Resource Avoidance Report for the Proposed Expansion of the National Cemetery of the Alleghenies Cecil Township, Washington County, Pennsylvania

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List of Acronyms

APE	Area of Potential Effect
BHP	Bureau of Historic Preservation
CEC	Civil & Environmental Consultants, Inc.
CFR	Code of Federal Regulations
CWA	Clean Water Act
DCNR	Department of Conservation and Natural Resources
EO	Executive Order
ESC	ESC Mid-Atlantic, LLC
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GPR	Ground Penetrating Radar
GSA	General Services Administration
GSF	Gross Square Feet
NAGPRA	Native American Graves Protection and Repatriation Act
NCA	National Cemetery Administration
NCOTA	National Cemetery of the Alleghenies
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PA	Pennsylvania
PADEP	Pennsylvania Department of Environmental Protection
PASDA	Pennsylvania Spatial Data Access
PEM	Palustrine Emergent Wetland
PFBC	PA Fish and Boat Commission
PFO	Palustrine Forested Wetland
PGC	PA Game Commission
PHMC	Pennsylvania Historical and Museum Commission
PJD	Preliminary Jurisdictional Determination
PNDI	Pennsylvania Natural Diversity Inventory
PNDI	Pennsylvania Natural Diversity Inventory
PNHP	Pennsylvania Natural Heritage Program
RAR	Resource Avoidance Report
SEA	Site-Specific Environmental Assessment
SSEA	Supplemental Site-Specific Environmental Assessment
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VA	U.S. Department of Veterans Affairs

1 INTRODUCTION

This Resource Avoidance Report (RAR) has been prepared for the U.S. Department of Veterans Affairs (VA) proposed expansion of the National Cemetery of the Alleghenies (NCOTA), located at 1158 Morgan Road, Bridgeville, Cecil Township, Washington County, Pennsylvania, 15017 (**Figure 1**). As part of the proposed Master Plan for NCOTA (VA, 2017), new burial capacity and other physical infrastructure would be developed within a portion of the original Phase 2 development area, and future phases of development would be planned for south of Morgan Road. The proposed Master Plan expansion would extend the longevity of NCOTA for Veterans and their eligible family members in southwestern Pennsylvania.

The purpose of this RAR is to identify the natural and physical site resources within the proposed expansion areas. The RAR also identifies applicable permits that define existing preservation areas and specify the mitigation that is required in the event that the site resources are impacted by the proposed expansion project. The Study Area for the proposed expansion area was approximately 156 acres.

In 2001, the NCA completed a Site-Specific Environmental Assessment (2001 SEA) that analyzed the initial site selection and the reasonably foreseeable impacts associated with the phased construction and operation of a new national cemetery in Washington County, Pennsylvania (PA). The purpose of the 2001 SEA was to determine the potential environmental and socioeconomic impacts of constructing and operating a new national cemetery in the Pittsburgh, PA, area. The 2001 SEA concluded that no significant impacts on the human environment would result, and the VA issued a Finding of No Significant Impact (FONSI) accordingly.

The cemetery was constructed and opened in Bridgeville, PA, in August 2008, and is formally known as the National Cemetery of the Alleghenies. The cemetery sits on 292 acres, approximately 20 miles southwest of downtown Pittsburgh; Morgan Road bisects the northern and southern portions of the property. The Phase 1 area of the original Master Plan included construction of an 11,400-gross-square-feet (gsf) administration/maintenance building and a 3,100-gsf public information center. In addition, the design included an entrance feature, a flag/assembly area, and two committal service shelters, each of which was approximately 600 gsf and included a utility and storage closet. Related site work including grading, internal roads, parking, and utilities was accomplished in Phase 1. During Phase 1, approximately 3,000 columbarium niches and 10,000 gravesites were constructed. Soon after completion in August 2008, the VA identified the need to continue expanding beyond the Phase 1 cemetery capacity. A Supplemental Site-Specific Environmental Assessment (SSEA) was published in February 2015 to analyze impacts associated with Phase 2 construction according to the original Master Plan.

In 2017, the VA National Cemetery Administration began developing a new Master Plan for the proposed expansion in the northern portion (Phase 2 Expansion) and for the potential full buildout of future cemetery phases in the portion of the property located south of Morgan Road (Southern Expansion). Accordingly, an SEA is being prepared to analyze and evaluate the potential effects of the implementation of the 2017 Master Plan. Specifically, the SEA evaluates the construction and operation of the proposed Phase 2 Expansion and the potential full buildout of the Southern Expansion of the 2017 Master Plan.

During development and review of the Draft 2018 SEA, NCA contacted federal, state, and local agencies with interest or oversight responsibilities regarding the Proposed Action. Additionally, the NCA consulted with federally recognized Native American tribes in accordance with the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act (NAGPRA), and Executive Order 13175. The VA identified Native American tribes as having possible ancestral ties to Washington County, PA, and invited each tribe to consult on this Proposed Action.

2 RESOURCE ANALYSIS

2.1 Wetlands and Waters of the US

The USACE has regulatory jurisdiction over Waters of the United States, including wetlands pursuant to Section 404 of the Clean Water Act and Navigable Waters of the United States pursuant to Section 10 of the 1899 Rivers and Harbors Act. Jurisdictional wetlands are delineated based upon the presence of hydric soils, hydrologic indicators, and hydrophytic vegetation in accordance with the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual for the Eastern Mountains and Piedmont Region* (USACE 2010) and *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). In Pennsylvania, wetlands and streams are potentially regulated under Title 25, Pennsylvania Code, Section 105, Dam Safety and Water Management as *Regulated Waters of this Commonwealth* (Commonwealth of PA, 2018c).

The USACE issued a Preliminary Jurisdictional Determination (PJD) (LRP-2017-1438) for the property on October 16, 2017 (**Appendix A**).

In 2002, Civil & Environmental Consultants, Inc. (CEC) completed a Wetland and Stream Delineation for the property in accordance with the U.S. Army Corps of Engineers' (USACE) *Wetland Delineation Manual, Technical Report Y-87-1* and using wetland criteria detailed in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (*Version 2.0)* (Environmental Laboratory, 1987; USACE, 2012). CEC identified 17 separate wetland areas ranging in size from 0.1 to 0.98 acre and totaling 2.44 acres, and 1,230 linear feet of streams. A USACE Regulatory Guidance Letter for Jurisdictional Determination, dated June 26, 2008, determined that these wetlands may be jurisdictional waters of the United States and could, therefore, be subject to USACE oversight under Section 404 of the *Clean Water Act* (CWA).

In 2017 ESC Mid-Atlantic, LLC (ESC) completed a Wetland and Stream Delineation for the portion of the property south of Morgan Road in accordance with the aforementioned USACE requirements (Environmental laboratory, 1987; USACE, 2012). ESC identified eight separate wetland areas ranging in size from 0.01 to 0.44 acre and totaling 1.22 acres, and one stream totaling 1,520 linear feet of streams (**Appendix B**).

ESC identified seven palustrine emergent (PEM) wetlands, one palustrine forested (PFO) wetland, and one perennial stream located in unimproved grass covered and partially wooded land. All of the wetlands are associated with the perennial stream, and are located in the southern portion of the Study Area. Hydrological features within the Study Area are governed primarily by site topography. The primary hydrological sources for the wetland areas are seeps originating upslope or within the wetland areas, concentration of surface flows in low lying areas, and an onsite perennial stream.

A USACE Regulatory Guidance Letter for Jurisdictional Determination, dated October 16, 2017, determined that these wetlands may be jurisdictional waters of the United States and could, therefore, be subject to USACE oversight under Section 404 of the *Clean Water Act* (CWA) (**Appendix C**).

Figure 2 shows the PADEP Chapter 93 (Commonwealth of PA, 2018b) regulated streams and the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) wetlands (USFWS, 2018c). No PADEP Chapter 93 streams were identified within the Study Area. One NWI wetland was identified within the northeastern portion of the Study Area in mixed forest. This wetland was classified as R5UBH: Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded.

None of the previously delineated wetlands are located within the footprint of the proposed Phase 2 disturbance actions.

2.2 Floodplains

Based on review of available Federal Emergency Management Agency (FEMA) Flood Zone Maps (**Figure 3**), no parts of the Study Area are located within any 100-year or 500-year floodplains (FEMA, 2015).

2.3 Cultural Resources

Cultural resources are generally defined as the physical remains of a people's way of life and include historical architecture and archaeology. The baseline age established by the NHPA for historic resources is 50 years of age or older. Although the National Cemetery of the Alleghenies is not 50 years of age, the National Park Service (NPS) has determined that all National Cemeteries are exceptionally significant places that are eligible for listing in the National Register of Historic Places (NRHP). However, the NPS has provided guidance that unimproved portions of a National Cemetery that have only been set aside for future use and not ready to receive burials are not eligible for the NRHP.

2.3.1 Cultural Resources Surveys

A Phase I Cultural Resources Survey and a Phase II Archaeological Survey were previously conducted at the NCOTA property. The goals of these surveys were to (1) determine the presence or absence of previously identified archaeological or historic architectural resources in the project's area of potential effect (APE); (2) identify in preliminary fashion the presence of any historic architectural resources within the APE that are potentially eligible for inclusion in the NRHP; and (3) establish the potential of the project APE to contain archaeological sites not previously identified. The Phase I investigation consisted of an examination of all site files, maps, and previous cultural resource investigation reports for the project tract and adjacent areas at the Pennsylvania Historical and Museum Commission (PHMC) and the Carnegie Museum of Natural History. In addition, all relevant historical sources (i.e., maps, atlases, county and local histories, etc.) at various local repositories were reviewed. Phase I field methodology included surface surveillance, ground penetrating radar (GPR), surface collection, and the excavation of shovel test probes. All work was performed pursuant to the NHPA, and the ACHP's "Protection of Historic Properties" (36 CFR 800). This work was also conducted pursuant to the PHMC, Bureau of Historic Preservation (BHP) *Guidelines for Archaeological Investigations* (1991), and the Pennsylvania History Code (37 Pa. C.S.A. Section 101 *et seq*.).

Background research conducted in association with Phase I revealed two historic properties that are over 50 years old, William D. Morgan Farmstead and Robert L. Morgan Farmstead (both determined not eligible for the NRHP[1]); and two previously recorded archaeological sites (the Morgan Site #1 [36WH417], a prehistoric archaeological site of unknown cultural affiliation; and the Tombstone Site [36WH153], a small, 1782 historic family cemetery with a prehistoric component) located within the APE. The field survey for Phase I identified six cultural resources: the two previously recorded historic farmsteads, the two previously recorded archaeological sites, and two newly identified prehistoric archaeological sites.

During the Phase I field survey, the Morgan Site was re-identified and two new sites, Morgan #2 Site (36WH1371) and Morgan #3 Site (36WH1372), were discovered in the APE. GPR was used to determine the current boundaries of the previously recorded Tombstone Site (36WH153), a late eighteenth-century family cemetery, situated roughly 250 feet south of Morgan Road.

The Tombstone Site (36WH153) is identifiable by four inscribed granite monuments on a plot that measures 66 feet by 66 feet. The inscriptions on the granite monuments identify a total of 64 individuals who were interred there between 1787 and 1836. Based on the results of the GPR, a high probability exists that human burials were located beyond the boundaries marked by the granite markers. The GPR identified an area of disturbance of irregular shape measuring 150 x 150 feet. Refer to the Phase I report (Davis et. Al, 2003) in regard to the GPR and relocation efforts undertaken by the contractor who conducted the surveys on the subject of the Tombstone Site (36WH153). It was recommended that the Tombstone Site (36WH153) be excluded from all future ground disturbing activities; subsequently, this was acknowledged and agreed upon by the PHMC/BHP in a letter dated December 16, 2003. As a protective measure, the 2017 Master Plan includes a 75-foot buffer around the boundary of the Tombstone Site.

[1] Both farm complexes were part of a Historic Resources Survey and Determination of Eligibility Report in 1999 as part of the Southern Beltway Transportation Project. The BHP PHMC determined that they were not eligible for listing in the NRHP because they lacked integrity (ER #89-1278-042-S and ER #89-1378-042-W).

The Phase II Archaeological Survey was conducted to determine the potential for National Register eligibility for these sites. Based on the Phase II Archaeological Survey, the Morgan Site (36WH417), Morgan #2 Site (36WH1371) and Morgan #3 Site (36WH1372), were determined not to be eligible for listing on the National Register for Historic Places. No further work was recommended. Morgan Site #1, #2 and #3 no longer exist due to development.

Conclusions concerning cultural resources for the Phase I and Phase II surveys were coordinated with the BHP and PHMC. No further work was recommended for the NCOTA.

2.3.2 Native American Resources and Consultation

For all federally proposed actions, federal agencies are required to consult with federally recognized Native American Tribes in accordance with NEPA, the NHPA, the NAGPRA, and EO 13175. No Traditional Cultural Properties or Native American sacred places are currently known to exist within the study area.

As part of the 2018 SEA, the VA will consult with eight (8) federally-recognized Native American tribes as part of the NEPA process. These tribes were identified as having possible interest in the project area. As part of the public outreach effort, letters will be disseminated to these Native American tribes to solicit their interest in the proposed action.

2.4 Karst Topography, Sinkholes, and Depressions

Sinkholes are common where the subsurface rock formations are comprised of limestone, carbonate rock, or other surface that can dissolved by groundwater. According to the Pennsylvania Department of Conservation and Natural Resources shapefiles (PADCNR, 2009) there is no Karst Topography, Sinkholes, or Depressions within the Study Area **(Figure 4).** Additionally, a geotechnical investigation involving subsurface borings and test pits within the southern portion of the property was conducted in October, 2017. No karst or sinkholes were identified.

2.5 Slopes

Slopes on the site were mapped based on USGS topographic data (**Figure 5**). Slope classes mapped on **Figure 6** are 0-0.25%, 0.25-1%, 1-3%, 3-10%, 10-15%, and greater than 15% grade. Section 10.6 (Grading Guidelines) from the latest NCA Design Guidelines (November 2016) has a requirement that interment areas be located on slopes of 15% or less. These same design guidelines establish a maximum slope of 25% for mowed slopes. There are areas identified throughout the Study Area with slopes that are above a 15% grade.

