



# Accomack-Northampton Coastal 2015 Annual Report Resources Technical Assistance Program



Virginia Coastal Zone Management Program

Accomack-Northampton Planning District Commission

NOAA Grant: NA16NOS4190171

Grant Year 2016 Task 41

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# **Fiscal Year 2016 Technical Assistance Annual Report**

*October, 2017*

*Prepared For:*

**Virginia Coastal Zone Management Program**

Virginia Department of Environmental Quality

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*On the cover – Photographs taken by Bonnie Mahl of the Soil and Water Conservation District during the Northampton Watershed Festival at Kiptopeake State Park. A-NPDC Coastal Resources Program Manager engaged with hundreds of local sixth graders, explaining where our water originates – the Yorktown-Eastover Sole Source Aquifer System.*



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## 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. In addition to Chincoteague, the A-NPDC assists 18 incorporated towns on the Eastern Shore.

The Eastern Shore of Virginia is an approximately 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. 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. As result, A-NPDC has championed several efforts focusing on ensuring a sustainable future for local economies and the environment.

## Executive Summary

During the 2016 Fiscal Year (FY2016), A-NPDC published the CAWG newsletter, hosted CAWG quarterly meetings, 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's focal project for FY2016 was to update the 2009 Historic Chincoteague Walking and Biking Brochure. This was a vital effort for promoting safe and environmentally sound tourism activities in our most economically viable tourism location in the region.

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). The A-NPDC reached over 1,600 people with the 15 training and outreach events covering groundwater, coastal hazards and resiliency, floodplain management, and more. Over \$500,000 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 FY2016.

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## Products and Outcomes

The following sections describe the activities completed during FY2016 and their current and anticipated outcomes.

### Climate Adaptation Working Group Newsletter

The CAWG is comprised of local, state, and federal representatives of government, aquaculture, agriculture, and community organizations and has met regularly since 2012. The group met once during FY2016 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. The group participated in the Coastal Resilience Mapping and Decision Support Tool training opportunities as well. This task implements Executive Order 35, Goals 9 and 10. Newsletters were distributed to support the group and supplement local decision-making processes related to sea-level rise and climate change. However, beginning in August of 2016 the newsletter format was updated to a more online media-friendly format, and the frequency of distribution increased to biweekly. 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.

The CAWG newsletters were distributed to several hundred residents and stakeholders representing dozens of agencies/groups working in coastal management. Biweekly e-newsletters are comprised of research publications, news items, and planning tools. The CAWG newsletters for all of FY2016 can be found on the [Climate Adaptation page](#) of the [A-NPDC web site](#). These are digital newsletters with links to external sites and are not intended to be a printed resource.

### *Leveraged Accomplishments*

In FY2016, the CAWG Newsletter resulted in directly assisting and enhancing the following activities:

- ◆ Engaged over 30 partnering and participating agencies including local, state, and federal government agencies and local NGOs;
- ◆ Held one meeting;
- ◆ Engaged local residents and stakeholders in the Hazard Mitigation Plan distribution for 2016;

- ◆ Continued coordination with the Nature Conservancy to maintain and enhance the Eastern Shore of Virginia [Coastal Resilience](#) Decision Support Tool;
- ◆ Engaged with local stakeholders during a training for [Coastal Resilience](#) applications; a fact sheet about the project, the [Phase I Training Session Manual](#), and additional materials will continue to be available at <http://conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/virginia/Pages/vaeasternshore.aspx>.
- ◆ Participated in about five relevant webinars; and
- ◆ Presented on the climate adaptation program to the Virginia General Assembly Joint Subcommittee on Recurrent Flooding and the Virginia Coastal Policy Team;
- ◆ Reviewed approximately 10 adaption-related projects.

## Coastal Management Training

The A-NPDC coordinated ten training and outreach events during FY2016. The events are summarized in the following sections. This task implements Executive Order 35, Goals 2, 6, 8, 9, and 10. Overall, we strive to not only provide educational and training opportunities and relevant reports, but also safe places to discuss vital issues on the Shore, including, but not limited to coastal access, cultural heritage, conservation and recreation, hazard mitigation and resiliency, tourism and economics, health and the outdoors, and collaboration and corroboration among existing entities on the Shore. The table below identifies specific events and includes existing and anticipated outcomes. The sign in sheets and similar materials for the educational and training activities are available upon request.

**Table 1: Training and Outreach Events**

<u>Event Title</u>	<u>Date(s)</u>	<u>Outcomes</u>
Accomack County Watershed Festival	10/26/2016	About 200 students from Accomack County public and private schools attended this all day event. A-NPDC staff educated the sixth-graders about groundwater resources on the eastern shore, identifying where their drinking water originates – our sole source aquifer system – and how that relates to the watershed. Students went away with a new knowledge of where their drinking water originates and how to conserve the sensitive resource.

