

NonPoint Source Times

Volume 18, Issue 4 Fall 2009

Local Youth Put Stimulus Dollars to Work

On August 10th and 11th the Casco Bay Youth Conservation Corps (YCC), a group of local high school students working to improve the water quality of Casco Bay, will be joining the efforts to restore Long Creek by assisting with a large-scale planting project designed to enhance stream habitat and improve the water quality of the Creek. The YCC will plant 500 native trees and shrubs to create a vegetated buffer along the south branch tributary of Long Creek at Philbrook Avenue in South Portland.

Long Creek is a stream that flows through the Maine Mall area of South Portland, with portions of the stream, and the land draining to it, extending into Portland, Westbrook and Scarborough. Over the past two years, the community-based Long Creek Restoration Project, led by the City of South Portland, has been working to develop a locally-supported stormwater management plan to bring the stream back into compliance with state and federal standards (www.restorelongcreek.org).

The restoration efforts for this section of Long Creek will help to establish wildlife habitat and food for aquatic animals, while also providing shade and temperature control for the stream. This planting is being completed with the support of the Maine Mall, the Hampton Inn and the EconoLodge as part of a larger project to address stormwater impacts in and around Philbrook Avenue. In addition to the planting, six subsurface stormwater treatment units are being installed by White Bros Construction to manage runoff from heavy rain events.

These improvement efforts on Philbrook Avenue are funded through the American Recovery and Reinvestment Act of 2009 that is being administered by the Clean Water State Re-

(Continued on page 2)

Inside This Issue

Didymo	2
NPS RFP Outcome - FFY 2010	3
Make a Splash With Your Communication	5
Minnesota Has LID Definition in Statute	10
Pesticide Ban for Common Yard Care Banned in New Brunswick, CA	11
Maine Forestry BMP Use & Effectiveness Report	13
Water Quality Improvement After Lawn Fertilizer Ban	15
3 Coastal Maine Towns with No Discharge Designation	16
CEO Program at SPO Gearing Up Again	17

(Continued from page 1)

volving Fund program. Funding for the Casco Bay YCC is provided, in part, by the Casco Bay Estuary Partnership.

To view the completed planting project, please come to the YCC tour of accomplishments on Friday, August 14th. The tour will start at the Philbrook Avenue location at 9:00am. For more information contact Stephanie Dulac, YCC Technical Director, at (207) 892-4700.



Written by Stephanie Dulac. For more information contact Stephanie at Casco Bay Youth Conservation Corps, 35 Main Street, Suite 3, Windham, ME 04062. 207-892-4700 .

Say No to Didymo

Get past its egghead name, didymo (*Didymosphenia geminata*), or its more colorful nom de guerre, rock snot, and you encounter one of the newest threats to Maine's environment.

Whichever handle it goes by, this invasive alga targets Maine's pristine and flowing waterways—the kinds of rocky bottomed streams and rivers sportsmen from around the world long to fish.

And that's the risk. Anglers coming from away may play host to microscopic cells of this pest that attach to waders, fishing gear or anything else in contact with infested waters.

When established, didymo can multiply aggressively to eventually smother entire stream or river beds with a thick coating of vegetative goo that lives up to its vernacular name, at least in appearance. (Actually, it has the texture of steel wool.) Biologically, it is an invasive species that displaces the native river-bottom habitat including aquatic insects relied upon by trout and other riverine natives.

Once didymo moves into a stream or river, it's there forever; it cannot be eradicated.

The distribution and number of nuisance blooms of didymo has increased dramatically in the past 20 years across the U.S. as well as throughout angler-coveted regions of New Zealand, Scotland, Scandinavia and the Pacific Northwest. One can argue a cause and effect relationship between glossy brochures for exotic cold-water fishing excursions and the explosive spread of didymo.

Maine is surrounded by waters infested with didymo. New Hampshire, Vermont, Massachusetts and the Canadian Maritimes all have infestations, according to their respective environmental officials. Maine biologists think that, at least so far, the booger...er...bullet has missed the Pine Tree State. While good news, this also means Maine has the most to lose.

That's why anglers need to do their part to prevent further infestations. These measures are more than suggestions; they're essential to preserving Maine waters. Fortunately, they're as simple as check, clean and dry all gear, especially waders or other footwear. Here's how:

Check: Before leaving a river or stream, check your gear and remove all obvious clumps of algae, looking for hidden clumps. Leave them at the affected site. If you find any later, dispose of all material in the trash.

(Continued on page 3)

(Continued from page 2)

Clean: At home, soak and scrub all items for at least one minute in hot (140 degrees F) water and a five percent solution (one cup per gallon of water) of dishwashing detergent. Felt-soled waders and other absorbent material are especially attractive to alga cells, so soak them for at least 30-40 minutes. When in the field, a coldwater soak in five per cent salt works.

Dry: If cleaning is not practical, after the item is completely dry, wait an additional 48 hours before contact or use in any other waterway.

Because footwear is always suspect for stream-to-stream transport of didymo, maybe consider buying an extra pair of non-felt waders and make it a practice to sanitize one while fishing in the other.

