

the Water Column



A Publication of the Maine Volunteer Lake Monitoring Program

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Provided free of charge to our monitors and affiliates

Summer 2009

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July 11, 2009

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Photo by volunteer monitor Terri Marin
See this photo in color online at
www.MaineVolunteerLakeMonitors.org/WCSummer2009

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VLMP Staff

Scott Williams	Executive Director
Roberta Hill	Program Director
	VLMP's Center for Invasive Aquatic Plants
Jim Entwood	Program Coordinator
Jackey Bailey	Development Coordinator
Christine Guerette	Program Assistant
Ilse Pukinskis	2009 Intern
Michelle DiPesa	2009 Intern
Qihong Hunsicker	2009 Intern
Linda Bacon	QA/QC Advisor (Maine DEP)

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Editorial Staff

Scott Williams	Richard Jennings
Roberta Hill	Jim Entwood, Layout

To Contact Us

24 Maple Hill Road
Auburn, Maine 04210
207-783-7733
vlmp@mainevlmp.org
www.MaineVolunteerLakeMonitors.org

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2009 VLMP Lake

July 11, 2009

8:30 - 12:30

followed by lunch

re-certification workshops for Secchi & DO monitors at 1:00

To Register

email vlmp@mainevlmp.org

phone 207-783-7733

mail in the form on the back of this newsletter

or go online to www.MaineVolunteerLakeMonitors.org/conference

Free for Certified Volunteers ~ all others \$36

At The Great Outdoors



on Pleasant Pond

68 Naiad Lane

Turner, Maine 04282

224-7061

www.greatoutdoorsme.com

Please join us on July 11 by the beautiful clear blue waters of Pleasant Pond in Turner. Meet with other volunteers, Maine lake scientists, and staff from VLMP and State Agencies. Take part in technical discussions about monitoring lakes and their watersheds, and learn how your data can be used to protect them. Celebrate and recognize volunteers who have served for 5 years, 10 years, and all the way up to Robert Susbury who is now in his 35th year as a volunteer monitor!! Be ready to share your "unusual experience" in the field for the *2009 Oops! Award*. Registration and lunch are free to all certified volunteer monitors.

2009 Oops! Award

Presented to the volunteer with the best story about an unusual experience that occurred "in the line of duty."

Be ready to share your story!

Monitoring Conference

Keynote Address

Extending the Frontiers of Citizen Science: New Applications to Lake Development, Recreation & Associations

Jessica E. Leahy, Assistant Professor - School of Forest Resources & Kathleen P. Bell, Associate Professor - School of Economics, University of Maine

Lakes and the landscape of Maine are undergoing tremendous change. Planners, managers, and scientists face numerous challenges in developing a solid understanding of the nature, drivers, and consequences of these changes. Increasingly, citizen scientists are being tapped in response to these challenges. Familiar with VLMP's success in monitoring Secchi and invasive aquatic plants, we reached out to VLMP monitors to help us understand current lake development, recreation, and association activities. We are thrilled with the response to the "2009 VLMP Survey: Lakes in Maine's Changing Landscape" mail survey. At present, our participation rate exceeds 60 percent. We very much appreciate the time and attention monitors gave to the survey. Thank you for helping to create a more complete picture of Maine lakes! In the keynote address, we will share results from this survey and connect these results to our larger efforts to study and encourage sustainable lake management in Maine. Our EPA-funded research project examines issues related to recreational use of lakes, residential development, water quality and invasive plants and fish.

Presentations

Damariscotta Lake Stewardship: From Lake Monitoring to Land Preservation

Al Railsback Executive Director, Damariscotta Lake Watershed Association

Blue, Brown, Green and Murky: Integrating Water Color Into Lake Assessment

Linda Bacon, *Biologist*, Maine Department of Environmental Protection

Hunting for Aquatic Invaders: 10 Ways to Maximize Direct Observation

By Roberta Hill, *Director*, Maine VLMP's Center for Invasive Aquatic Plants

Volunteer Service Awards

Recertification for Secchi & DO Monitors

Directions to The Great Outdoors

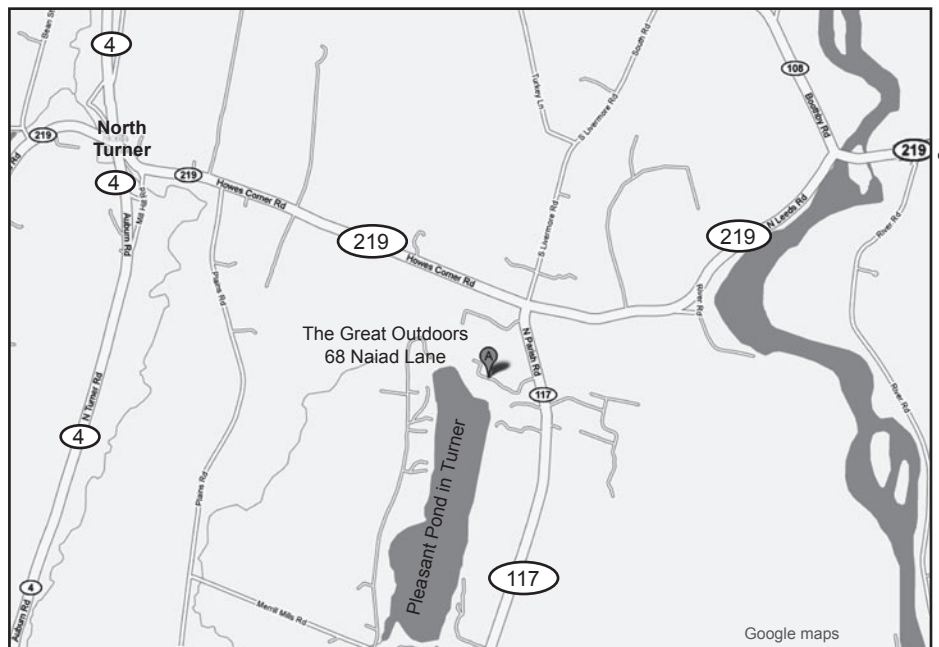
From South (Auburn)

Head North on Route 4 to Turner
Turn Right onto Route 219/Hoves Corner Road
(Flashing Yellow Light at Intersection)
Go 2 miles and turn Right onto Route 117 at
Flashing Light.
In approx .25 miles turn Right onto Naiad Lane,
Great Outdoors sign will be at the end of
the road, facility is 0.3 miles in.

From East (Augusta)

Head West on Routes 202/100/11
In Winthrop Turn Right onto Routes 133/41 (2.5
miles)
Bear Left and continue on Route 133 (5.8 miles)
In Wayne Turn Left onto Route 219
Travel 7.4 Miles, Turn Left onto Route 117 (Flashing
Yellow Light at Intersection)
In approx .25 miles turn Right onto Naiad Lane,
Great Outdoors sign will be at the end of
the road, facility is 0.3 miles in.

