
APPENDIX E: AGENCY COMMENTS ON DRAFT EA

THIS PAGE INTENTIONALLY LEFT BLANK

U.S. Department of Agriculture
Natural Resources Conservation Service

THIS PAGE INTENTIONALLY LEFT BLANK

United States Department of Agriculture



Natural Resources Conservation Service
1934 Deyerle Ave., Suite A
Harrisonburg, VA 22801

Telephone: 540/434-1404
Fax: 540/434-1519

Commander, U.S. Army Garrison Fort Belvoir
ATTN: Directorate of Public Works
Building 1442
9430 Jackson Loop
Fort Belvoir, Virginia 22060-5116

June 4, 2013

Sir,

In review of the EA for the Water and Wastewater Utility Upgrade at Fort Belvoir, Virginia, it is agreed that the finding of "No Significant Impact" is correct concerning the soil resources. The soils that would be affected by this construction under the Farmland Protection Policy Act would classify as "committed to urban" and thus not covered under the FPPA. However, to protect this precious resource, it is imperative that the Erosion and Sediment Control (ESC) plans be followed to ensure impacts to the soil resources at the sites are minimal and of a temporary nature.

Sincerely,

A handwritten signature in black ink that reads "Don Flegel". The signature is written in a cursive, flowing style.

Don Flegel
Soil Resource Specialist

cc: David Kriz, State Soil Scientist, NRCS Richmond, VA

Helping People Help the Land

An Equal Opportunity Provider and Employer



THIS PAGE INTENTIONALLY LEFT BLANK

Commonwealth of Virginia

Draft Environmental Assessment Review

The following agencies, planning district commission, and locality joined in this review:

Department of Environmental Quality

Department of Conservation and Recreation

Department of Game and Inland Fisheries

Marine Resources Commission

Department of Forestry

Department of Health

Department of Historic Resources

Fairfax County

Northern Virginia Regional Commission

In addition, the Department of Agriculture and Consumer Services, and Department of Mines, Minerals and Energy were invited to comment.



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

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

August 1, 2013

Commander
U.S. Army Garrison Fort Belvoir
Attn: Directorate of Public Works
Building 1442
9430 Jackson Loop
Fort Belvoir, Virginia 22060-5116

RE: Environmental Assessment and Federal Consistency Determination for the Water/Wastewater Utility Upgrade, Fort Belvoir, Fairfax County, (DEQ 13-112F).

Dear Commander:

The Commonwealth of Virginia has completed its review of the April 2013 Environmental Assessment (EA) (received June 6, 2013) for the above referenced project. In addition, the EA includes a Federal Consistency Determination (FCD). The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of federal consistency documents submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. The following agencies, locality, and planning district commission participated in the review of this proposal:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Game and Inland Fisheries
Marine Resources Commission
Department of Forestry
Department of Health
Department of Historic Resources
Fairfax County
Northern Virginia Regional Commission

In addition, the Department of Agriculture and Consumer Services, and Department of Mines, Minerals and Energy were invited to comment on the proposal.

PROJECT DESCRIPTION

The Department of the Army's utility privatization (UP) partner (American Operations and Maintenance, Inc. or American Water) at Fort Belvoir proposes to implement a number of projects to upgrade the water and wastewater system infrastructure through the UP contract. Under the UP contract, American Water is required to initially replace outdated system components, implement a life-cycle-based replacement program, and conduct general maintenance. These projects are organized into four categories: (1) initial system deficiency corrections (ISDC) projects, (2) renewals and replacement (R&R) projects, (3) future system deficiency corrections/upgrades (FSDC), and (4) general maintenance. These projects include:

- demolition of four water storage tanks and construction of three new water storage tanks (ISDC);
- replacement of six sections of sewer force mains (R&R);
- maintenance of seven sections of gravity sewer mains (general maintenance);
- reinstallation or repair of nine aerial stream crossings with associated streambank repair (ISDC); and
- implementation of additional projects (R&R and FSDC) identified in Fort Belvoir's *2012 Annual System Deficiency Corrections, Upgrades and Renewal & Replacement Plan (ASDC)* for fiscal years 13 through 17 that are currently in the conceptual phase.

The proposed action would be implemented during a period of approximately 18 to 24 months.

CONCLUSION

Provided activities are performed in accordance with the recommendations which follow in the Impacts and Mitigation section of this report, this proposal is unlikely to have significant effects on ambient air quality, important farmland, forest resources, and wetlands. It is unlikely to adversely affect species of plants or insects listed by state agencies as rare, threatened, or endangered.

However, the Northern Virginia Regional Commission recommends that the Army proceed with developing an Environmental Impact Statement (EIS), as opposed to a Finding of No Significant Impact (FONSI). Commission staff finds that the EA describes many potential environmental impacts which should be further reviewed by state, regional, and local agencies. An EIS would ensure that appropriate mitigation measures are fully explored and implemented.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Water Quality and Wetlands. According to the EA (page 3-73), construction activities associated with present and future R&R and FSDC projects would temporarily impact water resources during construction. The proposed action would have short-term, adverse impacts on surface water resources related to construction activities. However, streambank restoration would result in long-term, beneficial impacts. All construction activities would be consistent with state and federal erosion control guidelines and would be conducted according to permit requirements, ensuring that adverse, cumulative impacts would be minimized and would not be significant.

Construction activities associated with present and future R&R and FSDC projects could have the potential to temporarily or permanently impact wetlands, but measures would be employed to avoid and minimize impacts. Under the proposed action, instream work would be limited to within the channel and the banks minimizing impacts to wetlands. Horizontal directional drilling (HDD) technology would be used to replace force main pipes beneath sensitive areas to avoid and minimize impacts. For any impacts on the wetlands, the Army would submit a Joint Permit Application to the U.S. Army Corps of Engineers (Corps). Permit conditions would be followed to minimize and reduce impacts to wetlands. As a result, any adverse, cumulative impacts would be minimized and would not be significant.

1(a) Agency Jurisdiction. The State Water Control Board (SWCB) 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 Water Protection/Compliance, within the DEQ Division of Water Quality Programs. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities.

1(b) Agency Findings. The VWPP program at the DEQ Northern Regional Office (NRO) finds that impacts to surface waters, including wetlands, will be avoided and minimized to the maximum extent practicable based on the information provided in the EA. Should impacts to surface waters be necessary, the project appears to qualify for a Corps Regional Permit (RP) or Nationwide Permit (NWP).

1(c) Recommendations. 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 trench 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, 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.
- Flag or clearly 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.

1(d) Requirements. Provided that the entire project is authorized by the Corps under a RP and/or NWP and meets any required §401 Clean Water Act Certification Conditions, a VWP general or individual permit will not be required for this project. However, should surface water or wetland impacts require authorization from DEQ-NRO under the VWPP program, the applicant must document that avoidance and minimization has occurred to the greatest extent practicable.

The initiation of the VWPP review process is accomplished through the submission of a Joint Permit Application (JPA) (form MRC 30-300) to the Virginia Marine Resources Commission (VMRC). Upon receipt of a JPA for any proposed surface waters impacts, VWPP staff at DEQ-NRO will review the proposed project in accordance with the VWPP program regulations and guidance.

2. Subaqueous Lands Impacts. The EA (page 2-28) states that nine existing sections of water lines and gravity sewer mains that cross above intermittent and perennial streams will be reinstalled below the streambed or will require structural reinforcement, which may require streambank repair and stabilization to prevent erosion of soil around the concrete piers that support the water and sewer lines. Final designs will be included in the Joint Permit Application which the Virginia Marine Resources Commission will review for the issuance of permits to Fort Belvoir.

2(a) Agency Jurisdiction. The Virginia Marine Resources Commission (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.

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

- U.S. Army Corps of Engineers (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 Virginia Water Protection Permit;
- VMRC for encroachments on or over state-owned subaqueous beds as well as tidal wetlands; and
- local wetlands board for impacts to wetlands.

2(b) Agency Findings. VMRC finds that since stream crossings will be involved, the submission of a JPA will be required. All jurisdictional impacts will be reviewed during the JPA review process.

For additional information, contact VMRC, Jordan Creed at (757) 247-2256.

3. Erosion and Sediment Control and Stormwater Management. According to the EA (page 3-73), construction of present and future projects would require compliance with Virginia Stormwater Management regulations and Virginia Erosion and Sediment control regulations with an approved ESC Plan and Stormwater Pollution Prevention Plan. The completion of the required Stormwater Pollution Prevention Plan and Soil Erosion and Sediment Control Plan and implementation of BMPs for these projects would be coordinated.

3(a) Agency Jurisdiction. Effective July 1, 2013, the Department of Environmental Quality administers the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*. In addition, 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. Note that these programs were previously administered by the Department of Conservation and Recreation.

3(b) Requirements.

(i) Erosion and Sediment Control and Stormwater Management Plans

The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VESCL&R*. Accordingly, the applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: *VESCL* 62.1-44.15 et seq.]

(ii) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities

The operator or owner of a construction project involving land-disturbing activities equal to one acre (2,500 square feet or more in a Chesapeake Bay Preservation Area) are 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 on DEQ's website at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx>. [Reference: *Virginia Stormwater Management Act* 62.1-44.15 et seq.] *VSMP Permit Regulations* 4 VAC 50 et seq.].

4. Chesapeake Bay Preservation Areas. According to the document (page 4-5), the proposed action would result in temporary and permanent impacts to Resource Protection Areas (RPAs) from aerial stream crossing projects and its associated streambank repairs. The document finds that impacts to RPAs would likely be below

the thresholds for which mitigations is required, and concludes that potential impacts to RPAs will be reviewed through the Joint Permit Application process.

4(a) Agency Jurisdiction. Effective July 1, 2013, the Department of Environmental Quality administers the Chesapeake Bay Preservation Act (Bay Act) (Virginia Code §62.1-44.15 *et seq.*) and *Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations)* (4 VAC 50-90-10 *et seq.*). Note that this enforceable policy was previously administered by the Department of Conservation and Recreation.

4(b) Agency Comments. In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas and Resource Management Areas (RMAs) as designated by the local government. RPAs include:

- tidal wetlands;
- certain non-tidal wetlands;
- tidal shores; and
- a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow.

RMAs, which require less stringent performance criteria, include those areas of the county not included in the RPAs.

4(c) Requirements. Federal actions on installations located within Virginia's federally approved coastal zone under the Coastal Zone Management Act are required to be consistent with the performance criteria of the *Regulations* on lands analogous to locally designated Chesapeake Bay Preservation Areas (CBPAs). The following requirements apply to the proposed project.

(i) General Performance Criteria

Development on lands analogous to RPAs and RMAs are subject to general performance criteria found in 4 VAC 50-90-130 of the *Regulations*, including requirements to:

- minimize land disturbance (including access and staging areas);
- retain indigenous vegetation; and
- minimize post-development impervious surfaces.

For land disturbance over 2,500 square feet, the project must comply with:

- the requirements of the *Virginia Erosion & Sediment Control Handbook, Third Edition, 1992*; and
- stormwater management criteria consistent with water quality protection

provisions of the *Virginia Stormwater Management Regulations* (4 VAC 50-60-10) shall be satisfied.

(ii) Water and Sewer Utility Exemption

Per 4 VAC 50-90-150 2 of the *Regulations*, the construction, installation and maintenance of water and sewer utilities and facilities on lands analogous to locally-designated CBPAs shall be exempt from the *Regulations* provided that:

1. to the degree possible, the location of such utilities and facilities should be outside Resource Protection Areas;
2. no more land shall be disturbed than is necessary to provide for the proposed utility installation; and
3. all such construction, installation and maintenance of such utilities and facilities shall be in compliance with all applicable state and federal permits and designed and conducted in a manner that protects water quality.

4(e) Conclusion. The proposed activities would be consistent with the Bay Act and *Regulations*, provided they are consistent with the requirements described above.

5. Air Pollution Control. According to the EA (page 3-74), an applicability analysis determined that peak year combined emissions due to construction and operation activities would be below the appropriate *de minimis* values for areas in nonattainment for ozone and particulate matter (PM_{2.5}), demonstrating that a full conformity determination is not required. Air emissions were also evaluated to determine regional significance and found not to be regionally significant. As a result, cumulative impacts to air quality would not be significant.

5(a) Agency Jurisdiction. DEQ's Air Quality Division, on behalf of the State Air Pollution Control Board, is responsible to develop regulations that become *Virginia's Air Pollution Control Law*. DEQ is charged to carry 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.

5(b) Agency Findings. According to the DEQ Air Division, the project site is located in a designated ozone nonattainment area and emission control area for oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). Precursors to ozone (O₃) pollution include VOCs and NO_x.

5(c) Recommendation. The project proponent should take all reasonable precautions to limit emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels.

5(d) Requirements.

(i) Fugitive Dust

Fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *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, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(ii) Open Burning

If project activities include the open burning or use of special incineration devices for the disposal of land clearing debris, this activity must meet the requirements of 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100 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. The project proponent should contact Fairfax County officials to determine what local requirements, if any, exist.

(iii) Fuel Burning Equipment

The installation of fuel burning equipment (e.g. boilers and generators), may require permitting from DEQ prior to beginning construction of the facility (9 VAC 5-80, Article 6, Permits for New and Modified Sources). The project proponent should contact DEQ-NRO for guidance on whether this provision applies.

6. Solid and Hazardous Wastes and Hazardous Materials. According to the EA (page 3-2), Fort Belvoir conducts its hazardous waste management program in compliance with the Resource Conservation and Recovery Act. The installation has a Hazardous Waste Management/Waste Minimization Plan and a Master Spill Plan. Fort

Belvoir complies with EO 13423, Strengthening Federal Environmental, Energy and Transportation Management by promoting the use of products to reduce solid and hazardous waste. All hazardous materials would be handled and stored according to Army regulations and all applicable federal, state, and local laws and regulations. All hazardous wastes would be disposed of at permitted treatment, storage, and disposal facilities in compliance with all applicable regulations.

6(a) Agency Jurisdiction. Solid and hazardous wastes in Virginia are regulated by the Virginia Department of Environmental Quality, the Virginia Waste Management Board (VWMB), and the U.S. Environmental Protection Agency. They administer programs created by the federal *Resource Conservation and Recovery Act*, *Comprehensive Environmental Response Compensation and Liability Act*, commonly called Superfund, and the *Virginia Waste Management Act*. DEQ administers regulations established by the VWMB 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.

6(b) Agency Findings. DEQ's Division of Land Protection and Revitalization (DLPR) (formerly the Waste Division) determined that both solid and hazardous waste issues and sites were addressed in the report. DLPR staff conducted a cursory database search for zip code 22060 (Fort Belvoir), and found one Resource Conservation and Recovery Act (RCRA) site, one Comprehensive Environmental Response Compensation and Liability Act (CERCLA) site, two Formerly Used Defense Sites (FUDS), and thirty-two petroleum release sites. A detailed list of these sites is included in DLPR comments attached to this response.

6(c) Recommendations.

(i) Petroleum Release Sites

DEQ's petroleum contamination (PC) case files may identify petroleum releases that should be evaluated by the project engineer or manager to establish the exact location of the release, the nature and extent of the petroleum release, and the potential to impact the proposed project. The facility representative should contact the Tank Program at DEQ-NRO at for further information and the administrative records of the PC cases which are determined to be in close proximity to the proposed project.

(ii) Comprehensive Environmental Response Compensation and Liability Act

The DEQ Federal Facilities Restoration Program recommends contacting the Environmental Compliance Branch Chief, Directorate of Public Works, Environmental and Natural Resource Division at Fort Belvoir for information concerning CERCLA obligations

at the Main Post. The Environmental Compliance Branch Chief, or designee, should be advised prior to initiating any land-, sediment-, or groundwater-disturbing activities at or near Military Munitions Response Program (MMRP) range areas and Main Post Solid Waste Management Units (SWMUs).

6(d) Requirements.

(i) Generated Waste

Any soil that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations.

(ii) Asbestos-containing Material and Lead-based Paint

All structures being demolished, renovated, or removed should be checked for asbestos-containing materials (ACM) (such as insulation) and lead-based paint (LBP) prior to the installation of upgrades. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, state regulations 9 VAC 20-80-640 for ACM and 9 VAC 20-60-261 for LBP must be followed.

Questions or requests for further information regarding these comments may be directed to DEQ-LPRD, Steve Coe at (804) 698-4029.

7. Pesticides and Herbicides. DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used to the extent feasible. Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

8. Natural Heritage Resources. The EA does not specifically discuss potential project impacts to natural heritage resources. The document (page 3-74) concludes that construction activities associated with the proposed action would result in minimal impacts to vegetation and wildlife on Fort Belvoir because minimal vegetation and wildlife habitat would be removed. As a result, adverse, cumulative impacts to vegetation and wildlife and wildlife habitat would not be significant.

8(a) Agency Jurisdiction.

(i) Department of Conservation and Recreation

The mission of the Virginia Department of Conservation and Recreation 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.

The Natural Heritage Program's (DCR-DNH) 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).

(ii) Department of Agriculture and Consumer Services

The *Endangered Plant and Insect Species Act* of 1979, Chapter 39 §3.1-1020 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 and threatened species of plants and insects. The VDACS Virginia Endangered Plant and Insect Species Program personnel cooperates with the USFWS, 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 USFWS, are available, adherence to the order and tasks outlined in the plans are followed to the extent possible.

8(b) Agency Findings.

(i) Natural Heritage Resources

Biotics documents the presence of natural heritage resources in the following project areas. However, due to the scope of the activity and the distance to the resources, DCR-DNH does not anticipate that this project will adversely impact these natural heritage resources.

- Water Storage Tank #591;
- Force Main Replacements #s 584, 7677, 952, 04-78, 1575, 1695;
- Gravity Sewer Main Maintenance Sites 1-7;
- Aerial Stream Crossings, Sites 1-9;
- ASDC Project: New Access to Lift Station 584

(ii) Accotink Wetland Conservation Site

According to information currently in DCR files, the Accotink Wetland Conservation Site is downstream of the following project sites.

