

ENVIRONMENTAL ASSESSMENT
FOR
DEMOLITION OF WATER TOWER 1706
AT
MARINE CORPS BASE, QUANTICO,
Prince William County, Virginia

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

September 2015

Proposed Agency Action: Demolition of Water Tower 1706

Type of Statement: Environmental Assessment

Lead Agency: United States Marine Corps

For further information on this NEPA document:

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Abstract: This Environmental Assessment is intended to meet NEPA requirements for the proposed demolition of water tower 1706. The no action alternative, Alternative A, and one action alternative, Alternative B, were examined. Alternative B is the action proponent's preferred alternative.

Alternative B would allow Marine Corps Base Quantico to demolish water tower 1706 but would result in adverse effects to historic resources. Water tower 1706 is a contributing element to the National Register of Historic Places listed Marine Corps Base Quantico Historic District. A Memorandum of Agreement to mitigate the adverse effect is being developed with the Virginia State Historic Preservation Officer. With appropriate Best Management Practices implemented, demolition of the tower will not result in adverse effects to wildlife/threatened and endangered species habitat, Waters of the United States (including wetlands), air and water quality, low-income, minority groups, or children, military training, noise levels, infrastructure, or human health/safety. If the stated avoidance/mitigation measures (Section 4.15 of this EA) are executed, the proposed alternative would have no significant impacts on the natural or human environments. The preparation of an Environmental Impact Statement (EIS) is not required.

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

This environmental assessment (EA) was prepared to comply with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) 40 CFR parts 1500-1508, and Marine Corps Order P5090.2A which details the US Marine Corps' internal operating instructions for implementing NEPA. This EA, along with associated agency consultations, meet all NEPA requirements for demolition of water tower 1706.

Water tower 1706 is no longer part of the Marine Corps Base Quantico (MCBQ) drinking water system and has been abandoned. Currently, the tower is being maintained to ensure structural integrity. Even though the tower is not being actively used, it must be routinely inspected and maintained which incurs government cost.

1.1 Background

As depicted in Figure 1, water tower 1706 is located south of Building 15, Liversedge Hall, and north of the Masters Hill Family Housing.

The elevated water tank was constructed in 1929 and has a 100,000 gallon capacity. The steel tank is 28 feet in diameter on top of four steel supports resting on a concrete foundation. The structure is 152 feet in height. A central standpipe rises to meet the tank in the bottom center. The tank and support legs are painted in a white and orange checkerboard pattern. See tower photographs Figure 2. This structure was part of the first permanent construction at MCBQ.

Water tower 1706 is a contributing element to the National Register of Historic Places listed Marine Corps Base Quantico Historic District under the theme of First Permanent Construction under Criteria A which is associated with events that have made a significant contribution to the broad patterns of our history and Criteria C which embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The water tower is no longer part of the existing drinking water system and was taken out of service in the early 2000s.

Figure 1 Site Location Map

Water Tower 1706



Legend

 Historic District

 MCBQ GIS DATA
MAP: CHRISTA NYE

 0 1.25 2.5 5 7.5 10 Miles

Figure 2 Tower Photographs (CRM Files)

Building Photographs

Building Number: 1706

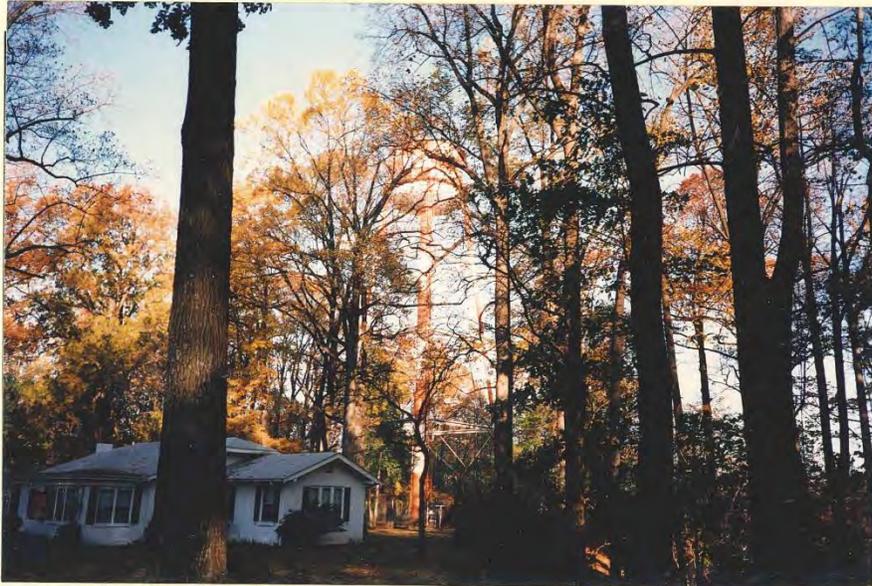
Building Style: Water Tower
Location: Near Bauer Road

Elevation:
Front



Roll #: 31	Frame #: 0 A	CD #: 308	CD Image #: 1	Picture Date: 27 Nov 95
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Elevation:
Back



Roll #: 31	Frame #: 1 A	CD #: 308	CD Image #: 2	Picture Date: 27 Nov 95
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2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative A - No Action

Under alternative A, no action would occur. Water tower 1706 would remain in place and the cost to maintain the integrity of the structure would persist. This is not the preferred alternative as this water tower is not being utilized and no longer serves its purpose.

2.2 Alternative B - Demolish Water Tower 1706

Alternative B would allow for the demolition of water tower 1706. Demolition would include the removal of the tower structure, closure of pipe infrastructure, excavation to remove the tower and fence footers, regrading, and stabilization of the site. Alternative B is the lead agency's preferred alternative to reduce operating costs.

2.3 Alternatives Dropped from Further Review

In accordance with CEQ guidance, all reasonable alternatives must be rigorously examined within NEPA documentation. Marine Corps Order P5090.2A, Chapter 12, section 12103.1d(2) states that the NEPA process should identify and assess all reasonable alternatives to proposed actions that would avoid or minimize adverse environmental effects. Additionally, the reasons for eliminating alternatives must also be discussed in Environmental Assessments.

Due the nature of the proposed need for action, no other viable alternatives were identified/evaluated.

3.0 EXISTING ENVIRONMENTAL CONDITIONS

CEQ regulations for implementing NEPA (40 CFR Part 1500) requires documentation that succinctly describes the environment of the areas potentially affected by the alternatives being considered.

Tower 1706 is located within the Mainside area at MCBQ, in Prince William County, Virginia. The site is accessible via McCard Road.

3.1 Land Use

MCBQ is divided into two areas; Mainside, 6,000 acres east of Interstate 95 and U.S. Route 1 and; the Westside or Guadalcanal area, 53,200 acres west of the same highways.

Current land usage can be seen in Figure 1.

3.1.1 Geology

The proposed action would occur within the Mainside 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. Many soils within the project area are disturbed due to past development for buildings and a swimming pool.

Hydric soils and highly erodible soils can constrain excavation activities or indicate potential environmental impacts. Hydric soils are defined as soils that are saturated long enough during the growing season to develop oxygen deficient conditions in their upper portions and are typically associated with wetlands, streams, or open water. Oxygen-deficient conditions within soils are conducive to the establishment of wetland vegetation. Hydric soils often contain large amounts of organic material.

Highly erodible soils are classified as having an erosion rating index of eight or greater. Often, highly erodible soils are found on steep slopes and can be difficult to work with during excavation activities.

Two soil units exist at the proposed demolition site: Caroline-Sassafras complex with fifteen to thirty percent slopes (map unit CdE), and Kempsville fine sandy loam with 6 to 10 percent slopes, eroded (map unit KfC2).

CdE is a well-drained soil with rapid runoff with a high erosion potential when exposed. The soil complex is comprised of 35 percent Caroline soils and 35 percent Sassafras. The remainder of the soil complex consists of gravelly, sandy, and clayey material. This soil series is common within oak-hickory and pine associations.

KfC2 is a well-drained soil and is characteristic of a mixed pine and hardwood forest. This soil series occurs on hilltops and sideslopes underlain by sandstones. Depth to hard bedrock

is about 3 to 8 feet and rapid weathering is common. Added topsoil may be needed in shallow areas to provide adequate rooting depth for replacement vegetation after ground disturbances.

The site contains no hydric soil and moderately erodible soils when left exposed.

The soils map is included as Figure 3.

3.1.3 Topography

The terrain of the proposed project area consists of nearly level to steep slopes. Elevation at water tower 1706 is approximately 150 feet above sea level. Elevation generally increases from the tower towards Building 15, Liversedge Hall located approximately 400 feet northeast of the site. Site drainage flows northeast to southwest. See Figure 4 for topographic map.

3.2 Water Resources

The Coastal Plain topography allows for rapid water conveyance and due to the proximity of various water bodies, activities conducted on the Base could potentially affect the water resources of the area.

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

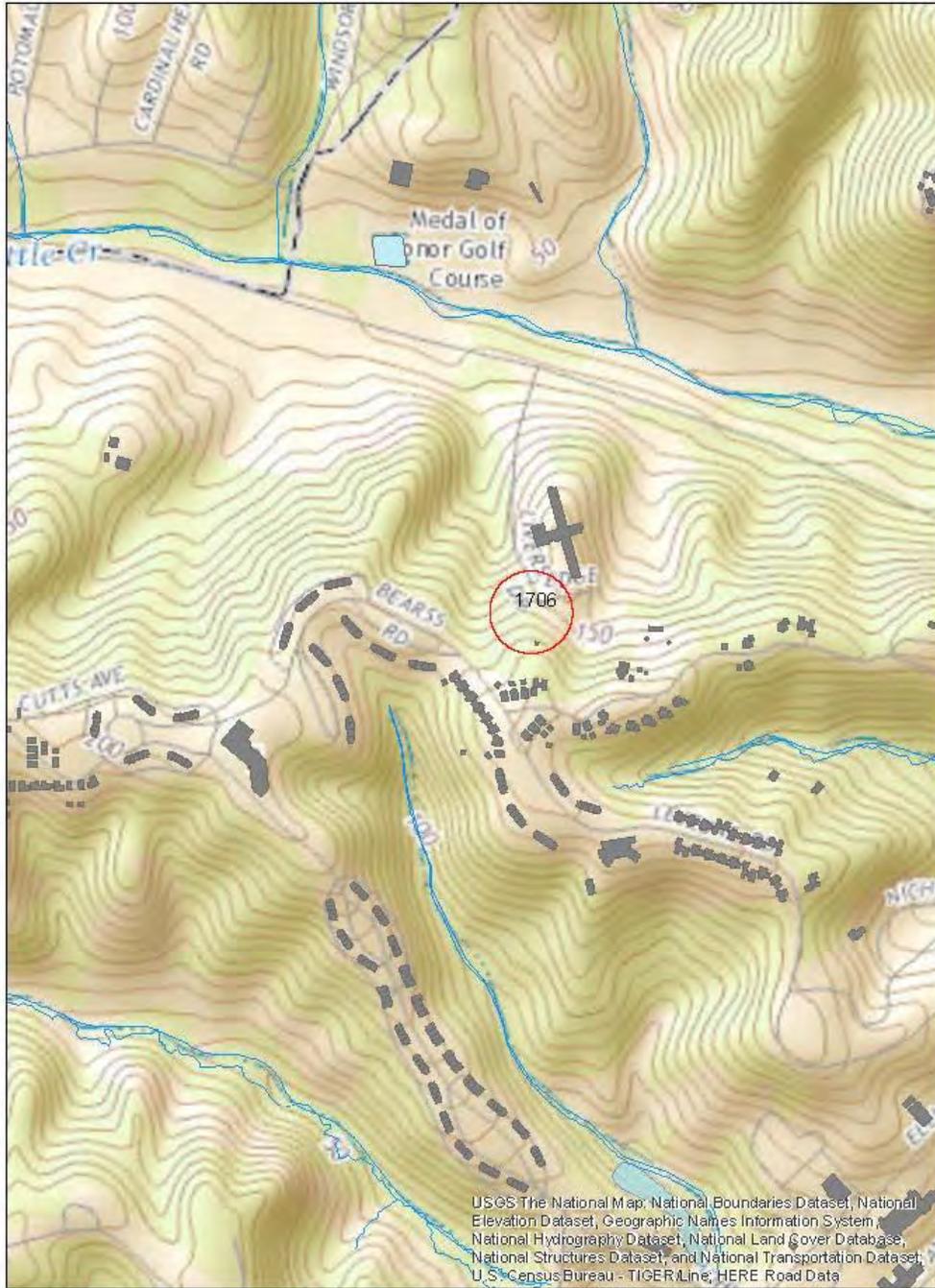
- Section 404 of the Clean Water Act, which requires a permit from the US Army Corps of Engineers for the discharge of dredged or fill material in to "waters of the US" a term that includes most streams, wetlands, and ponds.
- Executive Order (E.O.) 11990, *Protection of Wetlands*, requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

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 Section 401 water quality

Figure 3 Soil Map



Figure 4 Topographic Map



500 250 0 500 Feet

certification from the Virginia Department of Environmental Quality (DEQ), and under certain circumstances, the Virginia Marine Resources Commission (VMRC).

