

WETLANDS

Update

Volume 13, Number 1

August 2007



White Arrow-Arum
(*Peltandra sagittaeifolia*)
Photo by Robin Bedenbaugh

Dear Members:

The wetland regulatory world has experienced great movement and change since my greetings to you in January. We have also had great success with more than 50 professionals in attendance at our March 14, 2007, Unified Stream Methodology workshop. Thanks to Trisha Beasley (DEQ), Bettina Rayfield (DEQ), and Kathy Perdue (COE), we offered our membership an informative workshop on the ever-changing assessments and regulatory oversight of Virginia streams.

Your VAWP board members continue to work diligently to arrange your upcoming summer field workshop covering some of the problematic high chroma soils encountered along tidal shores of the Coastal Plain of Virginia. The workshop was held on July 27, 2007 and was a great success. Thanks to instructors Harold Jones,

Greg Hammer, John Gagnon and Dave O'Brien. Special thanks also to Harold Jones for arranging the trip to False Cape and the box lunches. Check the VAWP website for pictures from the field trip.

We are finalizing the details of the annual meeting and fall workshop on watershed planning/management, scheduled for Sept. 21. Among the programs planned so far for the annual meeting are panel discussions on the new Rapanos guidance and the *COE Draft Interim Regional Supplement to the Corps of Engineers, Wetland Delineation Manual: Atlantic and Gulf Coastal Plan Region (issued June 22, 2007)*. It's time to elect new VAWP board officers, so please plan to attend the meeting, and be sure to volunteer. Without your continuing service work, our organization would not be 214 members strong.

We have six new members and six student members, so please introduce yourself and make them feel welcome. If you have ideas about increasing student membership, e-mail me at dmergen@cityofchesapeake.net. Unfortunately, 30 percent of our membership has not paid dues since 2004, so please e-mail Marsh Zellhoeffer at mzellhoe@hdrinc.com to check your status.

Certification Committee Chair Robin Bedenbaugh reported that DPOR has extended the Virginia Certified Wetland Delineator grandfather period to July 2010. DPOR is excepting applications for the Aug. 3 examination, and the next examination will be February 2008. For Certified Wetland Delineator program information, visit www.dpor.virginia.gov/dporweb/ssc_main.cfm or contact Robin at Robin.Bedenbaugh@hdrinc.com.

VAWP board members and committee chairs continue to track and participate within ongoing regulatory and legislative initiatives in Virginia, including the following.

- COE LID Guidance (8/10/2006)
- COE Wetlands & Waters Survey Requirements (8/23/2006)
- CBLAD Onsite Non-tidal Wetland Delineation Guidance (12/2006)

(see President's Letter continued on page 2)



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Wetland Professionals**

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Members are encouraged to actively participate in any of the committees that have formed to facilitate VAWP activities.

Membership

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Wetland Certification

Robin Bedenbaugh

Programs & Website

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Blueskies Environmental
Associates, Inc.

President's Letter (continued from page 1)

- COE & DEQ Unified Stream Methodology (1/2007)
- COE Re-issued Nationwide Permits & Regional Conditions (3/19/2007)
- COE 07-SPGP-01 (6/1/2007)
- COE & EPA Rapanos v. United States & Carabell v. United States Guidance (6/15/2007)
- Revised COE Subdivision Recommendations (6/19/2007)
- DRAFT Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (6/22/2007)
- DCR VSMP Regulations (6/2007)

To keep you abreast of ongoing regulatory and legislative initiatives, here are my observations from the June 1 DEQ VWPP and COE Section 404 stakeholder meeting. This was the second meeting since November 2006 among the COE, DEQ, and various consultants, environmental advocacy groups, attorneys, and other regulatory and advisory agencies mainly representing Northern Virginia and Hampton Roads.

Col. Dionysios Anninos believes it takes two regulatory organizations, i.e., COE and DEQ, to effectively manage wetland and stream resources in Virginia. The colonel would like to continue focusing on the goals of "partnership" and cross

training between the COE and DEQ. In addition, he hopes to expand the COE's Systems Accumulative Watershed Approach for assessing impacts and required mitigation for wetlands and streams in Virginia. The COE anticipates providing ORM2 data online during June 2007, which will contain daily updated GeoDatabase information from a watershed impact analysis GIS maintained in partnership with the DEQ.

