

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 1 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Coastal Program Management & Quick Grants

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Attached
Open	Start:	End:	Closeout:		
	10/1/2006	3/31/2008	6/30/2008		

Please see attached "Program Administration Progress Report."

Task: 1.01 Virginia Institute of Marine Science - Chesapeake Bay National Estuarine Research Reserve System  
Coastal Management Support

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Progress Reports Constitute Final Product
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

Task: 1.02 Virginia Commonwealth University  
Coastal Management GIS Support

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Canceled
Cancelled	Start:	End:	Closeout:		
	7/1/2007	9/30/2007	12/31/2007		

VCU was not able to advertise and hire the position during the July - September quarter. This position will be hired in fall of 2008 through FY 2007 Task 1.02

Task: 1.03 Virginia Institute of Marine Science  
Working Waterways & Waterfronts Symposium Support

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	4/1/2007	9/30/2007	12/31/2007		

The Working Waterways and Waterfronts Symposium organized by the Virginia Sea Grant Program at the Virginia Institute of Marine Science was held May 9-11, 2007 in Norfolk, Virginia. 180 attendees from around the country participated in the program which included 34 case studies from local, state and regional organizations related to public and private efforts to preserve working waterfronts. In addition to the presentation of case studies, the conference served to organize a coalition working to share and initiate efforts to preserve access for water-dependent industries and stakeholders. A Conference C.D. was completed and provided registrants containing the presentations, conference summary and strategic planning document developed during the final days facilitated discussions. The conference website [www.wateraccess2007.com](http://www.wateraccess2007.com) continues to serve as a clearing house for water access related information.

Final Products	% Completion
Report CD	100

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Task: 2 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Virginia CZM Program Outreach

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start:      End:      Closeout:		
	10/1/2006   12/31/2007   3/31/2008		

The Outreach Coordinator completed design, and coordinated production and distribution, of the Virginia Coastal Zone Management Magazine, Spring/Summer 2007 – [www.deq.virginia.gov/coastal/magazine.html](http://www.deq.virginia.gov/coastal/magazine.html). The magazine is available on-line in both a PDF and HTML format (during this period HTML formatted pages were created to improve accessibility of articles on the website and to enable links directly to articles). Of the 3500 copies of the magazine printed, just over 1770 copies are mailed to VA Delegates and Senators, VA's congressional delegation, VA CZM agency directors/boards/commissions, Tidewater local governments (elected/appointed officials, SWCD Chairman, PDC and planning directors, planning commission chairmen, wetlands board chairmen), Coastal Policy Team members, federal government staff (NOAA and EPA), other state CZM program managers, and conservation and education contacts. Approximately 200 copies are provided to the Office of EE, DEQ's regional offices, and to partner agencies and PDCs for distribution to visiting public. Remaining copies are distributed during public events. Production of the Fall/Winter 2007 issue was initiated, however due to staffing shortages and subsequent workload restraints in the VA CZM Office, this issue was pulled from production. A Spring/Summer 2008 issue is planned.

The OC maintained the Virginia CZM websites, including sub-sites for the Seaside Heritage Program, Seaside Water Trail and Coastal GEMS. Total hits or views during this period were 2,396,885 (number of times web files were requested from the server including web pages, PDFs etc. – this number does not reflect unique visitors – just indicates activity of site). The VA CZM web was redesigned to improve navigation and content organization. New pages were added, e.g. Living Shorelines – [www.deq.virginia.gov/coastal/livingshore.html](http://www.deq.virginia.gov/coastal/livingshore.html).

The OC coordinated planning and logistics for the 2007 Virginia Coastal Zone Partners Workshop, to be held December 6 & 7, 2007 in Portsmouth – [www.deq.virginia.gov/coastal/workshop.html](http://www.deq.virginia.gov/coastal/workshop.html).

The OC produced signage and artwork for the Seaside Heritage Program, including a new reef restoration site sign, drafts of panels for a VSHP educational kiosk, and an informational and acknowledgment sign for floating docks.

The OC facilitated exhibits, including these large regional and state events - Environment Virginia Conference (April, over 800 attendees), Virginia Beach Earth Day (May; over 1,000 visitors), Virginia GIS Conference (Sept. – over 100 attendees). And distributed materials through other venues, e.g. copies of Seaside Water Trail brochure to Virginia Welcome Centers.

The OC participated in coordinative meetings and efforts related to the Living Shorelines initiative (production of landowners guide) and the Chesapeake Club campaign (production of additional campaign collateral); and provided assistance to grantees related to production of new educational materials, e.g. hawk educational models and maps for waterman outlining new oyster rotational harvest boundaries.

The OC continued efforts to cultivate partners, e.g. participated in Hampton Roads Alliance for Environmental Education annual workshop, met with the Science Museum of Virginia on possible new exhibits and programs, and initiated meeting of DEQ Environmental communicators and educators to share information and look for overlap in goals.

Magazine --- 50% --- 2nd issue - Fall/Winter 2007 cancelled (spring/Summer 2008 next planned issue)

Websites --- 100%

Exhibits/Events --- 100%

Planning conducted during FY 2006 for Virginia CZ Partners Workshop, December 6 & 7

Media --- 100%

Task: 3 Dept. of Environmental Quality - Environmental Impact Review  
Environmental Impact Review & Federal Consistency

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:      End:      Closeout:		
	10/1/2006   12/31/2007   3/31/2008		

During the second half of FY 2006, the Office of Environmental Impact Review/Federal Consistency (OEIR) reviewed 90 development projects and management plans for consistency with the Virginia CZM Program. This represents 72% of the total amount of projects reviewed during this period. Major state projects accounted for 30 projects, 43 were federal actions, and 17 were federally funded projects (predominantly local government projects). The 43 federal projects included 39 direct federal actions and 4 indirect federal actions (licenses and approvals). Several reviews completed were related to Base Realignment and Closure Actions mandated in 2005. Federal consistency staff also attended several scoping meetings associated with BRAC NEPA and consistency document preparation. These projects included BRAC actions at Fort Belvoir, Fort Lee, Fort A.P. Hill and other projects associated with BRAC. In the Commonwealth's response to the Draft EIS for Fort Belvoir, which included a federal consistency determination, we objected to the federal consistency determination on account of insufficient information and assurances regarding mitigation of impacts on air quality, under the Air Pollution Control enforceable policy of the Virginia CZM Program. These concerns were addressed by the Army and the objection was lifted with conditions. There will be numerous other projects in the near future associated with BRAC. For example, a number of units, agencies, and activities would be moved to Fort Belvoir from other locations, resulting in 20 construction projects and creating approximately 73 acres of impervious surfaces. The OEIR continues to maintain a website for Federal Consistency. The site can be accessed through DEQ's main webpage or found at <http://www.deq.virginia.gov/eir>. This webpage includes the Commonwealth's Federal Consistency information package, a project list with project descriptions, and links to the DEQ main webpage for public notices of Federal consistency reviews. The webpage is updated weekly.

The senior EIR Planner, Charles Ellis left his position on August 24, 2007. His replacement, Anne Pinion, began work on October 10, 2007.

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Task: 4 Dept. of Environmental Quality - Environmental Education  
Environmental Education

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

The Environmental Education Coordinator failed to submit a progress report.

Task: 5 Dept. of Environmental Quality - Chesapeake Bay Program  
Water Quality Improvement Fund Match

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:	End:	Closeout:		
	10/1/2006	3/31/2008	6/30/2008		

In FY 2005-2007 matching funds for Virginia's CZM awards are being provided in part through DEQ's Water Quality Improvement Fund grants (WQIF Grant: #440-S-07-10) to Arlington County for their multi-million dollar sewage treatment plant upgrades. Some elements from Design Package (CP #2) No.2. will be used as match for the FY 2006 award and different elements will be used for the FY 2007 award; however the specific elements that will be used as match for the FY 2006 award have still not been determined, so there is no progress to report at this time.

Task: 6 Virginia Marine Resources Commission  
Permit Review and Compliance

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

During the reporting period, VMRC received a total of 1435 joint permit applications. Actions were completed on 1084 of the projects that were received. During the reporting period 201 compliance inspections were conducted for previously issued permits. Compliance inspections for the random sample of 130 projects permitted by local wetlands boards were also completed.

Final Products	% Completion	Anticipated Completion Date
Collect permit compliance data for projects permitted by VMRC	Ongoing	
Collect permit compliance data for wetland projects permitted in 2004	100%	
Compile data for entry into data base	100%	November 15, 2007

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Task: 7 Dept. of Conservation & Recreation - Natural Heritage  
Habitat Conservation/ Locality Liaison

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

628 projects were reviewed for impacts to natural heritage resources in the coastal zone (39% of the projects reviewed state-wide).

The Locality Liaison has given 5 presentations to localities and other conservation partners, including Lancaster County, Prince George County, Spotsylvania County, Virginia Beach, DCR - Dept. of Chesapeake Bay Local Assistance, and Dept. of Soil and Water Conservation-James Watershed Office. Presentations included an overview of DCR's Natural Heritage Program, Locality Assistance Program, Natural Heritage Data Explorer (NHDE), Virginia Conservation Lands Needs Assessment (VCLNA) and Land Conservation Data Explorer (LCDE).

The Locality Liaison was appointed to the Hanover County Rural Legacy Committee, which is made up of local, state and federal government staff, and local citizens. The Committee is charged with identifying implementation strategies for preserving the conservation area designated by the County's comprehensive plan, including developing a PDR program. The Liaison has been attending the monthly meetings on an as needed basis.

A Locality Liaison web page was developed to allow localities and other conservation partners to access information about the Locality Assistance Program electronically. ([http://www.dcr.virginia.gov/natural\\_heritage/localityliaison.shtml](http://www.dcr.virginia.gov/natural_heritage/localityliaison.shtml))

The Wetland Catalog is being promoted during project review for mitigation as opportunities arise. The Locality Liaison has also developed a web page for this tool and is working with data management staff to incorporate the data and site maps. ([http://www.dcr.virginia.gov/natural\\_heritage/wetrestcat.shtml](http://www.dcr.virginia.gov/natural_heritage/wetrestcat.shtml))

DNH staff conducted hands-on training sessions for the NH Data Explorer website on a monthly basis. These training sessions are open to any organization. Additionally training sessions were conducted for Prince William County, DCR University, DCR-DSP Resource Managers, NRCS Technical Committee, VA Dept of Game and Inland Fisheries and VA Planners Association Conference.