In 1988 Virginia enacted the Chesapeake Bay Preservation Act (CBPA). 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 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 Streams

According to site visits, topographic maps, aerial mapping, and GIS data, no streams are within the proposed project area. The nearest streams are located approximately 950 feet southwest and 950 feet southeast of the water tower. See topographic map, Figure 4.

3.2.2 Wetlands

A two-step process was used to establish the likelihood of wetlands within the proposed project boundaries. Initially, National Wetland Inventory (NWI) maps were reviewed and then ground-truthed by the MCBQ NREA, NEPA Program. No wetlands are located in the project area. See Figure 5 for NWI mapping.

3.2.3 Floodplains

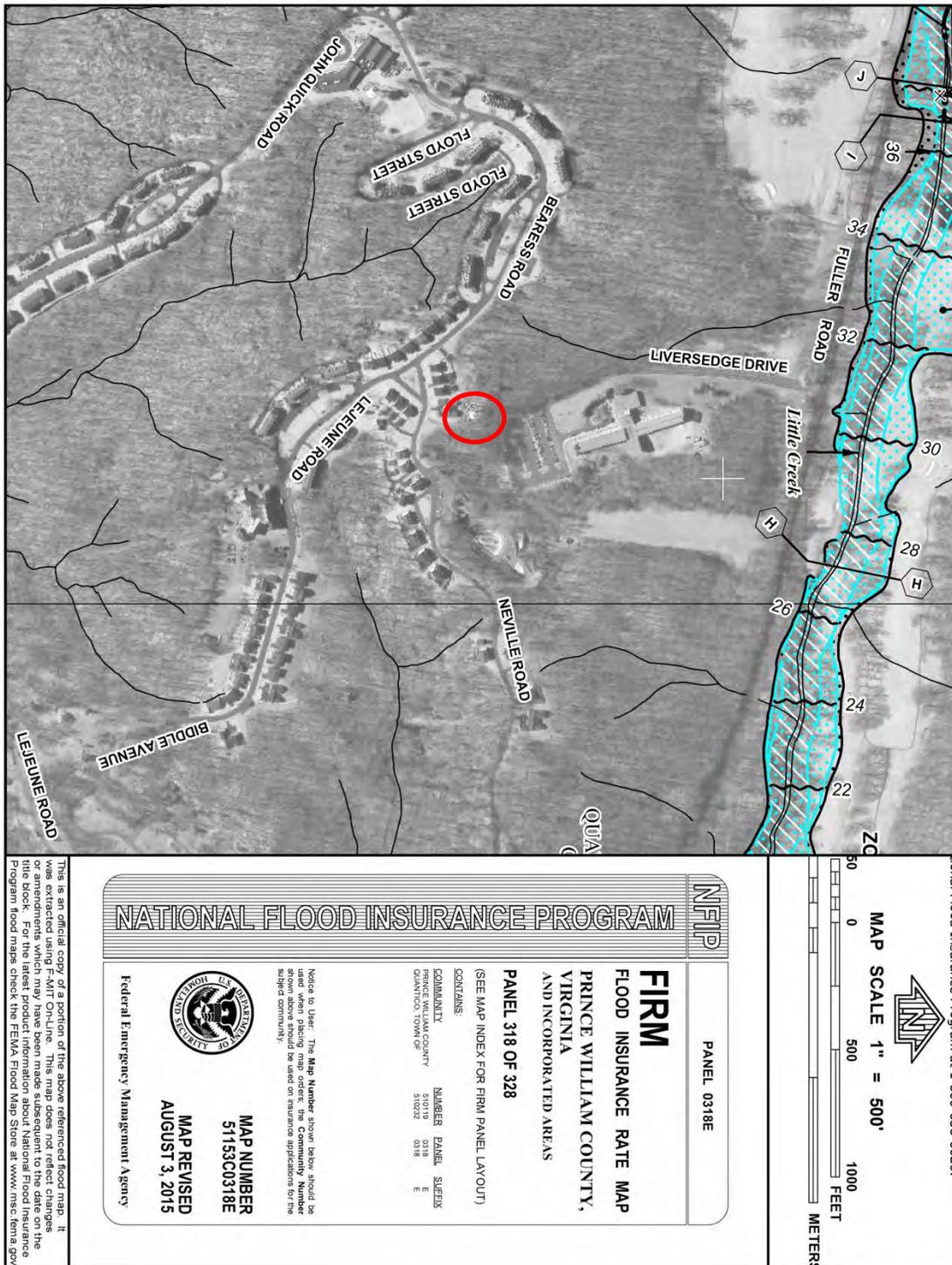
Executive Order 11988, *Floodplain Management* requires federal agencies to eliminate/minimize occupancy and modification of floodplains. The order specifically prohibits federal agencies from funding construction in the 100-year floodplain unless no practicable alternative exists.

The location of Alternative B was identified on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) numbers 51153C0318E panel 318 of 328. The flood mapping was revised on August 3, 2015. The site is described as being completely within Flood Zone X (unshaded) which is outside of the 500-year floodplain. The FEMA FIRM is included as Figure 6.

Figure 5 National Wetland Inventory



Figure 6 FEMA Flood Insurance Rate Map



3.2.4 Groundwater

Fractured bedrock aquifers underlie most of MCBQ with the largest being the Potomac Aquifer. Groundwater can typically be reached at depths between 200 and 350 feet. Within the Coastal Plain region, the water table generally flows subparallel with the surface topography and groundwater flows towards the Potomac River at MCBQ. One of the largest surface recharge areas for the Potomac Aquifer exists in Stafford County, near Interstate 95 (west of the project site). To date, no comprehensive studies of groundwater resources have been conducted at MCBQ.

3.2.5 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972 (16 USC § 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 USC § 1453 [1]). According to this statute, MCBQ is not within Virginia's coastal zone.

Section 307 of the CZMA 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 Zone Management Program (VCP) describing current coastal legislation and enforceable policies. The Virginia VCP 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 project areas are located upslope from significant water resources including the Potomac River with associated tributaries and wetlands. Stormwater runoff from the tower discharges to the stormwater system within the Masters Hill housing development. Additionally, stormwater flow can also

sheet flow directly to an intermittent tributary of the Potomac River. When this unnamed tributary reaches Little Hall, south of water tower 1706, the stream is piped under the heavily developed portion of MCBQ and then discharges to the Potomac River.

3.3 Biological Resources

3.3.1 Vegetation

Water tower 1706 is within a highly developed area of MCBQ and is immediately surrounded by turf grasses. Outside of the immediately maintained tower area is dense mixed-hardwood forest.

3.3.2 Wildlife and Wildlife Habitat

The area surrounding water tower 1706 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, eastern gray squirrel, eastern cottontail and bobwhite quail. Non-game species include resident and migratory songbirds, raptors, and various reptiles, amphibians, and invertebrates.

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

The Migratory Bird Treaty Act (MBTA) protects all species covered by the four migratory bird treaties the United States signed with Canada, Mexico, Japan, and Russia. The MBTA prohibits taking, 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* DOD and USFWS set forth a Memorandum of Understanding (MOU) to promote the conservation of migratory birds. The MOU pertains to installation support functions such as the construction and operation of administrative/support facilities, commissaries, military exchanges, shops, road construction, and welfare/recreation activities.

Neotropical migratory birds breed in North America and migrate to Central and South America to overwinter. The wood thrush (*Hylocichla mustelina*), scarlet tanager (*Piranga olivacea*), and red-eyed vireo (*Vireo olivaceus*) are common neotropical migrants

found in mature MCBQ forests. Much research is ongoing nationwide to determine the factors affecting the population densities and breeding success of these species.

Habitat used by migratory birds is located adjacent to water tower 1706. The tower site is located within the 143 acre Forest Compartment 71 and also contains some maintained shrubs and grasses.

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.

3.3.3 Threatened and Endangered Species/Species of Concern

The Endangered Species Act (ESA) 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.

Three plant species on MCBQ are listed as federally threatened or endangered and include harperella, small whorled pogonia, and sensitive joint-vetch.

Harperella, *Ptilimnium nodosum*, is a federally listed endangered plant species native to riverine habitats. This plant is only found in 13 areas ranging from Maryland to Georgia. Harperella has been historically found along Aquia Creek, which is located along the southern boundary of the installation.

The small whorled pogonia (SWP), *Isotria medeoloides*, 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. There are approximately 15 known MCBQ colonies.

Sensitive joint-vetch, *Aeschynomene virginica*, is a federally listed threatened species. This plant is an annual legume that prefers slightly brackish tidal river systems and exists along the Potomac River.

There are two MCBQ animal species listed under the ESA; the Northern long-eared bat (NLEB) and the Dwarf wedge mussel.

The NLEB, *Myotis septentrionalis*, is a threatened species of bat that is found at MCBQ. The NLEB population has been 99% destroyed by the White-nose syndrome (WNS) and other population

pressures such as habitat destruction and communications towers and wind turbines. MCBQ is within the area of the United States impacted by WNS. The NLEB is active at MCBQ from approximately April 15 through September 15. There is no NLEB hibernaculum aboard MCBQ.

The dwarf wedge mussel (*Alasmidonta heterodon*) is federally endangered. This small bivalve lives in freshwater streams and requires highly oxygenated and silt-free waters. This species has historically been found within the Aquia Creek watershed. An updated species survey was conducted during the summer of 2014 and no dwarf wedge mussels were found.

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 Migratory Bird Treaty Act (see Section 3.3.2) and the Bald and Golden Eagle Act and considered a species of concern. The Bald and Golden Eagle Act requires a buffer of 660 feet around a nesting site. There are no known nesting sites near water tower 1706. See Figure 7 for map.

According to Chief of Naval Operations Instruction (OPNAVINST) 5090.1B, it is Navy and Marine Corps policy to cooperate with states to protect state listed species, if mission compatible. MCBQ considers project impacts to Virginia-listed rare species and state listed species during the NEPA process.

The Virginia Piedmont waterboatman, *Sigara depressa*, and the brook floater, *Alasmidonta varicose*, are two listed state endangered 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 in clean consistently moving streams in gravel or sand substrates.

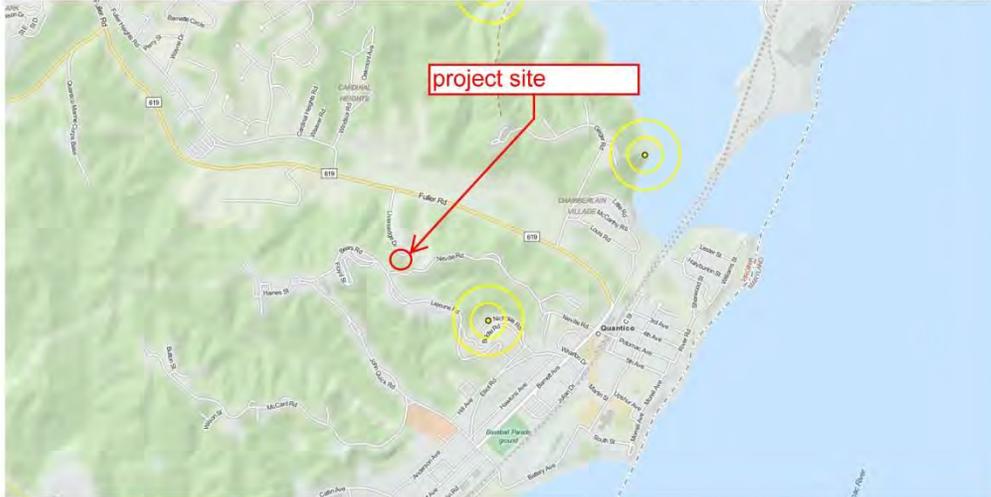
3.4 Cultural Resources

Implementation of proposed federal actions must comply with the National Historic Preservation Act (NHPA) of 1966, as amended. Under the NHPA, consideration of historic preservation issues must be integrated into the early stages of project planning by federal agencies. Under Section 106 of the NHPA, a federal agency is required to account for the effects of proposed actions 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

Figure 7 Bald Eagle Nest Map



CCB Mapping Portal



Layers: VA Eagle Nest Locator, VA Eagle Nest Buffers

Map Center [longitude, latitude]: [-77.30222511396277, 38.52396547611769]

Map Link:

http://www.cbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&zoom=15&lat=38.52396547611769&lng=-77.30222511396277&legend=legend_tab_a78d6af8-e398-11e4-d42-0e0c41326911&base=Street+Map+%28MapQuest%29

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funds on the action. Section 110 requires the identification and evaluation of any cultural resources on federal property that meet the eligibility criteria of the NRHP.