2.6 Soils

Soil information was obtained from the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS, 2018). The site includes soils of the Dormont-Culleoka association. These soils are generally moderately well drained to well drained, and moderately deep to deep-with-a-gently-sloping-to-steep topography. Dormont soils predominate on hillsides and have a seasonal high-water table depth of 2- to 2.5-feet. Culleoka soils predominate on ridges and hilltops and are generally deep and well drained. Based on the USDA-NRCS mapping, Dormont silt loam, 15 to 25 percent slopes (DoD), and Fluvaquents, loamy (Fa), are classified as hydric soils (**Figure 6**). A description of each mapped soil unit is provided in the following list.

Brooke silty clay loam (BoB): The Brook series consists of moderately deep and well drained soils with slopes ranging from 3 to 8 percent. Brooke soils are found on hills. Parent material is clayey residuum weathered from limestone and shale. The available water to a depth of 60 inches in Brooke soils is low. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric criteria.

Culleoka channery silt loam (CaB, CaC, and CaD): The Culleoka series consists of moderately steep, well drained soils with slopes ranging from 3 to 25 percent. Culleoka soils are found on hills on uplands. Parent material is fine-loamy residuum weathered from sandstone and shale. The available water to a depth of 60 inches in Culleoka soils is low. There is no zone of water saturation within a depth of 72 inches. These soils do not meet hydric criteria.

Dormont silt loam (DoB, DoC, and DoD): The Dormont series consists of deep and moderately well drained soils with slopes ranging from 3 to 25 percent. Dormont soils are found on hills in uplands. Parent material is fine-loamy residuum weathered from limestone, sandstone, and shale. The available water to a depth of 60 inches in Dormont soils is moderate. A seasonal zone of water saturation is at 31 inches during January through April. These soils do not meet hydric criteria.

Fluvaquents (Fa): The Fluvaquents series consists of deep and poorly drained soils with slopes ranging from 0 to 3 percent. Fluvaquents soils are found on flood plains. Parent material is alluvium. The available water to a depth of 60 inches in Fluvaquents soils is moderate. A seasonal zone of water saturation is at 6 inches during January through May and October through December. These soils meet hydric criteria.

Guernsey silt loam (GeB, GeC, and GeD)*:* The Guernsey series consists of deep and moderately well drained soils with slopes ranging from 3 to 25 percent. Guernsey soils are found on ridges on hills. Parent material is colluvium derived from limestone and shale over residuum weathered from limestone and shale. The available water to a depth of 60 inches in Guernsey soils is high. A seasonal zone of water saturation is at 22 inches during January through April. These soils do not meet hydric criteria.

The following table summarizes the acreage of the mapped soil units within the Study Area.

Table 1. USDA-NRCS Soils within the Project Study Area

Soil Map Unit	Soil Map Unit Name	Drainage Class	Hydric (Y/N)	Acres within Study Area
BoB	Brooke silty clay loam, 3 to 8 percent slopes	Well drained	N	1.0
CaB	Culleoka channery silt loam, 3 to 8 percent slopes	Well drained	N	6.1
CaC	Culleoka channery silt loam, 8 to 15 percent slopes	Well drained	N	55.4
CaD	Culleoka channery silt loam, 15 to 25 percent slopes	Well drained	N	27.4
DoB	Dormont silt loam, 3 to 8 percent slopes	Moderately well drained	N	9.6
DoC	Dormont silt loam, 8 to 15 percent slopes	Moderately well drained	N	29.1
DoD	Dormont silt loam, 15 to 25 percent slopes	Moderately well drained	Y	3.2
Fa	Fluvaquents, loamy	Poorly drained	Y	4.6
GeB	Guernsey silt loam, 3 to 8 percent slopes	Moderately well drained	N	9.8
GeC	Guernsey silt loam, 8 to 15 percent slopes	Moderately well drained	N	8.9
GeD	Guernsey silt loam, 15 to 25 percent slopes	Moderately well drained	N	0.1
WeB	Weikert-Culleoka complex, 3 to 8 percent slopes	Somewhat excessively drained	N	0.4
Totals				155.9

2.7 Flora and Fauna

Federally-listed species are those plants and animals protected by the Federal government pursuant to the Endangered Species Act of 1973, as amended. Federally-listed species are classified as endangered or threatened. State-listed species are those plants and animals managed by the Commonwealth of Pennsylvania pursuant to Title 30, Chapter 75: Fish and Boat Code (fish, amphibians, reptiles, and aquatic organisms), Title 34, Chapter 133: Game and Wildlife Code (wild birds and mammals), and Title 17, Chapter 45: Conservation of Wild Plants (native plant species). State-listed species are classified as endangered, threatened, and species of special concern.

The potential for state- and/or federally-listed plant and animal species occurring within the study area was assessed via the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool on April 5, 2018. The

PNDI environmental review for the Proposed Action (e.g. implement the 2017 Master Plan) states that, based on PNDI records, the PA Department of Conservation and Natural Resources (DCNR), and PA Fish and Boat Commission (PFBC) have not identified any known anticipated impact on threatened and endangered species and/or special concern species and resources, and that no further review action is required.

According to the PNDI environmental review, the PA Game Commission's (PGC) response to the Proposed Action is that it could have potential impacts to state- and federally-listed species which are under the jurisdiction of both the PGC and the USFWS. The PGC defers comments on potential impacts to federally listed species to USFWS. According to the PNDI environmental review, USFWS response to the Proposed Action is that it the proposed project is within the vicinity of known northern long-eared bats maternity roost trees. To avoid prohibited incidental take of northern long-eared bats during the pup season, no tree removal – which includes cutting down, harvesting, destroying, trimming or manipulating of trees, saplings, or snags – shall occur from June 1 to July 31. If avoidance measures are implemented, no further consultation or coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required. The PNDI receipt must be signed by the applicant stating that they acknowledge, and will adhere to, the seasonal tree clearing restriction.

Furthermore, no state- or federally protected species were observed by AECOM biologists during the site reconnaissance visit on April 13, 2018. The protected species information from the PNDI and USFWS is included in **Appendix D**.

The following sections discuss the findings of the flora and fauna research.

2.8 Land Use and Vegetative Cover

All vegetative habitats and land uses within the Proposed Expansion Area were classified using the Southwestern Pennsylvania Commission's Land Use/Land Cover shapefile for Washington County, Pennsylvania shapefiles (PASDA, 2015). Wetland and surface water habitats were also classified using the *U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). A list of land use and vegetative cover types present within the study area is presented in **Table 2**. The land use mapped within the study area are indicated in **Figure 8.**

2.8.1 Agricultural

The majority of the study area is comprised of agricultural land that has been primarily used for crops or open pasture. This area is dominated by orchard grass (*Dactylis glomerata),* with some patches of teasel (*Dipsacus fullonum*), plantain (*Plantago* sp.), Canada goldenrod (*Solidago canadensis*), and clover (*Trifolium* sp.).

Some of the agricultural land within the study area is wetland, vegetated with sweet flag (*Acorus calamus*), sedges (*Carex* sp.), common jewelweed (*Impatiens capensis*), reed canary grass (*Phalaris arundinacaea*), green bulrush (*Scirpus atrovirens*), and broadleaf cattails (*Typha latifolia*).

2.8.2 Cemetery

Approximately one third of the study area is classified as cemetery. Within this area the vegetation consists of maintained lawn and minimal ornamental plantings.

2.8.3 Mixed Forest

Within this community, the dominant canopy species include red maple (*Acer rubrum*), white pine (*Pinus strobus*), black cherry (*Prunus serotina*), white oak (*Quercus alba*), and sassafras (*Sassafras albidum*). The understory species include Morrow's honeysuckle (*Lonicera morrowii*), multiflora rose (*Rosa multiflora*), Allegheny blackberry (*Rubus allegheniensis*), greenbriar (*Smilax rotundifolia*), and wild grape (*Vitis* sp.). The groundcover is dominated by bedstraw (*Galium* sp.), ground ivy (*Glechoma hederacea*), and clover.

2.8.4 Transportation/Major Highways

Interstate 79 borders the study area to the east. Morgan Road, a two-lane rural road, passes through the approximate center of NCOTA, dividing NCOTA into northern and southern areas.

Table 2. Land Use/Vegetative Cover within the Study Area

SPC Description[1]	Approximate Acres
Agricultural	92.9
Cemetery	52.9
Mixed Forest	9.9
Transportation/Major Highways	0.3
TOTAL	**156**

[1]PASDA, 2015

2.9 Wildlife

During the field survey on April 13, 2018, wildlife observed within the study area included red-winged blackbird (*Agelaius phoeniceus*), red-tailed hawk (*Buteo jamaicensis*), Eastern wood pewee (*Contopus virens*), pileated woodpecker (*Dryocopus pileatus*), red-bellied woodpecker (*Melanerpes carolinus*), song sparrow (*Melospiza melodia*), white-tailed deer (*Odocoileus virginianus*), chickadee (*Poecile* sp.), American robin (*Turdus migratorius*), and American goldfinch (*Spinus tristis*).

2.9.1 Listed Species

Based on the field evaluation and the review of the listed species information contained within the various sources listed previously, it was determined that the study area contains suitable habitat for federally- and state-listed species. **Table 3** below shows the listed species that have the potential to occur within the study area based on the presence of suitable habitat. Concurrence of affect determinations for federally-listed species will be sought through the NEPA process associated with the Proposed Action.

Table 3. Listed Species Potentially Occurring within Study Area

Scientific Name	Common Name	Federal Status	State Status
Mammals			
Myotis septentrionalis	Northern long-eared bat	T	C - Rare

Notes:
T = Threatened; E = Endangered; SSC = Species of Special Concern; C = Candidate; NL = Not Listed

Northern Long-Eared Bat

The northern long-eared bat is listed as endangered by PGC and USFWS. The northern long-eared bat is characterized by its long, rounded ears that, when folded forward, extend beyond the tip of the nose. In Pennsylvania, the northern long-eared bat is found in forests. Northern long-eared bats hunt at night over small ponds, in forest clearings, at tree top level, and along forest edges. They use caves and underground mines for hibernation. Maternity roosts are located in tree cavities, under exfoliating bark, and in buildings. The primary threat to the species is white-nose syndrome, a fungus that appears on the muzzle and other parts of hibernating bats. Impacts to hibernacula and loss or degradation of summer habitat can also cause mortality in northern long-eared bats.

During the field survey on April 13, 2018, the study area was surveyed for suitable northern long-eared bat habitat. No northern long-eared bats were observed during the field survey. However, suitable habitat is available for this species within two small forested areas, totaling approximately 9.9 acres of forest, in the southwest portion of the study area.

By implementing seasonal restrictions on tree removal from June 1 to July 31, prohibited incidental take of northern long-eared bats during the pup season will be avoided. Assuming the VA will adhere to seasonal tree removal restrictions as recommended by USFWS, it was determined that the Proposed Action would not adversely affect the northern long-eared bat.

Bald Eagle

Although the bald eagle is no longer state or federally listed, it is still federally protected by the Bald and Golden Eagle Protection Act in accordance with 16 United States Code 668. Pursuant to USFWS bald eagle guidelines, any disturbance within 660 feet of a bald eagle nest requires additional coordination and potential permitting with the USFWS. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and river banks. The nests are generally located near bodies of water that provide a dependable food source. According to the USFWS online bald eagle nesting sites locater, no nests are located within one mile of the study area and none were observed during the field survey on April 13, 2018. For these reasons, it has been determined that the Proposed Action would not adversely affect the bald eagle.

2.9.2 Critical Habitat

The study area was assessed for the occurrence of USFWS Critical Habitat as defined by 17 CFR 35.1532. The study area is within the distribution area of the federally-threatened northern long-eared bat (*Myotis septentrionalis*) (**Figure 3**). As discussed above, northern long-eared bats live in forests. By implementing seasonal restrictions on tree removal from June 1 to July 31, prohibited incidental take of northern long-eared bats during the pup season will be avoided.

2.9.3 Overhead Utility Rights-of-Way and Access Thereto

There is an overhead utility line crossing located in the study area south of Morgan Road. It enters the study area in the northwest corner, near Morgan Road, and continues approximately 0.3 mile to the south-southwest before exiting the study area.

3 SUMMARY: COMPOSITE RESOURCE AVOIDANCE

A USACE Regulatory Guidance Letter for Jurisdictional Determination, dated October 16, 2017, determined that eight wetlands and one stream located within the study area may be jurisdictional waters of the United States and could, therefore, be subject to USACE oversight under Section 404 of the *Clean Water Act* (CWA). Impacts to these resources would require a PADEP Chapter 105 Water Obstructions and Encroachments Permit and a USACE Section 404 Permit. It is anticipated that these resources will be avoided during the development of the Proposed Action.

Cultural Resource surveys identified six cultural resources: the two previously recorded historic farmsteads, the two previously recorded archaeological sites, and two newly identified prehistoric archaeological sites. It was determined that the two previously recorded historic properties, one of the previously recorded archaeological sites, and two of the newly identified prehistoric archaeological sites, were not eligible for listing on the NRHP. It is recommended that one of the previously recorded archaeological sites, the Tombstone Site (36WH153), be excluded from all future ground disturbing activities; subsequently, this was acknowledged and agreed upon by the PHMC/BHP in a letter dated December 16, 2003. Additionally, the 2017 Master Plan includes a 75-foot buffer around the boundary of the Tombstone Site.

There are areas identified throughout the study area with slopes that are above a 15% grade. In order to comply with NCA Design Guidelines it is recommended that interment areas be located on slopes of 15% or less.

The proposed expansion area is within the critical habitat distribution of the northern long-eared bat. Based on the PNDI environmental review, USFWS recommends the avoidance measure of seasonal tree clearing restrictions from June 1 to July 31 to avoid prohibited incidental take of northern long-eared bats during the pup season. If avoidance measures are implemented, no further consultation or coordination under the Endangered Species Act is required and northern long-eared bats will not be impacted.

