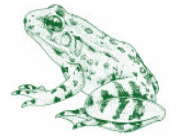


# Raymond Waterways Newsletter

Published by Raymond Waterways Protective Association

*"To protect and improve pond and lake water quality and foster watershed stewardship"*



Summer 2006

## Variable Milfoil Remediation Projects 2006



This season RWPA has expanded its efforts to control and eradicate V. milfoil along Raymond's Sebago Lake shoreline. Read more about our 2006 efforts on page 3.

Check out the Maine Center for Invasive Aquatic Plants at [MCIAP.org](http://MCIAP.org) for photos and information on invasive aquatic plants (IAP).

## Watershed Protection Projects 2006



**Panther Pond Conservation Project-** Eroded path stabilized with Erosion Control mulch. Infiltration steps (waterbars) installed to divert water into vegetation away from the lake.



RWPA has continued to support Panther Pond Association by providing project management support for the Panther Pond Conservation Project. We will also provide staff support for the Phase II of the Thomas Pond Project and we have applied for federal funds to fix sites on Raymond Pond. Read more on pages 6 & 7.

## Dear Friends of Raymond Waterways

### Board of Directors & Staff

#### President

Charlie Turner

#### Vice President

John Rand

#### Treasurer

John Palmer

#### Secretary

Connie Cross

Peter Wilson

Ben Severn, PPA

#### Executive Director

Noralee Raymond

#### Lakes Rangers

Al Lamanda

Tom Clancy

William Koscielny

**Our Annual Meeting...** this year we will hold our Annual Meeting, Saturday, August 12th - 4pm at Camp Timanous. A BBQ will be held after the meeting from 5-7. Camp Timanous is located off the Plains Rd on Panther Pond. Join us by boat or car. We will provide the burgers, hot dogs, and soda. Bring salad or dessert to share. Please RSVP so we can order the correct amount of food. We hope you can join us!

**Milfoil and Polluted Runoff...** are the two major problems our lakes face. As our town increases in population and development, we must increase our efforts to combat and control these problems. Milfoil is a tangible problem and the impact is quite visible, while runoff is more subtle in its effect, brought on by seemingly beneficial rainfall, that can cause erosion and carry particulate matter (soil), fertilizers, and other pollutants into our lakes.

#### Heavy rains impact water quality measurements...

No doubt you are aware of the unusual weather we have experienced over the past year. As expected, this has had a rather dramatic effect on the water quality testing results. The first two weeks in May produced record levels of rain in Southern Maine, resulting in much flooding in both York and Cumberland Counties. With the rain, we have seen a significant drop in water clarity. Take a look at the table. **Just after the extended period of heavy rain, we experienced a 33% drop in water clarity over two weeks. In the course of the month the total loss of clarity was 9.5 feet. Now that's dramatic!**

Water Clarity Measurements		
DATE	SECCHI READING	NOTES
April 28	8.2 meters (26.9')	Before the rain
May 17	5.7 meters (18.7')	After extended rain period
May 30	5.3 meters (17.4')	Even further drop!

Water clarity is measured by visibility depth using a secchi disc. The disc is lowered in the water until it falls out of sight. The higher the number, the farther down in meters the disc remains visible, and so the better the water clarity.

#### Inside this Issue:

Dear Friends...	2
2005 Lake Ranger Results	3
2006 Invasive Projects	3
2005 Water Quality Monitoring Results	4
Dear Friends cont.	5
2006 Invasives cont.	5
Thomas Pond Conservation Project	6
Watershed Stewards Program	6
Bug of the Year	6
Panther Pond Conservation Project	7
Membership Form	8
Invasive Plant Map	8

**What is the cause of this? Purely and simply, water runoff!** Water washing down our roads, driveways, paths and rooftops into the lake is the main culprit. As the water washes over the land it picks up soil particles and washes it into the lake. These particles cloud the water, decreasing water clarity. It also carries the nutrient phosphorus, essentially "fertilizing" the pond and decreasing water quality. Excess phosphorus can also harm fish habitat and lead to nuisance algae blooms – a mat of green scum. We report this to underscore the importance of controlling and/or reducing stormwater runoff to our lakes.