To Livermore & Farmington



To Turner & Auburn

To Augusta

Lakeside Notes

The Endless Generosity of Maine's Volunteer Lake Monitors

We never cease to be amazed at, and are truly grateful for, your seemingly bottomless generosity. You not only donate substantial time, and personal resources in order to help all of us monitor and protect Maine's lakes, but increasingly, many of you also provide generous financial support for the VLMP.



By Scott Williams
VLMP Executive Director

It was just a few years ago, following much discussion, that we created the annual appeal, in which we asked the public, including our volunteers, to consider making a donation to the program. The response was wonderful, and a little unexpected. Many of you welcomed the opportunity to make a contribution to help us support your work and to facilitate the growth of the program. We also discovered that many lake associations throughout Maine were willing to support the work of a volunteer monitor on their lake with an annual contribution to the VLMP.

Since its inception way back in the early 1970's, the Maine Volunteer Lake Monitoring Program has provided training, equipment and technical support to volunteer monitors and their lake communities—all free of charge. During the financial ups and downs of the program's history some have suggested that one way of helping to ensure financial sustainability for the program would be to change this policy and pass our costs on to the monitors, especially considering that it now costs from \$350-500 to train each new volunteer, provide them with basic monitoring gear, manage their data, send them newsletters and an annual report, provide technical assistance, and more. And that's just for the first year!

But by keeping the program free for our volunteers, we are fulfilling our side of an agreement with you. We provide training, equipment and support, and in return, you donate your time, the use of your boat, send us your data, and frequently report the findings of your monitoring efforts to your lake association and watershed community, year after year. Many of you are stalwart stewards of your lake and watershed and the data that you gather is the cornerstone of efforts to protect both.

Government funding, which has historically been the primary source of financial support for the program, has been flat-funded for several years. As a result of this, donations from the public, lake associations, towns, and volunteers have become increasingly important in helping us to continue our practice of training and supporting volunteer monitors without charging a fee.

Obviously, we believe in the importance of this program, as do you, our volunteers. You demonstrate your commitment in so many ways. Undoubtedly, your lake association appreciates the work that you do for your lake and watershed community. But they may not fully appreciate the value of having a local grassroots expert like you (and us) available to help them monitor the health of their lake. And perhaps they don't realize that you are part of a larger network of people throughout Maine who have a great deal of collective knowledge and understanding about lakes – and that the VLMP provides you with ongoing information about hundreds of Maine lakes, as well as personal technical support. And all of this is available to them free! It's an incredible bargain for your lake association.

You can help your lake association learn more about your good work, and the work of the VLMP. We're confident that once they understand the value that all of us provide them, they will recognize the importance of supporting the VLMP, which, in turn will ensure that we are able to continue to support your efforts. You can move this mutually beneficial relationship forward by asking your lake association to make an annual donation to the VLMP. To help you make the request, we've drafted a letter that you can present to your association. The letter was included in the spring mailing packet that you recently received. If you misplaced it, it can be downloaded at: www.MaineVolunteerLakeMonitors.org/support, or—you can use this article to make your case, if you wish. If there's anything that we can do to help with this, please feel free to contact us.

Thank you very much for all that you do for your lake, and for all Maine lakes. We look forward to hearing from you this summer, and hope to see many of you at the Annual Lake Monitoring Conference on July 11th which, as always, is provided to certified volunteer monitors free of charge!

What's in the Online Edition of *The Water Column*?

www.MaineVolunteerLakeMonitors.org/WCSummer2009

Hunting for Aquatic Invaders: 10 Ways to Maximize Direct Observation

By Roberta Hill



The purpose of an invasive aquatic plant (IAP) screening survey is to rule out the presence of one or more target invaders. The more thorough the screening process, the more confidence one has in the “no IAP detected” result. Yet everyone who has ever conducted an invasive aquatic plant screening survey knows: *it is virtually impossible to be 100% thorough in ones search*—to directly and confidently observe every square inch of intended survey area. The weather and light conditions are not always conducive; there are limits on the time and energy one can devote to the project; some plant communities are just way too dense and expansive; some lakes are entirely littoral (shallow enough to support aquatic plant growth) from shore to shore!

You may not be able to see it *all*, but there is much that can be done to *maximize* direct observation. Some of the procedures described in this article may already be part of your standard survey routine; reading them will provide a good brush up. But others (we hope) will present you with some enticing new ideas that strike you as ripe for the trying; and here is all the information you need to get started. With the summer survey season fast approaching, you won't want to miss Roberta's [TOP TEN TIPS](#) for increasing the efficiency, the accuracy, and *your enjoyment* of your time on the water.

Roberta will also be presenting this information at the VLMP Lake Monitoring Conference on July 11.

Happy hunting!

Build a Trunk Scope

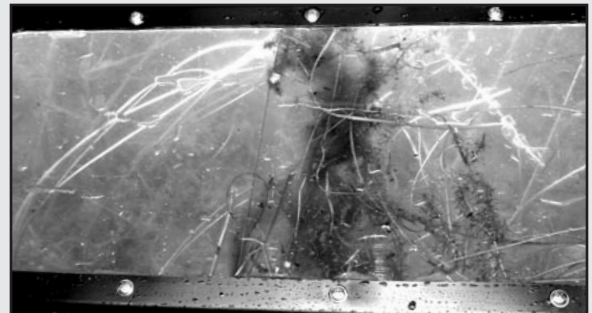
By Ross Wescott, VLMP Invasive Plant Patroller

Invasive Plant Patroller Ross Wescott, dissatisfied with the limitations of the bucket scope (e.g., not well shielded from backlighting; limited view area) set out to make improvements. By the time Ross completed his self-imposed redesign project; Maine had its first “trunk scope” (or as we here at the VLMP are inclined to call it: “Ross's Rolls Royce”). The trunk scope is crafted from a large heavy-duty plastic trunk. It floats on the surface and may be lashed to the front, back, or side of the boat. A Plexiglas window in the bottom of the trunk provides three times the view area of the typical bucket scope, while the hinged top and black-curtain sides shield out unwanted light. The scope is ergonomic and easy to use; just sit back and observe the wonders passing before you!

We predict Ross's ingenious viewing device will not only soon be used by many other Plant Patrollers here in Maine; it will be sweeping the nation! Ross is also moving forward on a new scope designed specifically for lone-kayakers. So stay tuned!

Ross Wescott's detailed step-by-step instructions on how to construct your own trunk scope are now available on line at:

www.MaineVolunteerLakeMonitors.org/TrunkScope.pdf



above: Wide viewing area of the Trunk Scope
left top: Invasive Plant Patrollers Sibyl & Robert French survey with a trunk scope

Congress of Lake Association's Maine Lakes Conference

Nurturing Living Lakes:
The Actions You Can Take

Saturday, June 20th, 2009
9 am to 5 pm

Saint Joseph's College, Standish, ME

For more info contact COLA at
1-877-254-2511 or info@mainecola.org

VLMP 2009 Volunteer Training Workshops

Water Quality Monitor Workshops

This workshop covers background information about lake ecosystems, what effects lake health and how we measure changes in lake water quality over time. New volunteers are trained to measure Secchi Disk Transparency and will go out on the water to take readings and become a certified lake monitor. Please contact us for more information about water quality monitors, criteria for becoming a monitor and volunteer opportunities on your lake of interest.