<u>Event Title</u>	<u>Date(s)</u>	<u>Outcomes</u>
Climate Adaptation Presentation to Chesapeake Bay Funders Network	10/26/2016	Presented climate adaptation program activities and needs to 15 participants at Chesapeake Bay Funders Network. Leveraged multiple partnerships resulting in 2 project proposals.
Virginia Coastal Policy Center	12/2/2016	A-NPDC staff gave a presentation to about 300 at the Chesapeake Bay Funders Network regarding challenges and responses to climate change and sea level rise on the Eastern Shore.
Well & Septic Forum	10/26/2016	Educating local governments, businesses, and residents about the geology and formation of the Shore and the effects this has on the sensitivity of our ground water supply, increases their dedication to its proper stewardship. Guest speakers from the well and septic industry shared knowledge of system maintenance that will protect both human and environmental health when implemented at home. About 20 individuals attended this event.
Saltwater Intrusion Monitoring Presentation	02/08/2017	Sharing research and data with local elected officials and government staff will help them to make better informed decisions for the protection of residents and resources. Thirteen people were present when A-NPDC staff updated the Accomack County Board of Supervisors about the Electromagnetic Logging research and the results to date.
Tangier Adaptation Working Group	03/08/2017	Coordinated working group consisting of Town of Tangier Staff and Elected Officials, US Army Corps of Engineers, Christopher Newport University, and artificial oyster reef construction companies to develop strategic plan for constructing a series of living breakwaters to mitigate immediate erosion concerns along the island's shorelines. Outcomes include a map of prioritized living breakwater construction projects and additional leveraged partnerships with the Chesapeake Bay Foundation and The Nature Conservancy. Next steps include leveraging projects via combination of private fundraising and grant funding.

<u>Event Title</u>	<u>Date(s)</u>	<u>Outcomes</u>
Accomack Wallops Working Group Coastal Resiliency Tool Training	03/22/2017	Working groups bring recommendations to local Planning Commissions and Boards. Including future conditions from projected sea-level rise into decisions about land-use and zoning is vital to coastal resiliency. Twelve individuals were present at this meeting, when A-NPDC staff presented basic instructions on the capabilities and how to use the Coastal Resiliency Tool.
Northampton Watershed Festival	04/18/2016	About 400 Northampton students were able to learn at the A-NPDC station where their drinking water originates and the terms 'permeability' and 'porosity'. Understanding a resource allows individuals to better manage the resource, the hope is that these students share what they learn with family and friends.
12 <sup>th</sup> Annual Household Hazardous Waste Collection	05/06/2017	Convenience Centers in Fishers Corner, Painter, & Eastville served over 50 people and prevented about 1.5 tons of hazardous materials from potentially contaminating our ground and surface waters. The promotional campaign and word of mouth from participants also serves to educate residents about the proper ways to dispose of wastes and benefits of doing so.
Coastal Resilience presentation for the Accomack County Planning Commission	06/06/2017	Teaching our local planners and commissioners about increasing risks to our community and potential ways to improve our resiliency is an opportunity that we embrace and that will have far reaching effects beyond the thirteen present for this presentation.
Sea-Level Rise Presentation	06/06/2017	Presentation for public seminar series at the Chincoteague Museum regarding sea-level rise impacts and adaptation efforts. Thirty five in attendance.
NOAA Marine Debris All Hands Meeting	07/20/2017	Sitting on the local panel, A-NPDC staff was able to share information about coastal resiliency, litter prevention programs, information about the ghost pot removal initiative, and other collaborative relevant programs and efforts on the Shore with the approximately 25 attendees.

<u>Event Title</u>	<u>Date(s)</u>	<u>Outcomes</u>
Climate Adaptation Presentation to William & Mary Law School Students	09/22/2017	Presented on climate adaptation activities and needs to William & Mary Law School Students during field trip to the Eastern Shore. Leveraged partnership support from the Virginia Coastal Policy Center regarding student-led policy research and development.
MarshFest educational event (>500 attendees)	9/23/2017	Presented the groundwater model, using solar energy, to demonstrate groundwater flow and potential sources of contamination.
Floodplain Manager Training	09/28/2017	Working with DCR, A-NPDC staff organized this all day training opportunity. The ten attendees will take an increased knowledge about the NFIP, CRS, VFRIS, ordinances, permitting requirements, and more back to their communities to improve resiliency on the Shore.

## Technical Assistance

The A-NPDC provided technical assistance to local, state, and federal organizations on numerous occasions including environmental review, GIS, and information services during FY2016. Technical assistance activities are summarized in the following sections. This task implements Executive Order 35, Goals 1, 2, 4, 6, 9 and 10.

### *Partnerships*

The A-NPDC partnered with over 50 government and NGO organizations during FY2016 to complete projects aimed to complete the Scope of Work. **Table 2** summarizes A-NPDC partnerships for FY2016.

**Table 2: FY2016 Partnerships**

<b>ID</b>	<b>Agency/Group</b>	<b>Partnership Activity</b>
1	34 Agencies, Governments, and NGOs	A-NPDC staff coordinated the Eastern Shore CAWG which brought together 34 partnering groups quarterly to address climate change and sea level rise in the region.

