

ENVIRONMENTAL ASSESSMENT
FOR
ESTABLISHMENT OF A CROSSING AT CANNON CREEK AND RE-ESTABLISHMENT
OF A PERIMETER TRAIL IN TRAINING AREAS 7A AND 9C
AT
MARINE CORPS BASE QUANTICO,
Stafford County, Virginia



National Environmental Policy Act (NEPA) Coordination Program,
Environmental Planning Section,
Natural Resources and Environmental Affairs Branch
Installation and Environment Division
Marine Corps Base Quantico, Virginia

2017



Proposed Agency Action: Establish a Crossing at Cannon Creek
and Re-establish a Perimeter Trail, Marine Corps Base
Quantico, Virginia

Type of Statement: Environmental Assessment

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Abstract: This Environmental Assessment is intended to meet NEPA requirements to Establish a Crossing at Cannon Creek and Re-establish a Perimeter Trail in Training Areas 7A and 9C at Marine Corps Base Quantico, VA. The No Action Alternative (Alternative A) and the Action Alternative (Alternative B) were evaluated. Alternative A would have no adverse effects on cultural/natural resources or the human environment as the status quo would be maintained.

Alternative B - Establishing a Crossing and Cannon Creek and Re-establishing a Perimeter Trail in Training Areas 7A and 9C would cause no significant impacts to land use, water resources, biological resources, air quality, noise, infrastructure, traffic, socioeconomic, or hazardous waste issues. Temporary water quality impacts associated with soil disturbance resulting from tree clearing activities would be mitigated through appropriate Erosion and Sediment Control measures per the Virginia Erosion and Sediment Control Handbook.

Alternative B is the preferred action and, if the stated mitigation measures are executed, would not have significant impacts on the human environment.

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

This environmental assessment (EA) has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969; regulations of the Council on Environmental Quality (CEQ) 40 Code of Federal Regulations (C.F.R.) parts 1500-1508; and Marine Corps Order (MCO) P5090.2A Ch. 3, which documents the US Marine Corps' (USMC) internal operating instructions on how to implement NEPA. This EA is intended to meet NEPA requirements for the establishment of a crossing at Cannon Creek in Training Area 7A and the re-establishment of a 3.3 miles long trail along the southern perimeter of the base in TA 7A and 9C, terminating at Range 6 at Marine Corps Base Quantico (MCBQ).

CEQ regulations for implementing NEPA (40 C.F.R. part 1500) require documentation that succinctly describes the environment of the area or areas potentially affected by the alternatives being considered under the proposed action, and discusses the impacts in proportion to their significance.

This EA also satisfies 36 C.F.R. part 800.6(a) which states that a federal agency when presented with the potential of an adverse effect as a result of its undertaking must "develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties."

1.1 Background

MBCQ proposes re-establishing an existing trail along the southern perimeter of Training Area (TA) 7A and 9C. The trail will consist of aggregate (gravel) and terminate at Range 6. The proposed action also involves the installation of a culvert to establish a crossing to connect two existing trails at Cannon Creek in TA 7A and 9C. The trail will be required to be a minimum of 20 feet in width, include turnouts, culverts, and will be utilized as a firebreak.

1.2 Need for the Proposed Action

Many of the trails located in both TA 7A and 9C have not been utilized or maintained for 30 years. As a result, there has been significant growth of vegetation, soil, depressions as well as dead and overgrown trees on this infrastructure. Other damage present on the trails includes rutting and potholes due to a lack of maintenance. Several areas of the trail are too narrow and cannot accommodate military vehicles, or function as

a firebreak. To correct the deficiencies in these locations, the trail will need to be widened to a minimum of 20 feet in order to accommodate military vehicles and meet the minimum requirements for a firebreak. Several areas along the trail re-establishment footprint in TA 9C have experienced significant erosion and ponding due to the trail being located downslope and having high amounts of runoff. Also, an intermittent stream occurs near the western terminus of the trail at Range 6. To ensure that water flows effectively in many of these areas of concern, an estimated total of between five and seven culverts will need to be installed along the proposed trail re-establishment footprint including over the intermittent stream.

MCBQ Range Management Branch desires to re-establish the Perimeter Trail in TA 7A and 9C and Cannon Creek crossing to:

1. Safely transport Marines to ranges while keeping military vehicles and personnel within the boundaries of the TA.
2. Allow Marines to effectively provide security along the perimeter of the base.

Currently, Marines have to utilize Garrisonville Road (Virginia State Route 610) while accessing ranges near this location. According to the VA Department of Transportation and the government of Stafford County, VA, Garrisonville Rd. is expected to see a 45% increase in motor vehicle traffic over the next twenty years (2017-2037). Stafford County, VA is currently widening a one mile section between Onville Rd. (Virginia State Route 641) and Eustace Rd. (Virginia State Route 751) from a four lane roadway into a six lane roadway. This proposed action would ensure the safety of both Marines and civilians traveling in this area by removing military vehicles from the highway while protecting MCBQ from liability. The re-establishment of the Perimeter Trail in TA 7A and 9C and the Establishment of the Cannon Creek crossing will allow Marine Corps personnel to also effectively patrol and secure the perimeter of MCBQ. The proposed action also follows the guidance outlined in Marine Operations (MO).3 of the MCBQ Joint Land-Use Study (JLUS) that was completed in 2014 in cooperation with Stafford, Prince William, and Fauquier Counties in VA. MO.3 states:

"Pursue funding or other options as available to provide an on-base ordnance route to reduce the safety impacts of transporting military ordnance and personnel off-base on civilian roads." - MCBQ JLUS, 2014

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative A - No Action

Under the no action alternative, the conditions of the perimeter trail would remain the same. There would not be a crossing established at Cannon Creek and the area would remain in its natural state. Garrisonville Road would still be utilized in this location by Marine Corps personnel and vehicles.

2.2 Alternative B - Construct a Crossing Across Cannon Creek and Re-establishment of Perimeter Trail Leading to Range 6 in TA 7A and 9C

A crossing at Cannon Creek would be established to connect two existing trails in TA 7A. A perimeter trail along the southeast boundary of TA 7A and 9C that begins at SR 643 and terminates at Range 6 would be re-established (See Figures 2.1, 2.2, and 2.3.). Tree removal would be performed to widen the trail to the necessary 20 feet minimum needed for vehicle access as well as to allow the trail to function as a firebreak. A crossing consisting of a two barreled culvert that contains a total of two 8 feet X 20 feet steel pipes will be established over Cannon Creek. The design will include headwalls, wingwalls and an apron constructed from gabion and rip-rap. The crossing will also consist of a 12 foot X 100 foot long trail passing over the culvert that would connect two trail segments.

2.3 Alternatives Eliminated from Further Consideration

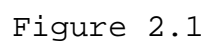
2.3.1 Tank Trail Repair Project

The plan to upgrade the perimeter trails was first conceived in 1999. From 1999-2012, the plan, referred to the Tank Trail Repair Project, was designed and re-designed multiple times. Initially, the Tank Trail Repair Project consisted of seven phases. The first phase of the project, completed in 2007, improved a segment of Washboard Road and a trail from the Washboard Road gate near Camp Barrett to SR 643 in TA 7B. The remaining five phases of the project consisted of:

- Repairing 12 miles (57.6 acres) of trails in TAs 7A, 7B, 9B, 9C, and 13 (also included the construction of a new trail segment in TA 7A).
- Repairing 13 miles (62.4 acres) of trails in TAs 9A, 14A, 14B, 15A, 15B, and 15C.

- Repairing 12 miles (57.6 acres) of trails in TAs 6B, 11A, and 11B.
- Repairing 10 miles (48 acres) of trails in TAs 10A, 10B, 10C, and 11C.
- Repairing a total of 13 miles (62.4 acres) of trails in TAs 8, 16A, 16B, 16D, 16E, and 16D.

After further investigation, it was determined that implementing this proposed action was unnecessary and not feasible. First, it was determined that MCB-3 and the 617 Tank Trail could efficiently move Marines and military vehicles through the central portion of the Westside area of the base. This eliminated the need for a significant portion of the project. Second, the amount of environmental regulatory compliance and the overall cost as well as the funding necessary to implement this alternative was deemed to be excessive. As a result, this alternative was dismissed from further consideration.



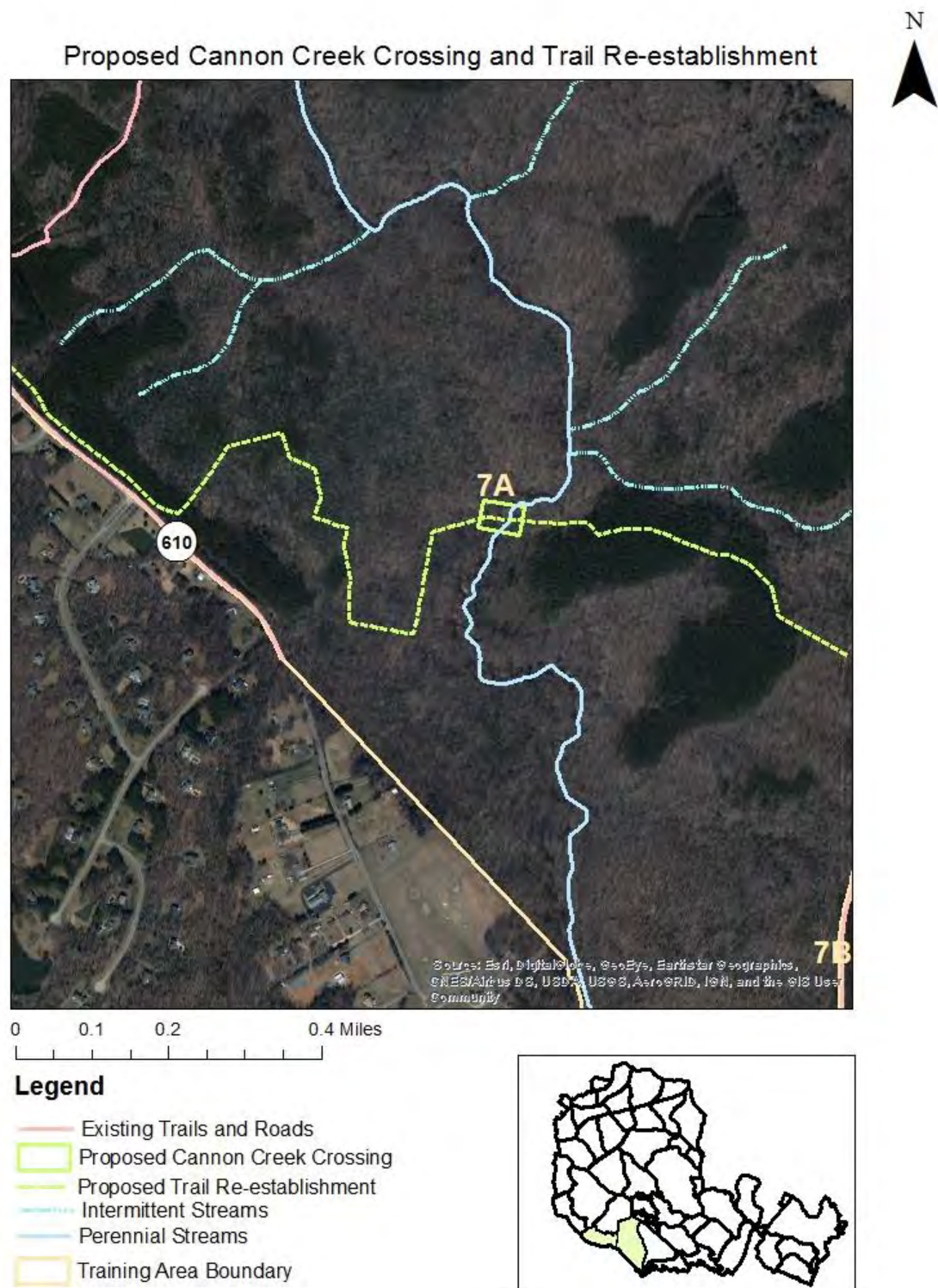


Figure 2.2

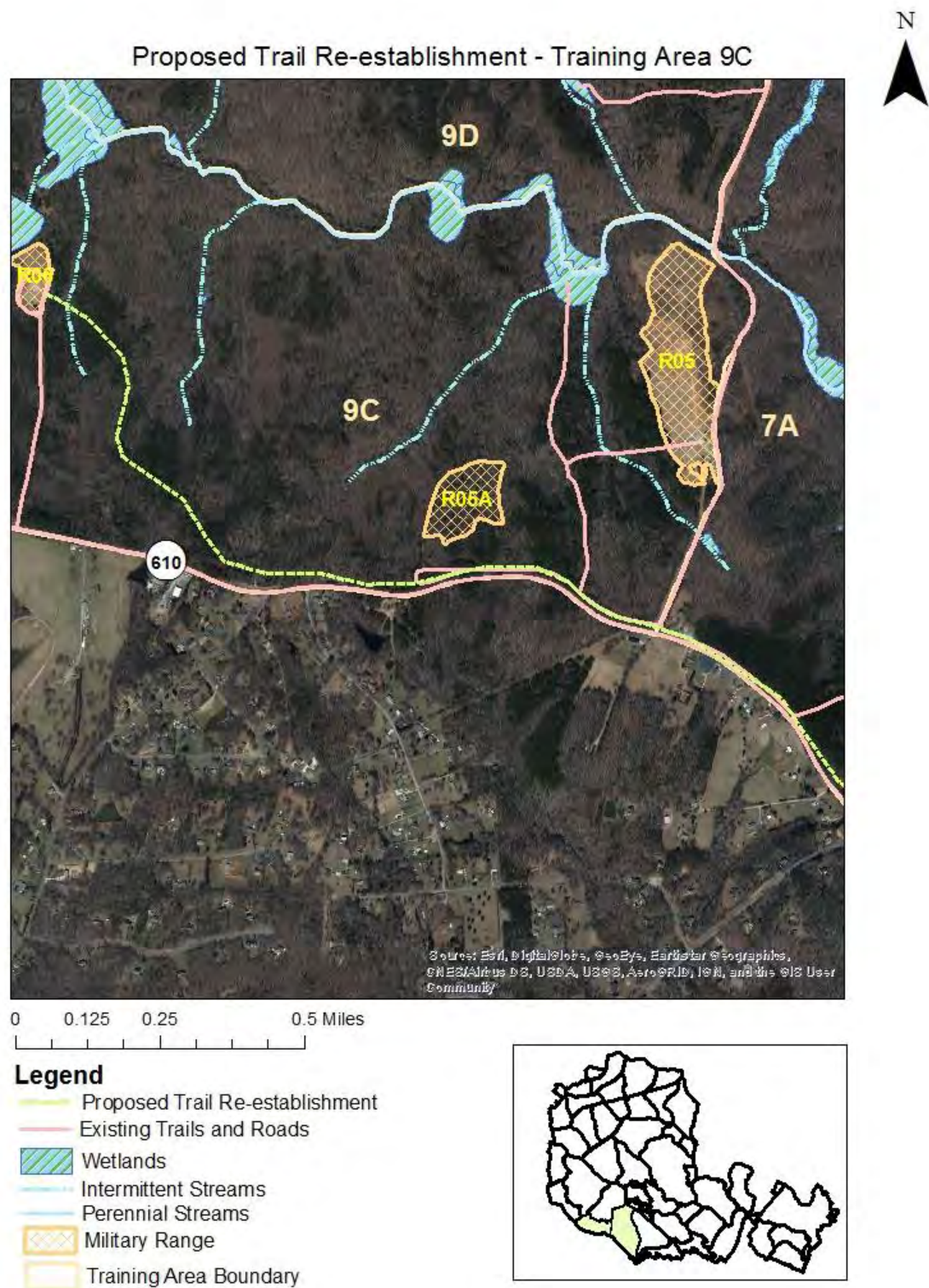


Figure 2.3

3.0 Existing Environmental Conditions

CEQ regulations for implementing NEPA (40 C.F.R. part 1500) require documentation that succinctly describes the environment of the area or areas potentially affected by the alternatives being considered under the proposed action, and discusses the impacts in proportion to their significance.

Both alternatives under consideration for this proposal are located at TA 7A and 9C within the Westside at MCBQ, in Stafford County, VA. The existing environmental conditions described in this section will be the same for all alternatives.

3.1 Land Use

MCBQ is divided into two areas; Mainside, 6,000 acres east of Interstate 95 and U.S. Route 1, and Westside (Guadalcanal), 53,200 acres west of the same highways. Both of the proposed action locations would be initiated within the Westside portion of the base. The proposed Cannon Creek crossing and proposed perimeter trail re-establishment is located within TA 7A and 9C of the MCBQ Westside. TA 7A is heavily forested and the primary land-use is maneuver training and land navigation. TA 9C is also heavily forested, supports maneuver training and consists of three ranges: Range 5, Range 5A, and Range 6. Range 5 serves as an Automated Infantry Squad Battle Course. This course is used to train and test teams and squads on the necessary skills needed to identify, engage and defeat moving targets in tactical scenarios. The range has a total of six firing points, bleachers and a control tower.

Range 5A is an inactive range that has historically served as a small-arms firing range. Range 6 is currently inactive, however it is expected to be re-activated to support small arms training in the future. The most notable feature of this range is the Range 6 pond, a recreational fishing pond that is located on the northwest side of the range. These areas, which include the proposed action locations, are all located within the non-dudded impact area of MCBQ.

3.1.1 Geology

The proposed action would occur within the Westside portion of the base, which lies in the Coastal Plain geologic region. The region consists of Mesozoic and Cenozoic marine sediments, some consolidated into sandstone and marl. The project area is specifically within the Patapsco formation, which dates to the

Cretaceous Period at the end of the Mesozoic Era. It is comprised of sand and clay from shallow aquatic deposits, which cover Pre-Cambrian crystalline rock with a thickness of approximately 150 feet. These deposits are generally unconsolidated.

3.1.2 Soils

The soils found in the Coastal Plain are the result of the soil formation on the underlying sediments. The dominant soil type located at the proposed Cannon Creek crossing location is referred to as the Wehadkee very fine sandy loam. These soils are comprised of alluvium material, have 0-2% slopes, are found in floodplains, and are poorly drained. The coefficient for runoff of these soils is also very high. The Ashlar fine sandy loam occurs in a small area of the northwest portion of the footprint. This soil type is found on hillslopes and is steeply-sloped but very well-drained. Lastly, the State fine sandy loam, found on the southeast portion of the footprint is 0-4% slopes, is very well drained, and found in stream terraces. The soil types that are present within the 3.3 mile trail segment in TA 7A and 9C designated to be re-established, include the Appling Soils, Meadowville Silt Loam, Alluvial Land, Cecil Soils, State Fine Sandy Loam, Wehadkee very fine Sandy Loam, and Previously Disturbed Soils. These soils occur at various locations throughout the proposed trail re-establishment footprint.

The Alluvial Land Fine Sandy Loam (wet) has 0-6 % slopes and is poorly drained. The soils are found primarily in floodplains. The Meadowville Silt Loam, has 0-4% slopes is very well drained and is commonly found in drainageways. Appling Soils have slopes ranging from 2-12%. These soils are commonly found on hillslopes and are very well-drained. Cecil Soils, though slightly eroded, are found on hillslopes, and also have very good drainage characteristics.

Soils that are prone to ponding, flooding or have poor load-bearing characteristics can cause problems during and after any type of road establishment or excavation work is performed. It may also lead to structural damage in the future. A summary of these soils and their limitations is discussed within Appendix B.

3.1.3 Topography

The terrain of the proposed Cannon Creek crossing location consists of a mostly undisturbed natural landscape. On the east and west sides of the proposed crossing are former trails which will be re-established as part of the proposed action. These trails will be connected by the proposed Cannon Creek crossing. The location of the crossing has an elevation of 210 feet. The topography has a moderate gradient and increases roughly 10 feet to 220 feet in all directions within the site footprint. The topography of the proposed trail re-establishment footprint has an elevation of 290 ft. at the eastern edge of the trail, drops to 210 ft. at Cannon Creek, gradually increases through rolling terrain, and is about 310 ft. above sea level at its western terminus. The topography of the proposed Cannon Creek crossing and perimeter trail re-establishment is summarized in Figures 3.1.1 and 3.1.2.

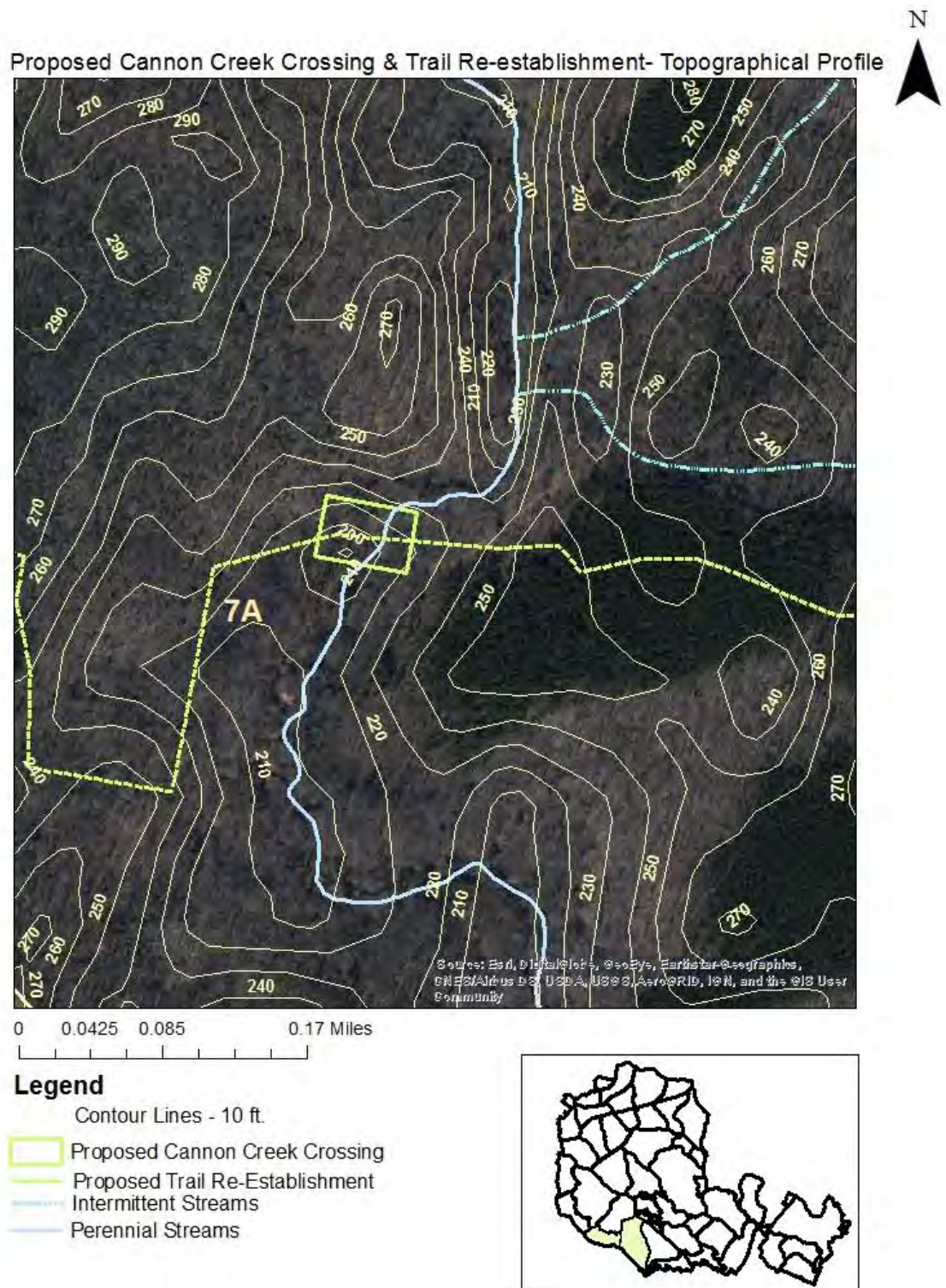


Figure 3.1.1

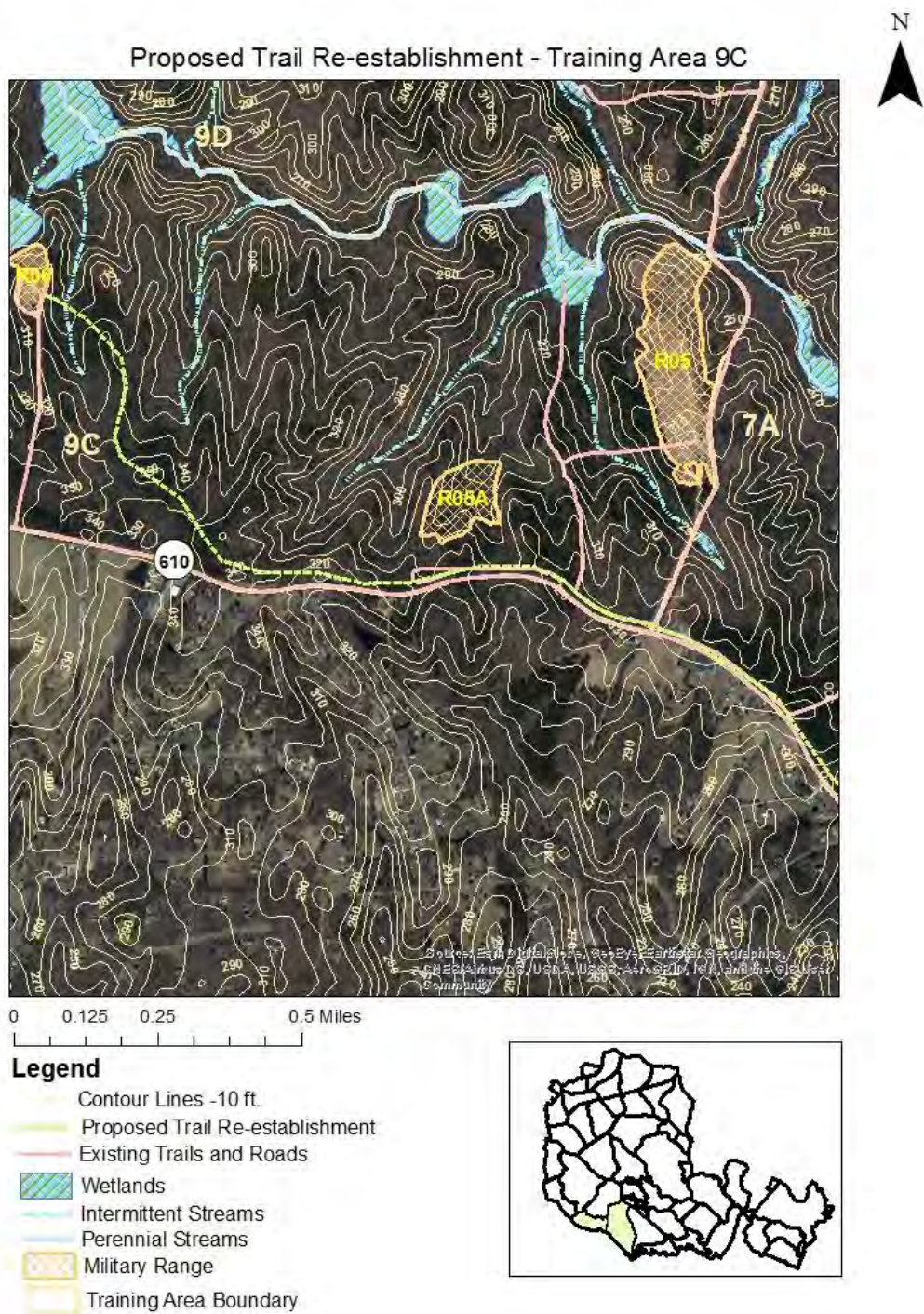


Figure 3.1.2

3.2 Water Resources

Due to the rugged upper Coastal Plain topography and proximity to various water bodies, activities conducted on the base could potentially affect the water resources of the area.

Activities in surface waters (including streams) and wetlands are regulated under numerous federal laws, regulations, and policies. The proposed action would be bound by the following:

- The Clean Water Act (CWA), 33 U.S.C. §1344 (Section 404) requires a permit from the US Army Corps of Engineers for the discharge of dredged or fill material in to "waters of the US", a term that includes most streams, wetlands, and ponds.
- Executive Order (E.O.) 11990, *Protection of Wetlands*, requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.
- Department of the Navy "no net loss" policy, for implementing E.O. 11990.

The Commonwealth of Virginia also regulates streams and wetlands that are considered "waters of the state" through a number of laws and provisions. Any action that requires a federal Section 404 permit may also require a water quality certification per CWA 33 U.S.C. §1341 (Section 401) from the Virginia Department of Environmental Quality (VDEQ) and, under certain circumstances, the Virginia Marine Resources Commission.

In 1988, Virginia enacted the Chesapeake Bay Preservation Act (CBPA), Code of Virginia, Title 10.1-Conservation, Chapter 21. This Act established a cooperative program between state and local governments to improve water quality in the Bay by requiring resource management practices in the use and development of environmentally sensitive land features. As defined by the CBPA, Resource Protection Areas (RPA) are buffer zones that include all areas within 100 feet of a tidal wetland, contiguous non-tidal wetlands, or perennial streams. Other areas are designated as Resource Management Areas (RMA). The RMA includes the 100-year floodplain, highly erodible soils, highly permeable soils, and non-tidal wetlands that are not part of an RPA. The Department of Defense (DoD) is a signatory to an agreement supporting the CBPA and its associated regulations and will comply to the maximum extent possible consistent with the military mission and budget constraints.

3.2.1 Surface Waters

Cannon Creek is a tributary of Aquia Creek. Cannon Creek flows in a southeasterly direction from the western portion of MCBQ before reaching its terminus at Aquia Creek just beyond the base boundary. The proposed Cannon Creek crossing lies in the south-central portion of TA 7A. Several intermittent streams that serve as tributaries to Cannon Creek lie to the north and west of the proposed crossing. The proposed perimeter trail re-establishment crosses an intermittent stream that is part of the Cannon Creek watershed near its terminus at Range 6.

3.2.2 Wetlands

Although there are no actual or potential wetlands that exist at the proposed Cannon Creek crossing footprint, there are potential wetlands that may occur less than 0.5 miles south of the proposed action location. The proposed re-established perimeter trail location does not contain any potential or actual wetlands according to information from the National Wetlands Inventory (NWI).

3.2.3 Floodplains

Executive Order 11988 (1977), *Floodplain Management*, requires federal agencies to take action to minimize occupancy and modification of floodplains. The order specifically prohibits federal agencies from funding construction in the 100-year floodplain unless no practicable alternative exists.

The area of the proposed Cannon Creek crossing is depicted on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) number 5101540126E, panel 126 of 280. The FIRM shows the proposed Cannon Creek crossing inside of Flood Zone A but the section of the proposed trail upgrades is outside of Flood Zone A at this location (See Figure 3.2.1 and Figure 3.2.2). The western portion of the proposed perimeter trail re-establishment location in TA 9C is depicted on the FEMA Flood Insurance Rate Map (FIRM) number 5101540020E, panel 20 of 280 (See Figure 3.2.3). This portion of the proposed trail re-establishment is in an area of minimal flood risk and is outside of a 100-year floodplain (See Figure 3.2.4).