Phase 2 of the NHDE Website is in development (85% complete) and is expected to go live mid-November 2007. User interface enhancements have been agreed upon and signed off on. Database enhancements are in development, including geodatabase schema model and application management for NHDE subscriptions. Functionality specifications have been detailed and are in development, including enhancements to report generation and tool functionality based on database model modifications, and capture of polygon boundary information submitted as part of project review.

The Liaison attended the "Sea Level Rise & Other Coastal Hazards" workshop at VIMS on 5/11/07. Two project review assistants attended "Mapping & Regulating Wetlands with Remote Sensing & GIS" presentation hosted by DEQ on 4/17/07.

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Task: 8 Virginia Institute of Marine Science - Center for Coastal Resources Management			
Tidal Wetlands Management Technical Support			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> In Mailed Attachments
Closeout	Start:	End:	Closeout:
	10/1/2006	9/30/2007	12/31/2007

**CCRM Advisory Activity:**

	Information Requests	Add'l Field Visits	Meetings	Advisory Reports	Website Hits
April	177	14	26	61	565
May	221	21	31	71	464
June	219	19	25	64	478
July	173	11	16	51	432
August	183	15	31	57	366
September	146	16	33	55	348

**Wetlands Reports:**

The Center for Coastal Resources Management posts all Joint Permit Applications with VRMC assigned numbers in a searchable database on their website. To view the original shoreline permit applications, as well as the associated VIMS report, additional information, and photos for every application reviewed by the Wetlands Program staff please see: <http://www.vims.edu/ccrm/wetlands/newpermits.html>

**Publications:**

Rivers and Coast, Winter 2006, Vol. 1, No. 2, "Living Shorelines"  
<http://ccrm.vims.edu/rivers&coast/rivers&coastfullcolor112906.pdf>  
 Virginia Wetlands Report, Spring 2007, Volume 22, Issue 1, "Living on the Edge"  
<http://ccrm.vims.edu/vwr/vwr-spring07.pdf>

**Final Products**

Virginia Wetlands Report, Fall 2007, Volume 22, Issue 2, "The Big Picture: Managing Wetlands from a Shoreline Perspective"  
[http://ccrm.vims.edu/vwr/vwr\\_2007\\_fall.pdf](http://ccrm.vims.edu/vwr/vwr_2007_fall.pdf)

**Workshops:**

The CCRM staff put on a "Sea Level Rise & Other Coastal Hazards: The Risks of Coastal Living" workshop for 90 people on May 11th, 2007 at VIMS. The workshop presentations can be viewed online at:  
[http://ccrm.vims.edu/seminarpresentations/spring\\_2007/spring\\_2007\\_presentations.html](http://ccrm.vims.edu/seminarpresentations/spring_2007/spring_2007_presentations.html)

Final Products	% Completion
Permit Review	100%
Wetlands Newsletter	100%
Tidal Wetlands Database	100%

Task: 9 Virginia Institute of Marine Science			
2006 Submerged Aquatic Vegetation Distribution and Abundance Survey of Virginia's Chesapeake Bay and its Tributaries and the Seaside			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Open	Start:	End:	Closeout:
	10/1/2006	12/31/2007	3/31/2008

**2006 SURVEY**

Project Benchmarks and Deliverables	% Completion	Anticipated Completion Date
2006 SAV Monitoring		
1. Acquisition of aerial photography	100	Completed
2. Flightlines ortho-rectified	100	Completed
3. Quadrangles mosaiced	100	Completed
4. Quadrangles Photointerpreted/Digitized	100	Completed
5. Release of 2006 SAV data to EPA	100	Completed
6. Addition of all field survey data	100	Completed
7. 2006 Distribution Report – Draft	100	Completed
8. 2006 Distribution Report – Final	0	Dec. 31, 2007

The 2006 SAV monitoring program is proceeding on schedule. We have released the 2006 SAV data and have completed the draft final report.

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Task: 10.01 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Seaside Heritage Program - Year 5. Coordination and Management Plan

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start:      End:      Closeout:		
	10/1/2006    3/31/2008    6/30/2008		

About \$16,000 remains in this task. This grant has been extended through March 2008 to allow time to determine whether the funds can be used for a "sting operation" to catch seaside oyster thieves. A proposal for reprogramming will hopefully be submitted to grantsonline soon. If that does not work, the funds will be used for additional work by UVA on the Seaside Management Plan or transferred to Task 10.20 for ecotourism/interpretive signage improvements.

Task: 10.02 College of William & Mary - Center for Conservation Biology  
Potential Impact of Common Reed Expansion on Threatened High-marsh Bird Communities on the Seaside Phase III - Red Knot Stopover E

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:      End:      Closeout:		
	10/1/2006    9/30/2007    12/31/2007		

Product #1: Impact Assessment of Common Reed expansion on threatened high-marsh wintering bird communities along the seaside of Virginia's Eastern Shore. Select patches of high marsh and low marsh were surveyed between 6 December 2006 and 1 March 2007. A total of 272 line transect surveys were conducted in 22 survey days within the 99 high and low marsh patches. All patches were surveyed between 2 and 3 times per patch. All patches accessed by boat were surveyed between 2.5 hours before mean high tide and 2.5 hours after mean high tide. All other patches that were accessible from land were surveyed throughout the day. A total of 1364 birds were detected on transect. The most common birds detected were: Myrtle warbler (353), Sharp-tailed Sparrow (166), and American Robin (164), these three species accounted for half of all observations. Sharp-tailed sparrows were most commonly detected within *Spartina alterniflora*, and *Baccharis halimifolia*, with 84.9% of detections occurring within these habitats. Only 9 (5.4%) Sharp-tailed sparrow observations occurred within *Phragmites* habitat. These results are similar to breeding season results where we found that while *Phragmites* is not typically used, the presence of *Phragmites* within the marsh patch does not exclude Sharp-tailed sparrows and other high marsh avian species. Analysis of bird data and vegetation data is continuing.

Product #2: GIS Data Layers for threatened high-marsh wintering bird communities. GIS layers of transects, surveys, and additional vegetation mapping have been generated. Bird survey data has been associated with the transect layer and analysis is continuing.

Product #3: Database of Red Knot observations. Islands were surveyed for Red Knots between 27 April 2007 and 18 June 2007. 31 days of surveys (61 island transects) were conducted on Parramore, Hogg, Cobb, Ship Shoal, Wreck, Myrtle, and Smith Island. In addition to our surveys we acquired resight observations from Fisherman Island National Wildlife Refuge. A total of 578 observations of banded birds were made during surveys, of these observations, 319 were "complete" meaning the full combination of bands, flags, and alphanumeric codes were recorded. All observations have been entered into a database, and we are awaiting original banding data to determine when and where resighted bird were originally banded

Final Products	% Completion	Anticipated Completion Date
Impact Assessment	80	11/15/2007
GIS Data Layer	90	11/15/2007
Red Knot Data	80	11/15/2007

Task: 10.03 Virginia Institute of Marine Science  
Restoration of Seagrasses in Virginia's Seaside Bays - Year 5

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:      End:      Closeout:		
	10/1/2006    12/31/2007    3/31/2008		

MONITOR SUCCESS OF ESTABLISHED SEAGRASS AREAS – Eelgrass in large acre plots in Hog Island Bay were qualitatively and quantitatively examined in spring and summer, 2007, and appeared healthy and robust.

COLLECT SEEDS FOR 2007 RESTORATION EFFORTS – Seeds were successfully collected from sites in the York River, Mobjack Bay and South Bay.

COLLECT WATER QUALITY WITH DATAFLOW IN AREAS WITH EXISTING EELGRASS AND ADJACENT UNVEGETATED AREAS – water quality collection for year 5 was initiated in April, 2007, and will continue through November 2007. This includes the deployment of a continuously recording sensor at South Bay. The water quality track now includes all four bays where eelgrass is successfully growing.

LARGE SCALE SEAGRASS RESTORATION – Will be conducted during fall, 2007, in Hog Island Bay

MAPPING OF SEAGRASS FROM AERIAL PHOTOGRAPHS – VIMS was successful in collecting both high level (12,000 ft) black and white vertical photography, as well as low level (2000 ft) color vertical photography in May, 2007.

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Task: 10.04 Virginia Eastern Shorekeeper  
Virginia Eastern Shorekeeper

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

The Virginia Eastern Shorekeeper provided year-round on the water monitoring of important natural resources on the seaside of the Eastern Shore of Virginia. Focused monitoring of impacts to oyster reef sanctuaries, restored eelgrass beds and nesting bird colonies on the barrier islands shows that humans, though present are a relatively small impact to these protected recourse areas. Largely due to the land protection efforts of The Nature Conservancy and state and federal agencies. The stewardship of these resources has been further enhanced by the partnership created and supported by the Virginia CZM Program.

Shorekeeper patrols document the improved stewardship by private, state and federal resource managers. The report 2006 SHOREKEEPER PATROL REPORT documents these improved activities and the positive effects. Much of the improvement has been in public awareness. Information, particularly signage near sensitive resources, has greatly improved.

This year the Shorekeeper began using a remote time-lapse camera to validate human impacts on restored oyster beds and nesting bird colonies. Over 1500 digital images indicate that the public is generally respecting the posted areas at the three sites monitored. The islands are still being used by visitors, even the islands close to the public, but the nesting bird colonies seem to be disturbed less.

The hard calm aquaculture industry on the Eastern Shore continues to evolve and improve its practices. The Shorekeeper has been tracking these improvements and the implementation of a number of Best Management Practices aimed at improving the environmental health of the seaside waters. Shorekeeper efforts in reducing the amount of discarded netting used by clam aquaculture continue to show success. The growth, changes in local practices, reduction in discarded netting and adoption of BMP's is documented in the report titled; HARD CLAM AQUACULTURE – THE RESPONSE TO ENVIRONMENTAL CONCERNS ON THE EASTERN SHORE OF VIRGINIA. The report attempts to capture the largely unregulated efforts clam aquaculture is making in protecting an improving the tidal resources they require.

