

Protect and Preserve



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www.belgradelakesassociation.org

OUR MISSION:

To protect and improve the watershed of Great Pond and Long Pond through Preservation, Education and Action.

BELGRADE LAKES ASSOCIATION

MILFOIL SPECIAL EDITION 2012

MILFOIL... the facts

- Variable milfoil was positively identified in Great Meadow Stream in July 2010.
- By September 2011 the milfoil infestation had spread into North Bay of Great Pond.
- Variable milfoil is an invasive aquatic plant that has no natural enemies and grows in very shallow areas all the way out to where the water is 15' to 20' deep.
- Variable milfoil forms a thick mat on the surface that greatly reduces the recreational value of a lake, makes swimming impossible and boating very difficult.
- Left unchecked, variable milfoil could grow around virtually the entire shoreline of both Great and Long Pond.
- Milfoil can drive down shorefront property values and have a negative impact on local business.
- The milfoil in Great Pond is now in a very small area and can be contained ... if we really go after it this year.
- Action was undertaken in 2010 and 2011 to control the milfoil infestation.
- A much more aggressive plan is in place for 2012 that has four major components:
 - Community awareness and education
 - Controlling access to milfoil infested areas
 - Field Action: Hand pulling milfoil in Great Meadow Stream and North Bay, placing benthic barriers and surveying Great and Long Pond for new milfoil outbreaks
 - Fundraising
- A commercial milfoil mitigation company, New England Milfoil, is under contract to lead the hand pulling operation this summer.
- A second milfoil pulling team and a survey team will be hired and managed by the BRCA.
- Work on the water will start in late May and continue for 16 weeks to mid September.
- The Maine Lakes Resource Center is the information center for all milfoil activities.
- Help is needed: volunteers and donations of money, equipment, watercraft and housing.
- More information is available on the BLA website: www.blmaine.org.

■ **We can beat this milfoil threat ... but it's going to take help from everyone. Please join us.**

MILFOIL IN GREAT POND

AQUATIC WEED THREATENS GENERATIONS OLD WAY OF LIFE

Belgrade Lakes, Maine. For many of us the name is almost magical. It's a refuge from that other world ... a place with deep family traditions ... where kids learn to swim, fish and boat ... where life takes on a whole new meaning ... where time almost stands still.

At the center of it all is our lakes. It's our lakes that brought us all here and that bind us together. It's our lakes that we most cherish and most want to preserve for the generations to come. And it's our lakes that are at great peril threatened by a small feathery aquatic plant called milfoil.

No one is sure how it got here ... maybe on a boat propeller, the bed of a boat trailer or even a duck decoy. But what is certain is that variable milfoil is in Great Pond. And without action, our lakes may never be the same again.

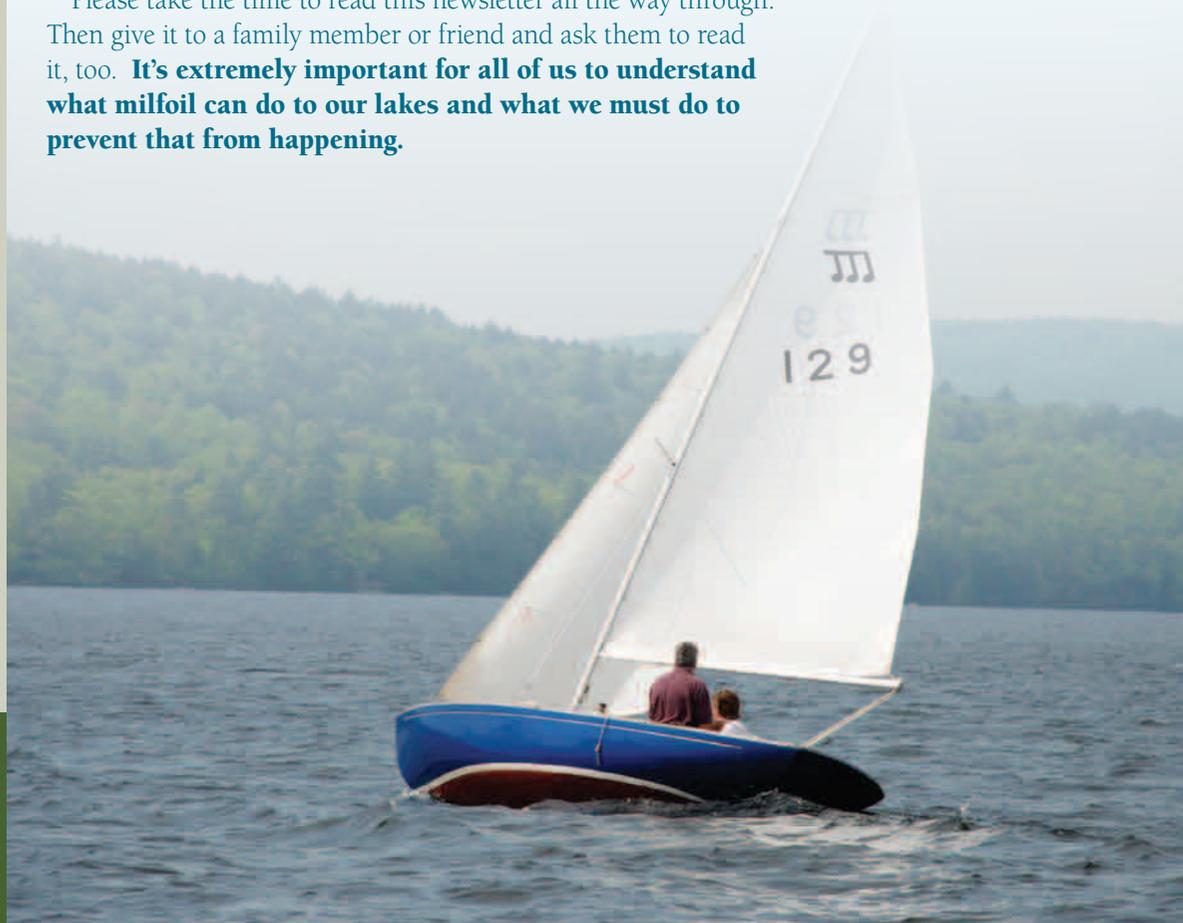
A thick mat of milfoil could grow around virtually the entire shoreline of Great and Long Pond ... all the way out to where the water is 15' to 20' deep. Once an area is infested with milfoil, you can't swim in it or navigate a boat through it.

Like it or not, we are in for one tough fight with this aggressive invader. There's an awful lot at stake ... loss of a traditional way of life ... and an uncertain future here for generations to come.

But there is good news. The milfoil is now confined to a very small area in Great Pond. With aggressive action, it's believed the milfoil can be contained so that it will not spread to other parts of the lake. Achieving this kind of success will require an all out effort. Every one of us is going to have to play a part to stop this milfoil.

The first thing we have to do is fully understand the threat posed by this invasive plant. This special edition of the Belgrade Lakes Association newsletter is the initial step in a campaign designed to educate shorefront property owners, renters, visitors and the entire Belgrade Lakes community about milfoil.

