



RiverWatch

January 2011

THE NORTH AND SOUTH RIVERS WATERSHED ASSOCIATION, INC.

Celebrating 40 Years!

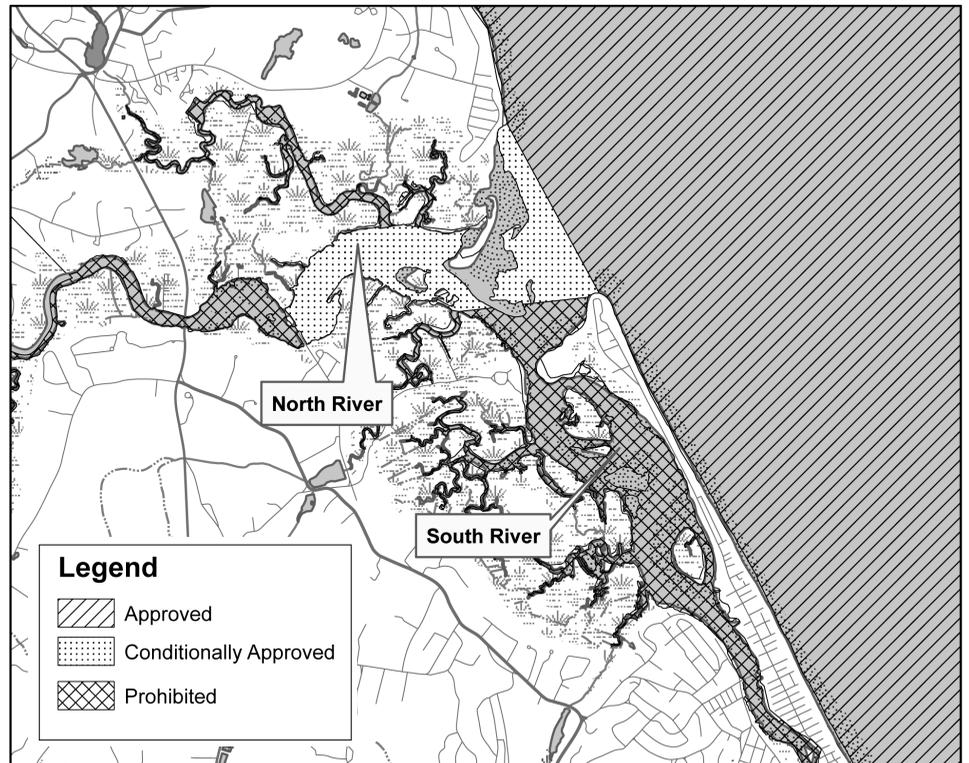
Cleaner Water for Shellfishing

Prospects Brighten for Opening South River Shellfish Beds

The ability to harvest shellfish locally is a clear measure of the health of our rivers and their water quality. It also happens to be a great New England family tradition. Getting out your waders and clam rake, searching for clam holes, getting all mucky and then enjoying the fruits of your labors is one of the greatest pleasures of living on the coast and a great way to introduce your kids to the importance of keeping our water clean.

Both the North and South Rivers have extensive shellfish beds near the mouth of the rivers but due to degraded water quality they were closed to recreational harvest in 1988. In 1995 the North River shellfish beds were re-opened after a campaign led by the NSRWA to clean up water quality. That campaign led to water quality improvements which allowed for limited opening of the shellfish beds in the winter months, when bacteria are not as likely to reproduce as quickly. Since then water quality in the North River has improved such that we now have the shellfish beds open for recreational harvest from December 1 – June 30 as long as water quality results come back clean.

Ultimately, our goal is have the shellfish beds open year-round (only the truly hard core want to shellfish in the winter)! Over the last decade and a half the NSRWA with the towns of Marshfield and Scituate have worked on improving water quality by increasing stormwater treatment, upgrading septic systems to Title V and most importantly in Marshfield... extending the sewer system to properties along the South River from Old Colony



North and South Rivers Shellfish Areas

The Division's area biologist speaks for all of us in saying to me that, "I think there is a good resource there that the people of Scituate and Marshfield should be able to enjoy."

