

WATERSHED

A Newsletter of the Wood-Pawcatuck Watershed Association

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Fall/Winter 2010

Making History on the Pawcatuck River *by Chris Fox*

After years of planning and fundraising WPWA has finally removed a major fish passage barrier on the Pawcatuck River. The removal of the Lower Shannock Dam on Railroad St in Richmond marks a new era in the history of the river and for the state as a whole. Little thought was given to the environment when our state's industrial revolution dammed local rivers to harvest their power. The damage this caused to the local inhabitants of the rivers over a period of centuries is immeasurable.

Think of the river as a highway for wildlife. Just as we rely on Route 95 to get just about everywhere and for every purpose imaginable wildlife rely on our rivers for the exact same purpose. Imagine if we put permanent roadblocks at key points along Route 95 and maintained them for centuries. Our habits and travel patterns would be significantly altered making it nearly impossible to get anywhere. Frankly, I'd move to a place where my travel would be more efficient. Many believe this is exactly what migratory and resident species did when man began damming rivers across the world.

Will the wildlife return now that the barriers are being removed? Of course! Won't you begin using the many RI bridges closed after the March 2010 flood when they are repaired? Much emphasis has been placed on the return of migratory fish

species like herring as part of dam removals throughout the country. As a project team we are a keenly interested in gauging our Pawcatuck project's success by measuring the number of these fish returning. As an individual I prefer to gauge success under a larger umbrella. Did we successfully remove a man made barrier in the river and provide every opportunity possible for wildlife to move up and downstream? We absolutely did!



A view looking upstream to the redesigned river channel

So what's in it for us? First and foremost the peace of mind that comes from finally making reparations for the damage done by our forefathers. The cost to remove the dam pales in comparison to the money it generated and the country it helped to build. Our project goal was

to pass fish but not at the expense of other interests. So if you're a history or civil works buff we left a many remnants of the industrial era intact including a portion of the dam itself. If you're a paddler you will have a safer portage when the Town of Richmond completes the Knowles Mill Park at the former dam site in 2011. Not much has changed if your interest is fishing but it is expected that there will be more fish to catch upstream in the coming years.

You can view project photos, presentations and plans on our website but visiting the site in person is a must. Everyone who came to watch MAS Building & Bridge surgically remove the dam and repair the watershed's "clogged artery" were witness to history in the making. Removing the dam is as significant an event as its construction was in the 1800's. Though all the members of the project team were elated to see the dam go on July 28th 2010, each of us took time to reflect on how difficult it must have been to build this dam by hand.

Continued on middle of page 2



The old mill raceway in Shannock was one of many historic structures preserved.

From the Executive Director

Continued from page 1

Thank you to all who contributed to our 2010 Annual Appeal fundraising campaign. Given the hard economic challenges we all are facing your generous contribution toward WPWA's mission is invaluable and most appreciated. We are looking forward to working hard this winter to bring you more great recreational and educational programs in 2011.

Thanks to a generous grant from the Champlin Foundation our campus will be getting a new well and septic system in 2011. As part of the process we will be renovating the campus grounds and removing our rental house. We are also working with RIDEM to expand the public parking and add a composting toilet to our public access area.

Our Pawcatuck River Restoration project continues to march forward and has consumed an enormous amount of my time. Realizing the successful removal of Lower Shannock Falls has energized our project team and we look forward to constructing the state's largest fish ladder at Horseshoe Falls this summer. I urge you all to plan a visit to the village of Shannock this summer to see all the changes that will be ongoing in the village. Many thanks to the folks of Shannock for their continued support of this valuable fish restoration project at one of the state's most iconic dams.

WPWA has experienced many growing pains during the short time that I have been at the helm. The positive changes that have been made would not have been possible without the support of a dedicated staff and board of trustees. A special thank you to Denise, Danielle, our trustees and volunteers for all your hard work in 2010. You are the backbone of all the great things we are accomplishing for our area's rivers and residents.

Happy New Year!



The yankee ingenuity required to build a dam that even in its decrepit state could withstand the 2010 flood is a testament to man's determination to conquer nature.

If you weren't able to watch this historic event in person you still have a chance to witness history in the making.

