Conservation Currents

Northern Virginia Soil & Water Conservation District

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Volunteers Tackle Park's Invading Plants

The Fairfax County Park Authority is getting serious about weeds! Last spring, in response to citizens' complaints about the decreased beauty and deteriorating ecological value of their parks caused by invading weeds, and spurred by development of the park's first ever Natural Resource Management Plan in January 2004, FCPA began recruiting and training volunteers to take on six of the most aggressive, unwanted plants in Fairfax County's parklands.

The six plants, kudzu vine (*Pueraria montana var. lobata*), Japanese barberry (*Berberis thunbergii*), winged burning bush (*Euonymus alata*), English ivy (*Hedera helix*), mile-a-minute (*Polygonum perfoliatum*), and Japanese stiltgrass (*Microstegium vimineum*), are all weeds that reproduce readily and spread rapidly, often smothering other vegetation. Mile-a-minute, for example, can grow up to a half a foot per day!

All six plants also are included on the Virginia Department of Conservation and Recreation's list of invasive alien plants (http://www.state.va.us/dcr/dnh/pdflist.htm), a list of weeds that have spread or been introduced to Virginia, and which are threatening to overwhelm the state's natural areas. Additionally, all six are relatively easy to identify and can be removed without herbicides, by hand pulling or by using simple tools.

The goals of the park authority's new weed management initiative, nicknamed the IMA (or invasive management area) program, are to control these targeted weeds at specific sites and, ultimately, re-plant parkland with a variety of native plants.

Neighbors and local boy scouts adopted Rutherford Park in Fairfax, which was overwhelmed by English ivy (top). The removal of the ivy (bottom) will allow natural forest understory the opportunity to grow.

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Local NRCS Office Welcomes New Staff

In November, the district welcomed Arlen Ricke, Watershed Resources Planning Specialist with the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) to Fairfax County, where he will work in the federal agency's local office.

Conservation districts, including the Northern Virginia district, work closely with state and federal staff to implement national and state-wide conservation initiatives at the local level. In Fairfax County, the district is fortunate to share office space with the NRCS, our federal partner. NRCS staff offer technical expertise in soil science, engineering, plants and water resources to conservation districts, and work with them to encourage soil and water resource stewardship among local land managers. For the last several years, for example, NVSWCD worked closely with NRCS soil scientists to update the Fairfax County soil survey.

Ricke, however, is the first full-time, permanent employee to staff the Fairfax County NRCS office in 2 years. Ricke's challenge is to adapt NRCS' goals, which focus on traditional agriculture, to Fairfax County's suburban demographic. Ricke is an NRCS career employee with 19 years of experience working with agriculture in Kansas and New Mexico. Most recently, Ricke administered an NRCS office that dealt with 2 conservation districts and 5 tribal governments in the vicinity of Albuquerque.

Despite Albuquerque's western location and smaller size, Ricke feels his experience working with the New Mexico city's suburban districts has prepared him for the challenges he'll face in his new NRCS post. His administrative experience at the agency will also help him negotiate philosophical and bureaucratic hurdles, as he guides Fairfax County's NRCS office beyond the status quo.

Initially, Ricke will be working with district employee,

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Reprinting Articles

IMA program continued from page 1

A jungle once grew at Mason District Park in Annandale. Mile-a-minute vine and other non-native invasive plants dominated this clearing.

IMA program volunteers use tarps and mulch to smother the weeds. After several seasons, the tarps can be removed and the area replanted.

The park authority wants to re-create habitats that support local wildlife and maintain ecosystems that perform valuable processes that help keep our air and water clean. At the same time, the program provides volunteers with the opportunity to get outdoors, meet others, and make a difference in the park down the road or in their neighborhood.

Volunteers can participate in the IMA program as a site leader or as a one-time volunteer. Site leaders adopt an IMA location in their local park, and recruit friends, family, neighbors and groups to work with them to control the weeds prevalent at that site. Initially, group leaders guide their teams in pulling or smothering unwanted plants. Eventually, when weed populations have been controlled, re-planting of the site can take place. For volunteers who would like to help when they can, removal and planting events are posted on the IMA on-line calendar (http://www.fairfaxcounty.gov/parks/resources/nrp-ima.htm).

