ATTACHMENT J
MITIGATION INFORMATION

Permittee-Responsible Mitigation Plan for the Falcon Ethane Pipeline Project Neshannock Creek Restoration Site

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Shell Pipeline Company LP

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Appendix A: Figures

5.6.2 Cultural Resources

On July 11, 2013, the Pennsylvania Historical and Museum Commission (PHMC) State Historic Preservation Office (SHPO) determined that the Project will have no effect on historic properties. The signed Project Review Form indicating PHMC clearance for the NCRS is provided in Appendix E: Jurisdictional Agency Coordination.

6.0 Determination of Mitigation Needs

6.1 Functional Impacts and Proposed Functional Uplift

As previously mentioned, the PA Wetland Condition Level 2 Rapid Assessment Protocol (PADEP, 2017) was used to evaluate the existing and post-restoration wetland conditions at the PRM Site. The results from the data was then used to ensure that the wetlands being impacted as a result of the proposed Project are adequately offset via the restoration of the PRM Site. The existing and post-restoration worksheets for the PRM Site are provided as Appendix D: PA Wetland Condition Level 2 Rapid Assessment Forms.

The PRM Site post-restoration overall condition score was compared to a weighted average overall condition score of the Project impacted wetlands to ensure that the restoration site and activities adequately compensate for the Project impacts. As shown in Table 3: Summary of Project and PRM Site Wetland Condition Level 2 Rapid Assessment Overall Condition Index (CI) Scores below, the PRM Site provides mitigation above and beyond the mitigation needs of the Project.

Table 3: Summary of Project and PRM Site Wetland Condition Level 2 Rapid Assessment Overall Condition Index (CI) Scores	
Project Weighted Average CI	**0.75**
Neshannock PRM Pre-Restoration CI	**0.68**
Neshannock PRM Post-Restoration CI	**0.87**

As demonstrated in Table 3: Summary of Project and PRM Site Wetland Condition Level 2 Rapid Assessment Overall Condition Index (CI) Scores, the expected functional ecological uplift within the restored wetland will, in additional to the acreage calculations as described in Table 4: Mitigation Summary Table, meet and exceed the required mitigation offsets to the functions and values that will be lost at the Project.

The impacted wetlands most dominantly exhibit existing stressors from vegetative alterations including presence of invasive species, ROW clearing, clear cutting or brush cutting (mechanized removal of shrubs and saplings) and selective tree harvesting as well as hydrologic modifications in the form of ditching, draining, filling/grading, stormwater inputs, microtopographic alterations and adjacent stream alterations. Sedimentation stressors were also identified within some of the impacted wetlands, including sediment deposits, eroding banks, and active selective forestry harvesting within one year. ***Wetlands that are anticipated to be permanently impacted may experience a net decrease the following functions and values: wildlife habitat, production (nutrient) export, and floodflow alterations. As demonstrated herein, loss of wetland functions at the impact project will be offset accordingly at the PRM Site.***

Although the PRM Site wetland currently exhibits floodflow alteration functionality as it retains a significant amount of hydrology evidenced by soil saturation, surface water and a high-water table, this function is hindered due to degradative land uses. Restoration efforts at the PRM Site will result in improved and more efficient floodflow alteration functionality. Improving vegetative density and diversity, including the planting of native trees and shrubs, seeding with native herbaceous cover, and removal of invasive species, will enhance the wetlands ability to reduce flood damage by retaining water for prolonged periods following precipitation events. Vegetative enhancements will further improve the wetlands effectiveness in trapping and filtering sediments, toxicants, and pathogens before water can runoff into adjacent waters or infiltrate ground water supplies. In terms of production export, restoration activities at the PRM Site will improve the usefulness of the wetlands to many

living organisms. For example, providing a variety of vegetative layers will appeal to wider variety of wildlife. Native shrubs enhance the wetlands opportunity for nesting, and provide cover from predation while fruiting shrubs, including dogwood, blueberry and elderberry provide valuable food sources. These functionalities will be improved as described below.

