

AGENDA NOTE – HRPDC ANNUAL COMMISSION MEETING

ITEM #21: FOR YOUR INFORMATION

A. Chesapeake Bay Program

The U.S. Environmental Protection Agency (EPA) Chesapeake Bay Program and the National Fish and Wildlife Foundation announced the recipients of over \$10.9 million in grants for 55 environmental projects in the Chesapeake Bay Watershed's six states and the District of Columbia. The funding was awarded through the Chesapeake Bay Stewardship Fund via the Small Watershed Grants Program and the Chesapeake Bay Innovative Nutrient and Sediment Reduction Grants Program, both of which are administered by the National Fish and Wildlife Foundation. A copy of the "Backgrounder" prepared by the Chesapeake Bay Program, summarizing these projects is attached.

The HRPDC proposal to support the region's efforts to address the Chesapeake Bay TMDL and Watershed Implementation Plan is among the approved projects. This funding will support HRPDC staff technical analyses, facilitation of the Regional Chesapeake Bay TMDL Steering Committee and related activities.

Attachment 21A

B. Navy Region Mid-Atlantic Public Affairs Office

Commander, Navy Region Mid-Atlantic has released the fiscal year 2010 (Oct. 1, 2009 through Sept. 30, 2010) Department of the Navy impact statistical data for the Hampton Roads area. Total direct economic impact to the region saw a decrease of approximately \$1.4 billion, from \$14.9 billion in fiscal year 2009 to \$13.5 billion in fiscal year 2010. Total annual payroll (military and civilian) remained steady at \$8.2 billion. However, procurement expenditures decreased from approximately \$6.7 billion in FY09 to \$5.3 billion in FY10. A copy of the Navy's release of this data is attached.

The HRPDC staff summary of the report is shown below:

On September 15, 2011 the Commander, Navy Region Mid-Atlantic released the economic impact report for the Hampton Roads area. According to the release, the Navy had a direct economic impact of \$13.5 billion in 2010, down \$1.4 billion from 2009. Total active duty Navy employment was 82,463, approximately 80% of the region's active duty military. The Navy had 84 ships homeported in Hampton Roads and 36 aircraft squadrons. The Navy's annual payroll (military and civilian) was \$8.2 billion and Navy procurement was \$5.3 billion.

| Economic Impact of the Navy | | | | | |
|--------------------------------------|-----------|-----------|----------|---------------|----------------|
| Figures in Millions of 2010\$ | | | | | |
| | 2010 | 2009 | 2000 | 1 Year Change | 10 Year Change |
| Active Duty Military Payroll | \$ 4,773 | \$ 5,005 | \$ 3,538 | -4.6% | 34.9% |
| Retired Military / Survivors Payroll | \$ 1,228 | \$ 1,228 | \$ 829 | 0.0% | 48.1% |
| Civil Service Payroll | \$ 2,058 | \$ 1,992 | \$ 1,508 | 3.3% | 36.5% |
| Non-Appropriated Funds | \$ 142 | \$ 141 | \$ 124 | 0.5% | 14.7% |
| Total Annual Payroll | \$ 8,202 | \$ 8,367 | \$ 6,049 | -2.0% | 35.6% |
| Total Procurement | \$ 5,270 | \$ 6,846 | \$ 3,912 | -23.0% | 34.7% |
| Total Direct Economic Impact | \$ 13,472 | \$ 15,213 | \$ 9,960 | -11.4% | 35.3% |

Sources: Commander, Navy Region Mid-Atlantic, Virginia Business 2002 Statistical Digest, HRPDC

A complete copy of the report is available at:

http://www.cnmc.navy.mil/navycni/groups/public/@cnrma/documents/document/cnicp_a269332.pdf

Attachment 21B

C. Skirt The Issue- Rising Above

In March, Virginia Sea Grant, through a joint effort with University of Virginia's Institute for Environmental Negotiation, the Hampton Roads Planning District Commission, the City of Virginia Beach, Wetlands Watch and Old Dominion University, held "listening sessions" in Virginia Beach. It was a chance for residents to voice their opinions on floods and reports of sea-levels rising. More than 100 residents participated. HRPDC Regional Planner Ben McFarlane briefed each of the listening sessions on the ongoing HRPDC studies of sea level rise and participated in a subsequent briefing to Virginia Beach City Council on the work. This effort was featured in a recent issue of Hampton Roads Magazine. A copy of the article is attached.