Please take the time to read this newsletter all the way through. Then give it to a family member or friend and ask them to read it, too. **It's extremely important for all of us to understand what milfoil can do to our lakes and what we must do to prevent that from happening.**





BELGRADE LAKES ASSOCIATION

171 Main Street
P.O. Box 551
Belgrade Lakes, ME 04918

Phone:
207.512.5150

Email:
info@blaine.org

Web:
belgradelakesassociation.org

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THE MILFOIL STORY

WHAT IT IS. HOW IT GOT HERE. WHAT PROBLEMS IT CAN CAUSE.

By Lynn Matson, Co-chair BLA Milfoil Task Force

WHAT IS MILFOIL?

Milfoil is a rooted, submersed, perennial aquatic plant. There are actually nine different kinds of milfoil in Maine. Five of them are native. These native milfoil species have been in our lakes for eons but are not a problem because they are part of the natural ecology of the lakes. The native milfoils are a primary food source of a small water bug, the watermilfoil weevil, which keeps them in check.

The other four types of milfoil are the problem. The aquatic weevils don't have an appetite for these invasive species, so they're left to grow and spread unchecked in our lakes. They really have no natural enemies.

WHAT DOES MILFOIL LOOK LIKE?

You might already know what milfoil looks like. In fact, you may have had it in your fish tank when you were a kid. It was the very fine feathery plant that grew on long stems from the bottom of your tank right up to the top and formed a thick mat in which your fish could easily hide.

To be a little more descriptive, **variable milfoil**, which is the invasive species in Great Pond, grows in clumps with branching stems emerging from dense, spreading roots. Stems may be green and slight, but most often they are thick, robust and reddish or reddish brown in color. Small root hairs grow at nodes along the length of the stem.

Variable milfoil is also called variable-leaf milfoil and for good reason. Depending on the time of year, its leaves have such a different appearance that the same plant can be mistaken for two different plants.

In the spring and early summer, when the plant is totally submersed, the variable milfoil leaves are fine, feather-like and arranged in densely packed whorls of 4 to 6 around the stem. The tight arrangement of these delicate submersed leaves gives the plant a bottlebrush or raccoon tail appearance.

In midsummer when the plant reaches the surface, the stems can stick out of the water 3" to 6" and form spikes. The leaves that grow on the stems above the water are solid and stiff, not divided or feather-like, about 1" in length, longer than they are wide, bright green in color and usually have serrated edges. Very small white flowers will develop on the spikes.

Upon reaching the lake surface, the milfoil stems branch out profusely and grow horizontally, creating a dense surface canopy just like in your fish tank. But there is one big difference. In your aquarium the milfoil grew just a couple of feet in length. In our lakes it can grow right from the shoreline all the way out to where the water is 15' to 20' deep and has been found growing in water that is 30' deep. The resulting thick mat of milfoil that forms across the surface not only greatly reduces the recreational value of the lake but also blocks available sunlight to submersed plants, changing the entire character of the lake's ecosystem.

WHERE DID MIFOIL COME FROM?

Variable milfoil is actually native to our southern states from Florida to Texas but very foreign and destructive to the rest of the country, including Maine.



Variable milfoil ... the invasive plant that threatens our lakes

Invasive milfoils have been spreading for decades. They have followed traffic corridors hitching a ride on boat trailers. A boat pulled out of an infested lake can easily and unknowingly transport the plant to a non-infested lake and change it forever.

Milfoil has followed the I-95 corridor right up the east coast. Maine was one of the last states to see non-native milfoil infest its lakes. As late as 1970 there was no invasive milfoil in Maine. Now it's in 26 of Maine's lakes. Great Pond is one of the most recent to be added to this growing list of milfoil-infested Maine lakes.

Even our winters won't be much help. Like most aquatic plants, milfoil winters over below the ice. In Minnesota, where the temperature in January regularly dips to 20 degrees below zero, many of its renowned 10,000 lakes are loaded with invasive milfoil.

HOW DOES MILFOIL SPREAD?

One of the things that makes milfoil so difficult to control is the way it grows and multiplies. What makes it so insidious is the way it spreads throughout the lake.

When pieces of the stem break off a healthy milfoil plant, they can stay alive for many days. In that time the fragments can be moved around the lake by water currents, the wind, on a boat anchor line, a fisherman's lure or a hunter's decoy. When those fragments settle to the bottom in a new part of the lake, the root hairs that grow along the stem can quickly find their way down into the sediment and a whole new infestation breaks out. The fragments can also ride on a boat, boat motor or trailer to a new lake.

It's because of this fragmentation capability that it's so important to check watercraft and trailers entering and leaving our lakes and to keep boaters, kayakers, fishermen, hunters and others out of milfoil infested areas.

WHY IS MILFOIL SUCH A THREAT?

It's really not hard to understand what invasive milfoil can do to our lakes. Just look at the pictures in this newsletter. Words can't begin to describe how this feathery plant can totally transform a lake from a recreational gem into a weed-infested nightmare.

The milfoil canopy that grows on the water surface can be so thick and dense that you cannot swim in it or even move a boat through it. It makes kayaking and canoeing very difficult. Milfoil can also be ingested into the water intake port of boat motors, resulting in failures and expensive repairs.

But the threat of milfoil reaches way beyond our actual lakes. It hurts the whole community. A lake fouled with milfoil will be much less attractive to prospective property buyers, renters, vacationers, boaters and even fishermen.

Area businesses will suffer; lakeshore property values will decline; and the tax burden, now heavily born by lakeshore



Harvesting milfoil is an expensive and never-ending operation

property owners, will shift to non-lakeshore owners. **This is not a hypothetical situation. Lakeshore property values decreased 15-20% on Lake Arrowhead in Limerick, Maine, after it became infested with milfoil.**

WHAT DOES IT COST TO MANAGE MILFOIL?

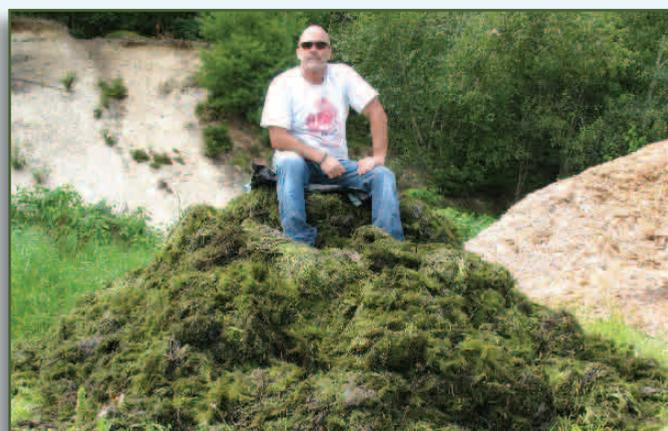
The expense to control milfoil can be as onerous as the mess this plant creates in our lakes. It is estimated that well over \$100 million is spent every year in this country in an attempt to manage nuisance populations of milfoil.

In many parts of the U.S. the only way that lakes can be made usable is by employing milfoil harvesters. Please understand that these harvesters don't kill the milfoil. They simply cut it off below the surface to open up lanes so boats can reach the deeper clear water. The milfoil quickly grows back so this harvesting is not only expensive but a never-ending operation.