Water tower 1706 is a contributing element to the National Register of Historic Places listed Marine Corps Base Quantico Historic District under the theme of "First Permanent Construction" under Criteria A which is associated with events that have made a significant contribution to the broad patterns of history and Criteria C which embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Archaeological surveys have not been conducted in the vicinity of the water tower but the area has been extensively disturbed for construction of the water tower and surrounding base housing. There are no known archaeological resources that are eligible or potentially eligible for listing on the National Register of Historic Places within the project area.

3.5 Air Quality

The Environmental Protection Agency (EPA) defines ambient air (40 CFR Part 50) as "that portion of the atmosphere, external to buildings, to which the general public has access." In compliance with the 1970 Clean Air Act (CAA) as amended in 1977 and 1990, the EPA has produced ambient air quality standards and regulations. The EPA has issued National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide, sulfur dioxide (SO₂), particulate matter (PM) at two levels- particles with a diameter less than or equal to a nominal 10 micrometers (PM₁₀) and less than or equal to a nominal 2.5 micrometers (PM_{2.5}), ozone, nitrogen dioxide (NO_x), and lead. Areas that do not meet NAAQS are called non-attainment areas. MCBQ is located in a moderate ozone non-attainment area within the Ozone Transport Region, and in a PM_{2.5} non-attainment area. 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.

Established under the Clean Air Act (section 176(c)(4)), the General Conformity Rule plays an important role in helping states improve air quality in those areas that do not meet the NAAQS. Under the General Conformity Rule, federal agencies must work with State, Tribal, and local governments in a

nonattainment or maintenance area to ensure that federal actions conform to the air quality plans established in the applicable implementation plan.

In order to target federal projects which have the greatest impact on regional air quality, EPA established *de minimis* thresholds. *De minimis* thresholds are pollutant specific and specify the maximum allowable emissions from a project before a formal conformity determination must be prepared. Federal agencies do not need to prepare conformity determinations for actions that do not exceed these thresholds.

Additionally, several types of federal actions are automatically exempt from the general conformity rule without regards to their emissions. Actions such as routine repair of facilities and roads, routine transport of materiel and personnel, routine movement of mobile assets, and others are listed as exempt in 40 CFR 93.153(c)(2). Any equipment that requires a permit to construct and operate under a state's New Source Review program is exempt from General Conformity, as well as any other action specifically accounted for in the State Implementation Plan (SIP).

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.

The pollutant *de minimis* criterion 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.

3.5.1 Climate Change

Greenhouse gases (GHG) are atmospheric compounds that contribute to the greenhouse effect. GHGs include CO₂, CH₄, and N₂O, fluorinated gases and water vapor. 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 anthropogenic causes (IPCC 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 Environmental Protection Agency, to develop climate change assessment tools.

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 CFR Part 98) 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. MCBQ adheres to CEQ's guidance on evaluating a project's impact on climate change and GHG emissions.

3.6 Noise

Noise, defined as unwanted sound, is a prevalent human environment concern in and around military installations. The major sources of noise at MCBQ include aircraft, artillery, small arms, explosives, vehicles, heavy equipment, and machinery.

Existing noise levels around the water tower are primarily from air operations at the nearby Marine Corps Air Facility (Turner

Field) and ranges located west of I-95. Ordnance used in live and simulated fire exercises, is generally conducted at ranges on the western side of the Base, approximately four miles from the proposed project area.

3.7 Infrastructure, Utilities, and Transportation

The site has a well-developed infrastructure; utilities and services are readily available.

3.7.1 Utilities

Utilities such as water, sewer, electrical, natural gas, and fiber optic communication cable extend to the facility from from near the intersection of Neville Road and Lejeune Road. Water and sewer service is provided by MCBQ, electricity by Dominion Virginia Power, natural gas from Columbia Gas Company, Inc. and communications from Verizon and government networks. There are no known underground storage tanks for fuel near the water tower 1706.

Currently, water tower 1706 is used to support wireless telecommunications equipment owned by T-Mobile. There are current lease agreements with the Department of Navy for placement and operation of the equipment.

3.7.2 Transportation

Access to the site is accomplished via Neville Road or Lejeune Road on the Mainside of the installation. The tower is situated within a military housing development.

3.8 Hazardous Materials, Hazardous Waste, and Solid Waste

The tower was constructed in 1929 and it may contain hazardous materials such as lead and cadmium may be present in the external coating and asbestos may be present within the associated piping. These materials may become hazardous waste upon disposal.

Executive Order 13514, *Leadership in Environmental, Energy, and Economic Performance* calls for meeting or exceeding fifty percent diversion of non-hazardous solid waste and sixty percent diversion of construction and demolition debris from landfills.

3.9 Recreation

The water tower is not located within a recreation area. Many recreational trails are present within the Mainside of MCBQ but do not pass near tower 1706. Additionally, the Medal of Honor Golf Course lies approximately 1,500 feet northwest of the project site.

3.10 Military Training

The water tower area is located within a cantonment area and is not used as a military range aboard MCBQ.

3.11 Environmental Justice

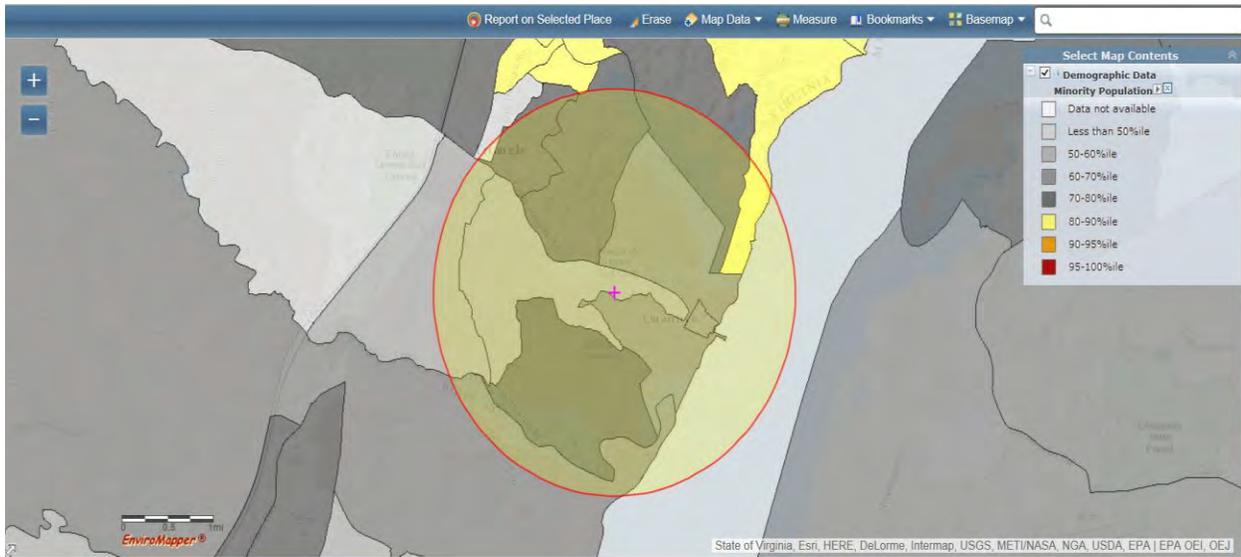
Executive Order (EO) 12898, *Federal Actions to address Environmental Justice in Minority Populations and Low-income Populations*, was issued in 1994. This order directs agencies to address environmental and human health conditions in minority and low-income communities so as to avoid the disproportionate 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. Children are more likely than adults to be adversely affected by environmental contaminants. The proposed project will occur immediately adjacent to public lands maintained by Prince William County, private residences, public highways, and Marine Corps Base Quantico.

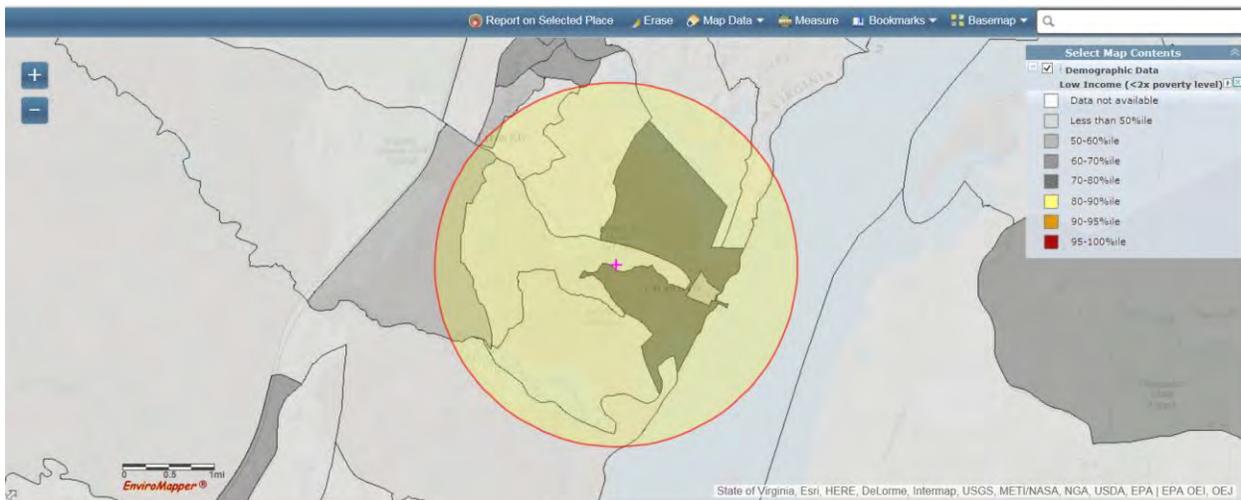
Population data reveals that census tracts surrounding the project area have higher percentages of minorities, low-income, and families with children than Prince William and Stafford Counties as a whole. See Figure 8.

Figure 8 Environmental Justice Mapping

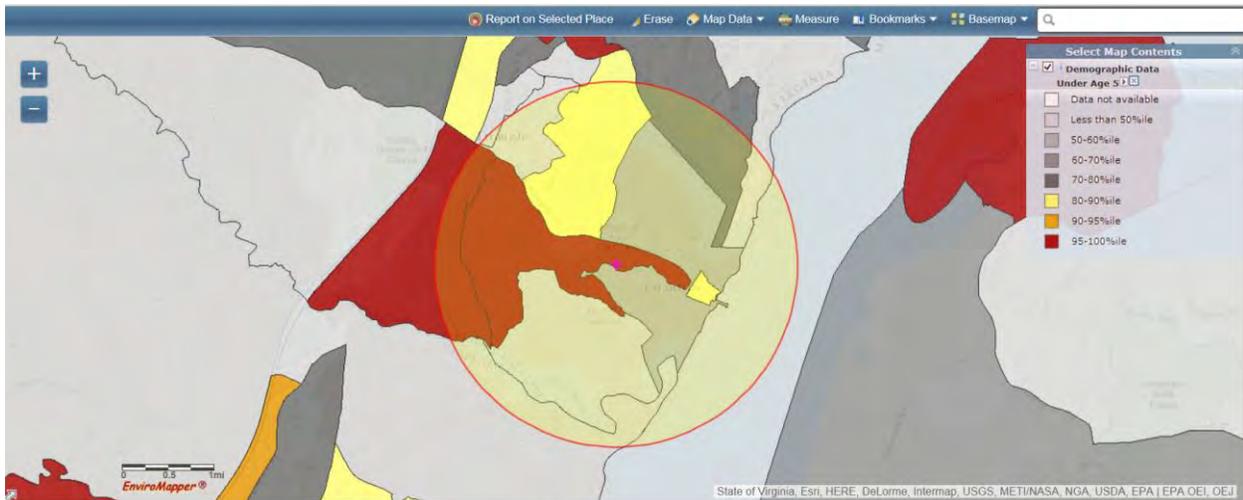
Source: EJSCREEN EPA Environmental Mapper



Minority Population Map



Low Income Population Map



Children <5 years old mapping



4.0 ENVIRONMENTAL CONSEQUENCES

The CEQ regulations implementing NEPA (40 CFR Part 1500) requires impacts discussion, 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 action alternative for the demolition of water tower 1706.