Attachment 21C



Backgrounder

410 Severn Avenue, Suite 109 · Annapolis, MD 21403

1 (800) YOUR BAY · www.chesapeakebay.net

SMALL WATERSHED GRANT (SWG) and INNOVATIVE NUTRIENT AND SEDIMENT (INSR) GRANT AWARDEES and PROJECTS

Fifty-five projects in the Chesapeake Bay watershed have received \$10.9 million in grants from the Chesapeake Bay Stewardship Fund, which is administered by the National Fish and Wildlife Foundation (NFWF).

The Small Watershed Grants (SWG) Program awarded \$2.8 million to 36 nonprofit organizations and local governments working to improve the condition of their local watersheds.

The Innovative Nutrient and Sediment Reduction (INSR) Grants Program awarded \$8.2 million to 19 innovative and cost-effective projects that dramatically reduce or eliminate the flow of nitrogen, phosphorus, and sediment pollution into local waterways and the Chesapeake Bay. Descriptions of each project, by grant and state, are below:

VIRGINIA PROJECTS

SMALL WATERSHED GRANTS

- The *Thomas Jefferson Planning District Commission* will use a \$50,000 grant to evaluate and revise current pollution reduction plans and develop strategies to implement the Virginia Watershed Implementation Plan at a local level. The project will promote collaboration between river basin commissions and local governments.
- *Lands and Waters* will use a \$43,994 grant to support its Vernal Pool Schoolyard Restoration Program, which engages Daniels Run Elementary and Lanier Middle School students in schoolyard conservation projects.
- The *City of Waynesboro, Virginia* will use a \$100,000 grant to enhance existing stormwater infrastructure, develop a stormwater education and cost-share program, and engage private landowners in installing rain barrels and rain gardens on their properties.
- The *Culpeper Soil and Water Conservation District* will use a \$28,405 grant to adapt the North Carolina Community Conservation Assistance Program for use in Virginia. The project will partner with fifteen central Virginia localities and the Virginia Master Gardeners.
- The *James River Association* will use a \$75,000 grant to encourage Lynchburg homeowners to disconnect their downspouts and install stormwater management structures such as rain barrels and rain gardens. The project will create a stewardship incentive program, in which participating homeowners can achieve certification and public recognition as "River Heroes".
- The *Center for Watershed Protection, Inc.* will use an \$80,000 grant to increase the tree canopy in urban, suburban, and rural sites in Clarke County, Virginia. Reforestation efforts will reduce runoff and nutrient pollution.
- The *Hampton Roads Planning District Commission* will use a \$50,000 grant to create a regional steering committee and local work groups that will establish meaningful stakeholder involvement in the Phase II Watershed Implementation Plan process.
- The *James City County Stormwater Division* will use a \$75,000 grant to expand the Turf Love program, which helps citizens create garden areas that reduce pollutant delivery to waterways. The project will increase the number of certified nutrient management plans and provide landowners with financial incentives to install rain gardens.

-over-

- The *Chesapeake Bay Foundation, Inc.* will use a \$150,000 grant to conduct community-wide watershed restoration, education, and conservation activities that will improve water quality in Upham Brook, an urban tributary of the Chickahominy River in Henrico County, Virginia. The project will rely on citizen engagement and will include volunteer opportunities, homeowner audits, and citizen water quality testing.

INSR GRANTS (Virginia cont'd)

- *Water Stewardship, Inc.* will use a \$600,000 grant to reduce nutrient pollution on farms in three regions of Virginia (Eastern Shore, Middle Peninsula, and Shenandoah Valley). The project will evaluate Water Stewardship's current program for meeting the targets outlined in Virginia's Watershed Implementation Plan.
- The *Elizabeth River Project* will use a \$301,900 grant to launch *RiverStar*, a behavior-change program that will engage homeowners in practices that will reduce nutrient and sediment pollution. The project will use yard flags, free technical assistance, an annual festival, and social marketing techniques to inspire homes to reduce fertilizer use, harvest rainwater, and install native plants.
- The *Virginia Polytechnic Institute and State University* will use a \$600,000 grant to implement on-farm technical assistance, financial assistance, and continuous improvement plans on dairy farms in the Shenandoah Valley. The project will reduce phosphorus pollution.