The city of Minneapolis, Minnesota, uses 2 harvesters to help manage milfoil on 5 of the 14 lakes that lie within the city limits. To start with, the harvesters cost between \$90,000 and \$200,000. On top of that the city spends \$100,000 a year for the actual harvesting. But here's the catch. All five of their lakes on which milfoil is harvested total only 1085 acres and they actually harvest just 125 acres for "recreational access only."

Great Pond is 8533 acres. Long Pond is 2557 acres. That's a total of 11,090 acres.

To give you some idea of what's involved in battling milfoil on a large lake system, just look at Chautauqua Lake in western New York which is just over 13,000 acres. Highly valued, just like our lakes, Chautauqua employs 8 milfoil harvesters, 5 transit barges, 3 shoreline conveyors, 4 dump trucks and a summer staff of 40 to fight its milfoil battle at a cost of over \$500,000 a year.



Milfoil awaiting disposal

According to their website, this armada of equipment removed 55 truck loads of milfoil from their lake in just 5 days from August 29 to September 2, 2011!

The expense to battle milfoil can quickly become overwhelming. **We've got to contain our problem right now while it's still possible ... before it fills our lakes and empties our wallets.**

WHERE DID MILFOIL ENTER INTO OUR LAKES?

Variable milfoil was positively identified in Great Meadow Stream in July 2010. The stream connects North Pond to North Bay in Great Pond. The milfoil was found growing in the mile and a half section of the stream that lies south of the Route 225 bridge, suggesting it may have come on a watercraft launched at the bridge from the shoulder of the road.

By the end of 2010, the milfoil had worked its way down the entire length of the stream. In 2011, the infestation increased in the stream channel, and by the end of the summer it was found in the mouth of the stream and at one location in Great Pond on the east side of North Bay.

Many of you know that Lake Messalonskee and Belgrade Stream below the dam are heavily infested with variable milfoil. But in some ways Messalonskee is lucky. It's a relatively deep lake with lots of steep shoreline that drops right down to deep water. This makes it harder for milfoil to get a toehold and root, so the milfoil in Lake Messalonskee is largely confined to the coves and shallower west end of the lake where the Route 27 public boat landing was closed.

Great Pond and Long Pond are different. They have more gradual shorelines and much larger areas where the water is less than 20' deep, the ideal habitat for milfoil.

Make no mistake. Invasive milfoil is here and we are now facing a very major threat to our lakes!

Study the map on page 4 of this newsletter. Note all the areas that are high risk for milfoil infestation in Great and Long Pond. Look at your favorite spots to fish or boat or at the lake profile in front of your camp and just imagine the whole shoreline clogged with milfoil and how it will change everything you love about your lake.

This is a threat we have to stop! The milfoil can be defeated in Great Pond. We can't let it take over our lakes. Read more to learn what steps have been taken, what is planned for 2012 and what you can do to help.

MILFOIL VOLUNTEERS NEEDED

This summer experienced professionals will join the milfoil fight on Great Pond. New England Milfoil divers will lead the hand pulling operation in North Bay and Great Meadow Stream and summer employees will be hired to do hand pulling, manage the benthic barriers and survey for other milfoil outbreaks on both Great and Long Pond.

But we will not beat this milfoil infestation without volunteers ... lots of them! This is where you can help.

There's important volunteer work to be done both on and off the water. On the lakes, we will have regularly scheduled volunteer days on Tuesdays and Thursdays all summer. Volunteers will hand pull milfoil in the shallow areas, transport the pulled milfoil to staging areas for disposal and operate in kayaks to net milfoil fragments.

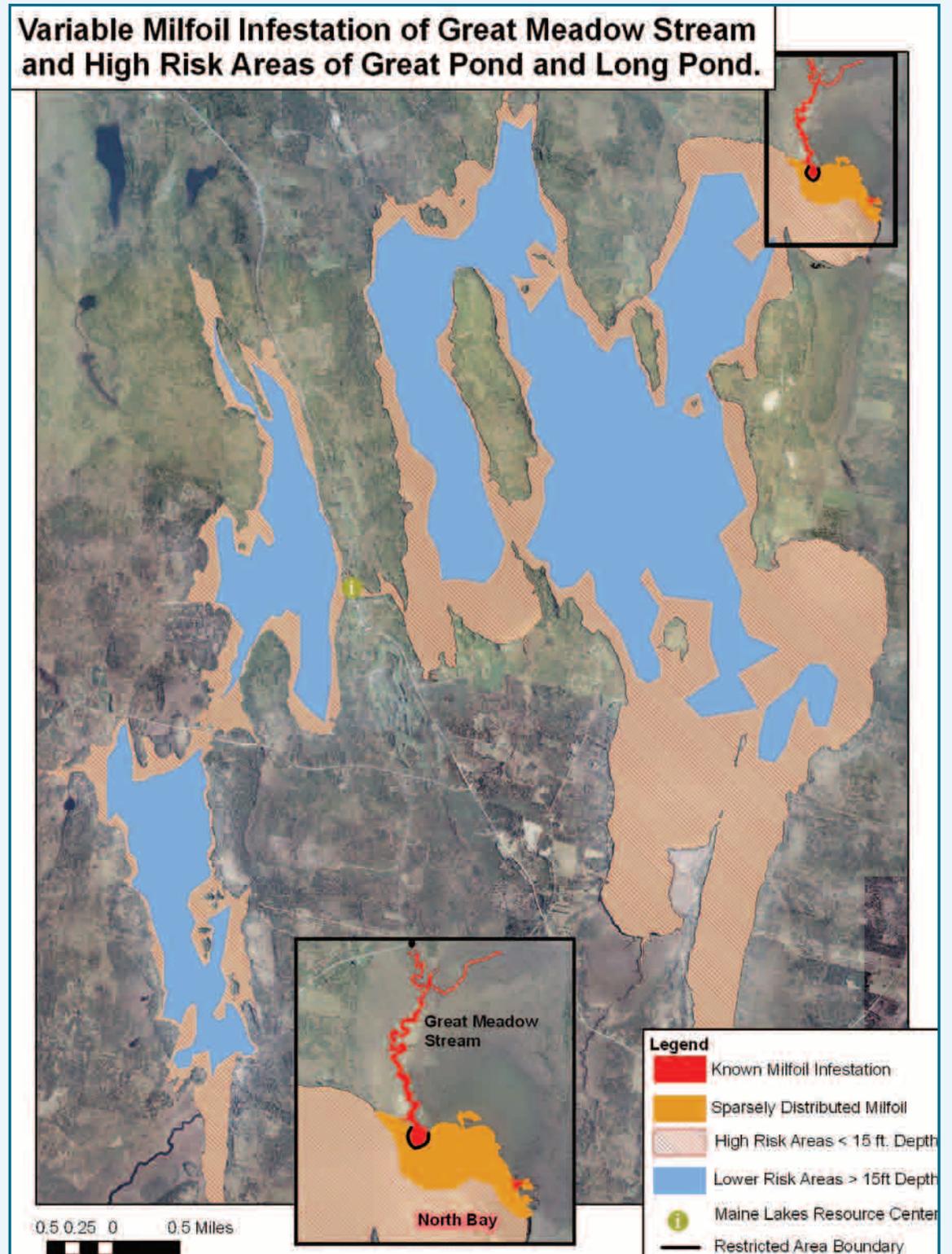
Volunteers will also be needed to work with the survey teams to search for other milfoil outbreaks. Depending on your experience and interest, you can suit up in scuba gear and go underwater to search, put on snorkel equipment and look from the surface, or operate out of a kayak or canoe and use an aquascope to peer down below the surface. Training and milfoil identification instruction will be provided for all volunteers.