Based upon available published data and onsite investigations, there are no anticipated soils, sinkholes, or floodplains resources that should require additional avoidance during the design and construction process for the development within the study area, according to the design presented in the 2017 Master Plan.

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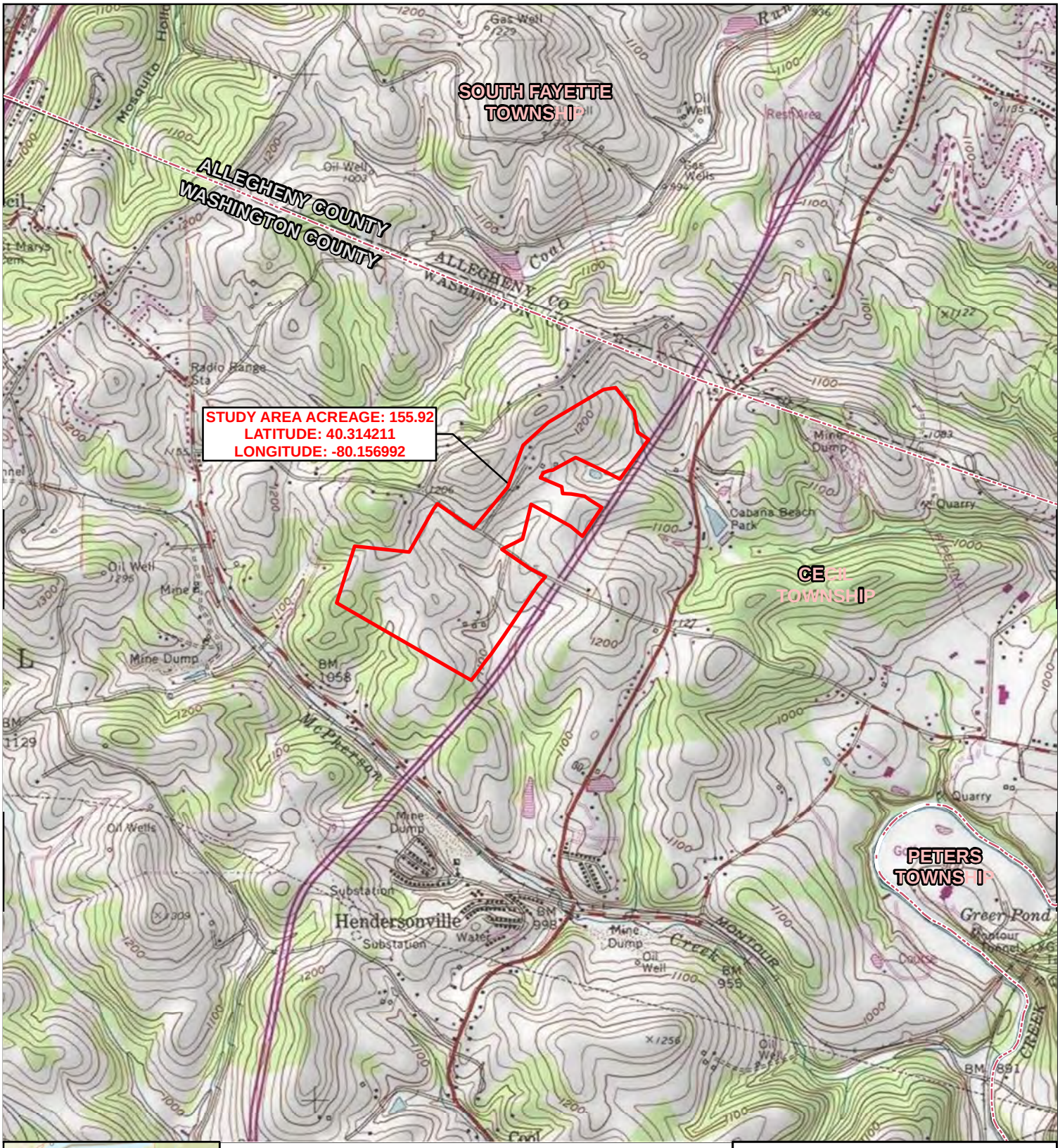
FIGURES



CECIL TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA

N

LEGEND

STUDY AREA

TOWNSHIP BOUNDARY

0 1,000 2,000 4,000 Feet

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FIGURE 1
AERIAL IMAGERY MAP

NATIONAL CEMETERY OF THE ALLEGHENIES

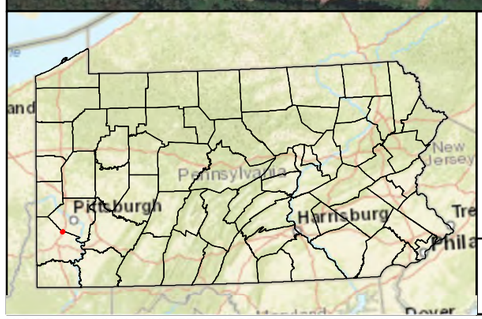
RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: KFS DATE: 4/26/2018

APPROVED: PROJECT #: 60556045

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_1_VA_CEM_PROJECT_LOCATION_MAP_20180425.mxd



N

0 250 500 1,000 Feet

LEGEND

STUDY AREA

TOWNSHIP BOUNDARY

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FIGURE 2
AERIAL IMAGERY MAP

NATIONAL CEMETERY OF THE ALLEGHENIES
RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/26/2018
APPROVED: PROJECT #: 60487539

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_2_VA_CEM_AERIAL_MAP_20180425.mxd

LEGEND

- NORTHERN LONG EARED BAT HABITAT DISTRIBUTION AREA
- USFWS CRITICAL HABITAT
- STUDY AREA
- TOWNSHIP BOUNDARY

N

0 250 500 1,000 Feet

REFERENCES: NORTHERN MYOTIS DISTRIBUTION OF NORTH AMERICA, BCI, 2003. CRITICAL HABITAT, USFWS, 2017. ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY COORDINATE SYSTEM: NAD 1983 UTM ZONE 17NTRANSVERSE MERCATOR

FIGURE 3
ENDANGERED AND THREATENED SPECIES DISTRIBUTION MAP
NATIONAL CEMETERY OF THE ALLEGHENIES
RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/25/2018

APPROVED: PROJECT #: 60487539

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_3_VA_CEM_WILDLIFE_20180425.mxd

N

Feet
0 250 500 1,000

LEGEND

- CH93 STREAM
- NWI WETLAND
- FEMA 100-YEAR FLOODPLAIN FLOOD ZONE
  - A
  - AE
- STUDY AREA
- TOWNSHIP BOUNDARY

REFERENCES: STREAMS, CHAPTER 93 DESIGNATED USE, PSIE/PADEP, 2017, 100-YEAR FLOODPLAIN FOR WASHINGTON COUNTY, PENNSYLVANIA, FEMA, 2015. NATIONAL WETLAND INVENTORY (NWI) WETLANDS OF PENNSYLVANIA, USFWS, 2016. ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY COORDINATE SYSTEM: NAD 1983 UTM ZONE 17NTRANSVERSE MERCATOR

FIGURE 4
NATURAL RESOURCE MAP
NATIONAL CEMETERY OF THE ALLEGHENIES
RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/25/2018
APPROVED: PROJECT #: 60487539

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_4_VA_CEM_NATURAL_RESOURCES_MAP_20180425.mxd

N

0 250 500 1,000 Feet

LEGEND

- DCNR KARST LOCATION
- STUDY AREA
- TOWNSHIP BOUNDARY

REFERENCES: KARST, DCNR, 2009. SERVICE LAYER CREDITS: ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

FIGURE 5

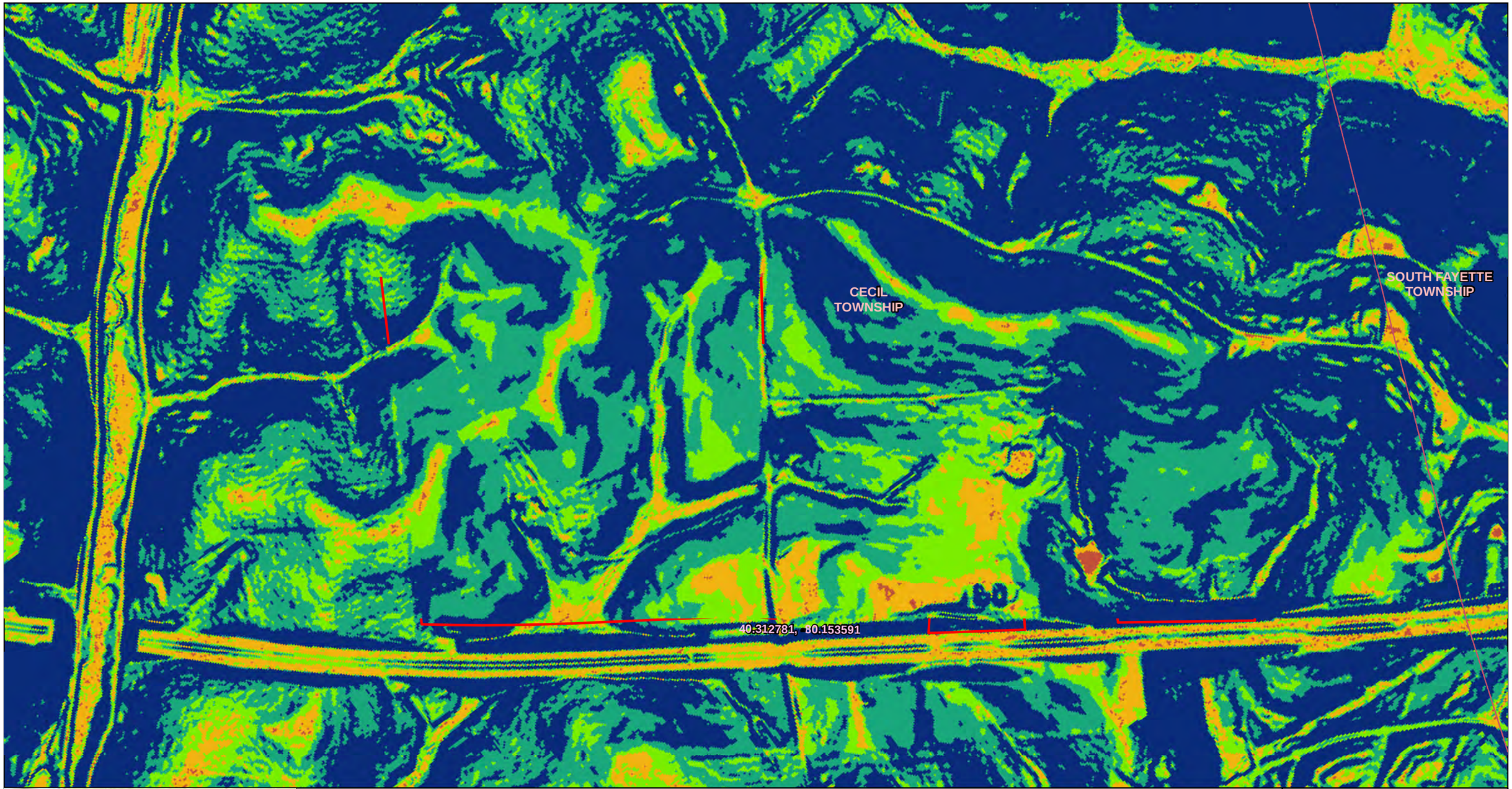
KARST LOCATION MAP

NATIONAL CEMETERY OF THE ALLEGHENIES
RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/26/2018
APPROVED: PROJECT #: 60487539

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_5_VA_CEM_KARST_MAPS_20180424.mxd



N

0 250 500 1,000 Feet

LEGEND

SLOPE (PERCENT RISE)
- 0 - 1%
- 1 - 5%
- 5 - 10%
- 10 - 15%
- 15+%

STUDY AREA

TOWNSHIP BOUNDARY

REFERENCES: SLOPE (PERCENT RISE), NATIONAL ELEVATION DATASET (DEP), 2016.

FIGURE 6

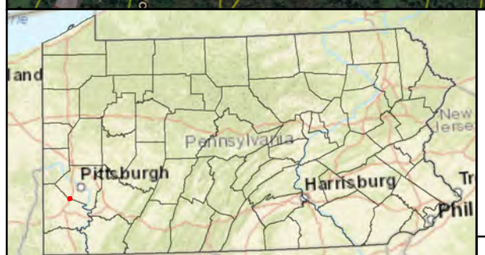
SLOPE MAP

NATIONAL CEMETERY OF THE ALLEGHENIES
RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/26/2018
APPROVED: PROJECT #: 60487539

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_6_VA_CEM_SLOPE_20180425.mxd



CECIL TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA

N

0 250 500 1,000 Feet

LEGEND

SSURGO SOIL TYPE

HYDRIC

NO

YES

STUDY AREA

TOWNSHIP BOUNDARY

REFERENCES: SOIL SURVEY GEOGRAPHIC *SSURGO) DATABASE FOR WASHINGTON COUNTY, PENNSYLVANIA, USDA/NRCS, 2017. ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY COORDINATE SYSTEM: NAD 1983 UTM ZONE 17NTRANSVERSE MERCATOR

FIGURE 7

SOILS MAP

NATIONAL CEMETERY OF THE ALLEGHENIES

RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/25/2018

APPROVED: PROJECT #: 60487539

Y:\GIS\Projects\VA\VA CEMETERY BRIDGEVILLE\MXDS\FIG_7_VA_CEM_SOILS_MAPS_20180424.mxd

N

0 250 500 1,000 Feet

LEGEND

LAND USE
- COMMERICAL AND SERVICES
- MIXED RANGELAND
- AGRICULTURAL
- MIXED FOREST
- CEMETERY
- RESIDENTIAL
- TRANSPORTATION
- STUDY AREA
- TOWNSHIP BOUNDARY

REFERENCES: LAND USE LAND COVER (LULC) FOR WASHINGTON COUNTY, SPC, 2015. ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY COORDINATE SYSTEM: NAD 1983 UTM ZONE 17NTRANSVERSE MERCATOR

