October 28, 2011

Virginia Coastal Zone Management Program
Semiannual Section B Report on Core Agency Implementation Activities
For the Period from April 1, 2011 – September 30, 2011

A. STATE AGENCY MONITORING

1) DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)

a) DEQ – Virginia Coastal Zone Management Program

Virginia CZM Program staff continued to work with our partner agencies to implement the Program over the last 6 months. For a full description of staff activities, please refer to the Section A report for Task 1.

b) DEQ – Water Permitting Programs

DEQ- Virginia Water Protection Permit (VWPP) Program

The Virginia Water Protection Permit (VWPP) Program is required for water withdrawals and activities in wetlands and surface waters that may or may not require Clean Water Act section 401 water quality certifications. The following table describes the activity for each of these permits. For the VWPP Program, the column "Permits Reissue Pending / Avg Proc. Days" represents water supply permit permits whose applications are currently being processed for reissuance. The processing days cannot be calculated until the permits are actually reissued.

Compared to the October 2010 to March 2011 reporting period, general permits increased as did the average processing time(1). Delays were mainly due to untimely applicant response, suspension of the permit process due to inadequate project information or change in project scope or impacts, threatened and endangered species concerns and/or coordination, coordination under the State Program General Permit process, and inadequate mitigation proposals. The number of individual permits issued during the current reporting period was about the same as those issued in the previous reporting period, and the average processing time(1) remained relatively unchanged. Any delays were largely due to threatened and endangered species concerns and/or coordination, incomplete applications, suspension of the permit process due to inadequate project information, and hearings/State Water Control Board meetings required.

About the same number of permits and permit authorizations were modified during this reporting period, and the average time to process these requests continued to be in line with program guidelines for issuance actions (no regulatory time line for processing changes to general permit authorizations or individual permits).

There were no individual permits reissued during the current reporting period. General permit authorizations are not reissued in the VWPP program.

No applications were denied permits during the current reporting period.

The VWPP program staff conduct inspections on a variety of sites and for a variety of reasons. Inspection data is available from the DEQ Quarterly and Annual reporting made to the Administration division, and is also provided to the Virginia Department of Accounts on a fiscal year basis. This data can be provided if necessary for the purposes of this report.

DEQ-Virginia Pollution Discharge Elimination System (VPDES) Water Permitting Program

There are a total of 252 individual municipal and industrial CZM area VPDES permits. This number and the numbers in the table above represent typical activity in the program. Over time, the number will possibly decrease by several more since DEQ now has a general permit for water treatment plants and most of these facilities will let their individual permit expire and apply for the general permit. Other than that, there is no particular reason for increases or decreases in numbers from the last reporting period. There are also numerous facilities registered under general permits in CZM areas including 16 car wash facilities, 73 concrete products facilities, 6 cooling water discharges,

128 single family homes, 23 nonmetallic mineral mining facilities, 3 petroleum and hydrostatic testing discharges, 47 seafood processors, 347 industrial storm water discharges and 1 coin operated laundry. It is unknown why the single-family home permits have increased. It is unknown why the seafood processor permits have gone down except that perhaps facilities are just closing down due to the economy. Others represent typical numbers for general permit registrants in CZM areas in Virginia.

DEQ – VPA Water Permitting Program

The Virginia Pollution Abatement permit (VPA) is required for facilities that manage wastewater, animal waste, biosolids or industrial sludges in such a manner that they do not have a discharge from the site. For example, an agricultural facility that temporarily stores wastewater to be land applied as part of an irrigation/fertilization program. During the period between April 1, 2011 and September 30, 2011, no new VPA Individual permits were issued in the Coastal Zone Management area. However, five permit applications were received and are pending. Four of those applications were for the land application of biosolids and have been pending an average of 70 days. One individual VPA permit was reissued and three permit applications were received for the reissuance of VPA Permits and are being processed; each non-biosolids related. One application to modify a VPA Permit authorizing the land application of biosolids was received and issued during the reporting period.

During the period between April 1, 2011 and September, 2011, applications for two facilities were received and coverage under the General Permit for Poultry Waste management was reissued to both facilities in the Coastal Zone Management area. During the period between April 1, 2010 and September 30, 2011, no applications were received and no coverage was issued, modified or denied under the VPA General Permit for Animal Feeding Operation in the Coastal Zone Management area.

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VPDES/VPA/VWP - April 1, 2011 – September 30, 2011										
	Permits Issued / Avg Proc. Days [(1)]		Permits Reissued / Avg Proc. Days		Permits Modified / Avg Proc. Days		Denied / Avg Proc. Days		Permits Reissue Pending / Avg Proc. Days	
VPDES	0	NA	19	262	4	110	0	NA	35**	NA
VPA	0	0	1	97	1	56	0	NA	3	110
VPA GP	0	0	2	10.5	0	0	0	0	0	0
VWP IPs	15	128	0	N/A	10	84	0	N/A	0	N/A
VWP GPs	106	45	N/A	N/A	21	23	0	N/A	0	N/A

Processing day is the amount of time between receiving a complete application and making the final case decision (issuance, reissuance, modification, etc.).

* Information from CEDS database

** This represents existing VPDES individual permits expired but pending through September 30, 2011

c) DEQ – Water Program Enforcement and Compliance

DEQ continues to apply both informal and formal enforcement measures in the enforcement program. Reference Table 1, below.

Informal measures, such as Warning Letters and Letters of Agreement, are used in those cases where non-compliance is not significant in nature and where compliance can be achieved in a short period of time. For the period April 1, 2011, through September 30, 2011, DEQ issued 188 Warning Letters and two Letters of Agreement for violations of VPDES, VPA, VWPP, and Ground Water program requirements.

Formal enforcement actions are used in those cases where non-compliance is more serious or may take a significant amount of time to correct. Formal measures generally involve the issuance of a Notice of Violation followed by a Consent Order, or an Executive Compliance Agreement in the case of a state agency. In some cases, Unilateral Administrative Orders or court orders may be sought. Between April 2011 and September 2011, DEQ issued 53 Notices of Violation for violations of VPDES, VPA, VWPP, and Ground Water program requirements. During the same period, the agency concluded enforcement cases with the issuance of 25 Consent Orders that assessed a total of $581,642 in civil charges. One of the orders represented a multi-media, multi-facility enforcement action that addressed violations across seven facilties, five of which were located within Virginia's coastal zone, in both the water and air programs. Three orders included Supplemental Environmental Projects (SEPs); the projects included requirements on the part of the responsible parties to: implement a computer database and tracking system to ensure compliance with all permit conditions; disconnect an existing septic system from a county facility and reconnect to a public sanitary sewer system for conveyance and treatment; and install new above-ground piping at load rack areas of a petroleum liquid storage and distribution facility.

Table 1

Measure	Action Type	Count	Total Civil Charges Assessed
Informal	Warning Letters	188	N/A
Informal	Letters of Agreement	2	N/A
Formal	Notices of Violation	53	N/A
Formal	Consent Order*	25	$581,642
Total		**268**	**$581,642**

*Consent order: the count includes one multi-media, multi-facility order (air and water program areas); the total civil charges assesssed incorporates the pro-rated charges assessed for three water facilities cited in the multi-media, multi-facility order.

d) DEQ – Air Permitting Program

OFFICE OF AIR PERMIT PROGRAMS
PERMITS ISSUED REPORT FOR
VIRGINIA'S COASTAL RESOURCES MANAGEMENT PROGRAM

Period: **April 1, 2011 – September 30, 2011**

PERMIT TYPE	NUMBER OF PERMITS ISSUED	AVERAGE PROCESSING TIME (Days)
PSD & NA	0	NA
Major	0	NA
Minor	52	25
Administrative Amendment	8	16
Exemptions	62	43
State Operating	4	135
Federal Operating (Title V)	0	NA
Acid Rain (Title IV)	0	NA
Total Number Permits Issued	**126**	

* The average processing time is determined by computing the difference between when the application was deemed administratively complete and when the permit was issued.

Note: The information provided for this report includes data from the Northern Virginia Regional Office, Piedmont Regional Office and Tidewater Regional Office only.

Definitions:
Prevention of Significant Deterioration (PSD) = A source which emits **250 tons or more** per year of any regulated pollutant or combination of regulated pollutants, or who is one of 28 specific industries listed in the state regulations and will emit 100 tons per year of a regulated pollutant.
Major = A source which emits, or has the potential to emit, **100 tons or more** per year of any air pollutant.
Minor = A source which emits, or has the potential to emit, **less than 100 tons** per year of any air pollutant.
State Operating= Application for permit written pursuant to 9 VAC 5-80-800.
Administrative Consent Agreement = An agreement that the owner or any other person will perform specific actions to diminish or abate the causes of air pollution for the purpose of coming into compliance with regulations, by mutual agreement of the owner or any other person and the Board.
Administrative Amendment = Changes made to the permit to clarify or correct an issued permit. For example, equipment references, improved control equipment, reductions of allowed emissions below the exemption levels, etc.
Exemption = Facilities meeting are exempted from permitting requirements by exemption levels defined in 9 VAC 5-80-11.
Federal Operating (Title V) = a source that emits **10 tons or more** per year of any hazardous air pollutant, **or 25 tons** per year of any combination of hazardous air pollutants or emits criteria pollutants above major source levels.
Acid Rain (Title IV) = tightens the annual emissions limits for SO_2 and NO_x which are imposed on large higher emitting electric utility plants and sets restrictions on smaller, cleaner plants fired by coal, oil, and gas.

OFFICE OF AIR PERMIT PROGRAMS
PERMITS PENDING REPORT FOR
VIRGINIA'S COASTAL RESOURCES MANAGEMENT PROGRAM

Permits pending as of **September 30, 2011**

PERMIT TYPE	NUMBER OF PERMITS PENDING
PSD & NA	1
Major	0
Minor	28
Administrative Amendment	2
Exemptions	14
State Operating	6
Federal Operating (Title V)	7
Acid Rain (Title IV)	1
Total Permits Pending	**59**

Note: The information provided for this report includes data from the Northern Virginia Regional Office, Piedmont Regional Office and Tidewater Regional Office only.

OFFICE OF AIR PERMIT PROGRAMS
PERMITS WITHDRAWN AND APPLICATIONS DENIED REPORT FOR
VIRGINIA'S COASTAL RESOURCES MANAGEMENT PROGRAM

Period: **April 1, 2011 – September 30, 2011**

PERMIT TYPE	NUMBER OF PERMITS WITHDRAWN	NUMBER OF APPLICATIONS DENIED
PSD	0	0
Major	0	0
Minor	3	0
Administrative Amendment	0	0
Exemptions	2	0
State Operating	0	0
Federal Operating (Title V)	0	0
Acid Rain (Title IV)	0	0
Total Permits Rescinded	**5**	**0**

Note: The information provided for this report includes data from the Northern Virginia Regional Office, Piedmont Regional Office and Tidewater Regional Office only.

e) DEQ – Air Program Enforcement and Compliance

DEQ continues to apply both informal and formal enforcement measures in its air enforcement program. Reference Table 2, below.

Informal measures include Requests for Corrective Action, Informal Correction Letters, Warning Letters, and Letters of Agreement. These actions are used in those cases where non-compliance is not significant in nature and where compliance can be achieved in a short period of time. During the six-month period beginning April 1, 2011, and ending September 30, 2011, DEQ issued 70 Requests for Corrective Action, and 21 Warning Letters.

Formal enforcement actions are used in those cases where non-compliance is more serious or may take a significant amount of time to correct. Formal measures generally involve the issuance of a Notice of Violation and negotiation of a Consent Order, or an Executive Compliance Agreement in the case of a state agency. In some cases, Unilateral Orders or court orders may be pursued. Between April 2011 and September 2011, DEQ initiated eight new formal enforcement actions via issuance of Notices of Violation. Additionally, the Agency issued 13 Consent Orders; these orders assessed a total of $1,012,505.64 in civil charges.

Table 2

Measure	Action Type	Count	Total Civil Charges Assessed
Informal	Requests for Corrective Action	70	N/A
Informal	Informal Correction Letter	0	N/A
Informal	Warning Letters	21	N/A
Formal	Notices of Violation	8	N/A
Formal	Consent Orders*	13	*1,012,505.64
Total		**112**	**1,012,505.64**

*The consent order civil charges figure includes the pro-rated amount corresponding to two air facilities cited in the multi-media, multi-facility order referenced in section c - DEQ – Water Program Enforcement and Compliance.

2) VIRGINIA MARINE RESOURCES COMMISSION (VMRC)

a) VMRC – Habitat Management Division

During the period April 1, 2011 through September 30, 2011 the Habitat Management Division received 990 applications for projects involving State-owned submerged lands, wetlands or dunes. These applications were for projects such as piers, boathouses, boat ramps, marinas, dredging and shoreline stabilization. As the clearinghouse for the Joint Permit Application all applications were assigned a processing number by the Division and forwarded to the appropriate agencies, including, local wetlands boards, the Norfolk District of the U.S. Army Corps of Engineers, the Department of Environmental Quality, VIMS and others as necessary.

A public interest review was initiated and site inspections were conducted for those projects requiring a permit from the Marine Resources Commission. Likewise, Habitat Management staff also conducted site inspections for all projects requiring a local wetlands board permit and evaluated each local board decision for Commissioner review. Habitat Management staff also conducted compliance inspections on permits issued by VMRC and local wetlands boards. Five notices to comply were issued during the period.

The Habitat Management Staff completed actions on 1033 applications received during the period. Action on most applications was completed within 90 days after they were received. As such, a number of the actions taken during the period were for applications received prior to April 2011. Similarly, those applications received near the end of the current reporting period are still under review. Habitat Management Staff also participated in the inter-agency review process involving 46 general permits for Virginia Department of Transportation projects.

In addition to staff actions, the Full Commission considered 59 projects. During the reporting period the Commission considered 27 protested projects or projects requiring a staff briefing, including two appeals of local wetlands board decisions. The Commission also approved 25 projects over $50,000.00 in value through June 2011 and 7 porjects over $500,000.00 in value after July for which staff had completed the public interest review and for which there was no objection.

b) VMRC – Fisheries Management Division

At its April 2011 meeting, the Virginia Marine Resources Commission (VMRC) passed an amendment to allow commercial summer flounder trawlers to offload product up to 9pm. VMRC also established the 2011 commercial horseshoe crab quota which will be sub-allocated by gear type, as well as other conservation measures including a vessel trip limit of 1,000 pounds and the establishment of a control date (December 31, 2010) for future measures. Also at this meeting, VMRC established the 2011 commercial bluefish quota as 1,113,727 pounds.

At its May 2011 meeting, VMRC established the 2011 commercial bluefish quota as 1,113,727 pounds. VMRC requested June public hearings to establish a January 1, 2012 moratorium on river herring harvest and conservation measures for spiny dogfish, including a quota and control date.

At its June 2011 meeting, VMRC established a moratorium on river herring (alewife and blueback herring) harvest, effective January 1, 2012. VMRC also established conservation measures for spiny dogfish, including a control date of April 30, 2011, and a state commercial quota of 2,148,224 pounds for the 2011-2012 season.

At its July and August 2011 meetings, no relevant amendments were established.

At its September 2011 meeting, VMRC requested October public hearings to modify summer flounder trip limits and the season start date for the winter 2011 fishery. VMRC also requested an October public hearing to modify scup trip limits for the Winter I, 2012 fishery.

c) VMRC – Law Enforcement Division

Enforcement under "Other Agency" refers to summons issued for other agencies' laws, code or regulation sections. The majority of the summons in this category are for DGIF regulations on boating safety laws, expired boat registration, no life jackets, flares, etc.

Summons under "Police Powers" are all criminal vs fisheries. These are the reckless driving, drunk driving, driving without a license/suspended license, shoplifting, possession of cocaine, marijuana, etc.

VIRGINIA MARINE POLICE
ARRESTS/CONVICTIONS SUMMARY BY CATEGORY

REPORT FORMAT: FEDERAL FISCAL YEAR AREA: ALL AREAS
START PERIOD: 10/01/2006
END PERIOD: 09/30/2011

Category	2006/2007		2007/2008		2008/2009		2009/2010		2010/2011	
	Convictions	Arrests	Convictions	Arrests	Convictions	Arrests	Convictions	Arrests	Convictions	Arrests
Buyers	4	5	10	11	1	1	2	3	1	1
Casting Garbage/Trash	1	1	0	0	0	0	0	0	1	1
Clams	4	4	0	1	1	1	3	5	1	1
Commercial Fishing License	16	21	16	25	6	9	3	5	1	3
Conchs	0	0	9	9	7	7	1	1	0	0
Crabs	69	81	138	172	93	111	65	77	36	43
Federal Violation	94	97	0	6	0	18	1	4	0	0
FIP Violations	0	0	0	0	0	0	0	0	61	63
Fish	298	364	271	319	160	205	113	139	78	94
Freshwater Fishing without a license	12	13	1	1	10	10	13	13	10	11
Habitat/Wetlands	2	2	0	0	0	0	0	0	0	0
License Tags	7	8	3	3	1	2	1	2	2	3
Mandatory Reporting	4	8	0	0	0	0	0	0	0	1
Misc	2	2	1	1	0	0	0	0	0	0
Non-residents	0	0	0	1	0	0	0	0	0	0
NSSP	0	0	3	3	0	0	9	9	0	3
Other Agencies	592	624	435	481	279	322	239	275	218	244
Oysters	56	68	54	72	31	39	55	70	54	60
Piers	0	0	0	0	0	0	0	0	0	0
Police Powers	90	107	61	68	42	52	48	60	57	67
Removal of Obstructions	6	7	4	4	1	1	0	3	0	0
Resisting officer	1	4	2	3	0	0	0	0	0	0
Shellfish	0	0	0	0	1	2	4	4	2	3
SW Recreational Licenses	481	496	309	331	175	196	132	151	117	151
TOTALS:	**1739**	**1912**	**1317**	**1511**	**808**	**976**	**689**	**821**	**639**	**749**
PERCENT OF CONVICTIONS:	**90.95%**		**87.16%**		**82.79%**		**83.92%**		**85.31%**	

Print Date: Monday October 3, 2011

3) VIRGINIA DEPARTMENT OF HEALTH (VDH) – DIVISION OF SHORELINE SANITATION

From April 1, 2011 through September 30, 2011, the VDH shellfish program had 964 acres of shellfish grounds closed to harvesting. There were 1021 acres of shellfish grounds reopened.

The Department received and reviewed a total of 29 VMRC Permit Applications, and processed as follows:

Two (2) of the Permit Applications needed action in the Marina Program.

Twenty-seven (27) applications were approved based on meeting the Requirements of providing adequate facilities.

Zero (0) applications were denied because of inadequate facilities.

4) Department of Conservation and Recreation (DCR)

a) DCR - Division of Soil and Water Conservation

The Department of Conservation and Recreation (DCR), Division of Soil and Water Conservation (DSWC) administers numerous enforceable and non-enforceable programs that help the Commonwealth of Virginia manage its coastal resources. The following is a summary of key program activities conducted by DCR staff during the period of April 1, 2011 through September 30, 2011.

Regulatory Programs

Stormwater Management Program
No report at this time

Nutrient Management

DCR Nutrient Management Staff have been active in developing and reviewing nutrient management plans and other nutrient reduction activities to achieve the Commonwealth's nutrient reduction commitments of Chesapeake Bay tributary strategies. In the coastal zone of Virginia, DCR staff developed nutrient management plans covering 253,641 acres during the reporting period. The plan acreage developed by coastal watershed is summarized in the following table:

VA CZM Basins	Cropland	Alfalfa Only	All Other Hayland	Pasture	Specialty Crop	Turf and Landscape	Total
Albemarle Sound	2,747	0	33	167	0	0	2,946
Atlantic Coastal	6,458	0	0	0	126	0	6,584
Chesapeake Bay Coastal	15,393	0	101	137	498	0	16,129
Chowan	36,388	0	685	1,232	160	0	38,466
James	21,196	0	11,674	6,526	1,442	0	40,837
Potomac	38,144	0	39,017	27,220	234	0	104,614
Rappahannock	24,276	0	3,436	1,772	352	0	29,836
York	13,306	0	469	312	142	0	14,229
Total	157,907	0	55,414	37,365	2,955	0	253,641

Non-Regulatory Programs

Coastal Nonpoint Source Program

The responsibility of the Coastal NPS Program Manager is to coordinate the Coastal Nonpoint Source Program implementation and administration of grants and grant budgets and provide technical support to Division of Soil and Water, VDCR relating to coastal zone ecology, management, and restoration. The position continues to serve as a liaison between DCR the Center for Environmental Studies at VCU and the VA Coastal Management Program to promote joint, applied research and outreach projects, coastal nonpoint source pollution, coastal zone ecology, management, and restoration.

For the grant reporting period, the Environmental Analyst at the Virginia Commonwealth University serving as the Coastal NPS Program Manager continued to implement the Coastal NPS Program and VNEMO Program at the Virginia Department of Conservation and Recreation.

The Coastal NPS Program Manager implemented these programs to support various coastal priorities such as the Sustainable Community Planning Focal Area Projects, the integration of the Chesapeake Bay TMDL Watershed Implementation Plan for local government process, and implement the National Fish and Wildlife Foundation Grant at the Science Museum of Virginia. During this reporting period, the Environmental Analyst accepted the role as manager of the Virginia Healthy Waters Initiative due to staff turnover and significant structural changes at the Department of Conservation and Recreation.

The VCU Environmental Analyst has continued a strong role with the implementation of the VNEMO project in coordinating specific roles and responsibilities within the program delivery and context of the Shoreline Project, under the guidance of the Northern Virginia Regional Commission (NVRC), the VNEMO client. The VNEMO Program Manager also began to outline the process of conducting public listening sessions around Climate Change and Sea Level Rise in Northern Virginia. Through an extension of funding from the VCZM program to the NVRC for this work, a contract was established with the University of VA Institute for Environmental Negotiation (UVA IEN) to lead the listening sessions in the same manner as those conducted in the VA Beach area. The county of Prince William accepted the offer to host the listening sessions, which are planned for the fall, 2011 and will be reported in the following report timeframe.

