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The Rappahannock River Basin Commission

# The Rappahannock River Basin

The Official Newsletter of the Rappahannock River Basin Commission  
Robert J. Wittman, Chair

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## Unrelenting, The RRBC Presses On

The Rappahannock River Basin Commission (RRBC) remains committed to improving water quality and quantity and preserving natural resources in the Rappahannock River Basin and beyond. Unrelenting in its goals the RRBC met September 21 in the Upper Basin, at the Madison County Rescue Squad Auxiliary, Madison, Virginia. Chairman Rob Wittman opened the meeting, thanking hosts Madison County Board of Supervisors Member Bill Crigler and Chairman David C. Jones and, and the ladies of the Rescue Squad Auxiliary. John Barber gave the invocation.

Meeting topics included an update on the work of The Rappahannock River Basin Nonpoint Source Work Group (NPSWG) and a presentation by Eric Lacatell and Ridge Schuyler of The Nature Conservancy (TNC). RRBC



Coordinator Eldon James provided news about state-wide watershed collaborative efforts. Additionally, Mr. James and Commission member

Harry Atherton introduced ideas associated with Fauquier County's Riparian Easement Solutions Team (FREPS). Chairman Wittman considered upcoming legislative initiatives to be presented at Virginia's General Assembly. Finally, Joan Salvati, Director, Division of Chesapeake Bay Local Assistance, Department of Conservation and Recreation (DCR), explained Chesapeake Bay buffer requirements, highlighting the flexibility to enhance nutrient reduction through vegetative cover.

Rappahannock Area Development Commission (RADCO) ([www.radco.state.va.us/](http://www.radco.state.va.us/)) Executive Director and Fiscal Agent for the RRBC Stephen Manster noted in his Report contributions from localities, Planning Commissions (PDC), Soil and Water Conservation Districts (SWCD), as well as grant and in kind dollars collected. Expenditures, mostly for staff and the work of the Commission's committees, matched revenues, with

only Middlesex County having not yet rejoined the Commission. Also distributed was the proposed annual budget, fiscal year 2006, for The RRBC.

On a sad note, Chairman Wittman said that long time RRBC Middlesex County Representative Lee Weber passed away very unexpectedly in September. "She will be greatly missed," Chairman Wittman said.

## The Nonpoint Source Work Group: Tackling Tributary Strategies

At its September 21 meeting, RRBC members heard progress to date and future work planned for the Rappahannock River Basin

**Care of the watershed and the environment is a stewardship issue.**

*John Barber*

Nonpoint Source Work Group (NPSWG). Noting that four meetings of the Group have been held to date, Chairman Wittman and Eldon James presented issues and challenges ahead.

Chairman Wittman asked members of the Commission for instructions to the NPSWG. Mr. Grzeika said state-wide communication and education is needed, particularly for school children. Mr. Wilson: "We should start with basic definitions." Mr. James remembered his elementary school anti-litter campaign, tied to science and civics. Mr. Rozell and Chairman Wittman agreed that extension agents are a good resource. Noting that only 1 in 300 people know what a watershed is, Pete Fields said individuals need a sense of personal responsibility for maintaining the water quality in their watershed. Mr. Barber said that care of the watershed and the environment is a stewardship issue.

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Mr. James noted that the Northern Neck PDC and Northern Neck Soil and Water Conservation District are conducting a training program for local government staff, focusing on natural resource violations, as they've had



**Eldon James**

major issues with some agricultural properties. He reported he had met with planners from the City of Fredericksburg to help them do this kind of training, and he offered to help other Commission members. Mr. Barber said realtors need to be educated as they are often not clear with prospective home buyers. To prevent individuals

from making unwitting errors in land use activities, Chairman Wittman said the NPSWG had discussed a "one stop shopping" approach at the county level. Mr. Barber said his staff has put together *The Yellow Pages for Assistance* with natural resource and water related information, and Mr. Anderson said that his staff has put together a brochure on the subject.