FIGURE 8
LAND USE MAP

NATIONAL CEMETERY OF THE ALLEGHENIES

RESOURCE AVOIDANCE REPORT

U.S. DEPARTMENT OF VETERANS AFFAIRS

DRAWN BY: JCS DATE: 4/26/2018
APPROVED: PROJECT #: 60487539

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APPENDICES

APPENDIX A
2017 EXPANSION MASTER PLAN FIGURE

FUTURE GRAVESITE YIELD SUMMARY BY SECTION - OVERALL

CASKETED BURIALS		
SEC.	PPC	PV/OS
8	1,758	--
9	1,948	--
11	--	650 PV
12	--	650 OS
13	944	--
14	1,150	--
15	1,715	--
16	1,540	--
17	--	345/345
18	1,230	--
19	--	260/260
20	1,955	--
21	1,460	--
22	1,320	--
23	1,520	--
24	1,165	--
25	1,265	--
26	1,225	--
27	--	106/106
28	--	142/142
29	655	--
30	930	--
	21,780	3,006

CREMAIN BURIALS		
SEC.	IGC	CN
C8	760	--
C9	828	--
C10	612	--
C11	2,100	--
C12	1,500	--
C13	610	--
C14	870	--
C15	1,595	--
C16	710	--
C17	500	--
C18	1,450	--
C19	1,020	--
C20	325	--
C21	575	--
C22	595	--
C23	1,215	--
C24	1,190	--
C25	1,220	--
A	--	5,120
B	--	2,112
D	--	2,112
E	--	7,660
F	--	5,820
G	--	3,200
H	--	1,920
	17,675	27,944
GRAND TOATAL:		70,405

LEGEND

- PROPERTY LINE
- SETBACK LINE
- 8' CHAIN LINK FENCE
- UNDERGROUND ELECTRIC
- EXISTING WETLANDS
- EXISTING TREELINE
- PPC — PRE-PLACED CRYPT SECTIONS (3'X8' CASKET PLOTS)
- PV/OS — PRIVATE VAULTS (4'X10') / OVERSIZED CASKET PLOTS (4'X10')
- IGC — IN-GROUND CREMAIN SECTIONS (4'X4' CREMAIN PLOTS)
- CN — COLUMBARIUM / MEMORIAL WALLS
- SECTION NUMBER & HEADSTONE FACE DIRECTION
- NATURALIZED AREAS
- LAWN

ABBREVIATIONS:

PPC	PRE-PLACED CRYPTS (3'X8' PLOTS)
PV/OS	PRIVATE VAULT/ OVER-SIZED PLOTS (4'X10' PLOTS)
IGC	IN-GROUND CREMAINS (4'X4' PLOTS)
CN	COLUMBARIUM NICHES

Revisions: Date:

CONSULTANT

The LA Group (518) 587-8100	Kovach Design Solutions, LLC (717) 491-1806	Davidson Brown, Inc. (757) 369-8403
rvi (512) 480-0032	Miller-Remick LLC (856) 429-4000	Modjeski and Masters (717) 790-9565
The Onyx Group (703) 548-6699	ECS Mid Atlantic LLC (540) 785-6100	

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LANDSCAPE ARCHITECTURE
SURVEY AND MAPPING
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STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: PREFERRED DEVELOPMENT PLAN MASTER PLAN - OVERALL SITE

Phase: MASTER PLAN (MP2)

Project Title: NATIONAL CEMETERY OF THE ALLEGHENIES

Project Number: 935PC2006

Building Number:

Approved: Project Director

Location: WASHINGTON COUNTY, PENNSYLVANIA

Issue Date: FEBRUARY 5, 2018 | Checked: DLM | Drawn: JDS

Drawing Number: G-501

Dwg. 01 of 04

VA FORM 08 - 6231

NORTH

GRAPHIC SCALE

100 0 50 100 200

1 inch = 100 feet

LEGEND

- PROPERTY LINE
- I-79 RIGHT-OF-WAY
- SETBACK LINE
- 8' CHAIN LINK FENCE
- E/U — UNDERGROUND ELECTRIC
- PPC — PRE-PLACED CRYPT SECTIONS (3'X8' CASKET PLOTS)
- PV/OS — PRIVATE VAULTS (4'X10') / OVERSIZED CASKET PLOTS (4'X10')
- IGC — IN-GROUND CREMAIN SECTIONS (4'X4' CREMAIN PLOTS)
- COLUMBARIUM / MEMORIAL WALLS
- HEADSTONE FACE DIRECTION
- EXISTING TREELINE
- PROPOSED TREELINE / PLANT MASSING
- NATURALIZED AREAS
- LAWN
- EXISTING WETLANDS

ABBREVIATIONS:

PPC	PRE-PLACED CRYPTS (3'X8' PLOTS)
PV/OS	PRIVATE VAULT/ OVER-SIZED PLOTS (4'X10' PLOTS)
IGC	IN-GROUND CREMAINS (4'X4' PLOTS)
CN	COLUMBARIUM NICHES

GRAVESITE YIELD SUMMARY BY SECTION - SOUTH OF MORGAN ROAD

CASKETED BURIALS

SEC.	PPC	PV/OS
15	1,955	--
16	1,715	--
17	1,540	--
18	--	345/345
19	1,230	--
20	--	260/260
21	1,460	--
22	1,320	--
23	1,520	--
24	1,165	--
25	1,265	--
26	1,225	--
27	--	106/106
28	--	142/142
29	655	--
30	930	--
	15,980	1,706

CREMAIN BURIALS

SEC.	IGC	CN
C11	2,100	--
C12	1,500	--
C13	610	--
C14	870	--
C15	1,595	--
C16	710	--
C17	500	--
C18	1,450	--
C19	1,020	--
C20	325	--
C21	575	--
C22	595	--
C23	1,215	--
C24	1,190	--
C25	1,220	--
E	--	7,660
F	--	5,820
G	--	3,200
H	--	1,920
	15,475	18,600
GRAND TOATAL:		51,761

NOTES:

1. SEE DESIGN-BUILD DRAWINGS (BY OTHERS) AND PHASE 3 CONSTRUCTION DOCUMENTS 1 DRAWINGS FOR DETAILED ENLARGEMENTS OF DEVELOPMENT LOCATED NORTH OF MORGAN ROAD.

ASSUMPTIONS:

- PRE-PLACED CRYPT BURIALS ARE PITCHED NO STEEPER THAN 5%
- IN-GROUND CREMAIN SECTIONS ARE PITCHED NO STEEPER THAN 8%
- ROADS ARE PITCHED NO STEEPER THAN 10% (EXISTING CEMETERY IS 12% MAX.)
- 100' BURIAL SETBACK FROM THE EDGE OF MORGAN ROAD; 30' MINIMUM SETBACK FROM ALL OTHER PROPERTY LINES AND RIGHTS-OF-WAY (20' MINIMUM REQUIRED)
- 75' SETBACK AROUND EXISTING PRIVATE CEMETERY MAINTAINED. PRIOR TO DETAILED DESIGN IN THIS AREA, A THOROUGH STUDY OF THE EXTENTS OF THIS PRIVATE CEMETERY SHOULD BE COMPLETED.
- OVERHEAD ELECTRIC LINES CAN BE RELOCATED
- A NON-POTABLE WATER SOURCE FOR IRRIGATION IS VIABLE

Revisions: Date:

CONSULTANT

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rvi (512) 480-0032	Miller-Remick LLC (856) 429-4000	Modjeski and Masters (717) 790-9565
The Onyx Group (703) 548-6699	ECS Mid Atlantic LLC (540) 785-6100	

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LANDSCAPE ARCHITECTURE
SURVEY AND MAPPING
SECURITY CONSULTING

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: PREFERRED DEVELOPMENT PLAN MASTER PLAN - ENLARGEMENT

Phase: MASTER PLAN (MP2)

Project Title: NATIONAL CEMETERY OF THE ALLEGHENIES

Project Number: 935PC2006

Building Number:

Approved: Project Director

Location: WASHINGTON COUNTY, PENNSYLVANIA

Issue Date: FEBRUARY 5, 2018 | Checked: DLM | Drawn: JDS

Drawing Number: G-502

Dwg. 02 of 04

VA FORM 08 - 6231

NORTH

GRAPHIC SCALE
150 0 75 150 300
1 inch = 150 feet

GRAVESITE YIELD SUMMARY

PHASE	VA PROJECTED INTERMENTS/INURNMENTS				MASTER PLAN DESIGN YIELD				
	CASKET PLOTS	CREMAIN PLOTS			CASKET PLOTS		CREMAIN PLOTS		
		IN-GROUND CREMAIN SITES (4'X4') PLOTS	COLUMBARIUM NICHES	TOTAL NUMBER OF GRAVESITES	PRE-PLACED DOUBLE-DEPTH CRYPTS (3'X8') PLOTS	PRIVATE VAULTS / OVERSIZE (4'X10') PLOTS	IN-GROUND CREMAIN SITES (4'X4') PLOTS	COLUMBARIUM NICHES	TOTAL NUMBER OF GRAVESITES
MINOR	--	--	1,030	1,030	--	--	--	5,120	5,120
3	6,174	2,542	3,464	12,180	5,800	650/650	2,200	4,224	13,524
4	3,522	2,049	2,782	8,353	3,255	175/175	2,100	3,310	9,015
5	2,139	1,505	2,055	5,699	1,955	105/105	1,500	2,175	5,840
6	1,344	1,178	1,606	4,128	1,230	65/65	1,480	2,175	5,015
7	1,344	1,178	1,606	4,128	1,460	65/65	1,595	1,420	4,605
8	1,344	1,178	1,606	4,128	1,320	65/65	1,210	1,420	4,080
9	1,344	1,178	1,606	4,128	1,520	65/65	1,450	1,490	4,590
10	1,344	1,178	1,606	4,128	1,165	65/65	1,345	1,490	4,130
11	1,344	1,178	1,606	4,128	1,265	53/53	1,170	1,600	4,141
12	1,344	1,178	1,606	4,128	1,225	53/53	1,215	1,600	4,146
13	1,344	1,178	1,606	4,128	1,585	142/142	2,410	1,920	6,199
	22,587	15,520	22,179	60,286	21,780	3,006	17,675	27,944	70,405

LEGEND

- PROPERTY LINE
- 8' CHAIN LINK FENCE
- EXISTING WETLANDS
- DESIGN-BUILD MINOR
- PHASE 3
- PHASE 4
- PHASE 5
- PHASE 6
- PHASE 7
- PHASE 8
- PHASE 9
- PHASE 10
- PHASE 11
- PHASE 12
- PHASE 13

ABBREVIATIONS:

PPC	PRE-PLACED CRYPTS
PV/OS	PRIVATE VAULT/ OVER-SIZED PLOTS
IGC	IN-GROUND CREMAINS
CN	COLUMBARIUM NICHES

Revisions:	Date:

CONSULTANT

The LA Group (518) 587-8100	Kovach Design Solutions, LLC (717) 491-1806	Davidson Brown, Inc. (757) 369-8403
rvi (512) 480-0032	Miller-Remick LLC (856) 429-4000	Modjeski and Masters (717) 790-9565
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PROGRAMMING AND PLANNING
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
SURVEY AND MAPPING
SECURITY CONSULTING

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: PREFERRED DEVELOPMENT PLAN PHASING PLAN

Phase: MASTER PLAN (MP2)

Project Title: NATIONAL CEMETERY OF THE ALLEGHENIES

Project Number: 935PC2006

Building Number:

Approved: Project Director

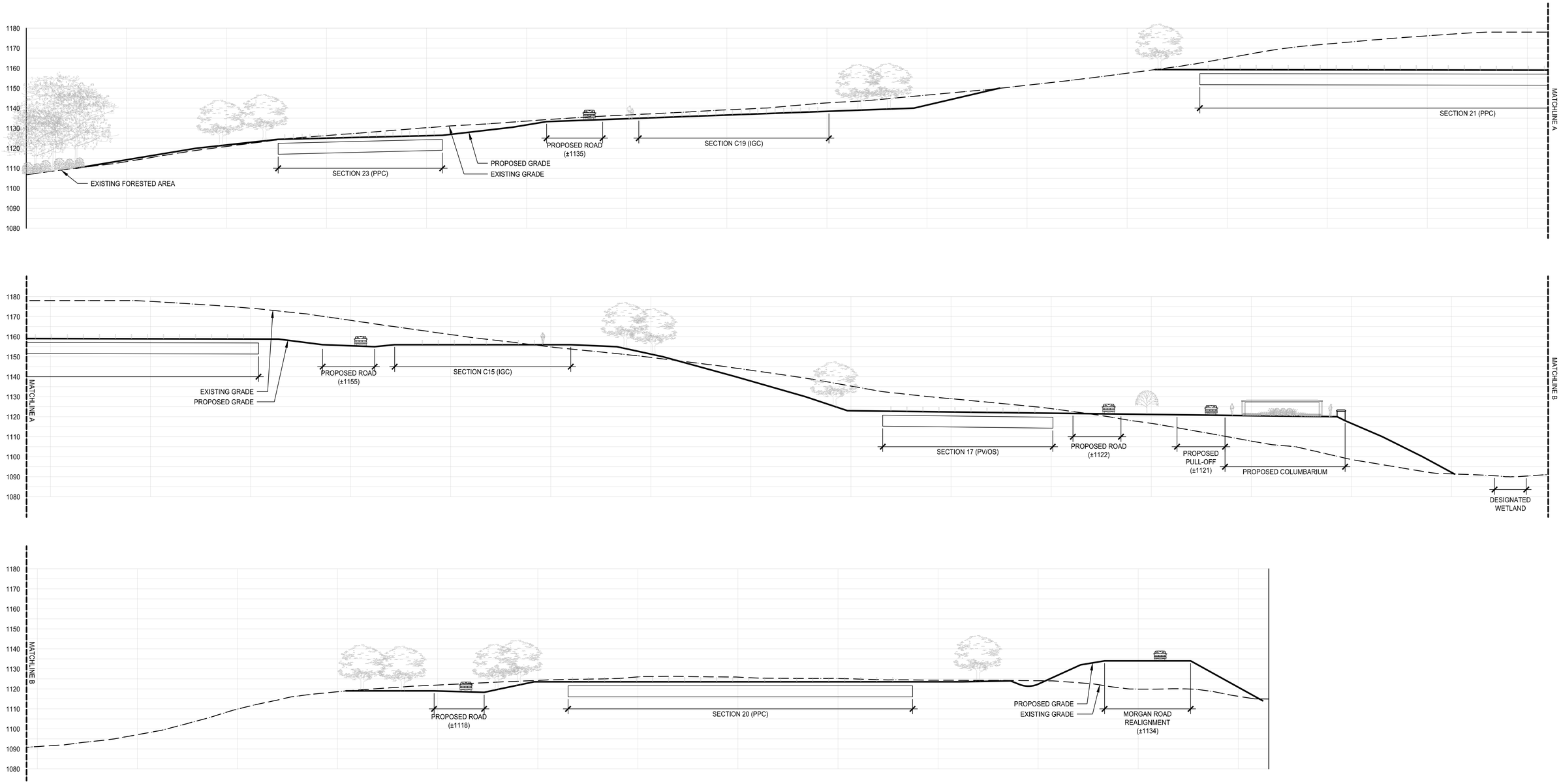
Location: WASHINGTON COUNTY, PENNSYLVANIA

