

Environmental Day Camps Promote Environmental Stewardship in the Middle James Region

By Robin Buckalew, Piedmont SWCD

Farmville, VA. - We make decisions every day that will either improve or degrade the watershed where we live. To help young people understand the connection between actions and consequences in the watershed, the Piedmont SWCD, together with the Peter Francisco SWCD, offers a summer day camp called Environmental Day Camp for rising sixth and eighth graders.

Campers get their feet wet and their hands dirty at Environmental Day Camp (EDC). Active involvement in field-oriented educational activities is the hallmark of this weeklong day camp. "Learning through experience is what makes this school so exciting," says Piedmont SWCD educator Deanna Fehrer. "We study the concepts and then we follow up with field work that emphasizes the 'Wow!' factor of learning."

Campers are outdoors for the entire week. In the outdoor environment camp leaders have the opportunity to cultivate camper teamwork and problem solving skills, while promoting mutual respect for others and the environment. For instance, as teams wade into a stream to net and observe aquatic organisms to determine if the stream is healthy or impaired, team leaders demonstrate proper stream etiquette.

Field trips to local beef, poultry, and cattle operations introduce campers to ways farmers can be productive while working in harmony with a



2005 Environmental Day Camp team members and team leader assess a stream's water quality using a macro-invertebrate (bug) collection and identification system.

quality environment. Campers interact with natural resource and water management professionals in places ranging from Farmville's Water Treatment Plant to Bear Creek Lake State Park.

The best way to find out how the students feel about their EDC experience would be to read their daily journals. Each student enters careful notes and sketches into a journal that will serve as a reminder of the valuable lessons learned in the field. Even though many of the entries might be about the good food and friends at EDC, you will also note a growing understanding of what it means to be an environmental steward.

Every year, approximately 20 students from Amelia, Buckingham, Cumberland, Nottoway, and Prince Edward counties are eligible



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to receive full scholarships to attend EDC.

Local business leaders, who understand that conservation education focused on youth is imperative to developing a stewardship ethic, help finance the school.

To find out more about this and other environmental education opportunities available contact the Piedmont SWCD at (434) 392-3782 or the Peter Francisco SWCD at (434) 983-4757.

Upcoming Events

8/8 and 8/9: James River Fishing School's *Fishing 101 and Fishing 102*, 9am-3pm

8/15: 2009 Virginia Citizens for Water Quality *Summer Summit* (Charlottesville)

8/22 and 8/23: James River Fishing School's *Family Fishing*, 8am-11am (Pony Pasture)

9/2: Henricopolis SWCD's *Build-A-Barrel Workshop*, 6pm-8pm (Henrico)

9/11-9/12: Virginia Conservation Network's *Virginia Environmental Assembly* (Staunton)

9/19: James River Association's *Trash Cleanup*, 10am-12pm (Richmond)

10/19-10/24: James River Association's *Extreme Stream Makeover* (Blackwater Creek Watershed)

For more information on these events, please visit <http://www.mjrt.org>

Hopewell Takes 'Going Green' to New Levels

By Christina Luman-Bailey

The City of Hopewell's Regional Wastewater Treatment Facility is soon to embark on a scientific investigation to evaluate the use of natural occurring algae to consume the excess nitrogen in the plant's discharge.

The truly 'green' concept is quite simple in that excessive algae, which are a problem for Virginia's rivers and the Chesapeake Bay, can be used in a controlled environment to consume the nitrogen from the treatment plant wastewater.

Application of the use of algae for wastewater treatment is relatively new. Therefore, Hopewell

plans to use Federal Stimulus Funds (ARRA) to initiate a demonstration project to assess the long term viability of algae as a natural treatment alternative.

This type of process will have far less green house gas emissions as it will use far less energy than a conventional engineered solution. The growth algae can also be harvested and converted into useful products such as bio-fuel or green coal.

Hopewell has selected the firm Algae Wheel from Indianapolis, IN to construct a test project at the Regional Plant. The project will begin in fall

2009 and will run for approximately nine months.