As demonstrated in the PRM Site PA Wetland Condition Level 2 Rapid Assessment post-restoration forms, removing invasive and non-native vegetation and re-planting the PRM Site with a diverse native-community will increase the community structure as well as the vegetative diversity and density of the PRM Site. Restoration of the PRM Site will improve the overall wetland zone of influence, as well as the vegetation condition indices. Plantings and seedings proposed across the PRM Site will improve the effectiveness of the wetland in reducing flood damage by increasing water retentions for prolonged periods following precipitations events and the gradual release of floodwaters. This improved functionality will help deal with any sediment stressors that may be present within the immediate surrounding landscape. Furthermore, because sources of excess sediment exist within the surrounding landscape, the restored PRM Site wetland will be better capable of reducing or preventing degradation of water quality as it will act as a trap for sediments, toxicants and/or pathogens in runoff water. Increased vegetative diversity, including plant community structure, and density will be able to retain higher volumes of water than under normal or average rainfall conditions, supporting additional stability of the wetland ecological system and its buffering characteristics, and thereby providing social and economic value related to erosion and flood prone areas. Restoration activities proposed for the PRM Site will also enhance the quality and quantity of wildlife habitat available within the PRM Site.

The post-restoration wetland system will exhibit a diverse plant community structure and will offer a greater and wider range of usable products for wildlife, improving production export functionality. ***This will improve the value and functionality of the habitat for various types and populations of animals typically associated with wetlands. Native vegetation will encourage a greater opportunity for a diverse vegetative community to develop. Furthermore, appropriate native vegetation will improve the ecological integrity of the enhanced wetland, as the wetland will build resilience and become a self-sustaining ecosystem able to accommodate stress and change, thereby providing necessary vegetative and habitat offsets to the impacted wetlands.*** The PRM Site therefore plays an important role in the larger ecological system and encompassing watershed.

Current functionality is expected to improve considerably because of restoration efforts. The expected functional ecological uplift the wetland will exhibit as a result of restoration efforts, in additional to the acreage calculations as described in Section 7.0 Determination of Mitigation Needs, will both meet the required mitigation ratio and offset the functions and values that will be lost at the impact site.

6.2 Project Impacts

Construction of the Project will result in temporary and permanent conversion impacts to PSS and PFO wetlands in Allegheny, Beaver and Washington Counties, PA. Table 4: Mitigation Summary Table provided below presents the impacts and mitigation needs of the Project. A ratio-based method is employed to ensure that the PRM Site provides a sufficient acreage of mitigation to meet the functional replacement needs of the Project. Additionally, Section 5.5 PA Wetland Level 2 Rapid Assessments provides a discussion of the how the conditions at the PRM Site will be improved and will provide offset for those lost as a result of the Project.

As shown in Table 4: Mitigation Summary Table below, mitigation ratios based on impact type (temporary or permanent) and by wetland Cowardian classification type (PSS or PFO) are being used to determine final mitigation requirements.

Table 4: Mitigation Summary Table				
Resource	**Impact Type**	**Impact Area (Acres)**	**Mitigation Ratio (X:X)**	**Mitigation Need (Acres)**
PSS	Perm	0.07	2:1	0.14
	Temp	0.54	1:1	0.54
PFO	Perm	0.10	3:1	0.31
	Temp	0.11		0.33
Totals		**0.83**	**-**	**1.33**

Note:
1. Please note that the total wetland acreage impacts are correct. Due to aggregation per wetland type and rounding of each wetland acreage to the nearest tenth, a rounding discrepancies of 0.01-acre occurs.

6.3 Proposed Mitigation

Proposed mitigation of the PRM Site will involve vegetative enhancement and permanent protection. As shown in Figure 9: ***PRM Site*** Resource Development Map (Appendix A: Figures), the PRM Site will be enhanced to PFO conditions as part of the restoration approach. ***A master resource development plan for the larger Neshannock Creek Restoration Site is provided as Figure 10: Neshannock Creek Restoration Site Master Resource Development Plan.***

7.0 Mitigation Work Plan

7.1 Wetland Enhancement Approach

Restoration activities will include vegetative enhancement and protection of the wetland resources within the bounds of the PRM Site. Appendix A: Figures, Figure 9: ***PRM Site*** Resource Development Map, shows the proposed restoration activities for the PRM Site. Appendix F: Planting Plan, contains the planting plans for the PRM Site. Ecological lift will be achieved by protecting the area from anthropogenic activities including cattle grazing, restoring historic habitat conditions, planting and seeding of native plant species to restore the native plant community, and controlling invasive species. Barbed-wire fencing or similar will be installed around the bounds of the PRM Site to ensure that pasturing uses cease upon mitigation commencement.