There's also plenty of work to do back on dry land right in the BLA office. We'll need help generating publicity and getting out mailings and letters. Volunteers will also be needed to staff the milfoil display area at Maine Lakes Resource Center and to tell the milfoil story to MLRC visitors, to road association meetings and to other community gatherings.

This milfoil infestation is a community wide threat. Everyone who lives here, owns property, vacations, boats, fishes or just loves these lakes will be hurt if we cannot control this infestation. Defeating milfoil is going to take the whole community and lots of volunteers. So please sign up.

To volunteer please call the Milfoil Coordinator Toni Pied at 207-512-5554 or send an email to brcamf@belgradelakes.org Thank you.

OUR VULNERABILITY



Without aggressive action, Variable Milfoil could grow around virtually the entire shoreline of Great and Long Pond.

WAR ON MILFOIL: 2012 STOP MILFOIL ACTION PLAN

The discovery of milfoil growing in North Bay of Great Pond set off alarm bells. The BLA, BRCA and COLA jumped into action. The new Maine Lakes Resource Center offered its support, as did Colby College and the Belgrade Lakes Region Business Group. State of Maine officials in the Departments of Environmental Protection, Inland Fisheries and Wildlife, Conservation and Transportation as well as the Maine Warden Service quickly agreed to meet and step up their involvement.

Representatives and volunteers from all these groups formed a strong coalition right from the start and are still working closely together with a great sense of purpose and urgency. There's a clear recognition around the table of just what's at stake and what we have to lose.

Since September, 2011, when variable milfoil was discovered in North Bay of Great Pond, here's what has been accomplished and what action steps are in place for 2012:

- The Belgrade Lakes Association stepped in to lead this milfoil fight because the problem right now is in Great Pond and poses a clear threat to Long Pond, the two bodies of water within the direct mission of this organization.
- A special Milfoil Task Force was formed and charged with developing an all out battle plan against this aggressive aquatic invader. Many of the task force members have been engaged in the milfoil fight for several years. They are highly concerned about this milfoil threat, just like you. And every one of them is determined to beat it in 2012. The task force is made up of local residents and members of the BLA, BRCA, COLA, the Maine Lakes Resource Center, Colby College and the Belgrade Business Group. The task force members are listed at the end of this story. If you have questions or ideas on how best to stop the spread of this milfoil infestation, please don't hesitate to contact them.
- The task force evaluated a range of potential control options to address the milfoil infestation. Given the type of milfoil present in Great Pond, as well as its specific physical location and setting, it was determined that an approach including access controls, hand pulling by divers and placement of benthic barriers would be the most effective at this time. For more information on these and other control options that were considered, see Dr. Peter Kallin's article in this newsletter.
- **The task force developed a very aggressive STOP MILFOIL Action Plan:**
 - employing professional divers and seasonal workers to hand pull milfoil in Great Meadow Stream and North Bay for 16 weeks in 2012 from late May to mid September,
 - hiring a dedicated full-time 2-person Invasive Plant Survey Team to systematically survey the entire shoreline of Great and Long Pond for other milfoil outbreaks,
 - acquiring watercraft and other equipment needed to support this effort, and
 - recruiting and coordinating volunteers to augment all aspects of this work.
- New England Milfoil (NEM), a professional dive and milfoil mitigation company based in Brownfield, Maine, has been contracted for nine weeks starting in late May to hand pull milfoil from North Bay and Great Meadow Stream. See "New England Milfoil" story for more information about this company and the role they will play.
- A team of summer employees will be hired to augment the work of NEM. They will hand pull milfoil, primarily in Great Meadow Stream, install and maintain benthic barriers and conduct the shoreline surveys. Colby College student interns will also support this effort.
- Volunteers will play an important role in this action plan. Volunteers will be recruited to hand pull milfoil every Tuesday and Thursday during the summer. Please volunteer and join us on the water.
- A communications program has been developed to alert and educate all vital stakeholders about the very real danger of invasive milfoil to Great and Long Pond through newsletters, mailings, websites, the media, public meetings, retail signage and a live milfoil display in the Maine Lakes Resource Center.
- Task force members are working closely with Maine state officials from the departments of Environmental Protection, Inland Fish and Wildlife, Transportation, Conservation and the Maine Warden Service to develop effective approaches to further limit access to Great Meadow Stream and the affected areas in North Bay. These measures will include new surface use restrictions, access control buoys, a new permanent barrier at the Route 225 bridge and new signage at the state boat ramps and near the infested areas. See related story.

- A **STOP MILFOIL** Capital Campaign is underway with the goal of raising \$500,000 to wage this fight against invasive milfoil. The monies raised in this campaign will be used to fund the contract with New England Milfoil, hire full time summer milfoil staff and acquire the equipment needed to support their work. All funds not used in 2012 will remain in a **STOP MILFOIL** special BLA account to be used for milfoil mitigation and survey work in future years. Your contributions to this **STOP MILFOIL** fund are vitally important!

These are the steps that are currently underway. This 2012 **STOP MILFOIL** Action Plan is a major escalation from anything that was undertaken in the last two years. It reaches out to the entire lake community, brings to bear many more trained professional personnel and divers, calls for significantly stepped up volunteer participation, includes comprehensive surveying of both Great and Long Pond and provides for more on-the-water work.

Once the divers get into the water this spring in Great Meadow Stream and North Bay to identify the location and extent of the infestation, additional steps might be needed to combat the milfoil most effectively. But whatever it takes, the task force is determined to conquer our milfoil infestation this year.

Milfoil Task Force Members:

Polly Beatie, President
Belgrade Lakes Association

Mel Croft, President
Belgrade Regional Conservation Alliance

Pat Donahue, Belgrade Lakes Association

Adam Gardner, Belgrade Lakes Association

Mark Heuberger, Milfoil Task Force Co-Chair
Belgrade Lakes Association

Dr. Peter Kallin, Executive Director
Belgrade Regional Conservation Alliance

Megan Loubier, Belgrade Lakes Region
Business Group

Maureen Maslak, Belgrade Lakes Association

Lynn Matson, Milfoil Task Force Co-Chair
Belgrade Lakes Association

Phil Mulville, Belgrade Lakes Association

Dr. Philip Nyhus, Colby College

Toni Pied, Milfoil Coordinator
Belgrade Regional Conservation Alliance

Dr. Bruce Rueger, Colby College

Maggie Shannon, Executive Director
Maine Congress of Lake Associations

Kathi Wall, Executive Director
Maine Lakes Resource Center

STOP MILFOIL CAPITAL CAMPAIGN GOAL SET AT \$500,000

The Milfoil Task Force has set a goal of \$500,000 for its **STOP MILFOIL** Capital Campaign. The fundraising effort officially kicked off February 2012.

