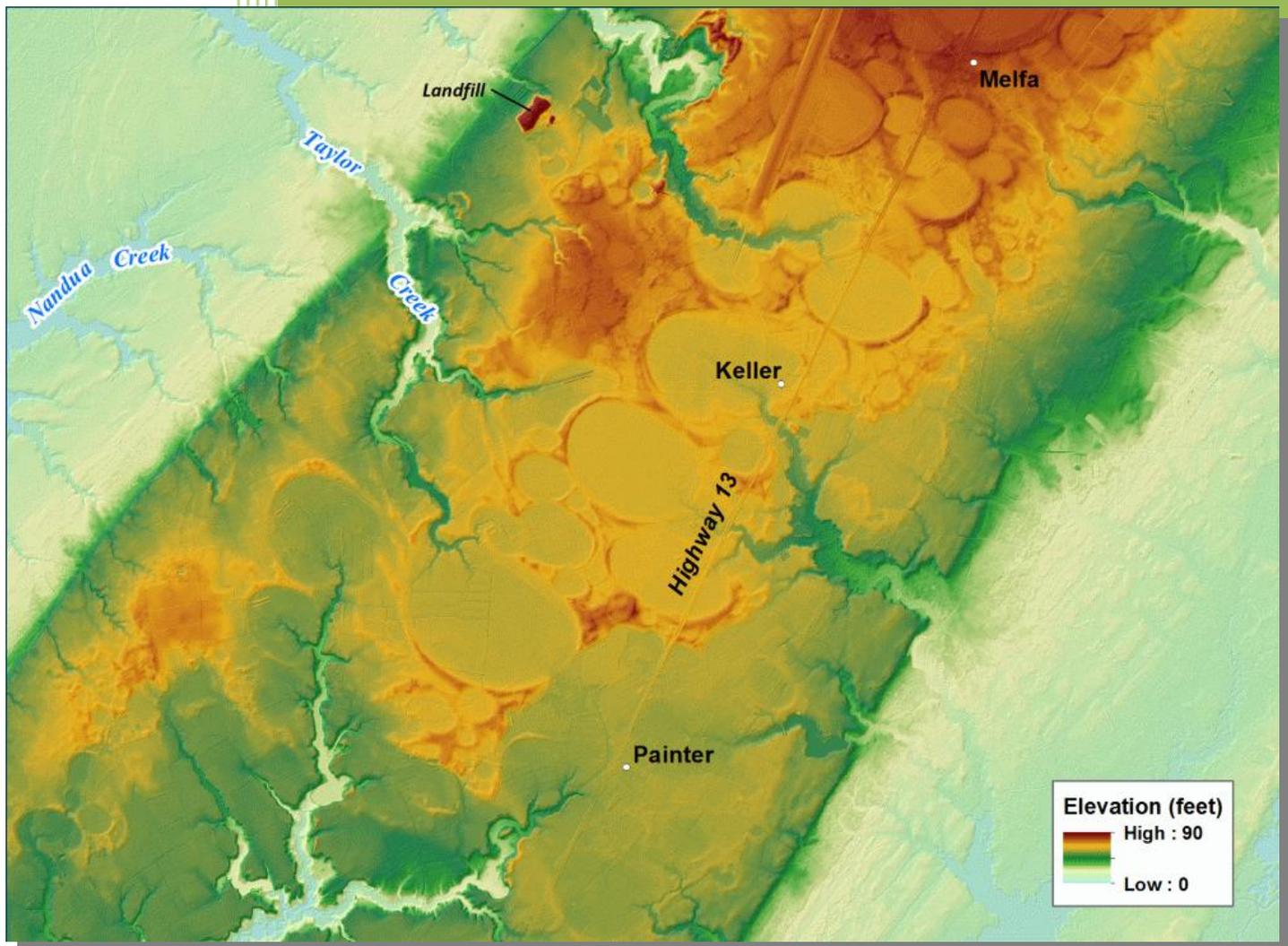




2011 Annual Report

Accomack–Northampton Coastal Resources Technical Assistance Program



Virginia Coastal Zone
MANAGEMENT PROGRAM



Virginia Coastal Zone Management Program

Accomack-Northampton Planning District Commission

NOAA Grant: NA11NOS4190122

Grant Year 2011 Task 41

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2011 Technical Assistance Annual Report

February 2013

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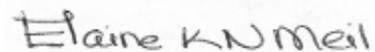
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On the cover – LiDAR Elevation Data Illustrating Land Elevations for South-Central Accomack County. High-resolution LiDAR elevation data was acquired for the Eastern Shore of Virginia and made available for free to the public in 2011. The dataset improves upon the existing digital elevation models with 4-7 foot vertical resolution by providing 0.5 foot vertical accuracy. South-central Accomack County and the towns of Melfa, Keller, and Painter are illustrated. The bayside and seaside paleoshorelines and coastal terraces are apparent as well as the abundant Carolina Bays and various infrastructure such as the Accomack County airport. The new LiDAR data is essential for adequate coastal management and planning on the Eastern Shore.



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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	EXECUTIVE SUMMARY	1
3.0	PRODUCTS	2
3.1	CLIMATE ADAPTATION WORKING GROUP	2
3.1.1	SUMMARY OF ACCOMPLISHMENTS	2
3.1.2	QUARTERLY MEETING REPORTS	2
3.2	COASTAL MANAGEMENT TRAINING REPORT	5
3.2.1	OCTOBER 20, 2011 GROUND WATER COMMITTEE PUBLIC WORKSHOP	6
3.2.2	U.S. NAVY NATIVE AMERICAN CULTURAL AWARENESS TRAINING	6
3.2.3	GIS USERS GROUP LIDAR WORKSHOP	7
3.2.4	VIRGINIA OUTDOORS PLAN PUBLIC WORKSHOPS	7
3.2.5	GARGATHY CREEK, FINNEY CREEK, NORTHAM CREEK, FOLLY CREEK, ROSS BRANCH, & WACHAPREAGUE CHANNEL TMDL DEVELOPMENT PUBLIC MEETING	8
3.2.6	HOUSEHOLD HAZARDOUS WASTE COLLECTION	8
3.2.7	JUNE 6, 2012 GROUND WATER COMMITTEE PUBLIC WORKSHOP	9
3.2.8	COASTAL FLOODING WORKSHOP	9
3.2.9	CITIZENS FOR A BETTER EASTERN SHORE COASTAL FLOODING PRESENTATION	10
3.2.10	ATLANTIC DISTRICT RURITANS COASTAL FLOODING PRESENTATION	10
3.3	TECHNICAL ASSISTANCE REPORT	10
3.3.1	PARTNERSHIPS	11
3.3.2	LEVERAGED FUNDS	12
3.3.3	HISTORICAL SEARCHES	13
3.3.4	INFORMATION REQUESTS	14
3.4	GROUND WATER COMMITTEE REPORT	16
3.4.1	SUMMARY OF ACCOMPLISHMENTS	16
3.4.2	MONTHLY PROGRESS REPORTS	18
3.5	TRANSIENT AND WORKING WATERFRONT INFRASTRUCTURE NEEDS ASSESSMENT REPORT	30

APPENDICES

APPENDIX A – JANUARY 18, 2012 CLIMATE ADAPTATION WORKING GROUP MEETING SIGN-IN SHEET, AGENDA, AND PHOTOGRAPHS	31
APPENDIX B – APRIL 10, 2012 CLIMATE ADAPTATION WORKING GROUP MEETING SIGN-IN SHEET AND AGENDA	35
APPENDIX C – SEPTEMBER 26, 2012 CLIMATE ADAPTATION WORKING GROUP MEETING SIGN-IN SHEET AND AGENDA	38
APPENDIX D - GROUND WATER COMMITTEE PUBLIC WORKSHOP PHOTOGRAPHS, ANNOUNCEMENT AND PRESENTATION – OCTOBER 20, 2011	41
APPENDIX E – U.S. NAVY NATIVE AMERICAN CULTURAL AWARENESS TRAINING PHOTOGRAPHS	44
APPENDIX F – GIS USERS GROUP LiDAR WORKSHOP SIGN-IN SHEET, EVENT FLYER, AND PHOTOGRAPHS	47
APPENDIX G – VIRGINIA OUTDOORS PLAN PUBLIC WORKSHOP MEETING RESULTS AND PHOTOGRAPHS	53
APPENDIX H – HOUSEHOLD HAZARDOUS WASTE COLLECTION EVENT MATERIALS AND PHOTOGRAPHS	57
APPENDIX I – JUNE 6, 2012 GROUND WATER COMMITTEE PUBLIC WORKSHOP SIGN-IN SHEET, EVENT FLYER, AND PHOTOGRAPHS	61
APPENDIX J – COASTAL FLOODING WORKSHOP EVENT MATERIALS AND PHOTOGRAPHS	66
APPENDIX K – EASTERN SHORE OF VIRGINIA TRANSIENT AND WORKING WATERFRONT INFRASTRUCTURE NEEDS ASSESSMENT REPORT	72

1.0 Introduction

The Accomack-Northampton Planning District Commission (A-NPDC) was formed in 1970 to provide planning and housing services on the Eastern Shore of Virginia. A-NPDC is a regional commission consisting of Accomack and Northampton Counties and the Town of Chincoteague. Additionally, the A-NPDC assists 19 incorporated towns on the Eastern Shore.

The Eastern Shore of Virginia is a 70-mile long peninsula between the Atlantic Ocean and the Chesapeake Bay that has remained as one of the few remaining rural regions on the Atlantic seaboard despite consistent pressure from future development. The region is unique for its vast wealth of coastal resources. The threats of development and constant changes to the region's dynamic coastal environment put the socio-economic, natural, and built environments on the Eastern Shore at risk. In 2012, the A-NPDC assumed the role of lead agency for the Eastern Shore of Virginia Climate Adaptation Working Group (CAWG) to coordinate efforts amongst local, state, and federal representatives of government, aquaculture, agriculture, and community organizations to better plan and mitigate risks associated with climate change and sea level rise. CAWG along with other A-NPDC efforts such as the Eastern Shore of Virginia Ground Water Committee are working to ensure a productive future for Eastern Shore residents and the natural environment.

During FY2011, A-NPDC coordinated the CAWG, offered coastal management training opportunities for local government staff, and coordinated public education efforts. The A-NPDC also continued to staff the Eastern Shore of Virginia Ground Water Committee, provide GIS services, conduct state and federal environmental reviews, and work with local governments and organizations to address coastal management issues. The A-NPDC conducted a focal project that aimed at assessing needs of existing transient and working waterfront infrastructure with the intent to develop strategies that will both enhance and preserve existing infrastructure in the region. The expected outcome will be improved coastal management on the Eastern Shore of Virginia.

As part of the overall mission, the A-NPDC maintains a coastal program with the assistance and support of the Virginia Coastal Zone Management Program and the National Oceanic and Atmospheric Administration (NOAA).

2.0 Executive Summary

The 2011 Fiscal Year (FY2011) program included staff support of the Eastern Shore CAWG, coordination of ten training and outreach programs; technical assistance to local, state,

and federal government organizations; staff support of the Eastern Shore Ground Water Committee; and development of the *Transient and Working Waterfront Infrastructure Needs Assessment Report*. Over \$175,000 in grant funds and staff time were leveraged to aid the completion of multiple projects related to the goals presented in the scope of work for FY2011.

3.0 Products

The following sections describe the activities completed during FY2011.

3.1 Climate Adaptation Working Group Report

The Climate Adaptation Working Group (CAWG) is comprised of local government staff and officials and met four times during FY2011 to coordinate coastal management efforts, provide information and solicit input from localities on state and federal initiatives, and allow the exchange of information between localities. This task implements Executive Order 23, Goal 8.