The Clean Water Act (early version, 1970; latest version, 1990) listed portions of the Chesapeake Bay and its tidal rivers as "impaired waters." As part of the Chesapeake Bay Preservation Act, nonpoint and point sources were asked to reduce the amount of nitrogen, phosphorous, and sediment released into streams, tributaries, and, ultimately, the Chesapeake Bay, capping those loads by 2010. Nonpoint sources cause 80 percent of the load and include agricultural runoff and soil erosion as land is deforested, disturbed, and developed. Other sources of nonpoint load are forestry, septic tanks, lawn management, with the attendant problems of sediment, bacteria, and toxins. Nonpoint sources are regulated to a far lesser degree than point sources. Point sources, which account for 15 to 20 percent of the load, include water and sewage treatment plants.

At its May 4, 2005, exploratory meeting, the Nonpoint Source Work Group (NPSWG) proposed to provide advice and direction to the RRBC, who would use this advice to formulate policy recommendations to local and state government officials, on how the Rappahannock Tributary Strategy could be implemented and accomplished. Chairman Wittman stated that such a work group could help prevent duplication of effort, avoid possible



**RRBC Chair Robert Wittman**

pitfalls and unintended consequences, and seek through its advice to give the RRBC the most for its money as ways to implement the tributary strategy were identified. Chairman Wittman said indicators such as dissolved oxygen, chlorophyll *a*, and water clarity need to be looked at in context, to determine how meeting the goals of 2010 are progressing. At this meeting Stuart McKenzie, Environmental Planner, Northern Neck Planning Commission, pointed out that some practices do not yield

water quality benefits. He said communication is needed, to determine implementations that are most effective and cost effective.

The bulk of the land in the Rappahannock watershed that drains into the Rappahannock is agricultural land. Large lot zoning has had the unintended consequence of creating farmettes, where small two- or three-horse farms, with livestock, not for production, are not regulated. Local planning and zoning regulations and ordinances are needed to prohibit sediment and nutrient pollution from these recreational agricultural activities.

The NPSWG emphasized that more effort needs to be invested in communication, coordination, cooperation, and incentives to achieve success in addressing the nonpoint source issues; point source issues are easier to track. As Chairman Wittman said, "The devil is in the details." Localities have not yet been tasked with implementing these strategies, and in fact localities may think responsibility lies with state agencies and the Commonwealth. For instance, when a property is rezoned, that property should have the same nutrient levels post-development as it did pre-development; that kind of specific oversight comes best from the local level.



First developed by the Pennsylvania Roadside Council (now the Pennsylvania Resources Council) in 1950, the Litterbug is often identified with the anti-litter movement of the late 1950's and early '60's.

However, Virginia is what is called a "Dillon state." This Rule, first recognized in *City of Winchester v. Redmond*, restricts the powers of local government to only those powers specifically delegated to it by the General Assembly. All other powers, real or theoretical, are reserved to the General Assembly and may not be exercised by local governments.\*

During the June 1<sup>st</sup> meeting of the NPSWG Stuart McKenzie said he has heard all of this before, since 1996: "The implementation of the tributary strategies can be encapsulated into one word--volunteer." Continuing, he



said authority for implementation comes from the Clean Water Act, the Commonwealth's quality management plans—and, one has not been written since 1977 for the Rappahannock--the 303d TMDL Priority List Report, and state water quality standards. "Unless Stuart McKenzie, center, Bob Bos, left, Dudley Pattie, right, at a 2004 RRBC meeting.

you are in violation of those standards," Mr. McKenzie said, "you do not have a nonpoint source problem."

At the NPSWG's July 14 meeting, Dr. William Cox, professor of Civil Engineering at Virginia Tech, who has worked with the Water Allocation Group and the RRBC, presented a synopsis of what exists in statutory authority. Laws, policies, and procedures in place are adequate to make sure that nonpoint source programs are implemented. The RRBC Web site ([www.rappriverbasin.org](http://www.rappriverbasin.org)) has the full report, WATER QUALITY MANAGEMENT: GOVERNMENTAL RESPONSIBILITIES AND RELATIONSHIPS

(Appendix), as well as Dr. Cox's Presentation in PowerPoint™ (see the left hand side of the Web site; click on NON POINT SOURCE). Others outside the basin have been studying Dr. Cox's work. The report does have a shelf life, as the state legislature, or the U.S. Congress, or the EPA may make changes, but as of right now, it is up to date.