ID	Agency/Group	Partnership Activity
2	TNC, VESLT, DGIF, Ducks Unlimited, NWR, VDCR, & more	The Southern Tip Partnership (STP) collaborates to ensure the effective conservation of lands on the Eastern Shore. The STP is also providing insight and input towards the development of the report: <i>Socio-economic Impacts of Conserved Land on Virginia's Eastern Shore</i> .
3	Accomack County/NASA	A-NPDC staff served on the joint Land Use Study Working Group which involved regional coastal management issues for ongoing and future activities at the Wallops Flight Facility.
4	The Nature Conservancy	A-NPDC staff partnered with TNC to maintain, update, and train users on the Eastern Shore of Virginia Coastal Resilience Tool.
5	VIMS, VCZMP, Middle Peninsula PDC & Northern Neck PDC	A-NPDC served as partnering agency on the Rural Working Waterfronts Coalition and leveraged funding through VCZM to ensure and enhance working waterfronts in the VA coastal zone.
6	VDCR NHP, ESVA Resource & Development Council, Town of Exmore	A-NPDC staff worked to coordinate potential opportunities to implement the Shore Big Trees Program. On Earth Day several trees were planted in the new Town of Exmore park. A-NPDC staff also maintained a native tree list to give to interested localities to plant their own native tree.
7	ESVA Environmental Education Council	A-NPDC staff served on the regional council to further environmental education efforts within the region.
8	Eastern Shore Watersheds Roundtable	A-NPDC staff served on the Steering Committee of the ESVA Watersheds Network. 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.
9	Eastern Shore Disaster Preparedness Coalition	A-NPDC staff served on the regional coalition focused on disaster preparedness and emergency management. Local VCZMP products were incorporated into the group's discussions and planning activities.
10	Eastern Shore Healthy Communities	A-NPDC staff coordinated with ESHC on their trails and potential linking to the Seaside Trail, etc.
11	VDCR	A-NPDC partnered in the development of the Virginia Outdoors Plan by hosting and coordinating local public input sessions.
12	USGS	The Ground Water Committee contracted USGS to complete electromagnetic-Induction logging of all relevant regional wells to be used primarily to determine changes in salinity of our ground water.
13	VDGIF	A-NPDC organized and co-facilitated a Boating Access Focus Group and facilitated outreach to local stakeholders for the next steps in the three-year study process.
14	VDEQ	A-NPDC facilitated two workshops for DEQ on the TMDL's in both Little Mosquito and Assawoman Creeks, and in Nassawadox Creek.

ID	Agency/Group	Partnership Activity
15	VDOT	A-NPDC worked closely with VDOT to create and initiate the Sponsor-A-Highway Pilot Program, which will clean up our rural roadways.
16	Waste Watchers of the Eastern Shore	A-NPDC staff worked with this non-profit organization towards increasing recycling and reducing littering through various projects.
17	ESVA Regional Navigable Waterways Committee	A-NPDC staff worked with the Committee to complete the Regional Dredging Needs Assessment and attended meetings with the USACE in efforts towards more comprehensive planning for dredging in the future.
18	VA Department of Historic Resources	A-NPDC staff provided local guidance for the development of a historic resources survey focused on identifying properties and structures at risk to coastal hazards.
19	Wetlands Watch	A-NPDC staff worked with this not-for-profit organization to have a training for the use of their new Sea Level Rise application and following data collection sessions.
20	VA Department of Conservation and Recreation	A-NPDC staff worked with VDCR to organize and facilitate the Eastern Shore VA Outdoors Plan meeting and worked with staff to ensure that all ideas were appropriately captured.
21	Geological Society of America	A-NPDC participated in the GSA Annual Conference field trip to the Barrier Islands to present local coastal issues to the group.

### *Leveraged Funds*

The A-NPDC used NOAA/VCZMP grant funds to leverage services and complete projects aimed at improving coastal management on the Eastern Shore of Virginia. **Table 3** summarizes instances where NOAA/VCZM grant funds were leveraged during FY2016. Over \$500,000 was leveraged in FY2016 utilizing NOAA /VCZMP grant funds.

**Table 3: FY2016 Leveraged Funds**

ID	Group/ Event	Activity	FY2016 Amount
1	Arcadis	Eastern Shore Ground Water Committee funds used to support consulting hydrogeologist to the Eastern Shore Ground Water Committee.	\$21,666
2	VIMS	Funds support research project entitled, “Managing for biodiversity and blue carbon in the face of sea-level rise and barrier island migration”. A-NPDC staff to leverage outreach activities to local stakeholders.	\$4,500
3	FEMA/VDEM	Funds used to leverage a rewrite of the Eastern Shore Hazard Mitigation Plan.	\$133,000

