



FEMA

FINDING OF NO SIGNIFICANT IMPACT

Addison-Evans Water Production and Laboratory Facility Floodwall and Stream Enhancement Project

Chesterfield County, Virginia

PDMC-PJ-03-VA-2018-008

BACKGROUND

Chesterfield County has applied through the Virginia Department of Emergency Management to the Federal Emergency Management Agency (FEMA) for a grant under the Pre-Disaster Mitigation Grant (PDMG) program, authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, U.S. Code (U.S.C.) § 5133. The PDMG program is designed to assist states, territories, federally recognized tribes, and local communities in implementing a sustained pre-disaster, natural hazard mitigation program. The program goal is to reduce overall risks to the population and structures from future hazard events, while reducing reliance on federal funding in future disasters. FEMA requires that the state, local, territorial, and tribal governments develop and adopt a hazard mitigation plan as a condition for receiving funding for PDMG projects. These grants are funded annually by congressional appropriations and are awarded on a nationally competitive basis. Chesterfield County's floodwall and stream enhancement at the Addison Evans Water Production and Laboratory Facility (AEWPLF) project was selected under the PDMG program during the 2018-year cycle, Project ID: PDMC-PJ-03-VA-2018-008.

In accordance with FEMA Directive 108-1 and FEMA Instruction 108-1-1, this Environmental Assessment (EA) has been prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ) in 40 Code of Federal Regulations (C.F.R.) Parts 1500-1508. This Environmental Assessment has been prepared to analyze the potential environmental consequences associated with the proposed project and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

Recent changes to the CEQ regulations implementing NEPA became effective on September 14, 2020. 85 Fed. R. 43304-76 (July 16, 2020). As stated in 40 C.F.R. § 1506.13, the new regulations apply to any NEPA process begun after September 14, 2020. This EA substantively commenced prior to that date; therefore, this EA conforms to the CEQ NEPA implementing regulations that were in place prior to September 14, 2020, and procedures adopted pursuant to Department of Homeland Security Directive 023-01, Rev. 01, and FEMA Directive 108-1.

The purpose of the proposed project is to protect the AEWPLF from floodwaters and mitigate potential damages, financial burden, shutdowns, and risks to on-site employees as experienced in

past flood events. As the AEWPLF is located immediately below the spillway of the Swift Creek Reservoir and is within the FEMA Floodplain for Swift Creek, the facility suffers from frequent minor flooding and less frequent but significant major flooding events. Even during “normal” heavy rainfall, the Site topography causes water to pool in areas south and west of the facility, further inundating the floodplain and limiting the flow capacity and ability to move water downstream away from the facility. During high-flow discharges from Swift Creek Reservoir, water overwhelms the banks of the creek and impacts the facility. Flooding, minor and catastrophic, disrupts operations at the AEWPLF and reduces or eliminates the County’s ability to supply drinking water to its customers from this facility, requiring water to be purchased under existing wholesale agreements from alternative sources at a higher cost. Minor flooding events can shut down the AEWPLF for 1-3 days, while major flooding events can put the facility offline for a week and a half or longer depending on the severity of the damage.

In accordance with federal laws and FEMA regulations, the EA process for a proposed federal action must include an evaluation of alternatives and a discussion of the potential environmental impacts. This EA was prepared in accordance with FEMA’s regulations as required under NEPA. As part of this NEPA review, the requirements of other environmental laws and executive orders were addressed. This EA informed FEMA’s decision on whether to prepare an EIS or a FONSI.

Alternatives discussed in this EA include no action, the proposed action, and additional alternatives considered and eliminated from further consideration.

Under the No Action Alternative, a floodwall would not be constructed, and stream enhancement would not occur. Following completion of repairs from recent flood events, the AEWPLF would continue to operate at risk of future shutdowns due to flooding. Operations and equipment storage would remain consistent with current activities. Risks to human health and safety would not be mitigated.

Under the Proposed Action a floodwall would be constructed around the perimeter of the operational area and stream enhancement would occur in the Swift Creek floodplain to improve capacity and flow. The floodwall will provide flood protection along the perimeter of the north, south, and west sides of the facility tying into high ground on the east. The total length of the floodwall will be about 2,000 feet with the top of the wall set at elevation 178.5 feet, providing 3.5 feet of freeboard on top of the 100-year flood elevation, which is 175 feet (NGVD29 per FEMA FIRM 51041C0117D). The floodwall will be 16 feet high on average. Steel flood gates will be installed at the main entrance to the facility and on the access road to the dam which will be normally open to allow vehicle access in and out of the site. A stormwater pumping station and an improved stormwater collection system will be constructed to discharge interior drainage flows from inside of the floodwall. A check valve will allow normal storm flows to discharge to the existing riprap and concrete drainage channel and Swift Creek during “normal” rainfall events. During heavy rainfall events when Swift Creek overflows its banks the check valve will close, and interior drainage flows will be diverted to the pump station to discharge over the floodwall. Stream enhancement will include reducing the amounts of heavy vegetation and debris located within the stream channel and overbank areas of Swift Creek to help improve the conveyance of waters in the floodplain. Vegetation removal would include cutting trees to ground surface, trimming branches, and removing scrub-shrub and dead or downed vegetation and debris. By building the floodwall in conjunction with stream enhancement, the level of protection for the AEWPLF and the surrounding area will be increased.