Nitrogen enters the waterways of Virginia from a variety of sources such as agricultural run-off, urban/suburban storm water, air deposition and point sources such as treatment plants. Currently only point source nitrogen releases are permitted and controlled.

Excessive nitrogen in the water can cause naturally occurring phytoplankton to 'bloom' into algae (which is a type of plant). The algae consume the oxygen in the water which then harms aquatic life and also

shades the river bottom, destroying underwater grasses that are good for fish habitat. Removal of excessive nitrogen and phosphorus from Virginia water ways is a major undertaking that ultimately affects citizens through higher sewer rates, taxes and development activities.

For further information on the Hopewell Algae Project please contact the plant Director Mark Haley or Environmental Manager Jeanie Grandstaff at 804-541-2210 or mhaley@hopewellva.gov.

Volunteers needed for trash cleanup!

The James River Association will be holding a trash cleanup on from 10am to noon on Saturday, September 19. We will be meeting in the parking lot of the Goodwill at 6202 W. Broad Street. The cleanup will focus on Horsepen Branch and the culvert at the intersection of Falmouth and Broad.

Volunteers should wear sturdy shoes or boots. Bags and gloves will be provided.

For more information or to register, contact Michelle at 804-788-8811 ext 204 or email volunteer@jrava.org.

Celebrating the Best of the Valley... in Staunton September 11-12, 2009

Join the VA Conservation Network for a weekend in the beautiful Shenandoah Valley. Celebrate the best of the Valley. Learn more about the people and non-profits helping to preserve the region's history, culture and natural beauty.

Valley Conservation Council joins with the **Virginia Conservation Network** to host the **2009 Virginia Environmental Assembly**, Friday and Saturday, **September 11-12** at the **Frontier Culture Museum** in Staunton.



Virginia Conservation Network

Highlights include:

- * VCC and VCN annual membership meetings
- * Local foods dinner Friday night
- * Green tours of historic Stanton
- * Hikes
- * Farm visits
- * A fun day at the museum for your family!

For details visit, www.vcnva.org or call 804-644-0283.

James River Association's 2nd Annual Runoff Rundown Recap

By Michelle Kokolis, James River Association

On Saturday, July 11, 111 river lovers joined JRA for the 2nd Annual Runoff Rundown. During this one day event, all 340 miles of America's Founding River were concurrently covered, starting in Iron Gate and ending at the mouth of the River at Fort Monroe.

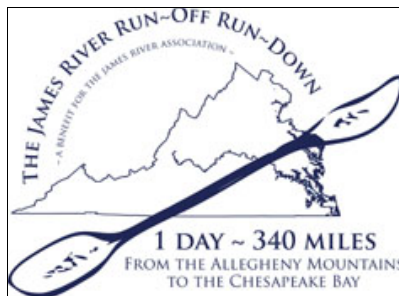
While most participants paddled canoes and kayaks, this year's event also included several unorthodox participants...the team

"Cartographers" set out with the goal of using a jon boat with a 6hp motor to cover 120 miles of the river from Lynchburg to Richmond.

Unfortunately, their day was cut short when they sprang a leak, but we certainly appreciate their effort! There were also 2 participants that chose to SWIM their section of the river.

Did YOU participate in the Runoff Rundown? If you did, we would love to have copies of any photos you took. You can upload photos to the JRA Facebook page, email them or mail them to us on CD/DVD.

All in all, this year's event raised over \$25,000 for JRA! Many thanks to everyone that came out in support of a healthy James River!



The James River Advisory Council Celebrates its Tenth Annual Regional Cleanup

By Lorne Field, Chesterfield County Environmental Engineering

The James River Advisory Council (JRAC) held the 10th annual James River Regional Cleanup on June 13. Over 70 miles of the river was cleaned at sites in Appomattox and Buckingham Counties, the City of Richmond, and the counties of Chesterfield, Henrico, Goochland, Powhatan and Charles City. It was a regional, cooperative effort that included volunteers from across the James River watershed.

893 volunteers, 28 paddle craft and 13 power craft descended on the river and collected an enormous amount of trash. 506 bags of trash and 332 bags of recyclables were collected. Other notable items were: 23.5 tires, 22 automotive and boat parts and 11 pieces of home and lawn furniture.