In 2006, more than 700 volunteers participated in the IMA program at 21 park sites throughout the county. Re-planting events were held at six of the IMA locations. Several sites still have additional weeding to be done. The remainder will be monitored for weed regeneration this spring, and planted if weeds have been adequately controlled.

Kathy Frederick, the IMA volunteer coordinator, attributes the success of the IMA program to the dedication of its volunteers. Most of the 21 site leaders who participated in the program in 2006 plan to continue their volunteer efforts during the 2007 season. And, although IMA's official work period ended in October, several are continuing to work at their local park throughout the winter.

In 2006, funding for IMA came from monies set aside by the Fairfax County Board of Supervisors to support its environmental agenda. An additional $50,000 in funding through the National Fish and Wildlife Foundation's Chesapeake Bay Small Watershed Grants program will enable the park authority to keep IMA going this year.

For spring 2007, Frederick is hoping to recruit 10-20 additional site leaders for the IMA program and is considering expanding the list of target weeds to 10 total species. "We want neighbors to care about their parks and to take a vested interest in them," Frederick says. "We also want to improve our ability to manage our parklands and protect the natural resources the public values. The IMA program is helping us do that."

To become an IMA program volunteer, contact Kathy Frederick at 703-324-8681, TTY 711 or email her at Katherine.Frederick@fairfaxcounty.gov.

Volunteer Monitoring Demonstrates Tree Plantings Help Stream Ecosystems

by Dr. Greg Noe, U.S. Geological Survey; Meghan Fellows, Fairfax County Park Authority; and Joanna Cornell, NVSWCD

Local streams receive plenty of abuse. Hit with pollution, storm runoff, and deforestation, both next to the stream (called the "riparian zone") and within their watershed, we know that stream ecosystems are not what they used to be. Stopping these stresses and improving stream health will take the efforts of every resident, business, and government agency within our county. Strong scientific evidence supports the benefits of stream restoration, including planting vegetation in the riparian zone. However, information about the health of streams following restoration would be needed to help prioritize the locations and designs of future planting efforts.

Fairfax County, the Fairfax County Park Authority, and the nonprofit Earth Sangha have worked with volunteers to revegetate nearly 30 stream riparian zones since April 2005. The U.S. Geological Survey and NVSWCD are now monitoring and evaluating the effectiveness of one of these riparian plantings in restoring stream health. With the help of something called an "iButton", a tiny temperature monitoring device, we are evaluating the impact of riparian zone restoration on stream temperature at Lake Fairfax Park in Reston.

Volunteers replant the riparian zone at Lake Fairfax Park. The stream passes through the planting area (right) into a mowed, open field (background, near footbridge).

The riparian restoration planting we evaluated was located just below the dam at Lake Fairfax Park, in a formerly mowed area where the field was too wet for recreation and mowing equipment was getting stuck in the mud. After an enormous volunteer planting effort, the area around the stream is now flourishing with wildlife and native plants like ironweed and sycamore saplings. But stream health is more than having the right plants and wildlife – it is also about having the right range of water temperatures. Too hot, and the water doesn't have enough oxygen to support fish and insects. Hot water also speeds up some chemical reactions and the breakdown of organic matter, which can lead to a lack of food, too many nutrients, and oxygen deficiency.

Soon after planting at Lake Fairfax Park, volunteers began monitoring stream-water temperature. iButtons make collecting data on water temperature easy: they are the size of a stack of four dimes, relatively inexpensive, automatically store temperature at programmed intervals (every 30 minutes for us) over long time periods, and can be downloaded with a Palm Pilot. About once a month, in hot, freezing, wet, windy, or occasionally mild weather, the volunteers wade into the stream to download data from the iButtons.

An iButton.

The stream at Lake Fairfax Park is a shallow and narrow headwater stream that starts at a seep where ground water emerges from a hillside and ends 200 yards later when it joins the larger Colvin Run. From upstream to downstream, we've installed iButtons at five locations within the stream: just downstream from the ground-water seep; two sites in the currently forested riparian zone; in the riparian plant-