All proceeds will be used to implement the Milfoil Action Plan which calls for a combination of public education, access controls, hand pulling and systematic surveying to stem the milfoil infestation in Great Meadow Stream and North Bay of Great Pond and to prevent it from reaching to other areas in our lakes.

"This is where we need everyone to step up," said Lynn Matson, Milfoil Task Force co-chair and head of the fundraising drive. "We can develop the best possible mitigation plan; but if we don't have the funds to implement it, we're going to lose this milfoil fight," he said.

A special **STOP MILFOIL** BLA bank account has been established. All donations will go into this account and be used only for milfoil related activities on Great and Long Pond.

The goal was set at \$500,000 to cover three years of anticipated expenses. Fully implementing the Milfoil Action Plan in 2012 will cost about \$250,000 including funds to contract New England Milfoil, hire full time summer staff, acquire watercraft and other needed equipment, and implement the publicity and education program.

"It's expected to cost significantly less to control the milfoil in 2013 and 2014," said Mark Heuberger, Milfoil Task Force co-chair, "although we will not know for sure until we can fully assess the success of our work this season," he added. Right now the anticipated expenses for years two and three of the milfoil plan are approximately \$125,000 per year.

"Funding will be critical to our success in controlling milfoil," said Heuberger. "We believe that once area residents, businesses, visitors and anyone who uses and loves these lakes learn about how these waters could be overtaken with milfoil, they'll step up and support this campaign," he added.

"We're asking everyone to get on board."

The campaign raised \$41,000 before it was even officially launched. Great Pond camp owners Adam and Michele Petryk started it off with a very generous gift of \$25,000.

"We're counting on others to follow their wonderful example," said Matson. "If we don't stop it right now the whole milfoil mess just gets worse both in terms of clogging up our lakes and increasing the cost to control it." "We'll never have as good a chance of beating it as we do this year," he added. "That's why everyone needs to get behind this program right now."

The entire BLA Milfoil Task Force is asking everyone to join this fight and give generously to the **STOP MILFOIL** Capital Campaign. Please make your check payable to "**BLA – STOP MILFOIL**" and use the self-addressed envelope you'll find in this newsletter to mail it in. Or send your gift to:

**BELGRADE LAKES ASSOCIATION – STOP MILFOIL
PO BOX 551
BELGRADE LAKES, MAINE 04918**

Thank you very much for your donation and your support of this important work! With your help we can stop the spread of milfoil.



Keep our lakes looking like this.....

BOATS, EQUIPMENT AND HOUSING NEEDED

Looking for a way to help out with the milfoil fight on Great Pond without having to jump in the lake and literally pull the stuff out? How about donating boats, equipment or housing?

The donated boats being requested by the Milfoil Task Force will be used by the hired summer employees working directly for the BRCA. This donated equipment will significantly reduce our costs and leave more funds for the manpower needed to control milfoil.

The following donations are needed:

- 16'-18' Boston Whaler type boat with a reliable 50-60 HP outboard motor
- Canoes
- One and two person kayaks
- Pick-up truck to transport pulled milfoil from the lake
- Housing for as many as 6 summer staff members

The Whaler will be used by the BRCA team to ferry personnel and equipment from the staging area on shore to the site of the infestations in North Bay and Great Meadow Stream and to haul the

pulled milfoil out of these areas back to the staging area for disposal. The canoes and kayaks are needed for hand pulling work further up the stream where the boat cannot be used, for netting fragments around the work areas and for survey work on both Great and Long Pond. The truck will be used to transport milfoil from the staging area to Black Gold Vermiculture in the village where it will be converted into compost.

Housing is also needed for our summer employees. As many as 6 staff members will be hired by the BRCA, some of whom may need a local place to stay this summer. Providing housing from May through September will again save funds that can be put into the milfoil work.

If you are interested in donating a boat or equipment or providing housing, please call BRCA Milfoil Coordinator Toni Pied at 207-512-5554 or send an email to: brcamf@belgradelakes.org.

Thanks for your help with this important request. If we all jump in and join the fight, we can beat this milfoil infestation.



..... *not like this. With your help we can do it!*

STOPPING THE SPREAD OF MILFOIL

Great Meadow Stream Infestation Area Closed To All Boats

In response to strong pressure from the Belgrade Lakes community, Maine Inland Fish and Wildlife and Department of Environmental Protection officials have issued a new Surface Use Restriction banning all boats from entering the milfoil infested area in Great Meadow Stream.

Keeping all boat traffic out of milfoil-infested areas is critical in preventing milfoil from spreading to other parts of the lake. Motor propellers, canoe and kayak paddles, even fishing lines and lures and duck decoys can easily fragment the milfoil plant. Moved around the lake by wind and water currents, the fragments can quickly take root and start whole new areas of infestation.

At a well-attended public meeting held at the Maine Lakes Resource Center, IF&W Commissioner Chandler Woodcock heard compelling arguments from local citizens and area business people as to why the infested area needs to be closed to all boats. Many of those who spoke at the meeting made the point that not only are our lakes threatened but the future of the whole community is at risk if this milfoil infestation can't be stopped.

Following the meeting a new Surface Use Restriction was issued. It completely closes the milfoil infested area in Great Meadow Stream to "ALL BOATS" from ice out this

spring through the beginning of duck season next fall at which time the closure reverts to "ALL MOTORIZED BOATS" until ice in.

Other control measures that will be put into place this year include:

1. A longer line of "**CLOSED AREA**" buoys will be positioned in North Bay across the mouth of the Great Meadow Stream to clearly mark the infested area. The buoys are white with an orange diamond and the words "**CLOSED AREA**" on them. Mounted on one large buoy will be signs issued by the DEP and Warden Service showing a large "**STOP**" sign and alerting boaters that the area is closed. In addition, a continuous line of floats will be placed at the mouth of the stream to further delineate the closed area.
2. A new steel gate closure will be installed at the stream access near the Route 225 bridge. Much like the gate blocking the Route 27 boat ramp on Lake Messalonskee, this new gate will prevent the launching of boats from trailers at this bridge access point. Signage about the infestation and closure will also be placed in this area.

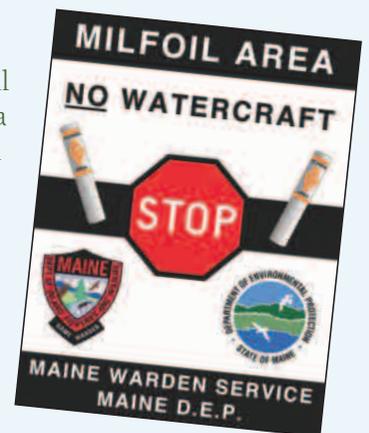


3. New information kiosks will be installed in high traffic areas at the state boat ramps on Great and Long Pond. Signage will be posted at these kiosks informing boaters about the infested areas on Great Meadow Stream and in North Bay as well as areas at risk of infestation.
4. The Maine Warden Service will increase patrols in the infested areas especially during the heavy early spring fishing season and on weekends.

PLEASE ABIDE BY THE CLOSURE ORDER AND HELP STOP THE SPREAD OF MILFOIL IN OUR LAKES. Keeping boats out of the infested area is key to successfully preventing new outbreaks in other areas of the Great Pond and keeping the milfoil out of Long Pond.

