

**FINAL
ENVIRONMENTAL ASSESSMENT
PISCATAWAY CREEK MITIGATION SITE
CLINTON, MARYLAND**



Piscataway Creek Mitigation Site

**Prepared for: DEPARTMENT OF THE AIR FORCE
Joint Base Andrews-Naval Air Facility, Washington, Maryland Andrews AFB, MD 20762**

January 2016

Page intentionally left blank.

**FINAL Environmental Assessment for
Piscataway Creek Mitigation Site
at
7606 Woodyard Road, Clinton, Maryland**



Prepared for:

**DEPARTMENT OF THE AIR FORCE
Joint Base Andrews-Naval Air Facility, Washington, MD Andrews AFB, MD 20762**

January 2016

Page intentionally left blank.

**FINDING OF NO SIGNIFICANT IMPACT AND
FINDING OF NO PRACTICABLE ALTERNATIVE FOR THE
PISCATAWAY CREEK MITIGATION SITE
CLINTON, MARYLAND**

This Finding of No Significant Impact (FONSI) and Finding of No Practicable Alternative (FONPA) was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969; President's Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA, 40 Code of Federal Regulations (CFR) 1500-1508; and Environmental Impact Analysis Process, 32 CFR 989. The decision in this FONSI and FONPA is based upon information contained in the *Environmental Assessment (EA) for Piscataway Creek Mitigation Site, Clinton, Maryland*.

The purpose of the EA is to determine the extent of environmental impact that may result from proposed wetland mitigation at the Piscataway Creek Mitigation Site (PCMS) and to evaluate whether these impacts, if any, would be significant. The purpose of the Proposed Action is to develop 12.5 non-tidal, wetland mitigation units on the PCMS in order to offset both the impacts to 11.42 acres of wetlands and the temporal loss to wildlife habitat that occurred as part of the 2012 West Runway improvements. Section 404 (NAB 2010-60065-M07) and MDE Non-Tidal Wetlands and Waterways permits (10-NT00140/201060476) approved impacts to non-tidal wetlands as part of the West Runway improvement, but they also required that appropriate mitigation be conducted to compensate for any wetlands impacted as part of the West Runway project.

Description of Proposed Action and Alternatives

The alternatives that have been analyzed to accomplish the action include conducting wetland mitigation on the PCMS (Proposed Action) and the No-Action alternative. To be considered a viable mitigation site alternative for the 11.42 acres of non-tidal wetland impacts, the proposed mitigation site must possess a qualified chemical, physical and biological composition; lack ecological, cultural and historic constraints; and comply with a myriad of site selection criteria pursuant to Federal Rules on Compensatory Mitigation at 33 CFR 332 as overseen and regulated by the U.S. Army Corps of Engineers and the rules, policy and guidance authorized under the Maryland Non-Tidal Wetlands Protection Act as overseen and regulated by the Maryland Department of the Environment (MDE), as well as Section 106 of the National Historic Preservation Act, and Federal Aviation Administration (FAA) Advisory Circular (No. 150/5200-33B). Despite diligent attempts to provide this mitigation by JBA, the mitigation requirement remains.

The Proposed Action includes the preservation of 50.98 acres of non-tidal wetlands, the creation of 9.27 acres of non-tidal wetlands, and the restoration of 1.37 acres of non-tidal wetlands—for a total project area of 61.62 acres at the PCMS, which amounts to 12.5 wetland mitigation units. Activities required to implement this mitigation include using earth-moving equipment to modify existing grades, removal and eradication of invasive species, installation of deer exclusion fence, planting of native wetland vegetation plus maintenance and monitoring activities.

The proposed action alternative is analyzed in the EA. The No-Action Alternative is carried forward for analysis in accordance with Air Force Regulation 32 CFR 989.8 (d).

The Proposed Action is the only alternative that meets the selection criteria, in addition to having a net positive effect on the natural and human environment.

Decision

Based on the review of the EA, the Air Force has decided to proceed with the proposed wetland mitigation at the PCMS. The potential impacts to the human and natural environment were evaluated relative to the existing environment. For each environmental resource or issue, anticipated direct and indirect effects were assessed, considering both short-term and long-term project effects.

The proposed wetland mitigation would create up to 9.27 acres of new non-tidal wetlands, restore 1.37 acres of non-tidal wetlands, and preserve 50.98 acres of forested wetland habitat in perpetuity—resulting in a significant ecological uplift on the site, improved water quality, increased floodplain storage, improved wildlife habitat, and the creation of a valuable sink for greenhouse gas emissions. Furthermore, there exists an ongoing temporal loss to wildlife habit and wetland functions and values as a result of the 11.42 acres of wetlands that were filled at JBA in 2012 and for which no mitigation has been completed to date. The 12.5 mitigation units that will be created as part at the PCMS will offset both the loss of 11.42 acres of wetlands as well as the temporal loss to wildlife habitat functions and values.

The proposed action is expected to result in less than significant or no effects to land use, cultural resources, hazardous materials and waste management, environmental justice, and safety and occupational health. Unavoidable, short-term, adverse impacts associated with implementation of the Proposed Action would include: a temporary increase in fugitive dust and air emissions and intermittent noise during construction. However, these effects are considered minor, temporary and would be confined to the project footprint and immediate vicinity. Use of environmental controls and obtaining required permits and approvals would minimize these potential and temporary impacts.

Overall the analysis for this EA indicates that at the completion of the wetland mitigation at PCMS, there will be a net ecological uplift of the project area.

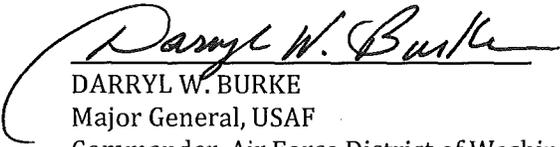
Conclusion

Finding of No Practicable Alternative

Considering the information contained herein (including the attached EA), and pursuant to the authority delegated by the Headquarters Air Force Order Mission Directive 1-18, paragraph 6, the Air Force finds that there is no practicable alternative to completing the wetland mitigation on the Piscataway Creek Mitigation Site. Completion of this mitigation will compensate for the 11.42 acres of wetlands that were filled during the 2012 project improvements during the West Runway project and bring the JBA into compliance with permit conditions issued for the West Runway project.

Finding of No Significant Impact

In accordance with the CEQ regulations implementing NEPA and the Air Force Environmental Impact Analysis Process, the Air Force concludes that the Proposed Action will have a net positive impact on the quality of the human environment and that the preparation of an environmental impact statement is not warranted.


DARRYL W. BURKE
Major General, USAF
Commander, Air Force District of Washington


Date

Cover Sheet

Environmental Assessment for Piscataway Creek Mitigations Site Clinton, MD

Lead Agency: Department of the Air Force

Proposed Action: Earthwork grading and planting work associated with the wetland restoration activities that are being proposed at the Piscataway Creek Wetland Mitigation site.

Written comments and inquiries regarding this document should be directed to:

Anne Hodges
NEPA/EIAP manager, 11 CES Environmental
3466 North Carolina Ave.
Joint Base Andrews, MD 20762

Report Designation: Environmental Assessment (EA)

Abstract: The Air Force District Washington (AFDW) conducted construction activities between 2010 and 2012 to repair the west runway (01L/19R) at Joint Base Andrews-Naval Air Facility, Washington (JBA), Maryland in Prince George's County, Maryland (formerly Andrews Air Force Base). These construction activities resulted in 11.42 acres of permanent impacts to non-tidal wetlands, which require compensatory mitigation.

This EA has been prepared to analyze the potential environmental impacts of the Proposed Action or No-Action alternative to mitigate for the aforementioned 11.42 acres of wetland impacts, in accordance with the National Environmental Policy Act (NEPA) of 1969, 42 United States Code (USC) Section 4231, et seq., as amended in 1975; Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) Section 1500-1508; and Environmental Impact Analysis Process, 32 CFR Section 989.

The Proposed Action is the preferred alternative to compensate for the 11.42 acres of non-tidal wetland impacts and the temporal loss to wildlife habitat functions and values, that occurred as a result of the West Runway repair activities. The Proposed Action will offset both the 11.42 acres of wetland loss and the associated temporal loss to wildlife habitat by developing 12.5 non-tidal, wetland mitigation units on the Piscataway Creek Mitigation Site (PCMS). The PCMS is privately owned by the John M. and Sara R. Walton Foundation and is located 1.5 miles southeast of the JBA West Runway at 7606 Woodyard Road, Clinton, Maryland in Prince George's County (See Figure 1). The PCMS is situated on a 62.62 acre portion of the larger Walton Property (126.03 acres) that is adjacent to and within the floodplain of Piscataway Creek, which flows through the property from northwest to southeast. The PCMS is located in the Middle Potomac Watershed USGS HUC 8 - 02070010 and Piscataway Creek MD 8-Digit Watershed - 02140203 (See Figure 2).

The Proposed Action will result in the development of non-tidal wetland mitigation at the PCMS. The mitigation project will entail the preservation of 50.98 acres of non-tidal wetlands, the creation of up to 9.27 acres of non-tidal wetlands, and the restoration of 1.37 acres of non-tidal wetlands—for a total project area of 62.62 acres. Activities required to complete this mitigation include using earth-moving equipment to modify existing grades, grading, removal and eradication of invasive species, planting of native wetland vegetation, installation of deer exclusion fencing, and associated

maintenance and monitoring activities.

This EA evaluates potential construction related impacts associated with the Proposed Action to the human and natural environment. In addition, the EA evaluates the No-Action alternative, which would be to do nothing and which would be non-compliant with the permit requirements.

The Proposed Action is expected to result in less than significant or no effects to land use, groundwater, floodplains, cultural resources, hazardous materials and waste management, environmental justice, and safety and occupational health. Upon completion, the wetland mitigation project would result in an overall ecological uplift of function and value on this site and within the watershed. Most importantly, implementing the Proposed Action would provide the mitigation required for the 11.42 acres of wetland impacts that occurred during the construction of the west runway improvements.

During construction, the Proposed Action would have temporary and minor impacts to vegetation, wildlife, surface water resources, local air quality, and existing noise levels within the immediate vicinity of the project limits. Additional, minor, permanent, and beneficial impacts to soils and topography are expected due to the grading and filling of areas. Any adverse impacts from erosion or these impacts will be minimal or most likely eliminated entirely due to the implementation of an approved Soil Erosion and Sediment Control (SESC) Plan.

The No-Action Alternative would have long-term adverse impacts to vegetation, wildlife, groundwater, and surface water resources, since 11.42 acres of wetlands have already been permanently impacted as a result of the West Runway project that was completed at JBA in 2012—no action would continue this temporal impact to wildlife habitat functions and values. If this proposed alternative is not selected, the mitigation for these wetland impacts would not occur. Furthermore, there is a severe dearth of available wetland mitigation sites in this highly urbanized region and watershed, which explains the lag time between the permanent wetland impacts and implementation of the required mitigation. Additionally, if JBA does not complete the mitigation required by MDE and USACE as part of the permit requirements associated with the West Runway project, they would be in violation of their permit requirements. The failure to comply with past permit conditions may prevent JBA from receiving permits from MDE and/or USACE for future development projects on the base.

To implement the Proposed Action, various federal and state reviews and permits would be required. Potential permits and environmental plans include, but are not limited to, the following:

Permit	Status
Section 404 Permit for working in a wetland (NAB 2010-60065-M07,)	Issued 09/02/10 for West Runway Repairs
MDE Non-Tidal Wetlands and Waterways Permit (10-NT00140/201060476)	Issued 09/15/2010 for West Runway Repairs
Modification to Section 404 Permit for working in a wetland (NAB 2010-60065-M07,)	Issued 10/05/11 Permit modification for West Runway Repair
Modification to MDE Non-Tidal Wetlands and Waterways Permit (10-NT00140/201060476)	Issued 09/30/11 Permit modification for West Runway Repair
Phase I Mitigation Plan Approval	Issued on 8/31/15 by MDE, Approved by USACE Regulatory on 9/24/15
Phase II Mitigation Plan Approval	Pending
Soil Erosion Control Plan Approval, Prince George's County Soil Conservation District	Pending
General Permit for Stormwater Associated with Construction Activities from the Maryland Department of the Environment (MDE)	Pending
Waterways Modification of 10-NT00140/201060476 to include specific onsite improvements involving modification to regulated water courses.	Pending

These permits and approvals have been or will be obtained prior to the start of construction.

Page intentionally left blank.

Contents

1	INTRODUCTION	1
1.1	PURPOSE AND NEED FOR ACTION	1
1.2	SCOPE OF EA	1
1.3	DECISION TO BE MADE	2
1.4	APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION	2
2	DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	5
2.1	SELECTION OF CRITERIA FOR ALTERNATIVES	5
2.2	ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY	7
2.3	DESCRIPTION OF THE PROPOSED ALTERNATIVES	11
2.3.1	Proposed Action	11
2.3.2	No-Action Alternative	13
2.4	IDENTIFICATION OF PREFERRED ALTERNATIVE	13
3	AFFECTED ENVIRONMENT	14
3.1	LAND USE	14
3.2	SOILS & TOPOGRAPHY	14
3.3	AIR QUALITY	16
3.4	CLIMATE	20
3.5	WATER RESOURCES – SURFACE WATERS & GROUNDWATER	20
3.6	FLOODPLAINS	21
3.7	WETLANDS	21
3.8	VEGETATION	22
3.9	WILDLIFE	23
3.9.1	Threatened and Endangered Species	23
3.10	CULTURAL RESOURCES	24
3.11	HAZARDOUS MATERIALS AND WASTE MANAGEMENT	24
3.12	TRANSPORTATION	24
3.13	STORMWATER	25
3.14	SOLID WASTE MANAGEMENT	25
3.15	NOISE	25
3.16	SOCIOECONOMICS	25
3.16.1	Population and Demographics	25
3.16.2	Economy and Income	26
3.17	ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN	27
3.18	SAFETY AND OCCUPATIONAL HEALTH	27
4	ENVIRONMENTAL CONSEQUENCES	28
4.1	LAND USE	29
4.1.1	Proposed Action	29
4.1.2	No-Action	30
4.2	SOILS & TOPOGRAPHY	30
4.2.1	Proposed Action	30
4.2.2	No-Action	31
4.3	AIR QUALITY	31
4.3.1	Proposed Action	31
4.3.2	No-Action	31

4.4	CLIMATE.....	31
4.4.1	Proposed Action	31
4.4.2	No-Action.....	32
4.5	WATER RESOURCES – surface waters & groundwater.....	32
4.5.1	Proposed Action	32
4.5.2	No-Action.....	33
4.6	FLOODPLAINS.....	33
4.6.1	Proposed Action	33
4.6.2	No-Action.....	33
4.7	WETLANDS	33
4.7.1	Proposed Action	33
4.7.2	No-Action.....	34
4.8	VEGETATION.....	34
4.8.1	Proposed Action	34
4.8.2	No-Action.....	35
4.9	WILDLIFE.....	35
4.9.1	Proposed Action	35
4.9.2	No-Action.....	36
4.10	CULTURAL RESOURCES.....	36
4.10.1	Proposed Action.....	36
4.10.2	No-Action.....	36
4.11	HAZARDOUS MATERIALS AND WASTES.....	37
4.11.1	Proposed Action.....	37
4.11.2	No-Action.....	37
4.12	TRANSPORTATION.....	37
4.12.1	Proposed Action.....	37
4.12.2	No-Action.....	37
4.13	STORMWATER SYSTEMS	37
4.13.1	Proposed Action.....	37
4.13.2	No-Action.....	38
4.14	SOLID WASTE MANAGEMENT	38
4.14.1	Proposed Action.....	38
4.14.2	No-Action.....	38
4.15	NOISE.....	38
4.15.1	Proposed Action.....	38
4.15.2	No-Action.....	39
4.16	SOCIOECONOMICS.....	39
4.16.1	Proposed Action.....	39
4.16.2	No-Action.....	39
4.17	ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN	40
4.17.1	Proposed Action.....	40
4.17.2	No-Action.....	40
4.18	SAFETY AND OCCUPATIONAL HEALTH.....	40
4.18.1	Proposed Action.....	40
4.18.2	No-Action.....	40
4.19	CUMULATIVE IMPACTS.....	40
4.20	UNAVOIDABLE ADVERSE IMPACTS	41
4.21	RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	42

4.22	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES	42
5	LIST OF ORGANIZATIONS AND INDIVIDUALS CONTACTED, REVIEWERS, AND PREPARERS	
	43	
5.1	Individuals Contacted and Reviewers	43
5.2	List of Preparers.....	43
6	References.....	44

LIST OF TABLES

Table 3-1:	National Ambient Air Quality Standards.....	17
Table 3-2:	De Minimis Exemption Levels for Conformity Determinations in Nonattainment Areas	19
Table 3-3:	List of Various Plant Species at PCSMS.....	22
Table 3-4:	Local Population and Demographic Statistics.....	26
Table 3-5:	Unemployment Rates, 2014 and 2015 (Aug/Sep).....	26
Table 3-6:	Environmental Justice Data.....	27
Table 4-1:	Baseline Conditions Screening Matrix.....	28
Table 4-2:	Typical Noise Levels of Principal Construction Equipment.....	39

LIST OF APPENDICES

Appendix A: List of Figures

- Figure 1 – Proximity of Piscataway Creek Mitigation Site to Joint Base Andrews
- Figure 2 – Watershed boundaries
- Figure 3 – Aerial photo of project site
- Figure 4 – Street map of project site
- Figure 5 – USGS map of project site
- Figure 6 – Soil map of project site
- Figure 7 – FEMA floodplain map of project site
- Figure 8 – Adjacent land use of project site
- Figure 9 – Maryland DNR mapped wetlands on project site
- Figure 10 – Piscataway Creek Mitigation Site Phase I Design Plans

Appendix B: Agency Correspondence

Appendix C: Proposed Action Site Photographs

Appendix D: Phase I Mitigation Plan

Appendix E: Wetland Delineation Plan

Appendix F: Costal Zone Consistency Determination

Page intentionally left blank.

1 INTRODUCTION

Joint Base Andrews-Naval Air Facility, Washington, Maryland (referred to herein as JBA; formerly Andrews Air Force Base [Andrews AFB]), is located in Prince George's County, Maryland directly east of U.S. Interstate 95/495 and between Maryland State Route 4 (Pennsylvania Avenue) to the north and Maryland State Route 5 (Branch Avenue) to the south. The Base encompasses 4,346 acres and is home to more than 20,000 active duty military personnel, civilian employees, and family members.

Between 2010 and 2012, JBA engaged in construction activities to make improvements to Runway 01L/19R, also known as the West Runway. The project resulted in unavoidable permanent impacts to 11.23 acres of emergent, non-tidal wetlands and 0.19 acres of scrub/shrub, non-tidal wetlands—a total of 11.42 acres of permanent wetland impacts. As part of the conditions in the permits that authorized the West Runway improvements, issued by Maryland Department of the Environment (MDE) and the United States Army Corps of Engineers (USACE), JBA is responsible for providing compensatory mitigation for these permanent wetland impacts. However, despite JBA's diligent attempts to provide compensatory wetland mitigation for impacts related to the West Runway Repair, the mitigation requirements for the West Runway project remain outstanding.

As part of this EA, JBA is proposing an action to conduct the required wetland mitigation on the Piscataway Creek Mitigation Site (PCMS). The PCMS is privately owned by the John M. and Sara R. Walton Foundation and is located approximately 1.5 miles southeast of the JBA West Runway at 7606 Woodyard Road, Clinton, Maryland in Prince George's County (See Figure 1). The PCMS is situated on a 62.62 acre portion of the larger Walton Property (126.03 acres) that is adjacent to and within the floodplain of Piscataway Creek, which flows through the property from northwest to southeast. Please note that JBA represents a significant portion of the headwaters of the Piscataway Creek. The PCMS is located in the Middle Potomac Watershed USGS HUC 8 - 02070010 and Piscataway Creek MD 8- Digit Watershed - 02140203 (See Figure 2). JBA was issued permits by MDE (10-NT00140/201060476) and USACE (NAB 2010-60065-M07) in 2010 for the West Runway Repair Project with additional modifications issued by both agencies in 2011.

1.1 PURPOSE AND NEED FOR ACTION

The purpose of this action is to implement required, non-tidal compensatory mitigation on the PCMS generating 12.5 wetland mitigation units. These 12.5 wetland mitigation units will fully compensate for the 11.42 acres of permanent, non-tidal wetland impacts and the temporal loss associated with the lag in implementing this required mitigation. The PCMS project, as proposed, will fully satisfy the mitigation mandated by both the Army Corps of Engineers, Baltimore District, Regulatory Branch as well as the Maryland Department of Environment in the aforementioned permits. The West Runway project was fully completed in 2012, therefore it is imperative that appropriate compensatory mitigation is implemented as soon as possible.

1.2 SCOPE OF EA

The purpose of this Environmental Assessment (EA) is to evaluate the direct and indirect impacts associated with the proposed wetland mitigation project on the PCMS.

This EA was prepared to address the environmental impacts of the Proposed Action in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended. This document identifies

and evaluates the potential environmental, cultural resources, and socioeconomic effects associated with implementing the Proposed Action, which is implementing the preferred alternative (developing mitigation on the PCMS site) and the potential effects of the No-Action alternative. Section 2.0 contains the Description of the Proposed Actions and Alternatives. Section 3.0 (Affected Environment) of this EA describes the existing environmental, cultural, and socioeconomic conditions that fall within the scope of this EA. Section 4.0 describes the environmental, cultural, and socioeconomic consequences anticipated as a result of implementing the Proposed Action.

The EA focuses on impacts that may occur in the footprint or within immediate vicinity of the proposed mitigation project, which is shown as the project area on Figure 3. This document analyzes direct effects (those resulting from the alternatives and occurring at the same time and place) and indirect effects (those distant or occurring at a future date). This EA has been prepared to analyze the potential impacts associated with the Proposed Action in accordance with the:

- National Environmental Policy Act (NEPA) of 1969, 42 United States Code (U.S.C.) 4231 *et seq.*, as amended in 1975
- Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) Section 1500-1508
- U.S. Air Force Environmental Impact Analysis Process, 32 CFR Section 989

1.3 DECISION TO BE MADE

The Chairman of the Environmental Safety and Occupational Health Committee at Joint Base Andrews is responsible for deciding which alternative to adopt under normal circumstances. In the event floodplains or wetlands are impacted, the Major Command (MAJCOM) is responsible. The decision would be to implement either the Proposed Action or the No-Action alternative. If the No-Action alternative is selected, the proposed wetland mitigation work on the PCMS will not be completed nor would the outstanding compensatory mitigation requirement be satisfied and JBA would be found in violation for non-compliance with their permit requirements. This decision will be based on the findings contained within this EA.

1.4 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

This EA has been prepared in compliance with NEPA; other federal statutes, such as Endangered Species Act, Clean Water Act, Clean Air Act, and National Historic Preservation Act; executive orders; and other applicable state statutes and regulations. Applicable Federal statutes, standards, and directives pertinent to this EA include, but are not limited to, the following:

- Section 404 of the Clean Water Act as amended (Public Law 9-17)
- Comprehensive Environmental Response, Compensation and Liability Act
- National Environmental Policy Act of 1969 (Public Law 9-90)
- National Historic Preservation Act of 1966, as amended (Public Law 8-65)
- Solid Waste Disposal Act of 1965, as amended (42 USC. 3251 *et seq.*, 6901 *et seq.*)
- Watershed Protection and Flood Prevention Act of 1954 (16 USC 1101, *et.*

In order to implement the Proposed Action, various federal and state reviews and permits would be required. Potential permits and environmental protection plans include, but are not limited to, the

following:

Permit	Status
Section 404 Permit for working in a wetland (NAB 2010-60065-M07,)	Issued 09/02/10 for West Runway Repairs
MDE Non-Tidal Wetlands and Waterways Permit (10-NT00140/201060476)	Issued 09/15/2010 for West Runway Repairs
Modification to Section 404 Permit for working in a wetland (NAB 2010-60065-M07,)	Issued 10/05/11 Permit modification for West Runway Repair
Modification to MDE Non-Tidal Wetlands and Waterways Permit (10-NT00140/201060476)	Issued 09/30/11 Permit modification for West Runway Repair
Phase I Mitigation Plan Approval	Issued on 8/31/15 by MDE, Approved by USACE Regulatory on 9/24/15
Phase II Mitigation Plan Approval	Pending
Soil Erosion Control Plan Approval , Prince George’s County Soil Conservation District	Pending
General Permit for Stormwater Associated with Construction Activities from the Maryland Department of the Environment (MDE)	Pending
Waterways Modification of 10-NT00140/201060476 to include specific onsite improvements involving modification to regulated water courses.	Pending

Agency coordination was accomplished in accordance with 40 CFR 1501.6, by way of coordination letters sent to the following agencies as part of the Phase 1 Mitigation Proposal submitted to the MDE and USACE in August 2015. Letters were sent to the following agencies and included in Appendix B: USDA APHIS Wildlife Service (6/18/15), National Marine Fisheries Service (4/20/15), Maryland Department of Natural Resource - Wildlife and Heritage Service (4/20/15), Maryland Department of Natural Resources - Integrated Policy and Review Unit (4/22/15), U.S. Fish and Wildlife Service (4/20/15), and the Maryland Historic Trust (4/20/15).

Responses to the coordination letters were received from the following agencies: National Marine Fisheries Service, Maryland Department of Natural Resource - Wildlife and Heritage Service, and the U.S. Fish and Wildlife Service (Appendix B). In an October 20, 2015 response, the Maryland Historical Trust stated that the proposed mitigation project on the PCMS would have “no adverse affect on historic properties.” Additionally a December 9, 2015 response from the Department of the Air Force Headquarters 11th Wing cited that the proposed PCMS did not pose a significant additional wildlife hazard to flying operations or safety at JBA.

Tribal Consultation — As of the January 14, 2015 Federal Register Notice, there are no Federally Recognized Indian Tribes/Nations in Maryland. Although there are no federally recognized tribes in Maryland, the Powhatan is a State-recognized tribe and is anticipated to be federally recognized in the near future. JBA is not required by the National Historic Preservation Act (NHPA) to consult with this tribe; however, JBA should prepare to do so, if necessary, for future projects. JBA will consider Native American concerns in base planning, complying with the American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act.

During the preparation of this EA, it was determined that no significant or adverse impacts would occur as a result of implementing the Proposed Action. Therefore, a Notice of Intent to prepare an

environmental impact statement was not published. Notices of Availability (NOA) announcing the availability of the EA for public review and comment were placed in the Enquirer Gazette on December 17, 2015, thus starting a 30-day public review period. Copies of the draft EA, Finding of No Significant Impact (FONSI), and Finding of No Practicable Alternative (FONPA) were placed in the Joint Base Andrews base library and the Upper Marlboro Branch library. Copies for intergovernmental review were delivered on December 16, 2015 to the Maryland State Clearinghouse, Maryland Department of the Environment, Maryland Department of Natural Resources, United States Fish and Wildlife Service, and the National Capital Planning Commission. Copies of the NOA and distribution letter can be found in Appendix B.

2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This Section describes the alternatives the Air Force developed and analyzed to fully satisfy the outstanding, non-tidal, wetland mitigation required by the MDE and USACE. As discussed further in this section, JBA considered reasonable alternatives to the Proposed Action, but eliminated them for reasons listed in section 2.2. The No-Action alternative is carried forward for analysis in accordance with 32 CFR Section 989.

2.1 SELECTION OF CRITERIA FOR ALTERNATIVES

To be considered a viable mitigation site alternative for the 11.42 acres of non-tidal wetland impacts, the proposed mitigation site must possess a qualified chemical, physical and biological composition; and lack ecological, cultural and historic barriers. In addition the proposed site must comply with a myriad of site selection criteria pursuant to Federal Rules on Compensatory Mitigation at 33 CFR 332 rules, as overseen and regulated by the U.S. Army Corps of Engineers, and the rules, policy and guidance authorized under the Maryland Non-Tidal Wetlands Protection Act, as overseen and regulated by the Maryland Department of the Environment (MDE), as well as Section 106 of the National Historic Preservation Act, and Federal Aviation Administration (FAA) Advisory Circular (No. 150/5200-33B).

Based on the aforementioned rules, mitigation credits could be purchased from an approved wetland mitigation bank, but there is currently no approved mitigation bank that services the area where the West Runway wetland impacts occurred. The rules potentially also allow for a contribution to the In-Lieu-Fee (ILF) program for certain wetland impacts, but this option is also not available for the West Runway project. For one, the ILF program is being reauthorized and is not currently available as an option to any applicant. Secondly, all other options must be fully exhausted before an ILF contribution is made and typically major fills (>5 ac) are not permitted to make ILF contributions at all. As such, the alternative analysis focused on locating an appropriate site where wetland mitigation could occur to compensate for the 11.42 acres of non-tidal wetland impacts—exclusive of any temporal losses of lost wetland habitat, functions and values.

The wetland mitigation guidance defined by MDE is concurrent with or more conservative than USACE guidance, so for the purposed of selection criteria it was decided that MDE guidance would be the primary driver in terms of identifying suitable mitigation sites. According to MDE guidance documents,¹ the goal of mitigation is to compensate for lost nontidal wetland acreage and functions, which is necessary for the State of Maryland to attain the overall goal of "no net loss" of nontidal wetland acreage and functions. In order to achieve the goal of "no net loss" of acreage and function, MDE requires a replacement ratio for permanent wetland impacts. The replacement ratio varies, depending on the type of wetland habitat impacted. The West Runway project resulted in 11.23 acres of emergent non-tidal wetlands and 0.19 acres of scrub/shrub non-tidal wetlands. According to MDE guidance, emergent nontidal wetlands should be replaced at a 1:1 ratio and scrub-shrub wetlands should be replaced at 2:1 ratio. On a case-by-case basis, MDE also allows some credit for enhancement of existing, but degraded wetlands, and partial credit for the preservation of wetlands that are part of a larger wetland restoration project. Given these replacement ratios, JBA is required to provide 11.61 acres of wetland restoration to compensate for the 11.42 acres of

¹ Maryland Nontidal Wetland Mitigation Guidance, prepared by Maryland Nontidal Wetlands and Waterways Division, Second edition January 2011. Performance Standards and Monitoring Protocol for Permittee-Responsible Nontidal Wetland Mitigation Sites, April 2015, issued by Maryland Department of the Environment and the U.S. Department of the Army Corps-Baltimore District

wetland impacts that occurred as part of the West Runway project (11.23 acres for the 11.23 acres of emergent wetland impacts at a 1:1 replacement ratio, and 0.38 acres for 0.19 acres of scrub-shrub wetland impacts at a 2:1 replacement ratio).

MDE guidance also defines a hierarchy as to where the mitigation should be located. According to this guidance, initial efforts at locating a mitigation site should be focused on conducting the mitigation on the same site where the impacts occurred. The 11.42 acres of wetland impacts occurred as a result of improvements to the West Runway that were executed within the boundaries of JBA. JBA is an active, military air facility, and due to the fact that the base contains an active airport in addition to ongoing military missions within the boundaries of JBA, onsite mitigation is not an option. Further limitations to onsite mitigation exists as per the 2007 U.S. Department of Transportation (USDOT), Federal Aviation Administration (FAA) Advisory Circular (No. 150/5200-33B) which discusses potential wildlife hazards to airplanes and airline facilities. According to the FAA Circular certain types of wetland restoration/mitigation may attract wildlife hazards (primarily large waterfowl), therefore where feasible or where deemed that such activities would create a wildlife hazard and increase the probability of a strike, wetland mitigation projects should be located 10,000 feet from any airports serving turbine-powered aircraft—the types of aircraft utilizing JBA airports. Given the need to maintain land within JBA available for mission related objectives, as well the increased risks of creating a wetland in the immediate vicinity of active runways, siting a wetland mitigation project on JBA is not feasible.

Continuing with the mitigation hierarchy guidance set by MDE, MDE recommends that the site search should begin within the same eight-digit state watershed (Piscataway Creek Watershed-02140203) and then expand into increasingly larger sub-watersheds. Consideration is also given to sites that are in the same county as the authorized wetland loss, should the proposed mitigation be located in a drainage basin that is different from the original impacts.

As such, based on the acreage requirements set by the replacement ratios and the geographic requirements set by the MDE guidance, as well as other criteria, the alternatives analysis focused on finding off-site mitigation sites that were at least 11.6 acres in size, starting in the Piscataway Creek Watershed (MDE 8 Digit), and then radiating outward to surrounding watersheds. Potential sites were then further evaluated to determine if they would support wetland restoration. As per MDE 2011 guidance, when evaluating whether a site would make an acceptable mitigation site, land that is considered for mitigation should have one or more of the following physical characteristics:

- Former wetlands that have been effectively drained for agricultural purposes (prior converted cropland);
- Former wetlands that may be degraded;
- Existing wetlands that are degraded, such as by partial drainage;
- Wetlands in agricultural production (farmed wetlands);
- Areas connected to existing nontidal wetlands, waterways or within the 100-year floodplain;
- Disturbed areas, such as sand and gravel mines; and

In addition to being identified as a preference in state and federal rules/guidance, it is well understood that larger, contiguous mitigation sites are capable of reaching self-sustainable equilibrium over time and are more effective at replacing lost functions and values, versus smaller isolated patches of wetland mitigation. This approach has been embraced by MDE and the USACE

Baltimore District and was a desired outcome in discussions with each agency regarding mitigation site identification and selection. In addition, those sites that were formerly comprised of and/or located adjacent to the targeted community to be restored possess a higher probability of success. Finally, the most important and defining factor of any wetland mitigation project is a viable source of hydrology that either exists or can be re-established, established or enhanced. Taking into account all of the aforementioned requirements, including the willingness of a property owner to allow wetland mitigation on their land, JBA identified and analyzed potential alternatives.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

The Middle Potomac Watershed is one of the most urbanized in the state of Maryland. There is a dearth of suitable mitigation sites and particularly those of scale (greater than 2 acres), which are capable of generating the 12.5 non-tidal wetland mitigation units required by JBA. Furthermore in many cases the sites that are most appropriate for mitigation are difficult to secure because many landowners are not willing to sell or place a permanent conservation easement on their land or a portion thereof. This conclusion is based on the results of JBA's previous attempts, as described below, to identify and secure a suitable non-tidal wetland mitigation site. In addition to JBA's own efforts (outlined below), JBA's consultants also investigated over 30 additional sites in the Middle Potomac. The consultants met the same difficulties, where sites were not large enough, mitigation was not technically feasible or private landowners were not willing to sell or permanently conserve their land.

JBA investigated the possible use of mitigation banks and other wetland mitigation opportunities within its eight-digit State watersheds (02140201-Potomac River Upper Tidal; 02140203-Piscataway Creek) and six-digit State watershed (021402 - Washington Metropolitan) as well as an adjacent six-digit State watershed (021401-Lower Potomac River). There were no mitigation banks available within these areas that could support mitigation for 11.42 acres of non-tidal wetland impacts. The search for "in-kind" wetland mitigation included disturbed areas, areas in agricultural production, former wetland areas that may now be degraded, areas adjacent or connected to existing non-tidal wetlands, waterways or within the 100-year floodplain, and areas that are accessible to necessary construction equipment.

The alternative sites that were investigated and eliminated from further analysis are listed below, including details pertaining to the dismissal of each alternative site. The most common criteria that were not met or were areas of concern were "Property Availability", "Environmental Factors", and "Within FAA Separation Criteria".

Meetinghouse Creek Site, Including Good Samaritan Park

The area of Meetinghouse Creek, including Good Samaritan Park, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there is minimal acreage to support "in-kind" wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Greenhouse Site (Meetinghouse Creek)

The area of the Greenhouse Site (Meetinghouse Creek), was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there was not enough acreage to provide the required mitigation and other factors limited the ability to develop “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Tributary to Meetinghouse Creek Site

The area along a Tributary to Meetinghouse Creek, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there is minimal acreage to support “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Yuma Park Site

The Yuma Park site, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there was not enough acreage to provide the required mitigation and other factors limited the ability to develop “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Piscataway Creek Site, Upstream of South Perimeter Road

The area along the Piscataway Creek, upstream of South Perimeter Road, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there was not enough acreage to provide the required mitigation and other factors limited the ability to develop “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Area. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Piscataway Creek Site, Downstream of South Perimeter Road

The area along the Piscataway Creek, downstream of South Perimeter Road, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there was not enough acreage to provide the required mitigation and other factors limited the ability to develop “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Tributary to Charles Branch Site

The area along a Tributary to Charles Branch was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there was not enough acreage to provide the required mitigation and other factors limited the ability to develop “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Tributary to Cabin Branch Site, Between Patrick Avenue and Marlboro Pike

The area along a Tributary to Cabin Branch, between Patrick Avenue and Marlboro Pike, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there was not enough acreage to provide the required mitigation and other factors limited the ability to develop “in-kind” wetland mitigation..
- FAA Separation Criteria: The site is located within the FAA Separation Area. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Tributary to Cabin Branch Site, Between Patrick Avenue and Pennsylvania Avenue

The area along a Tributary to Cabin Branch, between Patrick Avenue and Pennsylvania Avenue, was deemed not feasible due to the following constraints:

- Property Availability: While the property is located on main base JBA, there is minimal acreage to support “in-kind” wetland mitigation.
- FAA Separation Criteria: The site is located within the FAA Separation Criteria. Completion of a wetland mitigation project at the site could potentially increase aircraft-wildlife strikes.

Davidsonville Transmitter Station Site

Areas on the Davidsonville Transmitter Station Site were deemed not feasible due to the following constraints:

- Proximity to Watershed of Wetland Impacts: While the site is located on JBA property, it is too far from the watershed where wetlands were impacted to successfully serve as a site for wetland mitigation.

Brandywine Receiver Site

Multiple areas on the Brandywine Receiver Site were deemed not feasible due to the following constraints:

- Environmental Factors: Rare, Threatened and Endangered (RTE) species were observed on the site during surveys. Also, extensive grading would be required to potentially reach a groundwater source making achievement of wetland hydrology questionable. Both MDE and USACE drafted letters on December 12, 2011 and January 6, 2012, respectively, stating that both agencies did not deem the Brandywine Site as a feasible wetland mitigation site due to the present of RTE species (see Appendix B).

Charles County Privately Owned Zekiah Swamp Site

The Charles County privately owned site along the Zekiah Swamp was deemed not feasible due to the following constraints:

- Property Availability: During the course of investigating site suitability, it was determined that the property would not be available for use for wetland mitigation.
- Environmental Factors: While coordination with Maryland Department of Natural Resource (MDNR) identified that there were potential rare, threatened and endangered (RTE) species on the site, complete surveys were not accomplished due to determination of property unavailability.

Brandywine Road Site Near Lee Acres Drive (Maryland-National Capital Park and Planning Commission (M-NCPPC) Site)

The Brandywine Road Site near Lee Acres Drive was deemed not feasible due to the following constraints:

- Property Availability: During the course of investigating site suitability, it was determined that the property would not be available for use for wetland mitigation.
- Environmental Factors: It was determined during a field visit that proposed sources of hydrology were questionable; however, this was not fully investigated prior to determination of property unavailability.

Dyson Road Site (M-NCPPC Site)

The Dyson Road Site was deemed not feasible due to the following constraints:

- Property Availability: During the course of investigating site suitability, it was determined that the property would not be available for use for wetland mitigation.
- Environmental Factors: It was determined during a field visit that extensive grading would likely be required to achieve wetland hydrology, raising questions about the sites viability; however, this was not fully investigated prior to determination of property unavailability.

North Keys Community Park Site (M-NCPPC Site)

The North Keys Community Park Site was deemed not feasible due to the following constraints:

- Property Availability: During the course of investigating site suitability, it was determined that the property would not be available for use for wetland mitigation.
- Environmental Factors: It was determined during a field visit that potential sources of hydrology may be limited to deeper groundwater requiring extensive excavation and grading, thus raising questions about this sites viability; however, this was not fully investigated prior to determination of property unavailability.

Private Property Along Aquasco Road Site (Potential M-NCPPC Site)

The private property along Aquasco Road was deemed not feasible due to the following constraints:

- Property Availability: During the course of investigating site suitability, it was determined that the property would not be available for use for wetland mitigation.
- Environmental Factors: It was determined during a field visit that extensive grading may be required to achieve wetland hydrology; however, this was not fully investigated prior to determination of property unavailability.

2.3 DESCRIPTION OF THE PROPOSED ALTERNATIVES

2.3.1 Proposed Action

The PCMS project is situated on a portion of the Walton Foundation Property located at 7606 Woodyard Road, Clinton, Maryland (Lat: 38.781246, Long: -76.842437) (Figures 3, 4, and 5). The Walton Foundation Property is 126 acres in size and is primarily comprised of pastures and barns associated with the existing horse boarding operation. The PCMS is located within the Middle Potomac Federal HUC 8 – 02070010 and lies within the upper segment of the Piscataway Creek Watershed (MD 8 digit – 02140203). The Walton Foundation owns, actively manages the property and supports the project goals, which are consistent with the foundation’s mission.

The mitigation, as proposed, includes three (3) elements, listed below, which are depicted on the approved Phase I Mitigation Plans (see Appendix D and Figure 10).

1. 50.98 ac of preservation. The preservation consists of existing, high quality non-tidal, forested wetlands and uplands located within the 100-year floodplain of Piscataway Creek. This acreage has been designated as a Green Infrastructure Assessment (GIA) "Corridor".
2. 9.27 ac of creation. The creation consists of establishing forested and scrub-shrub headwater wetlands currently used as pasture for boarded horses.
3. 1.37 ac of restoration (rehabilitation). The restoration consists of existing, degraded wetlands currently used as pasture for boarded horses.

The PCMS is situated on a 61.62 acre portion of the larger Walton parcel (126.03 acres) that is immediately adjacent to Piscataway Creek. Piscataway Creek flows through the property from northwest to southeast.

Approximately 51 acres of the PCMS is comprised of non-tidal, forested wetlands and uplands within the floodplain of Piscataway Creek. This forested area is documented as Forest Interior Dwelling Bird Species (FIDS) habitat and has been characterized as a Green Infrastructure Corridor by Prince George's County. The creation and restoration acreage, will be integrated with the preservation component and the entire project will be permanently conserved under a perpetual conservation easement.

The proposed creation and restoration areas are comprised of active pasture land since 1938 (see Figure 3). Prior to 1938, these areas were comprised of forested, freshwater wetlands and uplands. These two proposed mitigation elements consist of establishing (9.27 ac) and restoring (1.37 ac) headwater wetlands. This 10.64 acres is adjacent and connected to and will be fully integrated with the 50.98 acres of existing, high quality, floodplain forest thus providing an expansion of contiguous high quality, forested, wetland habitat. The wetland creation/restoration will be accomplished by modifying existing topography and utilizing existing sources of seasonally shallow ground and surface water. Modifications will include excavation and grading to lower existing elevations as well as plugging drainage ditches and redirecting channelized flows.

The creation, restoration, and preservation of headwater wetlands resulting from this mitigation project will more than replace the functions and values permanently impacted at JBA, including the temporal loss. The headwater wetlands enhanced, created and permanently preserved on the PCMS will provide groundwater recharge and support the base flow of Piscataway Creek. The wetlands will serve to help desynchronize peaks storm water discharges to Piscataway Creek by retaining surface water runoff and promoting infiltration. In this way the wetlands will effectively increase flood storage of areas in proximity to the creek. Furthermore, according to Federal Emergency Management Agency (FEMA) flood mapping, the majority of the PCMS lies within the 100-year floodplain of Piscataway Creek and so the proposed mitigation will also provide some incremental measure of flood attenuation. Additional functional uplift will come in the form of sediment retention/reduction, nutrient cycling and transformations; both of which will contribute to water quality improvements in Piscataway Creek. Finally, the proposed PCMS project, as proposed, will create, enhance and preserve a large, contiguous and valuable piece of urban wildlife habitat characterized as a Green Infrastructure Corridor by Prince George's County.

This site was selected for its overall "restorability" and prioritized due to its ability to provide 12.5 mitigation units on one site in close proximity to JBA, with a direct connection to Piscataway Creek, within the same MD 8 Digit HUC watershed as the impacts and the overall ecological lift that can be

sustainably achieved. Therefore, the restoration, as proposed, is contextually appropriate, technically feasible, and will develop sufficient mitigation to offset the 11.42 acre of wetland impacts that occurred as part of the West Runway improvements.

2.3.2 No-Action Alternative

This analysis provides a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the Proposed Action. The No-Action alternative would not conduct any type of restoration activities on the PCMS. In the near-term the 61.62 acres comprising the proposed project plus adjacent areas would likely remain as they are today. Namely, they would remain as non-tidal, forested wetlands, uplands, and active pasturelands within the floodplain of Piscataway Creek, but without the implementation of an invasive species management plan it's likely that existing areas of invasive species would expand. Additionally, failing to proceed with the required mitigation on the PCMS would require JBA to renew its search for a viable wetland mitigation site—and as mentioned earlier, there is a severe dearth of available wetland mitigation sites in this highly urbanized Middle-Potomac watershed. Furthermore, the No-action alternative would mean that JBA remains non-compliant with USACE and MDE permits and they will be non-compliant with state and federal law. This non-compliance with MDE and USACE permit conditions, could delay or prevent JBA from receiving any additional permits from MDE and/or USACE for any other planned capital improvements critical to maintaining the bases military mission and state of readiness until the outstanding mitigation requirement is resolved.

2.4 IDENTIFICATION OF PREFERRED ALTERNATIVE

The Proposed Action is the preferred alternative. As described in Section 2.3, no mitigation banks exist to service these impacts, an ILF contribution is not possible, and a host of alternate mitigation sites were considered and rejected for technical reasons or were simply unavailable for mitigation purposes.