Finally, the Colonel does not support DEQ's assumption of the Section 404 program. He will issue a white paper this summer explaining the need for two regulatory agencies to effectively protect wetland and stream resources in Virginia.

David Paylor, Director of the DEQ, believes that "effective" resource management and meeting the goals of "no net loss" of wetland and stream resources in Virginia consists of three attributes; certainty, consistency and timeliness. He believes that DEQ needs to increase its regulatory focus on the SPGP program vs. assumption of the Section 404 program, and both agencies need to improve regulatory compliance. In the near future, he would like to review 07-SPGP-01 interactions between the regulated public, COE, and the DEQ as indicators of the viability of Section 404 assumption.

Currently, no EPA permit application has been finalized by the DEQ, because not enough data from the 07-SPGP-01 program has been collected. However, draft criteria are available from the DEQ central office. Legislation associated with Section 404 assumption will be drafted this summer because 2008 legislative submittals are due to the Department of Budget/Finance between August and September 2007.

Finally, the DEQ will seek input from the stakeholder group in September 2007 on issues surrounding DEQ's assumption of the Section 404 program, and no application to the EPA or final legislative initiatives will be made prior to the September stakeholder meeting.

I would like to thank the VAWP again for the opportunity to be of service to the organization, and I encourage you to get involved with our goals and initiatives while we continue improving discussions and transactions of ideas on wetland issues important in Virginia.

If you have any questions, suggestions, ideas or concerns, feel free to contact me at 757.382.6307 or dmergen@cityofchesapeake.net.

David E. Mergen

President



*Young Cypress in New Kent County
Photo by Robin Bedenbaugh*

UPCOMING VAWP EVENTS

VAWP Board Meetings

Board meetings are open to all members and are held at the Williamsburg Offices of Landmark Design Group.

Our next meetings are: September 11, 2007 and November 13, 2007

An Introduction to Basic Soil Science

Monday, August 13 - Tuesday, August 14, 2007

Holiday Inn Express, 2801 Plank Road, Fredericksburg, VA

Sponsored By:

Virginia Association of Professional Soil Scientists (VAPSS)

Virginia Tech Department of Crop and Soil Environmental Sciences

**Please mark your calendars now for the VAWP 2007 Annual Meeting
September 21, 2007, Kingsmill Resort, Williamsburg.**

EPA, Corps of Engineers Issue Joint Guidance Following Rapanos

The EPA and the Corps issued a joint guidance on June 5 that is designed to clarify agency jurisdiction over waters of the United States, and wetlands following the 2006 Supreme Court decision in the *Rapanos v. U.S. and Carabell v. U.S.* cases (known as the “Rapanos” decision).

The stated intention of the guidance is to ensure nationwide predictability, reliability and consistency in the performance of jurisdictional decisions, although the reality of the guidance is that decisions will still be made on a case-by-case basis, rather than through the application of objective standards. Under the guidance, the agencies will assert jurisdiction over the following:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable water:

- Non-navigable tributaries not relatively permanent
- Wetlands adjacent to non-navigable tributaries not relatively permanent
- Wetlands adjacent to but that do directly abut a relatively permanent non-navigable tributary

Agencies generally will not assert jurisdiction over the following:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)

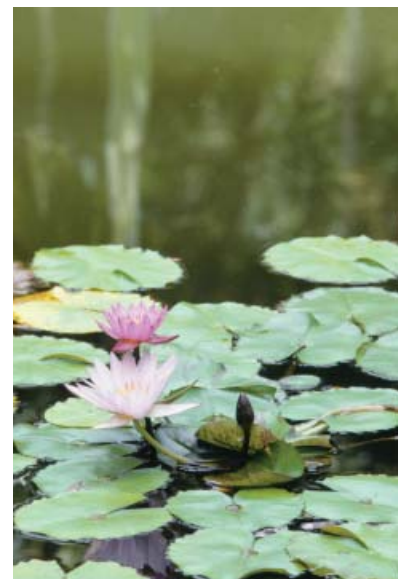
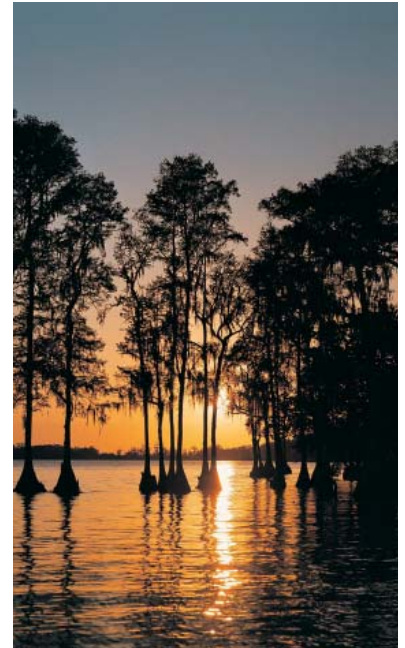
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

