



NSRWA
www.nsrwa.org

RiverWatch

July 2011

THE NORTH AND SOUTH RIVERS WATERSHED ASSOCIATION, INC.
Celebrating 40 Years!

South River Clean Enough for Shellfishing!

**South River Water Quality Improvements
Allow Shellfish Beds to Re-Open After 20 Years**

A huge milestone occurred this April 15th when the Division of Marine Fisheries (DMF) re-opened 313 acres of South River to recreational shellfishing. Finally, after over a decade of effort, the South River's water quality has improved to the point where shellfishing will be allowed.

Next year the South River Shellfish beds will be open for the same period of time as the North River beds are: December 1 - May 30th. This is the culmination of decades of work by NSRWA and the town of Marshfield to restore water quality in the South River!

The opening of the shellfish beds is tangible evidence that we can restore degraded water quality by using our core strengths of monitoring, advocacy and education.

The South River shellfish beds were closed in the early 1990's due to bacterial contamination, as were the North River beds. In the mid-90's after working to clean up the Scituate Wastewater Treatment Plant, the Association assisted the DMF to sample the water quality in the North River and have those beds opened in 1996.

In the late 1990's the Association focused its attention on the South River Initiative. That Initiative identified pollution hotspots in the South River through intense water quality sampling. The data collected from that Initiative led to the Association's advocating for the expansion of the sewer system in Marshfield along



NSRWA member Len Bicknell enjoys clamming with his grandsons John and Patrick on the South River this April!

the South River. Adopted in 2000 by town meeting, with our member's support, the sewerage of homes was completed in 2005. In 2008, we successfully advocated for a No Discharge Area - prohibiting boats from discharging wastewater in our rivers.

In 2006, we re-tested the areas that we had sampled in the late 90s and found significant declines in bacterial pollution. Armed with the results we requested that

the DMF start testing the water in the South River again to determine if it could be opened to shellfishing. The sampling effort was done over several years and required that the Marshfield Harbormaster provide boats to the DMF to sample in the winter months. (The DMF first samples in December; then if the samples are clean they expand to the next month, and they

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“There is nothing better than going out on these beautiful rivers, working hard for your reward and then enjoying a hot cup of chowder made with something you dug out of the mud yourself.”

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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Address Correspondence to:
NSRWA
P.O. Box 43
Norwell, MA 02061
phone: 781-659-8168
www.nsrwa.org

Letter from the President



Getting Involved

As mentioned in our last newsletter, we are currently immersed in a strategic planning process. Our intention is to share the fruits of this labor with you in November.

One of the steps in this planning is assessing the organization's strengths and weaknesses. And at the top of that list of strengths is our membership, which currently numbers a bit over 1100 - representing an estimated 2000 plus households.

We are indeed fortunate that so many of you are involved in the association's efforts at a variety of levels. You participate in activities like our lecture series, walks, skills workshops, and events like our Expo. You volunteer to shuttle herring upstream, for Riverwatch monitoring, for Clean-up Day. You take stands on the issues at town meetings. And you support what we do with your financial contribution.

At any or all of these levels of involvement, you are making a difference - one that impacts the quality of life in south shore communities.

I want to suggest a few other ways to make a difference that you might consider in shaping the work we do:

Join a Committee

We do a lot of the watershed's work in standing and ad hoc committees - planning, organizing, and executing ideas. Although these committees have typically been composed of NSRWA board members, we have openings for non board members as well. Contact us and we would be delighted to discuss the current committee opportunities.

Be a Leader

Have you ever considered taking a leadership role in the NSRWA? We currently have 15 directors on our board and our goal is to increase that number in the near term. If you would like hear more about the role and responsibilities of a director, let us know we'll arrange for a member of our nominating committee to talk to you.

Between now and our November 4th annual meeting, we will be accepting nominations for the association's offices. Interested in throwing your hat into the ring? Let us know.

Take the Member Survey

Help us chart our course by taking a few minutes to take our member survey. By doing so, you will provide valuable input to our strategic planning. **Simply go to the nsrwa.org website and follow the link.**

Have a wonderful and summer and thanks for all that you do!

