



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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November 7, 2013

Mr. Chuck Roadley
Williamsburg Environmental Group
5209 Center Street
Williamsburg, VA 23188

RE: Federal Consistency Certification: U.S. Army Corps of Engineers Individual Permit
for Curles Neck Farm Project (DEQ 13-113F)

Dear Mr. Roadley,

The Commonwealth of Virginia has completed its review of the federal consistency certification (FCC) for the above-referenced project. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal consistency documents and responding to appropriate officials on behalf of the Commonwealth. This letter is in response to the FCC submission received on June 6, 2013. The FCC was prepared by Williamsburg Environmental Group (WEG) on behalf of Mr. Tommy Pruitt (the applicant) and submitted as a requirement to obtain a U.S. Army Corps of Engineers (Corps) individual permit. The following agencies and planning district commission participated in this review:

Department of Environmental Quality
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Department of Health
Department of Historic Resources
Department of Forestry
Marine Resource Commission
Virginia Institute of Marine Science
Richmond Regional Commission

Henrico County and the Virginia Department of Agriculture and Consumer Services also were invited to comment.

PROJECT DESCRIPTION

WEG on behalf of Mr. Tommy Pruitt (the applicant) submitted a FCC for the Curles Neck Farm Project in Henrico County. The project qualifies for an individual permit from the Corps. The applicant is proposing to construct a 2,376 linear foot low-profile single sheet pile structure extending from the southern terminus of an existing earthen levee system to the existing Corps dredge material management area on Curles Neck Farm. The project will result in permanent impacts to 0.24 acre of tidal forested wetlands, 2,877 square feet of subaqueous bottom, and 0.06 acre of tidal non-vegetated wetlands. Temporary impacts will include 0.62 acre of tidal forested wetlands, 0.05 acre of tidal non-vegetated wetlands and 2,480 square feet of subaqueous bottom. In addition, 1,144 cubic yards of subaqueous bottom will be dredged for barge access. The project is located along the south side of New Market Road, west of Turkey Island, east of Jones Neck and is bordered by the James River to the North and East. The purpose of the project is to preserve the existing levee system in regulating water levels within Curles Neck Swamp and provide a long-term mechanism to preserve and protect Curles Neck Swamp from permanent inundation as a result of sea level rise. The FCC states that the project is consistent with the Virginia Coastal Zone Management Program (VCP).

PUBLIC PARTICIPATION

In accordance with 15 CFR §930.2, a public notice of this proposed action was published on the DEQ website from June 12, 2013 to July 5, 2013.

Summary of Public Comments and Responses from State Agencies: Eight e-mailed public comments (two from the same person) were received in response to the notice. One hard copy of emailed comments was also received. All comments voiced opposition to and/or concern about the project with three people requesting a public hearing. Generally, the concerns focus on public access and impacts to the ecosystem as a result of the project. The issues of interference with the public use of state waters, a pre-construction study, impacts to threatened and endangered species and the legality of the existing structures are beyond the scope of this review. However, the Virginia Marine Resources Commission (VMRC) responded to concerns about public access and the existing structures and the response is included in Attachment 1.

Concerns regarding negative impacts to fisheries, water quality and wetlands are within the scope of this review as they relate to the fisheries management, point source and wetlands management enforceable policies. The Virginia Institute of Marine Science

(VIMS) states in its report to the VMRC concerning Joint Permit Application # #12-1534 that concerns for the potential adverse effects to estuarine habitats and living resources associated with this proposed project are significant. The DEQ Piedmont Regional Office (PRO) states that the VMRC permit will address the water quality concerns raised by the VIMS report. Regarding fisheries, VMRC states that the Commission authorized a permit for the steel wall conditioned on the requirement for a three-year post-construction monitoring study evaluating fish usage, specifically river herring and American eel, subject to VMRC staff approval. In addition, the VMRC permit includes special conditions to monitor the impact on fish from the proposed project. The Department of Game and Inland Fisheries (DGIF) states that the project would be consistent with the fisheries management enforceable policy assuming erosion and sediment controls are implemented. VMRC states that the permit for the project includes a wetland mitigation plan (Conceptual Mitigation Plan, April 29, 2013) that has been reviewed and approved by VMRC staff. Additional information is available in Attachment 1.

BACKGROUND

DEQ received the FCC for the Curles Neck Farm Project on May 31, 2013. Additional information, as requested by DEQ, was submitted via postal mail on June 6, 2013, by WEG, making December 2, 2013, the sixth-month legal deadline for the Commonwealth's response. On August 27, 2013, DEQ sent a letter notifying the applicant and the Corps of the status of the review as required under 15 CFR Part 930, sub-section 930.62(b). VMRC, which administers the subaqueous lands and wetlands management enforceable policies, approved a submerged lands and tidal wetlands permit on May 28, 2013. However, the permit was conditioned on the submission of water management and fishery monitoring plans which require approval by VMRC, and DEQ required additional information on the sufficiency of the plans before responding to the FCC review. During the review, VIMS (an advisory agency), VMRC's staff report and public comments raised concerns about impacts of the project on the Curles Neck ecosystem. In part, the concerns addressed adverse impacts to fisheries, water quality and wetlands. These topics are addressed in the water and fishery management plans as well as the wetland mitigation plan which are part of the VMRC permit. The permit was finalized on October 29, 2013, and includes 28 conditions which must be satisfied to ensure consistency with the fisheries management and subaqueous lands management enforceable policies. Requirements of the wetland mitigation plan must be satisfied to ensure consistency with the wetlands management enforceable policies.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act (CZMA) of 1972, as amended (16 USCA, CZMA § 307, § 1456(c)(3)(A)) and its implementing federal consistency

regulations (15 CFR Part 930, subpart D), any applicant for a required listed federal license or permit to conduct an activity, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of the Commonwealth shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the VCP and that such activity will be conducted in a manner consistent with the program. At the same time, the applicant shall furnish to DEQ a copy of the certification with all necessary information and data. The Commonwealth has six months after receipt of a complete FCC to concur or object to the applicant's finding of project consistency with the VCP. The VCP is comprised of a network of programs administered by several agencies. In order to be consistent with the VCP, all the applicable permits and approvals listed under the enforceable policies of the VCP must be obtained prior to commencing the project.

FEDERAL CONSISTENCY CONDITIONAL CONCURRENCE

Based on our review of the Curles Neck Farm Project consistency certification and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ conditionally concurs that the proposal is consistent with the VCP provided the proposal complies with all the applicable permits, approvals, and conditions of the enforceable policies of the VCP.

The conditions of this concurrence include, but are not limited to, receiving applicable permits from the Virginia Marine Resources Commission and adhering to special conditions and the wetlands mitigation plan identified within the permit with respect to the following enforceable policies of the VCP:

- (i) subaqueous lands management (Virginia Code § 28.2-1200 – 28.2-1213);
- (ii) wetlands management (Virginia Code § 28.2-1301 through § 28.2-1320; Virginia Code § 62.1-44.15.5 and the Water Quality Certification requirements of §401 of the Clean Water Act of 1972); and
- (iii) fisheries management (Virginia Code §28.2-200 to §28.2-713 and §29.1-100 to §29.1-570).

In accordance with the Federal Consistency Regulations at 15 CFR Part 930, section 930.4, this conditional concurrence is based on the applicant obtaining necessary authorizations prior to any actions that would impact any of the enforceable policies. If the requirements of section 930.4, sub-paragraphs (a)(1) through (a)(3) are not met, this conditional concurrence becomes an objection under 15 CFR Part 930, section 930.63.

Other state approvals which may apply to this project are not included in this conditional concurrence. Therefore, the the applicant must ensure that these activities are

conducted in accordance with all applicable federal, state, and local laws and regulations.

ANALYSIS OF ENFORCEABLE POLICIES

According to information in the FCC, the proposed activity would have no effect on the following enforceable policies: dunes management and shoreline sanitation. The resource agencies that are responsible for the administration of the enforceable policies of the VCP generally agree with findings of the FCC. The applicant must ensure that the proposed action is consistent with the enforceable policies. In addition, DEQ encourages the applicant to consider potential project impacts on the advisory policies of the VCP (Attachment 2). The analysis which follows responds to the discussion of the enforceable policies of the VCP that apply to this project.

1. Fisheries Management. The FCC (page 3) states that project site is part of a section of the James River that is an Anadromous Fish Use Area. According to the FCC, the proposed project will not adversely affect fisheries management resources since it can be constructed in adherence with time-of -year restrictions and erosion controls. The FCC states that the creation of additional forested tidal wetlands would provide additional habitat and revitalize intertidal and shallow water habitat areas.

1(a) Agency Jurisdiction.

1(a)(i) Virginia Marine Resources Commission and Department of Game and Inland Fisheries. The fisheries management enforceable policy is administered by the VMRC (Virginia Code §28.2-200 to §28.2-713) and the DGIF (Virginia Code §29.1-100 to §29.1-570).

1(a)(ii) Department of Health. The Virginia Department of Health's (VDH) Division of Shellfish Sanitation (DSS) is responsible for protecting the health of the consumers of molluscan shellfish and crustacea by ensuring that shellfish growing waters are properly classified for harvesting, and that molluscan shellfish and crustacea processing facilities meet sanitation standards. The mission of this Division is to minimize the risk of disease from molluscan shellfish and crustacea products at the wholesale level by classifying shellfish waters for safe commercial and recreational harvest; by implementing a statewide regulatory inspection program for commercial processors and shippers; and by providing technical guidance and assistance to the shellfish and crustacea industries regarding technical and public health issues.

1(b) Agency Findings.

1(b)(i) VMRC Findings. VMRC states that it reviewed the project through the Joint Permit Application (JPA) process (VMRC #12-1534). In the Habitat Management Division Evaluation (May 28, 2013), VMRC staff states that its review of the project, the public interest review and state agency comments identified several areas of concern, including a lack of details addressing important questions about the potential impacts of the project on living resources within the area. VMRC staff states that the scope of the project and possible adverse effects on the living resources within the James River warrant additional time to review and consider the project impacts. Staff recommended that the Commission consider monitoring efforts and studies of the diadromous fish use, spawning and migratory patterns related to Curles Neck Swamp and a detailed timeline for the proposed opening and closing of the tidal gates and the associated water levels. On May 28, 2013, the Commission approved a conditional tidal wetlands permit and subaqueous lands permit for the proposed project.

1(b)(ii) VDH Findings. VDH DSS concurs with the findings that the project occurs in waters that have been classified as "Prohibited and Non-Productive."

1(b)(iii) DGIF Findings. DGIF states that Blueback herring and alewife have been documented from Curles Neck Swamp and DGIF has designated the James River at the project site as an Anadromous Fish Use Area. Blocking the tidal inlets could result in adverse impacts upon anadromous fish and other species currently accessing the swamp through these inlets.

DGIF states that the applicant originally proposed to maintain and operate the existing 48-inch culverts at the mouth of Curles Neck Creek and has recently proposed to also "add a tidal gate along the proposed sheet pile wall to allow for the free flow of fish during certain times of the year. This gate will be located in the tidal gut." Pending receipt and review of design specifications and operational protocols for the existing and proposed structures, DGIF cannot offer specific recommendations for the protection of affected species, but DGIF states that such a project modification, if properly designed and operated, could provide sufficient passage for anadromous fish into and out of Curles Neck Swamp.

DGIF documents federally-listed endangered Atlantic sturgeon from the project area. Based on the project scope and location, DGIF does not anticipate that this project will adversely impact this species.

1(c) Agency Recommendations. DGIF has the following recommendations:

- Maintain connectivity between the James River and Curles Neck Swamp during in-migration, spawning and out-migration.
- Continue to coordinate with DGIF and with the National Oceanographic and Atmospheric Administration (NOAA) National Marine Fisheries Service to ensure protection of anadromous fishes that may be affected by this project.
- Coordinate with the NOAA National Marine Fisheries Service regarding possible impacts upon Atlantic sturgeon.

1(d) Conclusion. Assuming adherence to erosion and sediment controls, DGIF states that the project would be consistent with the fisheries management enforceable policy.

The VMRC permit was finalized on October 29, 2013. The permit includes special conditions to monitor the impact of the proposed project on fish. The applicant must meet the requirements of the conditions to ensure consistency with the fisheries management enforceable policy. A summary of the conditions regarding fisheries management follows:

- Implementation of a water management plan, which the VMRC may review and amend after a three-year assessment period.
- Implementation of a three year post-construction monitoring plan, which the VMRC may review and amend after three years, assessing river herring and eel utilization of Curles Neck Marsh in accordance with Exhibit 2 of the VMRC permit.
- Submission of results of the fishery monitoring study at the end of the three-year assessment period to VMRC.
- Adherence to a time-of-year restriction for instream construction work between February 15 and June 30 of any year to minimize adverse impacts of construction on anadromous fish species.
- An agreement to use reasonable efforts to cooperatively address and mutually agree to terms and conditions for continuance, discontinuance, or amendment of the water management plan and fishery monitoring plan.

2. Wetlands Management. The FCC (page 4) states that proposed impacts associated with the construction of the sheet pile will include permanent impacts to 0.24 acre of tidal forested wetlands, 0.06 acre of tidal nonvegetated wetlands and temporary impacts to 0.62 acre of tidal forested wetlands and 0.05 acre of tidal non-vegetated wetlands as

a result of temporary construction access. The FCC also states that the Commission approved the proposed project during a hearing on May 28, 2013.

2(a) Agency Jurisdiction.

2(a)(i) DEQ. The State Water Control Board promulgates Virginia's water regulations, covering a variety of permits to include Virginia Pollutant Discharge Elimination System Permit, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection Permit (VWPP). The VWPP is a state permit which governs wetlands, surface water, and surface water withdrawals/impoundments. It also serves as § 401 certification of the federal Clean Water Act § 404 permits for dredge and fill activities in waters of the U.S. The VWPP Program is under the Office of Wetlands and Stream Protection (OWSP) within the DEQ Water Division.

2(a)(ii) VMRC. Tidal wetlands are administered by VMRC under the authority of Virginia Code §28.2-1301 through §28.2-1320.

2(b) Agency Findings.

2(b)(i) DEQ Findings. The DEQ PRO Virginia Water Protection Permit (VWPP) Program issued a permit waiver since the project is located in tidal wetlands, thereby deferring to VMRC under the wetlands management enforceable policy. The DEQ PRO VWPP Program states that pursuant to 9VAC 25-210-220(B) of the VWPP Program Regulation, a VWPP is not required for this project because VMRC will be issuing a permit pursuant to Chapter 12 and/or Chapter 13 of Title 28.2 of the Code of Virginia, and the Corps will be issuing an individual permit pursuant to Section 404 of the Clean Water Act for the proposed activities. The proposed project will permanently impact 0.24 acre of tidal forested wetlands and 0.106 acre of subaqueous bottom land. In addition, the proposed project will temporarily impact 0.65 acre of tidal forested wetlands and 0.081 acre of subaqueous bottom land. Compensatory mitigation will be addressed by the Corps and/or the VMRC permits.

2(b)(ii) VMRC Findings. VMRC states that it reviewed the project through the JPA process (VMRC #12-1534). In the Habitat Management Division Evaluation (May 28, 2013), VMRC staff states that its review of the project, the public interest review and state agency comments identified several areas of concern, including impacts to tidal wetlands. Staff recommended that the Commission consider a tidal wetlands survey and an applied analysis on how the wall will prevent inundation of tidal wetlands. On May 28, 2013, the Commission approved a conditional tidal wetlands permit. Since Henrico County has not yet adopted the model wetlands ordinance, the Commission is charged with acting as the local wetlands board pursuant to Chapter 13, Subtitle III, of Title 28.2 of the Code. The permit requires a mitigation plan for tidal wetland impacts.

The goal of the wetland mitigation project is to provide compensation for unavoidable impacts to tidal wetlands. The tidal wetlands will be created by establishing a connection to the James River.

2(c) Requirement. Should the size and/or scope of the project change, or if permits are not obtained from VMRC or the Corps, a VWP permit may be required from DEQ.

2(d) Recommendations. DEQ has the following recommendations for the proposed project:

- Properly implement and maintain erosion and sediment controls throughout all phases of construction;
- Inspect and repair all erosion and sediment controls and Best Management Practices (BMPs) before and after rain events; and
- Following all standards and specifications under the *Virginia Erosion and Sediment Controls Handbook* (1992, 3rd Edition).

In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. To minimize unavoidable impacts to wetlands and waterways, DEQ recommends the following practices:

- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable.
- Preserve the top 12 inches of material removed from wetlands for use as wetland seed and root-stock in the excavated area.
- Design erosion and sedimentation controls in accordance with the most current edition of the *Virginia Erosion and Sediment Control Handbook*. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to state waters. The controls should remain in place until the area is stabilized.
- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub or forested). The applicant should take all appropriate measures to promote revegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats or geotextile fabric in order to prevent entry in state waters. These materials should be managed in a

manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.

- Clearly flag or mark all non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading or filling activities for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Employ measures to prevent spills of fuels or lubricants into state waters.

2(e) Conclusion. Provided the project complies with applicable requirements and conditions in the Corps' Permit No. NAO-2012-2152 and VMRC Permit No. 12-1534, it would be consistent with the wetlands management enforceable policy. The VMRC permit was finalized on October 29, 2013. The description of the permitted activity by VMRC includes the mitigation plan that is required to compensate for the loss of tidal wetlands associated with the construction of the wall (and riprap scour protection). The applicant must meet the requirements of the mitigation plan to ensure consistency with the wetlands management enforceable policy. A summary of the requirements follows:

- The mitigation plan includes a wetlands monitoring program.
- Native plant density of at least 300 living woody stems per acre must be achieved by the end of the first growing season following planting and maintained through the end of the monitoring period or until canopy coverage of woody species is greater than 30 percent.
- Native non-invasive herbaceous plant coverage must be at least 60 percent by the end of the first growing season, at least 70 percent by the end of the second growing season, and at least 80 percent by the end of the third monitoring year and thereafter.
- Measures must be taken to control any invasive plant that is deemed detrimental to the colonization of the site by desirable native species.
- Monitoring of the site will be conducted for ten years and results must be incorporated in a report with the first being due at the end of the first full growing season following grading. Results for the site are due at the end of years, 1, 2, 3, 5, and 10, and are to be submitted to the Corps and DEQ by December 31 in each of these years.