PENNSYLVANIA PROJECTS

SMALL WATERSHED GRANTS

- The *Trust for Tomorrow* will use a \$100,000 grant to provide technical assistance, education, and outreach to Juniata River watershed landowners interested in restoring wetlands through the Natural Resource Conservation Service Wetland Reserve Program.
- The *Centre County Conservation District* will use a \$75,000 grant to implement best management practices on seven farms listed as high priorities in Centre County's Chesapeake Bay Implementation Plan. The project will create forested riparian buffers, develop nutrient or manure management plans and install livestock fencing.
- The *Pennsylvania Institute for Conservation Education's Master Naturalist Program* will use a \$30,000 grant to educate and train citizens to be leaders in protecting, restoring, monitoring, and conserving natural resources in their communities.
- The *Brandywine Conservancy, Inc.* will use a \$93,285 grant to develop innovative pollution reduction models for 20 Chester County municipalities. The project will rely on public municipalities, as well as private landowners, to implement pollution reduction practices.
- The *Chiques Creek Watershed Alliance* will use a \$30,000 grant to restore a section of Chiques Creek adjacent to athletic fields. The project will reduce flood damage to the athletic complex and parking areas and educate the public about the importance of stormwater management.
- The *Lancaster County Conservation District* will use a \$37,500 grant to educate Plain Sect farmers on the importance of agricultural best management practices and provide them with tools to meet Pennsylvania agriculture regulations. The project will reduce nutrient runoff into surface and groundwater.
- The *Western Pennsylvania Conservancy* will use a \$100,000 grant to collect data on unassessed waters in Pennsylvania's Chesapeake Bay drainage. The project will identify at-risk streams supporting critical aquatic habitat and brook trout fisheries, and deter development allowances, including drilling permits, from being issued in these areas.
- The *Clearwater Conservancy of Central Pennsylvania, Inc.* will use a \$100,000 grant to restore impaired stream reaches and riparian habitats within the Spring, Spruce, Little Fishing, and Upper Penn's Creek watersheds.
- The *Little Juniata River Association* will use a \$71,900 grant to restore clean water and recover habitat by reducing stream-bank erosion and planting buffers in the Little Juniata River watershed.

INSR GRANTS (Pennsylvania cont'd)

- The *Pennsylvania State University* will use a \$700,000 grant to integrate feed, manure, and soil conservation best management practices on farms in the Upper Kishacoquillas Creek and West Branch Little Conestoga Creek watersheds.
- The *City of Lancaster* will use a \$200,000 grant to create a stormwater utility, the first in Pennsylvania's portion of the Chesapeake Bay watershed. The project will serve as a model for other Pennsylvania cities.
- The *Lancaster County Conservancy* will use a \$400,000 grant to assist municipalities and landowners in implementing cost-effective stormwater management practices. The project will embrace Lancaster County's agricultural heritage and will employ incentives for adapting stormwater management practices.

MARYLAND PROJECTS

SMALL WATERSHED GRANTS

- The *Pinchot Institute for Conservation* will use a \$30,000 grant to expand possibilities for forest mitigation under Maryland's Forest Conservation Act, which requires developers to replace cut trees or buy "credits" from private landowners who have planted trees. The project will identify strategies for connecting developers with private landowners.
- *Defenders of Wildlife* will use a \$50,000 grant to ensure the continued adaptability of ecologically significant coastal wetlands on Maryland's Eastern Shore. The project will map high priority land tracts, identify funding sources for land protection, and develop landowner incentives.
- The *Low Impact Development Center, Inc.* will use a \$120,000 grant to construct rain gardens along major transportation corridors in the Port Towns of Bladensburg, Colmar Manor, Cottage City, and Edmonston.
- *Chesapeake Wildlife Heritage, Inc.* will use a \$50,000 grant to restore 140 acres of non-tidal wetlands in the Chester River and Choptank River watersheds. The project will educate landowners about their role in restoring the Chesapeake Bay and work with landowners to develop conservation plans for their properties.
- The *City of Salisbury, Maryland* will use a \$75,000 grant to develop a restoration implementation plan for the Wicomico River watershed. The project will determine specific strategies to meet target pollution load reductions established by the Chesapeake Bay Watershed Implementation Plan for Wicomico County.
- The *Oyster Recovery Partnership* will use a \$50,000 grant to prioritize Maryland tributaries suitable for oyster restoration. The project will also expand the region's oyster shell recycling program, which collects used oyster shells from restaurants and reuses them to reseed oyster beds.
- The *St. Mary's River Watershed Association, Inc.* will use an \$80,000 grant to engage area residents, developers, and businesses in low impact development practices that will improve water quality in the St. Mary's River. The project will also implement a neighborhood rewards program for conservation practices.
- The *Smithsonian Environmental Research Center* will use an \$80,000 grant to restore eroding shoreline at Cheston Point in Edgewater, Maryland. The project will create a stable marsh habitat containing appropriate native plant species, which will benefit aquatic species and migratory waterfowl along Cheston Creek.
- *Trout Unlimited, Inc.* will use a \$26,536 grant to develop a brook trout habitat restoration plan for Little Tuscarora Creek, one of the few streams in Frederick County still capable of sustaining a healthy brook trout population.
- The *Scenic Rivers Land Trust, Inc.* will use a \$75,000 grant to continue a watershed protection and community outreach initiative that will engage citizens in watershed protection activities and preserve thousands of acres of undeveloped land through easements or purchases.