Alternative A is no action and Alternative B is the proposed action. As discussed in Section 2.3 of this EA, no other viable alternatives were identified. Best management practices and measures to mitigate potential impacts are covered in section 4.15.

4.1 Land Use

Impact of Alternative A: Under the no action alternative, the water tower would remain in place and unused. There would be no impacts to land use under alternative A.

Impact of Alternative B: Extensive vegetation clearing will not be required to demolish the water tower. Grading and stabilization through seeding would occur after the demolition of the water tower. Invasive species must not be planted as a component of this project.

Soils will be disturbed as a part of this project and potential impacts and mitigations to minimize soil movement are included in Sections 4.2 and 4.15 of this EA.

The current land is use military housing. Alternative B would not change the use of the land. Alternative B would not result in significant land use changes.

4.2 Water Resources

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

Impact of Alternative A: This alternative does not involve alteration of wetlands, surface waters, or associated hydrology. Alternative A would not result in impacts to water resources.

Impact of Alternative B: No Waters of the United States are within the project boundaries and, as such, demolition of the water tower will not adversely impact water resources.

The proposed action alternative would not require fill within the 100-year or 500-year floodplains. The 100-year floodplain is considered a RMA under the CBPA. There are no Waters of the United States at the project site.

The project will disturb less than one acre of land so the project will require an Erosion and Sediment Control plan short form (see Appendix A). The erosion and sediment control plan must be submitted to the NREA Branch's Water Programs Manager for review and approval at least 70 days prior to land disturbing activities (see Section 8.0 for contact information). The project must be compliant with the new VSMP regulations, 9VAC25-870. The NREA *Erosion and Sediment Control, Stormwater Pollution Prevention and Low Impact Development (LID) on MCB Quantico* (2013) application and design guidance document should be followed to eliminate approval delays.

Stormwater flows into the conveyance system within the housing area and then is piped under Barnett Avenue to the Potomac River.

The proposed action alternative is consistent to the maximum extent practicable with the enforceable policies of Virginia's Coastal Zone Management Program (VCP). The proposed project is not expected to have adverse effects on fisheries, shorelines, subaqueous lands, dunes, or coastal lands.

4.3 Biological Resources

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

Impact of Alternative B: The action alternative is compliant with the Migratory Bird Treaty Act and the Bald and Golden Eagle Act. The nearest nest is approximately 2,200 feet south of the project area which is well outside of the 660 foot buffer required under the Bald and Golden Eagle Act. Demolition noise at this distance will not have an adverse effect on Bald Eagles.

Some minor tree clearing may occur to facilitate site access and laydown areas for the structure demolition. Less than one acre of total disturbance is expected. Significant habitat will not be permanently disturbed.

In the event tree clearing needs to occur for site access, a time of year restriction will apply to the project. To avoid potential impacts to the Northern long-eared bat, tree clearance must occur between September 16th and April 14th of any given year. If this is not feasible, further coordination and possible surveys will be required. Survey cost may need to be incurred by the project.

Water resources that support the dwarf wedge mussel, Harparella, Sensitive joint-vetch, waterboatman, and brook floater will not be affected. Best management practices to avoid downslope water quality degradation during ground disturbance activities will be followed to avoid downstream sediments (see Section 4.2 and 4.15.1).

While forest segmentation reduces the amount of contiguous habitat that is available for migratory birds, site clearing associated with any potential laydown areas would not significantly affect the available forestland available. The majority of migratory birds listed under the MBTA on MCBQ are waterfowl species. No wetlands or open water will be significantly affected by the proposed construction activities.

Additionally, MCBQ is committed to supporting migratory bird data collection and monitoring. In 1995, MCBQ enrolled three bird-banding stations in the Monitoring Avian Productivity and Survival (MAPS) program and has been operating these stations annually. In 2000, a two-year study involving the feeding ecology of neotropical birds during the fall migration was initiated. Additionally, the Marine Corps continues to be an active participant with the Partners in Flight program which is a nationwide program to study and manage neotropical migratory birds that breed in North America and migrate to Central and South America to overwinter and habitat conservation efforts integrated into installation management are detailed within the MCBQ Integrated Natural Resources Management Plan.

Construction noise can affect wildlife and influence behavior and movement patterns. A forested buffer will remain in place on three sides of the demolition project which will lessen the amount of transmitted noise. Noise associated with demolition is unavoidable but temporary.

The proposed action will not have significant impacts on threatened and endangered species, migratory birds, or habitats used by these species.

4.4 Cultural Resources

Under Section 106 of the NHPA, a federal agency is required to account for the effects of the proposed action on any historic 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.

Section 110 requires the identification and evaluation of any cultural resources (including archaeological sites) on federal property that meets the eligibility criteria of the NRHP.

Impact of Alternative A: This alternative does not include land disturbance or development so cultural resources would not be affected.

Impact of Alternative B: Water Tower 1706 is considered a contributing element of the National Register of Historic Places listed MCBQ Historic District. Demolition of this structure is considered an adverse effect to the Historic District. The SHPO has concurred with the finding of adverse effect. A Memorandum of Agreement (MOA) is being developed to mitigate the adverse effect. Proposed mitigation includes intensive documentation of the historic structure to include photographs and architectural history and description. See Appendix B for SHPO consultation and the draft MOA.

Public notices were placed on the MCBQ website for 30 days and invitations to be a consulting and/or concurring party in the MOA process were sent to Prince William, Stafford, and Fauquier Counties. Stafford County requested copies of reports associated with the demolition and SHPO process. No other comments were received.

Although the site has been previously disturbed and covered by past archaeological surveys, there is always the potential for unexpected discoveries. In the event potential human remains (e.g. bones, bone fragments) are discovered, 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 Cultural Resources Manager/NEPA Program per Section 8.0 of this EA
- Redesign project to avoid remains, if possible
- Base Cultural Resources Manager/NEPA Program will contact 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 guidelines

4.5 Air Quality

MCBQ is located in a moderate ozone non-attainment area within the Ozone Transport Region, and in a PM_{2.5} non-attainment area.

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 National Ambient Air Quality Standards (NAAQS).

Impact of Alternative A: Alternative A will not have an effect on air quality as no new construction would occur and no new emissions sources added.

Impact of Alternative B: The expected potential air pollutants associated with alternative B would include emissions from demolition activities/equipment, crew commuting vehicles, fugitive dust, and from use of other fuel-burning equipment.

The direct and indirect emissions associated with alternative B are not expected to exceed *de minimus* emissions levels based on concept plans. A Record of Non-applicability for General Conformity has been completed for this project. See Appendix C.

The contractor in charge of construction will be responsible for ensuring compliance with the Fugitive Dust Standard. As stated in the Title V Operating Permit for MCBQ, Section XV.N, Fugitive Dust Emission Standard:

"During the operation of a stationary source or any other building, structure, facility or installation, 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 precautions may include, but are not limited, to the following:

- Use, where possible, of water or chemicals for control of dust in demolition activities (including road surfaces), from use of quicklime, construction operations, the grading of roads, or the clearing of land;
- 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 the maintaining of them in a clean condition;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
- Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion;
- The prompt removal of spilled or traced dirt or other materials from paved streets and of dried sediments resulting from soil erosion."

The proposed action would produce a temporary minor change in air emissions from the use of demolition equipment.

The action alternative would not significantly impact the current air quality conditions at MCBQ or the Metropolitan Washington non-attainment area.

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."

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. A detailed quantitative and qualitative assessment is not required.

Impact of Alternative B: Demolition emissions are short in duration and are not covered by the Mandatory Reporting of Greenhouse Gases rule as the intent is to track and regulate stationary sources. This project would not have any significant changes in stationary or mobile emission sources or landfill operations.

MCBQ address GHG emissions by meeting demands of laws, Executive Orders, and policies relating to air quality, GHGs, and climate change. The proposed project will be compliant with Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* which establishes GHGs as the integrating metric for tracking progress in federal sustainability, requires a deliberative planning process, and links to budget allocations to ensure goal achievement. Executive Order 13514 calls for a 34 percent reduction of GHG by 2020. The Marine Corps Base Quantico Sustainability Plan was developed in 2013 and implementation will be the primary method MCBQ will reach the GHG reduction goal by 2020.

Best management practices (BMPs) would be required and implemented for activities associated with the proposed action. Demolition/ground disturbing activities will be accomplished in full compliance with current Virginia regulatory requirements, with compliant practices and/or products.

By directly inventorying all emissions in a nonattainment region and monitoring concentrations of criteria pollutants in attainment regions, the Commonwealth of Virginia takes into account the effects of all past and present emissions in the state. This is done by putting a regulatory structure in place designed to prevent air quality deterioration for areas that are in attainment with the NAAQS and to reduce common or criteria pollutants emitted in nonattainment areas to levels that will achieve compliance with the NAAQS. This structure of rules and regulations applies either specifically or indirectly to all activities in the region and all activities associated with the proposed action alternative. MCBQ operates under a Title V Operating Permit. Annual reports demonstrating compliance are required under the permit will continue to be submitted. No other large-scale projects or proposals have been identified that, when combined with the proposed action, would threaten the attainment status of the region, would have substantial GHG emissions, or would lead to a violation of any Federal, state, or local air regulation. In compliance with CEQ's and the EPA's guidance, a detailed qualitative and quantitative analysis of CO₂ equivalents is not required for the proposed action.

The proposed action would not significantly contribute to cumulative impacts to air quality, GHGs, or climate change.

4.6 Noise

Impact of Alternative A: There would be no new noise impacts with the no action alternative. Noise levels would remain the same.

Impact of Alternative B: Implementation of the proposed action would generate short-term, temporary noise from demolition operations (i.e., noise from demolition equipment, supply trucks, and worker vehicles). The potential for noise impacts from the proposed construction could be temporarily substantial in the immediate area. It is recommended that Lincoln Military Housing be made aware of the construction schedule so housing residents are made aware of potential noise impacts. Demolition activities should occur during normal business hours to avoid unnecessary noise for residents.

Due to the nature of the project, no long-term noise impacts are associated with this alternative.

4.7 Infrastructure, Utilities, and Transportation

Impact of Alternative A: The no construction alternative would not have an impact on existing infrastructure.

Impact of Alternative B: Demolition of water tower 1706 will result in decreased government costs due to the removal of the abandoned water tower. Maintenance costs include general maintenance of the structure and inspections.

Wireless telecommunications equipment is located on and around water tower 1706. Current agreements with the providing companies will either be allowed to expire or be renewed with the approval of new equipment locations. A cumulative impact of this action may be the installation of separate monopole or lattice towers to support existing wireless telecommunications equipment. The detailed evaluation of such towers is outside the scope of this EA but will be evaluated both individually and cumulatively based on potential locations which are not currently available.

4.8 Hazardous Materials/Waste/Solid Waste

Impact of Alternative A: The proposed no action would have no effect on general procedures for hazardous materials and hazardous waste management at MCBQ.

Impact of Alternative B: Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and availability of Material Safety Data Sheets (MSDSs). Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplace operations; monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; recommend and evaluate controls (e.g., ventilation, respirators) for the protection of personnel; and ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures.

In order to detail and evaluate the potential on-site hazards, the contractor will be required to complete an Environmental Protection Plan (EPP).

The water tower was constructed in 1929 and there are likely heavy metals (lead and cadmium) within the paint coating. The paint shall be tested prior to disposal of the structure. A Toxicity Characteristic Leaching Procedure (TCLP) for Heavy Metals (RCRA-8) shall be conducted by the contractor. The contractor shall submit an Environmental Protection Plan (EPP) to NREA for approval prior to the start of work. The EPP must detail hazardous materials and hazardous waste management.