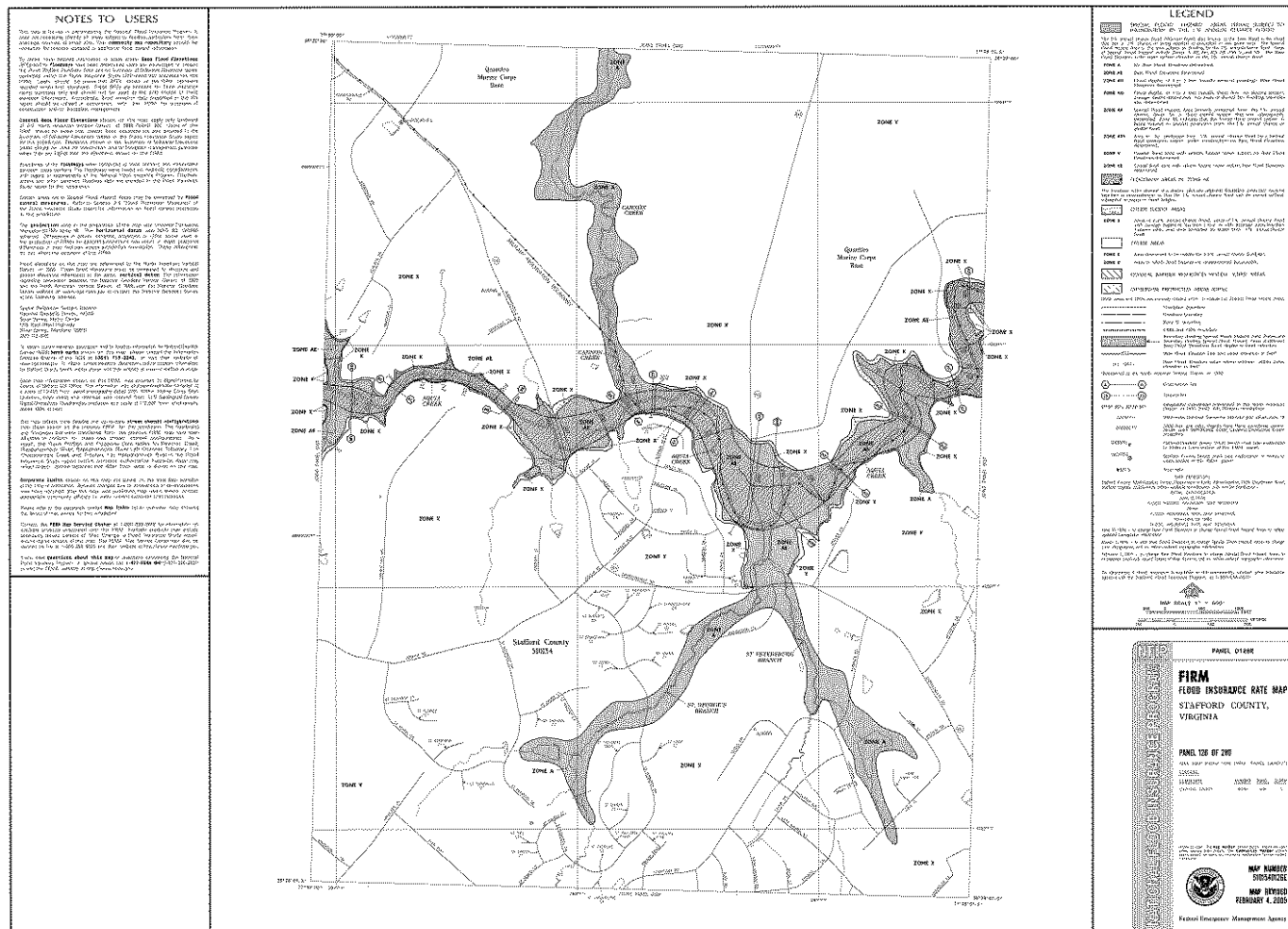


Figure 3.2.1

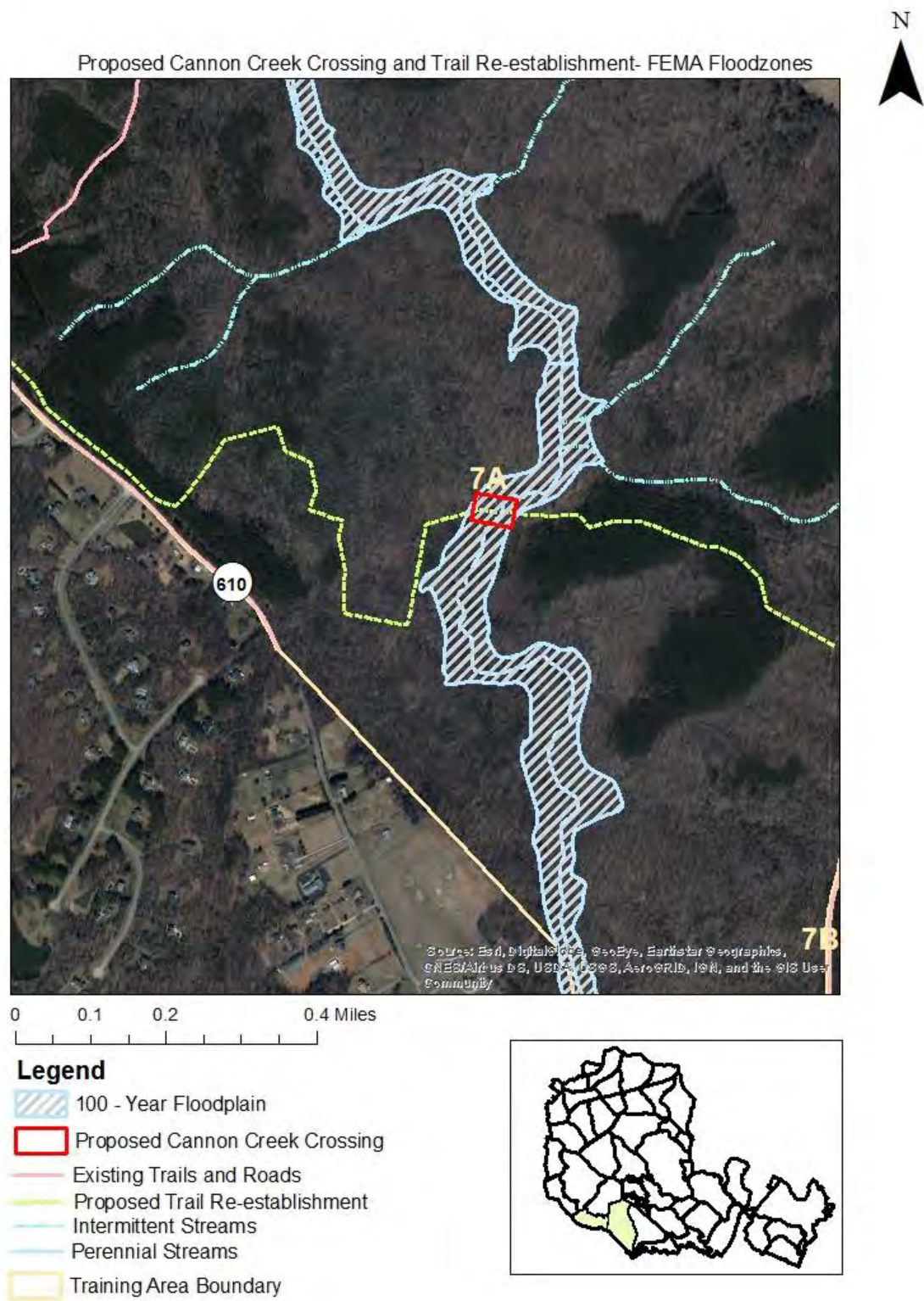


Figure 3.2.2

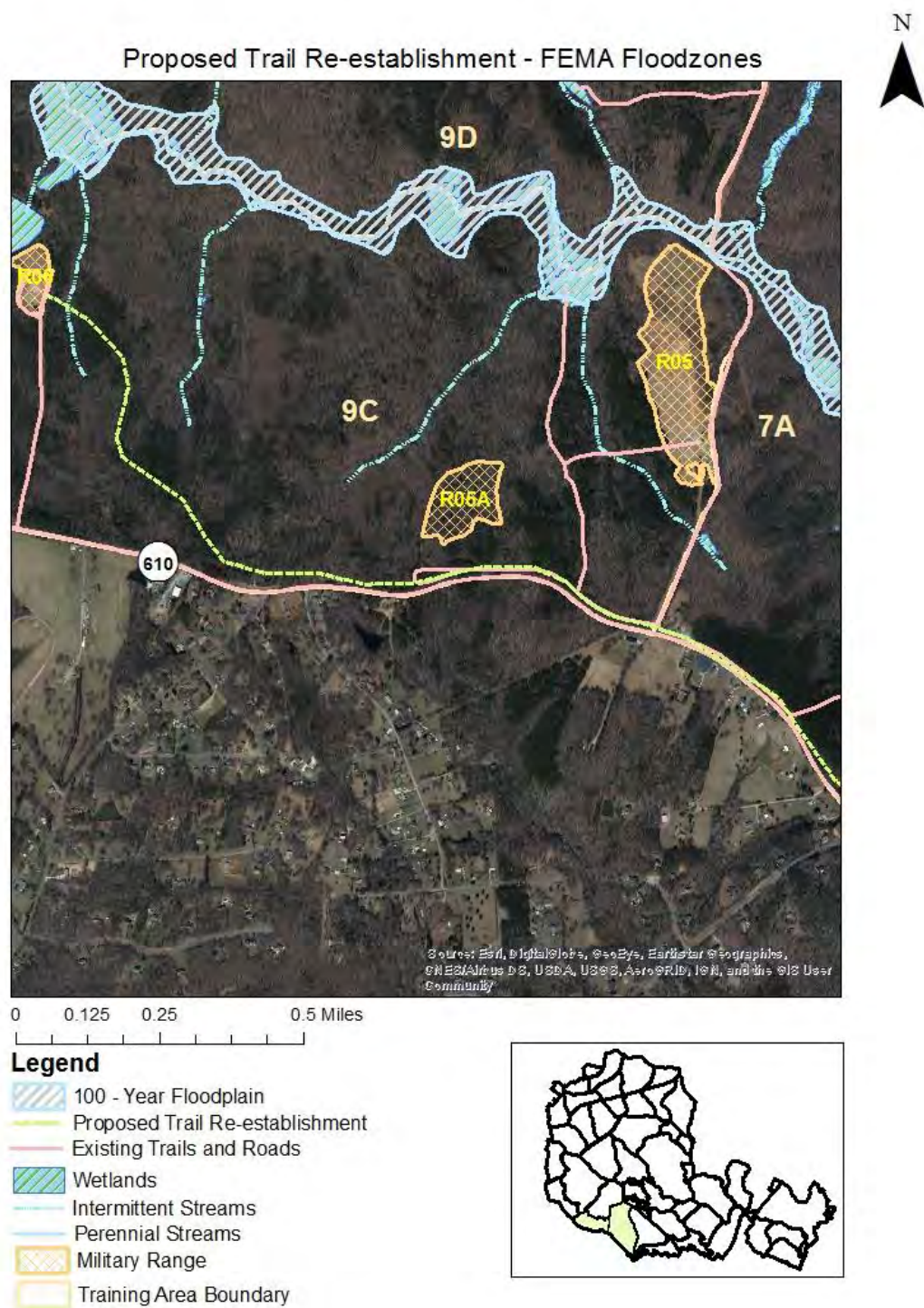


Figure 3.2.4

3.2.4 Groundwater

The Potomac Aquifer extends from New Jersey in the north, to North Carolina in the south, and eastward under the Chesapeake Bay. The MCBQ lies within this aquifer. In this aquifer water can be reached at depths between 200 and 350 feet. One of the largest surface recharge areas for the Potomac Aquifer exists in Stafford County, near Interstate 95. No comprehensive studies of groundwater resources have been conducted at MCBQ to date.

3.2.5 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. §1451, et seq., as amended) provides guidance to states, in cooperation with federal and local agencies, for developing land and water use programs in coastal zones. The CZMA states that "the boundary of a State's coastal zone must exclude lands owned, leased, held in trust or whose use is otherwise by law subject solely to the discretion of the Federal Government, its officers, or agents" [16 U.S.C. §1453 (1)]. According to this statute, MCBQ is not within Virginia's coastal zone.

The CZMA 16 U.S.C. §1456 (Section 307) covers coordination and cooperation issues. Section 307 mandates that federal projects that affect land uses, water uses, or other coastal resources of a state's coastal zone must be consistent to the maximum extent practicable with the enforceable policies of that state's federally-approved coastal management plan. If a proposed federal project or activity affects coastal resources or uses beyond the boundaries of the federal property, Section 307 of the CZMA applies.

The Commonwealth of Virginia has developed and implemented a federally-approved coastal resources management program (CRMP) describing current coastal legislation and enforceable policies. The Virginia CRMP has nine enforceable policies which include: wetlands management, fisheries management, subaqueous lands management, dune management, non-point source pollution control, point source pollution control, shoreline sanitation, air pollution control, and coastal lands management.

3.2.6 Stormwater

The proposed crossing and proposed perimeter trail re-establishment are located on the southern portion of Cannon Creek, a tributary of Aquia Creek, which flows near the southern portion of MCBQ. The proposed crossing and perimeter road re-

establishment are located in TA 7A and 9C roughly within a one mile radius north of the MBCQ boundary and the confluences of Aquia Creek and Cannon Creek. The proposed crossing and perimeter trail re-establishment lie entirely within the Cannon Creek watershed (See Figure 3.2.1). The watershed occupies a total of 9,508 acres within the southern portion of MCBQ.

Proposed Cannon Creek Crossing and Trail-Reestablishment Relevant Watersheds.

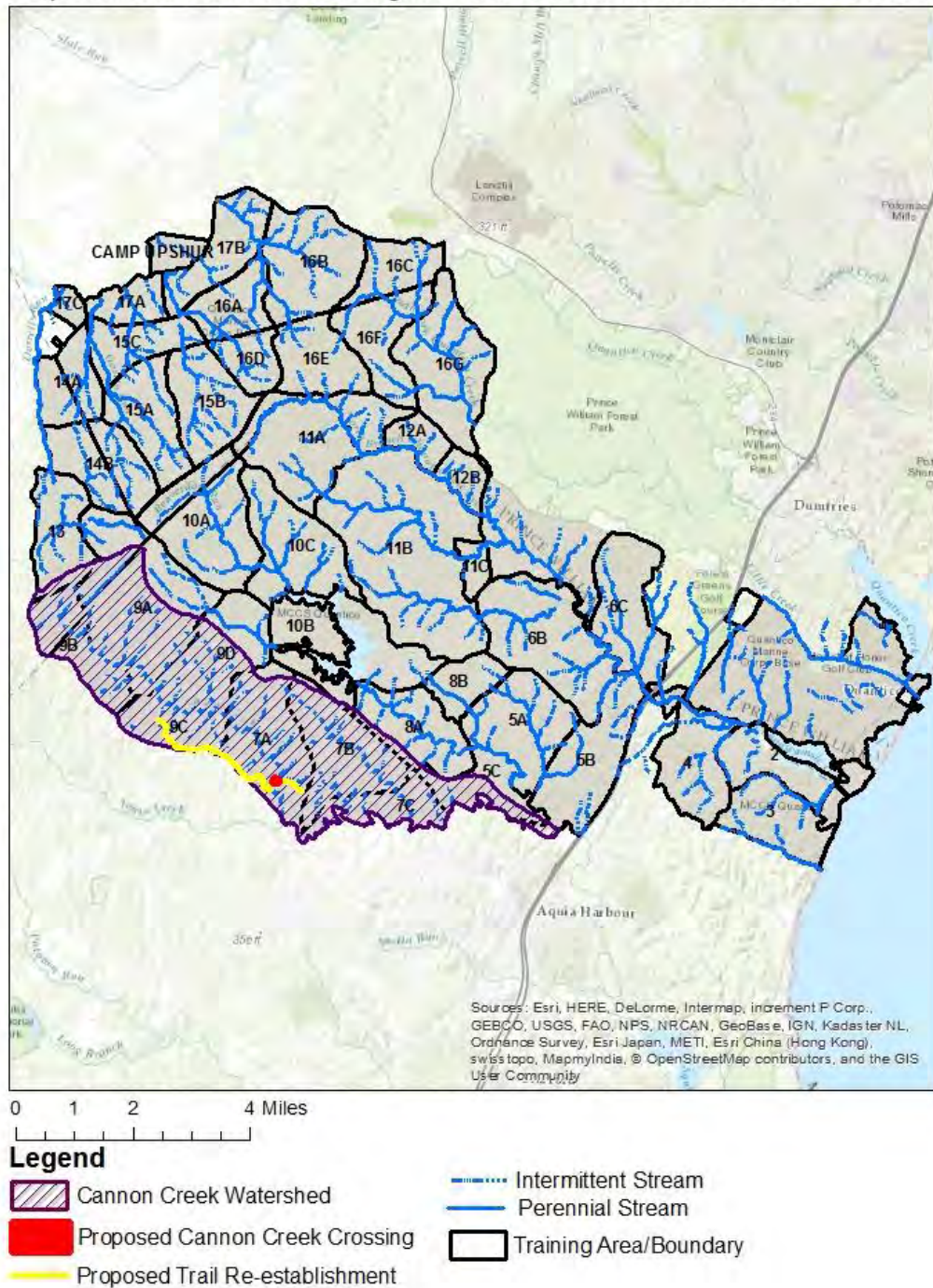


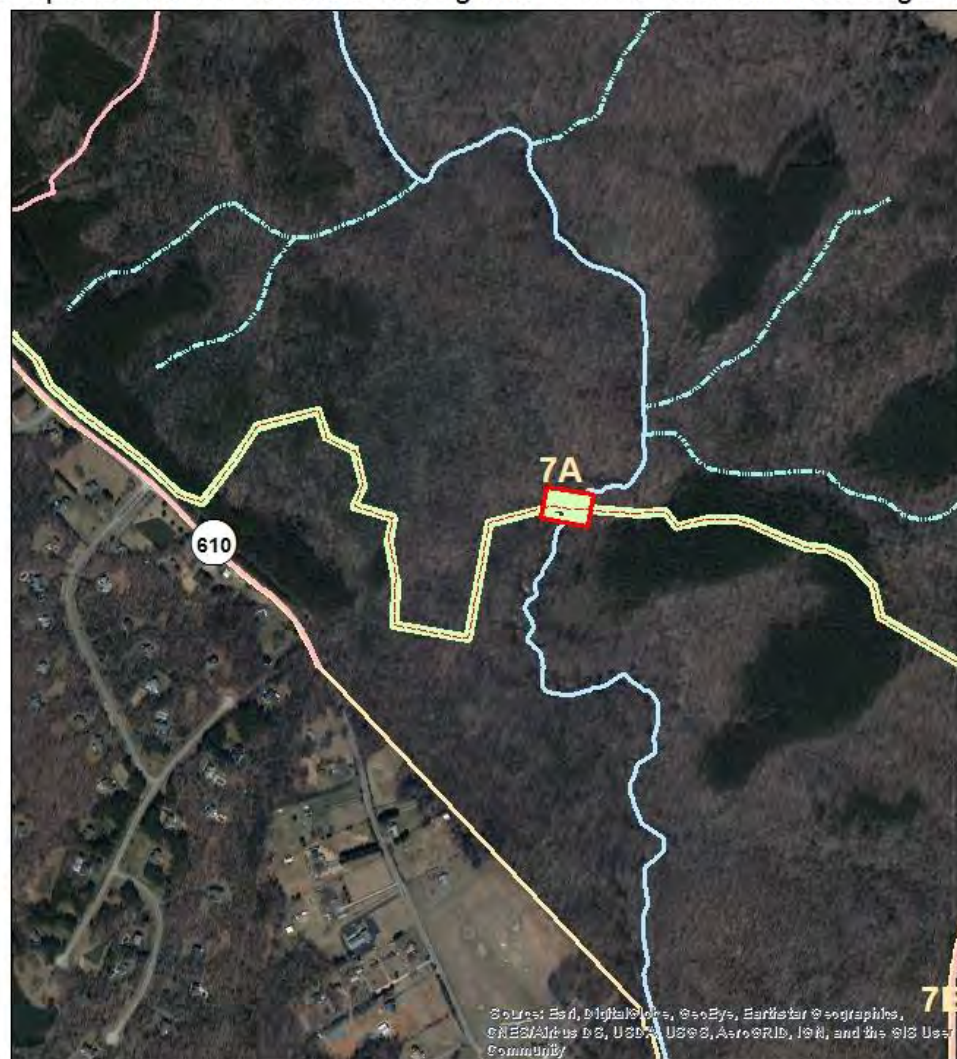
Figure 3.2.5

3.3 Biological Resources

3.3.1 Vegetation

The proposed Cannon Creek crossing footprint consists of 0.34 acres of deciduous forested vegetation and two trails on each side of Cannon Creek that are being re-established. The proposed crossing would connect these segments and eliminate the need for Marines and military vehicles to utilize Garrisonville Road. The trail segment on the east side of the creek terminates at the shoreline. The trail segment on the west side of the creek continues briefly adjacent to Cannon Creek before terminating. The entire proposed Cannon Creek crossing footprint consists of 0.34 acres of deciduous forested vegetation. A significant portion of this vegetation consists of overgrown branches and/or dead or dying trees (See Figure 3.3.1). The proposed 3.3 mile trail re-establishment footprint consists of deciduous vegetation with grasses.

Proposed Cannon Creek Crossing and Trail Re-establishment Vegetation



0 0.1 0.2 0.4 Miles

Legend

- Existing Trails and Roads
- Deciduous Vegetation
- Proposed Cannon Creek Crossing
- Proposed Trail Re-establishment
- Intermittent Streams
- Perennial Streams
- Training Area Boundary

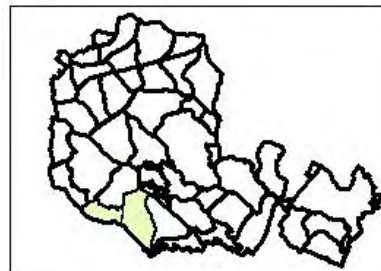


Figure 3.3.1

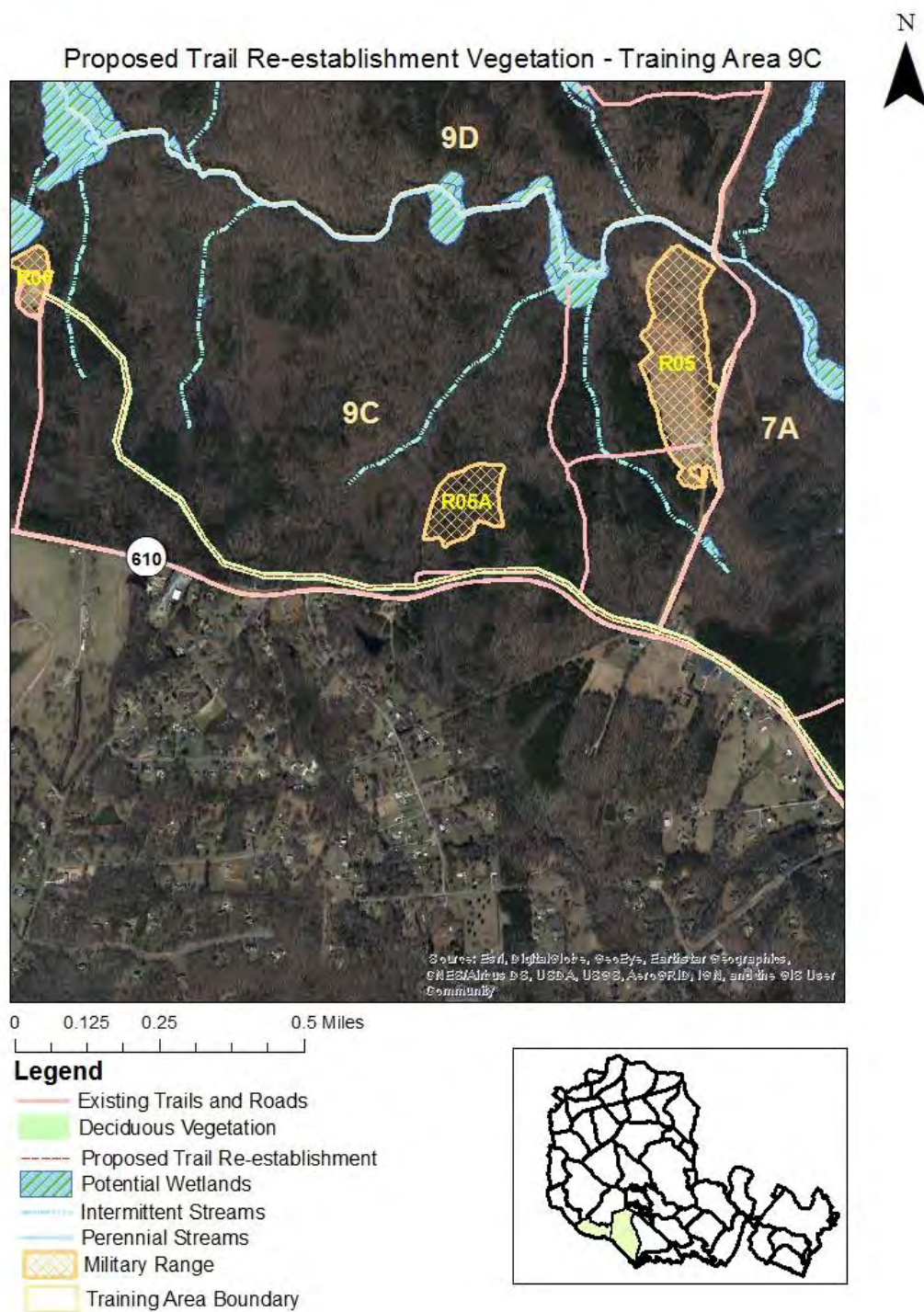


Figure 3.3.2

3.3.2 Wildlife

The base supports a wide variety of both game and non-game species and a diversity of wildlife habitat is available. Game species include white-tailed deer, wild turkey, gray squirrel, cottontail rabbit and bobwhite quail. Non-game species include resident and migratory songbirds, raptors, and various reptiles, amphibians, and insects.

Migratory birds utilize a variety of habitats available throughout MCBQ including forestland, grassland, wetland, and riparian corridors.

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §701-12) protects all species covered by the four migratory bird treaties the United States signed with Canada, Mexico, Japan, and Russia. The MBTA prohibits taking (e.g., pursuing, hunting, shooting, wounding, trapping, capturing, or collecting, or attempting to pursue, hunt, shoot, wound, trap, capture, or collect, intentionally or unintentionally), killing, or possessing of migratory birds (including parts, feathers, nests, and eggs) unless permitted by the Secretary of the Interior. The United States Fish and Wildlife Service (USFWS) currently recognizes 832 species of migratory birds.

Per Executive Order 13186, Responsibilities of Federal Agencies to Migratory Birds (2001), the DoD and USFWS set forth a Memorandum of Understanding (MOU) to promote the conservation of migratory birds and their habitats. Habitat that would be considered critical to the natural history and/or life cycle of migratory birds is not located within the proposed development areas of Alternative B.

Bald eagles, which are protected under the MBTA, are discussed within the threatened and endangered species/species of concern portion (3.3.3) of this EA.

Spotted Salamanders (*Ambystoma maculatum*) as well as other amphibians inhabit several man-made ruts and depressions that occur on the TA 9C portion of the proposed perimeter trail re-establishment.

3.3.3 Threatened and Endangered Species

The Endangered Species Act (ESA), 16 U.S.C. §1531 et seq., requires federal agencies to ensure that their actions will not jeopardize the continued existence of any threatened or

endangered species or result in the destruction or adverse modification of its critical habitat.

Two plant species on MCBQ are federally-listed as threatened or endangered species. These include Harperella (*Ptilimnium nodosum*) and small whorled pogonia (*Isotria medeoloides*).

Harperella is a federally-listed endangered plant species native to riverine habitats. This plant is only found in 13 areas ranging from Maryland to Georgia.

The small whorled pogonia (SWP) is a federally-listed threatened species. The SWP is a perennial plant that generally occurs on gentle to moderate slopes with eastern or northern exposures and prefers acidic sandy loam soils with low nutrient content.

Two animal species found on portions of MCBQ are federally-listed as endangered. They are the dwarf wedge mussel (*Alasmodonta heterodon*) and the Indiana bat (*Myotis sodalis*).

The dwarf wedge mussel is a small bivalve that lives in freshwater streams and requires highly oxygenated and silt-free waters.

The Indiana bat can be found over most of the eastern half of the United States. The bat spends winter hibernating in caves and occasionally in abandoned mines (hibernacula). During summer, the bats prefer to roost under the peeling bark of dead and dying trees. According to information obtained from the 2015 Bat Survey at U.S. Marine Corps Base, Quantico, VA, the Indiana Bat was detected in on base but the species was not detected in TA 7A or 9C.

The endangered Rusty-patched bumblebee (*Bombus affinis*) historically nests on occupied grasslands and tallgrass prairies. The bee has been reported in 13 states across the eastern half and upper Midwest of the United States, including Virginia.

The northern long-eared bat (*Myotis septentrionalis*) (NLEB) is also found on MCBQ. The NLEB is federally-listed as threatened. The bat spends winter hibernating in caves and mines (hibernacula). They prefer roosting sites with constant temperatures, high humidity, and no air currents. In summer, they prefer roosts under tree bark, in cavities or in crevices of both live and dead trees, and rarely in man-made structures such as barns or sheds (50 C.F.R. part 17). There are no known

Indiana bat or NLEB hibernacula on MCBQ. According to information obtained from the 2015 Bat Survey at U.S. Marine Corps Base, Quantico, VA, the NLEB were detected on base and in TA 7A, but none were detected at or near the proposed action locations. The NLEB was not detected anywhere in TA 9C.

The little brown bat (*Myotis lucigus*) and tricolored bat (*Perymyotis subflavus*) are listed as state-endangered. Both species were detected on base during 2016.

The bald eagle, *Haliaeetus leucocephalus*, was removed from the Federal List of Endangered and Threatened Wildlife and Plants in 2007 due to population recovery. The bald eagle is still afforded federal protection under the MBTA (see Section 3.3.2) and the Bald and Golden Eagle Protection Act (BGEPA) of 1940, as amended (16 U.S.C. §668-668d, 54 Stat. 250), and is listed as a species of concern in the USFWS Birds of Conservation Concern, 2008. The BGEPA requires a buffer of 660 feet around a nesting site. No bald eagle nesting sites have been observed near the perimeter trail re-establishment footprint or the proposed Cannon Creek crossing.

MCO P5090.2A, Ch. 3 directs the USMC to comply with environmental requirements, protect the environment and human health, and enhance and sustain mission readiness, to include cooperating with the Commonwealth of Virginia to protect Virginia-listed rare species and to provide consideration of state-listed species during the NEPA process.

The Virginia Piedmont waterboatman, *Sigara depressa*, and the brook floater, *Alasmidonta varicose*, are two Virginia-listed endangered faunal species. Both species are water dependent. The Virginia Piedmont waterboatman is an insect that inhabits ponds and extremely slow moving streams. The brook floater is a bivalve that is found among boulders within gravel or sand.

3.4 Cultural Resources

Implementation of the proposed action must comply with the National Historic Preservation Act (NHPA) of 1966, (54 U.S.C. §300101 et seq.). Under the NHPA, consideration of historic preservation issues must be integrated into the early planning stages of project planning by federal agencies. Under NHPA 36 C.F.R. part 800 (Section 106), a federal agency is required to account for the effects of the proposed action on any district, site, building, structure, or object that is included or eligible for inclusion in the National Register of Historic

Places (NRHP), prior to the expenditure of funds on the action. Under NHPA 54 U.S.C. §§306101(a) and 306102 (Section 110), the identification and evaluation of any cultural resources on federal property that meet the eligibility criteria of the NRHP is required.

Architectural historians with the U.S. Army Construction Engineering Research Laboratory (USCERL) conducted a survey of Quantico buildings between 1992 and 1994 (USCERL 1994). They identified significant historic buildings and landscapes on the base. Seven themes forming the historic context for the subsequently nominated NRHP Quantico Marine Corps Base Historic District (QMCBHD) include: First Permanent Construction, Aviation, Education, Industrial, Naval Clinic, African American Barracks, and Lustron Housing. Neither of the proposed action locations is located with the QMCBHD, however there are Cultural Resource sites that are near the proposed Perimeter Trail Re-establishment. The most notable of these sites is the Shiloh Cemetery, a publicly accessible African-American cemetery near the southern terminus of SR 644 (See Figure 3.4.2). Two homesteads and an abandoned gas station lay near the proposed action footprint in TA 7A (See Figure 3.4.1).