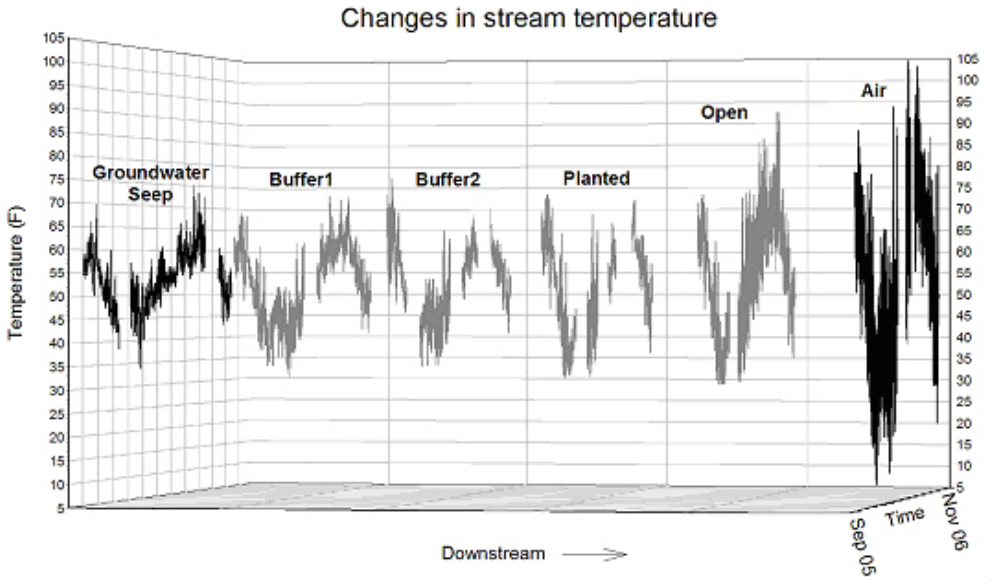
Intrepid volunteer stream monitors Kathy Frederick (left) and Debbie Humphreys (right) download data from an iButton at the planted riparian site.

ing area between the forest and mowed grass where a few small trees, shrubs and tall grass now grow; and lastly, in a completely open area where grass mowing continues. An iButton also hangs off a tree to compare water and air temperature. Despite a few data gaps due to ornery iButtons or losing an iButton in the muck, over 100,000 measurements now document the influence of our land management on water temperature.

What is the effect of riparian vegetation on stream temperature? It depends on the time of year. When the air is cold, the water temperature also gets cold. In winter, the water got colder and colder as it flowed downstream from the ground-water seep (which has a relatively constant temperature), through the vegetated riparian areas and into the unplanted open site. During the coldest weather, the stream at the open, unplanted site froze solid for days, which rarely happened at the planted site just upstream. Vegetation at the planted site likely helped block the frigid winds and protect the stream. Needless to say, a solidly frozen stream is not a good place for wildlife, especially those that live in water!

But, in the summer, when it is hot, the water temperature got really, really hot. Where there was no vegetation, the stream temperature got extremely hot in the middle of the day in June, July, and August compared to the planted and forested riparian sites. At times, the stream water at the open site heated above 90°F – that was 18°F hotter than at the planted site just upstream where tall grass, shrubs, and trees shade the water.

Trees and shrubs help shade streams from solar heating during hot weather and help insulate streams from freezing weather. The extremes of our weather can lead to 'fire and ice' in streams without vegetated riparian zones. This buffering effect of riparian plants on stream temperature is crucial for maintaining good stream ecosystem health. Of course, trees in the riparian zone also provide food and homes for wildlife and help maintain water quality. As the trees grow and the canopy fills in, we'll continue to track stream temperature as evidence of the importance of maintaining and restoring vegetation along our streams.♦



Stream temperature at the five iButton monitoring locations from September 2005 to November 2006. Temperature changes registered by the iButton in the open, mowed field are more extreme than those where vegetation is present. Air temperature is also shown to compare with stream temperature.

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Meherrin is Newest Scenic River

by Amanda Mullins
Reprinted from Virginia Water Central *(September 2006, No. 39)*

On June 25, 2006, at Gholson Bridge near Lawrenceville in Brunswick County, Gov. Tim Kaine designated a 37-mile portion of the Meherrin River as a State Scenic River, making it the newest addition to the Virginia Scenic Rivers Program. The Scenic Designation Bill signed by the governor was originally introduced in the 2006 Virginia General Assembly as House Bill 104 and Senate Bill 527.