It is expected that hazardous materials such as lead-based paint will be encountered during tower demolition. Additionally, transite pipe (asbestos-containing) may be present in the water distribution system associated with the tower. Hazardous materials can become hazardous waste when disposal occurs. Hazardous waste will be removed in accordance to all state and federal regulations. The contractor may not dispose of hazardous materials/waste on MCBQ property. Disposal of hazardous waste off the demolition site must follow the MCBQ Standard Operating Procedure for Waste Disposal (See Appendix D).

All solid waste activities will be covered in the project solid waste management plan. This plan can be part of the Environmental Protection Plan and must be submitted to NREA for review prior to receipt of the Notice to Proceed. The plan must be submitted to the Contracting Officer and/or designated representative, and to NREA (see Section 8.0 for the solid waste program contact information).

The contractor is responsible for coordinating all solid waste disposals at a landfill that meets all Federal, State, and local regulatory standards. Hazardous waste and universal waste will be disposed of in compliance with all applicable regulations. The contractor will support the solid waste diversion philosophy outlined in Executive Order 13514 by recovering/recycling materials.

Alternative B will result in construction 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 (see Appendix E) to NREA within 30 days of the close of the project, and no later than October 15 to be included in annual report submissions.

4.9 Health/Safety

Impact of Alternative A: This alternative would maintain the status quo. Alternative A would not have an impact on health/safety.

Impact of Alternative B: Work site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by DoD regulations designed to comply with standards issued by the Occupational Safety and Health Administration (OSHA) and the United States Environmental Protection Agency. These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors. All Material Safety Data Sheets (MSDS) for all chemicals shall be kept on site and all storage containers labeled. Demolition crews would not be exposed to greater safety risks from the inherent dangers at construction sites. Contractors would be required to establish and maintain safety. Therefore, the proposed demolition would not introduce new or unusual safety risks, assuming construction protocols are followed.

This site does not occur within a known Military Munitions Response Site (MMRP) but there is always the potential to encounter unexploded ordnance (UXO) at MCBQ. Contractors should undergo UXO awareness training given at MCBQ. In the event UXO is discovered at the demolition site, work shall stop

immediately and the contracting officer notified so the appropriate notifications can be completed.

If appropriate Best Management Practices and appropriate handling of hazardous materials/waste, as required by state and federal regulations are followed, implementation of Alternative B would not have an adverse effect on health and safety.

4.10 Environmental Justice/Socioeconomics

Impact of Alternative A or B: Population data reveals that census tracts surrounding the project area have higher percentages of minorities, low-income, and families with children than Prince William and Stafford Counties as a whole. While the proposed project would occur near populations containing these groups, it will not significantly affect the health of these groups. Temporary minor impacts such as noise created by construction activities would occur but these impacts will not disproportionately affect minorities, low-income residents, or children. Best management practices such as dust management would also be employed to eliminate or keep temporary environmental nuisances to a minimum.

Implementing any 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, or children at MCBQ or in the surrounding area.

In the event any heavy metal containing paint is removed prior to demolition through blasting (water, sand, etc), the tower must be encapsulated to avoid impact to the surrounding housing community. Additionally, if blasting occurs, the ground surrounding the tower must be analyzed for heavy metals and remediated, if applicable.

The demolition process will result in as proposed in temporary employment opportunities and while this will result in a minor positive impact to the community, the impact is negligible. This project will not create new pressures on community infrastructure and school districts.

4.11 Recreation

Impact of Alternative A: There would be no site work with this alternative and there would be no impact to recreation aboard MCBQ.

Impact of Alternative B: The site is located within a no hunting zone. No hunting, fishing, or hiking/biking/running

paths exist within the vicinity of the tower. Alternative B is not likely to result in loss of recreation opportunities at MCBQ.

4.12 Military Training

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

Impact of Alternative B: The water tower area is not used as a military training area. Alternative B will not cause impacts to military training.

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.

The proposed action was evaluated for cumulative impacts relating to the following actions:

- Several contributing elements to the Base Historic District have been recently demolished or are slated for demolition: Building 3074, 2101, 2102, 2103, 2106, 2205, and 2112. All but 3074 are considered air obstructions and demolition will improve the safety of the Marine Corps Air Facility. Impacts to the historic district have/are being mitigated according to various Memorandum of Agreements.
- Construction of the Heritage Center Parkway and scenic overlook. This project has recently been completed. An Environmental Assessment was completed for this project in 2011 resulting in a Finding of No Significant Impact. This project will have minor (under 0.1 acre) wetland impacts that will be properly permitted by the appropriate state and federal agencies having jurisdiction. It is expected that the project will qualify for a Nationwide Permit 3 for culvert maintenance. The subject project will not have potential impacts to Waters of the United States so cumulative impacts will not occur.
- Phase I of the National Museum of the Marine Corps and Memorial Park was completed in 2006 and the Memorial Chapel was completed in 2009. An Environmental Impact Statement (EIS) was completed for this project.
- Actualization of erosion control measures along Little Creek. There are a variety of USACE proposed remediation projects to be completed as Base funding allows. The demolition project will

not have impacts that will affect execution of these repair projects.

- Phases 2 and 3 of the Russell Road Widening from the MFCU towards Dunlap Circle under design and is expected to be complete in 2015. An EA was completed for Phase 2 in 2011. An EA was completed for Phase 3 in 2012. Mitigations for these phases include purchasing of mitigation banking credits for less than 0.1 acre of wetland impacts, purchasing of stream credits, a Phase III archaeological data recovery, and implementation of sediment and erosion controls. Depending on the scheduling of this project, there is potential for construction along this road to impact access to the tower 1706 site.

- Widening of Fuller Road from the front gate to Mason Drive. An EA was completed for this project in 2012. Mitigation measures include a stabilization study by USACE and subsequent erosion control projects. Widening of Fuller Road beyond Mason Drive may occur in the future but any completion timeframes and impacts would be speculative. A Civil War camp site (Camp French) could be adversely impacted if the project limits extend to the southeastern portion of Fuller Road. Proposed projects within Little Creek will occur just upstream of the confluence at Purvis Road/Fuller Road. This project will affect access routes within the Base and could affect the route of demolition equipment and crews moving into the tower 1706 area.

- Realignment of Purvis Road. This project qualified for a categorical exclusion in 2010. This project was evaluated within the Purvis Road Improvement Report and no cumulative impacts will occur.

- The construction of a Consolidated Elementary School. This project was completed in 2015. There will be no cumulative impacts.

- The construction of a Child Development Center along Purvis Road was completed in 2013.

- The redevelopment of the Lyman Park housing area was completed in 2005. Stream and wetland mitigation were required in the form of on-site mitigation. The mitigation site is located along Little Creek.

Projects by others:

- Widening of U.S. Route 1 by the Virginia Department of Transportation (VDOT) and Prince William County (PWC). NEPA documents will be completed by VDOT/PWC. Wetland and stream impacts are expected for this project. Any required mitigation measures will be completed by VDOT/PWC.

- Realignment of Fuller Heights Road by VDOT and PWC. The project qualified for a Federal Highway Administration Categorical Exclusion in 2010. Minor wetland impacts and

adverse effects regarding potential erosion to Little Creek are expected. A Little Creek stabilization study has been completed by USACE. Recommended stabilization projects will be carried out by MCBQ as funding allows. There is no expected start of construction date for this project.

The proposed action alternative (Alternative B) will not have significant cumulative impacts when considered with past, present, and foreseeable future projects. Appropriate avoidance and mitigation measures will occur throughout project implementation to ensure potential impacts remain below significant levels.

4.14 Unavoidable Impacts

It is not expected that there will be unavoidable permanent impacts associated with the implementation of Alternative A or B. Alternative B will result in permanent impacts to the MCBQ historic district as detailed in 3.4 and 4.4 of this EA. Section 4.15 outlines Best Management Practices/Mitigations that will ensure potential impacts remain below significant levels.

4.15 Mitigation/Further Actions Required by Project Proponent

4.15.1 Cultural Resources

Permanent adverse effects to the MCBQ Historic District will occur with Alternative B. The adverse effect will be mitigated through the MOA process with the SHPO. All mitigations must be completed and approved by SHPO prior to the demolition of the tower. The project must incur the cost of the mitigation measures.

In the event potential human remains (e.g. bones, bone fragments) are discovered, 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 8.0 of this EA
- Redesign project to avoid remains, if possible
- Base Archaeologist/NEPA Section will contact State Historic Preservation Office (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 guidelines

4.15.2 Mitigation of Affects to Water Quality

The implementation of basic erosion and sediment control practices would be required during construction as specified in the Virginia Erosion and Sediment Control Handbook (VDCR 1992). The proper installation and maintenance of erosion and sediment controls would minimize the movement of disturbed soils off-site and into the Potomac River watershed. The project will require an erosion and sediment (E&S) control plan (short form) and a be submitted to the NREA Water Program at least 70 days prior to the start of land disturbance. The project must adhere to the new VSMP regulations per 9VAC25-870 which went into effect 1 July 2014, EISA 438 and the Navy's LID Policy. The E&S control plan must be approved by NREA before demolition can begin. The NREA *Erosion and Sediment Control, Stormwater Pollution Prevention and Low Impact Development (LID) on MCB Quantico* (2013) application and design guidance document should be followed to eliminate approval delays.

4.15.3 Minimization of Dust

The contractor must follow BMPs outlined in Section 4.5 of this EA for dust reduction. The proposed project will occur adjacent residential/community areas.

4.15.4 Waste Management Plan/Construction Waste Management Report

The water tower was constructed in 1929 and there are likely heavy metals (lead and cadmium) within the paint coating. The paint shall be tested prior to disposal of the structure. A Toxicity Characteristic Leaching Procedure (TCLP) for Heavy Metals (RCRA-8) shall be conducted by the contractor. The contractor shall submit an Environmental Protection Plan (EPP) to NREA for approval prior to the start of work. The EPP must detail hazardous materials and hazardous waste management.

It is expected that hazardous materials such as lead-based paint will be encountered during tower demolition. Additionally, transite pipe (asbestos-containing) may be present in the water distribution system associated with the tower. Hazardous materials can become hazardous waste when disposal occurs. Hazardous waste will be removed in accordance to all state and federal regulations. The contractor may not dispose of hazardous materials/waste on MCBQ property. Disposal of

hazardous waste off the demolition site must follow the MCBQ Standard Operating Procedure for Waste Disposal (See Appendix D).

The contractor must submit a Construction Waste Management Plan to the NREA, Solid Waste Program Manager (See Section 8.0 of this EA) prior to starting construction. The contractor must submit the Construction Waste Management Report included in Appendix E by October 15 or within 30 days of the project close.

4.15.5 Safety and UXO

This site does not occur within a known Military Munitions Response Site (MMRP) but there is always the potential to encounter unexploded ordnance (UXO) at MCBQ. Contractors should undergo UXO awareness training given at MCBQ. In the event UXO is discovered at the demolition site, work shall stop immediately and the contracting officer notified so the appropriate notifications can be completed.

All Material Safety Data Sheets (MSDS) for all chemicals shall be kept on site and all storage containers labeled.

4.15.6 Threatened and Endangered Species

Tree clearance shall occur between September 16th and April 14th to avoid potential adverse impacts to the ESA listed Northern long-eared bat.

5.0 CONCLUSION

Table 1. Summary of Impacts Alternatives A and B

Resources		Alternative A (No Action)	Alternative B (Proposed Action)
Land Use			
	Geology	0	0
	Soils	0	1/N
	Topography	0	0
Water Resources			
	Surface Waters	0	0
	Wetlands	0	0
	Floodplains	0	0
	Groundwater	0	0
	Stormwater	0	1/N
Biological Resources			
	Vegetation	0	1/N
	Wildlife/Habitat	0	1/N
	T&E Species	0	1/N
Cultural Resources		0	2/N
Air Quality/Climate Change		0	1/N/T
Noise		0	1/N/T
Infrastructure			
	Utilities	0	1/T
	Transportation	0	0
Socioeconomics			
	Demographics	0	0
	Environmental Justice	0	0
	Employment/Income	0	1/P/T
Health/Safety/Munitions		0	0
Hazardous Materials/Waste and Solid Waste		0	1/N/T
Recreation		0	0
Military Training		0	0

3= High Impact, 2=Moderate Impact, 1=Low Impact, 0=Negligible/No Impact

P=Positive Impact, N=Negative Impact, T=Temporary (generally during construction)

Two alternatives regarding the demolition of water tower 1706 been evaluated. Alternative A would have no adverse effect on the natural environment but the abandoned water tower would remain in place. The potential adverse effects of Alternative B

to wetlands, streams, and overall water quality would be mitigated through measures mentioned in section 4.15.1 and 4.15.2 of this EA. With avoidance and mitigation measures, Alternative B would not have significant impacts on the natural or human environments and the preparation of an Environmental Impact Statement is not required.