ID	Group/ Event	Activity	FY2016 Amount
4	VA Dept. of Historic Resources	Funds used to leverage a survey of 3 historic properties on the Eastern Shore.	\$500
5	Accomack & Northampton Counties	Funds used to leverage an annual Household Hazardous Waste Collection.	\$14,000
6	Accomack County	Funds used to leverage the Eastern Shore GreenWorks Committee to oversee litter reduction strategies.	\$6,000
7	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.	\$4,000 in-kind hours
8	VCZMP	Two A-NPDC staff served on the advisory committee for the development of the report: <i>Socio-economic Impacts of Conserved Land on Virginia's Eastern Shore</i> . Contractors from George Mason University and Urban Analytics are completing the report.	\$108,000
9	EPA/Chincoteague Bay Field Station	Funds supported construction of a series of living breakwaters at the Saxis Public Fishing Pier. Project serves to mitigate erosion and wave damage, enhance water quality, and educate public on resilience activities.	\$7,500
10	VCZMP	Staff will work with other regions to expand and complement the current Working Waterfront 309 strategy by develop and implementing the tools and policies needed to ensure sustainability of the waterfronts and related industries in Rural Chesapeake Bay/Seaside of Virginia.	\$47,500
11	VTC	A-NPDC staff planned, organized, advertised, implemented the Virginia Certified Ecotour Guide Course with partners and the aid of the Virginia Tourism Commission sponsorship.	\$10,000
12	VCZMP	<i>Pending:</i> The Virginia Oyster & Water Trail Eco-Tourism Collaboration will support and generate direct, indirect, and induced jobs – jobs that rely on the natural resources of the rural coastal areas.	\$200,000
<b>Total Leveraged Funds FY2016: \$556,666.00</b>			

### *Historical Searches*

Four historical searches were performed by A-NPDC staff during FY2016. Historically, the A-NPDC has provided this service to numerous agencies and without local availability of DSS, local agencies on the Eastern Shore would be required to pay about \$150 per search. Each environmental review corresponds with a historical search. **Table 4** summarizes the historical searches.

**Table 4: FY2016 Historical Searches**

Agency	Search Description	Outcomes
Eastern Shore of Virginia Housing Authority	Three searches were completed for the Indoor Plumbing Rehabilitation Program.	No historic properties were affected by the proposed projects and clearance was granted.

### *Information Requests*

The A-NPDC responded to more than 40 information requests from private, local, state, and federal organizations and private citizens during FY2016. Many, but not all, of these requests are summarized in **Table 5**.

**Table 5: FY2016 Information Requests**

ID	Date	Agency/Group	Contact	Request Description
1	11/2/2016	ESRNWC	John Joeckel	HMP Draft & RDNA (printed, bound copy of RDNA)
2	11/3/2016	Marsh Point Townhome Association	Bill Botts	Hazard mitigation/CC/SLR Plan information
3	12/9/2016	Trail's End	Dr. Len Buchta	Joint Land Use Study
4	12/12/2016	Accomack County resident	Betsy Reich	Dredging Needs Assessment (B&W copy, color USACE survey Guilford Creek)
5	12/15/2016	Accomack County resident	Tara Southard	Park/Pet Clean Up Stations
6	1/3/2016	Northampton County	Richard Neely	Hazardous waste disposal
7	1/25/2017	Northampton County resident	Joyce	Proper disposal of oil waste; HHWC
8	1/27/2017	Northampton	Robert Meyers	Perdue public notice/permit/tri data
9	2/6/2017	Northampton County	Richard Neely	Hazardous waste disposal
10	2/6/2017	Northampton	Kris Tucker	CEDS
11	2/14/2017	UVA	Madeline Houck	Info about CAWG
12	2/28/2017	UVA	Madeline Houck	Interview about PDC efforts in coastal resilience & CAWG
13	3/8/2017	Shorekeeper	Jay Ford	Poultry house groundwater use progress.

ID	Date	Agency/Group	Contact	Request Description
14	3/3/2017	DEQ OWS	Ryan Green	Location/Outreach aid with Compliance Assistance Framework for permitting groundwater users
15	3/14/2017	Senator	Lynwood Lewis	Update on poultry concerns (with regard to groundwater)
16	3/14/2017	SWCD	Cole Charnock	Indoor Plumbing Survey Update
17	3/14/2017	MG	Joe Valentine	Climate Advocacy Training
18	3/15/2017	Violet Stitches, Parksley business	Marylin Wohlrab	Discuss stormwater issues in Town, need for removing old road and repaving, so that the difference in elevation between road and sidewalk is greater than 1 inch.
19	3/15/2017	Accomack County resident	Ray Breslin	Questions about poultry.
20	3/30/2017	Wachapreague	Pete Hodgson	Questions about flooding mitigation, funding opportunities for drainage and storm water management
21	4/5/2017	Painter	John Curl	HHWC questions
22	4/5/2017	Resident	Mr. Justis	Groundwater Withdrawal Permit question (poultry operation, 3 houses)
23	4/13/2017	Resident	Richard Neely	HHWC questions
24	4/23/2017	CBES	Sue Mastyl	GWC question (2016 summary)
25	4/24/2017	Wetlands Watch	Mary-Carson Stiff	Resilience Research and Design Collaborative
26	4/25/2017	Resident	Bill Watson	Dredging & launch at Wisharts Point
27	4/27/2017	ESTC	Sarah Barban	Chincoteague Historic Brochure
28	4/30/2017	CBES	Mary Miller	Wagner Borrow Pit
29	4/30/2017	Resident (Quinby)	Connie Powel	recycling
30	5/3/2017	Resident	Mrs. Scotty Pascal	HHWC questions
31	5/3/2017	Resident	Edward Vargas	HHWC questions
32	5/4/2017	Resident (Eastville)	Mr. Conrad	HHWC questions
33	5/8/2017	Resident	Dave Lassiter	HHWC questions
34	5/12/2017	Resident (Chincoteague)	Daniel Grosse	HHWC questions