3.1.1 Summary of Accomplishments

In FY2011 the CAWG:

- ◆ Transitioned leadership from the Nature Conservancy to the A-NPDC and greatly expanded its number of partnering and participating agencies
- ◆ Held four working group meetings including one public workshop
- ◆ Successfully oversaw a roll-out campaign for the new LiDAR elevation data including presentation to Accomack and Northampton Supervisors and Planning Commissions
- ◆ Coordinated with the NOAA Coastal Services Center to develop coastal vulnerability models for the Eastern Shore
- ◆ Developed an online mapping archive project to solicit and preserve local knowledge of experienced changes resulting from sea level rise and climate change
- ◆ Reviewed approximately 40 adaption-related projects

3.1.2 Quarterly Meeting Reports

January 18, 2012 Meeting

Meeting Location: Shore Bank Headquarters, Onley, VA

Meeting Time: 10:00 a.m. – 2:30 p.m.

Attendees: 12

Agencies Represented: 11

Meeting Objectives:

- To consult working group on sea-level rise scenarios to be used in generating coastal vulnerability assessment products using LiDAR
- To solicit feedback from group on LiDAR overview presentation for locality board of supervisors
- To determine the topic of a Sea Grant funded focus group related to sea-level rise public policy solutions

Meeting Outcomes:

- Chris Kinkade of the NOAA Coastal Services Center presented an overview of the coastal vulnerability models being developed using new LiDAR data. Lessons learned from other coastal communities regarding selection of sea level rise scenarios for planning purposes were discussed. Brian Batten of Dewberry solicited input from the group regarding various sea level rise scenarios and planning strategies in the region. The group reached consensus by stating that each locality and agency wishes to choose its own scenario for which to plan.
- Curt Smith provided feedback on the LiDAR rollout campaign and indicated that there were no major concerns or misunderstandings amongst county officials regarding the data.
- Curt Smith provided an overview of the UVA-IEN Sea Grant Project: Planning for Virginia's Coastal Resilience to Address Sea Level Rise and explained that the agency was interesting in hosting a roundtable discussion involving elected officials and concerned citizens. After extensive discussion on the project, the group recommended that the project scope be altered to an educational and outreach forum to educate and survey the local public regarding their understanding and concerns regarding sea level rise and flooding.

The sign-in sheet, agenda, and photographs from the meeting are included in **Appendix A**.

April 10, 2012 Meeting

Meeting Location: Eastern Shore of Virginia Chamber of Commerce, Melfa, VA

Meeting Time: 9:30 a.m. – 2:00 p.m.

Attendees: 15

Agencies Represented: 15

Meeting Objectives:

- To develop and coordinate a public meeting to kickoff an educational and outreach oriented effort regarding sea level rise and flooding in the region
- To begin reviewing Coastal Vulnerability Maps
- To review ongoing adaptation efforts on the local, state, regional, and federal level

Meeting Outcomes:

- Curt Smith presented an update on FEMA’s effort to update local Flood Insurance Rate Maps using LiDAR data
- Curt Smith led a discussion regarding a LiDAR rollout campaign geared towards the general public. The group decided that this issue would be best while coinciding with the completion of the FEMA FIRM maps
- Curt Smith led a discussion developing the CAWG Coastal Flooding Public Workshop. The group recommended that Skip Stiles be the featured presenter and surveys be conducted before, during and after the presentations to get a better understanding of local feelings, levels of understanding, and concerns.
- Gwynn Crichton of TNC indicated that additional processing was needed of the LiDAR data before the NOAA CSC coastal vulnerability maps could be completed.
- Curt Smith presented an update of legislation tasking VIMS with conducting a Recurrent Flooding Study for Tidewater Virginia
- Joel Mitchell of NASA provided an update on the development of an upcoming Climate Adaptation Workshop for the NASA Wallops Flight Facility in Fall 2012
- Gwynn Crichton of TNC and Sara Reiter of RC&D provided an update on a living shoreline project at Camp Occohannock
- Curt Smith briefed the group on a proposal to research the dynamics of the Chincoteague Inlet and implications for adjacent federal and private properties.
- The group shared individual updates:
 - The Town of Chincoteague is conducting a stormwater survey using LiDAR
 - UVA-LTER is holding a class to educate VA science teachers on water quality and planning issues

The sign-in sheet, agenda, and photographs from the meeting are included in **Appendix B**.

June 13, 2012 Coastal Flooding Workshop

The public workshop was held in place of the 3rd quarter CAWG meeting. This event was considered as an educational and training activity for the current grant and is discussed in greater detail in Section 3.2.8.

September 26, 2012 Meeting

Meeting Location: Eastern Shore of Virginia Chamber of Commerce, Melfa, VA

Meeting Time: 9:30 a.m. – 12:00 p.m.

Attendees: 18

Agencies Represented: 17

Meeting Objectives:

- To develop an online mapping project to solicit and archive local knowledge of changes experienced as result of sea level rise and climate change
- To review the first public meeting to kickoff an educational and outreach oriented effort regarding sea level rise and flooding in the region and develop the next CAWG public workshop
- To review ongoing adaptation efforts on the local, state, regional, and federal level

Meeting Outcomes:

- John Dawes of Chesapeake Commons gave a presentation to the group regarding the agency's services and mission. The group discussed how the Eastern Shore Coastal Change Archive could be developed and rolled-out to the community.
- Curt Smith presented a review of the Coastal Flooding Workshop and outcomes of the surveys. The group decided to distribute the workshop report individually.
- Curt Smith led a discussion developing the second CAWG Coastal Flooding Public Workshop and developed ideas for an annual science symposium for the region.
- The group provided updates on the following adaptation projects:
 - NOAA CSC Flood Vulnerability Maps update
 - VIMS Recurrent Flooding Study for Virginia
 - Sea Level Rise & Extreme Events in the VA Tidewater Conference
 - FEMA FIRM Map & Flood Insurance Reform Law update
 - NASA-WFF Climate Adaptation Workshop Update
 - MARCO Adapting to Climate Change in the Mid-Atlantic Workshop
 - Chesapeake Bay Sentinel Site Cooperative Project
 - VA Sea Grant Reference Lists for Hampton Roads and Maryland Eastern Shore
 - Anne Arundel Co., MD Future Coast Project
 - Atlantic National Seashores Climate Vulnerability Assessment Report

The sign-in sheet and agenda from the meeting are included in **Appendix C**.

3.2 Coastal Management Training Report

The A-NPDC coordinated ten training and outreach sessions during FY2011. The sessions are summarized in the following sections. This task implements Executive Order 23, Goal 10.

3.2.1 October 20, 2011 Ground Water Committee Public Workshop

A-NPDC staff coordinated the Ground Water Committee's fourth presentation in the "Our Eastern Shore Ground Water" presentation series at the Eastern Shore of Virginia Chamber of Commerce in Melfa. Clifton Bell of Arcadis-Malcolm Pirnie presented "How safe is our ground water and are there ways we can protect it?" to 11 persons from 6 different stakeholder groups including town and county governments and planning commissions, private citizens, and businesses.

The workshop presented information on the quality of local ground water and what options are available for protecting water quality. Specifically, other items addressed included:

- A brief overview of the source of our water and how we use it.
- An overview of what makes our ground water vulnerable.
- A discussion on saltwater intrusion including causes, prevention, and solutions. This discussion will include simple methods to reduce saltwater intrusion that homeowners can use as well as large scale solutions such as Aquifer Storage and Recovery and desalting.
- Identify potential sources of contaminants to groundwater including fertilizers, pesticides and herbicides, wastes and wastewaters, and toxic chemicals and trace contaminants.
- Discussion of available methods for protecting our ground water supply from contaminants such as publically available resources, current and new waste treatment systems, and household hazardous waste management programs.

The workshop was advertised in local newspapers, on the radio, and on the internet and local high school science teachers were personally contacted to encourage students to participate. Clifton's presentation was received with great enthusiasm and prompted many questions and discussions. Photos from the workshop and announcement flyer are included in **Appendix D**.

3.2.2 U.S. Navy Native American Cultural Awareness Training

As part of the US Department of the Navy's cultural awareness training for the Wallops Island facility local people of Native American decent presented a program on November 16, 2011. The program was attended by 30 people representing 3 stakeholder groups and featured a presentation on Native populations indigenous to the Eastern Shore, notable

Native American participation in the Navy and cultural information relevant to many Indian nations. There were also displays of Native regalia and beadwork and artifacts. Participants were invited to taste traditional Native dishes such as venison, Three Sisters stew (corn, beans and squash) and fry bread. There were also demonstrations of traditional dancing styles and explanation of the significance of various regalia worn by the dancers. The booklet for the training event was distributed to all participants and featured the VCZM and NOAA logos. Photographs from the Festival are included in **Appendix E**.

3.2.3 GIS Users Group LiDAR Workshop

The A-NPDC partnered with the Nature Conservancy and Eastern Shore Resource Conservation and Development Council to host an annual meeting of the Eastern Shore GIS Users Group on December 14, 2011 at the Eastern Shore Community College in Melfa. The workshop aimed to provide GIS users with a thorough understanding of LiDAR elevation data including data specifications, accessibility, planned and potential applications and uses, and overall benefits of the data for the Eastern Shore community.

The workshop was attended by 33 participants representing 21 different stakeholder groups and additionally provided an excellent forum for networking and sharing of experiences and data among GIS users in the region. Presentations were given by representatives from the Virginia Information Technologies Agency, the Nature Conservancy, NOAA Coastal Services Center, and Dewberry and were focused on various LiDAR- related topics including data specifications, applicability, development of Coastal Vulnerability Assessments, involvement in updates to FEMA Flood Insurance Rate Maps, and development of local projects implementing the data. The workshop enhanced the overall applicability of the high-resolution LiDAR elevation data in the region and leveraged multiple planning and coastal management-related projects.

The workshop sign-in sheet, agenda, and photographs are including in **Appendix F**.

3.2.4 Virginia Outdoors Plan Public Workshops

A-NPDC hosted two public workshops at its office in Accomack on February 16, 2012 to assist the Virginia Department of Conservation and Recreation with the 2012 update to the Virginia Outdoors Plan. Sixteen participants representing 11 different stakeholder groups were involved in the workshops aimed at soliciting information on citizen interests and opinions regarding outdoor recreation and land conservation priorities on the Eastern Shore. Several high priority projects were identified during the workshops and will be included as such in the 2012 plan. Workshop materials and photographs are included in **Appendix G**.

3.2.5 Gargathy Creek, Finney Creek, Northam Creek, Folly Creek, Ross Branch, & Wachapreague Channel TMDL Development Public Meeting

On March 28, 2012 the A-NPDC hosted a public meeting for the development of TMDLs for several creeks along the seaside of the Eastern Shore. The meeting provided valuable information about potential sources of input and land-use trends within each watershed. This local information is being used in consideration during the VDEQ's development of the TMDL for each respective watershed. Three individuals representing three stakeholder groups participated in the meeting.

3.2.6 Household Hazardous Waste Collection

On Saturday, April 28 fifty Eastern Shore residents travelled to Eastville to drop off nearly over 1 ton (2,100 pounds) of household hazardous material for proper disposal and recycling by Care Environmental Corporation. A variety of materials were brought in including aerosols, gasoline, kerosene, pesticides, insecticides, acids, fluorescent light bulbs, fertilizers, and batteries. In addition, nearly 200 pounds of reusable paint was collected and donated to the Eastern Shore Food Bank.