3. Subaqueous Lands. The FCC (page 4) states that the proposed project includes 2,877 square feet of permanent impacts and 2,480 square feet of temporary impacts to subaqueous lands. In addition, the project will involve mechanical dredging of 1,144 cubic yards of subaqueous bottom for construction access.

3(a) Agency Jurisdiction. In accordance with the Coastal Zone Management Act of 1972 (§1456(c)) and federal consistency regulations (15 CFR, Part 930, Subpart D, §930.30 et seq.), the applicant's actions must be consistent with the enforceable policies of the VCP, including the subaqueous lands management enforceable policy. VMRC, pursuant to Section 28.2-1200 *et seq.* of the Code of Virginia, has jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks in the Commonwealth.

The VMRC serves as the clearinghouse for the JPA used by the:

- Corps for issuing permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act;
- DEQ for issuance of a VWPP;
- VMRC for encroachments on or over state-owned subaqueous beds as well as tidal wetlands; and
- local wetlands board for impacts to wetlands.

The VMRC distributes the completed JPA to the appropriate agencies. Each agency conducts its review and respond.

3(b) Agency Findings. VMRC states it reviewed this project through the JPA process (VMRC #12-1534). On May 28, 2013, the Commission approved a conditional submerged lands permit.

3(c) Conclusion. The VMRC permit was finalized on October 29, 2013. The permit includes special conditions to minimize encroachment on state-owned submerged lands. The applicant must meet the requirements of the conditions to ensure consistency with the subaqueous lands management enforceable policy. A summary of the conditions regarding subaqueous lands follows:

- Submission of a post-dredging bathymetric survey of the dredged area within 30 days of the completion of the dredging to VMRC.
- Post-dredge survey depths must vary uniformly around the permitted dredge depths with the average depth approximating minus 3.5 feet at mean low water. Any areas dredged deeper than minus 4 feet will be considered a violation of the permit and subject to enforcement action.
- A meeting will be held on site within seven days prior to the commencement of the dredging.
- Removal of all unpermitted structures (after the steel wall has been installed) in cooperation with VMRC.

4. Air Pollution Control. The FCC (pages 5 and 6) states that the proposed project will result in a temporary increase in air emissions from construction equipment and from vehicular and boat traffic to and from the site. The FCC states that the project will not include open burning.

4(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the Air Pollution Control Board, is responsible for developing regulations that implement Virginia's Air Pollution Control Law. DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate regional office is directly responsible for the issue of necessary permits to construct and operate all stationary sources in the region as well as to monitor emissions from these sources for compliance. As a part of this mandate, the environmental documents of new projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

4(b) Ozone Maintenance Area. According to the DEQ Air Division, the project site is located in an ozone maintenance and an emission control area for volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are contributors to ozone pollution.

4(c) Requirements.

4(c)(i) VOCs and No_x. All precautions are necessary to restrict the emissions of VOCs and NO_x during construction.

4(c)(ii) Fugitive Dust. During land-disturbing activities as applicable, fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 *et seq.* of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, water or suitable chemicals for dust control during the proposed demolition and construction operations and from material stockpiles;
- Install and use hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
- Cover open equipment for conveying materials; and

- Promptly remove spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

4(c)(iii) Open Burning. If project activities change to include the burning of vegetative debris or use of special incineration devices in the disposal of land clearing debris during construction, this activity must meet the requirements under 9VAC5-130 *et seq.* of the regulations for open burning, and it may require a permit. The regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. Contact officials with Henrico County to determine what local requirements, if any, exist.

4(d) Conclusion. Provided the project complies with applicable requirements, it would be consistent with the air pollution control enforceable policy of the VCP.

5. Coastal Lands Management. The FCC (page 6) states that the project area is located within the Resource Protection Area (RPA) associated with the James River. According to the FCC, the proposed project is intended to preserve and protect the habitat from permanent inundation and will further protect the RPA features. The FCC states that WEG will coordinate with Henrico County on the proposed work within the RPA.

5(a) Agency Jurisdiction. Effective July 1, 2013, the DEQ Water Division (WD) Office of Stormwater Management (OSM) administers the coastal lands management enforceable policy of the VCP, which is governed by the Chesapeake Bay Preservation Act (Virginia Code §62.1-44.15:67 – 62.1-44.15:78) and Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830-70 *et seq.*).

5(b) Agency Finding. The DEQ WD OSM states that since the purpose of this project is to protect Curles Neck Swamp from the effects of sea level rise, it is considered a water-dependent facility and is permitted within the RPA.

5(c) Chesapeake Bay Preservation Act Requirements.

- Submit a water quality impact assessment to Henrico County for review and approval.
- Adhere to applicable erosion and sediment control and storm water management requirements.

5(d) Agency Conclusion. The project would be consistent with the requirements of coastal lands management enforceable policy if the requirements listed in 5(c) are satisfied.

6. Non-point Source Pollution Control. The FCC (page 5) states that a Virginia Stormwater Management Permit (VSMP) will be obtained prior to construction, and appropriate erosion and sediment controls will be utilized.

6(a) Agency Jurisdiction. Effective July 1, 2013, the DEQ Water Division administers the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R) and the Virginia Stormwater Management Law and Regulations (VSWML&R).

6(b) Erosion and Sediment Control. If the project involves a land-disturbing activity of equal to or greater than 2,500 square feet in a Chesapeake Bay Preservation Area, the property owner is responsible for submitting a project-specific erosion and sediment control (ESC) plan to the Henrico County for review and approval pursuant to the local ESC requirements. Depending on local requirements the area of land-disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles and soil intentionally transported from the project, must be covered by the project-specific ESC plan. Local ESC program requirements must be requested through the Henrico County.

6(c) Stormwater Management Plan. Depending on local requirements, a stormwater management (SWM) plan may be required. Local SWM program requirements must be requested through Henrico County.

6(d) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program. The operator or owner of a construction project involving land-disturbing activities equal to or greater than 2,500 square feet or more in a Chesapeake Bay Preservation Area is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the General Permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx.

6(e) Conclusion. For consistency with the nonpoint source pollution control enforceable policy of the VCP, the project must be consistent with the erosion and sediment control and the stormwater management laws and regulations.

7. Point Source Pollution Control. The FCD (page 5) states that the proposed project will not be a point source of pollution.

7(a) Agency Jurisdiction. The State Water Control Board promulgates Virginia's water regulations, covering a variety of permits to include VPDES, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection Permit. DEQ issues individual VPDES permits to both municipal and industrial facilities. Permit requirements, special conditions, effluent limitations and monitoring requirements are determined for each facility on a site-specific basis in order to meet applicable water quality standards. General permits are permits written for a general class of dischargers including Petroleum Contaminated Sites and Hydrostatic Tests (9VAC25-120). The six DEQ regional offices perform permit application reviews and issue permits for the covered activities.

7(b) Agency Comments. PRO waived §401 certification under the point source enforceable policy (email, A. Dunaway/E. Irons, August 27, 2013). PRO states that the VMRC permit will adequately address the water quality concerns raised in the VIMS report.

8. Advisory Comments on VCP Resources.

8(a) Agency Jurisdiction. VIMS conducts research in coastal ocean and estuarine science, educates students and citizens, and provides advisory service to policymakers, industry, and the public. VIMS also serves as an advisory agency to VMRC.

8(b) Agency Findings. VIMS states (in comments submitted to VMRC) that concerns for the potential adverse effects to estuarine habitats and living resources associated with this proposed project are significant even though the area has been subjected to the long-term influences of altered hydrology and availability. The concerns are especially heightened due to the current state of alosine and American eel populations, and the related strict resource management structures that these species are under. A summary of VIMS' conclusions follows:

- *History of Curles Neck:* VIMS states that the history of alteration within Curles Neck Swamp and the presence of the earthen levee add to the complexity of the project. The recent breaches have allowed the area behind the levee to begin normalizing hydrologic connectivity with the James River. Although no direct studies have been conducted, VIMS states that it can confidently assume that

the renewed connectivity has benefitted tidal habitats and fishery resources above the previous condition and water management strategy. VIMS also states that this area may not yet have fully recovered to its natural state and level of ecosystem function prior to construction of the earthen levee. This project will return Curles Neck Swamp to a semi-isolated area for most of the year, and isolation for the remainder of the year.

- *Interstate Fishery Management Plans:* VIMS states that the proposed project is inconsistent with the objectives of the Interstate Fishery Management Plan (IFMP) for Shad and River Herring and runs counter to initiatives in all coastal states, including Virginia, to remove obstructions that effect access to spawning and nursery habitat. Concerns for the potential adverse effects to estuarine habitats and living resources are significant even though the area has been subjected to the long-term influences of altered hydrology and availability. VIMS' concerns are especially heightened due to the current state of alosine and American eel populations, and the related strict resource management structures that these species are under. The IFMP for Shad and River Herring, and the IFMP for American eel are clear in their intent to protect stocks and create situations and opportunities that enhance stocks.
- *Adult and Young Fish in Curles Neck:* VIMS states that it is certain that adults and young herring are able to escape the Swamp through the culverts when open, but VIMS is not able to estimate what proportion of the population escapes. It is reasonable to assume that an unknown amount of adults and young will remain in Curles Neck Swamp under the proposed water management plan time window. Within this shallow and isolated environment, they likely would be subjected to the environmental stresses such as low dissolved oxygen, abnormally high temperatures, and increased predation, all of which increase the probability of mortality. Young fish may suffer additional mortality during this time from pumping unless the pump is equipped with 1 millimeter (mm) screens and is operated at very low flows.
- *Tidal Wetlands:* Tidal wetland losses will occur, but VIMS is unable to accurately determine the amount of impact from construction activities and water management. The applicant has proposed a practicable mitigation approach that should provide some level of community and functional replacement, but VIMS cannot be certain that this plan addresses all wetland community losses by area due to the lack of detailed information on tidal wetlands.

8(c) VIMS' Recommendations to VMRC. VIMS offered the following summary (details attached) of recommendations to VMRC for consideration prior to VMRC determining whether to issue a permit for the proposed project:

- Consider requiring long-term monitoring and assessment that can address alosine and eel stocks' level of use, productivity and spawning success, and contribution to the James River system if construction of the wall and additional culvert and tide flap are authorized;
- Consider pre-construction monitoring, which is preferred but may be impracticable;
- Ensure that monitoring occur post-construction but prior to implementation of a water management plan (i.e. allowing the tide flaps to remain open year round) for a period of at least three years to determine the optimum window of spawning success for alosines and eels (however, VIMS is not confident that the proposed time window is sufficient to allow maximum escapement opportunity);
- Continue monitoring after the selected water management plan is implemented allowing for operation that would lessen potential impacts and provide comparative data on the level of effect of the impoundment and water management; and
- Consider an adaptive management plan that can use continuing monitoring data to modify, if necessary, water management to address alosine and eel spawning and nursery requirements under future climate change and sea level rise scenarios.

ADDITIONAL ENVIRONMENTAL CONSIDERATIONS

In addition to the enforceable policies of the VCP, comments also were provided with respect to applicable requirements and recommendations of the following programs:

1. Solid and Hazardous Waste Management.

1(a) Agency Jurisdiction. Solid and hazardous wastes in Virginia are regulated by DEQ, the Virginia Waste Management Board and the U.S. Environmental Protection Agency. They administer programs created by the federal Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response Compensation and Liability Act (CERCLA), commonly called Superfund, and the Virginia Waste Management Act. DEQ administers regulations established by the Virginia Waste Management Board and reviews permit applications for completeness and conformance with facility standards and financial assurance requirements. All Virginia localities are required, under the Solid Waste Management Planning Regulations, to identify the strategies they will follow on the management of their solid wastes to include items such as facility siting, long-term (20-year) use and alternative programs such as materials recycling and composting.

1(b) Database Search. The DEQ Division of Land Protection and Revitalization (DLPR) (formerly the Waste Division) states that it conducted a cursory review of its files and identified one site:

- Petroleum Release Site Within 500 Feet of the Proposed Project: ID# 19901283 – Presquile National Wildlife Refuge, Turkey Island, Hopewell, VA 23860. Event Date: 3/14/2006. Status: Closed.

1(c) Agency Comment. DEQ PRO states that it is the generator's responsibility to determine if a solid waste meets the criteria of a hazardous waste and as a result be managed as such.

1(d) Requirements. Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable federal, state and local laws and regulations. The disposal of contaminated soils and groundwater should be done in accordance with DEQ regulatory guidelines.

1(e) Agency Recommendations.

- DEQ encourages all projects, including installation activities, to implement pollution prevention principles, including:
 - the reduction, reuse and recycling of all solid wastes generated; and
 - the minimization and proper handling of generated hazardous wastes.
- Evaluate the petroleum release site to establish the exact location, nature and extent of the release and the potential to impact the project.

2. Historic Structures and Architectural Resources.

2(a) Agency Jurisdiction. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated Historic Preservation Office for the Commonwealth, ensures that federal actions comply with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulation at 36 Code of Federal Regulations Part 800. The NHPA requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 also applies if there are any federal involvements, such as licenses, permits, approvals or funding. DHR also provides comments to DEQ through the state environmental impact report review process.

2(b) Agency Finding. DHR states that the Curles Neck property is an historically sensitive landscape containing numerous known archaeological resources.

2(c) Agency Recommendation. DHR recommends that the Corps consider the potential impact to known and unrecorded resources during the planning and implementation phases of this project.

2(d) Requirement. Consult directly with DHR, as necessary, pursuant to Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations codified at 36 CFR Part 800 which require federal agencies to consider the effects of their undertakings on historic properties.

Contact DHR (Roger Kirchen at Roger.Kirchen@dhr.virginia.gov) for additional information.

3. Natural Heritage Resources.

3(a) Agency Jurisdiction.

3(a)(i) Natural Heritage Resources. The mission of the DCR is to conserve Virginia's natural and recreational resources. DCR supports a variety of environmental programs organized within seven divisions including the Division of Natural Heritage (DNH). DNH's mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. The Virginia Natural Area Preserves Act, 10.1-209 through 217 of the *Code of Virginia*, was passed in 1989 and codified DCR's powers and duties related to statewide biological inventory: maintaining a statewide database for conservation planning and project review, land protection for the conservation of biodiversity, and the protection and ecological management of natural heritage resources (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

3(a)(ii) Threatened and Endangered Plant and Insect Species. The Endangered Plant and Insect Species Act of 1979, Chapter 39, §3.1-102- through 1030 of the *Code of Virginia*, as amended, authorizes the Virginia Department of Agriculture and Consumer Services (VDACS) to conserve, protect and manage endangered species of plants and insects. VDACS Virginia Endangered Plant and Insect Species Program personnel cooperates with the U.S. Fish and Wildlife Service (FWS), DCR DNH and other agencies and organizations on the recovery, protection or conservation of listed threatened or endangered species and designated plant and insect species that are rare throughout their worldwide ranges. In those instances where recovery plans, developed by FWS, are available, adherence to the order and tasks outlined in the

plans should be followed to the extent possible. VDACS has regulatory authority to conserve rare and endangered plant and insect species through the Virginia Endangered Plant and Insect Species Act. Under a Memorandum of Agreement established between the VDACS and DCR, DCR has the authority to report for VDACS on state-listed plant and insect species.

3(b) Agency Findings. DCR DNH identified the following resources in its files:

3(b)(i) James River – Turkey Island Creek Stream Conservation Unit (SCU). The James River – Turkey Island SCU is located within the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are given a biodiversity significance ranking based on the rarity, quality, and number of occurrences they contain on a scale of 1 to 5 with 1 being the most significant. The James River - Turkey Island Creek SCU has been given a biodiversity significance ranking of B4, which represents a site of moderate significance. The natural heritage resource associated with this SCU is the Atlantic sturgeon (*Acipenser oxyrinchus*, G3/S2/LE/LT).

Atlantic sturgeon is a large fish that reaches a maximum length of about 4.3 meters and may live for several decades. The adults migrate between fresh water spawning areas and salt water non-spawning areas. They feed primarily on benthic invertebrates and small fishes as available. Stocks on the Atlantic slope have been severely reduced by overfishing (mainly late 1800s and early 1900s), pollution, sedimentation, and blockage of access to spawning areas by dams (Gilbert 1989, Burkhead and Jenkins 1991, Marine and Coastal Species Information System 1996). In the Chesapeake Bay and elsewhere in the range, hypoxic events have increased and may degrade nursery habitat for Atlantic sturgeon (Secor and Gunderson 1997). Habitat loss due to dam construction and water pollution are thought to be major factors impeding full recovery of populations (Smith 1985, cited by Johnson et al. 1997; Gilbert 1989). A late maturation age and use of estuaries, coastal bays, and upstream areas of rivers for spawning and juvenile development make stocks vulnerable to habitat alterations in many areas (NatureServe 2012). This species is currently classified as endangered by the FWS and threatened by DGIF.

3(b)(ii) Curles Neck Conservation Site. DCR DNH states that the Curles Neck Conservation Site is located in the vicinity of the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation.

Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain on a scale of 1 to 5 with 1 being most significant. Curles Neck Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resource at this site is the Sensitive joint-vetch (*Aeschynomene virginica*, G2/S2/LT/LT).

Sensitive joint-vetch is a bristly stemmed annual legume growing to 2 meters in height. The characteristic pinnately divided leaves are gland-dotted and may fold slightly if touched. The pea-shaped flowers are yellow streaked with orange-red. This legume occurs in freshwater to brackish wetland habitats, primarily marshes, in the intertidal zone of our larger coastal rivers. This habitat type often supports a high diversity of both rare and common plant species. This annual herbaceous plant is classified as federally-listed by the FWS and stated listed by VDACS.