Lane to the intersection of Rtes 139 and 3A. The passage of the sewer extension in Marshfield in 2000 and its subsequent completion in December 2004 has led to significant decreases in bacterial counts in the waters of the South River. For the past several years the Division of Marine Fisheries has been taking samples in the

South River and I am pleased to report on a recent email exchange with the state Division of Marine Fisheries regarding the South River Shellfish beds.

The very good news is that if we are successful in keeping bacterial counts within acceptable limits—still an important

continued, page 8

THE NORTH AND SOUTH RIVERS WATERSHED ASSOCIATION

The mission of the North & South Rivers Watershed Association is to preserve, restore, maintain and conserve in their natural state, the waters and related natural resources within the watershed.

Our goals are to:

- Restore the water quality of the rivers by identifying and correcting adverse impacts;*
- Encourage stewardship of the watershed through public education, outreach and recreation programs; and*
- Promote responsible growth by working in partnerships to preserve open space, scenic vistas and sensitive natural resources.*

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Letter from the President

This has been a whirlwind year and it's quite startling to me to realize how quickly it has passed by. (Was it really late 2008 when our highly organized Executive Director started to gently - but insistently - "prod" us to plan for a fitting commemoration of our 40th?) And that early start paid dividends - with a large and diverse group of individuals contributing to our "history project".

In many respects the entire year has been an extended celebration of forty plus years of protecting our watershed. A spirit of pride in the NSRWA's good works was certainly on display at the amazing response to our annual meeting at Cushing Hall. So too was it evident in the great turnout and collective energy at the Harvest Moon Feast event in September.

Personally speaking, this focus on our history offered a great opportunity to learn firsthand from many of those who made that history. Combing through the archives and organizing an historical narrative with integrity (thank you Andy Hebert!); interviews that offered insights not only what happened when - but why things worked (or why they didn't). It will inform and inspire our work going forward. And it was great fun.

But the 40th theme has been important in a broader context than say, a good excuse to party (not that there's anything wrong with that). The theme has been something of a lynchpin to our ongoing commitment to rebound from an extremely difficult economic environment. It has helped us focus as we have implemented changes in the ways we (staff, board and membership) work together and to innovate to make the programs that support the NSRWA's mission more efficient...more successful.

There are many who deserve our appreciation for helping us make a difference: our excellent professional staff, our volunteer board of directors, our business partners, non profit partners, town officials and most of all - an inspired and engaged membership.

We have a lot of work ahead of us, but I believe we're on the right track to continuing to create history of which we and future generations will be proud.

Thank you.

Russ Haskell, President

UPCOMING EVENT Save the Date! Watershed Expo

Saturday April 2nd 10 am – 4 pm
Norwell Middle School, Rte 123

You won't want to miss this year's expo if you want to know where and how to find the best fish in the rivers, take a walk, go clamming, see amazing wildlife, or paddle in your own back yard this is the place to be. Fun and informative for the whole family!

Blue Communities Campaign Progress

North River Emerald Necklace

This past fall using Community Preservation funds the town of Marshfield purchased the Goggin parcel - a 49.75 acres of beautiful wooded upland, adjacent to the recently acquired 25-acre Little's property on Union Street and abutting the North River - oh and did we mention the dock to the river?!

This land is an absolute gem of a property in what we hope is becoming the emerald necklace of the North River.

Since 2005 we have successfully advocated for an additional 250 acres to be saved in perpetuity along the North River! 50 of which was the Goggin parcel this past fall. Thank you Marshfield voters!!! We look forward to hosting a walk at this property again as soon as the ownership transfer is complete sometime early next year.



View of North River from recently acquired Goggin parcel and dock.

Two \$10,000 Grants Awarded to NSRWA

The NSRWA has been awarded \$10,000 from the state's **Division of Ecological Restoration** to continue our work in Scituate to **restore streamflow and herring to the First Herring Brook (see page 4)**. The funding will enable us to continue our work with the town of Scituate on water conservation and to model how water conservation and new water sources can improve streamflow in the First Herring Brook.