6.0 DOCUMENT PREPARER

Christa Nye
NEPA Coordination Section
Natural Resources and Environmental Affairs Branch
Installation and Environment Division (G-5)
Marine Corps Base, Quantico, VA 22134
(703) 432-6770

7.0 LIST OF AGENCIES AND PERSONS CONTACTED

The following were contacted to review or during preparation of this Environmental Assessment:

Natural Resources and Environmental Affairs Branch, Facilities Division, Marine Corps Base, Quantico, VA 22134

Amy Denn, Head
Major Peter Baker, Deputy
Robert Stamps, Head, Natural Resources Section
Frank Duncan, Head, Environmental Planning Section
Dave Grose, Head, Environmental Compliance Section
Heather McDuff, Head, NEPA Program
Ron Moyer, Head, Forestry Program
John Rohm, Fish, Head, Wildlife, and Agronomy Program
Wayne Hagwood, Hazardous Waste Program Manager
Kate Roberts, Cultural Resources Program Manager
Andy McClelland, Air Program Manager
Brian Ventura, Remediation Program Manager
Jonmark Sullivan, Water Program Manager
Ronald King, Solid Waste Program Manager

Office of Counsel (C 050), Marine Corps Base, Quantico, VA 22134

Nathan Stokes, Associate Counsel

8.0 CONTACT INFORMATION

Contact regarding this EA:
Christa Nye at Christa.Nye@usmc.mil, 703-432-6770

Contact regarding archaeological resources:
Kate Roberts at Catherine.Roberts@usmc.mil, 703-432-6781

Contact regarding stormwater and erosion and sediment control plans: Jonmark Sullivan at Jonmark.Sullivan@usmc.mil, 703-432-0528

Contact regarding air quality, ozone depleting substances:
Dave Grose john.d.grose@usmc.mil, 703-432-1335

Contact regarding solid waste and reporting requirements:
Ronald King at Ronald.King@usmc.mil, 703-432-0524

Contact regarding forestry:
Ron Moyer at Ronald.Moyer@usmc.mil, 703-432-6775

Contact regarding endangered species:
John Rohm at john.rohm@usmc.mil, 703-432-6782

9.0 REFERENCES

Intergovernmental Panel on Climate Change (IPCC). Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (2007).

Natural Resources and Environmental Affairs Branch (NREA) Integrated Cultural Resource Management Plan for Marine Corps Base, Quantico, Virginia (2007).

Natural Resources and Environmental Affairs Branch (NREA) Integrated Natural Resources Management Plan for Marine Corps Base, Quantico, Virginia (2001).

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions. Available online at <http://soils.usda.gov/technical/classification/osd/index.html>.

VA Chesapeake Bay Preservation Act, VA Code 10.1-2100 - 2115
Clean Air Act of 1970, as Amended 42 USC § 7401 *et seq*
Coastal Zone Management Act of 1972, as Amended 16 USC § 1451, *et seq*.

Erosion and Sediment Control Regulations (VR 625-02-00) Erosion and Sediment Control Law, Article 4, Chapter 5 of Title 10.1 of the Code of Virginia.

Executive Order 12989, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks.

Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance.

Erosion and Sediment Control, Storm Water Pollution Prevention and Low Impact Development (LID) on MCB Quantico Application and Design Guidance (2013).

National Historic Preservation Act, 54 U.S.C. § 300101 *et seq.*

U.S. Migratory Bird Treaty Act, 16 USC 701-712.

U.S. Endangered Species Act, 16 USC 1531-1544.

U.S. Clean Water Act, 33 USC 1344.

APPENDIX A
EROSION AND SEDIMENT CONTROL PLAN (SHORT FORM)

Short Form Erosion and Sediment Control Plan

Project: _____

Project Manager: _____

Responsible Land Disturber: _____

Land Area to be Disturbed _____ (acres or square feet)

The following information is required:

1. Describe the nature, purpose, and scope of land disturbing activity
2. List all E&SC practices that will be required during all land-disturbing activities provided on the next two pages. Responsible Land Disturber (RLD) should sign the acknowledgement.
3. Provide a Site Map with description of E&SC practices.

Map must include the following:

- Indicate North
- Indicate all areas that are to be cleared and graded.
- Show all improvements such as buildings, parking lots, access roads, utility construction, etc.
- Show the locations of all erosion and sediment controls and stormwater management practices used on the site.
- Show existing and final contour lines and drainage divides.

Recommended Plan Symbols:

STONE CONSTRUCTION ENTRANCE	CE		EXISTING CONTOUR	
SILT FENCE	SF		FINISHED CONTOUR	
STORM DRAIN INLET PROTECTION	IP		LIMITS OF DISTURBANCE	
TEMPORARY DIVERSION DIKE	DD		DRAINAGE DIVIDE	
OUTLET PROTECTION	OP		STORM SEWER	
RIP RAP	RR			
ROCK CHECK DAMS	CD			
TREE PROTECTION	TP			

4. Describe any off-site land-disturbing activities that will occur (including borrow sites, stockpiles, etc.)
5. Identify all post-construction maintenance requirements and responsible party for effecting all actions.
6. A valid RLD certificate shall be provided with this application for the RLD that will be onsite supervising land disturbing activities.

Erosion and Sediment Control Notes:

1. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site.
2. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days.
3. Permanent stabilization shall be applied within seven days to areas that are to be left dormant for more than one year.
4. During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures.
5. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.
6. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized.
7. Permanent vegetation shall not be considered established until a ground cover is achieved that, is uniform, mature enough to survive and will inhibit erosion. This includes the stipulations of at least two 3" grass cuttings and at least 90% uniform coverage across the entire site.
8. All measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.
9. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.
10. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion.
11. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.
12. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.
13. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.
14. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
15. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.
16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
 - a. No more than 500 linear feet of trench may be opened at one time.
 - b. Excavated material shall be placed on the uphill side of trenches.
 - c. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
 - d. Restabilization shall be accomplished in accordance with the current edition of the VESCH.
 - e. Applicable safety regulations shall be complied with.

17. Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface.
18. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day.
19. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner.
20. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program authority.
21. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.
22. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system.
23. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.
24. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.
25. All Land Disturbing Activities aboard MCB Quantico will be conducted in accordance with the current edition of the Virginia Erosion and Sediment Control Law and Regulations (VESCLR) and the Virginia Erosion and Sediment Control Handbook, 1992 Edition (VESCH). A copy of the handbook and the approved E&SC Plan will be kept on-site at all times.
26. Inspections shall be conducted at least once every 14 calendar days and within 48 hours of a rain event producing 0.5" or rain or greater. All inspections shall be kept in an inspection log, present at the jobsite at all times, and available for inspection upon request.
27. Inspection reports shall include the following:
 - a. name(s) and qualifications of personnel making the inspection, and the date(s) of the inspection
 - b. major observations relating to the implementation of the SWPP plan
 - c. the location(s) of discharges of sediment or other pollutants from the site
 - d. location(s) of BMPs that need to be maintained
 - e. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
 - f. location(s) where additional BMPs are needed that did not exist at the time of inspection
 - g. Incidents of noncompliance
 - h. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit
 - i. Signature of inspector
28. If at any time an E&SC structure and/or device is found to be in need of maintenance or repair, the structure shall be repaired and/or replaced as needed immediately, or as soon as practical; however, all repair and/or replacement of controls shall be completed within 7 days of initial finding of deficiency, or before next anticipated storm event, whichever time period is shorter.

29. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control for site situations immediately.
30. Sediment must be removed from sediment traps, sedimentation ponds and all other sediment trapping devices when design capacity has been reduced by 50%.

This Plan is not applicable to projects with the following characteristics:

1. Project requires a sediment trap or basin.
2. Work will be performed in live watercourses.
3. Work will be performed in any areas that could potentially be characterized as wetlands.
4. Project will involve de-watering operations.
5. Project will increase peak flows rates of stormwater runoff, add additional impervious area, or create new drainage channels.
6. Existing conditions at the project site have inadequate stormwater management measures.

Responsible Land Disturber's Acknowledgement:

Signature

(Date)

Print Name

Title

APPENDIX B
SHPO CORRESPONDANCE AND MOA



COMMONWEALTH of VIRGINIA

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Molly Joseph Ward
Secretary of Natural Resources

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

MEMORANDUM

DATE: 23 March 2015 **DHR File #** 2015-3148

TO: Ms Catherine Roberts
USMC

FROM:  Marc E. Holma, Architectural Historian (804) 482-6090
Office of Review and Compliance

PROJECT: water tower demolition
Marine Corps Base Quantico

This project will have an effect on historic resources. Based on the information provided, the effect will not be adverse.

This project will have an adverse effect on historic properties. Further consultation with DHR is needed under Section 106 of the NHPA.

Additional information is needed before we will be able to determine the effect of the project on historic resources. **Please see attached sheet.**

No further identification efforts are warranted. No historic properties will be affected by the project. Should unidentified historic properties be discovered during implementation of the project, please notify DHR.

We have previously reviewed this project. Attached is a copy of our correspondence.

Other (Please see comments below)

COMMENTS: **The subject water tower (Structure 1706) was constructed in 1936 and contributes to the Marine Corps Base Quantico Historic District. Please continue to consult with DHR on appropriate mitigation and development of an MOA for this undertaking.**

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6408
Fax: (804) 862-6196

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

PUBLIC NOTICE

OF PLANNED ACTION TO DEMOLISH 1706 WATER TOWER

Marine Corps Base, Quantico (MCBQ) has determined that 1706 water tower will be slated for demolition. The structure served as a water storage tower and was part of the MCBQ water distribution system. The structure is located in the Marine Corps Base Quantico Historic District; the tower is no longer in use and is not part of the current water distribution system.

1706 water tower is a contributing element of the National Register of Historic Places listed Quantico Marine Corps Base Historic District.

Project information is available for review by making a written request to: Commander, NREA Branch (B 046) 3250 Catlin Avenue, Quantico, Virginia 22134-5001. Review requests and comments will be accepted for thirty (30) days after publication of this notice.



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

IN REPLY REFER TO:
5090
B 046
24 Jun 15

Chairman R. Holder Trumbo, Jr.
10 Hotel Street Suite 208
Warrenton, VA 20186

Dear Chairman Trumbo:

SUBJECT: DEMOLITION OF WATER TOWER 1706

Marine Corps Base, Quantico (MCBQ) is currently conducting consultation with the State Historic Preservation Office (SHPO). It was determined that Water Tower 1706 is a contributing structure to the MCBQ Historic District and that the demolition of this structure will result in an Adverse Effect (DHR #2015-3148).

The water tower is no longer in use and is not part of the current water distribution system. The structure is slated for demolition.

If Fauquier County would like to be a consulting and/or concurring party for the Memorandum of Agreement between MCBQ and SHPO please consult MCBQ Natural Resources Specialist, Christa Nye at (703) 432-6770, or christa.nye@usmc.mil. Please acknowledge receipt by countersigning and returning this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Allen D. Broughton", is written over a horizontal line.

Allen D. Broughton
Colonel, U.S. Marine Corps
Chief of Staff

Enclosure:
Site location map

Chairman R. Holder Trumbo, Jr.
Fauquier County

Date



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

IN REPLY REFER TO:
5090
B 046
24 Jun 15

County Archaeologist Justin Patton
Prince William County Planning Office DS940
5 County Complex Court, Suite 210
Woodbridge VA, 22192

Dear Mr. Patton:

SUBJECT: DEMOLITION OF THE WATER TOWER 1706

Marine Corps Base, Quantico (MCBQ) is currently conducting consultation with the State Historic Preservation Office (SHPO). It was determined that the water tower is a contributing structure to the MCBQ Historic District and that the demolition of this structure will result in an Adverse Effect (DHR #2015-3148).