Volunteer Creekwatcher's that have been trained by the Shorekeeper are adding an additional layer of monitoring and supporters for the seaside waters. Many of our Creekwatcher's are participating with patrols, shoreline observations and engaging in the public process with a better understanding of coastal processes. The Shorekeeper has also been an instructor in the newly formed Virginia Master Naturalist chapter on the Eastern Shore. This state sponsored non-advocacy program provides 40 hours of training to volunteers who in turn provide 40 hours of community service supporting natural resource protection annually.

Final Products	% Completion	Anticipated Completion Date
HARD CLAM AQUACULTURE –		
THE RESPONSE TO ENVIRONMENTAL CONCERNS	80	11/30/07
2006 SHOREKEEPER PATROL REPORT	90	11/15/07
CAMPING PLATFORM FEASIBILITY	90	11/15/07

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Task: 10.05 Dept. of Conservation & Recreation - Natural Heritage

Management and Education to Control Phragmites on the Seaside of Virginia's Eastern Shore

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:	End:	Closeout:		
	10/1/2006	12/31/2007	3/31/2008		

During the April to September time period of Year 5, VDCR-Natural Heritage staff made good progress toward completing Seaside Heritage Program deliverables. All five of the project deliverables have either been completed or are nearing completion. However, due to delays with billing for subcontracted work, the "Phragmites Brochures for Landowners" product could not be completed on time and a project extension to 12/31/2007 has been requested. Therefore, a Final Report for Task 10.05 will be forthcoming on or before 2/15/08. A summary of progress on all products follows:

- a) Phragmites control workshops. Four landowner workshops were conducted during August 2007. Two workshops were held in Accomack County at the Virginia Institute of Marine Science laboratory in Wachapreague and two were held in Northampton County at the University of Virginia's ABC Research Center in Oyster. A total of 42 landowners attended these four workshops.
- b) Phragmites control brochures. Text, photographs, and layout were completed for a new full-color brochure that describes the reasons for controlling Phragmites and covers the basics of how landowners can go about controlling this invasive species on their property. A longer-than anticipated printing timetable will prevent production and billing for the final brochure by the November project close-out date.
- c) Post-treatment monitoring. Aerial (helicopter) GPS mapping/monitoring was completed for Parramore Island in order to assess effectiveness of previous SHP-funded control treatments. Ground monitoring was also completed for treated Phragmites patches on Parramore Island treated during Year 4 to evaluate native-plant recolonization of areas treated with herbicide. A total of 25 permanent marked plots were installed and native species cover and diversity was documented.
- d) 2007 aerial control treatments. A total of 150 acres of Phragmites was treated during the period September 12-14, 2007 using aerial application of the herbicide Habitat. Treatments were conducted at NASA's Wallops Island Launch Facility on the Seaside of Accomack County.
- e) Phragmites management plan. A draft Phragmites management plan is nearing completion for the Eastern Shore Seaside. This plan lays the groundwork for dealing with the on-going Phragmites management challenge in this part of Virginia and synthesizes information developed over the complete history of the SHP to date.

Task: 10.06 Virginia Museum of Natural History

Avian Habitat Restoration on the Virginia Barrier Islands: Test of a Non-Lethal Approach to Predation Management

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start:	End:	Closeout:		
	1/1/2007	3/31/2008	6/30/2008		

VMNH personnel have continued to analyze and interpret data from 2005 and 2006. However, health problems (of VMNH personnel and their immediate family) prevented the planning and implementation necessary to conduct the field trial as described in the original proposal.

The net result of all these circumstances is that the tasks outlined for the April-September 2007 period in the current contract have not been completed. However this project is extended through March 2008 and will need another 3 month extension following that. These extensions will allow the spring field work to be completed so that we can complete the final mammalian predator effort under the Seaside Heritage Program.

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Task: 10.07 Virginia Institute of Marine Science

Population Assessment of Eastern Oysters (*Crassostrea virginica*) in the Seaside Coastal Bays.

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:	End:	Closeout:		
	1/1/2007	12/31/2007	3/31/2008		

The objective of this work is to obtain reliable estimates of the distribution and abundance of oysters on the seaside of the Eastern Shore of Virginia. The research approach begins by overlaying National Wetlands Inventory (NWI) maps for the region onto 2002 1-m aerial imagery from the Virginia Base Mapping Project (VBMP) to provide starting point maps of oyster habitat. It then couples direct aerial observations along with ground-truth measurements using sub-meter accuracy Global Positioning Systems (GPS) surveys, integrated with ArcView-based Geographic Information System (GIS), to develop distribution maps for oyster habitat throughout the seaside. Finally, a sampling scheme will be devised using these maps to obtain accurate estimates of basin-wide distribution and abundance of oysters throughout the entire seaside.

Over the past six months VIMS staff (1) developed preliminary maps of the locations of patch reefs and fringing reefs using the combined NWI and 2002 VBMP maps, (2) conducted 30 hrs of low altitude (300 ft) flights at low tide to refine current boundaries for all patch reefs and larger fringing reefs on the seaside and (3) visited 11 randomly-selected reefs to ground-truth the aerial mapping using GPS. Approximately 75% of the current oyster reef boundaries have been digitized into a GIS layer. Additionally, reefs are being categorized as natural, state restoration, private restoration or commercially-managed and this information is being incorporated into a GIS data layer.

Over the next 3 months additional ground-truth surveys will be completed and all remaining oyster habitat boundaries will be digitized and incorporated into a GIS data layer. Quantitative sampling to determine oyster abundance and size within the habitats, scheduled to start at the beginning of 2008, will get underway a little ahead of schedule (weather permitting).

Task: 10.08 The Rector and Visitors of the University of Virginia

Monthly Seminar Series

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start:	End:	Closeout:		
	10/1/2006	3/31/2008	6/30/2008		

The monthly seminar series was initiated in September 2007 with the first seminar presented on Thursday, September 20th by Dr. Arthur Schwarzschild, the Site Director of the Anheuser-Busch Coastal Research Center and Site Manager of the Virginia Coast Reserve Long Term Ecological Research Program. Prior to the first seminar, matching funds were used to purchase an LCD projector and podium for use in the seminar room. It is anticipated that matching funds will also be used to purchase a new laptop computer in the coming months to be dedicated for use in the seminar room. The second seminar has been scheduled for Thursday, October 18th, with additional monthly seminars planned to begin at 7:00 PM on the 3rd Thursday of every month. Seminars will be held at the ABCRC. Admission is free, but seating is limited to the first 50 people. Donna Fauber, the ABCRC office assistant has begun development of mailing lists (both postal mail and e-mail) for people interested in receiving information about upcoming seminars. She has also developed fliers that can be distributed to the people on the mailing lists and posted in public locations around the area. The local newspapers, radio station, Chamber of Commerce and other civic organizations (i.e. CBES) have been informed of the seminar series and have agreed to help publicize it on a regular basis. Additionally, information about the seminar series is being posted on the ABCRC webpage ([www.abcrc.virginia.edu](http://www.abcrc.virginia.edu)) and can be accessed by visiting the webpage and clicking on the link for the seminar series.

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2006**

**Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007**

Task: 10.2 Accomack-Northampton Planning District Commission  
Interpretive Signage for Seaside Heritage Access Sites

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Project Period Open
Open	Start: End: Closeout:		
	10/1/2006 12/31/2007 3/31/2008		

To highlight the Seaside's unique resources and ongoing efforts of the VSHP partnership to restore, manage and protect these resources, informational and interpretive signage will be strategically placed at sites of new VSHP public access and high traffic - Chincoteague Downtown Park, Wachapreague Harbor, Oyster Harbor, and, possibly, the Eastern Shore Wildlife Refuge. A 3-sided informational kiosk will need to be constructed at Chincoteague and Oyster, however an existing kiosk at Wachapreague, funded by a Virginia CZM grant in August 1995, may be utilized. Due to restrictions on placement of a kiosk at Willis Wharf Harbor, informational and interpretive panels will be mounted on the railings of the new observation deck funded through FY05 Task 9.2. Additional kiosks will go up at other sites on the Seaside as funds allow.

Each kiosk at the above locations will include two common panels. A PDF of these draft panels is attached.

- Panel 1 highlights the economic value of the seaside and its resources.
- Panel 2 highlights the ecological value of the seaside and its resources.
- Both Panel 1 and 2 include simple stewardship actions for the public to help protect these values.

A draft design for these two panels has been completed and distributed to VSHP partners for comment.

The third panel on each kiosk will be site specific. These panels are currently under development. This panel will include a more detailed example of a VSHP restoration/research/management activity occurring close to or in the local area. ANPDC staff is also seeking input on the content of these panels from the localities where the kiosks will be constructed – “what would the locality most like to convey to the public about the importance of seaside resources in their locality? What stewardship opportunities can and should be encouraged?”

Upon final approval of the panels, bids will be solicited from sign-makers. One possible kiosk structure being considered for Chincoteague and Oyster can be viewed at <http://www.panniergraphics.com/triangularkiosk.html>. Installation of these kiosks should be less expensive and less intrusive than a wooden roofed structure, and can be easily and quickly assembled in the time available to construct and install the kiosks once the signage is completed.

Final Products	% Complete	Anticipated Completion Date
Design and Fabrication of Informational/Interpretive Panels	40	March 31, 2008
Installation of Kiosks (or rail mounted sign bases)	0	March 31, 2008

Task: 10.21 Virginia Marine Resources Commission  
Seaside Heritage Program - Oyster Reef Restoration

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start: End: Closeout:		
	4/1/2007 9/30/2007 12/31/2007		

Fringing oyster reefs were constructed along Running Channel within Public Ground no. 27 in South Bay of Northampton County. 15,831 bushels of conch shells were purchased from a local shucking house, and deployed into a portion of the reef site at a cost of \$1.76 per bushel (\$27,862.56). The remaining portion of this reef site was constructed with fossil shells that were harvested from local Seaside deposits, transferred and deployed onto the reef site. A total of 28,000 bushels of reef shells were used at a cost of \$1.20 per bushel (\$33,600). Reef construction was completed June 15, 2007. The reef area is currently being surveyed and monitored for spatset. Spatset generally appears very good in this location, but the exact counts will not be complete until late October.