The NSRWA was also the recipient of an additional \$10,000 from the **Massachusetts Bays program**. The funding will support an **inventory of infrastructure (dams and culverts) and prioritize river restoration projects** in our watershed. The project entails field work to inventory culverts and dams in our streams and assess their condition, identify those that are improperly sized, and fragment river habitat continuity. This data will be compiled



Culvert in Furnace Brook, Marshfield - Example of Fish and Flow Barrier

along with information collected from town DPWs and Conservation Commissions on flooding and work to be done on these infrastructure to determine priorities for river restoration projects.

Scituate Preserves Community Preservation

At Scituate's town meeting this past November there was a warrant article to repeal Community Preservation. We joined with our friends at Maxwell Conservation Trust in appealing to voters to keep this important source of funding for open space. The voters listened and wholeheartedly agreed that preserving their community was worth it! To find out more about what Scituate Community Preservation has done, please visit scituatecpc.org

Matching Challenge Completed Early! Still Need Members

We are pleased to announce that we have finished our Matching Challenge - both an initial \$20,000 challenge this spring, and a follow-up \$15,000 challenge through this year. The first challenge inspired 24 new River Guardians, and the second challenge inspired 141 past members to rejoin. 56 completely new members joined, and we have seen a substantial increase in giving from current members over last year.

This was a huge success and helped to stabilize the NSRWA finances. However, we took a big hit during the economic downturn and we still need to raise our membership for the long term health of the organization. I urge you to consider a gift membership for a friend or family member. In addition we are pursuing additional sources of matching challenge for next year to help inspire more people to become members.

Thank You to New or Renewing River Guardian Circle Members

River Guardian Circle members are our most generous, making donations greater than \$500. Their generosity is one of the foundations for making the NSRWA a strong and effective voice for the rivers.

Individuals

Valmai Hilton
Alan & Janet Holbrook
James Hughes
Doug & Sarah Lowry
Dana Pantano
Samantha Woods & Lanny Day

Organizations and Businesses
Scituate Federal Savings

Conserving Water for Rivers

It used to be that the biggest concern for our rivers was the quality of the water but it turns out that flow in a river and the timing of that flow is equally if not more important. After all what makes a river a river if not flowing water! It is with this in mind that we have started to focus our monitoring not only on the quality of our water but also monitoring how well our rivers are flowing.

Streams Run Dry

This summer volunteers continued to monitor streamflows in the First and Third Herring Brooks. This summer was a particularly dry one and both brooks experienced many no-flow days. Both of these brooks feed municipal water supplies and both have several dams on them. Dammed parts of the First Herring Brook provide water to Scituate and groundwater wells near the Third Herring Brook provide water to Norwell and Hanover.

The chart shows streamflow this summer in the First Herring Brook in Scituate between the upstream reservoir and the Old Oaken Bucket Pond where the water is withdrawn. Flow ranges from 0 cubic feet per second (cfs) to over 5 cfs. The extremes in flow are caused by how the reservoir is managed. The town of Scituate holds water in the upper reservoir, thus streamflow goes to zero, then shuttles water from the reservoir to the Old Oaken Bucket pond via the brook to replenish the supply.

The NSRWA is working with the town to identify a way to have more natural releases that would allow some water in the stream at all times and accommodate the town's water needs. Clearly, summertime water conservation would

help Scituate to have more flexibility in managing the brook to sustain a minimum level of stream health.

Inspiring Water Conservation

As part of our Greenscapes program this summer we co-sponsored with the towns of Norwell, Marshfield, Scituate and Hanover a Water Challenge. Teams of 5 households were formed in each town to compete to see who could use the least amount of water between August 1st and September 30th, the winning team won \$500 towards the charity of their choice.

The Greenscapes Water Challenge led to several unexpected findings – particularly the vast difference in water consumption between families. One family of six consumed only about 108 gallons each day, whereas several families with two members consumed almost 800 gallons per day. The causes of the high rates of consumptions seemed to boil down to two causes: undiscovered leaks and lawn irrigation.

One team member in Scituate, living alone, reported consuming almost 206 gallons per day, which sent up a red flag.