ID	Date	Agency/Group	Contact	Request Description
35	5/22/2017	Resident	Anita Johnson	Organize clean up with Broadwater Academy students at Savage Neck Dunes; I coordinated with Dot Field
36	5/25/2017	Northampton Wetlands Board	Dave Fauber	CR Tool and HMP
37	8/8/2017	ES Post Hitching Post	Angie Heady	Chincoteague Historic Guide

## Ground Water Committee

The A-NPDC staffed the Eastern Shore of Virginia Ground Water Committee and managed the Ground Water Committee's consulting hydrogeologist during FY2016. Committee Officers elected for FY 2016 were Mr. Granville Hogg as Chairman and Mr. Paul Muhly as Vice Chairman.

In 2017, Mr. Daniel Hershey replaced Mr. J. Wesley Jeffries as representative for Accomack County. Both Counties had new County Administrators appointed to the Committee as well, Mr. Mike Mason for Accomack and Mr. Charles Kolakowski for Northampton.

### *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 one public workshops and several presentations to local government boards. During FY2016, the Ground Water Committee held 9 meetings, awarded the 2016 Eastern Shore Ground Water Award, commented on multiple regulatory actions, maintained the *Eastern Shore of Virginia Ground Water Supply Protection and Management Plan*, conducted a Household Hazardous Waste Collection (please visit the [web page](#) for historic summary information and Spanish and English versions of the FY16 flyer), and reviewed multiple environmental reviews and regulatory items.

Additional specific notable accomplishments of the Ground Water Committee in FY2016 are summarized in **Table 6**.

**Table 6: FY2016 Ground Water Committee Accomplishments**

Staff Research Documentation		
ID	Topic	Month

1	Organized VDEQ WSP staff to present concerning Water Supply Plan legislative requirements. Presented EVGMAC progress update.	Oct
2	Organized USGS presentation concerning EM-logging data analysis. Presented progress on Nutrient Trading Program agreement.	Nov
3	Presented information about the VA Pollutant Discharge Elimination System and Pollution Abatement Programs. Presented new research, from Dr. Kelsey Piper of Virginia Tech, concerning lead and the Virginia household Water Quality Program. Summarized EVGMAC activities and JLARC report.	Jan
4	Staff supplied supplemental information to Accomack County staff for their annual PC/BOS poultry update. Researched and reported on the VDEQ Water Quality Monitoring Program.	Feb
5	Organized site visitation and award presentation for the 2016 Ground Water Award to Commonwealth Chesapeake Company of Accomack County.	Feb
5	Staff presented about HB1774, Committee to explore alternative Stormwater Management methods in rural Tidewater localities. Staff served on the Work Group and provided updates to the Committee and localities.	Mar/Apr/May/June/July/Aug/Sept/Oct/Nov
6	Staff developed basic Ground Water Committee and Groundwater educational sheets.	Mar
7	Staff developed language to provide feedback on the FCD for projects with regards to water withdrawal and the SSA designation.	Mar
8	Reviewed and presented the EPA's 2015 Virginia Toxics Release Inventory Report	Mar/Apr
9	Reviewed petroleum tank data from DEQ.	May
10	Reviewed and presented information about DEQ's General Discharge Permit and the Nutrient Trading Permits. Included review of 2007, 2013, 2014, & 2015 N & P discharge data.	May/Aug
11	Reviewed and presented NASA WFF groundwater contaminants and their health impacts (PCE).	May
12	Presented information about new research that incorporates groundwater data into flood inundation forecasts.	Aug
13	Reviewed VPDES draft permit and USACE public notice.	Sept
14	Researched new Eastville ESRH facility design and potential for use of the unconfined aquifer for irrigation purposes.	Aug/Sept
15	Attended Northampton County Board meeting for an update on the Wagner Borrow Pit as a potential recipient of the spoil from the CBBT expansion project.	Aug/Sept
16	Worked with VT extension agents to organize and implement the Water Clinic and Well & Septic Forum.	May/June/July/Aug/Sept/Oct
17	Planned the education curriculum for MarshFest at the CBFS.	Sep
<b>Technical Documentation</b>		
<b>ID</b>	<b>Activity</b>	<b>Month</b>
1	Presented EVGMAC subcommittee updates. Presented the JLARC <i>Effectiveness of Virginia's Water Resource Planning and Management</i> , identifying recommendations that could directly impact the ESVA.	Oct