Fifty multicolor, plastic signs were purchased which identify the Seaside Heritage Program reef site. These signs have been placed on these locations, and are being placed on other locations as they are monitored in the Fall.

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2006**

**Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007**

Task: 11 Dept. of Conservation & Recreation - Natural Heritage			
Eastern Shore Land Acquisition - Bull Tract			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Open	Start:	End:	Closeout:
	10/1/2006	12/31/2007	3/31/2008

On September 28, 2006 the Virginia Department of Conservation and Recreation (DCR) purchased a 65.66% fee interest in a 285 acre portion of the 491 acre Bull Tract that had been purchased by The Nature Conservancy (TNC) in 2005. This 285-acre property was dedicated as the Magothy Bay State Natural Area Preserve (NAP). The purchase price paid by DCR for the 100% interest in the 285-acre parcel was determined by averaging the three appraisals that were done on the 285-acre parcel for DCR. That price was \$3,846,666.

On October 9, 2007, DCR purchased the remaining 34.34% interest in the 285-acre Bull tract for \$1,320,945. This final interest was purchased using state Parks and Natural Area Bond Funds, this CZM grant as well as grants from NOAA and the U.S. Fish and Wildlife Service. This \$283,179 CZM grant contributed 21.4% of the funds for this second closing of the Bull tract, or 7.4% of the funds for the entire Bull tract purchase.

This property is now owned entirely by the Virginia Department of Conservation and Recreation. The purchase of this and other parcels for migratory bird conservation on the lower Eastern Shore is in accordance with the Southern Tip Memorandum of Understanding signed by USF&WS, DCR, DGIF, The Nature Conservancy and Virginia CZM signed in 2006. The Magothy Bay NAP, as well as other public and private protected lands in the area, will be managed cooperatively following the Southern Tip MOU. The purpose of this MOU is to facilitate cooperation among the signatory agencies in protecting and managing conservation lands on the Southern Tip of the Virginia Eastern Shore for the purpose of resident and migratory bird species and other coastal dependent species and natural communities.

Final Products	% Completion	Anticipated Completion Date
Land purchase, including required CZM language in deed	100%	
Placement of DEQ, NOAA and Partners Sign	100%	
Delivery of deed and photos to VA CZM	0	Nov 15, 2007

Task: 41 Accomack-Northampton Planning District Commission			
A-NPDC Technical Assistance Program			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Attached
Closeout	Start:	End:	Closeout:
	10/1/2006	9/30/2007	12/31/2007

The A-NPDC held nine Ground Water Committee meetings and two Agriculture Advisory Group meetings. The Committee worked on several issues. The Groundwater Consultant has begun producing results of the USGS Groundwater Model. The second Annual Ground Water Awards have been presented to the awardees. This year two local agricultural operations were rewarded. One for maintaining buffer vegetation around farm ditches and improving irrigation equipment reducing water use. The other for designing a pond collection system to reuse irrigation water at a nursery.

Four coastal management committee meetings have been held.

Four coastal training/education programs have been held. A Heritage Day, focused on native American culture, was held in Chincoteague at the new Downtown Park. Many attended the events, exhibits, and dances. Another training program was held regarding new TMDL development on the Eastern Shore. One follow-up activity includes a further presentation to the Ground Water Committee in April. A Water Quality Teleconference requested by the Northampton and Accomack County Administrators was held. Northampton followed up by holding a Watershed Management Workshop for interested staff, and citizens and the Board of Supervisors. A Health Department Workshop was held explaining changes to the regulations governing alternative wastewater treatment systems.

A-NPDC staff has completed work on the Accomack County buffer project.

Final Products	%Completion	Anticipated Completion Date
Coastal Management Committee Report	100	
Coastal Management Training Report	100	
Accomack County Buffer Classification Project	100	
Ground Water Committee Report	100	
Technical Assistance Report	100	

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 42 Crater Planning District Commission  
Technical Assistance Program

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

(1) Crater PDC staff processed twenty-eight environmental impact reviews in regard to local, state and federal projects. (2) Crater PDC staff completed the updating process along with the Town of Surry's Planning Commission, in regard to the Town's Comprehensive Plan. Revisions included natural hazard mitigation recommendations which are part of the regional Crater Region Natural Hazard Mitigation Plan as well as data updates per the 2000 Census. (3) Two Coastal training meetings were held during the reporting period dealing with green infrastructure development and watershed planning. (4) Crater PDC staff continues to support the Friends of the Lower Appomattox River (FOLAR) activities- successful spring river clean-up (4/14/07); annual meeting (9/26/07); construction of Battersea Bridges in Petersburg and Observation Deck at the Appomattox River Park in Prince George County; participation in James River clean-up (6/9/07). (5) Two Crater PDC coastal meetings were held during the reporting period (6/8/07 and 9/17/07). (6) Crater PDC staff, along with the Town of Surry's Planning Commission, completed the Town Zoning Ordinance amendments in accordance with the Chesapeake Bay Regulations. (7) Crater PDC staff is serving on DCBLA's Phase III Advisory Committee to assist in the development of a checklist for Phase III implementation. (8) Crater PDC staff continues to participate with the Friends of Chesterfield's Riverfront, South Centre Corridors Resource and Conservation and Development Council, Chowan River Basin Roundtable and Coastal PDCs activities. (9) The Crater PDC staff assisted FOLAR in successfully raising \$37,000 during the reporting period in grants and contributions:

Final Products	% Completion	Anticipated Completion Date
Environmental Impact Review & Comments	100%	9/30/07
Coastal Training	100%	9/30/07
Town of Surry Comprehensive Plan	100%	9/30/07
Coastal Meetings	100%	9/30/07

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 43 Hampton Roads Planning District Commission  
Technical Assistance Program

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

The HRPDC Joint Environmental Committee (Chesapeake Bay and Stormwater) met six times. Approximately 100 local, state and federal staff participate as members of these Committees. In addition, the Environmental Strategic Planning Subcommittee met two times. The Joint Environmental Committees received presentations on new CBPA Program guidance, the VDH Regulations on Alternative Wastewater Systems, Chesapeake Bay Water Quality Report (USGS), Methodology for Perennial Stream Determination, TMDLs, Virginia Water Protection Permit Regulations (404 assumption), new Bio-solids Regulations & Environment Virginia 2008 Conference.

The HR Chesapeake Bay Committee is meeting monthly to address a variety of CBPA implementation issues, including development of a regional procedures manual, review of perenniality issues and review of CBPA Phase III guidance. Approximately 24 EIR and Federal Consistency reviews were undertaken.

Because of HRPDC staff schedule conflicts, HRPDC staff did not participate in any meetings of the Coastal PDC Committee. However, based on discussions with other PDC staff, briefings on coastal activities have been provided to the localities.

Through the Committee process, recommendations were made to state agencies on regulations dealing with stormwater management, wetlands wastewater reuse and are being developed for new stormwater and dam safety regulations. The groundwork has been laid for continuing local government participation in the legislative and regulatory processes.

HRPDC staff is working with DEQ and several of the region's localities on TMDL studies. The HRPDC staff, in cooperation with DEQ, has developed a long-term project to facilitate the outreach and Implementation Plan development process for all TMDLs in the Hampton Roads. An effort to integrate these Plans into a regional water quality plan is underway.

Presentations were made to the Environment Virginia 2007 Conference, Conference of Minority Public Administrators, AWWA/VWEA Conference, several green infrastructure workshops and conferences, and various civic organizations.

HRPDC staff continue to participate in the Chesapeake Bay Program Committees dealing with land use and with stormwater management. The localities are briefed on the CBP activities and local views are provided to the CBP Committees.

Newsletters were published in April and July 2007 and prepared for publication in October 2007.

HRPDC staff has participated in state CELCP advisory meetings and coordinated development of related regional proposals with the Cities of Chesapeake and Virginia Beach for the SWAMP area.

HRPDC staff is representing the region on several state Technical Advisory Committees: wetlands issues, PCB sampling to support TMDL development and Board Consolidation (DEQ), state stormwater management regulations, Stormwater Phase II regulations, and urban BMP cost sharing program (DCR).

HRPDC staff is pursuing several initiatives that will further enhance the region's efforts to develop a regional conservation corridor/green infrastructure system.

Final Products	% Completion	Anticipated Completion Date
Final Report: FY 2006-2007 Technical Assistance Program	100%	October 2007
EIA/EIS and Coastal Consistency Review	100%	October 2007
Public Information & Training	100%	October 2007
Regional Coordination	100%	October 2007
Special Regional Studies	100%	October 2007

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 44 Middle Peninsula Planning District Commission  
Technical Assistance Program

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

**Coastal Management Support:**

MPPDC staff continues to provide coastal management support to local governments, local wetlands boards and local planning staff. MPPDC staff has provided GIS analysis of development proposals, land conversion, land use plans, and local land use ordinance implementation over the last 6 months of the project. Project highlights include a census analysis for Bay Aging and traffic volume analysis for Rte 33 corridor.

**Local Planning Coordination:**

MPPDC staff convened meetings with local government level planners and administrators on 5/16/07 and 8/15/07. The May meeting was devoted to discussion of wireless broadband planning, HB 3203 (Urban Development Areas), the VAPA Symposium, and conversion of working waterfronts. The August meeting was devoted to discussion of the transportation bill and enhancement program. In addition, on 5/26/07 a special education session was held on conversion of working waterfronts, on 6/27/07 the MPPDC Commission learned about local community development opportunities from the USDA Rural Development Programs, and on 9/14/07 local government administrators received a training session on the the Middle Peninsula Nutrient Compliance Plan (12/8/06). Coordination of the Middle Peninsula Chesapeake Bay Public Access Authority (MPCBPAA) was delegated to the NOAA Fellow during this period. MPPDC staff continued to supervise the Fellow and participate in meetings and activities of the MPCBPAA on 4/13/07, 6/8/07, and 8/13/07.

