiny juveniles, via bait buckets and water holding areas on boats. Like other snails, this species may serve as a vector for various parasites and diseases.

Chinese mystery snails occur in a number of Maine water bodies, but their full distribution in Maine is unknown. You can assist the effort to get a better handle on this invasive organism by reporting any sightings to MCIAP at 207-783-7733 or [mciap@mainevlmp.org](mailto:mciap@mainevlmp.org).

**Reference:** Martin, Scott M. 1999. Freshwater snails (Mollusca: Gastropoda) of Maine. *Northeastern Naturalist*. *Cipangopaludina chinensis* (Reeve, 1863). Fact sheet by Gulf and South Atlantic Regional Panel On Aquatic Invasive Species. [www.gsar.org](http://www.gsar.org)

## Zebra mussels

*Dreissena polymorpha*

Zebra mussels are thought to have been introduced to this country as accidental stowaways attached to hulls or in the ballast water of ships entering the Great Lakes from Europe. Since they were discovered here in 1988, these tiny, freshwater bivalves, have become a major aquatic pest throughout much of the Midwest. Spreading to New England, primarily by way of boating activity, they have now impacted waters in Vermont, Connecticut, and Massachusetts, where the first documented occurrence of zebra mussels was in Laurel Lake in 2009.

Zebra mussels begin life as tiny free-swimming larvae, called veligers. It is during this stage that they are most readily transported from one water body to another (attached to boating gear, in bilge water, bait buckets etc.) and also most difficult to detect. After two or three weeks, the veligers “settle out” in the water body, attaching by way of strong, threadlike filaments to just about any hard surface they encounter. Rocks, sediment, wood, intake pipes, moorings, boat hulls and native mussel beds are all at risk of colonization. Zebra mussels are small (adults are about 15 mm) but voracious filter feeders, straining out major portions of the phytoplankton population and effectively starving out many native zooplankton species.

The gap created in the food web may cascade through the entire ecosystem. Zebra mussel infestations may clog power plants and industrial water systems, cause problems in irrigation canals and pipes, and foul boating equipment. Zebra mussels have not yet been detected in Maine.

Reference: Frequently asked Questions about the Zebra Mussel. United States Geological Survey. Florida Integrated Science Center, Gainesville FL.

[http://fl.biology.usgs.gov/Nonindigenous\\_Species/Zebra\\_mussel\\_FAQs/zebra\\_mussel\\_faqs.html](http://fl.biology.usgs.gov/Nonindigenous_Species/Zebra_mussel_FAQs/zebra_mussel_faqs.html)

## Quagga mussels

*Dreissena bugensis*

Quagga mussels are native to the Caspian Sea and, like zebra mussels, are thought to have come to this country in the ballast water of ocean-going ships. Quagga mussels were discovered in the Great Lakes in 1989, but were not identified as a distinct species until 1991. These invaders prefer silty or sandy lake bottoms, but may be found in waters ranging from warm and shallow, to deep and cold. Like zebra mussels, the shell is distinctly striped in dark and light bands. Adult quagga mussels are generally larger than zebra mussels (20 mm long, roughly the size of your thumbnail) and their shells are broader and more fan-shaped. The ventral (or hinged) side of the shell is convex, preventing the quagga mussel from being balanced, on this side, on a flat surface. (The zebra mussel will remain upright when placed on its ventral side.)



Quagga mussels feed year-round, even in winter when zebra mussels are dormant. Quagga mussel infestations also may clog power plant and industrial water systems, cause problems in irrigation canals and pipes, and foul boating equipment. Ecologically, they can alter benthic substrates and compete with native zooplankton, mussel and fish species for food and/or space. Quagga mussels have not been detected in Maine.

– Wisconsin Department of Natural Resources  
<http://dnr.wi.gov/topic/invasives/fact/quagga2012.html>

## Didymo or “Rock Snot”

*Didymosphenia geminata*

Anglers and boaters using Maine’s streams and rivers are urged to be aware of a new threat! The aquatic nuisance alga known commonly as “Didymo” or “rock snot” has invaded the northern reaches of the Connecticut River in New Hampshire and in the White River and Battenkill River in Vermont. These are the first official reports of the invasive algae in the northeastern U.S. This highly invasive species has not been detected in Maine.

However, it already affects freshwater rivers and streams in other parts of the U.S., Canadian provinces of Que-

bec and New Brunswick and New Zealand. It is not known at this time how *Didymo* will affect water quality, aquatic habitat and fish populations in Maine, but its potential to alter habitats and displace natives species are of great concern to officials in regions where infestations have been established.



It is critical for anglers and boaters to be aware that *Didymo* is easily spread by even just one cell of the alga breaking off and drifting downstream in infested reaches. It is also very easily spread by waders and other fishing gear that touches the bottoms of streams in infested areas, so it is essential to check and clean all fishing equipment.

Useful link to find out more about *Didymo*:

<http://www2.epa.gov/region8/didymosphenia-geminata>

## Viral hemorrhagic septicemia

### VHS

VHS is an Ebola-like virus, deadly to fish, which was first reported in 2005 in North American freshwater fish. It's not a threat to humans, but is devastating to 22 species of freshwater fish populations. It's been found in the Great Lakes, St. Lawrence River, New York State and moving eastward (toward Maine).

Genetic tests suggest that the Great Lakes VHS probably originated in the Atlantic Ocean and most likely was transported in the bilge water of ships. VHS has been reported in more than 20 species and may be the most serious threat ever to our freshwater fish populations.

Report immediately to DIFW (207-657-2345) any fish appearing to be abnormal. VHS has been divided into three stages with symptoms which may overlap. These include darkening of the body, protrusion of the eyes, hemorrhages in gills and eyes, pectoral fins and body surface. The fish may become twisted and swim on their sides.

Keep any such fish cool (4 degrees C, 39 degrees F), but do not freeze. Virus isolation must be done within 24 hours after a fish is caught.

## Northern pike

### *Esox lucius*

Northern pike are native to parts of Eurasia and North America, but not native to Maine. This popular "sport fish" was illegally introduced into the Belgrade Chain of Lakes in the 1970s. It's now present in at least 16 lakes in the Kennebec, Androscoggin, and coastal river drainages, and is suspected to occur in additional waters.

*Esox lucius* can inhabit almost every type of freshwater, from cold deep lakes, to warm shallow ponds, to sluggish streams. Besides fish, its diet includes frogs, crayfish, small mammals, and birds — just about anything it can sink its teeth into. Pike exceeding 30 pounds have been caught in Maine.

