

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #  e?

Task: 1.01	Dept. of Environmental Quality - Virginia Coastal Zone Management Program			Federal Budget Total:	\$310,600.00
Coastal Program Management					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start:	End:	Closeout:		
	10/1/2016	9/30/2018	12/31/2018		

About \$4,000 still remains, which will either be used in Task 10 for a final video or publication summarizing the Seaside eelgrass and scallop work or for a legal analysis of potential additional uses of public Baylor oyster grounds.

Task: 1.02	Dept. of Environmental Quality - Virginia Coastal Zone Management Program			Federal Budget Total:	\$97,000.00
Virginia CZM Program Outreach & Social Marketing					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start:	End:	Closeout:		
	10/1/2016	9/30/2018	12/31/2018		

This task is extended through September 30, 2018. During this reporting period, funds remaining in the grant enabled the Outreach Coordinator to participate in the 6th International Marine Debris Conference. Most of the \$7,222.35 in funds remaining in this task will enable printing and distribution of the Spring/Summer 2018 issue of the Virginia Coastal Zone Management magazine.

Final Products	% Completion	Anticipated Completion Date
Outreach and Social Marketing Strategies	100%	
Printed Media	85%	Magazine release in late May/early June
Events and Training	100%	
Electronic/Social Media	100%	

Task: 1.03	Virginia Institute of Marine Science - Chesapeake Bay National Estuarine Research Re			Federal Budget Total:	\$114,277.00
Coastal Management Support					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Attached
Closed	Start:	End:	Closeout:		
	10/1/2016	9/30/2017	12/31/2017		

Task: 1.04	Virginia Commonwealth University			Federal Budget Total:	\$99,086.00
Coastal Management GIS Support and Coastal GEMS Maintenance					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Attached
Closed	Start:	End:	Closeout:		
	10/1/2016	9/30/2017	12/31/2017		

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 2	Dept. of Environmental Quality	Federal Budget Total:	\$207,800.00
EIR and Federal Consistency			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u> Attached	
Open	Start: End: Closeout:		
	10/1/2016 9/30/2018 12/31/2018		

Final Product is attached, however there were leftover funds in this task. \$10,000 was transferred to a new task 13 for a Colonial Waterbird Survey. \$24,716 was transferred to a new Task 14 - GWRC Native Plant Demo Garden. Both projects have been approved by NOAA. About \$15,000 still remains, which will likely be used in Task 10 for a final video or publication summarizing the Seaside eelgrass and scallop restoration work. Some funds may also be used for legal analysis of potential additional uses of public Baylor oyster grounds.

Task: 3	Dept. of Environmental Quality	Federal Budget Total:	\$0.00
Water Quality Improvement Fund (WQIF) Match- City of Hopewell Wastewater Treatment Plant Nutrient Removal Upgrade			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u> Attached	
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 4	Virginia Marine Resources Commission	Federal Budget Total:	\$160,000.00
Permit Review & Compliance			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u> Attached	
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 5	Dept. of Conservation & Recreation - Natural Heritage	Federal Budget Total:	\$50,000.00
Habitat Conservation/Locality Liaison			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u> Attached	
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 6	Virginia Institute of Marine Science - Center for Coastal Resources Management	Federal Budget Total:	\$42,000.00
Tidal Wetlands Management Technical Support			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u> Attached	
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 7	Virginia Institute of Marine Science	Federal Budget Total:	\$60,000.00
2016 Submerged Aquatic Vegetation Distribution and Abundance Survey			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 12/31/2017	Closeout: 3/31/2018

Task: 8	Dept. of Conservation & Recreation - Natural Heritage	Federal Budget Total:	\$27,000.00
Healthy Waters Program in the Coastal Zone			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 9	Dept. of Environmental Quality - Virginia Coastal Zone Management Program	Federal Budget Total:	\$300,000.00
Eastern Shore Land Acquisition			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Pending
Pending	Start: 10/1/2016	End: 9/30/2018	Closeout: 12/31/2018

306A documentation is being prepared for the Spady Tract in Northampton County. The owner has agreed to sell. However, he is seeking 10% above appraised value, so DCR will be submitting justification for the increased sale price. We hope to submit 306A documentation in May 2018.