- Water Storage Tank #s188, 2429, 2428
- Re-diversion of Force Main Discharge from LS 1575;
- Meade Water Main Replacement

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. Accotink Wetlands Conservation Site has been given a biodiversity significance ranking of B3 which represents a site of high significance. The natural heritage resources of concern at this site are:

<i>Ranunculus ambigens</i>	Water-plantain spearwort	G4/S1/NL/NL
<i>Bolboschoenus fluviatilis</i>	River bulrush	G5/S2/NL/NL
<i>Carex vestita</i>	Velvety sedge	G5/S2/NL/NL
Tidal Freshwater Marsh	(Mixed High Marsh Type)	G3/S4?/NL/NL

Water-plantain spearwort is a perennial wetland herb in the buttercup family (Ranunculaceae). The global distribution of water-plantain spearwort includes the eastern, midwestern, and southern U.S. and Ontario, Canada. Although apparently globally secure, water-plantain spearwort, also known as water-plantain crowfoot, is regionally rare to historical or extirpated, particularly in some eastern states (Kartesz 1999). In Virginia, it has been documented in scattered locations in the Coastal Plain, Piedmont, and Ridge and Valley. Many Virginia occurrences are historical, but more recent occurrences include those in Fairfax, Charlotte, and Lee counties. The lower stem of this relatively stout herb may recline, producing roots from the nodes, then become ascending to erect and extending sometimes to over 3 feet long. Leaves are lance-shaped, with margins smooth to finely-toothed. Yellow-petaled flowers bloom from April-July and can be solitary or in a branching inflorescence; the round to oval fruiting head is composed of numerous, small, 1-seeded, fruits (Godfrey and Wooten 1981). Habitat in Virginia occurrences includes a variety of wetlands: freshwater marshes, both tidal and non-tidal; a spring seep within a clearcut; wet soil within a floodplain; a muddy stream bottom; ditches; and very wet, mucky ground in a small pastured wetland. Threats include habitat degradation or destruction, and competition from invasive alien plant species.

River bulrush, a state-rare plant species, inhabits fresh tidal marshes of the coastal plain of Virginia. This species forms predominantly sterile colonies that spread by rhizomes. Water pollution and sedimentation, sea level rise, and invasive species such as *Phragmites australis* pose the greatest threats to populations of this sedge. Nine populations of river bulrush are believed to be extant in Virginia.

Velvety sedge, a state rare sedge species, occurs in low forests (Weakley, in prep.), seepage wetlands and seasonally wet conditions. It has been documented in such

disturbed areas as powerline rights-of-way (TNC, 1996). This plant blooms during April and May (Weakley, in prep). Velvety sedge is currently known from eight locations within the coastal plain and eastern piedmont regions of Virginia, of which one is a historic occurrence.

Tidal Freshwater Marsh (Mixed High Marsh Type) (*Impatiens capensis-Peltandra virginica-Polygonum arifolium-Schoenoplectus fluviatilis-Typha angustifolia* Tidal Herbaceous Vegetation) occupies the higher elevation zone of freshwater to slightly oligohaline marshes on the Atlantic Coast from Maine to Virginia. From Delaware to northern Virginia, this is the principal mixed freshwater tidal marsh community and forms extensive patches along many tidal rivers. This community is composed of mixed, dense, and often diverse marsh vegetation with highly variable species composition and patch dominance. The soils are highly variable, varying from silts and silty mucks to peats and sands across the range (NatureServe, 2010). In Virginia, this community occurs most extensively in estuarine reaches of the Potomac River drainage, but has also been documented along the Rappahannock, Pamunkey, Mattaponi, and James Rivers.

Tidal freshwater marshes are naturally dynamic systems that are best developed where there is a major input of freshwater, daily tidal range of at least 0.5 m, and a geomorphology that tends to constrict and magnify tidal influence in the upper reaches of the estuary. These marshes are subject to diurnal flooding by tides and river discharge (NatureServe, 2010). Principal threats include chronic sea-level rise leading to increasing upstream salinity, pollutants, and invasive exotic plants such as marsh dewflower (*Murdannia keissak*) (Fleming *et al.* 2011).

(iii) Parker's Pipewort

Parker's pipewort (*Eriocaulon parkeri*, G3/S2/NL/NL) has been historically documented downstream of these project sites.

- Water Storage Tank #s188, 2429, 2428
- Re-diversion of Force Main Discharge from LS 1575;
- Meade Water Main Replacement

Parker's pipewort is classified as very rare to uncommon in Virginia. This diminutive pipewort species displays a greyish-white button flower and often occurs with other rare mudwort species in the intertidal zone of tidal regions from Maine to North Carolina. Potential threats include activities that alter natural river currents causing sedimentation, which could inhibit germination of seeds or smother seedlings, and/or erosion of the habitat. Other potential threats include activities that result in increased salinity levels, water pollution, and displacement by aggressive species (J. C. Ludwig, 1996). Parker's pipewort has been documented at 29 occurrences in Virginia with 11 of those historical or extirpated. Surveys for this species should be conducted during the flowering/fruitletting period from July to October.

(iv) Wood Turtle

The Wood turtle (*Glyptemys insculpta*, G3/S2/NL/LT), has been documented downstream of the following project site.

- Meade Water Main Replacement

The Wood turtle ranges from southeastern Canada, south to the Great Lake states and New England. In Virginia, it is known from northern counties within the Potomac River drainage (NatureServe, 2009). The Wood turtle inhabits areas with clear streams with adjacent forested floodplains and nearby fields, wet meadows, and farmlands (Buhlmann *et al.*, 2008; Mitchell, 1994). Since this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994). Threats to the wood turtle include habitat fragmentation, urbanization, and automobile or farm machinery mortality (Buhlmann *et al.*, 2008). The Wood turtle is currently classified as threatened by the Virginia Department of Game and Inland Fisheries.

(v) Dogue Creek Wetlands Conservation Site

According to information currently in our files the Dogue Creek Wetlands Conservation Site is adjacent to the following project site.

- ASDC Project: Woodlawn Village Water & Sewer Improvements Phase 1, 2 and 3.

The Dogue Creek Wetlands Conservation Site has been given a biodiversity significance ranking of B5 which represents a site of general significance. The natural heritage resource of concern at this site is the Wood turtle.

(vi) Area T-17 Ravines Conservation Site

According to information currently in DCR files, the following project sites are within the Area T-17 Ravines Conservation Site.

- Force Main Replacements #s 606, 06-64, 687 & 7350

The Area T-17 Conservation Site has been given a biodiversity significance ranking of B3 which represents a site of high significance. The natural heritage resource of concern at this site is the Northern Virginia Well amphipod (*Stygobromus phreaticus*, G2G3/S1/SOC/NL). The Northern Virginia Well amphipod is a distinctive species of subterranean amphipod that has a very limited range (Holsinger, 1991). Amphipods are tiny crustaceans more commonly known as freshwater shrimp, scuds, or sideswimmers. Their common names arise from their resemblance to shrimp and their

habit of swimming or “scudding” along the substrate on their sides in an undulating motion (Pennak, 1978). Amphipods are common in freshwater ecosystems of Virginia; they also occur in brackish and marine waters along the coast. Unable to swim in open water, amphipods are confined to the substrate -the stones, wet leaves and aquatic vegetation of their freshwater habitats- where they feed on detritus (dead animal and plant matter).

The Northern Virginia Well amphipod has been documented at only three sites, including historical collections obtained from wells in Alexandria (1921) and Vienna (1948) in northern Virginia (suburbs of Washington, D.C.). The exact locations of both collection sites are unknown, but they are presumed to have been destroyed by subsequent urbanization (Holsinger, 1991). The only recent collections (1996 and 2003) are from a single ravine seepage habitat on a military base in Fairfax County, Virginia (Chazal and Hobson, 2003).

Threats to the Northern Virginia Well amphipod are pollution of the groundwater, disturbance of the groundwater recharge area (such as urbanization) and disturbance of aquatic habitats. This species is tracked as a species of concern by the United States Fish and Wildlife Service (USFWS). However, this designation does not have any official legal status.

(iii) State-listed Plant and Insect Species

Under a Memorandum of Agreement established between VDACS and DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. DCR finds that the current activity will not affect any documented state-listed threatened or endangered plants or insects.

(iv) State Natural Area Preserves

DCR files do not indicate the presence of any State Natural Area Preserves under the agency’s jurisdiction in the project vicinity.

8(c) Recommendations.

(i) Erosion and Sediment Control, and Stormwater Management

DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control and stormwater management laws and regulations to minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities.

(ii) Northern Virginia Well Amphipod

DCR recommends avoiding contamination and disturbance to the lower sediments and

groundwater of the Potomac Group geology within the Area T-17 Ravines Conservation Site to avoid impacts to the Northern Virginia Well amphipod.

(iii) Spill Prevention and Response Plan

DCR recommends that a spill prevention and response plan be in place prior to commencement of these projects.

(iv) Natural Heritage Resources

Contact DCR-DNH for an update on natural heritage information if a significant amount of time passes before the project is initiated since new and updated information is continually added to the Biotics Data System.

9. Wildlife Resources and Protected Species. According to the EA (page 3-74), construction activities from present and future R&R and FSDC projects could disturb and remove vegetation and distract wildlife temporarily during construction. Most projects would occur in developed areas and would have minimal impacts on wildlife and wildlife habitat. Displaced wildlife would readily return to sites after construction activity is complete. However, many of the proposed cumulative projects would occur on previously disturbed areas and impacts to vegetation and wildlife in these areas would not be significant. Construction activities would result in minimal impacts to vegetation and wildlife because minimal vegetation and wildlife habitat would be removed.

9(a) Agency Jurisdiction. The Department of Game and Inland Fisheries (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). The 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.

9(b) Agency Findings.

(i) Wood Turtle

According to DCR records, the state-listed threatened wood turtle has been documented from Fort Belvoir. In addition, Dogue Creek and its tributary have been designated Threatened and Endangered Species Waters due to the presence of this species. Further information about wood turtles can be found online at: <http://www.dgif.virginia.gov/wildlife/species/display.asp?id=030062>

(ii) Bald Eagle

According to DCR records, bald eagle nests have been documented from Fort Belvoir. In addition, this project site is located adjacent to segments of the Upper Potomac Bald Eagle Concentration Zone. Significant habitat alteration, location of water-dependant facilities within concentration zones, or other recreational and commercial activities may result in adverse impacts upon eagles.

(iii) Anadromous Fish Use Areas

Dogue Creek, Accotink Creek, Pohick Creek, and the Potomac River have been designated Anadromous Fish Use Areas.

9(c) Recommendations.

(i) Wood Turtle

DGIF recommends the following to protect the wood turtle and the habitats it depends on from harm during the proposed work.

- Adhere to a time-of-year restriction from April 1 through September 30 of any year for work that is proposed to occur within naturally vegetated habitats within 900 feet of Dogue Creek or its tributary.
- Adhere to a time-of-year restriction from October 1 through March 31 of any year for any instream work in Dogue Creek or its tributaries.
- Coordinate with DGIF if these recommendations cannot be followed.

In addition, DGIF recommends that prior to the commencement of work all contractors associated with work at this site be made aware of the possibility of encountering wood turtles and become familiar with their appearance, status, and life history. An appropriate information sheet to distribute to contractors and employees is attached. If any wood turtles are encountered and are in jeopardy during the development or construction of this project, immediately remove them from danger and move them safely to suitable habitat in or near the closest perennial stream. Any relocations should be reported to the DGIF Region I Terrestrial Biologist and the attached wood turtle observation form should be completed and faxed to DGIF.

(ii) Bald Eagle

The Army should ensure that this project is consistent with state and federal guidelines for the protection of bald eagles. These guidelines may be found at <http://www.dgif.virginia.gov/environmental-programs/files/virginia-bald-eagle-guidelines-for-landowners.pdf>. The Army should coordinate with DGIF or the U.S. Fish and

Wildlife Service regarding possible impacts upon bald eagles or for a federal bald eagle take permit.

(iii) Anadromous Fish Use Areas

DGIF recommends that construction:

- Adhere to a time-of-year restriction from February 15 through June 30 of any year for any instream work in Anadromous Fish Use Areas and/or their tributaries.
- Conduct any in-stream activities during low or no-flow conditions.
- Use non-erodible cofferdams or turbidity curtains to isolate the construction area.
- Block no more than 50% of the streamflow at any given time.
- Stockpile excavated material in a manner that prevents reentry into the stream.
- Restore original streambed and streambank contours.
- Revegetate barren areas with native vegetation.
- Implement strict erosion and sediment control measures

(iv) General Protection of Wildlife Resources

DGIF recommends the following measures to minimize overall impacts to wildlife and natural resources from the development.

- Avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable.
- Maintain undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams, where practicable.
- Conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15.
- Implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration.

DGIF is available to work with the Army to develop project-specific measures as necessary to minimize project impacts upon wildlife resources. DGIF understands that adherence to these general recommendations may be infeasible in some situations.

10. Forest Resources. According to the EA (page 4-1), it is expected that a relatively small area of forest land would be disturbed, compared to approximately 5,550 forested acres of Fort Belvoir as a whole. BMPs such as seeding cleared areas with wildlife seed mixes and minimizing the clearing width of right-of-way corridors, would be employed where appropriate to reduce or minimize impacts.

10(a) Agency Jurisdiction. The mission of the Virginia 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.

10(b) Agency Comments. DOF's role in evaluating proposed projects brought before state regulatory bodies is to identify the forest resources that may be impacted; provide assessments; and provide recommendations and comments pertaining to conservation, management and mitigation needs aimed at conserving Virginia's forest resources. Assessing the impact to land use, in particular forested land, is a principal responsibility of DOF with regard to its role as a participating agency in DEQ's environmental impact review process. Conserving forest cover and improving forest productivity is critical in maintaining functioning forest ecosystems and providing the forest land cover that sustains the Commonwealth's robust forest industry. Forests not only provide forest products, recreational opportunities, habitat for wildlife, and aesthetic values, they are also critically important in improving water and air quality. Land conversion activities that impact the forest landscape impact these values.

10(c) Agency Findings. DOF has provided detailed findings for the utility upgrade project based on the forestry impact analysis guidelines contained in the *DEQ EIR Checklist 5a* (Part I) and National Capital Planning Commission (NCPC) policies contained in the *Comprehensive Plan for the National Capital: Federal Elements* (NCPC 2004) (Part II). The Part I and Part II findings are not repeated here, but are included in DOF's detailed comments attached to this response.

10(d) Recommendations.

(i) Construction Activities

Compacted soil restricts root penetration and nutrient cycling. Compaction also restricts water movement into soil, resulting in less water available for plant growth and increased runoff, erosion, and nutrient loss. This can result not only in diminished forest health but also reduced ability of the forest to fulfill its water quality improvement functions. DOF recommends activities to minimize construction impacts including:

- Restoring contours to pre-construction conditions and controlling erosion until re-vegetation stabilizes the disturbed areas.
- Restoring vegetation to native species and protecting the natural functions of the pre-construction ecosystem where forest clearing was done as part of the construction process and is not part of the necessary right-of-way (ROW).
- Reducing soil compaction by using appropriate machinery and avoid construction activity during periods of wet weather when compaction can easily occur.
- Following Forestry BMPs for water quality as outlined by the Virginia Department

of Forestry's *Voluntary BMP Guidelines* publication if harvesting operations are planned.

- Stockpiling soil away from trees that are to remain standing. Piling soil at a tree stem can kill the root system of the tree. Soil stockpiles should be covered, as well, to prevent soil erosion and fugitive dust.
- Retaining existing groupings and/or clusters of trees and natural vegetation on the sites where clearing occurs and where feasible, to provide esthetic and environmental benefits, as well as reducing future open space maintenance costs.

(ii) Invasive Species Management

While the width of the area of the removed forest within the ROWs may not be great, there may be significant consequences for the species that depend on the existing non-fragmented habitat. Fragmentation makes interior forest species more vulnerable to predators, parasites, and competition from edge species. Invasive plants can grow prolifically in the cleared-edge habitats of ROWs and can spread into the forest interior, limiting the growth of native species. Careful vegetation management in the ROWs can mitigate some of these effects. DOF recommends:

- Considering how invasive species react to increased soil disturbance and sunlight levels when developing vegetation management strategies.
- Taking steps to guard against construction vehicles inadvertently bringing into forest interiors invasive and/or non-native plant species from other locations during construction and follow-on maintenance activities. Weed seed and fungal spores can be transported in the mud or dirt on vehicles. Prior to moving equipment onto and off of an activity area, scrape or brush soil and debris from exterior surfaces, to the extent practical, to minimize the movement of invasive plants, pests and diseases to non-infested areas. Another option is to wash vehicles before they enter a weed-free area or when they leave an infested area. The emphasis of the cleaning should be in the wheels, wheel wells, bumpers, and undercarriage of the vehicle where most mud and dirt collects.
- Using native seed or non-invasive cover plants for revegetation if seeding or planting is necessary to minimize the threat of highly damaging invasive species from spreading.

(iii) Forest Fragmentation Planning

A ROW can fragment a larger forest block into smaller tracts that diminish their ability to provide the same habitat found in large blocks of contiguous forest. As a result, the continued fragmentation of a forest can cause a permanent reduction in the acres of suitable habitat and consequently a reduction in numbers for some species. Increasing forest edge as a result of the ROW construction will be accompanied by an increase in the establishment of invasive species. DOF recommends adopting management practices that mitigate these potential impacts including:

- Avoiding routes that fragment major forest blocks.
- Keeping ROW clearing to the minimum width necessary to prevent interference from trees and other vegetation.
- Including control of invasive species that become established in the ROW as part of the ROW vegetation maintenance plan.
- Establishing native herbaceous species and shrubs or some low-growing trees that are considered desirable ground cover and valuable wildlife habitat along the ROWs in the project's vegetation management and revegetation plan.
- Maintaining a scrub habitat, dominated by low growing, bushy vegetation and young trees is preferable to mowing in forest habitats. It can provide quality habitat for wildlife species that are dependent on early successional habitat (birds, reptiles, and amphibians).

(iv) Agency Coordination

DOF has identified the policies in the *Comprehensive Plan for the National Capital: Federal Elements* (NCPC 2004) that pertain to DOF areas of interest. DOF requests that Fort Belvoir and/or NCPC evaluations of land use impacts against those policies be shared with DOF before a decision is made on final action.

For additional information, contact DOF, Greg Evans at (434) 220-9020 and/or Buck Kline at (434) 220-9035.

11. Water Supply. According to the EA (page 3-66), currently all of the water storage tanks are approaching or have reached the end of their useful life and their continued use would decrease the overall reliability of Fort Belvoir's water distribution system. In order to meet current fire flow demands and future potable water demands to meet mission requirements, Fort Belvoir would require a water system with a storage capacity of 3 million gallons (up from 2.3 million gallons). In addition, sections of water lines cross above intermittent and perennial streams where erosion of the streambanks has affected the integrity of the lines.

11(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 and surface water intakes).

11(b) Agency Findings. VDH-ODW finds that the project is neither located within the watershed of surface water intakes nor groundwater wells. Several groundwater wells are located within a mile radius of the base. However, these wells are located across Pohick Bay and would not be impacted by this project.

The VDH-ODW Culpeper Field Office (CFO) does not have any specific information on several proposed phases of this project to include the following:

- **Aerial Stream Crossing.** While VDH-ODW is aware that this is an issue, CFO does not have record of a project that specifically addresses this issue and is unaware of the status of any efforts to correct aerial crossings.
- **Meade Road Water Main Replacement.** CFO is not aware of this project and has not received plans for review.
- **Woodlawn Village Water and Sewer System Improvements.** CFO is not aware of this project and has not received plans for review.