The Coastal NPS Program Manager was requested by VDCR to implement a training program to improve the capacity of the field staff in implementing outcome based technical assistance for local governments, following the model of the VNEMO Program. This initiative is continues to prepare the VDCR staff for increases in requests for technical assistance from local government for implementation of the CBTMDL and VA SWM Regulations. The VNEMO Program Manager partnered with the NVRC and the UVA IEN to develop a training specifically to equip state personnel and local and regional staff to best engage public policy participants that choose to be obstructive as opposed to inclusive in the decision making process. This training is scheduled for the fall, 2011 and will include participants from the VDCR field staff from the Divisions of Stormwater Management and Natural Heritage; VDEQ; VIMS Coastal Resources Center, the Coastal Planning District Commissions and local government.

The Coastal NPS Program Manager continued the management of the +$2M, NFWF funded, project at the Virginia Science Museum. The Manager continues to share the Project Management role with the Director of Science at the Museum. Project leadership outlined the overall project and identified teams to began the preparation of engineering designs, monitoring program design and educational and outreach materials. During the period, the CNP Manager oversaw the advertisement and hiring of a contractor to conduct the installation of the practices at the museum.

The VNEMO Program directly assisted the Division of Natural Heritage in the development of an outreach and engagement strategy around the Priority Conservation Areas data, later to be named the VA Ecological Valuable Areas. This database effectively integrates the INSTAR stream database at VCU. VEVA is a primary vehicle for communicating the value of the VA Healthy Waters Initiative due to the linkages of terrestrial and water based resource assessments.

The CNP Program Manager continued to partner with the VA DCR Public Communications Office in the development of the new Chesapeake Club campaign, "Plant More Plants" and participated in the Native Plant coordinating process initiated by the VCZM office.

The VCU Analyst transitioned to the management of the VA Healthy Waters Initiative and began partnership development with the VA Nature Conservancy and the Albemarle-Pamlico National Estuary Program to expand the range of the program. A policy analysis has begun under extended VCZM monies to integrate Healthy Waters language into VA Title 10.0.

b) DCR – Division of Natural Heritage

This report lists projects and activities conducted by the Department of Conservation and Recreation, Division of Natural Heritage (DCR-NH) during this period that were not funded by or otherwise reported to the VCZMP

Natural Area Preserves Stewardship

VCU Students Assist at Cape Charles Natural Area Preserve – 4/15/11

Students from VCU assisted with repairs to and the clearing of brush from the boardwalk at Cape Charles NAP in Northampton County. The students are enrolled in the Life Sciences Program Service Learning Course taught by Dr. Edward Crawford. Part of the course requirement is to participate in community service projects related to natural resources. Cape Charles NAP encompasses important stopover habitat for migrating songbirds. The boardwalk meanders through maritime forest and scrub habitats, providing public access for bird watching and nature study. It culminates at an overlook that offers an expansive view of the Chesapeake Bay. The students bolted down loose boards, collected trash and cut back overgrown vegetation to ensure a safe and pleasurable experience for visitors.

2011 Winter-Spring Prescribed Burning on Natural Area Preserves – 5/13/11

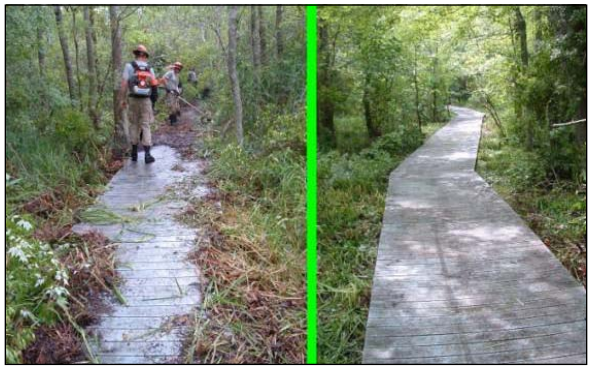
DCR Natural Heritage staff, with support from key partners the U.S. Fish and Wildlife Service and The Nature Conservancy, has completed a successful spring prescribed burn season on natural area preserves in the Eastern District. Ten burn units on four preserves were safely treated with prescribed fire through early May for a total of 413 acres burned. These fires will help to restore and maintain fire adapted natural communities such as Pine / Scrub-Oak Sandhills which support a large number of rare, fire-dependant species of plants and animals.

In winter-spring of 2011, DCR-DNH and partners conducted prescribed burns at Chub Sandhill, Antioch Pines, Cherry Orchard Bog natural area preserves as well as Blackwater Ecological Preserve, Piney Grove Preserve and Rappahannock National Wildlife Refuge. A USFWS AmeriCorp volunteer crew also assisted.

AmeriCorps helps prepare North Landing River Natural Area Preserve for re-opening in 2012 – 5/20/11

North Landing River Natural Area Preserve was at one point the state's flagship Natural Area Preserve, complete with an interpretive hiking trail and a hand-carry boat launch. However, since 2002, the preserve has been closed due to law enforcement staff shortages and the preserves ongoing issues with illegal activities including drug dealing, motor vehicle trespass, target shooting and significant trash dumping (by the dump truck load). With new LE(?)staff hiring approval, DCR plans to re-open the preserve and its water access to the North Landing River as early as possible. With coordination with US Fish & Wildlife Service, Natural Heritage staff teamed up with AmeriCorps and the Department of Defense to clean up the trail and boardwalks, preparing them again for public use. The team included wounded soldiers working on the team as part of their recovery program.

Preparation for North Landing River



North Landing River Path

Natural Heritage Program Recognized for Invasive Species Efforts – May 27, 2011

The Mid-Atlantic Panel on Aquatic Invasive Species (MAP-AIS) has announced the recipients of its first annual Rachel Carson awards program which recognizes organizations that work to prevent the introduction and spread of aquatic invasive species. A 2011 MAP Certificate of Merit was presented to DCR's Natural Heritage Program for its on-going commitment to control Phragmites – a tall non-native grass that invades and takes over coastal wetlands and shorelines. This award recognition included a new Garmin GPSMAP 76CSx GPS unit, which will assist DCR staff in invasive plant mapping efforts. DCR-Natural Heritage was nominated for this award by Joe McCauley, Chief of Realty for Region 5 of the U.S. Fish and

Wildlife Service, who previously served as Rappahannock River Valley National Wildlife Refuge manager and was a long-time partner with DCR in mapping and controlling Phragmites in Virginia.

Stafford County gravels Crow's Nest Natural Area Preserve's parking area – 7/15/11

Crow's Nest Natural Area Preserve's porous parking area, established with a high tech paver system to protect water quality and manage water runoff was in need of 20 tons of gravel in order to maintain and protect the paver system. The county of Stafford funded the procurement, delivery and spreading of the 20 tons of gravel. DCR is very appreciative of Stafford County's assistance.

Crow's Nest Natural Area Preserve's Parking Area

Japanese Stilt-grass Control at Crow's Nest – 9/12/11

On September 12, 2011, DCR Natural Heritage Stewardship staff supervised a certified pesticide applicator who was contracted to treat Japanese stilt-grass (Microstegium vimineum), a highly invasive exotic grass, at Crow's Nest Natural Area Preserve in Stafford County. 2011 was the second consecutive year of stilt-grass control at Crow's Nest – an effort made possible by funding assistance provided by the Northern Virginia Conservation Trust. Stilt-grass is found mostly on the preserve's trails and main access road but is threatening to rapidly invade interior forest areas. Approximately 14 acres of stilt-grass were treated with an approved herbicide along 14 miles of trails and roads. Repeated, successive annual herbicide applications prior to seed maturation are required to control stilt-grass due to this species strong ability to store or "bank" seed in the forest floor and surface soil layer. Despite DCR and Stafford County staffs efforts to clear trails and roads of downed trees after Hurricane Irene, additional trees fell during Tropical Storm Lee which hampered the contractor's effort to treat all 21 miles of trail at Crow's Nest infested with stilt-grass.

Japanese Stilt-grass Control – Crow's Nest Natural Area Preserve

Inventory

Frosted Elfin butterfly discovered – last seen in 1994 – 4/29/2011

DCR Natural Heritage zoologists discovered a population of the Frosted Elfin butterfly (Callophrys irus, G3 S2?) in City of Suffolk. A population was also found at Antioch Pines NAP the previous week by a Natural Heritage volunteer. Prior to these sightings, this species had not been confirmed in the Commonwealth since 1994. This small butterfly is associated with habitats that are either fire dependent or undergo other frequent disturbances. These disturbances encourage the growth of the caterpillars' food plants, lupine or wild indigo. This work is part of a two-year project to develop an atlas of rare butterflies, moths, dragonflies, and damselflies in Virginia.

Frosted Elfin

Web Atlas of Virginias rare Butterflies, Skippers, Moths, Dragonflies, and Damselflies – 6/3/11

In November 2010, the Virginia Department of Game and Inland Fisheries (VDGIF) contracted with the Virginia Department of Conservation and Recreation, Division of Natural Heritage (VDCR-DNH) to determine the historical and current distribution of all Lepidoptera (butterflies, skippers, and moths) and Odonata (dragonflies and damselflies) of Virginia that are Species of Greatest Conservation Need and Heritage-tracked species, and made this information available to the general public, researchers, conservation agencies and organizations, and other interested parties via a web-accessible atlas. In partial fulfillment of contract obligations, a progress report entitled "Web Atlas of Virginias rare Butterflies, Skippers, Moths, Dragonflies, and Damselflies – Progress Report for May 2011" was submitted to the Virginia Department of Game and Inland Fisheries. It highlighted progress made on 1) the development and populating of a database which will track records used to create the atlas, 2) the development of a template for factsheets that will be written for each species, 3) contact made with amateur and professional naturalists, seeking their input of records for the species and soliciting their help with the factsheets, and 4) field work conducted by VDCR-DNH zoologists to date.

North Wallops Island Reassessment Underway – 7/8/11

The DCR-DNH Field Botanist and Eastern Shore Region Steward battled dense swarms of mosquitoes, the invading non-native grass common reed (Phragmites australis ssp. australis), shrub expansion, and curtailed field time due to a planned rocket launch to begin the multidisciplinary reassessment of the North Wallops Island area on NASA's Wallops Flight Facility in Accomack County. DCR-DNH had last conducted a Natural Heritage inventory of the north end of Wallops Island in 1994-1995. The focus of this project is to revisit the previously documented natural heritage resources to assess their status and conduct a small amount of additional inventory to look for additional resources. The intent of the original inventory and this reassessment is to allow Wallops Flight Facility personnel to take these natural heritage resources into consideration when making decisions concerning land use, siting of facilities, and management/maintenance of areas containing significant biological resources. The focus of this initial trip was to determine the status of multiple colonies of the state rare plant big-headed rush (Juncus megacephalus, G4G5/S2), a plant of the southeastern U.S. known from interdunal swales, marshes, and human-created openings in the Outer Coastal Plain of Virginia. In some of the previously documented locations for this species, stands of dense wax myrtle (Morella = formerly Myrica spp.) now hinder access to the former sites suggesting loss of the previous interdunal swale habitat of this

species; a couple of sites that could be reached had either been lost to common reed invasion or shrub expansion. However, large areas of sand deposition since 1994-1995 have created new dune and swale habitat to the southeast, and new locations for big-headed rush were documented in these new swales on this trip. More botanical work, including the search for more big-headed rush and the status update on several other state rare plants, southern beach spurge (Chamaesyce bombensis) and seaside plantain (Plantago maritima var. juncoides), as well as zoological and ecological surveys, will continue through late summer/early fall.

Dark-red heads of big-headed rush (Juncus megacephalus)

Small whorled pogonia survey in Stafford County - 7/22/11

A survey for the federal and state listed orchid small whorled pogonia (Isotria medeoloides, G2/S2LT/LE/) was conducted by the DCR Natural Heritage Field Botanist in mid-July on a privately-owned tract in Stafford County. This site had been previously surveyed for this species in 2007 by a private consulting firm at which time a colony of nine plants was found. The U.S. Fish and Wildlife Service requires another survey before any proposed action is taken if more than two years have passed since a survey for this species has been conducted. This globally rare orchid is restricted to the eastern U.S. and Ontario, Canada, and in Virginia ranges from the Coastal Plain to the Cumberland Plateau with most of the Virginia occurrences located in the Coastal Plain and Piedmont. In Virginia small whorled pogonia is most typically found in deciduous second or third growth successional hardwood forests with fairly sparse ground cover and highly acidic, nutrient-poor, sandy loam soils. Our knowledge of the habitat for this species in Virginia, however, has been expanding in recent years, with plants found in a hemlock-dominated stand, under mixed hardwood-pine canopy, and in forests with more nutrient-rich soils. Populations are generally associated with some canopy break such as being situated near a stream bed or from more ephemeral circumstances such as downed trees. Habitat delineated as suitable for small whorled pogonia by the 2007 surveyors was targeted for survey at the Stafford County site in 2011, with lesser time spent on habitat delineated as marginal. The resurvey by DNH resulted in updated status information for the known colony, where only two young stems were observed, but no additional colonies were found over the wider tract. The results of the survey will help guide land use decisions at the site.

Young small whorled pogonia (Isotria medeoloides), Stafford County

Natural heritage biologists co-author paper describing new plant species – 9/02/11

A scientific paper co-authored by DCR- Natural Heritage Ecologist Gary Fleming, DCR- Natural Heritage Botanist Johnny Townsend, and University of South Carolina botanist John Nelson entitled "A New Hedge-Nettle (Stachys: Lamiaceae) from the Mid-Atlantic Piedmont and Coastal Plain of the United States" was published this month in the Journal of the Botanical Research Institute of Texas (JBRIT). The paper describes a new species of the mint family, Stachys matthewsii (Matthews hedge-nettle), that is endemic to the Piedmont of southern Virginia and North Carolina, as well as an area along the James River in Surry County, Virginia. The paper is the culmination of more than 30 years of research conducted by the authors, both individually and together. A number of historical collections of Matthews hedge-nettle that had been made between 1938 and 1978 were incorrectly attributed to other species. Between 1978 and 1998, the authors discovered additional populations and recognized that the plants did not match existing species concepts. In 2008, the authors examined more than 400 specimens of Stachys from Virginia and out-of-state herbaria in order to further identify and refine all the taxonomic characters that distinguish the new species. Matthews hedge-nettle is named in honor of James Matthews, an outstanding botanist, teacher, and mentor at the University of North Carolina at Charlotte.

Matthews Hedge-Nettle
(Stachys matthewsii)

Outreach and Education

DCR Presents at York River Research Symposium – 4/20/11

On April 20, 2011, DCR Natural Heritage Stewardship Biologist Kevin Heffernan was among 22 scientists presenting research results at the York River Research Symposium sponsored by the Virginia Institute of Marine Science. Heffernan gave an overview of DCR's Phragmites Aerial Survey and Mapping project, presented findings from partial surveys within the York River watershed and discussed plans to survey the Pamunkey and Mattaponi rivers for Phragmites in 2011. Other researchers at the symposium presented on a wide variety of topics including sea level change, marsh plant community change, salinity and sedimentation impacts, terrapin foraging in eelgrass and impacts of the non-native blue catfish on native fish abundance.

Crow's Nest Natural Area Preserve Field Day – 4/30/2011

DCR Natural Heritage staff in cooperation with Stafford County held a field day at Crow's Nest Natural Area Preserve on Saturday April 30. Approximately 85 individuals participated in guided hikes lead by DCR Natural Heritage, Stafford County Planning and U.S. Army Corps of Engineers staff. Visitors expressed their appreciation for getting Crow's Nest protected, for the effort to make it available for visitation on Saturday and the quality of the guided hikes

Nature Fair and Plant Sale – 4/30/11

A Natural Heritage Project Review assistant participated in Crestwood Elementary School's Nature Fair and Plant Sale on April 30, 2011. Approximately 300 children and adults participated in the event. The Natural Heritage display had information and pictures of the Natural Area Preserve System and rare threatened and endangered species from Chesterfield County. It also included a terrarium with two northern purple pitcher plants. The children had an opportunity to make their own pitcher plant to catch flies with supplied materials while hearing about the Natural Heritage program.

Phragmites Control Presentation –5/20/11

DCR Natural Heritage Eastern Shore Region Steward, Dot Field, was invited to speak on Phragmites control at the monthly meeting of the Little Pungo Ruritan Club of Accomack County. Many of the club members had waterfront properties, including farmland and were concerned about the spread of this invasive plant. Twenty-two club members attended the presentation.

Invasive Species Publications – 6/3/11

The Virginia Invasive Species Working Group's Advisory Committee has completed publication of three publications to raise awareness of invasive species, the problems they cause, and the costs to society to manage them. The publications are: 1) A twelve-page color brochure: Twelve Invasive Species of High Concern in Virginia. This brochure introduces the issues and profiles twelve species, including established species like tree-of-heaven and potential threats such as sirex wood-wasp; 2) An educational poster "Invasion of the Habitat Snatchers" which playfully introduces the issue and promotes the Invasive Species of Virginia website; 3) An informational poster offers quick facts on each of the twelve species highlighted in the brochure. The publications are being distributed to state and federal resource agencies, non-profit organizations, and industry stakeholders. They will also be distributed to schools, especially science classrooms. Coordinated by DCR staff, the publications are the work of multiple agencies and partners, including VDACS, DGIF, DOF, Virginia Cooperative Extension, Virginia Master Naturalists, USFWS, Virginia Native Plant Society, Friends of the Rivers of Virginia, The Nature Conservancy, and the Virginia Nursery and Landscape Association. The publications may be requested from DCR. Electronic versions of the posters and brochures will be made available on at www.vainvasivespecies.org.

Career Day Event – 6/13/11

DCR Inventory botanist, Chris Hobson, participated in a Career Day event at George Watkins Elementary School in new Kent County. He talked about Natural Heritage and what it is like to be a biologist to approximately 100 children and adults.

Eastern Shore Master Naturalists Society Meeting – 7/19/11

DCR Inventory biologist, Chris Hobson, gave a talk on Odonates to the Eastern Shore Chapter of the Master Naturalists on July 19, 2011. The mini-seminar covered the ecology, behavior and identification of Eastern Shore Odonates, including identifying the particular habitat in which each species could be found.

Wreck Island NAP visited by Secretary of Natural Resources Doug Domenech – 8/23/11

Secretary of Natural Resources Doug Domenech, DCR Director David Johnson and DCR Deputy Director Jeb Wilkins and members of the Secretary's staff visited Wreck Island NAP on August 23. Secretary Domenech was shown shorebird nesting habitat and assisted in the removal of signs designating nesting colonies. Colonies on the island are generally active from May through early August. Secretary Domenech was also informed on the role of natural processes in the formation of natural communities on barrier islands and given an up-close view of how these processes have affected the Wreck Island NAP landscape over time. After a picnic lunch on the island, Secretary Domenech and his staff returned to the mainland with souvenirs of their trip – shells, sand dollars and "goober stones". DCR-DNH staff leading the trip were Director Tom Smith, Eastern Shore Region Steward Dot Field and Eastern Shore Stewardship Technician Richard Ayers.

DCR – Invasive Species Field Trip – 9/10/11

On Saturday September 10, DCR Stewardship Biologist, Kevin Heffernan, guided a University of Richmond Invasive Species Biology class field trip to New Point Comfort Natural Area Preserve on the Chesapeake Bay where students collected tissue samples of Phragmites. The class, led by Dr. Carrie Wu, is investigating Phragmites genetic and morphological markers used to distinguish native from non-native invasive haplotypes. Using the samples collected on the field trip and other samples provided by Natural Heritage staff, the class will conduct genetic analysis, examine plant morphology, and conduct greenhouse experiments by growing Phragmites under different conditions. The results will help clarify questions that have recently emerged regarding the characteristics used to tell native Phragmites from the invasive Phragmites.


Invasive Species Field Trip

Land Conservation

Stream Clean Up: - 4/21/11

Five Heritage staff members along with Starbucks employees participated in a community service Chesapeake Bay Foundation's Clean Up of Horsepen Branch Creek on April 21, 2011. This urban stream located off Broad Street is a tributary of the James River, eventually flowing into the bay. The clean-up effort collected approximately 15 bags of trash including skateboards, a shovel, fencing, various sporting equipment and countless numbers of plastic bags. This event was part of Chesapeake Bay Foundation's earth day activities.

Natural Resource Conservation Service Easement Boundary Sharing Agreement – 7/15/11

The NRCS has recently determined that NRCS held easement boundaries are public information, and NRCS can now share its easement boundary information with DCR. NRCS had been operating under the instruction that easement boundary information was not to be disclosed under section 1619 of the 2008 Farm Bill. However, NRCS has determined this is not the case and that easement boundaries are public information. NRCS will move ahead with providing DCR the boundaries for Grassland and Wetland easements and DCR will work with NRCS staff to provide NRCS with the boundaries of the Farm and Ranch Land Protection Program easements (FRPP) NRCS has assisted with or may hold an interest in. At present DCR has data on a total of about 7660 acres of NRCS easements and right now about 1719 remain uncounted. NRCS has stopped reporting any newly protected acres, so this is great news.

Chesapeake Land Conservation Priority System – 7/29/11

DCR Natural Heritage Director Tom Smith participated in a meeting with NPS, USGS and NatureServe staff exploring opportunities for collaboration in the development of a Chesapeake Land Conservation Priority System. The system was called for in the Strategy for Protecting and Restoring the Chesapeake Bay Watershed issued in 2010 by the Federal Leadership Committee for the Chesapeake Bay in response to the Chesapeake Bay Protection and Restoration Executive Order 13508. Since that time, the USGS and the NPS convened an action team of federal, state and non-governmental organizations to advise on development of the system. The Federal Leadership Committee (FLC), which includes senior representatives of the departments of Interior, Agriculture, Defense, Commerce, Homeland Security and Transportation and EPA has been briefed on the needs. The FLC, the action team and DOI officials all concurred on the need to explore potential collaboration with NatureServe. The web based LandScope system, which Virginia played a key role in developing, is a great example of a readily available tool to enable a diversity of end users to make informed decisions related to land conservation priorities. Its user friendly web interface and highly relevant datasets complement our initial prototype, which provides more advanced decision support tools. In the coming weeks work will be done to draft a document outlining the elements of a cooperative arrangement for consideration to move the Chesapeake Land Conservation Priority System forward.