Figure 3.4.1

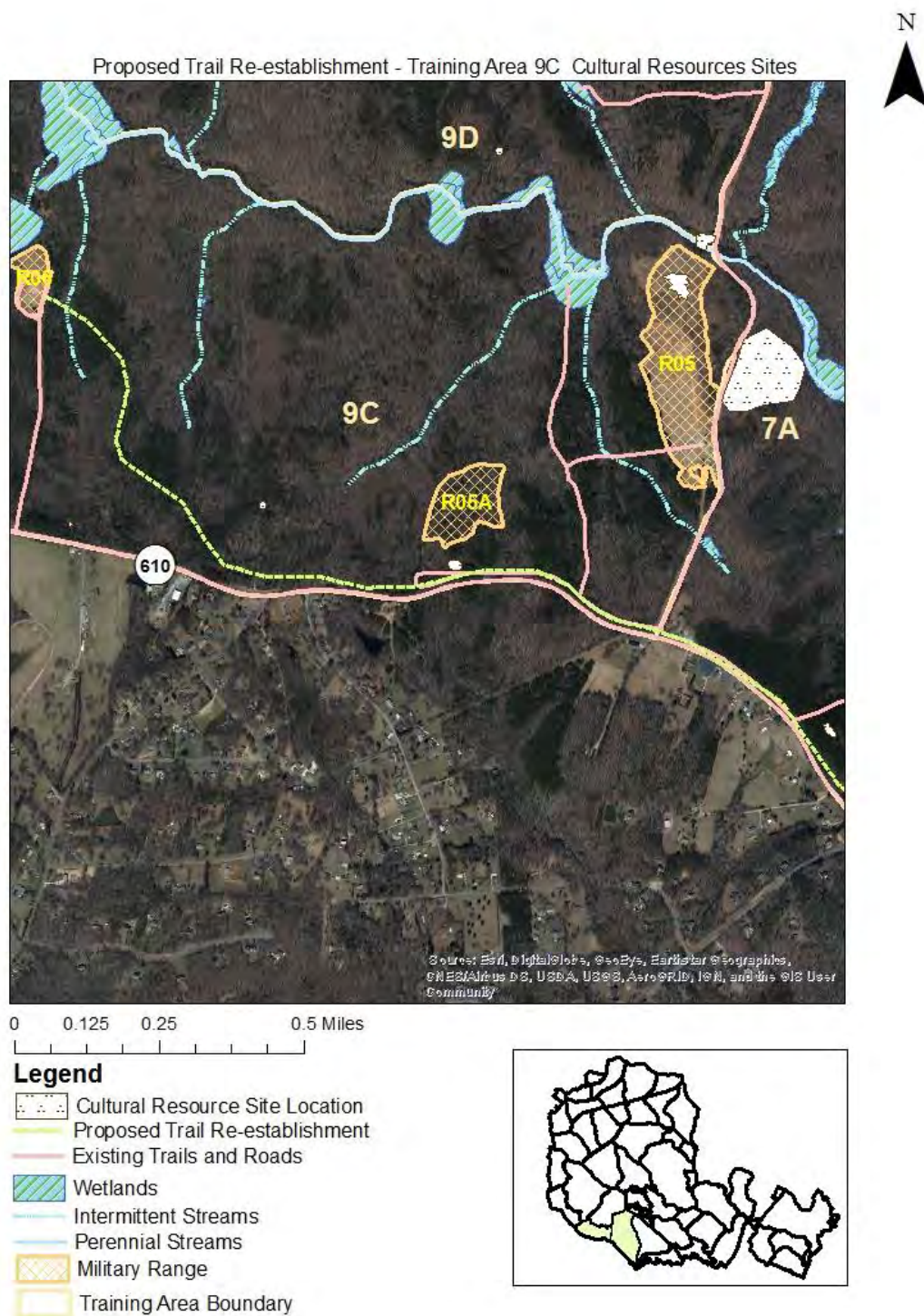


Figure 3.4.2

3.5 Air Quality

National Ambient Air Quality Standards

The U.S. Environmental Protection Agency (EPA) defines ambient air as "that portion of the atmosphere, external to buildings, to which the general public has access" (40 C.F.R. part 50). In compliance with the Clean Air Act (CAA) (42 U.S.C. §7401 et seq.) the EPA promulgated the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (PM), ozone, nitrogen dioxide (NO_x), and lead. States are required to develop a State Implementation Plan (SIP) to attain and maintain the NAAQS, with specific requirements for areas that do not meet the NAAQS, called nonattainment areas. The location of the proposed action is within the Metropolitan Washington (DC) Region that has been designated as a moderate non-attainment area for the 8-hour ozone NAAQS and a general non-attainment for PM_{2.5}. NO_x and volatile organic compounds (VOCs) are precursors to ozone formation and are regulated to control ozone pollution.

General Conformity

To ensure that actions taken by federal agencies in a nonattainment area do not interfere with a state's plan for attainment of the NAAQS, EPA promulgated the General Conformity rule [CAA section 176(c)(4)]. The General Conformity rule requires federal actions, whose emissions exceed *de minimis* thresholds of criteria pollutants and their precursors, to undergo a Conformity Determination. A Conformity Determination is a detailed analysis the action's impact on regional air quality. *De minimis* levels in the DC region are:

- NO_x: 100 tons per year (tpy)
- VOC: 50 tpy
- PM_{2.5}: 100 tpy

An Applicability Analysis is the first step in the Conformity process, used to determine if a full Conformity Determination must support the action. Proposed actions may be exempt from a Conformity Determination by two means:

1. If EPA identifies the action in 40 C.F.R. part 93.153(c)(2) as resulting in no emissions increase or an increase that is clearly *de minimis*.

2. If emissions from the action, including construction and post construction activities, are calculated and determined to fall below the *de minimis* emission rates.

If the Conformity Analysis indicates that the action falls into one of the listed actions, or the emissions are below *de minimis* thresholds, no further action is necessary. For actions that exceed *de minimis* thresholds and are not exempt, a Conformity Determination is required.

A Conformity Determination requires detailed direct and indirect emissions estimates, dispersion modeling analysis, and mitigation of air quality impacts, and an opportunity for public comment prior to approval.

Virginia SIP Regulations

Virginia's SIP includes a number of broadly applicable regulations as well as process-specific regulations for existing sources intended to ensure continued progress towards attainment of all NAAQS.

Cutback asphalt is prohibited except when stockpile storage greater than one month is necessary, when used or applied during the months of November through March, or when used or applied as a penetrating prime or tack coat, as per 9 VAC 5-45, Article 7 of VDEQ's air pollution regulations.

Title V Permitting

Generally, major sources of pollution are required to obtain federal operating permits issued under Title V of the CAA by either the EPA or the state regulatory agency. The primary purpose of a Title V permit is to improve compliance at a source by consolidating all requirements into a single document. Title V permits are reviewed and reissued on a 5 year cycle. While some changes to equipment may occur as "off-permit" changes and may be incorporated into the next permit renewal, most NSR permit actions require modification of the Title V permit within 12 months.

In the DC ozone nonattainment area, any source with a NO_x PTE greater than 100 tpy is a major source and must apply for a Title V Permit within 12 months of being designated such. The proposed project would occur entirely within Prince William County, which is an ozone attainment area.

The base's NO_x PTE is well above 100 tpy. The base currently operates under a Title V permit issued by the VDEQ on 2 September 2003. Renewal applications are pending.

3.5.1 Climate Change

Greenhouse Gas (GHG) reporting and permitting are the newest broad scale programs under the CAA. In 2009, the EPA determined that GHGs have a detrimental effect on human health and the environment and began developing regulatory programs to limit the emission of GHGs.

Greenhouse gases (GHG) are atmospheric compounds that contribute to the greenhouse effect. GHGs include CO₂, CH₄, and N₂O, and fluorinated gases. The greenhouse effect is a natural phenomenon that causes heat to be trapped within the lowest portion of the earth's atmosphere creating a wide range of environmental concerns referred to as climate change. Climate change is associated with rising global temperatures, sea level rise, changing weather patterns, changes to local and regional ecosystems including the potential loss of species, longer growing seasons, and shifts in plant and animal ranges. Most GHGs occur naturally within the atmosphere but scientific evidence indicates a trend of increasing global temperature over the past century due to a combination of natural occurrences and an increase in GHG emissions from human activities (Intergovernmental Panel on Climate Change, 2007).

According to the Quadrennial Defense Review Report of February 2010, the DoD has recognized that climate change will affect the DoD operating environment, roles, and missions undertaken; furthermore, adjustments due to climate change impacts on facilities and military capabilities will be necessary. The DoD has made a commitment to foster efforts to assess, adapt to, and mitigate the impacts of climate change. Specifically, the DoD has leveraged the Strategic Environmental Research and Development Program, a joint effort among the DoD, the Department of Energy, and the EPA, to develop climate change assessment tools.

GHG Reporting

In October 2009, the EPA promulgated the GHG Reporting Rule in 40 C.F.R. part 98. The rule establishes mandatory reporting requirements for facilities that fit into any of three applicability classifications.

A facility may be required to report GHG emissions if it falls into an "all-in" source category defined in 40 C.F.R. part 98.2(a)(1). One of these categories is Municipal Solid Waste (MSW) Landfills that emit more than 25,000 metric tons of carbon dioxide equivalent (CO₂e) in a year and accepted waste after 1 January 1980. The base has three MSW landfills, two of which accepted waste after 1 January 1980.

A facility may also be required to report if it falls into a second set of defined source categories and emits more than 25,000 metric tons of CO₂e in a year. The second set of categories includes production facilities outlined in 40 C.F.R. part 98.2(a)(2). The base does not operate any of these facilities.

Finally, a facility may be required to report if it does not meet either of the first two requirements, but it does operate stationary fuel combustion equipment with an aggregate rated heat input capacity of at least 30 MMBtu/hr and the facility emits more than 25,000 metric tons of CO₂e in a year from these sources. The aggregate rated heat input capacity of MCBQ is well in excess of 30 MMBtu/hr.

The base's MSW landfills and stationary fuel combustion equipment emissions are evaluated annually to determine applicability of Part 98. The most recent calculations demonstrate that, based on 2013 data, Part 98 reporting requirements do not apply to the base. As of 2013, base-wide CO₂e emissions from stationary fuel combustion equipment totaled 18,658 tons.

GHG Permitting

The NSR and Title V permitting programs apply to GHGs if a facility is subject to those programs for other pollutants. While traditional permitting thresholds for NSR and Title V technically apply to GHGs, actual application of those thresholds has been found impractical to use as thresholds for GHGs. In response, EPA has used its discretion to increase the thresholds under those programs for GHGs so that excessive GHG regulation and controls is avoided. The current threshold for significant emissions increases of GHGs is 75,000 TPY of CO₂e or more, and the Title V threshold for GHGs is 100,000 TPY of CO₂e or more. If GHG emissions are included in any NSR permit issued to MCBQ, then BACT and other NSR requirements will apply and be reflected in the MCBQ Title V permit.

On 23 June 2014, the U.S. Supreme Court issued a decision that said EPA could not require a source to obtain a PSD or Title V permit on the basis of GHG emissions alone. However, sources that must obtain PSD or Title V permits based on regulated NSR pollutants may still be required to control GHG emissions by application of BACT.

Pending further court action, a new stationary source at MCBQ may be subject to BACT for GHGs if it causes a significant emissions increase of a regulated NSR pollutant and also an emissions increase of 75,000 CO₂e or more.

3.6 Noise

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with military installations. The major sources of noise at MCBQ include aircraft, artillery, small arms, explosives, vehicles, heavy equipment, and machinery.

Existing noise levels in the project area are primarily from artillery, small arms, explosives, vehicles, heavy equipment, and machinery from nearby ranges and automobiles on Garrisonville Road. Other noise contributions come from temporary construction activities, but these are minor. Ordnance used in live and simulated fire exercises, is generally conducted at ranges that are currently on the Westside portion of MCBQ where the proposed actions will be occurring.

3.7 Infrastructure, Utilities, and Transportation

3.7.1 Transportation

The proposed action involves the establishment of a crossing at Cannon Creek and the re-establishment of a perimeter trail. There will be increased Marine personnel and vehicle movements in TA 7A and 9C as a result of the proposed action. Usage of Garrisonville Road by Marine Corps personnel in this area would be eliminated.

3.8 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to address Environmental Justice in Minority Populations and Low-income Populations*, was issued in 1994. This order directs agencies to address environmental and human health conditions in minority and low-income communities so as to avoid the disproportionate

placement of any adverse effects from federal policies and actions on these groups. The proposed action will not involve effects specific to minority or low-income populations.

EO 13045, *Protection of Children from Environmental Health and Safety Risk*, was issued in 1997. This order requires agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. The proposed action will not involve effects specific to children.

3.9 Hazardous Materials/Waste

MCBQ is located in three counties. According to the United States EPA's Map of Radon Zones, Stafford County is located in Zone 1 and Prince William and Fauquier Counties are located in Zone 2. Zone 1 counties have a predicted average radon screening level greater than 4 picocuries per liter (pCi/L), and Zone 2 counties have a predicted average radon screening level between 2 and 4 pCi/L. Historic data and geologic conditions indicate there is a high risk of radon being present in buildings at MCBQ above the action level of 4 pCi/L.

Many portions of MCBQ consist of historic munitions impact sites. The proposed action locations are within a non-duded impact area. However, excavation activities may expose lead or other munitions constituents during excavating activities.

3.10 Solid Waste

Reports of waste generated (including recycling) including material type (construction/demolition debris, concrete, scrap metal, used oil, etc.), tons, disposal destination, and disposal cost shall be reported on the Waste Management Plan located in Appendix F. The plan must be submitted to the NREA Branch within 30 days of the close of the project, and no later than October 15 of the respective calendar year to be included in annual report submissions.

Executive Order 13514, *Leadership in Environmental, Energy, and Economic Performance*, 2009, calls for meeting or exceeding fifty percent diversion of non-hazardous solid waste and construction and materials and debris from landfills by fiscal year 2015.

3.11 Recreation

The proposed action footprint is located within an area where hunting and other recreational activities are available. There are trails located near the proposed action location, however, they have not been upgraded or utilized for many years. Although off road vehicles are not permitted at MCBQ, individuals seeking recreational opportunities have utilized these vehicles in this location.

3.12 Military Training

The proposed action locations are located within the non-duded impact area of MCBQ. The proposed action footprint is located within an area that was historically used as a transportation route to get to Range 6. No live-fire or other training has occurred within the proposed action footprint itself.

4.0 ENVIRONMENTAL CONSEQUENCES

The CEQ regulations implementing NEPA (40 C.F.R. part 1500) require discussion of the impacts in proportion to their significance within NEPA documentation. The affected environment under the proposed action alternative ranges from site-specific physical and natural resources to broader regional concerns (i.e., air quality variables, noise, infrastructure, socioeconomic conditions, community facilities and services, transportation and traffic).

This section describes the anticipated direct, indirect, and cumulative environmental impacts of the no action alternative and the proposed action of the establishment of a crossing at Cannon Creek and the Perimeter Trail Re-establishment in TA 7A and 9C.

Alternative A is no action and Alternative B is the proposed action.

4.1 Land Use

Impact of Alternative A: Under the no action alternative, the current geologic, topographic, and soil conditions at MCBQ and the surrounding area would remain the same.

Impact of Alternative B: Alternative B, establishment of a crossing at Cannon Creek and Re-establishment of the Perimeter Trail in TA 7A and 9C, would not have a significant effect on

the land use at MCBQ as this area is utilized for training and personnel movements.

Neither of the alternatives would be expected to significantly change or affect the geology of the area, nor would they impact the topography of the base.

Most of the soils within the proposed action location are well-drained but have constraints to development that are somewhat limited to very limited for aggregate roads:

Appling Soils are somewhat limited due to being steeply sloped and having low strength. Cecil Soils are somewhat limited due to low strength. Alluvial Soils, State Fine Sandy Loam and Wedhadkee (found along or near Cannon Creek) are hydric and are severely limited due to poor drainage and low strength. Meadowville Silt Loam are severely limited due to low strength, shrink swell, and frost action.

A geotechnical survey has not been completed for the proposed action. It is advised that a geotechnical engineer survey the underlying soil in the event that these areas should be redeveloped in the future.

To prevent the loss or movement of soils from the disturbed areas, E&SC measures would be implemented during construction. Approximately 21.3 acres and 3.3 miles of land would be disturbed to implement Alternative B. With implementation of proper E&SC measures, the action alternative is not expected to significantly impact on-site or area soils. E&SC plans and stormwater pollution prevention plans (SWPPP) are required to be submitted to the Water Program Manager, NREA Branch, MCBQ at least 70 days prior to work starting on the project. All stormwater plans must comply with Virginia stormwater regulations for runoff, the Navy's Low Impact Development (LID) policy, and the Energy Impact Security (EISA) Section 438 requirements. It is also recommended that soil stabilization and soil bioengineering techniques are utilized to address poor soil conditions when encountered.

4.2 Water Resources

Potential impacts to the water resources were assessed based on the water quality, hydrology, surface water and wetlands, groundwater, and flooding potential in the project area.

Impact of Alternative A: It is expected that impacts to water resources would remain the same if no action is taken.

Impact of Alternative B: The action alternative, Alternative B, would involve the widening of an existing trail. There would be tree clearing to meet the requirement of a minimum of 20 feet of width for the re-established trail. Culverts over an intermittent stream, high-runoff, downslope areas, and firebreaks will also be installed along the trail. The re-established trail will consist of aggregate.

As stated above, the re-established trail outlined in Alternative B would consist of aggregate so there would be no adverse impacts due to run-off because the surface is not impervious. Potential water quality impacts from soil disturbances will be mitigated through the implementation of Best Management Practices (BMPs) per the Virginia Erosion and Sediment Control Handbook (1992), the Virginia BMP Field Guide (2009) and the Virginia BMPs For Water Quality Technical Manual (2011) for Forestry Management.

The amount of fill within the 100-year floodplain, which is considered an RMA under the CBPA, would be minor. Neither of the alternatives would adversely affect an RPA or RMA as defined under the CBPA. NREA and the USACE determined that discharges of fill material into Cannon Creek would be minimal. As a result, the establishment of the Cannon Creek crossing is covered under Nationwide Permit #18 - Minor Discharges and the permit was issued to MCBQ in January 2017. The permit does not require a pre-construction notification, however, MCBQ is responsible for ensuring compliance with the requirements of the permit and must notify NREA of any changes to the design of the crossing.

A Nationwide Permit #18 was also issued on 19 May 2017 for a proposed culvert over the small intermittent stream that is located near Range 6. A pre-construction notification is not required for the culvert but MCBQ is responsible for ensuring the compliance with the requirements of the permit. Also, once a final design has been identified for a 42 inch diameter culvert, MCBQ must submit the final design to verify that the culvert complies with the requirements of the Nationwide Permit #18 (See Figure 2.3 and Figure 4.5.2).

The proposed action is consistent to the maximum extent practicable with the enforceable policies of Virginia's Coastal Management Plan. The proposed project is not expected to

directly affect water resources (including wetlands) and not expected to have adverse effects on fisheries, shorelines, subaqueous lands, dunes, or coastal lands.

Alternative B would not adversely affect wetlands, surface waters, groundwater, CBPA requirements, or floodplain areas.

4.3 Biological Resources

Impact of Alternative A: Implementation of the no action alternative, Alternative A, would not have a significant impact on vegetation, wildlife, or threatened or endangered species.

Impact of Alternative B: This alternative will not have any adverse effects on wildlife or wildlife habitat.

In 2015, a SWP investigation was conducted for the proposed action footprint in TA 7A. Although a small amount of suitable habitat was located, there were no colonies of SWP located and it was determined that the proposed action was not likely to adversely affect the SWP. It has been determined that a SWP survey is not necessary for the portion of the proposed action footprint located in TA 9C as there is no suitable habitat in this location for the species (See Appendix C). The NLEB has not been detected within the footprint of Alternative B, however it has been detected to the south of the terminus of the proposed action footprint in TA 7A. In order to reduce impacts to both the NLEB and Indiana bat, the USFWS has implemented time of year restrictions. These restrictions implemented by USFWS mandates that no trees greater than 3 inches in diameter at breast height may be removed between 15 April and 15 September. The dwarf wedge mussel and harperella are not found in areas that would be affected by implementation of Alternative B. The endangered Rusty-patched bumblebee has not been located on MCBQ and the probability of the species being found within the action alternative footprint is low.

Although the tri-colored and little brown bat have been detected on MCBQ, there are no known summer roosts or winter hibernacula for these species on the base according to the Virginia Department of Game and Inland Fisheries. If there is a summer roost or a maternity colony for either species discovered while implementing the proposed action, all activities will cease and NREA will be contacted.

There are several man-made ruts and depressions that contain a significant amount of water occurring along the trail of the TA

9C portion of Alternative B. These features were most likely created by military vehicles during the time that portion of the trail was being utilized by the Marines but was not being maintained. The majority of these features are located on the trail and in several locations an alternate trail was created so they would be bypassed. During a site visit on 8 March 2017 to determine the habitat suitability of SWP, NREA personnel observed Spotted Salamanders and several of their egg masses, as well as other amphibians, occupying these ruts and depressions (See Appendix C). According to the Section 404 of the CWA, these features are neither "Waters of the United States" or wetlands (40 CFR 203.3). These features also have not been identified as wetlands by the NWI. Additionally, the Spotted Salamander is not listed as an Endangered or Threatened species under Section 7 of the ESA or a Rare Species by the State of Virginia (See Appendix C).

Since they provide valuable habitat for the Spotted Salamander and other amphibians, it is both desirable and recommended that either some of the pooled ruts and depressions be left intact or re-created downslope (See Appendix C). These depressions would serve as seasonal waterholes/pools for the salamanders and other amphibians. The re-created depressions could possibly include but are not limited to stormwater detention ponds, sediment basins or stormwater ditches. The results of the SWP investigation and the summary of these recommendations are outlined in Appendix C.

A timber assessment was completed on 6 July 2017 to ensure that MCBQ and the Federal Government are compensated for full market value for any merchantable timber that is harvested from the proposed action location. The results of the timber assessment are summarized in Appendix D.

Due to the scope of work and the required BMPs to protect water quality, there is no potential for the action alternative to adversely affect threatened and endangered species, or habitats used by these species. The proposed alternative would have no adverse effects on wildlife (including migratory birds) or wildlife habitat.

4.4 Cultural Resources

Impact of Alternative A: This alternative would have no additional adverse effects upon the NRHP-eligible QMCBHD or any other sites of cultural resources interest as the existing environmental conditions would remain.

Impact of Alternative B: There are two homesteads near the proposed action location in TA 7A. The homesteads are not within the proposed action footprint and have been identified with pink flags. Shiloh Cemetery lies adjacent to the proposed action footprint. The cemetery will be avoided, remain publicly accessible during and after the completion of the proposed action, and will not be impacted. Visitors will still need to coordinate with the base to visit the cemetery. Cultural Resource documentation for the proposed action is located in Appendix G.

The 2011 Programmatic Agreement between MCBQ and the Virginia State Historic Preservation Officer (SHPO) states that if a project occurs outside of the QMCBHD, viewshed, or there is no adverse effect as a result of the proposed action, the consultation process may be streamlined. As a result, no further consultation with the SHPO is necessary.

For excavations permitted where there are no known archaeological sites or cemeteries, caution must still be used by contractors. There may be undisturbed soil zones encountered adjacent to or under previous disturbances/fill.

The base Archaeologist, NEPA Section (703-432-6781/0519) should be contacted immediately if artifacts (e.g., metal tools, arrowheads, etc.) appearing to pre-date the 20th century or unusual soil zones are encountered during excavation.

In the event there are any unexpected discoveries of potential human remains (e.g., bones or bone fragments), work must be halted or diverted to other areas until appropriate measures are taken. Contract Project Managers must be informed that any human remains encountered are protected by state and federal law. The following procedures must be followed:

- Halt work at the location leaving remains in place and any associated features and objects
- Notify base Archaeologist/NEPA Section per Section 7.0 of this EA
- Redesign project to avoid remains, if possible
- The base Archaeologist/NEPA Section will contact the SHPO, and if remains are Native American will contact tribe(s)
- Removal of remains requires a permit from the SHPO, including the participation of a skeletal biologist or physical anthropologist, and plans to make appropriate notifications to possible descendants/relatives and other

measures in accordance with state law and Advisory Council on Historic Preservation (ACHP) guidelines

4.5 Air Quality

Impact of Alternative A: The no action alternative would not have an impact on air quality.

Impact of Alternative B: MCBQ is located in a moderate ozone non-attainment area within the Ozone Transport Region, and in a PM_{2.5} non-attainment area. Stafford County, where the proposed action will be occurring, is located within an attainment area. The pollutant *de minimis* criterion for General Conformity evaluations is 50 tons per year (tpy) for volatile organic compounds (VOC), 100 tpy for NO_x, 100 tpy for PM_{2.5}, and 100,000 tpy for CO₂. Sources of these pollutants associated with Alternative B would include emissions from construction equipment, crew commuting vehicles, fugitive dust, and from use of other fuel-burning equipment. Projected emission from the action alternative will fall within the *de minimis* levels.

No additional new air emissions sources are currently being proposed with Alternative B. If this changes, specifications for the new emissions source are required to be submitted to the NREA Air Program manager for review.

General Conformity

The General Conformity Rule ensures that the actions taken by federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet the NAAQS.

A federal agency must perform a General Conformity applicability analysis prior to initiating any non-exempt action that will cause emissions of criteria pollutants for which the area is designated nonattainment or maintenance. The analysis must include reasonable estimates of direct emissions (caused by the action; occur at the same time and place) and indirect emissions (caused by the action; may occur later in time or in a different location than the action). The analysis must be performed for each year of the action and one year of typical operations. If the analysis indicates that the emission levels are below *de minimis* thresholds for all years, then no further action is necessary.

Annual direct and indirect emissions from the proposed action are calculated to be below all applicable *de minimis* thresholds

in 40 C.F.R. part 93.153(b). A General Conformity Determination is not required.

			PROJECTED ACTUAL EMISSIONS					
			VOC	CO	NOx	PM	CO ₂	SO ₂
CONSTRUCTION EQUIPMENT	Quantity	Usage (hrs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)
Chippers/Stump Grinders (Com.)	1	240	23.72	111.06	253.23	26.14	26,309.7	53.21
Crawler Tractor/Dozers	1	480	113.62	337.00	906.20	98.20	89,885.6	181.77
Grader	1	240	87.98	246.87	759.48	75.12	76,373.8	154.45
Tamper, Vibratory	1	240	1.73	9.60	11.76	1.23	1,306.43	2.64
Leafblowers/Vacuums (Com.)	5	240	11.64	64.77	79.35	8.29	8,813.72	17.82
			VOC	CO	NOx	PM	CO ₂	SO ₂
HIGHWAY VEHICLES	Vehicle-Days	Miles/Day	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)
Light Heavy Duty (Diesel)	210	60	4.62	21.33	136.94	1.00	14,416.59	0.00
Heavy Heavy Duty Tractor (Diesel)	120	60	2.64	14.21	165.97	3.48	25,641.44	0.00
			VOC	CO	NOx	PM	CO ₂	SO ₂
LANDCLEARING	Acres		(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)
Disturbed Land Area	60		-	-	-	2,160.00	-	-
TOTAL PROJECTED EMISSIONS (tons)			1.23E-01	4.02E-01	1.16E+00	1.19E+00	1.21E+02	2.05E-01
<i>Notes:</i>								
<i>RSMeans Crew B-7 x 30 days for tree removal.</i>								
<i>RSMeans Crew B-36C x 30 days for gravel laydown.</i>								
<i>Substituted leafblower emissions for chainsaw emissions.</i>								
<i>HHD Tractors for equipment/material delivery and debris haul away.</i>								
<i>Land clearing emissions based on methodology in U.S. Air Force IERA Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Revised December 2003, Chapter 16.</i>								

Figure 4.5.1

Virginia SIP Regulations

The proposed action is subject to the following Virginia regulations:

- 9 VAC 5-40, Article 1 - Visible Emissions and Fugitive Dust/Emissions
- 9 VAC 5-40, Article 2 - Odor
- 9 VAC 5-45, Articles 5 and 6 - Emission Standards for Architectural and Industrial Maintenance Coatings

Visible Emissions and Fugitive Dust/Emissions

No owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles and other surfaces, which may create airborne dust; the paving of roadways and maintaining them in a clean condition.
3. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
4. Open equipment for conveying or transporting materials likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion.
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

Odor

No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any emissions, which cause an odor objectionable to individuals of ordinary sensibility.

Emission Standards for Asphalt Paving Operations

Cutback asphalt (asphalt cement that has been liquefied by blending with petroleum solvents) is prohibited except under special circumstances. Cutback asphalt is prohibited except when stockpile storage greater than one month is necessary, when used or applied during the months of November through March, or when used or applied as a penetrating prime or tack coat. NREA must be consulted if the proposed action involves the use of cutback asphalt

Emission Standards for Architectural and Industrial Maintenance Coatings

Traffic marking is limited to 150 g/L of VOC per 9 VAC 5-45, Article 5. Building coatings will also need to conform to Table 45-5A in that rule. Additionally, adhesives and sealants will need to conform to the limits in Table 45-6A in 9 VAC 5-45, Article 6.

4.5.1 Climate Change

CEQ's NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions states that "if a proposed action would be reasonably anticipated to cause direct emissions of 27,563 tpy (25,000 metric tons) or more of CO₂-equivalent GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public." These recommendations are consistent with the EPA's Mandatory Reporting of Greenhouse Gases rule (40 C.F.R. part 98) (2009), which applies to all stationary sources emitting 27,563 tpy or more of GHG emissions. The rule allows for data collection to help shape future climate change policies and programs but does not require control of GHGs.

Impact of Alternative A: The no action alternative would not cause an increase in greenhouse gas emissions and would not have new effects on climate change.

Impact of Alternative B: The action alternative in TA 7A and 9C will not add new emission sources. This project would not have any long term changes in stationary or mobile emission sources or landfill operations. In compliance with the CEQ's and EPA's guidance, quantitative analysis of CO₂ equivalents is not required for the proposed action.

GHG Reporting

Actual emissions from the proposed action are not expected to cause the total GHG emissions from MCBQ to exceed mandatory reporting thresholds.

GHG PSD Permitting

The proposed action does not involve the construction of any new stationary source or any project (which includes any addition or replacement of an emissions unit, any modification to an emissions unit or any combination of these changes), or the reduction of any stack outlet elevation at any stationary source. Therefore, GHG PSD permitting regulations do not apply.

GHG Title V Permitting

Actual emissions from the proposed action are not anticipated to cause the GHG PTE of the entire base to exceed 100,000 tpy, so the base will remain exempt from Title V permitting requirements for GHGs.

4.6 Noise

Existing noise at and around the project area is largely attributed to activities associated with training and artillery fire at MCBQ and automobile traffic along Garrisonville Road.

Impact of Alternative A: The no action alternative would not impact existing noise levels on the base or the surrounding area.

Impact of Alternative B: The primary noise receptors within the proposed action location would be the civilian residential and agricultural land-uses located along Garrisonville Road across from MCBQ. Implementation of the proposed action would generate short-term, temporary noise from trail work (i.e., noise from construction equipment, supply trucks, and worker vehicles). The proposed action alternative would not have a permanent increase on noise levels.

Although there are homes and a few farms along Garrisonville Road adjacent to TA 7A and 9C, noise associated with construction activities under Alternative B would be temporary. Given the type and duration of the noise to be generated and the ambient noise level adjacent to the project site, noise generated by construction activities is not expected to result

in significant impacts. Marines and military vehicles would be removed from Garrisonville Road and would instead utilize the re-established perimeter trail. A vegetative buffer exists between the installation boundary and Garrisonville Road, however even without this buffer, the noise generated by military vehicles is expected to be the same as common noises generated by automobiles. Also, the noise of military vehicles would be relocated to within the boundary of MCBQ and further away from Garrisonville Road. Aside from military vehicles, no additional post-construction noise would occur as a result of the implementation of the proposed action.

4.7 Infrastructure, Utilities, and Transportation

Impact of Alternative A: Due to the scope of the proposed work, implementation of Alternative A would not be expected to alter the existing infrastructure or utilities within MCBQ and will not affect traffic patterns.

Impact of Alternative B: The Action Alternative would divert USMC vehicles and personnel from Garrisonville Road to the re-established trail on the base perimeter. The flow of military vehicles and personnel would increase on along the far southern portions of TA 7A and 9C. Existing utilities and parking at MCBQ would not be affected by the implementation of Alternative B.

4.8 Environmental Justice

Impact of Alternative A or B: Implementing either of the proposed alternatives would not be expected to significantly impact the socioeconomics or create disproportionately high and adverse human health or environmental effects to minority, low-income populations, or children at MCBQ or in the surrounding area.

This project will have temporary minor impacts such as noise created by construction activities, and these impacts will not disproportionately affect minority, low-income populations, or children. Best management practices such as dust management would also be employed to eliminate or keep temporary environmental nuisances to a minimum.

4.9 Health/Safety and Munitions Response Program

Impact of Alternative A: This alternative would maintain the status quo and would not have additional effects on health and safety.