11(c) Recommendation. As the infrastructure improvements at Fort Belvoir continue to implemented, VDH-ODW recommends that a phased plan of development for the waterworks be developed and provided to CFO, so that ODW can anticipate the needs and work to be conducted at Fort Belvoir.

11(d) Requirement. These projects require a Construction Permit under the Virginia *Waterworks Regulations*. Either American Water or the Army must contact the CFO District Engineer to provide a status of project scope and details regarding these phases of construction.

Contact VDH-ODW, Barry Matthews at (804) 864-7241, for additional information regarding these comments.

12. Sewage Systems.

12(a) Discharging Sewer System Regulations. DEQ has approval authority for most discharging sewage collection systems and treatment works, except for single family home (less than 1,000 gallon per day) systems. This authority is contained in the *Sewage Collection and Treatment (SCAT) Regulations (9 VAC 25-790 et seq.)*. Additional information is available on the DEQ website at <http://www.deq.virginia.gov/Programs/Water/WastewaterAssistanceTraining/WastewaterEngineering.aspx>. Construction of sanitary wastewater collection systems must comply with the state's sewerage regulations.

12(b) Requirement. The Army must coordinate this project with DEQ-NRO to ensure compliance with the Sewage Collection and Treatment (SCAT) Regulations.

13. Historic and Archeological Resources. According to the EA (page 4-6), the loss of water storage tank 188 would result in adverse impacts to the historic viewshed of the Fort Belvoir Historic District and to the district itself. However, impacts would not be significant as adverse impacts would be minimized and compensated through mitigation measures as agreed upon in a Memorandum of Agreement between the Army and the Virginia Department of Historic Resources. Impacts to National Register of Historic Places-listed sites and unevaluated sites from the replacement of force main would be avoided by horizontal drilling underneath the site, rerouting the pipes, relining the existing pipe in situ, or by other means. Measures to avoid or mitigate any impact would be developed through Section 106 National Historic Preservation Act

consultation with the Virginia Department of Historic Resources to protect archaeological resources

13(a) Agency Jurisdiction. DHR conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated State's Historic Preservation Office, ensures that federal actions comply with Section 106 of the National Historic Preservation Act of 1962 (NHPA), as amended, and its implementing regulation at 36 CFR 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.

13(b) Agency Findings. DHR has been in consultation with the Army and its consultant regarding this project. The Army must continue to 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.

14. Local Review.

14(a) Agency Jurisdiction. In accordance with CFR 930, Subpart A, §930.6(b) of the *Federal Consistency Regulations*, DEQ, on behalf of the state, is responsible for securing necessary review and comment from other state agencies, the public, regional government agencies, and local government agencies, in determining the Commonwealth's concurrence or objection to a federal consistency certification.

14(b) Agency Findings. The Fairfax County Department of Planning and Zoning (DPZ), and the Fairfax County Department of Public Works and Environmental Services (DPWES) finds that the majority of the proposed projects will be occurring in previously disturbed land, or will have minor or temporary impacts. Each of these proposed projects represents an individual set of potential impacts and need for mitigation. However, while there are some temporary and permanent impacts, such as crossing intermittent and perennial streams, the appropriate mitigation techniques are proposed to be used.

14(c) Agency Recommendations. As with any project, county staff encourages that care be taken when working in sensitive environmental areas to minimize the unavoidable impacts of this proposed construction. In addition, DPWES recommends that the Army reuse the fully treated reclaimed water from the Fairfax County Norman M. Cole, Jr. Pollution Control Plant located in the vicinity of Fort Belvoir for uses such as cooling water, irrigation and/or others as allowed by the Virginia Water Reclamation and Reuse Regulations. The rationale for this is as follows:

- Although more than 90% of the nitrogen and phosphorus is removed from the wastewater during the treatment process, the reclaimed water contains some amount of these nutrients. By reusing the reclaimed water for cooling and irrigation, the remaining amount of nutrients in the reclaimed water will not be discharged into the Pohick Creek, which ultimately conveys the water to the Chesapeake Bay. This will result in improving the water quality in the Chesapeake, which is deteriorated. The Environmental Protection Agency (EPA), DEQ, and local jurisdictions have been working closely to improve the water quality in the Chesapeake.
- Reusing the reclaimed water for golf course and landscaping irrigation may reduce the need for fertilization due to the nutrients in the reclaimed water.
- Reusing the reclaimed water will preserve drinking water supplies by lowering the demand.
- Reusing the reclaimed water will result in reduced drinking water use at Fort Belvoir and lower water bills.

Questions regarding the county's comments may be directed to Fairfax County, Maya Dhavale at (703) 324-1355.

15. Regional Review.

15(a) Agency Jurisdiction. In accordance with CFR 930, Subpart A, §930.6(b) of the *Federal Consistency Regulations*, DEQ, on behalf of the state, is responsible for securing necessary review and comment from other state agencies, the public, regional government agencies, and local government agencies, in determining the Commonwealth's concurrence or objection to a federal consistency certification.

15(b) Agency Findings. Staff of the Northern Virginia Regional Commission (NVRC) notes the EA states that, "*it is clear that permanent impacts to RPAs and wetlands could lead to increased degradation of the perennial waters that these features are buffering from negative impacts.*" The anticipation of both short- and long-term impacts to wetlands, RPAs and floodplains requires further investigation and mitigation planning. Furthermore, the removal of forested habitat and both temporary and permanent displacement of wildlife, which could include some species of concern (small whorled pegenia, wood turtle, peregrine falcon, northern Virginia well amphipod, and bald eagle), requires further input from state agencies such as DCR and DGIF.

15(c) Recommendation. Based on the EA, NVRC recommends that the Army proceed with developing an Environmental Impact Statement (EIS), as opposed to a Finding of No Significant Impact (FONSI). The EA describes many potential environmental impacts which should be further reviewed by state, regional, and local agencies. An EIS would ensure that appropriate mitigation measures are fully explored and implemented. NVRC recommends that the Army prepare an EIS to comply with NEPA standards and practices.

For additional information regarding these comments, contact NVRC, Aimee Vosper at (703) 642-0700.

16. Pollution Prevention. DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) 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.

16(a) Recommendations. We have several pollution prevention recommendations that may be helpful in the construction of this project and in the operation of the utilities:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the Army is committed to minimizing its environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and it recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program.
- 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 (such as an EMS) 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 construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.
- Integrate pollution prevention techniques into utility maintenance and operation, to include the following: inventory control (record-keeping and centralized storage for hazardous materials), product substitution (use of non-toxic cleaners), and source reduction (fixing leaks, energy-efficient HVAC and equipment). Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventative maintenance.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. For more information, contact DEQ's Office of Pollution Prevention, Sharon Baxter at (804) 698-4344.

17. Water Conservation. The following recommendations will result in reduced water use associated with the operation of the utility.

- Grounds should be landscaped with hardy native plant species to conserve water as well as lessen the need to use fertilizers and pesticides.

- Convert turf to low water-use landscaping such as drought resistant grass, plants, shrubs and trees.
- Low-flow toilets should be installed with the rehabilitation.
- Consider installing low flow restrictors and aerators to faucets.
- Improve irrigation practices by:
 - upgrading sprinkler clock; water at night, if possible, to reduce evapotranspiration (lawns need only 1 inch of water per week, and do not need to be watered daily; overwatering causes 85% of turf problems);
 - installing a rain shutoff device; and
 - collecting rainwater with a rain bucket or cistern system with drip lines.
- Install new high-efficiency washers and dishwashers to reduce water usage by 30-50% per use over older models.
- Check for and repair leaks (toilets and faucets) during regular routine maintenance activities.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972 (§ 1456(c)), as amended, and the federal consistency regulations implementing the CZMA (15 CFR Part 930, Subpart C, § 930.30 *et seq.*) federal actions that can have reasonably foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent, to the maximum extent practicable, with the Virginia Coastal Zone Management Program. The VCP is comprised of a network of programs administered by several agencies. In order to be consistent with the VCP, the federal agency must obtain all the applicable permits and approvals listed under the enforceable policies of the VCP prior to commencing the project.

Federal Consistency Public Participation

In accordance with 15 CFR § 930.2, public notice of the proposed action was published on DEQ's web site from June 11, 2013 to July 9, 2013. No public comments were received in response to the notice.

Federal Consistency Concurrence

A Federal Consistency Determination (FCD) was submitted with the EA (Appendix C) that includes an analysis of the enforceable policies of the VCP. Based on our review of the FCD and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that the proposal is consistent with the VCP provided all applicable permits and approvals are obtained as previously described. We encourage the Army to consider the advisory policies of the VCP as well (see Attachment 2).

In addition, other state approvals which may apply to this project are not included in this concurrence. Therefore, the Army must ensure that this project is constructed and

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

REGULATORY AND COORDINATION NEEDS

1. Surface Waters and Wetlands. Surface water and wetland impacts associated with this proposal may require a Virginia Water Protection Permit issued by the DEQ Northern Regional Office pursuant to Virginia Code §62.1-44.15:5. A Joint Permit Application may be obtained from and submitted to the Virginia Marine Resources Commission which serves as a clearinghouse for the joint permitting process involving the VMRC, DEQ, Corps, and local wetlands boards. For additional information and coordination, contact DEQ-NRO, Trisha Beasley at (703) 583-3940.

2. Subaqueous Lands. In accordance with §28.2-1203 of the Code of Virginia, a permit may be required from VMRC for impacts to state-owned subaqueous lands. A Joint Permit Application may be obtained from and submitted to the VMRC which serves as a clearinghouse for the joint permitting process involving the VMRC, DEQ, Corps, and local wetlands boards. For additional information and coordination, contact VMRC, Jordan Creed at (757) 247-2256.

3. Erosion and Sediment Control and Stormwater Management.

3(a) Erosion and Sediment Control and Stormwater Management. This project must comply with Virginia's *Erosion and Sediment Control Law* (Virginia Code 10.1-567) and *Regulations* (4 VAC 50-30-30 *et seq.*) and *Stormwater Management Law* (Virginia Code 10.1-603.5) and *Regulations* (4 VAC 3-20-210 *et seq.*) as administered by DEQ. Activities that disturb 2,500 square feet or more in areas analogous to Chesapeake Bay Preservation Areas would be regulated by *VESCL&R* and *VSWML&R*. Erosion and sediment control, and stormwater management requirements should be coordinated with the DEQ Warrenton Office at (540) 347-6420.

3(b) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities. For projects involving land-disturbing activities of equal to or greater than 2,500 square feet in areas analogous to Chesapeake Bay Preservation Areas, the applicant is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (4 VAC-50 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ, Holly Sepety at (804) 698-4039.

4. Chesapeake Bay Preservation Areas. This project must be consistent to the maximum extent practicable with the coastal lands management enforceable policy of the VCP as administered by DEQ through the *Chesapeake Bay Preservation Act* (Virginia Code §§ 62.1-44.15:67 through 62.1-44.15:78) and *Chesapeake Bay Preservation Area Designation and Management Regulations* (Virginia Code 9 VAC 10-20-10 *et seq.*). Activities in areas analogous to CBPAs are subject to the general

performance criteria of 4 VAC 50-90-130 for activities in RMAs, 4 VAC 50-90-140 for activities in RPAs, and 4 VAC 50-90-150 2 pertaining to the exemption for the construction, installation and maintenance of water and sewer utilities and facilities. To ensure compliance with the *Regulations* the Army must to coordinate with DEQ, Daniel Moore at (804) 786-1518.

5. Air Quality Regulations. This project is subject to air regulations administered by the Department of Environmental Quality. The following sections of the Code of Virginia and Virginia Administrative Code are applicable:

- 9 VAC 5-50-60 *et seq.* governing fugitive dust emissions; and
- 9 VAC 5-130 *et seq.*, for open burning.

The installation of fuel burning equipment (e.g. boilers and generators), may require a permit (9 VAC 5-50-10 *et seq.* and 9 VAC 5-80-10 *et seq.*) prior to construction.

For more information and coordination contact DEQ-NRO, James LaFratta at (703) 583-3928. Also, contact local Fairfax County officials for information on any local requirements pertaining to open burning.

6. 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. 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 20-80); and
- *Virginia Regulations for the Transportation of Hazardous Materials* (9VAC 20-110).

Some of the applicable federal laws and regulations are:

- *Resource Conservation and Recovery Act (RCRA)* (42 U.S.C. Section 6901 *et seq.*);
- Title 40 of the Code of Federal Regulations; and
- U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 CFR Part 107).

For additional information concerning location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered, contact DEQ-NRO, Richard Doucette at (703) 583-3813.

6(a) Comprehensive Environmental Response Compensation and Liability Act. Contact the Environmental Compliance Branch Chief, Directorate of Public Works,

Environmental and Natural Resource Division at Fort Belvoir, Kelly Lease at (703) 806-0020 for information concerning CERCLA obligations at Fort Belvoir. The Environmental Compliance Branch Chief or designee should be advised prior to initiating any land, sediment, or groundwater disturbing activities at or near Military Munitions Restoration Program range areas and Main Post and North Area Solid Waste Management Units.

6(b) Asbestos Containing Material. It is the responsibility of the owner or operator to thoroughly inspect the parts of the facility where the upgrades will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*). Contact the DEQ-DLPR (previously the Waste Management Program) for additional information, (804) 698-4021, and the Department of Labor and Industry, Ronald L. Graham at (804) 371-0444.

6(c) Lead-Based Paint. If applicable, this project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, David Dick at (804) 367-8588.

6(d) Petroleum Releases. DEQ's petroleum contamination (PC) case files may identify petroleum releases that should be evaluated by the project engineer or manager to establish the exact location of the release, the nature and extent of the petroleum release, and the potential to impact the proposed project. The facility representative should contact the Tank Program at DEQ-NRO at (703) 527-5020 for further information and the administrative records of the PC cases which are determined to be in close proximity to the proposed project.

7. Natural Heritage Resources. An inventory for the Northern Virginia well amphipod may be coordinated by contacting DCR-DNH, Rene Hypes at (804) 371-2708. With the survey results DCR-DNH can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

8. Wildlife Resources and Protected Species. The Army should coordinate this project with DGIF, J.D. Kleopfer, Wildlife Diversity Biologist at (804) 829-6580 regarding the protection of the wood turtle should the species be encountered at the project site. Any relocations should be reported to DGIF and a wood turtle observation form should be completed and faxed to (804) 829-6788.

Coordinate with the USFWS with respect to potential project impacts to the bald eagle. Contact the USFWS Virginia Field Office at (804) 693-6694. For additional information on wildlife, visit www.dgif.virginia.gov.

To ensure protection of all other wildlife species, contact DGIF, Amy Ewing at (804) 367-2211 or amy.ewing@dgif.virginia.gov.

9. Forest Resources. Army and/or NCPC evaluations of land use impacts on forest resources based on the policies identified in the *Comprehensive Plan for the National Capital: Federal Elements* (NCPC 2004) may be coordinated with DOF, Greg Evans at (434) 220-9020 and/or Buck Kline at (434) 220-9035.

10. Waterworks Regulations. Contact VDH-CFO, Robert Edelman, District Engineer at (540) 829-7340, to obtain a Construction Permit in accordance with the Virginia *Waterworks Regulations* and to discuss the project scope and details regarding the various phases of construction.

11. Sewage Regulations. Contact DEQ-NRO, Bryant Thomas at (703) 583-3843 or Bryant.Thomas@deq.virginia.gov to ensure compliance with the Sewage Collection and Treatment (SCAT) Regulations, as applicable.

12. Historic Resources. The Army must coordinate with DHR regarding potential project impacts to historic resources to ensure compliance with Section 106 of the NHPA. For additional information and coordination, contact DHR, Roger Kirchen at (804) 482-6091.

13. Local and Regional Coordination.

(i) Fairfax County

The reuse of the fully treated reclaimed water from the Fairfax County Norman M. Cole, Jr. Pollution Control Plant for cooling water, irrigation and/or others as allowed by the Virginia Water Reclamation and Reuse Regulations may be coordinated with the Fairfax County DPWES at (703) 324-5030.

(ii) Northern Virginia Regional Commission

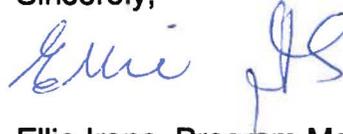
To further discuss the possible need for the development of an EIS for the proposal as recommended by NVRC, contact NVRC, Aimee Vosper at (703) 642-0700.

Thank you for the opportunity to review the Environmental Assessment and Federal Consistency Determination for the Water/Wastewater Utility Upgrade at Fort Belvoir in Fairfax County. Detailed comments of reviewing agencies are attached for your review.

Water/Wastewater Utility Upgrade
Fort Belvoir

Please contact me at (804) 698-4325 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,



Ellie Irons, Program Manager
Environmental Impact Review

Enclosures

Ec: Daniel Burstein, DEQ-NRO
Steve Coe, DEQ-DLPR
Kotur Narasimhan, DEQ-Air
Larry Gavan, DEQ-Water
Holly Sepety, DEQ-Water
Daniel Moore, DEQ-Water
Tony Watkinson, VMRC
Amy Ewing, DGIF
Robbie Rhur, DCR
Keith Tignor, VDACS
Greg Evans, DOF
Buck Kline, DOF
Barry Matthews, VDH
Roger Kirchen, DHR
David Spears, DMME
Fred Selden, Fairfax County
G. Mark Gibb, Northern Virginia Regional Commission



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

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

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.

Fisher, John (DEQ)

From: Burstein, Daniel (DEQ)
Sent: Monday, July 01, 2013 2:31 PM
To: Fisher, John (DEQ)
Subject: Re: DOD/Dept. of Army, Water/Wastewater Utility Upgrade, Fort Belvoir, Fairfax County, 13-112F - Review

NRO comments regarding the Consistency Determination for DOD/Dept. of Army, Water/Wastewater Utility Upgrade, Fort Belvoir, located in Fairfax County are as follows:

Land Protection Division - The project manager is reminded that if any solid or hazardous waste is generated/encountered during construction, the facility would follow applicable federal, state, and county regulations for their disposal.

Air Compliance/Permitting - The project manager is reminded that during the construction phases that occur with this project; the project is subject to the Fugitive Dust/Fugitive Emissions Rule 9 VAC 5-50-60 through 9 VAC 5-50-120. In addition, should the project install fuel burning equipment (Boilers, Generators, Compressors, etc...), or any other air pollution emitting equipment, the project may be subject to 9 VAC 5-80, Article 6, Permits for New and Modified sources and as such the project manager should contact the Air Permit Manager DEQ-NRO prior to installation or construction, and operation, of fuel burning or other air pollution emitting equipment for a permitting determination. Lastly, should any open burning or use of special incineration devices be employed in the disposal of land clearing debris during demolition and construction, the operation would be subject to the Open Burning Regulation 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100.