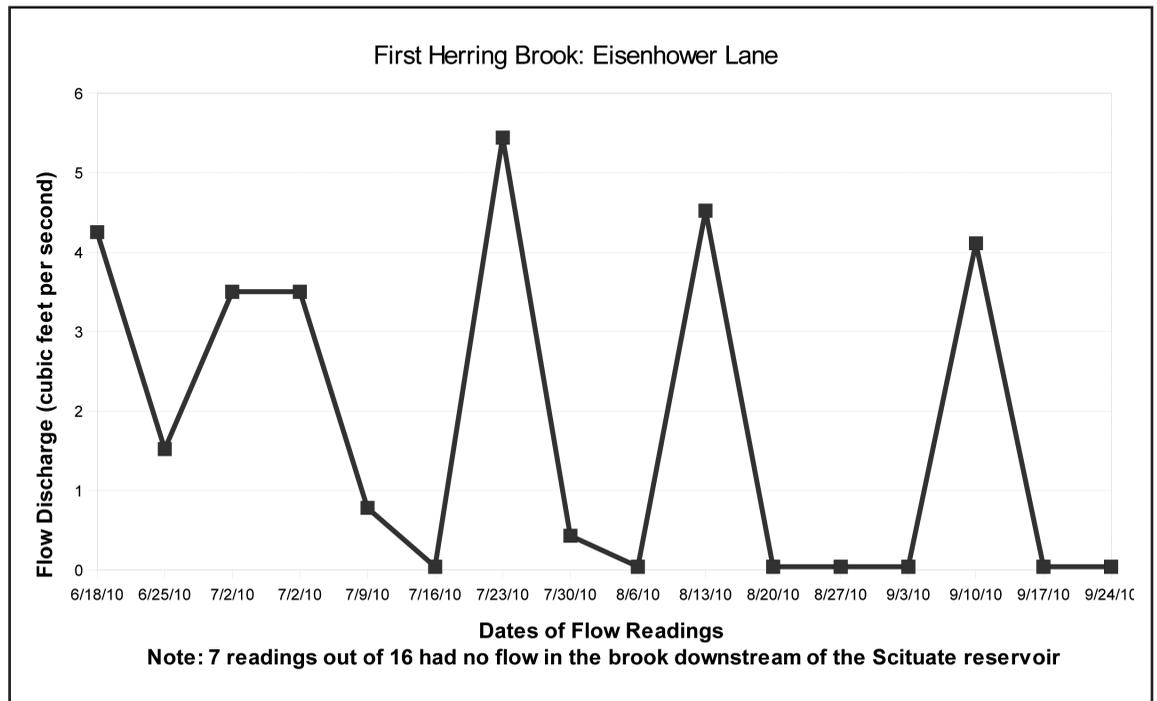
The Water Challenge organizers called the water department, the water department immediately investigated, and they discovered a leak in the woman's toilet.

A simple solution to detecting these hidden leaks is to take an initial water meter reading and then don't consume any water for about two hours. If the meter has changed at the end of the no-water-use period, you most likely have a leak.

Higher water users in the challenge usually had an irrigation system. "People don't realize how much water irrigation systems consume. For example, watering just one inch over an acre can consume 26,000 gallons – more than a backyard swimming pool," says Debbie Cook, Greenscapes Program Manager. Several families with irrigation systems consumed almost 400 gallons per person per day – well over the state's goal of less than 65 gallons per person per day, established to ensure that there is enough water for public safety and household consumption.

Working with Scituate Students to Conserve Water

In particular the NSRWA is concerned



Conserving Water, continued from p. 1

with promoting water conservation in Scituate as the First Herring Brook (the town's water supply and a tributary to the North River) has been severely impacted by water withdrawals—to the point that there are no longer any her-ring able to live in the brook and many no-flow days in the summer. The town and the NSRWA are working together to promote conservation to both restore streamflow to the brook and diminish the need for investigating costly new water supplies.

The NSRWA and South Shore Mass Bays program recently partnered with a Scituate High School teacher and her Advanced Placement Biology students to produce a water conservation profile for the town. Once the students have analyzed the data they will present their findings to the Scituate Water Resource Committee and Selectmen.