In Virginia, the Meherrin River flows southeasterly for over 100 miles before it eventually crosses into North Carolina and merges with the Chowan River. Largely undeveloped and providing significant natural habitat, the Scenic River section also includes two historical sites, Fort Christanna and Gholson Bridge. Such natural and historical features are key considerations for those who determine if a river segment merits designation as a Scenic River. Recreational features are also important, though such features were not a key factor in the Meherrin's designation.

The Brunswick County/Lake Gaston Tourism Association coordinated the Meherrin designation process. Bobby Conner, vice president of the association, explained why concerned community residents decided to seek protection for their river: "Our main reason was to protect the river for future generations," he stated in an interview.

Scenic-river designation signing ceremony at the Gholson Bridge over the Meherrin River on June 25, 2006.

Photo courtesy of Bobby Conner. Reprinted with permission.

Virginia's Scenic River Program began with the Virginia Scenic Rivers Act of 1970. Today the Scenic River system spans over 437 miles, consisting of 17 Scenic Rivers and two Historic Rivers. According to the program's web site, designation as a Scenic River "encourages protection and preservation of the river; declares the protection of a river's scenic values to be a beneficial purpose of water resource policy; requires appointment of an administering agency, usually the Department of Conservation and Recreation (DCR); and requires the Virginia Scenic Rivers Advisory Board…to advise the director of DCR on the federal, state, or local plans that impact the designated river segment and to give local citizens a voice in river-related issues." In addition, dams (or any other flow impediment) affected a Scenic River cannot be built unless the General Assembly approves such a project.

According to Lynn Crump, Environmental Programs Planner, the development along a river is generally not affected; however, if a project requires state or federal approval, the river's designation must be taken into consideration. Also, landowners do not lose control over their lands if a river is designated a Scenic River; designation does not give the public access to a river segment, and the state cannot control private land use. Moreover, landowners are not responsible for any additional taxes.

The designation process usually begins at the local level. Generally, concerned citizens or groups contact the DCR's Division of Planning and Recreation Resources and begin a dialogue. Then, local meetings are held, and a local advisory committee is formed. After the local board of supervisors or county administrator sends a letter to the DCR officially requesting evaluation of a river segment, DCR officials visit the locality and conduct field studies.

Scenic River continued on page 8

*New for 2007!
2 more plants,
(almost) same low price!

2007 Native Seedling Sale

"Winter is Our Season" Collection

We've added a groundcover to our traditional tree and shrub package! Christmas fern, a gorgeous, evergreen groundcover will brighten your shady areas and control erosion year-round. However, like the dogwood's beautiful bark and the bright berries of holly, we most appreciate it's determinedly green leaves in winter. You will enjoy the seedlings in this year's package throughout the year, but a few remind us to set our hearts towards spring.

16 Plants for $17.95! Supplies are limited. Order now! *

To see images of each plant, visit www.fairfaxcounty.gov/nvswcd/seedlingsale.htm

2 River birch (*Betula nigra*). Deciduous multi-stemmed tree valued for its attractive, peeling bark and clear yellow fall color. Tolerant of dry sites, but prefers moist locations. Likes sun or partial shade. Height: 50-75 feet. Spread: 35-50 feet.

2 Red osier dogwood (*Cornus sericea*). Hardy, low-growing (6 to 10-foot) deciduous shrub. Grows well in sun to full shade. Branches stay brilliant red throughout the year. White flowers in spring and white berries in fall. Often used for erosion control, stream bank protection, and wildlife food.

2 Buttonbush (*Cephalanthus occidentalis*). Height: 15-20 feet. Spread: 15 feet. Deciduous shrub or small tree grows well in sun to partial shade and in moist conditions. Bright, glossy green foliage. Showy, fragrant, cream-colored ball-shaped flowers bloom in summer followed by rust-colored nutlets that persist through the winter. Great source of food for birds and butterflies.

4 Winterberry holly (*Ilex verticillata*). Versatile, deciduous shrub grows to 10-12 feet. Flourishes in sun or full shade, and tolerates dry to saturated soils. Inconspicuous summer fowers on female plants, become brilliant red berries that persist from August to February. Male plant needed for pollination, but is not showy. A favorite of birds!

2 White oak (*Quercus alba*). Common tree of dry to moist woodlands, and a majestic shade tree for the home landscape. Leaves turn a coppery red in fall and may persist into winter. Produces acorns, a wildlife staple. Prefers sun to partial shade. Height: 75-100 feet. Spread: 75-100 feet.