THANKS FOR YOUR COOPERATION. Working together we can stop the spread of milfoil.

This sign will be posted on a buoy in North Bay and at the Route 225 bridge.



LIVE MILFOIL DISPLAY AT MAINE LAKES RESOURCE CENTER

This summer the Maine Lakes Resource Center in Belgrade Lakes Village will have a live milfoil display right on the main floor of the center. Variable milfoil will be growing in an aquarium so you'll be able to see what this invasive plant looks like in its natural setting.

In addition to the milfoil aquarium, the resource center will also have information about milfoil and other invasive aquatic plants and be the site for presentations on these and other lake related topics throughout the summer. You can also volunteer to join the milfoil fight at the MLRC center, make donations to the **STOP MILFOIL** Capital Campaign and sign up for the **EYES ON THE WATER** program.

"It's extremely important for everyone to be able to spot variable milfoil in our lakes," said Maggie Shannon, Executive Director of the Maine Congress of Lake Associations and Coordinator for the local **EYES ON THE WATER** program. "The best prevention of further milfoil infestations is early detection," she added. "So we'll need all shorefront property owners, renters, boaters and anglers ... anyone who uses the lakes ... to know what variable milfoil looks like and keep an eye out for it," she said.

A milfoil identification card has been included in this newsletter. Please keep it, put it in your boat, and use it to help find any new milfoil outbreaks. You can also always stop by the resource center anytime to learn more about identifying milfoil.

If you think you see variable milfoil growing anywhere in our lakes or you see a milfoil fragment, mark the location so it can be surveyed and put the fragment or a sample of the plant in a zip lock bag with water and take it to the Maine Lakes Resource Center for testing and verification. Please don't attempt to pull up the entire milfoil plant.

GET ON BOARD!



STOP MILFOIL

WWW.BELGRADELAKESASSOCIATION.ORG

A new **GET ON BOARD!**

STOP MILFOIL logo has been created to identify all activities related to the milfoil campaign. It will be on T-shirts that will be sold at the Maine Lakes Resource Center and Days Store and worn by milfoil workers this summer.

NEW ENGLAND MILFOIL CONTRACTED for 2012 SEASON

The BLA Milfoil Task Force has contracted New England Milfoil, a professional milfoil mitigation and dive company, headquartered in Brownfield, Maine, to hand pull milfoil from Great Meadow Stream and North Bay in Great Pond in 2012.

“This is an exciting development for our milfoil campaign,” said Mark Heuberger, co-chair of the Milfoil Task Force. “New England Milfoil brings years of experience and a great deal of expertise in removing milfoil to our fight on Great Pond. We are very pleased to have them on our team,” he added.

New England Milfoil owner and commercial diver Cliff Cabral and his team of certified divers have 58 years of combined experience and have spent hundreds of hours underwater removing tons of milfoil. They have done extensive milfoil mitigation work on Lake Sebago here in Maine and on Ossipee Lake and Lake Winnepesaukee in New Hampshire.

John McPhedran, head of the Invasive Aquatic Species Program in the Maine Department of Environmental Protection, reported that New England Milfoil has considerable experience removing variable milfoil and has contracted directly with the state of Maine in the past.

New England Milfoil will provide a team of 3 certified divers and a boat operator for 9 weeks this summer. Company owner Cabral will be leading the team. They will come fully equipped with diving gear, a tender boat to serve the divers and a shuttle boat to haul away the pulled milfoil.

New England Milfoil will also use a Diver Assisted Suction Harvester, or “DASH” boat, in deeper water locations where it is most effective. This specialized piece of equipment uses pumps attached to long hoses to vacuum the milfoil plants that have been hand pulled by the divers and flush them into special fine mesh bags. The DASH boat can significantly

increase the productivity of the milfoil harvesting by the dive team.

All the milfoil is being processed into compost right here in Belgrade Lakes Village. It’s called ‘Milsoil’ and is being sold in 25lb. bags at the Maine Lakes Resource Center with the proceeds benefitting the milfoil program.



New England Milfoil uses specialized equipment, including this DASH boat, to improve productivity of the dive teams

The Milfoil Task Force is also hiring an additional 4-person team of summer employees. They will augment the hand pulling by NEM, install and maintain benthic barriers and fill in the weeks that NEM cannot be on Great Pond. A 2-person survey team will also be hired to systematically survey for milfoil around the entire shoreline of both Great and Long Pond and in high-risk shallow areas. The field team will work for approximately 16 weeks this summer, from mid May through mid September.

The Milfoil Task Force is also putting out the call for volunteers to work with the BRCA dive teams and to augment the survey team. Plans call for regularly scheduled volunteer days on Tuesdays and Thursdays throughout the summer.

“Even though we are going to have professional divers in the water, volunteers will be critical to our success,” said Heuberger. “We need volunteers to hand pull milfoil, assist divers, net milfoil fragments, haul away the pulled milfoil, work with the benthic barriers and assist in surveying shorelines for other milfoil outbreaks,” he added.

To volunteer or get information on the latest volunteer activities and schedules please call 207-512-5554. To learn more about New England Milfoil, visit their website at: www.newenglandmilfoil.com.

It’s Time for “EYES ON THE WATER” Everyone!

*By Maggie Shannon, Executive Director
Maine Congress of Lakes Association*



(Photo courtesy of Lakes Environmental Association)

Variable milfoil is knocking on the door of Great Pond; but if all of us learn to spot the invader, we can stop it in its tracks!

Lake residents and visitors have a crucial role to play in stopping the spread of variable milfoil. The only way to beat this destructive invader is to find and remove young plants before they become established. We don’t know how far variable milfoil may have spread into Great Pond, so it’s vital for us to check out all areas where it may take root. Great Pond is 8,000 acres (big!) and vulnerable areas cover almost 1/3 of it. To scan all susceptible shallows, we’ll need as many eyes on the water as we can put out there.

EYES ON THE WATER

This summer, the BLA will host a series of short, hands-on workshops called **EYES ON THE WATER**. These hour and a half lakeside sessions will show you how to spot milfoil, tell you what to do if you find it, and equip you to show neighbors how to spot the intruder if it shows up on their shore.

EYES ON THE WATER will be run on six consecutive Saturdays starting July 7th at six accessible locations. The workshops are hands-on and brief. BLA will supply the coffee, doughnuts and instruction; all you do is show up with your kayak or canoe and a buddy. You’ll get a wristlet with water-proof plant identification cards (your handy Field Assistant!) and you’ll be registered to borrow Aquascopes and other equipment from BLA’s Stop Milfoil Library.

REGISTER

Anyone who will spend time searching for variable milfoil on or in the water of Great or Long Pond is invited to attend. To register, call BRCA Milfoil Coordinator Toni Pied at 207-512-5554 or write brcamf@belgradelakes.org. List the date you will attend and give your name, email address and phone number. Workshop dates are July 7, 14, 21, 28, August 4 and 11. Locations of workshops to be announced.