The Eastern Shore's landfills are not engineered to handle these materials and hazardous wastes that illegally enter the landfill or are improperly disposed of by pouring out onto the ground or into a water body pose a serious health risk to Eastern Shore residents and the environment. All water used by Eastern Shore residents comes from the ground and is very susceptible to contamination from these materials. Hazardous wastes also tend to accumulate around everyone's homes over time creating unnecessary health and safety risks at home. Every quantity of hazardous waste brought in through the collection program ensures that that waste will not pollute water resources on the Eastern Shore and endanger the quality of water and public health.

The event was the 8th annual collection sponsored by the Eastern Shore Ground Water Committee. NOAA and VCZM logos were displayed on all promotional and event materials. The agencies were also acknowledged in radio interviews leading up to the event and in media press releases following the event.

Event materials and photographs are included in **Appendix H**.

3.2.7 June 6, 2012 Ground Water Committee Public Workshop

A-NPDC staff coordinated the Ground Water Committee’s fifth presentation in its public workshop series at the Eastern Shore Community College in Melfa. Mark Sauer of VDEQ presented “An Overview of Wastewater Treatment on the Shore: Treatment Techniques and Permitting Requirements” to 53 persons representing 20 different stakeholder groups including town and county governments and planning commissions, private citizens, and businesses.

The workshop presented information on various aspects of wastewater treatment including:

- Types and levels of wastewater treatment
- Appearance of constructed treatment systems
- How different treatment systems work
- Discharge/disposal options on the Eastern Shore
- How current treatment compares to State water quality and groundwater standards
- The permitting process including who gets to review a permit before it is issued.

The workshop was advertised in local newspapers, on the radio, and on the internet. County and town government leaders and planning commissioners were personally contacted to encourage their participation. Mr. Sauer’s presentation was received with great enthusiasm and prompted many questions and discussions. Photos from the workshop and event materials are included in **Appendix I**.

3.2.8 Coastal Flooding Workshop

The Climate Adaptation Working Group in partnership with the UVA Institute for Environmental Negotiation developed and hosted the first public workshop to address coastal flooding and sea level rise in the region on June 13, 2012 at the Eastern Shore Community College in Melfa. The event was advertised heavily and covered extensively by local, regional, and national media outlets. The workshop was attended by over 200 people and was a keystone event for initiating a dialogue between local residents and elected officials regarding sea level rise on the Eastern Shore.

The goal of the workshop was to create awareness about the causes of sea level rise, the effects of sea level rise, and various options for dealing with the potential hazards. The workshop was highly interactive and participants were surveyed and polled to gauge their level of awareness and opinions on planning and mitigation strategies. The information

solicited during the workshop will serve local planners by allowing them to understand citizens in order to better shape their messages.

Following the workshop, UVA-IEN prepared a summary of the workshop’s findings. This document was made available to the public and the A-NPDC distributed it among the Climate Adaptation Working Group and local elected officials and planning commissioners.

Photos from the workshop and event materials are included in **Appendix J**.

3.2.9 Citizens for a Better Eastern Shore Coastal Flooding Presentation

On June 19, 2012, Curt Smith gave a presentation to the Board of Directors of the Citizens for a Better Eastern Shore non-profit community interest group at Shore Bank Headquarters in Onley, Virginia. Sixteen members of the group received a presentation regarding sea level rise and its historic, current, and future impacts on the Eastern Shore, what adaptation measures are currently being taken to prepare for future impacts, and which measures could be taken to plan for future impacts.

The presentation generated many questions and critical discussions regarding vulnerabilities and needed adaptation measures. VCZM and NOAA logos were displayed on all presentation materials.

3.2.10 Atlantic District Ruritans Coastal Flooding Presentation

On August 8, 2012, Curt Smith gave a presentation to the Atlantic District Ruritans in Atlantic, Virginia. Nine members of the group received a presentation regarding sea level rise and its historic, current, and future impacts on the Eastern Shore, what adaptation measures are currently being taken to prepare for future impacts, and which measures could be taken to plan for future impacts.

The presentation generated many questions and critical discussions regarding vulnerabilities and needed adaptation measures. VCZM and NOAA logos were displayed on all presentation materials.

3.3 Technical Assistance Report

The A-NPDC provided technical assistance to local, state, and federal organizations on numerous occasions including environmental review, GIS, and information services during

FY2011. Technical assistance activities are summarized in the following sections. This task implements Executive Order 23, Goals 1, 4, and 10.

3.3.1 Partnerships

The A-NPDC partnered with over 50 during FY201 to complete projects aimed to complete the Scope of Work. **Table 1** summarizes A-NPDC partnerships for FY2011.

Table 1 FY2011 Partnerships		
ID	Agency/Group	Partnership Activity
1	NASA Wallops Flight Facility, U.S. Fish & Wildlife Service, Marine Science Consortium, and the Nature Conservancy	A-NPDC staff collaborated to develop a workshop to address climate adaptation strategies for the Wallops Flight Facility.
2	31 Agencies, Governments, and NGOs	A-NPDC staff brought together 31 partnering groups quarterly to address climate change and sea level rise in the region.
3	U.S. Fish & Wildlife Service	A-NPDC staff met with local governments and staff from the USFWS to develop the Chincoteague National Wildlife Reserve CCRMP.
4	The Nature Conservancy	A-NPDC staff coordinated the Eastern Shore of VA Climate Adaptation Working Group and LiDAR Working Group in partnership with TNC. Outcomes included development of a LiDAR Public Rollout Campaign and Potential Uses Report and enhanced coastal resiliency amongst local governments.
5	VIMS, Middle Peninsula PDC & Northern Neck PDC	A-NPDC collaborated to develop a Working Waterfronts Coalition and attain funding through VCZM to ensure and enhance working waterfronts in the VA coastal zone.
6	UVA-Institute of Environmental Negotiation, Wetlands Watch	A-NPDC collaborated to develop a public education workshop on sea level rise to educate local residents and gauge local opinions on key issues.
7	ESVA Resource Conservation & Development Council	A-NPDC staff served on the council and partnered on multiple conservation related projects in the region.
8	ESVA Environmental Education Council, USDA-NRCS, ESVA Soil & Water Conservation District	A-NPDC staff coordinated to produce educational items for the Eastern Shore Watershed Walk held at the Onancock Harbor Fest in September 2012. The handouts and posters developed educated local youth on potential impacts from household hazardous wastes. The display received over 300 visitors.
9	Eastern Shore Watersheds Network	A-NPDC staff served on the Steering Committee of the ESVA Watersheds Network in FY2011. The network is a local watershed group that began meeting annually in 2001 to

		address pollution reduction strategies for ESVA watersheds through public education and outreach, data sharing, and research communication.
10	VA DEQ	A-NPDC assisted DEQ in hosting public meetings to develop TMDLs for local watersheds in the region.
11	Accomack & Northampton Counties, ES Soil & Water Conservation District	A-NPDC partnered in the development of nutrient reduction strategies required by the Chesapeake Bay TMDL-WIP Phase 2.

3.3.2 Leveraged Funds

The A-NPDC used NOAA/VCZM grant funds to leverage services and complete projects aimed at improving coastal management on the Eastern Shore of Virginia. **Table 2** summarizes instances where NOAA/VCZM grant funds were leveraged during FY2011. Over \$177,566 was leveraged in FY2011 utilizing NOAA /VCZM grant funds.

Table 2			
FY2011 Leveraged Funds			
ID	Group/ Event	Activity	FY2010 Amount
1	Malcolm Pirnie, Inc.	Eastern Shore Ground Water Committee funds used to support consulting hydrogeologist to the Eastern Shore Ground Water Committee.	\$21,666
2	Chesapeake Bay TMDL/WIP Technical Assistance	Staff reviewed TMDL items, analyzed regional allocation data, and assisted local governments by providing information and facilitating meetings regarding the TMDL planning process and implementation process resulting in increased communication with state and federal agencies, increased local knowledge, and ultimately improved water quality.	\$15,100
3	Rural Chesapeake Bay/Seaside of VA Working Waterfront Coalition	Funds used to leverage VCZM grant to ensure sustainability of working waterfronts and related industries.	\$10,000
4	ESVA Water Trails Association Development and Seaside Water Trail Camping Accommodation	Funds used to leverage VCZM grant to develop a regional group focused on the development of a water trail association and the development of a strategy to construct camping accommodations along the Seaside Water Trail	\$20,000

	Implementation Plan		
5	ESVA Locality Stormwater Program Development	Funds used to leverage VDCR grant to develop stormwater management programs for Accomack and Northampton Counties	\$42,000
6	Developing a Working Waterfronts Plan for VA's Coastal Zone	Funds used to leverage VCZM grant to define and inventory regional working waterfronts	\$6,000
7	VA Seaside Recreational Use Mapping Project	Funds used to leverage the completion of grant proposal and attend project development meetings. Leveraged funds resulted in completion of recreational use survey to enhance coastal management in the region	\$60,000
8	ESVA Climate Adaptation Working Group	A-NPDC staff coordinated a regional group focused on developing adaptation and outreach strategies for improving the Eastern Shore's ability to prepare and manage climate change and sea level rise.	\$1,000 in staff time
9	ESVA GIS Users Group	A-NPDC staff coordinated a regional group focused on providing a forum for networking and data sharing amongst GIS Users and providing training services.	\$1,000 in staff time
10	Envirothon Competition	A-NPDC staff judged the Eastern Shore regional 2011 Envirothon Competition. Three local high school teams gave presentations on Chesapeake Bay TMDL-related issues.	\$200 in staff time
11	VCZM Coastal Partners Workshop	A-NPDC staff participated in the workshop resulting in improved state-wide project networking and improved communication amongst coastal managers.	\$600 in staff time
Total Leveraged Funds FY2011: \$177,566			

3.3.3 Historical Searches

Twelve historical searches were performed by A-NPDC staff during FY2011. Eleven of the twelve searches were performed for properties in the Crispus Attucks Housing Development near the Town of Exmore. VCZM and NOAA funds were used to partially subscribe to the Department of Historic Resources Data Sharing System (DSS). Without local availability of DSS, numerous agencies on the Eastern Shore would be required to pay \$100 to \$150 per search. Each environmental review corresponds with a historical search.

Table 3 summarizes the historical searches.

Table 3
FY2011 Historical Searches

ID	Search Description	Outcomes
1	Eleven searches were completed for individual properties within the Crispus Attucks Housing Development within the New Road Community near the Town of Exmore. Searches were performed to supplement a grant proposal for federal funding to construct 22 residential units (11 duplexes).	Improved water quality in the regularly impaired waters of Occohannock Creek. Upgraded living conditions in the coastal zone.
2	One search was completed for the Bailey Road Housing Development near the Town of Parksley as part of the environmental review for the construction of 24 residential units. The environmental review resulted in a finding of no significant impact.	Assured water quality in the Hunting Creek and Chesapeake Bay watersheds. Upgraded living conditions in the coastal zone.

3.3.4 Information Requests

The A-NPDC responded to 34 information requests from private, local, state, and federal organizations and private citizens during FY2011. These requests are summarized in **Table 4**. Additional information requests were completed, but not documented.