4 Christmas fern (*Polystichum acrostichoides*). Glossy green, stocking-shaped leaflets are evergreen. A wonderful groundcover for part to full shade and moist locations. Grows in clumps and can be divided. An attractive addition to the naturalistic or formal garden.

A full, nonrefundable payment must accompany your order by ***April 16, 2007,*** *or until supplies run out. You will receive a confirmation receipt and a map to the pickup site (in Fairfax County, off of Braddock Road, two miles outside the Beltway, near Rolling Road). These bare root seedlings may be picked up on* ***Friday, April 20, between 9:00 a.m. and 4:00 p.m., or on Saturday, April 21, between 9:00 a.m. and noon.***

2007 Seedling Order Form

Name: _____

Address: _____

City/State/Zip: _____

Daytime Phone: _____ Fax (if available): _____

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Make your check payable to NVSWCD and mail to:
NVSWCD Seedling Sale
12055 Government Center Pkwy, Suite 905
Fairfax, VA 22035

Where did you hear/read about our seedling sale? _____

_____ **Seedling Packages @ 17.95** (sales tax included) **each = $** _____

New Staff continued from page 2

Willie Woode, to implement NRCS programs that provide financial support for resource protection and support conservation planning among the county's horsekeeping community. He'll also be involved in efforts to rehabilitate dams in the Pohick watershed.

Fairfax County, Ricke says, is currently "not really on the federal NRCS radar." One of his primary goals is to change that. Ricke plans to use NRCS tracking and data gathering tools to obtain credit at the federal level for the district's local conservation efforts. "There are conservation needs here and important work to be done. We need to bring Fairfax County's needs to the attention of Congress."

Ricke moved to Fairfax County to join his wife, also an NRCS employee, who is assigned to the service's Washington, DC headquarters. It was always the couple's intention to end up in the DC area, "We're just here a bit sooner than we thought," he quips. NVSWCD is definitely happy about that fortunate change in plans. ♦

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Then, a final report is prepared, and a designation recommendation is issued. Landowners, civic groups, local government officials, and local members of the General Assembly typically are involved in the process at one point or another.

For more information about the Scenic Rivers Program contact Lynn Crump at (804) 786-5054 or visit the program's web site at *www.state.va.us/dcr/prr/srmain.htm*. ♦

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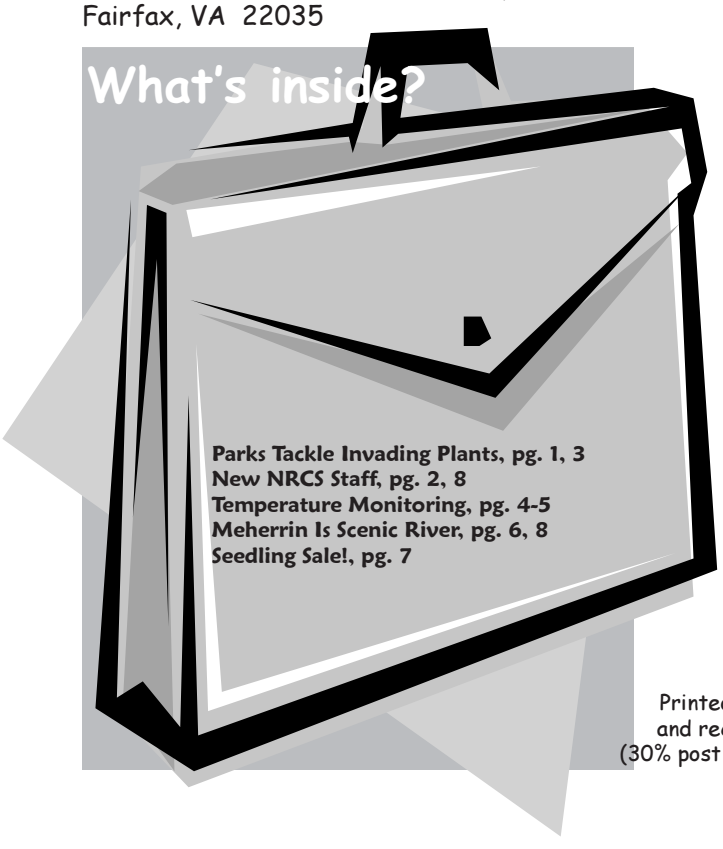

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