The No-Action alternative does not provide the mitigation required by JBA to offset 11.42 acres of permanent wetland impacts, as per MDE and USACE permit conditions for the West Runway project. Furthermore, it would maintain JBA's current state of non-compliance with MDE and USACE permit conditions listed as part of the West Runway project improvements.

3 AFFECTED ENVIRONMENT

This Section describes the relevant environmental conditions at the Base as well as the PCMS for resources potentially affected by the Proposed Action and No-Action alternative described in Section 2.0. The region of influence (ROI) or the expected geographic scope of potential impacts is considered to be the immediate project vicinity including immediately upstream and downstream of the site. The actual project area of the Proposed Action is 61.62 acres, but the limits of disturbance (LOD) are limited to the 10.64 acres of the site where the wetland creation and restoration will occur—activities within this LOD will include earthwork and planting. The remaining 50.98 acres of the total 61.62 acre project site, will simply be preserved as existing forested wetlands.

In compliance with guidelines contained in NEPA and CEQ regulations, and in AFI 32-7061, each environmental, cultural, and social resource category typically considered in an EA was reviewed for its applicability to the Proposed Action. Affected resources applicable to the Proposed Action are discussed further in this section and in Section 4.0, Environmental Consequences.

3.1 LAND USE

The Piscataway Creek Mitigation Site (PCMS) is located on the Walton Foundation Property which is comprised of 126 acres of a historic (built in 1735) single family residence (Poplar Hill, 81A-001), a caretakers residence, agricultural fields, pastures and barns associated with the existing horse boarding operation. The site has been a working farm since the 1730's and has been subject to numerous manipulations of drainage, hydrology and vegetation to create croplands and then active pasture. It is located in the southern quadrant of the Woodyard Road and Rosaryville Road intersection and Piscataway Creek flows along its eastern boundary. The property is zoned R-A (Residential – Agricultural) and a majority of land surrounding the property on the north and east is zoned R-R (Rural Residential), with O-S (Open Space) to the south. The Resurrection Cemetery and the undeveloped Piscataway Creek stream corridor and floodplain lie to the south and east of the site respectively. The sites location and boundaries are depicted on a Street map (Figure 4) and USGS topographic map (Figure 5, Upper Marlboro Quad).

The land use immediately adjacent to the Walton Foundation Property consists of a combination of single-family residential development, undeveloped forests, a cemetery, and farmland. Single-family residential homes lie to the northeast and southeast, while an active farm is directly east of the PCMS. There is also cemetery to the west and forests to the south and north. Just past these adjacent properties, but connecting via greenways lie several publicly owned properties. To the southeast is the Rosaryville State Park, to the south is forest land owned by the Maryland National Capital Park and Planning Commission, the north is the Prince George's County owned Sherwood Community Park and Mellwood Hills Community Park (see Figure 8).

3.2 SOILS & TOPOGRAPHY

PCMS is located between the Blue Ridge Mountains (60 miles to the west) and the Chesapeake Bay (25 miles to the east). The site is near the western edge of the Middle Atlantic Coastal Plain physiographic province. This fall line occurs between the Piedmont and Coastal Plain, approximately 13 miles west of JBA. PCMS is located in the floodplain, adjacent to the western side of Piscataway Creek. The topography is level to gently sloping, with elevations averaging 180 feet

above mean sea level.

The PCMS lies within the Atlantic Coastal Plains physiographic province. However, the site is proximate to the Piedmont Plain and possesses some characteristics, such as topography, which are similar to the Piedmont. The topography of the project itself actually ranges from relatively flat to a fair bit of slope and there are some substantial topographic changes in between. The Atlantic Coastal Plain Province is underlain by a wedge of unconsolidated sediments including gravel, sand, silt, and clay, which overlaps the rocks of the eastern Piedmont along an irregular line of contact known as the Fall Zone. Eastward, this wedge of sediments thickens to more than 8,000 feet at the Atlantic coastline. Beyond this line is the Atlantic Continental Shelf Province, the submerged continuation of the Coastal Plain, which extends eastward for at least another 75 miles where the sediments attain a maximum thickness of about 40,000 feet.

The sediments of the Coastal Plain dip eastward at a low angle, generally less than one degree, and range in age from Triassic to Quaternary. The younger formations crop out successively to the southeast across Southern Maryland and the Eastern Shore. A thin layer of Quaternary gravel and sand covers the older formations throughout much of the area.

The project site is adjacent to and within the floodplain of the Piscataway Creek, which flows through the Walton property from northwest to southeast. As such, the soils that make up the project area are those that are commonly found in low-lying flood-prone areas. As indicated on Figure 6, the following soil types make up the PCMS:

WE—Widewater and Issue soils. These soils are frequently flooded and are commonly found in flood plains or drainageways. They are comprised of an upper layer of loam, with lower layers of fine sandy loam, loam, and clay. They are poorly draining soils with a depth to water table of about 0 to 10 inches.

DfB—Dodon fine sandy loam (2 to 5 percent slopes) commonly found in stream terraces. They are comprised of an upper layer of fine sandy loam, with lower layers of sandy clay loam, and fine sandy loam. These soils are moderately well draining with a depth to water table of about 20 to 40 inches.

WoB—Woodstown sandy loam (2 to 5 percent slopes) are commonly found in Broad interstream divides, depressions, interfluves, swales, fluviomarine terraces, or drainhead complexes. They are comprised of an upper layer of sandy loam, with lower layers of loam, fine sandy loam, sandy loam, and loamy sand. These soils are moderately well draining soils with a depth to water table of about 20 to 40 inches.

MnB—Marr-Dodon complex (2 to 5 percent slopes) commonly found in Interfluves or knolls. They are comprised of an upper layer of fine sandy loam, with lower layers of fine sandy loam, sandy clay loam, and loamy fine sand. These soils are well draining and have a depth to water table of more than 80 inches.

CrC—Croom gravelly sandy loam (5 to 10 percent slopes) commonly found in interfluves and knolls. They are comprised of an upper later of gravelly sandy loam, with lower layers of very gravelly clay loam, extremely gravelly sandy clay loam, and extremely gravelly coarse sandy loam. These soils are well draining with a depth to restrictive feature of more than 80 inches.

3.3 AIR QUALITY

The Clean Air Act (CAA), which was last amended in 1990, requires the United States Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment (Table 3-1). The CAA established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The USEPA Office of Air Quality Planning and Standards (OAQPS) have set NAAQS for six principal pollutants, which are called "criteria" pollutants. They are listed below in Table 3-2 (USEPA 2009a). Units of measure for the standards are parts per million (ppm) by volume, milligrams per cubic meter of air (mg/m^3), and micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$).

Table 3-1: National Ambient Air Quality Standards

Pollutant [final rule cite]	Primary / Secondary	Averaging Time	Level	Form	
Carbon Monoxide [76 FR 54294, Aug 31, 2011]	primary	8-hour	9 ppm	Not to be exceeded more than once per year	
		1-hour	35 ppm		
Lead [73 FR 66964, Nov 12, 2008]	primary and secondary	Rolling 3 month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded	
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]	primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	primary and secondary	Annual	53 ppb ⁽²⁾	Annual Mean	
Ozone [73 FR 16436, Mar 27, 2008]	primary and secondary	8-hour	0.075 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	
Particle Pollution Dec 14, 2012	PM _{2.5}	primary	Annual	12 µg/m ³	annual mean, averaged over 3 years
		secondary	Annual	15 µg/m ³	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24-hour	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]	primary	1-hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year	

Source: USEPA: <http://www3.epa.gov/ttn/naaqs/criteria.html>

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard (“anti-backsliding”). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than

or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO₂ standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

Federal law requires states or local air quality control agencies to have a State Implementation Plan (SIP) that prescribes measures to eliminate or reduce the severity and number of violations of NAAQS and to achieve expeditious attainment of these standards. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS in each state. Areas that do not meet NAAQS are designated as “nonattainment” for those criteria pollutants. Nonattainment status is further defined by the extent the standard is exceeded as in moderate/severe nonattainment.

PCMS is located within the Washington, DC-MD-VA Region. The state of Maryland has adopted the NAAQS (Code of Maryland Regulations, Title 26, Subtitle 11, Air Quality). The Washington, DC-MD-VA Region is in attainment for all NAAQS criteria pollutants except ozone (8 hour). For ozone it’s designated as a marginal nonattainment area. Maryland has submitted a SIP for the region where PCMS is located to attain and maintain compliance with the NAAQS in accordance with the CAA.

The CAA Amendments of 1990 state that a federal agency cannot support an activity in a non-attainment (Table 3-2) area unless the agency determines that the activity will conform to the most recent USEPA-approved SIP within the region of the Proposed Action. The General Conformity Rule covers direct and indirect emissions of criteria pollutants or their precursors that are caused by a federal action, are reasonably foreseeable, and can practically be controlled by the federal agency through its continuing program responsibility. Conformity is demonstrated if the total net emissions expected to result from a federal action in a nonattainment or maintenance area will not:

- Cause or contribute to any new violation of any NAAQS
- Interfere with provisions in the applicable SIP for maintenance of any standard
- Increase the frequency or severity of any existing violation, or
- Delay the timely attainment of a standard, interim emission reduction or milestone including, where applicable, emission levels specified in the applicable SIP for purposes of demonstrating reasonable further progress, attainment, or maintenance

In accordance with Section 176(c) of the CAA Amendments, the USEPA promulgated the final conformity rule for general federal actions in 1993. Similar guidance to implement the conformity requirements has been published in the 1995 U.S. Air Force Conformity Guide.

A federal action is exempt from applicability of the General Conformity Rule requirements if the action’s total net emissions are below the *de minimis* levels specified in the rule and are not regionally significant (i.e., the emissions represent 10% or less of nonattainment or maintenance area’s total emission inventory of that pollutant) or are otherwise exempt per 40 CFR 93.153. Total net emissions include direct and indirect emissions from all stationary point and area sources, construction sources, and mobile sources caused by the federal action. However, there are special considerations regarding mobile-source emissions. If the action or a portion of the action is subject to the transportation conformity rule, that portion of the action is not subject to the General Conformity Rule.

3.4 CLIMATE

The PCMS is located within the eastern half Maryland, an area of the state that is significantly influenced by the Chesapeake Bay and the Atlantic Ocean. The project site undergoes for distinct seasons and has an average annual temperature for the first half of the year of 53.3°F and 63.0°F for the second half of the year. Additionally, the site receives on average 39.74 inches of precipitation annually, with 8.48 inches falling in the winter, 10.53 inches in the spring, 10.44 inches in the summer, and 10.29 inches in the fall. Of this total precipitation, on average about 15.4 inches falls as snow.² Finally, the PCMS falls within the USDA plant hardiness zone 7a, meaning plants in this region are tolerant of temperature lows of 0 to 5 °F³. Additionally the growing season for this part of Maryland typically starts in April and ends in October.

3.5 WATER RESOURCES – SURFACE WATERS & GROUNDWATER

The PCMS is located near the headwaters of Piscataway Creek and is adjacent to and within the 100 year floodplain of Piscataway Creek (see Figure 7). Piscataway Creek flows through the property from northwest to southeast, eventually draining into the Potomac River twelve miles downstream from the PCMS. The PCMS is located in the Middle Potomac Watershed USGS HUC 8 - 02070010 and Piscataway Creek MD 8- Digit Watershed - 02140203 (See Figure 2). Throughout the site there are also other surface waters including seasonal swales, ephemeral, intermittent and perennial streams that generally drain from northwest to southeast. There are streams located within and immediately adjacent to the PCMS and a series of man-made ditches. The streams are in various states of functionality and are generally impaired, degraded, diverted and channelized having been subject to decades of farming practices.

Piscataway Creek has been designated by the MDE as a water of very, high quality (Tier II water) and Maryland regulations regarding this designation can be found in the Code of Maryland Regulations (COMAR) 26.08.02.04. Special protections governing these waters are generally called “anti-degradation policies.” These policies include MDE approval of all design elements and the mandatory implementation of Environmental Site Design (ESD), riparian buffers with a minimum of 100 ft in all areas, and biological and chemical monitoring.

Groundwater is both surficial, including natural seeps, and deeper (6-8’ below ground surface) within the PCMS, and generally moves eastward through the site towards Piscataway Creek. The groundwater is then intercepted by a long north/south ditch line located at the toe of slope in all of the establishment areas. The network of onsite ditches intercept both surface runoff and shallow groundwater, quickly conveying the water and effectively bypassing both establishment and re-establishment areas, preventing the proper residence time for wetland development.

Coastal Zone—PCMS is within the designated Maryland coastal zone. When a federal agency conducts an activity or development project, or has an activity performed by a contractor for the benefit of the federal agency, the agency must determine whether its activities are reasonably likely to affect any coastal use or resource and to conduct the activities in a manner that is consistent to the maximum extent practicable with the enforceable policies of the applicable state coastal program. The federal agency must provide a consistency determination and supporting materials to the state Coastal Zone Management Program agency at least 90 days before starting the

² Maryland State Climatologist Office - <http://metosrv2.umd.edu/~climate/weather/marylandnormals.htm>, accessed 12/7/15

³ USDA - <http://planthardiness.ars.usda.gov/PHZMWeb/>

proposed activity (unless a different arrangement has previously been made between the federal agency and the authorized state agency) (Ghigiarelli 2004).

3.6 FLOODPLAINS

Executive Order 11988 (May 24, 1977, 42 FR 26971, 3 CFR, 1977 Comp., p. 117, amended January 30, 2015) requires that developments on Federal lands are to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains. Section 2 of the Executive Order states that each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of the Order. Before taking an action, each agency shall determine whether the Proposed Action will occur in a floodplain. This determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map, FEMA Flood Insurance Rate Map (FIRM) or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information. Furthermore, Section 2(a)(2) states that where possible, agencies shall use natural systems, ecosystem processes, and nature-based approaches when developing alternatives for consideration. In addition MDE regulates activities with the 100 year non-tidal floodway, requiring State Waterway Construction permits.

The PCMS is located near the headwaters of Piscataway Creek, which effectively originates on JBA, and lies adjacent to and within the 100 year floodplain of Piscataway Creek (see Figure 7).

3.7 WETLANDS

Executive Order 11990 (May 24, 1977, 42 FR 26961, 3 CFR, 1977 Comp. p. 121) requires that federal agencies provide leadership and take actions to minimize the destruction loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetland in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

A wetland investigation/delineation was performed on the entire 62 acre PCMS between May and October of 2015. The site has been a working farm since the 1730's and has been subject to numerous manipulations of drainage, hydrology and vegetation to create croplands and then active pasture. Piscataway Creek flows through the property along its eastern boundary, from northwest to southeast, and the majority of wetlands are found within the floodplain of the Piscataway Creek (Figures 9 and 10).

Fifteen (15) wetland and eleven (11) Waters of the US features were delineated on or in the vicinity of the project boundaries as shown on the attached Wetland Delineation Plans (see Appendix E). Many of these wetlands are small, depressional or linear features that have formed over time due to site manipulation. Others are natural or naturalized albeit disturbed/maintained and include areas of slope fed discharges where groundwater actively breaks out to the surface at the toe of slope and edge habitats. All three wetland delineation parameters were identified within the wetland areas; vegetation, hydrology and hydric soils. The delineation was conducted in accordance with the US Army Corps of Engineers 1987 Delineation Manual and the Regional Supplement to the Corps of

Engineers Wetland Delineation Manual Atlantic and Gulf Coast Plain Region. The wetland areas located on the site, with the exception of the floodplain forest surrounding Piscataway Creek, consist of maintained, altered, disturbed (by grazing and farming activities) and functionally impaired wetlands located in active pasture or hedge rows dividing active pasture. Numerous manipulations of surface and sub-surface drainage patterns have negatively impacted the form, function, configuration and distribution of wetlands and waters on this site, thus providing an excellent opportunity to develop wetland mitigation. The floodplain forest adjacent to the Piscataway Creek are part of a mapped Green Infrastructure Corridor containing documented habitat Forest Interior Dwelling Species (FIDS). Please note that the habitat quality including structure function and value increase from northeast to southwest. The northeast quadrant nearest to Woodyard and Rosaryville Roads has diminished vertical and horizontal structure, reduced woody understory and a higher percentage of invasive/exotic species cover. This “edge effect” decimation from deer over-browse diminish and transition into high quality floodplain forest toward the central portion of the site.

3.8 VEGETATION

The restoration and creation areas of the PCMS are chiefly comprised of existing pasture fields with degraded and functionally impaired hedgerows that divide these pastures. The interface between the preservation component and restoration components is comprised of a combination of native vegetation and grasses typical of the adjacent pastures. Floodplain forest comprises the entire preservation component and includes the main stem of Piscataway Creek.

The PCSM falls within the USDA plant hardiness zone 7a, meaning plants in this region are tolerant of temperature lows of 0 to 5 °F⁴. Additionally the growing season for this part of Maryland typically starts in April and ends in October.

The most natural community (least disturbed by anthropogenic manipulation) is the floodplain forest of Piscataway Creek itself, but the ecological quality of this forest varies in quality, composition and structure, generally improving from northeast to southwest. The community composition transitions to more intact and pristine, especially with regards to species composition and structure, with increased distance from Woodyard Road on the southeast side. There is a notable amount of deer browse and invasive species colonization close to Woodyard road, which has degraded the structure and composition of the forest in the northeast quadrant. The central and southwest quadrants exhibit very healthy structure and rich community composition typical of this part of the Coastal Plain.

The following is a list of plant species that have been observed within the various communities on the PCSMS:

Table 3-3: List of Various Plant Species at PCSMS

Native Species

Common Name	Scientific Name	Common Name	Scientific Name
River Birch	<i>Betula nigra</i>	Curly Dock	<i>Rumex crispus</i>
American Sycamore	<i>Platanus occidentalis</i>	Green Briar	<i>Smilax rotundifolia</i>
Tulip Poplar	<i>Liriodendron tulipifera</i>	Highbush Blueberry	<i>Vaccinium corymbosum</i>

⁴ USDA - <http://planthardiness.ars.usda.gov/PHZMWeb/>

Sweet Gum	<i>Liquidambar stryaciflua</i>	Soft Rush	<i>Juncus effusus</i>
Pin Oak	<i>Quercus palustris</i>	Riverbank Wildrye	<i>Elymus riparius</i>
American Beech	<i>Fagus grandifolia</i>	Spotted touch-me-not	<i>Impatiens capensis</i>
Red Maple	<i>Acer rubrum</i>	Spice Bush	<i>Lindera benzoin</i>
American Holly	<i>Ilex opaca</i>	Trout Lily	<i>Erythronium rostratum</i>
Poison Ivy	<i>Toxicodendron radicans</i>	Tussock Sedge	<i>Carex stricta</i>
Sensitive Fern	<i>Onoclea sensibilis</i>		

Invasive Species

Common Name	Scientific Name	Common Name	Scientific Name
Japanese Stilt Grass	<i>Microstegium vimineum</i>	Garlic Mustard	<i>Alliaria petiolata</i>
Japanese Barbery	<i>Berberis thunbergii</i>	Tree of Heaven	<i>Ailanthus altissima</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>	Mile-a-minute (banks of Piscataway Creek only)	<i>Polygonum perfoliatum</i>
Multi Flora Rose	<i>Rosa multiflora</i>	Asian Bittersweet	<i>Celastrus orbiculatus</i>
Field Garlic	<i>Allium vineale</i>		

Maryland Forest Conservation Act - The main purpose of the Maryland Forest Conservation Act (Natural Resources Article Section 5-1601 through 5-1613) enacted in 1991 was to minimize the loss of Maryland's forest resources during land development by making the identification and protection of forests and other sensitive areas an integral part of the site planning process. Identification of priority areas prior to development makes their retention possible. Of primary interest are areas adjacent to streams or wetlands, those on steep or erodible soils or those within or adjacent to large contiguous blocks of forest or wildlife corridors. Any activity requiring an application for a subdivision, grading permit or sediment control permit on areas 40,000 square feet (approximately 1 acre) or greater is subject to the Forest Conservation Act and will require a Forest Conservation Plan prepared by a licensed forester, licensed landscape architect, or other qualified professional

3.9 WILDLIFE

Observations of wildlife on the PCMS outside the floodplain forest have been limited to white tailed deer, raccoon, opossum, spring peeper, green frog, pickerel frog and several common species of perching birds or passerines. The floodplain forest of Piscataway Creek provides habitat for a wider array of neo-tropical migratory birds, resident passerines and forest interior dwelling raptors, microtines, small mammals, white tailed deer and a host of reptiles and amphibians.

Migratory Birds - Piscataway is located within the Atlantic migratory bird flyway and is therefore subject to seasonal populations of migrating birds. These migratory birds are subject to protection under the Migratory Bird Treaty Act of 1918.

3.9.1 Threatened and Endangered Species

The MD DNR-Wildlife and Heritage Service was contacted on April 20, 2015 requesting an environmental review from the MD DNR Natural Heritage Program Information Services. MD DNR responded that there are no State or Federal records for rare, threatened or endangered (RTE) species within the boundaries of the site, but that the forested wetland/upland portion of the site

contains Forest Interior Dwelling Bird species (FIDS) habitat. This portion of the site has also been identified as a Green Infrastructure Corridor by Prince George's County.

The US Fish & Wildlife Service (USFWS) was contacted on April 20, 2015 to request an environmental review of the site. The USFWS environmental review indicated that there are no occurrence records for critical habitats, threatened or endangered species on or within the vicinity of the PCMS. Additionally, no USFWS National Refuges are located within the vicinity of the PCMS. There are, however, twenty six (26) birds on the migratory birds of concern list that may utilize the site.

The Maryland Department of Natural Resources (DNR) Integrated Policy & Review Unit was contacted on April 22, 2015 to request an environmental review regarding aquatic habitats and fisheries resources on the project site. DNR responded that there were no State or Federal records for rare, threatened or endangered species within the boundaries of the PCMS. DNR also reiterated that portions of the site contained FIDS habitat.

3.10 CULTURAL RESOURCES

JBA has conducted investigations to identify potential and known historic properties located in the project's area of potential effect. The historic Marshalls (or Walton) Grist Mill is located just outside the northwest corner of the project area. A portion of a raceway associated with the mill is located in the wetland preservation area. The project area is located adjacent to the National Register-listed "His Lordship's Kindness" (Maryland Inventory of Historic Properties PG: 81A-1) but all of the wetland mitigation area is located outside the boundaries of this historic property.

3.11 HAZARDOUS MATERIALS AND WASTEMANAGEMENT

Hazardous material is defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Solid Waste Disposal Act (SWDA), and Emergency Planning and Community Right-to-Know Act (EPCRA) as a substance that, because of quantity, concentration, or physical or chemical characteristics, may present substantial danger to public health, welfare, or the environment. The term hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA), means any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that pose a substantive present or potential hazard to human health or the environment. Hazardous wastes must exhibit a characteristic of toxicity, reactivity, ignitibility, or corrosivity, or be listed as a hazardous waste as indicated in 40 CFR Section 261 and Section 263, respectively.

Based on a review of historical aerial photographs and maps pertaining to the subject site, as well as a site visit and interviews with the property owner conducted on 30 November 2015, the subject site does not contain any hazardous materials or hazardous wastes as defined above. Additionally, based on the current forested and/or vacant nature of the subject site, no operations which would require waste management operations are currently occurring.

3.12 TRANSPORTATION

PCMS is located off of Route 223/Woodyard Rd. a two-lane road which runs along the northern edge of the site. Routes 5 and 4 are just a mile away and Interstate 95/495, known as the "Capital Beltway" is roughly 3 miles to the north of the site. Access to the site can be gained directly off of

Woodyard Rd. or via His Lordship Kindness Rd. A dirt road provide access throughout the PCMS site that is used by the property owner and owners of the horses that are stabled on the property.

3.13 STORMWATER

The PCMS contains minimal impervious surfaces. In the immediate vicinity there are three structures including a pole barn, a very small single family house along Woodyard Road, and a series of paved and unpaved access drives. These minimal areas of impervious surface are surrounded by natural undeveloped land on all sides. Stormwater runs along the topographic gradient generally in a west to east direction toward Piscataway Creek. A percentage of this runoff is directed into a series of modified streams and man-made ditches, some percolates into the ground, with the remaining stormwater flowing through the floodplain forest and into Piscataway Creek.

3.14 SOLID WASTE MANAGEMENT

The contractor will manage collecting, handling, and disposing of solid waste generated from the wetland mitigation project. Solid waste generated that cannot be recycled is collected and disposed of by a contractor at a licensed landfill in Prince George's County. In addition, construction debris is disposed of at a licenses offsite landfill by the contractor responsible for any renovation or demolition activities.

3.15 NOISE

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Human response to sound varies according to the type and characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. Sound is measured with instruments that record instantaneous sound levels in decibels. In this EA, sound level measurements are A-weighted, which is used to characterize sound as it is heard by the human ear. Noise levels in excess of 65 decibels DNL are normally unacceptable for noise-sensitive land uses such as residences, schools, and hospitals (Andrews AFB 2007a).

Typical noise currently generated at the site is limited to farm related activities: mowing, pick-up truck traffic, and tractors. These sounds are limited to onsite, and are not heard beyond the limits of the property.

3.16 SOCIOECONOMICS

Socioeconomic conditions consist primarily of the characteristics of the nearby population and the economic characteristics of the area. These two topics are discussed below.

3.16.1 Population and Demographics

Maryland, as of mid-July 2014, has a population of 5,976,407 people and is the 19th most populated state in the Nation. Approximately 15 percent of the state's population resides in Prince George's County. Demographic information was collected for the year 2010 for Clinton and also 2014 for

Prince George’s County from the U.S. Census Bureau. This data is compared to the larger state of Maryland and displayed in Table 3-4.

Race and ethnicity statistics are included to characterize the demographic composition of the community surrounding PCMS. The population of the state increased 3.5% and the county by 4.7% in the four years analyzed. The demographic composition of the regional population, both county and state, has changed slightly: all populations have increased with the exception of the “two or more races” population group that decreased. The Hispanic or Latino population also increased.

Table 3-4: Local Population and Demographic Statistics

	Clinton, MD	Prince George’s County		Maryland	
	2010*	2010	2014	2010	2014
Total Population	35,970	863,420	904,430	5,773,785	5,976,407
White alone	11.3%	19.2%	26.9%	58.2%	60.1%
Black/African American alone	80.7%	64.5%	64.7%	29.4%	30.3%
Asian alone	2.5%	4.1%	4.6%	5.5%	6.4%
American Indian/Alaska Native alone	0.3%	0.5%	1%	0.4%	0.6%
Native Hawaiian/Pacific Islander alone	<0.1%	0.1%	0.2%	0.1%	0.1%
Two or more races	2.5%	3.2%	2.6%	2.9%	2.6%
Hispanic or Latino	5.2%	14.9%	16.9%	8.2%	9.3%

U.S. Census Bureau, 2015. * Only 2010 Census data available

3.16.2 Economy and Income

Compared to the U.S. with 63.8% employment and \$53,000 median household income, Maryland and Prince George’s County have higher rates of employment by 5-10% and earn higher income by over \$20,500. Table 3-6 presents the annual historical unemployment rates for 2014 and 2015 for the geographic areas surrounding the PCMS. The unemployment rate for each geographic area decreased from 2014 to 2015, comparable to the U.S. unemployment rates for the same period.

Table 3-5: Unemployment Rates, 2014 and 2015 (Aug/Sep)

Geographic Area	2014	2015
Prince George’s County, Maryland	5.7	5.1
Washington-Arlington-Alexandria Metropolitan Statistical Area	5.5	4.4
Baltimore-Columbia-Towson, Maryland Metropolitan Statistical Area	6.4	5.4
United States	5.7	4.9

Source: U.S. Bureau of Labor Statistics, November 2015

3.17 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

Executive Order (EO) 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations (59 FR 7629 [1994]) directs Federal agencies to address environmental and human health conditions in minority and/or low-income communities so as to avoid the disproportionate placement of any adverse effects (such as earning potential, distribution, or health of these sensitive populations) from federal policies and action on these populations.

Executive Order 13045—Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885 [1997]) requires Federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children as a result of the implementation of federal policies, programs, activities, and standards.

The degree of potential effects to populations of special concern is assessed by the percentage of individuals and/or populations affected. To comply with EOs 12898 and 13045, ethnicity, poverty status, and age of the populations at county, state and national levels were examined and compared (see Table below).

Table 3-6: Environmental Justice Data

Location	Percent Minority*	Percent Below Poverty	Percent Aged 17 Years or Younger
United States	37.9	14.8	23.1
Maryland	47.4	10.1	22.6
Prince George’s County	85.8	9.9**	22.7

U.S. Department of Commerce, Census Bureau, mid-2014 data

* Minority population is everyone other than non-Hispanic white alone

** 2013 data

3.18 SAFETY AND OCCUPATIONAL HEALTH

Current activities within the PCMS include farming and mowing activities, related to the horse boarding facilities. There are no issues that pose a risk to safety and occupational health

4 ENVIRONMENTAL CONSEQUENCES

This Section presents the potential environmental consequences of implementing the Proposed Action and No-Action alternative. The potential impacts to the human and natural environment were evaluated relative to the existing environment described in Section 3.0. For each environmental resource or issue present at the PCMS, anticipated direct and indirect effects were assessed, considering both short- and long-term project effects. Overall the Proposed Action would result in a net positive of impacts to human and natural environment, while the No-action alternative would have negative environmental impacts, in that the 11.42 acres of wetlands that were filled as part of the West Runway project would remain unmitigated for nor would the temporal losses to wildlife habitat be addressed.

Table 4-1 summarizes the anticipated impacts of the Proposed Action and the No-Action alternative. Those resources that will be impacted by the Proposes Action are discussed in more detail through the remainder of Section 4.

Table 4-1: Baseline Conditions Screening Matrix

RESOURCE CATEGORY	AFFECTED BY PROPOSED PROJECT?	REASON FOR DETERMINATION
Land Use	Yes – permanent & positive Impacts	Refer to Section 4.1
Soils and Topography	Yes – permanent & positive Impacts	Refer to Section 4.2.
Geology	No Impacts	No impacts expected to geology are expected from this project.
Air Quality	Yes- temporary & minor adverse impacts	Refer to Section 4.3.
WATER RESOURCES		
Surface Water & Groundwater Resources	Yes – permanent & positive Impacts	Refer Section 4.5.
Floodplains	Yes – permanent & positive Impacts	Refer to Section 4.6.
BIOLOGICAL RESOURCES		
Wetlands	Yes – permanent & positive Impacts	Refer to Section 4.7.
Vegetation	Yes – permanent & positive Impacts	Refer to Section 4.8.
Wildlife	Yes – permanent & positive Impacts	Refer to Section 4.9.
Rare, Threatened or Endangered Species	No Impacts	Letters from the USFWS and the MDNR indicate that no rare, threatened or endangered species occur in the project area (Appendix B).

Designated Natural Areas	No Impacts	No Wild or Scenic Rivers, Natural Areas, or National Forests are present. (NPS 2009) (USFWS 2009a) (Wilderness.net 2009)
Climate	Yes – permanent & positive Impacts	Refer to Section 4.29.
CULTURAL RESOURCES		
Cultural Resources	No Impacts	No impacts expected. Letter from Maryland Historical Trust indicates that there are no historic properties affected by this project. (Appendix B). Refer to Section 4.10 for further discussion.
HAZARDOUS, TOXIC, AND RADIOACTIVE SUBSTANCES		
Hazardous materials and waste management	No Impacts	Refer to Section 4.11.
Storage Tanks	No Impacts	No storage tanks occur on the proposed site.
INFRASTRUCTURE		
Transportation	Yes- temporary & minor adverse impacts	Refer to Section 4.12.
Stormwater Systems	Yes – permanent & positive Impacts	Refer to Section 4.13
Utilities (Water, Sewer, Electric, Lighting, Gas)	No Impacts	No impacts expected. No utilities within the project area.
Solid Waste Management	Yes- minor adverse impacts	Refer to Section 4.14.
SOCIOECONOMIC		
Noise	Yes- temporary & minor adverse impacts	Refer to Section 4.15.
Socioeconomic Conditions	Yes – temporary & positive Impacts	Refer to Section 4.16.
Recreation	No Impacts	No impacts expected. The project site is not open to the public or used for recreation.
Environmental Justice	No Impacts	Refer to Section 4.17.
Safety and Occupational Health	No Impacts	Refer to Section 4.18.

4.1 LAND USE

Land use would be impacted at the PCMS if the Proposed Action were to alter acreage within the project area that would change the existing land use category.

4.1.1 Proposed Action

Implementation of the Proposed Action would convert approximately 9.27 acres of active pasture land to created and conserved forested wetlands. There will also be temporary impacts to horse

usage and riding circulation patterns during construction. The remaining 1.37 acres of proposed wetland restoration and 50.98 ac of wetland preservation will retain their current land use. The overall change in land use, restoration and preservation activities will have a long-term positive effect on land use conserving this ground as natural open space in perpetuity. The project will result in ecological uplift including local improvement to water quality. This conservation use is consistent with the Walton Foundations mission objectives for this property as well as current PG County Zoning Designations. Finally, the proposed land use will support the MDE's objectives for the Piscataway Creek a designated Tier II Waterway as well as the PG County's objectives for Green Infrastructure Corridors and MD DNR's for FIDS habitat.

4.1.2 No-Action

Under the No-Action alternative there would be no change in land use at the PCMS. However, without any treatment and/or removal of invasive species within the project area, the ecological integrity of the site will continue to degrade.

4.2 SOILS & TOPOGRAPHY

The soils and topography would be altered from their current condition in order to implement the proposed action. Excavation and grading activities are not anticipated to result in negative impacts to soils or topography. In fact, the surficial soils within the footprint of the PCMS will be de-compacted and will remain that way as a result of the land use change where horses will no longer occupy these active pasturelands. Topographic changes will result in more gently sloping ground within the 9.27 acres slated for wetland creation and will not bear negatively on the surrounding slopes, which will be permanently stabilized following the completion of earthwork activities. Additionally, these surficial activities will not affect the site's underlying geology in any way.

4.2.1 Proposed Action

Implementation of the proposed action will not result in long-term impacts to the soils and topography of the PCMS or immediately adjacent areas. As stated above, the wetland creation and restoration areas will be subject to excavation and grading in order to establish and re-establish hydrology for the proposed wetland mitigation. Between 1 and 3 feet of cut will be required in order to be within 12 inches of the seasonal high groundwater table within the proposed wetland creation areas. Excavation and grading activities are projected to generate approximately 15,000 cubic yards of material, all of which will remain on the Walton Property. Some of this material will be used to plug ditches and create wetland enhancement berms (WEB's) and the balance will be placed in several designated locations onsite. All relocated material will be graded to a stable slope not exceeding 3:1 and permanently stabilized with either native vegetation or grasses in areas remaining active pasture. Although there will be changes to site topography, soil composition and chemistry, these changes are expected to generate a positive impact. The results will be more gently sloping topography, de-compacted soils with the development of an organic or "O" horizon and a transition from oxidizing to reducing conditions during the early part of the growing season. These changes will specifically support highly valued headwater wetland functions such as groundwater recharge, stormwater retention, floodplain connectivity, flood storage and water quality.

4.2.2 No-Action

Under the No-Action alternative there would be no alterations to the soils, topography or geology of the PCMS.

4.3 AIR QUALITY

Air quality at the PCMS would be impacted if the activities required to implement the Proposed Action resulted in exceeding NAAQS or local equivalent, exceeding the non-attainment criteria or the exposure limits.

4.3.1 Proposed Action

The Proposed Action at PCMS would generate minor, temporary impacts to air quality. The proposed earthwork will require the use of bulldozers, track-mounted excavators, and 6 wheel dump trucks for a limited period of time—estimated at 6-8 weeks. During this phase of the project there will be minor and temporary impacts to air quality as a result of emissions generated from the use of construction equipment. The balance of the construction will occur over the course of an additional 4-6 months, which will result in a limited number of vehicle trips to deliver plant materials as well as labor. Cumulatively, the amount of ozone generated by these air pollution sources would fall well within the de minimis exemption levels for conformity in nonattainment areas.

4.3.2 No-Action

Under the No-Action alternative there would be no impacts to air quality.

4.4 CLIMATE

The Proposed Action would impact local and/or regional climate if it increased or decreased the levels of greenhouse gas emissions that have been shown to contribute to global warming and climate change.

4.4.1 Proposed Action

The Proposed Action would have a large net positive impact to global warming, by creating a major carbon sink for carbon dioxide emissions. Although, there would be some release of greenhouse gas emissions as a result of the burning of fossil fuels to power construction and transportation during the construction of the project (estimated at 62,700 lbs of CO₂), these would be offset by the conversion of pasture to wetlands (EPA 2008 and Lewis 2011).

Natural wetlands hold twenty three (23) times more total organic carbon (TOC) as compared to grazed pastures (180.1 g/kg of TOC in natural wetlands versus 7.8 g/kg of TOC in grazed pastures) (Sigua 2009). Furthermore, when grazed pastures are converted back to wetlands, the total organic content within these reconstructed wetlands begins increasing almost immediately. A pasture to wetland conversion in Plant City, FL completed in 2008 showed that total organic content increased 360% within the first year from 5.4 g/kg of TOC to 19.7 g/kg of TOC (Sigua 2009). More long-term studies of constructed wetlands show that the accumulation of carbon within the wetlands

continues to increase dramatically. A 2014 study of two 15-year old constructed wetlands in central Ohio accumulated carbon at an average annual rate of 242 grams of carbon per square meter (Bernal 2014).

Based on sequestration estimates developed using the research cited above, just within the 10.64 acres of wetlands that will be created and restored, it is estimated that once the wetlands are established they should accumulate roughly 18,000 lbs of carbon per year (Bernal 2014). As such, within just several years the carbon sequestered in the wetland creation and restoration areas should offset any CO₂ emissions released during their construction, and thereafter these restoration/creation areas will act as a carbon sink. This is an addition to the carbon sequestration that will continue to occur within the 50.98 of forested wetlands that will be preserved in perpetuity.

4.4.2 No-Action

Under the No-Action alternative there would be no increase or decrease in greenhouse gas emissions or impacts to climate

4.5 WATER RESOURCES – SURFACE WATERS & GROUNDWATER

Surface water and groundwater resources would be impacted if the Proposed Action results in any discharge of material into or contamination of surface waters or groundwater. Additionally water resources at the PCMS could be negatively impacted if the mitigation related activities resulted in a reduction of groundwater volume or a decrease in its elevation or a decrease in surface water quality.

4.5.1 Proposed Action

The Proposed Action would have positive impacts on groundwater and surface water quantity and quality. The construction activities associated with the Proposed Action are will not result in any discharges of dredge or fill materials into adjacent waterways or any waters of the United States. The proposed restoration, creation, and preservation of wetlands within the 62 acre project site will improve infiltration rates and thus groundwater recharge, while also retaining water onsite for longer periods time, thereby reducing peak runoff rates and volumes. The project will also improve water quality by changing land use and filtering runoff from agricultural and urban activities through the created and restored wetland system before the water reaches Piscataway Creek. The project is designed to decrease the distance between the seasonal high groundwater table and the ground surface. The project is also designed to capture and detain surface water runoff resulting in higher rates of infiltration. This will recharge groundwater, reduce peak stormwater runoff velocities and volumes and, due to the proposed grading, create additional flood storage. All of these design objectives will result in increased water quality onsite and within the Piscataway Creek watershed. These are anticipated to compensate for impacts to water quality as a result of implementing the West Runway Repairs.

Coastal Zone—An assessment of the consistency of the Proposed Action with the enforceable policies of the Maryland Coastal Program is found in Appendix F.

4.5.2 No-Action

Under the No-Action alternative there would be no negative or positive impacts to existing water resources. However, long-term impacts resulting in degradation of water resources may continue as agricultural runoff from adjacent pastures continues to runoff into Piscataway Creek. Furthermore, proceeding with the No-Action alternative would mean that adverse impacts to water quality and wetland functions and values that occurred at JBA during the West Runway project would continue to be a net loss of wetland resources and ecological functions.

4.6 FLOODPLAINS

Floodplains at PCMS could be impacted if a project were to place fill or reduce flood storage volume within the 100 year floodplain of Piscataway Creek and result in a change of the flood elevation. Additional impacts could result from decreasing the time of concentration on site or increasing the velocity or volume of runoff reaching Piscataway Creek during and after storm events.

4.6.1 Proposed Action

The Proposed Action would have positive impacts on peak runoff volumes/rates plus flood storage volumes within the project footprint. The preservation of 50.98 acres of floodplain forest along Piscataway Creek will ensure this area of floodplain will be protected in perpetuity and thus its flood storage, peak runoff attenuation, water quality and habitat functions. Furthermore, the conversion of pastureland to forested wetlands preservation of these new wetlands will increase the natural buffer along this stretch of floodplains along the Piscataway Creek. The de-compaction of surface soils and the creation and restoration of wetland habitat will decrease times of concentration, promote groundwater infiltration (seasonally), decrease peak runoff and increase flood storage within the floodplain of Piscataway Creek, just downstream of JBA. Thereby, moderating the volume of surface runoff flowing in to the Creek during storm events and also potentially stabilizing or supplementing base flow in Piscataway Creek during periods of low-flow.

4.6.2 No-Action

Under the No-Action alternative there would be no impacts to existing floodplains at PCMS.

4.7 WETLANDS

Wetland resources at the PCMS could be adversely impacted if implementation of the Proposed Action resulted in filling of wetlands, modification of hydrology that reduces the hydroperiod of wetlands, or adversely impacts existing vegetation. Positive impacts to wetlands may occur through beneficial changes to hydrology and hydroperiod, soils, structure, function and composition of vegetation and/or wildlife habitat.

4.7.1 Proposed Action

The Proposed Action will have positive impacts on the wetlands within the PCMS. The implementation of this project will increase and enhance wetland functions and values at the PCMS, among these a reduction in invasive species, an increase in native species diversity and an overall increase in forested wetland habitat. As described earlier, removing invasive species and planting

additional native wetland species will restore 1.37 acres of wetlands in the northwestern portion of the project area. Furthermore, the Proposed Action will create 9.27 acres of scrub shrub and forested wetlands by excavating, grading and planting of areas that currently used as pastureland. Finally, the Proposed Action will preserve not only the 10.64 acres of restored/created wetlands, but also preserve in perpetuity 50.98 acres of existing floodplain forested wetlands. Appropriate approvals from Maryland Department of Environment and USACE will be obtained prior to commencing any construction related activity.

4.7.2 No-Action

Under the No-Action alternative there would be no impacts positive or negative to existing wetlands at the PCMS. There would continue to be a net loss of wetlands as mitigation would not be conducted for the 11.42 acres of wetland impacts at JBA from the west runway project. The potential negative is that the ongoing land use practices 1) continue to maintain existing jurisdictional wetlands as mowed pasture, 2) invasive species counts will continue to rise and affect plant community structure and composition and 3) water/air quality will continue to be negatively impacted by current land use practices.

4.8 VEGETATION

Vegetation would be impacted if implementation of the Proposed Action resulted in a diminishment of community composition or structure, an increase in invasive species composition or a decrease in species richness. This might include direct or indirect impacts to threatened or endangered species. Changes that reduced the viability or composition of native vegetation in the area would be considered significant. There are no rare, threatened, or endangered species of vegetation, significant natural communities or sensitive habitats occur within the project area and all of the vegetation and plant communities within the restoration and creation footprint are presently degraded.

Additionally, any activity requiring an application for a subdivision, grading permit or sediment control permit on areas 40,000 square feet (approximately 1 acre) or greater is subject to the Forest Conservation Act and will require a Forest Conservation Plan prepared by a licensed forester, licensed landscape architect, or other qualified professional.

4.8.1 Proposed Action

The Proposed Action would result in positive impacts to vegetation and more importantly vegetative community composition and structure, resulting in an overall ecological uplift. The conversion of maintained pasture into wetland, will result in a shift of managed fields and grasslands into a self-sustaining, biologically diverse wetland forest and scrub-shrub community. Additionally, the Proposed Action would treat and remove invasive species within the project area plus the immediately adjacent area, thereby increasing the level of native species and improving overall biodiversity and ecological health of the system.

Maryland Forest Conservation Act - Because over 40,000 square of the project area will be impacted as part of the Proposed Action a Forest Stand Delineation (FSD) and a Forest Conservation Plan (FCP) will be required as part of the State permitting process. However, the Proposed Action will not adversely impact any portion of the project site that contains existing forest. The Proposed Action calls for an increase of forested area within the 10.64 acre of wetland creation/restoration

area. As such, the Proposed Action will be in compliance with the Maryland Forest Conservation Act.

4.8.2 No-Action

Under the No-Action alternative there would be no immediate impacts to existing vegetation. However, the suppression of natural succession in the pastures would continue along with the edge effect and overall level of disturbance. The No Action would also not control the invasive species that currently exist, but rather promote their vigor and potentially their spread.

4.9 WILDLIFE

Wildlife resources at the PCMS would be impacted if implementation of the Proposed Action resulted in a change to wildlife species or their habitat, including threatened or endangered species, in the area. Changes that reduced the viability of wildlife population in the area or eliminated them would be considered significant.

Furthermore, it should be noted that as per the Migratory Bird Treaty Act (MBTA), migratory birds are afforded special status under the Migratory Bird Treaty Act of 1918. To avoid contact with these species, the timing of construction-related ground-disturbing activities should be planned as to avoid the nesting season of protected birds. A qualified biologist would survey for nesting birds that are Federally managed or listed as migratory by USFWS prior to construction. Surveys for migratory birds would occur 2 weeks prior to ground-disturbing activities. If nesting birds are discovered, appropriate actions would be taken, in conformance with the MBTA.