The water tower is no longer in use and is not part of the current water distribution system. It is slated for demolition.

If Prince William County would like to be a consulting and/or concurring party for the Memorandum of Agreement between MCBQ and SHPO please consult MCBQ Natural Resources Specialist, Christa Nye at (703) 432-6770, or christa.nye@usmc.mil. Please acknowledge receipt by countersigning and returning this letter.

Sincerely,

Allen D. Broughton
Colonel, U.S. Marine Corps
Chief of Staff

Enclosure:
Site location map

Justin Patton, Archaeologist
Prince William County

Date



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

IN REPLY REFER TO:
5090
B 046
24 Jun 15

Ms. Kathy Baker
Assistant Director
Department of Planning and Zoning
P.O. Box 339
Stafford VA, 22554

Dear Ms. Baker:

SUBJECT: DEMOLITION OF THE WATER TOWER 1706

Marine Corps Base, Quantico (MCBQ) is currently conducting consultation with the State Historic Preservation Office (SHPO). It was determined that the water tower is a contributing structure to the MCBQ Historic District and that the demolition of this structure will result in an Adverse Effect (DHR #2015-3148).

The water tower is no longer in use and is not part of the current water distribution system. It is slated for demolition.

If Stafford County would like to be a consulting and/or concurring party for the Memorandum of Agreement between MCBQ and SHPO please contact MCBQ Natural Resources Specialist, Christa Nye at (703) 432-6770, or christa.nye@usmc.mil. Please acknowledge receipt by countersigning and returning this letter.

Sincerely,

Allen D. Broughton
Colonel, U.S. Marine Corps
Chief of Staff

Enclosure:
Site location map

Kathy Baker, Assistant Director, Stafford County
Department of Planning and Zoning

Date



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

MCINCR-MCBQ
5090/4
B 046

MEMORANDUM OF UNDERSTANDING
BETWEEN
MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION
MARINE CORPS BASE QUANTICO, QUANTICO VIRGINIA
AND
VIRGINIA STATE HISTORIC PRESERVATION OFFICER

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

1. Purpose

a. WHEREAS, the United States Marine Corps (USMC) has identified Water Tower 1706 is no longer in use, no longer part of the current water system, and poses a safety hazard within the military housing area; and

b. WHEREAS, the Marine Corps Base Quantico (MCBQ) proposes to demolish the water tower (Department of Historic Resources [DHR] Project No. 2015-3148); and

c. WHEREAS, the MCBQ has consulted with the Virginia State Historic Preservation Officer (SHPO) pursuant to 36 C.F.R Part 800 regulations implementing Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108); and

d. WHEREAS, the MCBQ, in consultation with the SHPO, has defined the Undertaking's Area of Potential Effects, as shown in Attachment A; and

e. WHEREAS, Water Tower 1706 is a contributing element to the MCBQ Historic District (DHR Inventory No. 287-0010) a property listed in the National Register of Historic Places (NRHP); and

f. WHEREAS, the MCBQ in consultation with the SHPO, has determined that the Undertaking will have an adverse effect on the MCBQ Historic District; and

g. WHEREAS, the MCBQ, in accordance with 36 C.F.R. § 800.6(a)(1), has notified the Advisory Council on Historic

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

Preservation (ACHP) of the adverse effect and provided the ACHP the opportunity to participate in development of this Memorandum of Agreement (the "Agreement"), and ACHP declined to participate in further consultation on the Undertaking or development of the Agreement; and

h. WHEREAS, pursuant to 36 C.F.R. § 800.2(c)(3), the MCBQ invited Prince William County, Fauquier County, and Stafford County, Virginia to consult on this Undertaking and to concur with this Agreement, and none of the counties elected to consult and concur on the Agreement; and

i. WHEREAS, public involvement for this Undertaking is offered through consultation letters that were mailed to Stafford County, Fauquier County, and Prince William County, Virginia and a public notice that was posted on the MCBQ web site seeking public comment on the Undertaking, and no comments were received; and

j. WHEREAS, the MCBQ shall file an executed copy of this Agreement with the ACHP pursuant to 36 C.F.R. § 800.6(b)(1)(IV) prior to proceeding with the Undertaking.

k. NOW, THEREFORE, the MCBQ and the SHPO (collectively "the Signatory Parties") agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account its effect on historic properties.

2. Stipulations

a. Documentation and Mitigation. MCBQ shall ensure that the following documentation and mitigation measures are carried out:

b. Within two (2) years of the execution of this Agreement, MCBQ shall document Water Tower 1706 in the following manner:

c. Complete SHPO's Intensive Level Inventory Form and enter the information into the SHPO's Virginia Cultural Resources Inventory System. The Intensive Level Inventory Form shall include, but is not limited to, a narrative which includes a brief history placing Water Tower 1706 in its historic context within MCBQ;

d. Drawings: For Water Tower 1706 MCBQ shall provide to the SHPO drawings meeting Documentation Level II of "Secretary of Interior's Standards and Guidelines for Architectural and

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

Engineering Documentation: Historic American Building
Survey/Historic Engineering Record Standards."

e. Digital Photographs: MCBQ shall provide to SHPO black and white, large-format photographs of exterior elevations and any significant exterior architectural features. The photographs shall be consistent with the SHPO's "Photographic Documentation for Virginia Department of Historic Resources (DHR) Survey" (updated July, 2009).

f. MCBQ shall provide to SHPO clean photocopies of historic photographs and design drawings, if available.

3. Professional Qualifications

All architectural documentation work carried out pursuant to this Agreement shall be conducted by, or under the direct supervision of, an individual or individuals who meet(s), at minimum, the "Secretary of the Interior's Professional Qualifications Standards" (48 FR 44738-9, September 29, 1983) in the appropriate discipline.

4. Preparation and Review of Documents

a. Except as otherwise stated elsewhere in the Agreement, the MCBQ shall submit the documentation materials specified in Stipulation I, above, to the SHPO for review and approval, and to the Consulting Party for review and comment. The MCBQ shall address all comments received within thirty (30) days of confirmed receipt of the documentation materials. The MCBQ shall not proceed with the Undertaking until the SHPO has accepted in writing the documentation materials. If the SHPO does not respond within thirty (30) days of receipt of the documentation materials the MCBQ may assume acceptance. The MCBQ shall provide to the SHPO one (1) hardcopy of all documentation materials and one (1) electronic copy of the documentation materials in Adobe® Portable Document Format (.pdf).

b. All technical reports prepared pursuant to Stipulation IV of this Agreement, below, shall be consistent with the federal standards titled Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44716 September 29, 1983), Guidelines for Preparing Identification and Evaluation Reports for Submission Pursuant to Sections 106 and 110, National Historic Preservation Act, and

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

SHPO's Guidelines for Conducting Historic Resources Survey in Virginia (2011), or any subsequent revisions or replacements of these documents.

c. Except as otherwise stated in this Agreement, the SHPO agree to provide comments on all submitted documentation arising from this Agreement within thirty (30) calendar days of receipt. If no comments are received from the SHPO within the thirty (30)-day review period, the MCBQ may assume the non-responding party has no comments.

5. Unanticipated Discoveries

a. In the event that a previously unidentified archaeological resource is discovered during activities associated with implementation of the Undertaking, the MCBQ shall require the contractor to halt all demolition work involving subsurface disturbance in the area of the resource and in surrounding areas where additional subsurface archaeological artifacts and/or features can reasonably be expected to occur. Work in all other areas of the Undertaking may continue.

b. The MCBQ shall notify the SHPO within two (2) working days of the unanticipated discovery. In the case of unanticipated discovery of prehistoric or historic Native American sites, the MCBQ shall also notify appropriate federally-recognized Indian tribes and Indian tribes recognized by the Commonwealth of Virginia ("Virginia Indian tribes") that might attach religious and cultural significance to the affected property within two (2) working days of the discovery.

c. In the event of unanticipated discoveries, the MCBQ shall ensure that an archaeologist meeting the "Secretary of the Interior's Professional Qualifications Standards" (48 FR 44739) investigates the work site and the resource. The MCBQ shall consult with the SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes regarding the NRHP eligibility of the resource (36 C.F.R. § 60.4).

d. If, after consultation with the SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes, MCBQ determines that the resource is not eligible for NRHP listing then must submit the listing determination to the SHPO, appropriate federally-recognized Indian tribes and appropriate Virginia Indian tribes for concurrence. The SHPO, appropriate federally-recognized Indian tribes, and appropriate

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

Virginia Indian tribes shall respond within five (5) working days of receipt of the MCBQ's determination that the resource is not eligible for listing on the NRHP with any objections to the determination. If no objections are made by the SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes within five (5) working days of submission, then MCBQ may resume its work in the area of the unanticipated discovery.

e. If, after consultation with the SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes, MCBQ determines that the resource is eligible for NRHP listing then it shall develop a proposed treatment plan to resolve any adverse effects on the resource. MCBQ must submit the NRHP eligibility determination and proposed treatment plan to the SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes for concurrence. The SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes shall respond within five (5) working days of receipt of the MCBQ's determination of NRHP eligibility of the resource and proposed treatment plan. If no comments are received from the SHPO or appropriate tribes within five (5) working days, the MCBQ may assume the non-responding party has no objection to the determination or treatment plan. The MCBQ shall take into account the recommendations of the SHPO, appropriate federally-recognized Indian tribes, and appropriate Virginia Indian tribes regarding NRHP eligibility of the resource and the proposed treatment plan, and then carry out the treatment plan.

f. The MCBQ shall ensure that work within the area of a discovery eligible for inclusion on the NRHP does not proceed until an appropriate treatment plan is developed and implemented.

6. Treatment of Human Remains

a. The MCBQ shall make all reasonable efforts during the Undertaking to avoid disturbing gravesites, including those containing Native American human remains and associated funerary artifacts. The MCBQ shall treat all such gravesites in a manner consistent with the ACHP "Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects" (February 23, 2007; <http://www.achp.gov/docs/hrpolicy0207.pdf>).

b. Human remains and associated funerary objects encountered during implementation of the Undertaking shall be

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

treated in a manner consistent with the provisions of the Virginia Antiquities Act, Section 10.1-2305 of the Code of Virginia and its implementing regulations, 17 VAC5-20, and the Native American Graves Protection and Repatriation Act (25 U.S.C. § 3001 et seq.) and its implementing regulations, 36 C.F.R. Part 10. In accordance with the regulations stated above, the MCBQ may obtain a permit from the SHPO for the archaeological removal of human remains should removal be necessary.

c. In the event that the human remains encountered during the Undertaking are likely to be of Native American origin, whether prehistoric or historic, the MCBQ shall immediately notify appropriate federally-recognized Indian tribes and appropriate Virginia Indian tribes. The MCBQ shall determine the appropriate treatment of Native American human remains and associated funerary objects in consultation with the appropriate Virginia Indian tribes and any federally-recognized Indian tribes with interest in the area. The MCBQ shall make all reasonable efforts to ensure that the general public is excluded from viewing any Native American gravesites and associated funerary objects discovered during the Undertaking. The Signatory Parties and the Consulting Party to this Agreement shall release no photographs of any Native American gravesites or associated funerary objects discovered during the Undertaking to the press or to the general public.

7. Dispute Resolution

a. Should a dispute arise among the Signatory Parties with respect to any portion of this Agreement or the manner in which it is being implemented, the Signatory Parties shall first consult and attempt to resolve the objection. If the objection cannot be resolved then either Signatory Party may seek to terminate the Agreement in accordance with Stipulation VIII.

b. At any time during implementation of this Agreement, should a member of the public object in writing to the MCBQ regarding the manner in which the Agreement is being implemented, the MCBQ shall notify the SHPO and consult with the objector to attempt to resolve the objection. The SHPO may request that the MCBQ notify the ACHP about the objection as well. If after a good faith effort to resolve the objection, the MCBQ finds that the objection cannot be resolved, it shall notify in writing the SHPO and the ACHP of this fact, outlining what steps were taken to resolve the objection. The MCBQ may then proceed with the Undertaking pursuant to the stipulations

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

of this Agreement.