This year's theme was "Cleaning up the Source." Special attention was given to cleaning creeks and streams that feed into the James. Every year the river and its tributaries wash in trash and recyclables from all across the watershed. This year's focus was on educating people about how they can prevent trash in the river by being responsible on land.

For more information about the James River Advisory Council visit their website at www.jamesriveradvisorycouncil.com.

The chart on the following page summarizes the James River Regional Cleanup 2009.

Locations	# of Volunteers and Watercraft	Tires	Appliances & Parts	Automotive & Boat Parts	Bicycle Parts	Construction Materials	Coolers	Fishing Gear	House & Lawn Furniture	Pieces of Metal	Paint & Oil Cans	PVC Pipe	Toys	Bags of Trash	Aluminum	Plastic	Glass	Paper & Cardboard
Powhatan Co. Maidens Landing	73 1 power craft 6 paddle craft	7.5	2	1					7				6	46	8	8		8
Goochland Co. Westview Landing	31 3 paddle craft	1				3	2			3				33	20 bags unsorted			
Chesterfield Co. Robious Landing & Pocoshock Creek	114	2	10	5	2	4		2		20	5	5	1	49	28 bags unsorted			
Chesterfield Co. Falling Creek Ironworks	58 1 paddle craft	2	1	1						1			1	60	48 bags unsorted			
Chesterfield Co. Dutch Gap Landing	169 1 power craft 4 paddle craft	2		2				10	1	7				58	65 bags unsorted			
City of Richmond JR Park—Reedy Creek	141 6 paddle craft	2				3	1		1				1	150	20	60		16
City of Richmond JR Park—Pony Pasture	167 8 paddle craft	1				3		1						15	10	10	2	9
Henrico Co. Osborne Park & Boat Landing	77 11 power craft	3		9		1	1		1					53	6 bags unsorted			
Henrico Co. Horsepen Branch	46	1		3					1	8				25	1 bag unsorted			
Charles City Co. VCU Rice Center	17	2		1				1		3			1	17	13 bags unsorted			
TOTAL	893 13 power craft 28 paddle craft	23.5	13	22	2	14	4	14	11	39	8	7	16	506	332 bags of recyclable material			

Overview of Green Infrastructure Planning

By Janit Llewellyn, Environmental Program Planner
Department of Conservation and Recreation

Green Infrastructure is our nation's natural life support system – an interconnected network of waterways, wetlands, woodlands, wildlife habitats and other natural areas; greenways, parks and other conservation lands; working farms, ranches and forests; and wilderness and other open spaces that support native species, maintain natural ecological processes, sustain air and water resources, and contribute to the health and quality of life for America's communities and people (Benedict and McMahon, 2006).

Green infrastructure could become integral to long-term effective management of natural and cultural resources that support ecological health, economic vitality, and quality of life for citizens of the Commonwealth. Green infrastructure planning integrates outdoor recreation, open space, cultural resources and conservation lands. Localities would benefit by engaging the expertise of planners as well as parks and recreation professionals in comprehensive planning.

Localities should begin to evaluate the ownership of open space and management of both publicly and privately owned lands contributing to this network of green. Strategically linking linear land corridors maximizes environmental, habitat and outdoor recreation resources to meet the needs of growing populations. The use of such a planning model results in the protection of undeveloped land and waterways which provide essential benefits to society – clean air, clean water, food, open space for recreation and a sense of place.

Consideration for green infrastructure encourages conservation of natural resources directing development to suitable areas. This planning model identifies and ranks vital natural resources in concert with other community needs and gray infrastructure prior to development. With this type of planning, land development and growth is guided in ways that accommodate increased populations while protecting natural resources, thereby providing long-term



Hiking trails, such as the Dutch Gap Trail (pictured above), can serve as corridors connecting ecologically significant blocks of landscape, called cores or hubs.

ROUNDTABLE WRAP-UP

economic viability and community sustainability. Green infrastructure networks of undeveloped lands are necessary to improve water quality, protect ground water recharge areas for drinking water supplies, improve air quality and protect ecological resources. These networks also provide opportunities for outdoor recreation and protection of cultural resources.