Looking for an excuse for this new purchase? Just say *no* to didymo!

For more information contact Paul Gregory at Paul.Gregory@maine.gov or 287-6961

Outcome NPS RFP - FFY 2010

The Maine Department of Environmental Protection plans to award \$602,889 to help fund 14 projects designed to reduce pollution in lakes, streams and coastal waters. NPS grants will be funded with anticipated federal fiscal year 2010 monies provided to Maine by the EPA under Sections 319 and 604b of the Federal Clean Water Act.

Every time it rains or the snow melts, pollutants such as dirt, sediment, nutrients, bacteria and oils can be carried by water runoff to our brooks, lakes or coastal waters. Over time, if unchecked, clean waters can gradually become polluted. These NPS watershed projects recognize water pollution sources in watersheds and help communities take action to protect or restore clean lakes, streams, brooks and coastal waters.

In April, DEP issued a request for proposals. DEP received 24 proposals requesting about 1.13 million dollars in May. This strong response to the RFP demonstrated local community-based partnerships value clean water and are recognizing and finding solutions to NPS problems. DEP will be working with grantees to adjust work plans as needed to secure final approval. Grant awards are subject to receipt of federal FFY 2010 319 funds. Grants are planned to enable start-up of projects in about January 2010.

Summary of Proposals Received

<i>Project Type</i>	<i>Funds Requested</i>	<i>Funds to be Awarded</i>
NPS Watershed Implementation Project	\$1,045,345 16 proposals	\$531,161 8 proposals
NPS Watershed Survey	\$100,272 8 proposals	\$71,728 6 proposals

(continued on page 4)

(continued from page 3)

NPS Grants Scheduled to be Awarded in 2010

<i>Project</i>	<i>Grantee</i>	<i>Grant</i>	<i>Match</i>
NPS Watershed Implementation Projects			
Branch Lake Watershed Improvement Project – Phase II	Hancock County SWCD	54,184	36,230
Little Sebago Lake Conservation Project,	Cumberland County SWCD	95,391	73,395
McLean Brook Watershed BMP Implemen-	St. John Valley SWCD	39,312	26,484
Nickerson Lake Conservation Project –	Southern Aroostook SWCD	64,789	43,910
Pattee's Pond Watershed NPS Reduction Project	Town of Winslow	59,450	51,470
Sabattus Pond Watershed Project – Phase 3	Androscoggin Valley SWCD	77,066	93,402
Spruce Creek Watershed Improvement Project, Phase II	Town of Kittery	79,780	101,346
Thompson Lake Watershed Improvement Phase III Otisfield	Thompson Lake Environmental Association.	61,189	40,976
subtotal		531,16	467,213
NPS Watershed Surveys			
Beech Hill Pond Watershed Survey	Hancock County SWCD	12,899	8,800
Coldstream Pond NPS Watershed Survey	Penobscot County SWCD	9,600	8,020
Dyer River Watershed NPS Survey Project	Sheepscot Valley Conservation Assoc.	13,000	10,000
Moose Pond Watershed Survey	Cumberland County SWCD	15,563	10,626
Upper Pushaw NPS Watershed Survey	Penobscot County SWCD	11,540	8,000
Williams Brook Subwatershed Survey and Prestile Stream Citizen Storm Watchers	Central Aroostook SWCD	9,126	19,279
subtotal		71,728	64,725
total		602,88	531,938

For more information about DEP's Nonpoint Source Grants go to DEP's NPS Grants webpage: <http://www.maine.gov/dep/blwq/docgrant/319.htm> or contact Norm Marcotte, DEP at 207-287-7727 or norm.g.marcotte@maine.gov

Make A Splash with Your Communications

(Editor's note: This article was written by Eric Eckl. It first appeared in Small Flows Magazine Spring/Summer 2009 and is reprinted here with permission from Eric Eckl. Maine DEP thanks Mr. Eckl for allowing us to use it here.)

Interest in using social marketing approaches—advertising and information campaigns—to persuade citizens to voluntarily reduce polluted runoff is mounting in the wastewater industry. So it's worth taking a moment to consider what social science and market research says about your fellow citizens' attitudes and receptiveness to your message.

At first, you might be pleasantly surprised. Then you'll probably be a little frustrated and puzzled. But later we'll explore how to use this information, and I hope you will finish the article feeling enlightened and poised for success.

Here's one thing you should know: In survey after survey, everyday citizens tell pollsters that water is their top environmental issue. A 2008 Gallup Poll found that out of a list of several dozen environmental problems, water-related issues clustered at the top. And there are dozens of other surveys that corroborate that finding.

Disparities in attitudes among people from different walks of life—sex, age, race, income, education, or political outlook—are smaller when the topic is water than for most other issues. Exceptions to this pattern are rare, and this has been the case for at least 10 years.

Surprised? That's understandable. Frustrated? Sure.

You'd think that with research findings like that it would be a piece of cake to persuade your neighbors to spend more on their septic systems and less on fertilizer. You'd think they'd call elected officials in a rage when they read about dilapidated water infrastructure in the newspaper. You'd think they'd line up to join your local environmental group.

