



ASRA News

Newsletter of the Ausable River Association | Winter 2008/2009

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Storey page 5



An example of green infrastructure. Picture taken while standing on the bridge over the West Branch Ausable River at Whiteface Ski Area looking west.

Ausable Watershed Focus 2009: Stormwater Runoff

When it rains water runs downhill. Along the way it picks up everything in its path – sand, motor oil, pet waste, grass clippings, fertilizer, road salt, and other toxic chemicals from roofs, lawns, roads, and parking lots. In a natural system, undisturbed by clearing and development, rain water soaks into the soil or is held in wetlands. This process filters pollutants and nutrients as the water is slowly released to streams.

Urbanization also has the effect of increasing flood levels. Parking lots, roads, and roofs reduce the amount of land that can “soak-up” rainwater; ditches and stormwater pipes intercept rain water and direct it quickly into streams and away from groundwater. When it rains it’s like a big garden hose being turned on; water blasts into the river increasing erosion and creating bigger and more frequent floods.

Smart Growth (green infrastructure) seeks to limit the



Stormwater runoff. Above, the direct route for stormwater; left, stormwater retention area. See page 4 for more.

number of stormwater entry points by disconnecting run-off from pipes. Green infrastructure applications keep stormwater out of storm sewers and ditches and reduce the amount of untreated stormwater entering rivers and lakes. Specific practices include green roofs, rain gardens, planter boxes, riparian buffers, and permeable or porous pavement. Some of these practices are described below.

Green Roofs:

Vegetated roofs not only improve storm-water management, they regulate building temperatures, reduced urban heating, and provide wildlife habitat. Green roofs can absorb between 15 to 90 percent of roof run-off, thereby significantly reducing

Continued on page 4...



**ASRA
BOARD OF DIRECTORS**

Jeanne Ashworth, Town of
Wilmington
Dirk Bryant - TNC
Anita Deming—CCE
John Eldridge, Town of North
Elba
John Lafferty, Chair
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Joe Moore
Mary Lou Moore - TU

Attendees

John Hopkinson, Upper West
Branch

STAFF

Carol Treadwell, Executive
Director

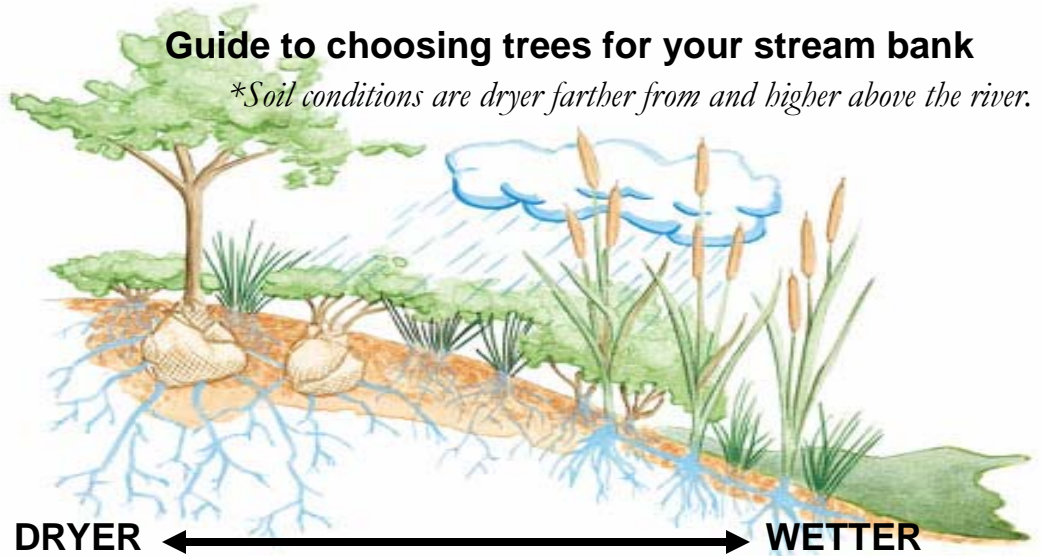
ASRA Board Meetings are held on the third Thursday of each month, 6:30 PM, at the Mirror Lake Beach House. Members are invited. Please call the ASRA office or email info@ausableriver.org to confirm dates and location.

Free Tree Seedlings for ASRA Members!