Based upon the noted hydrology on-site, the restoration work will focus on the establishment of a forested wetland complex throughout the enhancement area. Trees and shrubs will be planted per their hydrologic needs and adaptability, with trees and shrubs that are able to tolerate wetter conditions installed in and around inundated and/or fully saturated areas.

7.2 Wetland Enhancement Sequence

The wetland enhancement process will involve diligent invasive species management and replanting efforts. Initial restoration work, specifically during Year 1, will involve the application of an aquatic approved chemical herbicide to the invasive species within the PRM Site. The PRM Site will be controlled either early or late in the growing season while native species are dormant to avoid adverse impacts to native vegetation present within the PRM Site. Upon initial weed control completion, and depending on the time of year and season, the initial seeding and planting will be conducted. If the time of year is late summer or fall, planting will be postponed until the appropriate planting window. During the appropriate planting window, native herbaceous plants will be installed following a weed control event. Weed control activities will require follow-up monitoring to ensure effectiveness of the control method(s).

Existing native woody vegetation including shrubs and trees, particularly within the PSS and PFO portions of the PRM Site, will be maintained and will not be adversely affected by the proposed restoration activities. These areas do contain a notable invasive species presence and therefore require restorative action. Additionally, existing restored PRM sites within the NCRS and surrounding the proposed PRM Site, as shown in Figure 2: PRM Area Map (Attachment A: Figures) will support the invasive control and replanting and reseeding activities at the site.

After the initial weed control efforts, the site will be prepared for planting, which may include some selective mowing to allow for the installation of native plant seed. A variety of native trees and shrubs will be planted at the PRM Site, as shown in the attached Appendix F: Planting Plan.

FPR will plant the PRM Site at a rate 550 woody stems per acre, of which 20 percent will be larger woody plant material (#7 tree stock, which ranges from 4 to 6 feet in height), and 80 percent will be smaller woody plant material (bare root and one-gallon tree stock, generally 2 to 4 feet in height). This combination will benefit the PFO wetland restorative success of the PRM Site.

A detailed planting list is provided on Sheet 3 of 4 of Appendix F: Planting Plan. Please note that the specific list may change slightly based on time of year that planting occurs and stock availability.

All planted woody vegetation is subject to an 80 percent survivorship performance standard for the monitoring period, as detailed in Section 9.0 Performance Standards. If at any time during the 5 Year monitoring period of the PRM Site, the planted woody plant survivorship falls below 80 percent, supplemental plantings will be required to bring the PRM Site back into compliance with that success criterion.

In open areas, the initial tree installation effort will occur in a gridded matrix with specific species planted in areas best suited for their hydrologic needs. In areas where it is deemed applicable, smaller tree material may be installed at the center of a cluster of shrubby species. As the shrubs establish, they will protect the smaller tree material from browse.

The initial planting will be conducted in a manner that will allow for continued mechanical weed control of the newly seeded enhancement area during the first three years of establishment. This is to prevent weedy species from becoming established within the PRM Site while the native seeds germinate and grow, and to ensure enough light gets through to the establishing seeds, trees, and shrubs. Selective trimming may be used as needed to ensure enough light is getting through to developing tree seedlings.

It is anticipated that some of the smaller sized tree material will be lost to herbivory from local deer and other natural causes. This will be documented during the yearly monitoring periods. After the first year, the mortality from smaller trees and shrubs that have been installed will be used to determine replanting needs for the PRM Site's second year of establishment. The replanting will occur in a random pattern within the original gridded matrix to eliminate the appearance of planted "rows" and return the area to its natural condition.

A facultative wetland seed mix and a mix of native wetland forest tree and shrub species will be used across the PRM Site. The specific locations for all plantings to be used throughout the PRM Site are shown on the planting plans (Appendix F: Planting Plan).