Belle Isle Clean-Up – 8/14/11

Four Heritage staff members participated in a community service Chesapeake Bay Foundation's clean up of Belle Isle on August 11, 2011. This Richmond City park is a small island in the James River widely used for recreational purposes. The clean-up effort collected approximately 4 bags of trash including numerous cans and bottles and increased awareness of disposing of trash properly for people utilizing the park. This event was part of Chesapeake Bay Foundation's "I am for Clean Water" campaign.

Purchase of Davis Tract – Pickett's Harbor Natural Area Preserve – 9/23/11

On Monday September 26, DCR purchased the 88-acre Davis tract on the Chesapeake Bay in Northampton County. This purchase was funded entirely by a $1.5 million grant from America Electric Power of Columbus Ohio. The protected property will be known as the Pickett's Harbor Natural Area Preserve. It will be managed to protect Chesapeake Bay beach and dune habitats, forested dunes, a freshwater pond known as Devil's Ditch, and the federally threatened Northeastern beach tiger beetle. The 60 acres of agricultural fields will be converted to habitat for migratory songbirds through planting on native shrubs and tree seedlings in the future. This tract was made available for purchase by Sheppard Davis and his wife Jo Ann Blair-Davis of Virginia Beach and their family. Though very attached to this property, the Davis family decided that through state ownership, the natural values here will remain for all to enjoy in the future.

DCR - South Quay Land Acquisition Project Update – 9/30/11

DCR staff participated in a conference call this week with International Paper (IP) to discuss the progress on the 2,900 acre South Quay land acquisition project. DCR and IP staff met in the field in August to resolve questions regarding the boundary of the parcels to be sold by International Paper. IP has shared several real estate documents required by DCR including the source deeds, title work and right of way easement relating the property to be acquired. Bids have been received by the Department of General Service for the real estate appraisal and the appraiser will be selected next week. The firm Marsh & Legge has been hired by DCR to conduct the boundary survey and Phase 1 environmental inspection. DCR has issued a quick quote to solicit a timber cruise and timber appraisal over the 2,900 acres.

Natural Heritage Management Tools for FY2010

Activity 4/01/11 – 9/30/11
New Mapped Locations (Eos) – 155
Updated Mapped Locations (Eos) – 54
New Conservation Sites – 89
Updated Conservation Sites – 28
QC Mapped Locations (Eos) –
QC Conservation Sites –

Total Number in Database – 9/30/11
Animal Mapped Locations (Eos) – 1171
Plant Mapped Locations (Eos) – 1218
Community Mapped Locations (Eos) – 498
Conservation Sites – 866
Managed Areas – 7613
Mapped Tracts - 9189

c) DCR – Division of Planning and Recreation Resources

Nothing to report this period.

d) DCR- Division of Chesapeake Bay Local Assistance

Nothing to report this period.

5) Department of Game and Inland Fisheries (DGIF)

Recreational Fisheries

1. Anadromous Species Monitoring

A. Stream Monitoring, Juvenile Alosines

Weekly boat electrofishing for adult anadromous fish began in late February 2011 on the James and Rappahannock rivers in the fall zones and on the Chickahominy River at Walkers Dam. Less frequent sampling was also conducted on other streams such as the Appomattox and Mattaponi rivers. American shad were very abundant in tidal Rappahannock samples compared to recent sampling years. On the James below Boshers Dam, American shad catch rates were improved over 2010 results and similar to 2009 when we had the highest catch rate on record.

B. Stream Monitoring, Juvenile Alosines

Juvenile alosine sampling using a bow-mounted push net was conducted from June into July of 2011 on the James (Boshers pool) and Rappahannock (tidal) rivers. Boat electrofishing began in July and will continue into early November. Pushnetting upstream in the Boshers pool produced “normal” numbers unlike in 2010 when shad were scarce in push net samples. Electrofishing began toward the end of July when the fish reached a size large enough to improve their avoidance of the push net. Rappahannock collections (push net and electrofishing) have also been successful this year. Otoliths will be extracted from the American shad juveniles and examined under a black light microscope to determine origin. Oxytetracycline treatment of fry in the hatchery results in a visible ring in the otoliths under black light.

C. Mattaponi River Spring Anadromous Species Monitoring

During the spring anadromous spawning run VDGIF biologists regularly sampled the Mattaponi River from Aylett upstream to Zoar State Forest for anadromous species, with a focus on alosine species. This year, VDGIF increased effort in this area, with the goal of establishing baseline and trend data to assess run strength. Good numbers of adult American shad, hickory shad, and blue back herring were observed during these efforts. Analysis of data collected during these efforts is ongoing and results will be reported in the Federal Aid F111-R interim report for 2011.

2. Boshers Dam Fishway

The 2010 video review was completed. A change was made from reviewing all useable video to sub-sampling each hour of useable video. The first 15 minutes of each hour was reviewed and the count expanded by a factor of four (741 hours from April 8 to June 8 were sub-sampled). This technique resulted in an estimate of 116 American shad passed, slightly up from 100 in 2009 and the highest count since 2003 (174). The peak count to date occurred in 2002 (746). The fishway was operated again during the 2011 migration season and the video that was collected is currently being reviewed using the sub-sampling technique. After reviewing roughly half of the video so far, the sub-sample yields an estimate of 500 American shad passed.

3. Tidal River Catfish

While introduced flathead catfish numbers are relatively low in the tidal reaches of the James River system, the population has been expanding in recent years. Flathead catfish abundance has increased in upper tidal reaches of the James, and the size distribution of larger flatheads continues to increase. Range expansion has occurred, and flathead catfish now occur in downstream tributaries such as Herring Creek, Powell Creek, and Wards Creek. Flathead catfish have been collected by VDGIF biologists in the tidal Chickahominy River, just below Walkers Dam, and in the non-tidal Chickahominy just above Chickahominy Lake. In June, as part of an ongoing effort to develop knowledge of the tidal James River flathead catfish population, VDGIF biologists sampled 11 sites in the upper tidal James River using specialized low frequency electrofishing techniques. Otoliths were collected from over 100 individuals to assess age and growth.

In August, VDGIF Fisheries biologists sampled the tidal Rappahannock River, from Skinkers Neck (Caroline County) downstream to the Route 301 bridge (Tappahannock). A total of 13 locations were sampled, resulting in the capture of more than 5,000 catfish, over 99% of which were blue catfish. The fish were counted, measured, and weighed before most of them were returned to the river (a sub-sample of fish was retained for age and growth analyses). This is part of an ongoing effort to monitor the catfish assemblage in the tidal Rappahannock River that began in 2000, with a primary focus on the introduced blue catfish population which occurs there. VDGIF has documented dramatic declines in individual blue catfish growth rates in this river, with growth continuing to decline. In fact, due to slow individual growth, less than 2% of blue catfish in this river are over 50 cm, the size when blue catfish can be considered top predators, and, only 0.5% of the population is over 80 cm.

In August, VDGIF biologists surveyed the Mattaponi River, sampling 8 sites for catfish species using specialized low frequency electrofishing techniques. As in the past several years, blue catfish accounted for over 98% of the sample. Otoliths were collected for age and growth analysis. As has been the case in the Rappahannock River, growth of blue catfish in the Mattaponi River has declined significantly, growth declines in this river have been documented in the period beginning in 2004. While freshwater mussels were a dominate food item in blue catfish over 50 cm in the Mattaponi prior to 2004, freshwater mussels have been absent in blue catfish gut contents examined in subsequent years. Declines in individual blue catfish growth have been greatest in these larger fish (> 50cm).

As part of an on-going effort to monitor the recently established blue catfish population in the Piankatank system, in August, VDGIF biologists conducted an electrofishing survey of lower Dragon Run and the upper Piankatank targeting catfish species. VDGIF biologists first collected blue catfish from the Piankatank

and lower reaches of Dragon Run in early 2003. Since that time, VDGIF biologists have documented the expansion of the species within the system, as well as an increase in the relative abundance of the species in the reaches where it was first documented in the river. However, white catfish continue to occur in good numbers, with an excellent size distribution in the population – larger individual white catfish are represented in samples. In other rivers where blue catfish have established, white catfish abundance and size distributions have declined dramatically. It may be that in this relatively low productivity system, white catfish will be better able to compete – time will tell.

Analysis of data collected during 2011is ongoing and results will be reported in the Federal Aid F111-R interim report for 2011.

4. Fish Passage Projects

The new owner of Harvell Dam (first blockage on the Appomattox River) has challenged the removal option for which we secured funding from USFWS and NOAA with the previous owner's intent of cooperation. We are currently completing a study according to HB 1855 (2011 General Assembly session) to determine what modifications need to be made to the existing Denil fishway to achieve suitable fish passage. Fishway replacement and other fishway alternatives are also being considered in this study. The next step will be to determine if removal is still an option or if the owner will implement an agreed upon approach involving a technical fishway.

Riverton Dam on the North Fork Shenandoah River was removed in October 2010 (DGIF, Front Royal and USFWS partnership). This reopened 95 miles of the North Fork Shenandoah and significant tributaries to species such as the catadromous American eel and resident fishes.

Newport News is currently replacing Walkers Dam on the Chickahominy River. A new Denil fishway will be constructed and hopefully completed in time for the 2012 spawning run. The old Denil fishway will be removed as part of the phased dam replacement.

Charles Lake Dam on Kimages Creek, a tidal James tributary, was removed in December of 2010. A small breach occurred in the dam about five years ago. The restoration project by VCU, TNC and AR/NOAA involved removing enough of the earthen dam to restore the natural channel to provide fish passage and wetlands restoration. DGIF and VCU collaborated in the spring of 2011 to sample for in-migrating herring. Small numbers of both blueback herring and alewife were captured in a Fyke net set in the new breach documenting the use of the reopened habitat by target fish species. DGIF also collected American eel elvers approximately one mile upstream of the breached dam.

5. *American Shad Restoration Program*

Stocking of American shad fry for restoration purposes continued on both the James and Rappahannock rivers during Spring, 2011. Brood stock were collected and eggs were taken from the Pamunkey and Potomac rivers for stocking the James and Rappahannock rivers, respectively. Eggs were shipped to the U. S. Fish & Wildlife Service's Harrison Lake National Fish Hatchery for culture to the fry stage and stocking at 2-3 days of age. The total numbers of fry stocked for restoration purposes were as follows: James River (2.4 million) and Rappahannock River (4.1 million). The stocking in the James River was much lower than the goal of 4 million due to lower than expected catches of brood stock on the Pamunkey River, whereas this same goal was slightly exceeded for the Rappahannock River. As mitigation for the taking of brood stock, fry were stocked in the Potomac River (200,707) and one of its tributaries, the Occoquan River (286,951). Due to the much lower than expected production, no fry were stocked in the Pamunkey River as mitigation.

Creel surveys were conducted near the fall lines of the James and Rappahannock rivers from mid-March to Mid-May, 2011 primarily to evaluate the catch and harvest of *Alosa* species during their spawning runs. Data have been entered and processed, and results are pending analysis.

6. Monitoring of Northern Snakehead Expansion in Bay Watershed

In 2010, VDGIF biologists documented expansion of northern snakehead in all Potomac River tributary watersheds sampled, including: Mattox Creek, Monroe Creek, Yeocomico River, Nomini Creek, and Lower Machodoc Creek. In July 2011, work to document range expansion of this exotic species continued, with electrofishing work in the Upper Machodoc Creek watershed. The species was found to occupy fresh-oligohaline reaches of the Upper Machodoc system.

7. Fish Community Electrofishing Surveys

VDGIF has established annual fixed station electrofishing surveys in the tidal Rappahannock River, Mattaponi River, Pamunkey River, tidal James River, and the tidal Chickahominy River. These surveys are intended to monitor fish populations and assemblages that occur in shoreline and shallow water habitats in the fresh-oligohaline reaches of these rivers and their tidal tributaries. In September, VDGIF biologists sampled 22 sites in the tidal Rappahannock River system. Sampling occurred in the Rappahannock mainstem, as well as Cat Point Creek, Gingoteague Creek, Jetts Creek, Line Creek, Pee Dee Creek, Marsh Creek, Occupacia Creek, and Totosky Creek. Impacts from the tropical systems that recently moved over the region were obvious, and widespread. Areas of extremely low abundance of centrarchids and cyprinids were widespread, and other species groups were also collected in extremely low numbers relative to previous survey years. Areas where this was most dramatic were the lower tidal mainstem, below Route 301 and tributaries from Jetts Creek downstream to Occupacia Creek.

Analysis of data collected during 2011is ongoing and results will be reported in the Federal Aid F111-R interim report for 2011.

Instream Flow Study:

In June 2011, a meeting was held with the Appomattox River Water Authority (ARWA), the Dept. of Environmental Quality (DEQ) and additional stakeholders to develop a plan to evaluate instream flows in the Appomattox River below Lake Chesdin (Brasfield Dam). This resulted in the development of an Instream Flow Incremental Methodolgy (IFIM) plan to evaluate alternative flows on the aquatic life in the Appomattox River between Brasfield Dam and the head of tide. Transect selection for this IFIM study was conducted in July, 2011 involving DGIF and the contractor for ARWA. Data collection was initiated in September, 2011. A Demonstration Flow Assessment (DFA) is scheduled for September/October 2011. The results from the IFIM study will be used to evaluate alternative release scenarios from Lake Chesdin.

Wetlands:

1. Mitigation Banking

VDGIF continues to participate on the Inter-Agency Review Team that oversees stream and wetland mitigation banking and provide input on new banks all over Virginia, including the coastal zone. Numerous proposals have been made for new banks and/or additions to existing banks within the coastal region of Virginia during this reporting cycle. DGIF is also now part of the IRT overseeing the Virginia Aquatic Resources Trust Fund projects.

2. Wetland Restoration

VDGIF continues to have an active voluntary wetland restoration program. The program assists private, state, local, and federal government landowners to restore wetlands on their property. Landowners receive assistance with site selection, cost-share programs, restoration design, and permit issues. The Virginia Department of Game and Inland Fisheries is actively restoring wetland habitats in Virginia. Partnerships with organizations such as The U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, The U.S. Department of Agriculture's farm bill programs, Ducks Unlimited, The Chesapeake Bay Foundation, and many others have resulted in additional wetland acres restored. DGIF has implemented the Virginia Migratory Waterfowl Stamp Grant program designed to give grants to non-profit organizations for wetland restoration,

enhancement or creation. Grants have been awarded to Ducks Unlimited, The Elizabeth River Project, The Nature Conservancy and many other to restore wetlands in Virginia.

3. Wetland Mitigation at Mattaponi Wildlife Management Area

VDGIF is currently working with the Department of Defense at Fort A. P. Hill on a wetland mitigation project at Mattaponi Wildlife Management Area. The Department of Defense has delineated a wetland mitigation bank on the Management Area. Contractors working with the Department of Defense have identified approximately 200 acres as potential wetland restoration or creation sites. They are currently monitoring the hydrology on site and will be submitting a proposal within the next few months to identify the creation or restoration sites.

Land Acquisition:

VDGIF recently purchased two (2) tracts of land in Caroline County for a total of 2,542.6 acres of additional land preservation in the coastal zone during 2010-2011. This new parcel has been named Mattaponi Wildlife Management Area.

Geographic Information Systems/Data Management:

VDGIF continued to maintain spatial datasets of wildlife locations and resources in the coastal zone. VDGIF continues to focus on improving the both the range and quality of our species occurrence data as well as information on VDGIF properties. Staff completed several structural improvements to our observation database from which internal and external users will benefit. Over 1000 new observations for species in the Coastal Zone were added, including some for threatened and endangered species. Eagle nests from last year were obtained and incorporated into the Virginia Fish and Wildlife Information System. Several new subscribers were added to the Wildlife Environmental Review Mapping System (WERMS), and two quarterly updates were performed and notifications sent to users. Staff started working on improving our Bald Eagle Concentration Areas and Roosts dataset (BECAR) in the Coastal Zone, and these efforts will continue. Similarly, the Anadromous Fish Use Areas layer was updated to add expanded streams.

VDGIF is working with partners to implement the Coastal Virginia Ecological Value assessment dataset for conservation planning. The effort to create this dataset was supported through a Coastal Zone grant.

VDGIF completed its regular update to Find Game, which provides maps and information about public hunting opportunities. New properties added to the application in the Coastal Zone include the Mattaponi Wildlife Management Area.

NonGame Species Monitoring and Research:

1.Delmarva fox squirrels

One of the recovery objectives for the federally endangered Delmarva fox squirrel *(Sciurus niger cinerus;* DFS*)* is to restore populations throughout its historic range, which includes Virginia's Eastern Shore. At present, Chincoteague National Wildlife Refuge harbors the only known self-sustaining DFS population in the state of Virginia. The translocation of DFSs on lands that currently do not support squirrels have proven to be a successful means of expanding and increasing DFS populations within the species' historic range. Many of the forests that may serve as suitable translocation sites Virginia's Eastern Shore are privately owned. Several years ago, VDGIF was awarded federal funding under the Private Landowner Incentive Program to develop and implement a Safe Harbor Program that would provide private landowners with legal assurances that they will not be held accountable if translocation efforts fail, and funding to conduct habitat management activities on their lands that would benefit future introductions of DFS. In 2007, VDGIF entered into a contractual agreement with a locally owned environmental consulting firm (hereafter referred to as contractor) to assist with the identification of at least two private property owners with suitable squirrel habitat who are willing to have DFS translocated onto their property and agree to engage in land management and restoration activities

designed to benefit DFS. Below is a summary of recent actions taken towards the establishment of a DFS safe harbor program on Virginia's Eastern Shore.

During the first year of the project an intensive GIS based landscape analysis was used to identify potential areas on the Eastern Shore that are privately owned, likely contain suitable DFS habitat, and have predicted land uses conducive to supporting DFS populations. This analysis resulted in the discovery of two potential sites near the Maryland/Virginia state line that encompass an area of approximately 4,200 acres of largely forested habitat, hereafter collectively referred to as Conservation Area 1. Both sites are actively managed for silviculture and are within five miles of two viable DFS populations located in Maryland. If the introduction of DFS into Conservation Area 1 is successful and results in an expanding population, it is possible that genetic interchange may occur between the Maryland populations and the introduced Virginia population.

Following the discovery of Conservation Area 1, the contractor conducted an on-the-ground habitat suitability analysis at the two sites after gaining permission from both landowners to survey their lands. Results from the habitat surveys indicate that neither property is entirely suitable for DFS; however, both sites contain parcels with suitable DFS habitat that are large enough to sustain a viable population over the long term. Furthermore, there is also potential connectivity among suitable tracts within each property and between the two properties. Collectively, these areas represent several potential DFS translocation sites that can serve as the "core" area for the DFS reintroduction in northern Accomack County and pave the way for the implementation of long-term DFS management strategies.

The majority of work completed during this reporting period continued to focus on persuading the two major landowners in Conservation Area 1 to allow DFS translocations to occur on their properties in response to their growing reluctance to enter into a safe harbor agreement because of fears regarding possible restrictions imposed by the Endangered Species Act. One of the landowners is a private citizen while the other is Sustainable Conservation, Inc., which a subsidiary of the Conservation Fund.

Despite the set-backs described above, the contractor updated the five year DFS management plan for Conservation Area 1 that was drafted during the previous reporting period. It provides in detail, forest management recommendations that would ensure the success and viability of an introduced DFS population in Conservation Area 1 and at the same time does not place any encumbrances on the landowners.

Lastly, the state attorney general reviewed the general language of a Safe Harbor Agreement permit application to be submitted to the USFWS. He offered some minor comments and recommendations, but overall felt comfortable with the content of the application. We plan to meet with his staff during the next reporting period to finalize the document.

A. American Oystercatcher

Breeding Summary

American Oystercatcher Population Estimates and Distribution on the Virginia Coast

The American Oystercatcher (*Haematopus palliatus palliatus*) is ranked nationally as a species of high conservation concern (Brown *et al.* 2008) and in Virginia it is considered a species with a high conservation need (VDGIF 2005). In addition, oystercatchers are considered an important indicator species for barrier island/salt marsh communities. Given the large ecological overlap with other species in these habitats, including Piping Plovers (*Charadrius melodus*), Wilson's Plovers (*Charadrius wilsonia),* and many colonial nesting seabirds, the implementation of science-based conservation measures for American Oystercatchers at key wintering, migration, and breeding sites will also provide benefits for a number of other coastal species (Schulte *et al.* 2007).

Annual American Oystercatcher breeding surveys began in Virginia 12 years ago. The first survey was conducted by a private VDGIF contractor in 2000 and focused specifically on oystercatchers; all subsequent surveys have been carried out in conjunction with the annual Piping Plover/Wilson's Plover surveys. Sites covered during these surveys consistently included the barrier islands located along the seaward margin of Virginia' Eastern Shore, the southern tip of the Delmarva Peninsula (i.e., Wise Point), three inland sites on the western shore of the Chesapeake Bay (i.e., Craney Island, Grandview Beach and Plum Tree Island National Wildlife Refuge), and the Atlantic facing beaches south of Virginia Beach (i.e., False Cape State Park and Back Bay National Wildlife Refuge). It should be noted, the annual surveys only encompass a portion of oystercatcher breeding habitat in Virginia and therefore the results do not reflect statewide totals.

A total of 369 American Oystercatcher breeding pairs were recorded during the 2011 Piping Plover, Wilson's Plover and American Oystercatcher survey. The number of pairs decreased by 8% compared to 2010 results (Figure 1) and includes a nesting pair that was discovered for the first time on an artificial island that is part of the Hampton Roads Bridge and Tunnel complex spanning the James River along the I-64 corridor. Unfortunately, the pair lost their eggs early in the breeding season and abandoned the site shortly afterwards. Despite the fact that this island is developed and experiences considerable human disturbance, it has supported large numbers of breeding seabirds since the late 1980's.