Russ Haskell, NSRWA President

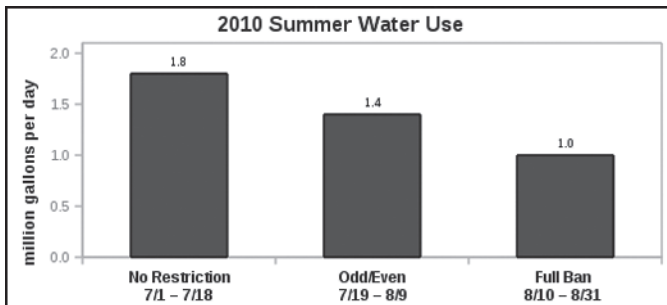
Blue Communities Campaign Progress

Restoring Flows in the First Herring Brook: Water Conservation Efforts

This spring the NSRWA, with support from our partners the Mass Bays Program and Division of Ecological Restoration, worked with the town of Scituate to adopt a lawn watering restriction between Memorial Day and Labor Day. Together we developed an educational flyer that went to all water customers in the town of Scituate.

The new lawn watering restriction applies to automatic lawn irrigation systems only and will restrict their use to one day a week based on the voting precinct the property lies within. We hope it will result in significant water conservation.

The winter time demand in Scituate is approximately 1 million gallons per day (MGD) but in the summer it skyrockets to almost 2 MGD! When a total outdoor water ban has been implemented Scituate's water demand drops back to the winter time usage and when the town has implemented an odd/even schedule water demand drops by approximately 400,000 gallons a day.



Streamflow Releases from Reservoirs

In addition to water conservation efforts, the town of Scituate is working with the NSRWA, Mass Bays program, and with \$10,000 from the Division of Ecological Restoration to take the results of our streamflow modeling and make them into an operational plan for the town's water supply.

The modeling results revealed that the town could allow more water downstream of the dams even under current conditions (i.e. no conservation and no change to fish ladders or dams) and allow for habitat to be wetted more often than it is now. Our job is to take that scientific assessment and interpret it into a real life operational plan with the town so the water supplier knows under what conditions they can allow more flow to be released over the dams.

Stream Restoration Prioritization

The Mass Bays Program provided the NSRWA with a \$10,000 grant to undertake a pilot program to "Prioritize Stream Restoration in the North and South Rivers Watershed." This effort has been ongoing for 9 months and will be completed this June. The program included assessing the conditions of dams and culverts as well as variables that impact stream habitat quality such as percent impervious (i.e. paved areas) in the streams watershed. The effort focused on the major coastal tributaries and branches to both the North and South Rivers. All told approximately 125 of the 380 known culverts were assessed by volunteers. Look for future RiverWatch articles on the results of this project.

Educating Municipal Officials About Polluted Runoff

One of the biggest challenges our watershed faces is the impacts of impervious surfaces on water quantity and quality. Town DPW's, Planning Boards, and Conservation Commissions each play a role in dealing with this issue and need support and education to stay up to date with the most recent technologies, policies and experience of other professionals.

The NSRWA in partnership with other South Shore watershed associations and the Mass Bays program hosted two professional workshops on stormwater management for town staff and other interested parties on June 6th in Hingham and on June 7th in Marshfield.

We hope that providing these workshops our will help municipal officials to be better equipped to work with us as we move forward to reduce existing polluted runoff and prevent future stormwater problems.

South River Park Update

As we go to press, all permits are in hand and construction bids have been received for the work to construct the South River Park on Rte 139. This project will result in a new park in a very urbanized area of the South River. In the next few weeks the town of Marshfield will choose a contractor to start the construction phase of the South River Park project!

Please take our member survey!

Visit www.nswra.org

and follow the link.

South River Pollution Study Completed

Work Still Needed to Address Remaining Pollution to Open Shellfish Beds Year-round

The opening of 313 acres of shellfish beds for recreational harvest is a great milestone and I wish I could say that our work on the South River was done. Ultimately our goal is to have the beds open year-round so people can enjoy shellfishing in the summer and to have the entire river's water quality meet safe swimming and boating standards. In order to do that we will need to continue our work to find and remediate the remaining sources of pollution to the South River.