But they don't. So what explains the chasm between what the pollsters tell us Americans think—and what they actually do? What accounts for this puzzling gap between lip service and action?

Lack of knowledge is certainly part of it. Most citizens are astonishingly ignorant of what polluted runoff is, what causes it, why it matters, and what they can do about it. And for decades, nature protection and pollution control experts have assumed that if a lack of knowledge is a barrier to action, then imparting knowledge is the solution.

In recent years, however, social science has increasingly honed in on two other barriers to action that seem to be more important to overcome:



Hurdle #1: Vocabulary

Most Americans simply do not understand (or respond to) the professional shop talk that graces the pages of this magazine (Small Flows). When confronted with words like "sprawl," "nonpoint source pollution," "biodiversity," "impervious surface," "instream flow," and even "water quality," many will draw a complete blank or imagine something very different from what you meant.

In 2005, the National Environmental Education Foundation (NEEF) reported that just about half of all Americans could guess the correct definition of "watershed" from four options. Around the Chesapeake Bay, it's a little lower. In Kentucky and parts of Florida, it's a little higher.

(Continued on page 6)

(Continued from page 5)

And American adults stubbornly resist adding these terms to their vocabulary or any other terms for that matter. The average American adult learns only a few dozen new words per year, less than one per week. Amazon.com offers dozens of “build your vocabulary” books and CDs, which all sell poorly.



Hurdle #2: Confidence

People who are confident in themselves, understand what to do and that their conservation actions make a difference, are almost twice as likely to make an effort than those who lack such confidence. So it matters that, according to NEEF’s landmark study, *Environmental Literacy in America*, only about 10 percent of everyday citizens approach environmental information with confidence.

Put these two findings together, and here’s what you get: The gap between Americans’ professed attitudes toward water protection and their behavior is at least partially explained by the fact that our efforts to reach these citizens actually backfire on us. In our publications, on our Web sites, and in our presentations, we overload otherwise receptive citizens with professional language that they struggle to follow sapping their confidence that people like them have a contribution to make.

The Water Words That Work™ Method

Over the past few years, I have developed a simple method that can help nature protection and pollution control professionals successfully completely translate your work. By this I mean, rewrite, digest, and reorient government reports, monitoring data, regulatory language, scientific findings, and other raw professional documents into messages that are clear and compelling for everyday citizens.



Step One: Begin with Behavior

Before you jump into writing or speaking, let’s pause to imagine success. In your mind, envision the day after your audience read or heard your words, and you have inspired, outraged, touched, or otherwise moved them to act. Now answer this deceptively simple question: What are they doing today?

Will they:

- Change a personal habit or behavior, such as starting carpooling or reducing lawn watering?
- Buy a different product or service going forward?
- Make a donation of time or money to your organization?
- Call or write a government official?
- What?

It’s important to narrow your list of possibilities down to the most important first step, and tell them what it is. If you can’t do that, your readers and listeners won’t be able to either. And when everyday citizens receive too many options or no guidance at all, the most common response is the same—to do nothing at all.

(Continued on page 7)

(Continued from page 6)



Step Two: Find Foolproof Photos

A picture is worth a thousand words, and that means you should lavish as much time and care on your choice of photos as you do on your choice of words. Here are four categories of photos that are foolproof. They'll help you get the response you want.

- **Faces.** You should have at least one picture of a human face—big enough to see their eyes— on every page.
- **Fixes.** Show people being part of the solution, preferably in the company of friends and family and with smiles on their faces.
- **Families.** Pictures of people with diverse ages and genders enjoying the outdoors together strike a much stronger chord with everyday citizens than pictures of athletic males enjoying the outdoors alone.
- **Fear Fighters.** If people have exaggerated or unfounded fears that their work means they won't be able to fish, hunt, farm, post no trespassing signs, snowmobile, or whatever —put those rumors to rest by showing pictures of them doing just that.



Step Three: Swap the Shop Talk

For most everyday citizens, professional terms like “riparian,” “watershed,” and “impervious surface” amount to a foreign language. The more you throw this kind of vocabulary around, the less at home they feel. And providing an “on the spot” vocabulary lesson can often sap their confidence even further.

You'll get a better response if you swap out your shop talk and insert plain English substitutes. You'll give up some nuance and precision, but you'll also get more actual responses and fewer blank stares.

Here's the shop talk test: Could your mother define the term for a stranger without your help? If yes, you can leave the word in. If no, take it out and replace it with something easier to understand. On the Water Words That Work blog, there is a helpful list of professional vocabulary and plain English substitutes. It doesn't cover every term, but it's a good start and will help you get into the spirit of it.



Step Four: Use the Water Words That Work

Some words have been tested again and again, in the lab and in the field and have been found to evoke a positive response. Some words are so powerful that it's worth going way out of your way to use them. A list of 25 proven winners is provided in the sidebar.

What do these terms have in common? First, they're more general than the professional terms on the tip of your tongue. That means they are widely understood. Second, they're empowering—the list includes many terms that you can use to encourage people that their

(Continued on page 8)

(Continued from page 7)

actions matter.