4.9.1 Proposed Action

The Proposed Action would result in positive impacts to wildlife habitat and usage within the PCMS. The restoration, creation and preservation of higher quality forested wetland habitat will improve the opportunity for foraging, nesting, shelter, loafing, resting and breeding for a multitude of avian, mammalian, amphibian, reptile and invertebrate species of wildlife.

NOAA's National Marine Fisheries Service (NMFS) was contacted on April 24, 2015 requesting information on the presence of any Endangered Species Act (ESA) listed threatened or endangered species under their jurisdiction at the proposed mitigation site. NMFS responded that since no in-water work is proposed, no species regulated by NMFS would be affected by the project.

Furthermore, the forested wetland/upland portions of the project area have been identified by Maryland DNR as Forest Interior Dwelling Species (FIDS) habitat. This project will result in a net increase of FIDS habitat in the creation/restoration areas, which will be fully integrated, with the existing 50.98 acres of high quality FIDS habitat to be preserved. No work will take place within the existing FIDS habitat. Furthermore, the proposed mitigation project will place a permanent conservation easement on the FIDS habitat and adjacent wetland restoration/creation, which will be protected in perpetuity.

There will be minor, temporary impacts during construction where some wildlife may avoid the site during construction, though there is plenty of suitable habitat surrounding the site for any displaced wildlife.

Migratory Bird Species – To avoid any impacts to migratory bird species, as well as other sensitive

species, all construction work will occur outside of state or federally mandated timing restrictions. Construction will be conducted in a manner to ensure no birds are killed, and no eggs or nests are destroyed.

4.9.2 No-Action

The No-Action alternative will result in no positive or negative impacts to wildlife habitat. However, since under the No-Action alternative the property will not be preserved, there is danger than in the long-term the PCMS may be developed at some point in the future and wildlife habitat would be destroyed. Additionally, any wildlife habitat impacted at JBA as part of the West Runway project would go unmitigated and continue to be a net loss.

4.10 CULTURAL RESOURCES

Cultural or other historic resources at PCMS could be adversely impacted by the proposed wetland mitigation through the disturbance of buried archeological deposits or the integrity of an existing historic building, district, or landscape.

4.10.1 Proposed Action

Extensive coordination between the Army Corps of Engineers, State Historic Preservation Officer (SHPO), Joint Base Andrews and the Maryland Historic Trust (MHT) took place over a period of months between April and October of 2015. Based on research that conducted as part of this coordination it was determined that a portion of a historic mill race associated with the historic Grist Mill is located within the proposed wetland preservation area. Based on its location within the PCMS this cultural resource will be preserved in perpetuity as a result of implementing the Proposed Action.

As per the October 20, 2015 MHT approval (Appendix B) there is some potential for archaeological resources in this area. However, the small size of the wetland creation area, plus its distance from Piscataway Creek, suggest that the potential for archaeological resources is low, and that no field investigations are warranted. Although the wetland mitigation area has never been investigated for the presence of archaeological resources, the portions of site that have the highest probability of containing archaeological resources are those areas in the eastern portion of the site, in close proximity to Piscataway Creek—the same portions of the PCMS that are proposed as a preservation areas and where no construction activities are proposed.

MHT concluded that implementation of the PCMS will have “No Effect” on historic resources and is consistent with Section 106 of the Historic Preservation Act as well the Maryland Historical Trust Act of 1985 and MHT stated on October 20, 2015 that the proposed PCMS project “will have no adverse affect on historic properties.” (Appendix B)

4.10.2 No-Action

Under the No-Action alternative there would be no impacts to cultural resources.

4.11 HAZARDOUS MATERIALS AND WASTES

As mentioned earlier in Section 3.10, historical aerial photographs and maps pertaining to the subject site were reviewed. In addition a site visit and interviews with the property owner were conducted on 30 November 2015. This analysis indicated that the subject site does not contain any hazardous materials or hazardous wastes as defined above. Additionally, based on the current forested and/or vacant nature of the subject site, no operations, which would require waste management operations, are currently occurring.

4.11.1 Proposed Action

The Proposed Action will not result in an increase in additional hazardous materials or wastes to the PCMS.

4.11.2 No-Action

There are no hazardous materials or wastes on the site, therefore under the No-Action alternative, there will be no effect to the PCMS.

4.12 TRANSPORTATION

Transportation would be impacted at the PCMS if the Proposed Action resulted in increased traffic congestion, additional vehicles entering the PCMS, or restricted movement in and around the PCMS.

4.12.1 Proposed Action

The Proposed Action will have only temporary impacts to transportation in and around the PCMS, during the construction. The grading and earthmoving activities associated with the wetland creation areas will result in temporary and minimal impacts to transportation in and around PCMS for approximately 6-8 weeks during site construction. Earthmoving equipment will need to be delivered to the site, and removed from the site once the construction work is completed. The balance of the construction will occur over the course of an additional 4-6 months, which will result in a limited number of vehicle trips to deliver plant materials as well as labor. Construction of the site is not intended to disturb access to the property for horse boarders or the property owners who regularly use these roads.

4.12.2 No-Action

Under the No-Action alternative, there will be no impacts to transportation in or around the PCMS.

4.13 STORMWATER SYSTEMS

Stormwater systems would be impacted should the project result in a change in the amount of stormwater or in the collection and handling of stormwater including any increases in discharge velocities.

4.13.1 Proposed Action

The Proposed Action would have a positive impact on rates and volumes of stormwater running off of the PCMS today. When compared to the existing pastures, the restoration/creation of 10.64 acres of wetlands within these pastures will increase the retention time of surface runoff on the site, improve the infiltration of groundwater, and improve the quality of water flowing into the Piscataway Creek by filtering runoff through the new and restored wetland systems. This project will also result in an overall increase in onsite flood storage thus improving stormwater retention and incrementally decreasing downstream peak flows.

4.13.2 No-Action

Under the No-Action alternative, there will be no impacts, positive or negative, to stormwater on or within the vicinity of the PCMS.

4.14 SOLID WASTE MANAGEMENT

Solid waste management would be impacted should the project result in a change in the amount of solid waste generated, collected, or handled. For the purposes of this EA, we are defining any solid waste consisting of soil as being excavated native soil.

4.14.1 Proposed Action

It is expected that approximately 15,000 cubic yards would be the maximum amount of cut projected for wetland creation and restoration areas. Plans call for this excavated soil to be spread across the site as part of the restoration. The contractor would dispose of construction debris, the majority of which will consist of plant containers, at an offsite landfill. Appropriate Erosion and Sediment Control permits will be obtained and best management practices will be employed during construction, per permit requirements.

4.14.2 No-Action

Under the No-Action Alternative, there would be no increase in solid waste and no impacts to solid waste management.

4.15 NOISE

An impact to noise could occur if the Proposed Action or alternative would change the onsite noise levels from what they are today.

4.15.1 Proposed Action

Implementation of the Proposed Action would not permanently alter noise levels generated on and around the PCMS. There would be a slight increase to the existing noise levels during the earthwork portion of the construction. Heavy earthmoving equipment would be used to complete grading including bulldozers, front-end loaders, excavators and dump trucks. In terms of Day-Night sound levels, the additional noise generated by construction activities (Table 4-2), specifically the use of heavy equipment such as graders, front-end loaders and dump trucks would be noticeable, but would be temporary in nature. The noise from construction activities would be short in duration

(8-10 weeks), coinciding with the length of the earthwork phase of construction. This work would occur during weekdays and standard working hours. It is unlikely that the noise generated from construction activities would be heard offsite, and therefore should not disturb any neighbors or sensitive receptors. Upon completion of the project, the noise exposure would return to existing levels, which are related to general farming activities, such as mowing, movement of tractors and pick-up trucks. Therefore, no long term or major impact to the noise environment would occur from implementing the Proposed Action.

Table 4-2: Typical Noise Levels of Principal Construction Equipment

Construction Vehicle Type	dBA
Front End Loader	80
Backhoe	72-93
Concrete Truck	85
Roof Saw	76
Crane	75-77
Pick-Up Truck	83-94
Delivery Truck	83-94

Source: USEPA (1971)

4.15.2 No-Action

Under the No-Action Alternative, there would be no change to noise levels at the PCMS.

4.16 SOCIOECONOMICS

An impact to socioeconomics would result if the Proposed Action had any positive or adverse effects on demographics, income levels, or economy of the local or regional area.

4.16.1 Proposed Action

The proposed action would have a minor temporary, positive effect on the local economy as a result of the proposed action. There will be some temporary positive benefits as a result of employment opportunities that are generated for the construction team. It is estimated that 3-5 individuals will need to be hired to conduct grading, fencing, and planting on the PCMS. However, Implementing the Proposed Action would result in no major impacts on the demographics or income potential of the PCMS or surrounding area.

4.16.2 No-Action

Under the No-Action Alternative, there would be no change to population or socioeconomic resources and no impacts to demographics, employment or income potential of the PCMS. However, failure to complete the mitigation required as part of the permit conditions for the West Runway project may delay or prevent JBA from obtaining permits from MDE and USACE for future projects, which may adversely affect the future work and potential jobs at JBA.

4.17 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

Environmental justice at the PCMS would be impacted if implementation of the Proposed Action affected localized minority populations, low-income populations, and/or children through impacts that would disproportionately affect the earning potential, distribution, or health of these sensitive populations.

4.17.1 Proposed Action

The immediate project area is not considered an area of concentrated minority population, low-income communities, or children. It is not anticipated that the Proposed Action would cause disproportionate impacts to these sensitive populations. Local residents may include low-income and/or minority populations. However, these populations would not be particularly or disproportionately affected by the proposed action, which is limited to wetland mitigation and would have no measurable effects on human health.

4.17.2 No-Action

Under the No-Action Alternative, there would be no impacts to minorities, low-income communities, or children.

4.18 SAFETY AND OCCUPATIONAL HEALTH

An impact would occur if the work associated with a proposed alternative resulted in the likelihood that human health and safety would be endangered at the PCMS. Changes that result in unacceptable or unnecessary health and safety risks would be considered significant

4.18.1 Proposed Action

Work associated with the proposed action would not result in any long-term impacts to worker health or safety. All contractors working on the site shall be licensed and insured to conduct the work in question. The contractor engaged in soil excavation activities will be responsible to prepare and implement a health and safety plan.

4.18.2 No-Action

Under the No-Action alternative there would be no impacts to human health and safety.

4.19 CUMULATIVE IMPACTS

CEQ defines indirect and cumulative effects as the impact on the environment that results from the incremental impact of the action when added to past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions (40 CFR Section 1508.7).

A critical principle of cumulative effects analysis states that the analysis should be conducted within the context of resource, ecosystem, and human community thresholds levels of stress beyond which the desired future condition degrades (CEQ 1997a). The magnitude and extent on a resource

depends on whether the cumulative effects exceed the capacity (resilience or resistance to stress and the ability to recover) of the resource to sustain itself and remain productive. Similarly, the natural ecosystem and human community have maximum levels of cumulative effects that they can withstand before the desired conditions of ecological functioning and human quality of life deteriorates. The function of the cumulative impacts analysis is to ensure that the consequences of actions do not exceed these thresholds.

The Proposed Action represents a positive cumulative impact to the environment compared to the existing conditions at the PCMS. The proposed wetland mitigation would result in a significant ecological uplift on the site, improved water quality, and preserve 62.62 acres of forested wetland habitat in perpetuity. Furthermore, there exists an ongoing temporal loss to wildlife habitat loss and wetland functions and values as a result of the 11.42 acres of wetlands that were filled at JBA in 2012 and for which no mitigation has been completed to date. The 12.5 mitigation units that will be created as part at the PCMS will offset the both the loss of 11.42 acres of wetlands as well as the temporal loss.

The Proposed Action is the only action that is currently being proposed at the PCMS or on the surrounding property. As such, to JBA's best knowledge there are no additional projects planned in or near the project area that could contribute to a cumulative impact.

4.20 UNAVOIDABLE ADVERSE IMPACTS

This EA identifies any unavoidable adverse impacts that may occur as a result of the Proposed Action and estimates the significance of these potential impacts to resources and issues. Furthermore, the CEQ specifies that a determination of significance must consider the context and intensity of the potential impact. The wetland mitigation on the Walton property would generally cause positive impacts within the borders of the Walton property, with some minimal and temporary impacts to air quality and traffic due to increased vehicle trips and movement of construction equipment.

Unavoidable, short-term, adverse impacts associated with implementation of the Proposed Action would include: a temporary increase in fugitive dust and air emissions and intermittent noise during construction, and along with minor temporary impacts to increase traffic to the PCMS as a result of construction activities. However, these effects are considered minor, temporary and would be confined to the project footprint and immediate vicinity. Use of environmental controls and obtaining required permits and approvals would minimize these potential and temporary impacts. There are no unavoidable, long-term, adverse impacts would occur as a result of the proposed wetland mitigation. At the completion of the project, there will be a net ecological uplift of the project area.

In order for the Proposed Action to be accomplished, these impacts would occur. The action is required to ensure JBA meets the mitigation requirements that were defined as a result of the West Runway project improvements. No other alternatives considered within this EA and previously investigated, as discussed in Chapter 2, would provide the wetland mitigation required to offset the 11.42 acres of wetland impacts that occurred as a result of the West Runway improvements.

4.21 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The relationship between short-term uses and enhancement of long-term productivity from the implementation of the Proposed Action is evaluated from the standpoint of short-term effects and long-term effects. Short-term effects would be those associated with the construction activities to conduct the wetland mitigation on the PCMS. The long-term enhancement of productivity would be the ecological uplift that will occur as a result of the restoration, enhancement, and preservation of 61.62 acres on the PCMS.

The negative effects associated with the temporary construction activities would be minor compared to the positive benefits from the ecological restoration that will result on as the completion of the project. Immediate and long-term ecological benefits would be realized after completion of the Proposed Action. These would far outweigh the negative effects of foregoing mitigation for 11.42 acres of wetland impacts at JBA—thereby failing to compensate for adverse impacts to wildlife habitat and wetland functions and values and placing JBA in a position of failing to comply with MDE and USACE permit conditions, potentially delaying or preventing JBA from obtaining permits to complete future projects.

4.22 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This EA identifies any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action, if implemented. An irreversible effect results from the use or destruction of resources (e.g. energy) that cannot be replaced within a reasonable time. An irretrievable effect results from loss of resources (e.g. endangered species) that cannot be restored as a result of the Proposed Action.

The short-term irreversible commitments of resources that would occur would include planning and engineering costs, construction materials and supplies and their cost, use of energy resources during construction, labor, generation of fugitive dust emissions, and creation of temporary construction noise. There are no long-term irretrievable commitments of resources that would occur from the implementation of the Proposed Action.

5 LIST OF ORGANIZATIONS AND INDIVIDUALS CONTACTED, REVIEWERS, AND PREPARERS

5.1 INDIVIDUALS CONTACTED AND REVIEWERS

The following individuals at Joint Base Andrews were consulted or reviewed this document:

- Todd Braun, Water/Wastewater Manager, 11 CES/CEIE
- Anne Hodges, NEPA/EIAP Project Manager, 11 CES/CEIE
- John Selstrom, Strategic Advisor to AFDW A4, Aktarius LLC
- Rima Silenas, Attorney/Ethics Counselor, 11 WG/JA

Other individuals consulted in preparation of this document:

- John Walton, Property owner land underlying the Piscataway Creek Mitigation Site

5.2 LIST OF PREPARERS

The contractors responsible for preparing this EA are:

GreenVest LLC
210 Najoles Rd.
Suite 202
Millersville, MD 21108

Princeton Hydro
1108 Old York Rd.
Ringo, NJ 08551

6 REFERENCES

- Andrews Air Force Base (Andrews AFB). 2007a. Air Installation Compatible Use Zone (AICUZ) Study, United States Air Force Andrews Air Force Base, Maryland.
- Bernal, Blanca & Mitsch, William J. (2014) Carbon Sequestration in Two Riverine Wetlands in the Midwestern United States. *Journal of Environmental Quality*. vol 42, pp. 1236-1244
- EPA. 2008. Average Annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. <http://www3.epa.gov/otaq/consumer/420f08024.pdf>, accessed December 2015
- Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, 59 FR 7629, February 16, 1994.
- Executive Order 13045—Protection of Children from Environmental Health Risks and Safety Risks, 62 FR 19885, April 23, 1997.
- Ghigiarelli, E., Jr. 2004. A Guide to Maryland's Coastal Zone Management Program Federal Consistency Process (online version). Published by the Maryland Department of the Environment. Accessed December 2015.
<http://pbadupws.nrc.gov/docs/ML0926/ML092670389.pdf>.
- Lewis, Phillip. Lerner, Michael., Frey, Henry C., & Rasdorf, William. (2011). Assessing Effects of Operational Efficiency on Pollutant Emissions of Nonroad Diesel Construction Equipment. *Transportation Research Record Journal of the Transportation Research Board* (Impact Factor: 0.54). 12/2011; 2233(-1):11-18. DOI: 10.3141/2233-02. *Data used for carbon emission estimates pulled from extended abstract of this article written by Phillip Lewis, http://events.awma.org/GHG2011/Abstracts/Session%209/Abstract%20%2340/Extended%20Abstract_40.pdf, accessed December 2015.*
- Maryland Nontidal Wetland Mitigation Guidance, prepared by Maryland Nontidal Wetlands and Waterways Division, Second edition January 2011
- Maryland Department of Planning, U.S. Census Bureau Population Division, June 25, 2015.
- Performance Standards and Monitoring Protocol for Permittee-Responsible Nontidal Wetland Mitigation Sites, April 2015.
- Sigua, Gilbert C., Coleman, Samuel W., & Albano, Joseph. (2009) Beef cattle pasture to wetland reconversion: Impact on soil organic carbon and phosphorous dynamics. *Ecological Engineering*. vol 35. pp. 1231-1236
- U.S. Department of Commerce, Census Bureau,
<http://www.census.gov/quickfacts/table/PST045214/24033,00,24?location=census+tract+8011.04>, accessed November 16, 2015.
- US Department of Labor, Bureau of Labor Statistics http://www.bls.gov/regions/mid-atlantic/news-release/Unemployment_WashingtonDC.htm, accessed November 15, 2015.

APPENDIX A

LIST OF FIGURES

Figure 1 – Proximity of Piscataway Creek Mitigation Site to Joint Base Andrews

Figure 2 – Watershed boundaries

Figure 3 – Aerial photo of project site

Figure 4 – Street map of project site

Figure 5 – USGS map of project site

Figure 6 – Soil map of project site

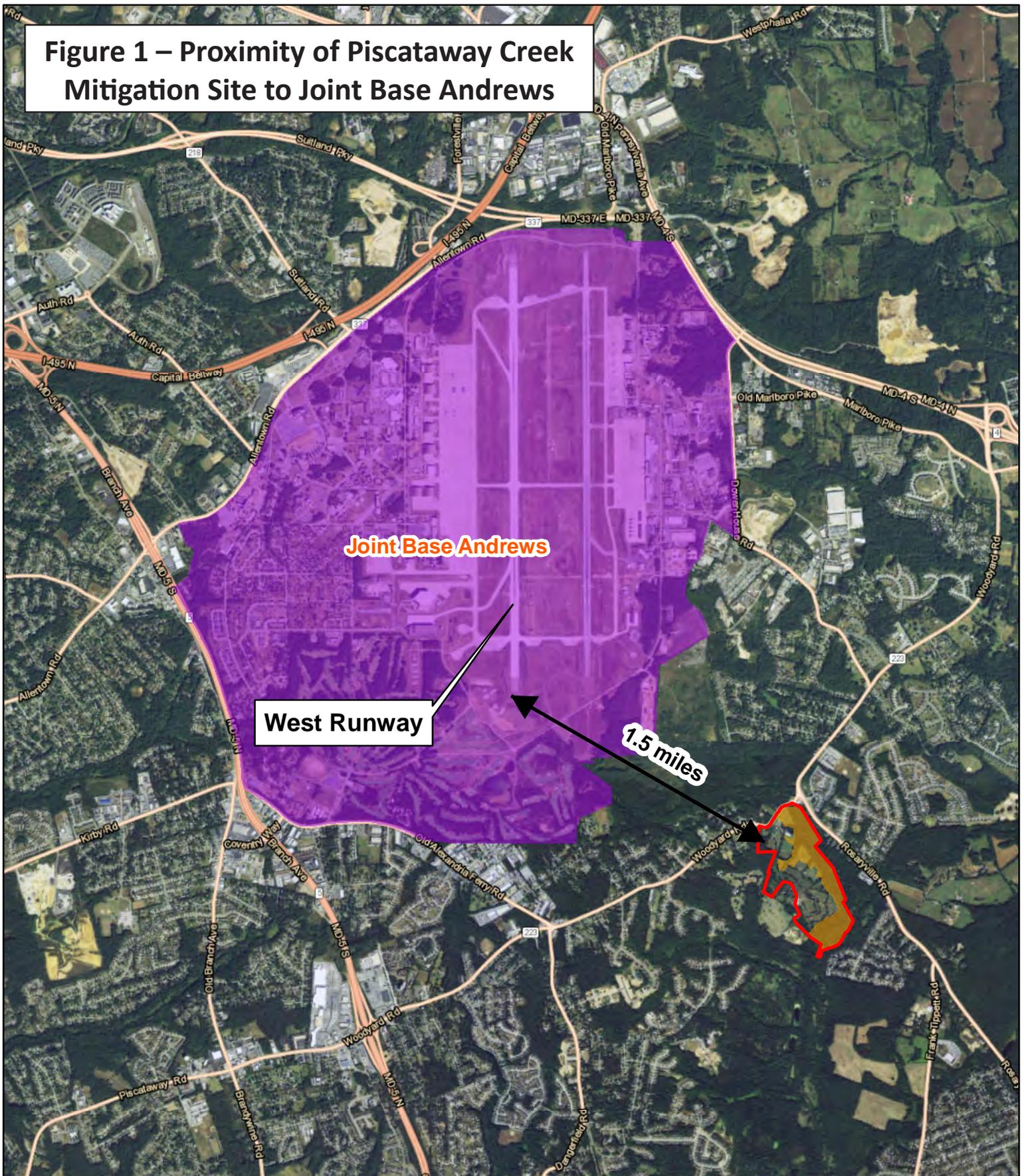
Figure 7 – FEMA floodplain map of project site

Figure 8 – Adjacent land use of project site

Figure 9 – Maryland DNR mapped wetlands on project site

Figure 10 – Piscataway Creek Mitigation Site Phase I Design Plans

Figure 1 – Proximity of Piscataway Creek Mitigation Site to Joint Base Andrews



Joint Base Andrews

West Runway

1.5 miles

N



0 1,500 3,000 Feet



Walton Property Boundary



Proposed Action Project Area (62.02 ac)

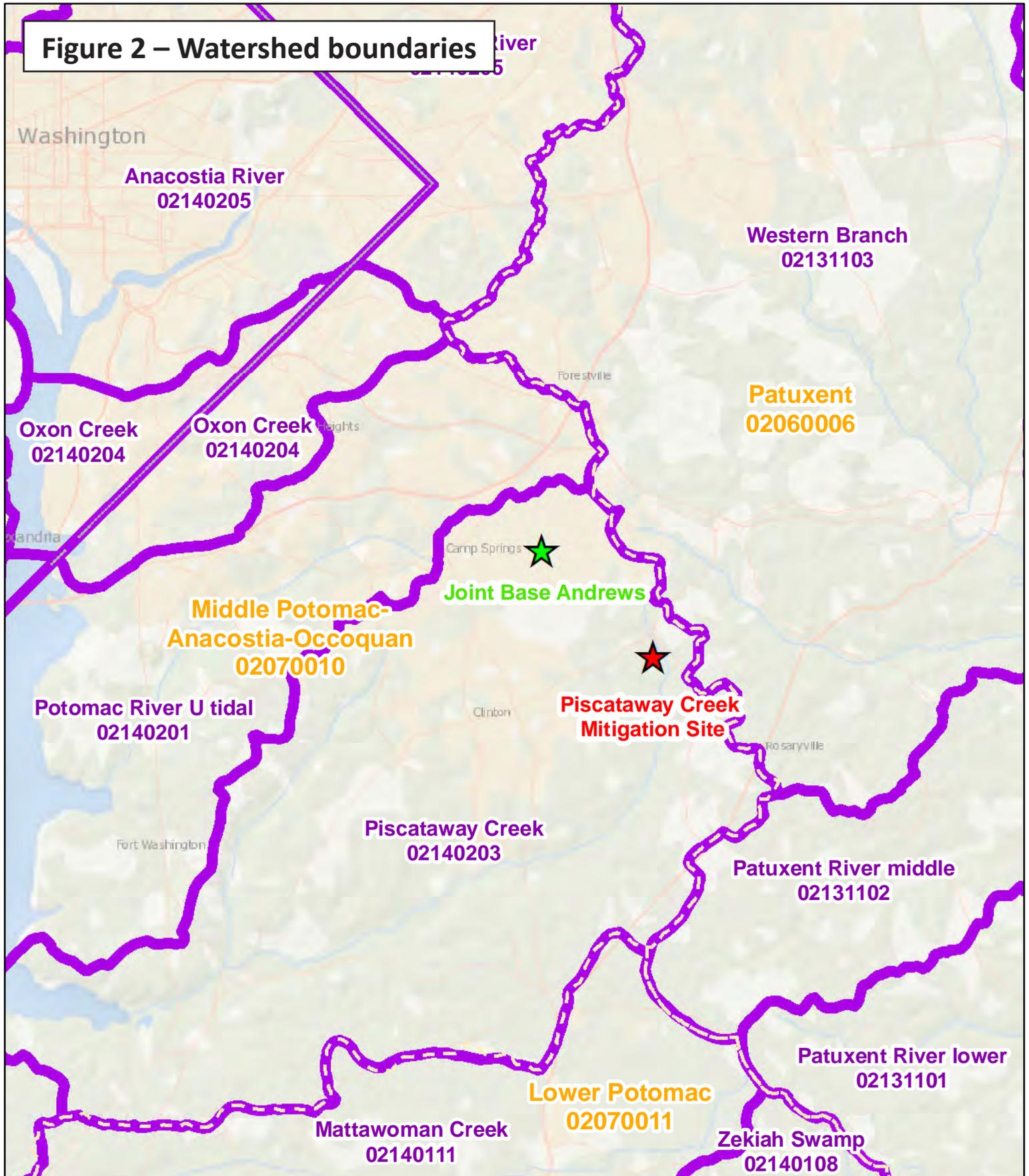


JBA Property Boundary

**Piscataway Creek Mitigation Site
Proximity of Mitigation Site & JBA**

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

Figure 2 – Watershed boundaries



-  Property Location
-  Joint Base Andrews

-  Federal HUC-8 Bdry.
-  MD 8-digit Watersheds

**Piscataway Creek Mitigation Site
Watershed Boundaries**

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

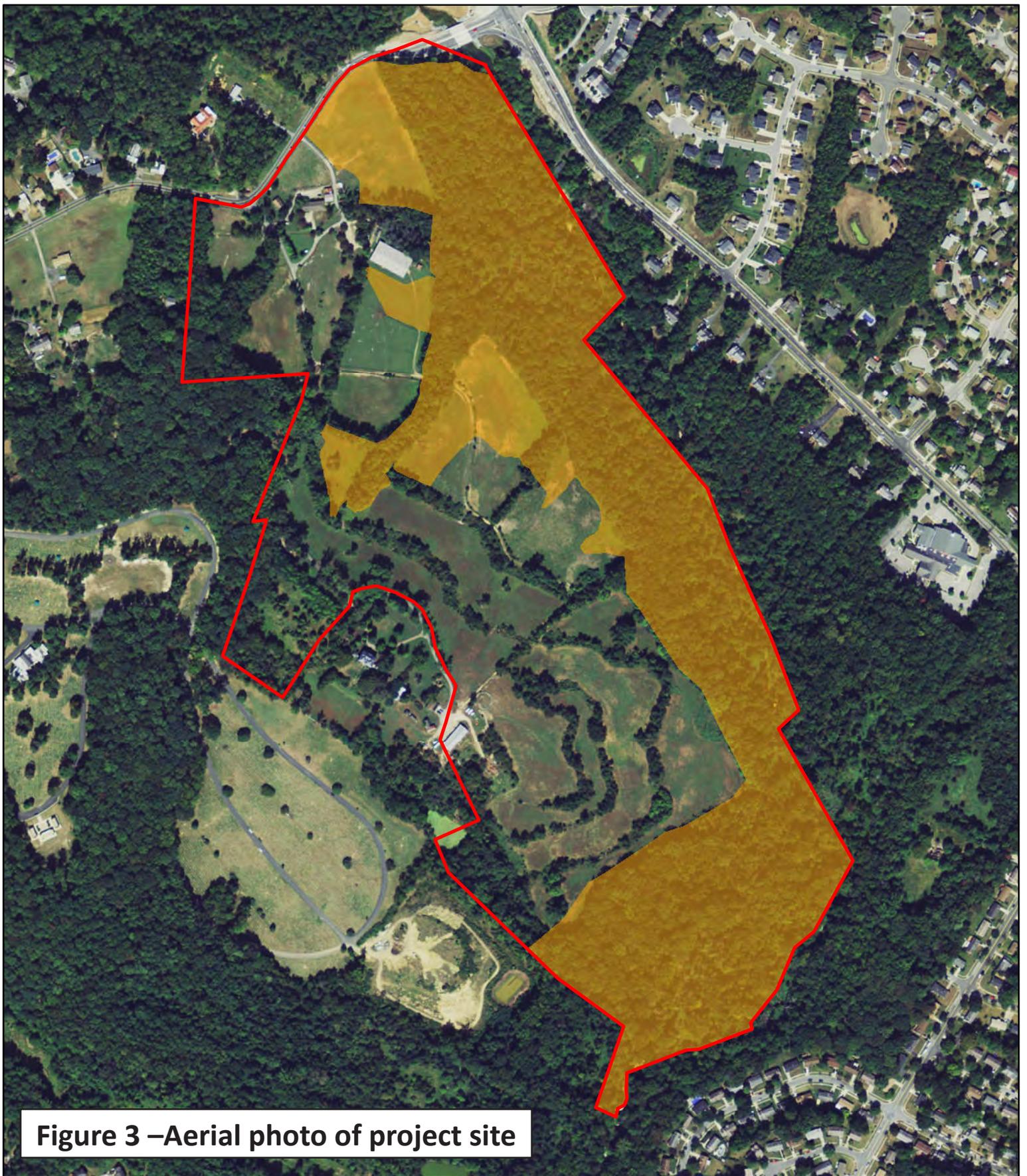
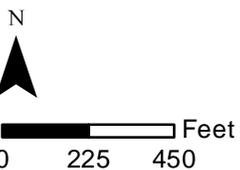


Figure 3 –Aerial photo of project site

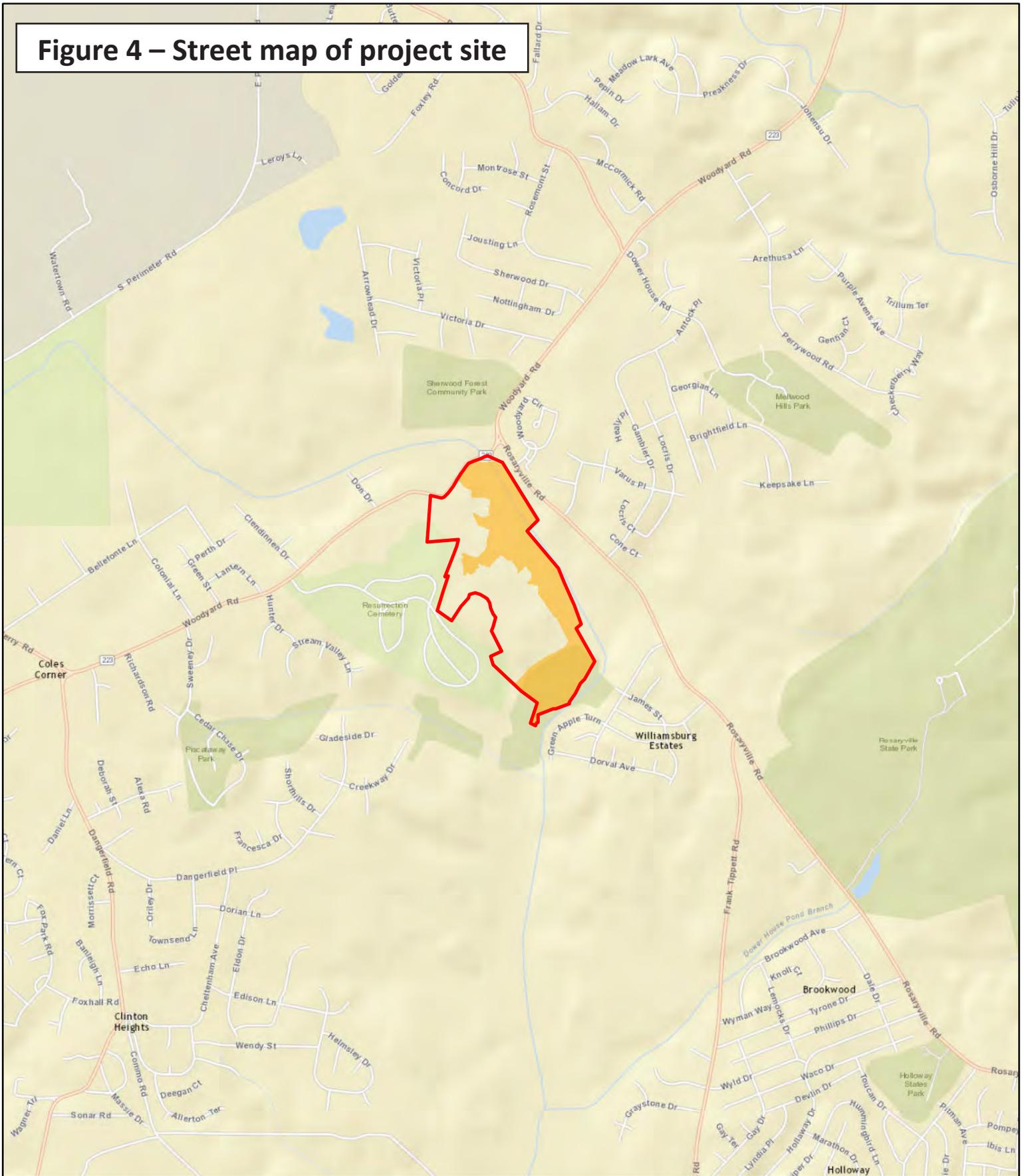


-  Walton Property Boundary
-  Proposed Action Project Area (62.02 ac)

Piscataway Creek Mitigation Site
Aerial Photograph from 2013

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

Figure 4 – Street map of project site



N



0 750 1,500 Feet



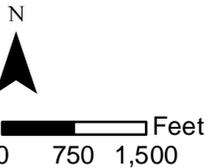
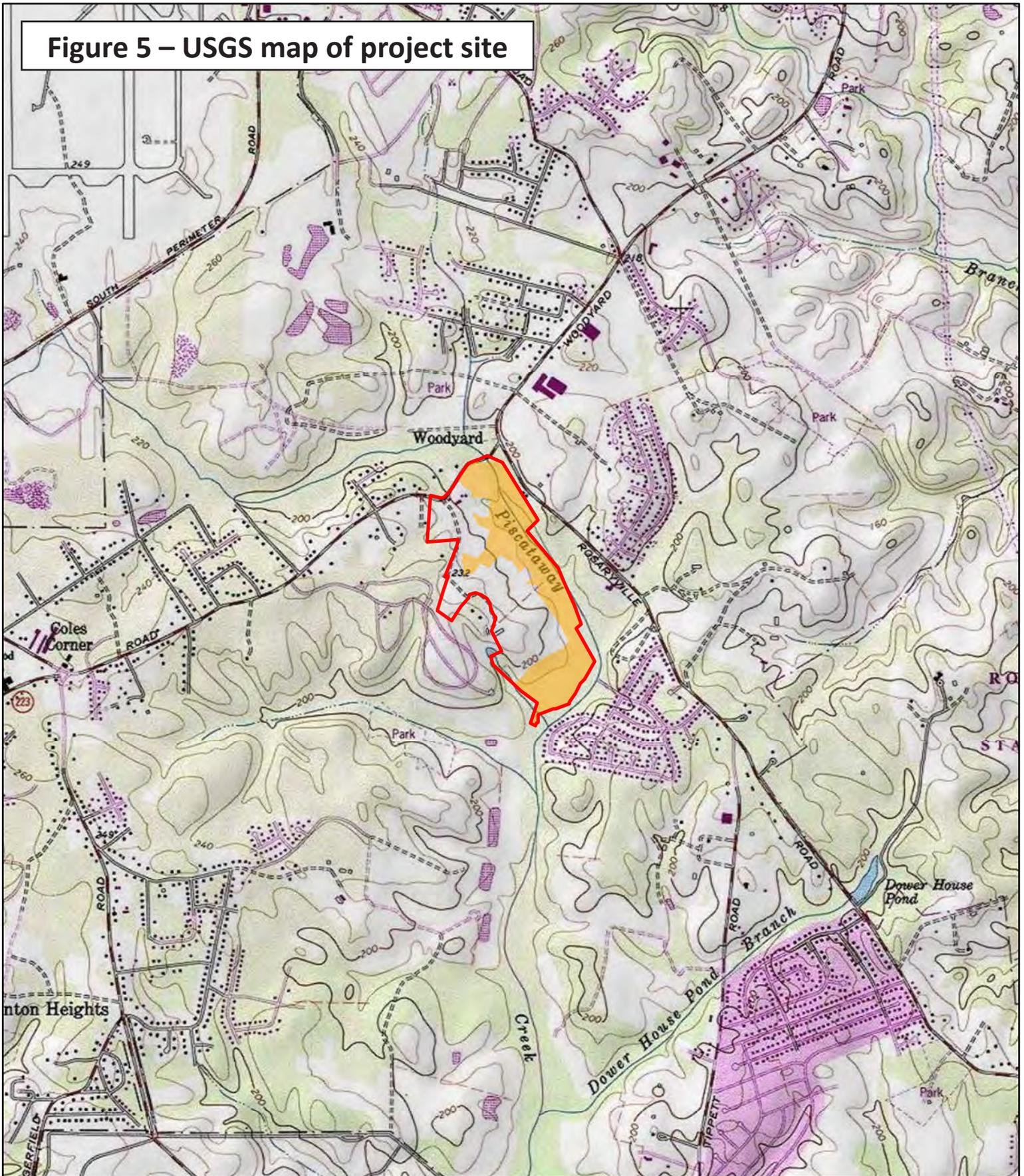
Walton Property Boundary

Proposed Action Project Area (62.02 ac)

**Piscataway Creek Mitigation Site
Street Map**

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

Figure 5 – USGS map of project site

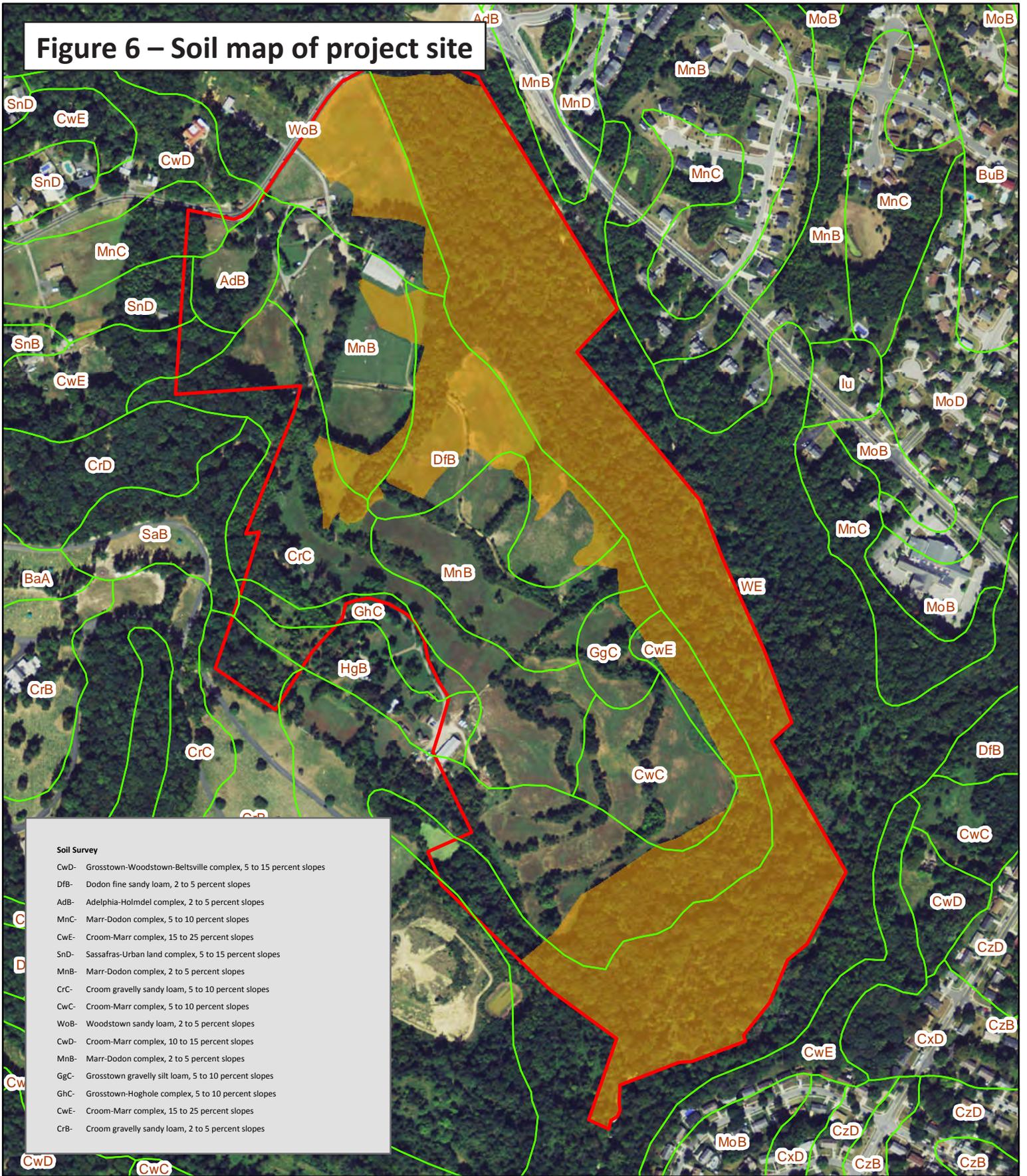


-  Walton Property Boundary
-  Proposed Action Project Area (62.02 ac)

Piscataway Creek Mitigation Site
USGS Map - Upper Marlboro SW Quad

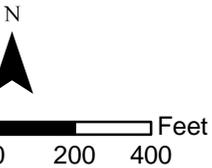
Piscataway Creek Mitigation Site
7606 Woodward Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

Figure 6 – Soil map of project site



Soil Survey

- CwD- Grosstown-Woodstown-Beltsville complex, 5 to 15 percent slopes
- DfB- Dodon fine sandy loam, 2 to 5 percent slopes
- AdB- Adelpia-Holmdel complex, 2 to 5 percent slopes
- MnC- Marr-Dodon complex, 5 to 10 percent slopes
- CwE- Croom-Marr complex, 15 to 25 percent slopes
- SnD- Sassafras-Urban land complex, 5 to 15 percent slopes
- MnB- Marr-Dodon complex, 2 to 5 percent slopes
- CrC- Croom gravelly sandy loam, 5 to 10 percent slopes
- CwC- Croom-Marr complex, 5 to 10 percent slopes
- WoB- Woodstown sandy loam, 2 to 5 percent slopes
- CwD- Croom-Marr complex, 10 to 15 percent slopes
- MnB- Marr-Dodon complex, 2 to 5 percent slopes
- GgC- Grosstown gravelly silt loam, 5 to 10 percent slopes
- GhC- Grosstown-Hoghole complex, 5 to 10 percent slopes
- CwE- Croom-Marr complex, 15 to 25 percent slopes
- CrB- Croom gravelly sandy loam, 2 to 5 percent slopes