Over the past several years we have focused on reducing polluted runoff from the downtown area of Marshfield which has the most pavement. In 2006 we performed an initial assessment and provided conceptual designs for facilities that would reduce the pollution.

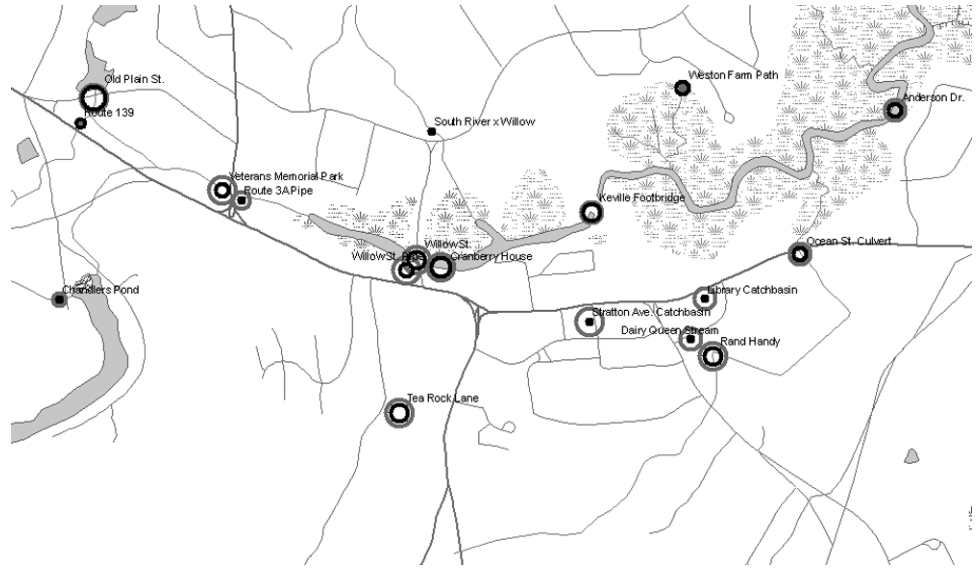
We timed the effort just prior to the redevelopment of the downtown area. Through that redevelopment project many of Marshfield's downtown areas now have additional stormwater treatment systems.

But not all areas were able to be fixed. In 2008 the NSRWA and Mass Bays had a summer intern conduct further sampling and we continued to find areas of chronic high bacteria in the downtown area of the South River including Willow Street, Keville Footbridge, and a tributary that runs behind the Dairy Queen.

In 2010, with the Mass Bays program, we assisted the town of Marshfield in obtaining a federal grant to conduct more intensive sampling and provide conceptual designs for stormwater treatment. The town used the funding to:

- Conduct bacterial source tracking to find hot spots
- Prioritize sites according to bacterial results and other factors (ease of construction, property ownership, potential for pollutant removal)
- Provide 30% design for top 3 sites

The town provided funding to the NSRWA to conduct the bacterial sampling and analysis. We hired several in-



Above: Map of bacteria samples taken in South River in 2010. Dark circles represent dry weather, lighter grey circles represent wet weather. Where the wet weather (light gray circles) are larger than dry weather (dark circles) then polluted runoff is contributing the larger amount of bacteria.

At right: A tributary to South River, behind Dairy Queen and Marshfield Library parking area. Note accumulation of sand from road runoff in stream.