Impact of Alternative B: Although the project area is not within any known munitions response sites, MCBQ includes active and former ranges. There is always the potential to encounter unexploded military munitions, discarded military munitions, and/or munitions and explosives of concern during excavating activities as well as earth disturbing activities. Potential land disturbances associated with this project would include tree removal, use of fill for depressions and placement of aggregate. Alternative B is located in the non-duded impact area and the proposed action footprint does not contain any UXO sites. No munitions or contaminants are known or anticipated along the planned route footprint. There has been no military training that has occurred along the route.

4.10 Hazardous Materials/Waste/Solid Waste

Impact of Alternative A: This alternative would have no effect on general procedures and practices for hazardous material removal, hazardous waste management, or solid waste management at MCBQ.

Impact of Alternative B: The Action Alternative would result in construction demolition debris (CDD) and waste. Reports of waste generated (including recycling) including material type (CDD, concrete, scrap metal, used oil, etc.), tons, disposal destination, and disposal cost shall be reported via the Construction Waste Management Report to NREA within 30 days of the close of the project, and no later than October 15, to be included in annual report submissions. All spoils and debris generated by the clearing operation shall be transported off base and disposed of in accordance with all federal, state, and local regulations.

The action proponent is responsible for coordinating all solid waste disposal at a landfill that meets all Federal, State, and local regulatory standards. The contractor will support the solid waste diversion philosophy outlined in E.O. 13514 by recovering/recycling.

Neither alternative would have an effect on general procedures for removal of hazardous materials and hazardous waste

management at MCBQ. No hazardous materials would be introduced under either of the alternatives.

According to the Marine Corps Order 5090.2A Ch. 3, Chapter 10, Section 2, Paragraph 10221:

"All efforts must be made to ensure that Marine Corps' projects are not constructed on contaminated sites. However, there may be times when the project is being planned or is underway and contamination is discovered."

1. If contamination is discovered during the planning stage, Naval Facilities Engineering Command (NAVFAC) can investigate and determine the need for clean up using Environmental Restoration Program, Navy (ER,N) funds and following environmental restoration (ER) procedures. However, the site investigation/clean-up must compete with other ER sites based on risk management. In most cases, this will take several years and the site may not be available in time for the project.

2. If contamination is discovered during construction and it is Defense Environmental Restoration Program (DERP) eligible, NAVFAC can carry out the site investigation/cleanup using ER,N funds. However, the site will compete with other ER sites based on risk management. If ER,N funding is not available in time to meet the construction schedule, the installation must use project funds to investigate/clean up the site. If neither ER,N nor project funding is available in time to meet the construction schedule, the installation must stop the project altogether or re-site it. An installation does not have an option to pay for any DERP-eligible work with installation Navy Operations and Maintenance (OM,N) funds except to accomplish DERP-eligible work within the scope of an OM,N funded construction project."

4.11 Recreation

Hunting, fishing, and hiking areas do occur within the immediate proposed action area. The implementation of the Action Alternative would have a temporary adverse effect on recreational activities while the proposed action is being implemented. However, the long-term effects on hunting, fishing, or hiking opportunities aboard MCBQ would be beneficial due to the implementation of Alternative B. This would be due to the fact that a trail will now be available for those interested in recreation to pursue those activities or reach their destinations.

4.12 Military Training

Impact of Alternative A: This alternative does not involve any construction or demolition, and would not have any additional effects on military training.

Impact of Alternative B: The Action Alternative will have a positive impact on military training because it will:

- Safely transport Marines to ranges while keeping military vehicles and Marines within the boundaries of the TA.
- Allow Marines to effectively provide security along the perimeter of the base.

4.13 Cumulative Impacts

For NEPA analysis, a cumulative impact is defined as the impact on the environment, which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future action. Impacts can result from individually minor but collectively significant actions taking place over a period of time.

Past projects:

- ***Expansion and Upgrade of Range 5 (Completed).***

Ongoing projects:

- ***Construction of Student Barracks at The Basic School (TBS).***

Future projects:

- ***General maintenance of Range 6.***
- ***Install temporary targets on Range 6.***
- ***Construction of new TBS Fire Station.***
- ***Construction of MiniMart at Hot Patch Road.***

Consultation with the SHPO is also completed for all construction and demolition projects at MCBQ as applicable.

4.14 Mitigation Measures

Environmental Impacts Evaluation Matrix		
Resource	Alternative A -No Action	Alternative B - Establishment of a Crossing at Cannon Creek and Re-establishment of the Perimeter Trail in Training Areas 7A and 9C
Land-Use	None	None
Water Resources	None	None
Biological Resources	None	Negligible - Project requires widening but utilizes existing right of way and infrastructure. SWP survey must be performed and and time of year restrictions to protect NLEB and Indiana Bat must be adhered to.
Cultural Resources	None	None - Shiloh Cemetery will remain publicly accessible however visitors must contact/coordinate with the base (Range Management Branch) to gain entry.
Air Quality	None	None
Noise	None	None
Infrastructure, Utilities and Transportation	None	Positive - Project requires widening but utilizes existing right of way and infrastructure.
Environmental Justice	None	None
Health, Safety and Munitions Response	None	None
Hazardous Waste/Materials	None	None
Military Training	None	Positive

Figure 4.14.1

4.14.1 Mitigation of Effects to Water Quality

The implementation of basic erosion and sediment control practices will be required during tree removal as specified in the Virginia Erosion and Sediment Control Handbook (VDCR 1992), the Virginia BMP Field Guide (2009) and the Virginia BMPs For Water Quality Technical Manual (2011) for Forestry Management. The proper installation and maintenance of E&SC measures will minimize the movement of disturbed soils off-site and into the Cannon Creek watershed.

4.14.2 Mitigation of Potential Effects to NLEB and Indiana Bat

USFWS time of year restrictions will be implemented. USFWS mandates that trees greater than three inches in diameter at breast height cannot be removed or harvested between 15 April and 15 September to minimize impacts to the NLEB and the Indiana Bat.

4.14.3 Mitigation of Potential Effects to the Spotted Salamander and other Amphibians (Recommended)

As stated in section 4.3, it is both desirable and recommended that either some of the pooled ruts and depressions be left intact or re-created downslope (See Appendix C). These depressions would continue to serve as seasonal waterholes/pools for the Spotted Salamanders and other amphibians while reducing the impacts of the proposed action on these species. The re-created depressions could possibly include but are not limited to stormwater detention ponds, sediment basins, or stormwater ditches. The summary of the recommendations pertaining to Spotted Salamanders and other amphibians inhabiting the pooled ruts are outlined in Appendix C.

5.0 CONCLUSION

The reason for the preparation for this EA was to avoid segmenting of a proposed action. Segmenting involves the breaking down of an action into smaller parts to reduce the appearance of significance or impacts of the action. This reasoning is outlined in CEQ regulations for implementing NEPA (40 C.F.R. part 1500.4 (p)) Reducing Paperwork and referenced in Marine Corps Order (MCO) P5090.2A Ch. 3:

"Using categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirement of to prepare an environmental impact statement."

While individually, each action (The Establishment of a Crossing at Cannon Creek and the Re-establishment of the Perimeter Trail in TA 7A and 9C) may have been eligible for a Categorical Exclusion (CATEX), cumulatively there was the possibility of significant impacts. As a result, an EA was prepared for this proposed action. The trail re-establishment also involved vegetation removal which has potential impacts to the SWP, NLEB, Indiana Bat, and cultural resource sites. As a result, analysis

under the NHPA and Sec. 7 of the Endangered Species Act was necessary.

Two alternatives regarding the Establishment of a Crossing at Cannon Creek and the Re-establishment of a Perimeter Trail in TA 7A and 9C have been evaluated:

The No Action Alternative

The Action Alternative (Alternative B)

The project proponent has determined that Alternative B is the preferred alternative. This Alternative allows MCBQ to effectively continue to support the base's mission and military training while minimizing impacts to the environment because it utilizes an existing right-of-way as well as infrastructure. Alternative B would not have significant impacts on the human and/or natural environment.

6.0 LIST OF PREPARERS

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8.0 REFERENCES

40 CFR parts 1500-1508, Council on Environmental Quality.

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Service, Endangered and Threatened Wildlife and Plants;
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Table of Acronyms

ACHP - Advisory Council on Historic Preservation
BACT - Best Available Control Technology
BGPA - Bald and Golden Eagle Protection Act
BMP - Best Management Plans
C.A.A. - Clean Air Act
CATEX - Categorical Exclusion
CBPA - Chesapeake Bay Preservation Act
CDD - Construction Demolition Debris
CEQ - Council on Environmental Quality
CFR - Code of Federal Regulations
CH₄ - Methane
CO - Carbon Monoxide
CO₂ - Carbon Dioxide
CO₂E - Carbon Dioxide Equivalent
CRMP - Coastal Resources Management Program
CWA - Clean Water Act
CZMA - Coastal Zone Management Act
DC - District of Columbia
DERP - Defense Environmental Restoration Program
DoD - Department of Defense
EA - Environmental Assessment
EISA - Energy Impact Security
ESA - Endangered Species Act
E.O. - Executive Order
E.P.A. - Environmental Protection Agency
ER - Environmental Restoration
ER, N - Environmental Restoration Program, Navy
E & SC - Erosion and Sediment Control
FEMA - Federal Emergency Management Agency
FIRM - Flood Insurance Rate Map
GHG - Greenhouse Gases
HVAC - Heating, Ventilation and Air Conditioning.
JLUS - Joint Land Use Study
LAER - Lowest Achievable Emissions Rate
LID - Low Impact Development
MBTA - Migratory Bird Treaty Act
MCBQ - Marine Corps Base Quantico
MCO - Marine Corps Order
Minor NSR - Minor New Source Review
MMBtu/hr - One Million British Thermal Units Per Hour
MO - Marine Operations
MOU - Memorandum of Understanding
MSW - Municipal Solid Waste
NAAQS - National Ambient Air Quality Standard
NAVFACENGCOM - Naval Facilities Engineering Command

NAVFAC - Naval Facilities Engineering Command
N-A NSR - Nonattainment New Source Review
NEPA - National Environmental Policy Act
NHPA - National Historic Preservation Act
NRHPA - National Register of Historic Places
NLEB - Northern Long-Eared Bat
NO_x - Nitrogen Dioxide
N₂O - Nitrous Oxide
NREA - Natural Resources and Environmental Affairs
NSR - New Source Review
NWI - National Wetlands Inventory
OCS - Office Candidates School
ODS - Ozone Depleting Substances
OM, N - Navy Operations and Maintenance
OPNAVINST - Chief of Naval Operations Instruction
pCi/L - Picocuries per Liter
PM - Particulate Matter
PSD - Prevention of Significant Deterioration
PTE - Potential to Emit
QMCBHD - Quantico Marine Corps Base Historic District
Rd. - Road
RMA - Resource Management Areas
RPA - Resource Protection Areas
SHPO - State Historic Preservation Officer
SIP - State Implementation Plan
Sn - State fine sandy loam
SO₂ - Sulfur Dioxide
SWP - Small Whorled Pogonia
TBS - The Basic School
Tpy - Tons per Year
USACE - U.S. Army Corps of Engineers
USCERL - U.S. Army Construction Engineering and Research Laboratory
TA - Training Area
USFWS - United States Fish and Wildlife Service
UXO - Unexploded Ordnance
VA - Virginia
VAC - Virginia Administrative Code
VDEQ - Virginia Department of Environmental Quality
VOC - Volatile Organic Compounds

APPENDIX A
Photographs



Cannon Creek (Looking North)



Proposed Trail Re-establishment, Training Area 7A near Shiloh Cemetery.



Proposed Trail Re-establishment with marked homestead in Training Area 7A.



Proposed Trail Re-establishment in Training Area 7A.



Proposed Trail Re-establishment, in Training Area 9C.



Proposed Trail Re-establishment in Training Area 9C.



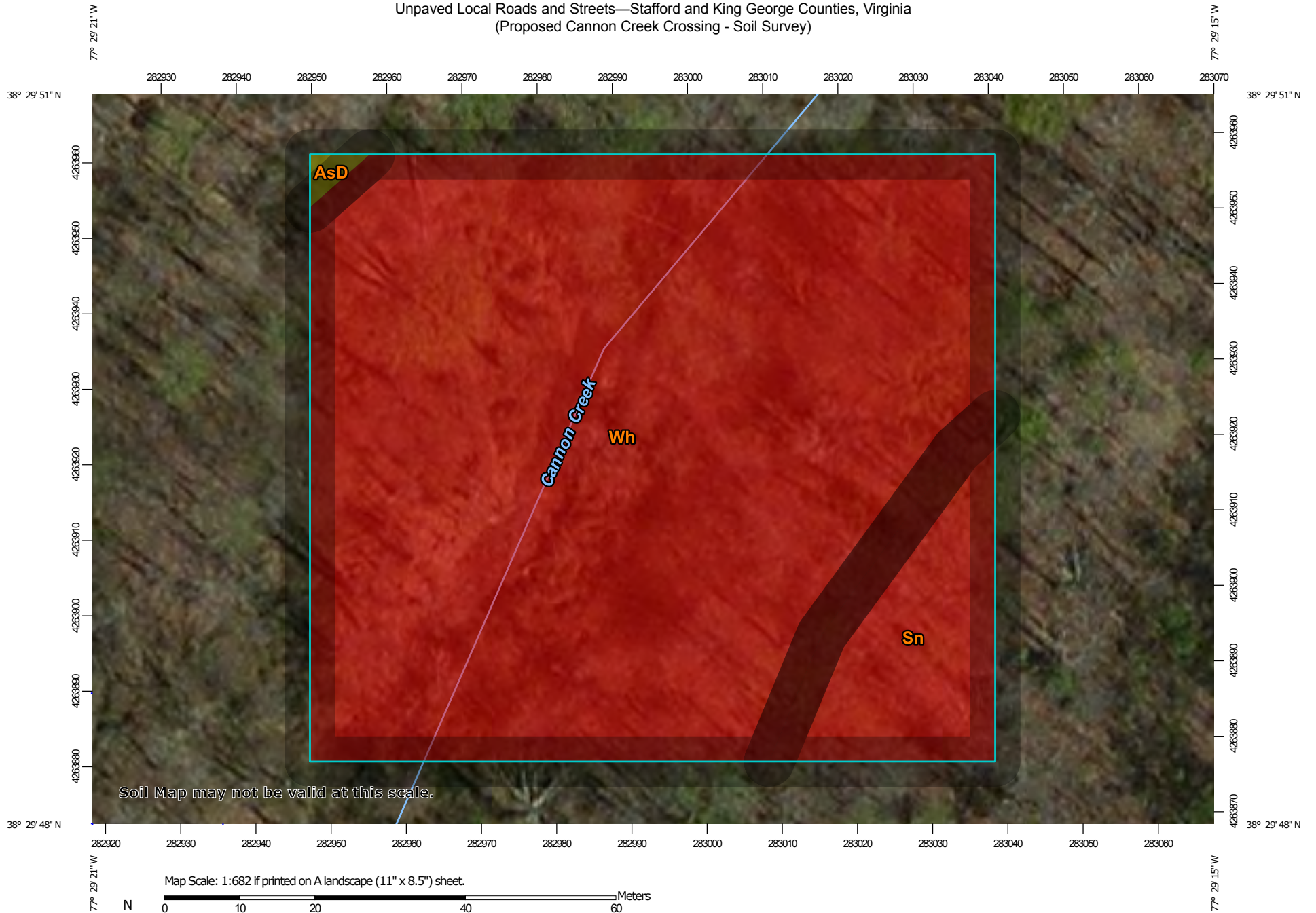
Proposed Trail Re-establishment
in Training Area 9C.



Proposed Trail
Re-establishment in Training
Area 9C.

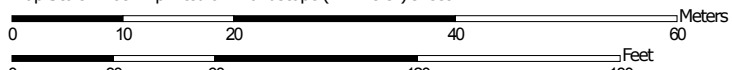
Appendix B
Soil Summaries

Unpaved Local Roads and Streets—Stafford and King George Counties, Virginia
(Proposed Cannon Creek Crossing - Soil Survey)



Soil Map may not be valid at this scale.

Map Scale: 1:682 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

4/7/2017
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
Unpaved Local Roads and Streets—Stafford and King George Counties, Virginia
(Proposed Cannon Creek Crossing - Soil Survey)

MAP LEGEND

Area of Interest (AOI)





 Area of Interest (AOI)

Background





 Aerial Photography

Soils





Soil Rating Polygons

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available


Soil Rating Lines

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available






Soil Rating Points

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Stafford and King George Counties, Virginia
Survey Area Data: Version 12, Dec 13, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Unpaved Local Roads and Streets

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
AsD	Ashlar fine sandy loam, 6 to 15 percent slopes	Somewhat limited	Ashlar (85%)	Depth to hard bedrock (0.46)	0.0	0.4%
				Slope (0.37)		
				Dusty (0.00)		
Sn	State fine sandy loam, local alluvium	Very limited	State (85%)	Low strength (1.00)	0.2	11.0%
				Flooding (0.40)		
				Dusty (0.05)		
			Alluvial land, wet (3%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.05)		
Wh	Wehadkee very fine sandy loam, 0 to 2 percent slopes	Very limited	Wehadkee (85%)	Depth to saturated zone (1.00)	1.6	88.7%
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.04)		
			Alluvial land, wet (5%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.05)		
			Cartecay (3%)	Flooding (1.00)		
				Depth to saturated zone (1.00)		
Totals for Area of Interest					1.8	100.0%

Unpaved Local Roads and Streets— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Very limited	1.8	99.6%

Unpaved Local Roads and Streets— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	0.0	0.4%
Totals for Area of Interest	1.8	100.0%

Description

Unpaved local roads and streets are those roads and streets that carry traffic year round but have a graded surface of local soil material or aggregate.

Description:

Unpaved local roads and streets are those roads and streets that carry traffic year round but have a graded surface of local soil material or aggregate.

The roads and streets consist of

(1) the underlying local soil material, either cut or fill, which is called "the sub-grade";

(2) the surface, which may be the same as the subgrade or may have aggregate such as crushed limestone added.

They are graded to shed water, and conventional drainage measures are provided. These roads and streets are built mainly from the soil at the site. Soil interpretations for local roads and streets are used as a tool in evaluating soil suitability and identifying soil limitations for the practice. The rating is for soils in their present condition and does not consider present land use. Soil properties and qualities that affect local roads and streets are those that influence the ease of excavation and grading and the traffic-supporting capacity. The properties and qualities that affect the ease of excavation and grading are hardness of bedrock or a cemented pan, depth to bedrock or a cemented pan, depth to a water table, flooding, the amount of large stones, and slope. The properties that affect traffic-supporting capacity are soil strength as inferred from the AASHTO group index and the Unified classification, subsidence, shrink-swell behavior, potential frost action, and depth to the seasonal high water table. The dust generating tendency of the soil is also considered.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Stafford and King George Counties, Virginia

Me—Meadowville silt loam

Map Unit Setting

National map unit symbol: 41fg
Elevation: 350 to 1,200 feet
Mean annual precipitation: 31 to 52 inches
Mean annual air temperature: 48 to 66 degrees F
Frost-free period: 210 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Meadowville and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Meadowville

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 50 inches: silty clay loam
H3 - 50 to 86 inches: gravelly sandy clay loam
H4 - 86 to 90 inches: fine sandy loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A

Stafford and King George Counties, Virginia

Wh—Wehadkee very fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 41gj
Elevation: 450 to 1,100 feet
Mean annual precipitation: 31 to 52 inches
Mean annual air temperature: 48 to 66 degrees F
Frost-free period: 210 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Wehadkee and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wehadkee

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 11 inches: very fine sandy loam
H2 - 11 to 46 inches: loam
H3 - 46 to 84 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Alluvial land, wet

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Cartecay

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Stafford and King George Counties, Virginia

Survey Area Data: Version 12, Dec 13, 2013

Stafford and King George Counties, Virginia

AIB—Appling fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 41c0
Mean annual precipitation: 31 to 52 inches
Mean annual air temperature: 48 to 66 degrees F
Frost-free period: 210 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Appling and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 38 inches: clay
H3 - 38 to 46 inches: clay loam
H4 - 46 to 72 inches: fine sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Hydric soil rating: No

Data Source Information

Soil Survey Area: Stafford and King George Counties, Virginia
Survey Area Data: Version 12, Dec 13, 2013



Stafford and King George Counties, Virginia

CfB2—Cecil fine sandy loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 41d6
Elevation: 200 to 1,400 feet
Mean annual precipitation: 31 to 52 inches
Mean annual air temperature: 48 to 66 degrees F
Frost-free period: 210 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cecil and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cecil

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 43 inches: clay
H3 - 43 to 68 inches: clay loam
H4 - 68 to 99 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Hydric soil rating: No

Data Source Information

Soil Survey Area: Stafford and King George Counties, Virginia
Survey Area Data: Version 12, Dec 13, 2013



Hydric soil rating: No

Data Source Information

Soil Survey Area: Stafford and King George Counties, Virginia

Survey Area Data: Version 12, Dec 13, 2013



Stafford and King George Counties, Virginia

Sn—State fine sandy loam, local alluvium

Map Unit Setting

National map unit symbol: 41g2
Elevation: 20 to 750 feet
Mean annual precipitation: 31 to 52 inches
Mean annual air temperature: 48 to 66 degrees F
Frost-free period: 210 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

State and similar soils: 85 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of State

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 50 inches: clay loam
H3 - 50 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Alluvial land, wet

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Stafford and King George Counties, Virginia

Survey Area Data: Version 12, Dec 13, 2013

Stafford and King George Counties, Virginia

Ae—Alluvial land, wet

Map Unit Setting

National map unit symbol: 41bw
Mean annual precipitation: 31 to 52 inches
Mean annual air temperature: 48 to 66 degrees F
Frost-free period: 210 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Alluvial land, wet: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alluvial Land, Wet

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 50 inches: clay loam
H3 - 50 to 72 inches: loam

Properties and qualities

Slope: 0 to 6 percent
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: Frequent
Available water storage in profile: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Stafford and King George Counties, Virginia
Survey Area Data: Version 12, Dec 13, 2013

Stafford and King George Counties, Virginia

AIC2—Appling fine sandy loam, 6 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: 41c1

Mean annual precipitation: 31 to 52 inches

Mean annual air temperature: 48 to 66 degrees F

Frost-free period: 210 to 230 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Appling and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Interfluvium

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 9 inches: fine sandy loam

H2 - 9 to 38 inches: clay

H3 - 38 to 46 inches: clay loam

H4 - 46 to 72 inches: fine sandy loam

Properties and qualities

Slope: 6 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Frost action (0.50)		
				Dusty (0.01)		
GsF	Galestown-Sassafras complex, 30 to 45 percent slopes	Very limited	Galestown (40%)	Slope (1.00)	1,902.2	0.6%
			Sassafras (25%)	Slope (1.00)		
				Frost action (0.50)		
				Dusty (0.01)		
lu	luka fine sandy loam, local alluvium, 0 to 4 percent slopes	Somewhat limited	luka (85%)	Flooding (0.40)	2,987.2	1.0%
				Depth to saturated zone (0.19)		
				Dusty (0.00)		
KeA	Kempsville fine sandy loam, 0 to 2 percent slopes	Somewhat limited	Kempsville (85%)	Dusty (0.02)	376.4	0.1%
KeB	Kempsville fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Kempsville (85%)	Dusty (0.02)	1,031.4	0.3%
KfB	Kempsville fine sandy loam, gravelly substratum, 2 to 6 percent slopes	Somewhat limited	Kempsville (85%)	Dusty (0.02)	3,686.0	1.2%
KfC2	Kempsville fine sandy loam, gravelly substratum, 6 to 10 percent slopes, eroded	Somewhat limited	Kempsville (85%)	Dusty (0.02)	2,068.0	0.7%
KfD2	Kempsville fine sandy loam, gravelly substratum, 10 to 18 percent slopes, eroded	Somewhat limited	Kempsville (85%)	Slope (0.96)	1,476.2	0.5%
				Dusty (0.02)		
LgA	Lignum silt loam, 0 to 2 percent slopes	Very limited	Lignum (85%)	Low strength (1.00)	74.5	0.0%
				Depth to saturated zone (0.48)		
				Shrink-swell (0.47)		
				Dusty (0.11)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Alluvial land, wet (5%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.05)		
			Elbert variant (3%)	Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
				Low strength (1.00)		
				Dusty (0.11)		
			Worsham (3%)	Depth to saturated zone (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.42)		
				Dusty (0.08)		
LgB	Lignum silt loam, 2 to 6 percent slopes	Very limited	Lignum (85%)	Low strength (1.00)	929.6	0.3%
				Depth to saturated zone (0.48)		
				Shrink-swell (0.47)		
				Dusty (0.11)		
			Worsham (3%)	Depth to saturated zone (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.42)		
				Dusty (0.08)		
MaD	Manor silt loam, 6 to 15 percent slopes	Somewhat limited	Manor (85%)	Frost action (0.50)	553.1	0.2%
				Slope (0.37)		
				Dusty (0.10)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
MaE	Manor silt loam, 15 to 35 percent slopes	Very limited	Manor (85%)	Slope (1.00)	2,139.8	0.7%
				Frost action (0.50)		
				Dusty (0.10)		
MdB	Marr very fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Marr (85%)	Frost action (0.50)	480.0	0.2%
				Dusty (0.03)		
MdC2	Marr very fine sandy loam, 6 to 10 percent slopes, eroded	Somewhat limited	Marr (85%)	Frost action (0.50)	802.3	0.3%
				Dusty (0.03)		
MdD2	Marr very fine sandy loam, 10 to 15 percent slopes, eroded	Somewhat limited	Marr (85%)	Slope (0.84)	431.6	0.1%
				Frost action (0.50)		
				Dusty (0.03)		
MdE2	Marr very fine sandy loam, 15 to 30 percent slopes, eroded	Very limited	Marr (85%)	Slope (1.00)	1,333.2	0.4%
				Frost action (0.50)		
				Dusty (0.03)		
Me	Meadowville silt loam	Very limited	Meadowville (85%)	Low strength (1.00)	1,746.7	0.6%
				Frost action (0.50)		
				Shrink-swell (0.31)		
				Dusty (0.11)		
MkB2	Mecklenburg loam, 2 to 6 percent slopes, eroded	Very limited	Mecklenburg (85%)	Low strength (1.00)	693.7	0.2%
				Shrink-swell (0.16)		
				Dusty (0.10)		
MkC2	Mecklenburg loam, 6 to 10 percent slopes, eroded	Very limited	Mecklenburg (85%)	Low strength (1.00)	1,141.3	0.4%
				Shrink-swell (0.16)		
				Dusty (0.10)		
MIC3	Mecklenburg clay loam, 6 to 10 percent slopes, severely eroded	Very limited	Mecklenburg (85%)	Low strength (1.00)	397.9	0.1%
				Shrink-swell (0.16)		
				Dusty (0.11)		
NaB	Nason silt loam, 2 to 6 percent slopes	Very limited	Nason (85%)	Low strength (1.00)	5,520.6	1.8%

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
NaC2	Nason silt loam, 6 to 15 percent slopes, eroded	Very limited	Nason (85%)	Shrink-swell (0.50)	7,072.2	2.4%
				Dusty (0.10)		
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Slope (0.37)		
NaC3	Nason silty clay loam, 6 to 10 percent slopes, severely eroded	Very limited	Nason (85%)	Dusty (0.10)	980.5	0.3%
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Dusty (0.11)		
				Low strength (1.00)		
OrA	Orange loam, 0 to 2 percent slopes	Very limited	Orange (85%)	Shrink-swell (1.00)	126.2	0.0%
				Low strength (1.00)		
				Depth to saturated zone (0.19)		
				Dusty (0.08)		
			Elbert variant (5%)	Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
				Low strength (1.00)		
				Dusty (0.11)		
			Worsham (3%)	Depth to saturated zone (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.42)		
				Dusty (0.08)		
				Low strength (1.00)		
				Depth to saturated zone (0.19)		
OrB	Orange loam, 2 to 6 percent slopes	Very limited	Orange (85%)	Shrink-swell (1.00)	1,270.4	0.4%
				Low strength (1.00)		
				Depth to saturated zone (0.19)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Dusty (0.08)		
OrC2	Orange loam, 6 to 10 percent slopes, eroded	Very limited	Orange (85%)	Shrink-swell (1.00)	792.0	0.3%
				Low strength (1.00)		
				Depth to saturated zone (0.19)		
				Dusty (0.10)		
Po	Pooler loam, thin solum variant, 0 to 2 percent slopes	Very limited	Pooler, variant (85%)	Depth to saturated zone (1.00)	912.5	0.3%
				Low strength (1.00)		
				Dusty (0.08)		
			Bladen (5%)	Depth to saturated zone (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Dusty (0.09)		
Ro	Roanoke silt loam, 0 to 2 percent slopes	Very limited	Roanoke (85%)	Depth to saturated zone (1.00)	2,391.3	0.8%
				Flooding (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Dusty (0.11)		
			Wehadkee (4%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
Sa	Sand and gravel pits	Not rated	Sand and gravel pits (100%)		1,294.2	0.4%
ScF	Sandy and clayey land, steep, Sassafras and	Very limited	Sandy and clayey land (80%)	Slope (1.00)	5,544.3	1.9%
				Shrink-swell (0.50)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
	Caroline materials			Low strength (0.22)		
				Dusty (0.05)		
SfA	Sassafras fine sandy loam, 0 to 2 percent slopes	Somewhat limited	Sassafras (85%)	Frost action (0.50)	1,506.5	0.5%
				Dusty (0.01)		
SfB	Sassafras fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Sassafras (85%)	Frost action (0.50)	13,671.9	4.6%
				Dusty (0.01)		
SfC2	Sassafras fine sandy loam, 6 to 10 percent slopes, eroded	Somewhat limited	Sassafras (85%)	Frost action (0.50)	7,313.1	2.4%
				Dusty (0.01)		
SfD2	Sassafras fine sandy loam, 10 to 15 percent slopes, eroded	Somewhat limited	Sassafras (85%)	Slope (0.84)	2,681.6	0.9%
				Frost action (0.50)		
				Dusty (0.01)		
SfE2	Sassafras fine sandy loam, 15 to 35 percent slopes, eroded	Very limited	Sassafras (85%)	Slope (1.00)	4,339.5	1.5%
				Frost action (0.50)		
				Dusty (0.01)		
Sn	State fine sandy loam, local alluvium	Very limited	State (85%)	Low strength (1.00)	1,405.3	0.5%
				Flooding (0.40)		
				Dusty (0.05)		
			Alluvial land, wet (3%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.05)		
StD	Stony rolling land	Not rated	Stony rolling land (85%)		140.2	0.0%
StE	Stony steep land	Not rated	Stony steep land (85%)		394.9	0.1%
SuC	Susquehanna soils, 2 to 10 percent slopes	Very limited	Susquehanna (85%)	Shrink-swell (1.00)	149.3	0.1%
				Low strength (1.00)		
				Dusty (0.10)		
TeA	Tetotum fine sandy loam, 0	Very limited	Tetotum (85%)	Low strength (1.00)	2,686.4	0.9%

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
	to 2 percent slopes			Depth to saturated zone (0.19)		
				Dusty (0.05)		
			Bladen (3%)	Depth to saturated zone (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Dusty (0.09)		
			Fallsington (3%)	Depth to saturated zone (1.00)		
				Frost action (0.50)		
				Dusty (0.03)		
			Pooler variant (3%)	Depth to saturated zone (1.00)		
				Low strength (1.00)		
				Dusty (0.08)		
TeB	Tetotum fine sandy loam, 2 to 6 percent slopes	Very limited	Tetotum (85%)	Low strength (1.00)	2,161.2	0.7%
				Depth to saturated zone (0.19)		
				Dusty (0.05)		
TeC2	Tetotum fine sandy loam, 6 to 10 percent slopes, eroded	Very limited	Tetotum (85%)	Low strength (1.00)	1,050.9	0.4%
				Depth to saturated zone (0.19)		
				Dusty (0.06)		
Tm	Tidal marsh	Very limited	Tidal marsh (85%)	Ponding (1.00)	3,771.3	1.3%
				Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Dusty (0.01)		
TuA	Turbeville loam, 0 to 2 percent slopes	Somewhat limited	Turbeville (85%)	Low strength (0.10)	385.4	0.1%
				Dusty (0.08)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
TuB	Turbeville loam, 2 to 6 percent slopes	Somewhat limited	Turbeville (85%)	Low strength (0.10)	3,159.9	1.1%
				Dusty (0.08)		
TuC2	Turbeville loam, 6 to 15 percent slopes, eroded	Somewhat limited	Turbeville (85%)	Slope (0.37)	1,539.1	0.5%
				Low strength (0.10)		
				Dusty (0.09)		
W	Water	Not rated	Water (100%)		11,673.6	3.9%
Wa	Wahee silt loam	Very limited	Wahee (85%)	Low strength (1.00)	1,057.0	0.4%
				Depth to saturated zone (1.00)		
				Shrink-swell (0.42)		
				Flooding (0.40)		
				Dusty (0.11)		
			Roanoke (5%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Dusty (0.11)		
WgD	Watt silt loam, gray surface variant, 10 to 15 percent slopes	Somewhat limited	Watt, variant (85%)	Slope (0.84)	344.4	0.1%
				Dusty (0.11)		
WgE	Watt silt loam, gray surface variant, 15 to 35 percent slopes	Very limited	Watt, variant (85%)	Slope (1.00)	1,289.2	0.4%
				Dusty (0.11)		
Wh	Wehadkee very fine sandy loam, 0 to 2 percent slopes	Very limited	Wehadkee (85%)	Depth to saturated zone (1.00)	5,196.3	1.7%
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.04)		
			Alluvial land, wet (5%)	Depth to saturated zone (1.00)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.05)		
			Cartecay (3%)	Flooding (1.00)		
				Depth to saturated zone (1.00)		
WIB	Westphalia loamy very fine sand, 2 to 6 percent slopes	Somewhat limited	Westphalia (85%)	Frost action (0.50)	210.0	0.1%
WD2	Westphalia loamy very fine sand, 6 to 15 percent slopes, eroded	Somewhat limited	Westphalia (85%)	Frost action (0.50)	351.2	0.1%
				Slope (0.37)		
WIE2	Westphalia loamy very fine sand, 15 to 30 percent slopes, eroded	Very limited	Westphalia (85%)	Slope (1.00)	521.8	0.2%
				Frost action (0.50)		
WmA	Wickham fine sandy loam, 0 to 2 percent slopes	Somewhat limited	Wickham (85%)	Low strength (0.22)	2,921.9	1.0%
				Dusty (0.06)		
WmB	Wickham fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Wickham (85%)	Low strength (0.22)	1,872.7	0.6%
				Dusty (0.06)		
WmC2	Wickham fine sandy loam, 6 to 12 percent slopes, eroded	Somewhat limited	Wickham (85%)	Low strength (0.22)	1,038.4	0.3%
				Dusty (0.06)		
				Slope (0.04)		
WnA	Wickham sandy loam, thin solum variant, 0 to 2 percent slopes	Somewhat limited	Wickham, variant (85%)	Dusty (0.01)	1,571.7	0.5%
WnB	Wickham sandy loam, thin solum, variant, 2 to 6 percent slopes	Somewhat limited	Wickham, variant (85%)	Dusty (0.01)	872.3	0.3%
WnC	Wickham sandy loam, thin solum variant, 6 to 12 percent slopes	Somewhat limited	Wickham, variant (85%)	Slope (0.04)	562.4	0.2%
				Dusty (0.01)		

Unpaved Local Roads and Streets— Summary by Map Unit — Stafford and King George Counties, Virginia (VA179)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
WoA	Woodstown fine sandy loam, 0 to 2 percent slopes	Somewhat limited	Woodstown (85%)	Frost action (0.50)	852.2	0.3%
				Dusty (0.02)		
WoB	Woodstown fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Woodstown (85%)	Frost action (0.50)	653.3	0.2%
				Dusty (0.02)		
Wr	Worsham loam	Very limited	Worsham (85%)	Depth to saturated zone (1.00)	2,703.2	0.9%
				Low strength (1.00)		
				Shrink-swell (0.42)		
				Dusty (0.08)		
			Alluvial land, wet (3%)	Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
				Dusty (0.05)		
			Elbert variant (3%)	Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
				Low strength (1.00)		
				Dusty (0.11)		
ZIB	Zion loam, deep variant, 2 to 6 percent slopes	Very limited	Zion, variant (85%)	Shrink-swell (1.00)	340.5	0.1%
				Low strength (1.00)		
				Dusty (0.09)		
ZIC2	Zion loam, deep variant, 6 to 10 percent slopes, eroded	Very limited	Zion, variant (85%)	Shrink-swell (1.00)	271.6	0.1%
				Low strength (1.00)		
				Dusty (0.10)		
Totals for Area of Interest					298,670.9	100.0%

Unpaved Local Roads and Streets— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Very limited	157,865.3	52.9%
Somewhat limited	124,450.7	41.7%
Null or Not Rated	16,354.9	5.5%
Totals for Area of Interest	298,670.9	100.0%

Description

Unpaved local roads and streets are those roads and streets that carry traffic year round but have a graded surface of local soil material or aggregate.