2	<p>Presented EVGMAC and subcommittee updates and summary of progress. Presented relevant points from the USGS research: <i>Spatial and Temporal Variation of Stream Chemistry Associated with Contrasting Geology and Land-Use Patterns in the Chesapeake Bay Watershed: Summary of Results from Smith Creek, Virginia; Upper Chester River, Maryland; Conewago Creek, Pennsylvania; and Difficult Run, Virginia, 20102013 (SIR 2016-5093).</i></p>	Feb/Mar
3	<p>Research most current groundwater withdrawal data to begin drafting the 2009-2016 water use and groundwater level trends fact sheet.</p>	Mar/Apr
5	<p>Provided to the Eastern Virginia Groundwater Management Advisory Committee the following issues that are directly relevant for the Shore as well as the wider Groundwater Management Areas:</p> <ol style="list-style-type: none"> <li>1. Prioritize use from more sustainable aquifers and limiting use of less sustainable aquifers. <ol style="list-style-type: none"> <li>a. Currently this is ineffectively addressed under the regulations by requiring use of the “lowest quality of water” for the beneficial use.</li> <li>b. This often does not always result in use of more sustainable aquifers, such as the Surficial aquifer.</li> <li>c. A preferred option to prioritize use of more sustainable aquifers is to encourage use by reducing permit application and permit requirements for use of the most sustainable aquifers (such as the Surficial aquifer). The General Permit concept is one option.</li> </ol> </li> <li>2. Coordinating research and model development with Stakeholder groups such as the Eastern Shore of Virginia Groundwater Committee. Currently State funded research and groundwater resource model development is conducted with little to no coordination with stakeholders. This should be accomplished through a formalized process to ensure inclusion of appropriate stakeholders. Including stakeholders in development of research objectives and scope as well as model development for resource management can result in: <ol style="list-style-type: none"> <li>a. More robust research programs and resource models;</li> <li>b. Potentially reduce cost by focusing on critical areas or issues identified by local stakeholders; and</li> <li>c. Elicit increased participation by stakeholders in maintaining a sustainable resource.</li> </ol> </li> <li>3. Better characterize un-permitted withdrawal use and impacts to the groundwater resource. Included in this characterization is gaining a better understanding of: <ol style="list-style-type: none"> <li>a. Unpermitted domestic use (number of domestic users, amount used, and aquifers used);</li> <li>b. Small commercial and industrial users that fall under the permit threshold; and</li> </ol> <p>Small commercial and industrial users that exceed the permit threshold but do not have a groundwater withdrawal permit.</p> </li> </ol>	Mar

6	<p>Provided information related to proposed dredge spoil disposal at the Wagner Borrow Pit (Wagner Brothers Mine #1). Principal focus of the information provided were:</p> <ol style="list-style-type: none"> <li>1) Comment on expected fate of combusted creosote associated with creosote treated wood.</li> <li>2) Comment on n t typical e nvironmental is sues r elated to upland disposal of dredge material ( polycyclic ar omatic h ydrocarbons ( PAHs) an d metals mobilized t o t he groundwater from the dredge spoil).</li> <li>3) Reviewed the Upland Placement Evaluation Report. Noted that the report evaluated sites west of the Chesapeake Bay with a focus on the Weanack site. The report did not evaluate sites on the Shore and the report only evaluated sites that were permitted to receive dredge spoil or similar materials.</li> </ol> <p>Reviewed the Hydrogeological Investigation Excavation Spoils Disposal Site for the Wagner pit prepared by MSA. N oted that the report concluded that there could be i mpacts to the shallow groundwater and recommended abandoning and replacing any nearby shallow potable wells with deep wells.</p>	Apr
7	<p>Provided an overview of the emerging contaminants Poly- and Perfluoroalkyl substances in groundwater. T he overview provided information on historical use; known health effects; fate and transport in the environment; and considerations relevant to the finding of PFAS in groundwater at NASA Wallops Flight Facility Main Base.</p>	May
4	<p>Presented summary and recommendations from the Virginia Joint Legislative Audit and Review Commission (JLARC) report: “<i>Effectiveness of Virginia’s Water Resource Planning and Management</i>”. Recommendations that could most directly affect water resources on the Shore are:</p> <ol style="list-style-type: none"> <li>i. <b>Rec 1:</b> DEQ should identify high priority locations for additional sites for monitoring land subsidence, salt concentration, and groundwater levels.</li> <li>ii. <b>Rec 12:</b> SWCB issue permits for non-human consumptive uses only after meeting requests for human consumptive needs.</li> <li>iii. <b>Rec 13:</b> SWCB reduce permitted withdrawals for non-human consumptive use as necessary to provide permit capacity to meet human consumptive needs.</li> <li>iv. <b>Rec 14:</b> Establish a limit on the proportion of overall permitted withdrawal capacity to be granted to an individual permit holder.</li> <li>v. <b>Rec 15:</b> Reduce the permitted withdrawal to more closely reflect the actual amount needed.</li> </ol> <p>An alternative option that the GA should consider is a “user fee” for groundwater users.</p>	Oct
5	<p>Summarized findings from the Eastern Virginia Groundwater Management Advisory Committee. Included in the findings was the recommendation for regional planning efforts through EVGMA Planning District Commissions with specific reference to the Eastern Shore of Virginia Groundwater Committee as an example to be emulated.</p>	Aug
6	<p>Presented information from USGS Circular: <i>Understanding Nutrients in the Chesapeake Bay Watershed and Implications for Management and Restoration – The Eastern Shore</i>. The circular provided a synopsis of research completed on nutrient contribution to the Chesapeake Bay from the Eastern Shore along with target reductions in nutrient loading necessary to meet the TMDL requirements.</p>	Aug