New Monitors: June 27 from 9:00 - Noon in Auburn

Re-cert for current monitors: June 27, 2PM in Auburn
July 11, 1PM in Turner (at the VLMP Conference)
Regional workshops listed online:
www.mainevolunteerlakemonitors.org

Invasive Plant Patrol (IPP) Introductory Workshops

The primary goal of these comprehensive workshops is to provide those who wish to join Maine's "early detection" effort with the information and guidance needed to get started. All IPP training sessions are open to the public and FREE to anyone interested in learning more about the threat of invasive aquatic plants in Maine.

Date	Time	Location, Town	County
June 16	2:30-8:00PM	Belgrade Center for All Seasons, Belgrade	Kennebec
July 1	2-7:30PM	Soule Shuman VFW Hall, Waldoboro	Lincoln
July 7	9AM-2:30PM	St. John Valley Tech. Ctr., Frenchville	Aroostook
July 14	3-8:30PM	Acton Town Hall Meeting Room, Acton	York
July 21	3-8:30PM	Room 100, Lord Hall, U.of Maine, Orono	Penobscot
July 28	2-7:30PM	Ellsworth City Hall, Ellsworth	Hancock
August 4	3-8:30PM	LEA Headquarters, Bridgton	Cumberland
August 7	1-6:30PM	Baxter State Park HQ, Millinocket	Penobscot
August 11	1-6PM	Room 101, Roberts Section A, UMF, Farmington	Franklin
August 15	9AM-2:30PM	Beaver Cove Marina, Moosehead Lake	Piscataquis

IPP Manual Control Methods

Workshops are geared for certified SCUBA divers and non-divers providing surface support for invasive aquatic plant control projects. All divers must show proof of SCUBA certification. The first workshop covers hand-pulling and benthic barrier projects. The second provides training in diver assisted suction harvesting. Both workshops include in-lake instruction and practice.

Manual Control Methods I
June 23, 9AM-4PM Sebago Lake State Park

Manual Control Methods II - Diver Assisted Suction Harvesting
June 27, 9-Noon Little Sebago Lake

IPP Survey Field Methods

This workshop provides on-lake instruction and practice for those wishing to conduct invasive aquatic plant screening surveys. Bring your own shallow draft boat or contact VLMP to make alternative boating arrangements. Previous attendance at an Introductory IPP workshop is recommended but not required.

Date, Time	Location	County
July 18, 9-Noon	Mattawamkeag Lake	Aroostook
August 9, 9-Noon	30-Mile River Watershed	Kennebec
August 29, 9-Noon	Sabbathday Lake	Cumberland

All workshops are subject to change. See www.MaineVolunteerLakeMonitors.org/workshops for the latest updates. Advanced registration is required for all VLMP training workshops. Contact us at 207-783-7733 or vlmp@mainevlmp.org to register.

Moosehead Lake Pilot... Continuing Full Steam Ahead!



If an aquatic invader such as Eurasian milfoil finds its way into Moosehead Lake, is it likely that somebody will find the intruder BEFORE it becomes irreversibly established there?

In 2008, the Maine Volunteer Lake Monitoring Program (VLMP) launched an ambitious pilot initiative on

Moosehead Lake to help ensure that the answer to this question is an emphatic "Yes!" Year two of the initiative is now underway. In the short term, the goal of the pilot initiative (dubbed Invasive Plant Patrol "Jump-Start") is to organize and conduct a screening survey of all shallow, off-shore areas of the lake, to rule out the presence of harmful aquatic invaders. Ultimately, however, the goal is to create an ongoing, locally-sustainable, citizen-based monitoring program capable of detecting problem species as soon as possible after introduction, *before* they grow out of control.

Since the inception of the VLMP's Invasive Plant Patrol (IPP) program in 2001, nearly 2000 individuals have been trained to monitor Maine waters for the presence of aquatic invaders. Roughly 2/3 of all invasive aquatic species monitoring currently taking place in the state is now done by

trained volunteers. Despite this progress, significant gaps in Maine's early detection system remain. Survey activity on some of Maine's most exceptional lakes, for example, remains sparse to non-existent.

IPP Jump-Start provides a novel approach to addressing this gap. The core of the program is the annual formation and coordination of the IPP Jump-Start team, comprised of novice patrollers and other members of the target community who will work and learn directly along side of VLMP staff, seasoned IPP volunteers, state agency personnel, and other professionals. During a weeklong survey "blitz," the team conducts an invasive aquatic plant screening survey as well as a baseline native aquatic plant inventory on the waters of concern.

While they are based in the area, team members engage in one-on-one educational outreach, informational meetings, local events, communication with community leaders and the local press, etc. to raise awareness of the project, and more broadly, the threat of invasive aquatic species in Maine. IPP training is offered to local community members, and workshop attendees are invited to test out their new skills by participating in one or more days of the survey.

The VLMP kicked off the Moosehead Jump-Start pilot initiative last summer, with a major grant from The Betterment Fund. Just recently, the Maine Outdoor Heritage Fund Board voted unanimously to provide the additional funding needed to move the pilot forward.

Year One of the Moosehead pilot produced an array of notable accomplishments:

- It brought together a remarkable coalition of project partners, including Maine's natural resource agencies, non-profit organizations, Moosehead region businesses, community leaders, residents and visitors, seasoned and novice volunteers, and more.
- All offshore areas capable of supporting aquatic plant growth of nearly half of the expansive (74, 890 acre) lake were surveyed. (The focus of 2008 was on the southern half of the lake. 2009 will cover the more northerly portions.) No invasive species were found.
- The survey included a native plant inventory. An inventory of this magnitude had never been attempted on Moosehead Lake. A total of 55 aquatic plant species were identified including five native milfoil species.
- The daily activity of the team in and around the lake generated a great deal of local interest, with a

number of locals expressing eagerness to become more directly involved in the project.

And now we are off and running on Year Two! Goals for this year include:

- Training a cadre of new plant patrollers in the Moosehead region (An Introductory Invasive Plant Patrol workshop is scheduled for Saturday, August 15, 9:00 AM to 2:30 PM, at Beaver Cove Marina)
- Reassembling the Jump-Start team. (*If you are a trained IPP, we need your help!* Please consider joining the team for one day, several days, or for the entire week!)
- Finishing up the lake-wide survey (scheduled for the week beginning August 16)
- Doing whatever else must be done to help ensure a viable, locally-sustainable monitoring effort moving forward

What's next? Plans are already underway to take IPP Jump-Start to the waters of another vulnerable region of the state in 2010. Right now, it looks like our next target region will be Acadia National Park. *So please stay tuned!*

For more on the Moosehead Lake Jump-Start initiative, please visit the VLMP's on-line photo journal at www.MaineVolunteerLakeMonitors.org/photos/Moosehead. If you are interested in learning more about this initiative, (or better yet, jumping in with both feet!) please contact Roberta Hill, at mciap@mainevlmp.org.