8. Amendments and Termination

a. Any Signatory Party may amend or terminate this Agreement by notifying the other Signatory Party to this Agreement, explaining the reasons for amendment or termination and affording the Signatory Parties at least thirty (30) days to consult and agree on the amendment and/or seek alternatives to the termination.

b. In the event that this Agreement is terminated, or if the MCBQ decides not to go forward with the Undertaking and this Agreement is rendered null and void, the MCBQ shall submit to the SHPO a technical report on the results of any archaeological investigations conducted pursuant to Stipulation IV, above, prior to and including the date of termination, and shall ensure that any associated collections and records recovered from MCBQ property during the Undertaking are curated in accordance with 36 C.F.R. Part 79, Curation of Federally Owned and Administered Archeological Collections.

c. In the event that this Agreement is terminated, the Signatory Parties may execute a new memorandum of agreement under 36 C.F.R. § 800.6(c) (1). If MCBQ terminates the Agreement and no replacement agreement with SHPO is reached, then MCBQ will forward the issue and all relevant documentation up its chain of command to request the comments of the ACHP under 36 C.F.R. § 800.7(a). Within thirty (30) days after confirmed receipt of documentation, the ACHP will either:

- (1) Provide the USMC with recommendations; or
- (2) Notify the USMC that it will or will not comment.

d. Pursuant to 36 C.F.R. § 800.7(c)(4), the USMC must take into account any comment the ACHP provides in response to such request. If SHPO terminates this Agreement and no replacement agreement with MCBQ can be reached, then MCBQ may enter into an agreement directly with the ACHP without SHPO's participation.

9. Duration

This Agreement shall continue in full force and effect for five (5) years after the date of the last Signatory Party's signature. All obligations under this Agreement must meet established deadlines within the stipulations, and the entire

Subj: DEMOLITION OF WATER TOWER 1706 ABOARD MARINE CORPS BASE
QUANTICO, VIRGINIA

Undertaking must be completed before expiration of this Agreement. If the Undertaking is not completed prior to expiration of this Agreement, the MCBQ is in violation of this Agreement. At any time in the six (6) month period prior to expiration of this Agreement, the MCBQ and SHPO can agree in writing to extend its duration with or without amendments. No extension or modification will be effective unless both Signatory Parties to the Agreement have agreed with it in writing.

10. Execution of this Agreement

This Agreement may be executed in counterparts, with a separate page for each signatory. The MCBQ will ensure that the SHPO is provided with a copy of the fully executed Agreement. Execution of this Agreement by the MCBQ and the SHPO and its submission to the ACHP in accordance with 36 C.F.R. § 800.6(b) (1) (iv), shall, pursuant to 36 C.F.R. § 800.6(c), be considered to be an agreement issued by the ACHP for the purposes of Section 110(1) of the NHPA. Execution and submission of this Agreement, and implementation of its terms, are evidence that the MCBQ has afforded the ACHP an opportunity to comment on the proposed undertaking and its effects on historic properties and that the MCBQ has taken into account the effect of the undertaking on historic properties in accordance with Section 106 of the NHPA.

UNITED STATES MARINE CORPS

By: _____ Date: _____

J. M. MURRAY
Colonel, U.S. MARINE CORPS
Commander, Marine Corps Base Quantico

VIRGINIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____

JULIE V. LANGAN
Director, Department of Historic Resources

APPENDIX C
Record of Non-applicability for General Conformity

APPENDIX D
WASTE MANIFEST SOP



UNITED STATES MARINE CORPS
MARINE CORPS BASE
3250 CATLIN AVENUE
QUANTICO, VIRGINIA 22134-5001

5090
B 046
FEB 07 2014

From: Commander, Marine Corps Base Quantico
To: Users of Hazardous Waste and Non-Hazardous Waste
Manifests and Waste Shipment Records

Subj: MANIFEST STANDARD OPERATING PROCEDURE

Ref: (a) 40 CFR 262 Subpart B
(b) 40 CFR 61 Subpart M

Encl: (1) Hazardous Waste Manifest Form 8700-22
(2) Non-Hazardous Waste Manifest Form
(3) Authorization to Sign Manifests
(4) Waste Shipment Record Form

1. This letter updates and remains in compliance with the references.

2. To ensure each hazardous waste (enclosure (1)) and non-hazardous waste manifest (enclosure (2)) is completed in accordance with 40 CFR 262 Subpart B, follow the below requirements:

a. Block 1. The Generator's U.S. EPA ID No. is VA1170024722.

b. Block 2. Enter appropriate page number(s)

c. Block 3. Enter the contractor's emergency response phone number of a phone that is monitored 24 hours a day.

d. Block 4. The unique tracking number must be pre-printed on the manifest.

e. Block 5. Enter generator's name and mailing address.

Commander, Marine Corps Base Quantico
NREA Branch (B046), 3250 Catlin Avenue
Quantico, Virginia 22134-5001
(703) 784-4030

Subj: MANIFEST STANDARD OPERATING PROCEDURE

f. Blocks 6. through 14. Contractor must complete. Construction and special projects handled by Base and tenant activities generating hazardous waste and non-hazardous waste requiring manifests must identify project location and project number in block 14.

g. Block 15. Only authorized Natural Resource and Environmental Affairs Branch (NREA Branch) personnel listed at enclosure (3) may sign hazardous waste and non-hazardous waste manifests.

3. To ensure each waste shipment record (enclosure (4)) is completed in accordance with 40 CFR 61 Subpart M, follow the below requirements:

a. Block 1. Enter owner's name, address, and phone number.

Commander, Marine Corps Base Quantico
NREA Branch (B046), 3250 Catlin Ave.
Quantico, Virginia 22134-5001

b. Block 2. Enter operator's name, address, and phone number.

c. Block 3. Enter waste disposal site, address, phone number, and permit number.

d. Block 4. Enter name and address of the EPA Regional office responsible for administering the asbestos NESHAP program.

US EPA Region III
1650 Arch Street
Philadelphia, PA 19103
(703) 784-4030

~~e. Blocks 5. through 8. Contractor must complete. Project location and project number must be identified in block 8.~~

f. Block 9. Only authorized NREA personnel listed at enclosure (3) may sign waste shipment records.

4. Only authorized personnel (enclosure (3)) will sign hazardous waste, non-hazardous waste manifests, and waste shipment papers at time of the scheduled waste pick-up.

5. Each waste manifest, waste shipment record, Land Disposal Restriction and Certification Form (LDR), Waste Profile Sheet,

Subj: MANIFEST STANDARD OPERATING PROCEDURE

and other supporting documents (e.g., lab analysis, etc.) must be forwarded to the NREA Branch, Environmental Compliance Section, for review and approval at least 5 business days prior to waste pick up.

6. The Environmental Compliance Section must receive a signed copy of the waste manifest or waste shipment record from the receiving facility within 30 days of shipment date.

7. Direct any questions pertaining to this procedure to NREA Branch, Hazardous Waste Program Manager or Solid Waste Program Manager at 784-4030.


KIRK NELSON
By direction

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)			
Generator's Phone:					
6. Transporter 1 Company Name				U.S. EPA ID Number	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address				U.S. EPA ID Number	
Facility's Phone:					
9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
1.					
2.					
3.					
4.					
14. Special Handling Instructions and Additional Information					
<p>15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.21(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.</p>					
Generator's/Offeror's Printed/Typed Name				Signature	Month Day Year
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____					
Transporter signature (for exports only):				Date leaving U.S.:	
17. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name				Signature	Month Day Year
Transporter 2 Printed/Typed Name				Signature	Month Day Year
18. Discrepancy					
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number: _____					
18b. Alternate Facility (or Generator)				U.S. EPA ID Number	
Facility's Phone:					
18c. Signature of Alternate Facility (or Generator)				Month	Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1.	2.	3.	4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a					
Printed/Typed Name				Signature	Month Day Year

Enclosure (1)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Doc No.	2. Page 1 of 1			
3. Generator's Name and Mailing Address							
4. Generator's Phone (including area code)							
5. Transporter 1 Company Name		6. US EPA ID Number		A. Transporter's Phone			
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter's Phone			
9. Designated Facility Name and Site Address		10. US EPA ID Number		C. Facility's Phone			
GENERATOR	11. Waste Shipping Name and Description			12. Containers		13. Total Quantity	14. Unit Wt/Vol
				No.	Type		
	a.						
	b.						
	c.						
D. Additional Descriptions for Materials Listed Above			E. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.							
Printed/Typed Name		Signature			Month	Day	Year
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials						
	Printed/Typed Name		Signature			Month	Day
FACILITY	18. Transporter 2 Acknowledgement of Receipt of Materials						
	Printed/Typed Name		Signature			Month	Day
19. Discrepancy Indication Space							
TITY	20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.						
	Printed/Typed Name		Signature			Month	Day

ORIGINAL - RETURN TO GENERATOR

Enclosure (2)



UNITED STATES MARINE CORPS
MARINE CORPS BASE
3250 CATLIN AVENUE
QUANTICO, VIRGINIA 22134-5001

IN REPLY REFER TO:

6280/2

B046

JAN 29 2014

From: Commander, Marine Corps Base Quantico
To: Assistant Chief of Staff, GF, Installation and
Environment Division

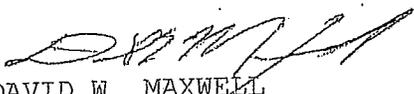
Subj: AUTHORIZATION TO SIGN HAZARDOUS WASTE MANIFESTS AND SHIPPING
PAPERS

Ref: (a) MCO P5090.2A

1. Per the reference, the following individuals are authorized to sign shipping papers (i.e., Uniform Hazardous Waste Manifest, Non-Hazardous Waste Manifests, Waste Shipment Records and Bills of Lading) for transportation of hazardous waste, non-hazardous waste, universal waste, asbestos-containing waste material, special solid waste, and remediation waste.

Donna M. Heric
Ronald W. King
Stacey M. Rosenquist
Bhasker K. Thaker

2. This letter supersedes all previous authorization letters.
3. The point of contact is Ms. Stacey Rosenquist, Natural Resources and Environmental Affairs Branch, (703)784-4030.


DAVID W. MAXWELL

Enclosure (3)

Waste Shipment Record

Waste Shipment Record		Report Date:	
GENERATOR	1. Work site name & mailing address:	Owner's Name:	Owner's Telephone Number:
	2. Operator's name:	Operator's Telephone Number:	
	Operator's Address:		
	3. Waste Disposal Site (WDS):	Additional Information or F. P. C. Approval Number:	
	Name:		
	Mailing Address:		
	Physical Site Address:		
	Phone Number:		
	4. Name and address of responsible agency:		
5. Description of waste:	6. Containers: Number: Type:	7. Total quantity: (Cubic yards)	
8. Special handling instructions & additional information:			
9. Operator's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.			
Printed/typed name and title:	Signature:	Date:	
TRANSPORTER	10. Transporter # 1 (Acknowledgement of receipt of waste)		
	Printed/typed name and title:	Signature:	Date:
	Address:	Telephone number:	
	11. Transporter # 2 (Acknowledgement of receipt of waste)		
	Printed/typed name and title:	Signature:	Date:
	Address:	Telephone number:	
DISPOSAL SITE	12. Discrepancy indication space:		
	13. Waste disposal site owner/operator: Certification of receipt of asbestos materials covered by this manifest except as noted in Item # 12.		
	Printed or typed name and title:	Grid Coordinates: East _____ North _____ El _____	
	Title:	Signature:	
		Date:	

Enclosure (4)

Waste Shipment Record – Instruction for Completion

Waste Generator Section (Items 1 –9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, state or EPA Regional office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is:
 - Non-friable asbestos material
 - Friable asbestos material
6. Enter the number of containers used to transport the asbestos materials listed in item 5. Also, enter the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):
 - DM – Metal drums or barrels
 - DP – Plastic drums or barrels
 - BA – 6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator must read and then sign and date this certification. The date is the date of receipt by transporter.

Transporter Section (Items 10 & 11)

10. & 11. Enter name, address and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.

Note: The transporter must retain a copy of this form.

Disposal Site Section (Items 12 & 13)

12. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.
13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in item 12. The date is the date of signature and receipt of shipment.

Note: The WDS must retain a completed copy of this form. The WDS must also send a completed copy to the operator listed in item 2.

Enclosure (4)

APPENDIX E
CONSTRUCTION WASTE MANAGEMENT REPORT

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: Ronald King at ronald.king@usmc.mil or call (703) 432-0524

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.