WPWA will be building the state's largest fish ladder just upstream at Horseshoe Falls during the coming summer. Shortly after and just a little further up the Pawcatuck River, we'll be removing the Kenyon Mill Dam. Once completed, these projects will allow wildlife to travel between Worden Pond and Little Narragansett Bay for the first time since the 1700's!

WPWA's New Years Day 2011

hike at the Francis C. Carter Memorial Preserve in Charlestown was a great way to begin the year! About twenty participants, including Annie, a very well behaved dog, enjoyed the near 50° F weather on The Nature Conservancy's (TNC) second largest preserve in the state.



Several participants stop for a photo

This 841 acre preserve, which is included in Walks in the Watershed, WPWA's pocket hiking guide (hike 18, page 37), presented hikers with beautiful, snow covered trails. Most notable were the huge boulders and rocky outcroppings of the Charlestown moraine as well as the numerous pitch pines and scrub oaks that lined the trails.

Did you know? The preserve not only welcomes leashed pets, but also horseback riding on specified trails. To accommodate horse trailers, riders should use the preserve's alternate parking area located on Old Mill Rd.



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UPCOMING EVENTS YOU WON'T WANT TO MISS!



Register with ease at: www.wpwa.org/events

February 5, Saturday, 10am to noon - Winter Hike at Black Farm

Join WPWA for a two-mile walk in the Hopkinton woods near the Wood river. Meet at the parking area on Woodville Alton Road.

February 13, Sunday, 4pm to 6pm - Woodcocks in the Watershed - A Most Amazing Bird

Roger Masse, a Ph. D. student in URI's Department of Natural Resources, will share his knowledge of avian ecology, focusing specifically on the biology of Woodcocks. To be held in the WPWA conference room overlooking the Wood river. Space is Limited!

March 5, Saturday, 10am to 1pm - Early Spring Hike at Grills Preserve

This easy grade, four-mile hike will take participants through a protected forest preserve that has about one mile of frontage on the Pawcatuck River. Meet at the Bradford Fishing Area parking lot on Route 91 in Westerly.

April 3, Sunday, 4pm to 6pm - The Great Rhode Island Flood of 2010 - An Hydrological Assessment

Tom Boving, professor in the URI Department of Geosciences, and WPWA Board of Trustees member, will discuss the hydrology and impacts of the March 2010 flood. To be held in the WPWA conference room overlooking the Wood river. Space is Limited!

April 23, Saturday, 9am to noon - Earth Day Cleanup in the Watershed

Help WPWA keep the watershed healthy and beautiful by adopting a river front access area for the day. Over twenty fishing and boating access areas to choose from.

May 26, Thursday, from 5pm to 8pm - WPWA Annual Meeting - with special lecture - Water in the Watershed

Guest speaker, Dr. Harold Ward, professor emeritus and WPWA Board of Trustees member, will speak about the water resource issues in the watershed. Details to come!

June 11, Saturday, from 9am to 3pm - Pawcatuck River Source To Sea #1

For experienced paddlers only, this trip will depart from Taylor's Landing in South Kingstown and take participants about 10 miles downstream to the Biscuit City Landing. The cost is \$15 per member or \$20 per non-member.

June 21, Tuesday, from 6pm to 8pm - Summer Solstice Paddle for Members Only!

Enjoy a relaxing evening on the Wood River while taking in the beauty of the dragonflies and swallows as you make your way up the river. Boat rentals \$10- upon request.

June 25, Saturday, from 9am to 3pm - Introduction to Kayak Paddling

This American Canoe Association Certified course is designed for beginners who want to learn more about safety on the water, improve their paddling skills, and practice rescue techniques. This day long course will require participants to get in the water. The cost, which includes boat rental, is \$25 per member or \$35 per non-member.

* * * * *

PADDLERS BE ADVISED
Recent Changes to the Pawcatuck River

The recent removal of the Lower Shannock Falls Dam on the Pawcatuck River in the town of Richmond, has created the potential for advanced paddlers to navigate this previously impassible section. This redesigned river channel now includes several large boulders and other natural obstructions that have been designed and positioned for the purpose of encouraging fish passage. These new natural obstructions may be considered hazardous by boaters and it is recommended that paddlers continue to portage this section on river right to avoid the dangers of this 200-foot river section.