So the next time there is a heavy rain, grab your umbrella, head outdoors and tour your property to see where the water goes. Sometimes this flow can be slowed down with simply a few turns of a shovel, or simple inexpensive conservation measures such as spreading erosion control mulch or crushed rock on a path or adding waterbars (rubber blade diverters, timbers) to a path or driveway (see photos below). Vegetative buffers along your property edge also help to slow down and filter runoff before it reaches the lake. *(Continued on page 5)*



Inexpensive conservation practices such as runoff diverters (rubber blades or timber waterbars) and crushed rock or erosion control mulch on paths are practical, affordable, easy to install, and can make a big difference on lake water quality. Photos above are from projects completed as part of the Panther Pond Conservation Project.

## 2005 Ramp Inspections and Ranger Program Results

We had a very successful season in 2005 with a large increase in the number of boat inspections, several ongoing remediation projects, and plant surveys completed on all of Raymond's lakes.

### Inspections 2005

- A total of 608 hours were spent at four launch sites to inspect 2950 boats, a tremendous increase over 2004 inspections (1882 boats at 4 sites).
- Removed 9 invasive plant fragments (Variable milfoil) from boats exiting Raymond Beach.
- Prevented the introduction of invasive Eurasian milfoil to Sebago Lake on a boat entering at Raymond Beach.

Eurasian milfoil is one of the most aggressive invasives and has been located in only one lake in Maine, a small private quarry in Scarborough.

SUMMER 2005 INSPECTION SURVEY TOTALS			
Lake	# Inspections	Plants Found	# Inspection Hours
Sebago Lake	2264	82 (10)*	339
Crescent Lake	655	41	204.75
Panther Pond	18	2	38
Thomas Pond	13	1	26.25
<b>TOTALS</b>	<b>2950</b>	<b>126</b>	<b>608</b>
*9 Invasive plants found on outgoing Sebago boats. *1 Invasive Eurasian milfoil on ingoing Sebago boat.			

### Remediation Efforts 2005

- Led Jordan Bay Marina staff with placement of benthic (bottom) barriers to eradicate large colonies in boat traffic areas.

Organized landowners to assist divers in a plant removal effort at Dingley Brook.

- Continued support at Bayview Estates with ongoing management in one canal using benthic barriers (benthic) barriers.

### Lake Plant Surveys 2005

- Completed shoreline plant surveys of Raymond Pond, Crescent Lake, Panther Pond, Thomas Pond, and Notched Pond. **No invasive plants were found.**

- Surveyed several sections of Sebago Lake. Documented colony locations.

Great thanks to the volunteers and staff for their dedication and hard work at the boat ramps and on the lakes.

## Lakes Ranger Program 2006 - Increase in Efforts to Control Milfoil

### Inspections

With the rainy weather, the ramps have been slower than usual, but in the good weather the ramps are busy as ever. Lakes Ranger Al Lamanda will return and we welcome aboard two new rangers in 2006, Tom Clancy and William Koscielny. All three rangers are residents of Raymond and are working hard to protect our precious lake resources from the threat of invasive plants. If you see them at the ramps be sure to thank them! We are always in need of volunteers at the ramps. Your commitment can be a few hours a week or one day a summer. Please remember, our rangers are not always on duty, so ***please be sure to inspect your boat before and after you float! Remove ANY and ALL plants.***

### Remediation Projects

In its third season at Dingley Brook, RWPA is working to clear the largest colony at the outlet of the brook using divers. In 2004 and 2005, at low water levels, volunteers cleared upper sections of the brook. These areas are doing well. This season, divers spent 20 hours over 5 days and pulled 10 yards of plants. Before the last pull, volunteers, Scott Crockett and Bruce Mitton marked areas that still needed work. Our next step is

to use benthic tarps in the areas where plants were thick and root masses well developed. RWPA expects to spend approximately \$4500 on the project. See table below.