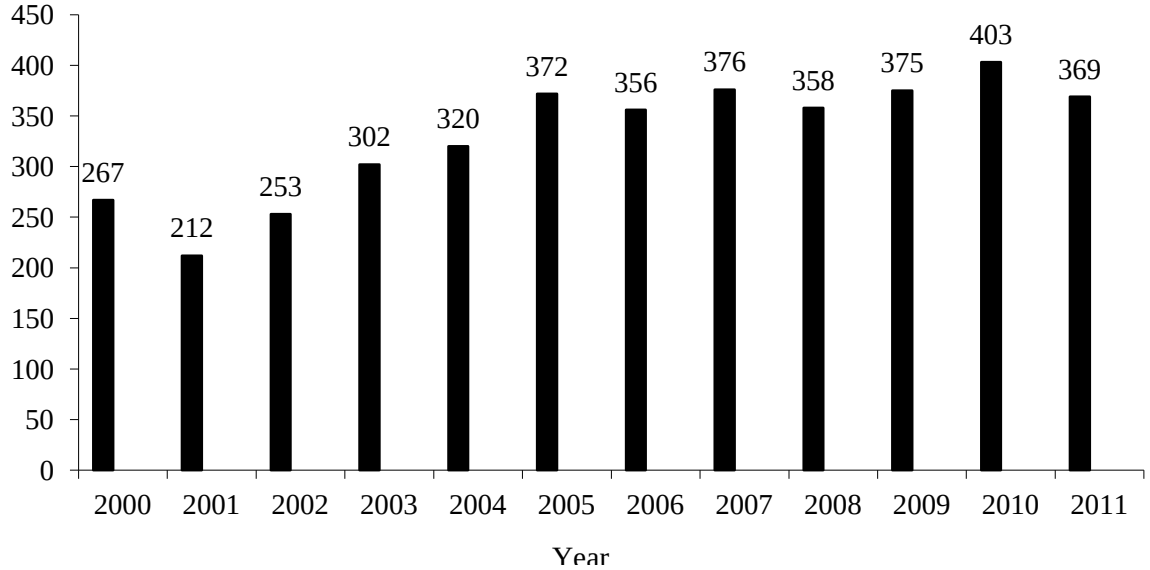


Figure 1. Number of breeding pairs for the barrier island portion of the annual American Oystercatcher survey of the Virginia coast, 2000 – 2011. Data presented does not include end-of-season totals. Data for 2000 adapted from Terwilliger and Cross 2000.

The 2011 end-of-season total, which includes additional pairs discovered during productivity studies on the barrier islands was 387 pairs and reflects a 7% decrease from last year's end-of-season total of 414 pairs.

American Oystercatcher Productivity

American Oystercatcher productivity has been monitored on the Virginia barrier islands since 2001 and in the seaside marshes since 2003. In 2009, VDGIF staff began monitoring oystercatcher productivity on islands located in Accomack County in the eastern half of the lower Chesapeake Bay. The decision to shift the majority of VDGIF's oystercatcher monitoring efforts from the barrier islands to the eastern shore of the Chesapeake Bay was based on the fact that this area of the Bay supports approximately 14% of the Commonwealth's oystercatcher breeding population and harbors nearly 90% of the breeding pairs in the Chesapeake Bay. Thus, we considered this an important breeding area that warranted further study. No prior attempts have been made to measure oystercatcher breeding success in the Chesapeake Bay; thus by filling this

data gap, we are able to compare reproductive success among the three most important oystercatcher breeding areas in Virginia; the barrier island chain, the seaside lagoon system, and the Chesapeake Bay. This work was further motivated by the fact that many of the Bay islands are experiencing severe erosion, which added a level of urgency to begin collecting avian productivity data before the sites become unsuitable for ground nesting birds.

Oystercatcher productivity monitoring entails locating oystercatcher breeding pairs and their nests or broods and following all nesting attempts until the broods fledged or the attempts failed. Each nesting territory was visited once every 5 - 20 days from April – August. Below, we report preliminary results for the 2011 breeding season.

Seaside Lagoon/Barrier Island Complex

This year, VDGIF conducted American Oystercatcher productivity studies on Cedar Sandbar, a small shoal that reconnected with the north end of Cedar Island in the spring of 2011 and supports one of the highest oystercatcher breeding densities along the barrier island chain. It is for this reason that preliminary productivity estimates for all barrier island sites are presented in this report.

The barrier island chain located seaward of the Delmarva Peninsula supports over 50% of Virginia's oystercatcher breeding population. From 2006 – 2008, oystercatcher productivity was monitored on all but two of the barrier islands (i.e., Parramore and Hog islands) by VCR, Chincoteague National Wildlife Refuge, Eastern Shore of Virginia National Wildlife Refuge and VDGIF. In 2009 and 2010, VCR assumed monitoring responsibilities on all VCR-owned islands allowing VDGIF to examine oystercatcher reproductive success in the Chesapeake Bay. In 2011, only 9 out of the 12 islands were monitored due to VDGIF and VCR staff shortages. This year's site specific productivity estimates are presented in Table 1. These data are preliminary as proofed results and summaries for each of the islands are still pending. Sites that experienced low productivity either supported unmanageable predator populations (i.e., (Assateague, Wallop's and Fisherman islands) or sustained regular tidal inundation (i.e., Myrtle Island). All other islands continue to produce relatively high numbers of fledged young.

Table 1. Preliminary results of American Oystercatcher productivity monitoring on Virginia's barrier islands, 2011. Parentheses indicate 2010 monitoring results. ND = no data, Unk = unknown.

Site	No. pairs Monitored	No. known nesting attempts	No. yng Fledged	Productivity estimate[1]
Assateague Island[2]	18 (14)	31 (20)	1 (2)	0.06 (0.14)
Wallops Island[3]	5 (ND)	6 (ND)	0 (ND)	0.00 (ND)
Assawoman Island[2]	28 (28)	33 (30)	25 (38)	0.89 (1.36)
Metompkin Island[4]	103 (95)	109 (102)	54 (90)	0.52 (0.95)
Cedar Sandbar [5]	37 (36)	41 (52)	36 (17)	0.97 (0.47)
Cedar Island[2]	ND (25)	ND (26)	ND (37)	ND (1.48)
Little Cobb Island[4]	ND (13)	ND (Unk)	ND (5)	ND (0.38)
Wreck Island[4]	ND (38)	ND (41)	ND (32)	ND (0.84)
Ship Shoal Island[4]	32 (34)	35 (38)	27 (43)	0.84 (1.26)
Myrtle Island[4]	5 (8)	Unk (ND)	0 (3)	0.00 (0.36)
Smith Island[4,6]	19 (22)	21 (23)	21 (25)	1.10 (1.14)
Fisherman Island[6]	37 (38)	50 (46)	11 (19)	0.30 (0.50)
TOTALS	**284 (351)**	**332 (378)**	**175 (312)**	**0.62 (0.89)**

[1] No. young fledged/no. pairs. Calculations based on pairs with known success
[2] Data provided by Chincoteague National Wildlife Refuge
[3] Data provided by NASA Wallops Flight Facility
[4] Data provided by The Nature Conservancy
[5] Data provided by Virginia Dept. of Game and Inland Fisheries
[6] Data provided by Eastern Shore of Virginia National Wildlife Refuge

In 2011, VDGIF continued to monitor the reproductive success of oystercatcher pairs breeding in the seaside lagoon system adjacent to the village of Wachapreague (hereafter referred to as the Wachapreague marshes). The VCR began monitoring the Wachapreague marshes in 2004 and transferred the responsibility to VDGIF in 2005. This year, we monitored 35 pairs that collectively produced 6 young resulting in the second lowest productivity estimate since 2004 (Figure 1). Our data continue to suggest that tidal flooding is the most significant limiting factor for birds breeding in this system and generally results in numerous renesting attempts as nests get washed out during extreme tide cycles. For example, among the 35 pairs monitored this year, we documented a total of 68 nesting attempts. However, pairs that manage to elude flooding events during the incubation period and produce hatchlings stand a good chance of fledging young. Of the 21 pairs that hatched at least one egg in 2010, 18 (86%) fledged at least one young. High fledging success may be due in part to a lack of mammalian predators and an abundant food supply within or in close proximity to oystercatcher breeding territories. The variability in breeding success illustrated in Figure 1 reflects how the timing of flooding events in relation to oystercatcher nesting phenology plays an important role in overall productivity within the seaside lagoon system.

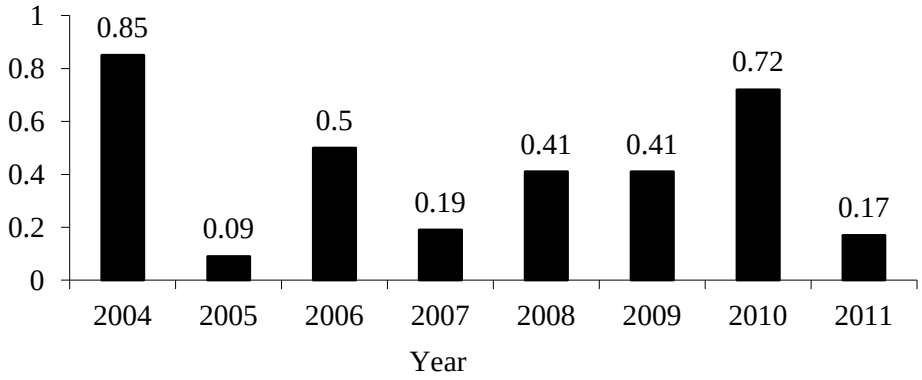


Figure 1. American Oystercatcher productivity rates in the Wachapreague marshes within the seaside lagoon system of Virginia's Eastern Shore, 2004 – 2011. Estimates reflect number of chicks fledged per pair. Only those pairs with known nests were included in the calculations. 2004 data were provided by the Nature Conservancy's Virginia Coast Reserve.

Chesapeake Bay Islands

We monitored the reproductive success of 67 oystercatcher pairs on six Chesapeake Bay islands in 2011 (Table 1). We did not cover Halfmoon, Webb and No Name islands this year because we were denied permission after submitting a formal access request to the private owner of this island chain. While the landowner considered our project to be valid and interesting, she refused our request out of fear of setting unwanted precedent should she receive similar requests in the future. The six sites covered this year were also monitored in 2009 and 2010.

The combined productivity estimate for the bay islands was 0.42 fledged young per pair, which represents a substantial decrease from the previous year's estimate of 0.78 fledged young per pair (Table 1). Clump and Watts islands were the only sites where productivity estimates were below the value (i.e., 0.38 fledged young per pair) required to maintain an increasing population (Brown *et al.* 2008). Watts Island productivity was consistently low throughout the three-year study (0.36 and 0.15 fledged young per pair in 2010 and 2009, respectively) largely due to washout events. Conversely, productivity on Clump Island during the previous two years was above 0.80 fledged young per pair. This year's precipitous drop in breeding success is less clear and may be a combination of factors including an overall reduction in suitable breeding habitat due to erosion; thus increasing competition for space with the large number of seabirds, including predatory gulls, also nesting on the island. In addition, this year we discovered raccoon (*Procyon lotor*) tracks on the site for the first time since the study began and it is possible the presence of this predator may have also negatively influenced productivity.

Table 1. American Oystercatcher productivity estimates on nine Chesapeake Bay islands in Accomack County, Virginia, 2011. Parentheses indicate 2010 monitoring results. Data provided by VA Dept. of Game and Inland Fisheries.

Site	No. pairs Monitored	No. known nesting attempts	No. yng Fledged	Productivity estimate[1]
Clump Island	12 (17)	16 (26)	3 (14)	0.25 (0.82)
Goose Island	11 (11)	12 (13)	8 (12)	0.78 (1.09)
Tangier Island	14 (13)	20 (13)	8 (11)	0.57 (0.85)
Watts Island	14 (11)	20 (15)	1 (4)	0.07 (0.36)
Halfmoon Island	ND (9)	ND (13)	ND (4)	ND (0.44)
Webb Island	ND (11)	ND (16)	ND (7)	ND (0.64)
No NameIsland	ND (1)	ND (2)	ND (0)	ND (0.00)
Parker's Island	9 (12)	13 (16)	4 (10)	0.44 (0.83)
Scarsborough Is.	7 (5)	7 (6)	4 (8)	0.57 (1.60)
TOTALS	**67 (90)**	**88 (120)**	**28 (70)**	**0.42 (0.78)**

[1] No. young fledged ÷ no. pairs monitored. Calculations based on pairs with known nests.

For the first time since the study began, the combined productivity estimate for the bay islands was below those reported for the barrier islands and seaside marshes, but remained well within the range of past annual estimates (Table 2). These data indicate that collectively, the bay islands continued to support source populations, but further monitoring will be necessary to determine how the distribution and reproductive success of breeding pairs on these islands will change as the amount of suitable nesting habitat continues to decrease because of rising sea levels and increased storm frequency. We will no longer monitor the Bay islands annually, but plan to repeat these studies every three to five years to measure the species response to habitat loss.

Table 2. American Oystercatcher productivity along Virginia's barrier island chain and within the seaside lagoon system, 2006 – 2011. Productivity estimates were based on the total number of pairs monitored within each geographic area and reflect number of young fledged per pair. Only those pairs with known nests were included in the calculations.

Area	2006	2007	2008	2009	2010	2011
Barrier islands	0.61	0.43	0.43	0.31	0.89	0.62
Seaside lagoon system	0.59	0.24	0.41	0.42	0.70	0.59
Chesapeake Bay islands	--	--	--	0.57	0.78	0.42

Literature Cited

Brown, S., T. Simons, S. Schulte, F. Sanders, B. Winn, B. Truitt, A. Wilke, S. Johnston, S. Melvin, and the American Oystercatcher Working Group. 2008. A business plan for the conservation of the American Oystercatcher: A Ten Year Plan to Secure a Keystone Coastal Species. Submitted to the National Fish and Wildlife Foundation, Manomet MA, 02345.

Schulte, S., S. Brown, D. Reynolds, and the American Oystercatcher Working Group. 2007. Version 2.0. American Oystercatcher Conservation Action Plan for the United States Atlantic and Gulf Coasts. 41 pp.

VDGIF. 2005. Virginia's comprehensive wildlife conservation strategy. Virginia Department of game and Inland Fisheries, Richmond, Virginia.

B. American Oystercatcher Banding Project

In 2003, The Nature Conservancy's Virginia Coast Reserve (VCR) initiated an American Oystercatcher banding program, which targeted primarily hatch year birds hand captured on breeding territories. In the first year, VCR staff applied unique combinations of multiple, UV resistant single layer darvic plastic wrap around color bands on the right and left metatatarsus and tibiotarsus along with a size 5 Bird Banding Laboratory (BBL) metal band on the right metatarsus. In 2004, the wrap around color bands were replaced with size 6 black color bands made of a triple-layer, UV-resistant darvic plastic. Each band was engraved twice with white, unique field-readable two-digit alpha-numeric codes and duplicated. Each bird received two identical color bands, one on each tibiotarsus, and a size 6 BBL metal band on the right metatarsus. In 2005, VDGIF began assisting with oystercatcher banding efforts in Virginia and below is a brief summary of work performed in 2011.

In 2011, Virginia switched to triple-stamped, vertically engraved 2-digit codes because we ran out of 2-digit code combinations the previous year. All of VDGIF's banding efforts during this performance period were focused on sites monitored for oystercatcher productivity (i.e., Chesapeake Bay islands, Cedar Sandbar and the Wachapreague marshes). We banded a total of 20 unfledged young on six bay islands, of which three did not fledge (Table 1). One additional fledged young was banded on Shanks Island by an independent researcher. In addition, we banded 2unfledged young in the Wachapreague marshes, both of which fledged. An additional 53 young were banded on Virginia's barrier islands by staff from VCR, Chincoteague NWR and Eastern Shore of Virginia NWR and VDGIF.

Table 1. Summary of American Oystercatcher banding in Virginia during the 2011 breeding season within three geographic regions. Parentheses indicate the number young that either did not fledge or died after fledging.

.Site	Total no. chicks banded
BARRIER ISLANDS	
Assateague Island[1]	1
Assawoman Island[1]	12
Metompkin Island[2]	13
Cedar Island[1]	3
Cedar Sandbar[3]	12
Cobb Island[2]	1
Fisherman Island[4]	11 (7)[5]
SUBTOTAL	53 (7)
SEASIDE MARSHES	
Chincoteague Bay[1]	4
Wachapreague[3]	2
SUBTOTAL	6
CHESAPEAKE BAY	
Clump Island[3]	4 (1)
Goose Island[3]	5
Scarborough Island[3]	3
Tangier Island[3]	5 (2)
Watts Island[3]	1
Parker's Island[3]	1
Shanks Island[6]	1
SUBTOTAL	20 (3)
TOTAL BANDED	**79 (10)**

[1] Data provided by Chincoteague National Wildlife Refuge
[2] Data provided by The Nature Conservancy
[3] Data provided by Virginia Dept. of Game and Inland Fisheries
[4] Data provided by Eastern Shore of Virginia National Wildlife Refuge
[5] Coded Bands from one of the marked young were removed due to band-related abrasions observed upon subsequent captures.
[6] Data provided by J. S. Weske, independent researcher.

Since 2003, 713 young and 21 adults have been banded in coastal Virginia (Table 2). In recent years, this has been is a collaborative effort on the part of VCR, Eastern Shore of Virginia NWR, Chincoteague NWR and VDGIF. The majority of banded birds have originated from breeding territories on the barrier islands; however, we are attempting to expand breeding season banding efforts in the seaside lagoon system and Chesapeake Bay islands. Prior to 2009, a total of 23 oystercatchers were banded on breeding territories in the Chesapeake Bay, the vast majority of which were marked by an independent researcher. Currently the number stands at 108 individuals which represents 15% of Virginia's banded population (Table 2). Moreover, the number of oystercatchers banded in the seaside marshes presently comprises 16% of Virginia's marked birds. These increased efforts throughout all three geographic areas have and will continue to provide a greater opportunity to determine post-breeding dispersal patterns and survival rates of birds originating from different breeding areas within Virginia through in-state fall/winter re-sighting efforts as well as resighting surveys conducted by individuals throughout the oystercatchers' winter range.

Table 2. Summary of American Oystercatchers banded in coastal Virginia, 2003 – 2011. Totals for the number of young banded only include individuals known to have fledged. Birds banded in 2003 received wrap-around non-engraved color band combinations. Birds banded in 2004-2011 received engraved color bands as dictated by the American Oystercatcher Working Group coordinated color-banding scheme. Young includes birds banded on natal territories and hatch years banded in the fall/early winter. Adults include those banded on breeding territories or after hatch years captured on winter roosts.

Region	Total banded (% of total)	Total young (% of total yng)	Total adults (% of total adults)
Barrier Islands	508 (69)	496 (69)	12 (57)
Seaside Marshes	117 (16)	112 (16)	5 (24)
Bayside Shorelines	109 (15)	105 (15)	4 (19)
TOTALS	**734 (100)**	**713 (100)**	**21 (100)**

2. Colonial Waterbirds

In 2011, VDGIF staff assisted with several seabird counts on the barrier islands and seaside marshes and results from these efforts are still pending. We also coordinated this year's Atlantic coast Least Tern (*Sterna antillarum*) breeding survey, an effort that began in 2006. The annual survey window for Virginia is June 5 – 20. Least Terns are one of the more difficult seabird species from which to obtain accurate breeding population estimates because they are highly ephemeral (abandon one site in favor of another in rapid succession and often several times during a single breeding season), patchy in distribution within colonies, and eggs are small and well camouflaged making them difficult to see. As such, several methods are used to survey Least Terns and they include walk-through nest counts, perimeter incubating pair counts and perimeter adult counts within 250 m of the colony. None of these methods are known to yield accurate population estimates given the nature of the species. Thus, the information gathered by participating Atlantic coast states are viewed as trend data rather than actual population estimates and efforts are made by the states to maintain a similar level of effort from year to year within in the survey window. Virginia's survey results from 2006 – 2011 are presented in Figure 1 and thus far the data show a slightly increasing statewide trend in the number of breeding pairs despite the 31% decrease reported this year. It should be noted that the peak incubation period for several Least Tern breeding colonies on the barrier islands and at one of the rooftop sites occurred early this year (i.e., during the first week in June or before), which resulted in a gross under-estimate of pairs for these sites and zero data for one of the barrier islands where all adults were tending mobile chicks at the time of the survey. This undoubtedly accounts for some of reported decline in 2011.

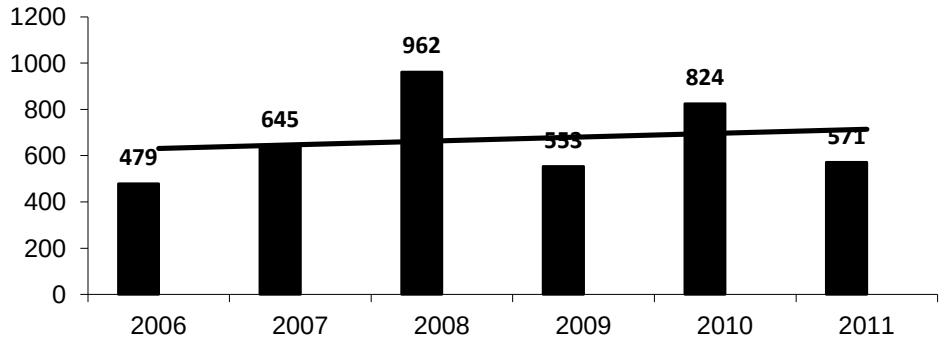


Figure 1. Estimated number of Least Tern breeding pairs in Virginia, 2006 – 2011.

In all years, over 50% of the breeding pairs occurred on the barrier islands and in 2009 and 2010 the the proportion of barrier island breeders exceeded 70% (Table 1). The barrier island chain is the most pristine and undisturbed habitat utilized by Least Terns in the Commonwealth. Inshore beaches located along the western shore of the Chesapeake Bay (i.e., Sandy Point, Rigby Island, Bethal Beach, New Point Comfort and Grandview Beach) have supported between 10% - 30% of the statewide breeding population. All of these sites, with the exception of privately-owned Rigby Island, are impacted heavily by human recreational activities and to a lesser extent, mammalian predators, during the breeding season. Greater effort is being made to minimize human disturbance through education, outreach and regulatory actions on the part of local municipalities. In 2011, Least Tern colonies occupied only two western shore sites; Grandview Beach and Rigby Island.

Craney Island Dredge Material Disposal Site in Portsmouth, VA, which is owned and managed by the US Army Corps of Engineers (USACOE), has supported between 1% and 12% of the statewide Least Tern breeding population (Table 1). This site receives considerable disturbance from continuous operation of heavy equipment and it supports large populations of Red Fox (*Vulpes vulpes*) and raccoons. An avian management plan is currently being drafted by a private consulting firm to provide guidance to the USACOE on how to minimize disturbance to nesting birds.