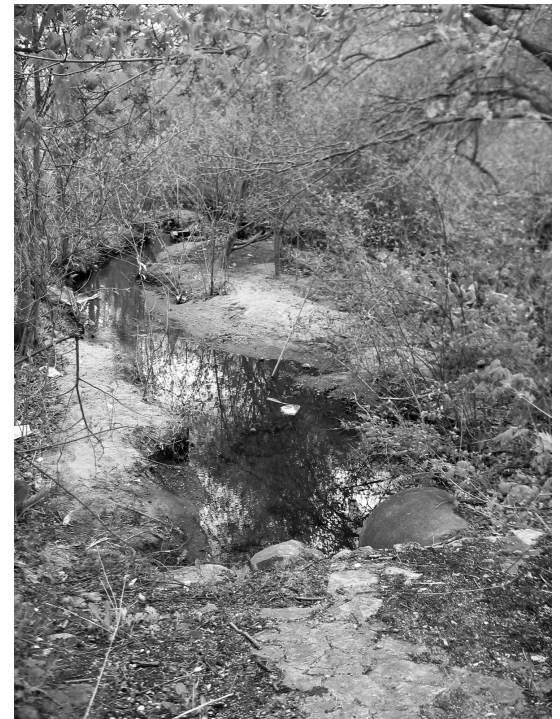
terns and started with 11 mainstem sites to bracket potential sources. In all we tested 32 sites, 3 during wet weather and 3 during dry weather from June-Sept 2010. The results showed areas of high bacteria associated with stormwater events at:

- Marshfield Library parking catchbasin
- Stream behind Dairy Queen/Rand Handy
- Willow Street and
- Bourne Park Ave.

Getting the Most Bang for the Buck

We want to focus on the areas where we can get the most "bang for the buck" so out of 18 possible sites 3 were chosen based on how high the sites scored in terms of water quality benefits, site characteristics, constructability, maintenance and public visibility. The three sites include:

- Drainage into a tributary to the South River behind the Dairy Queen and



Rand Handy buildings

- Area behind the Road to Responsibility
- Parking lot run off from the Marshfield Library

3 Sites, 3 Unique Solutions

Each of these areas present some design challenges in terms of ownership of land needed to install treatment systems, space constraints and regulated wetland areas. The number one site was the area that

drains into the stream behind Dairy Queen and Rand Handy. Much of the drainage for the downtown area ends up at this point so installing treatment here would capture a large percentage of the run off - about 55 acres of polluted runoff would be treated. The treatment system proposed includes three systems in sequence the first two systems would take out the larger sediments and the third system would be a constructed wetland to provide treatment of the bacteria. The land needed to accomplish this project is privately owned. The town has reached out to the owner and there is interest in working with the town to fix this site.

The second priority site is behind the Road to Responsibility (RTR). The parking lot from the library and RTR drains into the same tributary as the Dairy Queen and Rand Handy but further downstream. In this case the treatment proposed includes a grass swale (or ditch) and again a constructed wetland.

The third priority is a smaller area of the Marshfield Library parking lot where it is proposed to install a filtering bioretention area in a parking island. This "rain garden" is a planted island that would have a special soil mixture with an underdrain system.

We presented our findings to the Marshfield DPW on May 9th. In order to move the stormwater projects forward we will need to help the Marshfield DPW find resources to pay for final design and construction and the federal grants that we would often seek are not available this year. We are hoping to work with the DPW to determine the best way to fund these projects.

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

Matching Challenge Update!

The NSRWA recently received a generous \$10,000 matching challenge from the Bilezikian Family Foundation and an additional \$5,000 matching challenge from the Sylvester Fund.

Each committed to match any new donations to the NSRWA compared to 2010 which enabled us to triple any new donations but we have to meet the challenge before July 5th!

As we go to press we are very close to meeting both challenges.

THANK YOU to all our new members and existing members who raised their donations over their 2010 contributions to help us meet this matching challenge!

Thank You to New or Renewing River Guardian Circle Members

Individuals

John & Linda Bodenman
Peter & Roberta Fairbanks
Richard & Jackie Leach
Andrea Miller
Mark & Sally Moore
Marty & Adria Pitkow
John & Laurie Schneider
Michael & Susan Wolfe

Organizations and Businesses

Scituate Federal Savings
Sylvester Fund
Whole Foods
Horsley Witten Group
ESRI

South River Shellfishing! continued from page 1

must have several years worth of data in order for them to be confident that the pollution is indeed gone.) Thus it took until 2011 - 20 years since they had been closed - for these beds to finally be available to the public for them to harvest and eat shellfish.