Dingley Brook Estimated Project Cost			
Diver Plant Removal	5 days, 4.5 hrs/d, \$50/hr		\$2250
Benthic Tarps	360' tarp, 75 15' rebar		\$1200
RWPA Staff Hours	75 hrs, \$15/hr		\$1125
<b>Total Cost</b>			<b>\$4575</b>

We hope to have the majority of the brook clear of milfoil at the end of 2006. Yearly diver maintenance and limited tarping may be necessary to keep the brook milfoil free.



**2006 Lakes Rangers  
Al Lamanda, Tom Clancy, Will Koscielny**

RWPA began work on removing milfoil from a new section of the Jordan River (Panther Run) after being contacted by Gale Pillsbury of the Jordan River Marina Condo Ass'n (JRMCA). With the hard work of volunteers, JRMCA began efforts to control the spread of milfoil along their section of the Jordan River, a 75' x 200' canal and ~200' of shoreline (photos page 1). RWPA assisted JRMCA with the application for a \$2,000 state grant. JRMCA also contributed \$3,000 of their own funds to the project. Over two weekends in May, 18 volunteers assisted (continued on page 5)

## Our Lakes Health– Water Quality Monitoring Results

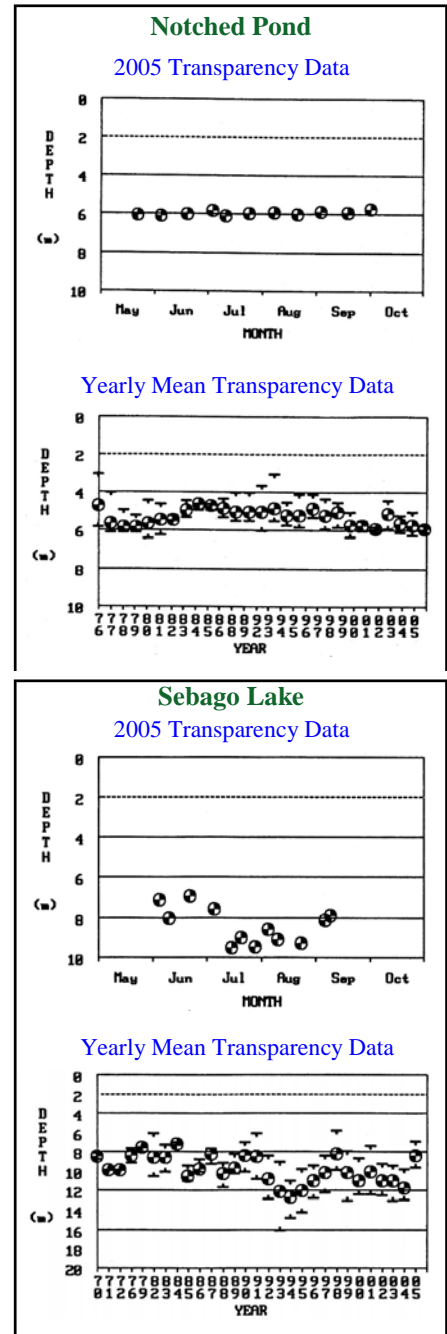
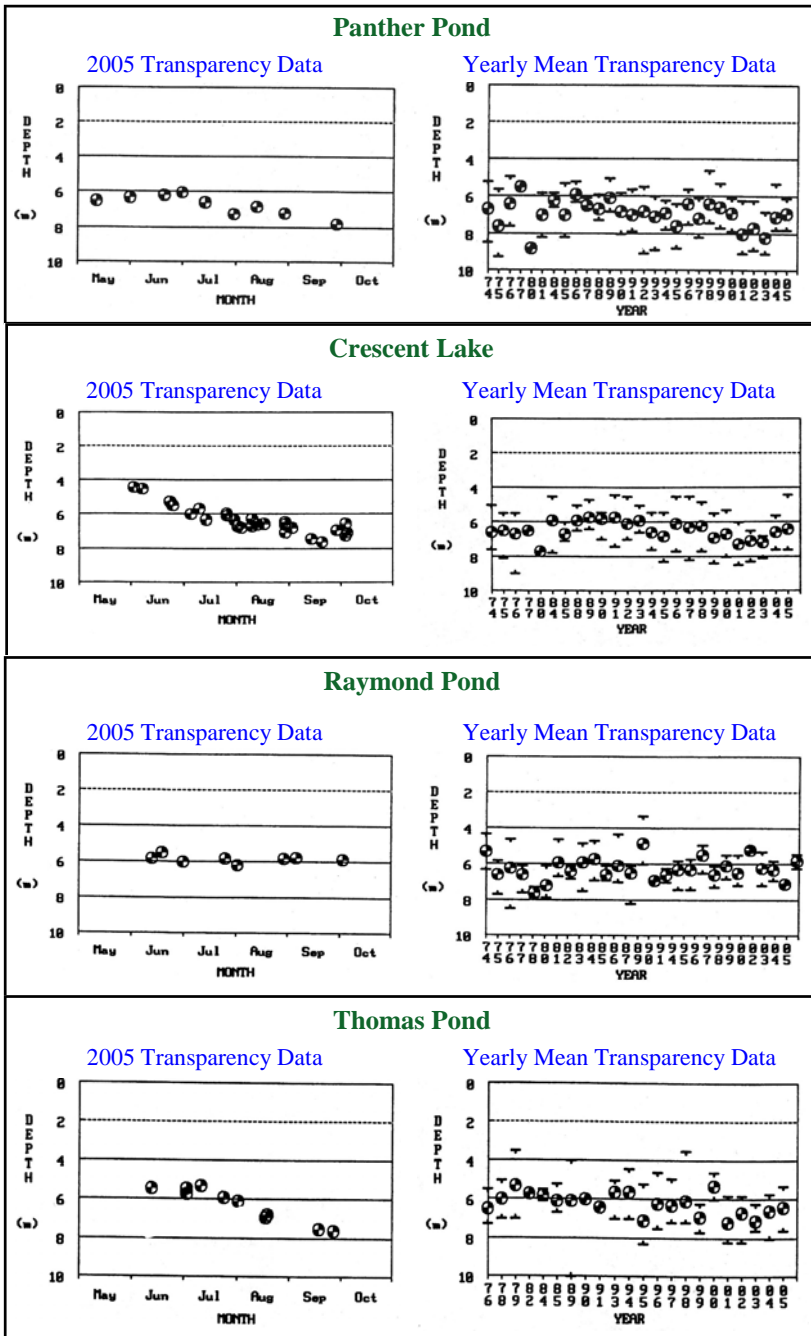
Here's a close look at our secchi disc charts. These charts have been meticulously assembled from data obtained from many people's dedicated efforts. Please remember that the lower a disc appears on the chart, the better, as it means the disc could be lowered deeper in the water before going out of sight, hence clearer. The secchi disc has been found to be a most reliable tool for measuring water quality, despite its low tech simplicity.



**Secchi disc measures water clarity**

What about the status of our lakes? Oxygen (O<sub>2</sub>) levels have recovered from last falls early depletion due to heavy rains. In general, around August, the lakes have

stratified, blocking off the mixing of the top and bottom layers that took place during spring and summer. The natural O<sub>2</sub> consumption of the bottom layer has no replenishment available to it, and so O<sub>2</sub> declines gradually almost to zero by late September, and remains that way until lake turnover in late November. Along comes the ice and the lake becomes stable until ice-out. Within a few days of ice-out, the lake turns over, thereby mixing the top and bottom layers and recharging the entire lake with oxygen, where upon the whole process begins again.