Virginia Water Protection Permit (VWPP) Program - The project proposes utility line work on the Fort Belvoir Army base in Fairfax County, Virginia. Based on the information provided, impacts to surface waters will be avoided and minimized to the maximum extent practicable. Should impacts to surface waters be necessary, the project appears to qualify for a U.S. Army Corps of Engineers (USACE) Regional Permit (RP) or Nationwide Permit (NWP). Provided that the entire project is authorized by the USACE under a RP and/or NWP and meets any required §401 Certification Conditions, a VWP general or individual permit will not be required for this project.

Water Permitting/VPDES Program: The project manager is reminded to follow the installation's MS4 Permit and the Virginia Erosion and Sediment Control Law and regulations.

Daniel Burstein
Regional Enforcement Specialist, Sr.
Virginia Department of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3904
Fax: (703) 583-3821

Please note that my email has changed, my email is now daniel.burstein@deq.virginia.gov.

Please consider the environment before printing this message.



RECEIVED

JUN 11 2013

DEQ-Office of Environmental
Impact Review

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 11, 2013

Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, 6th Floor
Richmond, Virginia 23219

Re: Water/Wastewater Utility Upgrade
Project # 13-112F
Fort Belvoir, Virginia

Dear Mr. Fisher:

We have reviewed the above-referenced consistency determination documentation for the United States Army's proposed upgrade to Fort Belvoir's water and wastewater infrastructure, to include replacing water storage tanks, force mains, and gravity sewer mains; reinstalling aerial stream crossings with stream bank repair, and other projects identified in Fort Belvoir's 2012 Annual System Deficiency Corrections, Upgrades and Renewal and Replacement Plan. As stream crossings and wetland impacts will be involved with the project, a Joint Permit Application will be required. All jurisdictional impacts will be reviewed during the JPA review process.

Please be advised that the Commission, under Section 28.2-1200 et. seq. of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along natural rivers and streams above the fall line or mean low water below the fall line, a permit may be required from our agency.

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,

A handwritten signature in black ink that reads "J Creed".

Jordan Creed
Environmental Engineer

Fisher, John (DEQ)

From: Gavan, Larry (DEQ)
Sent: Tuesday, July 02, 2013 5:11 PM
To: Fisher, John (DEQ)
Subject: 13-112F Ft. Belvoir Upgrade

Please see the comments below.

Thx

L

FEDERAL E & S and SWM BOILER PLATE

(a) Agency Jurisdiction. The Department of Environmental Quality (DEQ) administers 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 and Stormwater Management Plans. The Applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VESCL&R*. Accordingly, the Applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. The Applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL 62.1-44.15 et seq.]



RECEIVED

JUL 01 2013

DEQ-Office of Environmental
Impact Review

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: John Fisher, DEQ Environmental Impact Review Coordinator

FROM: Daniel Moore, DEQ Principal Environmental Planner

DATE: July 1, 2013

SUBJECT: DEQ- 13-112F- DOD/Department of the Army: Fort Belvoir Water Storage Tank Replacement and Sewer Upgrade Project, Fairfax County, Virginia

We have reviewed the Consistency Determination (CD) for the proposed water storage tank replacement and sewer upgrade project at Fort Belvoir in Fairfax County and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations):

In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria, include those areas of the County not included in the RPAs.

Pursuant to the *Coastal Zone Management Act of 1972*, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with Virginia's Coastal Zone Management Program (CZM Program) (see 307 (c) (1) of the Coastal Zone Management Act and 15 CFR Part 930, sub-part C of the *Federal Consistency Regulations*).

While Chesapeake Bay Preservation Areas (CBPA) are not locally designated on federal lands, this does not relieve federal agencies of their responsibility to be consistent with the provisions of the Regulations, 4 VAC 50-90-10 et. seq., as one of the enforceable programs of the CZM Program. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated CBPAs. Projects that include land disturbing activity must adhere to the general

performance criteria, especially with respect to minimizing land disturbance (including access and staging areas), retaining indigenous vegetation and minimizing impervious cover. For land disturbances over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992. Additionally, stormwater management criteria consistent with water quality provision protections of the *Virginia Stormwater Management Regulations* shall be satisfied.

Per 4 VAC 50-90-150 2 of the Regulations, the construction, installation and maintenance of water and sewer utilities and facilities on lands analogous to locally-designated CBPAs shall be exempt from the Regulations provided that:

1. to the degree possible, the location of such utilities and facilities should be outside Resource Protection Areas;
2. no more land shall be disturbed than is necessary to provide for the proposed utility installation; and
3. all such construction, installation and maintenance of such utilities and facilities shall be in compliance with all applicable state and federal permits and designed and conducted in a manner that protects water quality.

Provided adherence to the above requirements, the proposed activity would be consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations* and the *Chesapeake Bay Preservation Act*.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John E. Fisher

DEQ - OEIA PROJECT NUMBER: 13 - 112F

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

RECEIVED

CONSISTENCY DETERMINATION

JUL 19 2013

DEQ-Office of Environmental
Impact Review

PROJECT TITLE: WATER /WASTEWATER UTILITY UPGRADE, FORT BELVOIR

PROJECT SPONSOR: DOD / DEPARTMENT OF THE ARMY

PROJECT LOCATION: OZONE NONATTAINMENT 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). For any permit concerns, our Northern Virginia Regional Office may be consulted.



(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: July 19, 2013



RECEIVED

JUL 02 2013

DEQ-Office of Environmental
Impact Review

MEMORANDUM

TO: John Fisher, Environmental Program Planner

FROM: Steve Coe, Division of Land Protection & Revitalization Review Coordinator

DATE: July 2, 2013

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Statement: Project #13-112F Water/Wastewater Utility Upgrade, Fort Belvoir

The Division of Land Protection & Revitalization (DLPR) has completed its review of the Environmental Review Request for Project #13-112F Water/Wastewater Utility Upgrade, Fort Belvoir. The Department has these comments concerning potential waste issues associated with this project review request.

Solid and hazardous waste issues were addressed in the submittal, and the submittal indicated a search of solid and hazardous waste databases. The DEQ DLPR staff has reviewed the submittal, conducted a cursory database search for zip code 22060 (Fort Belvoir), and has the following comments concerning possible waste issues associated with the project:

RCRA sites: one

ID# VAR000512715 - Fort Belvoir Residential Communities LLC, Tracy Loop, Bldg 766, Fort Belvoir, VA 22060. Contact: Mark J. Leo at 703-787-2050.

CERLCLA sites: one

ID# VA5210020082 - Fort Belvoir, Belvoir Research & Development Center, Fort Belvoir, VA 22060. NPL Status: Not on the NPL.

Solid Waste sites: none

VRP sites: none

FUDS: two

- 1) Fort Belvoir. FUDS# C03VA0518. Fed ID# VA9799F1717.
- 2) Fort Belvoir Engineer Training. FUDS# C03VA0099. Fed ID# VA9799F1579.

Petroleum Release sites: 32 identified in cursory search. The following buildings on the base were identified as having possible petroleum releases/contamination incidents: (Note: Building # and date of event) - all incidents reported are CLOSED)

#00099 (4/2/2007), #00181 (4/2/2007), #00182 (4/2/2007), #00184 (4/2/2007), #00193 (4/2/2007), #00200 (6/5/2007), #00201 (3/6/2007), #00201-00203-00213-00211-00212 (4/2/2007), #00204-00205-00206-00207-00208-00209 (4/2/2007), #00210 (5/11/2007), #01803 (4/5/2007), 28 tanks in various buildings (6/20/2007), #00219 (4/2/2007), #00226 (4/2/2007), #00231 (4/5/2007), #00753 (6/20/2007), #00952 (6/20/2007), #01200 (6/20/2007), #01201 (6/20/2007), #01403 (5/15/2007), #01421 (5/15/2007), #01422 (4/5/2007), #01726 (4/2/2007), #01736 (4/2/2007), #01741 (4/5/2007), #01802 (4/30/2007), #02170 (6/20/2007), #02417 (4/2/2007), #02421 (4/2/2007), #02427 (4/2/2007), #02444 (4/2/2007), #02444 (5/31/2007), #02454 (3/27/2007)

Please note that the DEQ's petroleum contamination (PC) case files may identify petroleum releases that 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 Northern Virginia Regional Office at 703-527-5020 (Tank Program) for further information and the administrative records of the PC cases which are determined to be in close proximity to the proposed project.

DEQ's Federal Facilities Restoration Program Comments:

The DEQ's Federal Facilities Restoration Program recommends contacting Ms. Kelly Lease, Environmental Compliance Branch Chief, Directorate of Public Works, Environmental & Natural Resource Division, Fort Belvoir, Virginia at (703) 806-0020 for information concerning Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) obligations at Fort Belvoir's Main Post. Ms. Lease, or her designee, should be advised prior to initiating any land, sediment, or groundwater disturbing activities at or near MMRP range areas and Main Post Solid Waste Management Units (SWMUs).

Please contact Wade Smith at (804) 698-4125 or wade.smith@deq.virginia.gov with any additional questions.

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. For questions contact DEQ's Northern Virginia Regional Office, Kathryn Perszyk, at 703-583-3856.

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 at (804) 698-4029.

Environmental Impact Review – General Guidance for database searches

When the environmental impact report is written or compiled for specific sites, it should include an environmental investigation on and near the properties selected in order to identify any solid or hazardous waste sites or issues related to the (project area). The report author should analyze the data in the web-based Waste Division databases to determine if the project would affect or be affected by any sites identified in the databases. The databases include the Permitted Solid Waste Management Facilities, Virginia Environmental Geographic Information Systems (Solid Waste, Voluntary Remediation Program, and Petroleum Release sites), CERCLA Facilities, and Hazardous Waste Facilities databases.

The Permitted Solid Waste Management Facilities Database

A list of active solid waste facilities in Virginia.

CERCLA Facilities Database

A list of active and archived CERCLA (EPA Superfund Program) sites.

Hazardous Waste Facilities Database

A list of hazardous waste generators, hazardous waste transporters, and hazardous waste storage and disposal facilities. Data for the CERCLA Facilities and Hazardous Waste Facilities databases are periodically downloaded by the Waste Division from U.S. EPA's website.

Virginia Environmental Geographic Information Systems (VEGIS)

The "What's in My Backyard" application displays cross-media geographical features in proximity to a selected site/address for different facility search parameters.

Accessing the DEQ Databases:

The report author should access this information on the DEQ website at

<http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/ReportsPublications/OriginalReports.aspx>.

Scroll down to the databases which are listed under **Real Estate Search Information** heading.

Initially, the **solid waste information** can be accessed by clicking on the Permitted Solid Waste Management Facilities link and opening the file. You can search by city/county or region (zip code) for active permitted waste facilities. (Note: A targeted solid waste facility search can be accomplished through the **VEGIS** link - see information below re: VRP search).

The **Superfund information** will be listed by clicking on the Search EPA's CERCLIS database tab and clicking on the **Search Superfund Site Information** button (blue box). On this form, enter either 1) the zip code for the project site, or, 2) the name of the city or county and select Virginia in the State drop down box. Click "Search" at the bottom of the form. A facilities list will be appear.

The **hazardous waste** information can be accessed by clicking on the Hazardous Waste Facilities link. Go to the Geography Search section and fill in the 1) zip code of the project, or 2) the name of the city or county and VA in the state block, and click on "Search". The hazardous waste facilities in the locality will be listed.

The **Voluntary Remediation Program (VRP), Solid Waste Facilities, and Petroleum Release Sites** GPS databases can be accessed from the www.deq.virginia.gov website by clicking on **VEGIS** link under the **Resources & Tools** category. Then click on the "What's in my backyard" in the **Mapping Applications** block to the left. On the web map page, click on the "Pick a Quick Search Here" drop down arrow, and select "Address Search". In the adjacent block enter the zip code or address for the project site. Click on "Search". On the map you will see a green "balloon" indicating the site.

On the map area click on the "Tools" drop down arrow, and the select "Identify". A normal search looks like this: In the "Radius" block, type in [.5], and in the adjacent block select [miles] from the drop down options. Click on the "Layer" drop down arrow, select "VRP Sites", and then click on the green balloon. All VRP sites within the indicated range will appear in the Map/Results block to the left. Clicking on the block by the identified site will result in a second green balloon on the map. With multiple sites identified by the search, you can select/unselect each site to visualize its location, or change the radius of the search as needed.

At this time you can also search for "Solid Waste" sites and "Petroleum Releases" information for the project area by selecting these topics from the "Layer" options and then clicking on the green balloon on the map after each selection.

These database searches will include most waste-related site information for each locality based upon the radius of the address selected (such as .5 miles, .25 miles, or .1 mile). In many cases, especially when the project is located in an urban area, the database output for that locality will be extensive. This information is important to identify possible environmental concerns that may impact a new project.



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION
600 East Main Street, 24th Floor
Richmond, Virginia 23219
(804) 786-6124

RECEIVED
JUL 03 2013
DEQ-Office of Environmental
Impact Review

MEMORANDUM

DATE: July 3, 2013
TO: John Fisher, DEQ
FROM: Roberta Rhur, Environmental Impact Review Coordinator
SUBJECT: DEQ 13-112F, Fort Belvoir Water & Wastewater Utility Upgrade

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.

Water Storage Tank #591;
Force Main Replacements #s 584, 7677, 952, 04-78, 1575, 1695;
Gravity Sewer Main Maintenance Sites 1-7;
Aerial Stream Crossings, Sites 1-9;
ASDC Project: New Access to Lift Station 584

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Water Storage Tank #s188, 2429, 2428
Re-diversion of Force Main Discharge from LS 1575;
Meade Water Main Replacement

According to information currently in our files, the Accotink Wetland Conservation Site is downstream of these project sites. 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. Accotink

Wetlands Conservation Site has been given a biodiversity significance ranking of B3 which represents a site of high significance. The natural heritage resources of concern at this site are:

<i>Ranunculus ambigens</i>	Water-plantain spearwort	G4/S1/NL/NL
<i>Bolboschoenus fluviatilis</i>	River bulrush	G5/S2/NL/NL
<i>Carex vestita</i>	Velvety sedge	G5/S2/NL/NL
Tidal Freshwater Marsh (Mixed High Marsh Type)		G3/S4?/NL/NL

Water-plantain spearwort is a perennial wetland herb in the buttercup family (Ranunculaceae). The global distribution of water-plantain spearwort includes the eastern, midwestern, and southern U.S. and Ontario, Canada. Although apparently globally secure, water-plantain spearwort, also known as water-plantain crowfoot, is regionally rare to historical or extirpated, particularly in some eastern states (Kartesz 1999). In Virginia, it has been documented in scattered locations in the Coastal Plain, Piedmont, and Ridge and Valley. Many Virginia occurrences are historical, but more recent occurrences include those in Fairfax, Charlotte, and Lee counties. The lower stem of this relatively stout herb may recline, producing roots from the nodes, then become ascending to erect and extending sometimes to over 3 feet long. Leaves are lance-shaped, with margins smooth to finely-toothed. Yellow-petaled flowers bloom from April-July and can be solitary or in a branching inflorescence; the round to oval fruiting head is composed of numerous, small, 1-seeded, fruits (Godfrey and Wooten 1981). Habitat in Virginia occurrences includes a variety of wetlands: freshwater marshes, both tidal and non-tidal; a spring seep within a clearcut; wet soil within a floodplain; a muddy stream bottom; ditches; and very wet, mucky ground in a small pastured wetland. Threats include habitat degradation or destruction, and competition from invasive alien plant species.

River bulrush, a state-rare plant species, inhabits fresh tidal marshes of the coastal plain of Virginia. This species forms predominantly sterile colonies that spread by rhizomes. Water pollution and sedimentation, sea level rise, and invasive species such as *Phragmites australis* pose the greatest threats to populations of this sedge. Nine populations of river bulrush are believed to be extant in Virginia.

Velvety sedge, a state rare sedge species, occurs in low forests (Weakley, in prep.), seepage wetlands and seasonally wet conditions. It has been documented in such disturbed areas as powerline rights-of-way (TNC, 1996). This plant blooms during April and May (Weakley, in prep). Velvety sedge is currently known from eight locations within the coastal plain and eastern piedmont regions of Virginia, of which one is a historic occurrence.

Tidal Freshwater Marsh (Mixed High Marsh Type) (*Impatiens capensis-Peltandra virginica-Polygonum arifolium-Schoenoplectus fluviatilis-Typha angustifolia* Tidal Herbaceous Vegetation) occupies the higher elevation zone of freshwater to slightly oligohaline marshes on the Atlantic Coast from Maine to Virginia. From Delaware to northern Virginia, this is the principal mixed freshwater tidal marsh community and forms extensive patches along many tidal rivers. This community is composed of mixed, dense, and often diverse marsh vegetation with highly variable species composition and patch dominance. The soils are highly variable, varying from silts and silty mucks to peats and sands across the range (NatureServe, 2010). In Virginia, this community occurs most extensively in estuarine reaches of the Potomac River drainage, but has also been documented along the Rappahanock, Pamunkey, Mattoponi, and James Rivers.

Freshwater tidal marshes are naturally dynamic systems that are best developed where there is a major input of freshwater, daily tidal range of at least 0.5 m, and a geomorphology that tends to constrict and magnify tidal influence in the upper reaches of the estuary. These marshes are subject to diurnal flooding by tides and river discharge (NatureServe, 2010). Principal threats include chronic sea-level rise leading to increasing upstream salinity, pollutants, and invasive exotic plants such as marsh dewflower (*Murdannia keissak*) (Fleming et al. 2011).

In addition, Parker's pipewort (*Eriocaulon parkeri*, G3/S2/NL/NL) has been historically documented downstream of these project sites. Parker's pipewort is classified as very rare to uncommon in Virginia. This diminutive pipewort species displays a greyish-white button flower and often occurs with other rare mudwort species in the

intertidal zone of tidal regions from Maine to North Carolina. Potential threats include activities that alter natural river currents causing sedimentation, which could inhibit germination of seeds or smother seedlings, and/or erosion of the habitat. Other potential threats include activities that result in increased salinity levels, water pollution, and displacement by aggressive species (J. C. Ludwig, 1996). Parker's pipewort has been documented at 29 occurrences in Virginia with 11 of those historical or extirpated. Surveys for this species should be conducted during the flowering / fruiting period from July to October.

Furthermore, the Wood turtle (*Glyptemys insculpta*, G3/S2/NL/LT), has been documented downstream of the Meade Water Main Replacement site. The Wood turtle ranges from southeastern Canada, south to the Great Lake states and New England. In Virginia, it is known from northern counties within the Potomac River drainage (NatureServe, 2009). The Wood turtle inhabits areas with clear streams with adjacent forested floodplains and nearby fields, wet meadows, and farmlands (Buhlmann et al., 2008; Mitchell, 1994). Since this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994).