Table 4
FY2011 Information Requests

ID	Date	Agency/Group	Contact	Request Description
1	10/4/2011	Riverland Insurers	Iris Treakle	Tangier demographics data request
2	12/2/2011	Accomack Co. Resident	Jim McGowan	Cheriton Zoning Ordinance request
3	1/10/2012	Waste Watchers	Jenny O'Neill	Print 200 brochures for non-profit litter control group
4	2/6/2012	Waste Watchers	Jenny O'Neill	Print 50 brochures for non-profit litter control group
5	2/17/2012	Accomack Co. Resident	Andrea Benda	Household Hazardous Waste Collection inquiry
6	2/29/2012	ESVA Historical Society	Linda Gayle	Accomack and Northampton County demographics request
7	3/1/2012	UC Berkley Dept. of City and Regional Planning	Jess Zdeb	Planning grant information request

Accomack – Northampton Coastal Resources Technical Assistance Program

8	3/2/2012	Waste Watchers	Jenny O'Neill	Print 100 copies for non-profit litter control group
9	3/13/2012	Waste Watchers	Jenny O'Neill	Print 300 brochures for non-profit litter control group
10	3/14/2012	Northampton Co. Resident	Claude Bennett	Household Hazardous Waste Collection inquiry
11	3/26/2012	Loudon County	Gwen Kennedy	Chesapeake Bay TMDL-WIP inquiry
12	4/4/2012	Northampton Co. Resident	Juanita Worsley	Household Hazardous Waste Collection inquiry
13	4/16/2012	Northampton Co. Resident	Harry Holcomb	Household Hazardous Waste Collection inquiry
14	4/18/2012	Eastern Shore RC&D Council	Sara Reiter	Accomack and Northampton Boards of Supervisors address inquiry
15	5/9/2012	MIRTEC	Mark Washington	Tangier erosion information request
16	5/9/2012	VA Dept of Environmental Quality	Charley Banks	Star Spangled Banner National Historic Trail comment request
17	5/15/2012	Waste Watchers	Jenny O'Neill	Print 130 copies for non-profit litter control group
18	5/15/2012	Eastern Shore Soil & Water Conservation District	Tamsey Ellis	Create USGS topo and LiDAR maps for Kiptopeke Elementary School educational event
19	5/30/2012	Accomack Co. Resident	Dick Freeman	Sea level rise inquiry
20	6/6/2012	CH2M Hill	Dave Pryor	ESVA Climate Adaptation Working Group inquiry
21	6/6/2012	Northampton Co. Resident	David Kabler	ESVA sea level rise inquiry
22	6/6/2012	Accomack Co. Resident	Ed Young	ESVA sea level rise inquiry
23	6/6/2012	Accomack Co. Resident	William Turner	ESVA sea level rise inquiry
24	6/6/2012	Accomack Co. Resident	Patrick Henderson	ESVA Climate Adaptation Working Group inquiry
25	6/6/2012	Accomack Co. Resident	Billy Graham	ESVA sea level rise inquiry
26	6/12/2012	Accomack Co. Resident	James Henderson	ESVA sea level rise inquiry
27	6/14/2012	Accomack Co. Resident	Scott Belfit	Living shoreline inquiry
28	6/14/2012	WBOC Salisbury	Ko Im	Television interview regarding sea level rise impacts
29	6/14/2012	Accomack Co. Resident	Linda Gordon	ESVA sea level rise inquiry

30	7/9/2012	Accomack Co. Resident	Barry Sharb	Household Hazardous Waste Collection inquiry
31	7/24/2012	Town of Chincoteague	Bill Neville	Print out planning maps on plotter
32	7/24/2012	Town of Bloxom	Kim Cathell	National Flood Insurance Program inquiry
33	8/3/2012	Town of Chincoteague Resident	Carol Farley	Household Hazardous Waste Collection inquiry
34	9/24/2012	Waste Watchers	Jenny O'Neill	Print 100 copies for non-profit litter control group

3.4 Ground Water Committee Report

The A-NPDC staffed the Eastern Shore of Virginia Ground Water Committee and managed the Ground Water Committee’s consulting hydrogeologist during FY2011.

3.4.1 Summary of Accomplishments

A-NPDC staff coordinated ground water permit reviews with DEQ and local aspects of the ground water model update developed by USGS. A-NPDC staff also maintained and updated the Ground Water Committee web site and conducted educational programs including two public workshops held in October 2011 and June 2012. During FY2011, the Ground Water Committee held 9 meetings, awarded the 2011 Eastern Shore Ground Water Award, commented on multiple regulatory actions, reviewed 15 ground water withdrawal permits, served on the state Ground Water Reuse for Recharge Stakeholder Advisory Panel, continued efforts to updating the Eastern Shore of Virginia Ground Water Supply Protection and Management Plan, conducted a Household Hazardous Waste Collection, and reviewed multiple environmental reviews and regulatory items. The Ground Water Committee Report implements Executive Order 23, Goals 2 and 10.

The following sections summarize activities related to Committee organization; statutory, regulatory, and permit tracking/review; research and investigation; and implementation of ground water protection.

Committee Organization

Committee Officers elected for FY 2012 were Ms. Wanda Thornton as Chairman and Mr. Richard Hubbard as Vice Chairman.

The Committee welcomed new members, Peter Henderson, Richard Hubbard, and Grayson Chesser.

The Committee amended its by-laws changing the Accomack and Northampton County

Administrators and the A-NPDC Executive Director non-voting ex-officio members.

Statutory, Regulatory, and Permit Tracking/Review

- Routine review and tracking of Ground Water Withdrawal Applications and Permits.
- Regulatory Advisory Panel (RAP) formed to consider changes to the Groundwater Withdrawal Regulations and Groundwater Management Area. Britt McMillan represented the Eastern Shore of Virginia Groundwater Committee on the RAP.
- RAP formed to consider developing a state-incentivized program for reuse of water for recharge. Britt McMillan represented the Committee on the RAP.
- Submitted a letter to the EPA requesting their assistance to the VDH to institute regulations that limit total nitrogen being discharged into all mass drain fields to meet EPA-established standards.
- Commented and coordinated with governing agencies on three proposed or ongoing groundwater-related projects on the Eastern Shore.

Research and Investigation

- Developed and submitted a grant proposal to the EPA Environmental Justice Program to research water quality in economically disadvantaged communities on the Eastern Shore. The proposal was not selected for funding.
- Compiled all known local and regional ground water-related research articles and studies for inclusion in the *Ground Water Supply Protection & Management Plan*
- Reviewed the USGS publication: “Phosphorous and Groundwater: Establishing Links between Agriculture and Transport to Streams”.
- Reviewed the Stanhope, 2003 Masters Thesis: “Relationships between Watershed Characteristics and Base Flow Nutrient Discharges to Eastern Shore Coastal Lagoons”.

Implementation of Ground Water Protection

- Utilized the Eastern Shore of Virginia Ground Water Model to simulate proposed and permitted withdrawals to assist in managing the region’s ground water resource
- Coordinated with the USGS to continue the induction logging program to monitor regional salt water intrusion trends.
- Developed a ground water section for consideration by Northampton County to include in the update to the Comprehensive Plan
- Finalized Water Supply Plans for Accomack and Northampton Counties and oversaw adoption process
- Fourth and fifth of Semi-Annual Series of Public Workshops on Groundwater Resource Issues on the Eastern Shore of Virginia.

- ◆ October presented presentation titled ***“How safe is our ground water and are there ways we can protect it?”***
- ◆ June presented presentation titled ***“An Overview of Wastewater Treatment on the Shore: Treatment Techniques and Permitting Requirements”***
- Household Hazardous Waste Collection

3.4.2 Monthly Progress Reports

October 20, 2011 Meeting

- ◆ A Public Workshop was held in place of the regular monthly meeting. The workshop is described in greater detail in Section 3.2.1.

November 2011 Meeting

- The November meeting was cancelled due to bad weather and was rescheduled for December, 2011.

December 20, 2011 Meeting

- Public Nomination for 2011 Ground Water Award
The Committee generated a list of nominees and requested that staff research and present information on each during the January 2012 Committee meeting:
 - ES Rural Health – Onley
 - Cherrystone Campground Wastewater Reuse
 - Cape Charles Waste Water Treatment Plant
 - Plant ES Natives Campaign
 - Waste Watchers of the Eastern Shore
- Environmental Reviews
 - Sanns Poultry House Construction Project Environmental Assessment -
The EA was presented showing no significant impact to ground water was expected as the operation will be under the direction of an approved nutrient management plan and the operation is a dry litter operation where waste is taken off-site to sell.
- October 2011 Ground Water Committee Public Workshop
 - Staff briefed the Committee on the October 2011 workshop and discussion ensued on how to engage more residents. It was suggested that the June 2012 workshop be held at Shore Bank HQ in Onley with a presentation on state regulations on waste disposal. Other suggestions included alternating the host county for each workshop, contacting school superintendents, and

involving senior students and teachers, especially Tom Bonniwell of Northampton High School and Art Schwarzchild of LTER.

- Regional Water Supply Plan Update
 - Staff reported that the Plans are complete and the Committee will review them in five years with updates occurring in 10 years.
- VA Ground Water Recharge with Reclaimed Water for Reuse Stakeholder Advisory Group
 - Vice Chairman Thornton moved to appoint Britt McMillan to serve as a representative on the VA Ground Water Recharge with Reclaimed Water for Reuse Stakeholder Advisory Group. Seconded by Committee member Hampton, the motion carried by unanimous vote.
- Groundwater Consultant Report
 - Britt presented a GIS map showing all permitted ground water withdrawals on the Shore. Information for each withdrawal was included in the map.
 - *Ground Water Withdrawal Permit Application Reviews*
Britt reviewed the following applications:
 - i. Walker Farm – not previously permitted, but has been historic withdrawal
 - relatively small agricultural withdrawal
 - ii. Custis Farm – renewal for existing withdrawal, not previously permitted
 - moderately larger withdrawal from Yorktown
 - iii. Tipton Farm – relatively larger withdrawal from Columbia and Yorktown, but relatively smaller area of impact
 - iv. David’s Nursery – renewal for previously permitted withdrawal
 - Second largest agricultural withdrawal on Shore (99th percentile)
 - 9 wells in Yorktown with 1 additional proposed
 - Asking for 6% less than currently permitted
 - Discussion ensued regarding strategies for promotion of use of the Columbia aquifer for agricultural use.
 - *Ground Water Recharge with Reclaimed Water Stakeholder Advisory Group*
 - Britt gave a presentation on the current regulatory framework with regards to water reuse for recharge. Discussion ensued regarding regulations on mass drainfields. It was suggested that a letter be drafted from the Committee supporting a VDH requirement for total nitrogen output to conventional mass drainfields.

January 17, 2012 Meeting

- Review of 2011 Ground Water Award Nominees
Staff presented information on the 2011 Ground Water Award Nominees:
 - ES Rural Health – Onley

- Cherrystone Campground Wastewater Reuse
- Cape Charles Waste Water Treatment Plant
- Plant ES Natives Campaign
- Waste Watchers of the Eastern Shore

The Committee recognized that there were many deserving nominees in 2011 and requested that all nominees be notified of their nomination via letter and in a press release.

Committee Member Belote moved to present the 2011 Eastern Shore of Virginia Ground Water Award to Cherrystone Campground and Aquafarms. Seconded by Committee Member Miner, the motion carried by unanimous vote.

- *Proceedings of the 2011 Ground Water Protection Council Annual Forum*

Staff presented the list of presentations from the annual forum. The Committee expressed interest in hearing presentations on wastewater injection wells for combating saltwater intrusion and alternative treatment septic system impacts on ground water at future Committee meetings.

- *Northampton Co. Comprehensive Plan Review*

Britt McMillan presented a review of existing ground water-related items in the Comp Plan and identified other items absent in the plan for consideration by the County. The Committee recommended that Britt submit the review and recommendations to the County on behalf of the Committee.

- *Wastewater Workshop*

Vice Chairman Thornton moved to hold a Wastewater Workshop to educate the Accomack and Northampton Supervisors and Planning Commissioners and the general public on the technical aspects of sewage treatment. Seconded by Committee Member Belote, the motion carried by unanimous vote.