Northern pike may be confused with its close relative, the chain pickerel (*Esox niger*), a fish native to Maine. Unauthorized introductions of invasive, exotic fish species are particularly destructive to Maine's native brook trout populations, but pike are particularly voracious fish eaters. Their presence in one Maine lake is suspected of destroying one of the state's premier landlocked salmon populations. They may also cause irreversible changes to entire aquatic ecosystems.

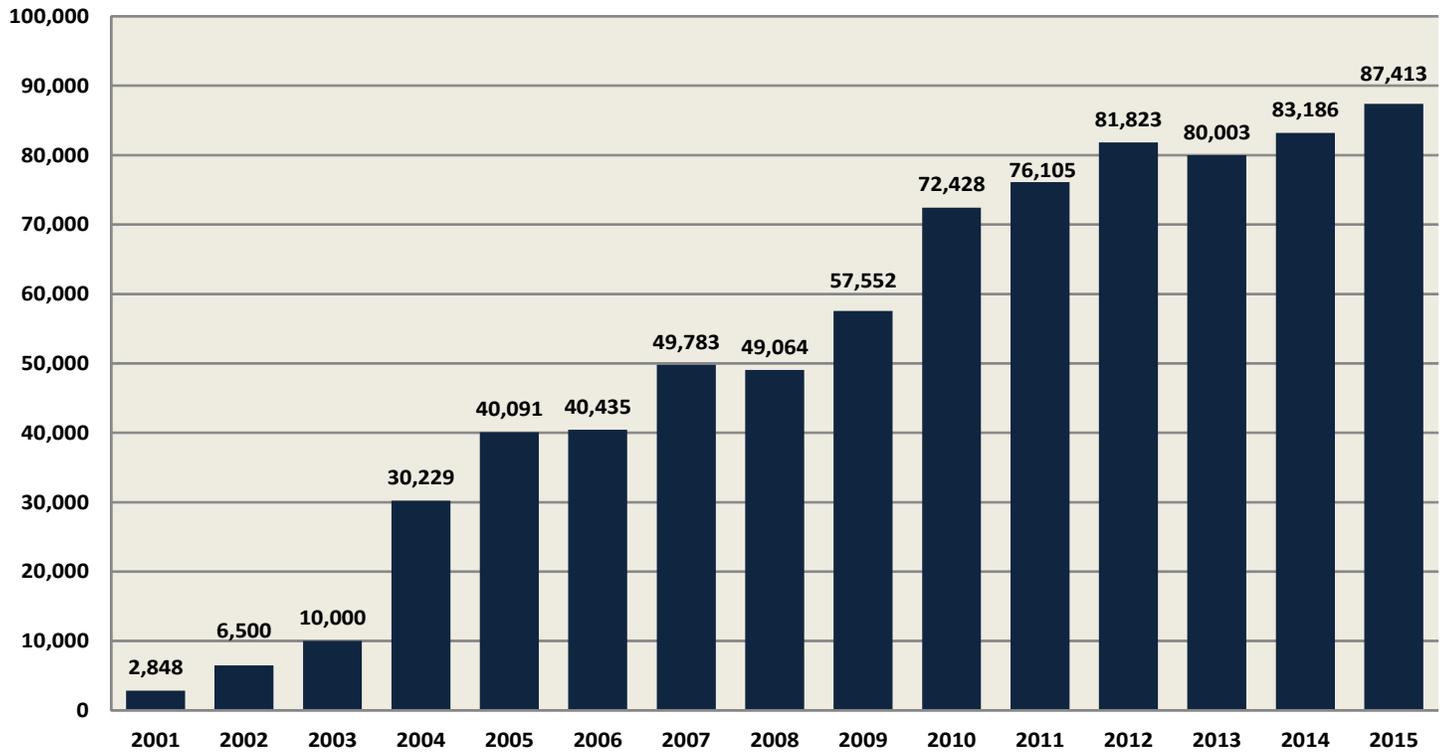
The illegal introduction of any fish into any Maine water is a Class E crime, punishable by fines up to \$10,000. The Maine Department of Inland Fisheries and Wildlife offers a minimum reward of \$2,000 for information leading to the apprehension of persons responsible for the illegal introduction of fish. Call Operation Game Thief at 1-800-253-7887. If you suspect that you have seen or caught a northern pike, please report your findings to the Maine Department of Inland Fisheries at 207-287-8000.

References: *Illegal Fish Stockings Threaten Maine Lakes and Rivers* by David Boucher, Fishery Biologist, Maine Department of Inland Fisheries and Wildlife; [www.maine.gov/ifw/fishing/illegal\\_stocking.htm](http://www.maine.gov/ifw/fishing/illegal_stocking.htm). Northern pike at <http://www.maine.gov/ifw/fishing/species/identification/northernpike.htm>



*Northern pike*

## Courtesy Boat Inspections: Annual Totals



<b>CBI statistics</b>	2014	2015
Infested lakes with inspections	14	14
Water bodies with inspections	116	117
Total plants found	2196	2648
Total invasive plants found	105	94
Invasive plants on entering boats	6	8
Invasive plants on leaving boats	99	86
Total inspectors	710	702
Inspection hours	42,293	43,591
Boats with sticker	93%	92%
Participating organizations	101	98*
<i>Source: Maine Department of Environmental Protection</i>		

<b>Confirmed 'saves' 2015</b>	<b>Boat direction</b>	<b>Invasive plant</b>
<b>Sebago Lake, Raymond</b>	1 entering 3 leaving	Variable milfoil
<b>Sebago Lake, Standish</b>	3 leaving	Variable milfoil
<b>Lake Arrowhead, Waterboro</b>	6 entering 36 leaving	Variable milfoil
<b>Messalonskee Lake, Oakland</b>	16 leaving	Variable milfoil
<b>Messalonskee Lake, Sidney</b>	15 leaving	Variable milfoil
<b>Pleasant Pond, Litchfield</b>	10 leaving	Variable milfoil
<b>Long Lake, Naples</b>	1 leaving	Variable milfoil
<b>Annabessacook Lake, Winthrop</b>	1 leaving	Variable milfoil
<b>Thompson Lake, Oxford</b>	1 leaving	Variable milfoil
<b>Wilson Pond, Monmouth</b>	1 entering	Eurasian milfoil

**\*42 participating organizations were BASS clubs and 5,400 inspections were conducted at BASS tournaments.**

# Department of Environmental Protection's Prevention and Control Efforts

## Funding

Funding for the Department of Environmental Protection's (DEP) Invasive Aquatic Species Program (IASP) comes from a fee on motorboats and seaplanes using inland waters. Boaters with Maine registrations pay \$10 and must display the "Stop Aquatic Hitchhikers - Preserve Maine Waters" sticker attached to the boat registration sticker. Boaters with out-of-state registration and all seaplane operators must purchase and display the \$20 Lake and River Protection Sticker.