Any Secchi readings taken on these days will help "ground truth", or calibrate images taken by the Landsat 7 satellite as it passes over Maine.

2009 Landsat 7 Overpass Dates

- June 8 & 24
- July 10 & 26
- August 11 & 27
- September 12 & 28
- October 14 & 30

Life Long Monitors

Water Quality Monitors

36 years

Joe Emerson, Upper Narrows Pond

35 years

Robert Susbury, Howard Pond

34 years

David Hodsdon, Clary Lake

33 years

Ralph Johnston, Highland Lake
Charles Turner, Panther Pond

32 years

Charles McClead, Phillips Lake
Richard Offinger, Cathance Lake

31 years

Thomas Dionis, Balch & Stump Ponds
Kenneth Holt, Bear Pond

29 years

John Wasleski, Kennebunk Pond
Stan Wood, Swan Lake

28 years

Kenneth Forde, Stearns Pond
Charles Hodsdon, Great East Lake

27 years

Bill Mann, Round Pond
William Reid, Wesserunnett Lake

26 years

John Laskey, Tripp Pond

25 years

Ken Bailey, Norton Pond & Megunticook Lake
Ruth Eleanor Cyr, Silver Lake
Peter Devine, Garland Pond
Chuck Strandburg, Barker Pond

20 years

Peter Fischer, Boyd Pond
Bill Gawley, Upper Hadlock, Upper Breakneck, Sargent, Seal Cove, Long, Jordan, Bubble & Witch Hole Ponds, Echo & Eagle Lake & The Bowl
Joseph Potts, Sebago Lake
Fred Weston, Long Pond

15 years

John Bradstreet, Sheepscot Pond
Richard Buck, Cold Rain Pond
Dan Guerette, Sabattus Pond
Peter Lowell, Moose Pond
Bruce Mailloux, Swan Lake
Charles Miller, Bickford Pond
Todd Sekera, Lower Springy Pond
Ross Swain, Ellis Pond

10 years

Churchill Barton, Brettun's Pond
Woody Carville, Beech Hill, Lower Patten, Upper Patten, Craig & Toddy Ponds & Alamoosook Lake

Heidi Chadbourne, Figure Eight Pond

Poppy Connor-Crouch, Lower Range Pond

John Crouch, Lower Range Pond
Ralph Gould, Taylor Pond
Roland Johnson, Sandy Bottom Pond

Bill Latham, Echo Lake
Bill Mansfield, Coffee Pond
Emmett Porter, Number Nine Lake
Ardis Records, Center Pond
David Records, Center Pond
Maggie Shannon, Great Pond
Dick Thibodeau, Little Wilson Pond
Maurice Vachon, Auburn Lake
Dana Valteau, Saint George Lake
James Vantassell, Bunganut Pond
Robert Warren, Center Pond
Thomas Warren, Center Pond
Doug Webster, Dumping Pond

5 years

Marvin Anderson, Schoodic Lake
Sal Bartolotta, Little Pond
Roy Bischoff, Rocky Pond
Dennis Blair, Spednik & East Grand Lakes
Robert Brown, Mattakeunk Lake
Kathy Burke, Bog Lake
Mike Cloutier, Sabbathday Lake
Charles Corliss, Schoodic Lake
Honey Cronin, Richardson Lakes
Joel Croteau, Parker Pond
Scott Dunham, Great East Lake
Debbie Duplisea, Pocasset Lake
Bob Ellis, East Grand Lake

Andy Fisk, Nehumkeag Pond
Paul Fortin, Lovewell Pond
Nicole Grant, Spednik & East Grand Lakes

Peter Harvey, Love Lake
Linda Harvey, Love Lake
Peter Holtby, Wilson Lake
Eben Joslyn, Watchic Pond
Ed Keenan, Forest Lake
Joshua Kempf, McIntire, Boody & Kidder Ponds

Robert LaBelle, Little Ossipee Lake
David Lamon, Somes Pond
Emile Nicol, China Lake
Elizabeth Payne, Wesserunnett Lake
Charles Pichette, Duckpuddle Pond
Meredith Podgurski, Umsaskis & Long Lakes

David Randall, Pocasset Lake
Laura Richter, Lake George
David Rier, Indian Lake
Pamela Rogers, Ward Pond
Paul Slack, Jordan, Lower Hadlock, & Upper Hadlock Ponds

Christie Souza, Mcgrath Pond
Shawn Sprague, Boyd Pond
Robert Stessel, Little Pushaw Pond
Samuel Stessel, Little Pushaw Pond
Michael Taftas, Little Ossipee Lake
Bob Tracy, Thompson Lake
Bobbi Twitchell, Abrams Pond
John Wedin, Branch Lake
Lew Wetzel, Pleasant Lake
Jesse Wheeler, Somes Pond

Invasive Plant Patrol Monitors — 5 years

Volunteers were first Certified as Invasive Plant Patrollers in 2004.

This year marks the 5th year of service for the more than 60 active volunteers who are part of that first cohort.

Dr Donald Ahern, Lower Patten Pond
Jessica Ahern, Lower Patten Pond
Sarah Ahern, Lower Patten Pond
Morris Amar, Back Pond
Linda Stetson Amar, Back & Middle Pond
Susan Bailey, Branch Lake
Michael Bernstein, Great Pond
Martin Blaney, Horseshoe Pond
Alvena Buckingham, Alford Lake
Diane Clay, Woodbury & Buker Ponds
Fred Cummings, Parker, Thomas, Moose & Saturday Ponds & Pleasant Lake
Jane Davis, Jewett, Back, Middle & Mud Ponds
Buffy DeMatteis, Buker Pond
Mary Jane Dillingham, Auburn Lake
Brian Dodge, Branch Lake
Pam Dodge, Branch Lake

Bob Dunlap, Green Lake
Cynthia Dunlap, Green Lake
Eileen Fair, No Name Pond
Bruce Fenn, Long & Great Pond
Larry Ferrell, Seabasticook Lake
Deborah Ferrell, Seabasticook Lake
Dan Fortin, Auburn Lake
Patrick Foster, Little Sebago Lake
Carol Gabranski, Branch Lake
Emily Gabranski, Branch Lake
Carol Gestwicki, Jewett, Back, Middle & Mud Ponds
Ron Gestwicki, Jewett, Back, Middle & Mud Ponds
Carol Gestwicki, Back Pond
Frank Getchell, Pitcher & Knight Ponds
Cathy Goddard, Great Pond
Neal Halle, Cathance Lake
Nate Hardy, Spaulding Lake
Anne Hayes, Branch Lake