A public notice was published in the local newspaper of record, the *Chesterfield Observer Newspaper*, and posted on FEMA's website at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/3>. The draft EA was available on FEMA's website for a 30-day public review and the comment period ran from June 9 to July 9, 2021. No comments were received during the 30-day public comment period.

FINDINGS

The Proposed Action would not affect threatened and endangered species, zoning and land use, visual resources, historic and cultural resources and archaeological resources. During construction, short-term impacts to geology and soils, water resources and water quality, air quality, terrestrial and aquatic environment, migratory birds, noise, and traffic and circulation are anticipated. The project would be required to follow all applicable restrictions and regulations and implement best management practices (BMPs) during construction to minimize and mitigate adverse impacts to resources.

The Proposed Action would have long-term beneficial impacts on hazardous materials, floodplain management, drinking water, public service and utilities, and safety and security. There would be minor long-term impacts to aquatic resources, however they would be minimized by complying with permit condition and utilizing BMPs, as well reduced sedimentation in the aquatic resources. No other long-term adverse impacts are anticipated. Because frameworks are in place to manage potential environmental impacts, no significant impacts are anticipated from the reasonably foreseeable environmental trends and planned actions near the Proposed Action Alternative project site.

CONDITIONS

The following conditions must be met as part of this project. Failure to comply with these conditions may jeopardize the receipt of federal funding.

1. Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
2. This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.
3. If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.
4. The applicant is responsible for obtaining and complying with all required local, State and Federal permit and approval processes.
5. The applicant will monitor ground disturbance during the construction phase; should human skeletal remains, or historic or archaeological materials be discovered during construction, all ground-disturbing activities on the subject property shall cease and the applicant shall notify the coroner's office (in the case of human remains), FEMA, and the State Historic Preservation Office.

6. If deviations from the proposed scope of work result in substantial design changes, the need for additional ground disturbance, additional removal of vegetation, or any other unanticipated changes to the physical environment, the applicant must contact FEMA so that the revised project scope can be evaluated for compliance with NEPA and other applicable environmental laws.
7. The applicant/contractor must coordinate with the local floodplain administrator to receive a permit to conduct any activities that would occur within the Special Flood Hazard Area.
8. Erosion controls will be in place prior to any ground disturbing activity.
9. Work must be conducted in the fashion it is proposed in any permit applications. Changes to project design that would alter determinations presented in the EA would require reopening consultations with regulatory agencies.
10. Heavy machinery and equipment to be used for the proposed action will meet federal clean air standards. In addition, all equipment used shall have sound control devices no less effective than those provided on the original equipment. No equipment shall have un-muffled exhaust.
11. All equipment shall comply with pertinent equipment noise standards of the USEPA.
12. Aquatic resources impacts would be permitted through the Virginia Joint Permit Application process to apply for permits through the Norfolk District U.S Army Corps of Engineers (USACE), Virginia Department of Environmental Quality (VDEQ), and the Virginia Marine Resources Commission (VMRC). It is anticipated that the following permits would be required:
 - a. USACE Nationwide Permit (NWP) 27 – Aquatic Habitat Restoration, Enhancement and Establishment Activities. All work authorized under USACE NWP 27 must be performed in compliance with the General Conditions of the NWPs and if applicable, any Regional General Conditions, and Special Conditions of the permit. This NWP has no limits to the impacts and compensatory mitigation is not required.
 - b. USACE NWP 33 – Temporary construction, Access, and Dewatering. All work authorized under USACE NWP 33 must be performed in compliance with the General Conditions of the NWPs and if applicable, any Regional General Conditions, and Special Conditions of the permit. This NWP has no limits to the impacts and compensatory mitigation is not required.
 - c. USACE NWP 43 – Stormwater Management Facilities. All work authorized under USACE NWP 43 must be performed in compliance with the General Conditions of the NWPs and if applicable, any Regional General Conditions, and Special Conditions of the permit. This NWP has a ½ acre impact limit; however, district and division engineers have been delegated a discretionary authority to modify authorizations under an NWP. Compensatory mitigation credits would be purchased from an approved mitigation bank.
 - d. VDEQ Water Quality Certification through the Virginia Water Protection Permit Program serves as Virginia’s Section 401 certification program for federal Section 404 permits issued under the authority of the Clean Water Act. Compensatory mitigation credits would be purchased from an approved mitigation bank.

- e. VMRC Habitat Permit - Subaqueous or Bottomlands. If required, compensatory mitigation credits would be purchased from an approved mitigation bank.
- f. Virginia Pollutant Discharge Elimination System General Permit VAR-10 authorizes discharges of stormwater from construction activities.
- g. Land Disturbance Permit - Chesterfield County
- h. Site Plan Permit – Chesterfield County
- i. Building Permit -Chesterfield County
- j. Buffer Modification Permit for Encroachment into Resource Protection Areas (Chesapeake Bay Preservation Area) – Chesterfield County
- k. Floodplain Encroachment Permit - Chesterfield County

CONCLUSION

Based on the findings of the EA, coordination with the appropriate agencies, comments from the public, and adherence to the project conditions set forth in this FONSI, FEMA has determined that the proposed project qualifies as a major federal action that will not significantly affect the quality of the natural and human environment. As a result of this FONSI, an EIS will not be prepared (FEMA Instruction 108-1-1) and the proposed project as described in the attached EA may proceed.

APPROVAL

Tessa Nolan
Regional Environmental Officer
FEMA Region 3

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