In the NPSWG's June 1 meeting, Eldon James noted two critical areas that need to be addressed:

- Recommendations must be made to local government as to how best to develop their own monitoring programs—if they choose to monitor.
- Local governments need to be provided the opportunity for ongoing discussion of the differences in modeling results and real world monitoring.

Stuart McKenzie said there will always be a lag time between groundwater monitoring results that will prohibit reconciling the model and monitoring. (Bay Program partners used the Chesapeake Bay Watershed and Water Quality Models). Mr. McKenzie pointed out, the Environmental Protection Agency (EPA) will rely on water samples, not on the model, to determine if water quality standards have been met. Matt Criblez, Manager, Virginia Department of Conservation and Recreation (DCR), York/Rappahannock Region, said it is the state that is ultimately responsible for the implementation of water quality standards. However, water quality monitoring will be done by the Department of Environmental Quality (DEQ). If water quality standards are not what they should be, in 2010 the EPA will mandate Total Maximum Daily Loads (TMDLs).



**Harry Atherton with a map of the Rappahannock Watershed.**

This will mean the EPA will tell point sources like sewage treatment plants what they can and cannot do, as well as telling nonpoint sources like farmers, land owners, and others how they must operate. The Nonpoint Source Work Group can encourage localities to implement the tributary strategy, working together with elected soil and water district directors and their staffs, to avoid this kind of intervention by the EPA.

A "real world" focus to the implementation of strategies is viewed as important and essential. Best management practices (BMPs) become critically important. Practical helps toward these goals: In the June 1<sup>st</sup> meeting of the NPSWG, Matt Criblez said mixed open land will be broken down with greater definition of use and Stuart McKenzie noted that low altitude aerial photographs are very helpful in determining land use.



**Matt Criblez, DCR, and RADCO Executive Director Stephen Manster**

During the RRBC's September 21 meeting, the 7 item NPSWG work plan was presented: (Mr. James said the Agendas and Minutes of the NPSWG are available on the Web site, [www.rappriverbasin.org](http://www.rappriverbasin.org) .)

1. Clarify the legal authority of various stakeholders to act and identify where authority is appropriate or inadequate to allow effective implementation of the solutions identified in the Rappahannock Tributary Strategy.
2. Encourage "buy-in" of state, regional, and local governments and agencies to the appropriate regulation of land use activities and land development in support of river-friendly water quality objectives.
3. Is current or planned water quality monitoring going to provide effective data to evaluate the success of implementing nonpoint strategies? If not, recommendations for improvements will be made.
4. Identify how to properly document successful and unsuccessful practices and to communicate those findings to others.
5. On-going assessment of the practicality of implementation strategies or techniques and providing feedback to the DCR ([www.dcr.virginia.gov](http://www.dcr.virginia.gov)) and other appropriate overseers.
6. Recommend how to effectively track changes in land use, and the rate of change, in the basin, and how to use that information efficiently to make decisions that improve water quality.
7. Provide input and feedback to decision makers on prioritizing the commitment of resources to maximize results for dollars invested.

A *Summary of Conclusions to Date* was presented:

1. Adequate regulatory authority exists but it is poorly understood by stakeholders including those responsible. Consequently, use of authority is incomplete.
2. Current programs are not always adequately funded and implemented.
3. Localities may improve coordination and compliance by integrating information and notification with appropriate agencies early in the planning process.