7	Presented groundwater model simulation to be used for an educational video. Began creation of Columbia fact sheet and presentation with the Board of Supervisors for each County as the target audience.	Sep
Implement Committee Work Plan		
Activity	Month(s)	Outcome
Public comment period for regulatory change requiring registration for all groundwater supply wells.	August	The regulatory change provides important information on groundwater use on the Shore. The regulations are in effect and drillers constructing new wells after September 22, 2016 are required submit information to DEQ. Note that all supply wells were already required to submit information to VDH, and the information in the new regulations provide better uniform reporting.
Provided issues relevant to the Shore for consideration by the Eastern Virginia Groundwater Management Advisory Committee	March	The Committee is considering major structural changes to how the Commonwealth manages groundwater resources. Changes implemented from this committee have the potential to impact the resource and use of the resource on the Shore.
Review proposed FY2016 Work Plan. The routine components of the proposed Work Plan includes 1) promote methods to increase use of the Columbia aquifer and surface water irrigation ponds; 2) Monitor and review Federal and State activities related to groundwater on the Shore; 3) Coordinate and/or track independent research on the Shore; 4) update annual groundwater use; 4) represent the GW committee on State or Federal Committees; 5) Participate in two public meetings/workshops. Special studies are: 1) use the Eastern Shore Groundwater Model to evaluate groundwater availability on the Shore, and 2) support saltwater intrusion monitoring by the USGS.	Aug	Overall Work Plan was supported by the Groundwater Committee. The special study to evaluate groundwater availability was approved by the Groundwater Committee. A summary, similar to the Annual Groundwater Use summary will be prepared presenting results of the groundwater availability evaluation.

The Ground Water Committee Report implements Executive Order 35, Goals 1, 2, 8, 9, and 10.

### *Packets and Minutes for the Monthly Meetings*

The minutes present activities related statutory, regulatory, and permit tracking/review; research and investigation; and implementation of ground water protection. Minutes for the Committee meetings can be found on the [Ground Water Committee page](#) of the [A-NPDC web site](#). Many additional resources can be found on the site as well. The committee met on the third Tuesday

of each month, with the exceptions of December 2016, June 2017, and July 2017.

## Chincoteague Historic Walking & Biking Brochure

The A-NPDC worked closely with the Town of Chincoteague, the Chincoteague Chamber of Commerce and Certified Visitor Center, the Chincoteague Cultural Alliance, and other stakeholders to update the information and maps in the Walking & Biking Tour of Historic Chincoteague Island brochure. Having such materials made available to visitors and residents, both digitally and in printed form, encourage healthy activity outside, increasing appreciation of the coastal environment and the history associated with the area. In addition to updating the maps to include new bridges, subsequent road orientation, and new Town built designated biking and walking trails, the water access points were included. A unique new feature was including the Eastern Shore Native Garden demos in the legend to promote the Eastern Shore Natives campaign and encourage visiting the sites and reading the kiosks. The updated brochure is available on the Chamber web site and the original files were supplied to the Chamber, so that additional prints can be ordered as needed by the community.

[http://www.chincoteaguechamber.com/files/New\\_Historic\\_Chincoteague\\_Brochure\\_ReducedFile.pdf](http://www.chincoteaguechamber.com/files/New_Historic_Chincoteague_Brochure_ReducedFile.pdf)

## Benefits Accrued from Prior VCZMP Grants

Below is a table naming and describing A-NPDC projects funded by VCZMP in previous years. The table highlights the projects that have produced measurable benefits in subsequent years and/or have served as a foundation for additional projects. Information about each TA Program Grant year, from FY2002 to present, can be found on the A-NPDC web site at the following address.  
<http://www.a-npdc.org/accomack-northampton-planning-district-commission/coastal-resources/technical-assistance-program/>