Description:

Unpaved local roads and streets are those roads and streets that carry traffic year round but have a graded surface of local soil material or aggregate.

The roads and streets consist of

- (1) the underlying local soil material, either cut or fill, which is called "the sub-grade";
- (2) the surface, which may be the same as the subgrade or may have aggregate such as crushed limestone added.

They are graded to shed water, and conventional drainage measures are provided. These roads and streets are built mainly from the soil at the site. Soil interpretations for local roads and streets are used as a tool in evaluating soil suitability and identifying soil limitations for the practice. The rating is for soils in their present condition and does not consider present land use. Soil properties and qualities that affect local roads and streets are those that influence the ease of excavation and grading and the traffic-supporting capacity. The properties and qualities that affect the ease of excavation and grading are hardness of bedrock or a cemented pan, depth to bedrock or a cemented pan, depth to a water table, flooding, the amount of large stones, and slope. The properties that affect traffic-supporting capacity are soil strength as inferred from the AASHTO group index and the Unified classification, subsidence, shrink-swell behavior, potential frost action, and depth to the seasonal high water table. The dust generating tendency of the soil is also considered.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix C
Small Whorled Pogonia Survey and Endangered Species
Documentation

Siddall CIV Darien G

From: Stephenson, Chelsey <chelsey_stephenson@fws.gov>
Sent: Wednesday, May 24, 2017 16:12
To: Siddall CIV Darien G
Cc: Sumalee Hoskin; Jennifer Stanhope; Troy Andersen
Subject: [Non-DoD Source] Re: Question concerning two projects: Perimeter Trail Re-establishment in Training Area 9B at Marine Corps Base Quantico, Tree Removal near Dirt 6 Road in Training Area 9B at Marine Corps Base Quantico.
Attachments: 20170524_email_Crawford to Hoskin_16B Timber Harvest MCBQ.pdf

Hi Darien,

We have reviewed the Perimeter Trail project and have no further comments.

In regards to the Tree Removal in Training Area 9B, there was further coordination between Chris Crawford and Sumalee Hoskin, our species lead for bats. Please see email attached. I suggest reaching out to Chris in regards to this project to make sure you are all on the same page.

Please let me know if there's anything else I can do for you.

All the best,
Chelsey Stephenson

On Wed, May 24, 2017 at 1:46 PM, Siddall CIV Darien G <darien.siddall@usmc.mil> wrote:

Jennifer and Chelsey,

I have questions concerning two projects that I submitted for review in late April:

Perimeter Trail Re-establishment in Training Area 9B at Marine Corps Base Quantico; submitted April 20, 2017 - I self-certified my package. Is there ANYTHING else I need from you ? Do you concur ? May the project proceed ?

Tree Removal near Dirt 6 Road in Training Area 9B at Marine Corps Base Quantico; submitted April 27, 2017 - I self-certified my package. Is there ANYTHING else I need from you ? Do you concur ? May the project proceed ?

Please get back to me as soon as possible. Thanks for all that you do.

Darien Siddall
Natural Resource Specialist
NEPA Section
Natural Resources and Environmental Affairs (NREA)
Environmental Planning Section
3049 Bordelon St.
Marine Corps Base (MCB) - Quantico, VA 22134
Phone: 703-432-6770
Fax: 703-784-4953
DSN: 278-4030



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>



In Reply Refer To:

April 20, 2017

Consultation Code: 05E2VA00-2017-SLI-1652

Event Code: 05E2VA00-2017-E-05007

Project Name: Perimeter Trail Re-establishment in Training Area 9C.

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2017-SLI-1652
Event Code: 05E2VA00-2017-E-05007
Project Name: Perimeter Trail Re-establishment in Training Area 9C.
Project Type: LAND - CLEARING
Project Description: Re-establishment of Trail in Training Area 9C.

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/38.507892444405954N77.52311343327445W>



Counties: Stafford, VA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/9045	

Flowering Plants

NAME	STATUS
Harperella (<i>Ptilimnium nodosum</i>)	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/3739	
Small Whorled Pogonia (<i>Isotria medeoloides</i>)	Threatened
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1890	

Critical habitats

There are no critical habitats within your project area.

USFWS National Wildlife Refuges And Fish Hatcheries

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuges or fish hatcheries within your project area.



CCB Mapping Portal



Layers: VA Eagle Nest Locator

Map Center [longitude, latitude]: [-77.50905990600586, 38.50839855310897]

Map Link:

http://www.ccbirds.org/maps/#layer=VA+Eagle+Nest+Locator&zoom=15&lat=38.50839855310897&lng=-77.50905990600586&legend=legend_tab_7c321b7e-e523-11e4-a0-0e0c41326911&base=World+Imagery+%28ESRI%29

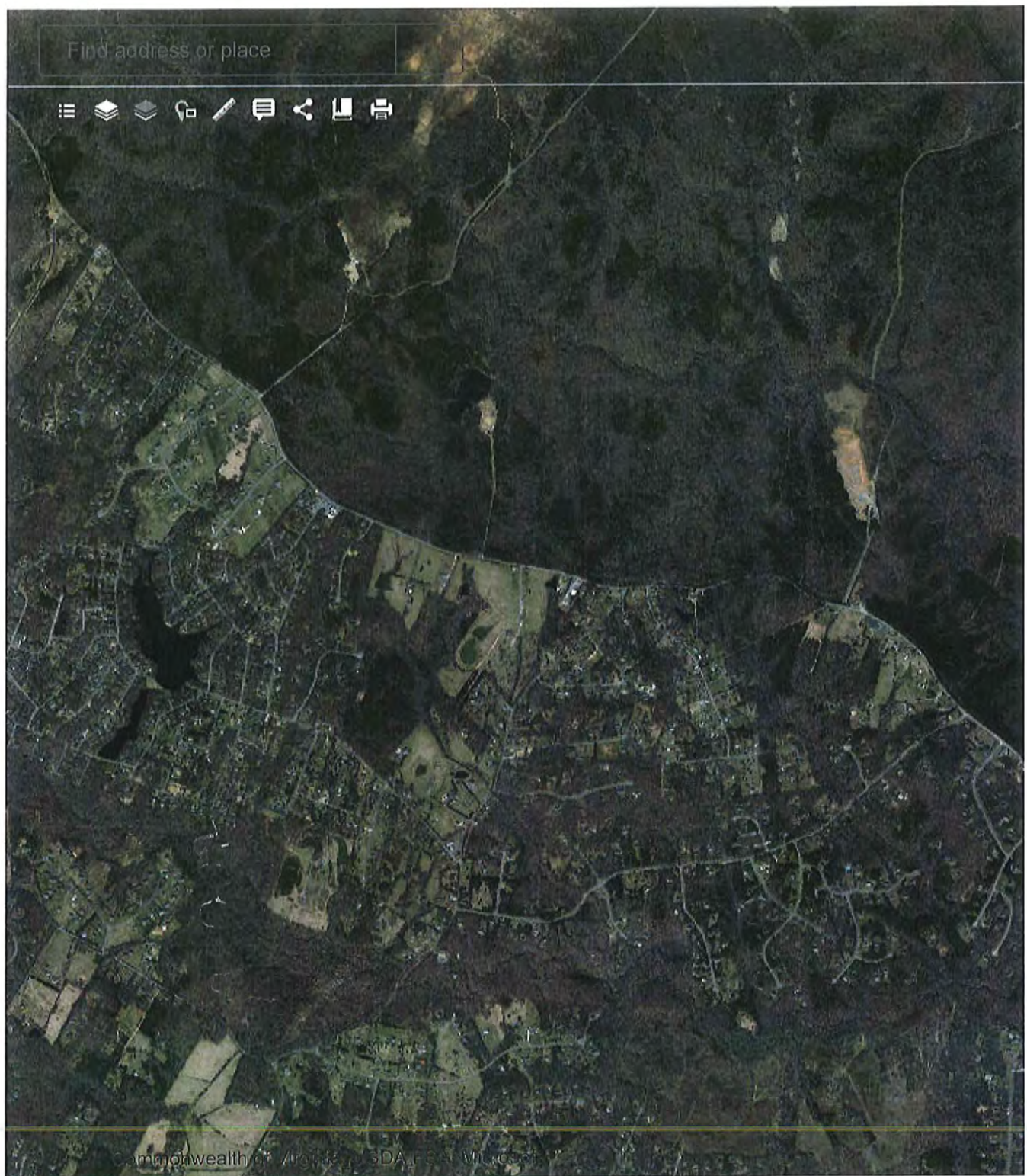
Report Generated On: 04/20/2017

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the [Data Use Agreement](#) to ensure compliance with our data use policies. For additional data access questions, view our [Data Distribution Policy](#), or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Report generated by [The Center for Conservation Biology Mapping Portal](#).

To learn more about CCB visit ccbbirds.org or contact us at info@ccbbirds.org





Species Conclusions Table

Project Name: Perimeter Trail Re-establishment in Training Area 9C

Date: 20 April 2017

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Northern Long-Eared Bat	No critical habitat present but suitable habitat is present.	Not likely to adversely effect.	Implementing Time of Year Restrictions (April 15 – September 15) for tree clearing that is not of significant size or acreage. Bat surveys determined that the NLEB is not present at this location of the base.
Haperella	No critical habitat present.	No effect	Site assessment revealed that there was no habitat present.
Small Whorled Pagonia	No critical habitat present.	No effect	Site assessment reveled there was no suitable habitat present.
Bald Eagle	Unlikely to disturb the Bald Eagle. Does not intersect with Bald Eagle concentration area.	No Eagle Act permit will be required.	No nests within a 660' buffer and not within a Bald Eagle concentration area.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Field Office
6669 Short Lane
Gloucester, VA 23061



Date: 20 April 2017

Self-Certification Letter

Project Name: Perimeter Trail Re-establishment in Training Area 9C

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. . 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. These conclusions resulted in:

- “no effect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- “may affect, likely to adversely affect” determination for the Northern long-eared bat (*Myotis septentrionalis*) and relying on the findings of the January 5, 2016 Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat; and/or
- “no Eagle Act permit required” determinations for eagles.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the "no effect" or "not likely to adversely affect" determinations for proposed and listed species and proposed and designated critical habitat; the "may affect" determination for Northern long-eared bat; and/or the "no Eagle Act permit required" determinations for eagles. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Troy Andersen of this office at (804) 824-2428.

Sincerely,



Cindy Schulz
Field Supervisor
Virginia Ecological Services

Enclosures - project review package



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION
MARINE CORPS BASE
3250 CATLIN AVENUE
QUANTICO, VIRGINIA 22134 5001

IN REPLY REFER TO:
11015/2
B 046
9 Mar 17

MEMORANDUM FOR THE RECORD

From: Head, Natural Resources Section, Natural Resources and
Environmental Affairs Branch
To: File
Subj: SMALL WHORLED POGONIA SURVEY FOR ROAD CONSTRUCTION IN
TRAINING AREA 9C
Encl: (1) Site Map

1. Marine Corps Base Quantico (MCBQ) is proposing to construct a new road in Training Areas (TA) 7A and 9C per the site map at the enclosure. This project is part of the road construction to allow transport of troops and munitions from The Basic School to Ranges 5, 6, 7 and 8 without entering either public highways or on-Base surface danger zones. The TA 7A portions of this road project were surveyed in 2014 and 2015 for the federally listed threatened plant, small whorled pogonia (SWP; *Isotria medeoloides*).

2. The proposed construction route in TA 9C was recently identified and follows an abandoned tracked vehicle route. John Rohm and Tim Stamps walked the route on 8 March 2017 to evaluate whether suitable habitat is present for the SWP and if a survey would be required for the plant during the growing period, 1 June - 15 July 2017.

3. The route traverses Virginia pine (*Pinus virginiana*) forest and follows an abandoned roadbed that was likely used by military wheeled and tracked vehicles. The corridor contains numerous small ponds, created in the ruts produced by heavy vehicles. In several locations, alternate trails were cut to bypass the waterholes. Most of the surrounding timber is Virginia pine.

4. The habitat in the abandoned trail corridor is not suitable for the SWP. Reconstructing a road in this corridor would not impact the SWP. Surveys for the SWP during the growing season will not be required.

5. Incidental to this survey, I observed many egg masses of spotted salamanders (*Ambystoma maculatum*) and other amphibians in the waterholes. None of these species are federally listed species and do not require protection. Nevertheless, it would be desirable, when

Subj: SMALL WHORLED POGONIA SURVEY FOR ROAD CONSTRUCTION IN
TRAINING AREA 7A

possible, to leave some waterholes intact, or to create new depressions immediately downslope to retain some of these valuable breeding pools.

6. Conclusion: Construction of the proposed road in TA 9C should have no adverse impact on the SWP. Because of the valuable amphibian breeding habitat on the current trail, it would be beneficial to retain some ponds or else create shallow depressions downslope from the road that could serve as seasonal waterholes.

A handwritten signature in cursive script, reading "R. T. Stamps".

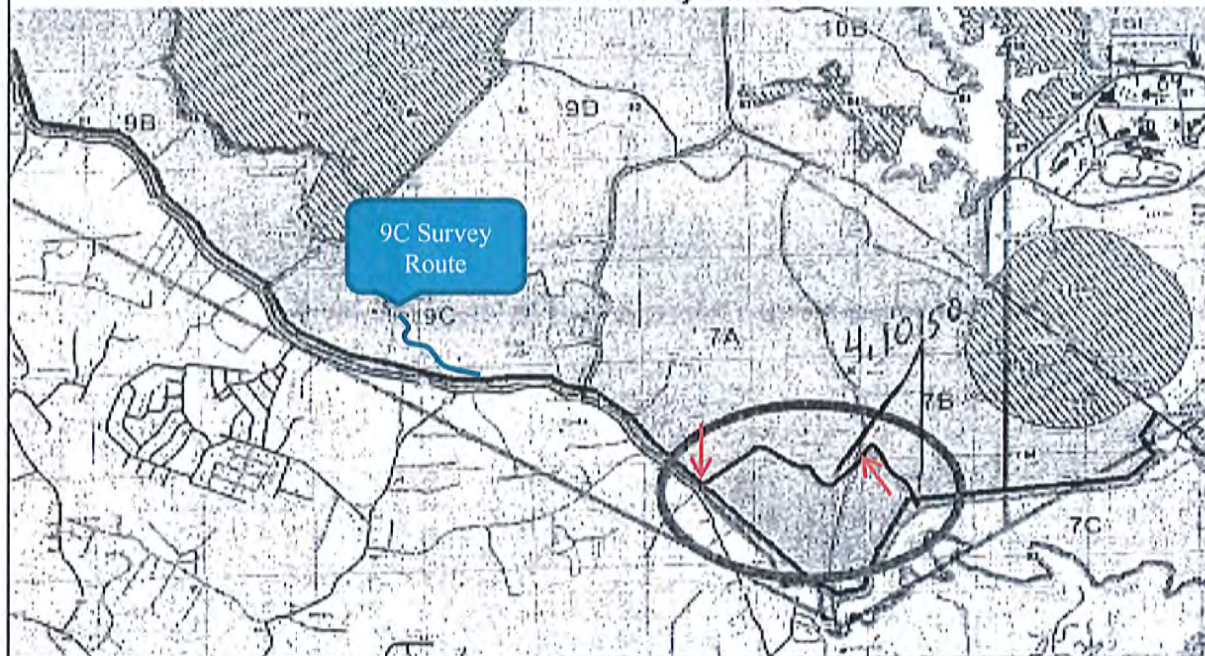
R. T. STAMPS



Tank Trail Repair Project

Proposed "Frampton Tank Trail"

Not Included In Any Phases



New survey corridor in Training Area 9C
marked in blue.

Enclosure (1)

Siddall CIV Darien G

From: Reynolds, Rick (DGIF) <Rick.Reynolds@dgif.virginia.gov>
Sent: Thursday, May 4, 2017 11:23 AM
To: Siddall CIV Darien G
Subject: [Non-DoD Source] FW: Hell Rick, this is Darien Siddall...this is concerning the Little Brown Bat and Tri-Colored Bat.

See below.

Rick

-----Original Message-----

From: Reynolds, Rick (DGIF)
Sent: Thursday, May 04, 2017 11:01 AM
To: 'Siddall CIV Darien G'
Subject: RE: Hell Rick, this is Darien Siddall...this is concerning the Little Brown Bat and Tri-Colored Bat.

According to DGIF records we are not aware of summer roosts or winter hibernacula for either tri-colored or little brown bat on the Quantico Base.

Rick Reynolds
Wildlife Biologist
Virginia Department of Game and Inland Fisheries P.O. Box 996 Verona, VA 24482
540-248-9360

-----Original Message-----

From: Siddall CIV Darien G [mailto:darien.siddall@usmc.mil]
Sent: Thursday, May 04, 2017 10:52 AM
To: Reynolds, Rick (DGIF)
Subject: Hell Rick, this is Darien Siddall...this is concerning the Little Brown Bat and Tri-Colored Bat.
Importance: High

Hello Rick,

We spoke at today concerning the State Endangered Little Brown Bat and Tri-Colored Bat. Per our conversation and use of your system, you stated that there were no known colonies of either of these species. They have been detected on our base though. Please send me your concurrence/non-concurrence on this issue. I have attached the map to this e-mail Thanks!

Darien Siddall
Natural Resource Specialist
NEPA Section
Natural Resources and Environmental Affairs (NREA) Environmental Planning Section
3049 Bordelon St.
Marine Corps Base (MCB) - Quantico, VA 22134
Phone: 703-432-6770
Fax: 703-784-4953
DSN: 278-4030
E-mail: darien.siddall@usmc.mil

Appendix D
Timber Assessment

GOVERNMENT ESTIMATE FOR TIMBER SALE CONTRACT

CONTRACT #: N40080-17-TS-01 MOD 001

INSTALLATION: MCB, Quantico

PRODUCTS FOR SALE

(VOLUMES ESTIMATED USING STANDARD TECHNIQUES)

SPECIES AND PRODUCT	ESTIMATED QUANTITY AND UNIT OF MEASURE	VALUE/ UNIT	TOTAL
<u>Sawtimber</u>			
Virginia Pine	124.1 MBF	50	\$ 6,205
Yellow Poplar	36.8 MBF	150	\$ 5,520
White Oak	22.4 MBF	225	\$ 5,040
Red Oak	29.9 MBF	100	\$ 2,990
Miscellaneous	5.4 MBF	75	\$ 405
<u>Pulpwood</u>			
Pine	40 Cords	N/A	\$ 0
Hardwood	18 Cords	N/A	\$ 0

TOTAL GOVERNMENT ESTIMATE: \$ 20,160

Submitted By: Christopher W. Crawford/
(NAME/SIGNATURE)

Title: Forester

Date: July 6, 2017

Siddall CIV Darien G

From: Moyer CIV Ronald R
Sent: Friday, July 14, 2017 7:32 AM
To: Siddall CIV Darien G
Subject: Timber Appraisals
Attachments: TimberAppraisal_R5_BypassRoadR5-R6.pdf
Signed By: ronald.moyer@usmc.mil

Darien,

Attached is the timber appraisal for the new rehearsal area just south of Range 5. This appraisal also includes the right-of-way timber for the Route 610 bypass road project from Range 5 to Range 6. We plan on adding this timber to one of our 2017 timber sale contracts as a modification (Contract N40080-TS-01 Mod 001)

The Training Area 12B re-alignment project does not include any merchantable timber. The area to be cleared consists mainly of small Virginia pine and some low quality hardwoods. Our plan is to push these trees up with the dozer, pile them, and then burn it this fall or winter.

Ron Moyer
Head, Forestry Program
NREA, Installation & Environment Div.
MCB Quantico, Virginia
Phones: 703 432-6779
571 238-8802

Appendix E
Nationwide Permits for Cannon Creek Crossing and for Culvert
over Intermittent Stream near Range 6.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

August 8, 2017

Mr. Darien Siddall
Natural Resources and Environmental Affairs
Environmental Planning Section
3049 Bordelon St.
Quantico, Virginia 22134

SENT VIA E-MAIL: darien.siddall@usmc.mil

RE: U.S. Army Corps of Engineers Nationwide Permit 18
Cannon Creek Stream Crossing Range 6, Stafford County, Virginia
Notification of No Virginia Water Protection (VWP) Permit Required

Dear Mr. Siddall:

The Department of Environmental Quality (DEQ) received your Nationwide Permit 18 authorization from the U.S. Army Corps of Engineers on July 31, 2017, for a culvert crossing associated with a proposed trail. .

The DEQ has issued conditional Section 401 Water Quality Certification for NWP #18, provided that the entire project meets the conditions of the §401 Certification a VWP general or individual permit will not be required for this project.

Please note that if the entire project is not authorized by the USACE under a RP or NWP or if the project does not meet the 401 Certifications, you may be required to obtain a VWP Permit for the work. In the event that the entire project is not authorized as outlined above, contact the VWP Permit Program in DEQ's Northern Regional Office at vwp.nro@deq.virginia.gov.

Any unexpected environmental impacts, environmental emergencies or spills must be reported to the Virginia Department of Emergency Management's Emergency Operations Center at 1-800-468-8892 within 24 hours of discovery.

If you have any questions regarding this letter, please contact me by phone at 703-583-3815 or by email tyler.gelles@deq.virginia.gov.

Respectfully,

A handwritten signature in black ink, appearing to read "Tyler Gelles".

Tyler Gelles
VWP Permit Writer

Cc: Ms. Theresita Crockett-Augustine, U.S. Army Corps of Engineers, Dumfries Field Office – VIA EMAIL

2. A pre-construction notification is required for discharges associated with the construction of utility line substations that result in the loss of greater than 5000 square feet of waters of the United States.
3. For utility activities requiring notification the prospective permittee shall the following information:
 - a. A map of the entire utility corridor including a delineation of all wetlands and waters of the United States within the corridor. Aquatic resource information shall be submitted using the Cowardin Classification System mapping conventions (e.g. PFO, PEM, POW, etc.).
 - b. An alternatives analysis, which specifically addresses the following:
 - i. Selection of an alignment, which avoids and minimizes wetland impacts to the maximum extent practicable. The utility line should make a direct or perpendicular crossing of a stream. Directional drilling is the preferred method of installation when possible, especially in tidal waters.
 - ii. Selection of an alignment, which avoids fragmenting large tracts of forested wetlands by routing utility lines outside of forested tracts or on the edges of forested tracts.
 - iii. Minimizing clearing of wetlands. Grubbing shall be limited to the permanent easement for underground utility lines. Outside of the permanent easement, wetland vegetation shall be removed at or above the ground surface unless written justification is provided and the impacts are reviewed and approved by the Corps.
 - iv. For overhead utility lines, allowance of natural succession to restore and maintain the corridor in scrub-shrub wetlands except for a minimum corridor needed for access, to the maximum extent practicable.
 - v. For buried utility lines, allowance of natural succession to restore the area to tree and scrub/shrub except for a 20-foot wide access corridor, to the maximum extent practicable.
4. For all submerged utility lines across navigable waters of the United States, a location map and cross-sectional view showing the utility line crossing from bank to bank is required. In addition, the location and depth of any Federal Navigation Channels shall be shown in relation to the proposed utility line. In general, all utility lines shall be buried at least six (6) feet below the authorized bottom depth of Federal Navigation Channel and at least three (3) feet below the bottom depth in all subaqueous areas. When circumstances prevent the placement of at least three feet of cover over the line (outside of the Federal Navigation Channel), then written justification and an alternative method must be provided with the notification and the deviation must be reviewed and approved by the Corps.
5. Whenever possible, excavated material shall be placed on an upland site. However, when this is not feasible, temporary stockpiling is hereby authorized provided that:

- a. All excavated material stockpiled in a vegetated wetland area is placed on filter cloth, mats, or some other semi-permeable surface. The material will be stabilized with straw bales, filter cloth, etc. to prevent reentry into the waterway.
 - b. All excavated material must be placed back into the trench to the original contour and all excess excavated material must be completely removed from the wetlands within 30 days after the pipeline has been laid through the wetlands area. Permission must be granted by the District Commander or his authorized representatives if the material is to be stockpiled longer than 30 days.
6. When open-cut trenching in designated anadromous fish use areas or hydrostatic testing of a pipeline involving water withdrawals from tidal waters are proposed, the Corps will coordinate with the NOAA Fisheries Service and/or the Virginia Department of Game and Inland Fisheries. In most cases, the following time-of-year restrictions (TOYR) will apply:
- James River, below Rt. 17 bridge: No TOYR.
 - James River, at Jamestown Island (Gray's Creek) downstream to Rt. 17 bridge: TOYR from February 15 through June 15 of any given year.
 - James River, at Jamestown Island upstream to Boshers's Dam: TOYR from February 15 through June 30 of any given year.
 - James River, above Boshers's (including Rivanna River): TOYR from March 15 through June 30 of any given year.
 - Rappahannock River, below Route 360 bridge: TOYR from February 15 through June 15 of any given year.
 - York River, below Route 33 bridge: TOYR from February 15 through June 15 of any given year.
 - Nansemond River: TOYR from February 15 through June 15 of any given year.
 - Elizabeth River: A PCN is required for a case-by-case specific review.
 - Unless otherwise noted: TOYR from February 15 through June 30 of any given year.

NWP 14-Linear Transportation Projects

Restricted use of NWP 14 Linear Transportation Projects in Nontidal Waters

The nontidal portion of NWP 14 overlaps with the current State Program General Permit (SPGP-01); therefore, NWP 14 may not be used for projects impacting nontidal waters of the United States, including wetlands within the Norfolk District. NWP 14 may still be used for projects impacting tidal waters of the United States.

NWP 23 - Approved Categorical Exclusions

Conditions Specific to NWP 23:

1. The use of this NWP applies to an entire project addressed in the Categorical Exclusion prepared by another Federal agency. This NWP cannot be used separately at individual crossings/impact areas of a single project. However, multiple crossings/impact areas of a single project can be authorized by this NWP provided the combined impacts of all crossings/impact

areas do not exceed the thresholds described below. This NWP cannot be used in combination with other NWPs for a single project.

2. Discharges from an entire project must not cause a combined loss of greater than ½ acre of wetlands.
3. The prospective permittee must notify the District Commander, via a pre-construction notification (PCN) if there is a discharge in special aquatic sites, including wetlands, and/or resulting in combined impacts to more than 300 linear feet of streambed resulting from the entire project (send notification to the Norfolk District Corps of Engineers, Regulatory Branch, 803 Front St., Norfolk, VA 23510-1096). Written verification from this office must be received before performing the proposed work. The PCN must be in writing and include the following information (the Joint Permit Application may also be used; the Virginia Department of Transportation may use their application form):
 - Name, address, and telephone number of the prospective permittee.
 - Location of the proposed project.
 - Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross section).
 - Brief description of the proposed project and the project purpose.
 - A delineation of affected special aquatic sites, including wetlands.
 - Statement describing how losses of the waters of the United States will be avoided and minimized to the maximum extent practicable.
 - Compensatory mitigation proposal to offset permanent losses of waters of the United States.

When all of the required information is received, the Corps will notify the prospective permittee within 45 days of receipt of all information either that the project may proceed under the nationwide permit or that an individual permit is required. If, after reviewing the PCN, the District Commander determines that the proposed activity would have more than a minimal individual or cumulative adverse impact on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and will provide the prospective permittee with instructions on how to seek authorization under an individual permit. If the prospective permittee is not notified otherwise within the 45-day period, he/she may presume the activity is authorized under this NWP.

4. To ensure that permanent losses of waters of the United States do not result in more than minimal adverse effects to the aquatic environment, compensation will be required for all wetland impacts and for any single impact to a stream of greater than 300 linear feet. For projects where the combined impacts to streams due to the entire project exceed 300 linear feet, but no single impact exceeds 300 linear feet, the Corps will determine on a case-by-case basis whether compensation for stream impacts is required.