\*(from *The Progress*, The Stafford Council for Progress, [staffordcountyforprogress.com](http://staffordcountyforprogress.com))

### **Ever heard of a "watershed"?**

Although everyone lives in a *watershed*, most people don't know the actual meaning of the word. Put simply, a watershed is all the land that drains into a given body of water. This body of water can be a creek, pond, river or ocean. Generally speaking, the larger the body of water, the larger its watershed. The Chesapeake Bay watershed,

for example, covers 64,000 square miles and drains from six states including 60 percent of Virginia. One thing all watersheds have in common is people, and where you have people, you have land altering activity. When we alter land - to farm, to build, to landscape, for transportation - we must take care to make sure our land use changes aren't causing runoff pollution problems for either other people or plants and animals downstream that depend on clean, usable water. The technical term for this form of pollution is [nonpoint source pollution](#) (NPS), and it's a thread you'll find common to nearly every page in the soil and water conservation section of DCR's Web site. Regardless of the watershed in which you live - and each watershed has unique NPS pollution problems - there are many ways all of us, from farmers to elementary school children, can prevent such pollution to keep Virginia's creeks, rivers and bays clean and productive.

(from the website of the Virginia Department of Conservation and Recreation—[www.dcr.virginia.gov/sw/](http://www.dcr.virginia.gov/sw/))

## **The Nature Conservancy: Preserving the Diversity of Life on Earth**

The Nature Conservancy staff members Andrew Lacatell, Chesapeake Rivers Program Director, and Ridge Schuyler, Piedmont Program Director, discussed the Conservancy's mission and programs at RRBC's September 21 meeting.

With its mission to preserve the plants, animals, and natural communities that represent the diversity of life on earth, The Nature Conservancy ([www.nature.org](http://www.nature.org)) historically has protected large acreages of land, including watersheds, protecting water quality, as well. Currently it protects 18 million acres in the U.S. and 120 million acres world-wide. Mr. Lacatell said the Conservancy might work with a particular landowner or on a project to protect a particular place, determining how land can be purchased, assisting counties, and bring expertise on a biodiversity level.

The Nature Conservancy seeks the best representation of forests, rivers, natural communities, and



cypress swamps, and then prioritizes them as places that need to be protected.

**Ridge Schuyler  
Andrew  
Lacatell, TNC**

The Conservancy tries to find unfragmented systems of contiguous forest land that are still a functional hardwood community and are at least 15 thousand acres in size. The Rappahannock River Basin is a high priority watershed for rescue by The Nature Conservancy. When the science-based organization began 50 years ago, its focus was to protect rare, threatened, and endangered species, primarily plants. For its first 40 or so years, the Conservancy's

primary way to protect land was to buy it. This has evolved so that now the Conservancy seeks to work with individual landowners, enticing them to protect their land, and with localities and counties, to permanently protect land, land that a locality would not otherwise be able to protect. "From our perspective, zoning does not protect land permanently," Mr. Schuyler said.

The City of Fredericksburg owns 33 miles (about 5,000 acres) along the Rappahannock and Rapidan rivers. [The land is in the City, Culpeper, Fauquier, Orange, Spotsylvania, and Stafford.] It is property the City acquired from Virginia Power; Virginia Power acquired it from Fredericksburg Power and Light, which at one time had planned to put a hydroelectric dam on the Rappahannock. The City of Fredericksburg bought the land in 1969 for about \$70,000. Two years ago, the City contacted the Virginia Horse Foundation and The Nature Conservancy (TNC) to help protect this land, as it was too large for the City to manage. The City is interested in protecting its drinking water and in riparian protection. The main threat to the land is third party encroachment—those who set up camp sites, people who clear land to get a view of the river, those who would ride ATV's, destroying the riparian buffer, those stealing timber. TNC is trying to bring its expertise to prevent third party encroachment.

Orange County Board of Supervisors Member Grover Wilson said easements protect landowners, and the land, but do little for the taxpayer, whose tax dollars support the easement program. (An easement is an interest in land owned by another, that entitles its holder to a



specific limited use or enjoyment of the land.) Mr. Wilson asked if citizens will still have full access to the Rappahannock River, for instance. Mr. Wilson said Virginia's taxpayers

**Stafford County Board of Supervisors Member Pete Fields and Orange County Board of Supervisors Member Grover Wilson** are bearing the cost of protecting wealthy landowners.