Green infrastructure is a network of ecologically significant blocks of landscape, called cores or hubs, which connect to linear bands of green space, called corridors. These landscape components vary in size, function and ownership. Cores may be comprised of public parks, natural areas, working forests, farms and rural historic districts, while corridors may be scenic rivers, stream buffers, hiking trails and even scenic byways. Each component contributes to the economy, the physical and mental health of citizens, and the long-term viability of natural resources and communities.

More information about green infrastructure planning is found in the 2007 Virginia Outdoors plan found on the Department of Conservation and Recreation's website at www.dcr.virginia.org. Supporting research is found at The Conservation Fund website, www.greeninfrastructure.net.



What does the James River mean to you? What is your special connection with the river and how can we help protect it for the future? Put your answer in a 20 second video and you could win \$750 in the James River Association's (JRA) new **The JAMES and ME Video Contest**.

The JAMES and ME Video Contest is open to middle school, high school and college students throughout the James River basin. We will accept entries beginning in August 2009. Now is the perfect time to start working on your video!

Students are encouraged to submit a twenty second video that conveys their personal connection with the James River. JRA will begin accepting entries in August, with the contest closing in early October. The winners will be announced in early November 2009.

The videos will be evaluated by a panel of judges who have an expertise in either film production or environmental issues. Videos will be judged on originality, cinematic style, entertainment value and the emotional connection they make to the James River. There will be one first place winner in each group (middle school, high school and college), each receiving a cash prize of \$750.

The winning videos will be premiered at JRA's annual meeting and available for viewing on JRA's website, as well as aired on FOX television.

For complete details and eligibility requirements please visit our website <http://www.jamesriverassociation.org/what-we-do/video-contest/>

Rivanna Conservation Society's Bread and Water Project



Combining the love of delicious, local food and our concern for the quality of the Rivanna River and its watershed, RCS has created an opportunity to nourish more than just the appetite. Restaurants throughout the watershed are donating 10% of all sales for either a lunch or dinner to the Rivanna Conservation Society. At the same time RCS is promoting area restaurants with a commitment to a clean Rivanna to its membership and to the community at large. This project is truly a “Win Win” for both RCS and the participating restaurants.

The Rivanna Conservation Society is a non-profit 501(c)(3) organization dedicated to safeguarding the ecological, scenic, recreational, and historic resources of the Rivanna River and its tributaries for the benefit of the community and generations that will follow. The restaurants selected are

committed to offering cuisine made with ingredients provided by local growers and farmers.

Donations from this project will help RCS sponsor clean water events and activities throughout the watershed. These include stream clean-ups, buffer planting projects, teacher and student training events, public education forums, citizen involvement programs and river paddles.

The Bread and Water Project was launched in June at MAYA Restaurant in Charlottesville. Upcoming events will be held at Eppie’s on the Mall, Fellini’s on Market Street and Hot Cakes in the Barrack’s Road Shopping Center. Visit www.rivannariver.org for more information.

Chesterfield County Projects

By Lorne Field

Chesterfield County Stormwater Academy Summer and Fall 2009

The Friends of Chesterfield’s Riverfront will partner with the Department of Environmental Engineering to offer a series of three academies designed to educate citizens about how they can adopt “Best Management Practices” to control and treat stormwater runoff at their homes, businesses and schools.

Each of the three academies will be aimed at A particular target group. There will be an

academy for citizens, one for industry and one for educators.

Each academy will introduce participants to the concepts of watersheds and non-point source pollution and teach individuals simple steps to reduce and treat their own runoff. *This program is supported by a grant from the Chesapeake Bay Restoration Fund.*

Academies will begin this summer.

For more information please contact Lorne Field at 804-748-1920 or Jennifer Sidleck at 804-796-1703.

Chesterfield County Riparian Steward- ship Program Fall and Winter 2009

The Department of Environmental Engineering is pleased to announce that it will partner with the Friends of Chesterfield's Riverfront to sponsor a Riparian Stewardship Program.