Bob Heyner, Forest Lake
Betsy Huebner, Jewett Pond
Rick Johnson, Middle Pond
Margaret Kennedy, Back Pond
David Lamon, Long &, Somes Ponds
Paul McCue, Seabasticook Lake
Philomena McPhee-Brown, Little Wilson Pond
Dave Potter, Unity Pond
Christian Poulin, Horseshoe Pond
Lea Ramirez, Great Pond
Karen Robbins, Sewall Pond
Brad Rounds, Forest Lake
Arthur Schilling, Jewett, Back, Middle & Mud Ponds
Claudia Scholz, Loon Lake
John Schultz, Great Pond
Ron Schutt, Jewett, Back, Middle & Mud Ponds
Maggie Shannon, Long & Great Ponds

Susan Sokol, Lower Patten Pond
Susan Therrien-Fenn, Long & Great Ponds
Brainard Tripp, Embden Pond
Maurice Vachon, Auburn Lake
Laura Warren, Little Kennebago Lake
Ralph Whedon, Branch Lake
Mark Whiting, Upper, Middle & Lower Lead Mountain Ponds & Cathance Lake
Paul Wight, Branch Lake
Susie Wilding-Hartford, Woodbury Pond
Mary 'Pixie' Williams, Parker, Thomas, Moose & Saturday Ponds & Pleasant Lake
Keith Williams, Highland Lake

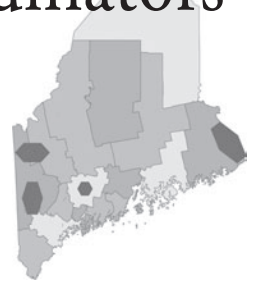
The Invaluable Role of Volunteer Coordinators

Volunteers are essential to fulfilling the mission of the VLMP by monitoring their lakes. But volunteers also play a critical role administrating VLMP programs through the all-volunteer Board of Directors and Volunteer Coordinators. The VLMP has two types of Coordinators:

Regional Coordinators maintain contact with volunteers, organize training workshops, respond to requests from volunteers and manage data collection.

Data Coordinators enter water quality data from volunteer data forms into the VLMP's LakeData database program.

Each of the 16 counties in Maine has its own Coordinator, and there are several local organizations such as Cobbossee Watershed District, Lakes Environmental Association, Rangeley Lakes Heritage Trust and the St. Croix International Waterways Commission that function as Regional Coordinator for volunteers in their area. In addition to their role of working with volunteers, Coordinators also provide feedback and insight at fall planning meetings with VLMP staff. Typically Coordinators volunteer about 25 hours each year which, as a whole, saves the program over \$15,000 annually!



Elizabeth Payne

Wesserunseft Lake Monitor
& Regional Coordinator
for Franklin, Somerset &
Washington Counties

Helping to facilitate the flow of VLMP data is a rewarding way to help protect Maine's lakes. I coordinate the data coming from Somerset, Franklin, and Washington counties. It's very gratifying to touch base with monitors from as far away as Schoodic Lake in Cherryfield and reassuring to know that so many people care enough about Maine lakes to volunteer their time—lots and lots of it.

I love best the way the work harmonizes with the predictable rhythm of the seasons. Every year, in mid-March, I get an email from Jim

at VLMP reminding me of the upcoming monitoring season. Along with discussion of workshop dates and the like, he tells me whether the crocuses are up or the birds are singing. In mid-April a big packet arrives with the all the materials for the monitoring season.

I help with the recertification workshop on Clearwater Lake in May, which means contacting Franklin County monitors, many of whom I'm getting to know. For me, the Clearwater workshop signals the start of the summer season. It's a pleasure to ride the rural roads to Industry—a trip back in time—and to bounce out to the deep hole in Linda Bacon's Boston Whaler. More often than not it's windy—and brisk!

In early August—high summer—telltale envelopes start trickling in, data sheets—recordings of water clarity readings, dissolved oxygen readings, phosphorus, color, and other information—collected by dozens of monitors from all three counties. My job is simple—to check the data sheets for completeness and correctness. If something is missing or awry, I contact the monitor and request clarification. Once I've checked all of the mid-season data sheets, I stuff them—by county—into manila envelopes and mail to the data entry people, who then enter the data into the VLMP database. In mid-October—about the time we shut off the water and shutter up the camp—the second batch of datasheets begins to arrive.

And so it goes. Autumn turns to winter and we all turn to other concerns. Then sometime in March—as perennial as pussy willows—an email appears in my inbox: "It's that time again and by the way the crocuses are up."

Being a volunteer, helping others, is an important activity to me. For the past twenty years I have been a contributing part of the VLMP operation. It started with doing water tests two or three times a month (i.e., Lake Monitor), then expanded to doing data entry for the lake monitors in a region (i.e., Data Coordinator). Notice that I did not use the word "work"; being a volunteer needs to be something you enjoy, utilizing a skill you have and resulting in a feeling that your contribution was helpful. Another key element is finding the time to volunteer. The Data Coordinator activity is a wonderful fit for me. I enjoy making productive use of my computer, and the periods of activity, mid-summer and late fall, are easy to fit into a busy schedule. The VLMP staff has been very receptive to suggestions on improving the data entry procedure; the software provided by the VLMP is easy to use. Now that I am retired, spending the winters in the South, the Data Coordinator role has proven to be a great work-at-home activity, regardless of seasonal location changes.



Joe Potts

Sebago Lake Monitor
& Oxford County
Data Coordinator

Interested in Becoming a Regional or Data Coordinator?

Contact Jim or Scott for more info.
783-7733 or vlmp@mainevlmp.org

Quality Counts!

Water Quality Recertification Changed for Secchi Simulator

www.MaineVolunteerLakeMonitors.org/recertify

Recertification workshops are upon us again! So it is time for me to put on my QA hat and remind all volunteers and cooperators of the importance of this step. This recertification process applies to DEP and VLMP staff as well. At the end of this week, we will be having the first of our two staff sessions on Long Pond in Belgrade. It is a site to behold: four to five boats either tied together or anchored closely at the deep hole each with 3-4 folks peering into the lake through scopes or taking oxygen profile after oxygen profile. We get together to review procedures and make sure staff and some volunteer meters are working properly before monitoring begins. This is the best way we can come up with to make sure the data collected is comparable year-to-year and lake-to-lake.

If you monitor for Dissolved Oxygen or obtain water samples using either a grab device or core tube, recertification is required annually. We review procedures and check equipment, much like we do at the staff sessions, and bring you up-to-date on any program changes.

If you monitor for Secchi Disk Transparency, the options for recertification have changed. Until last year, an

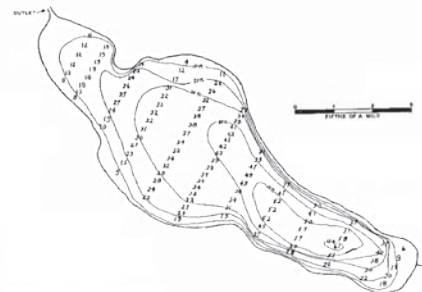
on-the-lake recertification was required once every three years. In 2008 the VLMP launched the **Secchi Simulator** to provide volunteers a **Virtual Recertification** option. This option does not replace on-the-lake recertifications but will extend the period between on-the-lake sessions from three to a maximum of six years. Monitors must go through the Simulator annually. When you reach six years, an on-the-lake recertification will be absolutely necessary. Reminders will be sent to encourage you to attend an on-the-lake session years three, four, five and six from your most recent session. If you opt-out of the annual Simulator testing you will still need to be recertified on-the-lake every three years.