**Middle Peninsula Chesapeake Bay Public Access Authority (PAA) -Wetlands Mitigation Special Project:**

MPPDC staff continues to work with member localities and the Middle Peninsula Chesapeake Bay Public Access Authority to explore the possible nexus between VMRC's new wetlands compensation/mitigation policy and the use of the MPCBPAA to assist local governments with developing innovative management solutions. MPPDC staff assembled a wetlands mitigation bank assessment team which visited and assessed 10 potential wetlands mitigation sites, and ranked and scored each site for possible conversion to a wetlands bank. PAA staff will continue to explore the development of a wetland bank.

**Browne Tract and additional new CELCP Maintenance and Management:**

MPPDC participates in the NOAA Coastal Service Center Fellowship program. Jacqueline L. Shapo has coordinated the affairs for the Middle Peninsula Chesapeake Bay Public Access Authority (PAA) as a NOAA Fellow. Product #4 has been articulated in a white paper authored by Ms. Shapo. The paper details the work of the PAA and the Brown Tract as well as the CELCP program. The white paper can be found at: [http://www.mppdc.com/project/CSC\\_extended\\_abstract\\_CoastalZone07.pdf](http://www.mppdc.com/project/CSC_extended_abstract_CoastalZone07.pdf)

All tasks have been completed during this period.

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 45 Northern Neck Planning District Commission  
Technical Assistance Program

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

NNPDC staff have completed all of the Montross Comprehensive Plan maps and has produced materials for the town to complete the Future Land Use Map. The Future Land Use Map is the heart of the comprehensive plan, and as such has taken longer to create due to public input. The Future Land Use map will be digitized when completed by Town Council and Staff.

NNPDC staff has digitized land cover in Richmond County Totuskey Creek Watershed. The Totuskey Creek Watershed was chosen, as it makes up a majority of the county's land area. NNPDC staff has digitized the land cover from the 2002 Virginia Base Mapping Program aerial photographs. The land cover classification is taken to Anderson's Level II, and local knowledge was added to supplement the Level II classifications. Hard copy maps were printed, and data given to the county.

NNPDC staff revised two Northumberland County tax maps (13 & 14) that are located around the village of Callao, and created hard copy 11 x 17" maps. NNPDC Staff revised an additional three tax maps (42, 43 & 44), in the southern end of the county, taxmaps and have printed 11" x 17" hard copy maps.

NNPDC staff assisted Longwood College in conducting a Low Impact Development (LID) rain barrel construction workshop at Hull Springs Farm on the Lower Machodoc on 6-30-07. Following that workshop, the NNPDC, in cooperation with the NNSWCD, conducted their own LID rain barrel construction workshop at the NNPDC offices, in addition to conducting a tour of the NNPDC LID demonstration site to workshop participants. NNPDC staff held the Summer Land Use Administrator's meeting on August 21st, where updates were given on the NNPDC's Water Supply Planning Project, Low to Moderate Income Septic Pumpout Project and Northern Neck Chesapeake Bay Access Authority's accomplishments. On September 11th, NNPDC Staff conducted a GIS Training Session for Westmoreland County to demonstrate the tax map revision process. On September 12th, NNPDC staff held its Fall Land Use Administrator's Meeting/ Dune and Beach Workshop, and invited county wetland members as well as county LU staff. Scott Hardaway from VIMS presented on the Dune and Beach inventory, and everyone said they learned something new from the workshop. Finally, NNPDC Staff, with the assistance of VDEQ Staff conducted a No Discharge Zone (NDZ) Workshop on September 27th. One county is very interested in seeking a NDZ certification for its waterways. Hopefully other counties in the Northern Neck will recognize the benefits of such a designation.

Coastal Management Support was given to the Town of Whitestone in the form of creating multiple maps to study possible future boundary adjustments to the town limits, and to the Town of Kilmarnock for producing a map for the town's application to FEMA's National Flood Insurance Program. NNPDC Staff met with Lancaster County Staff on two occasions to create and revise the draft Lancaster County Future Land Use Plan map. In addition, multiple maps were created for an appraiser that assists people seeking open space conservation easements, and they will be included in the compendium of maps.

Final Products	% Completion	Anticipated Completion Date
Coastal Management Support	100%	September 2007
Local Planning Coordination	100%	September 2007
Northumberland County 5 Revised Tax Maps	100%	September 2007
Richmond County Land Cover Data Creation	100%	September 2007
Town of Montross Comprehensive Plan Mapping	100%	

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 46 Northern Virginia Planning District Commission  
Technical Assistance Program

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:      End:      Closeout:		
	10/1/2006    9/30/2007    12/31/2007		

Technical Assistance: NVRC hosted the following four workshops targeted toward individual homeowners, public and private planners and engineers, landscaping professionals, homeowner association boards, and commercial and residential management companies.

1. "Beautifying Your Yard for Clean Water – Rain Gardens for Residents" introduced the basics of designing, building, and maintaining rain gardens. For added publicity, this workshop will be part of the "Living Lightly, Living Green" workshop series. Forty residents and landscaping professionals attended this free one-day workshop. Presentations were made by the Northern Virginia Soil and Water Conservation District and Arlington County Department of Environmental Services staff. (Held April 15, 2007 with 40 participants)
2. "Mitigating for Stream and Wetland Losses in Northern Virginia" (Held August 7, 2007 with 30 participants)
3. "Restoring Our Waterways – Case Studies in Northern Virginia" (Held September 19, 2007 with 16 participants)
4. "An Introduction to Maintaining Stormwater Systems" (Held September 27, 2007 with 25 participants)

Special Project: Nine local governments and two independent water and sewer authorities formalized their collaborative stormwater education efforts into the Northern Virginia Clean Water Partners. Through a local contribution of approximately \$170,000, the Partners funded the Regional Stormwater Education Campaign, which ran the radio ad "The Call," for the third year in a row. Additionally, pre- and post-surveys were conducted to collect information on the effectiveness of the ad and to capture general stormwater and environmental perceptions of the public. Supplemental print ad on proper pet waste disposal, a television public service announcement, and a campaign website were also developed to promote common messages for pet waste disposal, motor oil recycling, and proper lawn care techniques. Results from the Spring 2007 survey revealed a 15 percent increase in the number of respondents who heard the ad, in May. The website ([www.onlyrain.org](http://www.onlyrain.org)) continues to receive a steady stream of visitors. Between the initial set-up date of the Google Analytics account, 24 unique visitors have accessed the site. The majority using Northern Virginia Clean Water Partners as their keywords in their internet browser.

Chesapeake Bay Implementation: NVRC staff served on the Potomac Watershed Roundtable (June 15 and Aug 10) and the Northern Virginia Urban Forestry Roundtable (May 18). Staff also participated at meetings for Fairfax County Watershed Plan Implementation, most notably in planning meetings for the Falls Hill/Poplar Heights Residential LID Demonstration Project throughout September.

EA and Permit Review: NVRC staff continued to participate in the EA/EIS and permit intergovernmental review process, most notably, the recent Base Realignment and Closure (BRAC) changes that will bring thousands of new residents to the military installations in Northern Virginia.

Nvironment Newsletter: The Fall 2007 issue was released. It can be downloaded from <http://www.novaregion.org>.

All tasks have been completed.

Task: 47 George Washington Regional Commission  
Rappahannock River Basin Commission Staff Support

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:      End:      Closeout:		
	10/1/2006    9/30/2007    12/31/2007		

Staff supported the work of the Rappahannock River Basin Commission through the planning and conducting two Commission meetings. The commission meetings were held on June 27 and September 12, 2007. The agendas, minutes and of the Commission meetings as well as copies of the presentations are posted at: [http://www.rapriverbasin.org/meeting\\_events.htm](http://www.rapriverbasin.org/meeting_events.htm)

Staff also supported the work of the Non Point Work Group (NPWG). The work group held meetings on April 24, May 23, June 11, July 9, August 15 and September 5, 2007. The agendas, minutes and of the NPWG meetings are posted at: [http://www.rapriverbasin.org/meeting\\_events.htm](http://www.rapriverbasin.org/meeting_events.htm)

Upon the recommendation of the NPWG, the Commission voted at the March meeting to plan and conduct a River Summit in October 2007. The Summit is in response to the HB1150 Water Clean Up Plan. The NPWG has led efforts to plan the River Basin Summit 07 in order to provide information on several critical topics that face localities, SWCDs, state agencies and other stakeholders in the basin. The Summit format will provide for dialogue on the issues and a means of identifying next steps and action items. The four topic areas of the Summit will be: 1) the CAP, 2) TMDLs, and 3) Ongoing Planning in support of the required semi-annual updates to the Water Clean Up Plan. The Summit will be held October 30, 2007. (Planning for the River Summit 07 has taken the place of activities by the Water Allocation Group over the past 6 months.) The Summit program can be viewed at [http://www.rapriverbasin.org/meetings\\_events/summit2007](http://www.rapriverbasin.org/meetings_events/summit2007)

As listed above, the work on the RRBC Website was concentrated on updates relative to Commission and NPWG meetings as well as posting the all Summit information and providing for online registration. Staff has updated the listing of all water resource laws in support of the document Water Quality Management in Virginia: Governmental Responsibilities and Relationships. This presentation and the extensive Appendix is available through the Commission Website at: [http://www.rapriverbasin.org/np\\_workgroup.htm](http://www.rapriverbasin.org/np_workgroup.htm)

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 48 Richmond Regional Planning District Commission  
Technical Assistance Program

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:      End:      Closeout:		
	10/1/2006    9/30/2007    12/31/2007		

Environmental Technical Advisory Committee – This committee is organized by RRPDC staff and generally meets once every two months to bring together local and state environmental staff for training opportunities and discussion of environmental issues. In June 2007, RRPDC staff presented findings on recreational access on the Chickahominy River to a sub-committee of the Environmental TAC. The group also discussed strategies in developing blueways and increased public access to the water along the Chickahominy as part of the development of the study.

Local Government Technical Assistance – RRPDC staff completed 34 environmental reviews of federal, state and local projects during this period. RRPDC staff participated on a committee for LID demonstration grants in Chesterfield County for the development of grant RFP and selection criteria. RRPDC staff worked with a sub-committee of the Environmental TAC to develop, research, and write the Chickahominy River Recreational Access Study. The study looks at informal, commercial, and public access to the water by non-motorized boats and also at the feasibility for eco-tourism on the Chickahominy River. The study was reviewed by RRPDC localities and revised by RRPDC staff.