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2016**

**Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?**

Task: 10	Virginia Institute of Marine Science	Federal Budget Total: \$160,249.00	
Seaside Restoration			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Period Open
Open	Start:	End:	Closeout:
	1/1/2017	6/30/2018	9/30/2018

Eelgrass Restoration: Eelgrass seeds were broadcast in 11 one acre plots all in Cobb Bay on Oct. 5, 2017, at a seed density of 100,000 seeds per acre. This was a new site that had recent eelgrass recruits. Seed plots were placed immediately adjacent to these new recruits. In addition, 3 sets of 3-1 meter square test plots of adult plants were placed near the seed plots to determine if additional areas would be adequate for seed enhancement in 2018. Test batches of seeds were planted and maintained in the VIMS greenhouse to assess goodness of seeds. Germination of these seeds were monitored through Jan., 2018.

Water Quality Monitoring: Dataflow cruises were successfully completed on October 11 and November 9, 2017. The November cruise was the last cruise conducted. No Cruises were conducted in 2018 due to the ending of the grant. South Bay and Spider Crab Continuous Monitoring (CMON) stations were fully operational until early to mid-January 2018 when an icing event occurred. The first sub-zero water temperatures were recorded on 12/31/17 with temperatures hovering plus and minus around 0° C. Datasondes continued telemetering real time data and starting on 1/4/18 water temperatures remained consistently below 0° C (approximately -1.8 °) until 1/11/2018. Attempts were made to retrieve/recover the datasondes, however all boat ramps and waterways were completely frozen over. Fortunately no losses or damage of the datasondes occurred. From observing the recorded data, it seems damage to the stations occurred between 1/5/18 and 1/6/18. It is believed they were totally incased in ice. Repairs to the stations and re-deployment of instruments were not able to be completed until 2/14/18. Therefore, no data were collected between 1/22/18 – 2/13/18. Data has been successfully collected and telemetered since 2/14/18 and current data can be viewed at: <https://stormcentral.waterlog.com/public/vims> through the [www.VECOS.org](http://www.VECOS.org) website. It is anticipated that these stations will be continued for several additional months pending the availability of other funding.

Scallop Restoration: During routine maintenance of the spring 2017 progeny in late October, high mortality was observed coincident with a high abundance of flatworms that we suspect were preying upon the seed scallops. After this maintenance, approximately 46,148 juvenile bay scallops were retained in cages in the South Bay grassbed over winter. These scallops will be cleaned, split into additional bags, with any excess being released directly into the grassbed in the coming spring. In addition, 3,519 adult bay scallops were retained in cages, 65 of these individuals being wild scallops collected during the annual population survey. No releases were made during this time period in order to retain enough appropriately aged bay scallops to spawn in the late spring and fall of 2018.

Final Products	% Completion	Anticipated Completion Date
Final Report	0%	Aug. 31, 2018

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 11	Virginia Commonwealth University	Federal Budget Total:	\$70,554.00
Coastal VEVA Data Synthesis Update and Coastal GEMS Application Update			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: 10/1/2016	End: 9/30/2018	Closeout: 12/31/2018

**Updated Coastal VEVA Geospatial Data**

Coastal VEVA partners met to review the updated (version 2) Coastal VEVA data (model ran in previous progress period) in order to validate the data, discuss factors driving changes from version 1, ensure readiness to make available and present version 2 to the public, and talk about next steps. All partners endorsed the updated data and agreed to retain the 30m resolution (instead of 100m used in previous version) in data shared with the public. VCU staff did create a 100m resolution version of the updated data and utilized it for percent change analysis between version 1 and version 2. Factors driving change in each updated partner component dataset (and consequently the Coastal VEVA synthesis) were documented.