3(c) State Threatened and Endangered Plant and Insect Species.

- DCR DNH states that Sensitive joint-vetch is classified as federally-listed by the FWS and stated-listed by VDACS. To thrive, sensitive joint-vetch may require minimal competition from other plants. For this reason, plants are frequently found on accreting point bars and levees that have not yet been colonized by perennial species. Sensitive joint-vetch populations however, may also be found within marsh interiors. Researchers believe that these plants may be able to thrive there because of harsh soil and nutrient conditions that inhibit growth of potential competitors. An additional theory for the sensitive joint-vetch occurring at those locations is that grazing herbivores, such as muskrat (*Ondatra zebethicus*), eat large areas of vegetation ("muskrat eat-outs") leaving behind exposed soils that are more easily colonized by annuals. Populations face many potential on-site and off-site threats, including activities that alter natural river currents and sediment cycling and, thereby, prevent the development of accreting point-bar habitats for the species and/or cause erosion of that habitat. Other potential threats include activities which result in increased salinity levels, water pollution, displacement by aggressive species, and activities which result in excessive sediment loading which could inhibit germination of seeds or smother seedlings (FWS, 1995). Sensitive joint-vetch is currently known from about 30 locations in Virginia's coastal plain, 10 of which are historical occurrences. Surveys for Sensitive joint-vetch should be conducted from August 15 to October 15. At this time the plant is in flower or fruit and has attained some stature making it more visible during the surveys typically conducted from a boat.
- VDACS did not respond to DEQ's request for comment.

3(d) Natural Area Preserves. DCR states that there are no State Natural Area Preserves under its jurisdiction in the project vicinity.

3(e) Agency Recommendations.

- Contact the DCR DNH if a significant amount of time passes before the project is implemented since new and updated information is continually added to the Biotics Data System.
- Coordinate with the FWS due to the legal status of Sensitive joint-vetch and the Atlantic sturgeon.
- Consider another alternative for scour protection in lieu of grouted riprap.
- Conduct an inventory for Sensitive joint-vetch due to the potential for this site to support populations of the state- and federally-listed plant.
- Contact DCR DNH for a list of DCR biologists who are qualified and available to conduct inventories for rare, threatened, and endangered species and to discuss arrangements for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the FWS.
- Coordinate survey results with DCR DNH and FWS. Upon review of the results, if it is determined the species is present, and there is a likelihood of a negative impact on the species, DCR DNH will recommend coordination with VDACS to ensure compliance with Virginia's Endangered Plant and Insect Species Act.

4. Wildlife Resources.

4(a) Agency Jurisdiction. DGIF, as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally-listed endangered or threatened species, but excluding listed insects (Virginia Code Title 29.1). DGIF is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S.C. sections 661 *et seq.*) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts.

4(b) Agency Findings.

4(b)(i) Bald Eagles. DGIF states that Bald eagle nests and colonial waterbird colonies have been documented from the project area. Based on the scope and location of the proposed work, DGIF does not anticipate project-related adverse impacts upon eagles or waterbirds nesting onsite. The project, however, also is located within the James River Bald Eagle Concentration Area, and construction activities potentially could adversely impact eagles within that designated area.

4(b)(ii) Waterfowl Habitat. DGIF states that the ability to manage water levels in Curles Neck Swamp to maintain and enhance waterfowl habitat and to protect this habitat from sea level rise will, if properly exercised, be highly beneficial to resident and migratory wildlife. Further, this project offers significant educational and research opportunities.

4(b)(iii) Wetland Habitat. DGIF reviewed the proposed tidal wetland mitigation site and general plan, and determined it to be an acceptable proposal to compensate for the primary tidal wetland loss associated with the project.

4(c) Agency Recommendations. DGIF has the following recommendations:

- Coordinate with the FWS regarding possible impacts upon eagles known to use the project site and surrounding areas for nesting, foraging, and roosting.
- Work closely with institutions that have environmental research programs, such as Virginia Commonwealth University, VIMS, or the James River Association, to facilitate research and monitoring of Curles Neck Swamp, the tidal mitigation site, and associated environs.
- Coordinate with resource agencies on updates regarding management of the swamp, and to enhance understanding of such wetland management initiatives in the context of anticipated sea level rise, noting that continued beneficial aspects of the project are dependent on effective water level management through engineered structures.

4(d) Additional Information. DGIF maintains a database (<http://vafwis.org/fwis/>) of wildlife locations, including threatened and endangered species, trout streams and anadromous fish waters.

5. Water Supply.

5(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). VDH administers both federal and state laws governing waterworks operation

5(b) Agency Findings. VDH ODW states that there are no apparent impacts to public drinking water sources due to the proposed project and the project appears consistent with the Virginia Waterworks Regulations. There are no groundwater wells within a 1-mile radius of the project site. The Virginia-American Water Company surface water intake is within a 5-mile radius (Zone 1) and is located 3.7 miles downgradient of the project site.

5(c) Agency Recommendation. Notify the Virginia-American Water Company of the proposed project and coordinate with the company during construction.

6. Forest Resources.

6(a) Agency Jurisdiction. The mission of the Department of Forestry (DOF) is to protect and develop healthy, sustainable forest resources for Virginians. DOF was established in 1914 to prevent and suppress forest fires and reforest bare lands. Since the Department's inception, it has grown and evolved to encompass other protection and management duties including: protecting Virginia's forests from wildfire, protecting Virginia's waters, managing and conserving Virginia's forests, managing state-owned lands and nurseries, and managing regulated incentive programs for forest landowners.

6(b) Agency Finding. DOF states that it has no comments on the project.

Contact DOF (Gregory Evans at DOF at Gregory.Evans@dof.virginia.gov) for additional information if necessary.

7. Pollution Prevention. DEQ advocates that principles of pollution prevention be used in all construction projects. Effective siting, planning and on-site best management practices will help to ensure that environmental impacts are minimized. However, pollution prevention techniques also include decisions related to construction materials, design and operational procedures that will facilitate the reduction of wastes at the source.

7(a) Agency Recommendations. We have several pollution prevention recommendations that may be helpful during the construction:

- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.

The DEQ Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques. If interested, please contact DEQ (Sharon Baxter at 804-698-4344).

8. Pesticides and Herbicides. In general, when pesticides or herbicides must be used, their use should be strictly in accordance with manufacturers' recommendations. In addition, DEQ recommends that the responsible agent use the least toxic pesticides or herbicides effective in controlling the target species. For more information on pesticide or herbicide use, please contact the Virginia Department of Agriculture and Consumer Services (804-786-3501).

9. Local and Regional Comments. As customary, DEQ invited Henrico County and the Richmond Regional Planning District Commission (PDC) to comment on the project.

9(a) Jurisdiction. In accordance with the Code of Virginia, Section 15.2-4207, planning district commissions encourage and facilitate local government cooperation and state-local cooperation in addressing, on a regional basis, problems of greater than local significance. The cooperation resulting from this is intended to facilitate the recognition and analysis of regional opportunities and take account of regional influences in planning and implementing public policies and services. Planning district commissions promote the orderly and efficient development of the physical, social and economic elements of the districts by planning, and encouraging and assisting localities to plan for the future.

9(b) Local Comments. Henrico County did not respond to DEQ's request for comments.

9(c) Regional Comments. The Richmond Regional PDC did not identify any conflicts with the project.

REGULATORY AND COORDINATION NEEDS

1. Fisheries Management. Continue to coordinate with DGIF (Amy Ewing at Amy.Ewing@dgif.virginia.gov) and with the NOAA National Marine Fisheries Service (David O'Brien at David.L.O'Brien@noaa.gov) to ensure protection of anadromous fishes that may be affected by this project. Coordinate with NOAA National Marine Fisheries Service (David O'Brien at David.L.O'Brien@noaa.gov) regarding protection of the federally-listed endangered Atlantic sturgeon. The project must meet the requirements and conditions of VMRC Permit No. 12-1534 to ensure consistency with the fisheries management enforceable policy.

2. Water Quality and Wetlands. If the size or scope of the project changes, or if the Corps' Permit No. NAO-2012-2152 and VMRC Permit No. 12-1534 are not obtained, a VWP permit may be required pursuant to 9VAC25-210. Contact DEQ PRO (Allison Dunaway at 804-527-5086 or Allison.Dunaway@deq.virginia.gov) for additional information regarding VWP permitting requirements. The project must meet the requirements and conditions of VMRC Permit No. 12-1534 to ensure consistency with the wetlands management enforceable policy.

3. Subaqueous Lands Management. VMRC, pursuant to Section 28.2-1200 *et seq.* of the Code of Virginia, has jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks in the Commonwealth. The project must meet the requirements and conditions of VMRC Permit No. 12-1534 to ensure consistency with the subaqueous land management enforceable policy.

4. Nonpoint Pollution Control.

4(a) Erosion and Sediment Control and Stormwater Management. The applicant must ensure that it is in compliance with Virginia Erosion and Sediment Control Law (Virginia Code §62.1-44.15 *et seq.*) and Regulations (9VAC25-840 *et seq.*) and Stormwater Management Law (Virginia Code 62.1-44.15 *et seq.*) and Regulations (9VAC25-870-10 *et seq.*). The applicant must submit a site-specific erosion and sediment control (ESC) plan to Henrico County for review and approval pursuant to the local ESC ordinances. Dependent on local requirements, a separate stormwater management (SWM) plan may be required for this project.

4(b) General Permit for Stormwater Discharges from Construction Activities (VAR10). The owner or operator of projects involving land-disturbing activities of equal to or greater than 2,500 square feet or more in a Chesapeake Bay Preservation Area is required to apply for registration coverage under the General Permit for Discharges of Stormwater from Construction Activities. Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ (Holly Sepety at 804-

698-4039 or *Holly.Sepety@deq.virginia.gov*) (Reference: VSWML §62.1-44.15 *et seq.*; VSMP Permit Regulations 9VAC25-870 *et seq.*).

5. Coastal Lands Management. In order to ensure consistency with the coastal lands management enforceable policy of the VCP, activities must be consistent with all erosion and sediment control and stormwater management requirements. In addition, a water quality impact assessment must be submitted to Henrico County for review and approval. Contact Henrico County (Robin Wilder, Henrico County Water Quality Analyst 804-727-8325 or *wil47@co.henrico.va.us*) or DEQ WD OSM (Daniel Moore at *Daniel.Moore@deq.virginia.gov*) for additional information if necessary.

6. Air Pollution Control. The following regulations may apply during construction:

- fugitive dust and emissions control (9VAC5-50-60 *et seq.*); and
- open burning restrictions (9VAC5-130 *et seq.*).

6(a) Coordination.

- For information on any local requirements pertaining to open burning, contact officials with Henrico County (804-501-4900).
- Contact DEQ PRO (James Kyle at *James.Kyle@deq.virginia.gov* or 804-527-5047) for additional information regarding air quality regulations.

7. Solid and Hazardous Wastes. All solid waste, hazardous waste and hazardous materials must be managed in accordance with all applicable federal, state and local environmental regulations.

These state laws and regulations may apply:

- Virginia Waste Management Act (Code of Virginia §10.1-1400 *et seq.*);
- Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC20-60);
- Virginia Solid Waste Management Regulations (VSWMR) (9VAC20-81); and
- Virginia Regulations for the Transportation of Hazardous Materials (9VAC20-110).

These federal laws and regulations may apply:

- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations); and

- U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 Code of Federal Regulations Part 107).

Contact DEQ PRO (Jason Miller at 804-527-5028 or *Jason.Miller@deq.virginia.gov*) for additional information on waste management and the identified petroleum release.

8. Natural Heritage Resources.

- Contact DCR DNH at (804-371-2708) for an update on natural heritage information if a significant amount of time passes before the project is implemented.
- Coordinate with the FWS (Cindy Schulz at 804-654-1842 or *cindy_schulz@fws.gov*) due to the legal status of Sensitive joint-vetch and the Atlantic sturgeon.
- Contact DCR DNH (J. Christopher Ludwig, Natural Heritage Inventory Manager, at *Chris.Ludwig@dcr.virginia.gov* or 804-371-6206) for a list of DCR biologists who are qualified and available to conduct inventories for rare, threatened, and endangered species and to discuss arrangements for field work.
- Submit survey results for the Sensitive joint-vetch to DCR DNH (Rene' Hypes at *Rene.Hypes@dcr.virginia.gov*) and FWS (Cindy Schulz at 804-654-1842 or *cindy_schulz@fws.gov*).
- Coordinate with DCR DNH (Rene' Hypes at *Rene.Hypes@dcr.virginia.gov*) regarding questions about its recommendations.

9. Wildlife Resources.

- DGIF's database may be accessed at <http://vafwis.org/fwis/> or by contacting DGIF (Shirl Dressler at 804-367-6913 or *Shirl.Dressler@dgif.virginia.gov*).
- Coordinate with the FWS (Cindy Schulz at 804-654-1842 or *cindy_schulz@fws.gov*) regarding possible impacts upon eagles known to use the project site and surrounding areas for nesting, foraging, and roosting.
- Coordinate with DGIF (Amy Ewing at *Amy.Ewing@dgif.virginia.gov*) for additional information on its recommendations.

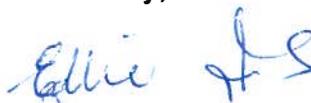
10. Historic Resources. Consult directly with DHR (Roger Kirchen at *Roger.Kirchen@dhr.virginia.gov*), as necessary, pursuant to Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations codified at 36 CFR Part 800 which require federal agencies to consider the effects of their undertakings on historic properties.

11. Waterworks.

- Contact the locality regarding potential impacts to public water distribution systems. Contact VDH (Barry E. Matthews at 804-864-7515) for additional information.
- Notify the Virginia-American Water Company (Virginia-American Water Company, 2223 Duke Street, Alexandria, VA 22314, 703-706-3867; Administrative Contact: Ms. Kelly Ryan, 900 Industrial Street, P.O. Box 60. Hopewell, VA 23860, 804-446-9822) of the proposed project and coordinate with the company during construction.

Thank you for the opportunity to comment on this FCC. The detailed comments of reviewers are attached. If you have questions, please do not hesitate to call me at (804) 698-4325 or Julia Wellman at (804) 698-4326.

Sincerely,



Ellie Irons, Program Manager
Environmental Impact Review

Enclosures

cc: John A. Vithoulikas, Henrico County
Bob Crum, RRPDC

ec: Todd Miller, U.S. Army Corps of Engineers
Sharon Baxter, DEQ
Mike Murphy, DEQ PRO
Allison Dunaway, DEQ PRO
Kelley West, DEQ PRO
Chuck Roadley, WEG
Rachel Roberts, WEG
Juliette Giordano, VMRC
Amy Ewing, DGIF
Keith Tignor, VDACS
Robbie Rhur, DCR
Barry Matthews, VDH
Steve Coe, DEQ ORP

Corps IP FCC
Curles Neck Farm Project
DEQ 13-113F

Kotur S. Narasimhan, DEQ DAPC
Larry Gavan, DEQ Water Division
Daniel Moore, DEQ Water Division
Holly Sepety, DEQ Water Division
Shantelle Nicholson, DEQ Water Division
Roger Kirchen, DHR
Buck Kline, DOF
Greg Evans, DOF
Lyle Varnell, VIMS
Pam Mason, VIMS
George Little, Citizen
William Rhoades, Citizen
Jane Myers, Citizen
Brian Siff, Citizen
Beth Sykes, Citizen
Wayland Jones, Citizen
Stephen Lake, Citizen

Attachment 1

DEQ 13-113F

Curles Neck Farm Project

Federal Consistency Certification

U.S. Army Corps of Engineers Individual Permit

Public Comments

Number	Date Received	Name	Position	Basis
1	07/02/13 by email	George B. Little, Jr.	oppose	Interference with the public use of state waters; negative effects to wetlands, water quality and fisheries
2	07/02/13 by email, 07/08/13 by postal mail	William Rhoades	oppose	Interference with the public use of state waters
3	07/03/13 by email	Jane Myers	oppose	Negative effects to fisheries, habitat and tidal wetlands; concern about applicant not having to conduct pre-construction study; Interference with the public use of state waters;
4	07/03/13 by email	Wayland Jones	oppose	Requests public hearing; concerned about VMRC's consideration of staff comments; interference with the public use of state waters; inadequate mitigation; negative impacts on tidal wetlands, fisheries and water quality
5	07/03/13 by email	Stephen Lake	oppose	Negative effects to tidal estuary, endangered species, water quality
6	07/05/13 by email	Brian Siff	oppose	Negative effects to water quality, habitat, fisheries, tidal wetlands; project contradicts state and federal initiatives; interference with public use of state waters
7	07/05/13 by email	Beth Sykes	oppose	Interference with the public use of state waters; negative effects to tidal wetlands, water quality and fisheries; inadequate mitigation; project contradicts state laws and regulations; requests public hearing

8	07/05/13 by email	Jane Myers	oppose	Concerned about VMRC's consideration of staff comments; requests public hearing; interference with the public use of state waters; negative impacts on tidal wetlands, fisheries and water quality; inadequate mitigation
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Enforceable Policies: Public Comments and Responses

<p>Fisheries Management: Negative effects to fisheries</p>	<ul style="list-style-type: none"> • DGIF states that the project would be consistent with the fisheries management section of the Virginia Coastal Zone Management Program (VCP) assuming adherence to erosion and sediment controls. DGIF states that it has no additional input. • VMRC states that the Commission authorized a permit for the steel wall conditioned on the requirement for a three-year post-construction monitoring study evaluating fish usage, specifically river herring and American eel, subject to VMRC staff approval. VMRC staff, in coordination with advisory agencies, has reviewed the proposed monitoring study. The VMRC permit includes special conditions to monitor the impact on fish from the proposed project.
<p>Wetlands Management: Negative effects to wetlands</p>	<ul style="list-style-type: none"> • DEQ PRO states that it has no additional comments to submit at this time. As a general recommendation, PRO recommends that Curles Neck Farm pursue the most environmentally protective alternative, taking into consideration existing state and federal water quality laws and regulations. • VMRC states that the permit for the project includes a wetland mitigation plan (Conceptual Mitigation Plan, April 29, 2013) that has been reviewed and approved by VMRC staff.
<p>Point Source Pollution Control: Negative effects to water quality</p>	<ul style="list-style-type: none"> • DEQ PRO states that the VMRC permit will adequately address the water quality concerns raised in the Virginia Institute of Marine Science (VIMS) report.