Public and Private Agencies/Commissions Liaison – RRPDC staff attended a meeting of the James River Advisory Council (JRAC), participated in conference calls of the Virginia Regional Environmental Management System (V-REMS) and attended meetings of the Virginia Coastal Committee and the VAPDC environmental committee. RRPDC staff also met with consultants from the Green Infrastructure Center, Inc. to assist in the development for a grant proposal to create a regional green infrastructure tool for the Richmond region using base data from the Virginia Department of Conservation and Recreation's Natural Heritage program.

GIS Data Support and Maps – RRPDC staff finalized draft maps for the Chickahominy River Recreational Study.

Final Products	% Completion	Anticipated Completion Date
Chickahominy River Recreational Access Study	95%	November 14, 2007

Task: 49 Virginia Beach/Virginia Aquarium and Marine Science Center  
Sea Turtle and Marine Mammal Stranding Response

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:      End:      Closeout:		
	1/1/2007    12/31/2007    3/31/2008		

This task officially started on January 1, 2007. During the period from April through September 2007, the Virginia Aquarium Stranding Response Program (VAQS) recorded 193 strandings in Virginia. There were 210 strandings during the same period in 2006. The VAQS Stranding Team responded to 65 marine mammal strandings in Virginia during this reporting period, 59 cetaceans and six pinnipeds. Twenty eight (43%) of the strandings were located in Virginia Beach, and 28 (43%) on Virginia's eastern shore. The cetacean species included one Gervais' beaked whale (*Mesoplodon europaeus*), one unidentified beaked whale, one common dolphin (*Delphinus delphis*), 48 bottlenose dolphin (*Tursiops truncatus*), five harbor porpoise (*Phocoena phocoena*), two pygmy sperm whale (*Kogia breviceps*), and one humpback whale (*Megaptera novaeangliae*). Pinniped species included four harp seal (*Pagophilus groenlandica*), one gray seal (*Halichoerus grypus*), and one unidentified seal. One bottlenose dolphin, one pygmy sperm whale, one beaked whale and one harp seal stranded alive. The live harp seal (VAQS20071019) was discovered on the eastern shore at the Chincoteague National Wildlife Refuge in Accomack County. After recovery from the beach, the seal spent one month in rehabilitation at VAQS. The seal (nicknamed "Chewbacca") was fitted with a satellite transmitter tag for post-release monitoring and released in Virginia Beach. The satellite tracked movements of this seal can be viewed on the WhaleNet website, or through links on the Virginia Aquarium website. This operation was conducted with the assistance of the Riverhead Foundation for Marine Research and Preservation from New York. The VAQS Stranding Team and our cooperators responded to 128 sea turtle strandings during this reporting period, including 108 loggerhead (*Caretta caretta*), seven green (*Chelonia mydas*), nine Kemp's ridley (*Lepidochelys kempii*), one leatherback (*Dermochelys coriacea*), and three unidentified to species. One large green sea turtle (VAQS20072055) stranded alive in July. This mature female weighs more than 320 lbs and is a very rare sight in Virginia. The majority of sea turtles found seasonally in Virginia are juveniles and sub-adults, and most are loggerheads. The green turtle (nicknamed "Tiki") was entangled in a whelk pot buoy line. This turtle is currently in rehabilitation at VAQS and is expected to be released with a satellite tag this fall. During this reporting period, the Stranding Team released three sea turtles back to the wild following long rehabilitation periods over the winter.

VAQS Staff attended five professional meetings and made seven formal presentations during this reporting period. There were more than 25 educational and/or training presentations by Stranding Team members to groups in the Hampton Roads area. Grant funded VAQS staff worked more than 870 hours and Stranding Team volunteers contributed more than 9,500 hours to the stranding response program during this reporting period. A detailed list of all trainings, presentations and publications will be included in the final report.

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2006**

**Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from October 1, 2006 - March 31, 2007**

Task: 50 Northern Neck Planning District Commission NNPDC Green Roof Innovative Stormwater Treatment Demonstration				
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Project Canceled
Cancelled	Start:	End:	Closeout:	
	10/1/2006	9/30/2007	12/31/2007	

Task: 81 Dept. of Conservation & Recreation Coastal NPS Program Management				
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Project Period Open
Proposed	Start:	End:	Closeout:	
	10/1/2007	3/31/2008	6/30/2008	

This project did begin until 10/1/2007. It will need to be extended through Spetember 30, 2008

Task: 82 Dept. of Conservation & Recreation Pilot Virginia Coastal NEMO				
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Project Period Open
Open	Start:	End:	Closeout:	
	10/1/2006	3/31/2008	6/30/2008	

The CNP Program Manager continued to undertake the development of the VA Nonpoint Source Pollution Education for Municipal Officials (NEMO) Program through a coordinated effort between the NOAA/EPA/NPS Chesapeake Bay Office and Virginia partners. Virginia Coastal Nonpoint Education for Municipal Officials Program (VA NEMO) is a partnership between the Chesapeake Bay Office of NOAA/EPA to provide technical assistance to localities in the Virginia portion of the Chesapeake Bay. Through the coordinated process, Mathews County was selected as the pilot site for the VA/ Chesapeake NEMO Program due to their request for assistance, willingness to participate and readiness of their undertaking of the Comprehensive Plan revision. Working with the County Supervisor and the Chief of Planning, a series of presentations and a citizen's planning academy were identified to educate the local constituents prior to the formal beginning of the Comprehensive Plan. The intent is to provide Mathews County with water quality based education targeted towards their Board and Commissions, staff and general public. In addition, the County has requested assistance establishing their GIS system. The series, "Talking About the Future – Second Tuesdays in Mathews," is scheduled for 7:00 pm to 9:00 pm on the second Tuesday of each month from October through February, in the Mathews County Library. Planned second Tuesday conversation topics include:

- October 9: Linking Land, Water and Growth
- November 13: Growth – What's Happening in the Region and in Mathews?
- December 11: Sustainable Rural Economic Development
- January 8: Mathews Valuable Resources
- February 12: Planning the Direction of Your Community

A partnership with the Virginia Tech Cooperative Extension was developed to increase the capacity of the Program. The VA Tech Extension program is developing the Community Viability Program targeting local government assistance. Their approach is a good fit with the VA NEMO effort as it expands the current services/assistance that can be provided. The program relies upon the DCR Regional Offices (Regional Managers and Watershed Coordinators), DCR Division of Chesapeake Bay Local Assistance (DCBLA), Planning District Commissions, Soil and Water Conservation Districts, and Watershed groups as the delivery mechanism.

During the reporting period, the CNP Program Manager attended the National NEMO Program Training on integrating forest resource management into NEMO programs.

Task: 83 TBD Coastal Non-point Source Pollution Competitive Planning District Commission (PDC) grant				
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Project Canceled
Cancelled	Start:	End:	Closeout:	
	10/1/2006	9/30/2007	12/31/2007	

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 84	Virginia Institute of Marine Science		
Virginia Clean Marina Program Development and Outreach- 2007-2008			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Period Open
Proposed	Start:	End:	Closeout:
	10/1/2007	3/31/2008	6/30/2008

This project did not begin until 10/1/2007. This will need to be extended through September 30, 2008.

Task: 85	Dept. of Conservation & Recreation		
Eastern Shore Shellfish Implementation Plan Finalization			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Pending
Proposed	Start:	End:	Closeout:
	8/1/2007	12/31/2007	3/31/2008

A contract is pending for this task which may need to continue through March 2008.

Task: 91	Dept. of Environmental Quality - Virginia Coastal Zone Management Program		
Section 309 Enhancement Grants			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Canceled
Cancelled	Start:	End:	Closeout:
	10/1/2006	9/30/2007	12/31/2007

Please see the progress reports for Tasks 91.01 and 91.02. All funds were transferred to those tasks.

Task: 91.01	Dept. of Environmental Quality - Virginia Coastal Zone Management Program		
Public Access Data for NPMS			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Canceled
Cancelled	Start:	End:	Closeout:
	10/1/2006	9/30/2007	12/31/2007

Due to the recent completion of the Chesapeake Bay Program's Public Access database, it was decided that this project as proposed would be duplicating that effort. VA CZM requested that these funds (\$43,000) be reprogrammed to a Task 93.04 for upgrades to Coastal GEMS.

Task: 91.02	Environmental Law Institute		
Virginia Coastal Zone Management Program Updates			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Project Period Open
Open	Start:	End:	Closeout:
	9/1/2007	3/31/2008	6/30/2008

Environmental Law Institute:  
-received signed agreement to commence work  
-identified the appropriate sections of Virginia Code for update  
-located prior versions of law  
-planned the project

Final Products	% Completion	Anticipated Completion Date
NPDES regulations notice	1	March 31, 2008
Changes to Virginia's Fisheries Statutes	5	March 31, 2008

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 92 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Aquaculture Zones and Best Management Practices

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Canceled
Cancelled	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

Please see the progress reports for Tasks 92.01, 92.02, and 92.03.

Task: 92 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Aquaculture Zones and Best Management Practices

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Canceled
Cancelled	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

Please see the progress reports for Tasks 92.01, 92.02, 92.03 and 92.04. All funds were transferred to those tasks and this task "parent" task is cancelled.

Task: 92.01 Virginia Institute of Marine Science - Center for Coastal Resources Management  
Shellfish Aquaculture Suitability Model

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

The focus of the first half of this project was to adapt land use patterns into the existing aquaculture model. We engaged aquaculture professionals on existing elements to the model and then lead expanded discussion regarding land use and zoning concerns. At the end of the first 6 months the project leaders were testing a protocol for integrating land use patterns into the model and the acquisition of count zooming data was nearly complete.