Adoption of LD1626 by the Maine Legislature in April 2014 changed the revenue distribution of invasive species sticker fees. Formerly 60% went to DEP and 40% to Department of Inland Fisheries and Wildlife (DIFW). The current distribution sends 80% to DEP and 20% to DIFW. The impetus for this change was to provide more funding to lake groups battling established infestations of invasive aquatic plants.

Following are brief descriptions of primary program elements for calendar year 2016. Budgeted salary/benefits for 3.5 DEP staff positions total \$307,500 in 2016. Each program element in the pie chart (above) includes an estimate of staff time devoted to each category. Overhead is approximately 16 percent on every dollar spent except

for grant funds. The 2016 budget includes \$62,730 in overhead. Please email [milfoil@maine.gov](mailto:milfoil@maine.gov) with questions regarding DEP funding and budget.

## Early Detection

Over 3,500 "citizen scientists," trained and supported by the Maine Volunteer Lake Monitoring Program through a grant with DEP, form the state's early detection program. They provide a core force for surveying boat ramps, inlets, dock and swim areas and other areas for potential plant invasion.

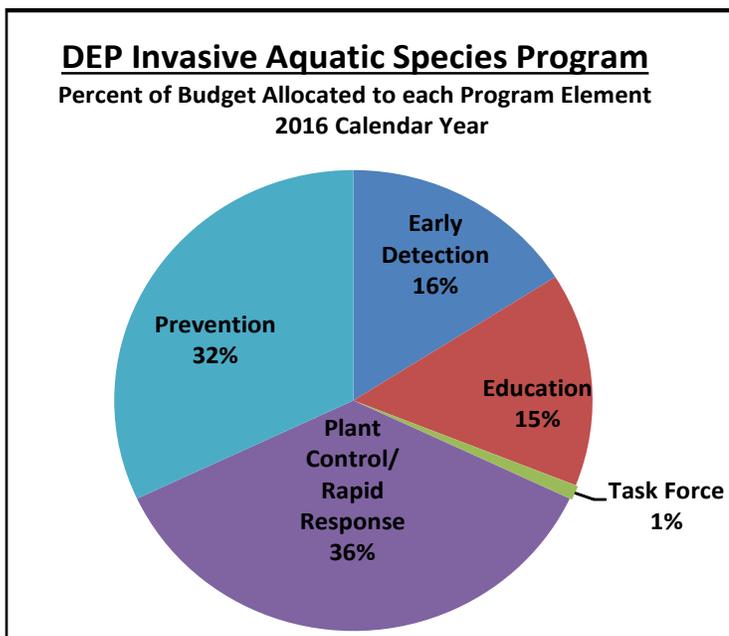
## Education

IASP staff engages in educational activities to inform residents and visitors of the invasive species threat, promotes behaviors that prevent the spread of new infestations and advises lake groups on plant control strategies and techniques. These activities include the following:

- assisting lake groups with spread prevention and plant control programs
- speaking about the invasive aquatic species threat to varied audiences and responding to requests for information from media outlets
- distribution of brochures and other collateral materials
- technical assistance to plant retailers and schools that use plants as classroom tools
- distribution of warning signs on infested and non-infested lakes and ponds.

## Prevention (Courtesy Boat Inspection Program)

One day, all boaters will inspect their watercraft and trailers for hitchhiking plants and other biological debris that migrate from lake to lake. Until then, posting inspectors at ramps is the most effective way to assure biological threats do not spread and provides an opportunity to show boaters the importance of inspecting and removing plants and debris. Boat inspectors are trained and grant funds are provided to support lake association and municipal boat inspection programs. Inspections have increased from 2,500 in 2001 to over 80,000 in each



of the last four years (2012, 2013, 2014 and 2015). The 2016 Courtesy Boat Inspection Program budget includes a competitive grant program for un-infested waters and allocates specific funding to organizations on infested lakes to prevent spread from those waters.

**Plant Control and Rapid Response**

Local and regional lake groups work tirelessly to control established infestations. The IASP responds to newly-discovered infestations to limit spread both within the infested lakes and beyond. Efforts include manual removal of plants by trained volunteers and SCUBA divers, deployment of warning buoys to direct boat traffic away from infested areas, and—in worst-case situations—the application of herbicides. The 2016 budget includes funding for rapid response by the IASP to the

newly-confirmed European naiad (*Najas minor*) infestation in Northeast Pond (Maine/NH border lake).

**Task Force/Interstate efforts**

Collaboration, both with neighboring states that have more extensive invasive plant problems and with Maine stakeholders, is essential to set priorities and find efficiencies. Not only do nearby states have a greater variety of invasive species able to migrate into Maine, they also have more experience in curbing or controlling plant infestations. Communication and the free exchange of experience are essential.

Within Maine, a Governor-appointed panel of stakeholders, the Interagency Task Force on Invasive Aquatic Plants and Nuisance Species, overviews and advises how revenues coming to the IASP best serve the state.

<b>Total milfoil sticker sales and revenue, 2002-2015</b>							
<b>Calendar Year</b>	<b>Resident</b>	<b>Amount</b>	<b>Non-resident</b>	<b>Amount</b>	<b>Grand Total</b>	<b>DIFW Share</b>	<b>DEP Share</b>
2002	100,049	\$900,441	9,814	\$186,466	\$1,086,907	\$434,763	\$652,144
2003	94,451	\$850,059	9,135	\$173,565	\$1,023,624	\$409,450	\$614,174
2004	96,713	\$870,417	9,260	\$175,940	\$1,046,357	\$418,543	\$627,814
2005	98,393	\$885,537	10,239	\$194,541	\$1,080,078	\$432,031	\$648,047
2006	99,947	\$899,523	10,449	\$198,531	\$1,098,054	\$439,222	\$658,832
2007	98,255	\$884,295	11,666	\$221,654	\$1,105,949	\$442,380	\$663,569
2008	94,451	\$944,510	11,190	\$212,610	\$1,157,120	\$462,848	\$694,272
2009	94,568	\$945,680	11,052	\$209,988	\$1,155,668	\$462,267	\$693,401
2010	97,250	\$972,500	11,096	\$210,824	\$1,183,324	\$473,330	\$709,994
2011	92,675	\$926,750	10,203	\$193,857	\$1,120,607	\$448,243	\$672,364
2012	93,477	\$934,770	10,108	\$192,052	\$1,126,822	\$450,729	\$676,093
2013	93,945	\$939,450	9,402	\$178,638	\$1,118,088	\$447,235	\$670,853
*2014	92,764	\$927,640	10,171	\$193,249	\$1,120,889	\$251,142	\$869,747
2015	93,887	\$938,870	10,017	\$190,323	\$1,129,193	\$225,839	\$903,354
<b>Totals</b>	<b>1,340,826</b>	<b>\$12,820,452</b>	<b>143,802</b>	<b>\$2,732,238</b>	<b>\$15,552,690</b>	<b>\$5,798,024</b>	<b>\$9,754,666</b>
<i>Source: Maine Natural Resources Services Center. Revenues collected January 1 - December 31.</i>							
<i>*DEP's share increased and DIFW's decreased in 2014 due to the revenue distribution change approved by the Maine Legislature in April 2014. See Funding section on page 17 for explanation of the revenue distribution change.</i>							