The Zen of Shellfishing

Scientists and environmentalists use the ability to shellfish as a barometer of the health of our river, but having clean water means much more than just eating shellfish and lower levels of bacteria. After all, shellfish is readily available for purchase at any fish market or grocer. What was lost when the beds were closed to a whole generation of people who lived in this area? Is there deeper meaning to shellfishing then just eating a clam?

Well according to some of our members it is one of the most satisfying experiences you can have with your family, by yourself or with friends. Dolly Bicknell - a longtime NSRWA Marshfield member and South River abuttor recalled fondly her father Edward Rowe Snow taking her out shellfishing. Bicknell remembers how much her father, Edward Rowe Snow, who died in 1982, enjoyed digging for clams on the South River.

"My dad used to go out every day and go clam digging," said Bicknell. "He would

either canoe or hike out. He'd leave clamming forks everywhere so he wouldn't have to always carry them."

She was glad to have the chance to share the experience with her family this past Easter.

"I grew up going clam digging quite a lot," said Bicknell. "It's been 20 years. It's just amazing to think that so many people have done so much to make it possible."

The clams they got on Easter Sunday "were huge," said Bicknell. "It was just a great day. It's just a really good thing."

David Dauphinee, a Scituate NSRWA member and North River abuttor, is self-described as "bi-valvular" because of his obsession with shellfishing the flats of the North and now the South River. David is very dedicated to going out clamming even in the middle of winter. David says "There is nothing better than going out on these beautiful rivers, working hard for your reward and then enjoying a hot cup of chowder made with something you dug out of the mud yourself. I am so excited about the South River being open!"

We couldn't agree with you more and look forward to having them open year-round as we move forward with our work to restore our rivers.

by Samantha Woods, Executive Director

Clean Up Day, Herring Heroes, Flyfishing and Clamming

This past spring was a busy one for the NSRWA!



Thank you to Whole Foods for not only sponsoring our Clean Up Day but for making us the recipient of their 5% Day this year which provided \$4,758 to our 5th grade Water Education program! And a big thank you to all the volunteers who got out and cleaned the river banks with us.



Above: NSRWA volunteers heeded our call to help the herring make it over a broken fish ladder in Pembroke on the Herring Brook. Over 18,000 fish were moved by these intrepid volunteers to their natal spawning grounds up at Oldham Pond.



At right: We hosted a flyfishing demonstration up at the Indian Head River and we took out 30 people to the North River clam flats to show them how to dig for their own shellfish. We hope to do these events annually!

GoodByes...



Garry VanWart passed away in April. He was a devoted member of the First Herring Brook Watershed Initiative (a group affiliated with the NSRWA) who enthusiastically led hundreds of people on nature walks in Scituate sponsored by the FHBWI and Maxwell Conservation Trust. His crystal clear, Maine-accented voice trumpeted his joy for sharing his immense knowledge of trees, flowers and other environmental attributes that he devoted his life to preserve.

Garry often had a story or visual aid to enhance his eloquent teachings, including his famous exploding lycopodium spore trick. His formidable experience as the Director of the Blue Hills Trailside Museum and Deputy Director of the Trustees of Reservations led to outstanding contributions to environmental education, land preservation and research. Garry was instrumental in FHBWI watershed investigations and projects.

He was especially engaging with young people. A highlight was a FHBWI sponsored project with students from the Scituate Gates Middle School Environmental Club. He used a property near the town reservoir owned by his dear friend Bill Krusell as an outdoor classroom where the students learned about vernal pools, hydrology, macro-invertebrates and other aspects of watershed science. He spent many hours preparing for these nature encounters by catching critters and collecting plants to share. Everyone who knew Garry will miss his zest for life and love of the natural world.

by Lance VanLenten, NSRWA Board member and First Herring Brook Watershed Initiative

NSRWA Outdoor Activities Schedule

Hidden Gems Near the Rivers Walk Series

It's not too late to participate in the last two walks of our Hidden Gems Near the Rivers Walks. Each walk is free for members - \$5 for non-members. Pre-registration required. To find out the details of each walk, including time and meeting place, and to register, go to our website, www.nsrwa.org

Sunday, July 17 - Willowbrook Farm - Don Salvatore, Museum of Science educator & abutter of Willowbrook Farm

Allegheny ant building mounds, rare Shagbark Hickory trees, and a stand of Musclewood trees are just the beginning of the wonders that await you on trails that meander through old fields and dense woods. An observation tower allows expansive views of the Indian Head River rare freshwater tidal marsh - a habitat of global significance.