At the same time the NSRWA will be working with the town to develop strategies for water conservation based on the findings of the analysis. Under current consideration is adopting an outside watering schedule of one day a week in the summer time and raising the reservoir elevation at which outdoor watering is banned.

by Debbie Cook
Greenscapes Program Manager

Saving Our Rivers Together for 40 Years!

The NSRWA's 40th Annual Meeting was a milestone event! Many who have contributed over the years to protecting and restoring our rivers were on hand to pay homage to the fine work that has been accomplished by this incredible organization of proud river huggers.

We would particularly like to thank our sponsors - **Image Resolutions** of Norwell for printing support and **Whole Foods** in Hingham and **Brant Rock Fish Market** for providing wonderful food for the event!

This year we welcomed two new board members to the NSRWA: Don Nagle, a Scituate resident and attorney engaged in environmental and land use law since 1988., who formerly worked with the EPA and Mass DEP; and Margery Parker, a Marshfield resident, who has been in the investment business for thirty years though her first passion is marine invertebrates having studied horseshoe crabs as an undergraduate student. Ms. Parker is also a past board member of the Vincent Memorial Hospital now Mass General Hospital.

We would also like to say thank you to outgoing board members Roger Crawford, Andrew Hebert, and John O'Leary. Roger Crawford was the founder and chair of our now annual Kayak Expo event. John O'Leary helped to institutionalize our endowment and Andrew Hebert founded our Wild Rice paddle and provided much of the research for our 40th! We know they will continue in other ways to support the mission of the NSRWA.

At the Annual Meeting awards were given to **Ralph Butler** as our **2010 Volunteer of the Year**, for his water quality monitoring and clean up day efforts and **Kathryn Robichau, Marshfield CPC Administrator**, received the **Barbara Pearson award** for her efforts in obtaining a \$250,000 grant for the South River Park.

by Paula Christie

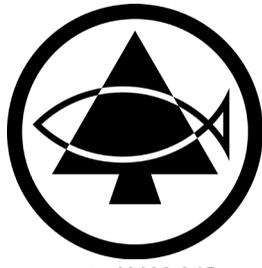
Photos from top:

- 40th Anniversary cake provided by Whole Foods Market;
- New board members Margery Parker and Don Nagle with longtime board member Barbara Carney in her handknit NSRWA sweater
- Barbara Pearson Memorial Award winner Kathryn Robichau, surrounded by her fellow Marshfield Community Preservation Committee members
- Volunteer of the Year Award winner Ralph Butler with Executive Director Samantha Woods





NSRWA



www.ssns.org



www.massaudubon.org/southshore

2011 Water Watch Lecture Series

January 19 – March 23

Wednesdays at 7 pm

at the South Shore Natural Science Center

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MASSACHUSETTS CULTURAL COUNCIL

The North & South Rivers Watershed Association, the South Shore Natural Science Center and Mass Audubon South Shore Regional Headquarters are pleased to announce their partnership in presenting a series of 10 free Wednesday evening lectures, January 19 – March 23, 2011.

This fascinating series offers something for everyone. All lectures will begin at 7pm and take place at the South Shore Natural Science Center, Jacobs Lane, Norwell. Members and the general public are encouraged to attend. Admission is free of charge!

For more information, or to be notified by email about this series and other NSRWA events via Rivernet, visit www.nsrwa.org or contact North & South Rivers Watershed Association 781-659-8168; South Shore Natural Science Center 781-659-2559; or Mass Audubon South Shore Regional Headquarters 781-837-9400.

JANUARY 19 - The Gulf Oil Spill

Dr. Judith McDowell, Woods Hole Oceanographic Institute

The explosion and sinking of the Deepwater Horizon oil platform in the Gulf of Mexico and the subsequent discharge of over 200 million gallons of crude oil and gas may be the largest environmental catastrophe in U.S. history. Effects of the discharged oil and dispersant chemicals are expected to be widespread and long lasting in many environments of the Gulf of Mexico with significant economic impacts to fisheries, tourism and coastal development. Many scientists from Woods Hole Oceanographic were recruited to lend their expertise to understanding and containing the spill. Dr Judith McDowell, Senior Scientist at the Woods Hole Oceanographic Institute, is coordinating the Woods Hole Gulf Oil Spill response effort and will present information on the immediate effects of the spill, efforts to contain the spill and plans for future studies.