Issue Date: FEBRUARY 5, 2018 | Checked: DLM | Drawn: JDS

Drawing Number: G-503

Dwg. 03 of 04

VA FORM 08 - 6231



1 CEMETERY SECTION

Scale: 1" = 20'

Revisions:	Date:

CONSULTANT

The LA Group (518) 587-8100	Kovach Design Solutions, LLC (717) 491-1806	Davidson Brown, Inc. (757) 369-8403
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SECURITY CONSULTING

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: PREFERRED DEVELOPMENT PLAN MASTER PLAN - PROFILE SECTION

Approved: Project Director

Phase: MASTER PLAN (MP2)

Project Title: NATIONAL CEMETERY OF THE ALLEGHENIES

Location: WASHINGTON COUNTY, PENNSYLVANIA

Issue Date: FEBRUARY 5, 2018 | Checked: DLM | Drawn: JDS

Project Number: 935PC2006

Building Number:

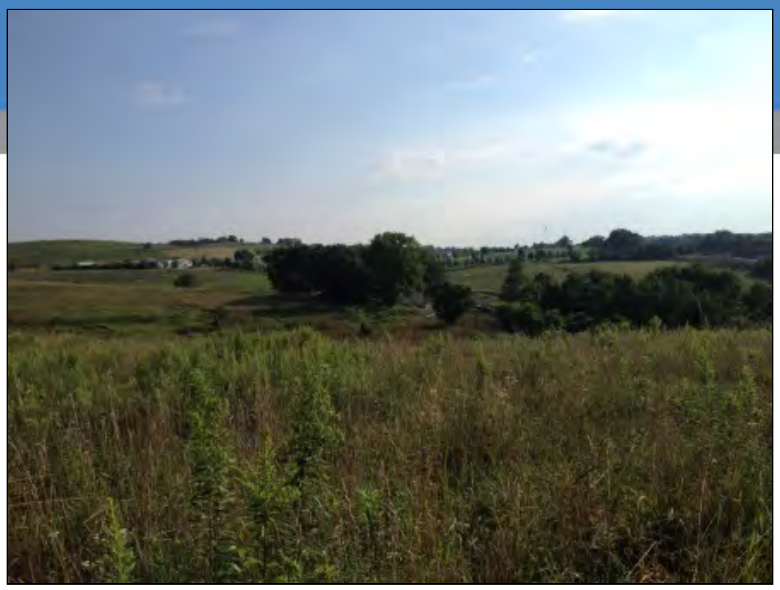
Drawing Number: G-504

Dwg. 04 of 04

VA FORM 08 - 6231

APPENDIX B
WATERS OF THE U.S. DELINEATION REPORT

WATERS OF THE U.S. DELINEATION REPORT



NATIONAL CEMETERY OF THE ALLEGHENIES
1139 MORGAN ROAD
CECIL TOWNSHIP WASHINGTON COUNTY PENNSYLVANIA

ECS PROJECT NO. 47:4518

FOR

WILLIAM H. GORDON ASSOCIATES, INC.

SEPTEMBER 1, 2017

September 1, 2017

Mr. Jason Gerhart, PE
William H. Gordon Associates, Inc.
301 N Mildred St
Charles Town West Virginia 25414

ECS Project No. 47:4518

Reference: Waters of the U.S Delineation Report, National Cemetery of the Alleghenies 1139 Morgan Road Cecil Township Washington County Pennsylvania

Dear Mr. Gerhart:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide you with the results of our Waters of the U.S. (WOUS) Delineation Report for the referenced site. ECS services were provided in general accordance with the Task Order issued by William H. Gordon Associates, Inc., dated July 31, 2017 and generally meet the requirements of the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual, and on the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0 dated April 2012.

If there are questions regarding this report, or a need for further information, please contact the undersigned.

Sincerely,

ECS Mid-Atlantic, LLC

Martin Ackley
Environmental Scientist
mackley@ecslimited.com
412-206-1470

Adam Meurer, CHMM, PWS
Principal, Environmental Services
ameurer@ecslimited.com
804-353-6333

1.0 INTRODUCTION

This report presents the findings of a wetland and stream delineation conducted by ECS Mid-Atlantic, LLC (ECS) for William H. Gordon Associates, Inc. (Gordon) at the National Cemetery of the Alleghenies project located at 1139 Morgan Road Cecil Township Washington County Pennsylvania (Latitude: 40.31262 N, Longitude: -80.15968 W), and is identified by the Washington County GIS Website as Parcel No. 140-011-00-00-0026-00. The site includes approximately 116.2-acres as shown on the Site Location Map (Appendix I). The site generally consists of unimproved grass covered and partially wooded land. A single maintenance structure was observed on the property.

ECS conducted the wetland and stream delineation on August 3 and 4, 2017. The purpose of this study was to identify and delineate potentially jurisdictional Waters of the U.S. (WOUS) within the subject property. ECS identified seven palustrine emergent (PEM) wetlands, one palustrine emergent/ palustrine forested (PFO) wetland, and one perennial stream within the project site which, in our professional opinion, would be considered jurisdictional by the U.S. Army Corps of Engineers.

2.0 METHODOLOGY

This wetland delineation is based on ECS' professional judgment and application of the technical criteria presented in the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual, and on the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0 dated April 2012. Wetland boundaries were delineated using the routine onsite determination method described in the USACE Manual and Regional Supplement, in conjunction with the Eastern Mountains and Piedmont 2016 Regional Wetland Plant List, and the USDA Soil Survey. Field work was completed on August 3 and 4, 2017 by Vince Humenay and Martin Ackley.

ECS completed the following tasks to identify and delineate potentially jurisdictional wetland boundaries onsite:

Desktop Review: ECS wetland scientists reviewed the U.S. Geological Survey (USGS) topographic map, U.S. Department of Agriculture Natural Resource Conservation Service (USDA-NRCS) Soil Survey of Washington County, Pennsylvania U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, and available aerial photographs to identify potentially jurisdictional Waters of the U.S. (i.e., streams, wetlands, natural ponds, lakes). Please reference Appendix I for the above-mentioned maps.

Field Investigation: ECS performed onsite wetland delineations as described above. First, site hydrology was observed and the plant community within the data plot was characterized. The dominant plant species within each community were then identified, and it was determined whether or not hydrophytic (wetland) plants dominated the plant community. The USFWS has defined five wetland plant indicator categories including:

Obligate wetland (OBL) – has >99% probability of occurring in wetlands
Facultative wetland (FACW) – has 66% to 99% chance of occurring in wetlands
Facultative (FAC) – has 33% to 66% chance of occurring in wetlands
Facultative upland (FACU) – has 1 to 33% chance of occurring in wetlands
Upland (UPL) – has <1% chance of occurring in wetlands
No Indicator (NI) – no wetland indicator for the specified species

Plants identified as OBL, FACW, or FAC are considered wetland plants (or hydrophytes) by USACE.

In areas determined to have hydrophytic vegetation and potential wetland hydrology, an approximately 16-20 inch soil test hole was completed with a hand auger to determine if hydric soils were present. The soil boring was also inspected to determine if indicators of wetland hydrology (inundation, soil saturation, etc.) were present.

Once an area is determined to be a wetland, further testing was performed to locate the wetland/ upland (non-wetland) boundary. A second test hole was completed in the upland area to document non-wetland conditions. Wetland boundaries were marked with consecutively numbered surveyor's ribbon flags. The wetland flags were surveyed as part of this assessment.

Data forms specified in the Regional Supplement were completed for each wetland and non-wetland testhole location, referred to as data points. The data forms recorded the vegetation, soils, and hydrology observations used in making the wetland determinations. ECS did identify wetland areas during the site reconnaissance which, in our professional opinion, would be considered jurisdictional by the USACE.

2.1 Methodology for Delineating Streams

During the field evaluation for wetlands, ECS observed the site for streams that would potentially be considered jurisdictional by state and federal regulatory agencies. ECS used field indicators such as the presence of an ordinary high water mark (OHWM) and continuous bed and banks to delineate stream channels and also observed characteristics such as flow, substrate composition, presence/ absence of defined bed and banks, origin of hydrologic source, presence/absence of vegetation in the stream channel, and composition and relative abundance of resident benthic macroinvertebrates to classify onsite streams into three stream types: ephemeral, intermittent, and perennial.

One stream was identified during our assessment. The stream located onsite is depicted on the Waters of the U.S. Delineation Map (Appendix IV). The stream length and classification is summarized on Table 1. Photographs of the stream is presented in Appendix III.

3.0 FINDINGS

3.1 Desktop Review

The NWI map did not depict wetlands within the project site boundaries. The USGS Canonsburg, Pennsylvania 2016 quadrangle map indicates that the project site drains to the southeast towards McPherson Creek, located to the south of the site. Elevations across the project site range from approximately 1,070 to 1,170 feet above mean sea level (MSL). The weather at the time of the site reconnaissance was approximately 80 degrees and sunny.

3.2 Site Soils

A review of the USDA Soil Survey for the project site identified nine mapping units within the site boundaries. These soil mapping units are: the Culleoka channery silt loam (3 to 8% slopes, 8 to 15% slopes, and 15 to 25% slopes), the Dormont silt loam (3 to 8% slopes, 8 to 15% slopes, and 15 to 25% slopes), Fluvaquents (loamy), and the Guernsey silt loam (3 to 8% slopes and 8 to 15% slopes). Fluvaquents (loamy) is identified as a hydric soil by the NRCS.

3.3 Waters of the U.S.

Eight potentially jurisdictional wetland areas totaling 1.22-acres and one potentially jurisdictional stream totaling 1,520-linear feet were identified and delineated within the study area. Their size and USFWS Cowardin classifications are summarized below (Table 1), and their locations are illustrated on the Waters of the U.S. Delineation Map (Appendix IV).

Hydrologic features within the ESL are governed primarily by site topography. The primary hydrological sources for the wetland areas are seeps originating upslope or within the wetland areas concentration of surface flows in low lying areas, and an onsite perennial stream.

Table 1: WOUS Summary Table

WOUS	Cowardin Classification	Onsite Linear Feet (LF)	Onsite Acreage (AC)	Onsite Square Footage (Sq. Ft.)
Wetland A	PEM	-	0.04	1,949
Wetland B	PEM	-	0.04	1,717
Wetland C	PEM	-	0.09	3,933
Wetland D	PEM	-	0.40	17,264
Wetland E	PEM	-	0.006	302

WOUS	Cowardin Classification	Onsite Linear Feet (LF)	Onsite Acreage (AC)	Onsite Square Footage (Sq. Ft.)
Wetland F	PEM	-	0.004	175
Wetland G	PEM	-	0.44	19,287
Wetland H	PEM/PFO	-	0.19	8,398
Stream A	Perennial	1,520	-	-

3.3.1 Wetland Summary

Wetland A: Wetland A is a 0.04-acre PEM wetland located near the center of the subject site near an onsite access road. The wetland appears to be fed by precipitation and/or seeps originating on the adjoining slope and from Stream A. The wetland appears to drain to Stream A. Wetland A is dominated by FAC vegetative species in the herbaceous stratum. Hydrological indicators included saturation, drainage patterns, and oxidized rhizospheres on living roots. Soils within the wetland at data point one (DP-1) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

Wetland B: Wetland B is a 0.04-acre PEM wetland located on the northern portion of the subject property. The wetland appears to be fed by seeps and from Stream A. The wetland appears to drain to Stream A. Wetland B is dominated by OBL vegetative species in the herbaceous stratum. Hydrological indicators included saturation, a high water table, and drainage patterns. Soils within the wetland at data point two (DP-2) consisted of low chroma, silty clayey soils with redoximorphic features characterized as depleted matrix soils.

Wetland C: Wetland C is a 0.09-acre PEM wetland located near the center of the subject site near an onsite access road. The wetland appears to be fed by seeps and from Stream A. The wetland appears to drain to Stream A. Wetland C is dominated by FACW vegetative species in the herbaceous stratum. Hydrological indicators included saturation, drainage patterns, and oxidized rhizospheres on living roots. Soils within the wetland at data point three (DP-3) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

Wetland D: Wetland D is a 0.40-acre PEM wetland located on the northcentral portion of the subject property. The wetland appears to be fed by seeps originating within the wetland area. The wetland appears to drain to Stream A. Wetland D is dominated by FACW vegetative species in the herbaceous stratum. Hydrological indicators included surface water, high water table, saturation, and drainage patterns. Soils within the wetland at data point four (DP-4) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

Wetland E: Wetland E is a 0.006-acre PEM wetland located on the southeastern portion of the subject property. The wetland appears to be fed by seeps originating within the wetland area and from

Stream A. The wetland appears to drain to Stream A. Wetland E is dominated by OBL vegetative species in the herbaceous stratum. Hydrological indicators included saturation and drainage patterns. Soils within the wetland at data point five (DP-5) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

Wetland F: Wetland F is a 0.004-acre PEM wetland located on the southeastern portion of the subject property. The wetland appears to be fed by seeps originating within the wetland area and from Stream A. The wetland appears to drain to Stream A. Wetland F is dominated by OBL vegetative species in the herbaceous stratum. Hydrological indicators included saturation and drainage patterns. Soils within the wetland at data point six (DP-6) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

Wetland G: Wetland G is a 0.44-acre PEM wetland located on the southeastern portion of the subject property. The wetland appears to be fed by precipitation, seeps originating within the wetland or on the adjoining slope, and/or from Stream A. The wetland appears to drain to Stream A. Wetland G is dominated by OBL vegetative species in the herbaceous stratum. Hydrological indicators included surface water, high water table, saturation, and drainage patterns. Soils within the wetland at data point seven (DP-7) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

Wetland H: Wetland H is a 0.19-acre PEM/PFO wetland located on the southeastern portion of the subject property. The wetland appears to be fed by seeps originating within the wetland or on the adjoining slope. The wetland appears to drain to Stream A. Wetland H is dominated by FACW vegetative species in the herbaceous stratum. Hydrological indicators included surface water, high water table, saturation, and drainage patterns. Soils within the wetland at data point seven (DP-7) consisted of low chroma, silty clay soils with redoximorphic features characterized as depleted matrix soils.