INSR GRANTS (Maryland cont'd)

- The *Maryland Association of Soil Conservation Districts* will use a \$335,202 grant to certify farmers that adhere to the highest standards of nutrient management and conservation best management practices. The Maryland Farm Stewardship Certification and Assessment Program will evaluate farms in priority watersheds to determine their compliance with pollution targets.
- The *University of Maryland* will use a \$400,000 grant to institutionalize lawn practices that will greatly reduce runoff and lawn fertilizer use. The project will alter attitudes about lawn care and appearance, changing lawn culture from a highly fertilized grass monoculture to a more diverse plant community with improved soil conditions and a greater ability to filter stormwater runoff.
- The *Watershed Stewards Academy* will use a \$500,000 grant to train and support certified “Watershed Stewards”, trained volunteers who will create a shift in behavior and land use within neighborhoods. Community-wide behavior change will reduce pollution and ensure that “green” practices are no longer the exception, but the new social norm.
- The *City of Baltimore Department of Public Works* will use a \$210,000 grant to develop guidelines for implementing a stormwater offset and banking system for Baltimore City that can be applied to other communities in the Chesapeake Bay watershed.
- *Frederick County* will use a \$200,000 grant to assist landowners in converting their lawns to forests. The project will create conservation programs to protect forest cover and ensure the longevity of restoration efforts.
- *Prince George's County* will use a \$291,000 grant to implement and evaluate nutrient removal processes, all of which will be powered by renewable energy sources.

DISTRICT OF COLUMBIA PROJECTS

SMALL WATERSHED GRANTS

- The *Casey Trees Endowment Fund* will use a \$95,000 grant to launch its Large Parcel Tree Planting Pilot Program, which will identify, map, and plant over 400 trees in the Oxon Run and Rock Creek watersheds.
- The *Metropolitan Washington Council of Governments* will use a \$175,000 grant to design and construct bioretention facilities at Langston Golf Course and the Kenilworth Park and Aquatic Gardens in Washington, D.C. The project will capture and filter stormwater runoff from two large parking lots, thereby reducing pollution loads to the Anacostia River.

INSR GRANTS

- The *District Department of the Environment* will use a \$700,000 grant to install and monitor a Regenerative Stormwater Conveyance system in an urban watershed. The project will use sand, shallow pools, and native vegetation to detain, infiltrate, and convey stormwater.
- The *District of Columbia Fire and Emergency Medical Services Department* will use a \$300,000 grant to transform four fire station roofs into model stormwater management systems. The project will install foam panels that can capture up to 2.5 inches of stormwater for reuse in daily operations.

NEW YORK PROJECTS

SMALL WATERSHED GRANTS

- The *Tioga County Soil and Water Conservation District* will use a \$150,000 grant to develop a floodplain berm removal program that will stabilize streams, decrease stream erosion, and reduce sediment pollution.

INSR GRANTS

- The *Tompkins County Conservation District* will use a \$700,000 grant to identify areas of highest nutrient pollution and implement nitrogen and phosphorus reduction practices in these areas. The project will conduct farmer outreach and collaborate with agricultural professionals, as well as federal, state, and local agencies.

WEST VIRGINIA PROJECTS

SMALL WATERSHED GRANTS

- The *Cacapon and Lost Rivers Land Trust* will use a \$100,000 grant to permanently protect ecologically critical private lands in the Cacapon and Lost Rivers watersheds. The project will also publish “Cacapon Voices,” a collection of text and images that describes property owners’ connection to their land.
- *Trout Unlimited, Inc.* will use a \$100,000 grant to engage private landowners in brook trout habitat restoration practices. The project will focus on streams sensitive to climate change.
- The *Cacapon Institute, Inc.* will use a \$50,000 grant to recruit 20 schools from the eight counties in West Virginia’s Potomac River Basin and engage thousands of students in hands-on conservation activities as part of its Potomac Headwaters Watershed Leaders program.