JANUARY 26 - Restoration on the Half-shell: Oyster Reef Restoration Lessons from Wellfleet Bay – Could We Do It Here?

Kate Killerlain Morrison, The Nature Conservancy and Mark Faherty, Mass Audubon Wellfleet Bay Sanctuary

In 2007, Mass Audubon's Wellfleet Bay Wildlife Sanctuary, The Nature Conservancy (TNC), National Oceanic and Atmospheric Administration (NOAA), and the Town of Wellfleet partnered to launch the first oyster reef restoration project in Massachusetts. Oyster reefs are critical to marine ecosystems but a recent TNC report documented an 85% loss of oyster reefs worldwide, greater than any other major marine habitat. Join TNC and Wellfleet Bay Audubon Sanctuary scientists as they introduce us to TNC's nation-wide efforts to restore oyster reefs, what they have learned so far from the Wellfleet Bay Oyster Reef Restoration Project, and discuss considerations for selecting potential oyster restoration sites here on the South Shore – perhaps even in the North River!

FEBRUARY 2 - Weather Lore, Weather Reality

Don McCasland, Blue Hill Observatory Science Center

Red Sky at night, six weeks of winter, woolly caterpillars. After a sunny Ground Hog Day, how many years was it cold and snowy or warm and drier? Are there any truths to these old expressions? Join Don McCasland of Blue Hill Observatory Science Center and learn how professional meteorologists and weather observers perceive the weather lore expressions. He will draw on 126 years of weather observations to tell us if any of them hold true.

FEBRUARY 9 - Marine Wildlife of Stellwagen Bank

Carol "Krill" Carson, Captain John Boats

Join Carol "Krill" Carson, marine biologist, for a presentation on the unique marine wildlife that live and feed in the waters of the Stellwagen Bank National Marine Sanctuary. This cold water sanctuary is just off the coast of New England and attracts a wide variety of coastal marine wildlife including endangered marine mammals such as humpback whale, North Atlantic right whales, harbor seals and gray seals. Large coastal fish also feed in these productive waters including the giant bluefin tuna, basking sharks, great white sharks and ocean sunfish.

FEBRUARY 16 - Scenes From BP Oil Spill: A 1st-Hand Look at the Oil Spill

Shawn Carey, Migration Productions

Haven't you wanted to hear about the Gulf oil spill from someone who's actually been there? Wildlife photographer Shawn Carey shares firsthand accounts, images and video from a recent trip to the Louisiana coast to witness and document the effects of the nation's largest oil spill on the region and its wildlife. Find out what he observed regarding the impacts of this environmental disaster and efforts underway to fix the damage. Carey also discusses the risks facing the huge number of fall migrants heading south to the Gulf region.

FEBRUARY 23 - Scituate Light – Shining for 200 Years

Bob Gallagher, Scituate Historical Society

Scituate Light turns 200 years old in 2011, making it one of the oldest light stations in the United States. In fact, when taken in total, the entire complex - including the original keeper's house and other buildings - is the oldest of its kind on the continent. It's been through the burning of Scituate Harbor by British troops in the War of 1812, deactivation in deference to the construction and lighting of Minot's Light in 1860, and the wreck of the Etrusco. Bob Gallagher, Keeper of Scituate Light, will tell of the many reasons the Scituate Historical Society will celebrate the light's bicentennial in 2011.

MARCH 2 - Our Changing Coastline: Formation, Evolution and Future

Jim O'Connell, Coastal Geologist

Why is your beach sandy or rocky or narrower or wider than you remember? Join Jim O'Connell Coastal Geologist as he takes a journey back in time to tell the story of the geological formation and continuing evolution of the South Shore's coastal glacial landforms, barrier beaches and coastal rivers. In particular, Jim will focus on the formation and evolution of the coastal landforms that separate the North and South Rivers from the Atlantic Ocean, including the formation of the Spit, and the dynamic barrier beaches along the South Shore. What will these landforms look like in the future and how long will they last?