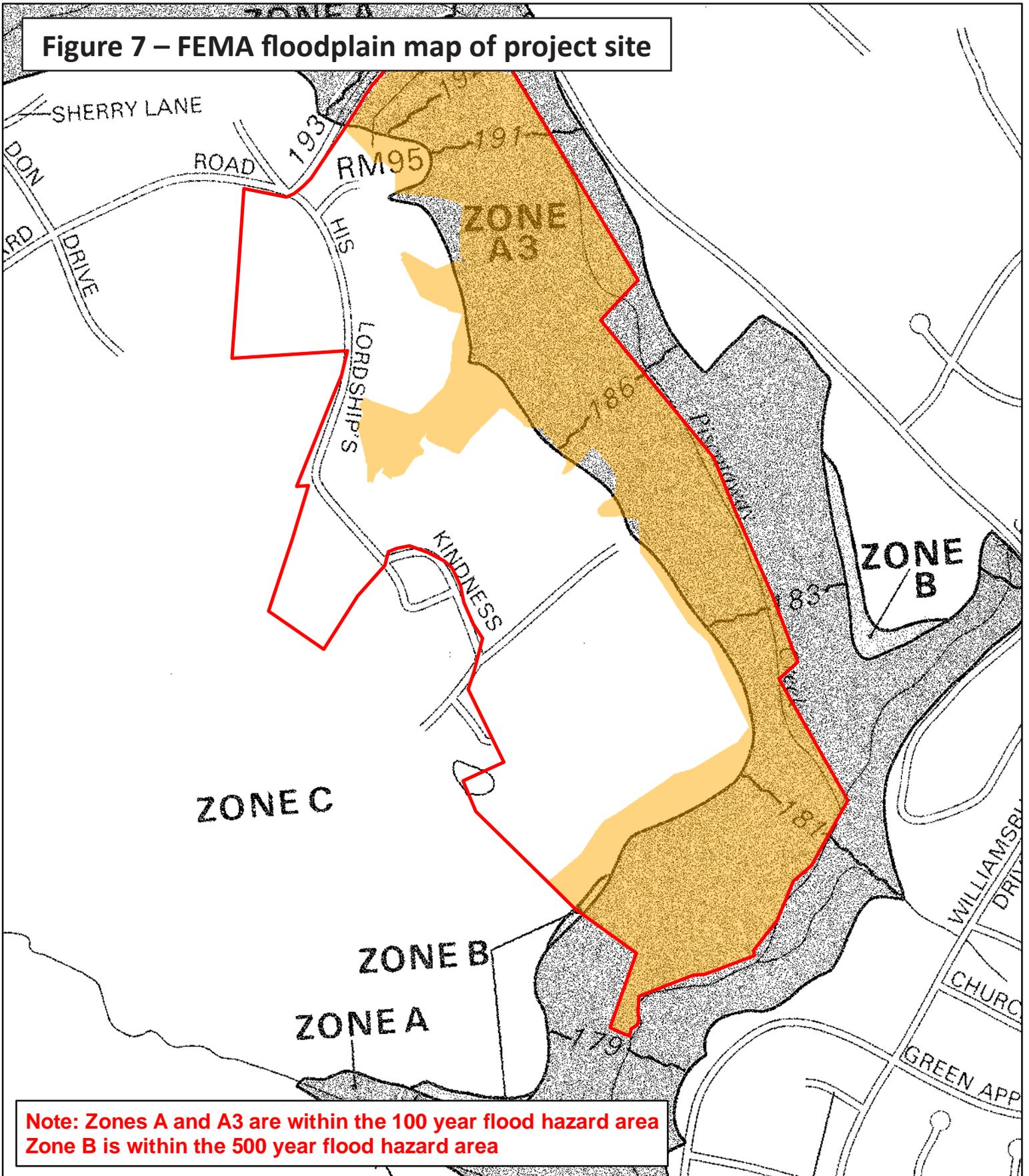
- Soil Survey
- Walton Property Boundary
- Proposed Action Project Area (62.02 ac)

**Piscataway Creek Mitigation Site
USDA Soil Survey Map**

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

Data Sources: ESD, NCEM, Soil Survey, SLD, NRCS, Websoil Survey

Figure 7 – FEMA floodplain map of project site



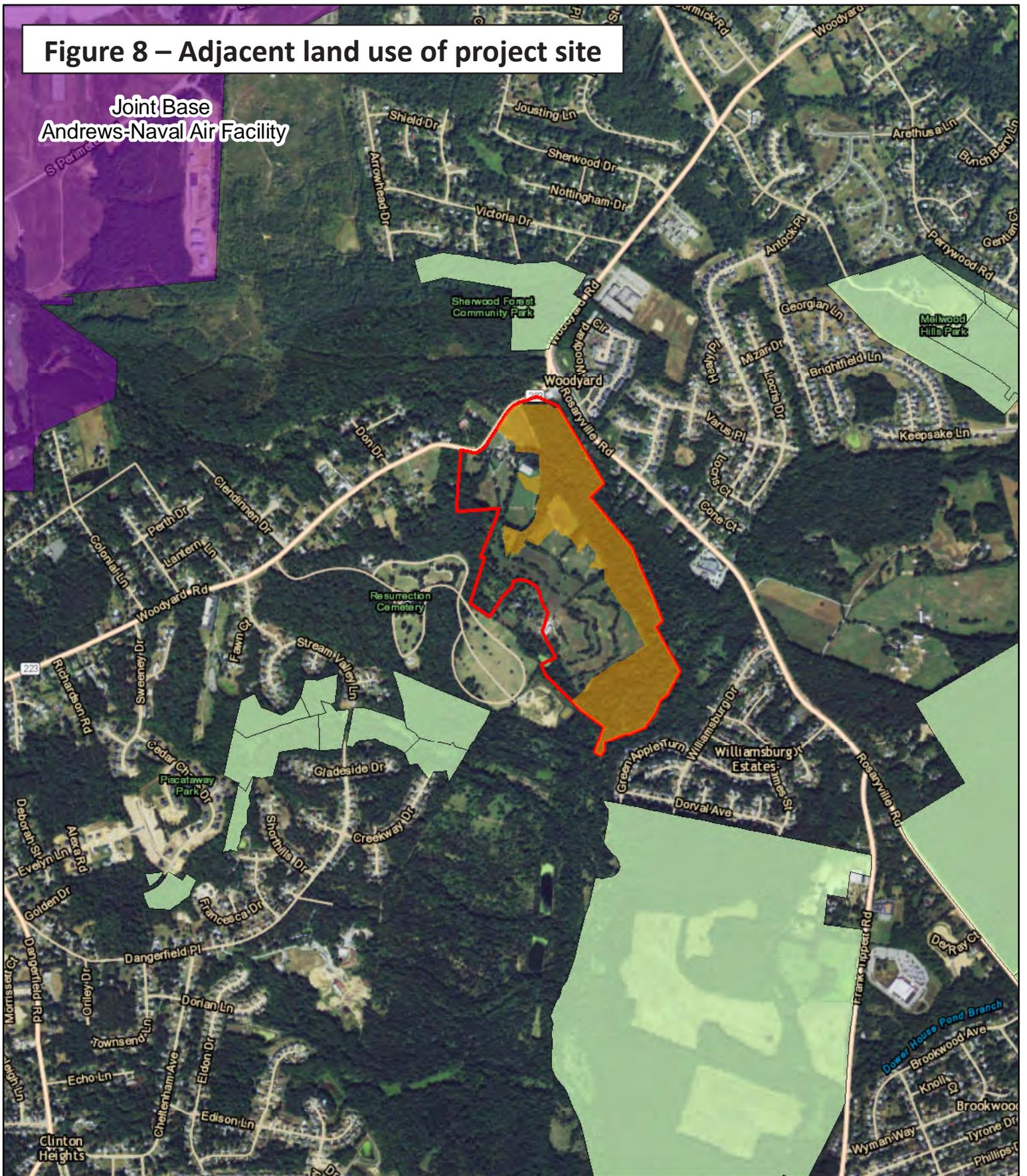
**Note: Zones A and A3 are within the 100 year flood hazard area
Zone B is within the 500 year flood hazard area**

-  Walton Property Boundary
-  Proposed Action Project Area (62.02 ac)

**Piscataway Creek Mitigation Site
FEMA Floodplain Map (effective 9/6/96)**

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

Figure 8 – Adjacent land use of project site



**Joint Base
Andrews-Naval Air Facility**

Sherwood Forest
Community Park

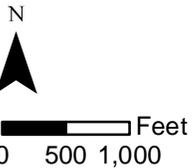
Melwood
Hills Park

Picataway
Park

Resurrection
Cemetery

Williamsburg
Estates

Dover House Pond Branch



- Walton Property Boundary
- Preserved Open Space
- Proposed Action Project Area (62.02 ac)
- JBA Property Boundary

**Piscataway Creek Mitigation Site
Land Use Figure**

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

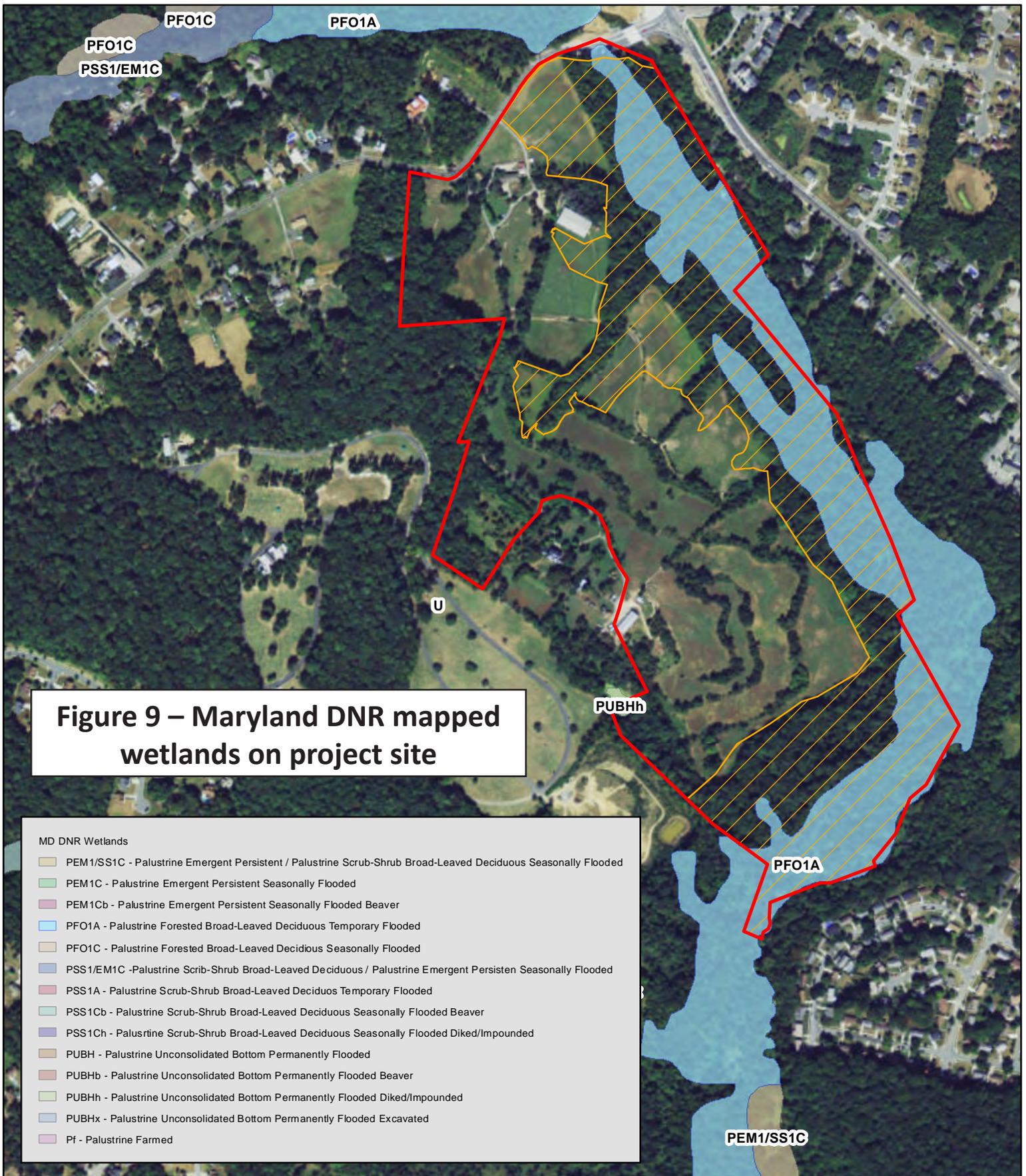
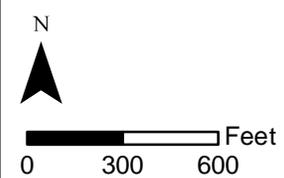


Figure 9 – Maryland DNR mapped wetlands on project site

MD DNR Wetlands	
	PEM1/SS1C - Palustrine Emergent Persistent / Palustrine Scrub-Shrub Broad-Leaved Deciduous Seasonally Flooded
	PEM1C - Palustrine Emergent Persistent Seasonally Flooded
	PEM1Cb - Palustrine Emergent Persistent Seasonally Flooded Beaver
	PFO1A - Palustrine Forested Broad-Leaved Deciduous Temporary Flooded
	PFO1C - Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded
	PSS1/EM1C - Palustrine Scrib-Shrub Broad-Leaved Deciduous / Palustrine Emergent Persisten Seasonally Flooded
	PSS1A - Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporary Flooded
	PSS1Cb - Palustrine Scrub-Shrub Broad-Leaved Deciduous Seasonally Flooded Beaver
	PSS1Ch - Palustrine Scrub-Shrub Broad-Leaved Deciduous Seasonally Flooded Diked/Impounded
	PUBH - Palustrine Unconsolidated Bottom Permanently Flooded
	PUBHb - Palustrine Unconsolidated Bottom Permanently Flooded Beaver
	PUBHh - Palustrine Unconsolidated Bottom Permanently Flooded Diked/Impounded
	PUBHx - Palustrine Unconsolidated Bottom Permanently Flooded Excavated
	Pf - Palustrine Farmed



Walton Property Boundary
 Proposed Action Project Area (62.02 ac)

Piscataway Creek Mitigation Site
MD DNR Mapped Wetlands

Piscataway Creek Mitigation Site
 7606 Woodyard Road
 Map 0108, Grid 00E4, Parcel 0236
 Clinton, Prince George's County, Maryland

Data Sources: ESRI Imagery, GreenVest LLC, MD iMap

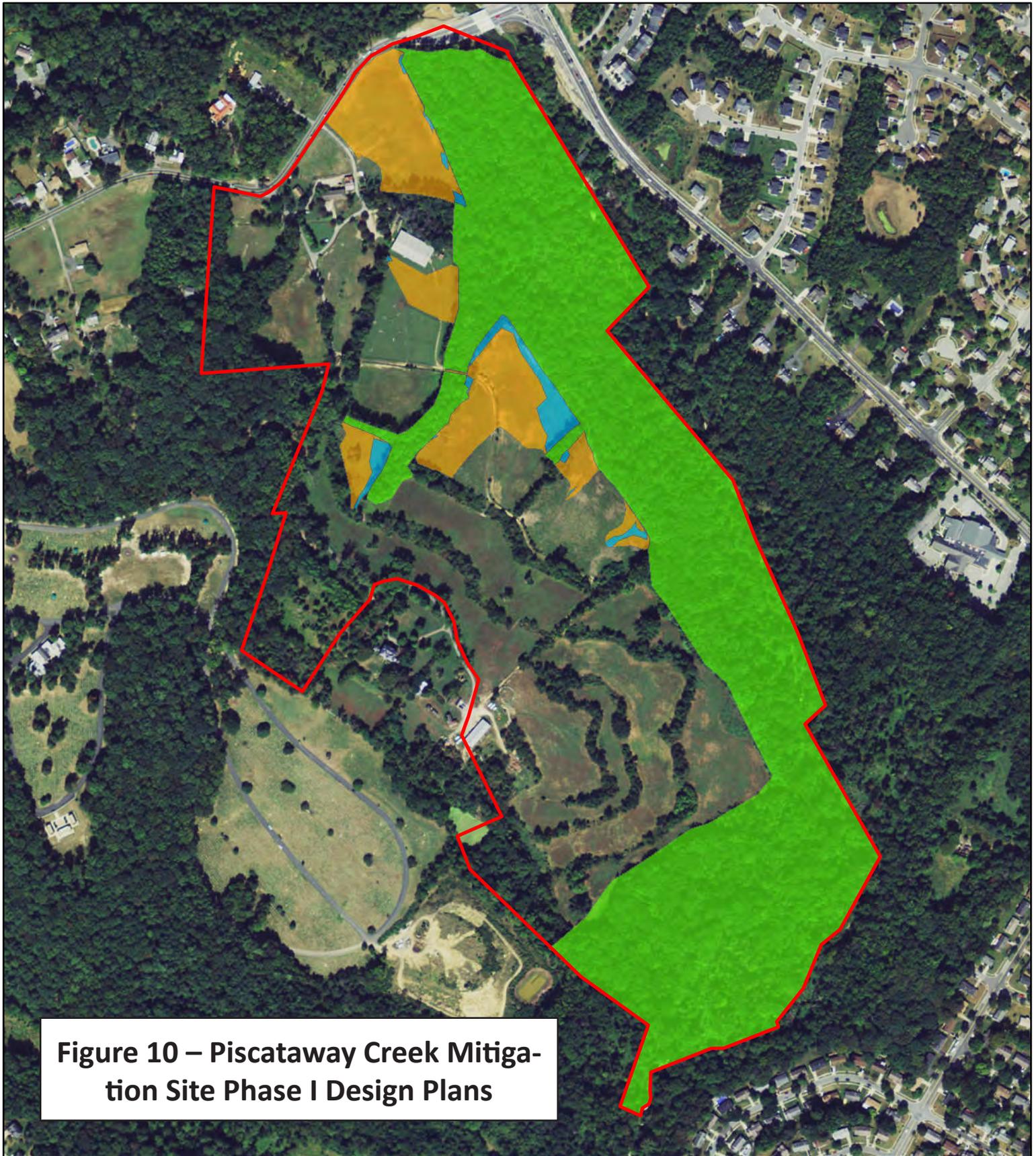
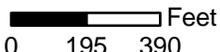


Figure 10 – Piscataway Creek Mitigation Site Phase I Design Plans

 	 Walton Property Boundary	<p>Piscataway Creek Mitigation Site <i>Phase I Design Plans</i></p> <p>Piscataway Creek Mitigation Site 7606 Woodyard Road Map 0108, Grid 00E4, Parcel 0236 Clinton, Prince George's County, Maryland</p>
	 Creation Area (9.67 ac)  Restoration Area (1.37 ac)  Preservation Area (50.98 ac)	

Page intentionally left blank.

APPENDIX B

AGENCY CORRESPONDENCE

December 15, 2015

MEMORANDUM FOR DISTRIBUTION

FROM: GreenVest LLC, on behalf of:
11 CES/CEIE
3466 North Carolina Ave.
Joint Base Andrews, MD 20762-4803

SUBJECT: Description of Proposed Action and Site Map for Piscataway Creek Wetland Mitigation project in Clinton, MD

1. Joint Base Andrews is preparing an Environmental Assessment (EA) for a proposed wetland mitigation project in Clinton, MD to offset 11.42 acres of wetland impacts that occurred as a result of West Runway project improvements (see Figures 1 and 2, attached). Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Sections 1500-1508), and 32 CFR Part 989, et seq., JBA will prepare an EA that considers the potential consequences to human health and the natural environment. The EA will examine the effects of the proposed project and will include analysis of the required no-action alternative.
2. In accordance with Executive Order 12372, Intergovernmental Review of Federal Programs, we invite your agency to comment on the Proposed Action described in the enclosed attachment and provide any relevant information about resources under your jurisdiction that may be present in the project area as indicated on the new site plan in the attachments.
3. Also enclosed is a copy of the distribution list for those federal, state, and local agencies to be contacted regarding this EA. If you believe any additional agencies should review and comment on this proposal, please feel free to include them in a re-distribution of this letter and the attached materials.
4. An attachment to this letter describes the project being analyzed in the EA. If undertaken, the project will be completed in accordance with applicable federal, state, and local laws and regulations and federal Executive Orders.
5. The Proposed Action is under a significant time constraint, so we request that you provide a timely and expedited review of the EA and the Proposed Action. Your assistance in providing information is greatly appreciated. Please provide written comments within 30 days from the date of this letter to Anne Hodges, 11 CES/CEIE, 3466 North Carolina Avenue, Joint Base Andrews, MD 20762 or send via e-mail to anne.m.hodges2.civ@mail.mil. If you need further information, please contact Ms.Hodges at 301-981-1426.



DAMIAN HOLYNSKYJ
Senior Land Planner

Distribution List

Mrs. Linda C. Janey, J.D.
Director, Maryland State Clearinghouse
Maryland Office of Planning, Room 104
301 West Preston Street
Baltimore, MD 21201-2365
ljaney@mdp.state.md.us

Mr. Elder Ghigiarelli
Federal Consistency Coordinator
Deputy Program Administrator
Maryland Department of the Environment
Wetlands and Waterways Program
1800 Washington Boulevard, Suite 430
Baltimore, MD 21230-1708
eghigiarelli@mde.state.md.us

Mr. Joe Abe
Coastal Policy Coordination Section Chief
Chesapeake and Coastal Service
Maryland Department of Natural Resources
580 Taylor Avenue, E-2
Annapolis, MD 21401
jabe@dnr.state.md.us

Ms. Genevieve Larouche
U.S. Fish & Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 1401

Lucy Kempf, Director
Urban Design and Plan Review Division
National Capital Planning Commission
401 9th Street, NW
North Lobby, Suite 500
Washington, DC 20004

Figure 1 – Proximity of Piscataway Creek Mitigation Site to Joint Base Andrews

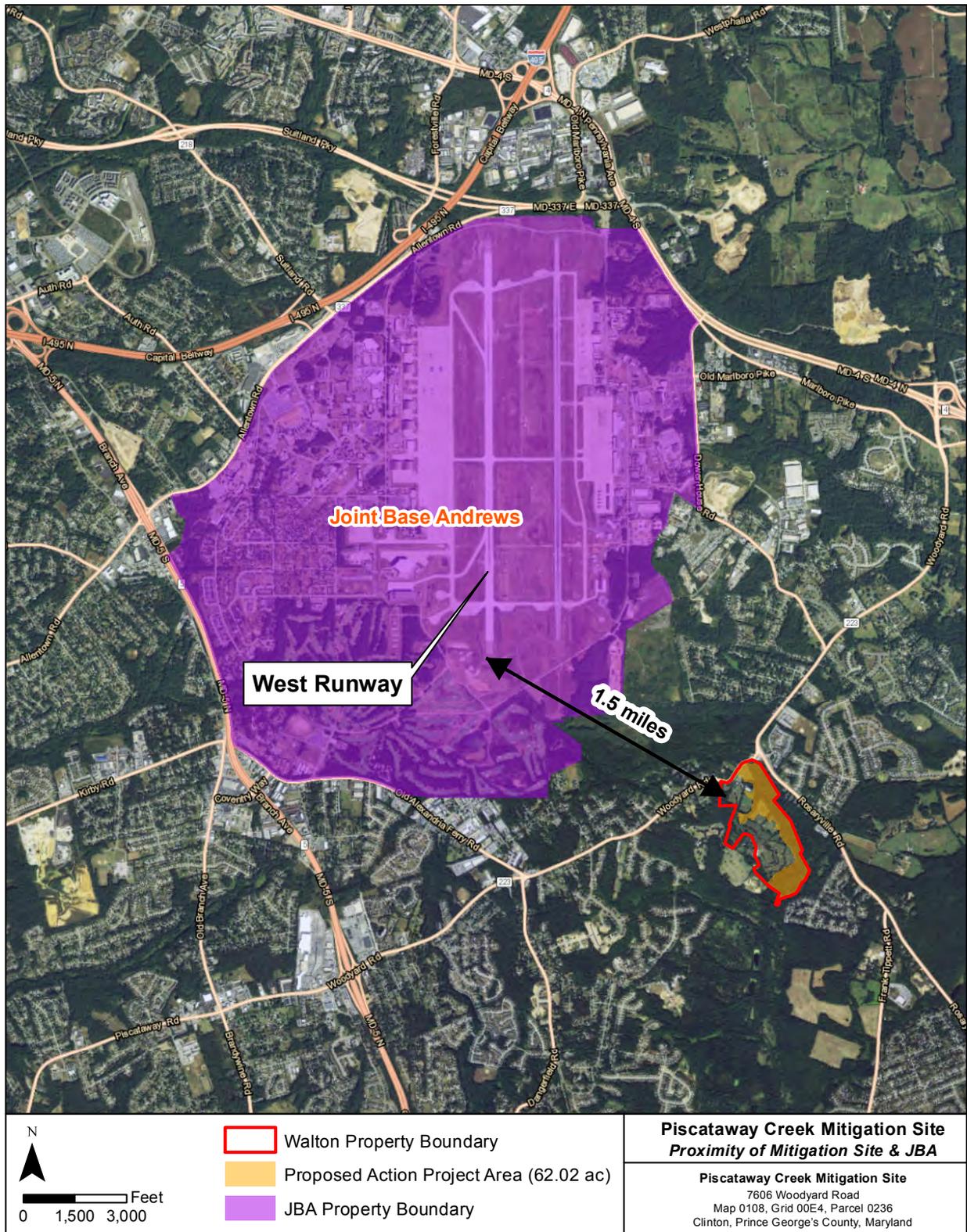
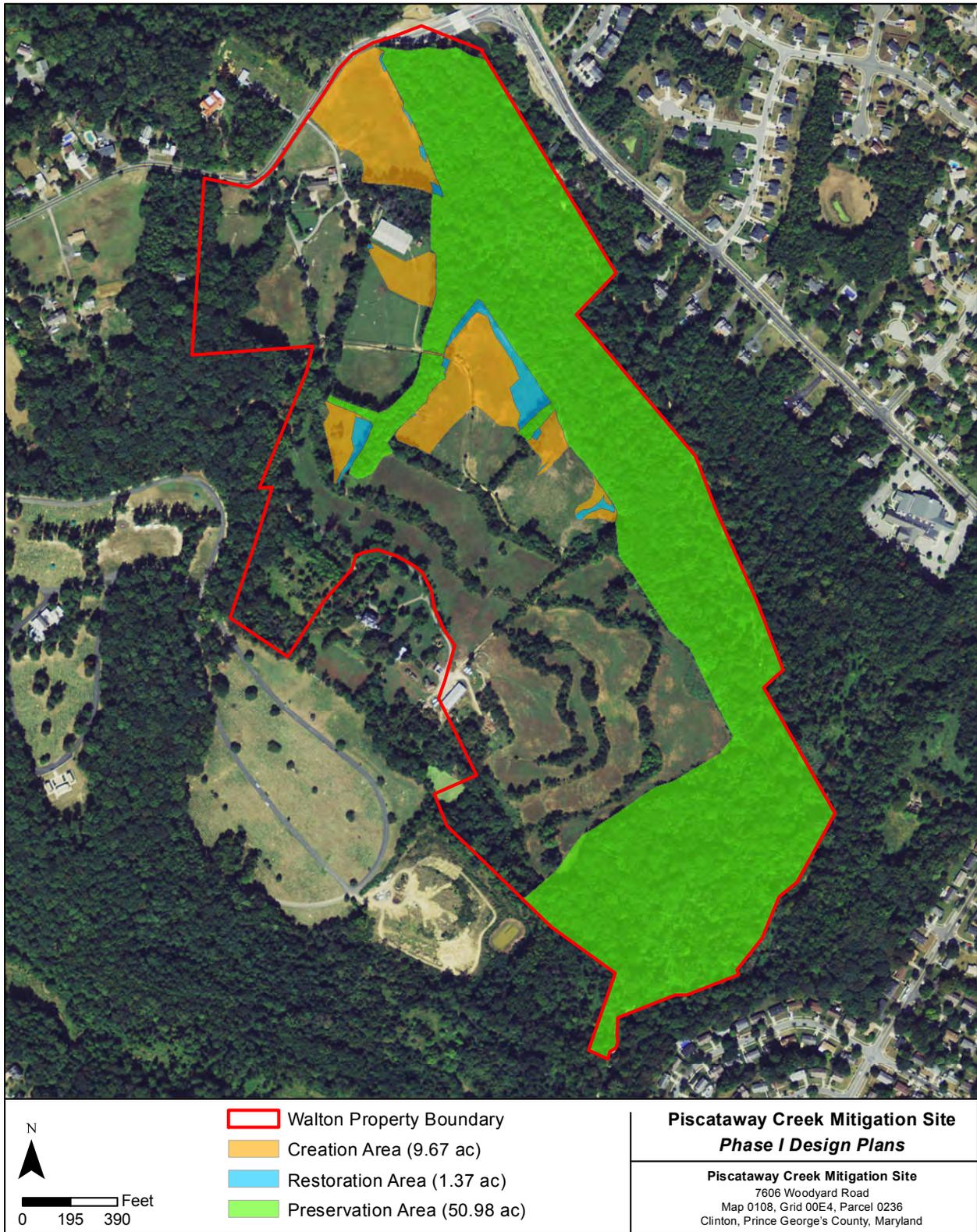


Figure 2 – Piscataway Creek Mitigation Site Phase I Design Plans



Data Sources: ESRI Imagery, GreenVest LLC

Correspondence with Maryland Clearing House

From: Bob Rosenbush -MDP- [<mailto:bob.rosenbush@maryland.gov>] **Sent:** Tuesday, January 19, 2016 1:35 PM **To:** HODGES, Anne Marie CIV USAF AFDW (US) **Subject:** [Non-DoD Source] Re: FW: MD20151218-1077 - JB Andrews NEPA

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Hi Anne: Concerning:

State Application Identifier: MD20151218-1077

Reply Due Date: 01/15/2016

Project Description: DraftEA and Draft FONSI: Piscataway Creek Wetland Mitigation, Clinton, MD: offsetloss of +/- 11.42 acres of Wetland impacts that occurred as result of West Runway Improvements: concerns wetlands creation, preservation, and restoration,+/- 61.62 acres

Project Address: 7606 Woodyard Road, Clinton, MD

Project Location: County of Prince George's

Clearinghouse Contact: Bob Rosenbush,
here are the review comments received to date.

The Clearinghouse received these qualifying comments from the State Highway Administration (SHA), a modal Administration, of the Maryland Department of Transportation.

The Highway Needs Inventory (HNI), SHA's long-range planning document, lists a widening project for MD 223, which straddles the northern boundary of the subject property. However, this project has not been funded for construction or programmed. Listed in the 2015-2020 Consolidated Transportation Program (CTP), is a corridor study that was completed in July 2015. The subject property falls within a section of MD 223 in which the report for the study calls for an upgrade of MD 223 with a typical section consisting of two travel lanes with shoulders and a drainage swale in both directions. These improvements are not funded for construction and have not been programmed. However, should SHA receive adequate funding for this upgrade, additional right-of-way might be required and it might pose impacts to the subject property. For this reason, it is our recommendation that issues regarding future right-of-way impacts along MD 223 should be coordinated with Mr. John Wedemeyer, SHA District 3 Right-of-Way Chief, at 301-513-740 or at jwedemeyer@sha.state.md.us < Caution-<mailto:jwedemeyer@sha.state.md.us> > . For coordination issues related to access to MD 223, please contact Mr. Pranoy Choudhoury, SHA District 3 Regional Engineer, at 301-513-7325 < tel:301-513-7325 > or at pchoudhoury@sha.state.md.us < Caution-<mailto:pchoudhoury@sha.state.md.us> >

The Maryland Department of General Services, the Maryland Department of Planning, and the Maryland-National Capital Park and Planning Commission found this project to be consistent with their plans, programs, and objectives.

The Maryland-National Capital Park and Planning Commission commented that the proposed project is for wetland mitigation, which will involve the creation, restoration and preservation of wetland in areas as indicated on the plan. According to available records. The site has no Type 1 or Type 2 Tree Conservation plan. The site is over 40,000 square feet in area and contained more than 10,000 square feet of woodland.

The project is under the Joint Base Andrews Air Force, a federal organization. As such, the project appears to be exempt from the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance; however conformance to the Maryland Forest Conservation Act may be required. Final determination of review authority will be made by the Maryland Department of Natural Resources. According to the proposed action, the project area will be placed in a permanent conservation easement registered with the county. Staff is in support of the proposed project and has no further comments.

A recommendation letter will be prepared. We are waiting to hear from the Maryland Historical Trust, the Maryland Emergency Management Agency, the Maryland Department of Natural Resources, and the Maryland Department of the Environment. Thanks for your cooperation. Bob R.

Bob Rosenbush, Planner
Maryland Department of Planning
301 West Preston Street, Room 1104
Baltimore, MD 21201-2305
Phone: 410-767-4487
Fax: 410-767-4490
E-mail: bob.rosenbush@maryland.gov < Caution-<mailto:bob.rosenbush@maryland.gov> >



January 21, 2016

RESPONSE TO INTERAGENCY COMMENT

FROM: GreenVest LLC, on behalf of:
11 CES/CEIE
3466 North Carolina Ave.
Joint Base Andrews, MD 20762-4803

TO: Maryland State Highway Administration
John Wedemeyer
SHA District 3 Right-of-Way Chief
707 North Calvert Street
Baltimore, MD 21202-3601

SUBJECT: Response to comments on Piscataway Creek Wetland Mitigation Environmental Assessment

The Clearinghouse received these qualifying comments from the State Highway Administration (SHA), a modal Administration, of the Maryland Department of Transportation.

The Highway Needs Inventory (HNI), SHA's long-range planning document, lists a widening project for MD 223, which straddles the northern boundary of the subject property. However, this project has not been funded for construction or programmed. Listed in the 2015-2020 Consolidated Transportation Program (CTP), is a corridor study that was completed in July 2015. The subject property falls within a section of MD 223 in which the report for the study calls for an upgrade of MD 223 with a typical section consisting of two travel lanes with shoulders and a drainage swale in both directions. These improvements are not funded for construction and have not been programmed. However, should SHA receive adequate funding for this upgrade, additional right-of-way might be required and it might pose impacts to the subject property. For this reason, it is our recommendation that issues regarding future right-of-way impacts along MD 223 should be coordinated with Mr. John Wedemeyer, SHA District 3 Right-of-Way Chief, at 301-513-740 or at jwedemeyer@sha.state.md.us

Response to Comment:

The potential expansion of the right-of-way along MD Rt 223 will have no adverse impacts on either ecological or hydrological functions and values of the proposed wetland restoration work at the Piscataway Creek Mitigation Site (PCMS). However, there is a potential that the proposed expanded right-of-way could extend into a small strip of the proposed mitigation project that will be placed under a permanent conservation easement once the restoration work is completed. If the expansion of MD Rt



223 receives adequate funding and is implemented it could impact restored, forested, freshwater wetlands under conservation easement. If impacts occurred to the PCMS as a result of the Maryland State Highway Authority implementing improvements to MD Rt 223, they would need to engage in their typical mitigation processes perhaps generating a need to provide on-site or offsite mitigation.

A handwritten signature in black ink, appearing to read "D. Holytskyj".

DAMIAN HOLYNSKYJ
Senior Land Planner

CC:

Anne Hodges
NEPA/EIAP Manager, 11 CES Environmental
3466 North Carolina Ave
Joint Base Andrews, MD 20762

April 20, 2015

Project Review
Chesapeake Bay Field Office
United States Fish and Wildlife Service
177 Admiral Cochrane Drive
Annapolis, MD 21401

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

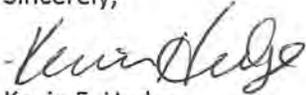
Dear Project Review Coordinator:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting an environmental review from the US Fish & Wildlife Service regarding protected endangered/threatened species, critical or proposed critical habitats, wetlands, national wildlife refuges, wilderness areas, wild and scenic river corridors, heritage trust reserves and/or National and State parks that may occur on or within the vicinity of the above referenced site.

The site consists of \pm 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location, a Site Aerial Map depicting site boundaries and the Trust Resources List obtained from IPaC.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

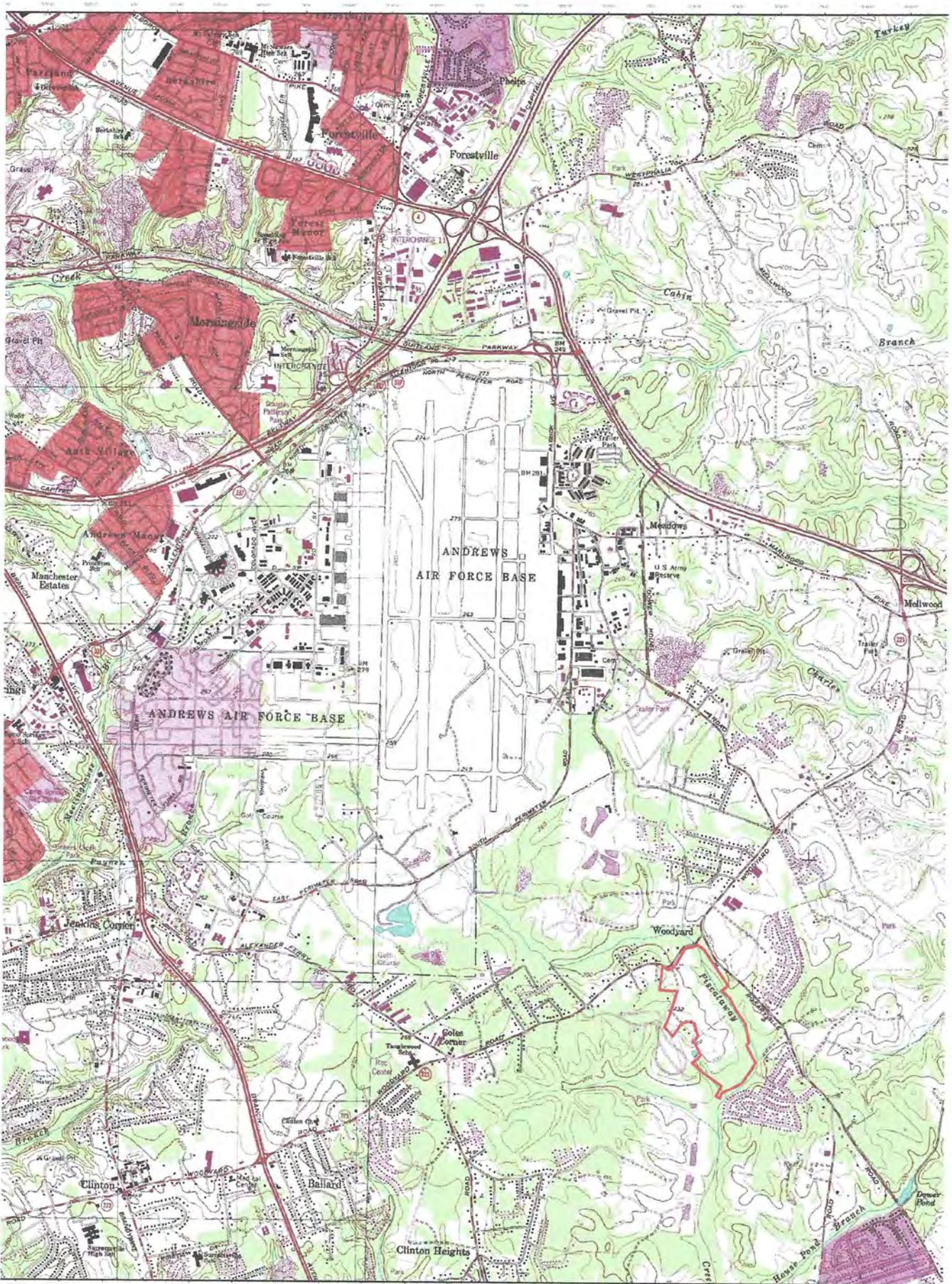
Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews



1:250,000

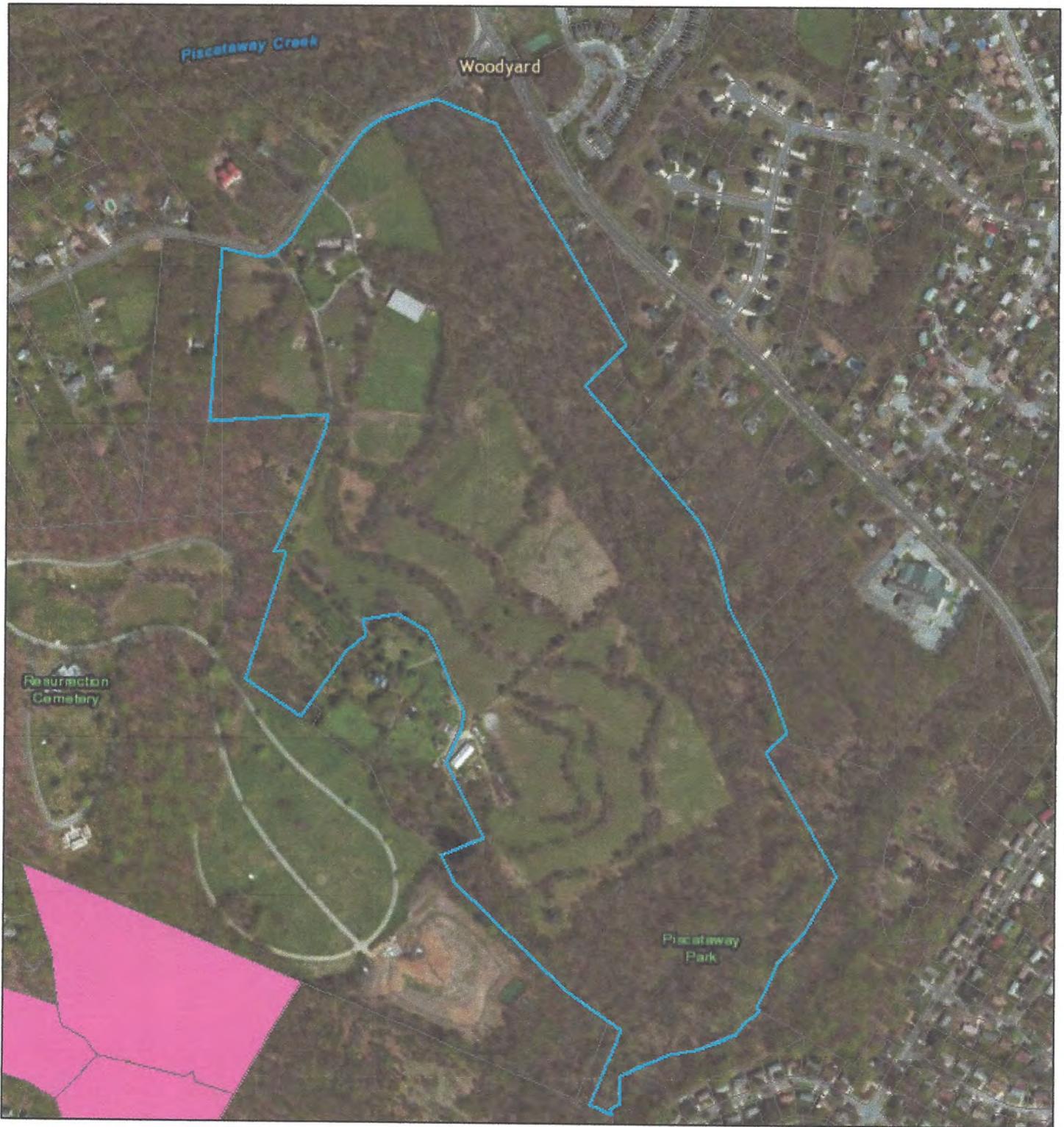


Index Map

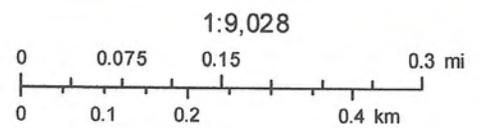


Piscataway Creek Mitigation Site (Walton) Limits

MERLIN-Marylands Environmental Resource and Land Information Network



March 5, 2015



MD iMAP, MDP, SDAT
MD iMAP, DNR
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus
DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the
GIS User Community



U.S. Fish and Wildlife Service

Trust Resources List

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

Chesapeake Bay Ecological Services Field Office
177 ADMIRAL COCHRANE DRIVE
ANNAPOLIS, MD 21401
(410) 573-4599

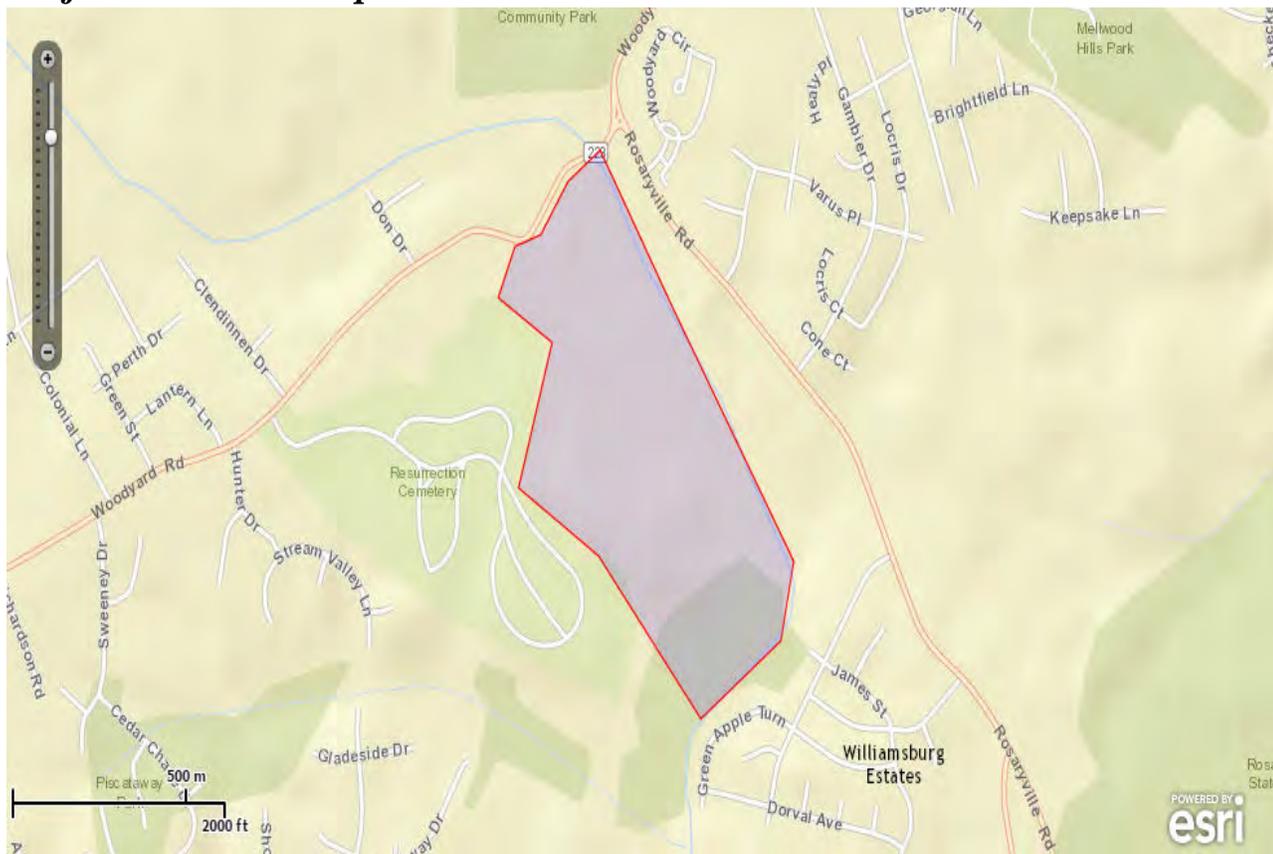
Project Name:

Walton Property Mitigation Site



Trust Resources List

Project Location Map:



Project Counties:

Prince George's, MD

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-76.8436887 38.7771907, -76.8463444 38.7785609, -76.8452289 38.7814968, -76.8470206 38.7824001, -76.8464627 38.7834371, -76.8456044 38.7836713, -76.8447032 38.7847451, -76.8436303 38.7853779, -76.8412699 38.7822668, -76.837193 38.7770813, -76.8376221 38.7754753, -76.8402829 38.7739028, -76.8436887 38.7771907)))

Project Type:

Stream / Waterbody / Canals / Levees / Dikes



U.S. Fish and Wildlife Service

Trust Resources List

Endangered Species Act Species List ([USFWS Endangered Species Program](#))

There are no listed species found within the vicinity of your project.