We are so very appreciative of the time you spend looking after your lake. We want to make sure that time is not wasted by reviewing procedures, answering your questions, sharing program updates with you, and most importantly, being able to put faces with names!



By Linda Bacon
Maine DEP Technical
Advisor

Lake Lingo Bathymetry



A lake bathymetric map is used to record and display lake depths as contours in much the same way that a topographic map displays contour elevations of the land surface. Bathymetric maps are useful for many purposes, including surface navigation, recreation (fishing & swimming), invasive plant surveys, and water quality monitoring (how else would you be able to find the "deep hole?"). Accurate information about lake depth is extremely valuable to people who study and monitor lakes. Biologists, for example use depth, along with water quality data, to determine the extent to which lakes and ponds are able to support a coldwater fishery. Water depth is also a major factor in determining whether or not, and to what extent, a lake stratifies during the summer. The amount of water (volume) contained in a lake basin is determined from depth data, and volume is used to determine the rate at which a lake flushes (flushing is often expressed as the number of times per year that the total volume of the lake is replaced). Invasive Plant Patrollers use depth maps to identify littoral areas (areas shallow enough to support rooted aquatic plant growth), to designate survey sectors, and to record survey data. Download a bathymetric depth map for your lake on the VLMP website at

www.MaineVolunteerLakeMonitors.org/lakes

Secchi Recertification Requirements Changed



- On-Line recertification with the Secchi Simulator is required annually, with one field re-certification every six years.
- Those who opt out of the Secchi Simulator re-certifications must still be recertified every three years in the field.
- D.O. monitors must be recertified in the field annually (this requirement is unchanged).

Sustaining the Efforts of VLMP Volunteers for the Future

Reflecting on the 2008 season, we must say we are very proud of the incredible effort and work accomplished by our volunteers! Over 3,500 Secchi disk readings, and more than 15,600 individual water temperature and dissolved oxygen readings were taken! More than 168 invasive aquatic plant screening surveys were done. Over 300 individuals were trained by the VLMP in 2008. What a great year! With 25 training workshops planned this summer and over 750 active volunteers we anticipate even more data on more lakes in 2009.

An important way to ensure that it will be is through a successful Spring Appeal. Our programs are ever increasingly sustained through funding from individuals, foundations and businesses. They are the community of volunteers and friends of the VLMP that believe in our mission and the work we have accomplished. We are especially excited that for this year's Spring Appeal one of our veteran volunteer lake monitors and the VLMP Board of Directors have teamed up to offer a \$7,000 challenge grant. **This means that every gift will be**

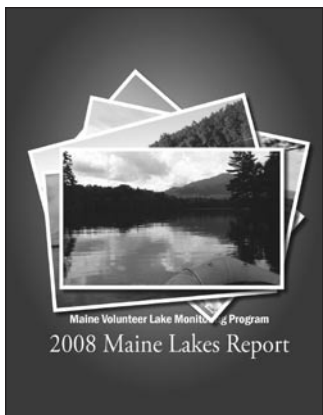
matched dollar for dollar up to \$7,000. By now you have probably received your letter in the mail. We hope that you will help double the benefit to Maine's lakes with your donation! For more information, or to make a donation contact me at 207-783-7733 or jackey@mainevlmp.org

Thank you!

Jackey Bailey
VLMP Development Coordinator

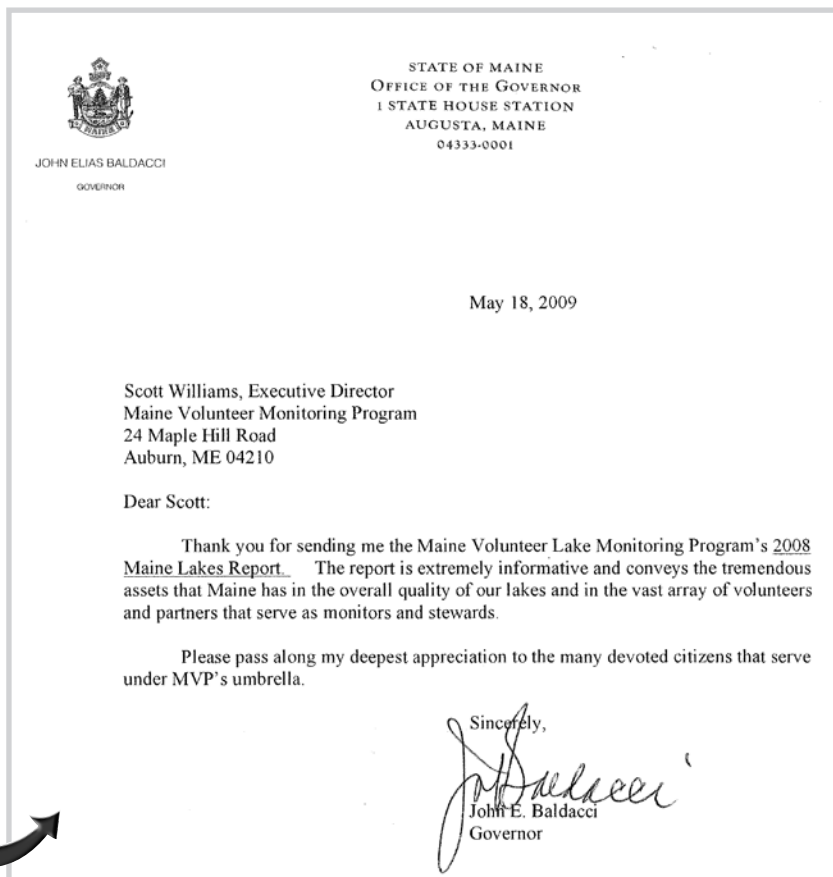
2008 Maine Lakes Report Now Available

The VLMP has released its 2008 Maine Lakes Report. This annual report provides the most comprehensive documentation available on the current health of Maine lakes, and highlights the efforts of hundreds of volunteer lake monitors throughout Maine who collect scientific data on more than 400 waterbodies. In addition to extensive background information on lake and watershed ecology, the report provides individual data summaries for lakes throughout the State of Maine.



The report is online at www.MaineVolunteerLakeMonitors.org/publications printed copies available on request

The Governor read the report and wanted to express his appreciation for your service!



How Clear Was Your Lake in 2008?

By Scott Williams

Are you wondering if the lake you monitor was clearer—or less clear—than average last summer? The Maine VLMP and DEP have tracked Secchi transparency (water clarity) data collected by hundreds of volunteer lake monitors over the years in order to be able to answer questions like this. We do so because clear water is at the very top of the list of attributes that the public values for lakes, and as it happens, water *clarity* is a good indicator of overall water *quality* for lakes and ponds. Short and long-term changes in the clarity of lake water also provide us with valuable information about the ways in which Maine lakes, both individually and as a whole, respond to influences like the weather. What we learn from the water clarity readings that you take with your Secchi disk also has important implications for the long-term protection of your lake and its watershed.