Sunday, September 11 - Fourth Cliff Walk - Paula Christie - Assistant Director, NSRWA

This walk in an area usually not open to the public is all about views. Take advantage of this special opportunity to get a bird's eye view north to Third Cliff, Trout's Island, the Spit, the coastline to Rexhame Beach and of course the Atlantic Ocean.

Paddling and Camping Opportunities for Members!

To find out the time, place and more details about each of these fun paddles or other outdoor activities go to our website, www.nsrwa.org. Registration required in advance for every paddle through our website.

Saturday, July 2 - Scenic Tour of the North River - Coastal Kayak Educators

Two-hour paddle featuring scenic sights along the North River. Ideal for novice paddlers. Kayaks and all equipment provided. \$35 per person - NSRWA members get first chance to sign-up.

Sunday, July 3 - Intro to Kayaking - Coastal Kayak Educators

3-hour course. On-land and in-water instruction in basic kayaking techniques and safety. Kayaks and equipment provided. Children welcome. \$35/member - \$60/non-member (includes NSRWA membership)

Friday, July 15 - Sunset/Moonlight Paddle

We are bringing back our most popular paddle ever. Watch the sun set and the moon rise as we paddle from the Driftway to the Spit. \$15/member - \$40/non-member (includes NSRWA membership)

Saturday/Sunday, August 13/14 - Overnight at Couch Beach - Coastal Kayak Educators

You bring your tent we provide the food and kayaks! On-land kayaking skills lesson, then on-the-water expeditions. Bbq on the beach. Breakfast served in the morning, with an early morning paddle. \$65 per person or \$55 per person in a group of 4 - add \$25 for individual or \$35 for family for NSRWA non-members.

Saturday, August 27 - Scenic Tour of the North River - Coastal Kayak Educators

Two-hour paddle featuring scenic sights along the North River. Ideal for novice paddlers. Kayaks and all equipment provided. \$35 per person - NSRWA members get first chance to sign-up.

Sunday, September 11 - Wild Rice Paddle

Wild rice (*Zizana* sp.), also known as Indian Rice is found on the slower flowing portions of the North River and Herring Brook river. Come join us for a couple of relaxing hours as we paddle and float our way down the river collecting wild rice. You must have your own paddling equipment. \$10/member - \$35/non-member (includes NSRWA membership)

Other Outdoor Opportunities

Yoga at the River's Edge Starts June 18

Every Saturday morning at different locations along the rivers June 18 - September 10, 8:30 - 10 a.m. For locations visit nsrwa.org or find us on Facebook Yoga at the River's Edge group. \$10 per person for NSRWA members, \$12 non-members. No registration is required. No class on rainy days.



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P.O. BOX 43 NORWELL, MA 02061
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In This Issue:

- **Clean Water Makes Us Happy As Clams!**
- **Help determine our future!**
Take our member survey at nsrwa.org
- **Summer River Activities and Great River Race!**

21st Annual Great River Race Registration is Open!

Saturday July 30

Race starts at 11:30 a.m.

If you can paddle it you can race it in our Great River Race . . . this event is fun for the whole family! From novice to racer, this race is for all non-motorized vessels including canoes, kayaks, rowboats and even stand up paddle boards.

Join us for this annual 7-mile paddling event on the North River. Race starts at 11:30 a.m. Pre-registration is strongly encouraged. Registration forms are available online at nsrwa.org



After the race, join us for an awards celebration at McGreal's Tavern in Norwell Center!