Threats to the wood turtle include habitat fragmentation, urbanization, and automobile or farm machinery mortality (Buhlmann et al., 2008). Please note that the Wood turtle is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

ASDC Project: Woodlawn Village Water & Sewer Improvements Phase 1, 2 & 3:

According to information currently in our files the Dogue Creek Wetlands Conservation Site is adjacent to this project site. The Dogue Creek Wetlands Conservation Site has been given a biodiversity significance ranking of B5 which represents a site of general significance. The natural heritage resource of concern at this site is the Wood turtle.

Force Main Replacements #s 606, 06-64, 687 & 7350

According to information currently in our files, these project sites are within the Area T-17 Ravines Conservation Site. The Area T-17 Conservation Site has been given a biodiversity significance ranking of B3 which represents a site of high significance. The natural heritage resource of concern at this site is the Northern Virginia Well amphipod (*Stygobromus phreaticus*, G2G3/S1/SOC/NL). The Northern Virginia Well amphipod is a distinctive species of subterranean amphipod that has a very limited range (Holsinger, 1991). Amphipods are tiny crustaceans more commonly known as freshwater shrimp, scuds, or sideswimmers. Their common names arise from their resemblance to shrimp and their habit of swimming or "scudding" along the substrate on their sides in an undulating motion (Pennak, 1978). Amphipods are common in freshwater ecosystems of Virginia; they also occur in brackish and marine waters along the coast. Unable to swim in open water, amphipods are confined to the substrate--the stones, wet leaves and aquatic vegetation of their freshwater habitats--where they feed on detritus (dead animal and plant matter).

The Northern Virginia Well amphipod has been documented at only three sites, including historical collections obtained from wells in Alexandria (1921) and Vienna (1948) in northern Virginia (suburbs of Washington, D.C.). The exact locations of both collection sites are unknown, but they are presumed to have been destroyed by subsequent urbanization (Holsinger, 1991). The only recent collections (1996 and 2003) are from a single ravine seepage habitat on a military base in Fairfax County, Virginia (Chazal and Hobson, 2003).

Threats to the Northern Virginia Well amphipod are pollution of the groundwater, disturbance of the groundwater recharge area (such as urbanization) and disturbance of aquatic habitats. Please note that this species is tracked as a species of concern by the United States Fish and Wildlife Service (USFWS); however, this designation does not have any official legal status.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water

management laws and regulations. In addition, DCR recommends avoiding contamination and disturbance to the lower sediments and groundwater of the Potomac Group geology within the Area T-17 Ravines Conservation Site to avoid impacts to the Northern Virginia Well amphipod. DCR also recommends a spill prevention and response plan be in place prior to commencement of these projects.

In addition, the Dogue Creek and/or an Unnamed tributary to Dogue Creek, which have been designated by the Virginia Department of Game and Inland Fisheries (VDGIF) as "Threatened and Endangered Species Waters", are within the project vicinity of several of the project areas. The species associated with these T & E Waters is the Wood turtle. Due to the legal status of Wood turtle, DCR 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).

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

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. The current activity will not affect any documented state-listed plants or insects.

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: Amy Ewing, VDGIF

Troy Andersen, USFWS

Literature Cited

- Buhlmann, K, T. Tuberville, and W. Gibbons. 2008. Turtles of the southeast. University of Georgia Press. Athens, GA. 252 pp.
- Chazal, A.C. and C. S. Hobson. 2003. Surveys for the Northern Virginia Well Amphipod (*Stygobromus phreaticus*) at Fort Belvoir, Virginia. Natural Heritage Technical Report 03-11. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, Virginia. Unpublished report submitted to USAG Fort Belvoir. 11 pp plus appendix.
- Fleming, G.P., K.D. Patterson, K. Taverna, and P.P. Coulling. 2011. The natural communities of Virginia: classification of ecological community groups. Second approximation. Version 2.4. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA.
- Godfrey, R.K. and J.W. Wooten. 1981. Aquatic and Wetland Plants of the Southeastern United States. The University of Georgia Press, Athens, GA. 933 pp.
- Holsinger, John R. 1991. *Stygobromus phreaticus*. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. p185.
- Kartesz, J.T. 1999. A Synonymized Checklist and Atlas with Biological Attributes for the Vascular Flora of the United States, Canada, and Greenland. First Edition. In: Kartesz, J.T. and C.A. Meacham. Synthesis of the North American Flora, Version 1.0. North Carolina Botanical Garden, Chapel Hill, NC.
- Ludwig, J. Christopher. 1996. Personal communication. Virginia Department of Conservation and Recreation, Division of Natural Heritage.
- Mitchell, J. C. 1994. Reptiles of Virginia. Smithsonian Institution Press, Washington. pp. 88-91.
- NatureServe. 2010. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: April 8, 2010, December 13, 2011).
- Pennak, R.W. 1978. Freshwater invertebrates of the southeastern United States, 2nd edition. John Wiley and sons, New York, NY. pp. 451-463.
- The Nature Conservancy. 1996. Biological and Conservation Data System. Arlington, Virginia, USA.
- Weakley, A.S. In prep. *Flora of the Carolina's and Virginia*. The Nature Conservancy, Southeastern Regional Office.

Fisher, John (DEQ)

From: Ewing, Amy (DGIF)
Sent: Friday, June 28, 2013 2:11 PM
To: Fisher, John (DEQ)
Cc: Cason, Gladys (DGIF); Cooper, Jeff (DGIF); Kleopfer, John (DGIF); Bugas, Paul (DGIF)
Subject: ESSLog# 33923_13-112F_Wastewater/Water Utility Upgrade-Ft. Belvoir
Attachments: WOTU_FieldObsForm_102610.doc; WOTU_Flyer_102610.doc

We have reviewed the subject project that proposes to construct a number of water and wastewater utility upgrades and replacements at Ft. Belvoir in Fairfax County, VA.

According to our records, state Threatened wood turtles have been documented from Ft. Belvoir. Dogue Creek and its tributary have been designated Threatened and Endangered Species Waters due to the presence of this species. To best protect wood turtles and the habitats it depends upon from harm during the proposed work, we recommend that any work proposed to occur within naturally vegetated habitats within 900 ft of Dogue Creek or its tributary adhere to a time of year restriction from April 1 through September 30 of any year. In addition, we recommend that any instream work in Dogue Creek or its tributaries adhere to a time of year restriction from October 1 through March 31 of any year. If these recommendations cannot be adhered to, we recommend additional coordination with us.

Also, we recommend that prior to the commencement of work all contractors associated with work at this site be made aware of the possibility of encountering wood turtles on site and become familiar with their appearance, status and life history. An appropriate information sheet to distribute to contractors and employees is attached. If any wood turtles are encountered and are in jeopardy during the development or construction of this project, immediately remove them from danger and move them safely to suitable habitat in or near the closest perennial stream. Any relocations should be reported to J.D. Kleopfer, VDGIF Region I Terrestrial Biologist, at 804-829-6580 and the attached wood turtle observation form should be completed and faxed to JD at 804-829-6788.

Further information about wood turtles can be found online at:
<http://www.dgif.virginia.gov/wildlife/species/display.asp?id=030062>

According to our records, bald eagle nests have been documented from Ft. Belvoir. In addition, this project site is located adjacent to segments of the Upper Potomac Bald Eagle Concentration Zone. Significant habitat alteration, location of water-dependant facilities within concentration zones, or other recreational and commercial activities may result in adverse impacts upon eagles. Therefore, we recommend that the applicant ensure that this project is consistent with state and federal guidelines for protection of bald eagles; and that he coordinate as indicated with us or with the U.S. Fish and Wildlife Service regarding possible impacts upon bald eagles or the need for a federal bald eagle take permit.

Dogue Creek, Accotink Creek, Pohick Creek, and the Potomac River have been designated Anadromous Fish Use Areas. Therefore, we recommend that any instream work in these streams and/or their tributaries adhere to a time of year restriction from February 15 through June 30 of any year. We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures.

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.

To minimize the adverse impacts of linear utility project development on wildlife resources, we offer the following general recommendations: avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable; maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable; conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15; and, implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. We understand that adherence to these general recommendations may be infeasible in some situations. We are happy to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources.

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**



WOOD TURTLE FIELD OBSERVATION FORM

The Virginia Department of Game and Inland Fisheries needs your help in monitoring Wood Turtle (*Glyptemys insculpta*) populations. If you encounter a Wood Turtle, please provide the information requested below and mail or FAX this form to:

Virginia Department of Game and Inland Fisheries
Attn: John Kleopfer
3801 J.T. Memorial Highway
Charles City, Virginia 23030
FAX 804-829-6788

If possible, send digital photos to: John.Kleopfer@dgif.virginia.gov

Distribution: The Wood Turtle is found primarily in the northeastern United States and parts of southeastern Canada, reaching the southern limit of its range in northern Virginia. In Virginia, it has been documented in Warren, Rockingham, Shenandoah, Frederick, Loudoun, Fairfax, Clark, and Page counties. It is not widely distributed, however, within these counties.

Species Descriptions (also see photos on the back of this sheet):

WOOD TURTLE: This semi-aquatic turtle usually is found in or near streams, but not in ponds, reservoirs, or lakes. The shell length of an adult Wood Turtle can reach 9 inches. The plastron (bottom-half of the shell) is NOT hinged and the carapace (top-half of the shell) is flattened. The legs and tail are usually reddish to orange in color. Females are sometimes less colorful.

EASTERN BOX TURTLE (*Terrapene carolina carolina*): This terrestrial (land-dwelling) species seldom is found in water, but is often misidentified as a Wood Turtle. The Eastern Box Turtle has a high domed shell and a hinged plastron, which allows for it to completely enclose itself. The shell length of an adult is rarely over 5 inches.

Your name: _____

Your address: _____

Your phone number (optional): _____

Location of observation (GPS coordinates, if possible). Include name of the nearest stream.

Comments: _____

THE WOOD TURTLE IS A PROTECTED SPECIES IN VIRGINIA: IT IS UNLAWFUL TO HARM, COLLECT, OR POSSESS THESE TURTLES.

WOOD TURTLE



Note the sculptured scales of the top of shell (carapace).

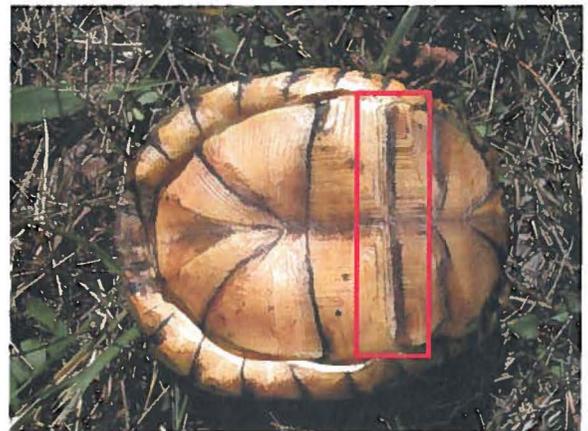


Bottom view (plastron) of a male Wood Turtle. The concave plastron is characteristic of a male. Note the distinct black markings and the brightly colored legs and tail.

EASTERN BOX TURTLE



Note the high domed shell and lack of sculptured scales. Males usually have an orange or yellowish face and legs and are more brightly colored in comparison to females.



Note the **hinged plastron** and no markings. The concave plastron is also characteristic of male box turtles.



The plastron of Eastern Box Turtles will often turn black.



Unlike Wood Turtles, box turtles can completely enclose themselves for protection.

Carl E. Garrison III
State Forester



RECEIVED

JUL 03 2013

DEQ-Office of Environmental
Impact Review

COMMONWEALTH of VIRGINIA

DEPARTMENT OF FORESTRY
900 Natural Resources Drive, Suite 800
Charlottesville VA 22903
434.977.6555 ~ Fax: 434.296.2369
www.dof.virginia.gov

July 2, 2013

TO: John Fisher, VDEQ
FROM: Greg Evans, VDOF
SUBJECT: DEQ Project Number 13-112F (Water/Wastewater Utility Upgrade, Fort Belvoir)

Virginia Department of Forestry Response to Environmental Impact Review Request

Thank you for the opportunity to comment on the Water/Wastewater Utility Upgrade Environmental Assessment (EA) developed for Army Ft. Belvoir. The Virginia Department of Forestry (DOF) notes that a FONZI determination has been made pertaining to the proposed project and that Section 3.0 (Affected Environment and Environmental Impacts) of the EA reports that impacts to land use are not analyzed in the EA. This latter decision was apparently made because Section 3.0 identifies the National Capital Planning Commission (NCPC) which provides planning guidance for federal land and building in the National Capital Region, through its document, *Comprehensive Plan for the National Capital: Federal Elements* (NCPC 2004), and notes that NCPC will be afforded the opportunity to review the EA; assess the Proposed Action's compatibility with federal planning goals, guidelines, and initiatives; and provide comments before a decision is made on the final action.

Assessing the impact to land use, in particular forested land, is a principal responsibility of the DOF with regard to its role as a participating agency in the Department of Environmental Quality's Environmental Impact Review (EIR) process. Conserving forest cover and improving forest productivity is critical in maintaining functioning forest ecosystems and providing the forest land cover that sustains the Commonwealth's robust forest industry. Forests not only provide forest products, recreational opportunities, habitat for wildlife, and aesthetic values, they are also critically important in improving water and air quality. Land conversion activities that impact the forest landscape impact these values.

The DOF's role in evaluating proposed projects brought before state regulatory bodies is to identify the forest resources that may be impacted; provide assessments; and provide recommendations and comments pertaining to conservation, management and mitigation needs aimed at conserving Virginia's forest resources. To assist the DEQ and NCPC review processes,

Mission: We Protect and Develop Healthy, Sustainable Forest Resources for Virginians.

DOF offers the following comments in response to project questions cited in *DEQ EIR Checklist 5a*. In addition, DOF has identified the policies in the *Comprehensive Plan for the National Capital: Federal Elements* (NCPC 2004) that pertain to DOF areas of interest and requests that Ft. Belvoir and/or NCPC evaluations of land use impact against those policies be shared with us before a decision is made on final action.

PART I: DEQ EIR Checklist 5a

- 1. Have the Land Capability Classes (LCC) of the soils present in the impacted forest been identified?**

DOF: Yes, both by LCC and slope

- 2. Does the forestland possess a combination of physical characteristics important to the production of forest products with minimal inputs of fuel, fertilizers, pesticides, and labor and not be subject to intolerable erosion?**

DOF: Yes, the forestland contains good species mix and lot size but the property is federal land and available only for military use.

- 3. Is the forestland valuable for the production of forest products and have a special combination of soil quality, slope, aspect, moisture supply, and species composition needed to economically produce sustained high quality or high yields of forest products when managed according to accepted silvicultural principles?**

DOF: Yes, but it is available only for military use.

- 4. Is the forestland of statewide or local importance in the production of forest products?**

DOF: No. It is available for military use only.

- 5. Has the forestland been recognized under any state award or forestry recognition programs?**

DOF: No. Federal land is not eligible.

- 6. Is the property part of an agricultural or forestal district or participating in use value assessment and taxation for real estate devoted to forest use?**

DOF: No. It is federal land and not eligible.

7. Does the forestland make a significant contribution to the local economy or the rural character of the area where the land is located?

DOF: Yes. The Fort is located in a densely populated urban area and its forested land contributes significantly to green corridors of neighboring political jurisdictions.

8. Does the preferred route or project site minimize the permanent loss of forestland?

DOF: Yes. Project designs and locations for all elements, e.g. water tank replacement, force main replacement, gravity sewer main maintenance, aerial stream crossings, and ASDC projects appear to be sited in developed areas or clustered in forested areas in a manner that minimizes permanent forest loss or fragmentation of large forest blocks

9. Is the impacted forestland found in a watershed that is important to a municipal water supply or is adjacent to waterways with TMDL (Total Maximum Daily Load) limits?

DOF: Yes. Area principal and sub-watersheds are adjacent to waterways with TMDL limits.

10. Has the importance of the forestland in providing ecosystem services and benefits (for example, water quality, water supply, air quality, biodiversity) been evaluated?

DOF: The EA notes that ecosystems services and benefits are provided by forestland but does not cite any evaluation.

11. Is the impacted forestland covered under a conservation easement?

DOF: No. As federal property used for military purposes, permanent easements may conflict with future military mission requirements so are not pursued.

12. Does the project impact Virginia Department of Forestry properties designated as State Forests?

DOF: No. There are no state forests adjacent to Ft. Belvoir.

13. Do local and state ordinances, county comprehensive plans, local watershed management plans, etc. support forestland conservation in the geographical area impacted by the major project?

DOF: Yes. All lands not designated as RPAs in Fairfax County are classified as RMAs. Fort Belvoir recognizes the RPA designation but, being a federal entity, is not subject to the provisions of the Fairfax County ordinance. As a result, Fort Belvoir does not use RPA maps produced by Fairfax County; instead, the Army delineates the RPA on the installation. In

addition to RPA areas, Fort Belvoir places a 35-foot buffer around all intermittent and ephemeral streams.

14. What is the Forest Conservation Value of the impacted forest?

DOF: A tabletop analysis using the DOF InFOREST evaluation tool that employs a GIS platform to integrate natural resource data categorized the forestland within the confines of Ft. Belvoir has being of moderately low to low conservation value.

15. Does the major project impact any unique natural areas or species of interest?

DOF: Yes. An installation-wide vegetation study of Fort Belvoir conducted in 1998 identified 17 plant community types included in the broader categories of mixed hardwood forests, pine forests, floodplain hardwood forests, wetlands, oldfield grasslands and urban land. Of the 17 plant community types identified, four possess species with state conservation rankings of rare or very rare.

PART II - National Capital Planning Commission Policies from its Comprehensive Plan that DOF requests be responded to as part of the EA land use study evaluation

Preservation and Maintenance: (Policy 7) Maintain and conserve trees and other vegetation in the landscaped buffer areas on federal installations in a natural condition. Perimeter roads and cleared areas on these sites should be kept to a minimum, carefully landscaped, and managed in a manner that addresses security, aesthetics, and natural character.

Greenways and Greenbelts: Several major federal facilities that could contribute to the greenbelt around the region include: ... Fort Belvoir.... During the past several decades, the region has experienced a decline in tree and landscape cover due to increasing urbanization and higher attrition rates among trees, dramatically changing the ecology of the area. As the amount of forested area has declined and urban development has expanded, the tree and landscape loss has resulted in an increase in stormwater runoff, decreased air and water quality, and measurable changes in air temperatures from ground surfaces.