MARCH 9 - Birds on the Beach: What Can They Tell Us?

Julie Ellis, Tufts Cummings School of Veterinary Medicine

Do you like to walk the beach? Then you might be able to learn more about what you see and contribute to science! Data collected by hundreds of SEANET volunteers provides baseline information about bird mortality and helps to detect mass mortality events such as oil spills, algal toxins, and disease outbreaks. If you like to walk on the beach, come learn more about the SEANET project including requirements of volunteers and survey protocols...no need to be an experienced birder! Volunteer supplies and SEANET t-shirts will be available at the presentation.

MARCH 16 - Mile-A-Minute Invasives

Tim Simmons and Bryan Connolly, Natural Heritage and Endangered Species Program

It seems like a year can't pass without news breaking of a new invasive species arriving in Massachusetts. These species crowd out native species and reek havoc on our native ecosystems. Mile-a-minute, Hydrilla, Porcelain Berry, Giant Hogweed, and Kudzu will be among the invaders discussed as early detection species...which means there is still time to stop them from becoming a permanent part of our landscape. Learn how to identify them, where to look for them, what to do about it when you detect a new occurrence and how and why these invasions are happening.

MARCH 23 - A Fish in Troubled Waters – Fate of the Atlantic Herring

Greg Wells, Herring Alliance Pew Environment Group

This lecture will expose you to a threat to New England's coastal waters that has gone largely unnoticed for too long: the mismanagement of our Atlantic herring, a cousin to the more locally known river herring. Over the past decade a fleet of industrial scale fishing vessels has dramatically expanded its operations in the region and now catches well over 150 million pounds of herring annually. Because herring form the cornerstone of the marine ecosystem—feeding whales, seabirds, striped bass, tuna and numerous other predators, the ecological reverberations of such intense fishing pressure spreads far and wide. If you like to eat fish then you won't want to miss this important lecture on the Atlantic herring a keystone species that is being overfished by industrial-scale trawlers.



RiverWatch

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In This Issue:

- **Shellfish Bed Opening on the South River Is Possible!**
- **Conserving Water for Rivers**
- **Water Watch Lecture Series Schedule**

Cleaner Water for Shellfishing, continued from page 1

“if”!—the Division has confirmed to me its intention to open the shellfish beds on a seasonal basis next year. The Division’s area biologist speaks for all of us in saying to me that, “I think there is a good resource there that the people of Scituate and Marshfield should be able to enjoy.”

But problems remain, and for the shellfish beds to be re-opened year round further improvements are necessary. This year, the Town received federal stimulus funding to track down where some of the remaining bacteria in the river might be coming from, and then use that data to find the best places in town to control runoff.

The NSRWA and Mass. Bays were in charge of the sampling and the funding allowed us to hire 4 interns to help us trace the remaining bacteria sources this past summer. As we expected, the places with high wet weather bacteria counts were generally in the downtown area due to the high impervious surface coverage. There is also less flushing from the tides in that part of the river. We saw high counts in the area near Willow Street and the pipe that comes out just upstream of the Willow Street Bridge. Among other locations, we also found high bacteria in the stream that runs next to the Dairy Queen, which receives runoff from a very large area of downtown to the west including much of the Webster Street shopping area. The next step in the project is for

the NSRWA and the Town to decide where and how to control these newly identified sources of pollution. Preliminary designs are being developed by engineers to control the runoff from these areas and will be presented to the public in the spring of 2011. After that we hope to apply for more funding to assist the town of Marshfield to construct the designs.

The good news for now is that as of December 1, 2010 until June 30, 2011 unless notified otherwise you can recreationally harvest shellfish from the North River (with a permit from Scituate or Marshfield). We hope that the testing this spring and winter shows good water quality results and that the South River clam flats will also be open soon for you and your children to enjoy and have some clam chowder for lunch!

*by Samantha Woods, NSRWA Executive Director
and Sara Grady, Mass Bays South Shore Technical Assistant*

We often have important news in between newsletters!

To keep up to date on river news and activities sign up for our Rivernet enews on our website www.nsrwa.org

You can also find us on Facebook.