Conclusion

Although no amount of communications savvy can guarantee a 100- percent success, those who try this method report a noticeable difference in how everyday citizens respond. Consider these unsolicited testimonials some of your peers have shared:

Andrew Pelloso with the Indiana Department of Environmental Management wrote, "... We've begun to use the words and the concepts to retool our education of the public. It's ... much more effective than our previous approaches."

"I have begun using [Water Words That Work] for talks to the local folks. I get a better response since I started ... I get more questions than I used to get," agrees Ted Withrow with the Kentucky Division of Water.



It's satisfying to speak to a group of everyday citizens and find that they are interested and responsive and think your work is important. It's an even better feeling when they report back to you that they have taken some steps in their daily lives to help protect their local waters.

The next time you and your peers have come up with some important scientific, technical, or policy information to share—that satisfying feeling is just four steps away. Good luck!

About the Author Eric is fascinated by the intersection between language, technology, and the environment. He blogs on the topic at waterwordsthatwork.com. Eric supports his blogging habit by consulting. His company, Water Words That Work LLC, assists nature protection and pollution control organizations with their behavior change, fundraising, and issue advocacy efforts.

Words That Work

Accountability	Law
Balance	Make a difference
Corporations	Nature Protection
Doing	Planning ahead
my/your/their part	Pollution control
Enough clean water	Responsible
Fair	Safe
Family and Children	Save money
Freedom	Trends
Future generations	What you can do
Healthy	Wildlife
Investment	Working together
It affects you	

Words That Don't

Anadromous	Open space
Animal waste	Recreation
Biodiversity	Riparian
Climate change	Run out of water
Conservation easement	Sprawl
Endangered species	Stormwater
Infrastructure	Tourism
Instream flow	Undeveloped land
Landscape	Watershed
Land use planning	Water quality
Nonpoint Source Pollution	
Nutrients	

Save The Date

December 2, 2009

Bring your calculator, learn to design LID for Maine's climate

When: Wednesday Dec 2, 2009

Where: Verillo's Convention Center, Portland Maine

Who: Municipal Stormwater Professionals (MSP). The folks doing technical design review for municipal permitting, and include both larger municipalities and smaller towns where single family lots are bulk of development. This also includes the SWCD's and planning commission folks that do municipal reviews. Secondary audience is private consultants.

Cost: \$40 for municipalities, \$100 for private consultants

Vendor Exhibits: Vendor fair will be included, \$200 for space includes 1 registration

Outcomes:

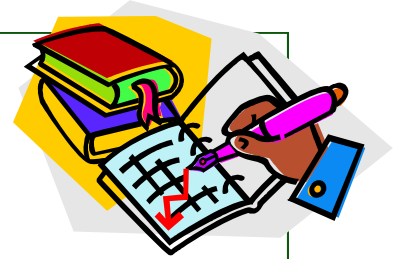
- MSPs will understand difference between LID as a BMP, and LID as a design philosophy
- MSPs will be able to suggest LID for a green development and retrofit site.
- MSPs will work through complete design for porous pavement and bioinfiltration (rain garden) at a minimum.
- MSPs will be able to calculate cost comparisons for LID and conventional treatment.
- MSP will gain experience with changing design objectives and effects on sizing LID.
- MSP will recognize LID/ stormwater issues associated with climate change
- MSP will work through O&M for various LID techniques
- MSP will have knowledge of changing chapter 500 LID requirements

For More Information: LaMarr Clannon, Maine NEMO Coordinator, (207)771-9020 or lcannon@maine.rr.com.

CONSERVATION EASEMENT REGISTRY

The Maine State Planning Office now maintains a mandatory statewide registry for all conservation easements held in Maine (33 MRSA, § 479C). All holders of conservation easements on real estate in Maine must register their easements annually and confirm the monitoring status of their easements. The registry is up and running and the deadline for completing your organization's registration this year is July 1, 2009. Beginning in 2010, the annual reporting deadline will be March 30.

If you have questions, please take a moment to read through the Frequently Asked Questions on the SPO website at <https://www.maine.gov/online/spo/cer/faq/>. If you find you still need assistance, contact Tim Glidden at easementregistry.spo@maine.gov.



Minnesota Has LID Definition in Statute

This spring, the Minnesota Legislature made the following language State Law. Note that they now have a definition of LID in statute:

The agency shall develop performance standards, design standards, or other tools to enable and promote the implementation of low-impact development and other storm water management techniques. For the purposes of this section, "low-impact development" means an approach to storm water management that mimics a site's natural hydrology as the landscape is developed. Using the low-impact development approach, storm water is managed on-site and the rate and volume of predevelopment storm water reaching receiving waters is unchanged. The calculation of predevelopment hydrology is based on native soil and vegetation.

The language is in [HF 2123, Omnibus Environment and Natural Resources Bill](#). Lines 52.19 – 53.2.

"The agency" refers to the MN Pollution Control Agency. The bill comes with a funding provision of \$500,000 to develop the "standards and tools". This project is what we are currently calling "MIDS: Minimum Impact Design Standards."