In 2007, Least Terns were discovered nesting of rooftops (i.e., Lynnhaven and Patrick Henry malls located in Virginia Beach and Newport News, respectively) for the first time coastal Virginia. Roof top colonies have been reported throughout the southeast for several decades and have been anticipated for many years in Virginia. In 2009 and 2010, Least Terns did not occupy the rooftop at Patrick Henry Mall; however, they did return this year and experienced relatively high breeding success (1.16 fledged young per pair). Conversely, the colony at Lynnhaven Mall produced zero fledged young this year which not unusual given that rooftop colonies are subject to severe heat stress and rapid flooding events following heavy downpours.

Table 1. Percentage of the annual estimated number of Least Tern breeding pairs that nested among four different habitat types in Virginia, 2006 – 2011. Numbers in parentheses represent the number of colonies in each habitat type.

	% of estimated statewide number of breeding pairs					
Habitat type	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Barrier beaches[1]	69 (19)	58 (19)	56 (32)	72 (26)	73 (19)	54 (27)
Inshore beaches[2]	30 (2)	37 (4)	25 (5)	10 (3)	13 (4)	20 (2)
Dredge material site[3]	1 (1)	1 (1)	6 (1)	11 (1)	9 (1)	12 (2)
Rooftop sites[4]	0	4 (2)	13 (2)	7 (1)	5 (1)	14 (2)
TOTALS	**100 (22)**	**100 (26)**	**100 (40)**	**100 (31)**	**100 (25)**	**100 (33)**

[1]Barrier islands located seaward of the Delmarva Peninsula

[2] Western Shore of the Chesapeake Bay.

[3]Craney Island Dredge Material Management Area, Portsmouth, VA.

[4]Lynhaven Mall, Virginia Beach, VA and Patrick Henry Mall, Newport News, VA.

4.Marsh Birds

DGIF continued to address research and monitoring priorities through surveys by our staff. A priority in recent years has been the collection of baseline information on the distribution and abundance of breeding secretive marsh birds in tidal fresh/oligohaline systems, including king rail and least bittern. This led to DGIF

call broadcast surveys of emergent marshes on the Mattaponi, Pamunkey and Chickahominy rivers in May-June of 2006-2009. These surveys documented high abundances of rails of the king/clapper complex within large marshes in the lower Mattaponi and Pamunkey rivers. These species are typically surveyed using call broadcasting, which increases their detection rate. However, the species are difficult to reliably identify by ear, given similarities between their vocalizations and variability amongst the calls of individuals. Although they can be visually distinguished in the field, the species' cryptic behaviors results in their being uncommonly seen during surveys. As a result, researchers studying the species often make assumptions regarding their identification based on surrounding habitat. The confluence of the Pamunkey with the York River marks a transition from higher to lower salinities. Here the large emergent marshes have the potential to harbor both clapper rails (associated with polyhaline and mesohaline systems) and king rails (associated with oligohaline and freshwater systems). In addition, hybridization between the two closely related species may take place in areas of co-occurrence, and has in fact been historically documented within Virginia along the Rappahannock River. Given the high rank conferred upon the king rail as a Species of Greatest Conservation Need within the Virginia Wildlife Action Plan, reliable information on its distribution and abundance is necessary in order to enact conservation actions to benefit the species. In 2011, DGIF personnel sought to address this need through a pilot project on Eltham Marsh on the Pamunkey River. Because a trapping approach may be necessary in order to reliably distinguish between king and clapper rails, the project's aim was to establish reliable trapping methods for these species. Between June 3 and July 28, we employed a number of trapping techniques, including: clover leaf traps with drift fences, with and without playback; line-dragging to drive birds into mist nets; and call broadcasting to attract birds to mist-nets. In addition, we opportunistically employed an airboat and dip net on May 18 when weather conditions were favorable and successfully caught three rails, all of which were identified in the hand as clappers. One additional clapper rail was captured in a clover leaf trap. We found playback to be extremely effective in attracting rails to within a couple of feet of the source; although we used this method to drive several rails into mist nets, the birds were able to free themselves before observers could reach them. A number of factors, including equipment malfunctions, contributed to a relatively low level of trapping effort such that the different techniques could not be conclusively evaluated. A total of four clover leaf traps were deployed at two sites; two of these were active for one day each and two for four days each (traps were generally set for 2-4 hours at falling, low, or rising tide, with periods of high tide being avoided). Captures via mist nets with audio lures were attempted for three days at one site and for one day at another site, with trapping sessions lasting 1-3 hours. Future work should be directed toward increasing trapping effort in order to properly evaluate the success of different techniques, and should include the use of additional techniques such as bow nets.

5.Sea Turtles and Marine Mammals

During this reporting period, minimal resources were devoted to marine mammals, with the Department's primary role being to assist the Virginia Marine Mammal Stranding Network, which is administered by the Virginia Aquarium & Marine Science Center's Stranding Program (VAQS). During this project year, VDGIF involvement was restricted to reporting all marine mammal strandings encountered on the barrier islands to VAQS who, in turn, deployed their staff to work up the animals as required by their funding sources.

VDGIF continued to maintain the state's loggerhead sea turtle (*Caretta caretta*) nesting database. From 1970 – 2011, a total of 135 Loggerhead nests and one Green Sea Turtle (*Chelonia mydas*) have been documented in Virginia, the majority of which have occurred on the southern mainland beaches near the NC/VA border. In 2011, nine confirmed loggerhead nests were reported in Virginia; five on Assateague Island and four on the southern mainland beaches at False Cape State Park and Back Bay NWR. To date, only one nest of the four nests on Assateague Island hatched successfully, two had zero hatch success and results for the fourth nest are still pending. Results for nests on the southern mainland beaches are still pending.

VDGIF staff continued to respond to sea turtle strandings on the remote barrier and bay islands and conducted necropsies on fresh to moderately decomposed carcasses. During this reporting period, the

Department documented eight Loggerhead strandings; two in the Chesapeake Bay and six in the barrier island/seaside lagoon system. The 2011 statewide stranding total thus far is 134: 106 loggerheads; 20 Kemp's ridleys; four leatherbacks; one green turtle; and three unidentified turtles.

VDGIF continues to administer and manage the large multi-state NMFS Section 6 funded sea turtle project entitled the *Virginia/Maryland Sea Turtle Conservation Initiative*. The three-year project seeks to collect a comprehensive set of data on the life history, abundance and distribution sea turtles in the Chesapeake Bay and Virginia's Ocean waters. In March of 2011, VDGIF contracted with the Virginia Aquarium and Marine Science Center to complete most of the work. We will provide a summary of year 1 results during the next reporting period.

6. Endangered and Threatened Birds

2011 Piping Plover and Wilson's Plover breeding summary

The 26th Annual Virginia Plover Survey (VPS) was conducted from June 1 - June 9, 2011 to obtain statewide breeding population estimates for the federally threatened Piping Plover *(Charadrius melodus)* and the state endangered Wilson's Plover *(Charadrius wilsonia)*. Results from the VPS are used to determine the size and distribution of the Piping Plover and Wilson's Plover breeding populations in the state and, together with other state and provincial survey data, are used to develop a range-wide annual population estimate for Atlantic coast Piping Plovers. In Virginia, both species of plovers share similar nesting habitats, which include ocean-facing beaches, dunes, and over-washed sand flats as well as several inland sites along the shores of the Chesapeake Bay and associated river systems. The Commonwealth is part of the Atlantic coast Piping Plover's southern breeding range and represents the northern limit of the Wilson's Plover breeding range.

VPS participants examined all suitable nesting habitats in coastal Virginia to locate breeding pairs of Piping Plovers and Wilson's Plovers. Seventeen ocean-facing sites were included in the survey covering an estimated 194 km of Virginia ocean-facing coastline along with two inshore sites on the western shore of the Chesapeake Bay (Grandview Beach and Plum Tree Island National Wildlife Refuge) and one on the James River (Craney Island Dredge Material Management Area).

During the 2011 survey, a total of 179 Piping Plover breeding pairs and 11 unpaired single adults (lone adults that did not appear to be defending a territory, mate, nest or brood) were observed along Virginia's barrier island chain (Table 1). This represents a 14% increase from the total number of individuals documented during the 2010 VPS (n = 323). This year's Piping Plover distribution was confined to the barrier islands (Assateague Island to Fisherman Island) with the majority of birds occurring on the northern barrier islands (Assateague Island to Cedar Island; Table 1). No Piping Plovers were documented at ocean-facing sites south of the Chesapeake Bay (i.e., Back Bay NWR and False Cape State Park) or on the western Shore of the Bay and the James River; a trend that has been ongoing since 1997. The 2011 end-of-season breeding pair total (includes additional pairs discovered during productivity monitoring efforts that follow the breeding survey) was 188 pairs (Table 1), a slight decrease from last year's end-of-season pair total of 192 pairs (Figure 1).

There were 22 Wilson's Plover breeding pairs and 2 single adults observed during the 2011 plover survey (Table 1). This reflects a 23% decrease from last year's survey total of 60 individuals and represents the lowest number of breeding pairs recorded since formal surveys began in 1988 (Figure 2). Wilson's Plover breeding activity was confined to the northern barrier islands (Assateague Island – Cedar Island; Table 1) a trend that has been ongoing since 2006. In prior years, one or two pairs were observed intermittently on the southern islands (Parramore Island to Fisherman Island) and from 1975 – 1990 as many as 30 adults were observed on this portion of the barrier island chain during the breeding season (VDGIF unpubl. data).

Table 1. Results from the 2011 Virginia Plover Survey. Numbers in parentheses indicates end-of-season Piping Plover breeding pair estimates.

	PIPL			WIPL		
SITE	**PAIRS**	**SINGLES**	**TOTAL INDS.**	**PAIRS**	**SINGLES**	**TOTAL INDS.**
Assateague Island[1]	36 (38)	1	73	0	0	0
Wallops Island	2 (3)	1	5	0	0	0
Assawoman Island[1]	28 (32)	0	56	8	0	16
Metompkin Island	44	0	88	4	0	8
Cedar Island	32	7	71	10	3	23
Dawson Shoals	0	0	0	0	0	0
Parramore Island	2	1	5	0	0	0
Hog Island	0	0	0	0	0	0
Cobb Island	2	0	4	0	0	0
Little Cobb Island	0	0	0	0	0	0
Wreck Island	3 (4)	0	6	0	0	0
Ship Shoal Island	8 (9)	0	16	0	0	0
Myrtle Island	4	0	8	0	0	0
Smith Island	16	0	32	0	0	0
Fisherman Island	2	0	4	0	0	0
Craney Island	0	0	0	0	0	0
Grandview Beach	0	0	0	0	0	0
Plum Tree Is. NWR	0	0	0	0	0	0
Back Bay NWR	0	0	0	0	0	0
False Cape SP	0	0	0	0	0	0
TOTALS	**179 (188)**	**11**	**369**	**22**	**3**	**47**

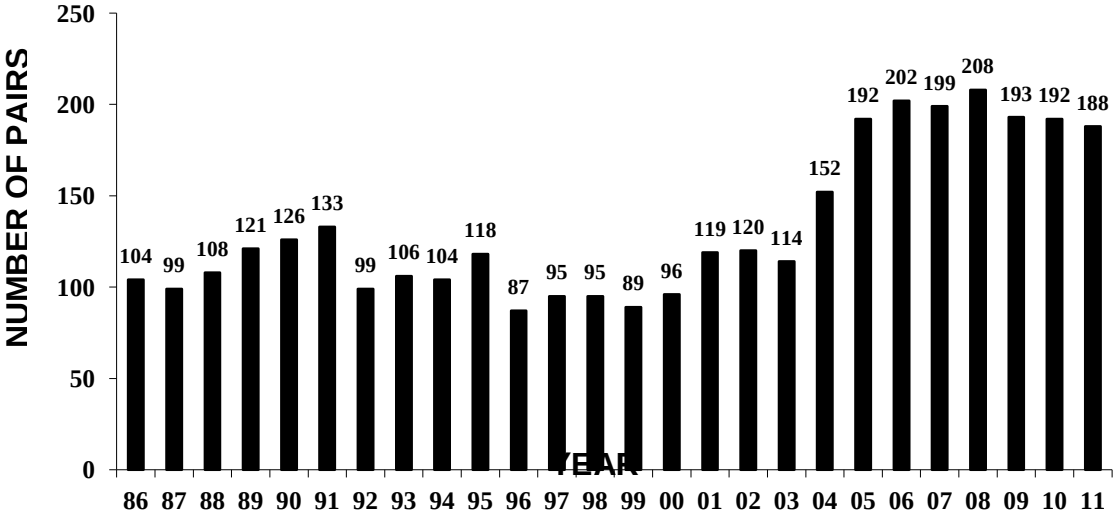


Figure 1. Annual number of Piping Plover breeding pairs (end-of-season totals) in Virginia, 1986 – 2011.

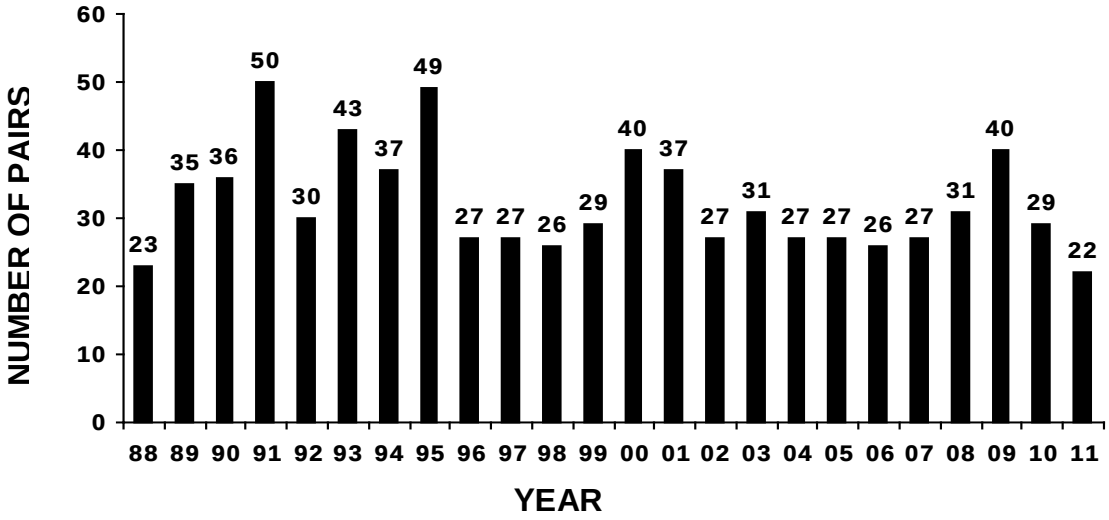


Figure 2. Annual number of Wilson's Plover breeding pairs (end-of-season totals) in Virginia, 1988-2011.

Staff from The Nature Conservancy's Virginia Coast Reserve, Chincoteague National Wildlife Refuge, Eastern Shore of Virginia National Wildlife Refuge and VDGIF monitored 98% (n = 184 pairs) of the statewide Piping Plover population in 2011. This year's statewide productivity estimate was 1.38 fledged young per pair, which is the highest reported since 2005 and is slightly above last year's estimate of 1.35 fledged young per pair (Figure 3). This year's site specific productivity estimates are presented in Table 2. These data are preliminary as proofed results and summaries for each of the islands are still pending.

No Wilson's Plover productivity studies were conducted in 2011 due to staff shortages.

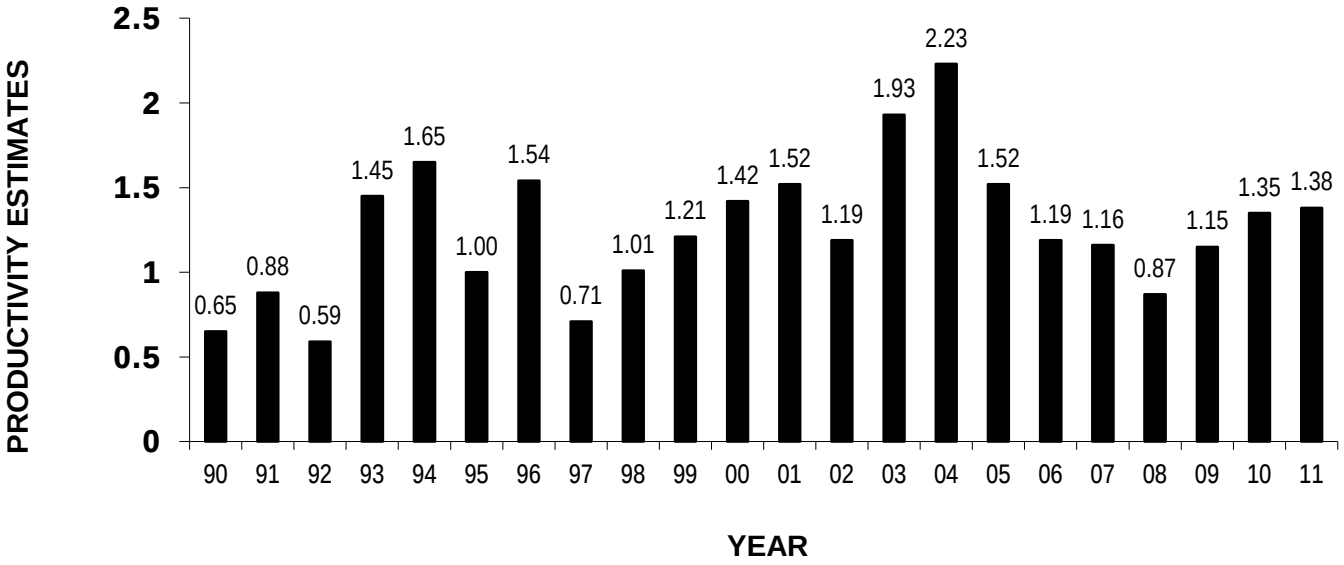


Figure 3. Annual statewide Piping Plover productivity estimates in Virginia, 1990 – 2011. Annual estimates obtained from ≥ 75% of nests laid each year.

Table 2. 2011 Piping Plover preliminary productivity estimates on Virginia's barrier islands. The number of pairs monitored for productivity (n = 184) represents 98% of Virginia's end-of-season Piping Plover breeding population (n = 188 pairs). Numbers in parentheses represent 2010 data in final form.

SITE	# OF PAIRS MONITORED	# OF CHICKS FLEDGED	2009 PROD.EST. (2008 EST.)
NORTHERN BARRIER ISLANDS			
Assateague Island[1]	38 (41)	69 (71)	1.82 (1.73)
Wallops[2]	3 (4)	3 (4)	1.00 (1.00)
Assawoman Island[1]	32 (24)	52 (35)	1.63 (1.46)
Metompkin Island[1,3]	43 (39)	41 (54)	0.95 (1.38)
Cedar Island[1,3]	32 (44)	51 (51)	1.59 (1.16)
N. ISLAND TOTALS	**148 (152)**	**216 (215)**	**1.46 (1.41)**
SOUTHERN BARRIER ISLANDS			
Wreck Island[3]	4 (3)	5 (0)	1.25 (0.00)
Cobb Island[3]	2 (2)	2 (0)	1.00 (0.00)
Ship Shoal Island[3]	9 (13)	4 (12)	0.44 (0.92)
Myrtle Island[3]	4 (5)	2 (10)	0.50 (2.00)
Smith Island[3]	15 (13)	23 (19)	1.53 (1.46)
Fisherman Island[5]	2 (3)	2 (1)	1.00 (0.33)
S. ISLAND TOTALS	**36 (39)**	**38 (42)**	**1.06 (1.07)**
STATEWIDE EST.	**184 (191)**	**254 (257)**	**1.38 (1.35)**

[1] Data provided by Chincoteague National Wildlife Refuge.
[2] Data provided by Wallop's Island Flight Facility biological staff.
[3] Data provided by VDGIF.
[4]Data provided by The Nature Conservancy's Virginia Coast Reserve.
[5] Data provided by Eastern Shore of Virginia National Wildlife Refuge

7. Atlantic Slope Freshwater Mussel Propagation

The VA Department of Game & Inland Fisheries continued its cooperative Atlantic slope freshwater mussel propagation facility with the U.S. Fish & Wildlife Services' Harrison Lake National Fish Hatchery in Charles City, which marks the 4th year of production and 5th year of operation at the VA Fisheries and Aquatic Wildlife Center (VFAWC). Propagation started in February and ended in August resulting in the production of nearly 765,000 juvenile mussels from seven species (Table 1), which is an increase of nearly 300,000 juveniles compared to the 2010 propagation numbers. In past years, none of the propagated species was listed as threatened or endangered but listed as a species of greatest conservation need in Virginia's Wildlife Action Plan or as a species of concern by DGIF and/or the USFWS. This year, we added the state endangered green floater (*Lasmigiona subviridis*) to our list and likely will continue to propagate the species and hopefully develop successful grow-out techniques. Our remaining 2009 and 2010 mussels were released in April and October, as well as some mussels from the 2011 year class. Over 3,400 larger-sized mussels have been released to date (Table 2) and all were tagged for future monitoring. The remaining 2011 mussels are still being grown out and/or assessed. However, we have at least 10,000 mussels that we anticipate will be released in November and through the summer of 2012.

Aside from propagation, construction on a new 1,000 square foot mussel propagation building was started in August. This will increase the mussel propagation facility capacity to nearly 1,500 square feet. The target date for the new building to be up and running is March 2012.