3.3.2 Stream Summary

Stream A: Stream A is a perennial stream which bisects the northeastern portion of the project site. The stream originates on the north adjacent property and enters the subject property via a culvert beneath Morgan Road. The stream channel high water mark ranged from 0.5 to 1.0 feet deep and 2 to 4 feet across. The stream travels 1,520 feet on the subject site before flowing off-site to the south.

4.0 REGULATORY DISCUSSION

The WOUS are regulated by Sections 401 and 404 of the Clean Water Act. State and Federal law dictates that any disturbance to WOUS must be permitted through the appropriate agencies.

Upon your request, we will contact the USACE to schedule a field meeting to conduct a wetlands and Waters boundary confirmation and preliminary jurisdictional determination. This process takes an average of one to two months months depending on the availability of USACE personnel.

If jurisdictional wetlands and streams are present at the site, planned land disturbance in these areas would likely require a permit from the U.S. Army Corps of Engineers and/or the Pennsylvania Department of Environmental Protection (PADEP). ECS recommends conducting a Jurisdictional Determination with the USACE. If any potential impacts are proposed, ECS recommends a Pre-Application meeting with the USACE and the PADEP at this time to coordinate follow-up efforts after the field visit in order to obtain the issuance of a JD letter from the USACE and begin the permitting process. In the interim, we recommend further review of state and federal agency records pertaining to Section 7 (Federal Endangered Species Act) and Section 106 (National Historic Preservation Act). These reviews will generally be required to verify compliance for General or Joint Permit conditions.

5.0 CONCLUSIONS

Eight potentially jurisdictional wetland areas totaling 1.22-acres and one potentially jurisdictional stream totaling 1,520-linear feet were identified and delineated within the study area. The locations and boundaries of potentially jurisdictional Waters are illustrated on the attached Waters of the U.S. Delineation Map (Appendix IV).

The flagged WOUS boundaries are subject to change during the jurisdictional determination meeting with the USACE. ECS cannot guarantee that field conditions and/or WOUS boundaries will not change over time.

Appendix I: Figures

FIGURE I: SITE LOCATION MAP

PROJECT #47:4518—NATIONAL CEMETERY OF THE ALLEGHENIES

1139 MORGAN RD, CECIL TWP., WASHINGTON COUNTY

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NOT TO SCALE

WETLAND DELINEATION REPORT

FOR: GORDON

AUGUST 2017

SOURCE: BING MAPS

ECS MID-ATLANTIC, LLC
145 LAKE DRIVE
SUITE 102
WEXFORD, PA 15090
412-206-1470

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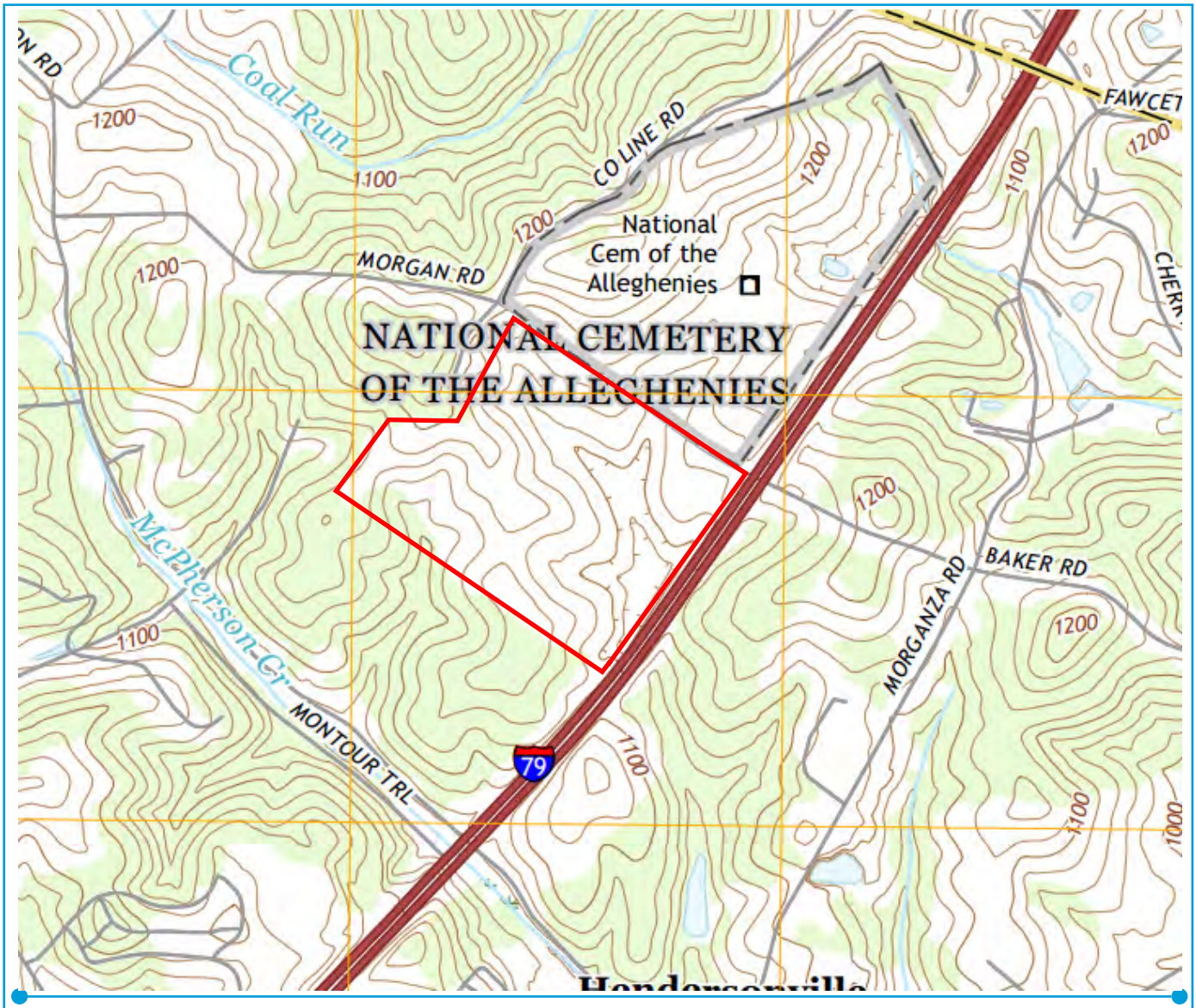

FIGURE II: USGS TOPOGRAPHIC MAP

PROJECT #47:4518—NATIONAL CEMETERY OF THE ALLEGHENIES

1139 MORGAN RD, CECIL TWP., WASHINGTON COUNTY

NOT TO SCALE

WETLAND DELINEATION REPORT FOR: GORDON AUGUST 2017 SOURCE: THE USGS MAP STORE	ECS MID-ATLANTIC, LLC 145 LAKE DRIVE SUITE 102 WEXFORD, PA 15090 412-206-1470

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FIGURE III: NATIONAL WETLAND INVENTORY MAP

PROJECT #47:4518—NATIONAL CEMETERY OF THE ALLEGHENIES

1139 MORGAN RD, CECIL TWP., WASHINGTON COUNTY

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NOT TO SCALE

WETLAND DELINEATION REPORT

FOR: GORDON

AUGUST 2017

SOURCE: USFWS WETLANDS MAPPER

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SUITE 102
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FIGURE IV: USDA SOILS MAP

PROJECT #47:4518—NATIONAL CEMETERY OF THE ALLEGHENIES

1139 MORGAN RD, CECIL TWP., WASHINGTON COUNTY

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NOT TO SCALE

WETLAND DELINEATION REPORT

FOR: GORDON

AUGUST 2017

SOURCE: NRCS WEB SOIL SURVEY

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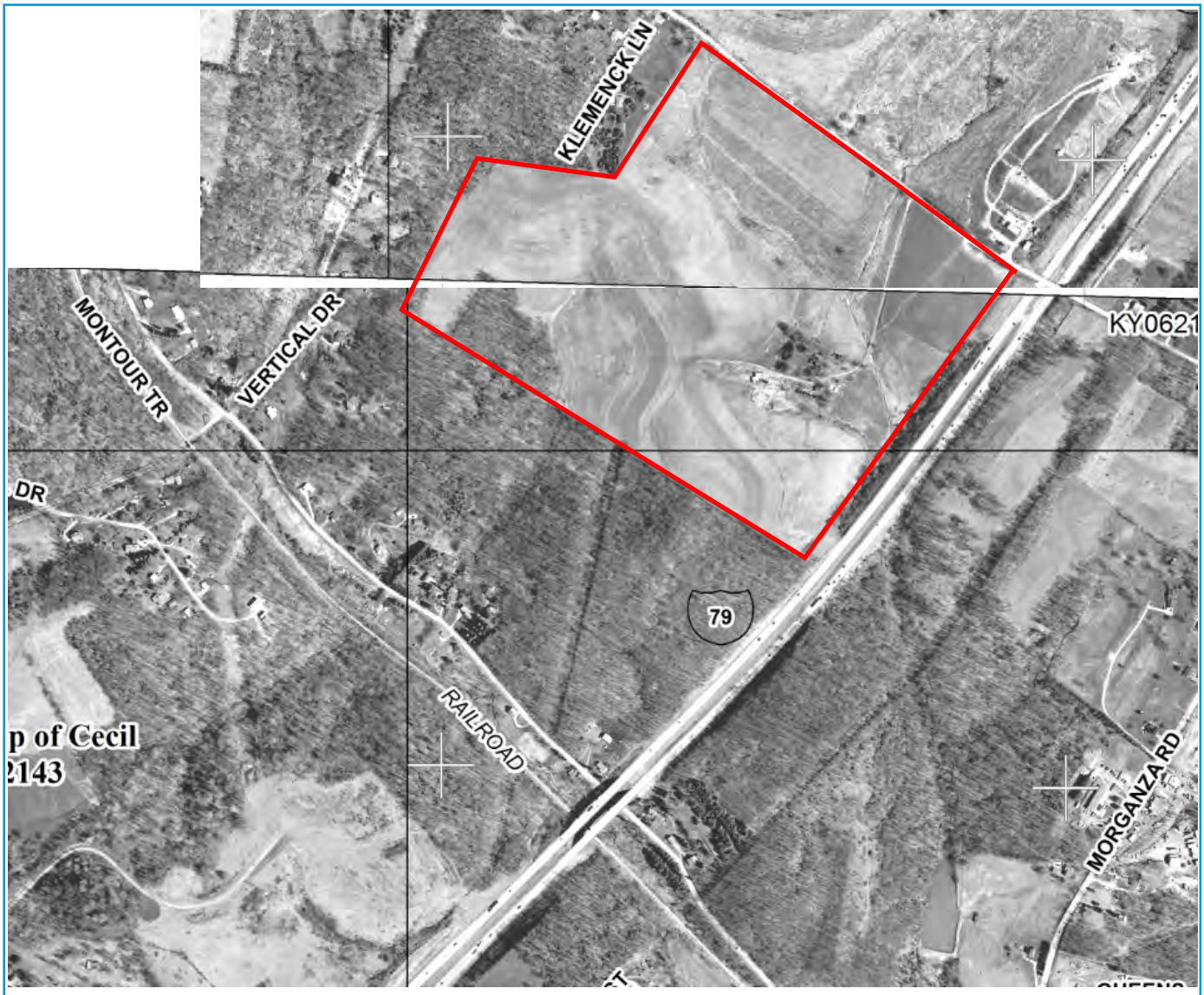

FIGURE V: FEMA FLOODPLAIN MAP

PROJECT #47:4518—NATIONAL CEMETERY OF THE ALLEGHENIES

1139 MORGAN RD, CECIL TWP., WASHINGTON COUNTY

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NOT TO SCALE

WETLAND DELINEATION REPORT

FOR: GORDON

AUGUST 2017

SOURCE: FEMA

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Appendix II: USACE Wetland Data Forms and Stream Data Forms

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-1

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Toe of Slope Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland A) located at the center of the property near the onsite access road. The wetland appears to be fed by precipitation and/or seeps originating on the adjoining slope.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:				
Surface Water Present?	☐ Yes	☒ No	Depth (inches):	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☐ Yes	☒ No	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Carex sp.	30	Y	FAC
2. Scirpus atrovirens	10	N	OBL
3. Eutrochium purpureum	15	Y	FAC
4. Dipsacus fullonum	5	N	FACU
5. Solidago canadensis	10	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species _____	x 2 = _____
FAC species 45	x 3 = 135
FACU species 15	x 4 = 60
UPL species _____	x 5 = _____
Column Totals: 70 (A)	205 (B)

Prevalence Index = B/A = 2.93

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	5YR 3/2	100					Silty Clay	
3-10	7.5YR 4/1	70	5YR 5/6	30			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-2