DELAWARE PROJECTS

SMALL WATERSHED GRANTS

- The *Town of Bridgeville, Delaware* will use a \$75,000 grant to identify the sources of urban nutrient pollution and to engage rural towns and citizens in sustainable growth practices that will help Bridgeville meet the goals of Delaware’s Chesapeake Bay Watershed Implementation Plan.

MULTI-STATE PROJECTS

SMALL WATERSHED GRANTS

- The *Octoraro Watershed Association, Inc.* will use a \$100,000 grant to identify conservation projects that address water quality issues in the Octoraro River watershed. The project will promote collaboration among county conservation districts, watershed stakeholders, environmental advocacy groups, and state agencies.

INSR GRANTS

- *Farm Pilot Project Coordination* will use a \$650,000 grant to evaluate nutrient reduction methods deployed at four poultry farms in the Chesapeake Bay Watershed. The project will develop a common method for handling poultry litter ash that will enhance its value as a fertilizer.
- The *Chesapeake Stormwater Network* will use a \$500,000 grant to provide targeted training to stormwater professionals in the Chesapeake Bay Watershed. The project will include webcasts, design workshops, field training, on-line training modules and master stormwater practitioner certificates.
- The *University of Maryland Stormwater Capacity Program* will use a \$400,000 grant to expand the ability and capacity of local governments and communities to achieve water quality restoration goals through more efficient stormwater financing.
- The *Chesapeake Bay Foundation, Inc.* will use a \$200,000 grant to support dairy and beef producers in transitioning from traditional confinement operations to pasture-based grazing systems. The project will reduce nutrient and sediment pollution from agricultural cropland and agricultural operations.

###

DEPARTMENT OF THE NAVY

NAVY REGION MID-ATLANTIC PUBLIC AFFAIRS OFFICE

1510 GILBERT ST., STE. 207
NORFOLK, VA 23511
TEL: (757) 322-2853
FAX: (757) 445-1953



FOR IMMEDIATE RELEASE

11-30

September 15, 2011

NAVY RELEASES NEW ECONOMIC IMPACT REPORT FOR HAMPTON ROADS AREA

Norfolk, Va. – Commander, Navy Region Mid-Atlantic has released the fiscal year 2010 (Oct. 1, 2009 through Sept. 30, 2010) Department of the Navy impact statistical data for the Hampton Roads area.

Total direct economic impact to the region saw a decrease of approximately \$1.4 billion, from \$14.9 billion in fiscal year 2009 to \$13.5 billion in fiscal year 2010. Total annual payroll (military and civilian) remained steady at \$8.2 billion. However, procurement expenditures decreased from approximately \$6.7 billion in FY09 to \$5.3 billion in FY10.

Operationally, the number of ships homeported in Hampton Roads increased from 83 to 84, and the number of aircraft squadrons also increased by one from 35 to 36.

-USN-

MEDIA NOTE: Questions concerning these statistics may be directed to the Commander, Navy Region Mid-Atlantic Public Affairs Office at 322-2853.

“The Navy in Hampton Roads”

A Statistical Report for Fiscal Year 2010 (1 October 09 – 30 September 10)
Information compiled at Navy Region Mid-Atlantic, Norfolk, Virginia
Released September 15, 2011

EMPLOYED PERSONNEL

| <u>Navy</u> | <u>2009</u> | <u>2010</u> |
|----------------------------------|----------------|----------------|
| Active Duty: | | |
| Officers | 10,879 | 11,553 |
| Enlisted | 72,452 | 67,827 |
| Students and Other Transients | 3,046 | 3,083 |
| Total Active Duty | 86,377 | 82,463 |
| Retired and Survivors (est.) | 46,786 | 47,557 |
| Military Family Members (est.) | 97,724 | 105,615 |
| Total Military and Family | 230,887 | 235,635 |
| <u>Civilian Employees</u> | | |
| Civil Service | 31,896 | 33,670 |
| Non-appropriated Fund | 4,091 | 4,143 |
| Total Civilian Employees | 35,987 | 37,813 |
| Total Navy “Family” | 266,874 | 273,448 |