Other Public Comments and Responses

<p>Interference with the public use of state waters</p>	<ul style="list-style-type: none">• With regard to the existing berm and the 1989 hearing, VMRC states that the Commission authorized an after-the-fact permit that was never formally executed with VMRC. At the May 28, 2013, hearing, the Commission authorized the execution of the original permit, #81-0479, in the name of PCN, LLC, as the current owners of the property. As such, the original berm is now a permitted structure and not illegal. On the matter of public access, VMRC still contends that Curles Creek is state bottom. However, the action of the Commission in 1989 when they authorized the original berm, would seem to preclude public access as they authorized a berm structure physically barring any access from public waters of the James River to Curles Creek. At the 2013 Commission hearing, the Commission members seemed to uphold the action of the 1989 Commission as they did not eliminate the physical barrier.
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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

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Attachment 2

Advisory Policies for Geographic Areas of Particular Concern

- a. Coastal Natural Resource Areas - These areas are vital to estuarine and marine ecosystems and/or are of great importance to areas immediately inland of the shoreline. Such areas receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. These areas are worthy of special consideration in any planning or resources management process and include the following resources:
- a) Wetlands
 - b) Aquatic Spawning, Nursery, and Feeding Grounds
 - c) Coastal Primary Sand Dunes
 - d) Barrier Islands
 - e) Significant Wildlife Habitat Areas
 - f) Public Recreation Areas
 - g) Sand and Gravel Resources
 - h) Underwater Historic Sites.
- b. Coastal Natural Hazard Areas - This policy covers areas vulnerable to continuing and severe erosion and areas susceptible to potential damage from wind, tidal, and storm related events including flooding. New buildings and other structures should be designed and sited to minimize the potential for property damage due to storms or shoreline erosion. The areas of concern are as follows:
- i) Highly Erodible Areas
 - ii) Coastal High Hazard Areas, including flood plains.
- c. Waterfront Development Areas - These areas are vital to the Commonwealth because of the limited number of areas suitable for waterfront activities. The areas of concern are as follows:
- i) Commercial Ports
 - ii) Commercial Fishing Piers
 - iii) Community Waterfronts

Although the management of such areas is the responsibility of local government and some regional authorities, designation of these areas as Waterfront Development Areas of Particular Concern (APC) under the VCP is encouraged.

Designation will allow the use of federal CZMA funds to be used to assist planning for such areas and the implementation of such plans. The VCP recognizes two broad classes of priority uses for waterfront development APC:

- i) water access dependent activities;
- ii) activities significantly enhanced by the waterfront location and complementary to other existing and/or planned activities in a given waterfront area.

Advisory Policies for Shorefront Access Planning and Protection

- a. Virginia Public Beaches - Approximately 25 miles of public beaches are located in the cities, counties, and towns of Virginia exclusive of public beaches on state and federal land. These public shoreline areas will be maintained to allow public access to recreational resources.
- b. Virginia Outdoors Plan - Planning for coastal access is provided by the Department of Conservation and Recreation in cooperation with other state and local government agencies. The Virginia Outdoors Plan (VOP), which is published by the Department, identifies recreational facilities in the Commonwealth that provide recreational access. The VOP also serves to identify future needs of the Commonwealth in relation to the provision of recreational opportunities and shoreline access. Prior to initiating any project, consideration should be given to the proximity of the project site to recreational resources identified in the VOP.
- c. Parks, Natural Areas, and Wildlife Management Areas - Parks, Wildlife Management Areas, and Natural Areas are provided for the recreational pleasure of the citizens of the Commonwealth and the nation by local, state, and federal agencies. The recreational values of these areas should be protected and maintained.
- d. Waterfront Recreational Land Acquisition - It is the policy of the Commonwealth to protect areas, properties, lands, or any estate or interest therein, of scenic beauty, recreational utility, historical interest, or unusual features which may be acquired, preserved, and maintained for the citizens of the Commonwealth.
- e. Waterfront Recreational Facilities - This policy applies to the provision of boat ramps, public landings, and bridges which provide water access to the citizens of the Commonwealth. These facilities shall be designed, constructed, and maintained to provide points of water access when and where practicable.
- f. Waterfront Historic Properties - The Commonwealth has a long history of settlement and development, and much of that history has involved both shorelines and near-shore areas. The protection and preservation of historic shorefront properties is primarily the responsibility of the Department of Historic Resources. Buildings, structures, and sites of historical, architectural, and/or archaeological interest are significant resources for the citizens of the Commonwealth. It is the policy of the Commonwealth and the VCP to enhance the protection of buildings, structures, and sites of historical, architectural, and archaeological significance from damage or destruction when practicable.



COMMONWEALTH of VIRGINIA

*Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607*

Douglas W. Domenech
Secretary of Natural Resources

Jack G. Travelstead
Commissioner

June 13, 2013

Ms. Julia Wellman
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Re: Project #13-113F
Curles Neck Farm Project

Dear Ms. Wellman:

We have reviewed the above-referenced project whereby Mr. Tommy Pruitt, PCN, LLC., proposes to extend an earthen levee system by installing a 2,376-foot sheet pile wall from the terminus of the existing earthen levee to an Army Corps of Engineers Dredge Material Management Area for the purposes of water management for waterfowl habitat and wetlands preservation at Curles Neck Farm situated along the James River in Henrico County.

The Marine Resources Commission, pursuant to Chapter 12 of Title 28.2 of the Code of Virginia, is responsible for issuing permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth. Accordingly, authorization may be required from the Marine Resources Commission for projects that involve encroachments channelward of ordinary high water along natural rivers and streams above the fall line or below mean low water below the fall line.

Additionally, permits may be required from the Marine Resources Commission, acting as the Henrico County Wetlands Board, under the Tidal Wetlands Act Chapter 13 of Title 28.2 of the Code of Virginia. Section 28.2-1300 of the Code of Virginia defines tidal wetlands as nonvegetated wetlands are "...lands lying contiguous to mean low water and between mean low water and mean high water..." and vegetated wetlands are "... lands lying between and contiguous to mean low water and an elevation above mean low water equal to the factor one and one-half times the mean tide range at the site of the proposed project..." Wetlands permits would be required for any use or development of tidal wetlands.

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Ms. Julia Wellman
Page Two

June 13, 2013
#13-113F VMRC Comments

The Marine Resources Commission recently reviewed this project through the Joint Permit Application (JPA) process (VMRC #12-1534). This project requires both a submerged lands permit and a tidal wetland permit from the Marine Resources Commission. On May 28, 2013, the Commission approved a conditional submerged lands and tidal wetlands permit. Enclosed are two documents that summarize our agency's review of the project (evaluation) and the Commission's action (Commission action letter).

Thank you for the opportunity to comment on this project. If we may be of further assistance, please do not hesitate to contact us.

Sincerely,



Juliette Giordano
Environmental Engineer



COMMONWEALTH of VIRGINIA

Marine Resources Commission

2600 Washington Avenue

Third Floor

Newport News, Virginia 23607

Douglas W. Domenech
Secretary of Natural Resources

Jack G. Travelstead
Commissioner

May 30, 2013

PCN, LLC
Attn: Mr. Tommy Pruitt
c/o Williamsburg Environmental Group
1011 Boulder Springs Drive, Suite 225
Richmond, VA 23225

RE: VMRC #12-1534

Dear Mr. Pruitt:

This is to inform you that the Marine Resources Commission, at its regularly scheduled meeting on May 28, 2013, considered your request for the use and development of tidal wetlands and for the encroachment over State-owned bottom including the dredging of 1,144 cubic yards of State-owned bottom including a 30 linear foot temporary bulkhead for construction access, associated with the construction and installation of an approximately 2,654 linear foot steel sheet pile wall with riprap scour protection along Curles Neck Swamp tributary to the James River and extending from an existing earthen levee to a U.S. Army Corps of Engineers Dredge Material Management Area at Curles Neck Farm in Henrico County.

The Commission reviewed slides of the proposal, all documents in the official record, and carefully considered your testimony and that of Mr. William Goodwin along with the supporting oral arguments presented by your counsel, Mr. Dale Mullen, the opposing testimony of Mr. William Rhoades, Mr. Brian Siff, and Mr. George Little, and technical comments provided by Mr. David O'Brien of NOAA Marine Fisheries Service and Dr. Mark Luckenbach and Dr. Troy Tuckey of the Virginia Institute of Marine Science. After careful deliberation and after considering all of the factors contained in §28.2-1205(A) and §28.2-1302 of the Code of Virginia, the Commission voted 6:2 to approve the project with the special permit conditions outlined below, and authorized the execution of the original permit, #81-0479, in the name of PCN, LLC, as the current owners of the property. The special permit conditions will include;

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- the requirement for a 3-year post-construction monitoring study evaluating fish usage, specifically river herring and American eel, subject to VMRC staff approval,
- authorization for construction is dependent on the submission of a water management plan subject to VMRC staff approval,
- the requirement for a review of the water management plan after three years amending the plan as necessary based on the three-year fishery monitoring data and subject to the Commission's approval,
- the requirement for a review of the fishery monitoring plan after three years amending as necessary and subject to the Commission's approval, and
- an agreement that PCN, LLC, enter into a process to amend the water management plan in the original permit #81-0479 that was authorized to be executed by the Commission at their May 1989 meeting.

A draft permit will be prepared in the near future and forwarded to you for review and signature. Should you have any questions regarding this matter, please feel free to contact Ms. Juliette Giordano of my staff at (757) 247-8028.

Sincerely,



Tony Watkinson
Chief, Habitat Management Division

TW/lra
HM

cc: Mr. Jack G. Travelstead, Commissioner
Mr. Paul Kugelman, Jr., Assistant Attorney General
Mr. John Vithoukas, Henrico County Manager
Mr. David O'Brien, NOAA Marine Fisheries Service
Dr. Mark Luckenbach, Virginia Institute of Marine Science
Dr. Troy Tuckey, Virginia Institute of Marine Science
Applicant

May 28, 2013

HABITAT MANAGEMENT DIVISION EVALUATION

PCN, LLC, #12-1534, requests authorization for the use and development of tidal wetlands and for encroachment over State-owned bottom including the dredging of 1,144 cubic yards of State-owned bottom including a 30 linear foot temporary bulkhead for construction access, associated with the construction and installation of an approximately 2,654 linear foot steel sheet pile wall with riprap scour protection along Curles Neck Swamp tributary to the James River and extending from an existing earthen levee to a U.S. Army Corps of Engineers Dredge Material Management Area at Curles Neck Farm in Henrico County. The project will require a tidal wetlands permit and a permit for use of State-owned bottomlands. The project is protested by two adjacent property owners.

Narrative

Curles Neck Swamp, the site of the proposed project, borders the historic Curles Neck Farm in the Varina district of Henrico County. Immediately adjacent to Curles Neck Swamp upriver is Jones Neck and immediately adjacent downriver is Presquile National Wildlife Reserve. Located along a tidal fresh reach of the James River, Curles Neck Swamp is a mix of tidal forested and tidal emergent wetlands, and non-tidal forested and emergent wetlands. Curles Creek runs within the main stem of Curles Neck Swamp. The Curles Neck Swamp encompasses approximately 1000 acres. The immediate project area is 11 acres with 9.5 acres of tidal forested wetlands and approximately 1,150 linear feet of tidal waters.

An existing levee system, which was constructed by the previous owner, runs along the eastern shoreline of the swamp comprised of a man-made 4,800 linear foot earthen berm with a 30-foot base width tapering to 15-foot along the top; approximately 800 linear feet of the berm spans the mouth of Curles Creek. Three hundred linear feet of the berm extends across state-owned submerged bottom of Curles Creek. The berm across Curles Creek has two 48-inch ARMCO tidal flapgate structures with two pumps to facilitate the manipulation of water levels within Curles Neck Swamp. The original purpose of the levee system was to cut off tidal flow to the swamp for regulating water levels for waterfowl management. Since the levee's installation in 1968 and 1969, numerous tidal inlets have developed along the southeastern shoreline of the swamp reestablishing the tidal connection between the James River and the interior of Curles Neck Swamp. These tidal inlets have existed since at least 1994. The existing water control structures are operable but less effective because of the reestablished tidal connection to the James River.

PCN, LLC proposes to extend the existing levee system by installing 2,654 linear feet of steel sheet pile wall with riprap scour protection along the southeastern shoreline from the existing levee to a U.S. Army Corps of Engineers Dredge Material Management Area. The sheet pile wall will close off the inlets and restore the property owners' ability to manipulate water levels

Narrative (cont'd)

within Curles Neck Swamp. The stated purpose of this project is to optimize nesting and feeding habitat for waterfowl and to preserve and protect the existing tidal wetlands of Curles Neck Swamp from sea level rise. They also propose to create 0.5 acres of tidal forested wetlands as compensation along a tidal ditch that connects to an old borrow pit site on their property.

The existing levee has an extensive history pertinent to the current request to extend the levee system. In 1968 and 1969, Mr. Richard Watkins, owner of Curles Neck Farm and Dairy, Inc., installed the existing levee and water control structures to manage Curles Neck Swamp as a waterfowl impoundment. Beginning every July, the water within the impoundment was drawn down by opening the inside flapgates and closing the outside flapgates. This allowed water to drain out of Curles Neck Swamp during ebb and low tides and prevented water from reentering during flood and high tides; the pumps were also used to help lower the water levels. Lowering the water levels exposed extensive mudflats that were then seeded with millet and remained exposed to facilitate the growth of the millet and Smartweed (*Polygonum*). Every fall, beginning in October, the flapgates were opened to flood the impounded Curles Neck Swamp. Historical reports on the operation of this impoundment indicate that the flapgates remained closed and Curles Neck Swamp remained flooded until the following July when the cycle began again.

In 1981, upon receipt of a complaint about the levee, the U.S. Army Corps of Engineers (Corps) required the submission of a Joint Permit Application (JPA). Mr. Watkins, complied and submitted an after-the-fact JPA to retain the levee and to continue the water management.

Two primary issues arose during the review of the after-the-fact JPA: 1) the issue of ownership over Curles Creek and public access; and 2) the impact of the levee on anadromous fish and wildlife using the creek. In 1982, the Virginia Institute of Marine Science (VIMS) and U.S. Fish and Wildlife Service (FWS) conducted studies evaluating the levee system's impacts on anadromous fish and waterfowl utilization of Curles Neck Swamp, respectively. The FWS study found the levee had no impact, beneficial or adverse, on the waterfowl utilization of Curles Neck Swamp. The VIMS study confirmed that river herring, both blueback herring and alewife, transited the 48-inch pipes when the flapgates were open and subsequently spawned in Curles Neck Swamp. This study led to a proposed special condition to require that the tidal flapgates remain open from March 1 to July 7 every year during the anadromous fish spawning run.

Ownership and subsequently, public access, were primary issues when this matter went before the Commission in the 80's. In the original JPA submission, Mr. Watkins claimed ownership over the submerged beds of the tidal Curles Creek based on a Crown grant traced to a 1691 grant to Mr. Richard Cocks. The JPA cover letter stated the subaqueous bottom of Curles Creek was not owned by the state, thus the applicant did not require a permit from VMRC for the levee. Commission staff believed, and still do, that the subaqueous bed of Curles Creek is state-bottom. It is generally believed grants of land in the Tidewater area by the English monarchy during the colonial era did not include the submerged beds of tidal waterways as these areas were held in

Narrative (cont'd)

common. As such, staff advised Mr. Watkins to obtain a VMRC permit for the levee system. In 1983, staff presented a draft permit to Mr. Watkins to address the after-the-fact nature of the levee. Mr. Watkins found the permit unacceptable because of a special condition that preserved public access to the state-owned bottom of Curles Creek.

On June 26, 1984, staff took the matter before the full Commission to resolve the issue of ownership and to approve the after-the-fact permit. The Commission ultimately compromised with the applicant and agreed to accept a Consent Decree if the applicant received a VMRC permit. This arrangement postponed litigation on the ownership of Curles Creek but preserved the right of public access, until a documented need arose. Although legal counsel for Mr. Watkins entered a Bill of Complaint with Henrico Circuit Court on behalf of Curles Neck Farm and Dairy, Inc., to seek an injunction against VMRC for requiring and pursuing permit proceedings it was believed this matter could be addressed with the Consent Decree between the Commission and Curles Neck Farm and Dairy, Inc.

The finalization of a Consent Decree took four years for the applicant's legal counsel and the Office of the Attorney General to resolve. However, in 1988, prior to the finalization of the Consent Decree and permit, Mr. John Wyatt submitted a letter of opposition to the after-the-fact permit. The application with the finalized language for the Consent Decree and permit document went back before the Commission on February 7, 1989. Mr. John Wyatt spoke in opposition to the project citing concerns about the after-the-fact nature, the environmental and fisheries impacts, and public access and navigation. Mr. Wyatt also submitted a petition with 54 signatures in opposition. The matter was tabled until the March hearing. At the March 7, 1989, hearing the matter was again tabled due to legal questions and the possibility of additional permit conditions. The matter was continued at the April 4, 1989, hearing by request of Mr. Watkins' legal counsel as they worked to address the Commission's question about additional tide gates for enhanced access for anadromous fish.