Significant Nexus Standard

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself, and the functions performed by all wetlands adjacent to the tributary, to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters. Significant nexus includes consideration of hydrologic and ecologic factors. Determination of a hydrological connection may include: size of the watershed, flow, duration, volume and proximity.

The guidance is effective immediately, although there is a 180-day public comment period during which time agencies are asking for public input on how the guidance is being applied and where improvements can be made. At the end of the comment period, the agencies will determine whether to revise, reissue or revoke the guidance.

What does the guidance practically mean? Not an enormous amount for most prospective permittees. The only part of the guidance that resembles a bright line test involves the discussion of “relatively permanent non-navigable tributaries of traditionally navigable waters.” To be considered relatively permanent, water must have at least continuous seasonal flow — defined as flow for three months. Otherwise, the guidance leaves a great deal of discretion on a key issue – whether a significant nexus exists – to the field personnel to be decided on a case by case. ■



Colonel Dionysios Anninos

Col. Dionysios Anninos assumed command of the Norfolk District June 30, after graduating in 2006 from the Air War College at Maxwell Air Force Base, Ala., where he earned his master's degree in strategic studies.

Born in Kefalonia, Greece, and raised in Upper Darby, Pa., he graduated from LaSalle University in 1985 with an undergraduate degree in mathematics; and in 1987, he earned master's degrees in systems and transportation engineering from the University of Pennsylvania. Additional military education includes engineer officer basic and advanced courses, and the Command and General Staff College.



As Norfolk district commander, Col. Anninos manages the Corps' water resources development and navigable waterways operations for five river basins in Virginia. These include the Rappahannock, York, James and Chowan rivers, and the Chesapeake Bay coastal basins. He is also responsible for the Corps' military design and construction projects for Army, Army Reserve and Air Force military installations throughout Virginia. He manages the Corps' regulatory, environmental restoration, flood damage reduction (including hurricane and storm damage reduction), and disaster response activities, and provides engineering support to the Global War on Terrorism.

His key military assignments include serving as deputy chief of operations (C3), Combined Forces Land Component Command, in direct support of Operation Iraqi Freedom and Operation Enduring Freedom; and commander, 577th Engineer Battalion, Fort Leonard Wood, Miss. His "Iron Soldiers" battalion was "one of a kind" in the Engineer Regiment. It included construction, sapper, dive and ordnance companies, a mine-dog detachment, and the operation of the Sapper Leader Course.

Col. Anninos' assignments have also included serving as NATO contingency infrastructure officer, Supreme Headquarters Allied Powers Europe, Brussels, Belgium, where he deployed for duty with the Bosnia Stabilization Force and Kosovo Force. He also served as executive officer, 11th Engineer Battalion; and engineer brigade operations officer supporting the 3rd Infantry Division, during which he deployed to Kuwait in support of Operation Desert Thunder. He also served as assistant division engineer, 2nd Infantry Division, Republic of Korea; and staff officer with the U.S. Army Artificial Intelligence Center, the Pentagon.

He began his military career with the 15th Engineer Battalion at Fort Lewis, Wash., where his assignments included assistant

battalion operations officer, company executive officer, platoon leader and commander, 54th Engineer Company (TOPO). While there, he also served duty fighting forest fires in the Pacific Northwest, and deployments to the Republic of Korea and the National Training Center.