# DIFW's invasive species program

Biologists from DIFW's Fisheries Division continue to respond to reports of non-native fish and other aquatic organisms. In 2015, reports of new invasive fish introductions were confirmed in five waters. The species included northern pike, muskellunge, black crappie, smallmouth bass, largemouth bass, rainbow smelt, golden shiner, and white catfish. Staff biologists also responded to reports or addressed invasive fish issues on 26 waters. One private pond containing goldfish on the University of Maine campus in Orono was reclaimed with University staff help.

Rainbow smelt were illegally stocked into Wadleigh Pond, in remote northern Piscataquis County, and imperiled populations of wild brook trout and Arctic charr. The reclamation was successful and the pond was restocked with brook trout and charr in 2013 and 2014. The reintroduced trout and charr were stocked from Wadleigh Pond fish retained at a private hatchery until reclamation was complete. Regional Biologists will monitor the progress for several years to come, but did receive angler reports in 2015 of several Arctic charr captured and released, indicating good survival of the replanted fish.

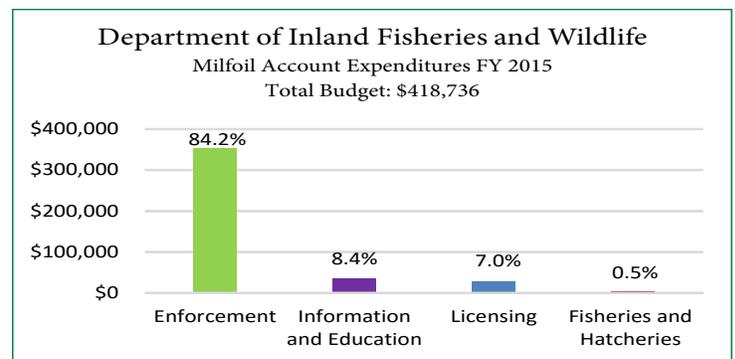
A similar project was completed earlier at Big Reed Pond, also in Piscataquis County and also involving brook trout and Arctic charr. From 2012 to 2015, Department biologists confirmed the reestablishment of a robust wild brook trout population. In 2015, a radio telemetry study confirmed the spawning location for Arctic charr, visually observed to be spawning in early November. This was the first confirmation that charr reproduction may be occurring in Big Reed since the reclamation (2010) and replanting of lake-specific stocks of trout and charr from 2011 to 2014.

A large reclamation project was completed in 2015 on 11-acre Round Pond in the White Mountain National Forest. Round Pond was last reclaimed in 1961, but sampling in 2012 showed robust populations of golden shiner and brown bullhead had become established - both species are considered invasive to this watershed and are severe competitors with brook trout. This project involved several weeks of pre-treatment preparation. The surrounding area is relatively low-gradient

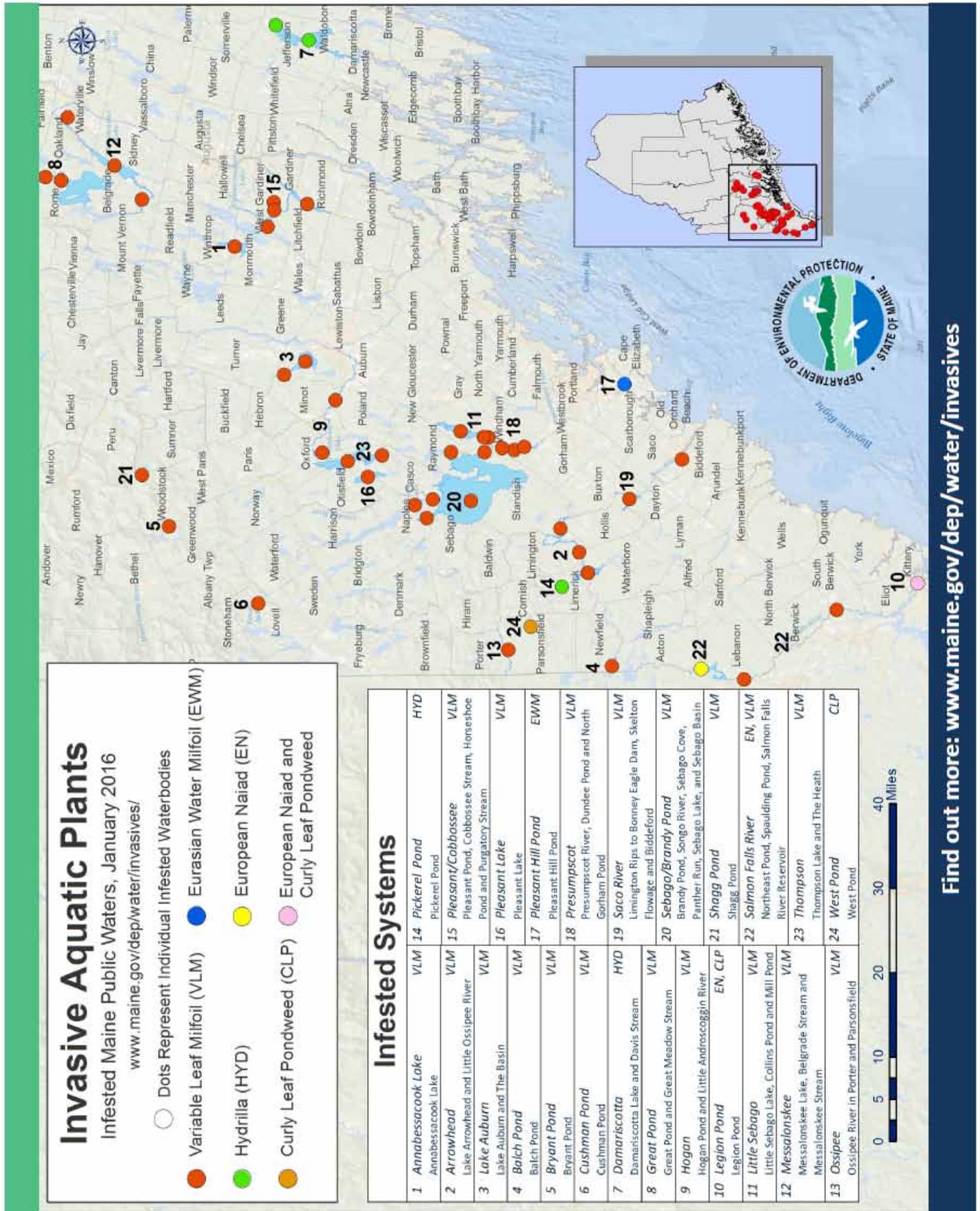
and comprised of extensive fringe wetlands and organic substrate. Marshy habitat and organic substrates can create difficulties in achieving a complete kill during reclamation. Another challenge was the prevalence of brown bullhead, a species notoriously difficult to completely eradicate. Biologists from Region A spent several weeks attempting to mitigate these challenges. Numerous beaver dams were removed, small flowages were pumped dry or treated with rotenone, and an upstream pond was siphoned down to diminish flows in the major inlet to Round Pond. These measures removed many potential fish refugia and made the larger treatment less stressful to other Divisional staff. Regional fisheries biologists will carefully evaluate the success of the reclamation in 2016, prior to reestablishing the pond's brook trout fishery. These "extreme" responses to illegal fish introductions are costly and logistically challenging, and place enormous demands on DIFW's small fishery staff.