The goal of MIDS is to develop calculation methodologies, similar to those developed via the NURP program in the 1980s, that will allow designers and reviewers to more easily apply innovative stormwater management techniques in developments. There will also be an ordinance package that communities can adopt for implementation. The aim is to make tools like bioretention the normal, standard, accepted engineering practice rather than the exception to the rule.

The MIDS calculations will be based on the following performance standard:

*Post-development runoff hydrology (quantity and quality) and pollutant loading should not exceed pre-development runoff hydrology, based on native vegetation for the site and a design storm of 5- year frequency.
{approximately 3.5" of rainfall in the Twin Cities}*

(Continued on page 11)

(Continued from page 10)

The team believes that this project will have national scale ramifications and are hoping to leverage significant federal (and other) dollars to make this a product that other states can use.

The MIDS project will be administered by the MN PCA, and the stakeholder input process will take place via the LID work group of the MN Stormwater Steering Committee.

Please also check out the Minnesota Stormwater Manual where one can find information on bioretention. The goal is to eventually incorporate the MIDS products into the manual.

<http://www.pca.state.mn.us/water/stormwater/stormwater-manual.html>

Written by Julie Westerlund, Education and Communications Manager, Minnehaha Creek Watershed District. For more information contact Julie at 952-471-0590 x 209 or jwesterlund@minnehahacreek.org

Sale and Use of 200 Pesticides to be Banned in New Brunswick, Canada

(from CBCNews.com)

The New Brunswick government is banning the use and sale of 200 over-the-counter lawn-care pesticides starting later this year.

Environment Minister Roland Haché announced the ban in the legislative assembly on Thursday. The government is clamping down on pesticides through a regulatory change.

Haché said there will be some exemptions to the ban for the agriculture and forestry sectors, as well as golf courses.

"This ban will contribute to an improved environment and quality of life for all residents in the province of New Brunswick," Haché said.

"Reducing the reliance on pesticides in the province will contribute to a sustainable environment."

Through this new regulation, the province is banning the use and sale of roughly 70 per cent of the retail products known as cosmetic pesticides available to homeowners.

As well, the ban will include the sale and use of the widely used lawn-care pesticide 2,4-D.

Haché said the ban on lawn-care products will come into force in the fall and that will give retailers enough time to pull the products from their shelves.



(Continued on page 12)

(Continued from page 11)

The ban is focusing on products that Hache said are most susceptible to being overused or misused, including:

- Lawn-care products for domestic lawns containing 2,4-D.
- Combination fertilizer and pesticide products.
- Granular spreadable weed killers.
- Hose-end spray products.

Lawn-care pesticides that require a homeowner to measure, mix or dilute.

Tories support ban

The Opposition Progressive Conservatives are supporting the government's initiative despite having some questions about how the ban will actually work.

Tory MLA Trevor Holder, the Opposition's environment critic, said he wants to know why the province is making the change through regulation and not legislating the ban.

Holder said the evidence linking pesticides to cancer is not conclusive but he said the move is a step in the right direction.

"You have to err on the side of caution," Holder said.

Companies must be accredited

Haché said it will also become mandatory for companies carrying out lawn-care services using commercial grade pesticides to receive an integrated pest management accreditation by February 2010.

This new accreditation process will require businesses to curtail their "blanket treatment" on problem areas and promote spot treatment.

The accreditation will be required when lawn-care companies seek operating permits.

"Any person that sells or uses a banned product or professionals who fail to comply with the terms of integrated pest management accreditation will be subject to prosecution under the Pesticides Control Act," the environment minister said.

Haché also told the legislative assembly that the Pesticides Control Act will be reviewed and the Environment Department will see if there are other ways of eliminating the unnecessary use of pesticides within the next two years.

<http://www.cbc.ca/consumer/story/2009/06/18/nb-pesticide-ban-210.html#socialcomments>

Northeast Aquatic Plan Management Society

Call for papers & Conference Announcement. (Abstracts due by September 25, 2009)

Gideon Putnam Resort, Saratoga Springs NY.

January 18-20, 2010.

FMI www.neapma.net

Maine Forestry BMPs Use & Effectiveness Report - 2008

Executive Summary

The 2008 Maine Forest Service (MFS) report on the use and effectiveness of forestry Best Management Practices (BMPs) presents the fourth year of data collection and analysis utilizing "Best Management Practices Implementation Monitoring Protocol," an original project of the Northeastern Area Association of State Foresters' (NAASF) Water Resources Committee. This protocol assesses the overall effectiveness of the suite of BMPs used rather than monitoring the simple installation of prescribed, individual practices, which do not necessarily guarantee success in protecting water quality.¹

The findings present an analysis of data collected between May and December 2008. The objective of this ongoing effort is to assess the use and effectiveness of BMPs in Maine. MFS uses BMP monitoring to focus educational outreach efforts to loggers, foresters, and landowners and identify trends for targeting technical assistance. As BMPs are voluntary measures to protect water quality, MFS does not use BMP monitoring to assess compliance with nor enforce laws and rules. When monitoring staff observe concerns or minor issues during BMP monitoring, MFS works closely with the landowner in a non-regulatory manner to seek corrective measures. Education and intervention usually result in quick corrective action, thereby avoiding lengthy regulatory processes that may prolong erosion problems and result in greater negative environmental impacts. Dealing with minor issues in this manner also increases landowner willingness to cooperate with the BMP monitoring process, resulting in a more comprehensive picture of BMP use.