**Coastal VEVA Educational Materials and Outreach Efforts**

VCU staff made the updated Coastal VEVA data available via a public map service and presented Coastal VEVA at the 2018 Virginia GeoCon (state GIS conference), including slides explaining the data and methodology, exploring changes between Coastal VEVA version 1 and version 2, reviewing intended uses of the data, and discussing outreach efforts. VCU staff is currently at work on an updated Coastal VEVA handout providing basic information about the data and a recorded demo describing VEVA and how it can be applied to conservation planning.

**Coastal GEMS Application Software and User Interface Updates & Coastal GEMS Landing Page**

VCU staff met to discuss layout and functionalities of the new Coastal GEMS landing page and the addition of multiple years of VBMP imagery to the Coastal GEMS basemap options. VCU staff shared a mockup of the landing page with CZM staff and VBMP imagery caching is currently underway.

**Coastal GEMS Map Stories**

VCU staff produced story maps (utilizing the VCU CES ArcGIS Online organizational account) that will be made available through the new Coastal GEMS landing page. Story maps completed during this progress period include a cascade story map describing the Coastal VEVA data, methodology, and intended use; a cascade story map detailing the restoration of eelgrass on VA's Eastern Shore featuring a time enabled interactive map of SAV planting sites and coverage; and a story map journal highlighting publicly accessible places in VA's coastal zone ranked in the highest category of the updated Coastal VEVA. An additional story map is currently being produced that will describe the results of the VA CZM funded study of economic impacts of conserved lands on VA's Eastern Shore.

Final Products	% Completion	Anticipated Completion Date
Updated Coastal VEVA Geospatial Data	100%	September 30, 2018
Coastal VEVA Educational Materials and Outreach Efforts	50%	September 30, 2018
Coastal GEMS Application Software and User Interface Updates	5%	September 30, 2018
Coastal GEMS Map Stories	80%	September 30, 2018
Coastal GEMS Landing Page	5%	September 30, 2018

Task: 12	Dept. of Game & Inland Fisheries	Federal Budget Total:	\$30,000.00
Lower Chickahominy Watershed Herpetological Inventory			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 13	College of William & Mary - Center for Conservation Biology	Federal Budget Total:	\$10,000.00
Assessing the status and distribution of colonial waterbirds in coastal Virginia (2018 breeding season)			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: 4/15/2018	End: 9/30/2018	Closeout: 12/31/2018

The contract for this project was signed on March 20, 2018. Therefore, there is no progress to be reported for this period.

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 14	George Washington Regional Commission	Federal Budget Total:	\$24,716.00
Cossey Park Native Plant Demonstration Garden			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: End: Closeout:		
	1/1/2018 9/30/2018 12/31/2018		

The contract for this project was signed on March 20, 2018. Therefore, there is no progress to be reported for this period.

Task: 41	Accomack-Northampton Planning District Commission	Federal Budget Total:	\$30,000.00
A-NPDC Technical Assistance Program			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 42	Crater Planning District Commission	Federal Budget Total:	\$30,000.00
Crater PDC Technical Assistance Program			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 43	Hampton Roads Planning District Commission	Federal Budget Total:	\$60,000.00
Hampton Roads Coastal Resources Management Technical Assistance Program			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 44	Middle Peninsula Planning District Commission	Federal Budget Total:	\$30,000.00
MPPDC Technical Assistance Program			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Task: 45	Northern Neck Planning District Commission	Federal Budget Total:	\$30,000.00
Northern Neck Planning District Commission Technical Assistance			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: End: Closeout:		
	10/1/2016 9/30/2017 12/31/2017		

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 46	Northern Virginia Regional Commission	Federal Budget Total:	\$30,000.00
NVRC Coastal Resources Technical Assistance Program			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 47	George Washington Regional Commission	Federal Budget Total:	\$30,000.00
George Washington Regional Commission Coastal Zone Management Assistance			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 48	Richmond Regional Planning District Commission	Federal Budget Total:	\$30,000.00
Richmond Regional Technical Assistance			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 49	Virginia Aquarium and Marine Science Center Foundation	Federal Budget Total:	\$31,000.00
Virginia Sea Turtle and Marine Mammal Stranding Network			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 1/1/2017	End: 12/31/2017	Closeout: 3/31/2018