- (Policy 3) Increase and conserve the tree canopy and landscape cover in urban areas of the region.
- (Policy 5) Maintain large tree preserves and forests as part of future development in the region.
- (Policy 6) Conserve portions of federal installations that contribute to greenway and greenbelt areas.
- (Policy 7) Retain natural wooded buffer areas in the vicinity of federal installations throughout the region.

Water Quality: Federal actions in the region should conform to the following policies:

- (Policy 2) Avoid thermal pollution of waterways, and provide and maintain adequate vegetated buffers adjacent to bodies of water, to protect fish and other aquatic life and to reduce sedimentation and pollutants.

- (Policy 3) Minimize tree cutting and other vegetation removal to reduce soil disturbance and erosion, particularly in the vicinity of waterways. When tree removal is necessary, trees should be replaced to prevent a net tree loss.
- (Policy 9) Encourage participation in regional agreements and programs that improve water quality and address watershed issues

Water Supply: Federal actions in the region should conform to the following policies:

- (Policy 1) Encourage the natural recharge of groundwater and aquifers by limiting the creation of impervious surfaces, avoiding disturbance to wetlands and floodplains, and designing stormwater swales and collection basins on federal installations.

Land Resources: Federal actions in the region should conform to the following policies:

Vegetation

- (Policy 1) Preserve existing vegetation, especially large stands of trees.
- (Policy 2) Incorporate new trees and vegetation to moderate temperatures, minimize energy consumption, and mitigate stormwater runoff.
- (Policy 4) Maintain and preserve woodlands and vegetated areas on steep slopes and adjacent to waterways, especially to aid in the control of erosion and sediment.

PART III – DOF RECOMMENDATIONS:

1. **Construction Activities:** Compacted soil restricts root penetration and nutrient cycling. Compaction also restricts water movement into soil, resulting in less water available for plant growth and increased runoff, erosion, and nutrient loss. This can result not only in diminished forest health but also reduced ability of the forest to fulfill its water quality improvement functions. DOF recommends activities to minimize construction impacts including:
 - Restoring contours to pre-construction conditions and controlling erosion until re-vegetation stabilizes the disturbed areas.
 - Where forest clearing was done as part of the construction process and is not part of the necessary ROW, restoring vegetation to native species and protecting the natural functions of the pre-construction ecosystem.
 - Reducing soil compaction by using appropriate machinery and avoid construction activity during periods of wet weather when compaction can easily occur.
 - Following Forestry Best Management Practices (BMPs) for water quality as outlined by the Virginia Department of Forestry’s Voluntary BMP Guidelines publication if harvesting operations are planned.
 - Stock piling soil away from trees that are to remain standing. Piling soil at a tree stem can kill the root system of the tree. Soil stockpiles should be covered, as well, to prevent soil erosion and fugitive dust.

- Retaining existing groupings and/or clusters of trees and natural vegetation on the sites where clearing occurs and where feasible, to provide esthetic and environmental benefits, as well as reducing future open space maintenance costs.

2. **Invasive Species Management:** While the width of the area of the removed forest within the ROWs may not be great, there may be significant consequences for the species that depend on the existing non-fragmented habitat. Fragmentation makes interior forest species more vulnerable to predators, parasites, and competition from edge species. Invasive plants can grow prolifically in the cleared-edge habitats of ROWs and can spread into the forest interior, limiting the growth of native species. Careful vegetation management in the ROWs can mitigate some of these effects. DOF recommends:

- Considering how invasive species react to increased soil disturbance and sunlight levels when developing vegetation management strategies.
- During construction and follow-on maintenance activities, take steps to guard against construction vehicles inadvertently bringing into forest interiors invasive and/or non-native plant species from other locations. Weed seed and fungal spores can be transported in the mud or dirt on vehicles. Prior to moving equipment onto and off of an activity area, scrape or brush soil and debris from exterior surfaces, to the extent practical, to minimize the movement of invasive plants, pests and diseases to non-infested areas. Another option is to wash vehicles before they enter a weed-free area or when they leave an infested area. The emphasis of the cleaning should be in the wheels, wheel wells, bumpers, and undercarriage of the vehicle where most mud and dirt collects.
- If seeding or planting is necessary to minimize the threat of highly damaging invasive species from spreading, use native seed or non-invasive cover plants for revegetation.

3. **Forest Fragmentation Planning:** An ROW can fragment a larger forest block into smaller tracts that diminish their ability to provide the same habitat found in large blocks of contiguous forest. As a result, the continued fragmentation of a forest can cause a permanent reduction in the acres of suitable habitat and consequently a reduction in numbers for some species. Increasing forest edge as a result of the ROW construction will be accompanied by an increase in the establishment of invasive species

DOF recommends adopting management practices that mitigate these potential impacts including:

- Avoiding routes that fragment major forest blocks.
- Keeping ROW clearing to the minimum width necessary to prevent interference from trees and other vegetation.
- Including control of invasive species that become established in the ROW as part of the ROW vegetation maintenance plan.

- Establishing native herbaceous species and shrubs or some low-growing trees that are considered desirable ground cover and valuable wildlife habitat along the ROWs in the project's vegetation management and revegetation plan.
- Maintaining a scrub habitat, dominated by low growing, bushy vegetation and young trees is preferable to mowing in forest habitats. It can provide quality habitat for wildlife species that are dependent on early successional habitat (birds, reptiles, and amphibians).

This concludes our comments. We would be happy to discuss them with Ft. Belvoir or NCPC representatives if that would be helpful.

Greg Evans
Voluntary Mitigation Program Manager
Forestland Conservation Division
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, VA 22903
434-220-9020

Fisher, John (DEQ)

From: Matthews, Barry (VDH)
Sent: Wednesday, July 03, 2013 10:25 AM
To: Fisher, John (DEQ)
Cc: Eggborn, Hugh (VDH); Douglas, Susan (VDH); Edelman, Robert (VDH); Albrecht, Edward (VDH)
Subject: Fort Belvoir Project - Water/Wastewater Utility Upgrade

Mr. Fisher –

The Virginia Department of Health has reviewed the documentation provided regarding the Fort Belvoir utilities improvements. We find that the project is neither located within the watershed of surface intakes nor wells. Several groundwater wells are located within a mile radius; however, these wells are located across Pohick Bay and would not be impacted by this project.

This project appears consistent with the Coastal Zone Management Act; however, the Office of Drinking Water – Culpeper Field Office (CFO) does not have any specific information on several proposed phases of this project: specifically:

- Aerial Stream Crossing – while ODW is aware that this is an issue, the CFO doesn't have a project that specifically addresses this issue and doesn't know the status of any efforts to correct aerial crossings.
- Meade Road Water Main Replacement – CFO is not aware of this project and has not received plans.
- Woodlawn Village Water and Sewer System Improvements – CFO is not aware of this project and has not received plans.

These projects require a Construction Permit under the Virginia ***Waterworks Regulations***. Please have appropriate personnel from either American Water or DOD/Dept of the Army contact the District Engineer in CFO, Mr. Robert Edelman to provide him with a status of project scope and details regarding these phases of construction.

As the infrastructure improvements at Fort Belvoir continue to be implemented; we recommend that a phased plan of development for the waterworks be developed and provided to CFO, so that the Office of Drinking Water can anticipate the needs and work to be conducted at Fort Belvoir.

Regards,

Barry E. Matthews, P.G.
Department of Health
James Madison Building
Office of Drinking Water, Room 621
Capacity Development Program
109 Governor Street
Richmond, VA 23219
804 864-7515 (w)
804 864-7520 (fax)
barry.matthews@vdh.virginia.gov

Fisher, John (DEQ)

From: Kirchen, Roger (DHR)
Sent: Tuesday, July 02, 2013 11:31 AM
To: Fisher, John (DEQ)
Subject: Water/Wastewater Utility Upgrade at Fort Belvoir (DEQ #13-112F; DHR File No. 2013-0707)

DHR has been in consultation with the Army and its consultant regarding this project. We request that the Army continue to 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*



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

July 8, 2013

RECEIVED

JUL 16 2013

**DEQ-Office of Environmental
Impact Review**

John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia, 23219

Dear Mr. Fisher:

The Fairfax County Department of Planning and Zoning and the Fairfax County Department of Public Works and Environmental Services have reviewed the Coastal Zone Management Act Consistency Determination and Draft Environmental Assessment and Draft Finding of No Significant Impact for the Department of Defense (DOD) and Department of the Army projects proposed to upgrade the water and wastewater system infrastructure at the U.S. Army Garrison Fort Belvoir.

The project consists of replacing water storage tanks and force mains, maintenance of gravity sewer mains, annual maintenance of gravity sewer mains, reinstallation of aerial stream crossings with streambank repair, and implementation of additional projects identified in Fort Belvoir's 2012 Annual System Deficiency Corrections (ASDC), Upgrades and Renewal & Replacement Plan for fiscal years 13 through 17. Specifically, the project will entail the removal of four existing water storage tanks and the construction of three replacements tanks, with supporting water lines and equipment; the replacement of six sections of sanitary sewer force mains (all located on the Main Post south of Route 1); the general maintenance of the wastewater infrastructure to include the clearing of woody vegetation in the right-of-ways (unless in a wetland area) and installation of culverts to enable vehicle access; the stream bank repair and stabilization in the area surrounding nine sections of water and gravity sewer lines; and the implementation of several projects proposed in the ASDC: a replacement of 3,138 linear feet of 6-inch water main and 650 linear feet of water service lines, sanitary sewer and water improvements in Woodlawn Village, a redirection of the force main discharge (an installation of an additional 2,675 linear feet of 6-inch water force main), and new access to lift station 584 (construction of a new access road and bridge over a stream).

The majority of these proposed projects will be occurring in previously disturbed land, or will require minor or temporary impacts. Each of these proposed projects represents an individual set of potential impacts and need for mitigation. However, while there are some temporary and permanent impacts, such as crossing intermittent and perennial streams, the appropriate

mitigation techniques are proposed to be used. As with any project, staff would like to encourage care to be taken when working in sensitive environmental areas to minimize the unavoidable impacts of this proposed construction.

The Department of Public Works and Environmental Services staff notes further specific comments:

The Army is encouraged to reuse the fully treated reclaimed water from the Fairfax County's Norman M. Cole, Jr. Pollution Control Plant located in the vicinity of Ft. Belvoir for such uses as cooling water, irrigation and/or other uses as allowed by the Virginia Water Reclamation and Reuse Regulations for the following reasons:

- Although more than 90% of the nitrogen and phosphorus is removed from the wastewater during the treatment process, the reclaimed water contains some amount of these nutrients. By reusing the reclaimed water for cooling and irrigation, the remaining amount of nutrients in the reclaimed water will not be discharged into the Pohick Creek, which ultimately conveys the water to the Chesapeake Bay. This will result in improving the water quality in the Bay, which has been deteriorated, and US EPA, VA DEQ, and local jurisdictions have been working closely to improve the water quality in the Bay.
- Reusing the reclaimed water for golf course and landscaping irrigation could lower the need for fertilization because of the nutrients in the reclaimed water.
- Reusing the reclaimed water will preserve drinking water supplies by lowering the demand.
- Reusing the reclaimed water will result in reduced drinking water use at Ft. Belvoir and lower water bills.

Staff concurs with Fort Belvoir's finding that the proposed replacement of the existing waterline would have no foreseeable adverse impact on the coastal uses and natural resources that are addressed by "enforceable policies" of the Virginia Coastal Resources Management Program.

Thank you for the opportunity to comment on this Consistency Determination, Draft Environmental Assessment and Draft Finding of No Significant Impact. If you have any questions about our comments, please do not hesitate to contact Maya Dhavale of my staff at 703-324-1355.

John E. Fisher
July 8, 2013
Page 3

Sincerely,

Marianne R. Gardner

Marianne R. Gardner
Director, Planning Division
Fairfax County Department of Planning and Zoning

MRG: MPD

cc: Board of Supervisors
Edward L. Long, Jr., County Executive
Robert A. Stalzer, Deputy County Executive
Pamela G. Nee, Department of Planning and Zoning (DPZ)
Maya Dhavale, DPZ
Sharam Mohsenin, Department of Public Works and Environmental Services



Northern Virginia Regional Commission

RECEIVED

JUL 02 2013

DEQ-Office of Environmental
Impact Review

June 26, 2013

John E. Fisher
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Re: Water/Wastewater Utility Upgrade, Fort Belvoir, Project # 13-112F

Dear Mr. Fisher:

The Northern Virginia Regional Commission staff has reviewed the document described above and has the following comments.

Based on the provided draft Environmental Assessment (EA), NVRC recommends that the U.S. Army proceed with developing an Environmental Impact Statement (EIS), as opposed to a Finding of No Significant Impact (FONSI). The draft EA describes many potential environmental impacts which should be further reviewed by state, regional, and local agencies.

The draft EA states that *"it is clear that permanent impacts to RPAs and wetlands could lead to increased degradation of the perennial waters that these features are buffering from negative impacts."* The anticipation of both short and long-term impacts to wetlands, RPAs and floodplains requires further investigation and mitigation planning. Furthermore, the removal of forested habitat and both temporary and permanent displacement of wildlife, which could include some species of concern (small whorled pegenia, wood turtle, peregrine falcon, northern Virginia well amphipod, and bald eagle), requires further input from state agencies such as the Department of Conservation and Recreation (DCR) and Department of Game and Inland Fisheries (DGIF).

The development and review of an EIS would ensure that appropriate mitigation measures are fully explored and implemented. NVRC recommends that the Army prepare an EIS to comply with NEPA standards and practices.

A copy of this letter should be included with your submission to indicate that the review by this agency has been completed.

Thank you for this opportunity to participate in the intergovernmental review process.

Sincerely,

A handwritten signature in blue ink that reads "Aimee Vosper".

Aimee Vosper
Director, Environmental & Planning Services

Chairman

Hon. Martin E. Nohe

Vice Chairman

Hon. Robert W. Lazaro, Jr.

Treasurer

Hon. Redella S. Pepper

Executive Director

G. Mark Gibb

County of Arlington

Hon. Jay Fiset

Hon. Libby Garvey

County of Fairfax

Hon. Sharon Bulova

Hon. John C. Cook

Hon. Penelope A. Gross

Hon. Pat Herrity

Hon. Catherine M. Hudgins

Hon. Jeffrey C. McKay

Hon. Linda Smyth

County of Loudoun

Hon. Janet Clarke

Hon. Scott K. York

County of Prince William

Hon. Peter Candland

Hon. Martin E. Nohe

Hon. Frank J. Principi

City of Alexandria

Hon. Redella S. Pepper

Hon. Paul C. Smedberg

City of Fairfax

Hon. Scott Silverthorne

City of Falls Church

Hon. Nader Baroukh

City of Manassas

Hon. Harry J. Parrish II

City of Manassas Park

Hon. Suhas Naddoni

Town of Dumfries

Hon. Gerald M. Foreman II

Town of Herndon

Hon. Lisa C. Merkel

Town of Leesburg

Hon. Fernando "Marty" Martinez

Town of Purcellville

Hon. Robert W. Lazaro, Jr.

Town of Vienna

Hon. M. Jane Seeman

(as of July 18, 2012)

THIS PAGE INTENTIONALLY LEFT BLANK

Fairfax County

THIS PAGE INTENTIONALLY LEFT BLANK



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

July 8, 2013

John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia, 23219

Dear Mr. Fisher:

The Fairfax County Department of Planning and Zoning and the Fairfax County Department of Public Works and Environmental Services have reviewed the Coastal Zone Management Act Consistency Determination and Draft Environmental Assessment and Draft Finding of No Significant Impact for the Department of Defense (DOD) and Department of the Army projects proposed to upgrade the water and wastewater system infrastructure at the U.S. Army Garrison Fort Belvoir.

The project consists of replacing water storage tanks and force mains, maintenance of gravity sewer mains, annual maintenance of gravity sewer mains, reinstallation of aerial stream crossings with streambank repair, and implementation of additional projects identified in Fort Belvoir's 2012 Annual System Deficiency Corrections (ASDC), Upgrades and Renewal & Replacement Plan for fiscal years 13 through 17. Specifically, the project will entail the removal of four existing water storage tanks and the construction of three replacements tanks, with supporting water lines and equipment; the replacement of six sections of sanitary sewer force mains (all located on the Main Post south of Route 1); the general maintenance of the wastewater infrastructure to include the clearing of woody vegetation in the right-of-ways (unless in a wetland area) and installation of culverts to enable vehicle access; the stream bank repair and stabilization in the area surrounding nine sections of water and gravity sewer lines; and the implementation of several projects proposed in the ASDC: a replacement of 3,138 linear feet of 6-inch water main and 650 linear feet of water service lines, sanitary sewer and water improvements in Woodlawn Village, a redirection of the force main discharge (an installation of an additional 2,675 linear feet of 6-inch water force main), and new access to lift station 584 (construction of a new access road and bridge over a stream).

The majority of these proposed projects will be occurring in previously disturbed land, or will require minor or temporary impacts. Each of these proposed projects represents an individual set of potential impacts and need for mitigation. However, while there are some temporary and permanent impacts, such as crossing intermittent and perennial streams, the appropriate

John E. Fisher
July 8, 2013
Page 2

mitigation techniques are proposed to be used. As with any project, staff would like to encourage care to be taken when working in sensitive environmental areas to minimize the unavoidable impacts of this proposed construction.

The Department of Public Works and Environmental Services staff notes further specific comments:

The Army is encouraged to reuse the fully treated reclaimed water from the Fairfax County's Norman M. Cole, Jr. Pollution Control Plant located in the vicinity of Ft. Belvoir for such uses as cooling water, irrigation and/or other uses as allowed by the Virginia Water Reclamation and Reuse Regulations for the following reasons:

- Although more than 90% of the nitrogen and phosphorus is removed from the wastewater during the treatment process, the reclaimed water contains some amount of these nutrients. By reusing the reclaimed water for cooling and irrigation, the remaining amount of nutrients in the reclaimed water will not be discharged into the Pohick Creek, which ultimately conveys the water to the Chesapeake Bay. This will result in improving the water quality in the Bay, which has been deteriorated, and US EPA, VA DEQ, and local jurisdictions have been working closely to improve the water quality in the Bay.
- Reusing the reclaimed water for golf course and landscaping irrigation could lower the need for fertilization because of the nutrients in the reclaimed water.
- Reusing the reclaimed water will preserve drinking water supplies by lowering the demand.
- Reusing the reclaimed water will result in reduced drinking water use at Ft. Belvoir and lower water bills.

Staff concurs with Fort Belvoir's finding that the proposed replacement of the existing waterline would have no foreseeable adverse impact on the coastal uses and natural resources that are addressed by "enforceable policies" of the Virginia Coastal Resources Management Program.