## Dear Friends (continued from page 2)

**If you need advice for how to control runoff...** give us a call and we will come over and offer recommendations for what might be done. We will provide you with a short written plan outlining the steps you can take to improve your property and protect our lakes.

**Become an active watershed steward...** this fall on Tuesday evenings for 7 weeks, a Watershed Stewards Training Program is available to Raymond and Casco residents. Come learn more about maintaining gravel roads, designing vegetative buffers, safe lawn care, landscaping to protect Maine's lakes, and more (details on page 7).

**How is RWPA combating runoff and erosion...** RWPA is in its second season of managing the Panther Pond Conservation Project (read more on page 6) and we are assisting the CCSWCD with the Thomas Pond Conservation Project - Phase II (article on page 7). Both of these federally funded projects (Clean Water Act - 319 funds) offer matching funds to help pay for construction work to fix eroding camp roads, ditches, driveways, and paths and install conservation landscapes (vegetative buffers).

RWPA recently applied for grant funds to run a similar project on Raymond Pond that would address 30 erosion sites identified in the Raymond Pond Watershed Survey, 1999. We will be notified in the fall if we will receive the grant. If we receive the funds, we will be looking to form a steering committee to help guide the two year project. Please contact us if you are interested in getting involved.

**Water quality over the years...** provided in the table to the right is the average secchi disc readings and the average total phosphorus (TP) loadings for our lakes. Bear in mind as you review these data, that any lake that contains more than 10 parts per billion of phosphorus is in danger of phosphorus recycling, courting big trouble and increasing the risk of algae blooms.

Average Clarity and Phosphorus Levels		
Lake	Average Transparency (ft)	Average Phosphorus (ppb)
Crescent Lake	21.3	6
Notched Pond	17.0	8
Panther Pond	22.6	7
Raymond Pond	20.3	7
Sebago Lake	30.0	4
Thomas Pond	10.8	9

Transparency measured with secchi disc.  
Phosphorus measured in parts per billion.  
(Data courtesy of VLMP)

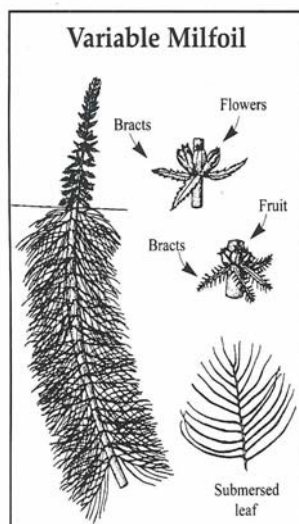
**Invasive plants – the battle continues...** The good news for the State of Maine is that no new infestations were documented in 2005. However, there are 26 waterbodies with infestations of four different invasive aquatic plants (IAP) - Variable milfoil (23), Curly leaved pondweed (1), Hydrilla (1), and Eurasian milfoil (1). The Maine DEP is working with local organizations, like RWPA, to control these infestations and prevent others through outreach and education such as the boat inspection program. RWPA inspectors prevented the introduction of Curly leaved pondweed in 2004 and Eurasian milfoil in 2005 from boats entering Sebago Lake. RWPA continues to battle V. milfoil infestations in Sebago with divers and benthic tarps (read more on page 3 and below). For information on IAP visit the Virtual Herbarium online at MCIAP.org.

**A special thanks to our donors...** RWPA would like to thank all of our friends who have contributed nearly 19,000 toward our 2006 efforts. Your donations have allowed us to expand our milfoil remediation efforts this season. Thanks you! We hope to see you at our meeting!

## Lakes Ranger Program 2006 (continued from page 3)

five divers with removing 13 yards of V. milfoil. From the photos on page 1, you can see that in May the plants were already growing to the surface making it impossible for boats not to spread the plants.