Bald Mountain Pond in Somerset County has been the focus of work since 2014 to study and protect Arctic charr from illegally introduced rainbow smelt, likely introduced prior to 2007, but only documented recently by DIFW. In 2015, Department biologists evaluated the nature and extent of the lake's smelt spawning runs and conducted trials to destroy incubating smelt eggs with electrofishing techniques. Radio telemetry techniques were employed again in 2015 to determine charr spawning locations and evaluate live capture techniques. This will continue in 2016.

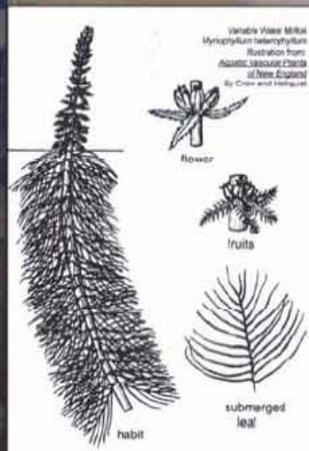
In 2015 Maine game wardens checked 21,239 boats and spent 9,512 hours on the water. 633 milfoil violations were addressed with 168 resulting in summonses and 465 resulting in warnings. Wardens worked with different CBI programs around the Sebago Lake area.

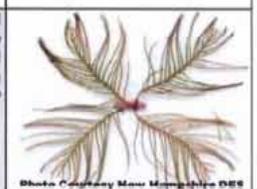
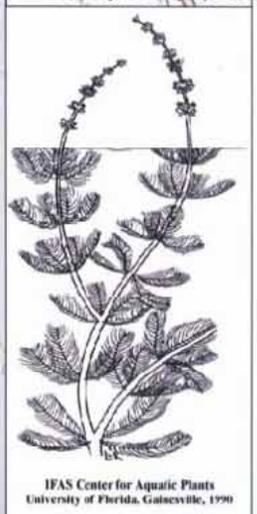


# Map of known locations of infestations in Maine public waters

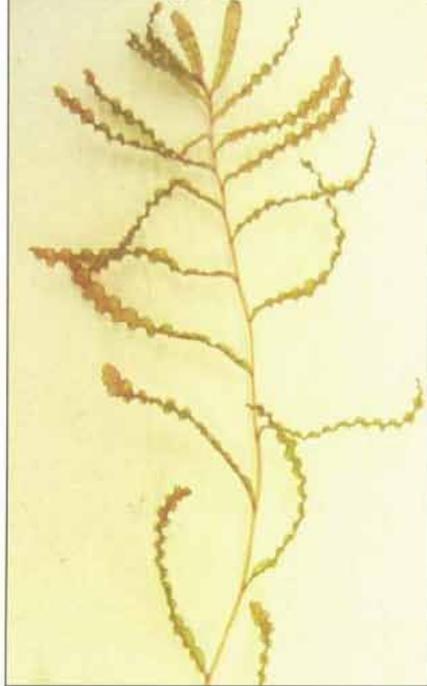


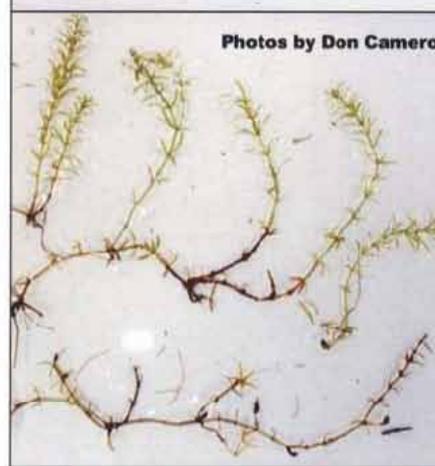
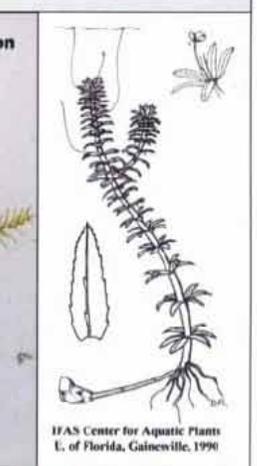
# Invasive aquatic plants handout

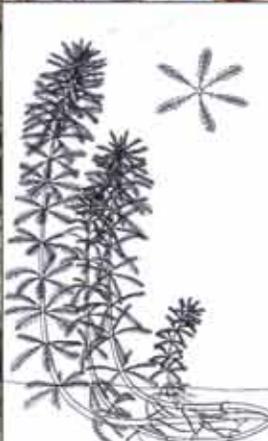
<p><b>Variable Water-milfoil</b> <i>Myriophyllum heterophyllum</i></p>	<p><b>Invasive</b></p>
 <p>Variable Water Milfoil <i>Myriophyllum heterophyllum</i> By Roberta Hill © 2004 MCIAP</p>	 <p>Photo by Ann Murray University of Florida / IFAS Used with permission</p>  <p>Variable Water Milfoil <i>Myriophyllum heterophyllum</i> Illustration from: Aquatic Macroalgae of the Eastern United States By Crow and Holmquist</p>
<p><b>Look Alikes:</b> <i>Utricularia</i> sp. (Bladderwort) Native <i>Ceratophyllum demersum</i> (Coontail) Native Other <i>Myriophyllum</i> species</p>	