ASRA is offering tree seedlings to its members for planting on riverbanks. This is the second year of a project to reestablish riparian buffer along the Ausable River in order to reintroduce ecosystem benefits such as shading.

Guide to choosing trees for your stream bank

**Soil conditions are dryer farther from and higher above the river.*



Trees and Shrubs Available through ASRA

Trees:

E. White Pine →

Trees:

← E. White Pine

← Red Maple →

← White Spruce →

Shrubs:

Elderberry →

Trees: Silver Maple

Green Ash

Stream-Co. Willow

Shrubs: Red Osier

← Elderberry

← Wetland Rose

Arrows indicate that a plant can tolerate either a wetter or drier environment.

Riparian Tree Seedling Request

Yes! I'd like to receive free seedlings to plant on the banks of the Ausable River!

Name _____ Address: _____

Location of intended plantings: _____

Indicate below the number of tree seedlings that you will pick up at the ASRA office:

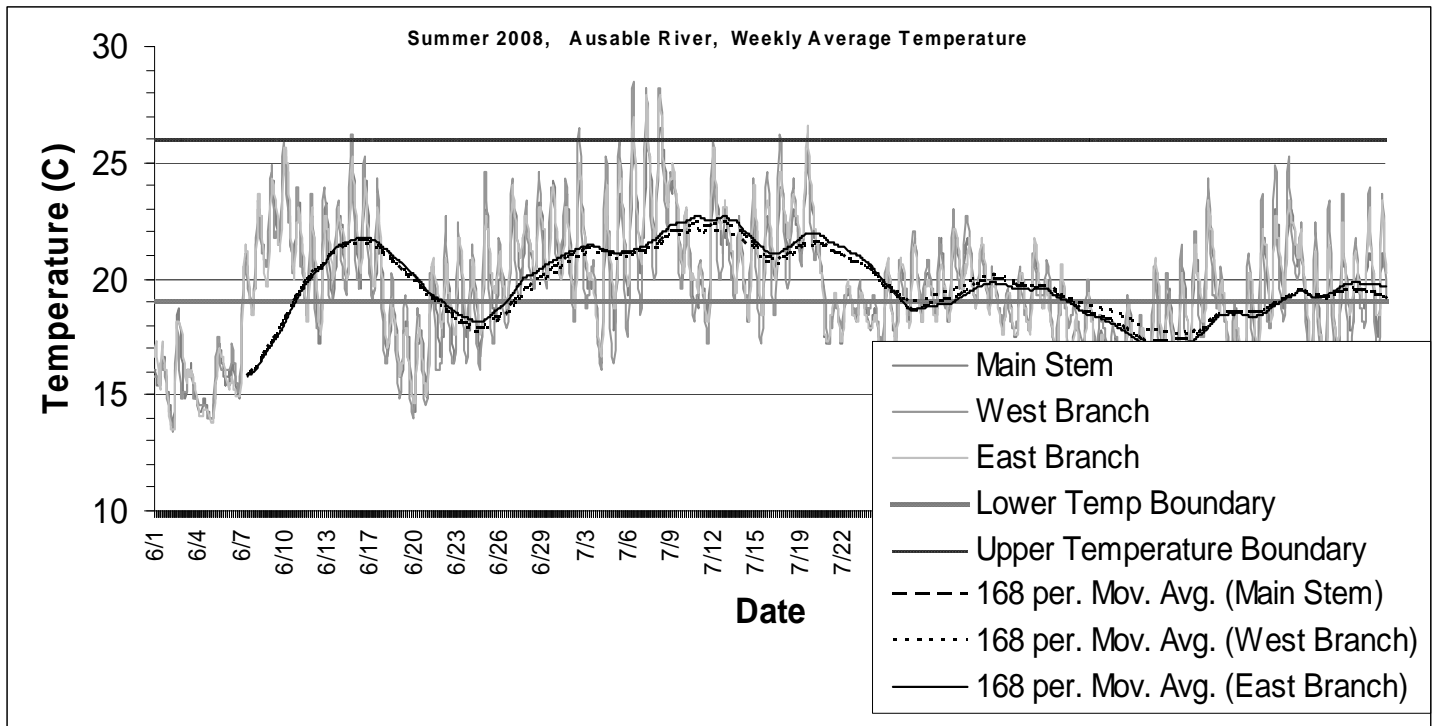
- | | | |
|---------------------------------------|--|--|
| <input type="checkbox"/> White Pine | <input type="checkbox"/> Silver Maple | <input type="checkbox"/> Red Osier Dogwood |
| <input type="checkbox"/> Red Maple | <input type="checkbox"/> Green Ash | <input type="checkbox"/> Elderberry |
| <input type="checkbox"/> White Spruce | <input type="checkbox"/> Stream Co. Willow | <input type="checkbox"/> Wetland Rose |

*The seedlings will be available the first week in May in time for spring, frost free planting. Plants come in bags and are bare root seedlings that require prompt planting.