Table 1. Juvenile freshwater mussels produced at VFAWC in 2011

Species	**Source Location**	**Juveniles Produced**
Anodonta implicata	Nottoway River	**47,150**
Lampsilis cariosa	Nottoway River	**88,367**
Lampsilis radiata radiata	Nottoway River	**100,321**
Lasmigona subviridis	Tye River	**245,526**
Leptodea ochracea	Nottoway River	**131,269**
Ligumia nasuta	Nottoway River	**150,352**
Villosa constricta	NF Roanoke River	**1,362**
		764,347

Species	**Date**	**Release Site**	**Age**	**Size Range (mm)**	**Number**
Lampsilis cariosa	10/5/2011	Nottoway River near Riverdale, Honey Hole #1 & #2	1+ yrs	15.3-49.3	**951**
Lampsilis radiata radiata	6/30/2011 10/5/2011	Nottoway River near Riverdale, Honey Hole #1	2+ yrs 1+ yrs	34.3-75.0 46.8	**372** **1**
Leptodea ochracea	10/5/2011	Nottoway River near Riverdale, Honey Hole #1 and #2	1+ yrs	20.9-56.8	**1,335**
Ligumia nasuta	10/5/2011	Nottoway River near Riverdale, Honey Hole #1 and #2	0+ yrs	18.5-61.0	**1,141**
Villosa constricta	4/22/2011	North Fork Roanoke River near McDonald's Mill	2+ yrs	21.1-25.3	**3**
					3,803

Table 2. Freshwater mussels propagated at VFAWC that were released in 2011 thru October 5th

B. FEDERAL CONSISTENCY

During the second half of FY 2010, the DEQ-Office of Environmental Impact Review/Federal Consistency (DEQ-OEIR) reviewed 146 development projects and management plans for consistency with the VCP. This represents 81.5% of the total amount of projects (179) reviewed during this period. Major state projects accounted for 17 projects and 129 were federal as follows: 78 were federal agency actions and 51 were federally funded projects (predominantly local government projects). The 78 federal projects included 62 federal agency activities, 2 OCS activity, 10 federal licenses, approvals, and 4 HUD mortgage insurance projects (submitted as a residual category pursuant to the federal consistency regulation 15 CFR 930.31(c)). All federal consistency determinations and federal consistency certifications were completed within the established legal deadlines. On May 16, 2011, OEIR completed the coordinated review of the federal consistency certification submitted by Dominion Virginia Power for the Combined License application to the Nuclear

Regulatory Commission and the U.S. Army Corps of Engineers permit application for the proposed Unit 3 at the North Anna Power Station in Louisa County. Based on comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ conditionally concurred that the proposal is consistent with the enforceable policies of the VCP.

The OEIR continues to maintain a website for Federal Consistency Reviews that can be accessed through DEQ's main webpage or found at http://www.deq.virginia.gov/eir. The 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.

Table 1 depicts federal projects in Tidewater Virginia reviewed from April 1, 2011 through September 30, 2011.

TYPE OF FEDERAL PROJECTS REVIEWED*	**NUMBER OF PROJECTS COMPLETED**	**REVIEW PERIOD**
*Direct Federal Actions	66	30-60 Days
** Federal Activities (approvals & permits)	10	90 Days
***Federally Funded Projects	51	30 Days
Outer Continental Shelf	2 (1 under review)	45-60 Days
TOTAL	129	**30-90 DAYS**

*Includes 4 HUD Mortgage Insurances reviewed as FCD residual category of Subpart C of the Regulations.
**These projects do not include permits issued pursuant to Section 404 of the Clean Water Act administered by the U.S. Army Corps of Engineers. Such permits are reviewed by the regulatory agencies under a separate interagency coordinated review process (coordinated by the Norfolk District U.S. Army Corps of Engineers).

*** These include federal assistance to local government reviewed under subpart F.

SIGNIFICANT FEDERAL PROJECTS REVIEWED FOR CONSISTENCY WITH THE VCP from 4/1/2011 to 9/30/2011

I. Federal Agency Projects

The following projects are examples of federal agency projects subject to Subpart C of 15 CFR 930.33(a)

Reissuance and Modification of Corps Regional Permit 5 for the Construction of Small Impoundments – DEQ completed the coordinated review of the reissuance and modification of the Regional Permit 5 (RP-5) for the construction of small impoundments in Virginia, submitted by the U.S. Army Corps of Engineers (Corps) Norfolk District under the *Federal Consistency Regulations* of the Coastal Zone Management Act (CZMA). RP-5 authorizes the construction of small impoundments for uses such as general farm use, irrigation, livestock watering, fire prevention, and recreation in non-tidal waters of the U.S., provided they have only a minimal environmental impact. Based on the comments submitted by the agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the RP-5, as proposed, is consistent with the VCP provided that: permittees obtain state and/or local approvals prior to commencement of

work in waters of the U.S. from the Virginia Marine Resources Commission (VMRC) and/or the local wetlands board; permittees ensure that projects are designed and constructed consistent with all state and local requirements pursuant to the Chesapeake Bay Preservation Act and the *Chesapeake Bay Preservation Area Designation and Management Regulations*; applicants submit a Joint Permit Application to the DEQ Virginia Water Protection Permit Program for a Virginia withdrawal permit; and the Department of Game and Inland Fisheries be afforded an opportunity to review and comment on RP-5 applications to ensure consistency with the fisheries management enforceable policy of the VCP.

Review of Several Nationwide Permits– DEQ completed the coordinated review of the proposed reissuance and modifications to the Nationwide Permits (NWPs), submitted by the U.S. Army Corps of Engineers (Corps) Washington Headquarters, in part, under the *Federal Consistency Regulations* of the Coastal Zone Management Act (CZMA). The Corp is soliciting comments for the reissuance of 48 of the 49 existing NWPs, general conditions, and definitions, with some modifications. Activities authorized by NWPs are those that are similar in nature, cause only minimal adverse environmental effects when performed separately, and cause only minimal cumulative adverse effect on the aquatic environment. According to the Corps' February 16, 2011 *Federal Register* notice requesting comments on the NWPs, the notice serves as the Corps determination that the activities authorized by the NWPs are, to the maximum extent practicable, consistent with the state CZMA programs. DEQ finds that it is premature to conduct a consistency review since the Corps is in the process of soliciting comments on the proposed NWPs; the Corps proposes to revise the text of some of the NWPs, general conditions, and definitions; and, after the comment period has ended, the Corps will draft the final NWPs which will be subjected to another review by interested federal agencies. Furthermore, the final NWPs will go into effect 90 days after their publication to allow state governments a 90-day period to review and respond to the CZMA consistency determination submitted by the Corps. Accordingly, the Commonwealth will respond to the Corps' federal consistency determination for the NWPs after publication of the NWPs in final form. One issue of note is the Department of Game and Inland Fisheries' concern with the lack of a review mechanism during the NWP application process that includes state review of potential project impacts to fisheries resources under the fisheries management enforceable policy of the Virginia Coastal Zone Management Program.

Virginia Regional Conditions to the NWPs – DEQ completed the coordinated review of proposed regional conditions specific to Virginia for the proposed Nationwide Permits (NWPs), submitted by the U.S. Army Corps of Engineers (Corps) Norfolk District. Division engineers are authorized to add regional conditions specific to the needs and/or requirements of a particular region or state. Regional conditions ensure that impacts to the aquatic environment authorized by the NWPs are minimal, both individually and cumulatively. The Norfolk District is seeking comment on proposed regional conditions developed for Virginia and on the need for additional regional conditions to help ensure that impacts authorized by the proposed NWPs are minimal. After the final NWPs are issued, the final regional conditions will be issued once they are approved by the Corps Division Commander. States will make their Section 401 Clean Water Act Water Quality Certification and Coastal Zone Management Act consistency determination decisions within 90 days of the *Federal Register* notice announcing the issuance of the final draft NWPs. The final NWPs will go into effect on or before March 19, 2012.

Modification to the York River Pier Repair Project – DEQ completed the coordinated review of a negative determination, submitted by the Department of Homeland Security (DHS) U.S. Coast Guard (USCG) for a modification to its proposal to make repairs to the York River Pier located at the USCG Training Center Yorktown in York County. As originally proposed, repairs were to include the replacement of twenty-seven deteriorated fender piles, six deteriorated bearing piles, and various damaged and deteriorated support and decking timbers. Since that time, a corner fender pile cluster located at the north corner of the pier facility was inadvertently damaged by a large vessel that was mooring at the pier. The USCG has amended the original project to include the replacement of the damaged corner fender. The Commonwealth responded to the negative determination submitted by USCG for the original project on February 23, 2011 (under DEQ #11-014F), and concurred that the proposed action is consistent, to the maximum extent practicable, with the

enforceable policies of the Virginia Coastal Zone Management Program (VCP). Based on our review of the USCG's negative determination and the comments submitted in response to the original project and the modification, DEQ concurs that the modified proposal is consistent, to the maximum extent practicable, with the VCP.

NASA Wallops Flight Facility Alternative Energy Project – DEQ completed a coordinated review of a final Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) issued by the National Aeronautics and Space Administration (NASA) for the Wallops Alternative Energy Project. The final EA, which includes responses to the draft EA that DEQ reviewed in 2010, states that based on concerns raised by stakeholders regarding potential impacts on birds and bats from the construction of utility-scale wind turbines on Wallops Island (which was proposed in the draft EA), NASA revised its proposed action. Under the proposed action in the final EA, NASA would install a system of solar panels on approximately 80 acres at the main base that would be capable of generating 10 gigawatt hours per year of power. Additionally, two 2.4 kilowatt residential-scale wind turbines would be installed; no utility-scale turbines are included. The final EA consider two other alternatives as well as the no action alternative.

In 2009, the General Assembly passed legislation requiring DEQ to develop one or more permits-by-rule (PBR) for the construction and operation of small renewable energy projects with rated capacity not exceeding 100 megawatts. It appears that DEQ's final wind PBR regulation that became effective in December 2010 would not apply to the proposed action. However, the proposal may be subject to the requirements of the solar PBR that is currently undergoing Executive Review. Until this proposed regulation becomes final and effective, authority over solar projects remains with the State Corporation Commission. DEQ's response to the EA includes recommendations for NASA to coordinate with the Virginia Department of Game and Inland Fisheries regarding potential impacts to protected species and with DEQ regarding any potential requirements of DEQ's proposed solar PBR.

Privatization of the Army Lodging Program, Fort Belvoir – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of the Army (Army) for the Privatization of Army Lodging (PAL) program at Fort Belvoir in Fairfax County. The Army would convey specified lodging facilities to a private development entity (Rest Easy). Implementing the PAL program at Fort Belvoir would entail constructing new lodging facilities and renovating existing facilities. DEQ completed its review of the NEPA Environmental Assessment (EA) for the above-referenced project and submitted its response to the U.S. Army Garrison Fort Belvoir on April 4, 2011. However, at that time, the Commonwealth was unable to complete its review of FCD included in the EA, because the Department of Conservation and Recreation (DCR) Division of Chesapeake Bay Local Assistance (DCBLA) was unable to complete its review for consistency with the coastal lands management enforceable policy of the Virginia Coastal Zone Management Program (VCP) based on the limited amount of information presented in the document. It appeared that the proposed hotel was located on lands that are analogous to Resource Protection Areas (RPA). Development in an RPA is restricted to water-dependent activities. The Army coordinated with DCR-DCBLA and provided additional information that relocated the hotel and associated structures outside of the RPA. Accordingly, DEQ conditionally concurs that the proposal is consistent with the VCP provided the project complies with the applicable conditions of the *Chesapeake Bay Designation and Management Regulations* for development in Resource Protection Areas and Resource Management Areas.

Reconfiguration of the Wallops Flight Facility Main Entrance – DEQ completed the coordinated review of a draft Environmental Assessment (EA) and Federal Consistency Determination (FCD) submitted by the National Aeronautics and Space Administration (NASA) for the reconfiguration of the main entrance at the Goddard Space Flight Center's (GSFC) Wallops Flight Facility (WFF) in Accomack County. The reconfiguration is needed to alleviate safety concerns created by the current layout. The proposal includes construction of a: badge office and visitor parking area; security personnel parking area; truck inspection area; guard house and canopy; traffic roundabout; and shipping and receiving facility. Construction would occur in either two or four

phases depending on available funding. Based on the information provided in the EA and comments from reviewers, the DEQ has no objection to the proposal, provided NASA complies with all applicable laws and regulations with respect to erosion and sediment control, stormwater management, air emissions, solid waste management and potential impacts on new bald eagles nests. In addition, DEQ concurs with the FCD that finds the proposed action consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program.

Naval Health Clinic Upgrade – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of the Navy (Navy) for upgrades to the Naval Health Clinic located in the southwestern portion of the Naval Support Facility Dahlgren in King George County. The proposal involves the demolition of the existing clinic (Building 192) and mechanical support building (Building 341), and the construction of a new freestanding, 31,336-square-foot, two-story clinic on the 3.7-acre site. A second alternative considered involves the construction of a 19,300-square-foot addition to the existing clinic (Building 192) and renovating the interior of the existing clinic. This alternative would also involve the demolition of the support building. DEQ concurs with the Navy's FCD that finds the proposed action consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program, provided the Navy obtains and complies with permit requirements for erosion and sediment control, stormwater management, air emissions, and development in lands analogous to Chesapeake Bay Preservation Areas. Furthermore, the Navy must comply with applicable solid and hazardous waste management requirements, protected species regulations, and requirements for potential historic resource impacts.

Upgrade Pier 1 at Naval Station Norfolk - DEQ completed a coordinated review of a federal consistency determination (FCD) submitted by the U.S. Department of the Navy. The Navy proposes to upgrade Pier 1 at Naval Station Norfolk, which is situated along the mouth of the Elizabeth River on the southwest corner of Naval Station Norfolk. The upgrade is intended to accommodate the berthing of the U.S. Naval Ship Comfort, which has higher berthing loads than the existing Pier 1 can withstand. Two existing mooring platforms will be demolished and re-constructed. Existing concrete piles, the concrete pile cap, concrete pier deck, and beams will be demolished. All of the work will occur within the existing footprint of the pier, which will not be lengthened or widened. The Navy finds the project consistent with the enforceable policies of the Virginia Coastal Zone Management Program (VCP). The reviewing agencies that are responsible for the administration of the enforceable policies generally agree with the FCD. Based on the review of the FCD and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that the proposed project is consistent with the VCP provided all applicable permits and approvals are obtained. The Navy must ensure that this project is constructed and operated in accordance with all applicable federal, state and local laws and regulations.

Demolition of Building C at Lafayette River Annex – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of the Navy (Navy) for its proposal to demolish Building C at the Lafayette River Annex (LRA) at Naval Station (NAVSTA) Norfolk. The demolition of Building C would help accomplish the Navy's effort to reduce the inventory of obsolete, sub-standard facilities. The demolition would eliminate future building operation and maintenance costs. The Navy also proposes to make necessary interior improvements to Building Z140 at NAVSTA Norfolk to accommodate office personnel and relocate the personnel who work in Building C to Building Z140. DEQ concurs with the Navy's FCD that finds the proposed action consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program, provided the Navy obtains and complies with applicable enforceable policies such as erosion and sediment control, stormwater management, air pollution control, and the coastal lands management which applies to development of lands analogous to Chesapeake Bay Preservation Areas.

New Town Project at Langley Research Center – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the National Aeronautics and Space Administration (NASA) to

construct parking lots associated with the New Town project. The New Town Project is an on-going major redevelopment project to revitalize NASA LaRC's infrastructure and capabilities. The Commonwealth reviewed and responded to a FCD submitted by NASA LaRC in July 2008 for Phase I of the project. As Phase I is almost complete and Phase II begins, NASA has identified the need to construct additional parking to accommodate the new Administrative Office Building, as well as construct or modify parking areas at several other buildings to accommodate personnel that are being moved around the Center to prepare for building deconstructions and renovations. The project consists of constructing approximately 301,000 square feet of parking within and around the core of New Town. This includes 107,109 square feet of new parking lots and 193,905 square feet of extensions to existing parking lots. Design plans for the parking lots would include a base condition of 27% pervious pavers, 14% vegetation, and 59% pavement. DEQ concurs with NASA's FCD which finds the proposed action consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program.

Pentagon Sentry Program - DEQ completed a coordinated review of an Environmental Assessment and Federal Consistency Analysis submitted by the Department of Defense (DOD) for the construction of security screening and inspection facilities for the Pentagon Force Protection Agency (PFPA) at the Pentagon in Arlington County. The facilities consist of (1) a Secure Access Lane (SAL) Remote Screening Facility; (2) a Metro Entrance Facility (MEF) Screening Facility; and (3) Corridor 8 (COR8) Screening Facility. The EA includes a discussion of coastal zone management and potential project impacts on the Virginia Coastal Zone Management Program (VCP). The document erroneously concludes that there are: (1) no reasonably foreseeable coastal effects associated with the construction or operation of the facility; (2) that a negative determination is not required; and (3) that DOD is not required to coordinate with state agencies under the Coastal Zone Management Act. However, in direct contradiction to this assertion, the document states that DOD will implement measures to ensure consistency with the VCP. Although the DOD did not submit the required Federal Consistency Determination, based on the information provided in the EA and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ finds that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained.

Wormley Creek Pier Extension - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of Homeland Security (DHS) U.S. Coast Guard (USCG) for the extension of three existing finger piers located on Wormley Creek at the Coast Guard Training Center Yorktown in York County. Each of the three piers will be extended 60-feet in order to accommodate new boats that will replace existing boats over the next several years. In addition, the existing fueling system (both gasoline and diesel fuels) will be reconfigured. Some onshore construction will occur associated with the fueling system. DEQ and the U.S. Coast Guard agreed to a 30-day extension of the Federal Consistency Determination (FCD) review. The Department of Conservation and Recreation (DCR) Division of Stormwater Management (DSM), Local Implementation (LI) (previously called the Division of Chesapeake Bay Local Assistance) found that there was insufficient information in the FCD to determine the project's consistency with the coastal lands management enforceable policy of the VCP as administered by DCR-DSM-LI through the *Chesapeake Bay Preservation Act*. The USCG provided additional information to DEQ on June 2, 2011 which was forwarded to DCR-DSM-LI . DEQ requested an extension of the review period to allow DCR-DSM-LI sufficient time to analyze the new information, conduct any further discussions as necessary, and complete the Commonwealth's response. During the coordinated review, the DCR-DSM-LI determined that the project was inconsistent with the coastal lands management enforceable policy of the Virginia Coastal Zone Management Program (VCP) due to the proposed location of the new fuel storage tank within lands analogous to Chesapeake Bay Resource Protection Area (RPA). In general, only water-dependent development is allowed within RPAs. Based on DCR-DSM-LI findings, the USCG amended the proposal to remove the storage tank from the RPA. Accordingly, based on USCG's amendment and the comments submitted by agencies administering the enforceable policies of the VCP, the Commonwealth completed its review and responded to the FCD on July 5, 2011 concurring that the proposal, as amended, is consistent with the VCP.

Asymmetric Warfare Group at Fort A.P. Hill-DEQ completed a coordinated review of an environmental assessment (EA), including a federal consistency determination (FCD), issued by the Department of the Army for construction to benefit the Asymmetric Warfare Group at Fort A.P. Hill. The Army's proposed action is to construct and operate two training ranges (800 meters and 1,200 meters in length) on 675 acres. The EA also analyzes the no action alternative. The proposed project area contains active firing ranges and includes a gated entrance, gravel access road, covered bleacher area and metal observation tower, which may be incorporated in the new site design. In addition to the construction of the ranges, the Army will construct support facilities, including parking areas, sidewalks, fencing and service roads, a bridge, operations center and associated support buildings, vault latrine, eating area, and storage buildings. The Army has issued a draft Finding of No Significant Impact. The FCD states that the project would be implemented in a manner consistent with the Virginia Coastal Zone Management Program (VCP). DEQ concurs that the proposed activity is consistent with the VCP and has no objection to the implementation of the proposed action provided that the Army complies with all requirements of applicable permits and other authorizations that may be required. DEQ's response includes recommendations for the Army to coordinate with the Virginia Department of Agriculture and Consumer Services regarding protected species legislation and the Virginia Marine Resources Commission regarding the submittal of a Joint Permit Application for proposed impacts to wetlands and streams.

Range Station 21 Shoreline Stabilization - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of the Navy (Navy) for the reconstruction of a gravel access road to Range Station 21 and the construction of an approximately 408-foot rip-rap revetment to protect the road and range station along the Potomac River at the confluence with Popes Creek at the Naval Support Facility Dahlgren in King George County. Past storm events, especially Hurricane Isabel, caused significant shoreline erosion that damaged the access road and now threatens the range station and adjacent real estate. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained with respect to wetland impacts, subaqueous lands impacts, erosion and sediment control, stormwater management, air pollution control, and impacts to lands analogous to Chesapeake Bay Preservation Areas. In addition, the Navy must comply with applicable regulations related to solid and hazardous waste management, wildlife resources and protected species (bald eagle), and historic and archaeological resources.

Naval Special Warfare Development Group 400-Yard Firing Line - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of the Navy (Navy) for upgrades to the existing firing range by constructing a firing line berm and access road at the Naval Air Station Annex, Dam Neck, in the City of Virginia Beach. The firing line will be an approximately 470-feet long by 20-feet wide earthen berm structure constructed using select fill. In addition, a gravel access road will be constructed immediately adjacent to the firing line berm to provide vehicular access in case of a medical emergency. The access road will measure approximately 328 feet long by 15 feet wide. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained with respect to wetland impacts, erosion and sediment control, stormwater management, and air pollution control. In addition, the Navy must comply with applicable regulations related to solid and hazardous waste management, wildlife resources, and protected species (bald eagle) and historic and archaeological resources.

Parade Grounds Area Water Upgrades - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of the Army (Army) for the replacement of 28,860 linear feet of existing waterline with high-density polyethylene (HDPE) pipe in the Long Parade Ground Area of the Fort Belvoir Main Post in Fairfax County. The new pipe will be installed parallel to the existing pipe (which will be abandoned in place) using horizontal directional drilling. All connection points, service tie-ins, and fire hydrants will be open cut and are located to minimize ground disturbance. The total work area is 1,290,695

square feet, which includes: material and equipment staging area, pipe assembly area, and disturbed soil area. Disturbed areas will be restored to their original conditions. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained with respect to erosion and sediment control, stormwater management, air pollution control, and impacts to lands analogous to Chesapeake Bay Preservation Areas. In addition, the Army must comply with applicable regulations related to solid and hazardous waste management, wildlife resources and protected species (bald eagle) and Virginia *Waterworks Regulations*.

Installation of Sandbags at Dam Neck Annex.- DEQ completed a coordinated review of a federal consistency determination (FCD) submitted by the U.S. Department of the Navy. According to the FCD, the Navy proposes to install sandbags at the toe of the slope of existing sand dunes along a 5,000-linear-foot stretch at the Dam Neck Annex in Virginia Beach in order to prevent further erosion of the dunes. The FCD states that the project would be consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program (VCP). Based on the review of the FCD and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that the proposed project is consistent with the VCP, provided all applicable permits and approvals are obtained. The Commonwealth's review includes a recommendation to submit a Joint Permit Application to the Virginia Marine Resources Commission and coordinate with the Department of Game and Inland Fisheries regarding the protection of bald eagles.