**Table 7: VCZMP Benefits Accrued**

<b><u>VCZM Grant #</u></b>	<b><u>NOAA Grant #</u></b>	<b><u>Project Title</u></b>	<b><u>Description of Benefits Accrued</u></b>
FY2002, Task 12.09	NA17OZ2355-01	Seaside Heritage Program: Ecotourism Access Improvements	Two floating docks were constructed in Chincoteague and Wachapreague resulting in enhanced access for paddlers. This infrastructure has been critical for the Seaside Water Trail and Camping Accommodation Implementation Plan
FY2003. Task 12.11	NA03NOS4190104	Seaside Heritage Program: Ecotourism Access Improvements	One floating dock was constructed in Willis Wharf resulting in enhance access for paddlers. The infrastructure has been critical for the Seaside Water Trail and Camping Accommodation Implementation Plan
FY2004, Task 11.10	NA04NOS4190060	Seaside Heritage Program: Ecotourism Access Improvements	Supplies purchased for the Willis Wharf Observation Deck led to construction using VCZM funds in FY05. The project also funded the construction of a floating dock in Quinby resulting in enhanced access for paddlers. This infrastructure has been critical for the Seaside Water Trail and Camping Accommodation Implementation Plan
FY2004, Task 83.06	NA04NOS4190060	Chesapeake Bay Buffer Land Classification Project	Project outcomes were built upon during FY06 TA Grant. Is regularly used for land use decisions by localities and available on Coastal GEMS
FY2004, Task 41	NA04NOS4190060	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2005, Task 41	NA05NOS4191180	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2006, Task 41	NA06NOS4190241	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2007, Task 41	NA07NOS4190178	A-NPDC Technical Assistance Program	The Seaside Water Trail Historic Resources Project has leveraged additional VCZM Grants associated with the trail.

<b><u>VCZM Grant #</u></b>	<b><u>NOAA Grant #</u></b>	<b><u>Project Title</u></b>	<b><u>Description of Benefits Accrued</u></b>
FY2008, Task 14	NA08NOS4190466	Wachapreague Seaside Park Plant ES Natives Demonstration Garden	A sub-program for Plant ES Natives, called Shore Big Trees, was established and a native tree was leveraged in the Wachapreague.
FY2008, Task 41	NA08NOS4190466	A-NPDC Technical Assistance Program	The Chincoteague Tour Training Guide was leveraged into additional work during TA Program grants in subsequent years. The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2009, Task 41	NA08NOS4190163	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2010, Task 41	NA10NOS4190205	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2010, Task 41	NA10NOS4190205	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.
FY2010, Task 96.01	NA10NOS4190205	Seaside SAMP Phase 3 Technical Assistance	This project led to additional VCZM grants related to assessing Recreational & Commercial uses on the Seaside to enhance coastal management. The work also led to VCZM funding for the establishment of restoration goals for SAV on the Seaside.
FY2011, Task 41	NA11NOS4190122	A-NPDC Technical Assistance Program	The Boating and Marina Needs Enhancement Assessment was leveraged into subsequent VCZM grants related to Working Waterfronts
FY2011, Task 96	NA11NOS4190122	Seaside SAMP Recreational Use Assessment and SAV Restoration Goals	This work was leveraged into subsequent VCZM funding for an assessment of commercial use and exploration of state-policy for establishment of SAV restoration set-aside areas for Seaside.
FY2012, Task 41	NA12NOS4190168	A-NPDC Technical Assistance Program	The ES Ground Water Committee leveraged work from this year's grant to complete additional and ongoing tasks during the subsequent year's grant.

<b><u>VCZM Grant #</u></b>	<b><u>NOAA Grant #</u></b>	<b><u>Project Title</u></b>	<b><u>Description of Benefits Accrued</u></b>
FY2012, Task 96	NA12NOS4190168	Seaside SAMP Recreational & Commercial Use Assessment and SAV Restoration Goals	The Commercial Fishing Use Assessment was leveraged into additional planning work funded by BOEM and VDMME regarding commercial and recreational fishing activities within the Virginia Wind Energy Area
FY2012, Task 51	NA12NOS4190168	Eastern Shore Water Trails Association Development & Seaside Water Trail Camping Accommodation Implementation Plan	No work leveraged from grant to date.
FY2013, Task 41	NA13NOS4190135	A-NPDC Technical Assistance Program	The Proceedings of the Eastern Shore Land Protection Working Group Report identified additional economic impact studies needed in the region. The work has been leveraged for FY15 through a VCZMP grant. The ES Ground Water Committee leveraged work from this year’s grant to complete additional and ongoing tasks during the subsequent year’s grant.
FY2013, Task 53	NA13NOS4190135	Eastern Shore Transportation Infrastructure Inundation Vulnerability Assessment	The report has been regularly utilized to leverage and enhance federal and state transportation funding applications. The report is being used in the Coastal Resilience Tool.
FY2014, Task 41	NA14NOS4190141	A-NPDC Technical Assistance Program	The special project, Shore Big Trees Implementation Plan, has led to native tree plantings in local communities. The ES Ground Water Committee leveraged work from this year’s grant to complete additional and ongoing tasks during the subsequent year’s grant.
FY2015, Task 41	NA15NOS4190164	A-NPDC Technical Assistance Program	The Coastal Resilience collaboration is serving as a major data resource for the EFC resilience finance strategy and planning development project.

<u>VCZM Grant #</u>	<u>NOAA Grant #</u>	<u>Project Title</u>	<u>Description of Benefits Accrued</u>
FY2015, Task 41	NA15NOS4190164	A-NPDC Technical Assistance Program	The special project, Regional Dredging Needs Assessment, is leading to a Section 22 initiative with the U.S. Army Corps of Engineers, in collaboration with the Eastern Shore Regional Navigable Waterways Committee.