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2016**

**Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?**

Task: 50	George Washington Regional Commission			Federal Budget Total:	\$31,593.00
Plant GW (Greater Rappahannock) Natives Campaign					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Project Period Open	
Open	Start:	End:	Closeout:		
	10/1/2016	6/30/2018	9/30/2018		

During this reporting period, GWRC continued to work with the native plants planning team to implement the campaign strategy developed with FY 15 CZM Technical Assistance funds. Planning team partners continued to distribute native plant guides and promote the campaign at various events throughout the region.

The native plants planning team also began working on a 306A grant application for a native plant demonstration garden at Cossey Park in the City of Fredericksburg. The planning team worked together with a volunteer landscape designer to design a plan for the demonstration garden. The planning team is now working with the City of Fredericksburg to develop an appropriate maintenance plan for the project and refine the garden design. GWRC also received funding from the Virginia Department of Forestry to purchase native trees to support the garden.

(Please note that subsequent to this reporting period it has been determined that the Cossey Park site in Fredericksburg is no longer a viable option. The native plants planning team are exploring suitable options.)

Final Products	% Completion	Anticipated Completion Date
George Washington Regional Plant Guide	100%	4/20/2017
Campaign Promotional and Marketing Materials	100%	7/1/2017
Plant GW Natives Campaign Website	100%	9/30/2017
Documentation of Native Plant Demo Site	25%	6/30/18
Plant GW Natives Final Report	25%	11/15/2018

Task: 51	Hampton Roads Planning District Commission			Federal Budget Total:	\$19,994.00
Regional Strategic Plan for Public Access in Hampton Roads					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report	
Closed	Start:	End:	Closeout:		
	10/1/2016	12/31/2017	6/30/2018		

- During this grant period, the HRPDC staff
- Completed the assessment of plans and policies
  - Completed the inventory of existing and planned public access locations
  - Identified and documented opportunities for funding public access projects
  - Finalized the geoapp and promotional materials to advertise the site to the public
  - Completed the final report documenting all products

Final Products	% Completion	Anticipated Completion Date
Assessment of Plans, Policies, and Locations for Public Access	100%	September 30, 2017
Identification of Opportunities for Funding of Public Access Projects	100%	December 31, 2017
Mapping of Existing and Planned Public Access Locations and Trails	100%	September 30, 2017
Trails and Public Access Sites Maps/Pamphlets	100%	December 31, 2017

Task: 52	Middle Peninsula Planning District Commission			Federal Budget Total:	\$40,000.00
Middle Peninsula Coastal Eco-Business Public & Private Operational Framework					
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Attached	
Closed	Start:	End:	Closeout:		
	10/1/2016	9/30/2017	12/31/2017		

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
**Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171**  
**for the period from #Name?**

Task: 53	Northern Virginia Regional Commission	Federal Budget Total:	\$40,000.00
Northern Virginia's Roadmap to Resilience			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 12/31/2017	Closeout: 3/31/2018

Task: 54	Northern Virginia Regional Commission	Federal Budget Total:	\$31,847.00
Northern Virginia Native Plant Social Marketing Campaign ("Plant NoVA Natives")			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: 10/1/2016	End: 9/30/2018	Closeout: 12/31/2018

**Product #1 Campaign Implementation and Community Leader Coordination**

During the reporting period, Northern Virginia Regional Commission (NVRC) staff coordinated and chaired six meetings of the steering committee and the second annual partners meeting to discuss ideas for the campaign for 2018. The outcome was a list of potential outreach projects that NVRC staff and the steering committee partners will discuss for potential implementation in an upcoming meeting.