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland B) located on the northern portion of the property adjacent to Stream A. The wetland appears to be fed by seeps.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches):	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☒ Yes	☐ No	Depth (inches): 1"	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Typha Latifola	75	Y	OBL
2. Scirpus atrovirens	5	N	OBL
3. Dipsacus fullonum	5	N	FACU
4. Solidago canadensis	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 80	x 1 = 80
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species 10	x 4 = 40
UPL species _____	x 5 = _____
Column Totals: 90 (A)	120 (B)

Prevalence Index = B/A = 1.33

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/1	100					Silty Clay	
3-9	2.5Y 5/1	90	2.5Y 5/6	10			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-3

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Toe of Slope Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland C) located near the center of the property. The wetland appears to be fed by seeps.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches):	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☒ Yes	☐ No	Depth (inches): 10"	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Impatiens capensis	60	Y	FACW
2. Eutrochium purpureum	10	N	FAC
3. Solidago canadensis	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	_____ x 1 = _____
FACW species	60 x 2 = 120
FAC species	10 x 3 = 30
FACU species	10 x 4 = 40
UPL species	_____ x 5 = _____
Column Totals:	80 (A) 190 (B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 3/2	100					Silt Loam	
5-11	5YR 3/1	80	5YR 5/8	20			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 11"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-4

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland D) located on the northcentral portion of the property. The wetland appears to be fed by seeps originating within the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☒ Yes	☐ No	Depth (inches): 1"	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☒ Yes	☐ No	Depth (inches): surface	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	50	Y	FACW
2. Leersia oryzoides	15	N	OBL
3. Carex bullata	10	N	OBL
4. Scirpus atrovirens	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 35	x 1 = 35
FACW species 50	x 2 = 100
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 85 (A)	135 (B)

Prevalence Index = B/A = 1.59

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	2.5YR 2.5/1	100					Silt Loam	
4-10	5YR 2.5/1	90	5YR 5/6	10			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-5

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland E) located on the southeastern portion of the property. The wetland appears to be fed by seeps originating within the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches): _____	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☐ Yes	☒ No	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-5

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Typha Latifola	50	Y	OBL
2. Impatiens capensis	10	N	FACW
3. Dipsacus fullonum	20	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 50	x 1 = 50
FACW species 10	x 2 = 20
FAC species _____	x 3 = _____
FACU species 20	x 4 = 80
UPL species _____	x 5 = _____
Column Totals: 80 (A)	150 (B)

Prevalence Index = B/A = 1.88

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	5YR 3/1	100					Silty Clay	
3-9	5YR 3/1	90	5YR 4/6	10			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-6

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland F) located on the southeastern portion of the property. The wetland appears to be fed by seeps originating within the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches): _____	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☐ Yes	☒ No	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-6

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Typha Latifola	50	Y	OBL
2. Impatiens capensis	10	N	FACW
3. Dipsacus fullonum	20	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 50	x 1 = 50
FACW species 10	x 2 = 20
FAC species _____	x 3 = _____
FACU species 20	x 4 = 80
UPL species _____	x 5 = _____
Column Totals: 80 (A)	150 (B)

Prevalence Index = B/A = 1.88

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	5YR 3/1	100					Silty Clay	
3-9	5YR 3/1	90	5YR 4/6	10			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-7

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Toe of Slope Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Fluvaquents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM wetland (Wetland G) located on the southeastern portion of the property. The wetland appears to be fed by precipitation and/or seeps originating within the wetland or on the adjoining slope.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☒ Yes	☐ No	Depth (inches): 1"	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☒ Yes	☐ No	Depth (inches): surface	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-7

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Typha Latifola	70	Y	OBL
2. Scirpus atrovirens	10	N	OBL
3. Phytolacca americana	10	N	FACU
4. Impatiens capensis	5	N	FACW
5. Dipsacus fullonum	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 80	x 1 = 80
FACW species 5	x 2 = 10
FAC species _____	x 3 = _____
FACU species 15	x 4 = 60
UPL species _____	x 5 = _____
Column Totals: 100 (A)	150 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/1	100					Silty Clay	
5-11	GLEY 2 4/10B	70	7.5YR 5/6	30			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 11"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-8

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Culleoka channery silt loam NWI classification: PEM/PFO

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks:
This data plot describes a PEM/PFO wetland (Wetland H) located on the southeastern portion of the property. The wetland appears to be fed by seeps originating within the wetland and/or on the adjoining slope.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches): _____	**Wetland Hydrology Present?** ☒ **Yes** ☐ **No**
Water Table Present?	☐ Yes	☒ No	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (inches): surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-8

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Juglans nigra	10	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Impatiens capensis	70	Y	FACW
2. Leersia oryzoides	10	N	OBL
3. Dipsacus fullonum	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	10 x 1 = 10
FACW species	70 x 2 = 140
FAC species	_____ x 3 = _____
FACU species	15 x 4 = 60
UPL species	_____ x 5 = _____
Column Totals:	95 (A) 210 (B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Silty Clay	
4-11	2.5Y 4/1	65	7.5YR 5/6	35			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 11"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-9

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Culleoka channery silt loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sampled Area within a Wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks:
This data plot describes an upland area to the north of Wetland A.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches): _____
Water Table Present?	☐ Yes	☒ No	Depth (inches): _____
Saturation Present? (includes capillary fringe)	☐ Yes	☒ No	Depth (inches): _____

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-9

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Solidago canadensis	25	Y	FACU
2. Securigera varia	10	N	UPL
3. Phytolacca americana	10	N	FACU
4. Dipsacus fullonum	20	Y	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species 55	x 4 = 220
UPL species 10	x 5 = 50
Column Totals: 65 (A)	270 (B)

Prevalence Index = B/A = 4.15

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/2	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8"

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: National Cemetery of the Alleghenies City/County: Cecil Township /Washington County Sampling Date: 8/3/2017

Applicant/Owner: William H. Gordon Associates, Inc. State: PA Sampling Point: DP-10

Investigator(s): Vince Humenay/Marty Ackley Section, Township, Range: Cecil Township

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR N Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Culleoka channery silt loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sampled Area within a Wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks:
This data plot describes an upland area to the west of Wetland C.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes	☒ No	Depth (inches): _____
Water Table Present?	☐ Yes	☒ No	Depth (inches): _____
Saturation Present? (includes capillary fringe)	☐ Yes	☒ No	Depth (inches): _____

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DP-10

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5')			
1. Solidago canadensis	30	Y	FACU
2. Daucus carota	5	N	UPL
3. Phytolacca americana	10	N	FACU
4. Dipsacus fullonum	10	N	FACU
5. Impatiens capensis	5	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 5	x 2 = 10
FAC species _____	x 3 = _____
FACU species 50	x 4 = 200
UPL species 5	x 5 = 25
Column Totals: 65 (A)	235 (B)

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/2	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8"

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

Appendix III: Photographic Log

1 - View of Stream A Looking Southeast

2 - View of Stream A and Culvert Beneath Morgan Road

3 - View of Wetland A Looking Northwest

4 - View of Wetland B Looking East

5 - View of Wetland C Looking Northwest

6 - View of Wetland D Looking Southeast

7 - View of Wetland E and F Looking Northwest (Wetland E and F Flank Stream A)

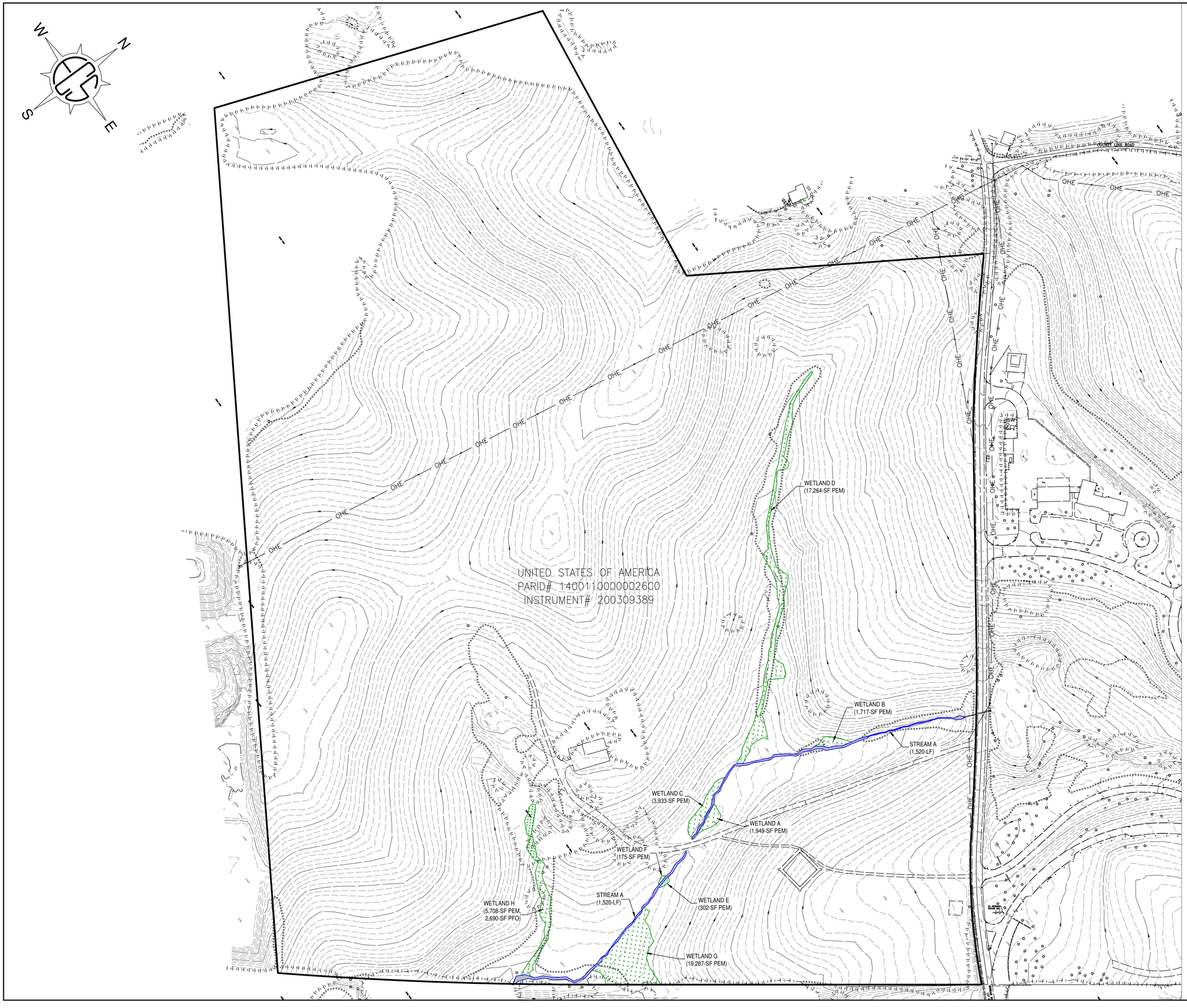
8 - View of Wetland G Looking East

9 - View of Wetland H Looking Northwest

10 - General View Across The Subject Property Looking Northeast

11 - View Across the Subject Property Looking West Into Wetland Areas on the Northern Portion of the Site

Appendix IV: Waters of the U.S. Delineation Map



LEGEND

- PERENNIAL STREAM CHANNEL (R3)
- PALUSTRINE FORESTED (PFO) WETLAND
- PALUSTRINE EMERGENT (PEM) WETLAND
- PROJECT SITE

SCALE (IN FEET)
60 120
120 0

CELEBRATING OVER 25 YEARS OF EXCELLENCE

ECS - MID-ATLANTIC, LLC
14026 THUNDERBOLT PLACE
SUITE 100
CHANTILLY, VA 20151
1-800-822-3489
703-471-8400
(FAX) 703-834-5527

"SETTING THE STANDARD FOR SERVICE"

NATIONAL CEMETARY OF THE ALLEGHENIES
1158 MORGAN ROAD
WASHINGTON COUNTY, PENNSYLVANIA

WATERS OF THE U.S. DELINEATION MAP
GORDON

ECS REVISIONS

ENGINEER	DRAFTING
AMM	AEA

SCALE 1" - 120'

PROJECT NO. 47:4518

SHEET 1 OF 1

DATE 08/30/17

APPENDIX C
USACE JURISDICTIONAL DETERMINATION

DEPARTMENT OF THE ARMY
PITTSBURGH DISTRICT, CORPS OF ENGINEERS
WILLIAM S. MOORHEAD FEDERAL BUILDING
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

REPLY TO
ATTENTION OF

October 16, 2017

Operations Division
Regulatory Branch
LRP-**2017-1438**

Mr. Ronald M. Hestdalen
National Cemetery of the Alleghenies
1158 Morgan Road
Bridgeville, PA. 15017

Dear Mr. Hestdalen:

This letter is in response to your request for a preliminary jurisdictional determination (PJD), received on September 18, 2017, prepared by ECS Mid-Atlantic, LLC in a report dated September 1, 2017. A delineation of the National Cemetery of the Alleghenies located at 1193 Morgan Road, Cecil Township, Washington County, PA was verified by Josh Shaffer of this office on October 11, 2017.

You have requested a preliminary jurisdictional determination (PJD) for the proposed 116.2-acre project area. The waters listed below are potentially waters of the United States.

Aquatic Resource ID	Lat	Long	Size or length	acres or LF	Resource Type	Geographic Authority
WL A	40.311877°	-80.156740°	0.04	ac	PEM	Section 404
WL B	40.312998°	-80.156696°	0.04	ac	PEM	Section 404
WL C	40.311906°	-80.156912°	0.09	ac	PEM	Section 404
WL D	40.313308°	-80.158529°	0.4	ac	PEM	Section 404
WL E	40.311399°	-80.156499°	0.006	ac	PEM	Section 404
WL F	40.311403°	-80.156597°	0.004	ac	PEM	Section 404
WL G	40.310693°	-80.156011°	0.44	ac	PEM	Section 404
WL H	40.310542°	-80.157003°	0.19	ac	PEM/PFO	Section 404
Stream A	40.312228°	-80.157024°	1,520	LF	Perennial	Section 404
Total Stream			1,520	LF		
Total Wetland			1.21	acres		

The U.S. Army Corps of Engineers authority to regulate waters of the U.S. is based, in part, on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404

of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to the discharge of dredged or fill material into waters of the U.S., including wetlands.