HOMEPORTED OPERATING UNITS

| | | |
|--------------------------------------|-----------|-----------|
| Ships Homeported | 83 | 84 |
| Aircraft Squadrons Homeported | 35 | 36 |

MILITARY FAMILY HOUSING

| | | |
|-------------------------------|---------------|---------------|
| Occupy Government PPV Housing | 4,084 | 4,379 |
| Own Private Dwellings | 20,013 | 20,012 |
| Rent Private Dwellings | 28,131 | 28,097 |
| Total | 52,228 | 52,488 |

“The Navy in Hampton Roads, cont’d”

| PERSONNEL WORK LOCATIONS | <u>2009</u> | <u>2010</u> |
|--------------------------|---------------|---------------|
| Norfolk | | |
| Military | 53,958 | 51,547 |
| Civilian | 17,334 | 18,957 |
| Virginia Beach | | |
| Military | 12,473 | 13,069 |
| Civilian | 2,797 | 2,109 |
| Portsmouth | | |
| Military | 6,737 | 4,983 |
| Civilian | 11,758 | 12,432 |
| Peninsula | | |
| Military | 1,314 | 1,313 |
| Civilian | 1,022 | 876 |
| Chesapeake | | |
| Military | 1,415 | 687 |
| Civilian | 249 | 236 |
| Little Creek | | |
| Military | 10,313 | 10,702 |
| Civilian | 2,506 | 2,800 |
| Suffolk | | |
| Military | 167 | 162 |
| Civilian | 321 | 403 |
| Total | | |
| Military | 86,377 | 82,463 |
| Civilian | 35,987 | 37,813 |

ECONOMIC IMPACT: ANNUAL PAYROLL (\$ MILLIONS)

| | | |
|--|----------------|----------------|
| Active Duty Military | \$4,887 | \$4,773 |
| Retired Military/Survivors (estimated) | \$1,199 | \$1,228 |
| Civil Service | \$1,945 | \$2,058 |
| Non-appropriated Funds | \$138 | \$142 |
| Total Annual Payroll | \$8,169 | \$8,202 |

GOODS AND SERVICES (\$ MILLIONS)

Includes contract awards for ship construction, conversion and repair in private yards; military construction, maintenance, repair and alterations; utilities; materials, equipment, supplies, services and transportation (freight and passenger).

| | | |
|-------------------------------------|-----------------|-----------------|
| Total Procurement | \$6,684 | \$5,270 |
| TOTAL DIRECT ECONOMIC IMPACT | \$14,853 | \$13,472 |

Skirt The Issue - Rising Above?

[Magazine](#) | [Departments](#)

The very nature of Hampton Roads is changing--and researchers and leaders are still searching for affordable solutions

By Kristen De Deyn Kirk



The land is sinking, and the water is rising, and no one's sure what we should do. Sounds like something out of a horror movie, but it's not—it's life in Hampton Roads. Fortunately for residents and businesses, officials are paying attention.

In March, Virginia Sea Grant, a joint effort with University of Virginia's Institute for Environmental Negotiation, the Hampton Roads Planning District Commission, the City of Virginia Beach, Wetlands Watch and Old Dominion University, held "listening sessions" in Virginia Beach. It was a chance for residents to voice their opinions on floods and reports of sea-levels rising. More than 100 residents participated. Clay Bernick, Virginia Beach's environment and sustainability manager, was later part of a group that spoke to the city council in May about residents' concerns and the city's current and future plans.

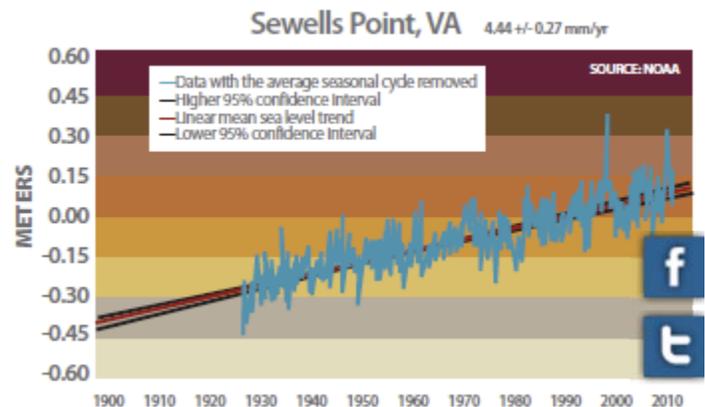
Back in 2009, the city developed a comprehensive plan to avoid disaster. Among the recommendations: Prohibit construction in floodplains without acceptable mitigation; build on higher ground where it is less susceptible to sea level rise and make higher ground the prime focus of development; aggressively retrofit existing storm drains throughout Virginia Beach into state-of-the-art stormwater management facilities to minimize flooding after heavy storms; and develop measures to increase reasonable structural setbacks in order to effectively protect properties facing the Chesapeake Bay and Atlantic Ocean.