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#))

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#))

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html>.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: <http://www.fws.gov/migratorybirds/CCMB2.htm>.



Trust Resources List

For information about conservation measures that help avoid or minimize impacts to birds, please visit: <http://www.fws.gov/migratorybirds/CCMB2.htm>.

Migratory birds of concern that may be affected by your project:

There are **26** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to the [ECOS Help Desk](#).

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
American Oystercatcher (<i>Haematopus palliatus</i>)	Yes	species info	Year-round
American bittern (<i>Botaurus lentiginosus</i>)	Yes	species info	Wintering
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	species info	Year-round
Black-billed Cuckoo (<i>Coccyzus erythrophthalmus</i>)	Yes	species info	Breeding
Blue-winged Warbler (<i>Vermivora pinus</i>)	Yes	species info	Breeding
cerulean warbler (<i>Dendroica cerulea</i>)	Yes	species info	Breeding
Fox Sparrow (<i>Passerella liaca</i>)	Yes	species info	Wintering
Gull-billed Tern (<i>Gelochelidon nilotica</i>)	Yes	species info	Breeding
Kentucky Warbler (<i>Oporornis formosus</i>)	Yes	species info	Breeding
Least Bittern (<i>Ixobrychus exilis</i>)	Yes	species info	Breeding
Nelson's Sparrow (<i>Ammodramus nelsoni</i>)	Yes	species info	Wintering
Peregrine Falcon (<i>Falco peregrinus</i>)	Yes	species info	Wintering



Trust Resources List

Pied-billed Grebe (<i>Podilymbus podiceps</i>)	Yes	species info	Breeding
Prairie Warbler (<i>Dendroica discolor</i>)	Yes	species info	Breeding
Prothonotary Warbler (<i>Protonotaria citrea</i>)	Yes	species info	Breeding
Purple Sandpiper (<i>Calidris maritima</i>)	Yes	species info	Wintering
Red Knot (<i>Calidris canutus rufa</i>)	Yes	species info	Wintering
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	Yes	species info	Year-round
Rusty Blackbird (<i>Euphagus carolinus</i>)	Yes	species info	Wintering
Saltmarsh Sparrow (<i>Ammodramus caudacutus</i>)	Yes	species info	Year-round
Seaside Sparrow (<i>Ammodramus maritimus</i>)	Yes	species info	Year-round
Short-billed Dowitcher (<i>Limnodromus griseus</i>)	Yes	species info	Wintering
Short-eared Owl (<i>Asio flammeus</i>)	Yes	species info	Wintering
Snowy Egret (<i>Egretta thula</i>)	Yes	species info	Breeding
Wood Thrush (<i>Hylocichla mustelina</i>)	Yes	species info	Breeding
Worm eating Warbler (<i>Helmitheros vermivorum</i>)	Yes	species info	Breeding

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the



Trust Resources List

Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

Data Limitations, Exclusions and Precautions

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC is unable to display wetland information at this time.

April 15, 2015

Kimberly Damon-Randall
Protected Resources, NMFS Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

Dear Ms. Damon-Randall:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting available information regarding endangered and/or threatened species, critical or proposed critical habitats, anadromous/catadromous fisheries and essential fish habitat that may occur on or within the vicinity of the above referenced site.

The site consists of \pm 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location and a Site Aerial Map depicting site boundaries.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

Sincerely,

Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

APR 27 2015

Kevin E. Hedge
Professional Wetland Scientist
GreenVest, LLC
210 Najoles Road, Suite 202
Millersville, MD 21108

Re: Piscataway Creek Mitigation Site

Dear Mr. Hedge,

We received your letter dated April 24, 2015, regarding proposed construction activities on the Piscataway Creek Mitigation Site, in Clinton, Maryland. In your letter, you request information on the presence of any Endangered Species Act (ESA) listed threatened or endangered species under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS).

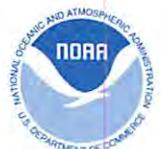
As no in water work is proposed, no listed species will be affected by the proposed project. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued.

More information on ESA protected species presence in Maryland, the Chesapeake Bay and its' tributaries can be found on our website: <http://www.GreaterAtlantic.Fisheries.NOAA.gov/Protected/Section7/Guidance/Maps/Index.html>. Please contact Ms. Ainsley Smith of my staff (978-281-9291 or Ainsley.Smith@Noaa.gov), should you have any questions regarding these comments.

NMFS' Habitat Conservation Division (HCD) is responsible for overseeing issues related to Essential Fish Habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act and other NOAA trust resources under the Fish and Wildlife Coordination Act. For more information regarding EFH, please contact Kristy Beard (410-573-4542; Kristy.Beard@Noaa.gov).

Sincerely,

Kimberly Damon-Randall
Assistant Regional Administrator
for Protected Resources





201504212

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 11TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762

RECEIVED
SEP 25 2015
F USAF
DL17

BY: _____

9 September 2015

Ms. Elizabeth Cole
Department of Housing and Community Development
Maryland Historical Trust
Office of Preservation Services
100 Community Place
Crownsville, Maryland 21032

The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.

Dale Henry Date 10/20/15

Dear Ms. Cole:

The purpose of this letter is to continue consultation with your office as required by Section 106 of the National Historic Preservation Act regarding the development of a proposed wetland mitigation area associated with construction of the proposed West Runway Repair and Enhancement Project at Joint Base Andrews (JBA) near the town of Clinton in Prince George's County, Maryland. The proposed wetland mitigation site, known as the "Piscataway Creek Mitigation Site," includes approximately 126 acres. Enclosure 1 to this letter is a portion of the U.S.G.S. Upper Marlboro quadrangle map of showing the project area, which is located southeast of JBA on the west bank of Piscataway Creek.

Slightly less than 62 acres of the total 126 acres will be used for wetland mitigation. Approximately 51.2 of existing wetland and forested upland will be preserved, and 8.3 acres of wetlands will be restored. The preservation and restoration work will involve little to no ground disturbance. Approximately 1.6 acres of the project area will be used for wetland creation, which will involve ground disturbance to a depth of approximately 8 to 12 inches. Enclosure 2 to this letter shows the wetland creation, restoration, and preservation areas.

JBA has conducted investigations to identify potential and known historic properties located in the project's area of potential effect. The location of the historic Marshalls (or Walton) Grist Mill is located just outside the northwest corner of the project area. A portion of a raceway associated with the mill is located in the wetland preservation area. Enclosure 3 shows the mill and raceway locations. Because no ground-disturbing activities will take place in this area the raceway will be preserved. The project area is located adjacent to the National Register-listed "His Lordship's Kindness" (Maryland Inventory of Historic Properties PG: 81A-1) but all of the wetland mitigation area is located outside the boundaries of this historic property.

The wetland mitigation area has never been investigated for the presence of archaeological resources. The portions of the project area with the highest probability of containing archaeological resources are in the eastern portion of the project area along Piscataway Creek. These high-probability areas will be preserved. The only potential effects to

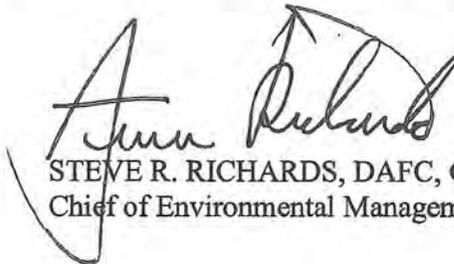
Archer
DLH
10/14/15
200

The Chief's Own!

archaeological resources resulting from the wetland mitigation project would involve ground disturbance in the 1.6-acre area slated for wetland construction. There is some potential for archaeological resources in this area. However, the small size of the wetland creation area, plus its distance from Piscataway Creek, suggest that the potential for archaeological resources is low, and that no field investigations are warranted.

No architectural resources are present in the wetland mitigation project's area of potential effect, and the area has a low probability for significant archaeological resources. There will be little change to the project area's appearance, so there will be no visual effects to any surrounding historic properties. Therefore, JBA has determined that implementation of the proposed wetland mitigation project will have no effect on historic properties, and no further cultural resource investigations are recommended.

Thank you for your cooperation with the JBA wetland mitigation project. Should we become aware, from any source, that historic properties may be adversely affected by the proposed project, we will notify your office immediately. If you have any questions or require further information, please contact me at (301) 981-1652 or my action officer, Mr. Jerris Harris, at (240) 612-6237.



STEVE R. RICHARDS, DAFC, GS-13
Chief of Environmental Management

April 22, 2015

Maryland Department of Natural Resources
Integrated Policy & Review Unit
Project Review Division
Attn: Mr. Greg Golden
Tawes State Office Building, C-3
Annapolis, Maryland 21401

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

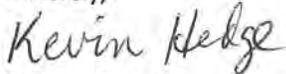
Dear Mr. Golden:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting an environmental review from the Maryland DNR IPRU Project Review Division regarding protected aquatic habitats and fisheries resources that may occur on or within the vicinity of the above referenced site.

The site consists of ± 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location and a Site Aerial Map depicting site boundaries.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

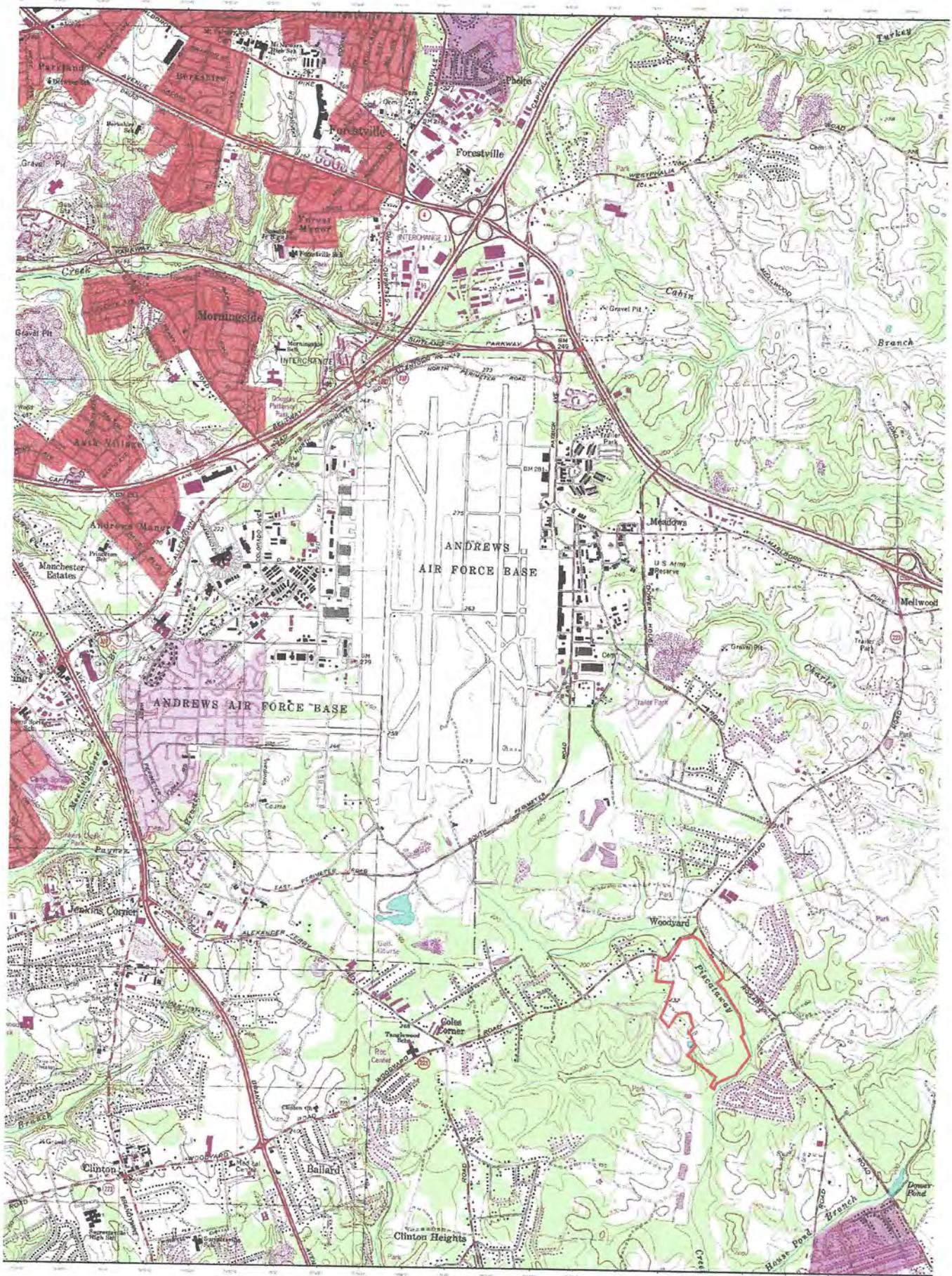
Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews



F:\Marlene

mytopo
A TERRELL COMPANY

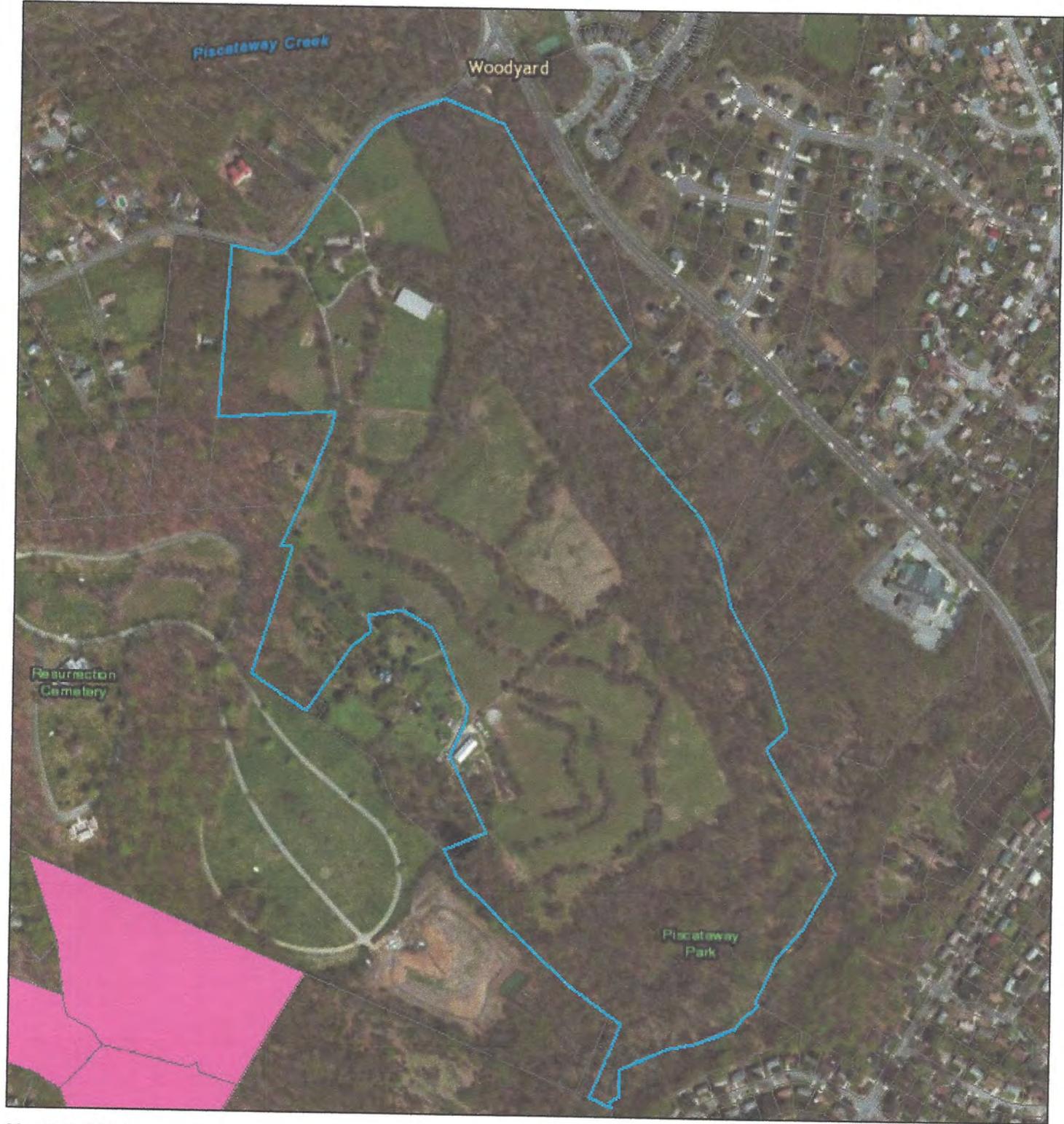


Index Map

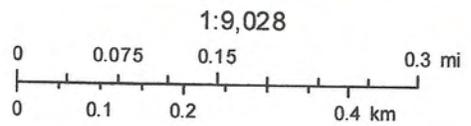


Piscataway Creek Mitigation Site (Walton) Limits

MERLIN-Marylands Environmental Resource and Land Information Network



March 5, 2015



MD iMAP, MDP, SDAT
MD iMAP, DNR
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Lawrence J. Hogan, Jr., Governor
Boyd K. Rutherford, Lt. Governor
Mark J. Belton, Acting Secretary

June 5, 2015

Mr. Kevin E. Hedge
Greenvest, LLC
210 Najoles Road, Suite 202
Millersville, MD 21108

RE: Environmental Review for Walton Property, Piscataway Mitigation Site, 7606 Woodyard Road, Clinton, Tax Map 108, Parcel 236, Prince George's County, Maryland.

Dear Mr. Hedge:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. This statement should not be interpreted however as meaning that rare, threatened or endangered species are not in fact present. If appropriate habitat is available, certain species could be present without documentation because adequate surveys have not been conducted. It is also important to note that the utilization of state funds, or the need to obtain a state authorized permit may warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. If this project falls into one of these categories, please contact us for further coordination.

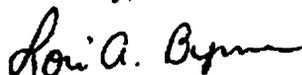
Our analysis of the information provided also suggests that the forested area on the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat is strongly encouraged by the Department of Natural Resources. The following guidelines could be incorporated as appropriate into the site design to help minimize the project's impacts on FIDS and other native forest plants and wildlife:

1. Restrict development to nonforested areas.
2. If forest loss or disturbance is unavoidable, concentrate or restrict development to the following areas:
 - a. the perimeter of the forest (i.e., within 300 feet of existing forest edge)
 - b. thin strips of upland forest less than 300 feet wide
 - c. small, isolated forests less than 50 acres in size
 - d. portions of the forest with low quality FIDS habitat, (i.e., areas that are already heavily fragmented, relatively young, exhibit low structural diversity, etc.)
3. Maximize the amount of forest "interior" (forest area >300 feet from the forest edge) within each forest tract (i.e., minimize the forest edge:area ratio). Circular forest tracts are ideal and square tracts are better than rectangular or long, linear forests.
4. Minimize forest isolation. Generally, forests that are adjacent, close to, or connected to other forests provide higher quality FIDS habitat than more isolated forests.
5. Limit forest removal to the "footprint" of houses and to that which is necessary for the placement of roads and driveways.

6. Minimize the number and length of driveways and roads.
7. Roads and driveways should be as narrow and as short as possible; preferably less than 25 and 15 feet, respectively
8. Maintain forest canopy closure over roads and driveways.
9. Maintain forest habitat up to the edges of roads and driveways; do not create or maintain mowed grassy berms.
10. Maintain or create wildlife corridors.
11. Do not remove or disturb forest habitat during April-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.
12. Landscape homes with native trees, shrubs and other plants and/or encourage homeowners to do so.
13. Encourage homeowners to keep pet cats indoors or, if taken outside, kept on a leash or inside a fenced area.
14. In forested areas reserved from development, promote the development of a diverse forest understory by removing livestock from forested areas and controlling white-tailed deer populations. Do not mow the forest understory or remove woody debris and snags.
15. Afforestation efforts should target a) riparian or streamside areas that lack woody vegetative buffers, b) forested riparian areas less than 300 feet wide, and c) gaps or peninsulas of nonforested habitat within or adjacent to existing FIDS habitat.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,



Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

June 18 2015

Thomas M DeSisto
USDA APHIS Wildlife Services
Wildlife Biologist
1419 Menoher Dr, Rm 228
Andrews AFB, MD 20762

**Re: Request for Wildlife Hazard Assessment
Piscataway Creek Mitigation Site
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland**

Dear Mr. DiSisto:

On behalf of Joint Base Andrews (JBA), GreenVest, LLC (GV) submits this formal request for a Wildlife Hazard Assessment pursuant to FAA Advisory Circular 150/5200-33B. This letter is a follow up to our site visit conducted on May 20, 2015 and is intended to provide your office with information needed to conduct a Wildlife Hazard Assessment of GV's proposed Piscataway Creek Wetland Mitigation Project (PCMP). This PCMP site is located in Clinton, MD in the Piscataway Creek MDE HUC 8 Watershed approximately 1.35 miles southeast of JBA (see attached USGS Site Location Map). This offsite, mitigation is being provided to satisfy JBA's outstanding, wetland mitigation requirements imposed by the Maryland Department of Environment (MDE) and the Baltimore District of the Army Corps of Engineers (ACE). This mitigation will compensate for non-tidal wetland impacts associated with improvements made to the West Runway in 2010.

The mitigation being provided on this site includes three (3) components (See Attached Concept Plan);

1. Preservation of existing non-tidal, forested wetlands and uplands within the floodplain of Piscataway Creek along the northern and eastern boundaries of the site.
2. Enhancement of existing, degraded wetlands currently used as pasture for boarded horses.
3. Restoration of historic forested wetlands currently used as pasture for boarded horses.

As discussed in the field this, forested, non-tidal wetland mitigation project will NOT create a wildlife hazard to JBA aircraft or other base related operations. In fact this mitigation project, is 1) being conducted off-post which is preferred pursuant to AC 150/5200-33B, and 2) will result in a net reduction of goose habitat by re-foresting open fields which currently provide seasonal foraging opportunities.

GV evaluated over 55 sites in an effort to locate and secure a site that would provide “in-kind” and “in watershed” wetland mitigation satisfying both the MDE and ACE requirements for West Runway. The Piscataway Creek Mitigation Site (PCMS) emerged as the lead candidate due to its ability to provide 100% of the required mitigation for West Runway on one site, “in-kind” and within the same MDE HUC 8 watershed. This site effectively presents a very efficient and cost effective alternative for JBA to satisfy its outstanding mitigation requirements in an off-post location not only proximate but tributary to the base.

The PCMS is under private ownership and is located at 7606 Woodyard Road, Clinton, Maryland in Prince George’s County (See USGS Site Location Map). The site is situated on a 61.59 acre portion of the larger parcel (126.03 acres) that is immediately adjacent to Piscataway Creek, which flows through the property from northwest to southeast. The PCMS is located in the Middle Potomac Watershed USGS HUC 8 - 02070010 and Piscataway Creek Watershed MD 8-Digit Watershed - 02140203 (See Figure 6).

Per definitions presented in the Federal Aviation Administration’s (FAA) Advisory Circular No. 150/5200-33B (FAA Circular), wetland mitigation projects can be considered hazardous wildlife attractants, and require review by the FAA when located within the prescribed separation/protection areas. The site is located outside of the 5,000 foot Perimeter A Separation Area within which hazardous wildlife attractants should be avoided, eliminated or mitigated, as defined in the FAA Circular, but the project site is located within the 10,000 foot Perimeter B Separation Area—at its closest point the project site is located about 7,000 feet from the southeastern corner of the easternmost runway at JBA.

However, as stated above the restoration plans for the PCMS include only forested wetlands which will NOT result in any open water or emergent wetland habitat. These restoration measures will actually result in a reduction of habitat that attracts nuisance wildlife which could pose a potential hazard to aircraft. The PCMS consists of a little over 51 acres of existing wetland/upland forest which will be preserved and about 11 acres of agricultural fields and pasture which will be enhanced/restored (see attached Conceptual Mitigation Plan). Forested wetlands provide very little value for and thus are not used by Canada Geese or other waterfowl and thus the restoration project will not pose a wildlife hazard to aircraft operations at JBA. The proposed forested wetland restoration will eliminate any seasonal attraction, albeit marginal, to wading birds or waterfowl by converting areas of temporary inundation to seasonal saturation.

Unique Ecological Functions Provided by the Piscataway Creek Mitigation Project

Per section 2-4c(1) of the FAA Advisory Circular No. 150/5200-33B, “The FAA may consider exceptions to locating mitigation activities outside the separations identified in Sections 1-2 through 1-4 if the affected wetlands provide unique ecological functions, such as critical habitat for threatened and endangered species or groundwater recharge, which cannot be replicated when moved to a different location.” The Piscataway Creek Mitigation Site and project does provide unique and special Ecological Functions as outlined below.

Presently, the site consists of grazed pasture fields that are separated by wood fences and narrow, forested hedgerow areas along stream corridors, typical of many farms in the area. The mitigation site is bordered on the east and south by forested floodplain associated with Piscataway Creek. This forested area includes sections of interior that is suitable for Forest Interior Dwelling

Species (FIDS) and has been identified as a Green Infrastructure Corridor by Prince George's County. The project, as proposed, will result in the preservation of this documented corridor and restoration of forested headwater wetlands. The restoration/enhancement components of the project will be integrated with the adjacent floodplain forest providing additional wildlife habitat by extension. We are in the process of consulting with DNR and USFWS to determine if there are any occurrences of threatened or endangered species, their habitats or significant natural communities on or within the vicinity of the subject site.

Furthermore, the PCWP will restore groundwater recharge as well as natural flood volume storage within the 100-year flood plain of Piscataway Creek in proximity to the base which cannot be replicated on another site. The proposed restoration activities will result in lifting myriad ecological functions and values, including: sediment control and reduction, nutrient reduction and cycling, flood storage, groundwater recharge, stormwater management and FIDS habitat within the Piscataway Creek Green Infrastructure Corridor

Description of the Piscataway Creek Mitigation Project Restoration Measures

The proposed restoration area have been used as pasture fields since at least 1938. Prior to 1938 these areas were comprised of forested freshwater wetlands. The proposed project consists of restoring headwater wetlands footprint of existing pasture fields incorporating sources of hydrology from seeps and adjacent drainage ditches as shown on the attached Conceptual Mitigation Plan.

The project is comprised of the following elements;

1. 52.05 acres of Forested wetland and upland preservation.
 - a. A permanent conservation easement will be recorded on this portion of the mitigation site and registered with Prince Georges County.
2. 1.09 acres of wetland enhancement.
 - a. Enhancement will be accomplished by converting existing, modified agricultural wetlands to forested cover by planting native woody species of vegetation.
 - i. Perimeter fence will surround all enhancement areas.
 - ii. A permanent conservation easement will be recorded on this portion of the mitigation site and registered with Prince Georges County.
 - iii. 5-7 years of maintenance and monitoring including the preparation and filing of annual monitoring reports to MDE and ACE.
3. 10.16 acres of forested wetland restoration.
 - a. Restoration will be accomplished by;
 - i. Eradication of invasive/exotic species of vegetation through herbicide application and mechanical removal.
 - ii. Installation of soil erosion and sediment control measures.
 - iii. Installation of perimeter fence surrounding the entire restoration area.

- iv. Minor excavation and grading (12-18" of cut).
 - 1. All excavated material will be placed in existing upland areas of the surrounding site.
- v. Planting of native species of woody vegetation (trees and shrubs)
- vi. A permanent conservation easement will be recorded on this portion of the mitigation site and registered with Prince Georges County.
- vii. 5-7 years of maintenance and monitoring including the preparation and filing of annual monitoring reports to MDE and ACE.

Site Access

During our field meeting, Mr. DiSisto asked if representatives of JBA and/or USDA/AFIS could be provided access to inspect the site and/or conduct wildlife hazard management, should the need arise. GV has secured the legal right and approvals to advance the mitigation work proposed. Furthermore, once the mitigation is completed the site will be protected under a permanent conservation easement which will give both the Maryland Department of the Environment (MDE) and the United States Army Corps of Engineers (USACE) access to the site. Granting JBA/USDA AFIS access to the site for purposes of conducting periodic inspections and/or wildlife hazard management, if needed, could be incorporated into the permits as well as the conservation easement recorded on the PCMS. However, as discussed in our field meeting and in this letter, GV does not anticipate USDA/AFIS will need to implement any wildlife hazard management measures on this site.

Conclusions

Both the MOA between the FAA, the Corps and other federal agencies regarding aircraft-wildlife strikes and the FAA circular AC 150/5200-33B recommend that wetland mitigation should be provided offsite where feasible. As described herein, the PCMP supports this goal. GreenVest respectfully submits that the PCMP as proposed will NOT create any wildlife hazard to aircraft operations or human safety at JBA. This project will yield ecologies and an economies of scale providing JBA with the mitigation it needs to satisfy outstanding MDE and ACE requirements related to the West Runway improvements.

We appreciate the opportunity to present this information to your office. We hope that you will concur that the Piscataway Creek Mitigation Project provides a viable opportunity to restore forested wetlands and provide JBA's required wetland mitigation, while avoiding wildlife hazards to aviation and human safety at JBA.

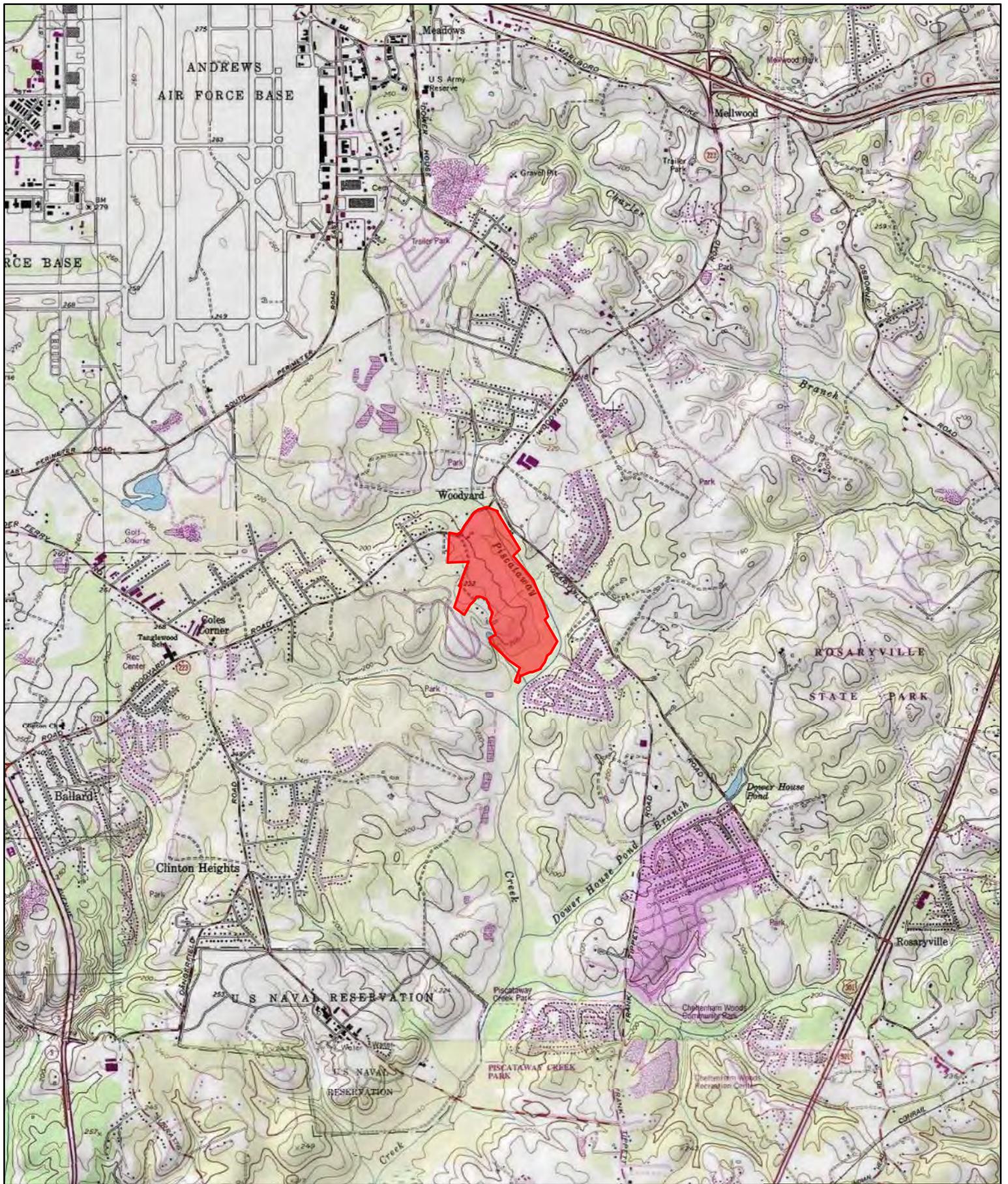
GreenVest is committed to working closely with FAA and JBA to address any potential concerns associated with securing approvals for and implementing this mitigation project. Please do not hesitate to contact me if you have questions or require additional information. I can be reached via email at brett@greenvestus.com or by phone at 201-410-0866 or in the office at 410-987-5500.

Sincerely,

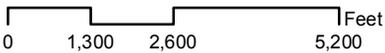
A handwritten signature in black ink, appearing to read "Brett Berkley". The signature is fluid and cursive, with the first name "Brett" and last name "Berkley" clearly distinguishable.

Brett Berkley, PWS
Sr. Vice President
GreenVest, LLC

cc: Carla Rupert (JBA)
Jerris Harris (JBA)
Vaso Karanikolis (ACE Baltimore District- Planning Division)



 Property Boundary



West Runway Joint Base Andrews
USGS Topographic Map

Piscataway Creek Mitigation Site
 7606 Woodyard Road
 Map 0108, Grid 00E4, Parcel 0236
 Clinton, Prince George's County, Maryland

GreenVest
 One Stop 24/7 Ltd.

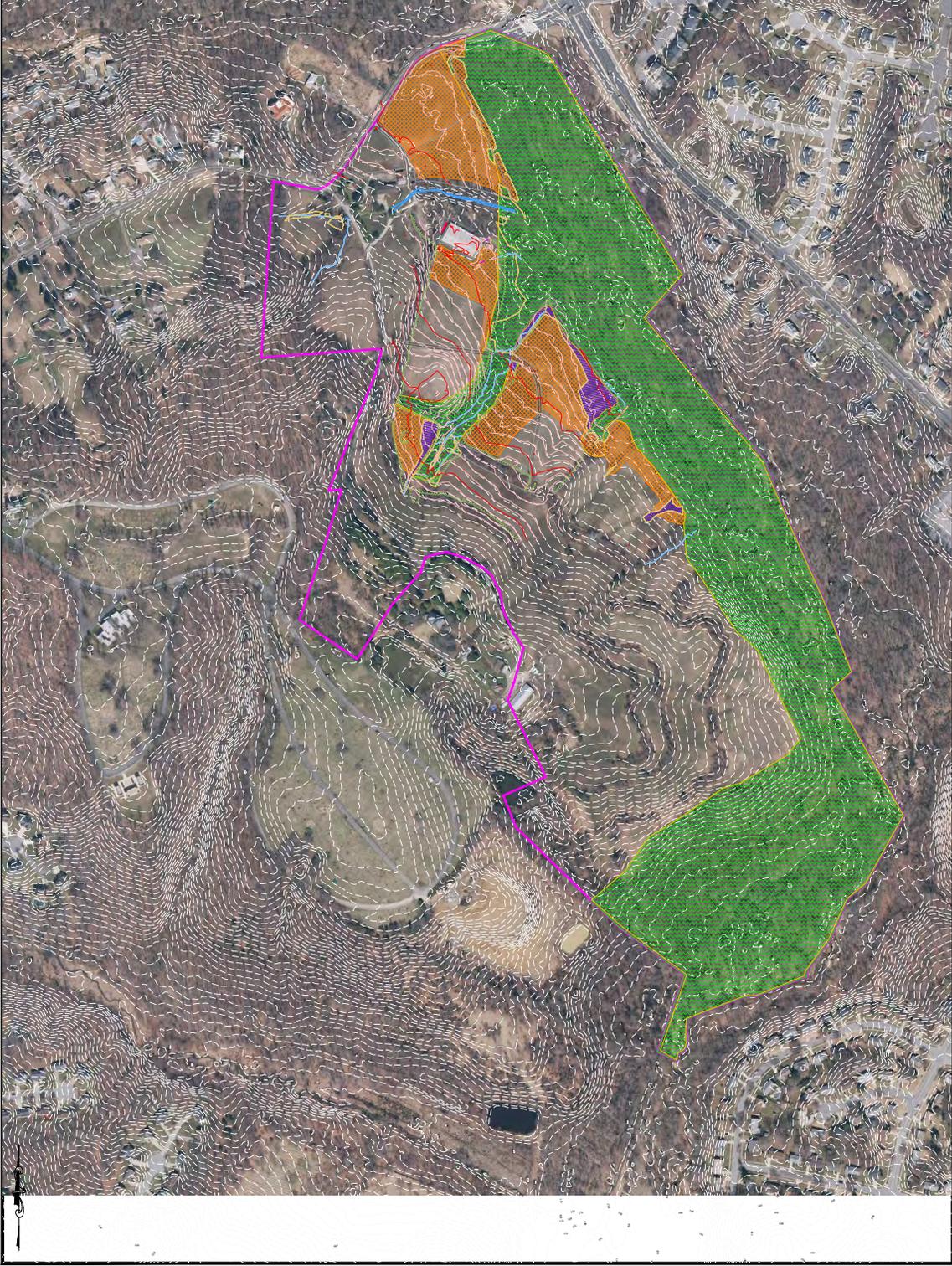
www.greenvest.us.com

MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.530 (p) 410.987.5301 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.6644 (p) 732.902.6643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5301 (f)

Scale: 1 in = 3,000 ft

Date: 4/15/2015

Drawing name: P:\14500\Project\1450005_006\1450006\CAD\PHI_BASEMAP_20150611.dwg Plotted on: Jun 17, 2015 - 10:46am



- LEGEND:**
- WETLAND / UPLAND FOREST PRESERVATIONS 32.05 AC. (2,287,300 S.F.)
 - WETLAND ENHANCEMENT 1.09 AC. (47,390 S.F.)
 - WETLAND CREATION/RESTORATION 10.16 AC. (442,450 S.F.)
 - STREAMS
 - WETLANDS
 - VEGETATION BUFFER



CALL BEFORE YOU DIG!
 MARYLAND LAW REQUIRES
 2 WEEKS NOTICE FOR
 CONSTRUCTION PHASE
 REFER TO THE MARYLAND
 UNDERGROUND UTILITY TRANSMISSION LAW
 1-800-257-7777

PROJECT NOTES

DATE	DESCRIPTION
REVISIONS	

DATE _____
 REVISIONS _____
 DATE _____

PHI
PRINCETON HYDRO, LLC
 SCIENTISTS AND ENGINEERS
 1108 OLD YORK ROAD, SUITE 1
 P.O. BOX 7290
 BRIDGEVILLE, PA 15005
 PHONE: 482.237.5600
 FAX: 482.237.5606
 WWW.PRINCETHYDRO.COM

GreenVest
 A Division of
PRINCETON HYDRO, LLC
 PROJECT NAME: JOINT BASE ANDREWS
 WEST RUNWAY
 CONCEPT MITIGATION PLAN

DRAWING NAME: WEST RUNWAY
 JOINT BASE ANDREWS
 CONCEPT MITIGATION PLAN

DATE:	06/17/2015
PROJECT NO.:	1450005
SCALE:	1" = 200'
DRAWN BY:	MMG
CHECKED BY:	MMG
SHEET NO.:	1

1 OF **1**



**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 11TH WING (AFDW)
JOINT BASE ANDREWS, MARYLAND 20762**

Colonel Bradley Hoagland
Commander, Joint Base Andrews
1500 W. Perimeter Road, Suite 2340
Joint Base Andrews, MD 20762

Brett Berkley, PWS
Sr. Vice President
Greenvest, LLC
210 Najoles Road, Ste. 202
Millersville, MD 21108

Dear Mr. Berkley,

Pursuant to your 18 June 2015 request for a wildlife hazard assesement of the Piscataway Creek Wetland Mitigation Project, the requested assessment has been completed by the 89th Airlift Wing's USDA APHIS Wildlife Services contractor. We do not find your proposal to pose a significant additional wildlife hazard to flying operations or safety at Joint Base Andrews.

If you have any questions, please contact Colonel Brian Porter at the 11th Wing Safety Office, 240-612-5972.

BRADLEY T. HOAGLAND, Colonel, USAF
Commander

The Chief's Own!

Page intentionally left blank.

APPENDIX C

PROPOSED ACTION SITE PHOTOGRAPHS



Site Photo 1 - View looking east at across the northern field that is part of the proposed wetland creation area (4/8/2015).



Site Photo 2 – View looking southeast across the northern field proposed as a wetland creation area (4/8/2015).



Site Photo 3 – View looking east across an additional field proposed as a wetland creation area. Just to the left of this picture is the hedgerow that is part of the preservation area and which divides the two wetland creation areas (4/8/2015).



Site Photo 4 – View looking north across existing pastureland (4/8/2015).

Page intentionally left blank.

APPENDIX D

PHASE 1 MITIGATION PLAN

PHASE I MITIGATION PROPOSAL

Piscataway Creek Mitigation Site
Non-Tidal Wetland Mitigation
Clinton, Prince George's County, MD

West Runway Repair – Joint Base Andrews

Joint Base Andrews
Attn: Steve Richardson
11 CES/CEAN
3466 North Carolina Street
Joint Base Andrews, Maryland, 20762

August 2015

PHASE I MITIGATION PROPOSAL

Piscataway Creek Mitigation Site
Non-Tidal Wetland Mitigation
Clinton, Prince George's County, MD

West Runway Repair – Joint Base Andrews

Prepared For: Joint Base Andrews
Attn: Steve Richardson
11 CES/CEAN
3466 North Carolina Street
Joint Base Andrews, Maryland, 20762

Prepared By: GreenVest, LLC
210 Najoles Road, Suite 202
Millersville, MD 21108
(410) 987-5500

August 2015

TABLE OF CONTENTS

1. Introduction & Objectives	1
2. Non-Tidal Wetland Impacts & Proposed Compensatory Mitigation	2
3. Location & Description of Mitigation	4
4. Site Selection & Justification	7
5. Site Protection Mechanism	9
6. Additional Information	9

TABLES

Table 1: Permanent Non-Tidal Wetland Impacts	2
Table 2: Proposed Compensatory Mitigation	2

APPENDICES

Appendix A: FIGURES

- Figure 1: Site Location Map
- Figure 2: USGS Topographic Map
- Figure 3: Aerial Photograph
- Figure 4: USDA Soil Survey Map
- Figure 5: 1938 Aerial Photograph
- Figure 6: Watershed Map

Appendix B: PHASE I MITIGATION PLAN

Appendix C: EXAMPLE CONSERVATION EASEMENT

Appendix D: REGULATORY CORRESPONDENCE

1. Introduction & Objectives

Joint Base Andrews (JBA) engaged GreenVest (GV) to provide outstanding compensatory mitigation for 11.42 acres of wetland impacts incurred by the West Runway Repair Project which occurred between 2010 and 2012. Despite JBA's diligent attempts to provide compensatory wetland mitigation for impacts related to the West Runway Repair the Maryland Department of Environment (MDE) and United States Army Corps of Engineers (USACE) mitigation requirement remains. GV is proposing, herein, to provide the required non-tidal (NT) wetland mitigation in one consolidated project on the Piscataway Creek Mitigation Site (PCMS). The PCMS project will also provide additional compensation to mitigate for the temporal loss of functions and values incurred between 2010 and the present. Therefore, this proposal provides at total of 12.5 wetland mitigation units on the PCMS. The PCMS is privately owned by the John M. and Sara R. Walton Foundation and is located approximately 1.5 miles southeast of the JBA East Runway at 7606 Woodyard Road, Clinton, Maryland in Prince George's County (See Figure 1). The PCMS is situated on a 62.13 acre portion of the larger Walton Property (126.03 acres) that is adjacent to and within the floodplain of Piscataway Creek, which flows through the property from northwest to southeast. The PCMS is located in the Middle Potomac Watershed USGS HUC 8 - 02070010 and Piscataway Creek MD 8-Digit Watershed - 02140203 (See Figure 6). JBA was issued permits by MDE and USACE in 2010 for the West Runway Repair Project with additional modifications issued by both agencies in 2011.