Milfoiled pulled by New England Milfoil in 4 hours from Lake Winnepesaukee in New Hampshire

Summary of Work to Date to Control Milfoil at Great Meadow Stream

By Peter L. Kallin, Ph.D., Executive Director, Belgrade Regional Conservation Alliance

Maine has a Rapid Response Plan (MEDEP, 2006) for dealing with invasive aquatic plants. It is based on the principles of early detection and rapid response dependant on the extent of the infestation, the risk of spread, and site-specific conditions such as native plant communities. In the case of the Great Meadow Stream (GMS), the infestation was detected during the first week of July, 2010 and confirmed by DNA analysis during the week of the 9th. Within a week the BRCA, BLA, and DEP met to form a plan and BRCA applied for a permit to control the plant by hand pulling and placement of benthic barriers. A press release was prepared and an article was written for the "Summertime in the Belgrades" as well as the Waterville Sentinel.

Between July 24th and August 1st BRCA Executive Director, Pete Kallin, attended annual meetings of the North Pond Association, Belgrade Lakes Association, Salmon Lake Association, and East Pond Association to discuss the situation and recruit volunteers.

Over the next week or so DEP staff approved the plant removal plan and provided training to BRCA staff and Lake Trust volunteers on hand removal techniques. Between mid-August and the mid-October, BRCA staff and 46 lake association volunteers put in over 500 volunteer hours surveying the stream, hand pulling plants, manufacturing, and deploying benthic barriers. Approximately 600 gallons of plants were removed and 7,425 sq.ft. of benthic barriers were deployed. DEP staff coordinated with IFW staff to issue a Surface Use Restriction (SUR) for the stream that prohibited motorized watercraft from entering the stream.

In mid-October, BRCA and BLA met to review progress and formulate an action plan for 2011. Encouraged by the significant progress we made in a fairly short time, a plan was developed to significantly increase the amount of paid staff working the problem. BRCA applied for a \$6000 Plant Control grant from DEP (the maximum amount) and was eventually awarded \$4500. BLA agreed to budget \$10,000 to fund additional paid BRCA staff that would be dedicated to the Great Meadow Stream effort as well as to furnish a boat for the milfoil team to use.

In 2011, BRCA hired two additional staff who were dedicated virtually full-time to the

GMS milfoil control efforts. They worked with existing staff, primarily Pete Kallin and Corinne Dawson, and 43 volunteers to put in over 1300 staff hours and 465+ volunteer hours while pulling 2615 gallons of milfoil and placing 6900 sq.ft. of benthic barriers.



Volunteers gathering at the Route 225 bridge

The largest group of volunteers in 2011 was a group of approximately 10 counselors in training (CIT) from Camp Runoia who showed up every Monday for the volunteer hand-pull events. The SUR was renewed by the DEP and IFW for another year, again prohibiting motorized boats from the stream.

In 2011, we generally found that where we had removed plants the previous year, there was very minimal regrowth. Similarly, where the barriers had been in place through the winter, there were no plants under the barriers. Unfortunately, we found new areas where the plants had grown, and the plants had spread into Great Pond at the mouth of the stream.

After the 2011 season, the Milfoil Task Force was formed to develop a plan that would significantly increase the effort in order to maximize the effort to stop the milfoil in its tracks and prevent further spread. Details of that plan are discussed



A volunteer team working in Great Meadow Stream

elsewhere in this newsletter.

Milfoil Control Options

In preparation of the plan, numerous options were evaluated that are authorized under Maine's protocol, including Manual Removal, Diver Operated Suction, Benthic Barriers, Mechanical Harvesting, and Herbicides.

Manual Removal involves divers or waders using hands or hand tools to remove the entire plant including the roots. It needs to be done carefully to prevent fragmentation, and any fragments need to be contained and collected to prevent inadvertent spread. This is a very labor intensive process but is the most selective and causes the least amount of damage to native plant communities. It is

the most appropriate method for situations where sporadic clumps of invasive plants are intermingled with native plant communities. This is the case for most of the Great Meadow Stream infestation.

Diver Operated Suction or Diver Assisted Suction Harvest (DASH) is a form of manual removal in which divers use Venturi pumps and hoses to transport plants to the surface after manually removing them from the sediment. It can accelerate the manual removal process where invasive plants are growing in moderate or high density clumps and there is sufficient room to operate the DASH boat. This method requires a specially equipped DASH boat that collects the plants as they are harvested and also requires careful control of fragments. This method could be appropriate for some of the GMS infestation, especially at the mouth where the stream enters North Bay.

Benthic Barriers involve the placement of geotextile or heavy plastic sheets, typically weighted with pieces of rebar, over clumps of plants to block sunlight and apply pressure to kill the plants. They are left in place for 6 to 8 weeks and then can be moved to allow the native plants to recolonize the area. This method is appropriate where invasive plants are in moderate or high density clumps in 3 to 6 ft of water with few native plants mixed in. This is typical of some of the GMS infestation.

Mechanical Harvesting involves the use of specialized machines with underwater cutter bars similar to a brush hog to essentially "mow" paths through heavily infested areas at 4 to 10 ft depth to allow boat

passage. This method is not appropriate for our current conditions and hopefully never will be.

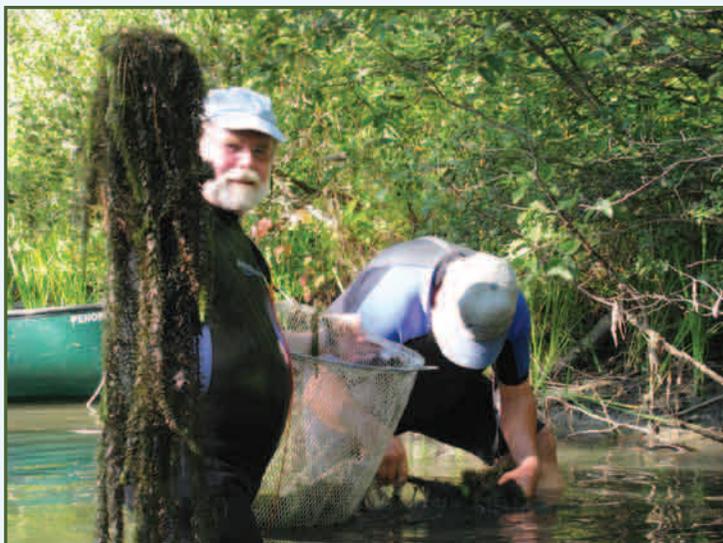
Herbicides can be used under certain specific conditions in Maine and are tightly controlled by DEP. The official DEP policy as stated in the Rapid Response Plan (MEDEP, 2006) is as follows:

“DEP will use manual removal, bottom barriers, diver-operated suction, and mechanical harvesting as the first options of choice.

Aquatic herbicides will only be used for rapid response when none of the commonly accepted techniques will work,

and when there is a strong likelihood that an infestation can be eradicated or controlled from spreading through its application.”

At the end of 2009, the DEP authorized the use of the herbicide, 2-4D in the outlet cove of Salmon Lake to control Eurasian milfoil. This decision was made after two years of hand pulling efforts with divers failed to halt the spread and the threat of infestation was deemed high and circumstances such



Variable milfoil being hand pulled in Great Meadow Stream

as the ability to control the infested area with curtains indicated a high probability of success.