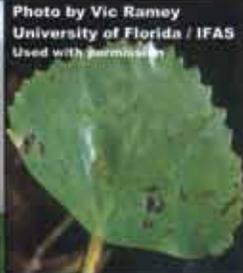
<p><b>Eurasian Water-milfoil</b> <i>Myriophyllum spicatum</i></p>	<p><b>Invasive</b></p>
 <p>Eurasian Water Milfoil <i>Myriophyllum spicatum</i> Collected and photographed by Don Cameron © 2004 MCIAP</p>	 <p>Photo Courtesy: Maine Invasive Species DES</p>  <p>IFAS Center for Aquatic Plants University of Florida, Gainesville, 1990</p>
<p><b>Look Alikes:</b> <i>Utricularia</i> sp. (Bladderwort) Native <i>Ceratophyllum demersum</i> (Coontail) Native Other <i>Myriophyllum</i> species</p>	

As of 2012, these four finvasive plants and European naiad have been documented in Maine's public waters.

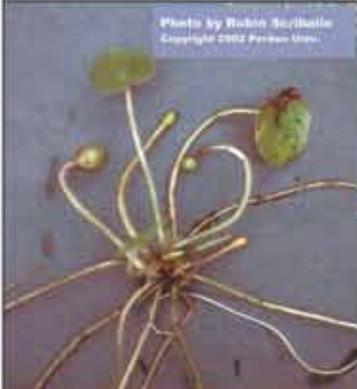
<p><b>Curly-leaved Pondweed</b> <i>Potamogeton crispus</i></p>	<p><b>Invasive</b></p>
<p>Photos by Maine DEP Invasive Species Program</p>	
	 <p><b>Turion</b></p>  <p>Copyright 2001 University of Florida Center for Aquatic and Invasive Plants</p>

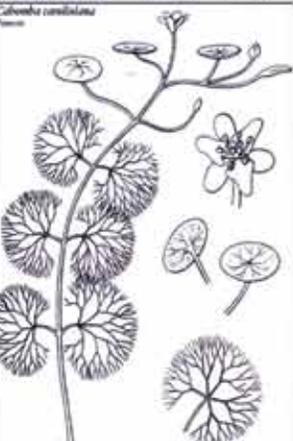
<p><b>Hydrilla</b> <i>Hydrilla verticillata</i></p>	<p><b>Invasive</b></p>
<p>cm cm cm</p>	
 <p><b>Tuber</b></p>	
 <p>Photos by Don Cameron</p>	 <p>IFAS Center for Aquatic Plants U. of Florida, Gainesville, 1990</p>

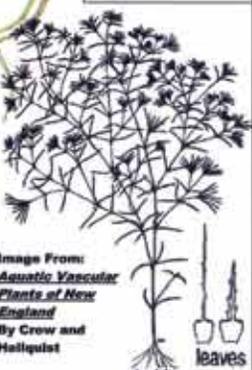
<p><b>Parrot Feather</b> <i>Myriophyllum aquaticum</i></p>	<p><b>Invasive</b></p>
<p>Photo by Vic Ramey University of Florida / IFAS Used with permission</p> 	<p>Photo by Don Cameron</p>   <p>IFAS, Center for Aquatic Plants U. of Florida, Gainesville, 1990</p>
<p><b>Look Alikes:</b> <i>Other members of the Myriophyllum genus</i></p>	

<p><b>Water Chestnut</b> <i>Trapa natans</i></p>	<p><b>Invasive</b></p>
<p>Photo by Vic Ramey University of Florida / IFAS Used with permission</p> 	<p>Photo by Vic Ramey University of Florida / IFAS Used with permission</p>   <p>Water Chestnut <i>Trapa natans</i> © MCIAP 2004</p>
<p><b>Look Alikes:</b> None</p>	

<p><b>Yellow Floating Heart</b> <i>Nymphoides peltata</i></p>	<p><b>Invasive</b></p>
<p>Photo by Vic Ramey University of Florida / IFAS Used with permission</p> 	<p>Photo by M. Malchoff Lake Champlain Sea Grant / VTDEC</p>   <p>Copyright 2002 U. of Florida Center for Aquatic and Invasive Plants</p>
<p><b>Look Alikes:</b> <i>Nuphar variegata</i> (Spatterdock) <b>Native</b> <i>Hydrocharis morsus-ranae</i> (European Frogbit) <b>Invasive</b> <i>Nuphar microphylla</i> (Yellow Waterlily) <b>Native</b></p>	

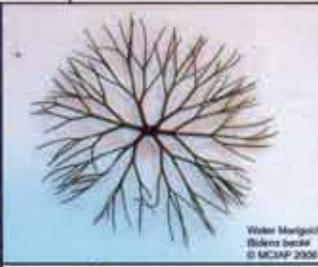
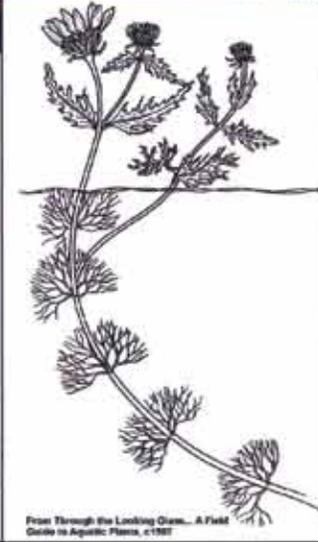
<p><b>European Frogbit</b> <i>Hydrocharis morsus-ranae</i></p>	<p><b>Invasive</b></p>
<p>Photo by Robin Scriballe Copyright 2002 Perdue Univ.</p>  <p>Photo by M. Malchoff L.C. Sea Grant / VTDEC</p> 	<p>Photo by Robin Scriballe Copyright 2002 Perdue Univ.</p>   <p>Copyright 2002 U. of Florida Center for Aquatic and Invasive Plants</p>
<p><b>Look Alikes:</b> <i>Nymphoides cordata</i> (Little Floating Heart) <b>Native</b> <i>Nymphoides peltata</i> (Yellow Floating Heart) <b>Invasive</b> <i>Nuphar microphylla</i> (Yellow Waterlily) <b>Native</b></p>	