Thanks to thousands of Secchi disk readings taken by volunteer monitors during the past four decades (3,555 readings alone in 2008!), we have begun to piece together a picture of how lakes and their watersheds are influenced by people and the weather. For starters, we know that the nutrient *phosphorus* controls the amount of algae that grows in lake water, and the concentration of algae in lakes largely determines how far down into the water we are able to see. We also know that as their watersheds become

developed, the amount of phosphorus in lakes increases. Stormwater runoff is the vehicle that carries phosphorus from the watershed to the lake.

You might expect that extended periods of heavy rain would cause lakes to become clearer, because all of that nice, pure rainwater would flush the phosphorus and algae out of the lake. But that basic logic gets complicated when natural forested watersheds become developed with roads, buildings, driveways, lawns, parking lots and more. Only a small percentage of the water in most lakes falls directly into the lake from the sky.

Most of the snowmelt and rain that flows into and through our lakes must first flow through their watersheds.

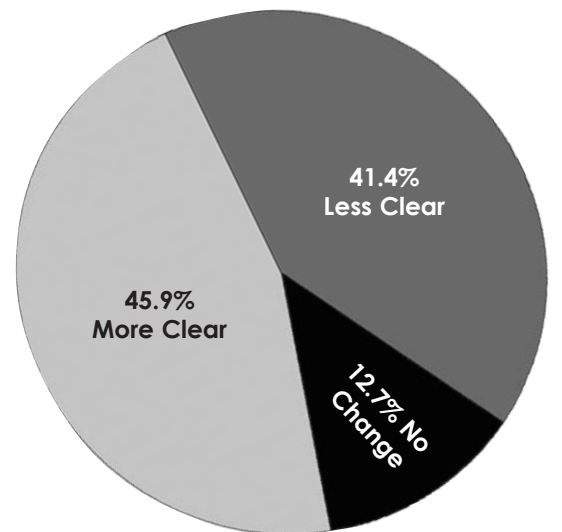
In a healthy, undisturbed watershed, natural buffer vegetation helps to filter the phosphorus and sediment from runoff. But as a watershed becomes more developed and buffers are removed, more runoff along with more phosphorus and sediment reaches the lake, ultimately causing the water to be less clear. Conversely, and strange as it may seem, less rain often translates to clearer lake water, because without runoff there is less fertilizer (phosphorus) flowing into the water to stimulate the growth of algae.

Now for the disclaimer: This is not a “one size fits all” phenomenon. Not all lakes respond in the same manner to more, or less rain (and snow), because precipitation isn’t the only weather factor that influences lake clarity. To complicate matters further, other factors affect the degree to which individual lakes respond to precipitation, including lake flushing rates, thermal stratification, dissolved oxygen levels, the size of individual lakes and their watersheds, and probably many more.

All of those factors notwithstanding, in recent years we have observed that many, but certainly not all, Maine lakes are generally clearer during years of below average precipitation, and less

Figure 1

Comparison of 2008 water clarity of 418 Maine lakes to their long term clarity.



clear during years when precipitation is above average.

But the relationship between precipitation and lake clarity isn't always obvious at first glance, as was shown in the data from 2008, when much of Maine experienced some of the heaviest rainfall in years, especially during the middle and late summer. Information obtained from the National Weather Service indicates that for much of the State, cumulative precipitation through the 2008 monitoring season was well above average, with frequent extreme rainstorms documented during the summer. Overall, the Portland area experienced the 3rd wettest year in the 138 years that records have been kept! Certainly, if precipitation is a strong influence on the annual clarity of our lakes, the 2008 data should be noteworthy.

Figure 1 indicates that in 2008, a slightly larger percentage of 418 Maine lakes were clearer than they have been historically. But a nearly equal number were less clear than they have been in the past, and about 13% showed no change. Even though the weather in 2008 was dramatic, the difference between the lakes that were clearer, and those that were not was not particularly dramatic. If anything, we might have expected that there would be substantially more lakes that were less clear, compared to those that were clearer.

The 2008 figures are somewhat of a surprise. In recent years that have been either very wet or very dry, the difference between the percentages of lakes that have been more or less clear has for the most part, been pronounced. One possible reason for

the unexpected results in 2008 is that much of the rain during the summer came relatively late in the season (July and August). It is typically the snowmelt and rain that comes early in the open-water season (April and May) that has the greatest influence on the growth of algae in lakes during the summer. Lakes may not have had sufficient time to "process" the phosphorus in the late-summer runoff.

less clear, compared to only 35% that were more clear, and only 10% were the same as their historical average.

Yet another way of looking at the changes that we see in Maine lakes from year to year is to calculate the annual average Secchi transparency (clarity) for all lakes for which there were data for individual years, and compare this single number from

one year to the next. The Secchi disks on the graph in Figure 3 represent the average of the annual averages for all lakes in the dataset for individual years. For example, in 2008, the annual average Secchi clarity for each of the 418 lakes in the set were lumped together and averaged, resulting in an overall lake clarity reading for all of the lakes, which was 5.34 meters.

Looking at the data from this perspective, we see that even though the number of lakes that were more, or less clear than average in 2008 was nearly equal (Figs 1 & 2), Maine lakes as a whole were less clear in 2008 than they were in 2007, a relatively dry summer, when the average transparency for all Maine lakes was 5.7 meters - one of the clearest years for Maine lakes in nearly three decades! But during the wet summer of 2008, the average dropped to 5.3 meters, moving into the range of 5.0-5.5 meters, where most of the annual averages have occurred since the early 1970's.

Figure 3 also illustrates how some of the clearest years for Maine's lakes have occurred within a year or two of the least clear years. The most dramatic example of this took place between 1984 and 1985, when the

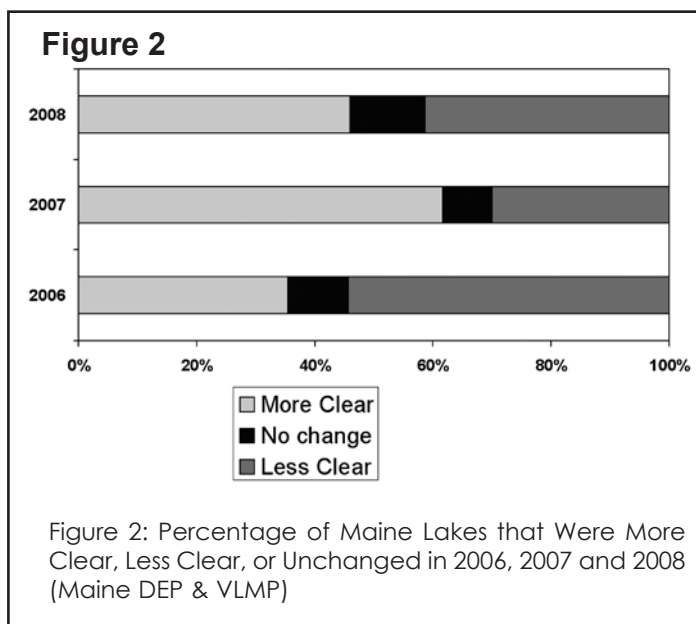


Figure 2: Percentage of Maine Lakes that Were More Clear, Less Clear, or Unchanged in 2006, 2007 and 2008 (Maine DEP & VLMP)