**Product #2 Native Plants and Water Quality Workshop**

The Plant NOVA Natives Steering Committee has been working on coordinating speakers and themes for this workshop. It is currently proposed to be held in the Summer of 2018. The theme will be on "Innovations in Native Plant Use". Topics will include how native plant gardens can act as stepping stones in Conservation Corridors. The agenda will start with keynote speaker Karen Firehock of the Green Infrastructure Center. The group will then hear a talk on native plants in storm water ponds and basins, electrical transmission line plantings and on creative use of closed landfills. Emphasis will be on successful projects/models we can share regionally or state-wide. Other topics that might be included are how to create stepping stone gardens and expanding the local tree canopy.

**Product #3 Mid-Campaign Evaluation**

Data has been collected for the mid-campaign evaluation. Metrics that are being evaluated include; reach of ads on facebook and nextdoor.com, subscribers to newsletter, responses to survey, visits to website, sales of guide, number of educational talks provided by volunteers, number of online pledges to plant more natives, and feedback from volunteers.

**Product #4 Model Native Plant Comprehensive Plan Language**

Building on the resolution that was adopted during the previous reporting period, model native plant language is being developed for local jurisdictions to include in their comprehensive plans. This language is currently being drafted.

Final Products	% Completion	Anticipated Completion Date
Product #1 Campaign Implementation and Community Leader Coordination	90%	09/01/2018
Product #2 Native Plants and Water Quality Workshop	50%	09/01/2018
Product #3 Mid-Campaign Evaluation	85%	09/01/2018
Product #4 Model Native Plant Comprehensive Plan Language	75%	09/01/2018

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 81	Virginia Aquarium and Marine Science Center Foundation	Federal Budget Total:	\$45,000.00
Monitoring and Assessment of Marine Debris in Virginia's Coastal Zone			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: 10/1/2016	End: 9/30/2018	Closeout: 12/31/2018

Survey Coordinator, Christina Trapani, continues to work with a trained volunteer team of up to 20 persons. Volunteers contributed more than 185 hours in this reporting period and continue to provide significant and essential support for this marine debris monitoring and assessment project.

During this reporting period, beach surveys were conducted monthly from October 2017 through March 2018 at the four Virginia study sites. Coordinator Trapani led teams that completed 23 monthly surveys at the four sites: Fisherman Island National Wildlife Refuge (5), Chincoteague National Wildlife Refuge (6), Back Bay National Wildlife Refuge (6) and Grandview Nature Preserve (6). Inclement weather prevented one survey from being completed at Fisherman Island National Wildlife Refuge in late October 2017. Since initiation of the project in April 2014, a total of 320 surveys have been completed at the four index beaches utilized for study sites. Data from all survey sites has been collected monthly and photos (each standing stock transect, interesting debris items, typical debris items, and of the shoreline at the study site) have been taken per the protocol.

Clean Virginia Waterways (CVW), led by project partner Katie Register at Longwood University, continues to receive data and periodically updates NOAA's Marine Debris Monitoring and Assessment Project Field Survey Data Collection Site. To date, all data through December 2017 have been entered. Clean Virginia Waterways is uploading hundreds of these photos into NOAA's online database for marine debris monitoring. Thus far, 12,405 debris items have been recorded (9,237 debris items in the accumulation surveys, and 3,168 from the standing stock surveys). Bottle/container caps continue to be the #1 most frequently found item (N=838), followed by balloon debris (N=632) in the #2 spot.

Trapani and Register participated in the 6th International Marine Debris Conference in San Diego, CA (March 12-16, 2018). They made an oral presentation on this marine debris monitoring project. Register gave an overview of the Virginia Marine Debris Reduction Plan and how monitoring and establishing baselines are important to the plan. Trapani discussed the NOAA protocols, volunteer management and preliminary results. The abstract for the presentation along with project results will be included in the final report.