On May 4, 1989, the matter went before the Commission a final time. The legal counsel for Curles Neck suggested to the Commission that additional tide gates for enhanced anadromous fish access would be very expensive and the cost was not justified based on the original studies that indicated the existing tide gates provided sufficient access for fish usage of the swamp. Mr. Wyatt again spoke in opposition reiterating concerns about environmental impacts in the form of declining fisheries, poor water quality, and habitat deterioration. Mr. Kirk Havens, representing the Mid-Atlantic Paddlers Association, spoke in opposition citing concerns about excluding public access to Curles Neck Swamp. The Commission ultimately authorized issuance of the after-the-fact permit in conjunction with the Consent Decree that preserved the property owner's rights to litigate ownership in the future should the need arise. The permit would authorize Curles Neck Farm and Dairy Inc. to retain the 800 foot earthen berm that extends across 300 linear feet of State-bottom of Curles Creek. However, as a result of the review for the current permit request, staff has discovered that the after-the-fact permit authorized by the Commission at the May 4, 1989, hearing was never executed. Based on historical documentation, two permit documents for review and signature were sent to Mr. Watkins care of his counsel on July 25, 1989, and again on November 8, 1989. The record

Narrative (cont'd)

contains no documentation indicating that the permit was signed or returned to VMRC for the required counter signatures. In addition, the current applicant was unable to produce a signed copy of the after-the-fact permit. As a result, the existing berm over State-owned submerged lands has never been authorized and continues to be an illegal structure. This is an important issue because the current proposal hinges on the previous authorization for the existing berm. Furthermore, staff questions if the Consent Decree is still valid for the current owners of Curles Neck Swamp because Curles Neck Swamp has changed ownership. The Commission entered into the Consent Decree with Curles Neck Farm and Dairy, Inc. It is unclear if the Consent Decree extends to PCN, LLC. In addition, the Consent Decree was conditioned on Curles Neck Farm and Dairy, Inc. accepting the Commission's permit. Since the permit was never executed, this possibly invalidates the Consent Decree.

Issues

PCN, LLC's proposed project requires both a subaqueous permit and a wetlands permit from the Commission. Since Henrico County has not yet adopted the model Wetlands ordinance, the Commission is charged with acting as the local wetlands board pursuant to Chapter 13, Subtitle III, of Title 28.2 of the Code.

Staff's review of the project, the public interest review and state agency comments identified several areas of concern including the existence of unauthorized structures installed along the tidal wetlands and submerged lands of Curles Neck Swamp, the question of public access and use of Curles Creek, as well as the lack of details addressing important questions about the potential impacts of the project on living resources within the area.

The unauthorized structures include several walls, one of which is described in the current application information along with others that are shown on elevation survey drawings, and sandbags. These structures have been placed within the various tidal wetlands and inlets along the shoreline. The sandbags were observed during a site inspection on August 6, 2012. Placement of the walls and sandbags appears to have been an attempt to close off the tidal inlets. The applicant has not addressed the unauthorized structure issue other than to explain that the previous owner installed the largest wall over State-bottom sometime in 1999. Staff feels that all of these unauthorized structures in tidal wetlands and on State-bottom should be removed.

In response to the public interest review, staff received four letters in support of this project. Written support letters were submitted by The Honorable Walter Stosch, Virginia State Senate, Dr. Leonard Smock of Virginia Commonwealth University's Rice Center, Henrico County Manager John Vithoukas, Mr. Thomas Brown and Ducks Unlimited. The supporters of the project commend the applicants for taking steps to preserve the marsh. Each letter stresses the importance of Curles Neck Swamp habitat for migratory and resident waterfowl. Several letters laud PCN, LLC for privately funding a project that will result in public benefits through the preservation of marsh habitat for waterfowl.

Issues (cont'd)

Staff also received two letters of opposition. Mr. George Little and Mr. William Rhoades, who live in the project vicinity, submitted written protest letters opposing the current project. The protestants oppose the exclusion of public access to State-owned waters. They both believe approval of the berm extension will continue to exclude public access and use of Curles Creek. Mr. Rhoades expressed his protest to an existing unauthorized wall across State-bottom in a tidal breach currently blocking access to the creek. He also questions the legal precedence the Commission's decision to approve the extension will set, expressing concern over the ability of other property owners to put up their own barriers along state bottom. Mr. Little contends that public access to Curles Creek should be restored through some means.

Staff maintains that Curles Creek is state-bottom, as are the tidal inlets that have since formed along the shoreline. Theoretically, the public has a right to access and use the waters of Curles Creek either through the main stem of the creek or through the formed tidal inlets. The Commission's action in 1989, however, would seem to preclude public access as they authorized a berm structure physically barring any access from public waters of the James River to Curles Creek. At the May 4, 1989, hearing Associated Member Hayes spoke on the matter of public access, stating "... the Commission was in agreement that nothing that the Commission would do to approve or disapprove the Consent Decree would impede any right [citizens] would have to use the creek or to challenge the owners claim to the creek." The unexecuted after-the-fact permit contained a special condition that permitted the Commission to reconsider the public access issue upon the occurrence of a "...full and complete public interest re-evaluation, including one or more public hearings, ..." Based on this historical information, staff feels that the issue of public access can once again be opened for discussion and debate by the Commission for the currently proposed project at Curles Neck Swamp.

In comments dated received, December 11, 2012, the U.S. Fish and Wildlife Presquile National Wildlife Refuge, an APO to the project site, requested time a time-of-year restriction on construction from late March-early June and early September-October to minimize water based disturbance to migratory birds in late fall and winter. They also requested the permit require the implementation of safety measures for boat operators of construction due to the public boat tours and waterborne education programming within the main river channel between Presquile NWR and Curles Neck. They recommend a no wake zone within the area adjacent to the project.

In comments dated received November 16, 2012, the Department of Conservation and Recreation (DCR) documents the presence of the Northern harrier (*Circus cyaneus*) in the project vicinity. This is a state species of special concern. They do not offer specific recommendations concerning this species other than to make the applicants and reviewing agencies aware of the possible inhabitation of the project site by the Northern harrier. They note the applicability of the Chesapeake Bay Act and recommend the implementation and strict adherence to erosion and sediment control and storm water management measures. In revised comments, dated received May 22, 2013, DCR identifies Turkey Island Creek Stream Conservation Unit in proximity to the project site and documents the presence of the natural heritage resource, Atlantic Sturgeon in the project vicinity. They recommend coordination with DGIF and U.S. Fish and Wildlife Service (USFWS) given the endangered status of Atlantic

Issues (cont'd)

sturgeon. DCR also identifies the proximity of the Curles Neck Conservation Site to the project area. "Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support." DCR documents the potential existence of sensitive joint-vetch, a federal and state endangered plant. They recommend a survey for sensitive joint-vetch in the project area conducted between August 15 and October 15. Upon receipt of the survey results, they can better assess the potential impacts of the project on this resource and provide specific recommendations for protection of this species. They also recommend coordination with USFWS.

In comments dated received May 3, 2013, the Department of Game and Inland Fisheries (DGIF) acknowledges the historical use of Curles Neck Swamp as a waterfowl management impoundment, the current project purpose to continue managing water levels to protect the swamp from inundation with sea level rise, and the benefit of this management scheme to waterfowl habitat and resident and migratory wildlife. DGIF categorizes Curles Neck Swamp as an Anadromous Fish Use Area and expresses concern over the potential adverse impacts to anadromous fish use by blocking the tidal inlets. DGIF recommends maintaining connectivity to the James River and Curles Neck Swamp during in-migration, spawning, and out-migration to address this concern. DGIF is unable to provide "specific recommendations for the protection of affected species" because of the lack of "design specifications and operation protocols for the existing and proposed structures." They request the applicant continue to coordinate with their agency on the implementation of water management scheme to reduce possible adverse impacts on anadromous fish. DGIF also documents the federally endangered Atlantic sturgeon in the project area but does not anticipate adverse impacts from the project. They recommend, however, coordination with NOAA Fisheries Service (NOAA) regarding possible impacts to Atlantic sturgeon. DGIF also documents the presence of Bald eagle nests and colonial waterbird colonies in the project area. Though they do not anticipate project-related adverse impacts, they recommend coordination with U.S. Fish and Wildlife Service (USFWS). DGIF approves of the wetland mitigation site and general plan as compensation for the loss of primary tidal wetlands. As a final recommendation, DGIF proposes the applicant work in close coordination with oversight agencies and institutions with research programs to facilitate research and monitoring of Curles Neck Swamp, the mitigation site, and the associated environs.

In their comments dated received May 17, 2013, the Virginia Institute of Marine Science (VIMS) raises several concerns about the potential impacts of the proposed berm extension on tidal wetland habitat and fishery resources. VIMS identifies the existing wetlands as forested hardwood tidal wetlands and outlines the important functions these wetlands provide. The installation of the wall will alter the function of this unique wetlands habitat along the shoreline by disrupting the natural processes of groundwater exchange, tidal inundation and flooding patterns, and fish and wildlife movement. VIMS notes that the removal of trees for construction

Issues (cont'd)

and the wall could fundamentally alter these shoreline wetlands by altering the sunlight and temperate exposure. VIMS also identifies the existence of emergent wetlands habitat within the impounded area. They could not assess the possible impacts, however, because of insufficient details about the elevations and conditions of the existing tidal wetlands within the impounded area.

The application only quantifies and proposes mitigation for the direct impacts from the steel wall, riprap scour protection, and construction access. The applicant has not addressed or quantified the secondary impacts to tidal wetlands as a result of blocking Curles Creek. VIMS anticipates secondary impacts to tidal wetland habitat within the impoundment from the reduction of tidal exchange associated with active water management. The altered hydrology will expose the wetlands to temperature extremes and other stressors which could lead to reduced plant production and affects on the aquatic food web. The National Oceanographic and Atmospheric Administration National Marine Fisheries Service (NMFS) also provide similar comments, dated received May 9, 2013, discussing the altered hydrology and the potential shift in wetland plant community. Comments received from the Army Corps of Engineers, dated received April 2, 2013, also request the applicant to address this same concern.

VIMS comments also provide extensive technical discussion on the potential adverse impacts of this project on blueback herring, alewife, and American eel. This is a prime concern because NOAA Marine Fisheries Service (NMFS) is currently reviewing these three species for listing under the Endangered Species Act. River herring (blueback herring and alewife) were a concern in the 1980s when the Commission considered the original levee system but are a greater concern today. According to the most recent Atlantic States Marine Fisheries Commission (ASMFC) stock assessment, river herring stocks are at historic lows. In 2012, ASFMC placed a harvest moratorium on river herring, shutting down the fishery. Thus, the potential impacts of this project on river herring populations, as well as American eel populations, cannot be ignored.

According to VIMS, the proposed water management schedule poses considerable threat to river herring and American eel and their habitat. The proposed draw down of Curles Neck Swamp in July and August overlaps with the river herring juvenile and larval life stages using the swamp for nursery habitat. The drawdown will reduce available habitat by 80-94% and will alter the water quality by severing tidal exchange with the James River. Larval and juvenile fish will be trapped in a "highly unnatural system." According to VIMS; this will result in increased competition for limited resources amongst blueback herring and alewife larvae and juveniles, thus reducing growth and production. The timing of the tide gate closures will also disrupt American eel behavioral activities due to overlap with important developmental life stages and migratory phases that occur in the spring and the fall.

Finally, VIMS comments on the "migratory barrier" the steel wall and the culverts and tide gates, create, potentially preventing access to spawning habitat and disrupting the life history of river herring originating from this swamp. VIMS also notes that extremes in water quality parameters (e.g. temperature, pH) can create intangible migratory barriers that preclude fish passage. Such water quality variations can be anticipated around Curles Neck Swamp given the

Issues (cont'd)

unnatural conditions created by the impoundment. VIMS notes that barriers to fish passage "represent one of the most important factors in the decline of anadromous alosine runs." They note that the design of the tide gate channels is critical and must allow easy access for spawning adults and passage of larvae and juveniles. They reference the intent of the Interstate Fishery Management Plan (IFMP) for Shad and river Herring and the IFMP for American eel to protect stocks and improve conditions to restore these stocks. According to VIMS, "This proposed project is inconsistent with the objectives of the IFMPs and runs counter to initiatives in all coastal states, including Virginia, to remove obstruction that effect access to spawning and nursery habitat." Likewise, in their comments, NMFS also addresses the migratory barrier concern recognizing the national efforts by NMFS, U.S. Fish and Wildlife Service, and other Federal and State agencies "to protect, restore, and enhance anadromous fish migration, spawning, rearing, production, and nursery habitats." NMFS' comments state they believe this project runs contrary to the ongoing restoration objectives and may possibly contribute to the continued decline of local anadromous fish stocks.

In summary, VIMS believes the renewed connectivity of Curles Neck Swamp with the James River has benefited tidal habitats and fishery resources, despite the altered nature of the system from the original levee. They offer the following as recommendations should this project receive a VMRC permit. A permit condition requiring long term monitoring and assessment addressing river herring and eel utilization of Curles Neck Swamp and contribution to the James River system. Pre-construction monitoring is preferred but if that is not feasible, they recommend a 3-year monitoring period after construction but prior to implementation of water management, in an effort to create a water management plan that accommodates herring and eel spawning and migratory patterns, with continued monitoring after implementation of a water management plan. They also recommend permitting an adaptive water management plan to address changes in fish spawning and migration patterns as a result of climate change and sea level rise.

Summary/Recommendations

PCN, LLC's proposed extension of the levee system through the installation of a steel sheet pile wall is fundamentally a request to continue to manage Curles Neck Swamp as historically been authorized for waterfowl management. On the surface, this request appears reasonable given the past Commission's approval to manage this site for waterfowl habitat. In the over 20 years since the previous Commission's approval, however, environmental conditions at the project site and natural resources management goals and objectives have changed. Such conditions cannot be ignored in light of the extreme uncertainty this project may have on living resources within the James River. The Commission should evaluate PCN's current proposal in the context of today's environmental and regulatory regimes and not rely solely on the historical precedence from the previous Commission.

Public access to Curles Neck Swamp is an issue the Commission evaluated and decided in the 80s. The previous Commission's action to authorize an after-the-fact permit precluded public access in as much as the berm created a physical barrier to access. However, the Commission

Summary/Recommendations (cont'd)

felt that their actions did not negate the public's right to access the creek or to challenge the owner's claim to the bottom of Curles Creek. Authorization for the issuance of the after-the-fact permit was conditioned on allowing the Commission (or the property owners) to reconsider public access in the future if the need arose. As such, staff believes the Commission can entertain reconsideration of the matter in light of the protests received.

Regardless of the ownership of Curles Creek, this project still requires a permit from our agency for the use and development of tidal wetlands. As such, litigating the ownership of Curles Creek may only eliminate the need for a subaqueous permit for certain aspects of the project. Staff should point out that the tidal inlets along the shoreline have formed through erosion. Under general common law concepts of accretion and erosion, erosion is to the benefit of the State. That said, the Commission would assume jurisdiction over any encroachments below mean low water in the tidal breaches.

The Commission must address the illegal status of the existing levee system. Staff feels the Commission has three options. The Commission can authorize the execution of the original after-the-fact permit in the name of the current owners. Alternatively, the Commission can decide to issue a new permit that authorizes the old levee system and the proposed additional wall. Finally, the Commission can execute the old after-the-fact permit and issue a new permit for the proposed addition with the understanding that any new permit may modify conditions of the old permit and use of the original levee system.

Based on our own review and comments received from our advisory agencies, staff feels that many questions are left unanswered. The scope of the project and possible adverse effects on the living resources within the James River warrant additional time to review and consider the project impacts. The advisory agencies have requested additional information to better evaluate the benefits and possible adverse effects of this project. The ultimate goal of the applicant is conservation. Accordingly, it is assumed they desire to ensure that their project does not create inadvertent harm to the surrounding resources and that they understand the Commission's hesitation to permit a project with unanswered questions. Additional items to review should include, but are not limited to:

- 1) Monitoring efforts and studies of the diadromous fish use, spawning and migratory patterns related to Curles Neck Swamp. These efforts should be done in coordination with experts and advisory agencies. The resulting data and information should be used to analyze the possible effects of the berm on river herring and American eel and propose mitigative efforts to reduce possible adverse impacts.

Summary/Recommendations (cont'd)

- 2) A clearly outlined and detailed timeline for the proposed opening and closing of the tidal gates and the associated water levels. This schedule should be approved by anadromous fish experts to ensure the swamp is open during the times of year that will not adversely impact migratory and spawning patterns of river herring and American eel. The schedule should be devised in coordination with advisory agencies to ensure consistency with ASMFC IFMPs and current living resources regulatory goals and objectives. The schedule should also be flexible to accommodate new science and changing environmental conditions if necessary.
- 3) A tidal wetlands survey quantifying the extent and existing conditions of the emergent and forested tidal wetlands along the shoreline and within the impounded area. This data should be used to better quantify the effects of active water management on the wetlands within the bermed area, the potential recovery of shoreline wetlands after construction, and the appropriate mitigation and compensation requirements. Mitigation efforts should clearly explain how the loss of tidal forested wetlands will be compensated.
- 4) An applied analysis on how the wall will prevent inundation of tidal wetlands at Curles Neck Swamp. This should include, among other items, a discussion on sedimentation patterns within the swamp and surrounding James River.
- 5) Monitoring study of benthic habitat conditions and water quality within the bermed area to quantify the effects of the levee system on the benthic environment and water quality. This data should be used to discuss the proposed impacts of impounding the area on benthic habitat and organisms and to modify the water management plan to reduce adverse impacts on water quality and the benthic environment.

Accordingly, after evaluating the merits of the project, and after considering all of the factors contained in §28.2-1205(A) and §28.2-1302 of the Code of Virginia, staff recommends the Commission table their decision on permit issuance indefinitely to allow the applicant time to collect the necessary information and the applicant must waive the right to a decision within 30 days pursuant to §28.2-1302(7)(C). If the applicant is unwilling to waive this right, then staff recommends denial of the application and recommends the applicant reapply after a year submitting the requested additional information and coordinating with the advisory agencies to address the questions raised.