February, 2012 Meeting

- The regular Committee meeting in February was cancelled due to inclement weather and was not rescheduled.

March 20, 2012 Meeting

- *Welcoming of New Committee Members*

Chairman Trala welcomed Pete Henderson, Richard Hubbard, and Grayson Chesser to the Committee.

- *Presentation of 2011 Ground Water Award*

Chairman Trala announced Cherrystone Campground and Aqua-Farms of Cheriton

as the recipient of the 2011 award. Representatives were not present to receive the award but will be acknowledged in press releases to local media outlets.

- USGS Induction Logging Program Discussion

Staff presented recent correspondence with the USGS and requested the Committee discuss plans for continued induction logging. Several members noted the need to commit the appropriate amount of funds needed to continue this program.

- EPA Environmental Justice Small Grant

Staff presented the resubmitted proposal and budget.

Committee Member Hampton moved to grant retroactive approval for submission of the EPA Environmental Justice Small Grant proposal on behalf of the ES Housing Alliance and the Committee. The motion was seconded by Secretary Meil and will be voted on by the Committee during the April meeting.

- Groundwater Consultant Report

- *Tankard Farm Withdrawal Permit Re-Application*

Britt indicated that the proposed withdrawal amount is 71% less than previously permitted amount as the result of improvements to the irrigation pond lessening need for ground water. The proposed withdrawal would be in the 33rd percentile among agricultural withdrawals on the Shore. No significant impacts were identified.

- *Kuzzens' Marshall-Johnson-Grapeland Complex Re-Application*

Britt indicated that this application is the combination of three existing permits and the proposed withdrawal would be in the 95th percentile among agricultural withdrawals on the Shore. The withdrawal would be a 64% increase over the existing permits as result of increased use for greenhouse irrigation. Maximum withdrawals would only occur in rare occasions, but would constitute the largest agricultural withdrawal on the Shore.

- *Triangle Mobile Home Park Draft Permit Application*

Britt indicated this application was for a previously unpermitted withdrawal for a municipal supply. The expected area of impact is 145 feet for a one foot drawdown.

- *VA Ground Water Reuse TAC*

Britt indicated the TAC discussed if DEQ should regulate ground water recharge and identified concerns with burdens on applicants and need for uniform guidance at their January meeting. The TAC was scheduled to meet in March to review draft regulatory language to be presented by DEQ.

- *Atlantic Town Center Waste Water Treatment System Review*

Britt presented a review of the proposed treatment system indicating that the system would utilize conventional rapid infiltration basins (RIB). Virginia does not have much experience with RIBs. The system would employ 12 RIBs with only two in operation simultaneously. The RIBs would be loaded with treated wastewater for 1-2 days and then would rest for 5-9 days to allow for proper infiltration. The system could accommodate 750,000 gallons of treated wastewater at build-out and only about 33% of this would enter the Columbia aquifer with the remainder being taken up by evapotranspiration. Britt indicated that the proposed system would more efficiently treat wastewater than an equivalent amount from septic systems. Discussion ensued between Chris Carbaugh of the Atlantic Town Center Development Corp., the Committee, and the Consultant regarding details of the project and the potential benefits of RIBs for the proposed development and future developments on the Eastern Shore. The review concluded that the proposed treatment system would adequately treat municipal wastewater and would not pose a direct threat to public health and environmental quality.

April 17, 2012 Meeting

- Groundwater Consultant Report

- *VA Water Reuse for Recharge Advisory Group Update*

Britt indicated that the advisory group reached a consensus at its last meeting that the state should not create its own recharge injection program. The group discussed aquifer storage and recovery (ASR) systems and how they could be regulated by the state. There was no consensus on rapid infiltration basins and if they should be managed as wastewater or ground water recharge. The group will meet again in May.

- *Edgewater Farm Re-Application*

Britt reported that this application is for the historically permitted amount and the withdrawal would be in the 25th percentile among agricultural withdrawals on the Shore. The withdrawal of 800 gpm or 13.4M gpy occurs from one well which is likely screened in the Upper Yorktown aquifer and is used to irrigate potatoes. The Committee had no comment.

Britt also indicated that the public comment period for the Triangle Mobile Homes Permit begins April 28. The Committee will develop comment during the May Committee meeting.

- *Atlantic Town Center Waste Water Treatment System Review*

Britt showed the same presentation from the March meeting to catch those Committee members not present up to speed. Discussion ensued regarding wastewater treatment options for the Eastern Shore and Britt stated that rapid infiltration basins handling highly treated wastewater such as the proposed ATC system is the best treatment option for non-VPDES systems if engineered and managed correctly. Discussion ensued

regarding the amount of biosolids expected to enter the landfill and Chris Carbaugh indicated that the amount would be relatively minor and roughly the equivalent of a couple dumpsters per year.

- Ground Water Supply Protection & Management Plan Update

Britt indicated that approximately 50 references are being compiled into a new chapter in the plan on ground water research. The sources are mostly governmental research with a lesser amount from academic mostly due to compatibility issues with quality control of data. Britt presented information on trace element concentrations in ground water and how the data will be incorporated into the plan.

- Committee Membership and Structure Discussion

Discussion ensued regarding potential changes to the voting members of the Committee. The Committee reached consensus to make both County Administrators and the A-NPDC Executive Director non-voting ex-officio members by amending the Committee By-Laws.

Committee Member Hampton moved to amend the Committee By-Laws in order to make both Accomack and Northampton County Administrators and the A-NPDC Executive Director non-voting ex-officio members. The motion was seconded by Committee Member Jeffries and carried by unanimous vote.

- Suggestion Letter to EPA Regarding Establishing Limits for Total Nitrogen Discharge into All Septic Mass Drain Fields

Staff presented a letter asking the EPA to lend their assistance to the VDH to institute regulations that limit total nitrogen being discharged into all mass drain fields to meet EPA-established standards that would have a positive effect on the Bay waters. Discussion ensued regarding the topic and the Committee decided to hold off on sending the letter.

May 15, 2012 Meeting

- 2012 Household Hazardous Waste Collection

Staff reported the outcomes of the collection held on Saturday, April 28. The total cost of the collection, not including staff time, was \$4,109.89 and \$859 was generated from collection fees. Discussion ensued about future funding options for the program.

- Committee Membership and Structure Discussion

Staff notified the Committee of amendments to the By-Laws on May 7 per the motion made during the April meeting. Thirty days must pass following notification and therefore the amendment may not be adopted until the next regular meeting. The County Administrators and A-NPDC Director will be considered non-voting ex-officio members and will not count towards a quorum. This change will leave the Committee with 8 voting members and any motion resulting in a tie vote will fail.

- Wastewater Workshop Update

Staff updated the Committee on the June 2012 Committee Public Workshop. It was noted that Sylvia Parks would be present representing Congressman Rigell. The Committee requested that supervisors and planning commissioners from each county be formally invited.

- Groundwater Consultant Report

- *Ground Water Supply Protection and Management Plan Update*

Britt indicated that work had begun writing the research section and that it will include approximately 50 studies. A draft of the research section will be presented at the August meeting and then a list of research needs will be developed.

- *Triangle Mobile Home Park Withdrawal Application*

Britt reported that this application is for a municipal withdrawal that would be among the smallest permitted withdrawals on the Shore. The Committee requested that a letter be submitted indicating no objection to the proposed withdrawal.

Committee Member Henderson moved to submit a letter of comment indicating no objection to the proposed Triangle Mobile Home Park Withdrawal Application. The motion was seconded by Committee Member Hubbard and carried by unanimous vote.

- *YMCA Silver Beach Withdrawal Re-Application*

Britt reported that this application is for a municipal withdrawal that would be among the smallest permitted withdrawals on the Shore. The amount requested is slightly less than the previously permitted amount. The two wells in the in the Yorktown Aquifer at the site have experienced a slight increase in the concentration of chlorides. The Committee requested that a letter be submitted indicating no objection to the proposed withdrawal.

Committee Member Jeffries moved to submit a letter of comment indicating no objection to the proposed YMCA Silver Beach Withdrawal Application. The motion was seconded by Committee Member Hampton and carried by unanimous vote.

- *Perdue Farms Withdrawal Re-Application*

Britt reported that this application is for 700 million gallons per year (2.6 million gal/day) and is the largest permitted withdrawal on the Shore with the next greatest being approximately half the amount of Perdue's withdrawal. The maximum requested amount increased slightly from the previously permitted amount. Reuse options were discussed and it was noted that reuse was difficult because of FDA and VDH concerns. Britt indicated that the USGS Ground Water Model was utilized to determine the area of impact, which is 6.7 miles in the upper Yorktown and 8 miles in the lower Yorktown. The withdrawal also has created a 56 foot drawdown adjacent to the site in the middle and lower Yorktown.

The Committee requested that a letter be submitted indicating no objection to the proposed withdrawal.

Secretary Meil moved to submit a letter of comment indicating no objection to the proposed Perdue Farms Withdrawal Application. The motion was seconded by Committee Member Henderson and carried by unanimous vote.

- Plasticulture Agriculture Discussion

Recent changes to the amount of tomatoes being grown on the Shore were discussed. The acres in plasticulture in Accomack County were reported to be nearly a quarter of the amount three years prior and are valued at less than \$10 million this year compared to \$40 million three years prior. Much of the tomato industry is going to Mexico.

June 6, 2012 Meeting

- ♦ A Public Workshop was held in place of the regular monthly meeting. The workshop is described in greater detail in Section 3.2.1.

July, 2012 Meeting

- ♦ No meeting was held during this month.

August 21, 2012 Meeting

- Committee Membership Amendment to By-Laws

Staff notified the Committee of amendments to the By-Laws on May 7 per a motion made during the April 2012 meeting. Amendments were made to the following sections:

- Article III, Section 3-6 (new section added)
- Article VII, Section 7-1
- Article VII, Section 7-2

Vice Chairman Thornton moved to amend the Committee By-Laws to make both County Administrators and the A-NPDC Executive Director non-voting ex-officio members. Seconded by Committee Member Hampton, the motion carried unanimously.

- Elections of FY2013 Committee Officers

According to Article IV of the Ground Water Committee By-Laws, nomination of the FY 2013 Committee officers shall be made at the July meeting, with election immediately following. Please note that, “The members filling the positions of Chairman and Vice-Chairman shall alternate between Accomack County and Northampton County annually, with neither position representing the same county at the same time.” The current

Committee Chairman is from Northampton and Vice Chairman from Accomack, the secretary is Elaine Meil.

Staff requested nominations for FY2013 Committee Officers.

Committee Member Jeffries moved to nominate Vice Chairman Thornton to be Chairman. Seconded by Committee Member Belote, the motion carried by unanimous vote.

Chairman Trala moved to nominate Committee Member Hubbard to be Vice Chairman. Seconded by Committee Member Chesser, the motion carried by unanimous vote.

The nominations were closed.

Vice Chairman Thornton was elected as Chairman by acclamation.

Committee Member Hubbard was elected as Vice Chairman by acclamation.

- EPA Environmental Justice Small Grant Proposal

The Committee's proposed project to test ground water quality and identify environmental health hazards in economically-disadvantage communities reliant on shallow ground water on the Eastern Shore was not selected for funding by the EPA Environmental Justice Small Grant program.

- Ground Water Consultant Report

A) *Technical/Regulatory/Educational Items*

YMCA Silver Beach Ground Water Withdrawal Impact Analysis:

Britt revisited questions that arose during the review during the May meeting concerning the relatively large Area of Impact (AOI). Britt explained that the DEQ Technical Evaluation, which provides the basis for calculating the AOI was not available at the time of the draft Permit review. Britt further explained that the AOI was larger than that which would have been produced had the ESVA Ground Water Model been used.