"They [the landowners] still own their property, and make a profit on it. It is the poor man, paying for the rich man's game," Mr. Wilson said. Mr. Schuyler acknowledged that, while recreational access easements do exist, The Nature Conservancy needs to do a better job of ensuring that where possible the taxpayer has access to the land under easement. Mr. Lacatell said that's the difference between a National Parks Service-owned property and a working forest easement. In a working forest, The Nature Conservancy would allow timber harvesting, as long as there was a timber management plan in place.

John Barber said maintaining productive land is a major contribution to the economy of an area. Landowners are paid for stumpage, individuals are paid to harvest timber, and suppliers and others involved benefit economically. But, Mr. Barber said, the flip side of this is that of the taxes on real estate and forested land, money needed by the county for fire protection, 30 to 40 cents of every dollar is used by the county. The other 60 to 65 cents supports the shortfall because of services required by

residential owners. “This needs to be looked at, as it shows how valuable easements are, as they help to maintain an economic base,” Mr. Barber said.

## The Virginia Watershed Alliance: Strength Through Cooperation

At the September 21, 2005, meeting of the RRBC, Elton James reported on DCR’s aim to again establish roundtables, where representatives from each watershed in the Commonwealth can meet to identify common problems and issues and share resources. (A listing of Virginia’s Watersheds can be found at [www.dgif.state.va.us/education/](http://www.dgif.state.va.us/education/)) Information-sharing cuts down on redundancy. If one watershed has addressed an issue, those answers could well help another watershed. This collaborative effort is cost effective.

Mr. James stated that, with the state’s help, an information Web site needs to be developed. Displaying the Web site of the Shenandoah Watershed, created by an individual at James Madison University, Mr. James explained the Web site simulates a flyover of the watershed. For a nominal fee, this same kind of Web-based simulation could be done for the Rappahannock River Basin.

Mr. James said he would convey the Commission’s interest at the next meeting of the roundtable. Noting there had been one face-to-face meeting, Mr. James explained a technology, available since 9/11. Since 9/11, using homeland security funds, every local health department in the Commonwealth has video conferencing capability. State and local agencies may use the system at no cost. One roundtable meeting was held using this teleconferencing system, a cost-effective way to meet. With one person in Abington, one in Harrisonburg, and Mr. James in Warsaw, the system worked well.

Finally, Mr. James said he will take the Commission’s discussion on education to the roundtable, to see if others have been developing ideas that the RRBC can use, as he hopes to encourage the state and DCR to conduct state-wide education.

## FREPS: The Right Plan at The Right Time

Harry Atherton is ready to deal.

2005’s Virginia General Assembly passed a law, establishing nutrient exchange or trading, allowing point source dischargers to achieve and maintain compliance with the load cap allocations for nitrogen and phosphorous delivered to the Chesapeake Bay.

Concurrently, in response to agricultural runoff in twelve of Fauquier County’s rivers that flow into the Rappahannock, Virginia’s Secretary of Natural Resources W. Tayloe Murphy, Jr., appointed Harry Atherton, a farmer, a member of the Fauquier County Board of Supervisors and of the RRBC, to convene interested parties to help create a program to develop incentives for best management practices (BMPs). Enlisting the services

of the Piedmont Dispute Resolution Center (an affiliate of Virginia Solutions, which is in partnership with the University of Virginia’s Institute for Environmental Negotiations and the Virginia Association of Community Conflict Resolution), Atherton developed the plan for the Fauquier Riparian Easement Program Solutions (FREPS) Team.

FREPS is needed, Mr. Atherton said, because, with the changes in point source regulations and “the possibility of point to nonpoint source pollution credit trading in the future, a program is needed that will allow Fauquier to take advantage of trading.” “Having been in the land use regulatory business for the last twenty-five years, I have come to the conclusion that long-term solutions to preservation of resources, whether they be water or land or agricultural or forest, is in the permanent easement program. Fauquier has had success with both the purchase of development rights and voluntary rights easements, but an area not focused on has been the protection of riparian buffers. FREPS is an attempt to get a voluntary program in place that would create opportunities for landowners in the county and down stream point source entities, who might need to do some trading.”