**COMMONWEALTH OF VIRGINIA
MARINE RESOURCES COMMISSION
PERMIT**

The Commonwealth of Virginia, Marine Resources Commission, hereinafter referred to as the Commission, on this 28th day of May 2013 hereby grants unto:

**PCN, LLC
1801 Bayberry Court, Suite 100
Richmond, VA 23226**

hereinafter referred to as the Permittee, permission to:

- Encroach in, on, or over State-owned subaqueous bottoms pursuant to Chapter 12, Subtitle III, of Title 28.2 of the Code of Virginia.
- Use or develop tidal wetlands pursuant to Chapter 13, Subtitle III, of Title 28.2 of the Code of Virginia.

Permittee is hereby authorized to use and develop tidal wetlands and encroach over State-owned bottom including the dredging of 1,144 cubic yards of State-owned bottom and installation of a 30 linear foot temporary bulkhead for construction access, associated with the construction and installation of an approximately 2,654 linear foot steel sheet pile wall with riprap scour protection along Curles Neck Swamp tributary to the James River extending from an existing earthen levee to a U.S. Army Corps of Engineers Dredge Material Management Area at Curles Neck Farm in Henrico County. All activities authorized herein shall be accomplished in conformance with the plans and drawings dated received October 4, 2012, and revised drawings dated received May 3, 2013, May 15, 2013, June 4, 2013, October 23, 2013, and October 24, 2013, including the mitigation plan, which are attached and made a part of this permit.

This permit is granted subject to the following conditions:

- (1) The work authorized by this permit is to be completed by May 28th, 2016. The Permittee shall notify the Commission when the project is completed. The completion date may be extended by the Commission in its discretion. Any such application for extension of time shall be in writing prior to the above completion date and shall specify the reason for such extension and the expected date of completion of construction. All other conditions remain in effect until revoked by the Commission or the General Assembly.
- (2) This permit grants no authority to the Permittee to encroach upon the property rights, including riparian rights, of others.
- (3) The duly authorized agents of the Commission shall have the right to enter upon the premises at reasonable times, for the purpose of inspecting the work being done pursuant to this permit.
- (4) The Permittee shall comply with the water quality standards as established by the Department of Environmental Quality, Water Division, and all other applicable laws, ordinances, rules and regulations affecting the conduct of the project. The granting of this permit shall not relieve the Permittee of the responsibility of obtaining any and all other permits or authority for the projects.
- (5) This permit shall not be transferred without written consent of the Commissioner.
- (6) This permit shall not affect or interfere with the right vouchsafed to the people of Virginia concerning fishing, fowling and the catching of and taking of oysters and other shellfish in and from the bottom of acres and waters not included within the terms of this permit.
- (7) The Permittee shall, to the greatest extent practicable, minimize the adverse effects of the project upon adjacent properties and wetlands and upon the natural resources of the Commonwealth.
- (8) This permit may be revoked at any time by the Commission upon the failure of the Permittee to comply with any of the terms and conditions hereof or at the will of the General Assembly of Virginia.
- (9) There is expressly excluded from the permit any portion of the waters within the boundaries of the Baylor Survey.
- (10) This permit is subject to any lease of oyster planting ground in effect on the date of this permit. Nothing in this permit shall be construed as allowing the Permittee to encroach on any lease without the consent of the leaseholder. The Permittee shall be liable for any damages to such lease.
- (11) The issuance of this permit does not confer upon the Permittee any interest or title to the beds of the waters.
- (12) All structures authorized by this permit, which are not maintained in good repair, shall be completely removed from State-owned bottom within three (3) months after notification by the Commission.
- (13) The Permittee agrees to comply with all of the terms and conditions as set forth in this permit and that the project will be accomplished within the boundaries as outlined in the plans attached hereto. Any encroachment beyond the limits of this permit shall constitute a Class 1 misdemeanor.
- (14) This permit authorizes no claim to archaeological artifacts that may be encountered during the course of construction. If, however, archaeological remains are encountered, the Permittee agrees to notify the Commission, who will, in turn notify the Department of Historic Resources. The Permittee further agrees to cooperate with agencies of the Commonwealth in the recovery of archaeological remains if deemed necessary.
- (15) The Permittee agrees to indemnify and save harmless the Commonwealth of Virginia from any liability arising from the establishment, operation or maintenance of said project.

The following special conditions are imposed on this permit:

- (16) The yellow placard accompanying this permit document must be conspicuously displayed at the work site.
- (17) Permittee agrees to notify the Commission a minimum of 15 days prior to the start of the activities authorized by this permit.
- (18) Permittee shall provide a post-dredging bathymetric survey of the dredged area within 30 days of the completion of the dredging. The survey shall be signed and dated as being accurate and true. The survey shall be referenced to mean low water and shall include evenly spaced transects across the width of the dredged channel with soundings taken at intervals not exceeding 10 feet. Accurate bathymetric data from each transects shall be used to establish the top width of the dredge cut (+/- 1') and shall include a depth measurement exterior to both sides of the dredge cut.
- (19) The post-dredge survey depths shall vary uniformly around the permitted dredge depths, with the average depth approximating minus 3 ½ feet (-3.5') feet at mean low water. Any areas dredged deeper than minus four feet (-4.0') will be considered a violation of the permit and subject to enforcement action.
- (20) A pre-dredging conference shall be held on site prior to the commencement of the dredging. The meeting shall be attended by the Permittee (or their designee), the dredging contractor and a member of the VMRC staff. The meeting shall be held within seven (7) days prior to the commencement of dredging and shall include: 1) an inspection of the dredge material containment area, 2) an inspection of the previously staked dredge area, and 3) a discussion of the terms and conditions of the permit.
- (21) The permittee agrees to implement a Water Management Plan. Exhibit 1.
- (22) After a three year assessment period, the Commission may review and amend the Water Management Plan. The three year assessment period begins on the date that the construction of the project is completed. Permittee must provide the Commission with a request to continue, or amend the Water Management Plan at the end of the three year assessment period. If the permittee fails to make the request, the Commission may require the permittee to make the request on written notice. The permittee must submit the request within 60 days of the date of the written notice or the Commission may undertake the review on its own provided that the Commission gives the permittee written notice of the date, time and location of the review. The Water Management Plan may be amended without amending the Consent Decree.
- (23) The permittee agrees to a three year post-construction monitoring plan assessing river herring and eel utilization of Curles Neck Marsh in accordance with Exhibit 2. The post-construction monitoring period will begin on the date construction of the project is complete.
- (24) After a three year assessment period the Commission may review and amend the Fishery Monitoring Plan. The three year assessment period begins on the date that the construction of the project is completed. The Permittee must submit to the Commission the results of the Fishery Monitoring Study at the end of the three year assessment period. At the end of the three year assessment period, the permittee must also submit a request to the Commission to continue, discontinue, or amend the Fishery Monitoring Plan. If the permittee fails to make the request, the Commission may require the permittee to make the request on written notice. The permittee must submit the request within 60 days of the date of the written notice or the Commission may undertake the review on its own provided that the Commission gives the permittee written notice of the date, time and location of the review. The Fishery Monitoring Plan may be amended or discontinued without amending the Consent Decree.
- (25) Permittee agrees not to conduct any authorized instream construction work between February 15 and June 30, of any year to minimize adverse impacts of construction on anadromous fish species.

(26) After steel wall installation, and as part of the construction process, permittee agrees to remove all unpermitted structures. Applicant and VMRC understand that sandbag removal may be more harmful than any remediation value. For this reason, VMRC and Permittee agree to work cooperatively to remove sandbags during construction or immediately thereafter, that may be removed without unreasonable cost or unwarranted environmental disturbance. Permittee understands that if the steel wall is not constructed by May 28, 2016, VMRC reserves the right to undertake enforcement action.

(27) This permit shall incorporate and govern the levee that is the subject of a Consent Decree entered by the Circuit Court of Henrico County on or about May 30, 1989, Chancery No. CH89000-632-00, Curles Neck Farm and Dairy, Inc. v. Va. Marine Resource Commission. All reservations of rights in that Decree are reserved herein as well. Subsequent modifications of the Consent Decree are expressly incorporated by reference as if set forth fully herein. The issuance of the permit is without waiver of permittee's right or the right of its successors and assigns to file a lawsuit or otherwise seek judicial review (1) challenging the Commission's jurisdiction over the levee, sheet pile wall, subaqueous bed, swamp, marsh, and/or sunken ground of the Curles Neck marsh and/or Curles Creek should the Commission ever proceed to amend, modify, suspend, terminate, revoke or otherwise alter the permit or (2) for the purpose of establishing title to the levee, sheet pile wall, subaqueous bed, swamp, marsh, and/or sunken ground of Curles Neck Marsh and/or Curles Creek.

(28) Permittee and the Commission agree to use reasonable efforts to cooperatively address and mutually agree to terms and conditions for continuance, discontinuance, or amendment of the Water Management Plan and Fishery Monitoring Plan. The purpose of such continuance, discontinuance, or amendment of the Water Management Plan and Fishery Monitoring Plan shall take into consideration reasonable measures to reduce adverse impacts on river herring and American eel while achieving the purpose of the project to 1) preserve and continue the primary purpose of the existing levee system in regulating water levels within the Curles Neck Marsh, and, 2) to provide a long-term mechanism to preserve and protect the beneficial habitat of Curles Neck Marsh from permanent inundation as a result of sea level rise.

Wellman, Julia (DEQ)

From: Fulcher, Valerie (DEQ)
Sent: Tuesday, June 18, 2013 12:55 PM
To: Wellman, Julia (DEQ)
Subject: FW: NEW PROJECT ACOE 13-113F
Attachments: Curles Neck VIMS response 2013.pdf

Here's VIMS' comments.

From: Lyle M Varnell [<mailto:lyle@vims.edu>]
Sent: Tuesday, June 18, 2013 10:50 AM
To: Fulcher, Valerie (DEQ)
Subject: NEW PROJECT ACOE 13-113F

Ms. Fulcher:

Pam Mason forwarded me your email for the project at Curles Neck Farm. Attached are the VIMS comments that we provided to VMRC. Please contact me if you have questions.

Lyle

Lyle M. Varnell (804) 684-7764 (office)
Associate Director for Advisory Services. (804) 684-7097 (fax)
Virginia Institute of Marine Science. lyle@vims.edu
College of William and Mary
1375 Greate Road, P.O. Box 1346
Gloucester Point, VA 23062

17 May 2013

Ms. Juliette Giordano
Habitat Management Division
Virginia Marine Resources Commission
2600 Washington Ave., 3rd Floor
Newport News, VA 23607

Subject: #12-1534 Curles Neck Farm

Dear Ms. Giordano:

We have conducted a review of the permit application submitted by PCN, LLC for a project at Curles Neck Farm in Henrico County. The following comments and recommendations are based on observations made during an interagency site visit on December 19, 2012; revised information dated April 29 and May 14, 2013; revised drawings received May 3, 2013; and a meeting with representatives of Williamsburg Environmental Group held at VIMS on May 3, 2013. The breadth and depth of our review was hindered by the lack of sufficient details and clarity to allow for accurate assessments of direct and secondary impacts on tidal wetlands, shallow water habitat, and associated living resources. This is a complex proposal within a complex estuarine system, and the limited time allowed for review further affected our ability to analyze potential environmental effects, benefits, and alternatives.

The applicant is seeking authorization for a 2,376 linear foot sheet pile wall with riprap scour protection on one side of the wall along the entire length. The stated purpose is to restore the original operational condition previously authorized by permit #81-0478. The existing levee was designed to control and regulate water levels within the area now referred to as Curles Neck Swamp in order to optimize nesting and feeding habitat for waterfowl. Although habitat management for waterfowl was previously authorized, it is our opinion that the proposed project should be re-evaluated based on current environmental conditions and resource management concerns. These concerns and the Commonwealth's management objectives for living resources in tidal waters have changed over the past 32 years.

The current site condition is a complex mix of tidal forested wetlands, tidal emergent marshes, tidal waters, tidal inlets, and non-tidal forested and emergent wetlands under an altered hydrologic regime that is attempting to return to a natural tidal condition as evidenced by the many breaches that have formed upriver of an earthen levee. The proposed wall is located between the 4,800 foot long earthen levee and a 37-acre Dredged Material Management Area used by the US Army Corps of Engineers for disposal of material removed from the James River federal channel. The new wall is designed to close off the tidal breaches that compromise the ability to control water levels. We do not know exactly when these tidal breaches were formed, but they are evident in aerial photographs since 1994. Resource-specific analyses are provided below along with possible measures to reduce the likelihood of significant adverse impacts that are not consistent with current resource management plans and objectives.

Tidal Wetlands

The proposed sheet pile wall and toe scour protection is located entirely within a forested tidal hardwood swamp located between Curles Neck Swamp and the James River. There is visual evidence of tidal flooding from the James River and frequent flooding over the top of the proposed wall is apparently expected, which is why scour protection is proposed on the west side of the wall. This type of forested tidal wetland typically provides denitrification, floodplain attenuation, sediment deposition areas, carbon sequestration, and unique habitat. If authorized, the permanent and direct impacts expected as a result of the activities required for wall construction include root zone interruption and groundwater exchange, changes to existing tidal inundation and flooding patterns across the swamp, and interrupted fish and wildlife movement along the forest corridor and between the James River and Curles Neck Swamp. Tree removal will result in temporary impacts to forested wetlands, and without implementation of a replanting plan could result in permanent changes to the area adjacent to the wall due to altered hydrology and increased sunlight to the forest floor. If the presently closed forest canopy will be opened along the length of the wall, this will affect the wetland forest interior habitat by increasing sunlight and temperature fluctuations. The recovery potential for the temporary construction impact areas is not certain, and if the project is permitted we recommend consideration of a restoration plan consistent with pre-construction baseline conditions.

There is no reference to or impact estimates for emergent tidal marshes, although this wetland type is known to be present along the James River shoreline adjacent to the tidal breaches and the proposed dredge and offload area. Not all of the tidal breaches were examined during the site visit and the time of year was not conducive for observing freshwater marsh vegetation. There may be emergent marsh present in the tidal breaches if there are suitable elevations and sufficient sunlight through the forest canopy.

Existing elevations and conditions of tidal wetlands within the impoundment area are unclear, due in part to plan views accompanying the additional information dated May 14, 2013 showing extensive vegetation existing below mean low water (Sheet 32). We are unable to accurately assess the amount of impacts to tidal wetlands, but impacts to tidal wetlands are expected as a result of the proposed water management plan. VIMS could not access these wetlands during the 1977 and 2012 Tidal Marsh Inventory surveys. Although emergent marshes appear to have persisted within Curles Neck Swamp, it is uncertain how the historic vegetation community has been altered due to previous water management activities, how these marshes have responded since tidal breaching, and how they may now be affected by the proposed structures.

The latest information provided for the application includes an estimate that 196 to 410 acres of forested and marsh wetlands will remain exposed during the 2-3 month drawdown period when daily tidal inundation will cease. This may result in high temperature stress to the vegetation (depending on rainfall), and less primary production and export of organic matter to the aquatic food chain. It is not clear if the benefits of waterfowl habitat management outweigh these expected and other potential wetland impacts.

Shallow Water Habitat

Existing shallow water habitat in the tidal breaches will be permanently filled by design. Additionally, an estimated 210 acres of existing open water area within the impoundment will be exposed as mud flats during the drawdown period. The resulting impacts on the existing benthic habitat are uncertain. The previous VIMS assessment from 1981 recommended monitoring for the effects of water drawdown on water quality and the benthic community, but to our knowledge no monitoring has been done and we have no other information about existing bottom and benthic habitat conditions.

Fishery Resources

Environmental concerns for project effects on alewives (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*) were raised during the original evaluation of the effects of the earthen levee, culverts, and tide flaps. These concerns are now elevated due to the continued decline of these fisheries, and must include added concerns for the American eel (*Anguilla rostrata*). The potential impacts of the proposed project on this particular spawning and nursery area are not well understood at this time with the information available. The application correctly references a VIMS study in 1982 that found adult river herring inside the impoundment area and evidence of spawning. This study did not evaluate the fate of larvae and juveniles after spawning or the out-migration of either adult or juvenile life stages. Although additional study of anadromous fish utilization was recommended by VIMS in the 1981 report, no additional monitoring has been performed to date as far as we know. No information for American eels exists for Curles Neck Swamp.

The proposed drawdown of Curles Neck Swamp during July and August (per WEG May 14, 2013 response to VMRC) poses considerable threat to fish habitat; specifically alewife, blueback herring, and American eel. Freshwater tidal creeks support nursery habitat for larval and juvenile alewife and blueback herring, and also serve as habitat for juvenile American eel; three species that are currently under review for listing under the Endangered Species Act. The operation of tide gates and water pumping stations to alter the flow regime in Curles Neck Swamp to maintain approximate mean low water conditions results in a direct reduction of available habitat by 80 – 94% (WEG) during nursery residence. Not only is the total amount of available habitat reduced, but the connectivity with the James River is also impacted, affecting nutrient cycling, dissolved oxygen content, residence time of contaminants and nutrients, and natural cycles associated with water exchange (e.g., zooplankton community dynamics) with the tidal James River. Information provided in the May 14th letter states that the residence time of water decreases from approximately 14.4 hours without the water management plan, to more than 66 hours under active water management. The method used to derive these estimates was not provided and we cannot assess their accuracy. However, this estimated reduction in water exchange also has the potential to negatively affect American shad (*Alosa sapidissima*) juveniles, as American shad prey on zooplankton and aquatic insect larvae that benefit from terrestrially derived organic input originating from the neighboring watershed (Hoffman *et al.* 2007).