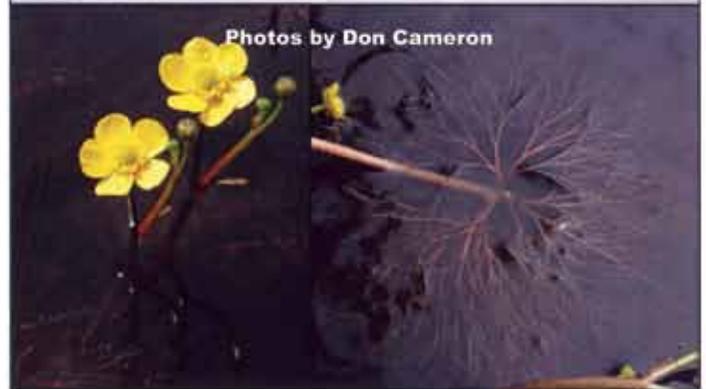
<b>Fanwort</b> <i>Cabomba caroliniana</i>	<b>Invasive</b>
 <p>Photo by Maine DEP Invasive Species Program</p>	 <p>Photo Courtesy: New Hampshire DES</p>
	 <p>IFAS Center for Aquatic Plants University of Florida, Gainesville, 1990</p>
<p><b>Look Alikes:</b> <i>Bidens beckii</i> (Water Marigold) <b>Native</b>  <i>Ranunculus flabellaris</i> (Yellow Water Crowfoot) <b>Native</b>  <i>Utricularia</i> sp. (Bladderwort) <b>Native</b></p>	

<b>European Naiad</b> <i>Najas minor</i>	<b>Invasive</b>
 <p>Photos by Don Cameron</p>	
	 <p>Image From: <i>Aquatic Vascular Plants of New England</i> By Crow and Hallquist</p>
<p><b>Look Alikes:</b> <i>Najas flexilis</i> (Slender Naiad) <b>Native</b>  Other <i>Najas</i> species <b>Native</b></p>	

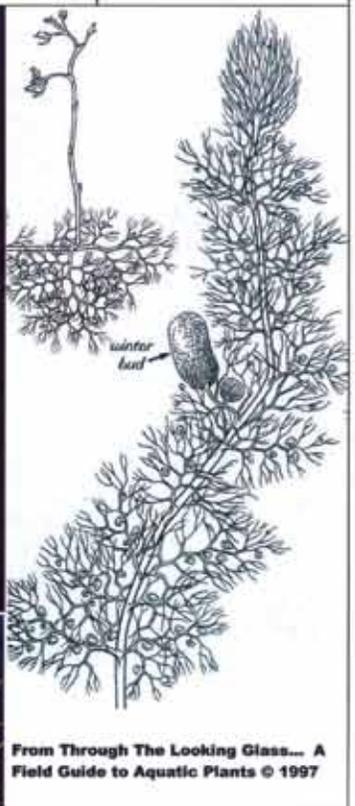
<b>Brazilian Elodea</b> <i>Egeria densa</i>	<b>Invasive</b>
 <p>Photo by Maine DEP Invasive Species Program</p>	 <p>Photo Courtesy NH DES</p>
	 <p>IFAS Center for Aquatic Plants University of Florida, Gainesville, 1990</p>
<p><b>Look Alikes:</b> <i>Hydrilla verticillata</i> (Hydrilla) <b>Invasive</b>  <i>Elodea canadensis</i> (American Waterweed) <b>Native</b></p>	

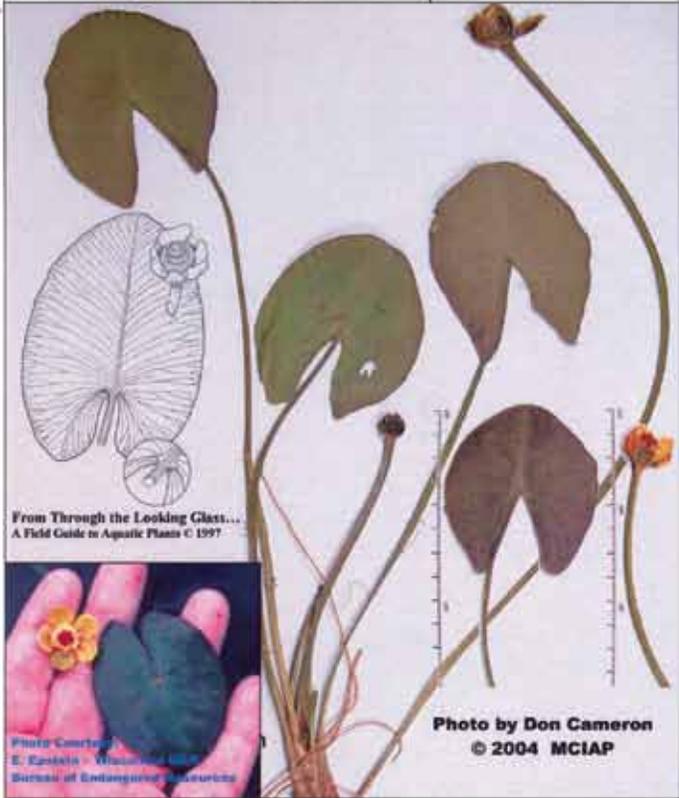
<b>American Waterweed</b> <i>Elodea canadensis</i>	<b>Native</b>
	 <p>American Water Weed <i>Elodea canadensis</i> By Don Cameron © 2004 MCIAP</p>
	
<p>From <i>Through the Looking Glass... A Field Guide to Aquatic Plants</i> © 1997</p>	

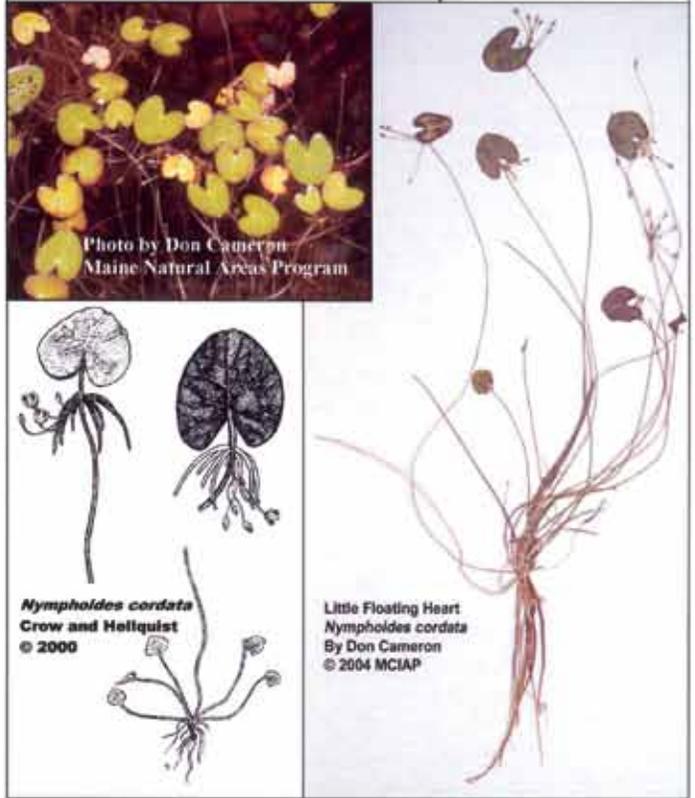
<p><b>Water Marigold</b> <i>Bidens beckii</i></p>	<p><b>Native</b></p>
 <p>Photo by Don Cameron</p>	 <p>Water Marigold <i>Bidens beckii</i> © MCIAP 2004</p>
 <p>Water Marigold <i>Bidens beckii</i> Photo by Don Cameron © 2004 MCIAP</p>	 <p>From <i>Through the Looking Glass... A Field Guide to Aquatic Plants</i>, c1997</p>