Thank you for the opportunity to comment on this Consistency Determination, Draft Environmental Assessment and Draft Finding of No Significant Impact. If you have any questions about our comments, please do not hesitate to contact Maya Dhavale of my staff at 703-324-1355.

John E. Fisher
July 8, 2013
Page 3

Sincerely,

Marianne R. Gardner

Marianne R. Gardner
Director, Planning Division
Fairfax County Department of Planning and Zoning

MRG: MPD

cc: Board of Supervisors

Edward L. Long, Jr., County Executive

Robert A. Stalzer, Deputy County Executive

Pamela G. Nee, Department of Planning and Zoning (DPZ)

Maya Dhavale, DPZ

Sharam Mohsenin, Department of Public Works and Environmental Services

THIS PAGE INTENTIONALLY LEFT BLANK

Fairfax County Park Authority

THIS PAGE INTENTIONALLY LEFT BLANK



FAIRFAX COUNTY PARK AUTHORITY



12055 Government Center Parkway, Suite 927 • Fairfax, VA 22035-5500
703-324-8700 • Fax: 703-324-3974 • www.fairfaxcounty.gov/parks

July 16, 2013

Commander, U.S. Army Garrison Fort Belvoir
ATTN: Directorate of Public Works
Building 1442
9430 Jackson Loop
Fort Belvoir, VA 22060-5116

SUBJECT: Draft Environmental Assessment for Water and Wastewater Utility Upgrade

The Park Authority staff has reviewed the above referenced application and has the following comments:

1. The majority of the impacts occur within existing built landscapes and will not have negative impacts on natural resources.
2. The project includes a number of maintenance actions to correct erosion issues in stream valleys and wooded areas around freshwater and sanitary sewer lines. The Park Authority recommends the following actions to minimize impacts from these maintenance activities:
 - a. Minimize clearing. Clearing should be ideally restricted to existing easement areas whenever possible.
 - b. If trees need to be removed, leave root systems whenever possible to minimize soil disturbance and compaction, and leave living root systems that will prevent erosion and may resprout.
 - c. Restore all disturbed soils in natural areas using native seed mixes composed on locally common species. The seed mixes should focus on native grasses and sedges that can provide the maximum soil stabilization and habitat benefit over time and should be adjusted according to the light and moisture regimes. Having two standard mixes (e.g., dry upland and moist bottomland) would likely be helpful.
 - d. Whenever possible replant with locally common native trees and shrubs.
 - e. Provide at least a two year warranty on restored areas to control non-native invasive plant species and ensure survivability of native plantings.

Additionally, the Park Authority offers the following recommendations for clarity:



If accommodations and/or alternative formats are needed, please call (703) 324-8563, at least 10 working days in advance of the registration deadline or event. TTY (703) 803-3354.

- Section 3.8.2.2, ASDC Projects, Page 3-62: The text states, "The fourth new access road to LS 584 is located near the southern end of Pohick Neck in a wooded area near archaeological sites 44FX0004 (listed on the National Register), 44FX1505 (not yet formally evaluated), and 44FX1677 (not yet formally evaluated)..." However in Section 3.8.3.1, ASDC Projects, Page 3-65 the text states, "ASDC projects will not have an impact on archaeology because no archaeological resources have been identified in the APE." Consider changing the Section 3.8.2.2 text to state, "The APE for the fourth new access road to LS 584 is located near the southern end of Pohick Neck in a wooded area near, but outside the boundaries of archaeological sites 44FX0004..." if this is accurate.
- Section 3.8.3.1, Force Main Replacement – Archaeology, Page 3-64: Consider restating that the entirety of all project areas has been previously surveyed for archaeological resources, as stated in the first sentence of Section 3.8.2.2.

Thank you for allowing the Fairfax County Park Authority to comment on this Environmental Assessment.

Sincerely,



Sandy Stallman, AICP, Manager
Park Planning Branch, PDD

Copy: Sandy Stallman
Chron Binder
File Copy

THIS PAGE INTENTIONALLY LEFT BLANK

Fort Belvoir's Response to Comments Received

THIS PAGE INTENTIONALLY LEFT BLANK

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade				
U.S. Fish and Wildlife Service, Virginia Field Office	1	USFWS Email with attachment, Dated 11 June 2013	<p>The email directed Fort Belvoir to review an attached document that stated: Due to increases in workload and refinement of our priorities in Virginia, this office will no longer provide individual responses to requests for environmental reviews. However, we want to ensure that U.S. Fish and Wildlife Service trust resources continue to be conserved. When that is not possible, we want to ensure that impacts to these important natural resources are minimized and appropriate permits are applied for and received. We have developed a website, http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews_Introduction.html, that provides the steps and information necessary to allow landowners, applicants, consultants, agency personnel, and any other individual or entity requiring review/approval of their project to complete a review and come to the appropriate conclusion. The website will be frequently updated to provide new species/trust resource information and methods to review projects, so refer to the website for each project review to ensure that current information is utilized.</p>	<p>Fort Belvoir reviewed the USFWS website to find the Small Whorled Pogonia to be potentially located within the project area. As stated in the Section 3.5.1.3 of the EA, was conducted for the proposed force main replacement project sites that were considered to have medium to high potential for small whorled pogonia and included certain site locations for the force main replacements including LS 584, and LFS 76 and 77, and gravity sewer main maintenance sites 1-6. During the survey, no small whorled pogonia were identified. In all other areas, small whorled pogonia habitat is classified as poor and no survey of the site was conducted (Paciulli, Simmons, and Associates 2012).</p>
Natural Resources Conservation Service	1	NRCS Comments Letter, Dated 4 June 2013	<p>In review of the EA for the Water and Wastewater Utility Upgrade at Fort Belvoir, Virginia, it is agreed that the finding of "No Significant Impact" is correct concerning the soil resources. The soils that would be affected by this construction under the Farmland Protection Policy Act would classify as "committed to urban" and thus not covered under the FPPA. However, to protect this precious resource, it is imperative that the Erosion and Sediment Control (ESC) plans be followed to ensure impacts to the soil resources at the sites are minimal and of a temporary nature.</p>	<p>Fort Belvoir concurs, see Sections 3.2.2.2 and 4.2 of EA.</p>
Fairfax County Park Authority	1	FCPA Comments Letter, dated 16 July 2013.	<p>The majority of the impacts occur within existing built landscapes and will not have negative impacts on natural resources.</p>	<p>Fort Belvoir concurs, see Table 4-1 in Section 4.4</p>
Fairfax County Park Authority	2	FCPA Comments Letter, dated 16 July 2013.	<p>The project includes a number of maintenance actions to correct erosion issues in stream valleys and wooded areas around freshwater and sanitary sewer lines. The Park Authority recommends the following actions to minimize impacts from these maintenance activities: a. Minimize clearing. Clearing should be ideally restricted to existing easement areas whenever possible. b. If trees need to be removed, leave root systems whenever possible to minimize soils disturbance and compaction, leave living root systems that will prevent erosion and may resprout. c. Restore any disturbed soils in natural areas using native seed mixed compose of locally common species. The seed mixes should focus on native grasses and sedge that can provide the maximum soils stabilization and habitat benefit over time and should be adjusted according to the light and moisture regimes. Having two standard mixes (e.g. dry upland and moist bottomland) would likely be helpful. d. Whenever possible replant with locally common native trees and shrubs. e. Provide at least a two year warranty on restored areas to control non-native invasive plant species and ensure survivability of native plantings.</p>	<p>Comment noted. Several recommendations including native plantings are already incorporated in the project, see Section 3.5.2.2</p>
Fairfax County Park Authority	3	FCPA Comments Letter, dated 16 July 2013.	<p>Section 3.8.2.2, ASCD Projects, Page 3-62: the text states "The fourth new access road to LS 584 is located near the southern end of Pohick Neck in a wooded area near archaeological sites 44FX0004 (listed on the National Register), 44FX1505 (no yet formally evaluated), and 44FX1677 (not yet formally evaluated)..." However in Section 3.8.3.1, ASCD Projects, Page 3-65 the text states, "ASDC projects will not have an impact on archaeology because no archaeological resources have been identified in the APE." Consider changing the Section 3.8.2.2 text tot state, "The APE for the fourth new access road to LS 584 is located near the southern end of Pohick Neck in a wooded areas near, but outside the boundaries of archaeological sites 44FX0004..." if this is accurate.</p>	<p>Fort Belvoir concurs. Text in Section 3.8.2.2 of EA amended.</p>
Fairfax County Park Authority	4	FCPA Comments Letter, dated 16 July 2013.	<p>Section 3.8.3.1, Force Main Replacement - Archaeology, Page 3-64: Consider restating that the entirety of all project areas has been previously surveyed for archaeological resources as stated in the first sentence of Section 3.8.2.2.</p>	<p>Fort Belvoir concurs. Text in Section 3.8.3.1 of EA amended.</p>
Fairfax County	1	Fairfax County Comments Letter, dated 8 July 2013.	<p>The majority of these proposed projects will be occurring in previously disturbed land, or will require minor or temporary impacts. Each of these proposed projects represents an individual set of potential impacts and need for mitigation. However, while there are some temporary and permanent impacts, such as crossing intermittent and perennial streams, the appropriate mitigation techniques are proposed to be used. As with any project, staff would like to encourage care to be taken when working in sensitive environmental areas to minimize the unavoidable impacts of this proposed construction.</p>	<p>Fort Belvoir concurs, see Section 4.2</p>

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade				
Fairfax County	2	Fairfax County Comments Letter, dated 8 July 2013.	<p>The Department of Public Works and Environmental Services staff notes further specific comments: The Army is encouraged to reuse the fully treated reclaimed water from the Fairfax County's Noman M. Cole, Jr. Pollution Control Plant located in the vicinity of Ft. Belvoir for such uses as cooling water, irrigation and/or other uses as allowed by the Virginia Water Reclamation and Reuse Regulations for the following reasons:</p> <ul style="list-style-type: none"> * Although more than 90% of the nitrogen and phosphorous is removed from the wastewater during the treatment process, the reclaimed water contains some amount of these nutrients. By reusing the reclaimed water for cooling and irrigation, the remaining amount of nutrients in the reclaimed water will not be discharged into the Pohick Creek, which ultimately conveys the water to the Chesapeake Bay. This will result in improving the water quality in the Bay, which has been deteriorated, and the US EPA, VA DEQ, and local jurisdictions have been working closely to improve the water quality in the Bay. * Reusing the reclaimed water for golf course and landscaping irrigation could lower the need for fertilization because of the nutrients in the reclaimed water. * Reusing the reclaimed water will preserve drinking water supplies by lowering the demand. * Reusing the reclaimed water will result in reduced drinking water use at Ft. Belvoir and lower water bills. 	<p>Use of reclaimed water from Noman Cole represents a separate and distinct action from the proposed actions analyzed in this Environmental Assessment. Fort Belvoir agrees that there are several beneficial aspects to reclaimed water use but it is outside the scope of this document and must be addressed separately.</p>
Fairfax County	3	Fairfax County Comments Letter, dated 8 July 2013.	<p>Staff concurs with Fort Belvoir's finding that the proposed replacement of the existing waterline would have no foreseeable adverse impact on the coastal uses and natural resources that are addressed by "enforceable policies" of the Virginia Coastal Resources Management Program.</p>	<p>Fort Belvoir concurs, see Section 3.7.2.2</p>
Virginia Department of Environmental Quality/Virginia Water Protection Permit program at DEQ northern Regional Office	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>RECOMMENDATIONS: 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:</p> <ul style="list-style-type: none"> • 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 trench 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, 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. • Flag or clearly 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. 	<p>Comment noted. Work within streams and wetlands will comply with the conditions of the Federal and State permits.</p>
Virginia Marine Resources Commission	2	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>Agency Findings. VMRC finds that since stream crossings will be involved, the submission of a JPA will be required. All jurisdictional impacts will be reviewed during the JPA review process. For additional information, contact VMRC, Jordan Creed at (757) 247-2256.</p>	<p>Fort Belvoir concurs; see Section 2.3.1.4 of the EA.</p>

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Virginia Department of Environmental Quality	3	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>REQUIREMENTS: The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with VESCL&R and VSWML&R, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by VESCL&R. Accordingly, the applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL 62.1-44.15 et seq.]</p>	Fort Belvoir concurs; see Section 3.10.2.1 of the EA.
Virginia Department of Environmental Quality	4	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>REQUIREMENTS: The operator or owner of a construction project involving land-disturbing activities equal to one acre (2,500 square feet or more in a Chesapeake Bay Preservation Area) are 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 on DEQ's website at http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/WSMPPPermits/ConstructionGeneralPermit.aspx. [Reference: Virginia Stormwater Management Act 62.1- 44.15 et seq.] VSMP Permit Regulations 4 VAC 50 et seq.].</p>	Fort Belvoir concurs; see Section 3.10.2.1 of the EA.
Virginia Department of Environmental Quality	5		<p>Requirements. Federal actions on installations located within Virginia's federally approved coastal zone under the Coastal Zone Management Act are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated Chesapeake Bay Preservation Areas (CBPAs).</p>	Fort Belvoir concurs; see Section 3.4.2.2 of the EA.
Virginia Department of Environmental Quality	6	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used to the extent feasible. Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.</p>	Comment noted.
Virginia Department of Environmental Quality	7		<p>The EA does not specifically discuss potential project impacts to natural heritage resources. The document (page 3-74) concludes that construction activities associated with the proposed action would result in minimal impacts to vegetation and wildlife on Fort Belvoir because minimal vegetation and wildlife habitat would be removed. As a result, adverse, cumulative impacts to vegetation and wildlife and wildlife habitat would not be significant.</p>	Fort Belvoir concurs. Special status species are discussed in Section 3.5.1.3.
Virginia Department of Environmental Quality, Air Division	8	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>RECOMMENDATION: The project proponent should take all reasonable precautions to limit emissions of VOCs and NOx, principally by controlling or limiting the burning of fossil fuels.</p>	Comment noted.
Virginia Department of Environmental Quality, Division of Land Protection and Revitalization	9	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>REQUIREMENTS: Any soil that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations.</p>	Fort Belvoir concurs. Fort Belvoir maintains a mature RCRA management program that will manage any wastes according to local, State, and Federal regulations.

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Virginia Department of Conservation and Recreation	4	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade</p> <p>Contact DCR-DNH for an update on natural heritage information if a significant amount of time passes before the project is initiated since new and updated information is continually added to the Biotics Data System.</p>	Comment noted.
Virginia Department of Game and Inland Fisheries	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>DGIF recommends the following to protect the wood turtle and the habitats it depends on from harm during the proposed work.</p> <ul style="list-style-type: none"> • Adhere to a time-of-year restriction from April 1 through September 30 of any year for work that is proposed to occur within naturally vegetated habitats within 900 feet of Dogue Creek or its tributary. • Adhere to a time-of-year restriction from October 1 through March 31 of any year for any instream work in Dogue Creek or its tributaries. • Coordinate with DGIF if these recommendations cannot be followed. <p>In addition, DGIF recommends that prior to the commencement of work all contractors associated with work at this site be made aware of the possibility of encountering wood turtles and become familiar with their appearance, status, and life history. An appropriate information sheet to distribute to contractors and employees is attached. If any wood turtles are encountered and are in jeopardy during the development or construction of this project, immediately remove them from danger and move them safely to suitable habitat in or near the closest perennial stream. Any relocations should be reported to the DGIF Region I Terrestrial Biologist and the attached wood turtle observation form should be completed and faxed to DGIF.</p>	Comment noted. Fort Belvoir staff conducts a preconstruction survey for projects located within wood turtle habitat to identify and relocate turtles prior to disturbance. Annually, briefings are performed to construction staff on identification of wood turtles and actions to be taken in case of discovery.
Virginia Department of Game and Inland Fisheries	2	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>The Army should ensure that this project is consistent with state and federal guidelines for the protection of bald eagles. These guidelines may be found at http://www.dqif.virginia.gov/environmental-programs/files/virginia-bald-eagle-guidelines-for-landowners.pdf. The Army should coordinate with DGIF or the U.S. Fish and Wildlife Service regarding possible impacts upon bald eagles or for a federal bald eagle take permit.</p>	Comment noted. Fort Belvoir has an active Bald Eagle Management program in coordination with the US Fish and Wildlife Service.
Virginia Department of Game and Inland Fisheries	3	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>DGIF recommends that construction:</p> <ul style="list-style-type: none"> • Adhere to a time-of-year restriction from February 15 through June 30 of any year for any instream work in Anadromous Fish Use Areas and/or their tributaries. • Conduct any in-stream activities during low or no-flow conditions. • Use non-erodible cofferdams or turbidity curtains to isolate the construction area. • Block no more than 50% of the streamflow at any given time. • Stockpile excavated material in a manner that prevents reentry into the stream. • Restore original streambed and stream bank contours. • Revegetate barren areas with native vegetation. • Implement strict erosion and sediment control measures 	Comment noted. No instream work is currently planned in Anadromous Fish Use Areas.
Virginia Department of Game and Inland Fisheries	4	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>DGIF recommends the following measures to minimize overall impacts to wildlife and natural resources from the development.</p> <ul style="list-style-type: none"> • Avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. • Maintain undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams, where practicable. • Conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15. • Implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. <p>DGIF is available to work with the Army to develop project-specific measures as necessary to minimize project impacts upon wildlife resources. DGIF understands that adherence to these general recommendations may be infeasible in some situations.</p>	Comment noted.

