



Monitoring the White River: A School-Based Watershed Education Program

Winter 2015 Newsletter

The ice is still thick on many stretches of the river, but the days are getting longer and warmer temperatures seem like they may soon be reality more than fantasy. We know you're fast approaching the final busy stretch of the school year – it will be a busy season for us too. Here's a quick summary of what your fellow educators in the watershed have planned:

First up, a dozen schools will be helping us plant over 4,000 trees and willows in late-April and early-May. Many of these schools have scheduled MWR presentations about the benefits of strong riparian buffers. We'll host several River Day events at planting sites around the watershed too.

Just as planting season begins to wind down, The Watershed on Wheels (WoW) Express will be visiting two schools in our area. This mobile classroom is an amazing resource available free of charge to visit classrooms within our watershed as well as in the rest of the Connecticut River watershed. Check it out online (http://www.fws.gov/refuge/Silvio_O_Conte/visit/wow.html) or visit in person at our spring teacher workshop and networking meeting (see below for more info!).

Moving into May and June, we'll pull out the kick nets and dust off our crayfish traps. Nothing beats the river for an end of the school year science field trip to look for waterbugs and their larger crayfish cousins!

If you have any questions, are interested in learning more about MWR program opportunities, or would like to know more about our Lending Library, please contact Emily Miller at emily@whiteriverpartnership.org or (802) 763-7733.

The **MWR units** listed below can be tailored to address individual school goals.

- *Crayfish* – key members of river and riparian food webs and invasive species
- *Riparian Track & Sign* – evidence of wildlife activities along river corridors
- *Waterbugs* (benthic macroinvertebrates) – indicators of river health and water quality
- *Watershed Restoration* – on-the-ground projects that improve water quality and habitat:
 - Culvert replacements and retrofits
 - Trees for Streams riparian buffers and planting plans
 - Alternative stream bank restoration projects *and more!*

Save
the
Date!



The Wow Express in action!

Spring Workshop & Networking Meeting Tuesday, May 12th from 3:30-5pm South Royalton School

Would you like to learn more about bringing the WoW Express to your school? Want to learn more about Watershed for Every Classroom? Come explore the WoW Express' mobile watershed classroom; hear about the South Royalton School teachers' experience with the Watershed for Every Classroom program; and network with other teachers providing watershed education in their classrooms. We'll provide snacks to keep you sharp. Please RSVP to Emily: emily@whiteriverspartnership.org or (802) 763-7733.

Spotlight on Hartford Memorial Middle School

The 6th, 7th and 8th grade students from Hartford Memorial Middle School's Team Altitude feel pretty strongly about the importance of riparian buffers – particularly the buffer at Hartford's Watson Park. These 74 students decided to focus on buffers for their fall ecology study and, supported by their four teachers, have drawn on the expertise of the WRP and several other local organizations and individuals. They have collected benthic macroinvertebrates; measured buffers; learned to identify trees; researched and planned planting projects; created outreach materials, videos and websites dedicated to the importance of buffers; and worked with the Town of Hartford to implement the planting project.

The fall study's culminating event was an impressive (and huge!) community gathering of students, parents, members of the town's Parks and Rec Department, the Conservation Commission, and other supporters. Students decorated tables with riparian buffer placemats, trivia cards, and brochures; served a delicious meal; and shared information about what they had learned, all while running the slides and sound system in front of a very large crowd. Students were well prepared, well organized, and very poised – truly impressive!

HMMS' Team Altitude has enriched their study of riparian buffers by participating in MWR's Riparian Track & Sign unit this winter and planting trees to improve the existing riparian buffer at Watson Park this spring.



A Pomfret student pounds willow stakes in South Royalton. Each stake will grow into a lush and resilient willow whose roots will help stabilize the bank!