- MDE Permit No.: 10-NT-0140/201060476
 - Modified: September 30, 2011
- USACE Permit No.: NAB-2010-60065-M07
 - Modified: June 14, 2011

The objective of this proposal is to fully satisfy the MDE/USACE mandated NT wetland mitigation requirements for the JBA West Runway Repair Project.

Ecological objectives include:

- Restore and create headwater wetland hydrology/hydraulics.
- Restore native vegetative community composition and structure.
- Restore and increase the chemical, biological and physical processes (functional uplift) of this historic headwater wetland system, and improve the same within the downstream receiving waters and associated aquatic habitats of the Piscataway Creek watershed.
- Restore wildlife habitat.
- Support the enhancement, protection and restoration goals for the Piscataway Creek Watershed identified in the Restoration Plan for the Piscataway Creek Watershed in Prince George's County (Dec. 2014 prepared by TetraTech).
- Support the preservation and restoration of an interconnected network of Green Infrastructure corridors and hubs, per the Prince George's County Green Infrastructure Plan

(June 2005) as well as the preservation and expansion of Forest Interior Dwelling Bird species (FIDS) habitat.

2. Non-Tidal Wetland Impacts & Proposed Compensatory Mitigation

The following text and tables outline the specific impacts and mitigation requirements associated with the JBA West Runway Repair Project. The project impacted 11.23 acres of non-tidal emergent wetlands and 0.19 acres of non-tidal scrub-shrub wetlands for a total of 11.42 acres of permanent, non-tidal wetland impacts. The permits and modifications listed above outline the avoidance and minimization measures taken, as well as the nature and composition of the wetland impacts and their associated functional wetland losses. The PCMS mitigation project as proposed will satisfy the mitigation required for those permanent wetland impacts by providing 11.42 mitigation units comprised of 11.61 mitigation acres. An additional 1.05 mitigation units will be provided to compensate for the temporal loss of functions and values over the last six years for a total of 12.5 mitigation units. Below, we have provided tabular descriptions of the permanent wetland impacts (Table 1) and proposed compensatory mitigation (Table 2).

Table 1: Permanent Wetland Impacts

Impact Area	Wetland Type	Impact (acres)	Replacement Ratio	Mitigation Acres	Mitigation Units
<i>Wetland 1</i>	Emergent	11.23	1:1	11.23	11.23
<i>Wetland 2</i>	Scrub/Shrub	0.19	2:1	0.38	0.19
Total		11.42		11.61	11.42

Table 2: Proposed Wetland Mitigation

	Acres	Mitigation Type Ratio	Mitigation Units
Non-tidal Wetland Preservation	51.52	20:1	2.58
Non-tidal Wetland Creation	9.24	1:1	9.24
Non-tidal Wetland Enhancement	1.37	2:1	0.69
Totals:	62.13		12.50

A wetland delineation and survey was conducted by U.S. Army Corps of Engineers, Baltimore District over the course of time between May and October 2012 to assess the wetlands and waterways present on the JBA airfield. This survey was used to determine the extent of non-tidal wetland impacts associated with the West Runway Repair Project. The survey identified thirty (30) separate small wetlands ranging in size from 0.01 acres to 3.22 acres along with five (5) Waters of the US (WUS). The majority of the wetlands impacted were low quality, mowed/maintained non-tidal emergent wetlands located within the airfield. Some of the wetlands identified and impacted were man-made open water features used for storm water management.

Six (6) of the thirty (30) identified wetlands (<1% of the total acreage) were isolated and the remaining twenty four (24) wetlands had a significant nexus to a traditional navigable waterway (TNW). Five (5) year-round or seasonal relatively permanent waters (RPW) connected the wetlands on site to major tributaries of two TNWs including the Potomac River. The Potomac is listed in the Code of Maryland Regulations (COMAR) stream use classification index as Use-IP (Water Contact Recreation and Protection of Aquatic Life).

Many of the impacted wetlands directly abut or are adjacent to RPWs that drain to Piscataway Creek (WUS 3), a major tributary of the Potomac River. An April 28, 2014 letter from the U.S. Army Corps of Engineers, Baltimore District details a jurisdictional determination (JD) and verification of wetland delineation at JBA for those wetlands that flow to the headwaters of Piscataway Creek. Several of the wetlands flow into an underground system of pipes that discharges into the headwater of the Piscataway Creek. The flow in these wetlands is intermittent and the wetlands are dry during the summer when the seasonal high water table drops in elevation.

The wetlands impacted by the West Runway Repair Project possessed limited functionality and thus value aside from supporting base flow in the headwaters of Piscataway Creek. Other functions and values include seasonal groundwater recharge, the potential for some flood storage capacity and limited water quality improvement.

The JD indicates that the wetlands were mostly classified as emergent that are regularly mowed with some scrub-shrub inclusions and also states that “the wetlands can be considered low quality because they are regularly mowed.” Areas that are not mowed as frequently are “a place that some wildlife could find suitable habitat.” The latter are managed by the Federal Aviation Administration (FAA) and U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS) to prevent wildlife hazards to aircraft operations. The wetlands were not classified as providing fish/spawn areas or habitat for Federally Listed species or other environmentally-sensitive species. In general the habitat provisioning services of these wetlands are very limited and closely managed. The JD also states that the impacted wetlands are approximated to be within the 5-10 year floodplain of the Piscataway Creek, potentially contributing to flood storage functions to the river's ecosystem.

These limited functions and values permanently impacted by the West Runway Repair Project will be more than adequately replaced by the PCMS project as proposed herein. The PCMS wetland mitigation project will provide high quality forested and scrub-shrub creation and restoration which will be fully integrated with adjacent, functioning, floodplain forest documented Green Infrastructure Corridor along Piscataway Creek. Therefore, the PCMS project as proposed will provide significant functional uplift. Please note that the project as proposed will replace low value managed/mowed emergent wetlands and uplands with high quality forested and scrub-shrub wetlands within close proximity to the impacts in the Piscataway Creek MD 8-Digit Watershed. Furthermore, most of the restoration is located within the floodplain of Piscataway Creek as is the entire 51.52 acres of high quality floodplain forest (Green Infrastructure Corridor) that will be

preserved and fully integrated with the 9.24 acres of wetland creation and 1.37 acres of wetland restoration (see Phase I Mitigation Plan in Appendix B). The chief focus of this project is establishing or restoring hydrology, hydroperiod and hydraulics with an aim to increase the time of concentration promoting groundwater recharge and creating flood storage capacity. Both of these elements will serve to support the base flow of Piscataway Creek compensating for this functional loss tied to the West Runway Repair Project. The mitigation will re-establish a diverse native plant community with associated structure and function, thus replacing marginal habitat losses at JBA with high quality wildlife habitat on the PCMS. This high quality habitat creation is off-installation and will not create any hazards to aircraft operations (see FAA Correspondence in Appendix D). The PCMS project will also lift other important ecological functions and values including: sediment control and reduction, nutrient reduction and cycling, storm water management, and wildlife habitat of the Piscataway Creek Green Infrastructure Corridor.

3. Location & Description of Mitigation

The PCMS project is located on the Walton Foundation Property at 7606 Woodyard Road, Clinton, Maryland (Lat: 38.781246, Long: -76.842437) (Figures 1, 2 and 3). The Walton Foundation Property is comprised of 126 acres primarily consisting of pastures and barns associated with the existing horse boarding operation. The PCMS is located within the Middle Potomac Federal HUC 8 – 02070010 and lies within the upper segment of the Piscataway Creek Watershed (MD 8 digit – 02140203). The Walton Foundation owns, actively manages the property and supports the project goals which are consistent with the foundations mission for the property. The foundation entered into a license agreement with GreenVest conveying the rights to develop this proposed mitigation including the placement/recording of a permanent conservation easement (see Example Conservation Easement, Appendix C).

The mitigation as proposed includes three (3) elements, listed below, which are depicted on the Phase I Mitigation Plan (see Appendix B). Please note that all wetlands located within or in the immediate vicinity of the creation and restoration footprint were delineated in the field in accordance with the 1987 Federal Delineation Manual and the Coastal Plain Region Supplement (*U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center*). The Phase I mitigation plan is predicated upon this field delineation. A delineation plan and report will be submitted under separate cover.

1. 51.52 ac of preservation. The preservation consists of existing, high quality non-tidal, forested wetlands and uplands located within the 100-year floodplain of Piscataway Creek.
2. 9.24 ac of creation. The creation consists of establishing forested and scrub-shrub headwater wetlands currently used as pasture for boarded horses.
3. 1.37 ac of restoration (rehabilitation). The restoration consists of existing, degraded wetlands currently used as pasture for boarded horses.

The PCMS is situated on a 61.59 acre portion of the larger parcel (126.03 acres) that is immediately adjacent to Piscataway Creek, which flows through the property from northwest to southeast. Approximately 51± acres of the PCMS is comprised of non-tidal, forested wetlands and uplands within the floodplain of Piscataway Creek. This forested area is documented as Forest Interior Dwelling Bird Species (FIDS) habitat and has been characterized as a Green Infrastructure Corridor by Prince George's County. This acreage, along with the creation and restoration acreage, will be preserved in perpetuity under a permanent conservation easement.

The proposed creation and restoration areas were (circa 1938) and are comprised of active pasture land (see Figure 5). Prior to 1938 these areas were comprised of forested, freshwater wetlands and uplands. The proposed mitigation consists of establishing (9.24 ac) and restoring (1.37 ac) headwater wetlands. This 10.61 acres is adjacent, tributary to and will be fully integrated with the 51.52 acres of existing, high quality, floodplain forest thus providing an expansion of contiguous high quality, forested, wetland habitat. The wetland creation/restoration will be accomplished by modifying existing topography and utilizing existing sources of ground and surface water. Modifications will include light excavation and grading to lower existing elevations as well as plugging drainage ditches and redirecting channelized flows. Please note that a preliminary field meeting was conducted with MDE Waterways Division in the field on 06/03/15 to determine the feasibility of the proposed channel modifications for purposes of sourcing hydrology for this mitigation project. MDE Waterways Division indicated that all in-channel work discussed in the field, which is also outlined in this proposal, was acceptable for the purpose of creating or restoring wetland hydrology. Waterways has been copied on this submission and will be copied on the Phase II submission which will include the appropriate floodplain modeling and/or other H/H engineering calculations and reports to document that the project will not adversely impact existing floodplain or flood surface elevations.

Wetland hydrology will be established through the enhancement of access to groundwater, which is the primary hydrologic driver at the site, and by the facilitated capture of surface water runoff and direct precipitation. Runoff will be captured by plugging ditches, redirecting channelized flow (via breaking ditches/spoil banks) and slowing/retaining overland sheet flow (via low, flow through weirs). Groundwater including natural seeps generally moves easterly toward Piscataway Creek and is intercepted by a long north/south ditch line located at the toe of slope in all of the establishment areas. The network of onsite ditches intercept both surface runoff and shallow groundwater, quickly conveying the water and effectively bypassing both establishment and re-establishment areas, preventing the proper residence time for wetland development. The existing topography will be graded lowering elevations to be within proximity of the seasonal groundwater table or to create a set of broad, flat swales leveraging existing groundwater seepage. In either case, excavation/grading and strategic ditch plugging and/or breaking plus the installation of low, flow through weirs will redirect and/or retain surface runoff and groundwater increasing residence time. Please note that these low, flow through weirs will be maintenance free and appear as a natural topographic undulation comprised of permeable substrate and planted with native vegetation. This simple but

effective set of prescriptions will result in the establishment or restoration of wetland hydrology characterized by a seasonally saturated hydroperiod typical of headwater systems.

Headwater wetland systems are typically dominated by surface water inputs (direct precipitation, channelized and over land runoff). This system is atypical in that groundwater also plays a significant role as a source of hydrology. However, it should be noted that headwater systems, particularly those with more steep topographic gradients like this site, tend to exhibit a hydroperiod at the drier end of the spectrum. This is an expected outcome on the PCMS where the target is a seasonally saturated forested and scrub-shrub system. Preliminary groundwater observations and ongoing measurements along with some initial water budget computations support the feasibility of the creation and enhancement proposed herein. These data will be supplemented with engineering calculations and a final water budget computation/report which will be included in the Phase II Mitigation Proposal. The proposed hydroperiod and water budget will rely upon several sources or inputs including groundwater, direct precipitation and overland runoff which will include capturing and recapturing additional, up-gradient tributary coupled with “closing the system”, thereby increasing time of concentration. We will also be establishing and/or rehabilitating connections to the shallow groundwater table on portions of this site further augmenting typical, seasonal patterns of groundwater discharge/recharge in this headwater wetland system. This seasonal pattern is characterized by the filling of shallow groundwater water storage compartments in the fall, winter and early spring months. These water storage compartments act as a source during the early spring, and conversely as a sink during the drier months of growing season.

Once hydrology is created and/or enhanced, a comprehensive native planting plan will be implemented, thereby re-establishing community composition, structure, diversity and function. Native woody plantings will be enclosed with perimeter deer fencing prior to installation and until fully established and capable of resisting deer browse. An invasive exotic plant control program will be implemented within the hedge rows and edges adjacent to and within close proximity of the creation and enhancement areas. Invasive/exotic species of vegetation will be initially eradicated from these areas and then managed on an as needed basis throughout the maintenance and monitoring period. The completed restoration project will be fully integrated with the forested wetlands/uplands adjacent to and surrounding the restoration area as described above to create a contiguous corridor of valuable non-tidal wetland habitat.

The creation, enhancement and preservation of headwater wetlands resulting from this mitigation project will more than replace the functions and values permanently impacted at JBA, including the temporal loss. The headwater wetlands enhanced, created and permanently preserved on the PCMS will provide groundwater recharge and support the base flow of Piscataway Creek. The wetlands will serve to desynchronize peaks storm water discharges to Piscataway Creek by retaining surface water runoff and promoting infiltration. In this way the wetlands will effectively increase flood storage within close proximity of the creek. Furthermore, according to FEMA flood mapping the majority of the PCMS lies within the 100-year floodplain of Piscataway Creek and so the proposed mitigation will provide valuable flood attenuation services. Additional functional uplift will come in the form of sediment retention/reduction, nutrient cycling and transformations; both of which will contribute

to water quality improvements in Piscataway Creek. Finally, the PCMS project as proposed will create, enhance and preserve a large, contiguous and valuable piece of urban wildlife habitat characterized as a Green Infrastructure Corridor by PG County.

This site was selected for its overall “restorability” and prioritized due to its ability to provide 12.5 mitigation units on one site in close proximity to JBA, with a direct connection to Piscataway Creek, within the same MD 8 Digit HUC watershed as the impacts and the overall ecological lift that can be sustainably achieved. Therefore, the restoration as proposed herein is contextually appropriate and technically feasible. We are confident that this approach will fully address JBA’s outstanding USACE and MDE mandated NT wetland mitigation requirement for the West Runway Repair.

4. Site Selection & Justification

The closing sentences in the paragraph above succinctly underwrite this sites suitability to provide NT wetland mitigation for permanent impacts at JBA. The following text provides some elaboration on how the PCMS was selected which further supports its selection and advancement. The Middle Potomac Watershed is one of the most urbanized in the state of Maryland. There are a dearth of suitable mitigation sites and particularly those of scale (greater than 2 acres) which are capable of generating the 12.5 NT wetland mitigation units required by JBA. Those sites that are appropriate are difficult to secure for purposes of providing mitigation where many savvy land owners are not willing to sell or place a permanent conservation easement on the land. This conclusion is based on the results of JBA’s previous attempts to identify a suitable mitigation site and the results of a more recent 10+ month long site search, across the Middle Potomac, conducted by GV to identify and secure viable NT wetland and stream mitigation sites. GV investigated over 30 sites in the Middle Potomac where sites were not large enough, mitigation was not technically feasible or private land owners were not willing to sell or permanently conserve their land. The PCMS offers a viable, “in-watershed”, “in-kind”, technically feasible opportunity of the correct scale with a willing land owner capable of providing 100% of the required 12.5 NT wetland mitigation units.

The Piscataway Creek sub-watershed lies in an urbanized section of the greater Middle Potomac watershed possessing 13.4% impervious surface area (ISA) with only 6.2% of all historic wetland systems remaining. EPA studies have shown (Hicks 2000) that aquatic systems within watersheds possessing greater than 15% ISA experience severe biological, chemical and physical impairments.

In 2014 Prince George’s County released the Piscataway Creek Watershed Restoration Plan and Report which summarized the present conditions in the Piscataway watershed and steps to be taken to restore its environmental health. The proposed project will support the action plan for the Piscataway Creek by restoring a host of important wetland functions such as, re-establishing groundwater storage, groundwater discharge/recharge, sediment and nutrient load reductions, and overall improvements to water quality.

The mitigation site is located on property that is currently being used as a horse boarding operation with ample acreage utilized as pasture. The PCMS was part of an original estate associated with Poplar Hill (81A-001) on His Lordship's Kindness (PG 81A-001 & National Register #70000853). The site is owned by the John M. and Sara R. Walton Foundation whose expressed purpose is to provide for the perpetual preservation of the Poplar Hill mansion (located on a separate but adjacent tax lot) which is designated as a National Historic Landmark. The proposed project will not have any negative impact on the historic mansion site and is in conformance with the foundations mission objectives.

The mitigation site is located north of and is adjacent to the Piscataway Creek corridor properties owned by Maryland National Capital Park and Planning Commission (MNCPPC). These properties contain the 100 year floodplain for the creek and are designated as the Piscataway Stream Valley Park. According to PG Atlas, there are multi-use trails planned along Piscataway Creek that connect Sherwood Forest Community Park and areas north to other stream valley park areas to the south. Walking and equestrian trails are also planned in the southern portion of the site that connect the historic property (Poplar Hill) to other undeveloped stream valley lands to the south.

The Piscataway Creek Mitigation site possesses significant restoration potential with highly achievable opportunities for ecological uplift providing the following benefits:

- 1) The site is located on open space that is owned by the Walton Foundation whose sole purpose is to preserve the property;
- 2) Use of this site ensures long-term stewardship of the land, in that the Walton Foundation is committed to assume long term stewardship responsibility;
- 3) The project is in a contextually appropriate area, within the watershed of proposed impacts and in the headwaters of Piscataway Creek in close proximity to the base;
- 4) Initial investigations have concluded that achievement of the target hydroperiod for creation and restoration activities is technically feasible;
- 5) This project as proposed will replace low quality maintained emergent habitat impacted at JBA with high quality forested and scrub-shrub habitat resulting in significant functional uplift;
- 6) This mitigation project will occur in a priority restoration watershed and close to a densely developed urban area characterized by an outstanding mitigation need and a dearth of viable/feasible mitigation sites;
- 7) The site is located in a Tier II catchment by US EPA and MDE and is in a "priority" for restoration by MD DNR;
- 8) The project area is adjacent to and will be integrated with a documented Green Infrastructure Corridor and by extension other large tracts of open space under MNCPPC management; and
- 9) The watershed is considered to be a Targeted Ecological Area (TEA) which is of high ecological value and is a conservation priority for the State of MD.

The PCMS was selected for all the reasons outlined above which we believe fully justify its selection to provide compensatory mitigation for the West Runway Repair Project.

5. Site Protection Mechanism

The PCMS is privately owned in fee title by the Walton Foundation. GV has secured the legal right to advance the mitigation work described herein under a fully executed license agreement. All of the restoration work to be performed under this mitigation proposal will be protected by a permanent conservation easement in a form acceptable to both the Baltimore District of the USACE as well as MDE. This will include granting rights of access to MDE and USACE as required under both state and federal rules. An example conservation easement can be found in Appendix C. Please note that the Walton Foundation will maintain horse-boarding facilities where they currently exist on the property but there will be no equestrian access to the PCMS once completed. The PCMS creation and restoration areas will be secured by perimeter deer exclusion fence and the perimeter split rail fence which will be maintained around the eastern boundary of the preservation area.

6. Additional Information

The following additional information preliminarily addresses the balance of the 12 components of a required mitigation plan pursuant to 33 CFR 332. Each of these components will be covered in detail in the Phase II Mitigation Plan/Proposal.

6.1. Financial Assurances

The PCMS mitigation is being provided to fully satisfy outstanding wetland mitigation requirements imposed by MDE and USACE associated with the West Runway Repair. Given that the permittee (United States Air Force - Joint Base Andrews) is a government agency, it is our understanding that financial assurances will not be required. However, if necessary, GV will provide financial assurances for the construction as well as maintenance and monitoring of the mitigation project. The amount and type of the financial assurances posted, if any, will be based on final MDE/USACE direction/approval. The financial assurances, if required, will be posted prior to construction and maintained until all permit requirements have been fully satisfied and the MDE/USACE releases the permittee from its mitigation requirements under the permits issued to Joint Base Andrews.

6.2. Maryland Historic Trust (MHT)

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires that all Federal agencies to take into account the effects of their undertakings on historic properties, and afford their office a reasonable opportunity to comment. Compliance with the federal statute is achieved in consultation with and approval of the proposed actions by the Maryland Historic Trust which is the State's Historic Preservation Office (SHPO). We are aware that areas of the Piscataway Creek watershed have been documented to possess a high probability for containing cultural/historic

resources. Please note that the USACE Baltimore District Planning Division Archeologist is coordinating the MHT review for this project. On April 20, 2015 GreenVest submitted a written request to MHT for available information regarding MHT easements, Maryland Inventory of Historic Property sites, National Register and National Historic Landmark sites that may occur on or within the vicinity of the project site. Verbal communication with MHT was conducted by GV on May 5th, 2015 to better describe the project and determine overall compliance needs for this project. Documentary research was conducted by GV as well as the Baltimore District Planning Division Archeologist which included interviews with the Walton Foundation. Subsequent correspondence between USACE and MHT occurred in May and June, 2015 which culminated in a meeting between the two agencies.

The PCMS was part of an original estate associated with Poplar Hill (81A-001) on His Lordship's Kindness (PG 81A-001 & National Register #70000853). The Poplar Hill Mansion sits on a separate tax lot and is designated as a National Historic Landmark. None of the activities proposed are proximate to or will have any effect on the Poplar Hill Mansion.

Research of documents provided by and discussions conducted with the Walton Foundation identified the location of an historic Mill and Mill Race (Marshalls Mill). Upon review of the 1878 Hopkins Atlas and discussions with the President of the Walton Foundation John Walton, the approximate location of the formal Mill and Mill Race was determined. The owner indicated that the farm manager had found pieces of the former millstone within a tractor rut located near the manure storage area on the property. Recent investigation of this area indicated presence of red bricks within the same tractor rut which could possibly be the remnants of the mill foundation. These remnants are located well outside the footprint of proposed disturbance associated with the PCMS project. GV also investigated the location of the former Mill Race. Its presence is clear in the field and is wholly located within the proposed preservation area where no physical work will take place. This project will not impact these identified historic resources but in fact protect them in perpetuity under a permanent conservation easement.

The USACE Archeologist has determined that no further investigation or other work is required to document cultural or historic resources on or in proximity to the PCMS. We anticipate that MHT will concur with this recommendation and issue a letter of "No Historic Properties Affected." MHT concurrence and written documentation of the same will be included in the Phase II Mitigation Proposal.

6.3. Threatened & Endangered Species

NOAA's National Marine Fisheries Service (NMFS) was contacted on April 24, 2015 requesting information on the presence of any Endangered Species Act (ESA) listed threatened or endangered species under their jurisdiction at the proposed mitigation site. NMFS responded that since no in water work is proposed, no listed species will be affected by the project.

The MD DNR-Wildlife and Heritage Service was contacted on April 20, 2015 to request an environmental review from the MD DNR Natural Heritage Program Information Services. MD

DNR responded that there are no State or Federal records for rare, threatened or endangered (RTE) species within the boundaries of the site, but that the forested wetland/upland portion of the site contains Forest Interior Dwelling Bird species (FIDS) habitat. This portion of the site has also been identified as a Green Infrastructure Corridor by Prince George's County. GV is aware of the guidelines to minimize impacts to FIDS habitats which are not applicable to this project. We respectfully submit that this project will result in a net increase of FIDS habitat in the creation/restoration areas which will be fully integrated with the existing 51.25 acres of high quality FIDS habitat to be preserved. No work will take place within the existing FIDS habitat. Furthermore, the proposed mitigation project will place a permanent conservation easement on the FIDS habitat and adjacent wetland restoration/creation which will be protected in perpetuity.

The US Fish & Wildlife Service (USFWS) was contacted on April 20, 2015 to request an environmental review of the site. The USFWS environmental review indicated that there are element occurrence records for critical habitats, threatened or endangered species on or within the vicinity of the PCMS. Additionally, no USFWS National Refuges are located within the vicinity of the PCMS. There are, however, twenty six (26) birds on the Migratory birds of concern list that may utilize the site. The documented occurrences of many of these migratory species underwrites the value of increasing FIDS habitat and integrating it with the preservation component of this project.

The Maryland Department of Natural Resources (DNR) Integrated Policy & Review Unit was contacted on April 22, 2015 to request an environmental review regarding aquatic habitats and fisheries resources on the project site. To date, there has been no response. We will include the response from DNR in the Phase II Mitigation Proposal.

Please note that preserving and expanding FIDS habitat could contribute to protection of the northern long eared bat among other RTE species. Our design efforts will incorporate specific RTE species habitat elements if feasible and appropriate. If feasible and appropriate, any such habitat improvements will be included in the Phase II Mitigation Plan/Proposal.

6.4. Wildlife Hazard Assessment

On May 20, 2015 a representative wildlife biologist from FAA/USDA-APHIS conducted an inspection of the PCMS with GV personnel. On June 18, 2015, GreenVest submitted a written request to the APHIS Wildlife Services formally requesting a Wildlife Hazard Assessment pursuant to the FAA Advisory Circular 150/5200-33B, which states that wetland mitigation projects can be considered hazardous wildlife attractants. Review by the FAA is required when a mitigation site is located within prescribed separation/protection areas. The site is located outside of the 5,000 foot Perimeter A Separation Area within which hazardous wildlife attractants should be avoided, eliminated or mitigated, as defined in the FAA Circular. The project site is located within the 10,000 foot Perimeter B Separation Area—at its closest point the project site is located about 7,000 feet from the southeastern corner of the easternmost runway at JBA.

The preliminary conclusion of the site inspection was that this project as proposed should not pose any wildlife hazard attractants to aircraft or other military operations at JBA. In fact, we submit that this PCMS mitigation project will reduce if not completely eliminate an existing wildlife attractant by converting existing pasture land, which provides foraging habitat for Canada geese, to forested

cover. Furthermore, this offsite project will obviate the need to provide compensatory wetland mitigation on-installation in much closer proximity to aircraft operations.

As stated above, the project will result in a net reduction of goose habitat by re-foresting open pasture fields which currently provide seasonal foraging opportunities. Forested wetlands provide very little value for Canada Geese and are therefore not used by Canada Geese or other waterfowl considered hazardous to aircraft operations. Additionally, the proposed forested wetland restoration will eliminate any seasonal attraction, albeit marginal, to wading birds or waterfowl by converting areas of temporary inundation to seasonal saturation. Therefore, GreenVest is confident that the formal assessment will document that the PCMS location and proposed activities will not create a wildlife hazard for JBA's aircraft or other base-related operations.

6.5. Adaptive Management

An adaptive management plan will be employed where modifications to the design plans may be required during the construction process to address unforeseen or prevailing field conditions. Any and all adaptive management measures will be implemented under the direction of the project biologist and/or engineer. Adaptive management principles will also be applied to the maintenance and management of the PCMS post-construction and throughout the monitoring period. GV's project biologist will develop and be responsible for implementing all aspects of the post-construction adaptive management plan, including any modifications from the approved mitigation plans. GV shall notify USACE and MDE in advance of implementing any adaptive management measures as needed. GV will advise MDE/USACE in writing of any substantial changes to the approved mitigation plan and provide adequate justification.

6.6. Performance Standards, Maintenance & Monitoring

A physical monitoring plan for the proposed project will be prepared, approved and implemented to document achievement of approved performance standards, in accordance with the program outlined below and pursuant to special conditions imposed by MDE/USACE. This plan will cover a five-year duration following completion of construction. A construction completion report will be prepared upon completion of the proposed mitigation project and submitted to MDE/USACE for review and approval. Subsequent monitoring reports will be submitted to MDE/USACE annually following completion of the first growing season following construction. The first monitoring visit will examine initial vegetative response of the plants to their new environment and ensure that the site is on a trajectory to achieving its own sustainable equilibrium. Subsequent monitoring visits will provide a regular schedule for data gathering, identification of any and all problems, and required maintenance and repair of the Mitigation Site as needed.

Monitoring will measure key biological and physical characteristics of the mitigation project and shall include elements such as:

- As-built survey/monitoring plan after completion of construction and in year 5 to close out the monitoring period.

- Plan view of entire project including topography at 1-foot contour intervals
- Location of Permanent Photograph, Monitoring/Sampling Stations, Stream Structures, and Cross Sections
- Photograph Documentation
 - Permanent photograph stations will be established, surveyed, and located on the as-built survey.
 - Sedimentation patterns to indicate the presence of surface flow including drift lines, organic matter deposition, and effect on nearby vegetation will be documented. Standing water elevations will be documented in all confined depressions as well as selected bank full discharge events.
 - Success of scrub-shrub and forest vegetation and relative cover including native recruitment.
 - Wildlife habitat structure and usage.
- Soils Documentation
 - Soil profile descriptions to a depth of 18 inches in representative locations throughout the Mitigation Site. These will be compared to the pre-construction condition.
 - Document maintenance of or re-establishment of hydric soils including evidence of reduction within monitoring plots through soil borings including redoximorphic features within each profile.
 - Location of all soil borings and profiles on the as-built survey/monitoring plan.
- Vegetation Documentation
 - Documentation that the Site has achieved 85% survival and/or 85% aerial cover of the mitigation plantings or target hydrophytes both planted and recruited.
 - Documentation of less than 10% cover of invasive/exotic species within all creation/restoration areas.
 - Documentation that all preferred plant species are healthy and thriving.
 - Documentation that the trees in all plant communities containing trees are a minimum of 5 feet in height in year 5.
- Hydrology Documentation
 - Documentation demonstrating that the targeted hydrology/hydraulics have been successfully re-established in all wetland and stream areas.
 - Hydrology will be monitored via:
 - Observations and photos of surface flow, inundation, and saturation made during scheduled field visits and noted in the monitoring reports.
 - Ground water and surface water data will continue to be collected from permanent wells installed within the creation/restoration areas.

6.7. Invasive Species Control & Management

There are small areas of invasive vegetation primarily limited to hedge rows proximate to the restoration/creation areas. Invasive species include reed canary grass (*Phalaris arundinacea*), Bradford pear (*Pyrus calleryana*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), Japanese barberry (*Berberis thunbergii*) and tree-of-heaven

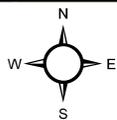
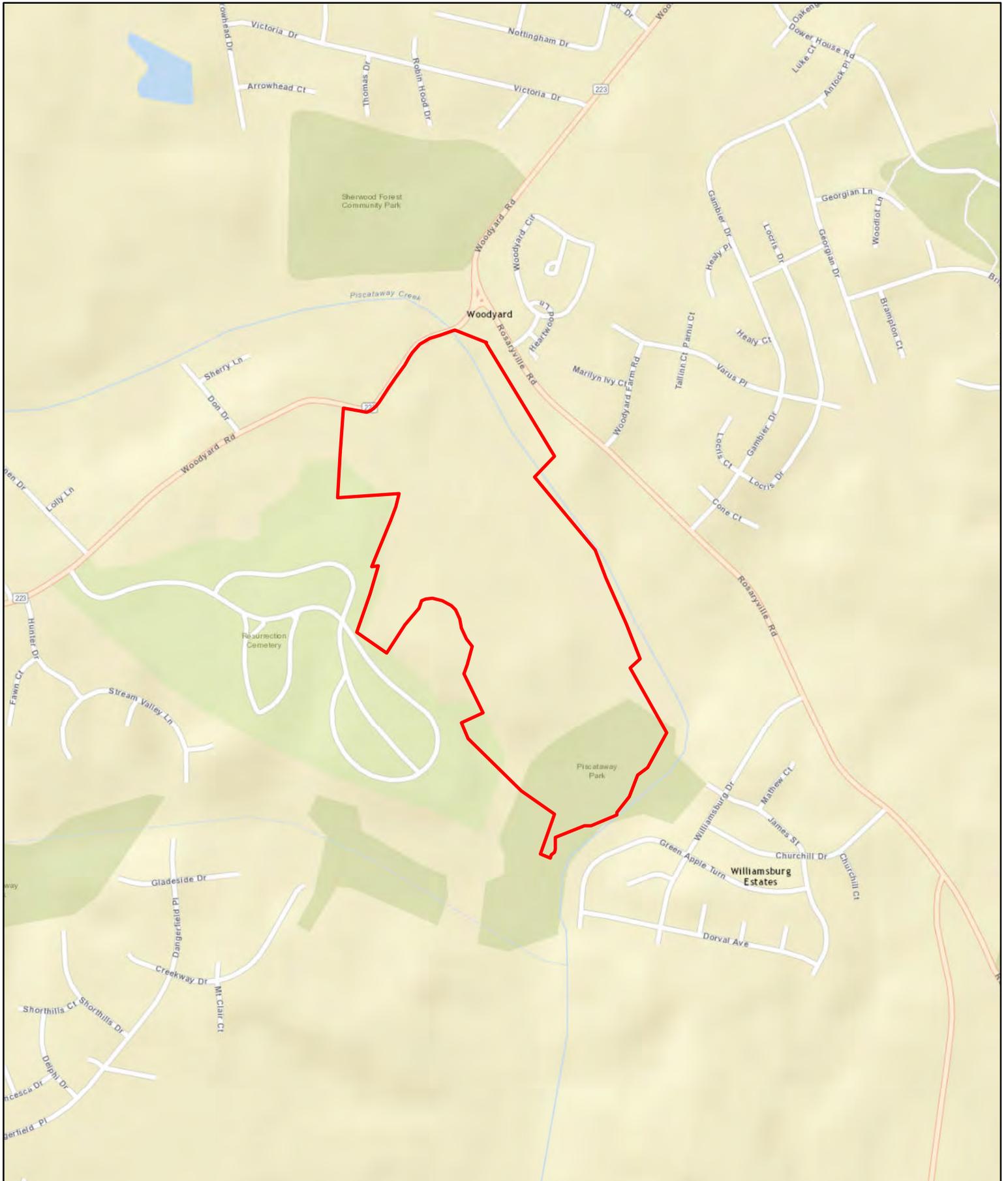
(*Ailanthus altissima*). Management and control measures will begin with site design and plant selection, followed by the initial eradication program, and then planting and systemic integration which will effectively eliminate “edge habitats.” Subsequent management measures will vary based on the nature of any re-occurrence. These measures may include, but are not necessarily limited to, mechanical removal/cutting, hand pulling, and specific herbicide prescriptions suitable in aquatic environments, either by mechanical means or by hand. Secondary measures may include adding plant material. At a minimum deer exclusion fencing will be installed around the entire project perimeter prior to commencing planting activities. The perimeter deer fence will be maintained as needed until all plantings are fully established and capable of resisting the deleterious effects of deer over browsing. Finally, an attentive monitoring and maintenance program based on the principles of adaptive management will allow for early identification of potential problems and implementation of required corrective measures. The key to minimizing the effect of an invasive, aggressive plant re-colonization is identifying the problem early and implementing corrective measures swiftly. This strategy relies on our ability to quickly implement corrective measures once a problem has been identified.

6.8. Conclusion

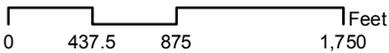
The Joint Base Andrews West Runway Repair Project resulted in permanent impacts to 11.42 acres of NT wetland within the Middle Potomac Federal HUC 8 and Piscataway Creek sub-watershed. GreenVest is proposing a viable “in-kind,” “in watershed” mitigation solution to fully satisfy the mitigation required for both permanent wetland impacts (11.42 mitigation units) as well as the temporal loss of functions and values over the last six years (1.08 mitigation units). The PCMS will provide a total of 12.5 wetland mitigation units on one site by restoring, creating, integrating and preserving a total of 62.13 acres of ground which will be protected in perpetuity. The PCMS project has ecological, programmatic and regulatory merit, is technically feasible and will result in the full satisfaction of the MDE and USACE compensatory mitigation requirements. We, therefore, respectfully request your review and approval of this Phase I Mitigation Proposal.

APPENDIX A

FIGURES



 Property Boundary



Piscataway Creek Mitigation Site
Site Location Map

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

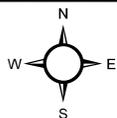
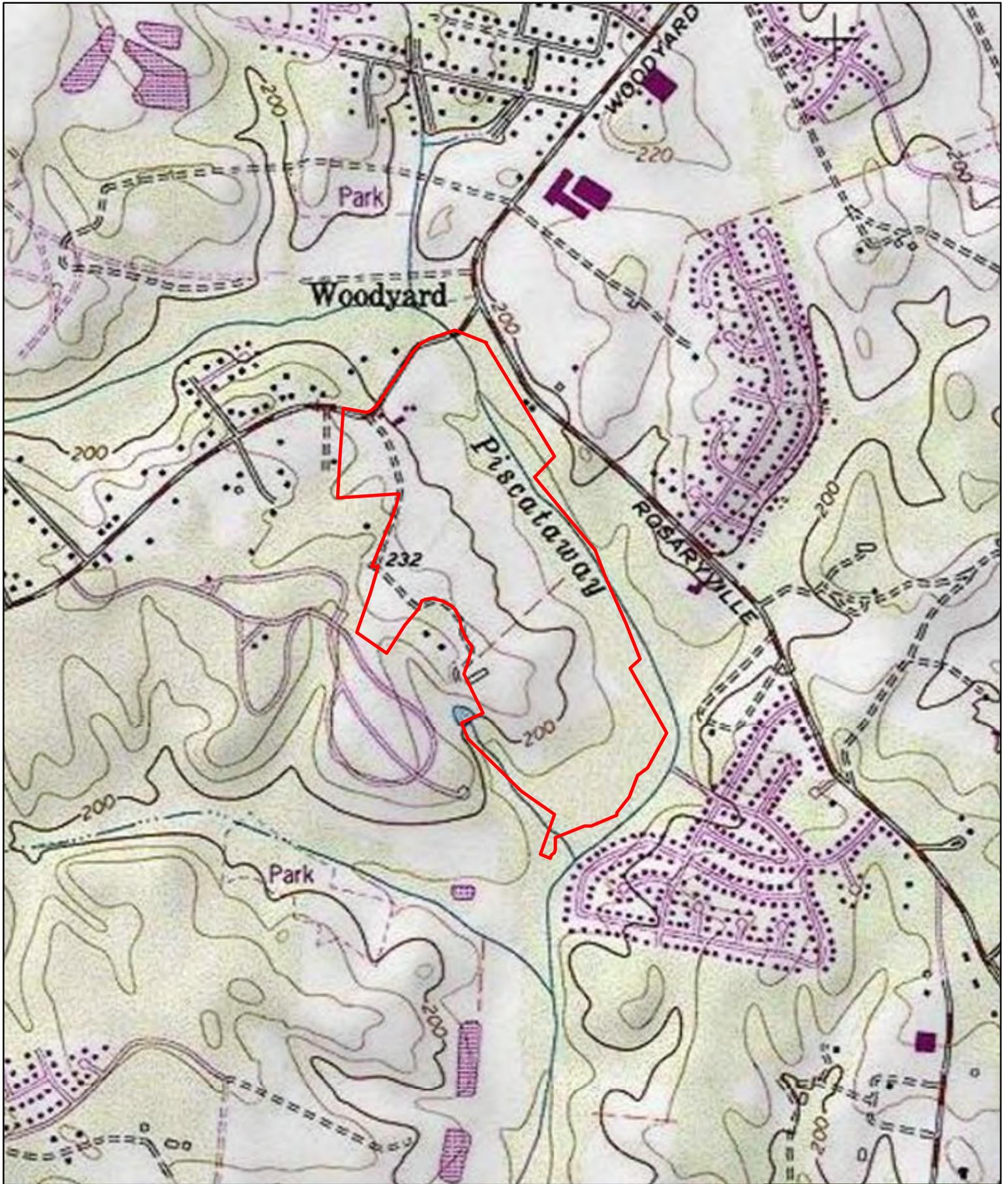
GreenVest
Real Estate Solutions

www.greenvest.com

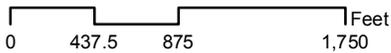
MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.5500 (p) 410.987.5501 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.8644 (p) 732.902.8643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)

Scale: 1 in = 1,000 ft

Date: 7/28/2015



 Property Boundary



Piscataway Creek Mitigation Site
USGS Topographic Map

Piscataway Creek Mitigation Site
 7606 Woodyard Road
 Map 0108, Grid 00E4, Parcel 0236
 Clinton, Prince George's County, Maryland

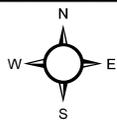
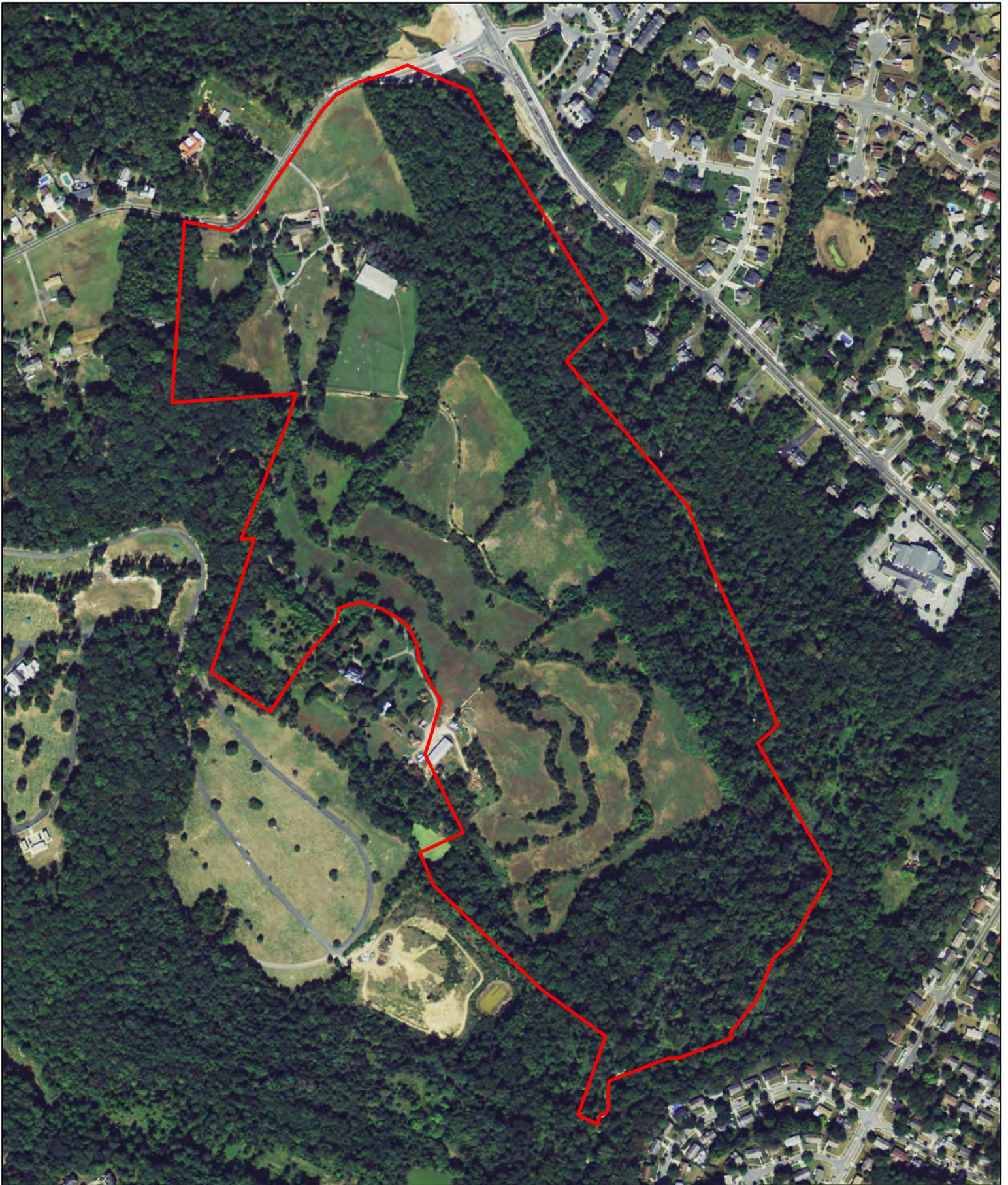
GreenVest
 Real Estate Solutions

www.greenvest.us.com

MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.5501 (p) 410.987.5501 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.8644 (p) 732.902.8643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)