Figure 2 is another form of graphic illustration of the annual water clarity of Maine lakes, compared to their historical averages. The 2008 bar shows the same information as the Figure 1 pie chart. Below this is the bar for 2007, a relatively dry year for Maine, when about 62% of the lakes were clearer than average, and only about 30% were less clear (8% unchanged). In comparing these two years, we see that many lakes that were clearer than average in 2007 became less clear in 2008, so there was actually quite a swing toward reduced lake clarity from one year to the next. In 2006, Maine experienced the wettest month of May on record, and much of the State experienced the wettest months of June and August in many years. The bar for 2006 shows us that a high percentage (54%) of 429 lakes were

Figure 3

Annual Secchi
Transparency Averages for Maine Lakes

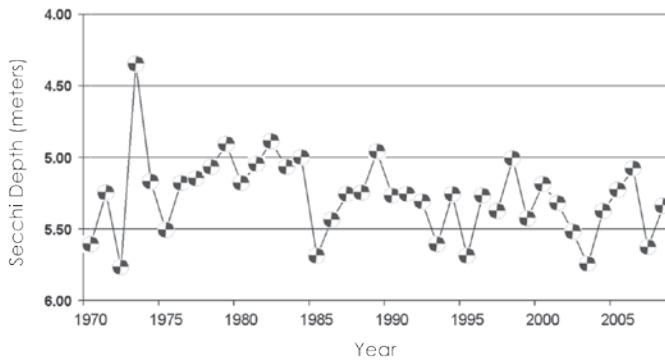


Figure 3 is a plot of the average annual Secchi disk transparency for all Maine lakes for which data have been available from 1970 through 2008. During the first few years of this period the number of lakes on which the average is based was relatively small. This may account for the high degree of fluctuation up until 1975, when the number of lakes in the data set exceeded 100. Since 1975, the number of lakes used to determine the annual average has increased steadily to more than 400 per year. The graph shows that for most years after 1975 the statewide average has been between 5.0 and 5.5 meters. The 2008 average of 5.34 meters was in this range.

The change from 2006 to 2007 is nearly as dramatic. As we discussed above, May 2006 was the wettest on record for some areas of Maine and much of the summer was very wet throughout the state, resulting in one of the least clear years on record for Maine lakes. But in 2007, a relatively dry year, the average clarity of Maine lakes improved sharply.

Please note that it was not until the mid 1970's that the number of lakes being monitored reached 100 or more, which probably accounts for the wild swings in Secchi transparency during that earlier, brief period.

average jumped to from 5.0 to 5.7 meters. What could have caused such a quick and substantial change? If you were fortunate enough to have spent time on a Maine lake in 1985, you might recall that the weather was exceptionally clear, dry, and calm throughout the summer. Very little precipitation occurred in Maine during the lake monitoring period. Without rain there is no runoff, and without runoff, phosphorus from the watershed stays *in* the watershed and *out* of the lake, resulting in measurably clearer water, as the graph suggests.

Many questions remain concerning why some lakes are clearer, and others less clear during dry years, and even whether or not it is the same group of lakes that experience shifts in transparency from year to year. We are working on the answers to these questions. What *is* certain is that our ability to describe relationships between lakes, the weather, and their environment is the direct result of the efforts of hundreds of dedicated volunteer lake monitors throughout Maine, without whom we would not recognize that these interesting relationships exist.

There's a simple take-home message about watershed stewardship and lake protection in our observations of the annual volunteer Secchi data:

“Regardless of weather extremes, it is important to use conservation practices to try to prevent stormwater runoff from flowing over the land into streams or lakes. Runoff captured by buffers evaporates, is taken up by plants or filters through the soil recharging the water in your lake without causing excess algal growth and reducing water clarity.”

The data that support this article comes to you courtesy of Maine's volunteer lake water quality monitors!

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Meet the 2009 VLMP Interns



Hello Everyone! I would like to take a section of *The Water Column* to introduce myself. My name is **Qihong Hunsicker**, but I am known as Chewy by my friends and colleagues. I come from a town outside of Philadelphia but spend a majority of my time in Maine. I have recently completed my junior year at Bates College and am an Environmental Studies major with a concentration in ecology. I chose to be

an Environmental Studies major because I love learning about how natural processes work, find them fascinating and how if one element of the link is broken, the cycle becomes unstable. After Bates, I envision myself spending a lot of time working outside carrying out research, getting involved with conservation and preservation projects, or educating people about the great outdoors, which a concentration in ecology would allow. I will be interning with Snake Hill Farm in Chagrin Falls, Ohio, and am looking forward to a summer filled with fun working with animals, food and people.

I came across the VLMP on the Environmental Studies department homepage listings of possible internship opportunities, as every major is required to fulfill an internship before graduating. Interning with the VLMP for the month of May has further developed my interest in working outside alongside others who share similar love for nature. The internship has taught me the many aspects behind VLMP's success as an organization from simple tasks such as putting stamps on envelopes to be sent to you to helping out with the training workshops. I have come to realize even the smallest jobs play significant roles to the overall mission VLMP is addressing. Furthermore, I learn a lot from reading the data and summary reports of the lakes volunteers have monitored over the years. I applaud you for the time, commitment, devotion and hard work you have given to the VLMP, keeping Maine's lakes healthy and crystal clear, so that we may enjoy the natural beauties that surround us. I am grateful to the VLMP for giving me the opportunity to work with them and wish the organization the best from this point on.

Thank you!



Mickey DiPesa is nearly finished with her Wildlife degree at Unity College in the foothills of central Maine. During her education she has encountered all types of animals and has a soft spot in her heart for the slimy ones that most people stay away from. For the past several summers she has worked with Mass Audubon at their Wildwood Sanctuary helping curious children form respectful relationships with the environment. This summer she will be working mostly with the DEP in Augusta but will also be working at VLMP in Auburn. When she's not knee deep in water she works at a dairy farm in Knox saving the world one calf at a time.

Ilse Pukinskis is a summer intern with the Maine Volunteer Lake Monitor Program. Raised in Connecticut, she recently finished her second year at Bowdoin College, where she is an Environmental Studies and Government combined major. A spring semester class on environmental science gave her a deeper understanding of Maine's environmental concerns, which encouraged her to pursue a summer internship inside the state. Ilse is an avid horseback rider and captain of her school's Equestrian Team. In the spring of 2010 she will be studying abroad in Thailand through a program focused on the local impacts of globalization and development. Ilse hopes to pursue a career in international environmental policy and sustainable development and is very excited to be spending the summer working to protect the beautiful lakes of Maine.





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