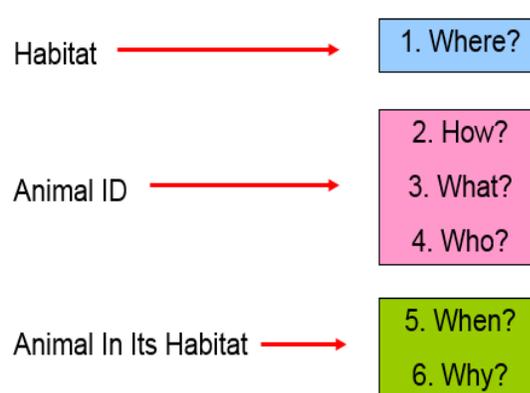
Spring – and tree plantings – are around the corner!

As you probably know by now, spring is tree planting season for the WRP. Each year the WRP depends on interested teachers and students to help us plant thousands of trees along the White River and its tributaries.

This year, we will again be offering a pre-planting classroom presentation to school groups that come out to plant. This presentation is part of our **Watershed Restoration: Trees for Streams** unit and in it we explain the rationale behind planting riparian buffers, the process for selecting tree species at each planting site, and more. As with all MWR units, we can adapt the presentation to suit different grade levels. Feel free to get in touch if you have any questions!

Riparian Track & Sign inquiry process

Tracking doesn't need to be frustrating. Less than ideal weather conditions – not enough snow, too much snow, dry snow, ice – can make it difficult to see the details of tracks in the winter, but you can still learn a lot about wildlife activity in the winter if you tweak your approach to tracking just a bit. We use a novel inquiry process in our **Riparian Track & Sign** unit (seen at right) that encourages us to look at the bigger picture and all of the information that's available and then gradually focus the lens to figure out whose tracks or sign we see.



We look at the habitat (Where?) and the track pattern, direction and speed (How?) before we observe the track or sign details (What?) and determine who they belong to (Who?). Details of tracks are often hard to see, whereas track patterns are often easily discerned. You can really narrow down the list of possible critters when you start to recognize those patterns!



This winter, students from Hartford's Memorial Middle School and the Ottauquechee School, Sharon Elementary, and the South Royalton School braved colder than average temperatures to explore the riparian habitats in their neighborhoods with MWR watershed educators Jenna Guarino and Emily Miller.

The MWR **Riparian Track & Sign** unit was also the topic of this fall's **Teacher Networking Meeting and Workshop**. Jenna Guarino led us in a discussion of the unit and an exploration of our teaching kit materials as well as the amazing skulls, pelts and tracks in the VT Fish and Wildlife's Furbearers Kit. Get in touch if you'd like details on how to access any of these amazing materials. Lastly a reminder to stay safe if you and your class head out to the river this winter. Check out a list of safety considerations in the online unit (www.whiteriverpartnership.org/teacher-resources).

A Hartford Memorial Middle School student points out some hopper tracks at a busy intersection at Clifford Park (see those walker/trotter tracks too?).



Snapshot of MWR's Watershed Education Network (participants since 2012)

<u>MWR Schools</u>	<u>Supporting Organizations & Agencies</u>
Bethel Elementary School Braintree Elementary School Brookfield Village School Chelsea Public School Dothan Brook School (Hartford) Hartford Memorial Middle School Mid-Vermont Christian School (Quechee) Newton School (Strafford) Ottauquechee School (Hartford) Randolph Elementary School Randolph Union Middle/High School Rochester School Sharon Elementary School South Royalton School Stockbridge Central School The Pomfret School The Sharon Academy Tunbridge Central School Vermont Technical College Whitcomb High School (Bethel)	Canaday Family Charitable Trust Clear Water Carbon Fund Couch Family Foundation Ecotone Education (Verdana Ventures LLC) Four Winds Nature Institute Friends of the Winooski Green Mountain National Forest Jack & Dorothy Byrne Foundation Lamson-Howell Foundation Mascoma Savings Bank Foundation Ottauquechee Natural Resources Conservation District Upper Valley Linkages for Environmental Literacy U.S. Fish and Wildlife Service Vermont Department of Fish and Wildlife Vermont Department of Forests, Parks & Recreation Vermont Water Quality Division Wellborn Ecology Fund
Questions about MWR? Emily Miller, WRP Monitoring Coordinator emily@whiteriverpartnership.org (802) 763-7733	Visit the White River Partnership's website for White River watershed information and maps, links to Water Quality Reports and other resources, and more: www.whiteriverpartnership.org