FREPS’ purpose is to represent the views and concerns of all the stakeholders impacted by a Fauquier



Riparian Easement Program. Further, it seeks to create a measurable, marketable, sustainable program **FREPS Chair Harry Atherton (Fauquier) and Madison County Board of Supervisors Member William L. Crigler**

that corrects and prevents stream impairment and protects water quality.

FREPS’ goal is to develop a riparian easement program that preserves and protects the quality of Fauquier County’s water, and offers value and transferability. Secondly, it seeks to develop a “Declaration of Cooperation” that identifies the consensus on how a riparian buffer program can work in Fauquier. Water Resources Planner Denise Harris (Fauquier County Project Manager, Water Resources Management) is tentatively scheduled to address the RRBC’s December 7, 2005, Richmond, Virginia, meeting about the outcomes of this series of FREPS meetings.

And what is the difference between FREPS and the Commonwealth’s Conservation Reserve Enhancement Program (CREP)? Mr. Atherton said FREPS is market-driven, CREPs is not. CREP pays farmers who voluntarily restore riparian buffers, filter strips, and wetlands through the installation of approved conservation practices. CREPS payments can take the form of rental payments, federal incentive payments, cost-share payments, Virginia Landowner Bonus Payments, and Optional Permanent Easement Payments. (See [www.dcr.virginia.gov/sw/crep.htm](http://www.dcr.virginia.gov/sw/crep.htm) for a full explanation of the Commonwealth’s CREP program). Mr. Atherton cited the example of, if one is trying to build 200 houses in

Fairfax County, one is going to need to develop some nonpoint resources, because the economy there is market-driven. "A program like FREPS could ultimately be more valuable to the homeowner than the CREP program. It is a landowners' program," Mr. Atherton said. (Some source material from *University of Virginia News*, www.virginia.edu/topnews)

## The 2006 Session: Legislative Initiatives for the Virginia General Assembly

Stafford County Board of Supervisors Member Pete Fields noted a "gray area" in erosion and sediment control. When a property's timber is being harvested as a prelude to development, the property is, theoretically, forest and is regulated by the Department of Forestry. In Stafford County, agreement exists in code administration and with the Department of Forestry, that if there is a subdivision plan filed, and there is clearing as a prelude to development, Stafford brings in ordinances, for erosion and sediment control. But, Mr. Fields said, this is not clear in Virginia's code. While Mr. Fields wants to make it as effortless as possible for someone to harvest their timber; when timber is being cleared for residential development and hiding under a different standard—claiming it is forestry when in fact houses are to be put on the land—



Virginia  
**John Barber, Chris Yakabouski, and Maxie Rozell, Jr.** needs to enact a law that clarifies steps to be taken. Mr. Barber said in his talks with the Department of Forestry, they think the subject needs clarification. "They do not like being used to avoid protection of the land," Mr. Barber said. Chairman Wittman will work with the Department of Forestry, as well as with RRBC's legislative delegation to work out details.

A second matter, of great concern, was raised by Madison County Board of Supervisors Chair David Jones. Mr. Jones farms for a living. Pointing out that the Chesapeake Bay clean up requirements ask farmers to shift from nitrogen to phosphorous-based fertilizer, he asked if there could be a slower phase-in of this requirement. Mr. Jones explained that nitrogen-based fertilizer can be supplemented with manure; phosphorous-based fertilizer must be supplemented with 60 to 70 percent manufactured fertilizer. Due to rising energy costs, fertilizer has gone from 18 cents a pound to what may be 60 to 80 cents a pound by spring 2006. "You spend your life, to build your soil up, and then you are told you have to mine it," Mr. Jones said.

Matt Criblez, DCR, said the transfer from nitrogen-based to phosphorous-based fertilizer takes place over the next year. Delegate Ed Scott said the Commission should ask DCR for information about the

implementation timetable. Further, Chairman Wittman said DCR could be asked to look at cost vs. benefit, as they consider this phasing in, in light of rising energy costs and economic conditions. Chairman Wittman said the RRBC will write a letter asking DCR to consider slowing down the phase-in of phosphorous-based fertilizer.