The program will develop outreach materials for land owners who have property next to creeks, stream, rivers and lakes. The Program will educate owners about the functions and benefits of healthy vegetated buffers along waterways and it will establish a Riparian Stewardship Fund for the replanting and maintenance of healthy buffer zones.

This program will include three riparian plantings at areas identified by a newly created Geographic Information System (GIS) layer that shows all riparian areas in Chesterfield County. *This GIS layer and the Riparian Stewardship Program are supported by Chesapeake Bay Small Watershed Grants.*

For more information please contact Lorne Field at 804-748-1920 or Jennifer Sidleck at 804-796-1703.

JRA's Extreme Stream Makeover: *Blackwater Creek*

By Michelle Kokolis

Monday, October 19 marks the start of the James River Association's 3rd Annual Extreme Stream Makeover. This year's event will take place in the Blackwater Creek watershed, which includes the City of Lynchburg as well as portions of Bedford and Campbell Counties.

This is the first year that the project will branch into multiple localities. There is at least one featured project planned for each location. These projects include a detention basin "face lift" at the Wards Crossing Shopping Center (Lynchburg), a streambank stabilization project in Campbell County and a BayScape at Jefferson Forest High School (Bedford).

We will also be building a rain garden at Peaks View Park. This will be an "instructional" project designed for local developers that have an interest in

learning how to install rain gardens.

Additional projects will occur throughout the watershed and include multiple buffer plantings, trash cleanups, an educational garden and several projects designed to enhance existing vegetated areas.

The project will start with the opening ceremony on the morning of Monday, October 19 and conclude on Saturday, October 24. We will be working on multiple projects every day which means we will need 50-75 volunteers per day! Volunteers can choose to work a morning, afternoon or all day shift.

If you would like more information about Extreme Stream Makeover, or if you would like to volunteer please visit our website www.extremestreammakeover.org.



Watershed Planning in Amherst County

By Scott Strang

If the drought of 1998-2002 taught us anything, it is that drinking water supplies cannot be taken for granted. You may get your water from an underground aquifer via a well, or it may come to you from a stream or reservoir via a pipe and a water treatment facility. In either case, both the quality and quantity of your water is tremendously impacted by the way the land within the watershed is used.

As Central Virginia grows, the local agencies responsible for providing public drinking water must be proactive in planning for the needs of county citizens. In Amherst County, that responsibility falls primarily on the Amherst County Service Authority (ASCA).

Fifty years from now, how many millions of gallons of water will the ASCA need to provide to its customers each day? Where will that water come from? Will it be clean enough to be treated easily and inexpensively? These are the questions that drive the watershed planning process.

In May, CVaLC applied for grant funds from the National Wildlife Foundation to help establish a watershed plan for Graham Creek and Harris Creek, Amherst County's main public drinking water supply watersheds.

The goal is to ensure a sustainable supply of clean drinking water for Amherst County's future. The project will establish a stakeholders' committee that includes the Amherst County Service Authority, the Robert E. Lee Soil and Water Conservation District, the Amherst County Planning Department, Sweet Briar College, and local farmers and developers. Together, these stakeholders will explore ways that the county can protect this critical natural resource.

The task would be relatively easy if the watersheds were permanently protected forested land. Unfortunately, quite the opposite is true. Unlike Lynchburg's Pedlar Reservoir watershed, which is mostly National Forest, the land within the Graham/Harris watersheds is privately owned, and only about a third of it is forested. The remaining two thirds is split between residential and agricultural uses.

Both residential and agricultural development can significantly impair water quality and quantity, but

fortunately there are programs and practices that can mitigate these negative impacts. The stakeholders committee will research ways that these practices can be implemented to serve the needs of future citizens while also protecting citizens' rights to use and enjoy their private property.

Middle James Roundtable

101 N. 14th Street, 11th Floor, Monroe Building
Richmond, VA 23219

Contact: info@mjrt.org

Join the list of Watershed Partners!

Please email us your organization's name and either website or contact number to be included on our watershed partner page of our website: <http://www.mjrt.org/Partners.aspx>



The Middle James Roundtable is supported with funding from the Environmental Protection Agency's Chesapeake Bay Program through the Virginia Department of Conservation and Recreation.