As the summer progresses we will be monitoring the area for growth and organizing additional diver removal projects as needed. RWPA would like to thank JRMCA volunteers for their hard work on the project and the volunteer project leader, Gale Pillsbury for taking the initiative to oversee the project and organize the divers and volunteers. We hope to work with other groups along the Jordan River and Panther Run to further control the spread of the plant in this area.



Our third project this season will be at Bay View Estates 2. Planning is underway to tackle a small infestation in late July, while Bay View 1 is in its third year controlling milfoil with benthic tarps.

### Lake Plant Surveys

We will organize our lake plant surveys in August to ensure Raymond's lakes are clear of Maine's 11 banned invasive plants. We are always in need of volunteers so please contact us if you are interested in spending an afternoon on the lake. You can steer the boat or we can teach you how to identify plants. ***If you think you have spotted an invasive plant be sure to contact us. Early detection is essential to preventing the spread of IAP.***

## Thomas Pond Receives Second Grant for Two Year Project

A new grant has been awarded to the Town of Casco and the Thomas Pond Watershed to fix erosion problems contributing pollutants to Thomas Pond. The \$115,059 grant will be implemented by the Cumberland County Soil & Water Conservation District (CCSWCD) and will help to pay for construction work on private and public property to fix eroding camp roads, ditches, and driveways and install conservation landscapes. The grant will also provide matching funds to qualified residences, free technical assistance and education programs to protect the lake.

Thomas Pond watershed encompasses 4.5 square miles and drains into Sebago Lake. The lake has approximately 7.5 miles of shoreline most of which is developed and privately owned with over 300 seasonal and year round homes. The Maine DEP has listed Thomas Pond on their list of *Lakes Most at Risk from Development*, under the Maine Stormwater Law, as well as the State's *Nonpoint Source Priority Watershed's* list.

Sediment is the number one type of pollution affecting

Maine's waterbodies. Erosion causes soil particles to enter our lakes. Soil carries the nutrient phosphorus, essentially "fertilizing" the pond and decreasing water quality. Excess phosphorus can harm fish habitat and lead to nuisance algae blooms – a mat of green scum. Studies show that as water quality decreases, property values also drop.

Over the next two summers, watershed residents can get help with reducing the chances of algae blooms and property value decline. Free technical assistance is available to all interested watershed residents. Conservation matching grants (up to \$300) will be offered to 23 priority sites and conservation practices will be installed at 9 predetermined road and trail sites. Workshops will also be offered to help citizens learn conservation techniques to use on their own property.

For more information on this grant or to take part in the opportunities it has to offer, please contact Heather True at the CCSWCD at [htrue@cumberlandcountyswcd.org](mailto:htrue@cumberlandcountyswcd.org) or 892-4700.

## Watershed Stewards Program Offered to Raymond and Casco Lakes

### Maine lakes are at risk.

Today, many land use decisions are made on a watershed basis. All land-use activities within a *watershed* (land area in which all precipitation drains to the lake), even

miles away, can affect water quality. Many lakes are at risk of pollution from these non-point sources. It is up to us, Maine's citizens, to recognize these sources of pollution and learn to correct these problems. The University of Maine Cooperative Extension's (UMCE) **WATERSHED STEWARDS PROGRAM** can help YOU do this!

We provide 25 hours of training designed to aid local citizens in recognizing threats to their lake, and give "Stewards" the tools needed to reduce or eliminate those threats. In turn our volunteers return 25 hours of service

to their watershed. There is no cost to participate, and Stewards receive our resource notebook (a \$60 value!).

**The 7 week program offers information on, yet is not limited to: Nonpoint Source Pollution– What is it, why do we care?; Gravel Roads; Vegetative Buffers; Invasive Aquatic Plants; Safe Lawn Care and Gardening Techniques; Septic System- Care and Maintenance; Best Management Practices, Lakes 101, and Landscaping to Protect Maine Lakes.**

**Tentative Schedule:**  
**Tuesdays, September 12 – October 24th**  
**6:30 – 9:00 PM**  
**Raymond Public Safety Building**

For more information or to register, call Laura Wilson, UMCE, at 581-2971 (800-870-7270 toll-free in Maine) or Noralee Raymond, RWPA, at 671-3329.