Thirdly, Mr. Barber said last year's appropriations committee in the state legislature sharply increased the cost share fund, which will be available to soil and water districts. Mr. Barber said his increase in the Northern Neck was enough to add another technician, beginning January 1, whose emphasis will be on education. **Chair, Madison County Board of Supervisors and farmer, David C. Jones**



Mr. Criblez noted that, associated with the Water Quality Improvement Act, of water quality management funds available in 2005, \$7.5 million was available in cost share funds. This year, over \$30 million is available. He said at least \$16 million in cost share funds will be available next year. Four million has been available to the upper Bay; six million, to the lower Bay. This money will increase in following years, and includes dollars for conservation enhancement programs, other programs such as nonpoint source initiatives, and the nonpoint source program.

Finally, Delegate Scott said the House Appropriations Committee got a briefing on Monday, September 19, on the budget that Governor Warner will introduce in December. Governor Warner is pulling a \$50 million dollar commitment, started last year, from the



### Delegate Ed Scott

water quality improvements fund. He is also pulling funds from transportation. Chairman Wittman asked to be kept apprised of these developments.

In final items discussed Eldon James asked the Commission if the Chairman should send a letter to Secretary Murphy and Secretary Bronson, requesting that the Rappahannock River Basin once again be funded. The Chairman will write this letter. Referring to speaking trips to various groups on the tributary strategy, water quality initiatives, and water quality grants, Matt Criblez said he would be glad to visit staff (planning staff, program administrators) or other groups and noted that he has prepared a laymen's presentation, informing people of what they can do individually. DCR wants to set up 3 to 5 year grants, and to provide seed money, even when the grant ends.

One-time funding, according to Eldon James, of which water quality improvement is a part, is surplus funding, so, effectively, these are one time commitments, from the Water Quality Improvement Act. The General Fund Appropriation of \$50 million dollars is for the Chesapeake Bay clean up (this language always gets changed by the General Assembly to "Chesapeake Bay and southern rivers clean up.").

## Chesapeake Bay Buffer Requirements: The Benefits of Buffers

In response to interest by soil and water districts, Joan Salvati, Director, Division of Chesapeake Bay Local Assistance, DCR, addressed the Commission's September 21 meeting on the flexibility to enhance nutrient reduction through vegetative cover. For instance, instead of allowing trees to be removed, allow placement of other nitrogen absorbing plants, like pampas grass, which are lower growing, and allow more sight vistas for people with a water view. Nitrogen absorbing plants can do the same job as trees—absorbing nitrogen, creating buffers, slowing water down, providing stream bank stabilization with Submerged Aquatic Vegetation (SAVs), minimizing nonpoint run off.

Distributing WATER QUALITY WATCH: CHESAPEAKE BAY RESOURCE PROTECTION AREAS (November 2000), produced by Chesterfield County and the brochure GOT BUFFER? (created by her Chesapeake Bay Division, with support from the U.S. Forest Service [[www.fs.fed.us](http://www.fs.fed.us)]), both had advice on the benefits of buffers, with specific advice on how to establish or reestablish a buffer. Finally, Ms. Salvati (Joan.Salvati@dcr.virginia.gov) displayed a manual created by DCR--RIPARIAN BUFFERS MODIFICATION AND MIGRATION MANUAL. This manual is downloadable, all or in part, at <http://www.cblad.virginia.gov/presentations.cfm>.

The Chesapeake Bay Preservation act, enacted by Virginia in 1988, established cooperative programs between state and local government aimed at reducing nonpoint source pollution. The Act is designed to improve water quality in the Bay and its tributaries by requiring wise resource management practices on environmentally sensitive land.

Ms. Salvati recounted how the Chesapeake Bay Preservation Act was adopted. A work group, started when the EPA Chesapeake Bay Program began, made up of developers, environmental groups, farmers, industrialists, and other stakeholders came together in a roundtable to commit to a reduction of nutrients into the Bay. Adopting the Chesapeake Bay Preservation Act was Virginia's first response to the original Chesapeake Bay Agreements.