**Send this form to: ASRA, P.O. Box 217, Elizabethtown, New York, 12932 before April 28, 2009.

OR e-mail your order to info@ausbleriver.org.

The Need for Shading the Ausable River



“Why are trout catches more abundant in the West Branch than in the East Branch?” It’s a common perception that the West has better tree cover, more deep pools, gorges, and waterfalls, and thus is blessed with cooler water temperatures. To date however, there has been no data collected nor scientific investigation published to quantify or qualify this hypothesis.

As a preliminary attempt to quantify any temperature difference, ASRA placed temperature loggers at three locations in the river – one each in the Main Stem, West and East Branches.

These little electronic wonders are the size of a quarter and record temperature hourly for the duration of their time in the river. The data is extracted to a computer spreadsheet after the loggers are taken out of the river.

Ausable temperature results are shown in the graph above. The chart shows hourly temperature fluctuations in grey. Weekly average temperatures are shown in black.

We were surprised to find very little difference in daily temperature between the three locations. Sometimes the East Branch was slightly warmer but there are also multi-day periods when the West Branch was warmer.

Weekly average temperature trends do show one alarming tendency. There are numerous episodes when average water temperature remains above that considered good for cold water fisheries. Temperatures between 19-26°C (68 to 79°F) are found to be the upper limits tolerable to trout (Eaton et al. 1995). In Southern Ontario streams with weekly maximum temperatures exceeding 22°C (72°F) had mar-

ginal or no brook trout populations (Barton et al., 1985). It is widely accepted that Brook Trout prefer temperatures at or below 20°C.

Although there are several interesting trends recorded in the data it presents more questions than answers and a more detailed study is needed. Possible changes to the placement of the loggers and more loggers placed in each branch will help clarify the temperature storey.

Thank you to Dr. Tim Mihuc at SUNY Plattsburgh, for providing the data loggers.

Eaton, J.G., 1995, A field information-based system for estimating fish temperature tolerances, *Fisheries*, v. 20, p. 10-18.

Barton, Taylor, and Biette, 1985, Dimensions of riparian buffer strips required to maintain trout habitat in Southern Ontario streams, *N. Am. J. Fish. Manage.*, v. 5, p. 36-378.

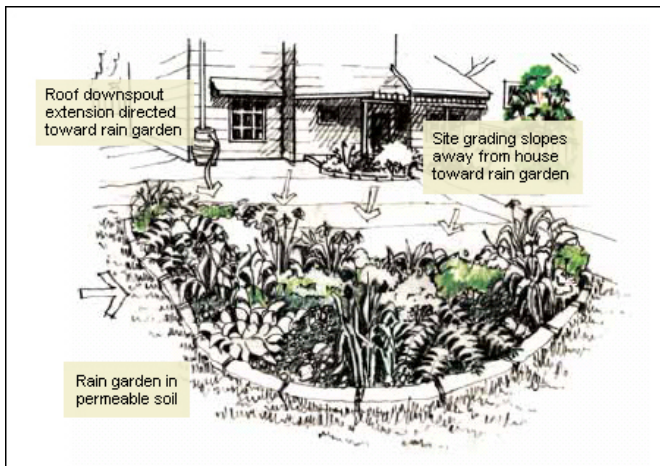
Green Infrastructure: Stopping

“Green Roofs” continued from page 1...

potential pollutants that traditionally come from impervious roof surfaces. To see an example of a Green Roof visit the Golden Arrow Resort in Lake Placid.