The timing of the proposed tidal gate closing coincides with residence period of juvenile blueback herring, alewife, and American eel. Spawning runs of blueback herring in Chesapeake Bay typically begin in April and spawning occurs at water temperatures between 14 and 26 °C with the timing of spawning varying by 3 to 4 weeks annually (Pardue 1983; Loesch 1987). Spawning locations for blueback herring can vary depending on latitude and the overlapping distribution with alewife. Where the distributions of the two species overlap, spawning sites include fast flowing areas of rivers and streams. When alewife are absent, blueback herring spawn in seasonally flooded oxbows and swamps (Loesch 1987). Hatching of blueback herring occurs from April through June in Chesapeake Bay tributaries (Hildebrand and Schroeder 1928; O'Connell and Angermeier 1999; Dixon 1996; Tuckey 2009). Closing the tide gates in July will trap juvenile alosines in a highly unnatural system.

Blueback herring feed on zooplankton with consumption and growth rates highest when zooplankton densities are highest. Feeding can be intense enough that less preferred prey, such as smaller cladocerans, become dominant in the remaining plankton assemblage (Burbidge 1974). The disconnect with the tidal James River during the proposed period of closure will have the potential to negatively affect food web dynamics that support blueback herring growth.

Hatching of alewife larvae occurs earlier than other alosines and extends from February through April in Chesapeake Bay tributaries (Hildebrand and Schroeder 1928; O'Connell and Angermeier 1999). Larvae feed on zooplankton consisting predominantly of copepods. Water flow has been found to decrease larval alewife survival with both high discharge levels and drought conditions negatively affecting survival (Sismour 1994; O'Connell and Angermeier 1997).

Juvenile alewives remain in tidal freshwater portions of rivers, streams, and ponds during the first summer and into fall prior to migration to the coastal ocean (Hildebrand and Schroeder 1928). The distribution of alewives and blueback herring in nursery habitats overlap, and diets consist of similar prey items, which creates the potential for competition (Davis and Cheek 1967; Grabe 1996). However, vertical distribution in the water column, as well as the temporal overlap of similar life history stages differs between species with alewife remaining deeper in the water column compared with blueback herring (Loesch *et al.* 1982). The spatial separation in the nursery habitat likely reduces interspecific competition among juveniles (Loesch 1987). The proposed water management plan for Curles Neck Swamp creates an unnatural tidal influence under drawdown conditions and will likely increase competition for resources affecting survival and growth of alewife and blueback herring. The 80 – 94% reduction in water volume eliminates the spatial separation that has evolved between species and places them in direct competition reducing overall production at a historic low period of abundance.

Anadromous alosines need to ascend streams to varying degrees to access essential spawning habitat, with important variability in distance traveled upstream both among and within species (Greene *et al.* 2009). Dams and other artificial structures built in streams can create migratory barriers that prevent such access by these species and interrupt their life history. Not all barriers are physical objects. Plumes of elevated water temperature (Leggett and Whitney 1972), reduced water quality (Chittenden 1969), including reduced pH, and reduced water quantity, (Greene *et al.* 2009) can also inhibit upstream migration by these fishes. These scenarios may occur adjacent to Curles Neck Swamp outfalls. Other physical barriers

through the culverts and spawn. However, this study did not provide information on the level of use of Curles Neck Swamp by adult spawners or the level/proportion of contribution of young herring and adults to the James River during and after the spawning season. We are certain that adults and young are able to escape the Swamp through the culverts when open, but are not able to estimate what proportion of the population escapes. It is reasonable to assume that an unknown amount of adults and young will remain in Curles Neck Swamp under the proposed water management plan time window. Within this shallow and isolated environment, they likely would be subjected to the environmental stresses mentioned above such as low dissolved oxygen, abnormally high temperatures, and increased predation; all of which increase the probability of mortality. Young fish may suffer additional mortality during this time from pumping unless the pump is equipped with 1 mm screens and is operated at very low flows. If construction of the wall and additional culvert and tide flap are authorized, we recommend that the Commission consider requiring long-term monitoring and assessment that can address alosine and eel stocks' level of use, productivity and spawning success, and contribution to the James River system. Pre-construction monitoring is preferred, but may be impracticable; however, we recommend that monitoring occur post-construction but prior to implementation of a water management plan (i.e. allowing the tide flaps to remain open year round) for a period of at least three years, use these data to determine the optimum window of spawning success for alosines and eels (we are not confident that the proposed time window is sufficient to allow maximum escapement opportunity), and then continue monitoring after the selected water management plan is implemented. This allows for operation that would lessen potential impacts and provide comparative data on the level of effect of the impoundment and water management. If authorized, this monitoring approach will provide the Commonwealth of Virginia the information necessary to address concerns raised in each IFMP. We also recommend consideration of an adaptive management plan that can use continuing monitoring data to modify, if necessary, water management to address alosine and eel spawning and nursery requirements under future climate change and sea level rise scenarios. It should be understood that an adaptive management strategy may also require the future raising and/or relocation of culverts if the culverts become subtidal to accommodate known alosine behavior preferences.

As mentioned above, tidal wetland losses will occur, but we are unable to accurately determine the amount of impact from construction activities and water management. The applicant has proposed a practicable mitigation approach that should provide some level of community and functional replacement, but we cannot be certain that this plan addresses all wetland community losses by area due to the lack of detailed information on tidal wetlands.

I hope that these comments assist the Commission in their deliberations. Please contact me if you have questions.

Sincerely,



Dr. Mark Luckenbach
Associate Dean of Research
& Advisory Services

known to influence migration include culverts (Clay 1995) and tide gates (Greene *et al.* 2009). Such barriers are believed to represent one of the most important factors in the decline of anadromous alosine runs (Limburg and Waldman 2009). The design of the tidal gate channels is critical and must be designed to allow easy entry of spawning adults and passage of larvae and juveniles.

American eel colonize nursery habitats in spring each year after inhabiting coastal Atlantic waters for nine to twelve months. The influx of glass eels occurs from February to June in Chesapeake Bay and all aquatic habitats from tidal estuaries to inland streams and ponds serve as nursery habitat (Tuckey and Fabrizio 2012). In Chesapeake Bay, American eel typically reach sexual maturity at seven years of age when they undergo a final metamorphosis, termed 'silvering'. The triggers that result in silvering are poorly understood, but the outmigration of maturing American eels occurs in fall months (e.g., September and October). American eel freely move from freshwater to estuarine habitats during the extended juvenile residence period in Chesapeake Bay and the proposed closure of the tidal gates impacts natural, behavioral activities of the species. Additionally, closing the tidal gates, decreases available habitat and increases the potential for predation by predators as American eel, alewife, and blueback herring will likely be concentrated in the waters nearby and adjacent to the tide gate system.

Conclusions and Recommendations

Adding to the complexity of this proposed project is the history of alteration within Curles Neck Swamp and the presence of the earthen levee. This area has been subjected to unnatural conditions for many years, but the recent breaches have allowed the area behind the levee to begin normalizing hydrologic connectivity with the James River. Although no direct studies have been conducted we can confidently assume that the renewed connectivity has benefitted tidal habitats and fishery resources above the previous condition and water management strategy. It also is reasonable to assume that this area may not yet have fully recovered to its natural state and level of ecosystem function prior to construction of the earthen levee. This project will return Curles Neck Swamp to a semi-isolated area for most of the year, and isolation for the remainder of the year. Concerns for the potential adverse effects to estuarine habitats and living resources associated with this proposed project are significant even though the area has been subjected to the long-term influences of altered hydrology and availability. Our concerns are especially heightened due to the current state of alosine and American eel populations, and the related strict resource management structures that these species are under. The Interstate Fishery Management Plan (IFMP) for Shad and River Herring, and the IFMP for American eel are clear in their intent to protect stocks and create situations and opportunities that enhance stocks. This proposed project is inconsistent with the objectives of the IFMPs and runs counter to initiatives in all coastal states, including Virginia, to remove obstructions that effect access to spawning and nursery habitat. To provide some context to this issue and of the importance of fish passage, the first natural resource action by the Commonwealth of Virginia occurred in 1798 with the General Assembly's adoption of a bill to "compel the owners of mills on the north branch of [the] Rappahannock River to make slopes for the passage of fish."

The small-scale study conducted by VIMS in 1981 showed the presence of herrings and herring larvae behind the earthen levee, which provided evidence that fish were able to enter Curles Neck Swamp

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MEMORANDUM

TO: Julia Wellman, DEQ/EIR Environmental Program Planner

FROM: Steve Coe, DLPR Review Coordinator

DATE: July 2, 2013

COPIES: Sanjay Thirunagari, DLP&R Review Manager
EIR File

SUBJECT: EIR Project No. 13-113F- Curles Neck Farm Project, Upgrades to Earthen Berm Levee System, Henrico County – Review Comments

The Division of Land Protection & Revitalization has completed its review of the Environmental Impact Report regarding the Lee Curles Neck Farm Project, Upgrades to Earthen Berm Levee System, Henrico County. The project scope: project includes construction of a 2,376 linear foot low-profile sheet pile structure extending from the southern terminus of an existing earthen levee system to the existing U.S. Army Corps of Engineers dredge material management area on Curles Neck Farm in Henrico County..

We have provided comments below concerning potential waste issues and environmental resources that could be affected and which may be impacted by this proposed project. The submittal did not address potential solid and/or hazardous waste issues. The submittal did not include a search of waste-related databases. The DLPR staff has conducted a cursory review of its database files, including a GIS database search (500 foot radius) of the project site and determined the information below.

No facility waste sites were located in the project area.

The staff's summary comments are as follows:

Hazardous Waste Facilities – none in close proximity to the project

CERCLA Sites – none

The following websites may prove helpful in locating additional information for these identification numbers: <http://www.epa.gov/superfund/sites/cursites/index.htm> or http://www.epa.gov/enviro/html/rcris/rcris_query_java.html.

FUDs Sites – none

Solid Waste Facilities – none

VRP Sites - none

Petroleum Release Sites – one

ID# 19901283 – Presquile National Wildlife Refuge, Turkey Island, Hopewell, VA 23860. Event Date: 3/14/2006. Status: Closed.

(Note: Dates above are the latest PC Database edit dates of the specific petroleum contamination (PC) Case Nos.)

Please note that the DEQ's PC case files of the PC Case Nos., within 500 feet of the proposed project are identified above and these petroleum releases should be evaluated by the project engineer or manager to establish the exact location of the release and the nature and extent of the petroleum release and the potential to impact the proposed project. The facility representative should contact the DEQ's Piedmont Regional Office for further information and the administrative records of the PC cases which are in close proximity to the proposed project.

GENERAL COMMENTS

Soil, Sediment, and Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Asbestos and/or Lead-based Paint

All structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed. Questions may be directed to Mr. Jason Miller at the Piedmont Regional Office (804-527-5028).

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Steve Coe, Environmental Specialist, at (804) 698-4029.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: Julia H. Wellman

DEQ - OEIA PROJECT NUMBER: 13 - 113F

PROJECT TYPE: STATE EA / EIR FEDERAL EA / EIS SCC

X CONSISTENCY CERTIFICATION

PROJECT TITLE: CURLES NECK FARM PROJECT

PROJECT SPONSOR: DOD / ARMY / ARMY CORPS OF ENGINEERS

PROJECT LOCATION: **X OZONE MAINTENANCE AND
EMISSION CONTROL AREA FOR NOX & VOC**

REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: CONSTRUCTION
 OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. 9 VAC 5-40-5490 et seq. – Asphalt Paving operations
4. **9 VAC 5-130 et seq. – Open Burning**
5. **9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
6. 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
7. 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. 9 VAC 5-50-400 Subpart _____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
9. 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
10. 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x).



(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: June 18, 2013

Wellman, Julia (DEQ)

From: Gavan, Larry (DEQ)
Sent: Tuesday, July 02, 2013 3:25 PM
To: Wellman, Julia (DEQ)
Subject: RE: NEW PROJECT ACOE 13-113F

Please see the comments below.

Thx
Larry

Private Sector Boiler Plate for E & S and SWM

(a) Agency Jurisdiction. The DEQ administers the nonpoint source pollution control enforceable policy of the VCP through the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

(b) Erosion and Sediment Control Plan. The Applicant is responsible for submitting a project-specific erosion and sediment control (ESC) plan to the locality in which the project is located for review and approval pursuant to the local ESC requirements, if the project involves a land-disturbing activity of 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area). Depending on local requirements the area of land disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project must be covered by the project specific ESC plan. Local ESC program requirements must be requested through the locality. [Reference: *Virginia Erosion and Sediment Control Law* §62.1-44.15 et seq.; *Virginia Erosion and Sediment Control Regulations* 4 VAC 50-30-30, 4 VAC 50-30-40]

(c) Stormwater Management Plan. Depending on local requirements, a Stormwater Management (SWM) plan may be required. Local SWM program requirements must be requested through the locality. [Reference: *Virginia Stormwater Management Act* §62.1-44.15 et seq.; *Virginia Stormwater Management (VSMP) Permit Regulations* 4 VAC 50-60-110]

From: Wellman, Julia (DEQ)
Sent: Wednesday, June 26, 2013 11:17 AM
To: Gavan, Larry (DEQ); Sepety, Holly (DEQ); Moore, Daniel (DEQ)
Subject: FW: NEW PROJECT ACOE 13-113F

Another one for your review.

I checked with Robbie and she is not coordinating for your sections on this review. Unfortunately, I have other to send you today. Hang in there. ☺

If you need more time to comment, please let me know.

From: Fulcher, Valerie (DEQ)
Sent: Friday, June 07, 2013 4:16 PM
To: Cason, Gladys (DGIF); Rhur, Robbie (DCR); odwreview (VDH); Coe, Stephen (DEQ); Narasimhan, Kotur (DEQ); West, Kelley (DEQ); Watkinson, Tony (MRC); Kirchen, Roger (DHR); mason@vims.edu; Kline, Everette (DOF); Evans, Gregory (DOF)
Cc: Wellman, Julia (DEQ)
Subject: NEW PROJECT ACOE 13-113F

Good afternoon - attached is a new EIR review request/project:

**ACOE: Curles Neck Farm Project, Henrico County
DEQ #13-113F**

Hard copies have been mailed to the Richmond Regional PDC and Henrico County.

The due date for comments is JULY 5, 2013. You can send your comments either directly to Julia by email (Julia.Wellman@deq.virginia.gov), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 629 E. Main St., 6th Floor, Richmond, VA 23219. If you have any questions, please email Julia.

Thanks!

Valerie

Valerie A. Fulcher, CAP-OM, Executive Secretary Sr.

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

629 E. Main St., 6th Floor

Richmond, VA 23219

804/698-4330

804/698-4319 (Fax)

email: Valerie.Fulcher@deq.virginia.gov



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

Fax: 804-698-4019 - TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

MEMORANDUM

TO: Daniel Moore

FROM: Shawn Smith, Chesapeake Bay Local Assistance

DATE: July 11, 2013

SUBJECT: DEQ 13-113F, Curles Neck Farm Project, Henrico County

This project proposes installing about 2300 linear feet of low profile single sheet pile structure extending from the southern terminus of an existing earthen levee system to the existing USCOE dredge management area on Curles Neck Farm in Henrico County. The purpose of this project is to protect Curles Neck Swamp from the effects of sea level rise. As such, it is considered a water dependent facility and is permitted within the Resource Protection Area. For compliance with Bay Act requirements, a water quality impact assessment should be submitted for review by the County, and applicable erosion and sediment control and storm water management requirements addressed. If these conditions are met, these projects will be consistent with Bay Act requirements.

MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road

Glen Allen, VA 23060

804/527-5020

To: Julia Wellman
Environmental Program Planner

From: Kelley West
Environmental Planner

Date: July 5, 2013

Subject: Curles Neck Farm Project (13-113F).

I have reviewed the Consistency Certification for the above referenced project, by which the applicant is proposing to construct a 2,376 linear foot low profile single sheet pile structure. The structure will extend from the southern terminus of an existing earthen levee system to the existing ACOE dredge material management area on Curles Neck Farm in Henrico County, Virginia. My comments are as follows:

Water: Erosion and sediment controls should be properly implemented and maintained throughout all phases of construction. E & S controls and Best Management Practices (BMPs) should be inspected/repared before and after rain events. Please follow all standards and specifications under the DCR Erosion & Sediment Controls Handbook (1992, 3rd Edition). DEQ recommends maximizing pervious surface areas and green spaces in the construction design to reduce runoff and the environmental impact associated with urban runoff.

The Consistency Certification discussed tidal wetlands located in the project area. ACOE and VMRC are issuing permits. DEQ-PRO VWPP will be issuing a permit waiver since the project is located in tidal wetlands. We also recommend that all construction activities avoid wetlands to the maximum extent possible. For any questions or additional information concerning VWP Permit requirements, please contact Allison Dunaway at (804) 527-5086.

Waste: The generation of hazardous or solid waste materials should be tested and removed in accordance with the Virginia Hazardous Waste Management Regulations (9 VAC 20-60) and/or the Virginia Solid Waste Management Regulations (9 VAC 20-80). Please understand that it is the generator's responsibility to determine if a solid waste meets the criteria of a hazardous waste and as a result be managed as such. In addition, asbestos waste, lead waste, or contaminated residues generated must be handled and disposed of in accordance with the VSWMR or VHWMR as applicable. DEQ recommends that pollution prevention principles be implemented to reduce the amount of wastes at the source, such as the re-use and recycling of waste material. If you have any questions concerning hazardous/solid waste management, please contact Jason Miller at (804)527-5028.