Please continue to paddle safely and always wear your personal floatation device!



**WATERSHED
KIDS
CORNER**



This edition of the Kid's Corner features information about snow! Please spend a few minutes with your child to read the article together before doing the activities.

Snow can be the most exciting part of winter, especially if you enjoy playing outside, all bundled up, and have a friend to build a snowman or make snow angels with! You probably already know that it has to be very cold outside in order for it to snow, but more important is that it has to be very cold up in the clouds for snowflakes to begin to form.



Snowflakes are really cool - one flake can be made of billions of particles of water! When a tiny droplet of water vapor* in a cloud is chilled to a freezing temperature (32° F or 0° C)* it condenses* on a speck of dust. It might seem weird, but there are billions of dust particles in the air - they are just too tiny to see with our eyes! When more and more frozen droplets begin to stick together they form a snowflake. All that weight from the group of frozen droplets make it too heavy to remain up in the cloud, so it falls down to the ground below.

Snowflakes are very delicate but also very intricately designed! If you want to get a closer look at them all you'll need are a few simple items:

- a piece of cardboard** - check the recycle bin for an old cereal box that you can cut up.
- a piece of black fabric** that is the same size as the cardboard - felt works best.
- a magnifying glass** - be sure to get permission first!



First, attach the fabric to the cardboard with some glue and let it dry - now you have made your viewing platform.

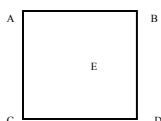
Next, put it in the freezer for a little while so it gets nice and cold. When it is snowing outside and you are warmly dressed, just take the viewing platform outside and let some snowflakes fall onto it. After you have a little collection you can take a closer look at them with the magnifying glass - you will be amazed!

Be careful not to breathe on them or they will melt quickly.

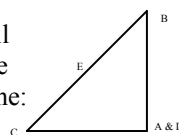
You have probably made paper snowflakes before but here are a few patterns to make some that look really neat!

No matter which patterns you plan to use, always begin with a snowflake base (steps 1 through 5) & always use square paper.

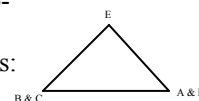
Step 1. Fold a piece of paper once diagonally so one pair of opposite corners meet.



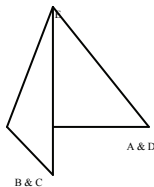
Your piece of paper will go from looking like the one on the left to this one:



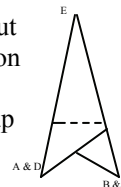
Step 2. Fold the opposite corners together again. Ending like this:



Step 3. Imagine there is a line from the top corner (E) that goes to the bottom edge. Fold the left side to this middle line. If you want, you can draw the line in lightly with pencil first. Your paper should now look like this:



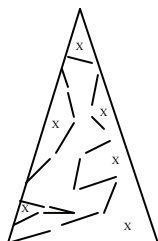
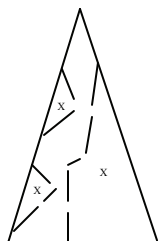
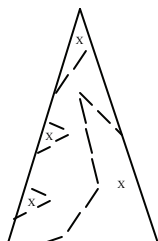
Step 4. Repeat Step 3. but this time fold the corner on the right (A&D) over the middle line. It will end up looking like this one:



Step 5. Cut off the bottom part of your folded piece of paper. A dotted line is drawn on the shape to the left to guide you.

You have now made a paper snowflake base! Use it to try one of the following patterns.

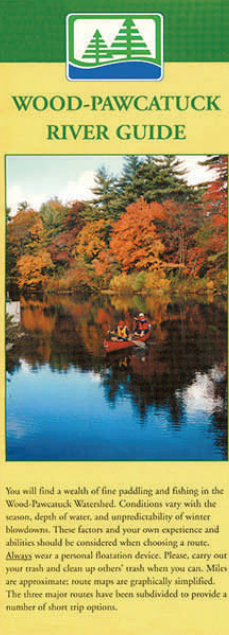
Once you have selected a pattern, carefully cut along the dotted lines to remove the parts that are marked with an X.