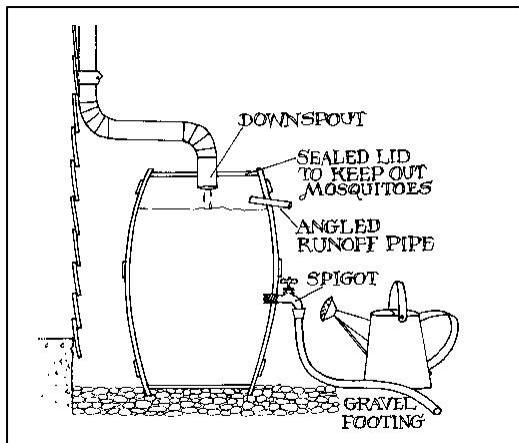
Rain Gardens:

A rain garden is a constructed depression. It is placed in such a way that it will collect runoff and permit water to be filtered and slowly absorbed by the soil. Rain gardens are planted with native plants that tolerate the local climate, soil, and water conditions without additional fertilizers.



Rain Barrels:

Disconnecting a home’s downspout from stormwater pipes and reconnecting it to a rain barrel is the simplest and cheapest way to keep stormwater on site and help restore the natural water cycle. Rainwater captured in a barrel gives unchlorinated, natural stormwater for watering gardens and lawns.



Vegetated Swales:

Vegetated, dry, wet, or stone-lined-stormwater swales are open, channel-like structures that are used to divert stormwater run-off. In some cases they are designed with permeable substrate and subdrains to enhance water infiltration.

Permeable Pavers:

Permeable pavers are made with a variety of materials which let rainwater drain through. Strong enough for patios and walkways and sturdy enough for driveways, they are placed on a layer of gravel so rain can slowly soak into the soil.



Porous asphalt can be used for large projects such as parking lots. As an added benefit the pavement facilitates snow and ice melt, dramatically reducing the amount of salt required for winter maintenance¹. Sanding the surface may clog the pores but even in cold weather climates the pores remain open all year permitting melted snow to drain through².

Summary:

In the U.S. urban areas cover 3% of the land and have caused the impairment of water quality in 13% of rivers². By comparison the Ausable Watershed is 4.7% urban cover³. It’s time for green infrastructure before the Ausable River becomes a statistic! The Ausable Watershed communities of Lake Placid and Wilmington have made several green infrastructure improvements; lets follow their lead! *See the articles on page 5 for details on how ASRA will assist its watershed communities to assess possibilities for clean water action.*

1 University of New Hampshire Stormwater Control research center.
 2 National Research Council, Committee on Reducing Stormwater Discharge Contributions to Water Pollution, report to the U.S. EPA, October 2008.
 3 Ausable River Watershed Management Strategy, November, 2008.

Stormwater before it gets to the River

ASRA's Role: Helping Municipalities Reduce Stormwater Runoff

Stormwater run-off has hidden pollutants that may be sneaking into our waterways... As discussed in the article in this newsletter, one way to prevent pollution is to capture run-off before it gets to the river. If the entry points to the river are not known however, it is difficult to ascertain a method for pollution prevention.

An Outfall Report consists of accurately locating each

area where stormwater enters the river. Possible entry points are pipes, culverts, bridges, ditches, or road and parking lot surfaces. The mapping is done with a map accurate GPS. Information about odor, water discoloration, and the condition of the outfall is recorded. The report is a useful tool that can be used by towns and villages to prioritize their highway maintenance schedule.

ASRA has secured a grant from the Environmental Protection Fund to conduct an outfall study and will be providing this useful information to the towns free of charge!

Highlight on Green Infrastructure...

Whiteface Mountain Ski Area Installs Two Vortech Units

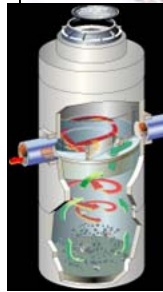
A project that ASRA has advocated for since 2005 finally came to fruition in fall 2008!

In April 2005, the ASRA director met with Whiteface Managers, a local engineer, and the Wilmington Town Supervisor to explore opportunities for reducing the amount of sediment entering the river from ski area parking lots, trails, and bridge. This vision was finally realized in 2008 when installation of two "Vortech" systems was coordinated with other construction projects at the ski area.

A "Vortech" is a concrete chamber which uses a swirling motion to separate the pollutants. It captures stormwater runoff, removes the sediment, oil, and grease and then discharges clean water.

Two of these units were installed on the west side of the Ausable River at the two corners of the Whiteface Ski Area bridge. The adjoining parking areas will be regraded in the spring to ensure that water is directed into the units, not the river.