<p><b>Yellow Water Crowfoot</b> <i>Ranunculus flabellaris</i></p>	<p><b>Native</b></p>
 <p>Photos by Don Cameron</p>	
	

<p><b>Coontail</b> <i>Ceratophyllum demersum</i></p>	<p><b>Native</b></p>
 <p>Photo by Vic Ramey University of Florida / IFAS Used with permission</p>	 <p>Photo by Don Murray University of Florida / IFAS Used with permission</p>  <p>IFAS Center for Aquatic Plants University of Florida, Gainesville, 1990</p> <p>From <i>Through The Looking Glass... A Field Guide to Aquatic Plants</i> © 1997</p>

<p><b>Common Bladderwort</b> <i>Utricularia macrorhiza</i></p>	<p><b>Native</b></p>
 <p>Photos by Don Cameron</p>	 <p>From <i>Through The Looking Glass... A Field Guide to Aquatic Plants</i> © 1997</p>

<p><b>Yellow Waterlily</b> <i>Nuphar microphylla</i></p>	<p><b>Native</b></p>
 <p>From <i>Through the Looking Glass... A Field Guide to Aquatic Plants</i> © 1997</p> <p>Photo by Don Cameron © 2004 MCIAP</p> <p>Photo Courtesy: E. Epstein - Wisconsin Dept. of Natural Resources Bureau of Endangered Resources</p>	

<p><b>Little Floating Heart</b> <i>Nymphoides cordata</i></p>	<p><b>Native</b></p>
 <p>Photo by Don Cameron Maine Natural Areas Program</p> <p><i>Nymphoides cordata</i> Crow and Hellquist © 2000</p> <p>Little Floating Heart <i>Nymphoides cordata</i> By Don Cameron © 2004 MCIAP</p>	

<p><b>Clasping Leaf Pondweed</b> <i>Potamogeton richardsonii</i></p>	<p><b>Native</b></p>
 <p>Photo by Vic Ramoy University of Florida / IFAS Used with permission</p> <p><i>Potamogeton richardsonii</i> Potamogeton, a subgenus of Potamogeton Copyright 2001, Univ. of Florida</p> <p>Center for Aquatic and Invasive Plants Copyright 2001, Univ. of Florida</p>	

<p><b>Slender Naiad</b> <i>Najas flexilis</i></p>	<p><b>Native</b></p>
 <p>Photos by Don Cameron</p> <p><i>Najas flexilis</i> Slender naiad Crow and Hellquist © 2000</p>	

## In a nutshell: How to be a great CBI

1. **Be safe.** Don't stay around if someone gets ornery or if a situation seems uncomfortable.
2. **Urge boaters** to inspect their own boats and gear every time they enter and leave a water body.
3. **Be professional.** Your attire should promote the right image. CBI shirts are mandatory. Know the facts about invasives and be courteous.
4. **Discourage company.** You are at work so don't let friends deter you from giving your job full attention.
5. **Be prepared** to answer questions such as, "Where do I get a sticker?"
6. **Write legibly** and don't forget to fill out the top two lines of the survey sheet before you start.
7. **Be in touch.** Have a cell phone or know where the nearest phone is.
8. **Stay in touch.** Keep phone numbers handy for police, wardens and your supervisor.
9. **Be comfortable.** Make sure you have rain gear, an umbrella, a chair, water and sunscreen.
10. **Be inspired.** This is important work even though there will be slow times.

### Quick Facts

#### About invasive aquatic plants:

Reproduce in many ways; may clone from small plant fragments.

Can survive out of water for days, reviving when re-hydrated.

Can blanket and choke surface waters; make swimming and boating difficult, dangerous or impossible.

Harm native vegetation and wildlife; lower property prices; harm local businesses. Once well-established, they're virtually impossible to remove and very costly to manage.

#### About the 'Milfoil law':

It's illegal to transport any aquatic plant on the outside of a vehicle, trailer, or equipment in Maine. It's illegal to sell, possess, import, cultivate, transport or distribute any invasive aquatic plant in Maine.



**CBI Aaron Tripp found and removed a Eurasian milfoil fragment on a boat launching at the Narrows public ramp on Kezar Lake in June 2011.**

Violation may result in fines of up to \$500 (first-time) and up to \$5,000 for launching boats carrying any of the banned species.

Fines for failure to display a current boat sticker apply to all motorized craft on Maine inland waters. (Kayaks, canoes and sailboats without motors are exempt.)

#### About boat stickers:

2016 (Stop Aquatic Hitchhikers) stickers are white with red print for both Maine registered boats and non-Maine registered boats. The resident sticker is affixed to the annual boat registration sticker which is red.

Cost is \$10 for resident; \$20 for nonresidents. Resident/nonresident status depends on where boat is registered, not where owner resides (NH residents may store/register boat in Maine).

All the sticker money goes to dedicated accounts for invasive species, education, prevention, control, eradication and enforcement. Money is divided 80/20 between DEP and DIFW, respectively.

#### CBI SUPPLY LIST

- |  |   |
|--|---|
| • Clipboard  | • Insect repellent, sunscreen, water            |
| • Pen or pencil and an indelible marker                  | • Folding chair and umbrella                    |
| • Plenty of survey forms                                 | • Trash bag                                     |
| • Ziploc baggies for plant samples                       | • List of phone numbers to call in an emergency |
| • DEP brochures explaining invasive aquatic plant threat | • List of places boaters can purchase stickers  |
| • Cell phone ( <i>optional</i> )                         | • Your CBI T-shirt!                             |

Notes:



*Thank you! Your help in halting the spread of invasive plants is priceless.*

*We know how valuable your time is and we thank you  
for your willingness to share it to protect Maine's waters.*

*The Lakes Environmental Association*



*The Maine Department of Environmental Protection*