Final Products	% Completion	Anticipated Completion Date
Program Management	60%	September 30, 2018
Data Collection	80%	June 30, 2018
Data Management & Analysis	50%	September 30, 2018
Final Report	0%	October 31, 2018

Task: 92.01	Virginia Institute of Marine Science	Federal Budget Total:	\$120,000.00
Decision Support Tools for Managing Tidal Shoreline in Virginia			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 92.02	Virginia Institute of Marine Science	Federal Budget Total:	\$40,000.00
Living Shoreline Contractor Training and Shoreline Management Plan Public Information Meetings			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 93.01	Richmond Regional Planning District Commission	Federal Budget Total:	\$30,000.00
Cumulative and Secondary Impacts: Leveraging Economic Benefits of the Natural Resources of the Lower Chickahominy			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Task: 93.02	Dept. of Conservation & Recreation - Natural Heritage	Federal Budget Total:	\$95,000.00
Inventory of Important Biological Resources in the Chickahominy Watershed			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: 10/1/2016	End: 6/30/2018	Closeout: 9/30/2018

Towards Product #1, Division of Natural Heritage (DNH) Ecologists, Botanists, and Zoologists have completed inventory of Natural Heritage Resource occurrences known from the study area. This includes visiting 2 animal, 47 plants, and 15 communities. During these surveys, sixteen of the 39 occurrences were relocated and five new occurrences (2 plants and 3 communities) were found and complete geo-referenced occurrence data were recorded. Field work concluded in late October 2017 and DCR-NH is working on entering this information into the DCR – Natural Heritage data system known as Biotics.

Towards Product # 2, Virginia Commonwealth University field staff have completed sampling all streams. Access to many streams was impossible due to the large number of impoundments and large tidal streams in the lower Chickahominy. To overcome this difficulty, conducted boat electrofishing sites on several Chickahominy tributaries.

Final Products	% Completion	Anticipated Completion Date
Data on historic or near-historic natural heritage resources	80%	5/31/2018
Data on stream reaches	100%	
Report - Inventory of Important Biological Resources in the Chick. Watershed	100%	
Final report-Inven. Of Imp. Biological Resources in the Chick. Watershed	0%	7/1/2018

Task: 93.03	Middle Peninsula Planning District Commission	Federal Budget Total:	\$50,000.00
Pushing the Envelope - Introducing Working Waterfront Legislation and Expanding the Working Waterfront Inventory			
<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Attached
Closed	Start: 10/1/2016	End: 9/30/2017	Closeout: 12/31/2017

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
**Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171**  
**for the period from #Name?**

Task: 94.01	Virginia Commonwealth University	Federal Budget Total: \$60,000.00	
Virginia Ocean Plan			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Period Open
Open	Start:	End:	Closeout:
	10/1/2016	6/30/2018	9/30/2018

For the Project Reporting period, the Environmental Scientist/Analyst with the Virginia Commonwealth University, Center for Environmental Studies in the Department of Life Sciences continued to serve as the Ocean Planning Stakeholder Engagement (OPSE) Coordinator to the VA Coastal Zone Management Program at the VA DEQ. During the reporting period, the OPSE Coordinator continued to work with the commercial fishing industry in support of the VA efforts to advance the Mid Atlantic Ocean Plan. These opportunities continue to strengthen the relationship between the offshore commercial fishing industry and the VA Coastal Zone Management Program.

During the reporting period, the OPSE Coordinator continued to communicate with the VA Marine Resources Commission to obtain fisheries data relevant to the black sea bass (*Centropristis striata*) and summer flounder (*Paralichthys dentatus*) catch location to develop data products consistent with the Mid Atlantic Regional Council on the Ocean (MARCO) Marine Life Data Analysis Team (MDAT) to display species shifts related to changes in temperature or climate. The VA Marine Resources Commission indicated those catch and landings data are available to the mid-1990s, and after significant communication with the MRC, data delivered did not meet the request only providing, year, species and harvest gear. Further inquiries with MRC revealed that Lat/long was not possible and only Water Area could be provided. The final request for relevant data from MRC for year, species, gear and water area, was met with confidentiality issues. Therefore, those data, as they relate to the waters areas identified (ocean, seaside eastern shore and misc seaside (system 1 - 3)), are not available to make conclusions about species shift due to changes in climate or other factors.