8.0 Maintenance Plan

The PRM Site will be monitored and maintained by FPR, as described in Section 10: Monitoring Requirements. FPR will act as the willing agent to perform all duties associated with satisfying compensatory mitigation requirements. Through contractual agreement with the Permittee, FPR will commit to restoring, enhancing, and preserving wetland functions and maintain wetland habitats in accordance with the provisions in the PRM.

Yearly maintenance will be documented in the annual monitoring reports along with a discussion of any anticipated maintenance events that will be needed the following year. In general, two to three site visits will be conducted annually during the first 3 years to monitor the PRM Site for invasive species and adapt the yearly maintenance plan as needed based upon these observations.

In general, maintenance will be heaviest during the first 3 years of establishment, and will entail mechanical weed control events, along with two or three chemical control events, all targeting invasive species. Maintenance will focus on controlling any pockets of invasive species that might still be present on-site and monitoring for the establishment of any new stands of invasive species. Control methods will be targeted to deal with the individual species as they are found and will include both mechanical and chemical control. The Agent projects that by the 4th and 5th years, the intensity of management efforts required will drop off

significantly as the native plant community will be relatively well established and resilient against the establishment and encroachment of invasive species.

In locations where wetland areas are too wet to allow mechanical access manual chemical and mechanical weed control will be necessitated. These areas although tend to have less problems with annual weedy species, can be threatened by more persistent perennial invasive species, specifically reed canary grass. Target weed control applied through spot application, coupled with mechanical weed control to stop any re-seeding will be the primary weed control techniques used in the wetter wetland areas.

9.0 Performance Standards

The PADEP and USACE will use the best professional judgment, visual observations, and monitoring reports to evaluate attainment of performance standards and to determine whether part or the entire PRM Site has successfully met the conditions of the permit. The following criteria will be used to assess project success:

1. In the vegetated wetland enhancement area, success will be evaluated by:
    a. Invasive herbaceous plant coverage will not exceed 20 percent during Year 1 monitoring and 10 percent each year thereafter. Any seeds used for plant establishment should and will be free of tall fescue, bermuda grass, and other allelopathic turf grass species, as well as plant species on the PA Department of Conservation and Natural Resources (DCNR) Invasive Plant list (PADCNR, 2014).
    b. Native herbaceous plant coverage will be at least 60 percent by the end of the first full monitoring year, 80 percent by the end of the second full monitoring year, and at least 85 percent each monitoring year thereafter. Any seeds used for plant establishment should and will be free of tall fescue, Bermuda grass, and other allelopathic turf grass species, as well as plant species on the PADCNR Invasive Plant List.
    c. All planted woody plant survivorship will be 80 percent following Year 1 monitoring. All plant survivorship will be determined from data collected through sampling at post-restoration monitoring locations.
    d. Each year during the monitoring period of the PRM Site, all planted woody vegetation shall exhibit an average increase in height from the previous year.
    e. By the fifth monitoring year (Year 5 following construction), trees will exhibit an average height of 8 feet and planted woody shrubs exhibit an average height of 5 feet. A density of 200 healthy stems per acre including volunteers, will be achieved by the end of the 5-year monitoring period.

10.0 Monitoring Requirements

On behalf of the Permittee, FPR will monitor the PRM Site to demonstrate compliance with the Performance Standards detailed in Section 9: Performance Standards. Monitoring will follow the guidelines established below:

1. Visual Description. Visual descriptions will be provided for the entire site. Visual observations will also be used to evaluate the percentage of invasive species present. Photos will be taken at the wetland monitoring plot and included with each monitoring report. Photos will be taken at ground level, facing north, south, east and west. The same photo location points at the monitoring plot will be used to allow for pre and post restoration comparisons.
2. Vegetation. Immediately following initial planting, FPR will establish permanent monitoring plots for wetlands within the mitigation area. Plots will be marked using 8-foot PVC pipe anchored with a metal T-post at plot center and GPS coordinates will be recorded. At each monitoring plot, herbaceous vegetation will be monitored in a 5-foot-by-5-foot plot and woody vegetation will be monitored in a 20-foot-by-20-foot plot. Monitoring plots may be adjusted as necessary to accommodate PRM Site boundary limits, whereby adjustments will occur such that the same square footage is accounted for. One monitoring plot will be stationed for this PRM Site. Permanent monitoring plot will provide data to evaluate the survival rate of planted vegetation including number, species, and survivorship. Reports will also reflect information regarding herbaceous plant species including the facultative wetland plant status [obligate (OBL) to upland (UPL)] per the USACE regional plant list (Lichvar 2016) of each plant, the percent of each species, and whether the species is native, introduced, or invasive.