Yet, more action is needed.

Benjamin McFarlane, a physical and environmental planner with Hampton Roads Planning District Commission (HRPDC), also spoke about his three-year grant project with the Virginia Coastal Zone Management Program. He called for "more data and better models" to understand the influence of sea-level rising. On June 16, he presented another update to the HRPDC, noting that he had outlined general costs and benefits of various options to combat the problem. The report had not been released as Hampton Roads Magazine went to press. The research and report for the grant project are due to be completed by this December. It is hoped that all of the concerned cities will buy into the final recommendations, yet this is a case of there being no easy, inexpensive answers—and it seems like the world is watching. We might be one of the first areas to face this problem on a large scale, but we won't be the last.

This year, PBS's *Need to Know* and *The New York Times* featured Norfolk and its flooding woes. A couple from Larchmont, a community near Old Dominion University, worried about how many more floods they could handle. They used to see a few puddles that they'd have to battle. Now, they feel like streets flood regularly. Four major floods in five years have damaged their appliances, including furnaces and hot water heaters. For them, the situation is getting worse and more costly to recover from. Local environmental activist William "Skip" Stiles, executive director of Wetlands Watch, appeared on *Need to Know*, noting that both residents and leaders are struggling with the issue. Residents don't have enough money to replace lost items, and city officials don't have much of a budget to improve conditions or buy back houses. Councilwoman Dr. Theresa Whibley noted on PBS that the city has "nowhere near enough money" to address the problem.

Stiles is worried about spending money on what might be temporary



Attachment 21C

solutions. Norfolk Mayor Paul Fraim has said that the city could create retreat zones, turning some areas into public parks or leaving them empty. But again, what about the money?

Norfolk certainly has a lot to overcome. Reporter Leslie Kaufman from The New York Times succinctly outlined the city's triple-whammy hit: The water from the rivers is rising; the land is sinking; and Attorney General Ken Cuccinelli is saying a University of Virginia climate scientist committed fraud in research "proving" climate change.

Putting politics aside, the problem is real: Kaufman writes, "... Norfolk has experienced the highest relative increase in sea level on the East Coast—14.5 inches since 1930, according to readings by the Sewells Point naval station."

None of this is news to Dr. Larry Atkinson, a professor of oceanography at Old Dominion University, and he's offered his expertise to be part of the solution. He created The Old Dominion University Climate Change and Sea Level Rise Initiative (CCSLRI) last fall, meeting with nearly 100 faculty members, administrators, industry and organization leaders, state and local officials and international colleagues to gather their ideas.

Part of CCSLRI's goal is to educate the citizens of Hampton Roads, and Atkinson is doing the basic work of explaining sealevel rising:

"Local sea level rise is caused by three things, all about equal," he says. "The warming of the ocean; glacial forebulge subsidence (the land shifting as glaciers melt); and freshwater flowing into the ocean from melting glaciers and ice caps."

Atkinson has hosted a faculty presentation by Wetland Watch's Stiles and a public talk by Rear Adm. David Titley, the Navy's top oceanographer, about climate change and the Navy's ability to face it. He's also written on the topic; an essay he penned in the spring for the Free Lance Star in Fredericksburg explained the science behind the rise and its ramifications. Newspapers countrywide picked up the essay, an indication that many Americans are concerned.

With Atkinson, his fellow researchers and leaders like Stiles, Bernick and McFarlane, there is hope that science can first prove to non-believers the causes of sea-level rising and, more important, introduce solutions—or at least the best possible coping mechanisms. Hampton Roads' residents might for once feel like they're part of a region, facing and conquering a problem together. After all, coastal Virginia Beach and Larchmont residents are affected, along with people in East Ocean View, Downtown Norfolk, Poquoson, and parts of Portsmouth, Hampton and Gloucester, according to Atkinson. On this issue, we'll most likely sink or swim together.

Add Comment

[< Prev](#)

[Next >](#)