At this time the integration of land use into the model is complete. Additional tests were done to evaluate the impact that bathymetry had on the model output. Aquaculture professionals had mixed opinions on water depth restrictions which lead to this additional inquiry. A protocol for integrating zoning into the aquaculture model is also complete. Initial tests are being performed on the County of Gloucester. When these are complete they will be reviewed and the final model run for each locality will be finished

Task: 92.02 Virginia Institute of Marine Science - Center for Coastal Resources Management  
Identification of management strategies for promoting shellfish aquaculture in Virginia

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:	End:	Closeout:		
	7/1/2007	12/31/2007	3/31/2008		

VIMS staff participated in many information exchange efforts with agency, industry and academic folks in the form of conference calls and emails. VIMS attended meetings with DEQ, VA Tech, VIMS, VMRC and others to review the status of shellfish culture and discuss options for promotion of aquaculture in Virginia. A draft report summarizing some potential management options is in preparation for researchers at Virginia Tech by the end of October. A final report with a more comprehensive discussion of the issues and options will be completed by the end of December.

## VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM

Year: 2006

Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 92.03 Virginia Institute of Marine Science

Management Initiatives for Shellfish Aquaculture -Development of an Environmental Code of Practice and Best Management Practices for Vi

<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Open	Start: End: Closeout:		
	10/1/2006 12/31/2007 3/31/2008		

Activities during this time period focused on the development of Deliverable Product #2, a draft "strawman" of Best Management Practices (BMPs) for shellfish growers and the development of an Environmental Code of Practice (ECP). Using documents collected during the development of Deliverable Product #1 (examples of existing BMPs), items for inclusion in a Virginia shellfish grower BMP were identified. Once identified, these items were collated into a form for presentation to industry members. These draft documents will be utilized during Year 2 (FY 2007 Task 92.03) when a wider array of industry participants will be provided an opportunity to comment on the draft and offer suggestions for refining the document. In addition to the development of BMPs, a draft Environmental Code of Practice was also produced. In association with the ECP, it was suggested that a "pledge" be developed whereby industry members could affirm their acceptance of the principles outlined in the ECP. At this time, a supporting agency or association has not been tied to the ECP pledge; this activity will be pursued in Year 2.

Delays were encountered due to the business schedules of the industry advisors. This necessitated canceling one of the scheduled meetings and relying on electronic communications. A final meeting to discuss the draft BMP/ECPs will be conducted as soon as possible. At this final meeting discussion on how to proceed in Year 2 will also take place.

Project Benchmarks and Deliverables	% Completion	Anticip. Completion Date
Product #1 – examples of existing BMPs	100	Will be delivered to VA CZM by 11-15-07
Product #2 – draft BMPs and ECP	100	

Task: 92.04 Virginia Polytechnic Institute & State University

An Economic Analysis of a Proposed Management Plan for the Public Oyster Grounds of the Rappahannock River

<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Closeout	Start: End: Closeout:		
	6/1/2007 9/30/2007 12/31/2007		

A bioeconomic model of the oyster fishery at the Mouth of the Rappahannock was developed to generate estimated values for the net revenues from opening the public grounds on a rotational basis. The model portrays one of the rotational areas based on characteristics of the entire region. The model starts with no population of oysters, essentially the situation before the Oyster Heritage Program began with reef construction and shelling.

The bars in each area are either included in a sanctuary or are open to harvest. The purpose of the unharvested sanctuary bars is to maintain a broodstock which supplies larvae for harvested bars. The population of mature oysters is assumed to be self-sustaining, i.e. each oyster just replaces itself. Oysters larger than 4.5 inches found on the harvested grounds are sold by the watermen to the Marine Resources Commission which then transplants them to the sanctuaries. Thus, the sanctuary population will be increasing over time as they are added.

The population of mature oysters on the harvested grounds results from a natural setting of spat. The broodstock, as well as mature oysters elsewhere in the area, are the source of larvae that settles on the substrate of these bars. The management plan calls for repletion of both sanctuary and harvested bars once every three years by placing cultch material as a means for promoting spat set. High mortality rates for spat and juveniles result in a market size population of oysters three years later that is a small fraction of the original spat.

Once the population in an area has reached market size, the area is opened to harvesting by watermen using dredge vessels. Each vessel has two watermen working and works half of each season on each of the two opened public grounds. Given the high natural mortality rate, most of the oysters not taken are expected to die in the third year. The estimated revenue received by the watermen is a function of their catch and the market price. Revenue net of harvester costs is found as revenue minus costs borne by the watermen. This tells us the net return received by the watermen for their efforts. Revenue net of state costs is revenue received by the watermen minus the costs of shelling and purchasing large oysters. This tells us whether or not the revenue generated covers the costs of the state's management activities. Revenue net of both costs is found as revenue minus both of these costs. This is the return to the allocation of all resources accounted for in the model.

## VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM

Year: 2006

Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 93 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Intergovernmental Decision Making

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Progress Reports Constitute Final Product
Closeout	Start: End: Closeout:		
	10/1/2006 9/30/2007 12/31/2007		

All funds have been transferred to Tasks 93.01, 93.02, 93.03 and 93.04.

Virginia CZM Program staff gave several educational/training presentations and hosted exhibits on Coastal GEMS during the April 1 to Sept 30, 2007 period:

- Environment Virginia Conference (April 10-12, 2007, 45 participants)
- Dept. of Conservation and Recreation Suffolk Regional Office Training Workshop (Apr 24, 2007, 10 participants)
- Virginia Energy Symposium (May 17, 2007, about 70 participants)
- Trans-Atlantic Atlas Workshop at Oregon State University (July 17, 2007, Coastal GEMS was presented by Marcia Berman of VIMS)
- Virginia Association of Planning District Commissions (VAPDC) GIS Conference (Sept 24-25, 2007, about 70 participants)

Virginia CZM Program staff are planning to give an educational lecture at the Science Museum of Virginia in Richmond for the Funsten Science Lecture Series on Oct. 24, 2007. Eugene Maurakis, Director of Science Education at SMV, is also very interested in creating a Coastal GEMS display and interactive kiosk at the Museum and a K-12 taught education course with the help of the CZM Program.

Task: 93.01 Middle Peninsula Planning District Commission  
Middle Peninsula Public Policy Project for Waterside-Landside Use Conflicts

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	In Mailed Attachments
Closeout	Start: End: Closeout:		
	10/1/2006 9/30/2007 12/31/2007		

Product #1 Report on the Establishment of the Waterfront Use Conflict Roundtable (Committee) and selection of a study reach: MPPDC staff and the project consultant guided and facilitated the York River Use Conflict Policy Recommendation Committee over the project period. The Committee consists of a cross section of local government appointed representatives and regionally appointed representatives of varying, and often conflicting, uses of the York River. Membership includes: local elected official, local planning staff, residential waterfront property owners, commercial waterfront property owners, commercial fisherman, oyster harvester, clam harvester, recreational users (duck hunting, oyster gardening, crab harvesting, fishing, boating), and MPPDC staff resource experts. By its very nature, the learning gap among the membership of the Committee is wide, and the self interests of each member seemingly at odds. Before effective discussions and analysis of use conflict policy recommendations could occur, all of the members of the Committee needed to gain a common understanding of existing policies, regulations, and uses of the York River along a designated study reach identified by the Gloucester County Board of Supervisors. The study reach was selected because of the high propensity for use conflict.

Product#2 Report on the Use Conflict Study Reach GIS Analysis Discussion:

The Committee worked in small groups to analyze the York Study Reach GIS plates. GIS analysis was completed with funding from the Virginia Sea Grant Community Development Program. Each group used a worksheet to analyze the information and better understand each part of the Study Reach. The GIS analysis was used as a segue into the next phase of the project. The Committee's education phase culminated with a discussion of "Who should manage use conflict?" "What is the appropriate use?" and "Who should determine the appropriate uses?" Photographs and maps of different recreational, commercial, and residential uses were also utilized during the discussion.

Product#3 Dictionary of Terminology:

Throughout the education process, the Committee identified questions and terminology issues that were researched and answered by MPPDC staff. This established a use of terminology common to the entire group. As expected, the learning gap was large, but having a common vocabulary and reference sheet of terms was essential.

All products are complete and in mailed attachments:

Final Report (37 pages)

Product 1: Report on Establishment of the Waterfront Use Conflict Roundtable

Product 2: Report on the Use Conflict Study Reach GIS Analysis

Product 3: Dictionary of Terminology

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 93.02 Virginia Institute of Marine Science - Center for Coastal Resources Management  
Tidal Flushing Characteristics in Virginia's tidal embayments

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:		
	10/1/2006	9/30/2007	12/31/2007		

The objective of this project is to perform a combination of water quality modeling analyses that will evaluate individual systems for general flushing characteristics. The tidal embayments will be ranked as quickly flushed, moderately flushed, or slowly flushed.

Meetings were held with staff from CCRM and the Department of Physical Sciences at VIMS were held as needed throughout the time period. Methods were discussed for the different modeling techniques.

Results from the models (residence times) were analyzed using several different methods to examine flushing characteristics.

The project is progressing according to schedule and was completed by Sept. 30, 2007. The final report is being written and the GIS dataset is being completed for submission.

Final Products	% Completion
acquisition of necessary data	100
classification of embayments	100
calculation/characterization of flushing times/residence times	100
development of GIS coverage	100

Task: 93.03 Dept. of Conservation & Recreation - Natural Heritage  
Virginia Biodiversity Assessment - Part 1

<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u>	Project Pending
Pending	Start:	End:	Closeout:		
	10/1/2007	3/31/2008	6/30/2008		

A scope of work for the Virginia Biodiversity Assessment - Part 1 was submitted to NOAA for approval on 9/27/07. Approval has been granted and a contract with the Dept. of Conservation and Recreation Division of Natural Heritage is pending.

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 93.04 Virginia Commonwealth University  
Continuing Coastal GEMS Development and Maintenance

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:      End:      Closeout:		
	6/1/2007    12/31/2007 3/31/2008		

VCU and WorldView Solutions, Inc. have completed the following tasks with regards to the Coastal GEMS project. The project is running on schedule and should be completed by the project end date.