This program is offered as part of the Thomas Pond Conservation Project. We will focus on Raymond and Casco's watershed areas, as we partner with the CCSWCD, RWPA, and the Thomas Pond Improvement Association. We hope you can join us!

## Bug of the Year– Crane Fly

This is not a picture of a super-size mosquito, although it looks like one! It's called a Crane Fly and it can be as long as 1.5 inches. The good news is that it is totally harmless and does not bite. They are often found swarming near ponds and are attracted to light. You may see them bouncing off your windows at night, especially if there is a lamp near the glass. Their long legs enable them to "dance" on the water surface. Crane flies mate in flight and the females



lay their eggs in water. The larvae live in mats of algae or other vegetation, in sandy or muddy lake bottoms. Later on they float to the top, and thrust their tails to the surface to breathe. Some species (about 30 in North America) are predaceous, others vegetarian, and still others do not eat at all (like adult mayflies). Again, they do not bite, although their misquito-like appearance does cause some people to fear them.

# Panther Pond Conservation Project - Phase I - Second & Final Season

After a most successful first year, the Conservation Project returns with expectations of even greater success than last year. Since last summer, Panther Pond residents have had the opportunity to participate in the project grant to reduce erosion problems.

During our first season we completed 10 projects and developed designs for an additional 12 sites. If you did not have a chance to participate in the project last year, it's not too late! We will once again be offering free technical assistance to any interested landowner. There is funding available for nine remediation projects and eleven Small Matching Grants (\$100).

Grant funds can be used toward the purchase of native plants for vegetative buffers or for erosion control materials (erosion control mulch, water diverters, crushed stone for infiltration). *If you have an erosion or runoff problem on your property or are interested in enhancing your shoreline vegetation please contact us today to schedule a time for us to visit your property.*

## Grants for Native Plants & Conservation Materials

Eleven matching grants (up to \$100) are still available. Inexpensive conservation practices such as vegetative buffers, infiltration steps, waterbars, and dripline trenches are practical, affordable, easy to install, and can make a big difference in water quality. Nine landowners have taken advantage of this opportunity. Completed projects include: two rubber blade diverters, two vegetative buffers, bank stabilization with erosion

## Upcoming Events

**PPA Annual Meeting-  
July 25, 7-9pm**

**Cruise the Buffers-  
July 29, 3-5pm**

**PPA 2nd Annual Picnic  
July 29, 5pm**

**Workshops, TBA**

**Check out the July issue of the  
Raymond Road Runner, back  
page for more project photos.  
Available on-line at  
[www.raymondmaine.org](http://www.raymondmaine.org)**

control (EC) mulch and blueberries, two path stabilizations—EC mulch path and a crushed rock path with stepping stones.

## 22 Erosion Remediation Projects

Eight major erosion sites have been fixed (see box below) and six projects are in the planning stages. Funds are available to address an additional 8 high and medium impact erosion sites, as identified in the Panther Pond Watershed Survey. Landowners and road associations of these sites are eligible to receive free technical assistance and 50% cost sharing to fix erosion and runoff problems.

## Workshops and Tours

Workshops will be held to demonstrate the best methods for planting shoreline vegetation and installing erosion control measures. Sign up today to be contacted when workshops are scheduled.

**Cruise the Buffers**— come join us for a pontoon ride around the lake on July 29th from 3-5pm. The tour will highlight completed projects and point out different types of vegetated buffers— from natural to landscaped.

Panther Pond Association and RWPA would like to thank all the landowners and volunteers who are helping to make this project a success. If you are interested in receiving technical assistance, matching grants, or would like to attend any of the workshops or the buffer cruise please contact PPA at [ppa@raymondmaine.org](mailto:ppa@raymondmaine.org) or contact Noralee at 207-671-3329 or [lakes@raymondmaine.org](mailto:lakes@raymondmaine.org).