His military decorations feature the Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal (with six oak leaf clusters), Army Commendation Medal (with three oak leaf clusters), Army Achievement Medal, Armed Forces Expeditionary Medal, Kosovo Campaign Medal, Global War on Terrorism Expeditionary Medal, Korea Defense Service Medal, Humanitarian Service Medal, NATO Medal, the Ranger Tab, the Sapper Tab, and the Parachutist Badge.

Col. Anninos is married to the former Catherine M. Bender from New Jersey, with whom he has two sons. ■

Corps of Engineers Modifies Virginia's Permitting State Programmatic General Permit – Virginia Given More Solo Authority

On June 1, 2007, the Corps issued a revised SPGP (07-SPGP-01) covering residential, commercial and institutional development activities, and linear transportation activities. Under the new prospective, permittees engaging in residential, commercial and institutional development activities no longer need Corps approval for impacts of less than 2,000 linear feet to non-tidal streams, and of less than 1 acre to non-tidal wetlands.

Prospective permittees with linear transportation projects no longer need Corps approval for impacts of less than 1/3 acre. Instead, an applicant only needs DEQ, and in some instances Virginia Marine Resources Commission, approval. Under the prior SPGP, affirmative

(see SPGP continued on page 5)

SPGP (continued from page 4)

authorization from the Corps was required to use certain categories contained in the SPGP. The new SPGP no longer has categories.

The Corps will still confirm delineations of the jurisdictional resources on a site (including isolated wetlands), and this confirmation must be submitted with the SPGP application. The application is still a Joint Permit Application submitted to the VMRC, but the applicant now must mark SPGP across the top of the application, then it will be processed under the revised SPGP.

Under this process, DEQ takes over the application review, including providing screening for historic resources and endangered species. If endangered species or historic resources are present, then DEQ presents the issue to the Corps for resolution, but that resolution does not automatically require the Corps to have a permitting role. Work that does not meet the terms and conditions of the SPGP will require an individual permit.

There will also be federal screening by the Corps, EPA and the U.S. Fish and Wildlife Service for residential, commercial or institutional permittees proposing impacts to more than .5 acre of wetlands or water, or to more than 300 linear feet of a stream. For linear transportation projects, screening will occur for impacts totaling more than 1/3 acre or impacts to more than 300 linear feet of stream at any one impact area. If the screening agencies raise concerns that are not addressed by DEQ during its process, the Corps may exert discretionary authority to require an individual permit.

Assuming that DEQ will be able to effectively manage its new role in screening for endangered species and historic resources, and that it will have sufficient permit writer personnel to review the applications quickly, this could be beneficial for the wetlands permit applicant because there is less danger of being caught between agencies.

However, one benefit touted by the Corps is that its permit writers are now freed up from prior permitting duties and will be able to focus on enforcement and compliance issues related to its individual permits. So time and money saved by general permittees on the front end of the process may be spent by individual permittees during the post-permit period. ■

.....CRITTER CORNER

The Muskrat (*Ondatra zibethicus*): Friend or Foe of Wetland Restoration?

By Robin Bedenbaugh

The muskrat is North America's largest microtine rodent, with adults ranging from 1.5 to 3 pounds. Found essentially throughout North America, it is one of the most common residents of emergent wetland habitats.

The muskrat prefers wetland habitats with plenty of open water, and abundant food primarily in the form of emergent wetland plants. It is well adapted for aquatic life, with broad webbed hind feet and a vertically flattened tail that serves as an effective rudder. It can swim up to 3 mph, and can remain submerged for up to 20 minutes.



It has a valvular mouth that allows it to close its lips behind its incisor teeth, giving it the ability to gnaw underwater without drowning. The muskrat is primarily an herbivore, though it has been known to occasionally eat mussels, crawfish and other aquatic organisms, when it lives in a habitat with little vegetation such as a farm pond. When available, cattail is its most preferred food source.

Like most rodents, muskrats are prolific reproducers – capable of producing two or three litters annually. They build small lodges of cut herbaceous matter or excavate burrows in which to bear and raise their young. When large numbers of muskrats occur in an area, they can have a definite impact on vegetation, particularly herbaceous vegetation.