The conditions in the GMS are different from the Salmon Lake infestation, with a different type of milfoil, a different flow regime and a much different spatial

distribution of the infestation. For example, most of the infestation at GMS occurs in a flowing stream. These conditions make it less amenable to chemical treatment. And, to date, DEP has not authorized the use of chemicals for treatment of variable milfoil.

In summary, the milfoil infestation at GMS does not currently meet the conditions for herbicide treatment under DEP policy.

Herbicides are not considered a viable option in the short term, but could be considered in the future under certain conditions, possibly for spot treatments of limited infestations unable to be controlled manually.

Biological control by milfoil weevils (*Euhrychiopsis lecontei*). The research on weevils has primarily been focused on control of Eurasian milfoil, and there has been little work done to date with weevils controlling variable milfoil. This is a promising avenue for potential long-term control but is not considered a viable short-term option.

Water drawdown. Water drawdown is not a viable option for controlling variable milfoil in Great Pond as water levels would have to be lowered approximately 10 ft or more and allowed to freeze solid. Variable milfoil actually develops a terrestrial form that flourishes in damp soils that are temporarily drained. It then reverts to the aquatic form when the area is flooded again.

Our ultimate measure of success is preventing the infestation from spreading to Great Pond and Long Pond. Our plan is to have a very concentrated effort over the next year or two and remove as many plants as we can locate which will significantly reduce the probability of spread. If we are successful, we will then be able to gradually reduce the effort to intensive surveys in the infested areas and removal of any plants that regrow. If no invasive plants are found for three consecutive years, DEP will remove the GMS from their list of infested waters.

Reference: Maine DEP (In Coordination with Departments of IFW and DOC) **Rapid Response Plan for Invasive Aquatic Plants, Fish, and Other Fauna, Part 1: Plant Protocol**, January, 2006

COLBY COLLEGE JOINS MILFOIL FIGHT

For decades, Colby College has focused its environmental resources on our lakes and has been at the forefront of our water quality work. More recently, an interdisciplinary group of Colby scholars, faculty and students has been studying the effects of increased development in the Belgrade watershed as part of a National Science Foundation research project. And last year Colby became a major partner in the Maine Lakes Resource Center, donating a working lab, erecting a state-of-art weather station, serving on the board and providing student intern support.

Now Colby College has joined our fight against the variable milfoil infestation in Great Pond. Right from the start of our 2012 campaign, Dr. Bro Adams, president of Colby and Great Pond camp owner, pledged his personal backing and the help of the college.

Two Colby professors are serving on the BLA Milfoil Task Force. Dr. Philip Nyhus, Associate Professor of Environmental Studies, will use his expertise with GIS (Geographic Information System) to determine how the wind, water currents and other factors move the milfoil fragments in the lakes. This information will help the survey teams in their search for new milfoil outbreaks in both Great and Long Pond.

Dr. Bruce Rueger, Assistant Professor of Geology, has been working with colleagues and students to complete a literature search update on variable milfoil and the latest methods being used to combat it. This work will ensure that the task force is aware of successful mitigation projects around the country as well as new developments in mitigation approaches.

Just as in past years, Colby is also planning to have several student interns work at the Maine Lakes Resource Center this summer. These students will assist in all areas including identifying variable milfoil, hand pulling, surveying for new outbreaks as well as working in the center, teaching visitors about milfoil and other invasive species, and posting milfoil progress reports on the BLA and MLRC websites.

The BLA board and the Milfoil Task Force want to thank the entire Colby community for their ongoing support and for giving their time, expertise and resources to this critically important milfoil mitigation work.

Colby

JOIN THE FIGHT.



YOUR HELP IS NEEDED.

The simple truth is that we now have variable milfoil in Great Pond and that it poses the same kind of disastrous implications for us that so many other lakes throughout the country have suffered over the last 70 years. But our situation is far from hopeless. The good news is that right now this infestation is believed to be limited to Great Meadow Stream and a very small area in North Bay of Great Pond. That gives us the very real possibility of containing and preventing it from spreading to other parts of our lakes.

We can stop the spread of this milfoil. But in order to do this, we need your help. We need you to learn everything you can about invasive milfoil. We need you to volunteer your time and talent to this fight. And we need you to make a donation to the **STOP MILFOIL Capital Campaign**. Working together we can manage this milfoil threat and preserve not only our lakes but also a way of life we all love and cherish.

WHAT YOU CAN DO TO HELP

Everyone is going to have to pitch in to beat this milfoil threat ... lakeshore property owners, area residents, local businesses, vacationers, boaters, fishermen, hunters and visitors. Here's what you can do to help:

LEARN: Educate yourself, your family, lake neighbors and friends about invasive milfoil. Learn what it looks like and what devastating problems it can cause. Keep yourself updated on the BLA, BRCA, COLA and MLRC websites.

WATCH: Learn what the native aquatic plants look like in front of your camp or where you boat or fish on the lake. Then regularly check your shoreline and be on the lookout for invasive milfoil when you're on the water, especially near the shore, in bays and other shallow areas and around boat ramps.

SIGN UP: Attend an **"EYES ON THE WATER"** session this summer to learn how to identify invasive plants. They're informative and fun and may just save our lakes. Our best protection against the widespread infestation of milfoil is early detection. The only way we'll keep it out is if you help spot it early.

CHECK: Carefully check all watercraft, motors, boat trailers, fishing gear and decoys that you put in or take out of the lake. It only takes a tiny fragment of milfoil to spread this aquatic plague to other parts of the lake and to other lakes.

AVOID: Stay out of Great Meadow Stream and the closed area of North Bay and keep others out of these infested areas. Fragmentation caused by boat motors, fishing lures and hunting decoys is the fastest way to spread milfoil to other parts of the lake.

VOLUNTEER: Give your time and talent to this milfoil fight. It will be put to good use. Help is needed for all kinds of important work, both on and off the water.

DONATE: Boats, equipment and housing are all needed. As the number of divers and personnel on the water grows, more equipment will be needed. Please consider donating 16'-18' Boston Whaler type boats with reliable motors, canoes and kayaks or housing for our summer staff.

GIVE: A goal of \$500,000 has been set for the **STOP MILFOIL Capital Campaign**. Please make a generous donation. It's the only way we have to fund this important work. Thank you.



HERE'S HOW TO HELP

**CALL THE MILFOIL HOTLINE NUMBER TO VOLUNTEER YOUR TIME OR DONATE WATERCRAFT, EQUIPMENT OR SUMMER HOUSING:
207-512-5554 or email brcamf@belgradelakes.org**

**SEND A DONATION TO "BLA – STOP MILFOIL" AND MAIL IT TO:
Belgrade Lakes Association
PO Box 551
Belgrade Lakes, Maine 04918**

You may also contribute to the STOP MILFOIL Campaign using a credit card at the BLA website: www.blamaine.org.

CHECK THESE WEBSITES OR VISIT THE MAINE LAKES RESOURCE CENTER TO LEARN MORE ABOUT INVASIVE MILFOIL AND THE PROGRESS BEING MADE TO COMBAT IT IN GREAT POND:

Belgrade Lakes Association – www.blamaine.org
Belgrade Regional Conservation Alliance – www.belgradelakes.org
Maine Congress of Lakes Association – www.mainecola.org
Maine Lakes Resource Center – www.mainelakesresourcecenter.org