The project came to fruition thanks to the efforts of numerous individuals at many offices and agencies. Funds to purchase the units came from the Environmental Protection Fund (EPF) secured through a grant written by the Essex County Planning Department and awarded by the Department of State (DOS). The grant required a 50% match which was paid for by the Town of Wilmington's water project



Vortech being installed at Whiteface Mountain Ski area November 2008.

fund. A funding shortfall threatened to derail the project however. ASRA asked Essex County Soil and Water District (SWCD) to step in and at the 11th hour the funding gap was closed with monies from the Champlain Watershed Improvement Coalition of New York (CWICNY) which is partly funded by Aid to Localities monies earmarked by Senator Little. This funding paper trail sounds like a bowl of spaghetti! Indeed, bringing municipalities, government agencies, and NGO's together to protect the environment is no free lunch!

Thank you to all who worked to bring this project to fruition!!!

If You Can't Beat 'Em..... let the Beetles Eat 'Em!

Using Biocontrol to Conquer Invasive Plants in the Ausable Watershed

Some of our readers may remember "If You Can't Beat 'Em, Eat 'Em!" published in the ASRA summer 2008 newsletter. This tongue in cheek title introduced a factual article with recipes for cooking with invasive plants. Below we highlight a beetle that consumes purple loosestrife. The *Galerucella pusilla* beetle doesn't require sugar and salt for its invasive recipes, it just eats 'em raw!



The Culprit:

Purple loosestrife was introduced to the U.S. and Canada in the 1800's from Europe as seed in soil used in ship ballast. It was also imported as an ornamental and medicinal plant.

Once established in North America, this invasive quickly spread to wetlands and waterways in all 50 states except Florida and Hawaii. Purple loosestrife quickly crowds out most native wetland plant species, such as sedges, rushes, cottontails. The result is loss of waterfowl nesting habitat, amphibian and algal communities, reduced water flow and quality, disruption of transportation, and degradation of hunting and fishing areas.

Once established, purple loosestrife is difficult to get rid of; hand pulling is ineffective and without continued use of herbicides, purple loosestrife is reestablished and spreads (Gabor et al., 1996).



Beetles

Coming to a Wetland

Near

You!

widespread damage later.

ASRA was awarded a grant from the Lake Champlain Basin Program to purchase and distribute *Galerucella pusilla* (purple loosestrife beetles) (see above).

The Project Area: The beetles will be released into four dense stands of purple loosestrife on the shore of Mill and Power Ponds in Lake Placid. The stands are upstream, up gradient, and upwind of the West Branch of the Ausable and could easily spread rapidly into pristine wetlands if not checked now. The West Branch is relatively "weed free" and early intervention could eliminate costly and more



The Hero:

Galerucella pusilla (Golden loosestrife beetle) is a leaf feeding beetle and the larval feeding is especially destructive to purple loosestrife (Wilson et.al, 2004). *Galerucella pusilla* feeds only on purple loosestrife so once the loosestrife population disappears the beetles either die out or move on to another infested wetland (Wilson et.al, 2004).



Biocontrol is far more beneficial than hand pulling or herbicide application for several reasons: 1) it requires fewer human work hours 2) it eliminates the need for introducing harmful chemicals into sensitive wetland areas (Blossey, 2002), and 3) it is economically more beneficial because beetle populations are self-perpetuating thus eliminating repeated herbicide purchases.

In favorable conditions, the beetles will eliminate an overgrowth of purple loosestrife within 4 to 5 years. The beetle population will then decline unless they move on to nearby purple loosestrife stands.

Blossey, B., 2002, www.invasiveplants.net/InvasivePlants/purpleloosestrife.asp.

Wilson, L, 2004, Biology and Biological Control of Purple Loosestrife: U.S.D.A. Forest Service Publications, FHTET-2004-12.

Beetle releases in nearby areas have proven to be a successful management tool –examples include a wetland at Saranac Lake High School and a wetland in Waddams, New York (Steven Flint, Adirondack Park Invasive Plant Program, and Meiyin Wu, SUNY Plattsburgh, oral communication).

ASRA will be working with the Mirror Lake Watershed Association to distribute and monitor beetle consumption. If you would like to volunteer call 873-3752.