Accomack Landfill Land Application Permit Modification:

Britt indicated that new changes to the permit adequately address concerns included in the Committee's comment letter included in the EPA Sole Source Aquifer review. The concerns were related to the design flow for the land treatment system and the land area for application. Britt concluded that the proposed changes lessen the potential for impacts on water resources from the land application system.

Chairman Thornton moved to submit a letter of comment to DEQ supporting the proposed modifications to the Accomack Co. Landfill Land Application Permit.

The motion was seconded by Committee Member Belote and carried by unanimous vote.

Water Reuse DEQ Ground Water Stakeholder Advisory Panel:

Britt indicated that the Advisory Panel had not met since the May meeting and no updates are available.

B) Ground Water Permits

David's Nursery:

The Committee was presented a review of the draft permit and discussion ensued regarding development of a letter of comment. The Committee determined that the letter include a request asking that a maximized amount of the water table be used by the nursery.

Committee Member Belote moved to submit a letter of comment indicating no objection to the proposed David's Nursery Withdrawal Application. The motion was seconded by Committee Member Trala and carried by unanimous vote.

Gillespe Farm:

The Committee was presented a review of the draft permit and discussion ensued regarding development of a letter of comment.

Committee Member Trala moved to submit a letter of comment supporting the proposed Gillespe Farm Withdrawal Application. The motion was seconded by Committee Member Jeffries and carried by unanimous vote.

Hog Neck Farm:

The Committee was presented a review of the draft permit and discussion ensued regarding development of a letter of comment. The Committee determined that the letter commend Hog Neck Farm for utilizing the Columbia Aquifer for their irrigation needs.

Committee Member Jeffries moved to submit a letter of comment supporting the proposed Hog Neck Farm Withdrawal Application. The motion was seconded by Committee Member Trala and carried by unanimous vote.

The Committee requested that staff compile and maintain a list of agricultural users who use the Columbia Aquifer and send letters commending their use.

Dreamland Homes:

The Committee was presented a review of the draft permit and discussion ensued regarding development of a letter of comment.

Vice Chairman Hubbard moved to submit a letter of comment supporting the proposed Dreamland Homes Withdrawal Application. The motion was seconded by Committee Member Belote and carried by unanimous vote.

C) *Committee Work Plan-Related Items*

Britt indicated that the ground water-related research section of the Management Plan has been completed and is in the process of being summarized for inclusion. A summary will be presented at the September meeting.

D) *Community Presentations*

October 2012 Public Workshop Discussion:

The Committee was presented options for workshop topics including rapid infiltration basins and influence of paleoenvironments on ground water and discussion ensued regarding scheduling of the October workshop.

Committee Member Trala moved to schedule the October 2012 Public Workshop to focus on the use of rapid infiltration basins for wastewater treatment. The motion was seconded by Committee Member Belote and carried by unanimous vote.

Additionally, the Committee requested that staff schedule to have a speaker present on septic system treatment system technology and permitting during the November meeting.

September 18, 2012 Meeting

- Ground Water Consultant Report

A) *Technical/Regulatory/Educational Items*

Accomack Landfill Land Application Permit Modification

Britt presented the comment letter submitted to DEQ supporting the proposed modifications.

USGS Study: Phosphorus and Groundwater: Establishing Links Between Agriculture and Transport to Streams

Britt presented a review of the USGS study to investigate fate and transport of agriculture-derived phosphorus in the soils, groundwater, and surface water as well as influence of agricultural practices that influence the amount and mobility of phosphorus in groundwater. The study concludes that at the sampling site on the Eastern Shore of Maryland, agriculture-derived phosphorus is not contributing to the total phosphorus in the stream. Britt presented data on known concentrations of phosphorus in local wells on the Eastern Shore of Virginia.

Masters Thesis: Relationships Between Watershed Characteristics and Base Flow Nutrient Discharges to Eastern Shore Coastal Lagoons, VA (Stanhope, 2003)

Britt presented a review of the thesis which investigated groundwater nutrient inputs into various Eastern Shore watersheds. The Committee expressed concern that the study may not adequately consider the impact from wildlife on the reported nutrient inputs.

Water Reuse DEQ Groundwater Stakeholder Advisory Panel

Britt indicated that no meetings have been held.

B) Ground Water Permits

None reviewed.

C) Committee Work Plan-Related Items

Research Section of the Ground Water Management Plan Update:

Britt presented the summary list of primary resources and indicated he is still working on the secondary resources. Each resource will have an abstract and keywords for ease of searching. Discussion ensued regarding need for additional research on pesticides in ground water.

Withdrawal Scenario Section of the Ground Water Management Plan Update:

Britt indicated that the ESVA Ground Water Model will be utilized to simulate various pumping-pattern scenarios. The model will consider the relative impact of 3 withdrawal scenarios from both the confined and unconfined aquifer for Cape Charles and Accomac. The outcomes will be incorporated into the Management Plan as graphs and text.

Committee Member Trala moved to approve the pumping-pattern section for inclusion in the Ground Water Management Plan. The motion was seconded by Committee Member Jeffries and carried by unanimous vote.

D) Community Presentations

October 2012 Public Workshop Agenda:

Britt presented a draft agenda for the workshop.

June 2013 Public Workshop Proposed Agenda:

Britt proposed an agenda focusing on how past environments have affected the quality and quantity of groundwater on the Shore with an emphasis on how the paleo-landforms and depositional environments are responsible for the aquifers and confining units, influence the current groundwater quality, affect well yields, and influence aquifer recharge.

3.5 Transient and Working Waterfront Infrastructure Needs Assessment Report

A needs assessment was conducted for marinas and public access sites on the Eastern Shore of Virginia. The report is intended to identify potential projects that could be eligible for financial assistance through funding programs and agencies such as the Boating Infrastructure Grant Program, the Virginia Clean Marina Program, The Virginia Clean Vessel Act, and the Virginia Port Authority. The expected outcome of the report is enhancement of the recreational boating experience for fishermen and transient boaters and to ensure adequate infrastructure to sustain the local commercial fishing and aquaculture industries.

The assessment was conducted by interviewing managers and harbor masters of public facilities and owners of private facilities to both assess existing conditions of facilities and identify potential enhancement projects. The assessment considered facility management, emergency planning, petroleum control, sewage and gray water control, waste containment and disposal, vessel maintenance and repair, stormwater management, and habitat and species protection.

The report includes a summary of the assessment that will identify potential projects for funding for each individual facility and illustrate regional needs that will enhance recreational and commercial boating for the Eastern Shore of Virginia. The final report was distributed to county and town planning officials and other stakeholders to aid in future planning efforts. The report is available upon request through A-NPDC and VCZM.

The report is included in **Appendix K**.

Appendix A

January 18, 2012 Climate Adaptation Working Group
Meeting Sign-In Sheet, Agenda, and Photographs



Eastern Shore Climate Adaptation Working Group Meeting
 Wednesday, January 18, 2012, 10:00 a.m. - 2:30 p.m.
 Shore Bank Headquarters, Onley

Meeting objectives:

1. To consult working group on sea-level rise scenarios to be used in generating coastal vulnerability assessment products using LiDAR
2. To solicit feedback from group on LiDAR overview presentation for locality board of supervisors
3. To determine the topic of a Sea Grant funded focus group related to sea-level rise public policy solutions

Agenda

- | | |
|------------|---|
| 10:00 a.m. | Welcome, meeting objectives and briefing on GIS Users meeting (December 14, 2011) |
| 10:15 a.m. | Selecting sea level rise scenarios for LiDAR Coastal Vulnerability Products <ul style="list-style-type: none"> • Overview of Coastal Vulnerability Products using LiDAR Data (Chris Kinkade, NOAA Coastal Services Center) • Lessons learned from other coastal communities regarding scenario selection • Group input on sea-level rise scenarios (Brian Batten, Dewberry) • Next steps |
| Noon | Lunch |
| 12:30 | Group feedback on LiDAR roll out presentation for localities |
| 1:00 | Overview of UVA's Institute for Environmental Negotiation's Sea Grant Project: "Planning for Virginia's Coastal Resilience to Address Sea Level Rise" <ul style="list-style-type: none"> • Project overview and objectives and how it dovetails with our work to date (Curt Smith, A-NPDC) • Group discussion to select best topic for Sea Grant focus group • Group discussion to select participants for focus group |
| 2:00 | Round robin of updates from working group |
| 2:20 | Next steps for working group |
| 2:30 | Adjourn |



Photograph 1 – CAWG Meeting.



Photograph 2 – CAWG Meeting.

Appendix B

April 10, 2012 Climate Adaptation Working Group Meeting
Sign-In Sheet and Agenda



Eastern Shore Climate Adaptation Working Group Meeting
 Tuesday, April 10, 2012, 9:30 a.m. - 2:00 p.m.
 Eastern Shore of Virginia Chamber of Commerce, Melfa

Agenda

- 9:30 a.m. Welcome and Meeting Objectives (*Curt Smith, A-NPDC*)
- 9:35 a.m. ESVA LiDAR Update (*Curt Smith, A-NPDC*)
- LiDAR Presentation Outcomes
 - FEMA FIRM Map Update
- 10:00 a.m. Sea Level Rise Workshop (*Curt Smith, A-NPDC*)
- Review of Workshop Agenda, Presentations, & Surveys
 - Discussion of Workshop Modifications & Finalization of Workshop Development
- 11:15 a.m. LiDAR Coastal Vulnerability Products (*Gwynn Crichton, TNC*)
- Presentation, Review, & Discussion of First Available NOAA CSC Vulnerability Maps
- 11:45 p.m. Lunch (provided)
- 12:15 p.m. Delegate Lewis' HJR-50 Recurrent Flooding Legislation Update (*Curt Smith, A-NPDC*)
- 12:30 p.m. NASA-WFF Climate Adaptation Workshop Update (*Joel Mitchell, NASA*)
- 12:45 p.m. TNC Implementing Climate Change Adaptation Strategies on ESVA Project Update (*Gwynn Crichton, TNC and Sara Reiter, RC&D*)
- 12:50 p.m. Possible Chincoteague Inlet Study (*Curt Smith, A-NPDC*)
- 1:00 p.m. Informational Items (*Curt Smith, A-NPDC*)
- 1:15 p.m. Updates from Working Group
- 1:45 p.m. Next steps for working group (*Curt Smith, A-NPDC*)
- Introduction of ESVA Coastal Change Archive Project
- 2:00 p.m. Adjourn

Appendix C

September 26, 2012 Climate Adaptation Working Group
Meeting Sign-In Sheet and Agenda

EASTERN SHORE OF VIRGINIA
Climate Adaptation Working Group
September 26, 2012

NAME	ORGANIZATION
Lou Hinds	U.S.F.W.S. - Chincoteague
Curt Smith	A-UPDC
Peter Siph	Northampton County
John Oves	Chesapeake Commons
Steve Parker	TNC
Ed Parker	Tangier
Bonnie Maul	ES SWCD
Pat Maul	VESLT
Aali Plowden - Rogers	VESLT
Jon Fisher	JALC
Dan Bilieki	Wachapreague
Danard Spahn	CBES
Tom Brockenbrough	Accomack Co
Bill Neville	Town of Chincoteague
SLIP STILES	Wetlands Watch
Shannon Holt	Wetlands Watch
Marcia Berman	VIMS
Anne Armstrong	Marine Science Consortium



Eastern Shore Climate Adaptation Working Group Meeting

Tuesday, September 26, 2012

9:30 a.m. - 12:00 p.m.