Based on a review of the information provided, eight (8) wetlands totaling 1.21 acres and 1 stream totaling 1,520 linear feet are located within the proposed review area. The hydrology of these aquatic resources flow into McPherson Run and eventually to the Ohio River (TNW) a section 10 Traditional Navigable Waterway. This office has determined that these waters **may** be jurisdictional waters of the United States in accordance with the Regulatory Guidance Letter for Jurisdictional Determinations issued by the U.S. Army Corps of Engineers in October 2016 (RGL No. 16-01). As indicated in the guidance, this **PJD is non-binding and** cannot be appealed (33 C.F.R. 331.2) and only provides a written indication that waters of the U.S, including wetlands, may be present on-site.

At this time you have requested a Preliminary Jurisdictional Determination with an option to request an approved JD later. However, for the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the streams and wetlands identified above will be evaluated as if they are jurisdictional waters of the United States.

If you have any questions, please contact Josh Shaffer at (412) 395-7121 or email Joshua.d.shaffer@usace.army.mil and reference project No. LRP-2017-1438 in all future correspondence with this office regarding this delineation.

Sincerely,

Jon T. Coleman
Acting Chief
Regulatory Branch

Enclosure

Copies Furnished:

- Joe Snyder (PA DEP)
- Vince Humenay (ECS Mid-Atlantic)
- Jason Gerhard (William H. Gordon Associates, Inc.)

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: September 1, 2017

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRP-2017-1438

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: PA County/parish/borough: Washington City: Cecil Township

Center coordinates of site (lat/long in degree decimal format):

Lat.: 40.31262 Long.: -80.15968

Universal Transverse Mercator:

Name of nearest waterbody: McPherson Run

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- [x] Office (Desk) Determination. Date: 9-18-2017
- [x] Field Determination. Date(s): 10-11-2017

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
see	table	within	PJD	Letter	

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Aquatic Resource map in Sept. 1, 2017 report.
- [x] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [x] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: _____.
- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [x] U.S. Geological Survey Hydrologic Atlas: _____.
  - [x] USGS NHD data.
  - [ ] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: Canonsburg.
- [ ] Natural Resources Conservation Service Soil Survey. Citation: _____.
- [ ] National wetlands inventory map(s). Cite name: _____.
- [ ] State/local wetland inventory map(s): _____.
- [ ] FEMA/FIRM maps: _____.
- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): google earth.
  or [x] Other (Name & Date): Sept. 1, 2017 report.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [ ] Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

SHAFFER.JOSHUA.DAVID.1247535116 Digitally signed by SHAFFER.JOSHUA.DAVID.1247535116 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=SHAFFER.JOSHUA.DAVID.1247535116 Date: 2017.12.13 07:56:49 -04'00'

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

LRP-2017-1438

Aquatic Resource ID	Lat	Long	Size or length	acres or LF	Resource Type	Geographic Authority
WL A	40.311877°	-80.156740°	0.04	ac	PEM	Section 404
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Stream A	40.312228°	-80.157024°	1,520	LF	Perennial	Section 404
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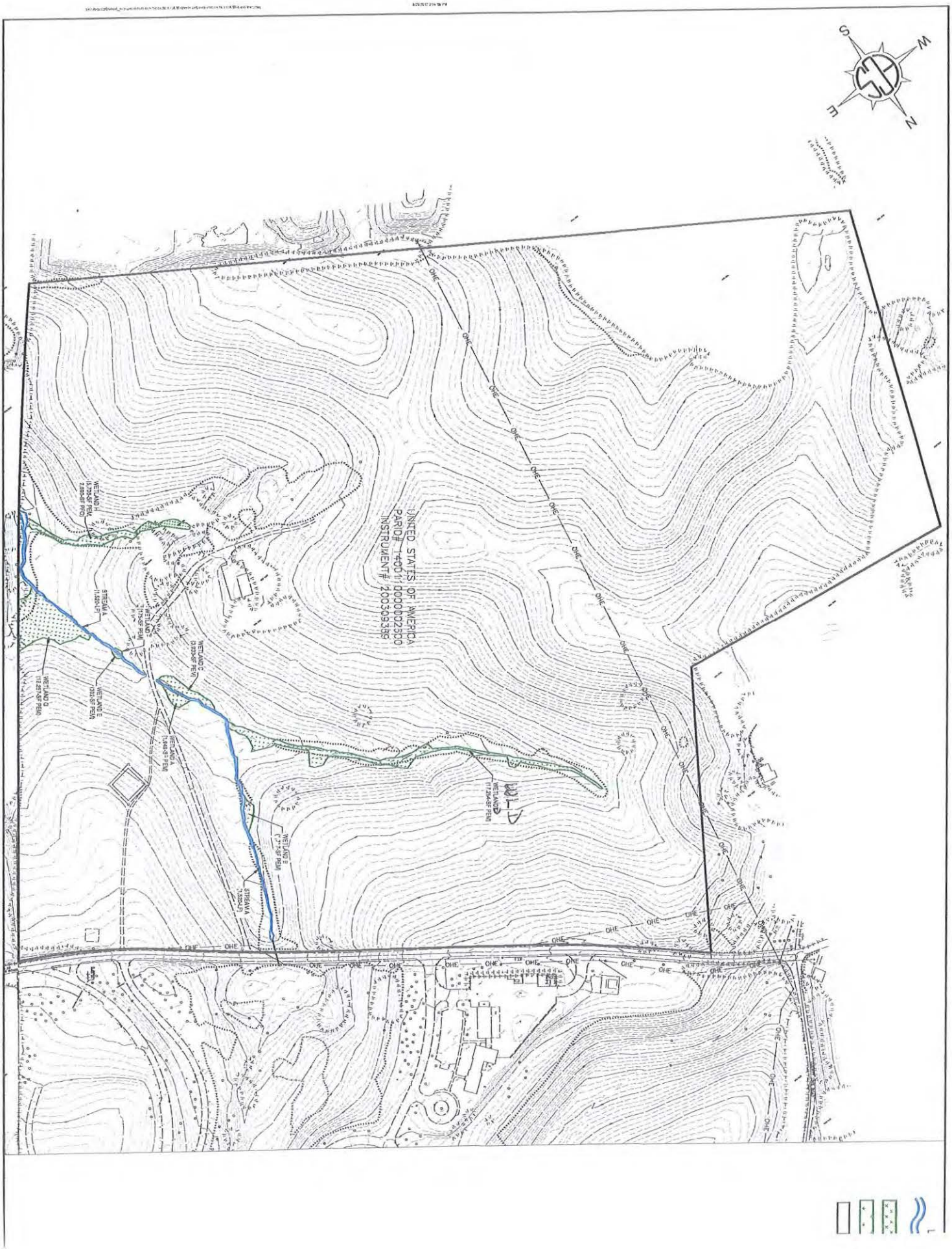


UNITED STATES OF AMERICA
PARID# 1400110000002500
INSTRUMENT# 200309389
WETLAND H
(5,708-SF PEM,
2,880-SF PFO)
STREAM A
(1,924-LF)
WETLAND C
(3,933-SF PEM)
WETLAND E
(302-SF PEM)
WETLAND G
(12,257-SF PEM)
WETLAND A
(1,949-SF PEM)
WETLAND B
(1,717-SF PEM)
STREAM A
(1,825-LF)
WETLAND D
(17,234-SF PEM)
OHE
S
W
E
N

APPENDIX D

PNHP PENNSYLVANIA NATURAL DIVERSITY INVENTORY RECEIPT

1. PROJECT INFORMATION

Project Name: **National Cemetary of the Alleghenies Expansion**
Date of Review: **4/5/2018 04:12:15 PM**
Project Category: **Development, New public/community development (school, library, church, museum)**
Project Area: **155.93 acres**
County(s): **Washington**
Township/Municipality(s): **CECIL**
ZIP Code: **15017; 15317**
Quadrangle Name(s): **CANONSBURG**
Watersheds HUC 8: **Upper Ohio**
Watersheds HUC 12: **Middle Chartiers Creek**
Decimal Degrees: **40.314211, -80.156992**
Degrees Minutes Seconds: **40° 18' 51.1602" N, 80° 9' 25.1702" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	**Conservation Measure**	**No Further Review Required, See Agency Comments**
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	**Avoidance Measure**	**See Agency Response**

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

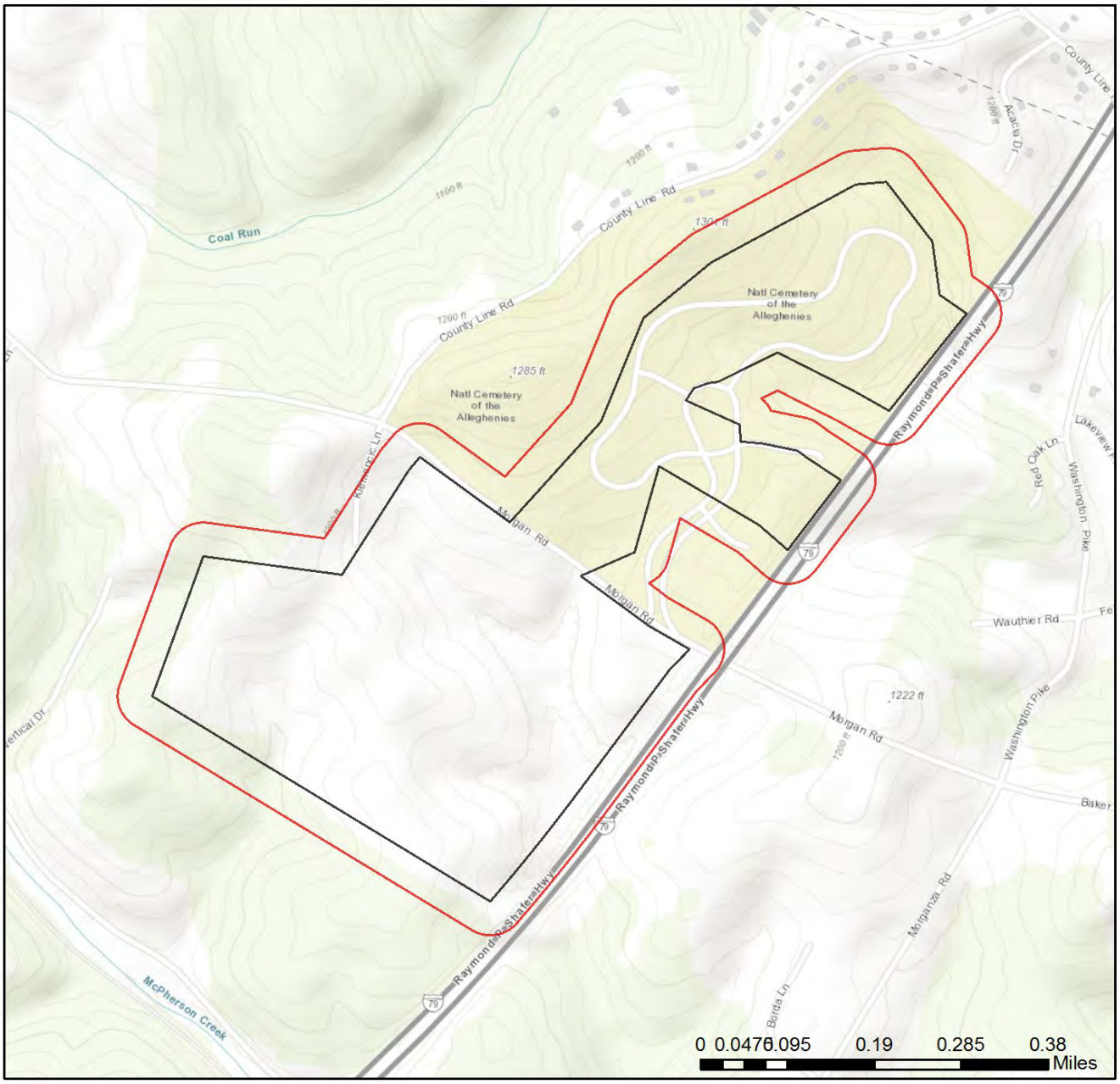
National Cemetary of the Alleghenies Expansion

Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

National Cemetary of the Alleghenies Expansion



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

RESPONSE TO QUESTION(S) ASKED

Q1: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).
Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q2: Is tree removal, tree cutting or forest clearing necessary to implement all aspects of this project?
Your answer is: Yes

Q3: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?
Your answer is: No

Q4: Will any tree removal be necessary to carry out any part of this project or activity? "Tree removal" is defined as cutting down, harvesting, destroying, trimming, or manipulating trees, saplings, or snags. [Round acres of tree removal up to the nearest acre (e.g., 1.2 acre becomes 2 acres).]
Your answer is: 2 to 10 acres of tree removal will occur.

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission
RESPONSE:

Conservation Measure: Potential impacts to state and federally listed species which are under the jurisdiction of both the Pennsylvania Game Commission (PGC) and the U.S. Fish and Wildlife Service may occur as a result of this project. As a result, the PGC defers comments on potential impacts to federally listed species to the U.S. Fish and Wildlife Service. No further coordination with the Pennsylvania Game Commission is required at this time.

PGC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Special Concern Species*

PA Department of Conservation and Natural Resources
RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service
RESPONSE:
Avoidance Measure: The proposed project is in the vicinity of a northern long-eared bat maternity roost(s). To avoid prohibited incidental take of northern long-eared bats during the pup season, do not conduct any tree removal from June 1 to July 31. Tree removal is defined as cutting down, harvesting, destroying, trimming, or manipulating trees, saplings, or snags. This seasonal restriction on tree removal is not required when removing hazardous trees for the protection of human life and property, as incidental take resulting from hazardous tree removal is exempted by the U.S. Fish and Wildlife Service's 4(d) rule (https://www.fws.gov/midwest/endangered/mammals/nlba).

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:
_____(Signature)

SPECIAL NOTE: **If you agree to implement the above Avoidance Measure, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).
***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____Fax:(_____)_____
Email:_____

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date