ASRA Creel Survey

As all you fisher-people out there know, the Ausable River Association has been collecting information on fish catches from the West Branch of the Ausable "Catch and Release" area since 2004.



A preliminary look at the data shows Brown Trout between 8 – 10 inches are the most frequently caught. The greatest fishing success within this size class is in survey Reach 5 (the river stretch upstream from the Flume). *SHHHH! don't tell anyone!*

ASRA is seeking funds to pay a student to do data entry for further data years and to work with a fisheries expert on the analysis. Not only will the final analysis be helpful to DEC Fisheries managers, it will support the education of a young biologist.

If you wish to donate to the Creel Survey Fund please find the Membership Form on the next page and check off "Creel Survey" in the specified donations section.

Thank You!

The Affect of Climate Change on Adirondack Rivers

There is mounting scientific evidence that global warming is affecting climate and ecosystems in the Adirondacks. The annual average temperature in the Adirondack region has warmed approximately 2 degrees Fahrenheit (F) since 1970 and winter average temperature has increased 4 degrees F. Moreover, climate models predict that the region could warm by another 5 to 12 degrees F. This prediction anticipates that more of the winter season precipitation will come as rain rather than snow and there will be an increase in extreme precipitation events with more intense rain and longer periods of rain. Streams will experience increases in discharge during winter and early spring, and lower water levels in late summer and early fall. The implications that

these changes have on river channel geometry, geomorphology, and ecology are profound.

A study of rivers using data from USGS stream gauges (Chiarenzelli, 2008) shows that on average, the discharge of Adirondack rivers has increased over the last 100 years of record. The Ausable discharge has increased by 8%. Chiarenzelli attributes changes in discharge to increases in regional precipitation but fails to find a link to climate warming. This interpretation is open to comment and further study is needed.



Chiarenzelli, Jeffrey R., 2008, Adirondack River Discharge During the Last Century, Adirondack Journal of Environmental Studies, v. 14, no. 2, pp. 14-21.
Frumhoff, Peter, 2008, Confronting Climate Change in the Northeast and the Adirondacks: Conference notes from "The American Response to Climate Change," Wild Center, November 18-19, 2008.

2008 Ausable River Association Business Donors THANK YOU!



Champlain & Tri-Lakes Chapters



- Adirondack Community Trust— North America Sports Community Fund



ASRA 10 year Celebration



The Ausable River Association celebrated its 10th anniversary on October 13, 2008. Thirty-four people turned out to celebrate and enjoy a sumptuous picnic dinner at Lake Everest Beach.



An Annual Report was presented by the Director followed by the drawing for the winner of the Canoe Raffle. As a birthday present everyone went home with an "Ausable River" T-shirt!

Thank you Adirondack Life for donating T-shirts to our 10 year Anniversary Celebration!



Thank you to everyone who contributed food to the picnic; everything was delicious!

And the Winner Is.....

The winner of the Placid Boatworks Spitfire Canoe is Patter Field. A long time ASRA member, Patter's family owns one of the oldest summer camps on Lake Everest. It was built in 1911 and purchased by her parents in the 1940's. Look for the green Spitfire as it navigates the waters of Lake Everest for many summers to come!



Carol displays the winning ticket with Joe Moore owner of Placid Boatworks, donor of the canoe.



Executive Director, Carol, talks with life time member, Nathan Farb.

2008 Members

Thank you for Supporting the Ausable River Association!