Eastern Shore of Virginia Chamber of Commerce, Melfa

Agenda

- 9:30 am Welcome, Introductions, and Meeting Objectives (*Curt Smith, A-NPDC*)
- 9:35 am Introduction to Chesapeake Commons online mapping tool (*John Dawes, Chesapeake Commons*)
- Overview of the program, presentation of completed & current projects, & discussion of development of potential CAWG projects (i.e. ESVA Coastal Change Archive)
- 10:15 am Recap of Coastal Flooding Workshop (*Curt Smith, A-NPDC*)
- Review of UVA-IEN workshop summary report & discussion on distribution strategy
- 10:20 am Planning of CAWG Public Outreach Events next Coastal Flooding Workshop
- Next Coastal Flooding Workshop (with consideration of facilitation assistance from George Mason University)
 - ESVA Science Symposium
- 11:00 pm Ongoing/Upcoming Adaptation Project/Event Updates
- NOAA CSC Flood Vulnerability Maps update (*Curt Smith, A-NPDC*)
 - VIMS Recurrent Flooding Study for Virginia (*Marcia Berman, VIMS*)
 - Sea Level Rise & Extreme Events in the VA Tidewater Conference Recap
 - FEMA FIRM Map & Flood Insurance Reform Law update (*Curt Smith, A-NPDC*)
 - NASA-WFF Climate Adaptation Workshop Update (*Joe Mitchell, NASA*)
 - MARCO Adapting to Climate Change in the Mid-Atlantic Workshop
 - Chesapeake Bay Sentinel Site Cooperative Project
- 11:40 pm Informational Items (*Curt Smith, A-NPDC*)
- VA Sea Grant Reference Lists for Hampton Roads and Maryland Eastern Shore
 - Anne Arundel Co., MD Future Coast Project
 - Atlantic National Seashores Climate Vulnerability Assessment Report
- 11:45 pm Roundtable Updates from Working Group
- 11:55 pm Next steps for working group (*Curt Smith, A-NPDC*)
- 12:00 pm Adjourn

Appendix D

Ground Water Committee Public Workshop Photographs
and Announcement – October 20, 2011



Photograph 1 – Clifton Bell addressing the crowd at the Public Workshop.



Photograph 2 Clifton Bell addressing the crowd at the Public Workshop.

**EASTERN SHORE of VIRGINIA GROUND WATER COMMITTEE
PUBLIC WORKSHOP SERIES****Our Eastern Shore Ground Water*****Part IV – How safe is our ground water and are there ways
we can protect it?***

The Eastern Shore of Virginia Ground Water Committee invites you to the fourth part in a series of public workshops aimed at providing specific information on the Shore's ground water resource used in each of our lives daily. This presentation will provide information on the quality of local ground water and what we can all do to ensure its quality. Attendees are encouraged to participate by asking any questions they may have. Britt McMillan, Consulting Hydrologist to the Ground Water Committee of Malcolm Pirnie, Inc. will be presenting. Britt has consulted the Ground Water Committee for over a decade and has a broad understanding of the Shore's ground water resource. His enthusiastic presentation covers the following:

1. A brief overview of the source of our water and how we use it.
2. An overview of what makes our ground water vulnerable.
3. A discussion on saltwater intrusion including causes, prevention, and solutions. This discussion will include simple methods to reduce saltwater intrusion that homeowners can use as well as large scale solutions such as Aquifer Storage and Recovery and desalting.
4. Identify potential sources of contaminants to groundwater including fertilizers, pesticides and herbicides, wastes and wastewaters, and toxic chemicals and trace contaminants.
5. Discussion of available methods for protecting our ground water supply from contaminants such as publically available resources, current and new waste treatment systems, and household hazardous waste management programs.

The seminar will be held at the Eastern Shore of Virginia Chamber of Commerce, 19056 Parkway, Melfa, Virginia, on Thursday, October 20th, from 6:30 to 8:00 p.m. Refreshments will be served.

For more information contact Curt Smith, Accomack-Northampton Planning District Commission at (757) 787-2936.



Appendix E

U.S. Navy Native American Cultural Awareness Training Photographs



Photograph 1 – Participants at the event.



Photograph 2 – Participants at the event.



Photograph 3 – Participants at the event.



Photograph 4 – Participants at the event.

Appendix F

GIS Users Group LiDAR Workshop Sign-In Sheet, Event Flyer,
and Photographs

ESVA GIS Users Group
LiDAR Workshop
December 14, 2011

NAME	ORGANIZATION
Curt Smith	A-VPBC
Lou Hinds	US FWS
Kevin Holcomb	USEPA
Sara Reiter	ES RC+D
CHRIS KINCADE	NOAA Coastal Sci. Center
Todd Herbert	DCR/VT
Arthur C. Miles	Town of Exmore
Lynn Brantley	ANEC
Gay Smith	TNC
Bo Lusk	TNC
Alex Wike	TNC
STEWART BAKER	VIDEM
Sara Seaman	Accomack Co. Emergency Management
Tom Brockebrough	Accomack Co
Rena Bortignon	VDGIF
PAM DANNON	USFWS
NICK MEADE	VA CZM
Sue Rice	US FWS FWS
Sarah Hamm	Dewberry
Keith Privett	VDH
TOM BONAAFO	TOWN OF CAPE CHAS
Peta Stitt	Northampton County
Amy Mallette	RITA
Marcia Beaman	Vims



Eastern Shore GIS Users Group

LiDAR Workshop

Wednesday, December 14, 2011, 10:30 a.m. - 2:30 p.m.

Eastern Shore Community College, Workforce Development Building, Melfa, VA

Meeting objective: Eastern Shore GIS Users gain a thorough understanding of LiDAR data, including data specifications, accessibility, planned and potential applications and uses, and overall benefits of data for Eastern Shore community.

Agenda

- 10:30 a.m. Welcome, introductions and workshop objectives (*Curt Smith, A-NPDC*)
- 10:45 a.m. Overview of LiDAR quality assessed data products and specifications and data distribution and storage (*John Scrivani, VA Information Technologies Agency*)
- 11:15 Summary of LiDAR use plan (*Gwynn Crichton, The Nature Conservancy*)
- 11:30 NOAA CSC Coastal Vulnerability Assessments (*Chris Kinkade, NOAA Coastal Services Center*)
- Noon Box Lunches from Mallards
- 12:30 NOAA CSC Coastal Vulnerability Assessments (*continued*)
- 1:00 FEMA Flood Insurance Rate Maps (*Sarah Hamm, Dewberry*)
- 1:30 Additional potential applications of LiDAR data and training needs for GIS Users' Group (*Group Discussion*)
- 2:00 Sharing and communicating LiDAR products to general public, agencies and localities (*Curt and Gwynn*)
- 2:20 Next steps
- 2:30 Adjourn



Photograph 1 – Participants at the LiDAR workshop.



Photograph 2 – Participants at the LiDAR workshop.



Photograph 3 – Participants at the LiDAR workshop.

Appendix G

Virginia Outdoors Plan Public Workshop Outcomes and Photographs

Douglas W. Domenech
Secretary of Natural Resources



David A. Johnson
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-2556 FAX (804) 371-7899

**Virginia Outdoors Plan
Public Input Meeting
February 16, 2012 at 3:00 p.m. and 7:00 p.m.**

Virginia Outdoors Plan/Planner
Janit Llewellyn Allen
804-786-0887 (o)
Janit.Llewellyn@dcr.virginia.gov

Local Planning District Contact
Curtis Smith
757-787-2936

Meeting Location
Accomack-Northampton Planning District Commission (PD22)
23372 Front Street
Accomac, VA 23301

AGENDA

Welcome
Meeting Purpose & Regional and State Roles
VOP background/Use/Historical Perspective
Overview 2007 VOP
Regional Outdoor Recreation & Conservation Status Report
Virginia Outdoors Survey (PowerPoint)
Structured Public Input
Timeline & Next Steps

Virginia Outdoors Plan comments should be directed to Janit Llewellyn Allen at janit.llewellyn@dcr.virginia.gov. Comments should be received by April 6, 2012.

*State Parks • Stormwater Management • Natural Heritage •
Outdoor Recreation Planning • Dam Safety and Floodplain Management • Land Conservation*

VIRGINIA OUTDOORS PLAN
Public Input Meeting
February 16, 2012

NAME	ORGANIZATION
Sue Telfer	
Stuart Mathias	Golden Horseshoe B.C.C.
Serguei Taylor	Chesapeake Chamber of Commerce
Elaine Wall	AKAFC
Bill Neville	Town of Chesapeake
Peter Henderson	Virginia Eastern Shore Audubon
Dot Field	DCR - Natural Heritage
Frank Renshaw	Northampton Co. Dept of Gen. Serv.
Andy Padden	Chesapeake Bay Foundation
<hr/>	
7:30	
Jamiat Spader	Front Garden Center Virginia Beach
DANIEL JORDAN	Kiptopeke DCR
Klea Schultz - klea@kschultz.com	Kiptopeke DCR - Daniel Jordan
David A. Page	Eastern Shore Anglers Club
Jim McLawan	" " " "
Bob Tower	Planning Consultant
RICHARD PEARSON	Resident
McLawan 1977 (D) VORTZON.NET	CHANCELLOR; C.A.T.R. ADVISORY COUNCIL



Photograph 1 – Participants at the Virginia Outdoors Plan public workshops.



Photograph 2 – Participants at the Virginia Outdoors Plan public workshops.

Appendix H

Household Hazardous Waste Collection Event Materials and Photographs



Public Service Announcement

*The Eastern Shore of Virginia Ground Water Committee
Announces the 8th Annual*

EASTERN SHORE OF VIRGINIA HOUSEHOLD HAZARDOUS WASTE COLLECTION

Is Being Held in Conjunction with the Eastern Shore Soil & Water Conservation
District's Annual Arbor Day/Earth Day Celebration on

SATURDAY, April 28, 2012
10:00 AM – 2:00 PM
Eastville, VA

In parking lot across from Northampton Courthouse Green

Eastern Shore residents will have the opportunity to dispose of household hazardous wastes.

Accepted Wastes:

• Garden chemicals	• Fuels: gasoline, kerosene	• Wood stain	• Epoxy
• Poisons	• Fungicides	• Paint thinner	• Rodent poison
• Repellants	• Wood preservatives	• Paint remover	• Asbestos
• Degreasers	• Paint products	• Driveway sealers	• Other hazardous waste

Not Accepted:

• Commercial waste	• Ammunition	• Radioactive waste	• Propane tanks
• Industrial waste	• Flares	• Medicines	• Empty containers of any kind
• Car batteries	• Explosives	• PCBs	
• Tires	• Medical waste	• Smoke detectors	
• Motor oil	• Biological waste	• Freon	

****Reusable paint will be collected and donated to the Eastern Shore Food Bank****

Participants can dispose of up to 25 pounds of hazardous waste for free. Additional waste will cost \$1.00 per pound. Disposal of the first 25 pounds for free will be available only as funds allow. Arrive early to ensure your spot!

Contact Curt Smith at the A-NPDC at 757-787-2936 ext. 114 or csmith@a-npdc.org for details.