Qualifications Training Range at Fort Lee - DEQ completed a coordinated review of a Draft Supplemental Environmental Assessment (EA) and Federal Consistency Determination (FCD) for the Qualifications Training Range (QTR) at Fort Lee in Prince George County. The QTR would be located on an existing Modified Record Fire Range (Range 4) and would consist of 12 firing lanes to support training for the M-16 A1/A2 Rifle, M-4 Carbine, M-249 Squad Automatic Weapon, and MK19 40 mm Grenade Machine Gun. To accommodate the new targets associated with the M-249 and MK 19 weapons, the range would be expanded to include approximately 180 meters x 300 meters of the wooded area at the northern end of the range. The proposed QTR would require grading of the existing Range 4 firing and target berms to establish the new firing points and target positions. The Department of Conservation and Recreation initially found that RPAs would be impacted to accommodate target mounds and service roads. Therefore, DCR concluded that the proposed activity is inconsistent with the coastal lands management enforceable policy of the Virginia Coastal Zone Management Program. DEQ encouraged the Army to resolve the issue, and upon review of additional information provided by the Army and follow up discussions, DCR determined that the project design greatly reduced RPA impacts, and mitigation for these impacts is proposed by the Army. Accordingly, DEQ, on behalf of the Commonwealth, concurs that the project is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program.

Replacement of Sewage Piping Under the North and South Piers – DEQ completed the coordinated review of a Federal Consistency Negative Determination, submitted by the U.S. Coast Guard (USCG), for the replacement of existing sewage piping beneath the north and south piers at USCG Base Support Unit in the City of Portsmouth. Project activities include: removal of the existing eight-inch sanitary sewage piping from the shore to the end of the north and south piers, including the removal of branch piping, piping, fittings, hangars, hangars rods, and associated items; and the installation of eight-inch sanitary sewage piping from the shore to the end of the north and south piers, including the installation of branch piping, piping, fittings, hangars, hangars rods, and transitions. Based on DEQ's coordinated review of the negative determination and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the VCP provided all applicable permits and approvals are obtained with regard to air emissions. In addition, the USCG must ensure the project complies with appropriate solid and hazardous waste management regulations.

Tylers Beach Federal Navigation Project - DEQ completed a coordinated review of a Draft Supplemental Environmental Assessment (EA) and Federal Consistency Determination (FCD) submitted by the U.S. Army Corps of Engineers for the Tylers Beach Federal Navigation Project, Isle of Wight County. The project consists of a 150-foot wide and 300-foot long harbor of refuge and entrance channel from Burwell Bay to the James River with two 370-foot long stone revetment/jetties at the entrance. The harbor and channel will be dredged to -9 feet mean lower low water (MLLW), including two feet of paid allowable overdepth and one-foot of nonpaid overdepth. The project depth will require the removal of approximately 25,000 cubic yards of dredged material. Dredging will be accomplished by hydraulic method. The dredged material is proposed for placement in an 18- to 20-acre upland confined placement facility, approximately two miles from the planned dredging activities, which consists of a 35-acre tract of property in Lawnes Point near the Rushmere area in the county. DEQ concurs that the project is consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program provided the Corps obtains all necessary permits and authorizations with respect to wetlands impacts, erosion and sediment control, stormwater management, and air emissions. In addition, the Corps must ensure the project complies with appropriate solid and hazardous waste management regulations. The Corps is encouraged to coordinate with the Virginia Department of Forestry regarding mitigation options for the loss of 25 acres of trees due to the construction of the upland containment area.

Hotel and Conference Center at the Marine Corps Heritage Center – DEQ completed the coordinated review of a Federal Consistency Determination (FCD), submitted by the U.S. Marine Corps for the construction of a hotel and conference center at the Marine Corps Heritage Center, Marine Corps Base Quantico, in Prince William County. The approximately 208,000 square-foot, multi-story, 4-star hotel and 26,000 square-foot full service conference center would be built on an approximately 17-acre site on the northeastern portion of the Heritage Center. There would be 250 guest rooms and approximately 157 parking spaces. DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program provided the Marine Corps obtains all applicable permits and authorizations with respect to wetland impacts, erosion and sediment control, stormwater management, air pollution control and impacts to lands analogous to Chesapeake Bay Preservation Areas. In addition, the Marine Corps must ensure the project complies with appropriate solid and hazardous waste management regulations.

Fort Belvoir Water Line Replacements - DEQ completed the coordinated review of a Federal Consistency Determination (FCD), submitted by the U.S. Army (Army) for the replacement of water lines in the Woodlawn Road, Jackson Loop Phase 1 and DeWitt Hospital Phase 1 areas of Fort Belvoir in Fairfax County. Approximately 2,760 linear feet (LF) of existing waterline would be replaced with high-density polyethylene (HDPE) pipe along Woodlawn Road; approximately 9,933 LF along Jackson Loop; and approximately 7,072 LF at DeWitt Hospital. The new pipe will be installed parallel to the existing pipe (which will be abandoned in place) using horizontal directional drilling (HDD) to minimize the impacts to the surrounding area. All connection points, service tie-ins, and fire hydrants will be open cut. Based on DEQ's coordinated review of the FCC and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program provided all applicable permits and approvals are obtained with regard to erosion and sediment control, stormwater management, air emissions, and Chesapeake Bay Preservation Areas. In addition, the Army must ensure the project complies with appropriate solid and hazardous waste management regulations, and waterworks regulations.

Fort Belvoir Fisher House – DEQ completed the coordinated review of a Federal Consistency Determination (FCD), submitted by the U.S. Army (Army) for the construction of the Fisher House at Fort Belvoir in Fairfax County. The facility will provide a temporary residence and support facility for extended stays to service men and women and their families receiving care at the Fort Belvoir Community Hospital. The proposal consists of the construction of a 10,000-square foot, single-story brick residential housing unit with 12 bedrooms/suites and

associated common use areas (kitchen, dining area, etc.). The total project site is 1.8 acres consisting of the Fisher House, driveway to the parking lot, parking lot, and an entrance drive. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the VCP provided all applicable permits and approvals are obtained for erosion and sediment control, stormwater management, air emissions, and Chesapeake Bay Preservation Areas. In addition, the Army must ensure that the project complies with appropriate solid and hazardous waste management regulations.

Construction and Operation of Army Reserve Center –DEQ completed a coordinated review of an environmental assessment (EA) submitted by the U.S. Army Reserve. The EA is for the construction and operation of a U.S. Army Reserve Center in Bedford County and the City of Bedford. The proposed action includes property acquisition and construction and operation of a new 400-member center consisting of the following facilities:

43,200 square-foot training building;
8,200 square-foot maintenance shop;
2,600 square-foot unheated storage facility;
192-space parking lot; and
21,830 square yard fenced military equipment parking lot.

Additional construction activities include paving, fencing, general site improvements and extending utilities. Operational activities would include training and vehicle maintenance. The proposed action will occur on a minimum of 11 acres on the approximately 18-acre property. The maximum expected use of the facility would be approximately 240 members per weekend. The EA considers the preferred alternative and the no action alternative. The site of the preferred alternative is along the western boundary of the City of Bedford. The northern portion of the site is in the city and the southern portion is in an unincorporated area of Bedford County. The site consists of vacant privately owned land that was formerly in agricultural use with abandoned structures and woods. The buildings would be demolished. Based on comments by reviewers, DEQ has no objection to the implementation of the preferred alternative. The Commonwealth's response includes recommendations for the Army to coordinate with the U.S. Fish and Wildlife Service regarding compliance with protected species legislation and continue working with the Department of Historic Resources regarding compliance with Section 106 of the National Historic Preservation Act.

Shoreline Stabilization and Restoration – DEQ completed the coordinated review of a Federal Consistency Determination (FCD), submitted by the U.S. Navy (Navy) for the stabilization and restoration of approximately 11,730 linear feet of shoreline along the Potomac River and Upper Machodoc Creek at Naval Support Facility Dahlgren in King George County. Restoration would be implemented in four phases, ranked by priority, along twelve sections of shoreline. Stabilization and restoration techniques would include the use of hardened structures in combination with living shoreline treatments, where feasible. The site-specific stabilization techniques would be determined during the design phase and based on the specific conditions at the individual reach. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the VCP provided all applicable permits and approvals are obtained with regard to subaqueous lands impacts, wetland impacts, erosion and sediment control, stormwater management, air emissions, and impacts to Chesapeake Bay Preservation Areas. In addition, the Navy must ensure the project complies with appropriate solid and hazardous waste management regulations, protected species legislation, and Section 106 of the National Historic Preservation Act.

Renovation of the AutoHobby Lift Station – DEQ completed the coordinated review of a Federal Consistency Determination (FCD), submitted by the U.S. Coast Guard (USCG) to renovate a sewage lift station located at the AutoHobby Building at the USCG Training Center Yorktown in York County. Repairs will include replacement of pumps, controls, wiring, valves, and discharge piping. A small amount of excavation (less than 100 square feet) may be required. The lift station is located along the York River approximately 40 feet inland from the mean high water mark and at an elevation of 15 feet. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the VCP provided all applicable permits and approvals are obtained with regard to erosion and sediment control, stormwater management, air emissions, and impacts to Chesapeake Bay Preservation Areas. In addition, the Navy must ensure the project complies with appropriate solid and hazardous waste management regulations and Section 106 of the National Historic Preservation Act.

2010 Master Plan for the Defense Supply Center Richmond - DEQ completed a coordinated review of an environmental assessment (EA) and federal consistency determination (FCD) submitted by the Defense Logistics Agency (DLA) regarding the 2010 Master Plan for the Defense Supply Center Richmond located in Chesterfield County. The documents address the repair of existing facilities and infrastructure, demolition of buildings and trailers, security upgrades, and future development projects. Future development projects include a fitness center in 2016, construction of a recreational vehicle parking area in 2017, relocation of the East Gate, demolition of warehouses, and construction of an operations center. DLA has identified locations for some but not all projects. As part of the Defense Supply Center Richmond's periodic development of a Master Plan to coordinate construction and maintenance projects over a five year period, this EA assesses impacts to the environment from implementation of the projects outlined in the Master Plan, which is the proposed action. Impacts from the no action alternative also are addressed in the EA. The FCD states that the project would be implemented in a manner consistent with the Virginia Coastal Zone Management Program (VCP) (previously called the Virginia Coastal Resources Management Program). DEQ's response includes a recommendation to submit site-specific documents required under the National Environmental Policy Act when currently unidentified project locations have been decided. DLA is also reminded that, in keeping with the federal consistency regulations, supplemental coordination may be necessary later.

Airfield Upgrades and Repairs at NALF Fentress – DEQ completed the coordinated review of a Federal Consistency Determination (FCD), submitted by the U.S. Navy (Navy) for upgrades and repairs to airfield facilities at Naval Auxiliary Landing Field (NALF) Fentress in the City of Chesapeake. Project activities would include: resurfacing the runway and taxiways; re-grading and reconstructing runway and taxiway shoulders; installing lighting in a three-foot asphalt strip along each side of the runway and taxiways; replacing and upgrading many of the supporting electrical systems; relocating and upgrading Landing Signal Office (LSO) shacks; paving and widening of the access road to the Automated Surface Observing System (ASOS); and constructing a rescue vehicle hardstand with electrical connections. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the VCP provided all applicable permits and approvals are obtained with regard to wetland impacts, erosion and sediment control, stormwater management, and air emissions. In addition, the Navy must ensure the project complies with appropriate solid and hazardous waste management regulations.

Installation of a Transformer at the York River Pier – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the U.S. Coast Guard (Coast Guard) for the installation of a transformer on the York River Pier at the U.S. Coast Guard Training Center Yorktown in York County. The project involves mounting a new transformer on the existing deck of the York River Pier immediately adjacent to the existing pier's main electrical components. The transformer will be tied to the pier's existing electrical infrastructure. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies

administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the VCP provided all applicable permits and approvals are obtained with regard to air emissions. In addition, the USCG must ensure the project complies with appropriate solid and hazardous waste management regulations.

Naval Air Station Firing Platform - DEQ completed a coordinated review of a federal consistency determination (FCD) submitted by the Department of the Navy. The FCD is for the proposed construction of a 900-yard firing platform at the Naval Air Station Annex, Dam Neck, in the City of Virginia Beach. The platform will be a pile-supported structure, elevated approximately 40-feet above the ground, and measuring approximately 35-feet by 15-feet. A gravel access road also will be constructed. The FCD states that the project would be consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program (VCP) (previously called the Virginia Coastal Resources Management Program. Based on the review of the FCD and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that the proposed project is consistent with the VCP provided all applicable permits and approvals are obtained. DEQ's review includes recommendation to coordinate with the Department of Game and Inland Fisheries if new Bald eagle nests are identified nearby and with the regional DEQ office regarding any evidence of a petroleum release if discovered during construction.

Expansion of the Range Instruction Building – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the U.S. Coast Guard (Coast Guard) for the expansion of the Range Instruction Building at U.S. Coast Guard Training Center Yorktown in York County. The project will provide a locker room addition to the existing building. The locker room addition will add approximately 900 square feet to the building footprint. A small stormwater retention and erosion control BMP will be constructed. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the VCP provided all applicable permits and approvals are obtained with regard to any potential wetland impacts, erosion and sediment control, stormwater management, air emissions, and impacts to Chesapeake Bay Preservation Areas. In addition, the USCG must ensure the project complies with appropriate solid and hazardous waste management regulations and Section 106 of the National Historic Preservation Act.

USCG Marine Event Permits

OEIR reviewed 20 marine events permits for the USCG from April 1, 2011 through September 30, 2011: A list of all the projects reviewed follow.

Cape Charles Fireworks Safety Zone
Chincoteague Fire Company Wild Pony Swim
35th Annual Norfolk Harborfest
Hampton Blackbeard Festival
Virginia State Hydroplane Championship
Neptune Festival Fireworks
Poquoson Seafood Festival Boat Race
Chesapeake Bay Workboat Race
Stars and Stripes Spectacular Fireworks Show
Rappahannock River Boaters Association Radar Shootout
Shore Thing and Independence Day Fireworks Show
24th Annual Cock Island Race, City of Portsmouth
85th Hampton Cup Regatta
Wicomico Community Fireworks Show
Isle of Wight 4th of July Fireworks Show

Rappahannock River Boaters Association Radar Shootout
Shore Thing and Independence Day Fireworks Show
Air Power Over Hampton Roads Air Show
Centennial of Naval Aviation Air Show
Watermen's Heritage Festival Boat Race

Two examples of Consistency responses to USCG follow.

Cape Charles Fireworks Safety Zone – DEQ completed the coordinated review of a Federal Consistency Determination, submitted by the Department of Homeland Security (DHS) U.S. Coast Guard (USCG) for the establishment of a safety zone in support of the City of Cape Charles fireworks show. The safety zone will include all waters of the Cape Charles Harbor within a 375-foot radius at the approximate position of 37-17-46.5N/076-01-30.3W. The action is required to protect mariners and spectators from the hazards associated with the fireworks display, such as the accidental discharge of fireworks, dangerous projectiles, and falling hot embers or other debris. Entry into or movement within the proposed zone during the enforcement period is prohibited without approval of the Captain of the Port. The safety zone will be enforced for a limited time on July 3, 2011 from 9:00 PM to 10:00 PM. State agencies found that the proposed action would have no impacts to the enforceable policies of the Virginia Coastal Zone Management Program (VCP). Accordingly, DEQ concurs that the proposal is consistent with the VCP. However, the Department of Game and Inland Fisheries recommends USGC coordinate with the U.S. Fish and Wildlife Service, Virginia Department of Agriculture and Consumer Services, and Department of Conservation and Recreation regarding possible impacts upon the federally-listed threatened northeastern beach tiger beetle.

Chincoteague Fire Company Wild Pony Swim - OEIR completed a coordinated review of a federal consistency determination submitted by the Department of Homeland Security U.S. Coast Guard (USCG) to establish a Special Local Regulation and issue a CG-4423 Permit for Marine Event to the Chincoteague Volunteer Fire Company for the Chincoteague Fire Company Wild Pony Swim. This event will take place on the waters of Assateague Channel between the Eastern side of Chincoteague Island and the Western side of Assateague Island from July 27, 2011 through July 29, 2011 between 5 am and 2 pm each day. There will be approximately 500 spectator boats, up to 50,000 spectators along the shoreline, and approximately 150-175 Assateague ponies making the swim. Due to the need for vessel control during the event, vessel traffic will be temporarily restricted to provide for the safety of participants, spectators and transiting vessels. The Coast Guard will place 11 yellow unlighted buoys to mark the outer navigational limits of the swim zone and five white and orange "NO WAKE" zone buoys to assist with spectator watercraft speed. Based on the information provided in the FCD and reviewers comments, DEQ concurs with the FCD that finds the proposed action consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program.

II. Residual Category

The following consistency determinations were submitted as a residual category of Subpart C pursuant to the federal consistency regulation 15 CFR 930.31(c).

Grace and Shafer Multi-Family Apartment - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of Housing and Urban Development (HUD) for the construction of the Grace and Shafer multi-family apartment in the City of Richmond. HUD would provide mortgage insurance under HUD Section 221d(4) to Berkadia Commercial Mortgage, LLC for the construction of the apartment. Project activities include the demolition of an existing single-story, 10,776 square foot commercial building on the 0.376 acre site, and the construction of an eleven-story, 152-unit multi-family apartment structure with first floor retail space and underground parking. Based on DEQ's coordinated review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided

all applicable permits and approvals are obtained with respect to erosion and sediment control, stormwater management, and air pollution control. In addition, HUD and the developer must comply with applicable regulations related to solid and hazardous waste management and historic resources.

Checed Creek Appartment - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of Housing and Urban Development (HUD) which intends to provide mortgage insurance under HUD Section 221d(4) to Community Housing Partners for the construction of the Checed Creek Apartment located at 15319 Warwick Boulevard in the City of Newport News. Project activities include the construction of a single multi-family apartment building, driveway, parking lot, two stormwater BMPs, and landscaping on a 2.066-acre parcel. In accordance with the federal consistency regulations, the Commonwealth of Virginia objects to the consistency determination and finds the project, as proposed, inconsistent with the Virginia Coastal Zone Management Program (VCP) based on insufficient information to determine its consistency with the wetlands management enforceable policy as administered by DEQ (*Virginia Code* §62.1-44.15:5) and coastal lands management enforceable policy as administered by the Department of Conservation and Recreation (DCR), Division of Stormwater Management (DSM), Local Implementation (LI) (previously called the Division of Chesapeake Bay Local Assistance) (Virginia Code §10.1-2100-10.1-2114). DEQ encourages the applicant to work with DEQ-TRO and DCR-DSM-LI to provide the requested information for its review. DEQ will lift its objections if DEQ-TRO and DCR-DSM-LI concurs that the project is consistent with the wetlands management and coastal lands management enforceable policies of the VCP.

The Landmark at Talbot - DEQ completed a coordinated review of a Federal Consistency Determination (FCD) submitted by the Department of Housing and Urban Development (HUD) which intends to provide mortgage insurance under HUD Section 221d(4) to Berkadia Commercial Mortgage, LLC for the construction of The Landmark at Talbot, located at 7211 Newport Avenue in the City of Norfolk. Project activities include the demolition of 15 three-story apartment buildings and 1 single-story boiler room/maintenance office, and the construction of a five-building, 190-unit multi-family apartment complex on the 5.7-acre parcel. The subject property is serviced by electricity, natural gas, and municipally supplied water and sewer. Based on DEQ's review of the consistency determination and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained with respect to erosion and sediment control, stormwater management, air emissions, and impacts to Chesapeake Bay Preservation Areas.

Spectrum at Willoughby Point in Norfolk – DEQ completed the coordinated review of a Federal Consistency Determination (FCD) submitted by the U. S. Department of Housing and Urban Development (HUD). HUD proposes to provide mortgage insurance through its Section 221(d)(4) program to Berkadia Commercial Mortgage, LLC, for the construction of The Spectrum at Willoughby Point (Phase I). The HUD program provides mortgage insurance for multifamily rental housing for moderate-income families. This complex will be a mixed-use community of residential & commercial structures and a yacht club. Based on the information provided in the FCD and comments from reviewers, the DEQ has no objection to the proposal, provided the applicant complies with all applicable laws and regulations including erosion and sediment control, stormwater management, air pollution control, Chesapeake Bay Preservation Act requirements, wetlands and subaqueous lands management. DEQ concurs with the FCD that finds the proposed action consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program.

III. Federal Activities (Permits, Licenses and Approval)
These projects were reviewed pursuant to Subpart D of the Consistency Regulations (15 CFR §930.53)

North Anna Power Station Unit 3 – DEQ completed the coordinated review of a Federal Consistency Certification (FCC) submitted by Dominion Virginia Power (Dominion) for the Combined Construction and Operation License (COL) and U.S. Army Corps of Engineers (USACE) Permit for the North Anna Power Station Unit 3. Dominion is proposing to construct and operate a third nuclear reactor (Unit 3) at the existing

North Anna Power Station (NAPS) site in Louisa County. The proposed project requires issuance of a COL from the Nuclear Regulatory Commission (NRC) and the issuance of federal permits from the USACE. Activities associated with the proposed Unit 3 project can be divided into five components: (1) construction of Unit 3 at the NAPS site, including site separation activities that will occur prior to the construction of Unit 3; (2) additions to the existing NAPS-to-Ladysmith transmission line; (3) modifications to the large component transport route (LCTR); (4) the placement of construction material on the Route 700 parcels near the entrance to the NAPS site; and (5) operation of Unit 3.
As required by the Coastal Zone Management Act, DEQ's review included public participation. In this regard, DEQ conducted a public hearing on March 3, 2011 at the Louisa County Middle School to receive oral and written comments from the public. During the public review process, DEQ received comments from more than 65 individuals and organizations. Most of the public comments received state that the project, as currently proposed, is inconsistent with one or more of the following enforceable policies of the Virginia Coastal Zone Management Program (VCP): Fisheries Management, Wetlands Management, and Point Source Pollution Control. Based on the comments submitted by the agencies administering the enforceable policies of the VCP, DEQ conditionally concurs that the proposal is consistent with the VCP provided Dominion obtain and comply with all applicable permits and/or approvals associated with the enforceable policies of the VCP. If Dominion fails to comply with the conditions of our concurrence, in accordance with the federal consistency regulations, then this concurrence becomes an objection.