Assessing the overall effectiveness of the suite of BMPs used rather than monitoring the installation of prescribed individual practices supports MFS's desire to pursue outcome-based forest policy, a science-based voluntary process that achieves mutually beneficial economic, environmental, and social outcomes in the state's forests. Outcome-based policies are an alternative to prescriptive regulation. They demonstrate measurable progress towards achieving statewide sustainability goals and allow landowners to use creativity and flexibility to achieve objectives, while providing for the conservation of public trust resources and the public values of forests.

MFS has conducted random, statewide monitoring of BMPs on timber harvesting operations since March 2000. MFS continues this monitoring effort as a part of regular field activities and expects to generate subsequent reports. BMPs were used appropriately at 41% of the monitored harvests in 2000. In 2008, BMPs prevented measurable sediment from reaching the waterbody at 72% of stream crossings and 92% of approaches to the crossings.

For this reporting period, key findings regarding the use and effectiveness of BMPs are:

- Of the 615 opportunities to observe soil conditions, 87% showed no sediment reached the waterbody, the same level as 2006-2007 and a 4% improvement from the 2005 reporting period.²
- BMPs were not applied on 4% of crossings, the same level as 2006-2007. BMPs were not applied at 2% of approaches, also the same as 2006-2007.

(Continued on page 14)

1 Welsch D., R. Ryder, T. Post. 2007. Best Management Practice (BMP) Manual –Field Guide: Monitoring, Implementation, And Effectiveness for Protection of Water Resources: U.S. Department of Agriculture, Forest Service, NA-FR-02-06, 129 pp.

2 Note: Due to small sample sizes, movement of percentages up or down by 5% or less is considered insignificant.

(Continued from page 13)

- Sedimentation events were most often related to the inadequate application of BMPs rather than a lack of BMP application.
- Forty-four percent of the sample units did not have water crossings. This may be due to no water present in the sample unit or a stream crossing purposely avoided through pre-harvest planning. Pre-harvest planning and harvest layout can help identify and protect sensitive areas, reduce skid trails, and avoid unnecessary stream crossings.
- 11% more structures spanned the bankfull channel width in 2008 than 2006-2007. Stream channel bankfull width is measured from the average high water mark that is expected to occur two out of every three years. Crossings that span the bankfull width are less likely to impede the movement of aquatic organisms and are at lower risk of catastrophic failure due to high flow events.

The monitoring identified two areas that need improvement:

- 1 - Sedimentation associated with crossing structures. Sedimentation associated with crossing structures has shown up as a consistent issue in BMP monitoring over the past 4 years. The 2008 data continue to show that crossing structures are the most common source of sedimentation. It can be extremely difficult to keep all soil from reaching a waterbody, but siltation and sedimentation can be minimized to the point that they do not affect the biological activity of the associated waterbody. To improve understanding of the potential impacts of crossing structure sedimentation, 2009 monitoring will collect data on sediment volumes entering waterbodies. In most cases either inadequate maintenance or installation of additional BMPs was the primary cause of sedimentation at crossings. This indicates an opportunity for increased training of foresters, loggers and machine operators on the importance of maintaining BMPs once they are installed and reinforcing or installing additional BMPs as conditions change.
- 2 - Undersized crossing structures. Although 2008 monitoring data showed a improvement over 2006-2007 in the percentage of stream crossings that spanned bankfull width, undersized crossing structures continue to be a problem. Undersized crossings can lead to conditions that limit fish passage including increased flow velocities, perched outlets and accumulated debris barriers. That undersized crossings would continue to be a problem is not surprising since upgrading crossing structures so they do not restrict the stream channel is costly and replacement of crossings would be expected to progress at a slow rate.

While the monitoring identified areas where there is room for improvement it is important to view the results in the proper historical context. Over the last several decades there has been a fundamental change for the better in how water quality is treated by forestry and logging professionals. This change has happened for many reasons but for most in the industry BMPs have become "just the way we do business". The results speak for themselves - it is Maine's working forests that produce the clean water that Mainers expect and depend on. In a recent analysis by the USDA Forest Service of 20 northeastern states "Maine scored the highest in its ability to produce clean water. The majority of it's watersheds received the highest possible score in this index showing a watershed's ability to produce clean drinking water".³

For the full report see http://www.state.me.us/doc/mfs/pubs/pdf/bmp_annual_rpt/bmp_rpt_08.pdf

³ Barnes, M., A.Todd, R.Whitney Lilja, and P. Barton. 2009. Forests, Water and People: Drinking water supply and forest lands in the Northeast and Midwest United States. USDA Forest Service, Northeastern Area State and Private Forestry, 11 Campus Boulevard, Suite 200, Newtown Square, PA 19073 NA-FR-01-08.