When I first began taking interest in wetland restoration some 20+ years ago, I had read that muskrats were a nuisance to wetland restoration efforts. I had no firsthand experience, so I took what I read for the truth, and placed them on my list of undesirable species.

My first experimentation with wetland restoration took place in my own backyard, which backed up to a vast brackish marsh system loaded with muskrats. I painstakingly began pulling the encroaching honeysuckle and poison ivy off of the wetland shrubs; manually pulled cattail and replaced it with native Iris, marsh mallow, and Virginia seashore mallow; and planted the banks of the creek with tiny bare root bald cypress seedlings.

Meanwhile, my neighbor was planting the banks of the creek along his yard with non-native red-tipped Photinia. We both discovered that muskrats like fresh new growth of bald cypress seedlings and red-tipped Photinia. The muskrats first cut the tender young red tops off all 125 Photinia, then started working on my bald cypress seedlings. Fortunately, I was able to wrap chicken wire around some of my seedlings before they fell victim to the foraging of the muskrats.

(see Muskrat continued on page 6)

Muskrat (continued from page 5)

Over the years, I discovered that muskrats would rarely touch a bald cypress once the tree reached two years of age, so I only had to protect them in the first year after planting. I also discovered during this time that cattail is such a favored food source, that muskrats will travel long distances to reach patches of it. A large patch existed across the creek from my neighbor's house, and each spring and summer, I could watch a regular parade of swimming muskrats going by my house to the cattail patch. They meticulously harvested the rhizomes and hearts of the growing shoots, then swam back down the creek carrying them to their lodges and the babies waiting for them there. It was during this time that I observed they would pass up all other food sources when sufficient quantities of cattail were available.

Over the next 10 years or so, I was able to regularly observe muskrat behavior in my creek and restored wetland. Provided I protected my annual plantings of bare root bald cypress until they reached two years of age, the only impact I observed on any woody plant species in my wetland was minor root damage to my box elder trees as a result of tunneling activity. I can't say the same for the cattail patch across from my neighbor's house. Over the course of a couple of years, the muskrats effectively eliminated it!

My family moved to Richmond in 2000, leaving my restored wetland and the muskrats behind in Norfolk. I forgot about muskrats for a while, until 2004, when I began monitoring a large wetland restoration site in New Kent County. The site was already in its fourth year, and still struggling with cattail control problems. Annual cattail control activities were conducted (manual cutting and treatment with Rodeo®), and the cattail was slowly but surely coming under control. However, large stands persisted in certain areas with lots of open water.

The winter of 2004-2005 was unusually wet, and the restoration site filled with water. That winter, muskrats took up residence in the site, and before winter was over, there were more than a dozen vegetation mound lodges constructed in the wetland. The muskrats built the lodges primarily out of cut wool grass and burreed stems. Fearing that so many muskrats might damage some of the young tree seedlings in the site, I contacted the USDA wildlife biologist and warned him that we might want him to do some muskrat control in addition to his annual beaver control.

But remembering my experiences in Norfolk, we decided to let them go and observe their activity, rather than trap them. Sure enough, as soon as the densest cattail patches began to sprout, the muskrats went to work. It was amazing to observe over the next couple of months the efficiency of these rodents in



knocking back the largest patches of cattail. We let them work the patches over until the density of cattail became so sparse that they began to shift to other species in the site we did not want damaged.

At the end of May, the USDA biologist came in for a week – knocking the muskrat population down to manageable levels, where the growth rate of the vegetation in the site offset the impacts from feeding muskrats. With the cattail population knocked down to a few areas with patchy densities, we brought in the cattail treatment crew in late June to cut and treat the remaining patches.

The effect was nothing less than spectacular. The cattail all but disappeared, and desirable vegetation filled in where the cattail stands had been. Without the cattail stands, the remaining muskrats largely vacated the site, and we have enjoyed the past few years without enough cattail or muskrats to warrant any treatment action.

As a result of my experiences and observations, I no longer consider muskrats to be the foes of wetland restoration as they have previously been labeled. In fact, with careful observation and management of their activities, muskrats may even become one of your restoration site's best friends. ■

*Schwartz, C. W., and E. R. Schwartz. 1981. The wild mammals of Missouri, rev. ed. Univ. Missouri Press, Columbia. 356 pp.