Scale: 1 in = 1,000 ft

Date: 7/28/2015



 Property Boundary

0 250 500 1,000 Feet

Piscataway Creek Mitigation Site
Aerial Photograph

Piscataway Creek Mitigation Site
7606 Woodyard Road
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland

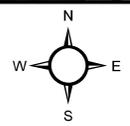
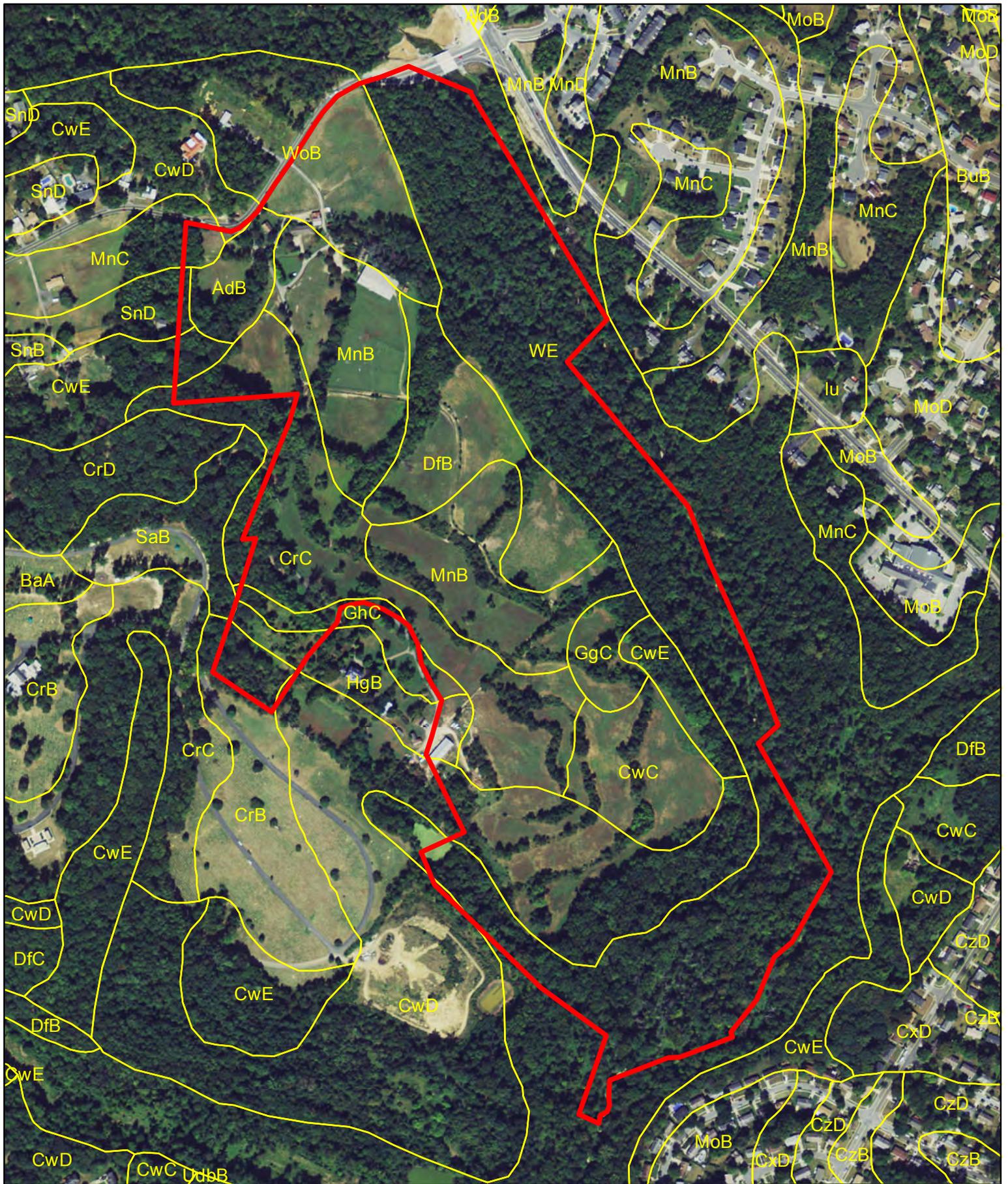
GreenVest
Real Estate LLC

www.greenvest-llc.com

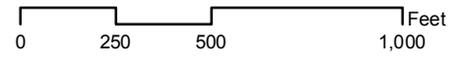
MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.5501 (p) 410.987.5501 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.8644 (p) 732.902.8643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)

Scale: 1 in = 500 ft

Date: 7/28/2015



Property Boundary
 Soil Survey



Piscataway Creek Mitigation Site
USDA Soil Survey Map

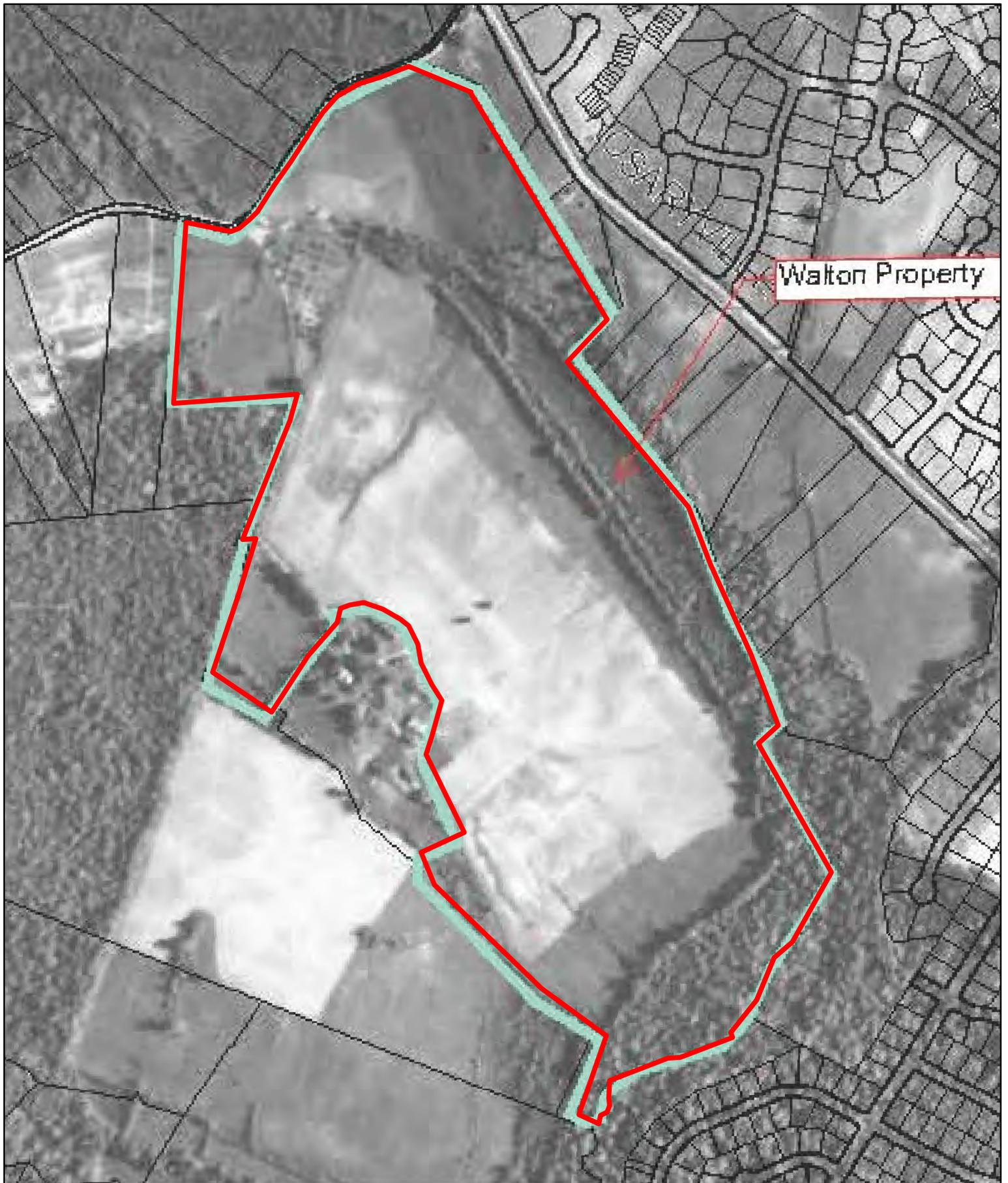
Piscataway Creek Mitigation Site
 7606 Woodyard Road
 Map 0108, Grid 00E4, Parcel 0236
 Clinton, Prince George's County, Maryland

GreenVest
Real Estate Solutions
www.greenvest.com

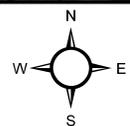
MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.5501 (p) 410.987.5501 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.8644 (p) 732.902.8643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)

Scale: 1 in = 500 ft Date: 7/28/2015

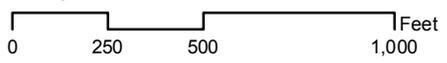
Data Sources: USDA Web Soil Survey, GreenVest LLC



Walton Property



 Property Boundary



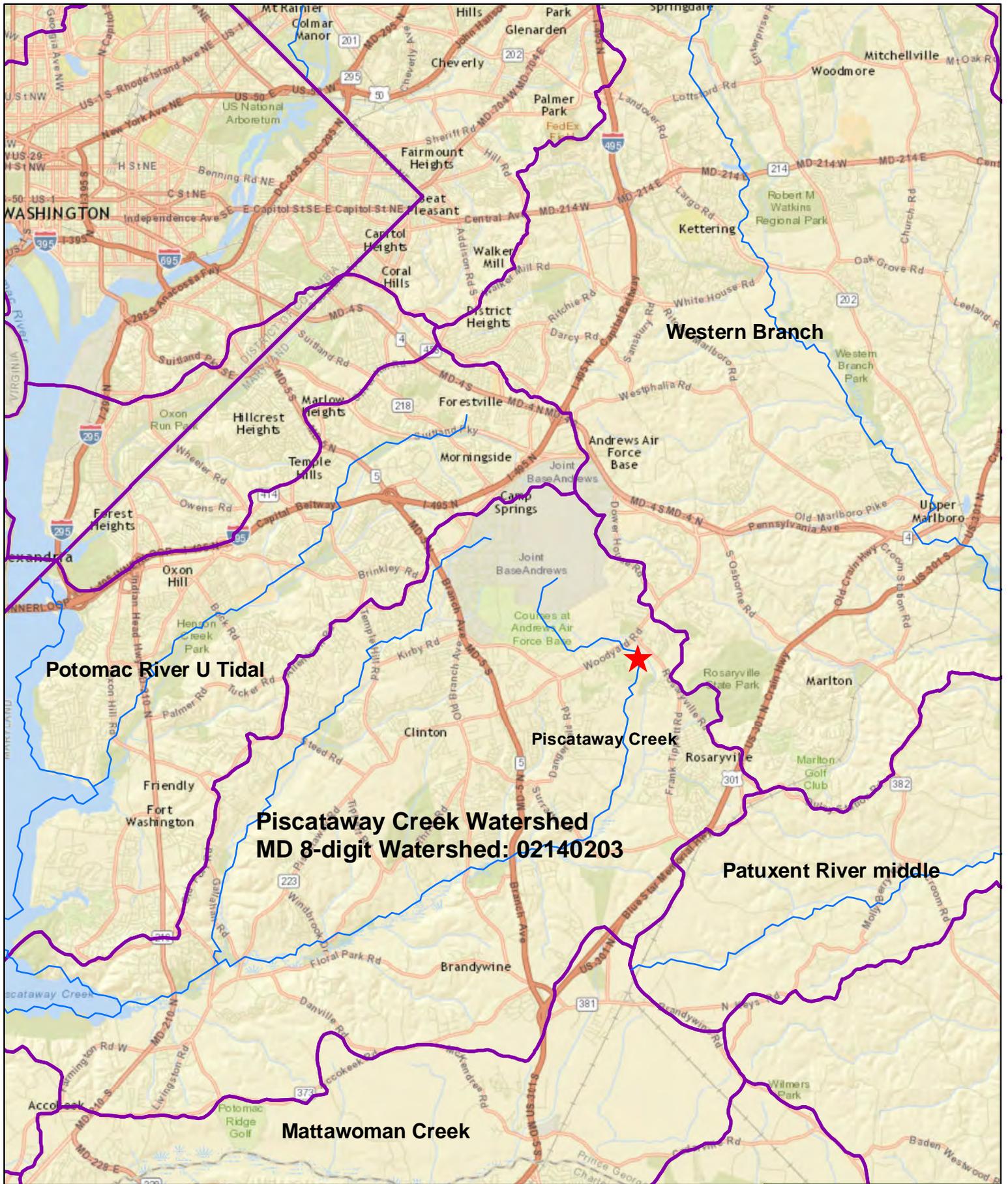
Piscataway Creek Mitigation Site
1938 Aerial Photograph

Piscataway Creek Mitigation Site
 7606 Woodyard Road
 Map 0108, Grid 00E4, Parcel 0236
 Clinton, Prince George's County, Maryland

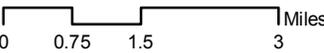
GreenVest
 Real Estate Solutions
www.greenvest.us.com

MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.550 (p) 410.987.5501 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.8644 (p) 732.902.8643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)

Scale: 1 in = 500 ft Date: 7/28/2015




 Property Location
 MD 8-digit Watersheds



Piscataway Creek Mitigation Site Watershed Map

Piscataway Creek Mitigation Site
 7606 Woodyard Road
 Map 0108, Grid 00E4, Parcel 0236
 Clinton, Prince George's County, Maryland

GreenVest
 2nd Stg 217, Ed.

MARYLAND 210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.5501 (p) 410.987.5501 (f)	NEW JERSEY 91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.6644 (p) 732.902.6643 (f)	NORTH CAROLINA 4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)
--	--	---

Scale: 1 in = 11,000 ft Date: 7/28/2015

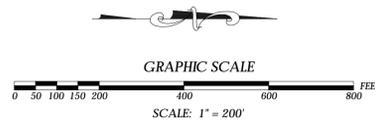
APPENDIX B

Phase I Mitigation Plan



LEGEND:

- | | | | |
|---|---|---|--------------------------------------|
|  | WETLAND/UPLAND FOREST PRESERVATION
50.98 AC. |  | STREAMS/DITCHES |
|  | WETLAND RESTORATION (RE-HABILITATION) 1.37 AC. |  | WETLAND DELINEATION LIMITS |
|  | WETLAND CREATION (ESTABLISHMENT) 9.27 AC. |  | PROPERTY LINE |
| | |  | PROPOSED DITCH/SWALE PLUGS |
| | |  | PROPOSED WATER ELEMENT (12" OR LESS) |



CALL BEFORE YOU DIG!
 MARYLAND LAW REQUIRES
 2 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE
 - STOP CALL
 REFERENCE MARYLAND STATE LAW ON
 UNDERGROUND UTILITY DRAINAGE PREVENTION LAW
 (MARYLAND STATE LAW TITLE 12)
 1-800-257-7777

PROJECT NOTES

- 2014 ORTHOMAGERY OBTAINED FROM MARYLAND IMAP DATA PORTAL.
- TOPOGRAPHIC CONTOURS DERIVED FROM USGS 3-METER NATIONAL ELEVATION DATASET (NED) OBTAINED FROM USGS NATIONAL MAP.

DATE	DESCRIPTION
REVISIONS	

DATE



SCIENTISTS AND ENGINEERS
 1108 OLD YORK ROAD, SUITE 1
 P.O. BOX 720
 RINGOES, NEW JERSEY 08551
 PHONE. 908.237.5660
 FAX. 908.237.5666
 WWW.PRINCETONHYDRO.COM



PROJECT NAME/LOCATION:
 PISCATAWAY CREEK MITIGATION SITE
 7606 WOODYARD ROAD
 MAP 0108, GRID 00E4, PARCEL 0236
 CLINTON, PRINCE GEORGES CO., MD

DRAWING NAME:
 WEST RUNWAY
 JOINT BASE ANDREWS
 CONCEPT MITIGATION PLAN

DATE:	06/11/2015
PROJECT NO.:	1450.006
SCALE:	1" = 200'
DRAWN BY:	AEM
CHECKED BY:	MPG

SHEET NO.
1 OF 2

APPENDIX C

Example Conservation Easement

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT ("Conservation Easement") made this ___ day of _____, 20___, by and between _____ and _____, having an address at _____ ("Grantors") and _____, having an address at _____, ("Grantees").

This Conservation Easement is based upon a form that assumes there are multiple Grantors and multiple Grantees. In the event that this assumption is wrong for this Conservation Easement, then, as appropriate, any Provision assuming multiple Grantors or Grantees shall be interpreted to mean only one Grantor or Grantee, as the case may be. In addition, Art. VI. D shall be disregarded when there is only one Grantee.

_____ is a nonprofit tax exempt organization within the meaning of Section 501(c)(3) of the IRC, established for _____, and is a "qualified organization" within the meaning of Section 170(h)(3) of the IRC.

Grantors own in fee simple ___ acres, more or less, of certain real property in _____ County, Maryland, and more particularly described in Exhibit A attached hereto, which was conveyed to the Grantors by _____ by Deed dated _____ and recorded among the Land Records of _____ County, Maryland in Liber ____, Folio _____. The address of the property is _____. The property is identified on tax map _____, parcel _____. A portion of the property, specifically identified as Ex. B hereto is to be encumbered by this Deed of Conservation Easement to permanently protect the restoration of wetlands contemplated by this easement. The property to be protected by this Easement is hereinafter referred to as "the Property".

The Property consists of ___ acres of agricultural land, woodlands, open fields, suitable for both wetland restoration and preservation; the Property is located within the _____ watershed in Prince George's County ; relatively natural habitat for [significant flora or fauna]; scenic value of significant environmental public benefit within this watershed; and

In recognition of the Conservation Attributes defined below or restoration work to be undertaken, Grantors intend hereby to grant a perpetual Conservation Easement over the Property, thereby restricting and limiting the use of the Property as provided in this Conservation Easement for the purposes set forth below. Grantors thus intend to make a charitable gift of a qualified conservation contribution in the form of this Conservation Easement with respect to the Property to further the preservation and conservation of the Property and the goals of Grantees.

Grantees intend hereby to accept this Conservation Easement and to hold such Conservation Easement exclusively for conservation purposes, as defined in Section 170(h)(4)(A) of the IRC. Grantees are able to monitor and enforce such Conservation Easement.

ARTICLE I. GRANT AND DURATION OF EASEMENT

The above paragraphs are incorporated as if more fully set forth herein. As an absolute gift for

no monetary consideration (\$0.00) but in consideration of the facts stated in the above paragraphs and the covenants, terms, conditions and restrictions in this Conservation Easement (the “Provisions”), Grantors unconditionally and irrevocably hereby voluntarily grant and convey (ADD “in trust” if a charitable trust is intended) unto Grantees, their successors and assigns, forever and in perpetuity, this Conservation Easement of the nature and character and to the extent set forth below, with respect to the Property. By execution hereof, Grantors intend to create a charitable trust to benefit the citizens of the State of Maryland.

This Conservation Easement shall be perpetual. It is an easement in gross and as such it is inheritable and assignable in accordance with Article XI, runs with the land as an incorporeal interest in the Property, and is enforceable with respect to the Property by Grantees against Grantors and their personal representatives, heirs, successors and assigns.

ARTICLE II. CONSERVATION PURPOSE

Pursuant to and in compliance with the requirements of Section 170(h)(4)(A) of the IRC and Section 1.170A-14(d) of the Treasury Regulations, the conservation of the Property will protect the following conservation attributes, as further set forth in Exhibit B: (1) the preservation of land areas for outdoor recreation or educational purposes; (2) the protection of relatively natural habitat of wetlands, streams, fish, wildlife or plants, or similar ecosystems; (3) the preservation and or restoration of open space for which yields a significant environmental benefit, or pursuant to a clearly delineated Federal, State, or local governmental conservation policy and which yields a significant public environmental benefit; (“Conservation Attributes”).

The purpose of this Conservation Easement is to preserve and protect in perpetuity the Conservation Attributes of the Property identified above and further described in Exhibit B, and to prevent the use or further development of the Property in any manner that would conflict with these Conservation Attributes (“Conservation Purpose”). The Conservation Attributes are not likely to be adversely affected to any substantial extent by the continued use of the Property as authorized herein or by the use, maintenance or construction of those Structures (as defined below) that exist on the Property or are permitted herein.

ARTICLE III. LAND USE AND STRUCTURES

A. General. This Article sets forth certain specific restrictions, prohibitions, and permitted activities, uses, and Structures under this Conservation Easement. Other than the specifically enumerated Provisions described below, any activity on or use of the Property that is otherwise consistent with the Conservation Purpose of this Conservation Easement is permitted. All manner of industrial activities and uses is prohibited. If Grantors believe or reasonably should believe that an activity not expressly prohibited by this Conservation Easement may have a significant adverse effect on the Conservation Purpose of this Conservation Easement, Grantors shall notify Grantees in writing before undertaking such activity.

B. Agricultural Uses and Activities. “Agriculture,” or “Agricultural” as the context requires, means production and/or management of products such as livestock, poultry, crops, trees, shrubs, plants

and other vegetation, and aquaculture, but not surface, sub-surface, or spring water. This includes, by way of example and not limitation, the related activities of tillage, fertilization, application of pesticides, herbicides and other chemicals, harvesting and mowing, and the feeding, housing, breeding, raising, boarding, training and maintaining of animals such as horses, ponies, cattle, sheep, goats, hogs, and poultry. Commercial (as defined below) small animal kennel operations are prohibited.

Agricultural uses and activities are permitted on the Property on a Commercial (as defined below) or non-Commercial basis.

C. Commercial Uses and Activities. "Commercial" means any use or activity conducted by Grantors or a third party for the purpose of realizing a profit or other benefit to Grantors, their designees, or such third party from the exchange of goods or services by sale, barter, or trade. In instances in which the Grantors are a nonprofit corporation, Grantors may conduct only those Commercial uses or activities that are directly related to Grantors' mission. Commercial activities and uses that are permitted shall be limited in scale to those appropriate to the size and location of the Property and shall not harm the Conservation Attributes. The following Commercial activities and uses are permitted:

(1) seasonal or occasional outdoor Commercial activities that are accessory to the Agricultural uses of the Property (for example: hay rides, corn maze, farm animal petting zoo, pick your own produce) and sale of Agricultural products produced off of the Property but associated with such seasonal or occasional activities (for example, the sale of apple cider on a hay ride);

(2) production/processing of Agricultural products (as listed in Article III.B above), a majority of which are produced on the Property or another property owned by Grantors, into derivatives thereof;

(3) the Commercial retail and/or non-retail sale of (i) Agricultural products (as listed in Article III.B above), a majority of which are produced on the Property or on a property owned by Grantors; or (ii) derivatives produced pursuant to III.C(4) above;

(4) Commercial services related to Agriculture limited to equestrian sports, events, and shows, boarding, the training of horses/ponies and riders, and the provision of recreational or therapeutic riding opportunities;

(5) Commercial Ecosystems Services Marketing (as defined below) and Commercial Mitigation and Conservation Banking (as defined below), and Commercial compensation from the implementation of appropriate Agricultural conservation practices; provided, however, that Grantors may not earn Commercial compensation if the activities generating such compensation are required as a result of Grantors' violation of this Conservation Easement. Grantees shall not be entitled to any such compensation unless provided for via separate agreement.

D. Private Passive Recreational Uses and Activities. "Passive Recreation," or "Passive

Recreational” as the context may require, means low-impact activities conducted outdoors, including, by way of example and not by way of limitation, nature study, orienteering, hunting, fishing, hiking, kayaking, canoeing, sailing, boating, horseback riding, camping, and cross country skiing.

Private Passive Recreational uses are permitted on the Property but shall be limited in scale to those appropriate to the size and location of the Property. Athletic fields and golf courses are prohibited on the Property.

E. Structures, Buildings, and Means of Access. “Structure” means anything constructed or erected with a fixed location on the ground or attached to something having a fixed location on the ground. “Building” means any Structure which is designed, built, or occupied as a shelter for persons, animals, or personal property. “Means of Access” means gravel or paved driveways, lanes, farm roads, and parking areas meant to carry vehicular traffic to permitted uses and Structures.

Structures, Buildings, and Means of Access are prohibited on the Property, except the following, which include those listed in Exhibit C:

(1) Reasonable Means of Access serving the Structures and contemplated restoration uses set forth above in III. C and E and other permitted uses; provided, however, that reasonable Means of Access to a Structure or use permitted by Art. III.C (3) and/or Art. III.E (1) and (2) is subject to Grantees’ approval in accordance with the provisions of Article V below; and

(2) Fencing, fences, and gates, which may be constructed, maintained, improved, removed, or replaced to mark boundaries, to secure the Property, or as needed in carrying out activities permitted by this Conservation Easement, and in accordance with Article III.N below.

F. Utilities. Grantor may repair and replace existing Utilities (as defined below) and may install new Utilities as set forth herein. Utilities must be sized and designed to serve the Property and shall not be installed primarily for the purpose of facilitating development, use, or activities on an adjacent or other property. “Utilities” includes, but is not limited to, satellite dishes, electric power lines and facilities, sanitary and storm sewers, septic systems, cisterns, wells, water storage and delivery systems, telephone and communication systems and renewable energy systems (including but not limited to solar energy devices on a Structure; geothermal heating and cooling systems, also known as ground source heat pump; wind energy devices; systems based on the use of Agricultural byproducts and waste products from the Property to the extent not prohibited by governmental regulations; and other renewable energy systems that are not prohibited by governmental regulations). Cellular communication Structures and systems are prohibited. To the extent allowed by law, any net excess generation produced by such renewable energy installation(s) may be credited to the Grantors’ utility bill or sold to the utility and shall not constitute Commercial activity.

G. Access Across the Property. No right-of-way for utilities or roadways shall be granted across the Property in conjunction with any industrial, commercial, or residential use or development of an adjacent or other property not protected by this Conservation Easement without the prior written approval of both Grantees, as per Article V.B.(ii).

H. Subdivision. The division, partition, subdivision, or boundary line adjustment of the Property, including the lease of any portion less than one hundred percent (100%) of the Property for a term in excess of twenty (20) years (“Subdivision,” or “Subdivided” as the case may be), is prohibited.

I. Buffer Requirements. A one-hundred (100) foot vegetative buffer strip along each side of the _____ River (Creek, etc...) is required on the Property. Grantors shall maintain such buffer strip if it currently exists, or allow it to naturally revegetate or plant such buffer strip with native species. Once established, Grantors shall not disturb such buffer, except when reasonably required for: (1) erosion control; (2) Passive Recreational uses which require water access and associated Structures, subject to Grantees’ approval, per Article V; (3) access to the water for irrigation of the Property; (4) control of non-native and invasive species or removal of dead, diseased, or infected trees as provided for in Article III.K below; (5) access to portions of the Property which are accessible only by crossing said water body; (6) livestock stream crossings in accordance with an approved Soil and Water Conservation Plan prepared by the Soil Conservation District; (7) enhancement of Wetlands (as defined below), wildlife habitat or water quality; (8) the existing _____ (*list existing Structure(s) located within the buffer*), as described in Exhibit C. Grantors shall not store manure or compost nor use or deposit pesticides, insecticides, herbicides or fertilizers (except for revegetation or planting of native species, or control of invasive or diseased species) within the buffer strip. The buffer strip shall comply with Art. III.N of this Conservation Easement.

J. Wetlands. “Wetlands” means portions of the Property defined by Maryland state law or federal law as wetlands at the time of the proposed activity. Other than the creation and maintenance of man-made ponds with all necessary and appropriate permits, and the maintenance of Agricultural drainage ditches, the diking, draining, filling, dredging or removal of Wetlands is prohibited.

K. Forest Management. Management and harvesting of all forests on the Property shall be consistent with the *Soil Erosion and Sediment Control Guidelines for Forest Harvest Operations in Maryland*, prepared by the Maryland Department of Environment (the “Guidelines”), or comparable provisions of any guidelines or regulations which may replace the Guidelines in the future and as they may be amended from time to time.

L. Dumping. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, ashes, garbage, waste, abandoned vehicles, appliances, machinery, hazardous or toxic substances, dredge spoils, industrial and commercial byproducts, effluent and other materials on the Property is prohibited, whether by Grantors or third parties. Soil, rock, other earth materials, vegetative matter, or compost may not be placed except when reasonably required for: (1) Agriculture or other permitted uses on the Property; or (2) the construction and/or maintenance of Structures, Buildings, Dwelling Units, and Means of Access permitted under this Conservation Easement. This Conservation Easement does not permit or require Grantees to become an operator or to control any use

of the Property that may result in the treatment, storage, disposal, or release of hazardous materials within the meaning of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

M. Excavation: Surface and Sub-surface Extraction. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, sand, surface or sub-surface water or other material substance in a manner as to affect the surface or otherwise alter the topography of the Property is prohibited, whether by Grantors or third parties, except for: (1) the purpose of combating erosion or flooding, (2) Agriculture or other permitted uses on the Property, (3) Wetlands or stream bank restoration, or (4) the construction and/or maintenance of permitted Structures and associated Utilities, Means of Access, man-made ponds and wildlife habitat. Grantors shall not sell, transfer, lease, or otherwise separate any mineral rights, currently owned or later acquired, from the surface of the Property. All manner of surface mining is prohibited. Sub-surface mining or drilling is permitted only in accordance with Treasury Regulation 1.170A-14(g)(4) and subject to Grantees' approval, pursuant to Article V below. In addition to the requirements of Article V, Grantees shall consider whether the impact will be limited, localized, and irremediably destructive of Conservation Attributes.

N. Visual Screening. In order to maintain the scenic view of the Property from _____ set forth as a Conservation Attribute in Exhibit B, Grantors shall not erect, construct, assemble, or plant visual screen, including but not limited to stockade fences, tall berms, and dense hedges, that would, in Grantees' sole discretion, substantially block views of the Property from such public roadways or waterways.

O. Signage. Display of billboards, signs or advertisements is prohibited on or over the Property, except to: (1) state solely the name and/or address of the Property and/or the owners; (2) advertise the sale or lease of the Property; (3) advertise the Agricultural uses of the Property; (4) advertise the goods or services sold or produced in accordance with permitted Commercial uses of the Property; (5) commemorate the history of the Property, its recognition under local, state or federal historical registers, or its protection under this Conservation Easement or federal, state or local environmental or game laws; (6) provide directions to permitted uses and Structures on the Property; and/or (7) address hunting, fishing, or trespassing (including signs or blazes on trees, the latter of which may be unlimited in number, for the purpose of delineating Property boundaries, which Grantees encourage in order to prevent encroachments). No billboard, sign, or advertisement on or over the Property shall exceed four (4) feet by four (4) feet. Multiple signs shall be limited to a reasonable number, shall be placed at least five hundred (500) feet apart, and shall be placed in accordance with applicable local regulations, except that signs permitted under exceptions (5) and (7) may be placed the lesser of one hundred (100) feet apart or the distance required by law.

P. Reserved Rights Exercised to Minimize Damage. All rights reserved by Grantors or activities not prohibited by this Conservation Easement shall be exercised so as to prevent or to minimize damage to the Conservation Attributes identified above and water quality, air quality, land/soil stability and productivity, wildlife habitat, scenic and cultural values, and the natural topographic and open space character of the Property.

Q. Ecosystems Services, Ecosystems Services Marketing, and Mitigation and Conservation Banking

“Ecosystems Services” means the conditions and processes through which natural ecosystems (such as forests, wetlands, grasslands, and endangered species habitat and the species that inhabit them) provide services (such as air and water purification, flood control, carbon and nutrient scrubbing, soil formation, decomposition and filtration of waste, pollination of crops, provision of habitat) that sustain and fulfill healthy human and natural systems. “Ecosystems Services Marketing” means sale, trade, exchange or payment to conserve, establish or enhance a particular natural function or Ecosystems Service. “Mitigation and Conservation Banking” means current or future programs with state or federal agencies or private entities intended to provide incentive or compensation for the conservation of rare, threatened or endangered species or communities by protecting or enhancing their habitats, or for other environmental preservation or enhancement efforts (such as wetland mitigation, stream mitigation, nutrient offsets, and similar programs).

If Grantors wish to develop or enhance existing Ecosystems Services on the Property, Grantors may do so by installing vegetative treatments and by excavating, filling and grading for forest or grassland establishment, erosion control measures, streambed or stream bank restoration, habitat restoration or wetland creation or restoration; provided, however, that such actions must be consistent with the Conservation Attributes of the Property as they are identified in this Conservation Easement. If Grantor wishes to create wetlands in an historically upland area, Grantor may do so only if such area is deemed suitable by the appropriate regulatory authorities. In connection with such activities, Grantors may construct new Structures (including but not limited to dams, weirs, water flow control gates) but not new Buildings. Grantors reserve the right to enter into agreements whereby Grantors agree to manage or permit a third party to manage the natural resources associated with the Property in a specific manner consistent with this Conservation Easement. Grantors may also enter into overlay conservation easements; provided, however, that Grantees must approve any request to subordinate this Conservation Easement to an overlay conservation easement.

Grantors may engage in Ecosystems Services Marketing and/or Mitigation and Conservation Banking on the Property on a Commercial basis.

ARTICLE IV. GRANT OF UNRESERVED PROPERTY RIGHTS

Grantors retain the right to sell, devise, transfer, lease, mortgage or otherwise encumber the Property subject to the provisions of this Conservation Easement. Grantors retain the right to sell, trade, or exchange credits allocated to Agricultural products produced on the Property.

Grantors hereby grant to Grantees all rights (except as specifically reserved herein) that are now or hereafter allocated to, implied, reserved or inherent in the Property, and the parties agree that such rights are terminated and extinguished and may not be used or transferred to any other property adjacent or otherwise, and may not be used for the purpose of calculating permissible lot yield of the Property or any other property. Grantors further agree that the Property shall not be used to provide required open space for the development or subdivision of another property, nor shall it be used in determining any

other permissible residential, commercial or agricultural uses of another property.

ARTICLE V. GRANTEE APPROVAL PROCESS

A. This Conservation Easement provides that, in specified circumstances, before Grantors can take certain actions Grantees must first give their permission, consent or approval. These specified circumstances include, but are not limited to:

- size of a parking area and Means of Access for a small-scale seasonal or occasional outdoor Commercial use or activity accessory to Agriculture, as per Article III.E(5);
- access across the Property for utilities or roadways serving another property, as per Article III.G;
- Subdivision of the Property, as per Article III.H;
- Structures associated with Passive Recreational water uses, located within the 100-foot buffer strip, as per Article III.I (2);
- sub-surface mining or drilling, as per Article III.M; and
- use of the Property for Commercial Ecosystems Services Marketing or Mitigation and Conservation Banking, as per Article III.Q .

B. Whenever the Provisions of this Conservation Easement require the permission, consent or approval of Grantees, Grantors shall submit to Grantees a written and visual description of the request for which approval is sought, accompanied by such plats, maps, Subdivision plans, drawings, photographs, written specifications, or other materials as Grantees may need to consider the request. Said materials shall be submitted prior to any start of construction and in advance of, or concurrent with, application for permits from federal, state, or local governments. Grantees shall evaluate the submission for completion and may require that Grantors submit additional information necessary for a complete submission. When Grantees deem the submission complete (“Request”), Grantees shall act on the Request within the timeframe provided for in Article V.C below.

(i) In evaluating the Request, each Grantee shall consider the specific Provision of this Conservation Easement requiring the approval, and said approval shall be granted or denied based on such Grantee’s sole discretion as to whether the Request conforms to the Conservation Attributes listed in Article II and Exhibit B of this Conservation Easement and the Conservation Purpose of this Conservation Easement. Approval is required by both Grantees.

(ii) If Grantors, with the support of a state or local government, are seeking approval of access across the Property for utilities or roadways as referenced in Article III.G, Grantees shall consider, in addition to the Conservation Attributes listed in Article II and Exhibit B of this Conservation Easement and the Conservation Purpose of this Conservation Easement, the following:

1. Does the project serve a valid public purpose, promote the public interest, or provide a public benefit;
2. Can the project be located in an alternative site without significant expense to a public agency;

3. Has the project received the written support of a state or local government;
4. Does the project maximize the use of concealment methods, if applicable;
5. Is the location of the project acceptable to Grantees;
6. Will the project provide a private benefit to Grantors;
7. Will the party making the Request compensate Grantees for Grantees' actual administrative costs and/or attorneys' fees (including but not limited to outside counsel fees) related to its review of the Request (whether or not such Request is approved), and, if approved, inspection of installation of the project, monitoring for violations and enforcement related to the project;
8. Has the party making the Request proffered acceptable mitigation, on or off the Property, to address the adverse impacts of the project and provide a net gain in Conservation Attributes, if feasible (for example, additional plantings, the grant of additional land, or a monetary payment).

C. Grantees shall each provide to Grantors a written decision regarding the Request within ninety (90) days after receipt of the Request, unless the time for consideration is extended by mutual agreement of the parties. Failure of either Grantee to act within the time provided shall be deemed an approval by such Grantee.

D. If an expert within the Maryland Department of Natural Resources advises Grantees of an occurrence of a rare, threatened, or endangered species that was not previously recognized on the Property, and that the habitat, survivability, or fitness for such species could be enhanced by a practice or activity which would otherwise result in a violation of a Provision of this Conservation Easement, Grantees, in their sole discretion, may approve of such a practice or activity.

ARTICLE VI. ENFORCEMENT AND REMEDIES

A. Grantees and their employees and agents shall have the right to enter the Property at reasonable times for the purpose of inspecting and surveying the Property to determine whether Grantors are complying with the Provisions of this Conservation Easement. Grantees shall provide prior notice to Grantors at their last known address, unless Grantees determine that immediate entry is required to prevent, terminate, or mitigate a suspected or actual violation of this Conservation Easement which poses a serious or potentially permanent threat to Conservation Attributes, in which latter case prior reasonable notice is not required.

In the course of such inspection, Grantees may inspect the interior of Buildings and Structures permitted by Article III.E (3) and III.E (4) for the purpose of determining compliance with this Conservation Easement.

B. Upon any breach of a Provision of this Conservation Easement by Grantors, Grantees may institute suit to enjoin any such breach or enforce any Provision by temporary, *ex parte* and/or permanent injunction, either prohibitive or mandatory, including a temporary restraining order, whether by *in rem*, *quasi in rem* or *in personam* jurisdiction; and require that the Property be restored promptly to

the condition required by this Conservation Easement at the expense of Grantors. Before instituting such suit, Grantees shall give notice to Grantors and provide a reasonable time for cure; provided, however, that Grantees need not provide such notice and cure period if Grantees determine that immediate action is required to prevent, terminate or mitigate a suspected or actual breach of this Conservation Easement.

Grantees' remedies shall be cumulative and shall be in addition to all appropriate legal proceedings and any other rights and remedies available to Grantees at law or equity. If Grantors are found to have breached any of Grantors' obligations under this Conservation Easement, Grantors shall reimburse Grantees for any costs or expenses incurred by Grantees, including court costs and reasonable attorneys' fees.

C. No failure or delay on the part of Grantees to enforce any Provision of this Conservation Easement shall discharge or invalidate such Provision or any other Provision or affect the right of Grantees to enforce the same in the event of a subsequent breach or default.

D. Each Grantee has independent authority to enforce the Provisions of this Conservation Easement. In the event that the Grantees do not agree as to whether the Grantors are complying with the Provisions, each Grantee may proceed with enforcement actions without the consent of the other Grantee.

ARTICLE VII. NO PUBLIC ACCESS

Although this Conservation Easement will benefit the public in the ways recited above, the granting of this Conservation Easement does not convey to the public the right to enter the Property for any purpose whatsoever.

ARTICLE VIII. BASELINE DOCUMENTATION

The parties acknowledge that Exhibits A – D (collectively, the "Baseline Documentation") reflect the legal description of the Property, existing uses, location, Conservation Attributes and Structures, Buildings, and Dwelling Units on the Property as of the date of this Conservation Easement. Grantors hereby certify that the attached Exhibits are sufficient to establish the condition of the Property at the time of the granting of this Conservation Easement. All Exhibits are hereby made a part of this Conservation Easement:

A. Exhibit A: Boundary Description and property Reference is attached hereto and made a part hereof. Exhibit A consists of _____ () pages.

B. Exhibit B: Boundary Description of the protected Property.

C. Exhibit C: Color Digital Images of the Property are not recorded herewith but are kept on

file at the principal office of _____ and are fully and completely incorporated into this Conservation Easement as though attached hereto and made a part hereof. A list of the image numbers, vantage points, and image descriptions is recorded herewith. Exhibit C consists of _____ () color digital images and _____ () pages.

- D. Exhibit D: Aerial Photograph of the Property is not recorded herewith but kept on file at the principal office of the _____ and is fully and completely incorporated into this Conservation Easement as though attached hereto and made a part hereof. Exhibit E consists of one (1) page.

ARTICLE IX. DUTIES AND WARRANTIES OF GRANTORS

A. Change of Ownership. In order to provide Grantees with notice of a change in ownership or other transfer of an interest in the Property, Grantors agree to notify Grantees in writing of the names and addresses of any party to whom the Property, or any part thereof, is transferred in accordance with Section 10-705 of Real Property Article, Ann. Code of Maryland, or such other comparable provision as it may be amended from time to time. Grantors, their personal representatives, heirs, successors and assigns further agree to make specific reference to this Conservation Easement in a separate paragraph of any subsequent deed or other legal instrument by which any interest in the Property is conveyed.

B. Subordination. Grantors certify that all mortgages, deeds of trust, or other liens (collectively "Liens"), if any, affecting the Property are subordinate to, or shall at time of recordation become subordinate to, the rights of Grantees under this Conservation Easement. Grantors have provided, or shall provide, a copy of this Conservation Easement to all mortgagees of mortgages and to all beneficiaries and/or trustees of deeds of trust (collectively "Lienholders") already affecting the Property or which will affect the Property prior to the recording of this Conservation Easement, and shall also provide notice to Grantees of all such Liens. Each of the Lienholders has subordinated, or shall subordinate prior to recordation of this Conservation Easement, its Lien to this Conservation Easement either by signing a subordination instrument contained at the end of this Conservation Easement which shall become a part of this Conservation Easement and recorded with it, or by recording a separate subordination agreement pertaining to any such Lien.

C. Real Property Taxes. Except to the extent provided for by State or local law, nothing in this Conservation Easement shall relieve Grantors of the obligation to pay taxes in connection with the ownership or transfer of the Property.

D. Warranties. The grantors who signed this Conservation Easement on the date set forth above ("Original Grantors") are the sole owner(s) of the Property in fee simple and have the right and ability to convey this Conservation Easement to Grantees. The Original Grantors warrant that the Property is free and clear of all rights, restrictions, and encumbrances other than those subordinated to this Conservation Easement or otherwise specifically agreed to in writing by the Grantees. The Original Grantors warrant that they have no actual knowledge of any use or release of hazardous waste or toxic substances on the Property that is in violation of a federal, state, or local environmental law and will defend, indemnify,

and hold Grantees harmless against any claims of contamination from such substances. The Original Grantors warrant that Exhibit C is an exhaustive list of all Dwelling Units on the Property.

E. Continuing Duties of Grantors. For purposes of this Conservation Easement, “Grantors” shall mean only, at any given time, the then current fee simple owner(s) of the Property and shall not include the Original Grantors or other successor owners preceding the current fee simple owner(s) of the Property, except that if any such preceding owners have violated any term of this Conservation Easement, they shall continue to be liable therefor.

ARTICLE X. TERMINATION

As set forth in Article I above, this Conservation Easement is granted in perpetuity. Grantees have determined that the Conservation Attributes set forth in Exhibit B constitute a valued public purpose worthy of permanent protection. Notwithstanding the preceding two sentences, this Conservation Easement may be terminated only due to extraordinary circumstances and only by way of Article X. A or B below.

A. Judicial Extinguishment. This Conservation Easement may be extinguished, other than as set forth in Art. X.B below, only if a court with jurisdiction, at the joint request of Grantors and Grantees, determines that conditions on or surrounding the Property have changed such that it has become impossible or impractical to fulfill the Conservation Purpose.

B. Condemnation. This Conservation Easement may be terminated through condemnation proceedings if condemnation of a part or all of the Property by a public authority renders it impossible or impractical to fulfill the Conservation Purpose. Grantees may, at their option, join in the negotiations or proceedings at any time to object to the taking and to recover the full value of the interests in the property subject to the taking and all incidental or direct damages resulting from the taking. All expenses reasonably incurred by the parties to this Conservation Easement in connection with such taking shall be paid out of the recovered proceeds.

C. Proceeds. The granting of this Conservation Easement gives rise to a property right, immediately vested in Grantees, with a fair market value at least equal to the ratio of the value of this Conservation Easement on the effective date of this grant to the value of the Property without deduction for the value of the Conservation Easement on the effective date of this grant.

If this Conservation Easement is terminated in whole or in part, whether by judicial extinguishment or condemnation, Grantees shall be entitled to a percentage of the gross sale proceeds or condemnation award equal to the greater of: (i) the percentage required pursuant to Treasury Regulation §1.170A-14(g)(6); or (ii) the proportion that the value of this Conservation Easement at the time of extinguishment or condemnation bears to the then value of the Property as a whole. Such proceeds received by Grantees shall be used by Grantees in a manner consistent with the Conservation Purpose of the original contribution. This paragraph is subject to any applicable Maryland or Federal statutes, including but not limited to Section 12-104(g) of Real Property Article, Ann. Code of Maryland.