NWP 29-Residential Developments

Restricted use of NWP 29 for Multiple Unit Residential Developments and Residential Subdivisions

NWP 29 overlaps with the current State Program General Permit (SPGP-01); therefore, NWP 29 may not be used to authorize multiple unit residential developments and residential subdivisions. NWP 29 may still be used for a single residence and attendant features.

THE FOLLOWING REGIONAL CONDITIONS ARE APPLICABLE TO MULTIPLE AND/OR ALL NWPS:

1. Conditions for Waters Containing Submerged Aquatic Vegetation (SAV) Beds:

This condition applies to: NWPs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 27, 28, 29, 31, 32, 33, 35, 36, 37, 38, 44, 45, 48 and 52.

A pre-construction notification (PCN) is required if work will occur in areas that contain submerged aquatic vegetation (SAVs). Information about SAVs can be found at the Virginia Institute of Marine Science's website <http://www.vims.edu/bio/sav/>. Additional avoidance and minimization measures, such as relocating a structure or time-of-year (TOYR) restrictions may be required to reduce impacts to SAVs.

2. Conditions for Anadromous Fish Use Areas:

To ensure that activities authorized by ALL Nationwide Permits do not impact waterways documented to provide spawning habitat or a migratory pathway for anadromous fish, a check for anadromous fish use areas must be conducted via the Norfolk District's Regulatory GIS (for reporting permits) and/or the Virginia Department of Game and Inland Fisheries (VDGIF) Information System (by applicant for non-reporting permits) at <http://vafwis.org/fwis/>. If the project is located in an area documented as an anadromous fish use area (confirmed or potential), a time-of-year restriction (TOYR) prohibiting all in-water work will be required from February 15 to June 30 of any given year or any TOYR specified by VDGIF and/or Virginia Marine Resources Commission (VMRC). For permits requiring a PCN, if the Norfolk District determines that the work is minimal and the TOYR is unnecessary, informal consultation will be conducted with NOAA Fisheries Service (NOAA) to obtain concurrence that the TOYR would not be required for the proposed activity.

3. Conditions for Designated Critical Resource Waters, which include National Estuarine Research Reserves:

Notification is required for work under NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38 in the Chesapeake Bay National Estuarine Research Reserve in Virginia. This multi-site system along a salinity gradient of the York River includes Sweet Hall Marsh,

Taskinas Creek, Catlett Island, and Goodwin Islands. More information can be found at: <http://www.vims.edu/cbnerr/>.

NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 cannot be used to authorize the discharge of dredged or fill material in the Chesapeake Bay National Estuarine Research Reserve in Virginia.

4. Conditions for Federally Listed Species and Designated Critical Habitat

Notification for ALL NWPs will be required for any project that may affect a federally listed threatened or endangered species or designated critical habitat. The U.S. Fish and Wildlife Service (Service) has developed an online system that allows users to find information about sensitive resources that may occur within the vicinity of a proposed project. This system is named "Information, Planning and Conservation System," (IPaC), and is located at: <http://ecos.fws.gov/ipac/>. This system provides information regarding federally listed and proposed candidate, threatened, and endangered species, designated critical habitats, and Service refuges that may occur in the identified areas, or may be affected by the proposed activities. The applicant may use this system to determine if any federally listed species or designated critical habitat may be affected by their proposed project, ensuring compliance with the Endangered Species Act.

5. Conditions for Waters with Federally Listed Endangered or Threatened Species, Waters Federally Designated as Critical Habitat, and One-mile Upstream (including tributaries) of Any Such Waters:

A pre-construction notification (PCN) is required for work in the areas listed below for NWPs 3, 4, 5, 6, 7, 12, 13, 14, 16, 17, 18, 19, 21, 23, 25, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, and 50 for the Counties of Lee, Russell, Scott, Tazewell, Wise, and Washington in Southwestern Virginia within the following specific waters and reaches:

- 1) Powell River - from the Tennessee-Virginia state line upstream to the Route 58 Bridge in Big Stone Gap and one mile upstream of the mouth of any tributary adjacent to this portion of the River.
- 2) Clinch River - from the Tennessee-Virginia state line upstream to Route 632 at Pisgah in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the River, the Little River to its confluence with Maiden Spring Creek, and one mile upstream of the mouth of any tributary adjacent to this portion of Little River.
- 3) North Fork Holston River - from the Tennessee-Virginia state line upstream to the Smyth County/Bland County line and one mile upstream of any tributary adjacent to this portion of the River.
- 4) Copper Creek - from its junction with the Clinch River upstream to the Route 58 bridge at Dickensonville in Russell County and one mile upstream of any tributary adjacent to this portion of the Creek.
- 5) Indian Creek - from its junction with the Clinch River upstream to the fourth Norfolk and Western Railroad bridge at Van Dyke in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the Creek.

- 6) Middle Fork Holston River - from the Tennessee-Virginia state line to its junction with Walker Creek in Smyth County near Marion, Virginia.
- 7) South Fork Holston River - from its junction with Middle Fork Holston River upstream to its junction with Beech Creek in Washington County.

For the above listed NWP's that require a PCN to work in specific waters and reaches, as described above, in the counties of Lee, Russell, Scott, Smyth, Tazewell, Wise, and Washington in southwestern Virginia, it is recommended that the prospective permittee first contact the applicable Norfolk District Field Office, found at this web link:

http://www.nao.usace.army.mil/Regulatory_Branch/contact_geo_southwest.asp, to determine if the PCN procedures would apply. If required, the PCN must be submitted in writing and include the following information (the Joint Permit Application may also be used – be sure to mark it with the letters PCN at the top of the first page):

- Name, address, and telephone number of the prospective permittee.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (including a plan view, profile, & cross-sectional view).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the NWP, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project may proceed under the NWP permit or whether an individual permit is required. If, after reviewing the notification, the District Commander determines that the proposed activity would have more than a minimal individual or cumulative adverse impact on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide the prospective permittee with instructions on how to seek authorization under an individual permit.

Non-federal applicants shall notify the District Commander if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the District Commander that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the PCN must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The District Commander will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete PCN. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have “no effect” on listed species or critical habitat, or until Section 7 consultation has been completed.

6. Conditions for Designated Trout Waters:

Notification is required for work in the areas listed below for NWP's 3, 4, 5, 6, 7, 12, 13, 14, 16, 17, 18, 19, 21, 23, 25, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, and 50.

This condition applies to activities occurring in two categories of waters; Class V (Put and Take Trout Waters) and Class VI (Natural Trout Waters), as defined by the Virginia State Water Control Board Regulations, Water Quality Standards (VR-680-21-00), dated January 1, 1991, or the most recently updated publication. The Virginia Department of Game and Inland Fisheries (VDGIF) designated these same trout streams into six classes. Classes I-IV are considered wild trout streams. Classes V and VI are considered stockable trout streams. Information on designated trout streams can be obtained via their Virginia Fish and Wildlife Information Service's (VAFWIS's) Cold Water Stream Survey database. Basic access to the VAFWIS is available via <http://vafwis.org/fwis/>.

The waters, occurring specifically within the mountains of Virginia, are within the following river basins:

- 1) Potomac-Shenandoah River Basins
- 2) James River Basin
- 3) Roanoke River Basin
- 4) New River Basin
- 5) Tennessee and Big Sandy River Basins
- 6) Rappahannock River Basin

VDGIF recommends the following time-of-year restrictions (TOYR) for any in-stream work within streams identified as wild trout waters in its Cold Water Stream Survey database. The recommended TOYR for trout species are:

- Brook Trout: October 1 through March 31
- Brown Trout: October 1 through March 31
- Rainbow Trout: March 15 through May 15

This condition applies to the following counties and cities: Albemarle, Allegheny, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Bristol, Buchanan, Buena Vista, Carroll, Clarke, Covington, Craig, Dickenson, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Henry, Highland, Lee, Loudoun, Madison, Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke City, Roanoke Co., Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Staunton, Tazewell, Warren, Washington, Waynesboro, Wise, and Wythe.

Any discharge of dredged and/or fill material authorized by the NWP's listed above, which would occur in the designated waterways or adjacent wetlands of the specified counties, requires notification to the appropriate Corps of Engineers field office, and written approval from that office prior to performing the work. The Norfolk District recommends that prospective permittees first contact the appropriate field office by telephone to determine if the notification procedures would apply. The notification must be in writing and include the following information (the standard Joint Permit Application may also be used):

- Name, address, and telephone number of the prospective permittee.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross-sectional view).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project can proceed under the NWP or whether an individual permit is required. If, after reviewing the notification, the District Commander determines that the proposed activity would have more than minimal individual or cumulative adverse impacts on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the NWP and provide instructions on how to seek authorization under an individual permit. If the prospective permittee is not notified otherwise within the 45-day period the prospective permittee may assume that the project can proceed under the NWP.

7. Conditions Regarding Invasive Species

Plant species listed by the most current *Virginia Department of Conservation and Recreation's Invasive Alien Plant List* shall not be used for re-vegetation for activities authorized by any NWP. The list of invasive plants in Virginia may be found at:
http://www.dcr.virginia.gov/natural_heritage/documents/invlist.pdf.

8. Conditions Pertaining to Countersinking of Pipes and Culverts in Nontidal Waters

This condition applies to: NWPs 3, 7, 12, 14, 17, 18, 21, 23, 25, 27, 29, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, and 50.

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation.

- Following consultation with the Virginia Department of Game and Inland Fisheries (DGIF), the Norfolk District has determined that fish and other aquatic organisms are most likely present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although prospective permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below.
- All pipes: All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the Norfolk District on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural

stream bottom. Pipes that are greater than 24" in diameter shall be countersunk 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.

- c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).
- d. Floodplain pipes: The requirement to countersink does not apply to pipes or culverts that are being placed above ordinary high water, such as those placed to allow for floodplain flows. The placement of pipes above ordinary high water is not jurisdictional (provided no fill is discharged into wetlands).
- e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water with the countersinking and invert restrictions taken into account.
- f. Pipes on bedrock or above existing utility lines: Different procedures will be followed for pipes or culverts to be placed on bedrock or above existing buried utility lines where it is not practicable to relocate the lines, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:
 - i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.
 - ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that bedrock or an existing buried utility line that is not practicable to relocate prevents countersinking, he/she should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then he/she must submit a pre-construction notification (PCN) to the Norfolk District in accordance with General Condition 31 of the NWPs. In addition to the information required by General Condition 31, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or

countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The PCN must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact his/her regional fishery biologist for the Virginia Department of Game and Inland Fisheries (VDGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the prospective permittee should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from VDGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

- g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above and will in most cases be non-reporting. It is recommended that on slopes greater than 5%, a larger pipe than required be installed to allow for the passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, he/she must submit a Pre-Construction Notification to the Norfolk District in accordance with General Condition 31 of the Nationwide Permits. In addition to the information required by General Condition 31, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact his/her regional fishery biologist for the Virginia Department of Game and Inland Fisheries (DGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will

notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN.

- h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, then the permittee must stop work and contact the Norfolk District (contact by telephone and/or email is acceptable). The permittee must provide the Norfolk District with specific information concerning site conditions and limitations on countersinking. The Norfolk District will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the Norfolk District could determine that the work will not qualify for a nationwide permit.
- i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, even if it is an otherwise non-reporting activity, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking, and if so, should follow the procedures outlined in (f) and/or (g) above.

9. Conditions for the Repair of Pipes

This condition applies to: NWP's 3, 7, 12, 14, 17, 18, 21, 23, 25, 27, 29, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, and 50.

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation.

If any discharge of fill material will occur in conjunction with pipe maintenance, such as concrete being pumped over rebar into an existing deteriorated pipe for stabilization, then:

A. If the existing pipe or line of pipes are NOT currently countersunk:

- a. As long as the inlet and outlet invert elevations of at least one pipe located in the low flow channel are not being altered, and provided that no concrete apron is being constructed, then the work may proceed under the NWP for the other pipes, provided it complies with all other NWP General Conditions, including Condition 9 for

Management of Water Flows. In such cases, notification to the Norfolk District Commander is not required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.

- b. Otherwise, the prospective permittee must submit a pre-construction notification (PCN) to the Norfolk District Commander prior to commencing the activity. For all such projects, the following information should be provided:
 - 1) Photographs of the existing inlet and outlet;
 - 2) A measurement of the degree to which the work will raise the invert elevations of both the inlet and outlet of the existing pipe;
 - 3) The reasons why other methods of pipe maintenance are not practicable (such as metal sleeves or a countersunk pipe replacement);
 - 4) Depending on the specific case, the Norfolk District may discuss potential fish usage of the waterway with the Virginia Department of Game and Inland Fisheries.

The Norfolk District will assess all such pipe repair proposals in accordance with guidelines that can be found under "Pipe Repair Guidelines" at:
http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/Guidance/guidance_documents.asp

- c. If the Norfolk District determines that the work qualifies for the NWP, additional conditions will be placed on the verification. Those conditions can be found at the web link above (in item ii).
 - d. If the Norfolk District determines that the work does NOT qualify for the NWP, the applicant will be directed to apply for either an LOP-I permit (applicable only for Virginia Department of Transportation projects) or an individual permit. However, it is anticipated that the applicant will still be required to perform the work such that the waterway is not blocked or restricted to a greater degree than its current conditions.
- B. If the existing pipe or at least one pipe in the line of pipes IS countersunk and at least one pipe located in the low flow channel will continue to be countersunk, and no concrete aprons are proposed:

No PCN to the Norfolk District is required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.

- C. If the existing pipe or at least one pipe in the line of pipes IS countersunk and no pipe will continue to be countersunk in the low flow channel:

This work cannot be performed under the NWPs. The prospective permittee must apply for either a Letter of Permission 1 (LOP-1) permit (applicable only for VDOT projects) or an individual permit. However, it is anticipated that the prospective permittee will still be required to perform the work such that the waterway is not blocked or restricted more so than its current conditions.

D. Emergency situations:

In the case of an emergency situation, a prospective permittee is encouraged to follow the above guidelines at the time of repair. However, if conditions or timeframes do not allow for compliance with the procedure outlined herein, then the pipe can be repaired as it was before the washout, but the prospective permittee will have to come back and replace or reconstruct the pipe/culvert in accordance with these guidelines. In other words, the repair of the pipe is viewed as a temporary fix, and an appropriate repair should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are repaired without compliance with these guidelines at the time that the repair occurs, even if it is an otherwise non-reporting activity, and that notification must provide the prospective permittee's planned schedule for following these procedures and constructing an appropriate repair (it is acceptable to submit such notification by email).

**Norfolk District Regional Conditions for the
2017 Nationwide Permits (NWP) Applicable in Virginia
(Including Northern Virginia Military Installations within Baltimore
District's Area of Responsibility)**

I. REGIONAL CONDITIONS APPLICABLE TO MULTIPLE AND/OR ALL NWPS:

1. Conditions for Waters Containing Submerged Aquatic Vegetation (SAV) Beds:

This condition applies to: NWPs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25, 27, 28, 29, 31, 32, 33, 35, 36, 37, 38, 39, 44, 45, 48, 52, 53 and 54.

A pre-construction notification (PCN) is required if work will occur in areas that contain submerged aquatic vegetation (SAV). Information about SAV habitat can be found at the Virginia Institute of Marine Science's website <http://web.vims.edu/bio/sav/>. Additional avoidance and minimization measures, such as relocating a structure or time-of-year restrictions (TOYR), may be required to reduce impacts to SAV habitat.

2. Conditions for Anadromous Fish Use Areas:

To ensure that activities authorized by any NWP do not impact documented spawning habitat or a migratory pathway for anadromous fish, a check for anadromous fish use areas must be conducted via the Norfolk District's Regulatory GIS (for reporting permits) and/or the Virginia Department of Game and Inland Fisheries (VDGIF) Information System (by applicant for non-reporting permits) at <http://vafwis.org/fwis/>. For any proposed NWP, if the project is located in an area documented as an anadromous fish use area (confirmed or potential), a time-of-year restriction (TOYR) prohibiting all in-water work will be required from February 15 to June 30 of any given year or any TOYR specified by VDGIF and/or Virginia Marine Resources Commission (VMRC). For permits requiring a PCN, if the Norfolk District determines that the work is minimal and the TOYR is unnecessary, informal consultation will be conducted with NOAA Fisheries Service (NOAA) to obtain concurrence that the TOYR would not be required for the proposed activity. For dredging in the Elizabeth River upstream of the Mid-Town Tunnel on the mainstem and the West Norfolk Bridge (Route 164, Western Freeway) on the Western Branch of the Elizabeth River, a TOYR is not required.

3. Conditions for Designated Critical Resource Waters, which include National Estuarine Research Reserves:

Notification is required for work under NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38 and 54 in the Chesapeake Bay National Estuarine Research

Reserve in Virginia. This multi-site system along a salinity gradient of the York River includes Sweet Hall Marsh, Taskinas Creek, Catlett Islands, and Goodwin Islands. More information can be found at: <http://www.vims.edu/cbner/>.

NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 cannot be used to authorize the discharge of dredged or fill material in the Chesapeake Bay National Estuarine Research Reserve in Virginia.

4. Conditions for Federally Listed Species and Designated Critical Habitat

For ALL NWPs, notification is required for any project that may affect a federally listed threatened or endangered species or designated critical habitat. The U.S. Fish and Wildlife Service (Service) has developed an online system that allows users to find information about sensitive resources that may occur within the vicinity of a proposed project. This system is named “Information, Planning and Conservation System,” (IPaC), and is located at: <http://ecos.fws.gov/ipac/>. The applicant may use IPaC to determine if any federally listed species or designated critical habitat may be affected by their proposed project. If your Official Species List from IPaC identifies any federally listed endangered or threatened species, you are required to submit a PCN for the proposed activity, unless the project clearly does not impact a listed species or suitable habitat for the listed species. If you are unsure about whether your project will impact listed species, please submit a PCN, so the Norfolk District may review the action. Further information about the Virginia Field Office “Project Review Process” may be found at: <http://www.fws.gov/northeast/virginiafield/endangered/projectreviews.html>.

Additional consultation may also be required with National Marine Fisheries Service for species or critical habitat under their jurisdiction, including sea turtles, marine mammals, shortnose sturgeon, and Atlantic sturgeon. For additional information about their jurisdiction in Virginia, please see <https://www.greateratlantic.fisheries.noaa.gov/protected/index.html>.

Additional resources to assist in determining compliance with this condition can be found on our webpage: <http://www.nao.usace.army.mil/Missions/Regulatory/USFWS.aspx>

5. Conditions for Waters with Federally Listed Endangered or Threatened Species, Waters Federally Designated as Critical Habitat, and One-mile Upstream (including tributaries) of Any Such Waters

Any work proposed in critical habitat, as designated in regional condition 4, requires a PCN.

6. Conditions for Designated Trout Waters:

Notification is required for work in the areas listed below for NWP's 3, 4, 5, 6, 7, 12, 13, 14, 16, 17, 18, 19, 21, 23, 25, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, and 54.

This condition applies to activities occurring in two categories of waters; Class V (Put and Take Trout Waters) and Class VI (Natural Trout Waters), as defined by the Virginia State Water Control Board Regulations, Water Quality Standards (VR-680-21-00), dated January 1, 1991, or the most recently updated publication. The Virginia Department of Game and Inland Fisheries (VDGIF) designated these same trout streams into six classes. Classes I-IV are considered wild trout streams. Classes V and VI are considered stockable trout streams. Information on designated trout streams can be obtained via their Virginia Fish and Wildlife Information Service's (VAFWIS's) Cold Water Stream Survey database. Basic access to the VAFWIS is available via <http://vafwis.org/fwis/>.

The waters, occurring specifically within the mountains of Virginia, are within the following river basins:

- 1) Potomac-Shenandoah River Basins
- 2) James River Basin
- 3) Roanoke River Basin
- 4) New River Basin
- 5) Tennessee and Big Sandy River Basins
- 6) Rappahannock River Basin

VDGIF recommends the following time-of-year restrictions (TOYRs) for any in-stream work within streams identified as wild trout waters in its Cold Water Stream Survey database. The recommended TOYRs for trout species are:

- Brook Trout: October 1 through March 31
- Brown Trout: October 1 through March 31
- Rainbow Trout: March 15 through May 15

This condition applies to the following counties and cities: Albemarle, Allegheny, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Bristol, Buchanan, Buena Vista, Carroll, Clarke, Covington, Craig, Dickenson, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Henry, Highland, Lee, Loudoun, Madison, Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke City, Roanoke Co., Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Staunton, Tazewell, Warren, Washington, Waynesboro, Wise, and Wythe.

Any discharge of dredged and/or fill material authorized by the NWP's listed above, which would occur in the designated waterways or adjacent wetlands of the specified counties, requires notification to the appropriate Corps of Engineers field office, and written approval from that office prior to performing the work. The Norfolk District recommends that prospective permittees first contact the applicable Norfolk District

Field Office, found at this web link:

<http://www.nao.usace.army.mil/Missions/Regulatory/Contacts.aspx>, to determine if the PCN procedures would apply. The notification must be in writing and include the following information (the standard Joint Permit Application may also be used):

- Name, address, and telephone number of the prospective permittee.
- Name, address, email, and telephone number of the property owner.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross-sectional view).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project can proceed under the NWP or whether an individual permit is required. If, after reviewing the PCN, the District Commander determines that the proposed activity would have more than minimal individual or cumulative adverse impacts on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the NWP and provide instructions on how to seek authorization under an individual permit. If the prospective permittee is not notified otherwise within the 45-day period, the prospective permittee may assume that the project can proceed under the NWP.

7. Conditions Regarding Invasive Species

Plant species listed by the most current *Virginia Department of Conservation and Recreation's Invasive Alien Plant List* shall not be used for re-vegetation for activities authorized by any NWP. The list of invasive plants in Virginia may be found at: <http://www.dcr.virginia.gov/natural-heritage/invspdflist>. DCR recommends the use of regional native species for re-vegetation as identified in the DCR *Native Plants for Conservation, Restoration and Landscaping* brochures for the coastal, piedmont and mountain regions <http://www.dcr.virginia.gov/natural-heritage/nativeplants#brochure>.

8. Conditions Pertaining to Countersinking of Pipes and Culverts

This condition applies to: NWPs 3, 7, 12, 14, 17, 18, 21, 23, 25, 27, 29, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52.

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no

higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation.

For Nontidal Waters: Following consultation with the Virginia Department of Game and Inland Fisheries (VDGIF), the Norfolk District has determined that fish and other aquatic organisms are most likely present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although prospective permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below. The following conditions will apply in nontidal waters:

- a. All pipes: All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the Norfolk District on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.
- b. When countersinking culverts, permittees must ensure reestablishment of a surface water channel (within 15 days post construction) that allows for the movement of aquatic organisms and maintains the same hydrologic regime that was present pre-construction (i.e. the depth of surface water through the permit area should match the upstream and downstream depths). This may require the addition of finer materials to choke the larger stone and/or placement of riprap to allow for a low flow channel.
- c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).
- d. Floodplain pipes: The requirement to countersink does not apply to pipes or culverts that are being placed above ordinary high water, such as those placed to allow for floodplain flows. The placement of pipes above ordinary high water is not jurisdictional (provided no fill is discharged into wetlands).
- e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water with the countersinking and invert restrictions taken into account.

- f. Pipes on bedrock or above existing utility lines: Different procedures will be followed for pipes or culverts to be placed on bedrock or above existing buried utility lines where it is not practicable to relocate the lines, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:
- i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.
 - ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that bedrock or an existing buried utility line that is not practicable to relocate prevents countersinking, he/she should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then he/she must submit a pre-construction notification (PCN) to the Norfolk District in accordance with General Condition 32 of the NWP. In addition to the information required by General Condition 32, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The PCN must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact the regional fishery biologist for the VDGIF, for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the prospective permittee should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from VDGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.
- g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above and will in most cases be non-reporting. It is recommended that on slopes greater than 5%,

a larger pipe than required be installed to allow for the passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, he/she must submit a PCN to the Norfolk District in accordance with General Condition 32 of the Nationwide Permits. In addition to the information required by General Condition 32, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact the regional fishery biologist for the VDGI for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN.

- h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, a utility line, or other documentable obstacle, then the permittee must stop work and contact the Norfolk District (contact by telephone and/or email is acceptable). The permittee must provide the Norfolk District with specific information concerning site conditions and limitations on countersinking. The Norfolk District will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the Norfolk District could determine that the work will not qualify for a nationwide permit.

- i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, even if it is an otherwise non-reporting activity, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking, and if so, should follow the procedures outlined in (g) and/or (h) above.

9. Conditions for the Repair of Pipes

This condition applies to: NWP's 3, 7, 12, 14, 17, 18, 21, 23, 25, 27, 29, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52.

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation.

For Nontidal Waters: If any discharge of fill material will occur in conjunction with pipe maintenance, such as concrete being pumped over rebar into an existing deteriorated pipe for stabilization, then the following conditions apply:

- a. If the existing pipe or multi-barrel array of pipes are NOT currently countersunk:
 - i. As long as the inlet and outlet invert elevations of at least one pipe located in the low flow channel are not being altered, and provided that no concrete apron is being constructed, then the work may proceed under the NWP for the other pipes, provided it complies with all other NWP General Conditions, including Condition 9 for Management of Water Flows. In such cases, notification to the Norfolk District Commander is not required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.
 - ii. Otherwise, the prospective permittee must submit a pre-construction notification (PCN) to the Norfolk District Commander prior to commencing the activity. For all such projects, the following information should be provided:

- 1) Photographs of the existing inlet and outlet;

- 2) A measurement of the degree to which the work will raise the invert elevations of both the inlet and outlet of the existing pipe;
- 3) The reasons why other methods of pipe maintenance are not practicable (such as metal sleeves or a countersunk pipe replacement);
- 4) A vicinity map showing the pipe locations.

Depending on the specific case, the Norfolk District may discuss potential fish usage of the waterway with the Virginia Department of Game and Inland Fisheries.

The Norfolk District will assess all such pipe repair proposals in accordance with guidelines that can be found under “Pipe Repair Guidelines” at:

<http://www.nao.usace.army.mil/Missions/Regulatory/GuidanceDocuments.aspx>

- iii. If the Norfolk District determines that the work qualifies for the NWP, additional conditions will be placed on the verification. Those conditions can be found at the web link above (in item ii).
 - iv. If the Norfolk District determines that the work does NOT qualify for the NWP, the applicant will be directed to apply for either Regional Permit 01 (applicable only for Virginia Department of Transportation projects) or an Individual Permit. However, it is anticipated that the applicant will still be required to perform the work such that the waterway is not blocked or restricted to a greater degree than its current conditions.
- b. If the existing pipe or at least one pipe in the multi-barrel array of pipes IS countersunk and at least one pipe located in the low flow channel will continue to be countersunk, and no concrete aprons are proposed:

No PCN to the Norfolk District is required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.

- c. If the existing pipe or at least one pipe in the multi-barrel array of pipes IS countersunk and no pipe will continue to be countersunk in the low flow channel:

This work cannot be performed under the NWPs. The prospective permittee must apply for either a Regional Permit 01 (applicable only for VDOT projects) or an Individual Permit. However, it is anticipated that the prospective permittee will still be required to perform the work such that the waterway is not blocked or restricted more so than its current conditions.

- d. In emergency situations, if conditions or timeframes do not allow for compliance with the procedure outlined herein, then the pipe can be temporarily repaired to the condition before the washout. If the temporary repair would require a PCN by the above procedures, the permittee must submit the PCN at the earliest practicable date, but no longer than 15 days after the temporary repair.

10. Condition for Impacts Requiring a Mitigation Plan

When a PCN is required, a mitigation plan needs to be submitted when the permanent loss of wetlands exceeds 1/10 acre and/or 300 linear feet of waters of the U.S., unless otherwise stated in the Regional Conditions (see Regional Condition 12).

11. Condition for Temporary Impacts

All temporarily disturbed waters and wetlands must be restored to their pre-construction contours within 12 months of commencing the temporary impacts' construction. Impacts that will not be restored within 12 months (calculated from the start of the temporary impacts' construction) will be considered permanent, unless otherwise approved by the Corps, and mitigation may be required. Once restored to their natural contours, soil in these areas must be mechanically loosened to a depth of 12 inches and wetland areas must be seeded or sprigged with appropriate native vegetation (see Regional Condition 7 regarding revegetation).

12. Condition for Transportation Projects Funded in Part or in Total by Local, State or Federal Funds

For all impacts associated with transportation projects funded in part or in total by local, state or federal funds and requiring a PCN, compensatory mitigation will generally be required for all permanent wetland impacts (including impacts less than 1/10 acre). Therefore, the PCN must include a mitigation plan addressing the proposed compensatory mitigation.

13. Condition for Projects Requiring Coordination Under Section 408

General Condition 31 of the NWPs requires that prospective permittees submit a pre-construction notification (PCN) if an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a US Army Corps of Engineers (USACE) federally authorized civil works project. For information on the location of Norfolk District projects, prospective permittees are directed to the maps showing the locations of Norfolk District projects located at:

http://www.nao.usace.army.mil/Portals/31/docs/regulatory/RPSPdocs/RP-17_Corps_Project_Maps.pdf

If the prospective permittee is uncertain whether the proposed activity might alter or temporarily or permanently occupy or use a Norfolk District federally authorized civil works project, the prospective permittee shall submit a PCN.

II. REGIONAL CONDITIONS APPLICABLE TO SPECIFIC NWPS:

NWP 5 - Scientific Measurement Devices

Condition for Construction or Installation of Subaqueous Turbines:

A pre-construction notification (PCN) is required if a prospective permittee proposes the construction or installation of subaqueous turbines because this work may have more than minimal impacts and the work will need to be coordinated with appropriate federal, state, and/or local agencies.

NWP 7 - Outfall Structures and Associated Intake Structures

Conditions for Intakes in Anadromous Fish Waters:

When an intake is proposed in designated anadromous fish waters, the following design parameters will be incorporated as permit conditions to protect the sensitive life stages of anadromous fish:

- 1) Screening over the mouth of the intake with mesh size that does not exceed 1mm;
- 2) Intake velocities that do not exceed 0.25 feet per second;
- 3) Intake must be positioned such that an unimpeded flow of water parallel to the screen surface occurs along the entire surface of the screen to take advantage of sweeping velocity.

NWP 10 - Mooring Buoys

Condition for Sufficient Mooring Depths:

Water depths in the mooring areas should be sufficient that vessels moored float at all stages of the tide. Boats should not hit bottom during low water conditions. The swing radius of the vessel plus the mooring chain should not result in the vessel becoming an obstruction to navigation. Use of this NWP is prohibited in and around SAV beds. Information about SAV habitat can be found at the Virginia Institute of Marine Science's website <http://web.vims.edu/bio/sav/>.

NWP 11 - Temporary Recreational Structures

Condition for Sufficient Mooring Depths:

Water depths in the mooring areas should be sufficient that structures moored float at all stages of the tide or stoppers must be utilized to prevent the structures from resting on the bottom, so as to not damage the underlying benthic communities. Structures should not hit bottom during low water conditions. Use of this NWP is prohibited in and around SAV beds. Information about SAV habitat can be found at the Virginia Institute of Marine Science's website <http://web.vims.edu/bio/sav/>.

NWP 12 - Utility Line Activities

Conditions Specific to NWP 12:

1. Construction of access roads may not result in more than 1/3 acre of impacts to waters of the United States.
2. A PCN is required for discharges associated with the construction of utility line substations that result in the permanent loss of greater than 5000 square feet of waters of the United States.
3. For utility activities requiring a PCN the prospective permittee shall provide the following information:
 - a. A map of the entire utility corridor to assist with our completeness determination. The map should include a delineation of all wetlands and waters of the United States within the corridor. Aquatic resource information shall be submitted using the Cowardin Classification System mapping conventions (e.g. PFO, PEM, POW, etc.).
 - b. An alternatives analysis, which specifically addresses the following:
 - i. Selection of an alignment which avoids and minimizes wetland and stream impacts to the maximum extent practicable. The utility line should make a direct or perpendicular crossing of a stream. Directional drilling should be reviewed as an option. However, the Norfolk District recognizes that in certain areas (e.g. karst areas) directional drilling may not be the environmentally preferred option.
 - ii. Selection of an alignment which avoids fragmenting large tracts of forested wetlands by routing utility lines outside of forested tracts or on the edges of forested tracts. Consult the Virginia Conservation Vision, a GIS analysis for identifying and prioritizing areas of un-fragmented natural cover in Virginia <http://www.dcr.virginia.gov/natural-heritage/vaconvision>.
 - iii. Minimizing clearing of wetlands. Grubbing shall be limited to the permanent easement for underground utility lines. Outside of the permanent easement, wetland vegetation shall only be removed at or above the ground surface unless written justification is provided and the impacts are reviewed and approved by the Corps.