Water Quality Improves After Lawn Fertilizer Ban

(from http://www.eurekalert.org/pub_releases/2009-08/uom-wqi081709.php)

ANN ARBOR, Mich.---In an effort to keep lakes and streams clean, municipalities around the country are banning or restricting the use of phosphorus-containing lawn fertilizers, which can kill fish and cause smelly algae blooms and other problems when the phosphorus washes out of the soil and into waterways.

But do the ordinances really help reduce phosphorus pollution? That's been an open question until now, says John Lehman, professor of ecology and evolutionary biology at the University of Michigan.

"It's one of those things where political organizations take the action because they believe it's the environmentally conscious thing to do, but there's been no evidence offered in peer-reviewed literature that these ordinances actually have a salutary effect," Lehman said.

Now, such evidence exists in a study published by Lehman and students Douglas Bell and Kahli McDonald in the journal *Lake and Reservoir Management*. The paper, published online Aug. 14, shows that phosphorus levels in the Huron River dropped an average of 28 percent after Ann Arbor adopted an ordinance in 2006 that curtailed the use of phosphorus on lawns. Phosphorus is naturally plentiful in southeast Michigan soils, so fertilizing established lawns with the nutrient is generally unnecessary.

Lehman was in an ideal position to assess the effectiveness of the Ann Arbor ordinance because he and undergraduate student Julie Ferris were already studying nutrient levels in the Huron River and two downstream lakes, Ford Lakes and Belleville Lake, for a different research project. Ferris used some of the data from that project in her senior honors thesis, and she and Lehman published a paper on the Ford Lake and Belleville Lake research, but they weren't sure what to do with the rest of the data from the Huron River around Ann Arbor.

"As we were talking about it, I got a phone call from Ann Arbor environmental coordinator Matt Naud, who knew about the work we had been doing," Lehman said. "He said the city council had enacted an ordinance that would reduce the use of phosphorus-containing fertilizers, and he wondered if we would be able to detect any change that might occur as a result."

Using statistical models, Lehman and Ferris figured out how much sampling would be required to confidently detect a 25 percent decrease in phosphorus concentrations. "We came up with the result that for most of the river that runs through Ann Arbor, we should be able to detect a change of that magnitude by sampling once a week for one summer or two summers, depending on the sampling station."

Naud found funding to pay a student to do the work over the next two summers. By that time, Ferris had graduated and gone on to medical school, so Lehman recruited Bell to do the sampling and chemical analyses. When Bell graduated and took a job measuring phosphorus on research cruises around Bermuda, McDonald joined the project.

"Right away, we started to see decreases," Lehman said. After the first year of data collection, it was clear that phosphorus concentrations were lower after the ordinance was enacted than before. But did the ordinance cause the drop? Though that explanation seems likely, public education efforts and general increased environmental awareness among Ann Arbor residents also may have entered in.

(Continued on page 16)

(Continued from page 15)

At any rate, the study already has attracted the attention of the Southeast Michigan Council of Governments (SEMCOG), which invited Lehman to present the study results at a meeting earlier this year, and may well generate interest beyond Michigan's borders.

"Although the science wasn't difficult, its ramifications in a political sense and in an environmental sense will not be insignificant," Lehman said.

The research was funded by the Environmental Protection Agency, the U.S. Department of Agriculture and the city of Ann Arbor. For more information contact: Nancy Ross-Flanigan rossflan@umich.edu or 734-647-1853 [University of Michigan](http://www.umich.edu).



Three Coastal Maine Towns Reduce Boat Pollution with No Discharge Area Designation

(Boston, Aug. 19, 2009) - The coastal waters of Kennebunk, Kennebunkport, and Wells, Maine will be protected as a "No Discharge Area," where discharges of treated and untreated boat sewage would be prohibited. EPA also announced a grant of \$264,567 to help support the Maine Healthy Beaches Program's continued efforts to monitor water quality conditions at Maine beaches, ensuring that people enjoying the beach are also enjoying healthy water conditions.

Recently, EPA approved a petition by the Maine Dept. of Environmental Protection (ME DEP) requesting the designation of the No Discharge Area. Following consideration of the request, and a 30-day public review and comment period, EPA approved the request to protect these coastal waters from boat sewage. This is another milestone in EPA's goal to designate the majority of New England coastal waters as No Discharge

EPA's grant of \$264,567 will assist the Maine Healthy Beaches program, started in 2001. The program has been very successful; when it began, only seven beaches were regularly monitored for water quality, in contrast to today when 50 Maine beaches are monitored. Further, there were fewer beach postings or closure days in 2008 (174) than in 2007 (194), an impressive improvement considering that two additional beaches were added to the monitoring program in 2008.

"Protecting coastal waters and environments from elevated levels of bacteria and pathogens is a proven way to protect our beautiful coastal areas for all to enjoy and prosper," said Stephen Perkins, acting deputy regional administrator of EPA's New England Office. "With both actions we are taking today – to halt boat sewage in Kennebunk, Kennebunkport and Wells, and continuing our commitment to water quality monitoring in Maine coastal areas – we can help protect the health of swimmers, the purity of shellfish beds and the overall marine environment."