Product 1:

- Migration of code to current base code for ArcIMS 9.2 (Task 1)
- Changes to fact sheets based on CZM recommendations (Task 2) – changes were edited based on last database export to VCU on July 27, 2007. Fact sheets were adjusted to add in contact information for dataset owners and the fact sheets were re-formatted to resemble the CZM's formatted MS Access database.
- Most of the dataset names in the layer list have been corrected. (Task 5)

Product 2:

- Printing/Export button added (Task 6) – a PDF engine was installed and is currently being completed
- Search by X,Y coordinates (Task 10) – in the advanced tab, a search was added and a user can enter coordinates in decimal degrees and zoom to the location.
- Results table (Task 11) – This represented a significant time investment but results are displayed on the left pane in the viewer to look and feel like other popular searching websites (Google, Local Live). A selected set of information is available in this pane, however, all attribute information is viewable and exportable from an additional button to "view results in table." Selected records are highlighted on the map when the user mouses over the record id in the left pane.
- Zoom to locality (Task 13) – A locality drop-down combo box was added and a user can zoom to a specific locality.

Product 3:

- Coastal News and Events (Task 18) – a new drop down box has been populated with events and newsworthy coastal locations
- Customized Selection menu (Task 22) – a user can draw a polygon on the screen to query all layers in the area. A user can also right-click on the map and choose only certain layers to select from.

Other enhancements not in the contract:

Faster maps through caching of data, right-clicking on the map provides a selection menu for data layers, single-left clicking access the spatial searching and results are displayed in the pane on the left.

Following additional updates of data layers and code for advanced tools, a second version of Coastal GEMS should be available at [www.deq.virginia.gov/coastal/coastalgems](http://www.deq.virginia.gov/coastal/coastalgems) by the end of October.

Task: 94 Dept. of Environmental Quality - Virginia Coastal Zone Management Program  
Shoreline Management

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Progress Reports Constitute Final Product
Closed	Start:      End:      Closeout:		
	10/1/2006    9/30/2007 12/31/2007		

Please see progress reports for Tasks 94.01, 94.02, 94.03, 94.04, 94.05.

Task: 94.01 Virginia Institute of Marine Science - Chesapeake Bay National Estuarine Research Reserve System  
Support for the Joint VA/MD Living Shoreline Summit

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Previously Submitted      5/4/2007
Closed	Start:      End:      Closeout:		
	10/1/2006    12/31/2006 3/31/2007		

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2006**

**Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007**

Task: 94.02 Virginia Institute of Marine Science - Center for Coastal Resources Management			
Recommendations for Revisions to the Wetlands Guidelines			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Open	Start:	End:	Closeout:
	10/1/2006	12/31/2007	3/31/2008

Wetlands Program staff has developed draft text for much of the Guidelines. The new structure will reflect more current thinking on classification, cumulative impacts and integrated shoreline management. We are developing graphics to help illustrate complex ecological concepts such as community distribution and ecosystem services.

Final Products	% Completion	Anticipated Completion Date
Report of proposed Wetlands Guidelines Revisions	70	Dec. 31, 2007

Task: 94.03 Virginia Institute of Marine Science			
Management-support synopsis of Virginia dune and beach assessments			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:
	10/1/2006	9/30/2007	12/31/2007

Task 1: Summary Report: The final draft of the "Sands of the Chesapeake" report is complete. The report is in publication.  
 Task 2: Beach and Dune Management Options: "The Coastal Primary Sand Dune and Beach Act: Recommendations to Update the Act and Complete the Oversight of Virginia Tidal Shorelines" report has been completed. It is presently in publication. The report has been presented to VMRC and the Coastal Team. Strategies are being developed to enact legislative change.  
 Task 3: Power point Presentation: This task utilizes the results of Tasks 1 and 2 and is nearing completion. Drafts have been presented for internal review. Final edits are underway.

Final Products	% Completion	Anticipated Completion Date
Task 1	95	November 2007
Task 2	95	November 2007
Task 3	85	November 2007

Task: 94.04 Virginia Institute of Marine Science			
Site Survey and Water Quality Assessment for Better Sill Design			
<u>Project status:</u>	<u>Current approved</u>		<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Closeout	Start:	End:	Closeout:
	10/1/2006	9/30/2007	12/31/2007

Site Assessment and Survey- The site was surveyed and the shore positions were provided to Jian Shen for his modeling effort. Two previous dates (pre- and post- sill installation) when the site was surveyed were entered into the computer and placed into the same coordinate system as the present survey in order to see the changes at the site through time.

Water Quality Assessment and Modeling - The St. Mary's River study site was visited on three separate occasions; these included May 15-16, June 13-15 and August 8-10, 2007. Conducted field studies during each visit included (1) continuous water quality monitoring at eight locations including the River proper and various locations behind sill structures (measured parameters included temperature, salinity, dissolved oxygen, turbidity, pH and chlorophyll), (2) groundwater studies to quantify discharge rates and potential impacts on water quality, (3) measurement of nekton activity at various locations in front of the sill, at the gaps and throughout the back of the sill structure. During the last visit, the fringing marsh was characterized as to species percent cover and substrate characteristics. Parts of this effort will support the residence-time model being developed. Field collection of information is 100% completed. Data is currently being analyzed and results will be submitted in the near future.

For the modeling:

- (1) Completed modifying the model to handle water seepage through sills
- (2) Completed large model set up and simulation of tide to generate boundary condition for small domain model
- (3) Generated small domain model grid
- (4) Starting to simulate residence time

Final Products	% Completion	Anticipated Completion Date
Site Assessment and Survey	100	
Water Quality Assessment and Modeling	90	Nov 2007

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**

**Year: 2006**

**Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007**

Task: 94.05 Dept. of Environmental Quality - Virginia Coastal Zone Management Program				
Living Shoreline Landowner Guide				
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> Submit w/next Semiannual Report
Open	Start:	End:	Closeout:	
	10/1/2006	12/31/2007	3/31/2008	

The Virginia Living Shoreline Landowner Guide steering committee met on July 18, 2007 to discuss contents of the guide. An expanded outline for the guide has been developed and additional stakeholders to review contents of the guide have been identified. Production of the Landowner guide is behind the original schedule.

Final Products	% Completion
Living Shoreline Landowner Guide	30

Task: 95 Middle Peninsula Planning District Commission				
Special Area Management Plan for Dragon Run				
<u>Project status:</u>	<u>Current approved</u>			<u>Final deliverable(s) status:</u> In Mailed Attachments
Closeout	Start:	End:	Closeout:	
	10/1/2006	9/30/2007	12/31/2007	

**Task 1 – Land-use Policy:**

MPPDC staff provided technical assistance to King and Queen, Essex, Gloucester and Middlesex Counties in consideration of the Dragon Run land-use planning recommendations for adoption. In addition to providing feedback, MPPDC staff attended two Planning Commission and one joint hearing meeting in King and Queen County; attended one Comprehensive Plan Steering Committee meeting in Gloucester County; continued communications regarding potential timeline for planning commission/board of supervisor consideration for Essex County; attended one meeting with newly hired Planning Director for Middlesex County to discuss SAMP and land-use recommendations, as well as consideration timeline.

**Task 2 – Public Access Guidance:**

MPPDC staff researched and developed information regarding the rights permitted by the Public Trust for riparian areas, such as the Dragon Run. This information will be presented to the Middle Peninsula Public Access Authority for adoption. Additionally, a grant was obtained from the Virginia Department of Conservation and Recreation to fund the construction costs associated with kiosks at which to post Dragon Run public access information. Additional site markers have been distributed to the Middle Peninsula Public Access Authority to provide boundary markers for new acquisitions.

**Task 3 – Technical Assistance:**

MPPDC staff continued to provide technical assistance and support to the Dragon Run Steering Committee and the Dragon Run Day Planning Subcommittee; MPPDC staff distributed Dragon Run DVDs to interested parties, as well as maintained the Dragon Run website, [www.mppdc.com/dragon](http://www.mppdc.com/dragon); MPPDC staff also attended Coastal PDC and Middle Peninsula Public Access Authority meetings.

**Task 4 – Conservation Acquisition Management Plan:**

MPPDC staff drafted two management plans and submitted them to the managing entities for adoption. Adoption is pending and will likely occur before the final project report due date of November 15th. The two sites were Dragon Bridge Tract (owned by CBNERRS) and Dragon Flats (owned by TNC).

**Task 5 – Biodiesel Partnership:**

MPPDC staff worked with a consultant from Virginia Clean Cities to continue to develop a model partnership program. The goal of the partnership program is to provide added value options to the traditional natural resource-based industries in the Dragon Run. The partnership has included representatives from the farming community, fuel distributors, school bus fleets/school boards, and the biodiesel refinery among others. Staff worked with the consultant to identify grant/loan opportunities to establish funding streams, such as the EPA Clean School Bus program to assist with the implementation of the partnership objectives. MPPDC staff presented a draft resolution for school board consideration to the four watershed county school superintendents in addition to one county adjacent to the watershed. MPPDC staff plans to attend school board meetings in the beginning of October during which adoption of the resolution may be considered.

All tasks have been completed and final products are in mailed attachments.

Year: 2006

**VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM**  
Performance Report, Section A, for Cooperative Agreement No. NA06NOS4190241  
for the period from April 1, 2007 - September 30, 2007

Task: 95.01 Dept. of Environmental Quality - Water Quality Assessment  
Mercury Monitoring in Dragon Run/Piankatank River Airshed

<u>Project status:</u>	<u>Current approved</u>	<u>Final deliverable(s) status:</u>	Submit w/next Semiannual Report
Open	Start:      End:      Closeout:		
	1/1/2007    12/31/2007    3/31/2008		

Dr. Willy Reay of VIMS collected weekly atmospheric mercury samples and monthly methyl mercury samples and shipped them to the Mercury Deposition Network (MDN) lab in Illinois for the period of April 1, 2007 to June 30, 2007. The sampling for this grant ended on June 30, 2007. The National Atmospheric Deposition Program coordinated activities between the MDN lab, Illinois State Water Survey and Virginia DEQ as required during the contract period. The MDN lab analyzed 3 methyl mercury monthly samples and 13 weekly atmospheric mercury samples for the period of April 1, 2007 to June 30, 2007. Data on the MDN website extends from December 2004 through March 2007. Once data through June 2007 is posted a final report covering the full project timeframe (Dec 2004 through June 2007) for both grants (FY05 Task 91.01 and FY06 Task 95.01) will be completed.