The OPSE Coordinator continued to research electromagnetic field impacts on fisheries including threatened and endangered fishes such as the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) for the purpose of developing a communication piece for the industry. VCU research was conducted by an intern to evaluate the broader range of boney fishes, cartilaginous fishes and shellfish. The focus of that research was to inform the development of the FAQ document that will translate conclusions from the research conducted at VCU on EMF impacts on sturgeon. That research was expanded to include black sea bass, summer flounder, tautog, and whelk (smooth and knobbed). Chesapeake Environmental Communications (rebranded: Greenfin Communications) has been developing the layout and design while the VCU intern has been conducting detailed research and policy brief documents. Intermediary conclusions indicate that limited research is available to make informed conclusions regarding the impacts of either electro or magnetic impacts on boney fishes. The majority of available research has been conducted on those species that either utilize magnetic navigation for migration or electric field detection for feeding behavior. Some research has been conducted on shellfish but with a focus on conch or lobster. Challenges continue to be the lack of conclusion to inform anecdotal evidence of boney fishes impacts.

The OPSE Coordinator, as a member of the Governor's Task Force on Offshore Renewable Energy, joined the Task Force meeting held in Virginia Beach on December 7. Orsted, previously known as Dong Energy, was present as Dominion Energy's developer of the VOWTAP area and reporting on progress made toward a 2020 deployment.

The OPSE Coordinator joined various calls including the ERA Workgroup, and MARCO MB calls.

Final Products	% Completion	Anticipated Completion Date
Report on Ocean Stakeholder Engagement and addressing VA's Ocean users' needs for the Healthy Ocean Ecosystem (HOE) Goa	85%	June, 2018
Report on Ocean Stakeholder Engagement and addressing VA's Ocean users' needs for the Sustainable Ocean Uses Goa	85%	June, 2018
Synthesis of scientific literature on EMF impacts on fisheries and threatened and endangered species	85%	June, 2018

Task: 94.02	TBD	Federal Budget Total: \$15,710.00	
Virginia Ocean Plan: Data Collection & Synthesis			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Funds Transferred Out of Task
Proposed	Start:	End:	Closeout:
	10/1/2016	12/31/2017	3/31/2018

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 94.03 Longwood University	Federal Budget Total: \$72,582.00
Virginia Marine Debris Reduction Plan Refinement and Implementation of Balloon Reduction Social Marketing Campaign	
<u>Project status:</u>	<u>Current approved</u> <span style="float: right;"><u>Final deliverable(s) status:</u> Submit w/next Semiannual Report</span>
Closeout	Start:      End:      Closeout:
	10/1/2016   3/31/2018   6/30/2018

Clean Virginia Waterways (CVW), its contractors, and partners along with VA CZM Program staff worked on the following activities this period:

Product #1. Refinement and Continued Implementation of the VA Marine Debris Reduction Plan  
CVW, its contractors, and CZM staff continued collaborations with the Mid-Atlantic RPB marine debris work group about regional approaches to prevent or remove marine debris. CVW & CZM staff also contributed to a grant proposal to expand the Joyful Send-off community-based social marketing campaign into mid-Atlantic states. CVW and CZM staff contributed to the Virginia Marine Debris Emergency Response Guide that was written by the NOAA Marine Debris Program. This report can be downloaded from <https://marinedebris.noaa.gov/reports/virginia-marine-debris-emergency-response-guide>

A platform for sharing marine debris projects was a priority of the VA Marine Debris Reduction Plan, so CVW and CZM Program staff contributed to an inventory of regional marine debris projects, to be used in a collaboration portal that has been developed by the NOAA Marine Debris Program. The portal will include summary information on marine debris prevention and mitigation programs underway in Virginia and other mid-Atlantic states.

Product #2. Balloon Release Reduction Campaign: Complete Implementation and Evaluation. A full report was completed and submitted that sums up this campaign's implementation and evaluation. The report can be downloaded from [www.longwood.edu/cleanva/publications.html](http://www.longwood.edu/cleanva/publications.html)

Product #3. Balloon Debris Monitoring Report. Researchers Christina Trapani and Kathy O'Hara along with CVW staff have been preparing a report of the balloon monitoring they have done on several of Virginia's barrier islands as part of this and other grants. The report will be submitted to the VA CZM Program before May 15, 2018.