**YOU
CAN
DO
IT!**


*** VOCABULARY ***

32° F or 0° C are freezing temperatures. °F stands for degrees Fahrenheit and °C stands for degrees Celsius.
water vapor is a noun that means: molecules of water in the air that are produced by evaporation from the sun.
condense is a verb that means: a gas or vapor that changes to become a liquid or a solid.



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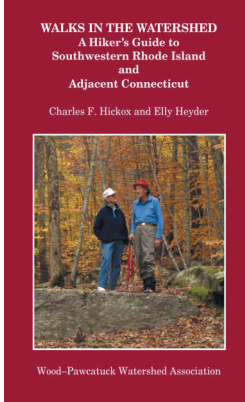
River Guide Qty: _____ Hiking Guide Qty: _____

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Send your submissions for possible inclusion in WATERSHED to info@wpwa.org



**WATERSHED
TECH CORNER**

Though quite different from previous Tech Corner articles, this issue of *Watershed* features an introductory article from the RI NEMO program. If you are not familiar with it, NEMO stands for Nonpoint Education for Municipal Officials. NEMO is a national network, with programs in over thirty states. Their goal is to provide decision makers with the skills and resources that they need to identify local water quality problems and to adopt effective pollution controls. The RI program offers training in the science, management, and regulation of water resources for community leaders and volunteer board members.

The RI NEMO program has worked with over 90% of Rhode Island communities since its inception in 1993. Providing support to the RI Dept. of Environmental Management, RI Dept. of Transportation, RI Coastal Resources Management Council, and RI HEALTH, RI NEMO continues to work on various projects of importance to the future of Rhode Island.

More info can be found on their website:
<http://www.uri.edu/ce/wq/NEMO/index.htm>

A New Way of Doing Business

By Lisa DeProspero Philo & Lorraine Joubert

For the first time in seventeen years, the standards by which Rhode Island contractors, builders, and even homeowners must manage stormwater have been updated. In December 2010, the Rhode Island Department of Environmental Management released the newly-revised *Rhode Island Stormwater Design and Installation Standards Manual*, and business is not going to be the same as usual.

If you experienced any of the severe flooding of last March, you might have given stormwater some consideration. However, problems related to stormwater do not end with flooding. In fact, stormwater is the top water pollution problem in Rhode Island.



Stormwater becomes polluted when it flows over paved surfaces, picking up any contaminants in its path. Those contaminants might include automobile fluids, grease, fertilizers, pesticides, and debris. This polluted water either flows directly into local water bodies or down drainage ditches and storm drains, which then channel it to local water bodies.

Stormwater is responsible for closing swimming beaches, destroying trout waters, degrading some of the state's most pristine water resources, and contributing to flooding.

The new Stormwater Manual addresses this form of water pollution by establishing standards that now require the use of "Low Impact Development" for new construction, redevelopment, and infill projects. The use of Low Impact Development represents a fundamental shift in approach, to new methods that specifically consider how to mimic nature to maintain the natural hydrology of a piece of land.

The release of this manual provides an opportunity for all of us to consider how we are managing stormwater on our own properties. For the next few editions of this newsletter, we'll be sharing some simple steps that homeowners can take to keep as much water as possible off of paved surfaces and to keep the water that does run off as clean as possible.



Wish you had a fly rod to practice casting with for the coming Spring?



A photo from WPWA's Learn to Fly Fish class held on the bank of the Wood River in July 2010.

From L to R: Jerry Gober, Al Manfredi, Peter Wolfe, Cecily Westervelt, Al Truchon, Rich Raggio, Jay Boyer, Christine Mulcahey, with Mal Rochford hiding behind her and WPWA's summer intern, Brittney Austin, on far right.

If you are a WPWA member - now you do! Thanks to the generous donation made by members of the Wood River Fly Fishing Club there is now a rod and reel at the WPWA campus that can be used on site during normal business hours. Cast on!

Opinions expressed in *Watershed* are not necessarily those of WPWA, its Board of Trustees, or staff.

Thank You to our Fall /Winter Sponsor of *WATERSHED*
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for their significant 2010 financial and volunteer contributions.

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