Transco Mid-Atlantic Connector Expansion Project -DEQ completed a coordinated review of an environmental assessment (EA) issued by the Federal Energy Regulatory Commission (FERC) for work related to a natural gas line throughout Virginia. The Transcontinental Gas Pipeline Company, LLC (Transco) proposes to increase the capacity of its existing mid-Atlantic system in Virginia to enable it to make deliveries from an interconnection with East Tennessee Natural Gas in North Carolina to delivery points in Virginia and Maryland. The expansion project includes the following activities:

Installation of 2.8 miles of new 42-inch-diameter pipeline looping and replacement in Prince William and Fairfax counties;

Modifications at Transco's existing Compressor Stations 165 and 175 in Pittsylvania and Fluvanna counties;

Installation and relocation of various appurtenant underground and aboveground facilities; and

Abandonment of certain facilities.

The National Park Service (NPS) participated as a cooperating agency in the preparation of the EA. The NPS will use the EA to consider the issuance of a right-of-way grant for the portion of the project on federal lands. The EA states that the majority of the project involves open land consisting of maintained and unmaintained right-of-way. The EA also states that Transco would reduce impacts on wildlife habitats and wildlife by using its existing rights-of-way and minimizing the areas of vegetation clearing for construction to the extent possible. DEQ reviewed the Federal Consistency Certification for portions of the project in Fairfax and Prince William counties, which are within the Commonwealth's designated coastal zone under DEQ 10-165F. DEQ concurred that the proposal is consistent with Virginia's Coastal Zone Management Program on January 31, 2011. The Commonwealth's response to FERC on the EA contains several recommendations including recommendations for Transco to coordinate with DEQ's regional offices regarding petroleum contaminated and voluntary remediation sites.

Radnor Heights Transmission Line and Substation – DEQ completed the coordinated review of a Draft Environmental Assessment and Federal Consistency Certification for the Dominion Radnor Heights Substation and Transmission Line project located in Arlington County. Dominion Virginia Power proposes to construct two new 230 kV underground transmission lines in Arlington County. The proposed work includes: cutting into

existing 230 kV lines near Davis Substation & extending each section 2.6 miles from the splice point to a new 230 kV switching substation (Radnor Heights Substation) to be located at the north end of Joint Base Myer-Henderson Hall (Fort Myer); constructing one new 230 kV underground transmission line approximately 1.1 miles from Dominion's existing Ballston Substation to the new Radnor Heights Substation; and constructing the Radnor Heights Substation. Based on the information provided in the Environmental Assessment and comments from reviewers, the Commonwealth of Virginia has no objection to the proposal as presented and concurs that this proposal is consistent with the Virginia Coastal Zone Management Program (VCP) provided that Dominion obtains and complies with all applicable permits and approvals of the pertinent enforceable policies of the VCP.

Rehabilitation of Floodwater Retarding Structure No. 8 in the Pohick Creek Watershed - DEQ completed a coordinated review of the Draft Supplemental Watershed Plan (SWP) No. 6 and Environmental Assessment EA for the rehabilitation of floodwater retarding structure (dam) No. 8 in the Pohick Creek Watershed, Fairfax County. Dam No. 8 does not presently meet Natural Resources Conservation Service (NRCS) or Virginia safety standards for the stability and integrity of the auxiliary spillway. The SWP provides for realigning the auxiliary spillway and armoring it with articulated concrete blocks from the control section of the auxiliary spillway to the valley floor. The training dikes will be extended to the valley floor. Approximately 40 feet of the dam embankment will be raised by 0.6 feet. The existing open top principal spillway riser will be replaced by a baffle-type riser. There will be no change in the current levels of flood protection downstream as a result of project activity. Provided activities are performed in accordance with the recommendations in the DEQ response, this proposal is unlikely to have significant effects on ambient air quality, important farmland, forest resources, and wetlands. It is unlikely to adversely affect species of plants or insects listed by state agencies as rare, threatened, or endangered. NRCS was reminded of the requirement under the Coastal Zone Management Act that a Federal Consistency Certification be submitted to DEQ for review and concurrence prior to any land disturbance.

Virginia Chesapeake Bay Artificial Reefs - DEQ completed a coordinated review of a Federal Consistency Certification (FCC) submitted by the Virginia Marine Resources Commission (VMRC) to continue the development of existing state supported artificial reefs in the Chesapeake Bay. Funding, in large part, for artificial reef development is provided by the U.S. Fish and Wildlife Service (USFWS) through the Aid to Sport Fish Restoration program. These funds will be used to acquire and deploy reef structures and materials as authorized by VMRC's U.S. Army Corps of Engineers (Corps) construction permits. The program now holds Corps' permits for eighteen Chesapeake Bay and five ocean reefs. Currently, DGIF's structure of choice has been clean concrete demolition materials such as bridge decking and piling as well as concrete pipe. When these materials have not been available in sufficient quantity, designed structures, such as Reef Balls, have been placed. The requested funding will be used to locate and/or purchase, haul and deploy materials and structures such as those referenced. Deployment locations will be recorded and made public on the VMRC website as well as disseminated at boat shows and fishing club meetings. Based on DEQ's review of the VMRC's consistency certification and the comments submitted by agencies administering the applicable enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP.

Marine Animal Care Center – DEQ completed the coordinated review of a Federal Consistency Certification (FCC) submitted by the City of Virginia Beach for the purchase of property from Department of the Navy (Navy) for the construction of the Marine Animal Care Center (MACC) located adjacent to Bells Road near its eastern terminus in the city. The purchase involves approximately 2.5 acres of land fronting on Owls Creek, a tributary of Lake Rudee. The MACC will consist of two separate buildings of approximately 18,000 square feet (sf) in total area constructed on a slab-on-grade foundation. Parking, landscaping and ingress/egress are part of the overall planning for the site. The purpose of the facility is to house and rehabilitate marine animals recovered by the city's stranding team. The facility will operate as an extension of the Virginia Aquarium for marine animal care and research. Based on DEQ's coordinated review of the FCC and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP),

DEQ concurs that the proposal is consistent with the enforceable policies of the VCP provided all applicable permits and approvals are obtained by the city with regard to any potential wetland impacts, erosion and sediment control, stormwater management and air emissions. In addition, Virginia Beach must ensure the project complies with appropriate solid and hazardous waste management regulations. Furthermore, the Navy must coordinate with the Department of Historic Resources in accordance with Section 106 of the National Historic Preservation Act.

Tangier Wind Turbine – DEQ completed the coordinated review of a Federal Consistency Certification (FCC), submitted by the Town of Tangier for the construction of a single 100 kilowatt (kW) wind energy generating facility at the Tangier Island Wastewater Treatment Plant (WWTP) adjacent to the Tangier Island Airport. The wind turbine will be directly interconnected to the WWTP with excess electricity to be net metered to other Town meters. Funding for the project is from the U.S. Department of Energy through the Virginia Department of Mines, Minerals and Energy. DEQ conditionally concurs that the proposal is consistent with the VCP provided the Town of Tangier obtains a jurisdictional determination for wetlands and surface waters from the U.S. Army Corps of Engineers and, if necessary, a Virginia Water Protection Permit from the DEQ Tidewater Regional Office. Also, the Town must obtain an exception from Accomack County for proposed project impacts to locally designated Chesapeake Bay Resource Protection Areas. In addition, the project requires approval from the Federal Aviation Administration (FAA) due to the proximity of the proposed turbine to the Tangier Airport. According to the Department of Aviation (DoAv), the FAA's Obstruction Evaluation Division issued a "Determination of No Hazard" for the proposed wind turbine. However, DoAv disagrees with the FAA's determination and appealed the determination. The FAA has six months to review DoAv's appeal.

Dominion Boulevard Roadway and Bridge Improvements – DEQ completed the coordinated review of a Federal Consistency Certification (FCC), submitted by the City of Chesapeake, in cooperation with the Federal Highway Administration (FHWA) and Virginia Department of Transportation (VDOT), for the construction of roadway improvements to U.S. Route 17 and construction of a new bridge to replace the existing bridge over the Southern Branch of the Elizabeth River in the City of Chesapeake. The project includes: construction of the Elizabeth River bridge and its approaches; widening Dominion Boulevard/US 17 from the northern bridge approach to the Oak Grove Connector interchange; construction of the Bainbridge Boulevard/Dominion Lakes interchange; and minor intersection improvements at Cedar Road and Great Bridge Boulevard. Based on DEQ's coordinated review of the FCC and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained with regard to wetland impacts, subaqueous lands impacts, erosion and sediment control, stormwater management, air emissions and impacts to Chesapeake Bay Preservation Areas.

Airport Entrance Sign at Chesapeake Regional Airport – DEQ completed the coordinated review of a Federal Consistency Certification (FCC), submitted by the Chesapeake Regional Airport Authority (Authority) for the construction of an entrance sign at the intersection of West Road and Airport Entrance Road in the City of Chesapeake. The proposed sign will be installed on an Authority easement located on W.W. Realty Associates, L.L.C. property adjacent to the airport. Based on DEQ's coordinated review of the FCC and the comments submitted by agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained with regard to erosion and sediment control, stormwater management, and air emissions.

IV. Federal Funds

DEQ completed the review of fifty-one local government projects submitted under 15 CFR, Part 930, Subpart F for federal financial assistance to local governments. Twelve projects involved federal financial assistance for the rehabilitation of single and multi-family affordable housing. Two projects involved improvements to community parks and one project involved the construction of improvements to a transit station (bus stop).

V. OCS Reviews

OCS Commercial Wind Lease Issuance & Site Characterization - DEQ completed a coordinated review of a Draft Environmental Assessment (EA) and Federal Consistency Determination (FCD) for commercial wind lease issuance and site characterization activities on the Atlantic Outer Continental Shelf (OCS) offshore New Jersey, Delaware, Maryland, and Virginia. The Department of the Interior Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) submitted the EA and FCD evaluating the environmental impacts and socioeconomic effects of issuing renewable energy leases, which includes reasonably foreseeable site characterization activities (geophysical, geotechnical, archeological, and biological surveys) on those leases, in identified offshore Wind Energy Areas (WEAs). In addition, the draft EA considers the reasonably foreseeable environmental impacts and socioeconomic effects associated with the approval of site assessment activities (including the installation and operation of meteorological towers and buoys) on the leases that may be issued. The Virginia WEA under consideration in the EA consists of 22 whole OCS blocks and 4 partial blocks. The EA considers six alternatives (Alternatives A-F). Alternative A (the preferred alternative) is the issuance of commercial and research wind energy leases within the WEAs and approval of site assessment activities on those leaseholds. The Department of Conservation and Recreation supports the use of the proposed mitigation measures described in the EA, including anti-perching devices, imposing lighting restrictions and prohibition of the use of guy wires to minimize and avoid impacts to avian species within the WEA. DEQ, on behalf of the Commonwealth, concurs that the project is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program.

Currently Under Review: Revisions to Safety and Environmental Management Systems for Oil, Gas and Sulphur Operations in the OCS– The Department of the Interior (DOI), Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), published a notice in September 14, 2011 Federal Register (Vol 76, No. 178, pages 56683-56694) seeking comments on revisions to a proposed rule for oil, gas and sulphur operations in the Outer Continental Shelf (OCS). This rulemaking proposes to amend BOEMRE regulations to require operators to develop and implement additional provisions in their Safety and Environmental Management Systems (SEMS) programs for oil, gas, and sulphur operations in the OCS. These revisions pertain to developing and implementing stop work authority and ultimate work authority, requiring employee participation in the development and implementation of SEMS programs, and establishing requirements for reporting unsafe working conditions. In addition, this proposed rule requires independent third parties to conduct audits of operators' SEMS programs and establishes further requirements relating to conducting job safety analysis (JSA) for activities identified in an operator's SEMS program. DEQ circulated this request to natural resources agencies for comments. Comments must be submitted to BOEMRE by November 14, 2011.

C. PROGRAM CHANGES

The Virginia CZM Program had previously contracted with the Environmental Law Institute (ELI) to develop a more in-depth analysis of the program's original enforceable policies regarding wildlife and endangered species and to evaluate the ramifications of recodification of Title 29.1, Chapters 1, 3, 4 and 5 regarding Administration of Game, Inland Fisheries, and Boating. A current contract is in place with ELI to identify and restate a clear list of its enforceable policies for federal consistency. Based on a conference call with NOAA OCRM staff on September 21, 2011, it was decided to reprioritize the endangered species issue over restatement of enforceable policies. It was also confirmed that adding threatened and endangered species code sections in support of Virginia's Executive Order Goal for endangered species protection would only constitute a routine program change and not a program amendment. A meeting is scheduled for November 2011 to review ELI's report and discuss this issue among the affected state agencies. After this meeting it is likely that the current ELI contract will be revised to meet identified needs.

D. SECTION 312 EVALUATION PROGRESS

1. Coastal Policy Team

PROGRAM SUGGESTION: The Coastal Policy Team should establish a strategic planning effort for the team and the VCZMP. The strategic plan could also set annual objectives and some measurable goals or performance measure criteria to help gauge success.

RESPONSE: It seems we already have multiple strategic planning processes in place: 1) Every three years the Coastal Policy Team goes through a process (sometimes associated with our biennial Partners Workshop) to identify a new "focal area" for the small amount of funds (~$350-500,000 per year) that we have available after our required continuing grants are covered; 2) Every five years the Coastal Policy Team engages in the Section 309 Coastal Needs Assessment & Strategy Development process – a strategic plan for prioritizing and developing new policies; 3) At almost every CPT meeting (2-3 times per year) the group discusses the next priority for incorporating new state laws or regulations into the Virginia CZM Program.

Given the limited resources we have, both in staff time and available dollars, it's not clear that sufficient benefit would derive from adding on yet another strategic planning process. We would like to discuss the need for this further with NOAA in the event that there is some aspect of strategic planning that we are neglecting but do or could have the resources to address.

2. Grants Management

PROGRAM SUGGESTION: Prior to development of the application for 2007 grant award funds, the VCZMP should consider ways to diversify match used for the CZMA cooperative agreement and to ensure mechanisms are in place to spend federal funds within the 18-month time frame of the award.

RESPONSE: While it is understandable that NOAA would like to see the CZM funds that DEQ retains for its own staff be matched task by task, it is not realistic to expect in this economic climate that the Commonwealth can afford to allocate new funds to the Virginia CZM Program. Like most states, Virginia has been through several rounds of state budget cuts and more are expected. State revenues have continued to decline. Fortunately, the WQIF funds that are used to match DEQ tasks have been maintained and the Commonwealth is actually spending millions more dollars on sewage treatment plant upgrades than are captured as match for our CZM awards. Also in light of Congress' failure to fund the Coastal Nonpoint Program for FY 2010, these sewage treatment plant upgrades funded with matching dollars are one of the only water quality projects the Virginia CZM Program has.

3. Water Quality

PROGRAM SUGGESTION: With the 'devolution' of local road planning, operations, and maintenance from the Virginia DOT to the local level, the VCZMP should consider using nonpoint program funding to support targeted assistance for the "Roads, Highways, and Bridges" nonpoint program management measures. The VCZMP and the nonpoint program manager should work to establish priorities for the nonpoint program and identify and develop for implementation some projects for whenever and whatever funding becomes available.

RESPONSE: Congress continues to fail to appropriate funding for the Coastal Non-Point program. In the event that funding for special initiatives for the water quality and non-point source program becomes available, the Virginia CZM Program will work closely with the Coastal Non-point Manager to identify opportunities for targeted assistance to local governments for the "Roads, Highways, and Bridges" nonpoint program management measures." To date, Virginia CZM continues to use Section 309 and 306 funds to support the

Coastal Networked Education for Municipal Officials (NEMO) program in Virginia. Through this support, Virginia CZM works with the Coastal Non-point Manager to prioritize non-point program activities and identify additional opportunities to expand and enhance the efforts of Coastal NEMO.

4. Coastal Hazards

PROGRAM SUGGESTION: The VCZMP and its Commonwealth, regional, and local community partners should consider development of a coastal community resiliency initiative through existing partnerships and programs (e.g., SAMPS, directed technical assistance) as a further means to address coastal hazards. Existing research data and results and recent development of infrastructure (i.e., data layers and geospatial information) such as Coastal GEMS could be translated and disseminated through training programs and workshops for local government decision-makers as part of this effort.
RESPONSE: Virginia has used the concept of focal areas since 1999 in order to concentrate financial and policy efforts on a particular resource or geographic region for a three-year period. The current focal area, Sustainable Community Planning, was chosen after extensive input from partner agencies at the 2007 Coastal Partners Workshop and through discussions of the Coastal Policy Team. As a result, Virginia CZM resources, including staff time and grants, are being directed at state agencies and coastal planning district commissions to help coastal localities plan for adaptation to climate change and to protect blue and green infrastructure. Both of these topics, but especially climate change adaptation, address the NOAA suggestion for a community resiliency initiative. Coastal GEMS is an important component of this initiative, and a number of local government training sessions have been conducted by Virginia CZM staff (see Suggestion 6). Additional support for sea level rise adaptation planning in the Hampton Roads region is planned and will be submitted to NOAA for approval in the fall of 2011.

5. Federal Consistency

PROGRAM SUGGESTION: The Coastal Policy Team should consider using federal consistency as a tool for identifying opportunities to review state policies or influencing new state policy based upon new situations presented in federal consistency determinations.

RESPONSE: In response to this suggestion, the Coastal Policy Team asked Virginia CZM staff to evaluate options for protecting endangered species through federal consistency. The Virginia CZM Program contracted with the Environmental Law Institute (ELI) to prepare routine program change submissions and then to address concerns raised about the expansion of authority regarding endangered species. ELI's report has been received and a meeting will be held in November 2011 to decide how to best proceed in addressing this issue.

6. Public Participation and Outreach

PROGRAM SUGGESTION: The Virginia Coastal Zone Management Program should evaluate the numerous educational and outreach markets it serves and consider a stronger focus on the local and coastal decision-makers. The planning district commissions, Sea Grant, the Chesapeake Bay-Virginia NERR Coastal Training Program, and the federal staff of the Chesapeake NEMO program could provide coordination and assistance.

RESPONSE: In early 2008, Virginia CZM released an improved version of Coastal GEMS. Since that time, numerous data layers have been developed and added to GEMS to make the system even more-user-friendly to planners and to make the connections between land and water resources more visible. For example, several data layers were synthesized to create a single, comprehensive Land Priority Conservation Areas (PCA) dataset that allows PDCs and local planners to use a single layer for comprehensive planning versus the multiple layers previously available. In FY 2010 the recently completed Estuarine Priority Conservation Areas layer has been

incorporated into a synthesis map now called the Coastal Virginia Ecological Value Assessment (Coastal VEVA) – giving localities and state agencies a single layer depicting all known blue and green infrastructure within Virginia's coastal zone. This FY 2010 grant is also focusing on training for elected officials and local planning staff on the value and use of this new data layer. The NEMO Coordinator as well as staff from DCR, DGIF VCU and VIMS are all involved in this effort. To ensure that local/coastal decision makers are aware of the Coastal GEMS tool and its capabilities VA CZM staff continues to offer Coastal GEMS training. Most recently in FY10, training was provided to local planners at a Richmond Regional PDC meeting and a similar training is currently being scheduled for Hampton Roads PDC.

Virginia CZM's "focal area" during the fiscal years 2008 -2010 is "Sustainable Communities: Protecting Blue-Green Infrastructure and Adapting to Climate Change." Representatives from each of Virginia's eight coastal planning district commissions helped refine this "focal area" during the 2007 Coastal Partners Workshop where the need for more education for local planners and decision-makers was identified as a high priority. Community planning occurs at the local government level and "focal area" grants to the coastal PDCs will continue to be the most effective and efficient means for the Virginia CZM Program to provide education and training to local planners and officials. The PDCs are coordinating with Virginia NEMO and a grant to Virginia NEMO at the Department of Conservation and Recreation is helping to provide direct technical assistance to those localities requesting it. The focal area projects should result in better-informed local planning staff and decision-makers and better protection and management of important coastal resources through adoption of local plans and ordinances.

Since Virginia's coastal planning district commissions are in an excellent position to provide local planners and officials regularly scheduled training on coastal resource management issues through their quarterly meetings, Virginia CZM continues to ask each coastal PDC to provide four training opportunities each year as a deliverable of their technical assistance funding. These trainings, on topics related to Virginia CZM goals and initiatives, have been ongoing for the last few years and are generally well attended across the eight coastal PDCs.

Virginia CZM staff continues to take advantage of several opportunities to improve coordination with our NOAA "sister" programs, CBNERRS and Sea Grant. Virginia CZM staff participate in Virginia Sea Grant strategic planning sessions and evaluations and Virginia CZM and CBNERRS staff occasionally hold "collaboration meetings." The Director of Virginia Sea Grant and Manager of CBNERRS are members of the Coastal Policy Team and Virginia CZM staff serve on the CBNERRS Coastal Training Steering Committee. These are all important venues for identifying common goals, priorities and programs. In June, Virginia CZM staff attended a Virginia Chesapeake & Coastal Partners meeting organized by NOAA CB Office staff – including staff from Virginia Sea Grant, VA NERRS, NCBO, Coastal Services Center, and the NOAA Restoration Center – to discuss current priority areas and opportunities for collaboration. As a follow-up to that meeting, we are working with communication and education staff in these offices to catalog regional NOAA environmental literacy and training programs and projects, communicate to decision-makers where the programs have supported and collaborated with one another on common CZM goals, and to identify opportunities where the NOAA programs can more effectively collaborate in future.

Virginia CZM staff has been engaged in ongoing coordination with state CZM partners on communication, marketing and education efforts and recently initiated a new Virginia Native Plant Marketing Partnership. It is hoped that the focus of this partnership on collaboration and coordination will show unity, lead to more consistent messaging to the general public and greater efficiencies in the use of limited resources, and provide a forum for the partners to work together to address common coastal water quality and habitat goals.