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Virginia Department of Forestry	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade</p> <p>RECOMMENDATIONS: Compacted soil restricts root penetration and nutrient cycling. Compaction also restricts water movement into soil, resulting in less water available for plant growth and increased runoff, erosion, and nutrient loss. This can result not only in diminished forest health but also reduced ability of the forest to fulfill its water quality improvement functions. DOF recommends activities to minimize construction impacts including:</p> <ul style="list-style-type: none"> Restoring contours to pre-construction conditions and controlling erosion until revegetation stabilizes the disturbed areas. Restoring vegetation to native species and protecting the natural functions of the pre-construction ecosystem where forest clearing was done as part of the construction process and is not part of the necessary right-of-way (ROW). Reducing soil compaction by using appropriate machinery and avoid construction activity during periods of wet weather when compaction can easily occur. Following Forestry BMPs for water quality as outlined by the Virginia Department of Forestry's Voluntary BMP Guidelines publication if harvesting operations are planned. Stockpiling soil away from trees that are to remain standing. Piling soil at a tree stem can kill the root system of the tree. Soil stockpiles should be covered, as well, to prevent soil erosion and fugitive dust. Retaining existing groupings and/or clusters of trees and natural vegetation on the sites where clearing occurs and where feasible, to provide esthetic and environmental benefits, as well as reducing future open space maintenance costs. 	Comment noted.
Virginia Department of Forestry	2	DEQ Coordinated Comments Letter with Federal Consistency Review, Dated 1 August 2013	<p>While the width of the area of the removed forest within the ROWs may not be great, there may be significant consequences for the species that depend on the existing nonfragmented habitat. Fragmentation makes interior forest species more vulnerable to predators, parasites, and competition from edge species. Invasive plants can grow prolifically in the cleared-edge habitats of ROWs and can spread into the forest interior, limiting the growth of native species. Careful vegetation management in the ROWs can mitigate some of these effects. DOF recommends:</p> <ul style="list-style-type: none"> Considering how invasive species react to increased soil disturbance and sunlight levels when developing vegetation management strategies. Taking steps to guard against construction vehicles inadvertently bringing into forest interiors invasive and/or non-native plant species from other locations during construction and follow-on maintenance activities. Weed seed and fungal spores can be transported in the mud or dirt on vehicles. Prior to moving equipment onto and off of an activity area, scrape or brush soil and debris from exterior surfaces, to the extent practical, to minimize the movement of invasive plants, pests and diseases to non-infested areas. Another option is to wash vehicles before they enter a weed-free area or when they leave an infested area. The emphasis of the cleaning should be in the wheels, wheel wells, bumpers, and undercarriage of the vehicle where most mud and dirt collects. Using native seed or non-invasive cover plants for revegetation if seeding or planting is necessary to minimize the threat of highly damaging invasive species from spreading. 	Comment noted.
Virginia Department of Forestry	3	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>A ROW can fragment a larger forest block into smaller tracts that diminish their ability to provide the same habitat found in large blocks of contiguous forest. As a result, the continued fragmentation of a forest can cause a permanent reduction in the acres of suitable habitat and consequently a reduction in numbers for some species. Increasing forest edge as a result of the ROW construction will be accompanied by an increase in the establishment of invasive species. DOF recommends adopting management practices that mitigate these potential impacts including:</p> <ul style="list-style-type: none"> Avoiding routes that fragment major forest blocks. Keeping ROW clearing to the minimum width necessary to prevent interference from trees and other vegetation. Including control of invasive species that become established in the ROW as part of the ROW vegetation maintenance plan. Establishing native herbaceous species and shrubs or some low-growing trees that are considered desirable ground cover and valuable wildlife habitat along the ROWs in the project's vegetation management and revegetation plan. Maintaining a scrub habitat, dominated by low growing, bushy vegetation and young trees is preferable to mowing in forest habitats. It can provide quality habitat for wildlife species that are dependent on early successional habitat (birds, reptiles, and amphibians). 	Comment noted.

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Virginia Department of Health/Office of Drinking Water	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	As the infrastructure improvements at Fort Belvoir continue to be implemented, VDH-ODW recommends that a phased plan of development for the waterworks be developed and provided to the Culpepper Field Office, so that ODW can anticipate the needs and work to be conducted at Fort Belvoir.	Comment noted. American Water is responsible for coordinating activities with VDH-ODW.
Virginia Department of Historic Resources	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	DHR has been in consultation with the Army and its consultant regarding this project. The Army must continue to 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.	Fort Belvoir concurs; see Section 3.8
Fairfax County Department of Planning and Zoning/ Fairfax County Department of Public Works and Environmental Services	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	As with any project, county staff encourages that care be taken when working in sensitive environmental areas to minimize the unavoidable impacts of this proposed construction. In addition, DPWES recommends that the Army reuse the fully treated reclaimed water from the Fairfax County Norman M. Cole, Jr. Pollution Control Plant located in the vicinity of Fort Belvoir for uses such as cooling water, irrigation and/or others as allowed by the Virginia Water Reclamation and Reuse Regulations. The rationale for this is as follows: <ul style="list-style-type: none"> • Although more than 90% of the nitrogen and phosphorus is removed from the wastewater during the treatment process, the reclaimed water contains some amount of these nutrients. By reusing the reclaimed water for cooling and irrigation, the remaining amount of nutrients in the reclaimed water will not be discharged into the Pohick Creek, which ultimately conveys the water to the Chesapeake Bay. This will result in improving the water quality in the Chesapeake, which is deteriorated. The Environmental Protection Agency (EPA), DEQ, and local jurisdictions have been working closely to improve the water quality in the Chesapeake. • Reusing the reclaimed water for golf course and landscaping irrigation may reduce the need for fertilization due to the nutrients in the reclaimed water. • Reusing the reclaimed water will preserve drinking water supplies by lowering the demand. • Reusing the reclaimed water will result in reduced drinking water use at Fort Belvoir and lower water bills. Questions regarding the the county's comments may be directed to Fairfax County, Maya Dhavale at (703) 324-1355.	Use of reclaimed water from Noman Cole represents a separate and distinct action from the proposed actions analyzed in this Environmental Assessment. Fort Belvoir agrees that there are several beneficial aspects to reclaimed water use but it is outside the scope of this document and must be addressed separately.

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Northern Virginia Regional Commission	1	DEQ Coordinated Comments Letter with Federal Consistency Determination, Dated 1 August 2013	<p>Agency Findings. Staff of the Northern Virginia Regional Commission (NVRC) notes the EA states that, "it is clear that permanent impacts to RPAs and wetlands could lead to increased degradation of the perennial waters that these features are buffering from negative impacts." The anticipation of both short- and long-term impacts to wetlands, RPAs and floodplains requires further investigation and mitigation planning. Furthermore, the removal of forested habitat and both temporary and permanent displacement of wildlife, which could include some species of concern (small whorled pegenonia, wood turtle, peregrine falcon, northern Virginia well amphipod, and bald eagle), requires further input from state agencies such as OCR and DGIF.</p> <p>RECOMMENDATION: Based on the EA, NVRC recommends that the Army proceed with developing an Environmental Impact Statement (EIS), as opposed to a Finding of No Significant Impact (FONSI). The EA describes many potential environmental impacts which should be further reviewed by state, regional, and local agencies. An EIS would ensure that appropriate mitigation measures are fully explored and implemented. NVRC recommends that the Army prepare an EIS to comply with NEPA standards and practices.</p>	<p>Proposed wetland and surface water impacts (phase I) associated with six permanent stream crossings and 1 temporary stream crossing have been approved and permitted by Virginia Department of Environmental Quality, Virginia Marine Resources Commission and the Army Corps of Engineers – Baltimore District through the Joint Permit Application process. Total impacts (permanent and temporary) are approximately 920 square feet.</p> <p>It is anticipated that future streambank stabilization and restoration projects associated with aerial utility crossings will be submitted in a JPA to DEQ, VMRC and the Corps of Engineers – Baltimore District.</p> <p>Prior to construction, the USACE and State of Virginia will review final designs through the Joint Permit Application process to assess specific impacts to wetlands and RPAs. Although impacts to RPAs are expected from the Proposed Action Alternative, public utilities are allowable construction within designated RPA areas.</p> <p>Fort Belvoir's Environmental and Natural Resources Division has been working with DCR in performing surveys and documenting habitat for the Northern Virginia well amphipod for approximately 10 years. At this time, none of the proposed work associated with the water and wastewater utility upgrade will impact seep locations or habitat where the Northern Virginia well amphipod have been documented.</p> <p>Fort Belvoir has prepared this EA in accordance with NEPA-implementing regulations of the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508). Based on the findings of the EA, Fort Belvoir has concluded that implementation of projects to upgrade the water and wastewater system infrastructure at the installation, including replacement of water storage tanks, replacement of force mains, annual maintenance of gravity sewer mains (general maintenance), reinstallation of aerial stream crossings with streambank repair, and implementation of additional projects identified in Fort Belvoir's 2012 Annual System Deficiency Corrections, Upgrades and Renewal & Replacement Plan, is not expected to result in significant impacts on the environment; therefore, an environmental impact statement is not required.[40 CFR 1501.4(c)]</p>
Virginia Department of Environmental Quality	1	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	<p>Surface water and wetland impacts associated with this proposal may require a Virginia Water Protection Permit issued by the DEQ Northern Regional Office pursuant to Virginia Code §62.1-44.15:5. A Joint Permit Application may be obtained from and submitted to the Virginia Marine Resources Commission which serves as a clearinghouse for the joint permitting process involving the VMRC, DEQ, Corps, and local wetlands boards. For additional information and coordination, contact DEQ-NRO, Trisha Beasley at (703) 583-3940.</p>	<p>Proposed wetland and surface water impacts (phase I) associated with six permanent stream crossings and 1 temporary stream crossing have been approved and permitted by Virginia Department of Environmental Quality, Virginia Marine Resources Commission and the Army Corps of Engineers – Baltimore District through the Joint Permit Application process. Total impacts (permanent and temporary) are approximately 920 square feet.</p> <p>It is anticipated that future streambank stabilization and restoration projects associated with aerial utility crossings will be submitted in a JPA to DEQ, VMRC and the Corps of Engineers – Baltimore District.</p>
Virginia Department of Environmental Quality	2	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	<p>In accordance with §28.2-1203 of the Code of Virginia, a permit may be required from VMRC for impacts to state-owned subaqueous lands. A Joint Permit Application may be obtained from and submitted to the VMRC which serves as a clearinghouse for the joint permitting process involving the VMRC, DEQ, Corps, and local wetlands boards. For additional information and coordination, contact VMRC, Jordan Creed at (757) 247-2256.</p>	<p>Proposed force mains (LS 7350 to 687 and LS 1695) that will be bored under subaqueous land were submitted to VMRC and permitted by VMRC as part of the JPA.</p>

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Virginia Department of Environmental Quality	3	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	<p>COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade</p> <p>This project must comply with Virginia's Erosion and Sediment Control Law (Virginia Code 1 0.1-567) and Regulations (4 VAC 50-30-30 et seq.) and Stormwater Management Law (Virginia Code 10.1-603.5) and Regulations (4 VAC 3-20-210 et seq.) as administered by DEQ. Activities that disturb 2,500 square feet or more in areas analogous to Chesapeake Bay Preservation Areas would be regulated by VESCL&R and VSWML&R. Erosion and sediment control, and stormwater management requirements should be coordinated with the DEQ Warrenton Office at (540) 347-6420.</p>	Erosion and sediment control (ESC) best management practices (BMPs) would be used during demolition and construction. To be in compliance with the Virginia Erosion and Sediment Control Laws and Regulations and the Fort Belvoir Municipal Separate Storm Sewer System (MS4) Permit and procedures, construction contractors would be required to develop an ESC Plan because the project would disturb greater than 2,500 square feet. All construction activities would be conducted in adherence to approved Fort Belvoir erosion control guidelines.
Virginia Department of Environmental Quality	4	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	For projects involving land-disturbing activities of equal to or greater than 2,500 square feet in areas analogous to Chesapeake Bay Preservation Areas, the applicant is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (4 VAC-50 et seq.). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ, Holly Sepety at (804) 698-4039.	A Stormwater Pollution Prevention Plan would be developed and a Virginia Stormwater Management Program General Permit for discharges of stormwater and construction activities would be required of the contractor. Possible BMPs, such as erosion control matting, silt fencing, using storm drain outlet protection, stone check dams, construction exits, and temporary and permanent seeding, would reduce the potential for erosion from construction, construction activities, as well as from the slight possibility of wind erosion. All construction activities would be conducted in adherence to Fort Belvoir's MS4 permit.
Virginia Department of Environmental Quality	5	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	An inventory for the Northern Virginia well amphipod may be coordinated by contacting DCR-DNH, Rene Hypes at (804) 371-2708. With the survey results DCR-DNH can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.	Fort Belvoir's Environmental and Natural Resources Division has been working with DCR in performing surveys and documenting habitat for the Northern Virginia well amphipod for approximately 10 years. At this time, none of the proposed work associated with the water and wastewater utility upgrade will impact seep locations or habitat where the Northern Virginia well amphipod have been documented.
Virginia Department of Environmental Quality	6	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	This project must be consistent to the maximum extent practicable with the coastal lands management enforceable policy of the VCP as administered by DEQ through the Chesapeake Bay Preservation Act (Virginia Code §§ 62.1-44.15:67 through 62.1-44.15:78) and Chesapeake Bay Preservation Area Designation and Management Regulations (Virginia Code 9 VAC 1 0-20-10 et seq.). Activities in areas analogous to CBPAs are subject to the general performance criteria of 4 VAC 50-90-130 for activities in RMAs, 4 VAC 50-90-140 for activities in RPAs, and 4 VAC 50-90-150 2 pertaining to the exemption for the construction, installation and maintenance of water and sewer utilities and facilities. To ensure compliance with the Regulations the Army must to coordinate with DEQ, Daniel Moore at (804) 786-1518.	Prior to construction, the USACE and State of Virginia will review final designs through the Joint Permit Application process to assess specific impacts to wetlands and RPAs. Although impacts to RPAs are expected from the Proposed Action Alternative, public utilities are allowable construction within designated RPA areas.
Virginia Department of Environmental Quality	7	Federal Consistency Under the Coastal Zone Management Act, , Dated 1 August 2013	The installation of fuel burning equipment (e.g. boilers and generators), may require a permit (9 VAC 5-50-10 et seq. and 9 VAC 5-80-10 et seq.) prior to construction.	No boilers or generators are proposed to be installed as part of the proposed action.

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade				
Virginia Department of Environmental Quality	8	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	<p>federal, state, and local environmental regulations. Some of the applicable state laws and regulations are:</p> <ul style="list-style-type: none"> • 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 20-80); and • Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20- 11 0). <p>Some of the applicable federal laws and regulations are:</p> <ul style="list-style-type: none"> • Resource Conservation and Recovery Act (RCRA) (42 U.S.C. Section 6901 et seq.); • Title 40 of the Code of Federal Regulations; and • U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 CFR Part 1 07). <p>For additional information concerning location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered, contact DEQ-NRO, Richard Doucette at (703) 583-3813.</p>	Fort Belvoir concurs.
Virginia Department of Environmental Quality	9	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	Contact the Environmental Compliance Branch Chief, Directorate of Public Works, Environmental and Natural Resource Division at Fort Belvoir, Kelly Lease at (703) 806- 0020 for information concerning CERCLA obligations at Fort Belvoir. The Environmental Compliance Branch Chief or designee should be advised prior to initiating any land, sediment, or groundwater disturbing activities at or near Military Munitions Restoration Program range areas and Main Post and North Area Solid Waste Management Units.	Kelly Lease has been an integral part of preparation of the EA and will be advised prior to construction activities.
Virginia Department of Environmental Quality	10	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	It is the responsibility of the owner or operator to thoroughly inspect the parts of the facility where the upgrades will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). Contact the DEQ-DLPR (previously the Waste Management Program) for additional information, (804) 698-4021, and the Department of Labor and Industry, Ronald L. Graham at (804) 371-0444.	Comment noted.
Virginia Department of Environmental Quality	11	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	If applicable, this project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, David Dick at (804) 367-8588.	Comment noted.
Virginia Department of Environmental Quality	12	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	DEQ's petroleum contamination (PC) case files may identify petroleum releases that should be evaluated by the project engineer or manager to establish the exact location of the release, the nature and extent of the petroleum release, and the potential to impact the proposed project. The facility representative should contact the Tank Program at DEQ-NRO at (703) 527-5020 for further information and the administrative records of the PC cases which are determined to be in close proximity to the proposed project.	Fort Belvoir staff reviews plans during the planning stages to identify areas of petroleum contamination to allow the project to avoid such areas.
Virginia Department of Environmental Quality	13	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	An inventory for the Northern Virginia well amphipod may be coordinated by contacting DCR-DNH, Rene Hypes at (804) 371-2708. With the survey results DCR-DNH can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.	Known habitat capable of supporting the Northern well amphipod at the force main replacement from LSs 7350 to 687 in T-17. It is anticipated that no impacts to the Northern Virginia well amphipod would occur based on the assumption that bore pits would not be located in areas with seeps, where the amphipod is found.
Virginia Department of Environmental Quality	14	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	The Army should coordinate this project with DGIF, J.D. Kleopfer, Wildlife Diversity Biologist at (804) 829-6580 regarding the protection of the wood turtle should the species be encountered at the project site. Any relocations should be reported to DGIF and a wood turtle observation form should be completed and faxed to (804) 829-6788.	Known habitat capable of supporting the wood turtle has been surveyed in conjunction with the wetland delineation (2012-2013) for the project work area. No evidence or occurrences of wood turtle were observed. Any work to be performed in areas with known wood turtle habitat will be surveyed again after the installation of erosion and sediment control measures but prior to construction activities. See prior response to comment above.

Reviewer	Reviewer Comment #	Source of Reviewer Comment	Comment	Comment Response
Virginia Department of Environmental Quality	15	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	<p>COMMENT SUMMARY - Environmental Assessment for Water/Wastewater Utility Upgrade</p> <p>Army and/or NCPD evaluations of land use impacts on forest resources based on the policies identified in the Comprehensive Plan for the National Capital: Federal Elements (NCPC 2004) may be coordinated with DOF, Greg Evans at (434) 220-9020 and/or Buck Kline at (434) 220-9035.</p>	As noted in the EA, Section 3.1, the National Capital Planning Commission (NCPC) provides planning guidance for federal land and building in the National Capital Region through its document, Comprehensive Plan for the National Capital: Federal Elements (NCPC 2004). NCPC (Mr. Marcel Acosta, Executive Director) was afforded the opportunity to review this EA; to assess the Proposed Action's compatibility with federal planning goals, guidelines, and initiatives; and provide comments before a decision is made on the final action.
Virginia Department of Environmental Quality	16	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	Contact VDH-CFO, Robert Edelman, District Engineer at (540) 829-7340, to obtain a Construction Permit in accordance with the Virginia Waterworks Regulations and to discuss the project scope and details regarding the various phases of construction.	As noted in Section 4.3 of the EA, Fort Belvoir will obtain a Construction Permit for potable water.
Virginia Department of Environmental Quality	17	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	Contact DEQ-NRO, Bryant Thomas at (703) 583-3843 or Bryant.Thomas@deg.virginia.gov to ensure compliance with the Sewage Collection and Treatment (SCAT) Regulations, as applicable.	As noted in Section 4.3 of the EA, Fort Belvoir will prepare and submit permit applications and other information needed for water and wastewater utility system work to Virginia. All applicable all applicable federal, state, and local laws and regulations will be adhered to.
Virginia Department of Environmental Quality	18	Federal Consistency Under the Coastal Zone Management Act, Dated 1 August 2013	The Army must coordinate with DHR regarding potential project impacts to historic resources to ensure compliance with Section 106 of the NHPA. For additional information and coordination, contact DHR, Roger Kirchen at (804) 482-6091.	Fort Belvoir concurs. The analyses of impacts on cultural resources that are presented in this section respond to the requirements of both NEPA and Section 106 of the NHPA, although the Section 106 compliance is being handled separately. The diversity and scope of these projects requires that Section 106 be conducted separately for each undertaking. See Section 3.8 of the EA.