"Maine's coastal waters are a precious natural resource as well as an integral driver for our economy - our beaches attract millions of tourists every year, our coastal waterways are prime boating areas enjoyed by locals and visitors, and the fisheries that abound in the waters off our shore provide a livelihood for thousands of Maine fisherman and their families," said Maine DEP Commissioner David Littell. "The new no discharge designation, combined with the EPA grant to monitor water quality will help us preserve and improve Maine's coastal waters."

(Continued on page 17)

(Continued from page 16)

To qualify for a No Discharge Area designation, the applicant must show there are enough pumpout facilities where boaters can get their holding tanks pumped out. This particular area has an estimated 537 boats, of which only 195 are large enough to have a "head" or toilet on board. There are a total of five pumpout facilities in the proposed area.

Other coastal waters designated in New England designated as No Discharge Areas include:

- All state marine waters of **Connecticut, Rhode Island, and New Hampshire**;
- - **In Maine:** Boothbay Harbor and Casco Bay, marine waters of Mount Desert, Southwest Harbor, Cranberry Isles and portions of Tremont;
- - Camden, Rockport, Rockland and portions of Owls Head in Maine have petitioned EPA for designation;
- - **In Massachusetts:** Harwich, Waquoit Bay, Nantucket Harbor, Wellfleet, Barnstable, and Buzzards Bay (including Wareham and Westport), Plymouth/Duxbury/Kingston, Scituate/Marshfield/Cohasset, Salem Sound, Boston Harbor, Cape Cod Bay and Revere/Saugus/Lynn/Nahant/Swampscott;

More information: [No Discharge Areas in New England](http://www.epa.gov/region1/eco/nodiscrg/index.html) (www.epa.gov/region1/eco/nodiscrg/index.html)

- [Beach protection in New England](http://www.epa.gov/region1/eco/beaches/index.html) (www.epa.gov/region1/eco/beaches/index.html)



By Robert A. Dennis, Kennebunk

CEO Program at SPO Gearing Up Again

The code enforcement program at the State Planning Office is gearing up again after a brief hiatus due to budget restrictions. Brianne D. Hasty will be overseeing the program. Brianne has a BA in Communication and spent the past 7 years working at the Maine Mathematics and Science Alliance as their Communications Coordinator where she helped track the certification of math and science teachers in the state of Maine and coordinated events nationwide.

The CEO program is returning, but with some changes which are detailed below. SPO is working to create a program that focuses on basic training, which is the primary statutory directive. As they look at the program and its alterations they hope to keep everyone up to date with information.

- SPO will no longer be providing technical assistance. If a CEP has questions they will direct you to a person or office where you can find the answers you need.
- SPO will only be offering basic and 80K training, they will no longer provide advanced training.
- The number of trainings offered per year by SPO will be scaled back.
- Law changes now allow us to extend certifications and even suspend the program again if revenues are not sustained.
- SPO will be making greater use of electronic and web-based media.

(Continued on page 18)

(Continued from page 17)

In order to ease this transition, the number of years a certification is valid has been increased from 5 years to 6 years. This will give CEOs more time to become re-certified. Brianne will be emailing certificates and certification cards with CEO and LPI new expatriation date (one year more than what your document currently states). If there are new since January 2009, please contact Brianne regarding certification status.

For more information contact Brianne D. Hasty, Code Enforcement Officer Training and Certification Program, Maine State Planning Office at P.207.287.8058 or Brianne.Hasty@maine.gov

Conservation: An Investment That Pays

New White Paper Makes the Case for Conservation

Conservation: An Investment That Pays—like TPL's other reports on the economic benefits of parks and conservation—is intended to help agency personnel and community conservationists make the case for conservation as a long-term economic investment. Too often, we still hear the argument that creating parks and conserving land is too expensive, especially in hard economic times. We hope that the research and many examples cited in the report will help you to promote conservation for its many benefits, including the boost parks and open space can give to a community's bottom line.

(excerpt from forward by [TPL President, Will Rogers.](#))

For more information http://www.tpl.org/content_documents/EconBenefitsReport_7_2009.pdf



Upcoming Events

Nov. 12, 2009 in Brewer, Nov. 18 in Augusta, Dec. 12 in Portland. Maintenance & Inspections of Stormwater BMPs. FMI contact JETC 253-8020.

Nov. 2009. Annual Watershed Managers Round Table. Exact date & location not yet set. FMI contact Wendy Garland at 922-6320 or wendy.garland@maine.gov

Dec. 2, 2009. LID Workshop. Portland, Maine. FMI contact Bill LaFlamme at 287-7726 or William.N.Laflamme@maine.gov



MDEP
1235 Central Drive
Presque Isle, Maine 04769

**Look for upcoming Announcement
Annual Watershed Managers Round Table
November 2009**

**FMI contact Wendy Garland FMI contact Wendy Garland
at 922-6320 or wendy.garland@maine.gov**