- iv. For overhead utility lines, allowance of natural succession to restore and maintain the corridor in scrub-shrub wetlands except for a minimum corridor needed for access, to the maximum extent practicable.
 - v. For buried utility lines, allowance of natural succession to restore the area to tree and scrub/shrub except for a 20-foot wide access corridor, to the maximum extent practicable.
 - c. Compensatory mitigation may be required for permanent conversion of wetlands within the utility line corridor.
4. For all submerged utility lines across navigable waters of the United States, a location map and cross-sectional view showing the utility line crossing from bank to bank is required. In addition, the location and depth of any Federal Navigation Channels shall be shown in relation to the proposed utility line. In general, all utility lines shall be buried at least six (6) feet below the authorized bottom depth of Federal Navigation Channel and at least three (3) feet below the bottom depth in all subaqueous areas. When circumstances prevent the placement of at least three feet of cover over the line (outside of the Federal Navigation Channel), then written justification and an alternative method must be provided with the notification and the deviation must be reviewed and approved by the Corps. Section 408 permission may be required (see Regional Condition 13 under Section I).
5. Whenever practicable, excavated material shall be placed on a Corps confirmed upland site. However, when this is not practicable, temporary stockpiling is hereby authorized provided that:
- a. All excavated material stockpiled in a vegetated wetland area is placed on filter cloth, mats, or some other semi-permeable surface. The material will be stabilized with straw bales, filter cloth, etc. to prevent reentry into any waterway.
 - b. All excavated material must be placed back into the trench to the original contour and all excess excavated material must be completely removed from the wetlands within 30 days after the pipeline has been laid through the wetland areas. Permission must be granted by the District Commander or his authorized representatives if the material is to be stockpiled longer than 30 days.
6. When open-cut trenching in designated anadromous fish use areas or hydrostatic testing of a pipeline involving water withdrawals from tidal waters are proposed, the Corps will coordinate with the NOAA Fisheries Service and/or the Virginia Department of Game and Inland Fisheries. Written verification from this office must be received before performing the proposed work. In most cases, the following time-of-year restrictions (TOYRs) will apply:
- James River, below Rt. 17 bridge: No TOYR.

- James River, at Jamestown Island (Gray's Creek) downstream to Rt. 17 bridge: TOYR from February 15 through June 15 of any given year.
- James River, at Jamestown Island upstream to Boshers Dam: TOYR from February 15 through June 30 of any given year.
- James River, above Boshers Dam (including Rivanna River): TOYR from March 15 through June 30 of any given year.
- Rappahannock River, below Route 360 bridge: TOYR from February 15 through June 15 of any given year.
- York River, below Route 33 bridge: TOYR from February 15 through June 15 of any given year.
- Nansemond River: TOYR from February 15 through June 15 of any given year.
- Elizabeth River: If dredging upstream of the Mid-Town Tunnel on the mainstem and the West Norfolk Bridge (Route 164, Western Freeway) on the Western Branch of the Elizabeth River, then a TOYR is not required.
- Unless otherwise noted: TOYR from February 15 through June 30 of any given year.

7. Aerial Transmission Lines Crossing Navigable Waters:

a. The following minimum clearances are required for aerial electric power transmission lines crossing navigable waters of the United States. These clearances are related to the clearances over the navigable channel provided by existing fixed bridges, or the clearances which would be required by the United States Coast Guard for new fixed bridges, in the vicinity of the proposed aerial transmission line. These clearances are based on the low point of the line under conditions producing the greatest sag, taking into consideration temperature, load, wind, length of span, and type of supports as outlined in the National Electrical Safety Code:

Nominal System Voltage (kV)	Minimum additional clearance (ft.) above clearance required for bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750 - 765	45

b. Clearances for communication lines, stream gaging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless otherwise specifically authorized by the District Engineer.

c. Corps of Engineer regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both this regional condition and ER 1110-2-4401 apply, the greater minimum clearance is required.

8. For utility lines landing in Virginia, from the Outer Continental Shelf (OCS), the applicant shall send the PCN to the following federal agencies:

Director, Naval Seafloor Cable Protection Office
Naval Facilities Engineering Command
1322 Patterson Ave SE, Suite 1000
Washington DC 20374

Bureau of Ocean Energy Management (BOEM)
Atlantic OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394.

9. For utility line projects completed by horizontal directional drilling or other boring methods, a plan to address the prevention, containment, and cleanup of sediment or other materials caused by inadvertent returns of drilling fluids to waters of the U.S. through sub-soil fissures or fractures needs to be included with the PCN (if a PCN is required). If an inadvertent return of drilling fluids to waters of the U.S. occurs, and the remediation requires work within waters of the U.S., then the applicant must notify the Corps immediately and submit a remediation plan as soon as possible, regardless of whether a PCN was required for the original work.

10. When an intake is proposed in designated anadromous fish waters, the following design parameters will be incorporated as permit conditions to protect the sensitive life stages of anadromous fish:

- a. Screening over the mouth of the intake with mesh size that does not exceed 1mm;
- b. Intake velocities that do not exceed 0.25 feet per second;
- c. Intake must be positioned such that an unimpeded flow of water parallel to the screen surface occurs along the entire surface of the screen to take advantage of sweeping velocity.

NWP 14-Linear Transportation Projects

Restricted use of NWP 14 Linear Transportation Projects in Nontidal Waters

A portion of NWP 14 overlaps with the current State Program General Permit (SPGP-01); therefore, NWP 14 may not be used for projects impacting Section 404 only, nontidal waters of the United States, including wetlands within the Norfolk District.

NWP 14 may still be used for projects impacting tidal waters of the United States and other nontidal, Section 10 waters of the United States.

NWP 23 - Approved Categorical Exclusions Conditions Specific to NWP 23:

1. The use of this NWP applies to an entire project addressed in the Categorical Exclusion prepared by another Federal agency. This NWP cannot be used separately at individual crossings/impact areas of a single project. However, multiple crossings/impact areas of a single project can be authorized by this NWP provided the combined impacts of all crossings/impact areas do not exceed the thresholds described below. This NWP cannot be used in combination with other NWPs for a single project.
2. Discharges from an entire project must not cause a combined permanent loss of greater than ½ acre of wetlands or 1,000 linear feet of stream.
3. The prospective permittee must notify the District Commander, via a pre-construction notification (PCN) if there is a discharge in special aquatic sites, including wetlands, and/or resulting in combined impacts to more than 300 linear feet of streambed resulting from the entire project (send notification to the Norfolk District Corps of Engineers, Regulatory Branch, 803 Front St., Norfolk, VA 23510-1096) or email to CENAO.REG_ROD@usace.army.mil. Written verification from this office must be received before performing the proposed work. The PCN must be in writing and include the information shown in general condition 32 of the NWPs or use the Joint Permit Application. The Virginia Department of Transportation may use their application form.
4. To ensure that permanent losses of waters of the United States do not result in more than minimal adverse effects to the aquatic environment, compensation will be required for all wetland impacts and for any single impact to a stream of greater than 300 linear feet. For projects where the combined impacts to streams due to the entire project exceed 300 linear feet, but no single impact exceeds 300 linear feet, the Corps will determine on a case-by-case basis whether compensation for stream impacts is required.

NWP 27-Aquatic Habitat Restoration, Establishment, and Enhancement Activities

1. For all projects proposing stream restoration, when notification is required proponents must provide a completed Natural Channel Design Review Checklist and Selected Morphological Characteristics form, including the name and location of the reference reach, if applicable. These forms and the associated manual can be located at:

<https://www.fws.gov/chesapeakebay/StreamReports/NCD%20Review%20Checklist/Natural%20Channel%20Design%20Checklist%20Doc%20V2%20Final%2011-4-11.pdf> .

2. Proponents must provide a monitoring plan in accordance with the 401 certificate conditions for NWP 27.

NWP 29-Residential Developments

Restricted use of NWP 29 for Multiple Unit Residential Developments and Residential Subdivisions

NWP 29 overlaps with the current State Program General Permit (SPGP-01); therefore, NWP 29 may not be used to authorize multiple unit residential developments and residential subdivisions. NWP 29 may still be used for a single residence and attendant features.

NWP 39-Commercial and Institutional Developments

NWP 39 overlaps with the current State Program General Permit (SPGP-01); therefore, NWP 39 may not be used if the SPGP-01 is applicable. However, if the SPGP-01 is not applicable, then NWP 39 may be considered.

NWP 48-Commercial Shellfish Aquaculture Activities

1. No aquaculture activity shall occur within beds of submerged aquatic vegetation (SAV) or saltmarsh, nor shall such vegetation be damaged or removed. Should an area become colonized by SAV or saltmarsh after an authorized aquaculture activity is installed, the activity shall be allowed to remain; however, no expansion into newly colonized areas is authorized by this NWP. Information on the location of SAV beds can be found at: <http://web.vims.edu/bio/sav/maps>.
2. An aquaculture activity will not meet the terms for this NWP if it will have more than minimal adverse effects on avian resources such as, but not limited to: shore birds, wading birds, or other waterfowl. This includes nesting, feeding or resting activities by migratory birds identified at 50 CFR 10.13.
3. An aquaculture activity will not qualify for this NWP if it will have more than minimal adverse effects on existing or naturally occurring beds or population of shellfish, marine worms or other invertebrates that could be used by man, other mammals, birds, reptiles, or predatory fish. Feeding and harvesting plans should be included in the application to evaluate impacts.
4. No aquaculture activity or vehicular access to the activity shall occur in such a way as to negatively impact coastal or wetland vegetation.
5. As-built drawings must be submitted with the certificate of compliance for all aquaculture projects.

6. The District Engineer will require an Individual Department of the Army permit for any project which he/she determines to have greater than minimal individual or cumulative impacts.

7. If the permittee decides to abandon the activity authorized under this NWP (unless such abandonment is merely the transfer of property to a third party), the permittee must notify the Corps and may be required to remove the structures and restore the area to the satisfaction of the Corps.

NWP 51-Land-Based Renewable Energy Generation Facilities

If aerial transmission lines crossing navigable waters are proposed, please see NWP 12 Regional Condition number 7.

NWP 52-Water-Based Renewable Energy Generation Pilot Projects

If aerial transmission lines crossing navigable waters are proposed, please see NWP 12 Regional Condition number 7.

NWP 53-Removal of Low-Head Dams

The following information related to physical removal of the dam structure should be included in the PCN:

1. Timing and rate of the drawdown of the impoundment to avoid and minimize downstream flooding and excessive sedimentation to downstream areas.
2. Method of re-establishment and stabilization of the stream channel, and avoidance of other environmental impacts, including the potential for drainage of adjacent wetlands.
3. Construction equipment to be used in the stream channel and appropriate measures that will be taken, such as the use of construction mats or barges, to minimize impacts.
4. Information sufficient to ensure that accumulated sediments are free from contaminants and are disposed of properly. If testing is required, the testing criteria shall be developed in cooperation with Virginia Department of Environmental Quality.
5. Information concerning competing uses of the waterbody above the dam if the impoundment is not fully owned by the applicant.

NWP 54-Living Shorelines

1. This activity authorizes the placement of sandy fill material, including the placement of sandy fill material landward of the sills provided the fill is for erosion control and/or wetland enhancement (and not solely recreational activities). The maximum fill area within waters of the United States that can be authorized under this NWP is one (1) acre. For the purpose of this NWP, a sill is defined as a low, detached structure constructed near shore and parallel to the shoreline for the purpose of building up an existing beach by trapping and retaining sand in the littoral zone. Because a sill acts like a natural bar, it is most effective when constructed at or near the mean low water line and low enough to allow wave overtopping.

2. The grain size of the source material used for fill must be quality beach sand that is the same size or larger than that of the native beach material and suitable for the proposed project. Excess silt/clay fraction and grain sizes slightly smaller than the former native sands will perform poorly. In most cases, sand material with no more than 10% passing a #100 sieve will be appropriate. All material will be obtained from either an upland source, a borrow pit, or dredge material approved by the Corps.

3. Coir logs, coir mats, and native oyster shell should be of sufficient weight, adequately anchored, or placed in a manner to prevent them from being dislodged and carried away by wave action.

4. Sills may be constructed of riprap, gabion baskets, or clean broken concrete free of metal and re-bar. Alternative materials may be considered for use during the permit review process. The materials should be of sufficient weight or adequately anchored to prevent them from being dislodged and carried away by wave action. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of sills.

5. Sills will be designed with at least one 5 foot window/gap per property and per 100 linear feet of sill unless waived by the District Engineer.

6. The sill height should be a maximum of +1 foot above mean high water and should be placed at a distance no greater than 30 feet from mean low water to the landward side of the sill unless waived by the District Engineer.

7. The total amount of vegetated wetlands which may be filled, graded, or excavated, in square feet, may not exceed the length of the activity along the shoreline in linear feet unless the District Engineer waives this criterion by making a written determination concluding that the project will result in minimal adverse effects. All impacts to sub-tidal, inter-tidal, and/or existing wetland vegetation may require a wetland vegetation planting plan and must result in no net loss of vegetated wetlands.

8. If the proposed project results in impacts to existing wetland vegetation, then a written monitoring report may be required at the end of the first full growing season following planting, and after the second year of establishment. If required, the

monitoring should be undertaken between June and September of each year and should include at a minimum: the project location, the Corps project number, representative photos of the site, and a brief statement on the success of the project.

9. As the design of a living shoreline project is site specific, it is suggested that the applicant refer to the Virginia Institute of Marine Sciences Living Shoreline Design Guidelines for Shore Protection in Virginia's Estuarine Environments and other reference documents which can be found at:

<http://ccrm.vims.edu/livingshorelines/agencies/index.html>

10. The District Engineer will require an individual Department of the Army permit for any project which he/she determines to have greater than minimal individual or cumulative impacts.

11. Projects which include placement of sandy fill material may result in creation of suitable habitat for various federally listed threatened or endangered species. If this occurs and the applicant seeks to either add to or replenish the area previously filled, the Corps will consult with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act to ensure work is not likely to adversely affect proposed or listed species or proposed or designated critical habitat. Specific requirements on the type of sand allowed for beach and dune work may be required.

Nationwide Permit (18) Minor Discharges (3/19/2012)

Minor discharges of dredged or fill material into all waters of the United States, provided the activity meets all of the following criteria:

- (a) The quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;
- (b) The discharge will not cause the loss of more than 1/10-acre of waters of the United States; and
- (c) The discharge is not placed for the purpose of a stream diversion.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if:

- (1) The discharge or the volume of area excavated exceeds 10 cubic yards below the plane of the ordinary high water mark or the high tide line, or
- (2) the discharge is in a special aquatic site, including wetlands. (See general condition 31.) (Sections 10 and 404)

REGIONAL CONDITIONS:

1. **Conditions for Waters Containing Submerged Aquatic Vegetation (SAV) Beds:** A pre-construction notification (PCN) is required if work will occur in areas that contain submerged aquatic vegetation (SAVs). Information about SAVs can be found at the Virginia Institute of Marine Science's website: <http://www.vims.edu/bio/sav/>. Additional avoidance and minimization measures, such as relocating a structure or time-of-year (TOYR) restrictions may be required to reduce impacts to SAVs.
2. **Conditions for Anadromous Fish Use Areas:** To ensure that activities authorized by this Nationwide Permit (NWP) do not impact waterways documented to provide spawning habitat or a migratory pathway for anadromous fish, a check for anadromous fish use areas must be conducted via the Norfolk District's Regulatory GIS (for reporting permits) and/or the Virginia Department of Game and Inland Fisheries (VDGIF) Information System (by applicant for non-reporting permits) at <http://vafwis.org/fwis/>. If the project is located in an area documented as an anadromous fish use area (confirmed or potential), a time-of-year restriction (TOYR) prohibiting all in-water work will be required from February 15 to June 30 of any given year or any TOYR specified by VDGIF and/or Virginia Marine Resources Commission (VMRC). For permits requiring a PCN, if the Norfolk District determines that the work is minimal and the TOYR is unnecessary, informal consultation will be conducted with NOAA Fisheries Service (NOAA) to obtain concurrence that the TOYR would not be required for the proposed activity.
3. **Conditions for Designated Critical Resource Waters, which include National Estuarine Research Reserves:** Notification is required for work under this NWP in the Chesapeake Bay National Estuarine Research Reserve in Virginia. This multi-site system along a salinity gradient of the York River includes Sweet Hall Marsh, Taskinas Creek, Catlett Island, and Goodwin Islands. More information can be found at: <http://www.vims.edu/cbnerr/>.
4. **Conditions for Federally Listed Species and Designated Critical Habitat:** Notification for this NWP will be required for any project that may affect a federally listed threatened or endangered species or designated critical habitat. The U.S. Fish and Wildlife Service (Service) has developed an online system that allows users to find information about sensitive resources that may occur within the vicinity of a proposed project. This system is named "Information, Planning and Conservation System," (IPaC), and is located at: <http://ecos.fws.gov/ipac/>. This system provides information regarding federally listed and proposed candidate, threatened, and endangered species, designated critical habitats, and Service refuges that may

occur in the identified areas, or may be affected by the proposed activities. The applicant may use this system to determine if any federally listed species or designated critical habitat may be affected by their proposed project, ensuring compliance with the Endangered Species Act.

5. **Conditions for Waters with Federally Listed Endangered or Threatened Species, Waters Federally Designated as Critical Habitat, and One-mile Upstream (including tributaries) of Any Such Waters:** A pre-construction notification (PCN) is required for work in the areas listed below for the Counties of Lee, Russell, Scott, Tazewell, Wise, and Washington in Southwestern Virginia within the following specific waters and reaches:
 - 1) Powell River - from the Tennessee-Virginia state line upstream to the Route 58 Bridge in Big Stone Gap and one mile upstream of the mouth of any tributary adjacent to this portion of the River.
 - 2) Clinch River - from the Tennessee-Virginia state line upstream to Route 632 at Pisgah in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the River, the Little River to its confluence with Maiden Spring Creek, and one mile upstream of the mouth of any tributary adjacent to this portion of Little River.
 - 3) North Fork Holston River - from the Tennessee-Virginia state line upstream to the Smyth County/Bland County line and one mile upstream of any tributary adjacent to this portion of the River.
 - 4) Copper Creek - from its junction with the Clinch River upstream to the Route 58 bridge at Dickensonville in Russell County and one mile upstream of any tributary adjacent to this portion of the Creek.
 - 5) Indian Creek - from its junction with the Clinch River upstream to the fourth Norfolk and Western Railroad bridge at Van Dyke in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the Creek.
 - 6) Middle Fork Holston River - from the Tennessee-Virginia state line to its junction with Walker Creek in Smyth County near Marion, Virginia.
 - 7) South Fork Holston River - from its junction with Middle Fork Holston River upstream to its junction with Beech Creek in Washington County.

For activities requiring a PCN to work in specific waters and reaches, as described above, in the counties of Lee, Russell, Scott, Smyth, Tazewell, Wise, and Washington in southwestern Virginia, it is recommended that the prospective permittee first contact the applicable Norfolk District Field Office, found at this web link:

http://www.nao.usace.army.mil/Regulatory_Branch/contact_geo_southwest.asp, to determine if the PCN procedures would apply. If required, the PCN must be submitted in writing and include the following information (the Joint Permit Application may also be used – be sure to mark it with the letters PCN at the top of the first page):

- Name, address, and telephone number of the prospective permittee.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (including a plan view, profile, & cross-sectional view).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the NWP, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project may proceed under the NWP permit or whether an individual permit is required. If, after reviewing the notification, the District Commander determines that the proposed activity would have more than a minimal individual or cumulative adverse impact on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the

adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide the prospective permittee with instructions on how to seek authorization under an individual permit.

Non-federal applicants shall notify the District Commander if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the District Commander that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the PCN must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The District Commander will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete PCN. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

6. **Conditions for Designated Trout Waters:** Notification is required for work in the areas listed below for this NWP. This condition applies to activities occurring in two categories of waters: Class V (Put and Take Trout Waters) and Class VI (Natural Trout Waters), as defined by the Virginia State Water Control Board Regulations, Water Quality Standards (VR-680-21-00), dated January 1, 1991, or the most recently updated publication. The Virginia Department of Game and Inland Fisheries (VDGIF) designated these same trout streams into six classes. Classes I-IV are considered wild trout streams. Classes V and VI are considered stockable trout streams. Information on designated trout streams can be obtained via their Virginia Fish and Wildlife Information Service's (VAFWIS's) Cold Water Stream Survey database. Basic access to the VAFWIS is available via <http://vafwis.org/fwis/>.

The waters, occurring specifically within the mountains of Virginia, are within the following river basins:

- 1) Potomac-Shenandoah River Basins
- 2) James River Basin
- 3) Roanoke River Basin
- 4) New River Basin
- 5) Tennessee and Big Sandy River Basins
- 6) Rappahannock River Basin

VDGIF recommends the following time-of-year restrictions (TOYR) for any in-stream work within streams identified as wild trout waters in its Cold Water Stream Survey database. The recommended TOYR for trout species are:

- Brook Trout: October 1 through March 31
- Brown Trout: October 1 through March 31
- Rainbow Trout: March 15 through May 15

This condition applies to the following counties and cities: Albemarle, Allegheny, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Bristol, Buchanan, Buena Vista, Carroll, Clarke, Covington, Craig, Dickenson, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Henry, Highland, Lee, Loudoun, Madison, Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke City, Roanoke Co., Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Staunton, Tazewell, Warren, Washington, Waynesboro, Wise, and Wythe.

Any discharge of dredged and/or fill material authorized by this NWP, which would occur in the designated waterways or adjacent wetlands of the specified counties, requires notification to the appropriate Corps of Engineers field office, and written approval from that office prior to performing the work. The Norfolk District recommends that prospective permittees first contact the appropriate field office by telephone to determine if the notification procedures would apply. The notification must be in writing and include the following information (the standard Joint Permit Application may also be used):

- Name, address, and telephone number of the prospective permittee.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross-sectional view).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project can proceed under the NWP or whether an individual permit is required. If, after reviewing the notification, the District Commander determines that the proposed activity would have more than minimal individual or cumulative adverse impacts on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the NWP and provide instructions on how to seek authorization under an individual permit. If the prospective permittee is not notified otherwise within the 45-day period the prospective permittee may assume that the project can proceed under the NWP.

7. **Conditions Regarding Invasive Species:** Plant species listed by the most current *Virginia Department of Conservation and Recreation's Invasive Alien Plant List* shall not be used for re-vegetation for activities authorized by any NWP. The list of invasive plants in Virginia may be found at: http://www.dcr.virginia.gov/natural_heritage/documents/invlist.pdf.
8. **Conditions Pertaining to Countersinking of Pipes and Culverts in Nontidal Waters:**

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation.

- a. Following consultation with the Virginia Department of Game and Inland Fisheries (DGIF), the Norfolk District has determined that fish and other aquatic organisms are most likely present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although prospective permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below.
- b. **All pipes:** All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the Norfolk District on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or

culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.

- c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).
- d. Floodplain pipes: The requirement to countersink does not apply to pipes or culverts that are being placed above ordinary high water, such as those placed to allow for floodplain flows. The placement of pipes above ordinary high water is not jurisdictional (provided no fill is discharged into wetlands).
- e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water with the countersinking and invert restrictions taken into account.
- f. Pipes on bedrock or above existing utility lines: Different procedures will be followed for pipes or culverts to be placed on bedrock or above existing buried utility lines where it is not practicable to relocate the lines, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:
 - i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.
 - ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that bedrock or an existing buried utility line that is not practicable to relocate prevents countersinking, he/she should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then he/she must submit a pre-construction notification (PCN) to the Norfolk District in accordance with General Condition 31 of the NWP. In addition to the information required by General Condition 31, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The PCN must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact his/her regional fishery biologist for the Virginia Department of Game and Inland Fisheries (VDGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the prospective permittee should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from VDGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

- g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above and will in most cases be non-reporting. It is recommended that on slopes greater than 5%, a larger pipe than required be installed to allow for the passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, he/she must submit a Pre-Construction Notification to the Norfolk District in accordance with General Condition 31 of the Nationwide Permits. In addition to the information required by General Condition 31, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact his/her regional fishery biologist for the Virginia Department of Game and Inland Fisheries (DGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN.
- h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, then the permittee must stop work and contact the Norfolk District (contact by telephone and/or email is acceptable). The permittee must provide the Norfolk District with specific information concerning site conditions and limitations on countersinking. The Norfolk District will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the Norfolk District could determine that the work will not qualify for a nationwide permit.
- i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The

Norfolk District must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, even if it is an otherwise non-reporting activity, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking, and if so, should follow the procedures outlined in (f) and/or (g) above.

9. **Conditions for the Repair of Pipes:**

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation.

If any discharge of fill material will occur in conjunction with pipe maintenance, such as concrete being pumped over rebar into an existing deteriorated pipe for stabilization, then:

A. **If the existing pipe or line of pipes are NOT currently countersunk:**

- a. As long as the inlet and outlet invert elevations of at least one pipe located in the low flow channel are not being altered, and provided that no concrete apron is being constructed, then the work may proceed under the NWP for the other pipes, provided it complies with all other NWP General Conditions, including Condition 9 for Management of Water Flows. In such cases, notification to the Norfolk District Commander is not required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.
- b. Otherwise, the prospective permittee must submit a pre-construction notification (PCN) to the Norfolk District Commander prior to commencing the activity. For all such projects, the following information should be provided:
 - 1) Photographs of the existing inlet and outlet;
 - 2) A measurement of the degree to which the work will raise the invert elevations of both the inlet and outlet of the existing pipe;
 - 3) The reasons why other methods of pipe maintenance are not practicable (such as metal sleeves or a countersunk pipe replacement);
 - 4) Depending on the specific case, the Norfolk District may discuss potential fish usage of the waterway with the Virginia Department of Game and Inland Fisheries.

The Norfolk District will assess all such pipe repair proposals in accordance with guidelines that can be found under "Pipe Repair Guidelines" at:

http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/Guidance/guidance_documents.asp

- c. If the Norfolk District determines that the work qualifies for the NWP, additional conditions will be placed on the verification. Those conditions can be found at the web link above (in item ii).
 - d. If the Norfolk District determines that the work does NOT qualify for the NWP, the applicant will be directed to apply for either an LOP-I permit (applicable only for Virginia Department of Transportation projects) or an individual permit. However, it is anticipated that the applicant will still be required to perform the work such that the waterway is not blocked or restricted to a greater degree than its current conditions.
- B. **If the existing pipe or at least one pipe in the line of pipes IS countersunk and at least one pipe located in the low flow channel will continue to be countersunk, and no concrete aprons are proposed:** No PCN to the Norfolk District is required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.

- C. **If the existing pipe or at least one pipe in the line of pipes IS countersunk and no pipe will continue to be countersunk in the low flow channel:** This work cannot be performed under the NWPs. The prospective permittee must apply for either a Letter of Permission 1 (LOP-I) permit (applicable only for VDOT projects) or an individual permit. However, it is anticipated that the prospective permittee will still be required to perform the work such that the waterway is not blocked or restricted more so than its current conditions.
- D. **Emergency situations:** In the case of an emergency situation, a prospective permittee is encouraged to follow the above guidelines at the time of repair. However, if conditions or timeframes do not allow for compliance with the procedure outlined herein, then the pipe can be repaired as it was before the washout, but the prospective permittee will have to come back and replace or reconstruct the pipe/culvert in accordance with these guidelines. In other words, the repair of the pipe is viewed as a temporary fix, and an appropriate repair should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are repaired without compliance with these guidelines at the time that the repair occurs, even if it is an otherwise non-reporting activity, and that notification must provide the prospective permittee's planned schedule for following these procedures and constructing an appropriate repair (it is acceptable to submit such notification by email).

GENERAL CONDITIONS:

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. **Navigation.**
 - a) No activity may cause more than a minimal adverse effect on navigation.
 - b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
 - c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.
15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
18. Endangered Species.
 - a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.
 - b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.
 - c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
 - d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.
 - e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

- f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.
19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.
20. Historic Properties.
- In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
 - Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.
 - Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.
 - The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
 - Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.
21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
- Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
 - For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.
23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal.
- The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
 - Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.
 - Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
 - The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

- (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.
 - (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
 - (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.
 - (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.
- d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.
- e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.
- f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
- g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
- h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.
24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.
25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.
26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.
27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.
28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.
29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
- “When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”
- _____
(Transferee)
- _____
(Date)
30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the

certification document with the NWP verification letter. The certification document will include:

- a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions.
- b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification.

a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine

that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

- (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
 - (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
 - (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and
 - (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.
- c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

d) Agency Coordination:

- (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.
- (2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional

15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

- (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

DISTRICT ENGINEER'S DECISION:

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.
2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements

must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

FURTHER INFORMATION:

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

SECTION 401 WATER QUALITY CERTIFICATION (4/18/12):

The State Water Control Board has provided conditional §401 Water Quality Certification for the following Nationwide Permit as meeting the requirements of the Virginia Water Protection Permit Regulation, which serves as the Commonwealth's §401 Water Quality Certification provided that any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44.15:23 A through C and as detailed below:

NWP 18: *Minor Discharges*, provided that:

- (1) the discharge does not include water withdrawals, such as the construction of an intake structure, weir or water diversion structure;

- (2) a Virginia Pollutant Discharge Elimination System (VPDES) permit is obtained prior to the placement of any alternative septic system discharging into Virginia Department of Health (VDH) designated shellfish waters.

The Commonwealth requests that all pre-construction notifications for any activities that fall into the excepted category be forwarded to the Department of Environmental Quality in order to accomplish their goal of individual review of certain activities.

COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION (4/19/12):

Based on the comments submitted by the agencies administering the enforceable policies of the Virginia Coastal Zone Management Program (VCP), the Virginia Department of Environmental Quality (DEQ) concurs that the reissuance of the 2012 NWPs and Virginia Regional Conditions, as proposed, is consistent with the VCP provided that the following conditions, discussed below, are satisfied:

1. Prior to construction, applicants shall obtain all required permits and approvals not yet secured for the activities to be performed that are applicable to the VCP's enforceable policies and that applicants also adhere to all the conditions contained therein.
 - The Virginia Marine Resources Commission's (VMRC) concurrence of consistency with the subaqueous lands management enforceable policy is based on the recognition that prospective permittees may be required to obtain additional state and/or local approvals prior to commencement of work in waters of the United States from the VMRC and/or the local wetlands board. Such approvals must precede implementation of the projects.
 - Similarly, the Department of Conservation and Recreation, Division of Stormwater Management, Local Implementation (formerly the Division of Chesapeake Bay Local Assistance) concurs that the proposed action is consistent with the coastal lands management enforceable policy provided projects are designed and constructed in a manner consistent with all state and local requirements pursuant to the Chesapeake Bay Preservation Act ("the Act") (Virginia Code §10.1-2100 et seq.) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20 et seq.). Applicable projects must receive local approval to be consistent with the coastal lands management enforceable policy.
2. The State Water Control Board has provided §401 Clean Water Act Water Quality Certification for the NWPs and Virginia Regional Conditions. Therefore, the activities that qualify for the NWPs meet the requirements of DEQ's Virginia Water Protection Permit Regulation, provided that the permittee abides by the conditions of the NWP. As to the exceptions for activities that would otherwise qualify for one of these Nationwide Permits, the State will continue to process applications for individual §401 Certification through a Virginia Water Protection General or Individual Permit pursuant to 9 VAC 25-210-10 *et seq.* The Commonwealth requests that the Corps forward to DEQ pre-construction notifications for any activities that fall into an excepted category for individual review of certain activities.

In accordance with the *Federal Consistency Regulations* at 15 CFR Part 930, section 930.4, this conditional concurrence is based on the applicants demonstrating to the Corps that they have obtained, or will obtain, all necessary authorizations prior to implementing a project which qualifies for a NWP. If the requirements of section 930.4, sub-paragraphs (a)(1) through (a)(3) are not met, this conditional concurrence becomes an objection under 15 CFR Part 930, section 940.43.