Noting that there are 84 localities in the Tidewater (largely east of I-95), Ms. Salvati said her Division establishes a general framework to help localities amend their local land use ordinances, to incorporate a series of performance measures, as well as establish resource protection areas (RPAs) and resource management areas (RMAs) and buffers. RPAs and RMAs are land elements of Virginia's Chesapeake Bay Preservation Act. Resource Protection Areas (RPAs) are tidal wetlands; nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams; tidal shores; and other lands that a locality may deem need protection. It is the most restrictive land area—land closest to water resources. (Development is not supposed to occur in RPAs unless it is a water dependent use like a boat ramp, a pier, a marina, or

a water intact facility.) RPAs are the next level—those lands adjacent to RPAs that serve as a buffer between the sensitive lands and developable lands. RPAs include floodplains, highly erodible soils, including steep slopes, highly permeable soils, and nontidal wetlands, not RPAs, and other lands. Under certain performance standards development can occur in RMAs.

A buffer of not less than 100 feet in width landward of these features and along both sides of any tributary stream must exist. Ms. Salvati noted that localities need to assure a 100-foot vegetated buffer area is retained, and established if it does not exist. Noting that buffers minimize the adverse effects of human activities,



Ms. Salvati said the main components of the RPAs that have to be preserved are shoreline edge vegetation, canopy trees, leaf litter on the forest floor (which absorb toxins), and understory vegetation. Concerning 100-foot buffers, regulations specifically say they must be capable of reducing

### Joan Salvati, Director, Division of Chesapeake Bay Local Assistance, Department of Conservation and Recreation

pollutants from nonpoint source run-off and control erosion. The 100-foot buffer will achieve a 75% reduction in sediment and a 40% nutrient reduction.

Ms. Salvati said preservation of sight-lines and vistas can be accomplished by pruning trees up; create a filtered few, taking only some of the trees, putting in their place more vegetation; construct paths with mulch; and solicit advice from a professional arborist. Permitted development includes docks and piers; redevelopment must be done in kind and in place (a 1,000 square foot house cannot be replaced by a 5,000 square foot house, further encroaching on the RPA). Disturbance must be limited; it must comply with state storm water management requirements and with the state erosion and sediment control requirements. Ms. Salvati said older houses that want to add on limited space are permitted to do this, through a brief process. DCR allows agriculture to encroach within 50 feet as long as they are using BMPs; they are allowed to encroach within 25 feet as long as they are implementing a very comprehensive conservation plan.

Ms. Salvati addressed actions individuals should take: canopy trees, understory vegetation, shrubbery, pine needle or leaf forest floor; on an RPA of 25' x 20', there should be 24 large trees, 6 or 7 shrubs, understory trees, some shrubs, and forest floor. For each tree removed, add two or three shrubs, for example. Never remove the forested floor; the leaf litter converts toxins in fertilizers and crab grass inhibitors. Chairman Wittman asked about shoreline stabilization; there was cost share money available for that, and it is not available anymore. There is some concern about stabilizing these areas, in the Northern Neck, in the middle peninsula, and on the eastern shore, with maritime pine forests, that are in sandy soils and are highly erodible. On a northward facing shoreline, the prevailing winds wreck havoc on the soil, with pine trees

going into the river or into the bay. The need is to encourage some kind of shoreline stabilization so that buffer is not lost, as Mother Nature can take 5 or 6 feet a year. Soil and water districts are very concerned about this as well. Ms. Salvati is acutely aware of buffers throughout the tidewater of Virginia that need restoration; she noted Chesapeake Bay implementation grant money that DCR has received this past year; \$10,000 of that will be put toward buffer restoration enabling her to work with four localities.

Ms. Salvati said DCR has said buffer restoration is needed and “words to that effect are in the tributary strategy.” Ms. Salvati said regulations allow

encroachment into the landward RPA 50 feet, but not 50 feet into the seaward land. Ms Salvati said DCR has an exception process; it is a well defined process; the landowner has to submit a water impact assessment that demonstrates that there will be negative impacts in encroaching the RPA. Localities west of I-95, not in the Chesapeake Bay area, have the authority to do this, as well.

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