Air: DEQ-PRO recommends the proposed actions shall operate in a manner consistent with air pollution control practices for minimizing emissions, especially during periods of high ozone. Fugitive dust should be kept to a minimum, (9 VAC 5-50-60 *et seq*). Permits may be required for any boilers or fuel-burning equipment. For further questions, please contact James Kyle at (804) 527-5047.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY PIEDMONT REGIONAL OFFICE

4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020; Fax (804) 527-5106
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

July 9, 2013

PCN, LLC
Attn: Thomas E. Pruitt
1801 Bayberry Court, Suite 100
Richmond, Virginia 23226

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: Joint Permit Application Number 12-1534, Curles Neck Farm, Henrico County
Notification of Virginia Water Protection Program Permit Wavier

Dear Mr. Pruitt:

The Virginia Department of Environmental Quality (DEQ) has reviewed your application, which was received on April 24, 2013. Currently, the project involves the construction of a levee and new work dredging in order to control water levels in tidal wetland areas of Curles Neck Farm. The proposed project will permanently impact 0.24 acre of tidal forested wetlands and 0.106 acre of subaqueous bottom land. In addition, the proposed project will temporarily impact 0.65 acre of tidal forested wetlands and 0.081 acre of subaqueous bottom land. Project activities are as described in the Joint Permit Application titled "Curles Neck – Joint Permit Application Information (#12-1534)" dated April 22, 2013. The project is also subject to all permit conditions found in the U.S. Army Corps of Engineers' Permit No. NAO-2012-2152 and Marine Resources Commission Permit No. 12-1534. Compensatory mitigation will be addressed by the Corps of Engineers and/or the Marine Resources Commission permits cited above.

Pursuant to 9 VAC 25-210-220(B) of the VWP Permit Program Regulation, a VWP permit is not required for this project because the Virginia Marine Resources Commission (VMRC) will be issuing a permit pursuant to Chapter 12 and/or Chapter 13 of Title 28.2 of the Code of Virginia, and the U.S. Army Corps of Engineers will be issuing an individual permit pursuant to Section 404 of the Clean Water Act for the proposed activities.

Should the size and/or scope of the project change, or the above-referenced permits not be obtained from VMRC or the Corps, a VWP permit may be required. You are advised that this letter does not relieve you from the responsibility of conducting the proposed activity in a manner that meets all applicable laws and regulations, including the State's Water Quality Standards.

If you have any questions regarding this correspondence, please contact Bill Pfeifle at (804) 527-5074 or at william.pfeifle@deq.virginia.gov.

Sincerely,


Allison C. Dunaway
VWP Program Manager

c: Todd Miller, U.S. Army Corps of Engineers
Juliette Giordano, Virginia Marine Resources Commission
Rick Atkinson, Williamsburg Environmental Group, Inc.



Douglas W. Domenech
Secretary of Natural Resources

David A. Johnson
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

MEMORANDUM

DATE: July 2, 2013
TO: Julia Wellman, DEQ
FROM: Roberta Rhur, Environmental Impact Review Coordinator
SUBJECT: DEQ 13-113F, Curles Neck Farm, Henrico CO

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the James River – Turkey Island Creek Stream Conservation Unit (SCU) is located within the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are given a biodiversity significance ranking based on the rarity, quality, and number of occurrences they contain; on a scale of 1-5, 1 being the most significant. The James River - Turkey Island Creek SCU has been given a biodiversity significance ranking of B4, which represents a site of moderate significance. The natural heritage resource associated with this SCU is:

Acipenser oxyrinchus Atlantic sturgeon G3/S2/LE/LT

Atlantic sturgeon is a large fish that reaches a maximum length of about 4.3 meters and may live for several decades. The adults migrate between fresh water spawning areas and salt water non-spawning areas. They feed primarily on benthic invertebrates and small fishes as available.

Stocks on the Atlantic slope have been severely reduced by overfishing (mainly late 1800s and early 1900s), pollution, sedimentation, and blockage of access to spawning areas by dams (Gilbert 1989, Burkhead and Jenkins 1991, Marine and Coastal Species Information System 1996). In Chesapeake Bay and elsewhere in the range, hypoxic events have increased and may degrade nursery habitat for Atlantic sturgeon (Secor and Gunderson 1997). Habitat loss due to dam construction and water pollution are thought to be major factors impeding full recovery of populations (Smith 1985, cited by Johnson et al. 1997; Gilbert 1989). A late maturation age and use of estuaries, coastal bays, and upstream areas of rivers for spawning and juvenile development make stocks vulnerable to habitat alterations in many areas

(NatureServe 2012). Please note that this species is currently classified as endangered by the United States Fish and Wildlife Service (USFWS) and threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

In addition, the Curles Neck Conservation Site is located in the vicinity of the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Curles Neck Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resource at this site is:

Aeschynomene virginica

Sensitive joint-vetch

G2/S2/LT/LT

Sensitive joint-vetch is a bristly stemmed annual legume growing to 2 meters in height. The characteristic pinnately divided leaves are gland-dotted and may fold slightly if touched. The pea-shaped flowers are yellow streaked with orange-red. This legume occurs in freshwater to brackish wetland habitats, primarily marshes, in the intertidal zone of our larger coastal rivers. This habitat type often supports a high diversity of both rare and common plant species. This annual herbaceous plant is classified as federally listed by the United States Fish and Wildlife Service (USFWS) and stated listed by the Virginia Department of Agriculture and Consumer Services (VDACS).

To thrive, sensitive joint-vetch may require minimal competition from other plants. For this reason, plants are frequently found on accreting point bars and levees that have not yet been colonized by perennial species. Sensitive joint-vetch populations however, may also be found within marsh interiors. Researchers believe that these plants may be able to thrive there because of harsh soil and nutrient conditions that inhibit growth of potential competitors. An additional theory for the sensitive joint-vetch occurring at those locations is that grazing herbivores, such as muskrat (*Ondatra zebethicus*), eat large areas of vegetation ("muskrat eat-outs") leaving behind exposed soils that are more easily colonized by annuals.

Populations face many potential on-site and off-site threats, including activities that alter natural river currents and sediment cycling and, thereby, prevent the development of accreting point-bar habitats for the species and/or cause erosion of that habitat. Other potential threats include activities which result in increased salinity levels, water pollution, displacement by aggressive species, and activities which result in excessive sediment loading which could inhibit germination of seeds or smother seedlings (USFWS, 1995). Sensitive joint-vetch is currently known from about 30 locations in Virginia's coastal plain, 10 of which are historical occurrences. Surveys for Sensitive joint-vetch should be conducted from August 15 to October 15. At this time the plant is in flower or fruit and has attained some stature making it more visible during the surveys typically conducted from a boat.

Due to the potential for this site to support populations of Sensitive joint-vetch, DCR recommends an inventory for the resource in the project area.

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at chris.ludwig@dcr.virginia.gov or 804-371-6206 to discuss arrangements for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. Survey results should be coordinated with DCR-DNH and USFWS. Upon review of the results, if it is determined the species is present, and there is a likelihood of a negative impact on the species, DCR-DNH will recommend coordination with VDACS to ensure compliance with Virginia's Endangered Plant and Insect Species Act.

Due to the legal status of Sensitive joint-vetch and the Atlantic sturgeon, DCR recommends coordination with the U.S. Fish and Wildlife Service (USFWS). Due to the legal status of the Atlantic sturgeon, DCR also recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570). DCR recommends another alternative be considered for scour protection in lieu of grouted riprap.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Gladys Cason (804-367-0909 or Gladys.Cason@dgif.virginia.gov).

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Cc: Kim Smith, USFWS
Amy Ewing, VDGIF

Literature Cited

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Gilbert, C. R. 1989. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (Mid-Atlantic Bight) Atlantic and shortnose sturgeons. U.S. Fish and Wildlife Service Biological Report. 82(11.22). U.S Army Corps of Engineers TR EL-82-4. 28 pp.

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United States Fish and Wildlife Service. 1995. Sensitive joint-vetch (*Aeschynomene virginica*) Recovery Plan. Hadley, Massachusetts. 55 pp.

Wellman, Julia (DEQ)

From: Ewing, Amy (DGIF)
Sent: Friday, June 28, 2013 11:53 AM
To: Wellman, Julia (DEQ)
Cc: Greenlee, Bob (DGIF); Cason, Gladys (DGIF)
Subject: ESSLog# 33300_13-113F_Curles Neck_FCD
Attachments: 33300_CurlesNeck_05012013.pdf

Julia,

Please see attached the comments we provided MRC during review of the JPA for this project. Those comments remain valid.

Assuming adherence to erosion and sediment controls, we find this project consistent with the Fisheries Management Section of the CZMA.

Thanks,

Amy Ewing

Environmental Services Biologist | VA Dept. of Game and Inland Fisheries | 4010 West Broad St. Richmond, VA 23230 | 804-367-2211 | www.dgif.virginia.gov



COMMONWEALTH of VIRGINIA

Douglas W. Domenech
Secretary of Natural Resources

Department of Game and Inland Fisheries

Robert W. Duncan
Executive Director

May 1, 2013

Juliette Giordano
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News, VA 23607

RE: Curles Neck Farm
ESSLog # 33300
JPA #12-1534

Dear Juliette:

The Virginia Department of Game and Inland Fisheries (VDGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises law enforcement and regulatory jurisdiction over those resources, inclusive of State or Federally *Endangered* or *Threatened* species, but excluding listed insects. We are a consulting agency under the U. S. Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*), and we provide environmental analysis of projects or permit applications coordinated through the Virginia Department of Environmental Quality, the Virginia Marine Resources Commission, the Virginia Department of Transportation, the U. S. Army Corps of Engineers, and other state or federal agencies. Our role in these procedures is to determine likely impacts upon fish and wildlife resources and habitats, and to recommend appropriate measures to avoid, reduce, or compensate for those impacts.

We have reviewed the Joint Permit Application revisions dated 22 April 2013 for the proposed project on Curles Neck Farm, located along the James River in Henrico County. In addition, we participated in a site visit to Curles Neck Farm on December 19, 2012. Based on our site review, discussions with the applicant, review of the revised application, and consideration of additional measures being proposed by the applicant, we offer the following comments.

During the late 1960s, a berm including two 4-foot diameter culverts with tidal flapgates was constructed across the mouth of Curles Neck Creek (Swamp) and the adjoining shoreline to impound and manage water levels within the swamp for enhancement of waterfowl nesting and foraging habitat. Historically, the impoundment was drawn down from June through October to facilitate natural regeneration of aquatic vegetation and for seeding the exposed mudflats with millet. During after-the-fact (1980s) permitting of the flapgates and associated berm it was determined that, to minimize impacts upon anadromous fishes, the flapgates would remain open

Juliette Giordano
May 1, 2013
Page 2 of 3

from March 1st through July 7th of each year. According to the applicant, all of the water control structures remain operable. The pumps, however, are not currently being used because a number of "tidal inlets" have formed along the southeastern edge of the swamp, rendering the pumps ineffective for managing water levels in the swamp.

To address the owner's inability to maintain water levels in Curles Neck Swamp, and concerns that sea level rise will result in loss of wetland habitats onsite, the owners have applied to construct a sheetpile wall from the southern terminus of the existing levee to the Corps' Dredged Materials Management Area located on the property. Placement of the sheetpile barrier will permanently displace approximately 0.24 acres of tidal forested wetlands and approximately 4,613 square feet of subaqueous bottoms. The proposed barrier will block the tidal inlets that have formed and allow the owners to meet the stated purposes of (1) preserving and continuing the regulation of water levels within Curles Neck Swamp, and (2) long-term protection against inundation resulting from sea level rise.

Blueback herring and alewife have been documented from Curles Neck Swamp and VDGIF has designated the James River at the project site as an Anadromous Fish Use Area. Blocking the tidal inlets could result in adverse impacts upon anadromous fish and other species currently accessing the swamp through these inlets. To address this concern, we recommend that connectivity between the James River and Curles Neck Swamp be maintained during in-migration, spawning, and out-migration. The applicant originally proposed to maintain and operate the existing 48-inch culverts at the mouth of Curles Neck Creek, and has recently proposed to also "add a tidal gate along the proposed sheet pile wall to allow for the free flow of fish during certain times of the year. This gate will be located in the tidal gut." Pending receipt and review of design specifications and operational protocols for the existing and proposed structures, we cannot offer specific recommendations for the protection of affected species, but we do believe that such a project modification, if properly designed and operated, could provide sufficient passage for anadromous fish into and out of Curles Neck Swamp. Therefore, we recommend continued coordination with us and with the National Oceanographic and Atmospheric Administration (NOAA) Fisheries Service to ensure protection of anadromous fishes that may be affected by this project.

We also document federal Endangered Atlantic sturgeon from the project area. Based on the project scope and location, we do not anticipate this project to adversely impact this species. However, we recommend coordination with the NOAA Fisheries Service regarding possible impacts upon Atlantic sturgeon.

Bald eagle nests and colonial waterbird colonies have been documented from the project area. Based on the scope and location of the proposed work, we do not anticipate project-related adverse impacts upon eagles or waterbirds nesting onsite. The project, however, also is located within the James River Bald Eagle Concentration Area, and construction activities potentially could adversely impact eagles within that designated area. Therefore, we recommend coordination with the U.S. Fish and Wildlife Service (USFWS) regarding possible impacts upon eagles known to use the project site and surrounding areas for nesting, foraging, and roosting.

Wellman, Julia (DEQ)

From: Kirchen, Roger (DHR)
Sent: Thursday, June 27, 2013 2:56 PM
To: Wellman, Julia (DEQ)
Subject: Curles Neck Farm Project (DEQ #13-113F; DHR File No. 2013-0733)

The Curles Neck property is an historically sensitive landscape containing numerous known archaeological resources. The potential impact to known and unrecorded resources should be considered in the planning and implementation of this project. We recommend that the Army Corps of Engineers consult directly with DHR, as necessary, pursuant to Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations codified at 36 CFR Part 800 which require Federal agencies to consider the effects of their undertakings on historic properties.

Roger

*Roger W. Kirchen, Manager
Office of Review and Compliance
Division of Resource Services and Review
Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221
phone: 804-482-6091 (NEW!)
fax: 804-367-2391
roger.kirchen@dhr.virginia.gov*

Wellman, Julia (DEQ)

From: Albrecht, Edward (VDH)
Sent: Tuesday, July 02, 2013 3:45 PM
To: Wellman, Julia (DEQ)
Cc: Matthews, Barry (VDH)
Subject: DEQ Project #: 13-113F ACOE: Curles Neck Farm Project

DEQ Project #: 13-113F
Name: Curles Neck Farm Project
Sponsor: DOD/Army/ACOE
Location: Henrico County

VDH – Office of Drinking Water has reviewed the above captioned project. Below are our comments as they relate to proximity to public drinking water sources (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems must be verified by the local utility.

There are no groundwater wells within a 1 mile radius of the project site.

There is 1 surface water intake in Zone 1 (within a 5 mile radius); the Virginia-American Water Co surface water intake is located 3.7 miles downgradient of the project site.

Notify and coordinate with the Virginia-American Water Co during construction.

There are no apparent impacts and the project appears consistent with the Virginia *Waterworks Regulations*.

VDH – Division of Shellfish Sanitation concurs with the findings that the project occurs in waters that have been classified as “Prohibited & Non-Productive”.

Edward Albrecht

Virginia Department of Health,
Office of Drinking Water
109 Governor Street, Sixth Floor
Richmond, VA 23219
(P) 804-864-7495
Edward.Albrecht@vdh.virginia.gov

Wellman, Julia (DEQ)

From: Evans, Gregory (DOF)
Sent: Monday, July 01, 2013 11:56 AM
To: Wellman, Julia (DEQ)
Subject: RE: NEW PROJECT ACOE 13-113F

Julia,

I have reviewed the above project on behalf of the Department of Forestry and we have no comments.

Greg Evans

Greg Evans
Voluntary Mitigation Program Manager
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, VA 229035
434-220-9020
gregory.evans@dof.virginia.gov
www.dof.virginia.gov

From: Fulcher, Valerie (DEQ)
Sent: Friday, June 07, 2013 4:16 PM
To: Cason, Gladys (DGIF); Rhur, Robbie (DCR); odwreview (VDH); Coe, Stephen (DEQ); Narasimhan, Kotur (DEQ); West, Kelley (DEQ); Watkinson, Tony (MRC); Kirchen, Roger (DHR); mason@vims.edu; Kline, Everette (DOF); Evans, Gregory (DOF)
Cc: Wellman, Julia (DEQ)
Subject: NEW PROJECT ACOE 13-113F

Good afternoon - attached is a new EIR review request/project:

**ACOE: Curles Neck Farm Project, Henrico County
DEQ #13-113F**

Hard copies have been mailed to the Richmond Regional PDC and Henrico County.

The due date for comments is JULY 5, 2013. You can send your comments either directly to Julia by email (Julia.Wellman@deq.virginia.gov), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 629 E. Main St., 6th Floor, Richmond, VA 23219. If you have any questions, please email Julia.

Thanks!

Valerie

Valerie A. Fulcher, CAP-OM, Executive Secretary Sr.

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review



Planning District Commission

Metropolitan Planning Organization

Town of
Ashland
Counties of
Charles City
Chesterfield
Goochland
Hanover
Henrico
New Kent
Powhatan
City of
Richmond

Executive Director
Robert A. Crum, Jr.

MEMORANDUM

RECEIVED

JUL 03 2013

DEQ-Office of Environmental
Impact Review

TO: Julia H. Wellman
Department of Environmental Quality

FROM: Barbara V. Jacocks, AICP
Principal Planner

DATE: July 2, 2013

SUBJECT: **ENVIRONMENTAL REVIEW AND COMMENT**

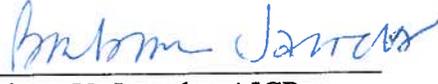
Project Title: **DOD/Army/Army Corps of Engineers for Curles Neck Farm
Project Consistency Certification**

CCN: VA14-0702-3243-0015-00087

The RRPDC received a request for comment concerning this proposal on June 11, 2013. RRPDC staff sent the request to staff of planning district member localities on June 17, 2013 in order to solicit comments to include in a comment letter. Any documents associated with the request were made available to locality staff. Response comments from locality staff were requested on or before close of business July 2, 2013.

RRPDC did not receive comments from locality staff.

Based on the information provided in the request, RRPDC has found no conflicts with this project since it has been found to be in compliance with the Coastal Zone Management Program's enforceable policies which constitute a comprehensive and realistic set of guidelines for protecting the state's coastal resources.

Signature 
Barbara V. Jacocks, AICP
Principal Planner

BVJ/awd