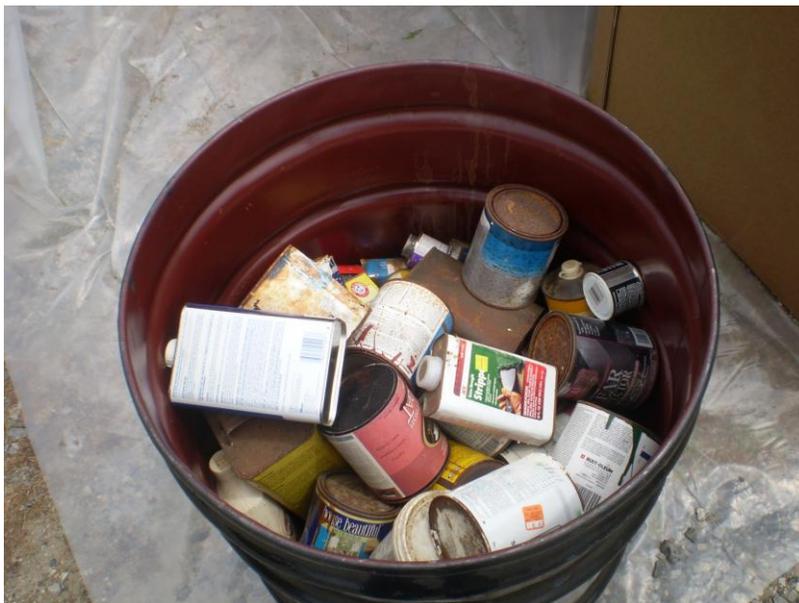
The Household Hazardous Waste Collection is made possible by funding from Accomack County, Northampton County, Virginia Coastal Zone Management Program, and NOAA.



Photograph 1 – 2012 Household Hazardous Waste Collection setup in Eastville.



Photograph 2 – 2012 Household Hazardous Waste Collection setup in Eastville.



Photograph 3 – Hazardous materials collected during the 2012 Household Hazardous Waste Collection in Eastville.



Photograph 4 – Reusable paint collected and donated to the regional Food Bank during the 2012 Household Hazardous Waste Collection setup in Eastville.

Appendix I

June 6, 2012 Ground Water Committee Public Workshop
Sign-In Sheet, Event Flyer, and Photographs



**EASTERN SHORE of VIRGINIA GROUND WATER COMMITTEE
PUBLIC WORKSHOP SERIES**

**An Overview of Wastewater Treatment on the Shore
Treatment Techniques and Permitting Requirements**

**Where: Great Hall of the Workforce Development Building at the
Eastern Shore Community College
29300 Lankford Highway, Melfa, VA**

When: Wednesday, June 6th from 6:30 to 8:00 p.m.

What: An educational workshop on wastewater treatment

Topics to be discussed include:

- Types and levels of wastewater treatment
- Appearance of constructed treatment systems
- How different treatment systems work
- Discharge/disposal options on the Eastern Shore
- How current treatment compares to State water quality and groundwater standards
- The permitting process including who gets to review a permit before it is issued

**Who: Mark Sauer, Water Permit Manager with the Virginia
Department of Environmental Quality will be presenting.
The public is encouraged to attend and participate in this
interactive workshop.**

Refreshments and light snacks will be served.

For more information contact Curt Smith, A-NPDC at 757-787-2936 or csmith@anpdc.org



EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE
Wastewater Workshop
June 6, 2012

<u>NAME</u>	<u>AFFILIATION</u>	<u>EMAIL ADDRESS</u>
<u>Ray Cassin</u>	<u>Accomack Planning</u>	<u>rcassin@accornet.net</u>
<u>AT Scott Matheson & Co.</u>	<u>Water Engineering</u>	<u>scott@atmatheson.com</u>
<u>Esther Miner</u>	<u>Accomack Co</u>	<u>Esther@accornet.net</u>
<u>Engene R. Hargrove</u>	<u>NIWA Consulting</u>	<u>engene@niwa.com</u>
<u>Brandon Chesak</u>	<u>Accomack District</u>	
<u>Bob Holman</u>	<u>Pharmacy Consultant</u>	<u>chickama@verizon.net</u>
<u>Cathy Plant</u>	<u>Local Health Dept</u>	<u>cathy.plant@w.dh.virginia.gov</u>
<u>David Johnson</u>	<u>Chemist</u>	<u>DavidJohnson@stas.com</u>
<u>CARA HARRIS</u>	<u>PSA</u>	<u>CARRIE89@VERIZON.NET</u>
<u>Christopher Hays</u>	<u>Prof</u>	<u>chays@verizon.net</u>
<u>Dave Gullipie</u>	<u>Gullipie Consult</u>	<u>edgullipie@verizon.net</u>
<u>Abdul Samsudin</u>	<u>State Consultant</u>	<u>Abdul.Samsudin@va.gov</u>
<u>J. Boyer</u>	<u>DE Construction</u>	<u>Ryan@BoyerPA.com</u>
<u>R. Mayers</u>	<u>NIWA Resident</u>	<u>mayersr@verizon.net</u>
<u>MARK TAYLOR</u>	<u>Accomack Co</u>	<u>mtaylor@accornet.net</u>
<u>Janice O'Hara</u>	<u>Accomack Co</u>	<u>Janice@accornet.net</u>
<u>Hayden Curtis</u>	<u>"</u>	<u>"@accornet.net</u>
<u>John Waterfield</u>	<u>"</u>	<u>"</u>
<u>Teresa Waterfield</u>	<u>"</u>	<u>"</u>
<u>Harvey Spence</u>	<u>Town of Chincoteague</u>	<u>hspence@chincoteague.gov</u>
<u>John Foy</u>	<u>TOC</u>	<u>johnfoyc@verizon.net</u>
<u>Kristi Sandy Schult</u>	<u>Schlitz</u>	
<u>Dr. Mary Sherman</u>	<u>Self</u>	<u>mary@schlitz.com</u>
<u>ED Boyer</u>	<u>Consultant</u>	<u>ed@boyer.com</u>
<u>Debra Caversano</u>	} <u>Respect Management</u> <u>Commercial Property</u> <u>Case Studies</u>	<u>dcaversano@respect.com</u>
<u>Toni Casaf</u>		<u>toni@respect.com</u>
<u>Jack Crosby</u>		<u>jack@respect.com</u>
<u>Westley Edwards</u>	<u>Citra</u>	



Photograph 1 – Mark Sauer of VDEQ addressing the crowd at the workshop.



Photograph 2 – Ground Water Committee Chairman and Accomack County Supervisor, Wanda Thornton, addressing the crowd at the workshop.

Appendix J

Coastal Flooding Workshop Event Materials and Photographs

Are You Interested in Discussing How Life on the Eastern Shore Has Changed & Could Change in Response to Sea Level Changes?

Please Plan on Participating in the Eastern Shore's First



Coastal Flooding Workshop

Historic & Future Sea Level Trends & Implications for Virginia's Eastern Shore

WEDNESDAY, JUNE 13, 2012

6:00 P.M. – 8:30 P.M.

**EASTERN SHORE COMMUNITY COLLEGE
29300 LANKFORD HIGHWAY, MELFA**

Topics To Be Presented Include:

- How much has sea level risen?
- How much will sea level rise?
- What impacts/changes will we see?
- What are other communities doing to prepare?
- What's been done or can be done to prepare on the Eastern Shore?

Participants Will Be Asked To Share Their Own Experiences During This Highly Interactive Workshop!

Please Contact Curt Smith at 787-2936 for more information.



UVa Club
of the Eastern Shore



Coastal Flooding Workshop:

Historic and Future Sea Level Trends & Implications for Virginia's Eastern Shore

6:00 P.M. – 8:30 P.M.

Wednesday, June 13, 2012

Great Hall of the Workforce Development Building
Eastern Shore Community College, 29300 Lankford Highway, Melfa

- 5:30 Registration and light snacks and refreshments**
Refreshments sponsored by the UVa Club of the Eastern Shore
- 6:00 Welcome and Introduction to the Project**
Tanya Denckla Cobb, Associate Director, UVA Institute for Environmental Negotiation
Audience Participation - Electronic Poll: What are Eastern Shore residents experiencing?
- 6:20 Sea Level Rise: Origins of the Eastern Shore**
Curtis Smith, Director of Planning, Accomack-Northampton Planning District Commission
Historic, Current and Future Sea Level Changes & Potential Impacts on the Eastern Shore
Skip Stiles, Executive Director, Wetlands Watch
Questions from audience and discussion
- 7:25 Audience Participation: Written Survey and Break**
- 7:35 How Are Other Coastal Communities Addressing Sea Level Rise?**
Melissa Keywood, Graduate Associate, UVA Institute for Environmental Negotiation
Overview of Sea Level Rise Planning Efforts on the Eastern Shore
Curtis Smith, Director of Planning, Accomack-Northampton Planning District Commission
Questions from audience and discussion
- 8:05 Community Feedback and Priorities for Next Steps**
Audience Participation - Final Electronic and Written Surveys
- 8:30 Adjourn**



The Nature
Conservancy

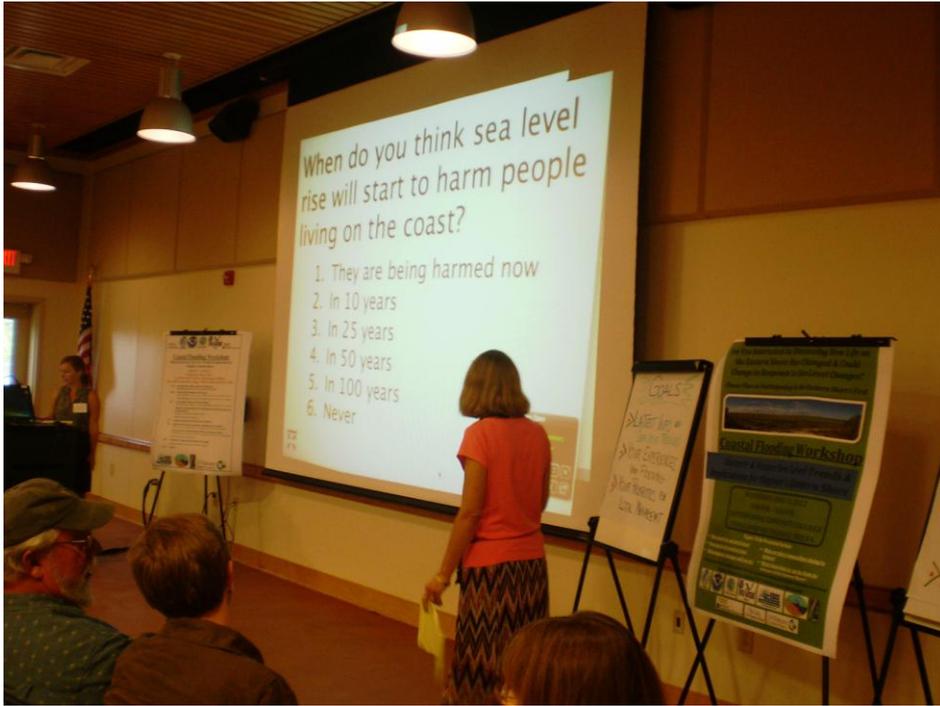




Photograph 1 – Curt Smith, A-NPDC Director of Planning, addressing the crowd of over 200 concerned citizens at the Coastal Flooding Workshop.



Photograph 2 – Curt Smith, A-NPDC Director of Planning, addressing the crowd of over 200 concerned citizens at the Coastal Flooding Workshop.



Photograph 3 – UVA-IEEN Staff conducting interactive and real-time surveys during the Coastal Flooding Workshop.



Photograph 4 –Concerned citizens participating in the Coastal Flooding Workshop.



Photograph 5 – Skip Stiles of Wetlands Watch addressing the crowd.



Photograph 6 – Participants were encouraged to participate during the workshop.

Appendix K

Eastern Shore of Virginia Transient and Working Waterfront Infrastructure Needs Assessment Report