## Completed Remediation Projects

### **Camp Hawthorne (2 sites)**

Campers installed 2 rubber blade diverters and settling basins on the road  
Infiltration trench and infiltration steps installed at edge of parking area

### **Maple Avenue Right of Way**

16 volunteers installed waterbars and crushed stone to stabilize eroding access

### **Jordan Lane Right of Way**

9 volunteers installed two rubber blade diverters with outlets into vegetation

### **Plains Road (Rolfe Brook)**

Raymond Public Works stabilized culvert outlet with crushed rock and created turnouts in the ditch to divert polluted runoff from washing directly into the brook

### **Long Drive -Hansons**

Local DEP certified contractor, Craig Gerry, crowned and graded the driveway, added better material, and installed two rubber blade diverters, two settling basins, and three turnouts to control runoff from this long steep driveway;

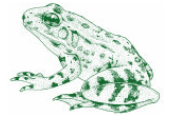
### **Plummerville -Allens (2 sites)**

Volunteers stabilized an eroded path with waterbars and EC mulch (front page picture). Beach erosion caused by runoff from the road and boat launch was diverted with a rubber blade into a large rain garden (bottom right photo).





## 2006 RWPA Membership Form



Thank you to our members who have already contributed in 2006. If you have not yet contributed please help us reach our 2005 goal of \$18,000 in 2005. Here is the form to fill out. Thank you!

I am glad to be a member: Again \_\_\_\_\_ For the first time \_\_\_\_\_

My lake/watershed is (please circle one): Crescent Raymond Thomas Panther Sebago Notched Nubble

Enclosed is (please circle) \$2500 \$1000 \$500 \$300 \$150 \$100 \$75 \$50 \$25 Other \_\_\_\_\_

Name \_\_\_\_\_ Phone Number \_\_\_\_\_ E-mail \_\_\_\_\_

Mailing Address \_\_\_\_\_

Raymond Address (if different) \_\_\_\_\_ Raymond Phone \_\_\_\_\_

Please mail contributions to: RWPA, PO Box 1243, Raymond, Maine 04071

### Invasive Milfoil Surrounds Raymond's Lakes



Invasive aquatic plants (IAP) threaten Raymond lakes and the threat is not just from out of state, but right here in Maine. There are 26 Maine lakes infested with IAP and many of these lakes are in southern Maine—many less than a 30 minute drive from Raymond. We are virtually surrounded by milfoil—look at the map. This map shows approximate locations of IAP. Once established, IAP spread rapidly, and may be found in other areas of an infested lake. Boaters should be extremely cautious and avoid any area of an infested lake that has thick plant growth. **Boaters should thoroughly inspect their boat, trailer, anchor, and tackle BEFORE and AFTER launching in any lake.**

IAP not only threaten the health of our lakes—stagnant mats of vegetation choke out native plants, decrease oxygen levels, and impact fish habitat; it also poses an economic threat to our lakes (cost of control or eradication, decreased property values and recreational income).

### RWPA ANNUAL MEETING

Saturday, August 12th, 4pm

BBQ & Activities 5-7pm

Camp Timanous, Plains Road

Please RSVP so we have enough food.

Thanks and hope to see you there!

### Raymond Waterways Protective Association

To protect and improve pond and lake water quality and foster watershed stewardship

RWPA  
PO Box 1243  
Raymond, Maine 04071

Phone: 207-671-3329  
Email: lakes@raymondmaine.org

Updates will be posted on the Town of Raymond website:  
[www.raymondmaine.org/committees/waterways/default.htm](http://www.raymondmaine.org/committees/waterways/default.htm)

NON-PROFIT ORGANIZATION  
U.S. POSTAGE PAID  
RAYMOND, ME  
PERMIT #11

Raymond Postal Patron  
Raymond, Maine 04071