Nationwide Permit (18) Minor Discharges
Effective 3/19/2017
Expires 3/18/2022

Minor discharges of dredged or fill material into all waters of the United States, provided the activity meets all of the following criteria:

(a) The quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;

(b) The discharge will not cause the loss of more than 1/10-acre of waters of the United States; and

(c) The discharge is not placed for the purpose of a stream diversion.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the discharge or the volume of area excavated exceeds 10 cubic yards below the plane of the ordinary high water mark or the high tide line, or (2) the discharge is in a special aquatic site, including wetlands. (See general condition 32.)

Authority: Section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act (Sections 10 and 404)

REGIONAL CONDITIONS:

1. **Conditions for Waters Containing Submerged Aquatic Vegetation (SAV) Beds:** This condition applies to: NWP's 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25, 27, 28, 29, 31, 32, 33, 35, 36, 37, 38, 39, 44, 45, 48, 52, 53 and 54. A pre-construction notification (PCN) is required if work will occur in areas that contain submerged aquatic vegetation (SAV). Information about SAV habitat can be found at the Virginia Institute of Marine Science's website <http://web.vims.edu/bio/sav/>. Additional avoidance and minimization measures, such as relocating a structure or time-of-year restrictions (TOYR), may be required to reduce impacts to SAV habitat.
2. **Conditions for Anadromous Fish Use Areas:** To ensure that activities authorized by any NWP do not impact documented spawning habitat or a migratory pathway for anadromous fish, a check for anadromous fish use areas must be conducted via the Norfolk District's Regulatory GIS (for reporting permits) and/or the Virginia Department of Game and Inland Fisheries (VDGIF) Information System (by applicant for non-reporting permits) at <http://vafwis.org/twis/>. For any proposed NWP, if the project is located in an area documented as an anadromous fish use area (confirmed or potential), a time-of-year restriction (TOYR) prohibiting all in-water work will be required from February 15 to June 30 of any given year or any TOYR specified by VDGIF and/or Virginia Marine Resources Commission (VMRC). For permits requiring a PCN, if the Norfolk District determines that the work is minimal and the TOYR is unnecessary, informal consultation will be conducted with NOAA Fisheries

Service (NOAA) to obtain concurrence that the TOYR would not be required for the proposed activity. For dredging in the Elizabeth River upstream of the Mid-Town Tunnel on the mainstem and the West Norfolk Bridge (Route 164, Western Freeway) on the Western Branch of the Elizabeth River, a TOYR is not required.

3. **Conditions for Designated Critical Resource Waters, which include National Estuarine Research Reserves:** Notification is required for work under NWP's 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38 and 54 in the Chesapeake Bay National Estuarine Research Reserve in Virginia. This multi-site system along a salinity gradient of the York River includes Sweet Hall Marsh, Taskinas Creek, Catlett Islands, and Goodwin Islands. More information can be found at: <http://www.vims.edu/cbner/>. NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 cannot be used to authorize the discharge of dredged or fill material in the Chesapeake Bay National Estuarine Research Reserve in Virginia.
4. **Conditions for Federally Listed Species and Designated Critical Habitat:** For ALL NWP's, notification is required for any project that may affect a federally listed threatened or endangered species or designated critical habitat. The U.S. Fish and Wildlife Service (Service) has developed an online system that allows users to find information about sensitive resources that may occur within the vicinity of a proposed project. This system is named "Information, Planning and Conservation System," (IPaC), and is located at: <http://ecos.fws.gov/ipac/>. The applicant may use IPaC to determine if any federally listed species or designated critical habitat may be affected by their proposed project. If your Official Species List from IPaC identifies any federally listed endangered or threatened species, you are required to submit a PCN for the proposed activity, unless the project clearly does not impact a listed species or suitable habitat for the listed species. If you are unsure about whether your project will impact listed species, please submit a PCN, so the Norfolk District may review the action. Further information about the Virginia Field Office "Project Review Process" may be found at: <http://www.fws.gov/northeast/virginiafield/endangered/projectreviews.html>. Additional consultation may also be required with National Marine Fisheries Service for species or critical habitat under their jurisdiction, including sea turtles, marine mammals, shortnose sturgeon, and Atlantic sturgeon. For additional information about their jurisdiction in Virginia, please see <https://www.greateratlantic.fisheries.noaa.gov/protected/index.html>. Additional resources to assist in determining compliance with this condition can be found on our webpage: <http://www.nao.usace.army.mil/Missions/Regulatory/USFWS.aspx>
5. **Conditions for Waters with Federally Listed Endangered or Threatened Species, Waters Federally Designated as Critical Habitat, and One-mile Upstream (including tributaries) of Any Such Waters:** Any work proposed in critical habitat, as designated in regional condition 4, requires a PCN.
6. **Conditions for Designated Trout Waters:** Notification is required for work in the areas listed below for NWP's 3, 4, 5, 6, 7, 12, 13, 14, 16, 17, 18, 19, 21, 23, 25, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, and 54. This condition applies to activities occurring in two categories of waters; Class V (Put and Take Trout Waters) and Class VI (Natural Trout

Waters), as defined by the Virginia State Water Control Board Regulations, Water Quality Standards (VR-680-21-00), dated January 1, 1991, or the most recently updated publication. The Virginia Department of Game and Inland Fisheries (VDGIF) designated these same trout streams into six classes. Classes I-IV are considered wild trout streams. Classes V and VI are considered stockable trout streams. Information on designated trout streams can be obtained via their Virginia Fish and Wildlife Information Service's (VAFWIS's) Cold Water Stream Survey database. Basic access to the VAFWIS is available via <http://vafwis.org/fwis/>.

The waters, occurring specifically within the mountains of Virginia, are within the following river basins:

- 1) Potomac-Shenandoah River Basins
- 2) James River Basin
- 3) Roanoke River Basin
- 4) New River Basin
- 5) Tennessee and Big Sandy River Basins
- 6) Rappahannock River Basin

VDGIF recommends the following time-of-year restrictions (TOYRs) for any in-stream work within streams identified as wild trout waters in its Cold Water Stream Survey database. The recommended TOYRs for trout species are:

- Brook Trout: October 1 through March 31
- Brown Trout: October 1 through March 31
- Rainbow Trout: March 15 through May 15

This condition applies to the following counties and cities: Albemarle, Allegheny, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Bristol, Buchanan, Buena Vista, Carroll, Clarke, Covington, Craig, Dickenson, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Henry, Highland, Lee, Loudoun, Madison, Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke City, Roanoke Co., Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Staunton, Tazewell, Warren, Washington, Waynesboro, Wise, and Wythe. Any discharge of dredged and/or fill material authorized by the NWP's listed above, which would occur in the designated waterways or adjacent wetlands of the specified counties, requires notification to the appropriate Corps of Engineers field office, and written approval from that office prior to performing the work. The Norfolk District recommends that prospective permittees first contact the applicable Norfolk District Field Office, found at this web link:

<http://www.nao.usace.army.mil/Missions/Regulatory/Contacts.aspx>, to determine if the PCN procedures would apply. The notification must be in writing and include the following information (the standard Joint Permit Application may also be used):

- Name, address, and telephone number of the prospective permittee.
- Name, address, email, and telephone number of the property owner.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross-sectional view).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project can

proceed under the NWP or whether an individual permit is required. If, after reviewing the PCN, the District Commander determines that the proposed activity would have more than minimal individual or cumulative adverse impacts on the aquatic environment or otherwise may be contrary to the public interest, then he/she will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the NWP and provide instructions on how to seek authorization under an individual permit. If the prospective permittee is not notified otherwise within the 45-day period, the prospective permittee may assume that the project can proceed under the NWP.

7. **Conditions Regarding Invasive Species:** Plant species listed by the most current *Virginia Department of Conservation and Recreation's Invasive Alien Plant List* shall not be used for re-vegetation for activities authorized by any NWP. The list of invasive plants in Virginia may be found at: <http://www.dcr.virginia.gov/natural-heritage/invspdflist>. DCR recommends the use of regional native species for re-vegetation as identified in the DCR *Native Plants for Conservation, Restoration and Landscaping* brochures for the coastal, piedmont and mountain regions <http://www.dcr.virginia.gov/natural-heritage/nativeplants#brochure>.

8. **Conditions Pertaining to Countersinking of Pipes and Culverts:** This condition applies to: NWP's 3, 7, 12, 14, 17, 18, 21, 23, 25, 27, 29, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52. **NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS.** However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation. For Nontidal Waters: Following consultation with the Virginia Department of Game and Inland Fisheries (VDGIF), the Norfolk District has determined that fish and other aquatic organisms are most likely present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although prospective permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below. The following conditions will apply in nontidal waters:

- a. All pipes: All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the Norfolk District on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.
- b. When countersinking culverts, permittees must ensure reestablishment of a surface water channel (within 15 days post construction) that allows for the movement of aquatic organisms and maintains the same hydrologic

regime that was present pre-construction (i.e. the depth of surface water through the permit area should match the upstream and downstream depths). This may require the addition of finer materials to choke the larger stone and/or placement of riprap to allow for a low flow channel.

- c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).
- d. Floodplain pipes: The requirement to countersink does not apply to pipes or culverts that are being placed above ordinary high water, such as those placed to allow for floodplain flows. The placement of pipes above ordinary high water is not jurisdictional (provided no fill is discharged into wetlands).
- e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water with the countersinking and invert restrictions taken into account.
- f. Pipes on bedrock or above existing utility lines: Different procedures will be followed for pipes or culverts to be placed on bedrock or above existing buried utility lines where it is not practicable to relocate the lines, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:
 - i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.
 - ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that bedrock or an existing buried utility line that is not practicable to relocate prevents countersinking, he/she should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then he/she must submit a pre-construction notification (PCN) to the Norfolk District in accordance with General Condition 32 of the NWPs. In addition to the information required by General Condition 32, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs

downstream, or other measures to provide for the movement of aquatic organisms. The PCN must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact the regional fishery biologist for the VDGIF, for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the prospective permittee should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from VDGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

- g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above and will in most cases be non-reporting. It is recommended that on slopes greater than 5%, a larger pipe than required be installed to allow for the passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, he/she must submit a PCN to the Norfolk District in accordance with General Condition 32 of the Nationwide Permits. In addition to the information required by General Condition 32, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact the regional fishery biologist for the VDGIF for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all

available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN.

- h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, a utility line, or other documentable obstacle, then the permittee must stop work and contact the Norfolk District (contact by telephone and/or email is acceptable). The permittee must provide the Norfolk District with specific information concerning site conditions and limitations on countersinking. The Norfolk District will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the Norfolk District could determine that the work will not qualify for a nationwide permit.
- i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, even if it is an otherwise non-reporting activity, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking, and if so, should follow the procedures outlined in (g) and/or (h) above.

- 9. **Conditions for the Repair of Pipes:** This condition applies to: NWP's 3, 7, 12, 14, 17, 18, 21, 23, 25, 27, 29, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52.

NOTE: COUNTERSINKING IS NOT REQUIRED IN TIDAL WATERS. However, replacement pipes/culverts in tidal waters must be installed with invert elevations no higher than the existing pipe/culvert invert elevation, and a new pipe/culvert must be installed with the invert no higher than the stream bottom elevation. For Nontidal Waters: If any discharge of fill material will occur in conjunction with pipe maintenance, such as concrete being pumped over rebar into an existing deteriorated pipe for stabilization, then the following conditions apply:

- a. If the existing pipe or multi-barrel array of pipes are NOT currently countersunk:
 - i. As long as the inlet and outlet invert elevations of at least one pipe located in the low flow channel are not being altered, and provided that no concrete apron is being constructed, then the

work may proceed under the NWP for the other pipes, provided it complies with all other NWP General Conditions, including Condition 9 for Management of Water Flows. In such cases, notification to the Norfolk District Commander is not required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.

- ii. Otherwise, the prospective permittee must submit a pre-construction notification (PCN) to the Norfolk District Commander prior to commencing the activity. For all such projects, the following information should be provided:
 - 1) Photographs of the existing inlet and outlet;
 - 2) A measurement of the degree to which the work will raise the invert elevations of both the inlet and outlet of the existing pipe;
 - 3) The reasons why other methods of pipe maintenance are not practicable (such as metal sleeves or a countersunk pipe replacement);
 - 4) A vicinity map showing the pipe locations.

Depending on the specific case, the Norfolk District may discuss potential fish usage of the waterway with the Virginia Department of Game and Inland Fisheries.

The Norfolk District will assess all such pipe repair proposals in accordance with guidelines that can be found under "Pipe Repair Guidelines" at:

<http://www.nao.usace.army.mil/Missions/Regulatory/GuidanceDocuments.aspx>

- iii. If the Norfolk District determines that the work qualifies for the NWP, additional conditions will be placed on the verification. Those conditions can be found at the web link above (in item ii).
- iv. If the Norfolk District determines that the work does NOT qualify for the NWP, the applicant will be directed to apply for either Regional Permit 01 (applicable only for Virginia Department of Transportation projects) or an Individual Permit. However, it is anticipated that the applicant will still be required to perform the work such that the waterway is not blocked or restricted to a greater degree than its current conditions.
- b. If the existing pipe or at least one pipe in the multi-barrel array of pipes IS countersunk and at least one pipe located in the low flow channel will continue to be countersunk, and no concrete aprons are proposed: No PCN to the Norfolk District is required, unless specified in the NWP Conditions for other reasons, and the permittee may proceed with the work.
- c. If the existing pipe or at least one pipe in the multi-barrel array of pipes IS countersunk and no pipe will continue to be countersunk in the low flow channel: This work cannot be performed under the NWPs. The prospective permittee must apply for either a Regional Permit 01 (applicable only for VDOT projects) or an Individual Permit. However, it is anticipated that the prospective permittee will still be required to perform the work

such that the waterway is not blocked or restricted more so than its current conditions.

- d. In emergency situations, if conditions or timeframes do not allow for compliance with the procedure outlined herein, then the pipe can be temporarily repaired to the condition before the washout. If the temporary repair would require a PCN by the above procedures, the permittee must submit the PCN at the earliest practicable date, but no longer than 15 days after the temporary repair.

10. **Condition for Impacts Requiring a Mitigation Plan:** When a PCN is required, a mitigation plan needs to be submitted when the permanent loss of wetlands exceeds 1/10 acre and/or 300 linear feet of waters of the U.S., unless otherwise stated in the Regional Conditions (see Regional Condition 12).
11. **Condition for Temporary Impacts:** All temporarily disturbed waters and wetlands must be restored to their pre-construction contours within 12 months of commencing the temporary impacts' construction. Impacts that will not be restored within 12 months (calculated from the start of the temporary impacts' construction) will be considered permanent, unless otherwise approved by the Corps, and mitigation may be required. Once restored to their natural contours, soil in these areas must be mechanically loosened to a depth of 12 inches and wetland areas must be seeded or sprigged with appropriate native vegetation (see Regional Condition 7 regarding revegetation).
12. **Condition for Transportation Projects Funded in Part or in Total by Local, State or Federal Funds:** For all impacts associated with transportation projects funded in part or in total by local, state or federal funds and requiring a PCN, compensatory mitigation will generally be required for all permanent wetland impacts (including impacts less than 1/10 acre). Therefore, the PCN must include a mitigation plan addressing the proposed compensatory mitigation.
13. **Condition for Projects Requiring Coordination Under Section 408:** General Condition 31 of the NWP requires that prospective permittees submit a pre-construction notification (PCN) if an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a US Army Corps of Engineers (USACE) federally authorized civil works project. For information on the location of Norfolk District projects, prospective permittees are directed to the maps showing the locations of Norfolk District projects located at: http://www.nao.usace.army.mil/Portals/31/docs/regulatory/RPSPdocs/RP-17_Corps_Project_Maps.pdf. If the prospective permittee is uncertain whether the proposed activity might alter or temporarily or permanently occupy or use a Norfolk District federally authorized civil works project, the prospective permittee shall submit a PCN.

GENERAL CONDITIONS:

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective

permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects from Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the

appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the

proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their World Wide Web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she

cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWP's 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWP's, the preferred mechanism for providing compensatory mitigation is mitigation

bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-

shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the

associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested

information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-

construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used.

Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

DISTRICT ENGINEER'S DECISION:

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information:

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

SECTION 401 WATER QUALITY CERTIFICATION (4/7/17):

The State Water Control Board issued conditional §401 Water Quality Certification for NWP 18 as meeting the requirements of the Virginia Water Protection Permit Regulation, which serves as the Commonwealth's §401 Water Quality Certification, provided that: (1) a Virginia Pollutant Discharge Elimination System (VPDES) permit is obtained prior to the placement of any alternative septic system discharging into Virginia Department of Health (VDH) designated shellfish waters; (2) any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44. 15:23 A through C, except in the absence of same river watershed alternatives in Hydrologic Unit Codes (HUC) 02040303 and 02040304, single family dwellings or locality projects may use compensatory mitigation in HUC 02080102, 02080108, 02080110, or 02080111 in Virginia; (3) the Corps of Engineers shall provide DEQ an annual report of projects authorized by this Nationwide Permit that includes detailed information on physical changes to water withdrawal structures, such as the maintenance of an intake, dam, weir, or water diversion structure that are deviations from the original configuration, or are a change in the character, scope, or size of the original design.

COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION (4/5/17):

Based on the comments submitted by the agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the 2017 NWPs and Virginia Regional Conditions as proposed, are consistent with the Virginia CZM Program provided the following conditions, discussed below, are satisfied:

- 1) Prior to construction, applicants shall obtain all required permits and approvals for activities to be performed that are applicable to the Virginia CZM Program's enforceable policies, and that applicants adhere to all the conditions contained therein.

The Virginia Marine Resources Commission's (VMRC) concurrence of consistency with regard to the fisheries management, subaqueous lands management, wetlands management, and dunes management enforceable policies is based on the recognition that prospective permittees may be required to obtain additional state and/or local approvals from the VMRC and/or the local wetlands board prior to commencement of work in both tidal and nontidal waters under the agency's jurisdiction. Such approvals must precede implementation of the projects.

2) The DEQ Office of Wetlands and Stream Protection (OWSP) has provided §401 Clean Water Act (CWA) Water Quality Certification for the 2017 NWPs and Regional Conditions, applicable to the wetlands management and point source pollution control enforceable policies of the Virginia CZM Program. The activities that qualify for the NWPs must meet the requirements of DEQ's Virginia Water Protection Permit Regulation (9 VAC 25-210-130) and the permittee must abide by the conditions of the NWP. DEQ-OWSP has identified specific NWP exceptions. DEQ will process an individual application for a permit or a certificate or otherwise take action pursuant to 9 VAC 25-210-80 et seq. for those activities covered by an NWPs that have not received blanket §401 CWA Water Quality Certification.

The Corps should forward pre-construction notifications to DEQ for applicants that do not comply with or cannot meet the conditions of the §401 CWA Water Quality Certification. Further, the Commonwealth reserves its right to require an individual application for a permit or a certificate or otherwise take action on any specific project that could otherwise be covered under any of the NWPs when it determines on a case-by-case basis that concerns for water quality and the aquatic environment so indicate.

In accordance with the Federal Consistency Regulations at 15 CFR Part 930, section 930. 4, this conditional concurrence is based on the applicants demonstrating to the Corps that they have obtained, or will obtain, all necessary authorizations prior to implementing a project which qualifies for a NWP. If the requirements of section 930. 4, sub-paragraphs (a)(1) through (a)(3) are not met, this conditional concurrence becomes an objection under 15 CFR Part 930, section 940.43.

Siddall CIV Darien G

From: Augustine, Theresita C CIV USARMY CENAO (US) <Theresita.M.Crockett-Augustine@usace.army.mil>
Sent: Friday, January 20, 2017 11:43 AM
To: Siddall CIV Darien G
Subject: RE: Culvert Installation
Attachments: Nationwide Permit 18.pdf; NAO_2012_NWP_REGIONAL_CONDITIONS.pdf
Signed By: AUGUSTINE.THERESITA.CROCKETT.1230827040

Hi Mr. Siddall,

I have reviewed your proposal for the installation of a culvert. The non-reporting NWP 18 is appropriate for this activity. It is your responsibility to be sure the project or work complies with all the criteria and conditions of NWP 18 (attached). If you have any questions, please email or call me. Thank you.

Theresita Crockett-Augustine
Environmental Scientist
Norfolk District Corps of Engineers
Northern Virginia Field Office
703-221-9736

The Norfolk District is committed to providing the highest level of support to the public. In order for us to better serve you, we would appreciate you completing our Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. We value your comments and appreciate your taking the time to complete the survey.

-----Original Message-----

From: Siddall CIV Darien G [mailto:darien.siddall@usmc.mil]
Sent: Tuesday, January 10, 2017 1:56 PM
To: Augustine, Theresita C CIV USARMY CENAO (US)
<Theresita.M.Crockett-Augustine@usace.army.mil>
Subject: RE: Culvert Installation

Hello Mrs. Augustine,

Here is the information that we discussed today. If you have any further questions please contact me. Thanks!

Darien Siddall
Natural Resource Specialist

NEPA Section
Natural Resources and Environmental Affairs (NREA)
Environmental Planning Section
3049 Bordelon St.
Marine Corps Base (MCB) - Quantico, VA 22134
Phone: 703-432-6770
Fax: 703-784-4953
DSN: 278-4030
E-mail: darien.siddall@usmc.mil

-----Original Message-----

From: Augustine, Theresita C CIV USARMY CENAO (US)
[mailto:Theresita.M.Crockett-Augustine@usace.army.mil]
Sent: Tuesday, January 10, 2017 1:31 PM
To: Siddall CIV Darien G
Subject: Culvert Installation

Hi Mr. Siddall,

Please forward the information you have in reference to the proposed culvert installation. I have attached NWP 18 for your review. Thank you.

Terri

Theresita Crockett-Augustine
Environmental Scientist
Norfolk District Corps of Engineers
Northern Virginia Field Office
703-221-9736

The Norfolk District is committed to providing the highest level of support to the public. In order for us to better serve you, we would appreciate you completing our Customer Satisfaction Survey located at [Blockedhttp://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey](http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey). We value your comments and appreciate your taking the time to complete the survey.

Siddall CIV Darien G

From: Augustine, Theresita C CIV USARMY CENAO (US) <Theresita.M.Crockett-Augustine@usace.army.mil>
Sent: Friday, May 19, 2017 2:03 PM
To: Siddall CIV Darien G
Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail. - Nationwide Permit #18
Attachments: NAO_FINAL_2017NWP_Regional_Conditions_28Mar2017.pdf; Nationwide_Permit_18.pdf; NAO-NWP-GC-18-Info.pdf
Signed By: AUGUSTINE.THERESITA.CROCKETT.1230827040

Hi Mr. Siddall,

This is in reference to your proposal to impact approximately 30 linear feet of an unnamed tributary to Cannon Creek for the installation of an approximately 42-inch diameter culvert associated with a trail re-establishment at Marine Corps Base (MCB), Quantico, Virginia. The non-reporting NWP 18 is appropriate for this activity. It is your responsibility to be sure the project or work complies with all the criteria and conditions of NWP 18 (attached). If you have any questions, please email or call me. Thank you.

Terri
Theresita Crockett-Augustine
Environmental Scientist
Norfolk District Corps of Engineers
Northern Virginia Field Office
703-221-9736

The Norfolk District is committed to providing the highest level of support to the public. In order for us to better serve you, we would appreciate you completing our Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. We value your comments and appreciate your taking the time to complete the survey.

-----Original Message-----

From: Siddall CIV Darien G [mailto:darien.siddall@usmc.mil]
Sent: Friday, May 19, 2017 7:34 AM
To: Augustine, Theresita C CIV USARMY CENAO (US) <Theresita.M.Crockett-Augustine@usace.army.mil>
Cc: McDuff CIV Heather A <heather.a.mcduff@usmc.mil>; Denn CIV Amy P <amy.denn@usmc.mil>; Duncan CIV Frank <frank.duncan@usmc.mil>
Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail. - Nationwide Permit #18
Importance: High

Hello Mrs. Augustine,

Today is Friday 19 May 2017.

I has been over 30-days now and I still have not heard from you pertaining to issuing a permit (nationwide or individual) that is needed for the intermittent stream near Range 6 at Marine Corps Base Quantico along the proposed Perimeter Trail. In our most recent conversation, you stated that

you had all the information that you needed to make a determination.

If there is any additional information that you need to make a determination, PLEASE let me know as this project is a VERY high priority for the base. Also, there was some other information that you wanted from me pertaining to other projects. Please e-mail me the information that you need me to get for you and I will acquire it for you ASAP. Thanks!

Darien Siddall
Natural Resource Specialist
NEPA Section
Natural Resources and Environmental Affairs (NREA)
Environmental Planning Section
3049 Bordelon St.
Marine Corps Base (MCB) - Quantico, VA 22134
Phone: 703-432-6770
Fax: 703-784-4953
DSN: 278-4030
E-mail: darien.siddall@usmc.mil

-----Original Message-----

From: Siddall CIV Darien G
Sent: Thursday, May 18, 2017 11:51 AM
To: Augustine, Theresita C CIV USARMY CENAO (US)
Cc: McDuff CIV Heather A
Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail. - Nationwide Permit #18

Hello Mrs. Augustine,

I has been over 30-days now and I still have not heard from you pertaining to the permit (nationwide or individual) that I need for the intermittent stream near Range 6 at Marine Corps Base Quantico along the proposed Perimeter Trail. If there is any additional information that you need to make a determination, PLEASE let me know as this project is a VERY high priority for the base. Also, there was some other information

that you wanted from me pertaining to other projects. Please e-mail me the information that you need me to get for you and I will acquire it for you ASAP. Thanks!

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-----Original Message-----

From: Siddall CIV Darien G
Sent: Thursday, May 18, 2017 8:45 AM
To: Augustine, Theresita C CIV USARMY CENAO (US)
Cc: McDuff CIV Heather A
Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail. - Nationwide Permit #18
Importance: High

Hello Mrs. Augustine,

I has been over 30-days now and I still have not heard from you pertaining to the permit (nationwide or individual) that I need for the intermittent stream near Range 6 at Marine Corps Base Quantico along the proposed Perimeter Trail. If there is any additional information that you need to make a determination, PLEASE let me know as this project is a VERY high priority for the base. Also, there was some other information that you wanted from me pertaining to other projects. Please e-mail me the information that you need me to get for you and I will acquire it for you ASAP. Thanks!

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-----Original Message-----

From: Siddall CIV Darien G
Sent: Thursday, April 13, 2017 12:09 PM
To: Augustine, Theresita C CIV USARMY CENAO (US)
Cc: McDuff CIV Heather A
Subject: FW: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail. - Nationwide Permit #18
Importance: High

Hello Theresita,

Please see the message below and the attached map . This is a follow-up concerning our conversation pertaining to a culvert that will be installed over an intermittent stream that is a tributary to Cannon Creek at Marine Corps Base (MCB), Quantico, Virginia. As you know, MCB-Quantico is proposing a 3.3 mile trail re-establishment near the southeast perimeter of the base. The total width of the trail over the culvert will be approximately 12 feet (0.003 acres) wide and the diameter of the culvert will need to be a minimum of 42 inches and the length about 30 linear feet. There are no wetlands at or near the location where the culvert will be installed over the intermittent stream. I believe this should be covered under Nationwide Permit #18 - Minor Discharges. Please confirm this, let me know whether this requires a pre-construction notification and respond to me as soon as possible. If you need any additional information, I will try to acquire it. Thanks!

Darien Siddall
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-----Original Message-----

From: Snow CIV Michael B

Sent: Thursday, April 13, 2017 11:05 AM

To: Siddall CIV Darien G

Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail.

Importance: High

Darian,

Based upon what I have found the drainage area to the point identified as the crossing is 7.013 Hectares, using a quick design guide for low volume roads and the following assumptions; culvert length: 30 LF, Roadway height above culvert invert 5 foot minimum, a runoff coefficient (C) of 0.2 for unlogged, heavily vegetated, a pipe slope of less than 5% the culvert diameter needs to be a minimum of 42" to handle the 100 year storm event and should handle all other flows.

Inlet and outlet protection in the form of rip rap, pipe material CMP is also required.

Hope this helps.

V/r,

Michael Snow

-----Original Message-----

From: Siddall CIV Darien G

Sent: Thursday, April 13, 2017 10:36 AM

To: Snow CIV Michael B <michael.b.snow@usmc.mil>

Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail.

GREAT! Thanks!

Darien Siddall

Natural Resource Specialist

NEPA Section

Natural Resources and Environmental Affairs (NREA)

Environmental Planning Section

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-----Original Message-----

From: Snow CIV Michael B
Sent: Thursday, April 13, 2017 10:35 AM
To: Siddall CIV Darien G
Subject: RE: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail.

Working it now Just got out of a budget meeting.

V/r,

Michael Snow

-----Original Message-----

From: Siddall CIV Darien G
Sent: Thursday, April 13, 2017 9:08 AM
To: Snow CIV Michael B <michael.b.snow@usmc.mil>
Cc: McDuff CIV Heather A <heather.a.mcduff@usmc.mil>
Subject: Culvert for Intermittent Stream near Range 6 along proposed Perimeter Trail.
Importance: High

Mike,

Were you able to get the culvert sized up and designed for the intermittent stream near Range 6 along the proposed Perimeter Trail ? You said it would be done today or tomorrow. Thanks!

Darien Siddall
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Natural Resources and Environmental Affairs (NREA)
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Appendix F
Construction Waste Management Report

ISWM Program Manager Rcvd: _____
FY Reporting Period: _____

Construction Waste Management Report Quantico Marine Corps Base

Report Date: _____
Project Number: _____ Project Name: _____
Contract Number: _____ Contract Task Order/Delivery Order: _____
Reporting Period: _____ to _____

**SUBMIT THIS FORM BY FAX TO (703) 784-4953, OR BY EMAIL TO: Marilisa Porter
at marilisa.porter@usmc.mil or call (703) 432-0522**

Comments: _____

Waste Stream	Disposal (Tons)	Disposal Cost	Recycled (Tons)	Recycled Cost	Recycled Revenues
C&D		\$		\$	\$

CONSTRUCTION & DEMOLITION DEBRIS (C&D).

- Record hazardous and non-hazardous C&D waste as one entry. Enter total tons of C&D disposed of in a landfill, by incineration, and/or by hazardous waste contract.
- Enter total disposal cost for C&D.
- Enter the recycled hazardous and non-hazardous C&D tons as one entry under the recycling column. You can also claim C&D diversion conducted by a construction contractor or MILCON project. If you have recycled C&D, it is likely that some was disposed of as well. Therefore, if there are recycled tons of C&D there should be some disposed tons of C&D.
- Enter the cost associated with recycling. Recycling costs include handling, processing, transportation, and other costs associated with recycling C&D. Soils that are used at another location or that are reclaimed count toward recycling.
- Enter Recycling Revenues. Enter only actual revenues received from recycling. Do not enter cost avoidance for recycling revenues.

Reported by: _____
Company: _____ Contact: _____
Address: _____ Title: _____
_____ E-mail address: _____
Telephone: _____ Fax: _____

Definitions:

Construction and Demolition (C&D) Debris. Waste derived from the construction, renovation, demolition or deconstruction of residential and commercial buildings and their infrastructure. C&D waste typically includes concrete, wood, metals, gypsum wallboard, asphalt, and roofing material.

Other Select Waste (OSW). Construction and demolition debris are the “Other Select Waste” categories for purposes of DoD metric reporting via SW module. If the Other Select Wastes are hazardous they must also be reported in the calendar year HW module.

Appendix F
Cultural Resources Correspondence

Siddall CIV Darien G

From: Roberts CIV Catherine
Sent: Friday, July 21, 2017 2:24 PM
To: Siddall CIV Darien G
Subject: tank trail summary
Signed By: catherine.roberts@usmc.mil

In addition to a pedestrian survey (2017) there were two additional surveys conducted within the APE of the tank trail expansion (2006 and 2012). There were three archaeological sites were discovered, all dating to the twentieth or late nineteenth century. None of these sites are considered potentially eligible for listing in the National Register of Historic Places, so no further archaeological work is recommended in these areas.

The majority of the project area was disturbed due to past use of the trails. In many locations, disturbance extended, beyond the 50 ft. (15 m) from the project area centerline. Phase I investigations identified eight archeological sites and two cemeteries. Activity within the tank trail area such as: military training, logging, and pine plantings have disturbed all or large portions of each site identified. Therefore, these sites are recommended not eligible to the National Register of Historic Places because they lack integrity or have low research potential.

No further work is needed within the area of the proposed tank trail expansion.

Kate Roberts

Marine Corps Base Quantico
Archaeologist
703 432 6781