ARTICLE XI. MISCELLANEOUS

A. Assignment. Each Grantee may assign, upon prior written notice to Grantors, its rights under this Conservation Easement to any "qualified organization" within the meaning of Section 170(h)(3) of the IRC or the comparable provision in any subsequent revision of the IRC and only with assurances that the Conservation Purpose will be maintained. If any such assignee shall be dissolved or shall abandon this Conservation Easement or the rights and duties of enforcement herein set forth, or if proceedings are instituted for condemnation of this Conservation Easement, this Conservation Easement and rights of enforcement shall revert to the assigning Grantee. If said Grantee shall be dissolved and if the terms of the dissolution fail to provide a successor, then Grantors shall institute in a court of competent jurisdiction a proceeding to appoint an appropriate successor as Grantee. Any such successor shall be a "qualified organization" within the meaning of Section 170(h)(3) of the IRC or the comparable provision in any subsequent revision of the IRC. No assignment may be made by any Grantee of its rights under this Conservation Easement unless Grantee, as a condition of such assignment, requires the assignee to carry out the Conservation Purpose.

B. Amendment. Grantors and Grantees recognize that circumstances could arise that justify an amendment of certain of the Provisions contained in this Conservation Easement. To this end, Grantors and Grantees have the right to agree to amendments to this Conservation Easement; provided, however, that:

(1) No amendment shall be allowed if it would adversely affect the qualification of this Conservation Easement or the status of Grantees under any applicable state or federal law, including Section 170(h) of the Internal Revenue Code;

(2) No amendment shall be allowed if it would create private inurement or private benefit;

(3) Proposed amendments will not be approved unless, in the opinion of each Grantee, the requested amendment satisfies the more stringent of the following: (A) (i) the amendment either enhances or has no adverse effect on the Conservation Purpose protected by this Conservation Easement and (ii) the amendment upholds the intent of the original Grantors and the fiduciary obligation of the Grantees to protect the Property for the benefit of the public in perpetuity; or (B) the amendment complies with such Grantee's amendment policy at the time that the amendment is requested;

(4) The amendment must be in conformity with all of each Grantee's policies in effect at the time of the amendment;

(5) The amendment is subject to and dependent upon approval of the Maryland Board of Public Works; and

(6) The amendment must be recorded among the Land Records in the county or counties where this Conservation Easement is recorded.

Grantors and Grantees may agree to an amendment in lieu of engaging in full condemnation

proceedings; provided that Grantees determine that the exercise of condemnation would be lawful, the best interest of all parties would be better served by negotiating a settlement with the condemning authority, and the Grantees receive and use compensation as set forth in Art. X.C above. In such event, an amendment shall only be required to satisfy Art. XI.B(5) and (6).

Proposed amendments that exceed the discretion granted to the Grantors and Grantees pursuant to this Provision are permitted only if they are authorized by a Maryland court having jurisdiction, and in evaluating any such proposed amendment, the court shall apply the law of charitable trusts as then in effect in the State of Maryland. Nothing in this Article XI.B shall require Grantors or Grantees to (i) agree to any amendment; or (ii) consult or negotiate regarding any amendment.

C. **Compliance with Other Laws.** The Provisions of this Conservation Easement do not replace, abrogate or otherwise set aside any local, state or federal laws, requirements or restrictions imposing limitations on the use of the Property.

In the event that any applicable state or federal law imposes affirmative obligations on owners of land which if complied with by Grantors would be a violation of a Provision of this Conservation Easement, Grantors shall: (i) if said law requires a specific act without any discretion on the part of Grantor, comply with said law and give Grantees written notice of Grantors' compliance as soon as reasonably possible, but in no event more than thirty (30) days from the time Grantors begins to comply; or (ii) if said law leaves to Grantors' discretion how to comply with said law, use the method most protective of the Conservation Attributes of the Property listed herein and in Exhibit B and give Grantees written notice of Grantors' compliance as soon as reasonably possible, but in no event more than thirty (30) days from the time Grantors begin to comply.

D. **Construction.** This Conservation Easement shall be construed to promote the Conservation Purpose, including such purposes as are defined in Section 170(h)(4)(A) of the IRC. This Conservation Easement shall be interpreted under the laws of the State of Maryland, resolving any ambiguities and questions of the validity of specific provisions in a manner consistent with the Conservation Purpose.

E. **Entire Agreement and Severability.** This instrument sets forth the entire agreement of the parties with respect to the Conservation Easement and supersedes all prior discussions, negotiations, understandings or agreements relating to this Conservation Easement. If any Provision is found to be invalid, the remainder of the Provisions of this Conservation Easement, and the application of such Provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

F. **Joint and Several.** If Grantors at any time own the Property in joint tenancy, tenancy by the entireties or tenancy in common, all such tenants shall be jointly and severally liable for all obligations set forth in this Conservation Easement.

G. **Recordation.** Grantees shall record this instrument in a timely fashion among the Land Records of _____ County, Maryland, and may re-record it at any time as may be required to preserve their rights under this Conservation Easement.

H. Notice to Grantees. Any notices by Grantors to Grantees pursuant to any Provision hereof shall be sent by registered or certified mail, return receipt requested, addressed to:

and to

or to such other addresses as Grantees may establish in writing on notification to Grantors, or to such other address as Grantors know to be the actual location(s) of Grantees.

I. Counterpart Signatures. The parties may execute this Conservation Easement in two or more counterparts, which shall, in the aggregate, be signed by all parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

J. Captions. The captions in this Conservation Easement have been inserted solely for convenience of reference and are not a part of this instrument. Accordingly, the captions shall have no effect upon the construction or interpretation of the Provisions of this Conservation Easement.

TO HAVE AND TO HOLD unto _____ and _____, their successors and assigns, forever. The covenants agreed to and the terms, conditions, and restrictions imposed as aforesaid shall be binding upon Grantors, their survivors, agents, personal representatives, heirs, assigns and all other successors to them in interest, and shall continue as a servitude running in perpetuity with the Property.

AND Grantors covenant that they have not done or suffered to be done any act, matter or thing whatsoever, to encumber the interest in the Property hereby conveyed; that they will warrant specially the Property granted and that they will execute such further assurances of the same as may be requisite.

IN WITNESS WHEREOF, Grantors and Grantees have hereunto set their hands and seals the day and year above written.

GRANTOR:

(Seal)
Name

STATE OF MARYLAND, _____ of _____, TO WIT:

I HEREBY CERTIFY, that on this ____ day of _____, 20__, before me the subscriber, a Notary Public of the State aforesaid, personally appeared _____, known to me (or satisfactorily proven) to be a Grantor of the foregoing Deed of Conservation Easement and acknowledged that he/she/it executed the same for the purposes therein contained and in my presence signed and sealed the same.

WITNESS my hand and Notarial Seal.

Notary Public
My Commission Expires: _____

ACCEPTED BY GRANTEES:

[Add Grantee Name]

BY: _____ (Seal)
Name:
Title:

DATE: _____

[Add Second Grantee Name],
A _____ nonprofit corporation

BY: _____ (Seal)
Name:
Title:

DATE: _____

I hereby certify this deed was prepared by or under the supervision of _____,
an attorney admitted to practice by the Court of Appeals of Maryland.

APPENDIX D

Regulatory Correspondence

June 18 2015

Thomas M DeSisto
USDA APHIS Wildlife Services
Wildlife Biologist
1419 Menoher Dr, Rm 228
Andrews AFB, MD 20762

**Re: Request for Wildlife Hazard Assessment
Piscataway Creek Mitigation Site
Map 0108, Grid 00E4, Parcel 0236
Clinton, Prince George's County, Maryland**

Dear Mr. DiSisto:

On behalf of Joint Base Andrews (JBA), GreenVest, LLC (GV) submits this formal request for a Wildlife Hazard Assessment pursuant to FAA Advisory Circular 150/5200-33B. This letter is a follow up to our site visit conducted on May 20, 2015 and is intended to provide your office with information needed to conduct a Wildlife Hazard Assessment of GV's proposed Piscataway Creek Wetland Mitigation Project (PCMP). This PCMP site is located in Clinton, MD in the Piscataway Creek MDE HUC 8 Watershed approximately 1.35 miles southeast of JBA (see attached USGS Site Location Map). This offsite, mitigation is being provided to satisfy JBA's outstanding, wetland mitigation requirements imposed by the Maryland Department of Environment (MDE) and the Baltimore District of the Army Corps of Engineers (ACE). This mitigation will compensate for non-tidal wetland impacts associated with improvements made to the West Runway in 2010.

The mitigation being provided on this site includes three (3) components (See Attached Concept Plan);

1. Preservation of existing non-tidal, forested wetlands and uplands within the floodplain of Piscataway Creek along the northern and eastern boundaries of the site.
2. Enhancement of existing, degraded wetlands currently used as pasture for boarded horses.
3. Restoration of historic forested wetlands currently used as pasture for boarded horses.

As discussed in the field this, forested, non-tidal wetland mitigation project will NOT create a wildlife hazard to JBA aircraft or other base related operations. In fact this mitigation project, is 1) being conducted off-post which is preferred pursuant to AC 150/5200-33B, and 2) will result in a net reduction of goose habitat by re-foresting open fields which currently provide seasonal foraging opportunities.

GV evaluated over 55 sites in an effort to locate and secure a site that would provide “in-kind” and “in watershed” wetland mitigation satisfying both the MDE and ACE requirements for West Runway. The Piscataway Creek Mitigation Site (PCMS) emerged as the lead candidate due to its ability to provide 100% of the required mitigation for West Runway on one site, “in-kind” and within the same MDE HUC 8 watershed. This site effectively presents a very efficient and cost effective alternative for JBA to satisfy its outstanding mitigation requirements in an off-post location not only proximate but tributary to the base.

The PCMS is under private ownership and is located at 7606 Woodyard Road, Clinton, Maryland in Prince George’s County (See USGS Site Location Map). The site is situated on a 61.59 acre portion of the larger parcel (126.03 acres) that is immediately adjacent to Piscataway Creek, which flows through the property from northwest to southeast. The PCMS is located in the Middle Potomac Watershed USGS HUC 8 - 02070010 and Piscataway Creek Watershed MD 8-Digit Watershed - 02140203 (See Figure 6).

Per definitions presented in the Federal Aviation Administration’s (FAA) Advisory Circular No. 150/5200-33B (FAA Circular), wetland mitigation projects can be considered hazardous wildlife attractants, and require review by the FAA when located within the prescribed separation/protection areas. The site is located outside of the 5,000 foot Perimeter A Separation Area within which hazardous wildlife attractants should be avoided, eliminated or mitigated, as defined in the FAA Circular, but the project site is located within the 10,000 foot Perimeter B Separation Area—at its closest point the project site is located about 7,000 feet from the southeastern corner of the easternmost runway at JBA.

However, as stated above the restoration plans for the PCMS include only forested wetlands which will NOT result in any open water or emergent wetland habitat. These restoration measures will actually result in a reduction of habitat that attracts nuisance wildlife which could pose a potential hazard to aircraft. The PCMS consists of a little over 51 acres of existing wetland/upland forest which will be preserved and about 11 acres of agricultural fields and pasture which will be enhanced/restored (see attached Conceptual Mitigation Plan). Forested wetlands provide very little value for and thus are not used by Canada Geese or other waterfowl and thus the restoration project will not pose a wildlife hazard to aircraft operations at JBA. The proposed forested wetland restoration will eliminate any seasonal attraction, albeit marginal, to wading birds or waterfowl by converting areas of temporary inundation to seasonal saturation.

Unique Ecological Functions Provided by the Piscataway Creek Mitigation Project

Per section 2-4c(1) of the FAA Advisory Circular No. 150/5200-33B, “The FAA may consider exceptions to locating mitigation activities outside the separations identified in Sections 1-2 through 1-4 if the affected wetlands provide unique ecological functions, such as critical habitat for threatened and endangered species or groundwater recharge, which cannot be replicated when moved to a different location.” The Piscataway Creek Mitigation Site and project does provide unique and special Ecological Functions as outlined below.

Presently, the site consists of grazed pasture fields that are separated by wood fences and narrow, forested hedgerow areas along stream corridors, typical of many farms in the area. The mitigation site is bordered on the east and south by forested floodplain associated with Piscataway Creek. This forested area includes sections of interior that is suitable for Forest Interior Dwelling

Species (FIDS) and has been identified as a Green Infrastructure Corridor by Prince George's County. The project, as proposed, will result in the preservation of this documented corridor and restoration of forested headwater wetlands. The restoration/enhancement components of the project will be integrated with the adjacent floodplain forest providing additional wildlife habitat by extension. We are in the process of consulting with DNR and USFWS to determine if there are any occurrences of threatened or endangered species, their habitats or significant natural communities on or within the vicinity of the subject site.

Furthermore, the PCWP will restore groundwater recharge as well as natural flood volume storage within the 100-year flood plain of Piscataway Creek in proximity to the base which cannot be replicated on another site. The proposed restoration activities will result in lifting myriad ecological functions and values, including: sediment control and reduction, nutrient reduction and cycling, flood storage, groundwater recharge, stormwater management and FIDS habitat within the Piscataway Creek Green Infrastructure Corridor

Description of the Piscataway Creek Mitigation Project Restoration Measures

The proposed restoration area have been used as pasture fields since at least 1938. Prior to 1938 these areas were comprised of forested freshwater wetlands. The proposed project consists of restoring headwater wetlands footprint of existing pasture fields incorporating sources of hydrology from seeps and adjacent drainage ditches as shown on the attached Conceptual Mitigation Plan.

The project is comprised of the following elements;

1. 52.05 acres of Forested wetland and upland preservation.
 - a. A permanent conservation easement will be recorded on this portion of the mitigation site and registered with Prince Georges County.
2. 1.09 acres of wetland enhancement.
 - a. Enhancement will be accomplished by converting existing, modified agricultural wetlands to forested cover by planting native woody species of vegetation.
 - i. Perimeter fence will surround all enhancement areas.
 - ii. A permanent conservation easement will be recorded on this portion of the mitigation site and registered with Prince Georges County.
 - iii. 5-7 years of maintenance and monitoring including the preparation and filing of annual monitoring reports to MDE and ACE.
3. 10.16 acres of forested wetland restoration.
 - a. Restoration will be accomplished by;
 - i. Eradication of invasive/exotic species of vegetation through herbicide application and mechanical removal.
 - ii. Installation of soil erosion and sediment control measures.
 - iii. Installation of perimeter fence surrounding the entire restoration area.

- iv. Minor excavation and grading (12-18" of cut).
 - 1. All excavated material will be placed in existing upland areas of the surrounding site.
- v. Planting of native species of woody vegetation (trees and shrubs)
- vi. A permanent conservation easement will be recorded on this portion of the mitigation site and registered with Prince Georges County.
- vii. 5-7 years of maintenance and monitoring including the preparation and filing of annual monitoring reports to MDE and ACE.

Site Access

During our field meeting, Mr. DiSisto asked if representatives of JBA and/or USDA/AFIS could be provided access to inspect the site and/or conduct wildlife hazard management, should the need arise. GV has secured the legal right and approvals to advance the mitigation work proposed. Furthermore, once the mitigation is completed the site will be protected under a permanent conservation easement which will give both the Maryland Department of the Environment (MDE) and the United States Army Corps of Engineers (USACE) access to the site. Granting JBA/USDA AFIS access to the site for purposes of conducting periodic inspections and/or wildlife hazard management, if needed, could be incorporated into the permits as well as the conservation easement recorded on the PCMS. However, as discussed in our field meeting and in this letter, GV does not anticipate USDA/AFIS will need to implement any wildlife hazard management measures on this site.

Conclusions

Both the MOA between the FAA, the Corps and other federal agencies regarding aircraft-wildlife strikes and the FAA circular AC 150/5200-33B recommend that wetland mitigation should be provided offsite where feasible. As described herein, the PCMP supports this goal. GreenVest respectfully submits that the PCMP as proposed will NOT create any wildlife hazard to aircraft operations or human safety at JBA. This project will yield ecologies and an economies of scale providing JBA with the mitigation it needs to satisfy outstanding MDE and ACE requirements related to the West Runway improvements.

We appreciate the opportunity to present this information to your office. We hope that you will concur that the Piscataway Creek Mitigation Project provides a viable opportunity to restore forested wetlands and provide JBA's required wetland mitigation, while avoiding wildlife hazards to aviation and human safety at JBA.

GreenVest is committed to working closely with FAA and JBA to address any potential concerns associated with securing approvals for and implementing this mitigation project. Please do not hesitate to contact me if you have questions or require additional information. I can be reached via email at brett@greenvestus.com or by phone at 201-410-0866 or in the office at 410-987-5500.

Sincerely,

A handwritten signature in black ink, appearing to read "Brett Berkley". The signature is fluid and cursive, with the first name "Brett" being more prominent than the last name "Berkley".

Brett Berkley, PWS
Sr. Vice President
GreenVest, LLC

cc: Carla Rupert (JBA)
Jerris Harris (JBA)
Vaso Karanikolis (ACE Baltimore District- Planning Division)

April 20, 2015

Kimberly Damon-Randall
Protected Resources, NMFS Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

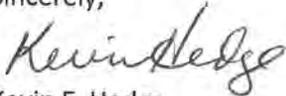
Dear Ms. Damon-Randall:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting available information regarding endangered and/or threatened species, critical or proposed critical habitats, anadromous/catadromous fisheries and essential fish habitat that may occur on or within the vicinity of the above referenced site.

The site consists of ± 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location and a Site Aerial Map depicting site boundaries.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

APR 27 2015

Kevin E. Hedge
Professional Wetland Scientist
GreenVest, LLC
210 Najoles Road, Suite 202
Millersville, MD 21108

Re: Piscataway Creek Mitigation Site

Dear Mr. Hedge,

We received your letter dated April 24, 2015, regarding proposed construction activities on the Piscataway Creek Mitigation Site, in Clinton, Maryland. In your letter, you request information on the presence of any Endangered Species Act (ESA) listed threatened or endangered species under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS).

As no in water work is proposed, no listed species will be affected by the proposed project. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued.

More information on ESA protected species presence in Maryland, the Chesapeake Bay and its' tributaries can be found on our website: <http://www.GreaterAtlantic.Fisheries.NOAA.gov/Protected/Section7/Guidance/Maps/Index.html>. Please contact Ms. Ainsley Smith of my staff (978-281-9291 or Ainsley.Smith@Noaa.gov), should you have any questions regarding these comments.

NMFS' Habitat Conservation Division (HCD) is responsible for overseeing issues related to Essential Fish Habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act and other NOAA trust resources under the Fish and Wildlife Coordination Act. For more information regarding EFH, please contact Kristy Beard (410-573-4542; Kristy.Beard@Noaa.gov).

Sincerely,

Kimberly Damon-Randall
Assistant Regional Administrator
for Protected Resources



April 20, 2015

Lori Byrne
Maryland Department of Natural Resources
Wildlife and Heritage Service
Tawes State Office Bldg., E-1
580 Taylor Avenue
Annapolis, MD 21401

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

Dear Ms. Byrne:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting an environmental review from the Maryland DNR Natural Heritage Program Information Services regarding protected endangered/threatened species, critical or proposed critical habitats, wetlands, national wildlife refuges, wilderness areas, wild and scenic river corridors, heritage trust reserves and/or National and State parks that may occur on or within the vicinity of the above referenced site.

The site consists of \pm 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location and a Site Aerial Map depicting site boundaries.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews



Lawrence J. Hogan, Jr., Governor
Boyd K. Rutherford, Lt. Governor
Mark J. Belton, Acting Secretary

June 5, 2015

Mr. Kevin E. Hedge
Greenvest, LLC
210 Najoles Road, Suite 202
Millersville, MD 21108

RE: Environmental Review for Walton Property, Piscataway Mitigation Site, 7606 Woodyard Road, Clinton, Tax Map 108, Parcel 236, Prince George's County, Maryland.

Dear Mr. Hedge:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. This statement should not be interpreted however as meaning that rare, threatened or endangered species are not in fact present. If appropriate habitat is available, certain species could be present without documentation because adequate surveys have not been conducted. It is also important to note that the utilization of state funds, or the need to obtain a state authorized permit may warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. If this project falls into one of these categories, please contact us for further coordination.

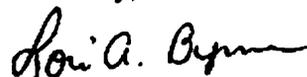
Our analysis of the information provided also suggests that the forested area on the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat is strongly encouraged by the Department of Natural Resources. The following guidelines could be incorporated as appropriate into the site design to help minimize the project's impacts on FIDS and other native forest plants and wildlife:

1. Restrict development to nonforested areas.
2. If forest loss or disturbance is unavoidable, concentrate or restrict development to the following areas:
 - a. the perimeter of the forest (i.e., within 300 feet of existing forest edge)
 - b. thin strips of upland forest less than 300 feet wide
 - c. small, isolated forests less than 50 acres in size
 - d. portions of the forest with low quality FIDS habitat, (i.e., areas that are already heavily fragmented, relatively young, exhibit low structural diversity, etc.)
3. Maximize the amount of forest "interior" (forest area >300 feet from the forest edge) within each forest tract (i.e., minimize the forest edge:area ratio). Circular forest tracts are ideal and square tracts are better than rectangular or long, linear forests.
4. Minimize forest isolation. Generally, forests that are adjacent, close to, or connected to other forests provide higher quality FIDS habitat than more isolated forests.
5. Limit forest removal to the "footprint" of houses and to that which is necessary for the placement of roads and driveways.

6. Minimize the number and length of driveways and roads.
7. Roads and driveways should be as narrow and as short as possible; preferably less than 25 and 15 feet, respectively
8. Maintain forest canopy closure over roads and driveways.
9. Maintain forest habitat up to the edges of roads and driveways; do not create or maintain mowed grassy berms.
10. Maintain or create wildlife corridors.
11. Do not remove or disturb forest habitat during April-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.
12. Landscape homes with native trees, shrubs and other plants and/or encourage homeowners to do so.
13. Encourage homeowners to keep pet cats indoors or, if taken outside, kept on a leash or inside a fenced area.
14. In forested areas reserved from development, promote the development of a diverse forest understory by removing livestock from forested areas and controlling white-tailed deer populations. Do not mow the forest understory or remove woody debris and snags.
15. Afforestation efforts should target a) riparian or streamside areas that lack woody vegetative buffers, b) forested riparian areas less than 300 feet wide, and c) gaps or peninsulas of nonforested habitat within or adjacent to existing FIDS habitat.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,



Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

April 20, 2015

Project Review
Chesapeake Bay Field Office
United States Fish and Wildlife Service
177 Admiral Cochrane Drive
Annapolis, MD 21401

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

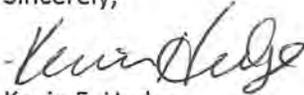
Dear Project Review Coordinator:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting an environmental review from the US Fish & Wildlife Service regarding protected endangered/threatened species, critical or proposed critical habitats, wetlands, national wildlife refuges, wilderness areas, wild and scenic river corridors, heritage trust reserves and/or National and State parks that may occur on or within the vicinity of the above referenced site.

The site consists of \pm 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location, a Site Aerial Map depicting site boundaries and the Trust Resources List obtained from IPaC.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews



U.S. Fish and Wildlife Service

Trust Resources List

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

Chesapeake Bay Ecological Services Field Office
177 ADMIRAL COCHRANE DRIVE
ANNAPOLIS, MD 21401
(410) 573-4599

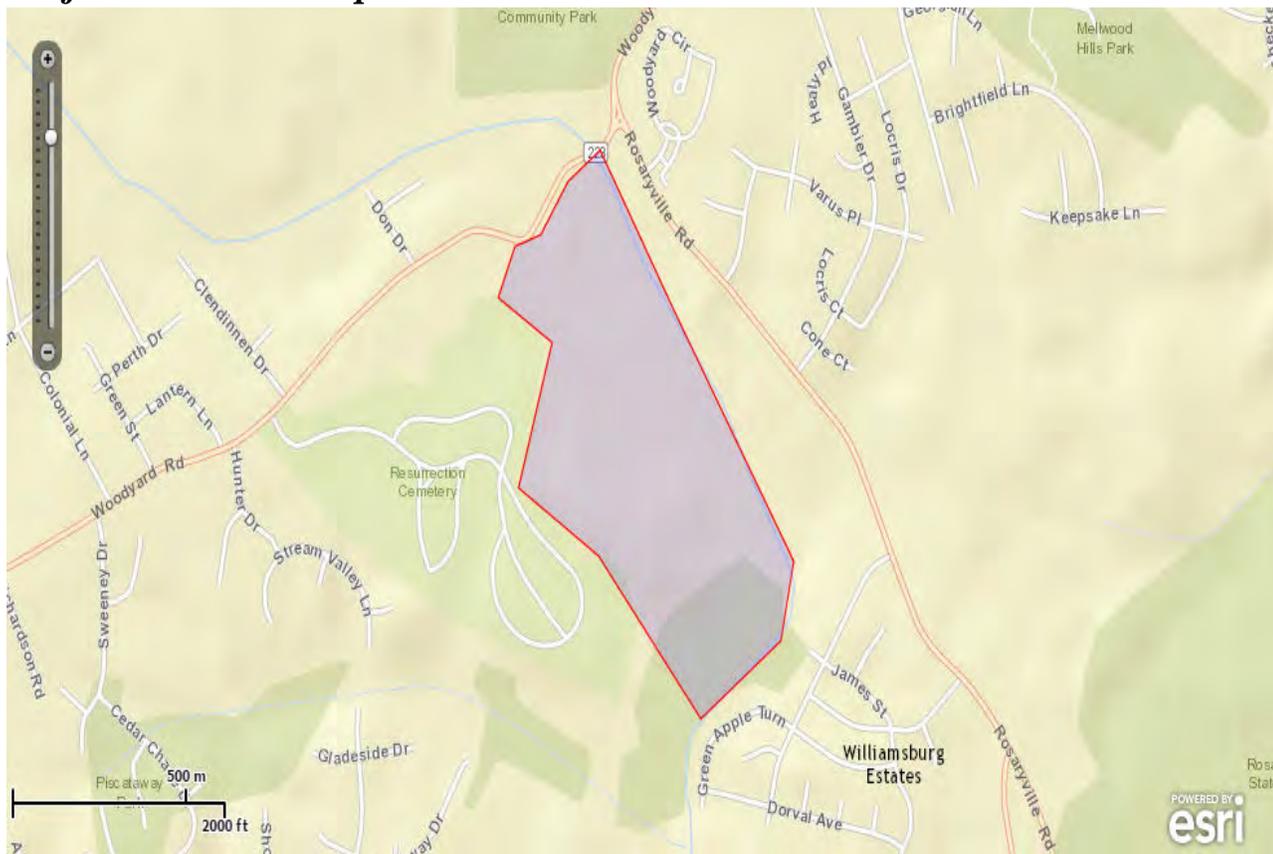
Project Name:

Walton Property Mitigation Site



Trust Resources List

Project Location Map:



Project Counties:

Prince George's, MD

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-76.8436887 38.7771907, -76.8463444 38.7785609, -76.8452289 38.7814968, -76.8470206 38.7824001, -76.8464627 38.7834371, -76.8456044 38.7836713, -76.8447032 38.7847451, -76.8436303 38.7853779, -76.8412699 38.7822668, -76.837193 38.7770813, -76.8376221 38.7754753, -76.8402829 38.7739028, -76.8436887 38.7771907)))

Project Type:

Stream / Waterbody / Canals / Levees / Dikes



U.S. Fish and Wildlife Service

Trust Resources List

Endangered Species Act Species List ([USFWS Endangered Species Program](#))

There are no listed species found within the vicinity of your project.

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#))

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#))

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html>.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: <http://www.fws.gov/migratorybirds/CCMB2.htm>.



Trust Resources List

For information about conservation measures that help avoid or minimize impacts to birds, please visit:

<http://www.fws.gov/migratorybirds/CCMB2.htm>.

Migratory birds of concern that may be affected by your project:

There are **26** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to the [ECOS Help Desk](#).

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
American Oystercatcher (<i>Haematopus palliatus</i>)	Yes	species info	Year-round
American bittern (<i>Botaurus lentiginosus</i>)	Yes	species info	Wintering
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	species info	Year-round
Black-billed Cuckoo (<i>Coccyzus erythrophthalmus</i>)	Yes	species info	Breeding
Blue-winged Warbler (<i>Vermivora pinus</i>)	Yes	species info	Breeding
cerulean warbler (<i>Dendroica cerulea</i>)	Yes	species info	Breeding
Fox Sparrow (<i>Passerella liaca</i>)	Yes	species info	Wintering
Gull-billed Tern (<i>Gelochelidon nilotica</i>)	Yes	species info	Breeding
Kentucky Warbler (<i>Oporornis formosus</i>)	Yes	species info	Breeding
Least Bittern (<i>Ixobrychus exilis</i>)	Yes	species info	Breeding
Nelson's Sparrow (<i>Ammodramus nelsoni</i>)	Yes	species info	Wintering
Peregrine Falcon (<i>Falco peregrinus</i>)	Yes	species info	Wintering



Trust Resources List

Pied-billed Grebe (<i>Podilymbus podiceps</i>)	Yes	species info	Breeding
Prairie Warbler (<i>Dendroica discolor</i>)	Yes	species info	Breeding
Prothonotary Warbler (<i>Protonotaria citrea</i>)	Yes	species info	Breeding
Purple Sandpiper (<i>Calidris maritima</i>)	Yes	species info	Wintering
Red Knot (<i>Calidris canutus rufa</i>)	Yes	species info	Wintering
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	Yes	species info	Year-round
Rusty Blackbird (<i>Euphagus carolinus</i>)	Yes	species info	Wintering
Saltmarsh Sparrow (<i>Ammodramus caudacutus</i>)	Yes	species info	Year-round
Seaside Sparrow (<i>Ammodramus maritimus</i>)	Yes	species info	Year-round
Short-billed Dowitcher (<i>Limnodromus griseus</i>)	Yes	species info	Wintering
Short-eared Owl (<i>Asio flammeus</i>)	Yes	species info	Wintering
Snowy Egret (<i>Egretta thula</i>)	Yes	species info	Breeding
Wood Thrush (<i>Hylocichla mustelina</i>)	Yes	species info	Breeding
Worm eating Warbler (<i>Helmitheros vermivorum</i>)	Yes	species info	Breeding

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the



Trust Resources List

Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

Data Limitations, Exclusions and Precautions

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC is unable to display wetland information at this time.

April 22, 2015

Maryland Department of Natural Resources
Integrated Policy & Review Unit
Project Review Division
Attn: Mr. Greg Golden
Tawes State Office Building, C-3
Annapolis, Maryland 21401

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

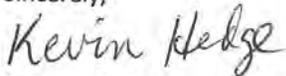
Dear Mr. Golden:

Greenvest, LLC (GV) is conducting a baseline environmental features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting an environmental review from the Maryland DNR IPRU Project Review Division regarding protected aquatic habitats and fisheries resources that may occur on or within the vicinity of the above referenced site.

The site consists of ± 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location and a Site Aerial Map depicting site boundaries.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews

April 20, 2015

Maryland Historic Trust
Project Review and Compliance
100 Community Place
Crownsville, MD 21032

RE: Walton Property (Piscataway Creek Mitigation Site)
7606 Woodyard Road, Clinton, Maryland 20735
Tax Map 0108, Parcel 236
Ninth Election District
Prince George's County, Maryland

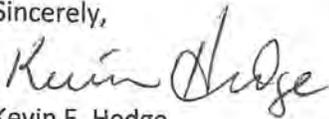
Dear Review Coordinator:

Greenvest, LLC (GV) is conducting a baseline environmental and historical features inventory for the above referenced property in Clinton, Prince George's County, Maryland. In this letter, we are requesting available information regarding MHT Easements, Maryland Inventory of Historic Property sites, National Register and National Historic Landmark sites that may occur on or within the vicinity of the above referenced site.

The site consists of ± 126.03 acres and is known as Tax Map 108, Parcel 236 located in Clinton, Prince George's County, Maryland. The site is bounded on the west by the Resurrection Cemetery and residential properties, by Piscataway Creek and residential and properties to the east, Woodyard Road to the north and to the south by MNCPPC parkland and residences of the Williamsburg Estates Subdivision. Enclosed are portions of the USGS Quadrangle (Upper Marlboro, MD) that depict the project location and a Site Aerial Map depicting site boundaries.

Should you have any further questions or require additional information, please do not hesitate to contact us at (410) 987-5500. Thank you in advance for your time and assistance in this matter.

Sincerely,



Kevin E. Hedge
Professional Wetland Scientist #1559

Enclosures

Cc: Sharon Sartor, USACE Baltimore District Planning Division
Vaso Karanikolis, USACE Baltimore District Planning Division
Carla Rupert, Air, Natural & Cultural Resources, Joint Base Andrews

APPENDIX E

WETLAND DELINEATION PLAN

APPENDIX F

COASTAL ZONE CONSISTENCY DETERMINATION

Consistency with Maryland Coastal Program Enforceable Coastal Policies

The Piscataway Creek Mitigation Site (PCMS) is within Maryland's designated coastal zone, and as such is regulated under the federal Coastal Zone Management Act (CZMA) and Maryland's federally-approved Coastal Zone Management Program.

The project proposed in the EA would be fully consistent with Maryland's Enforceable Coastal Policies. A net positive effect on Maryland's coastal resources is expected to result from implementing the Piscataway Creek Mitigation Project as proposed in the EA. All activities would be conducted in accordance with applicable laws, regulations, and policies governing erosion and sediment control and stormwater management, which would ensure that the project would be implemented in a manner consistent with the applicable Maryland Coastal Program enforceable policies. A synopsis of how the project would be consistent with the enforceable coastal policies is provided below.

Maryland's Enforceable Coastal Policies are divided into three (3) general sections: General Policies, Coastal Resources, and Coastal Uses. The General Policies are further divided into Core Policies, Water Quality, and Flood Hazards. This project's compliance with each of the applicable enforceable policies is discussed below. Policies not applicable to the proposed project are noted with an N/A.

GENERAL POLICIES

Core Policies

Policy: It is State policy to maintain that degree of purity of air resources which will protect the health, general welfare, and property of the people of the State. MDE (C9) Md. Code Ann., Envir. §§ 2-102 to - 103.

As noted in Section 3.3 and 4.3 of the EA, the Air Force and any contractors would comply with all applicable air pollution control regulations when implementing the mitigation proposed in the EA. Section 4.3 of the EA contains a detailed discussion of the projected air emissions associated with the proposed project. Temporary impacts to air quality will result from the use of earth moving equipment needed to implement the proposed mitigation project plus a minor increase in vehicle trips generated by workers during construction. These temporary effects are expected to be minor and ameliorated by the positive, long term impacts this mitigation project will have on local air quality.

Policy: The environment shall be free from noise which may jeopardize health, general welfare, or property, or which degrades the quality of life. MDE (C9) COMAR 26.02.03.02.

Section 3.15 and 4.15 of the EA provide a detailed discussion of the existing noise environment and temporary noise-related impacts associated only implementing the project as proposed in the EA. Construction related noise, which will be limited to the earthwork phase of this project would cease upon completion of excavation and grading and an overall reduction in noise generation is anticipated post construction.

Policy: Soil erosion shall be prevented to preserve natural resources and wildlife; control floods; prevent impairment of dams and reservoirs; maintain the navigability of rivers and harbors; protect the tax base, the public lands, and the health, safety and general welfare of the people of the State, and to enhance their living environment. MDA (C4) Md. Code Ann., Agric. § 8-102(d).

JBA will control pre- and post-construction stormwater runoff, including erosion, sedimentation, and nonpoint source pollution, throughout the duration of each project. JBA will comply with the requirements described in the MDE document *Maryland Stormwater Management Guidelines for State and Federal Projects* (MDE 2010) and the *MDE Stormwater Management Act of 2007* (MDE 2007). This project is comprised of creating and restoring forested wetlands located within the floodplain of Piscataway Creek and upon completion by its nature will meet this coastal zone policy. It will result in increased flood storage, improved stormwater management (quality and quantity) and will contribute to decreasing peak storm related discharges to the Piscataway Creek.

Policy: Controlled hazardous substances may not be stored, treated, dumped, discharged, abandoned, or otherwise disposed anywhere other than a permitted controlled hazardous substance facility or a facility that provides an equivalent level of environmental protection. MDE (D4) Md. Code Ann., Envir. § 7- 265(a).

All contractors involved with implementing the proposed actions will be required to comply with JBA's Environmental Protection Standards for contracts, which includes managing, storing, transporting, and disposing of hazardous materials and wastes and taking all necessary precautions to prevent spills of hazardous materials in accordance with all applicable federal, state, and local laws and regulations. It is anticipated that the only hazardous materials used to implement this project may include including earthmoving equipment related lubricants, oils and fuels.

Water Quality Policies

Policy: No one may add, introduce, leak, spill, or emit any liquid, gaseous, solid, or other substance that will pollute any waters of the State without State authorization. MDE (A5) Md. Code Ann., Envir. §§ 4- 402, 9-101, 9-322.

This project is comprised of implementing a nontidal, forested wetland mitigation project and by its nature will not introduce any liquid, gas, solid or other pollutant to waters of the State. The EA discusses compliance with laws, regulations, and policies related to the use, storage, and disposal of hazardous wastes and materials in Section 3.11 and 4.11. All contractors involved with implementing the proposed actions would be required to carefully manage, store, transport, and dispose of any lubricants, oils or fuels used to operate earthmoving equipment and take all necessary precautions to prevent spills of any of these materials in accordance with all applicable JBA environmental standards and federal, state, and local laws and regulations.

Policy: All waters of the State shall be protected for water contact recreation, fish, and other aquatic life and wildlife. Shellfish harvesting and recreational trout waters and waters worthy of protection because of their unspoiled character shall receive additional protection. MDE (A1) COMAR26.08.02.02.

This project by its nature will protect the wetland restored under a permanent conservation restriction and result in water quality improvements in Piscataway Creek and downstream aquatic habitats. Approved soil erosion and sediment control measures will be installed prior to and maintained throughout the duration of construction and until soils are stabilized. The SESC plan will be implemented and maintained in accordance with *Maryland Stormwater Management Guidelines for State and Federal Projects* (MDE 2010), and the *MDE Stormwater*

Management Act of 2007 (MDE 2007).

Policy: Any development or redevelopment of land for residential, commercial, industrial, or institutional purposes shall use small-scale non-structural stormwater management practices and site planning that mimics natural hydrologic conditions, to the maximum extent practicable. Development or redevelopment will be consistent with this policy when channel stability and 100 percent of the average annual predevelopment groundwater recharge are maintained, nonpoint source pollution is minimized, and structural stormwater management practices are used only if determined to be absolutely necessary. MDE (C9) Md. Code Ann., Envir. § 4-203; COMAR 26.17.02.01, .06.

N/A

Flood Hazards Policies

Policy: Proposed floodplain encroachments, except for roadways, culverts, and bridges, shall be designed to provide a minimum of 1 foot of freeboard above the elevation of the 100- year frequency flood event. In addition, the elevation of the lowest floor of all new or substantially improved residential, commercial, or industrial structures shall also be at least 1 foot above the elevation of the 100-year frequency flood event. MDE (C2) COMAR 26.17.04.01, .07, .11.

This policy is N/A as no hard structures of any kind will be implemented as part of the proposed mitigation project. Portions of the project are located within the 100-year floodplain of Piscataway Creek and implementing this project as proposed in the EA will result in a net increase of flood storage and will also contribute to desynchronizing downstream peak flows.

COASTAL RESOURCES POLICIES

The Chesapeake and Atlantic Coastal Bays Critical Area

N/A. The PCMS is not located the Chesapeake and Atlantic Coastal Bays Critical Area.

Tidal Wetlands

N/A. The project as proposed will restore, create and enhance nontidal wetlands and will not occur in a tidal wetlands.

Non-Tidal Wetlands

Policy: 1. Removal, excavation, grading, dredging, dumping, or discharging of, or filling a non-tidal wetland with materials of any kind, including the driving of piles and placing of obstructions; changing existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics; disturbing the water level or water table; or removing or destroying plant life that would alter the character of a non-tidal wetland is prohibited unless: The proposed project has no practicable alternative...

The project as proposed will enhance degraded and functionally impaired non-tidal wetlands. These wetlands have been ditched, drained and maintained as mowed pasture for decades. The project has no practicable alternative but to restore functionally impaired jurisdictional

wetland adjacent to proposed creation areas. The result will be a highly diverse and functional, nontidal, forested wetland fully integrated with the adjacent floodplain forest of the Piscataway Creek. All appropriate permits and approvals will be obtained from both federal and state agencies approving the design and implementation of the project as proposed in the EA.

Forests

Policy: The Forest Conservation Act and its implementing regulations, as approved by NOAA, are enforceable policies. Generally, before developing an area greater than 40,000 square feet, forested and environmentally sensitive areas must be identified and preserved whenever possible. If these areas cannot be preserved, reforestation or other mitigation is required to replace the values associated with them.

This policy does not apply in the Critical Area. DNR (C5) Md. Code Ann., Nat. Res. §§ 5-1601 to -1613; COMAR 08.19.01-.06.

Policy: Forestry activities shall provide for adequate restocking, after cutting, of trees of desirable species and condition; provide for reserving, for growth and subsequent cutting, a sufficient growing stock of thrifty trees of desirable species to keep the land reasonably productive; and prevent clear-cutting, or limit the size of a tract to be clear-cut in areas where clear-cutting will seriously interfere with protection of a watershed. DNR (C5) Md. Code Ann., Nat. Res. § 5-606.

As discussed in Section 4.8 the Proposed Action will require a Forest Stand Delineation (FSD) and a Forest Conservation Plan (FCP) as part of the State permitting process. However, the Proposed Action will not adversely impact any portion of the project site that contains existing forest. In fact, the Proposed Action calls for an increase of forested area within the 10.64 acre of wetland creation/restoration area. As such, the Proposed Action will be in compliance with the Maryland Forest Conservation Act. This project will result in the expansion of floodplain forest that will be fully integrated to the designated Green Infrastructure Corridor tied to Piscataway Creek.

Historical and Archaeological Sites

The Historical and Archaeological Sites Policy is not applicable to the proposed project. The project received Maryland Historic Trust clearance in the form of a No Effect Letter issued on 10/20/15. Therefore there will be no negative impacts to historical or archeological sites or resources.

COASTAL USES

The Coastal Uses Policies listed below are not applicable to the proposed project.

Mineral Extraction: The proposed project does not involve mineral extraction.

Electrical Generation and Transmission: The proposed project does not involve power plant construction, electrical transmission lines, or cooling water intake structures.

Tidal Shore Erosion Control: No tidal shores occur within the proposed project footprint.

Oil and Natural Gas Facilities: The proposed project would not involve vessels transporting oil or above-ground oil storage sites.

Dredging and Disposal of Dredged Material: The proposed project would not involve dredging or the disposal of dredged material.

Navigation: The proposed project would not impact navigation or navigation-related facilities. **Transportation:** The proposed project is not a transportation development or improvement project. **Agriculture:** The proposed project is not related to agriculture other than converting active pasture land to restored and preserved floodplain forest.

Sewage Treatment: The proposed project would not involve the discharge of sewage effluent, a sewage treatment facility, or an on-site sewage disposal system.

Development

Some development policies are applicable to the proposed project:

Policy: Any development shall be designed to minimize erosion and keep sediment onsite. MDE (C4) COMAR 26.17.01.08.

Policy: Development must avoid and then minimize the alteration or impairment of tidal and non-tidal wetlands; minimize damage to water quality and natural habitats; minimize the cutting or clearing of trees and other woody plants; and preserve sites and structures of historical, archeological, and architectural significance and their appurtenances and environmental settings. MDE/DNR/CAC (D6) Md. Code Ann., Envir. §§ 4-402, 5-907(a), 16-102(b); Md. Code Ann., Nat. Res. §§ 5-1606(c), 8-1801(a); Md. Code Ann., Art. 66B § 8.01(b); COMAR 26.24.01.01(A).

This project as proposed seeks to reverse decades of wetland function and value impairment by restoring sources of hydrology plus community composition, structure and function. The result will be a substantial improvement in ecological function and value including to stormwater management, groundwater recharge, water quality, flood storage, nutrient sequestration and cycling and wildlife habitat.

Prior to and during earthwork activities, JBA would protect the water quality of state waters by implementing and maintaining the approved erosion and sediment control measures. These ESC measures will control pre- and post-construction stormwater runoff, including erosion, sedimentation, and nonpoint source pollution in accordance with Maryland *Stormwater Management Guidelines for State and Federal Projects* (MDE 2010) and the *MDE Stormwater Management Act of 2007* (MDE 2007). JBA will also incorporate Sustainable Design and Development and energy conservation principles into project execution.

Other development policies are not applicable to the proposed project:

- A proposed construction project must have an allocation of water and wastewater from the county whose facilities would be affected or, in the alternative, prove access to an acceptable well and on-site sewage disposal system.
- Any proposed development may only be located where the water supply system, sewerage system, or solid waste acceptance facility is adequate to serve the proposed construction.
- This project consists of an ecological restoration and as such does not require the use of utilities.
- A residence or commercial establishment that is served or will be served by an on-site sewage disposal system or private water system.
- Grading or building in the Severn River Watershed.

- Establishment of an industrial facility.
- Because the development consists of an ecological restoration for mitigation purposes development policies do not apply to the project as proposed:
- Local citizens shall be active partners in planning and implementation of development. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.
- Development shall protect existing community character and be concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.
- Development shall be located near available or planned transit options. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.
- Whenever possible, communities shall be designed to be compact, contain a mixture of land uses, and be walkable. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.