Product #4. Reducing Marine Debris Through a Mid-Atlantic Social Marketing Workshop. Social Marketing Workshop: Completed prior to this grant period

Final Products	% Completion	Anticipated Completion Date
Product #1: Refinement and Continued Implementation of the VA Marine Debris Reduction Plan	100%	Completed
Product #2: Balloon Release Reduction Campaign: Complete Implementation and Evaluation	100%	Completed
Product #3: Balloon Debris Monitoring Report	100%	Completed
Product #4: Reducing Marine Debris Through a Mid-Atlantic Social Marketing Workshop	100%	Completed

Year: 2016

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA16NOS4190171  
for the period from #Name?

Task: 94.04 Dept. of Game & Inland Fisheries	Federal Budget Total: \$32,290.00
Sea Turtles and Fishing Piers - Mitigating Hook-and-line Interactions	
<u>Project status:</u>	<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Closeout	Current approved
Start:	End:
10/1/2016	3/31/2018
Closeout:	6/30/2018

In 2017, Virginia Aquarium Stranding Response personnel (VAQS) randomly surveyed 947 pier anglers during the fishing season. Combined with previous years, a total of 2,036 surveys have been conducted since 2014 as part of the VAQS Pier Partner Program. In addition to the pier angler surveys collected, angler interviews were attempted with all anglers (primarily pier anglers, but also those fishing from shore, a boat, etc.) who reported a hooked sea turtle, from 2014-2017. Of the 190 interactions, we were able to interview the individual who actually caught the turtle for 130 (68%) of the interactions. First, gear type was compared across the two groups. J-hooks and circle hooks were the primary gear used at fishing piers, reportedly used by 81% of anglers surveyed. J-hooks were slightly less frequent among hooked turtles, noted in 71% of the angler interviews, while they were reported as being used by 75% of anglers at fishing piers. This difference however was not significant. Circle hooks were the second most common hook in both groups, with slightly more hooked turtles interacting with circle hooks (20%) than reported in angler surveys (16%), this difference was not significant. Squid was the most commonly used bait in both groups, with 46% of hooked turtles reportedly caught with squid as bait, while 29% of anglers reported using squid as bait during pier surveys, suggesting a possible preference for squid by turtles. Cut fish was the second most common bait in both groups, with slightly more hooked turtles interacting with cut fish (23%) than reported in angler surveys. Also notable, worms and artificial bait were reported more frequently in surveys than in hooked turtle interactions. Worms were used more often by surveyed anglers (17%) than seen among hooked turtle interactions (8%). Artificial bait was used by 10% of anglers surveyed, but no interactions between turtles and artificial bait were recorded in the angler interview data. Twenty-eight live sea turtles were scanned using metal detectors multiple times by separate scanners which yielded in a total of 188 scans. Following scanning, radiographs were taken to confirm hook presence & location. Eighteen turtles had ingested hooks, while the remaining 10 were free of hooks (presumably removed by the angler). During the 118 trials in which a hook was present, the Adams Electronics (AE) detector resulted in 89% correct detections, and the Garrett Pro Pointer (PP) in 98%. During the 70 trials with no hook present, the AE resulted in 89% correct detections and the PP in 86%. Both units had drawbacks, but the ultra-sensitivity of the AE resulted in false positive signals during 49% of the trials compared with 37% using the PP. These results suggest that metal detectors may be effective tools for hooked turtle response with proper technique. Currently we are testing the limits of the most effective type of scanner, the Garrett Por Pointer, to determine minimum hook size and maximum turtle size for effective scanner use.

Final Products	% Completion	Anticipated Completion Date
Pier Fisher Surveys	100%	
Adapted response & rehab protocols for hooked turtles at fishing piers	100%	
Data Analysis & Final Report with Management Recommendations	75%	May 15, 2018