- | | | | |
|-------------------------|------------------------------|----------------------------|---------------------------|
| Anonymous (1) | M. Patterson Field | Ruth Kuhfahl | David Page |
| Diane Althans | Mr & Mrs J.G. Jr. Fritzinger | Joan & Miles Kulukundis | Patagonia, Inc. |
| Mary Ashmead | Dick & Susan Gaffney | Wes & Bethany Krawiec | Mr & Mrs Robert Peters |
| Jeane Ashworth | Dr. & Mrs. Nelson Gelfman | John Lafferty | Edward Prince |
| Joseph Barile | Tony Goodwin | Gary Lanzoni | Vic & Vickie Putman |
| Mary Barrie | William J. Grempp | Phillip Lobo | Ralas Timber, Inc. |
| Terry Blank | Louise Gregg | William Trigg Long | Karen Rappaport |
| Tom Both | Leita & William Hamill | Pam Machold | Riverside Lanes |
| Joan R. Burchenal | John Hopkinson | Paul Martin | Rich Rogers |
| Kara Page & Dirk Bryant | Brett Heineman | David Mason | Carol & Richard Rupprecht |
| Philip Conway | Hungry Trout Resort | Christopher McGill | John Ryan |
| Linda B. Cooley | Hungry Trout TCO Fly Shop | Constance Miller | Arthur V. Savage |
| Richard W. Dahlia | Audry Hyson | John W. Mills | Sara Schoetz |
| Linda S. Deyo | Michael and Nancy Ingersoll | Sarah & Robert Moench | Mimi & Skip Shinkle |
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| Anita Deming | Robert Jeffery | Connie Morrison | The Stover Family |
| Jennifer Deming | William J. Johnson | Susan Lourie & Eric Mosher | Barbara Strowger |
| Hollis G. Duensing | Jones Outfitters, Ltd. | The Mountaineer | Town of Jay |
| Lorraine Duvall | Susan Katz | Megan Murphy | Ann R. Treadwell |
| John Eldridge | Heidi & David Kerko | Michael Murray | William Wellman |
| Nathan Farb | Edward Kerr | Jim and Rosemary Olmsted | Kathleen Wiley |
| Yvonne Farmer | Warren Kries | Stanley Orlowski | Whiteface Chalet |

MEMBERSHIP FORM

Please complete this form and return to:

Ausable River Association
P.O. Box 217
Elizabethtown, NY 12932

- | | |
|---|--|
| <input type="checkbox"/> Eagle (\$1,000+) | <input type="checkbox"/> Brook Trout (\$250-499) |
| <input type="checkbox"/> Tiger Trout (\$500- \$999) | <input type="checkbox"/> Brown Trout (\$50-99) |
| <input type="checkbox"/> Rainbow Trout (\$100-249) | <input type="checkbox"/> Member (\$30) |

Double your donation! Support one of the projects below and your membership dollars will be matched \$1 for \$1 with grant money!

- I would like to donate to:
- | | |
|---|---|
| <input type="checkbox"/> Ausable Watershed Planning | <input type="checkbox"/> River Channel Assesment |
| <input type="checkbox"/> Creel Survey | <input type="checkbox"/> Invasive Species Mapping |
| <input type="checkbox"/> Water Quality Testing | |

Name: _____ Address: _____

City: _____ State: _____ ZIP code: _____

E-Mail: _____ Telephone: _____

_____ Please Save Paper; Send me E-News!

ASRA is a not-for-profit 501(c)3, your donation is tax-deductible to the extent allowed by the law.



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Elizabethtown, NY

**NEWSLETTER OF THE
AUSABLE RIVER
ASSOCIATION |**

P.O. Box 217

Phone: 518-873-3752

Fax: 518-873-3751

E-mail: info@ausableriver.org

**Working to protect and
enhance the cultural and
natural resources of the
Ausable River Watershed.**

**AUSABLE RIVER ASSOCIATION
WINTER 2008-2009 NEWSLETTER**

Test Your Watershed Smarts

- 1) What is a watershed?
 - A. A shed that stores water
 - B. The area of land that drains into a river or lake
 - C. A spot that has hard rock that sheds water
 - D. A new way of organizing water related environmental agencies
- 2) How do roads and construction near streams in the watershed affect the river?
 - A. It can cause siltation of the stream bottom
 - B. It can cause excess nutrients to enter the stream
 - C. It holds up the banks
 - D. A and C
- 3) A single quart of motor oil dumped down a street drain creates an oil slick of what size in the adjacent river or lake?
 - A. No slick, oil sinks to the bottom of the street drain and into a container
 - B. No slick, oil travels from street drains to a treatment plant
 - C. 160 square feet
 - D. 2 acres
 - E. About the size of the Exxon Valdez spill
- 4) How many fecal coliform bacteria are produced by an average sized dog dropping?
 - A. 49
 - B. 1200
 - C. 3 billion
- 5) Why are forests important to watersheds?
 - A. Tree roots hold up the river banks
 - B. Trees and grasses slow the flow of water thus reducing erosion
 - C. Trees soak-up water thus reducing the amount of runoff and erosion
 - D. All of the above
- D. What a disgusting question!
- E. Trick question, dogs only produce fecal streptococci bacteria.



Answers: 1.B, 2.D, 3.D, 4.C, 5.D