Monitoring activities will occur over a five-year period. During the first two years, monitoring will occur two times per year, once during the spring growing season (typically between April and May) and once during the fall growing season, typically between September and October. Monitoring will occur once annually during the fall growing season for the remaining three years for which monitoring is required. If all Performance Standards (Section 9: Performance Standards) have not been met in the fifth year, then a monitoring report will be required for each consecutive year until all standards have been successfully satisfied. Submittal of a final monitoring report (typically prepared the fifth growing season following completion of restoration activities, including planting) will be required.

Please note that additional site visits will occur as part of the maintenance activities at the PRM Site. Maintenance activities, as discussed in Section 8.0 Maintenance Plan, involve invasive species control, deer deterrent planting, mowing and supplemental planting if necessary. These site visits serve as monitoring assessment opportunities that aid in determining both the effectiveness of earlier management activities, and determine management techniques to be employed throughout the future establishment of the PRM Site.

10.1 Monitoring Reports

On behalf of the Permittee, FPR will submit monitoring reports to the PADEP and USACE following each formal monitoring event during the five-year monitoring period. As such, two monitoring reports will be submitted for the first two years monitoring occurs, and one monitoring report will be submitted for the remaining three years for which monitoring is required. Monitoring reports following a spring monitoring event will be submitted within 90 days of when monitoring occurs. Monitoring reports following a fall monitoring event will be submitted by December 31st of that year.

Monitoring reports will include all data collected from the year's monitoring events, which will be used for comparison to the PRM Site's progress towards the performance standards found in Section 9: Performance Standards. If the PRM Site achieves all its performance standards prior to year 5, an early release may be requested from the USACE and PADEP. Additionally, reports will include the following discussions: success to date; maintenance and management activities conducted during that year; the proposed maintenance schedule for the following year based upon the results of the yearly monitoring; and any problems which have been or are being encountered. At a minimum, monitoring reports should also include the following:

- Photos taken from ground level at the monitoring plot to document overall conditions;
- A description of the general condition of the seedlings, including survival and mortality, and if applicable, a discussion of likely causes for mortality;
- A description of vegetative communities developing at each monitoring plot;
- A description of the generalized degree and distribution of exotic/invasive species and whether they are seed bearing trees or seedlings;
- Identification of measures used to eradicate exotic/invasive species and document results of these efforts;
- A corrective action or redial action plan to address deficiencies in Performance Standards, if applicable.

10.2 As-Built Planting Plan

Following initial restoration activities, FPR will complete an as-built planting plan to show the general locations and quantities of the vegetative material that was planted. On behalf of the Permittee, FPR will submit the as-built planting plan as part of the first monitoring report to the regulating agencies following completion of the planting and first monitoring event for the PRM Site.

11.0 Long-Term Management Plan

To ensure the long-term sustainability of the PRM Site, FPR will initially perform maintenance and long-term management. The Permittee anticipates that these activities will be minimal as the project is designed to be self-sustaining with limited management activities. Maintenance will be heaviest during the first 3 years of establishment, and will entail mechanical weed control events, along with two or three chemical control events, all targeting invasive species.

Inspections will be conducted bi-annually to identify any need for invasive species control, additional signage, or boundary maintenance. Specific items required as part of a Long-Term Management Plan are listed below.

Woody Plant Survivorship

If at any time during the 5-year monitoring period of the PRM Site, the planted woody plant survivorship or planted tree survivorship falls below 80 percent, supplemental plantings will be required to bring the PRM Site back into compliance with that performance standard.

Patrols

Walk-through surveys will be conducted annually to qualitatively monitor the general condition of the habitats on-site. Notes to be made may include observations of species encountered, water quality, general extent of wetlands and streams, or invasive or non-native species establishment. If there are any noted items that require maintenance, this should be recorded and submitted in a report to the Agencies.

Invasive Species Monitoring

The walk-through survey will include a qualitative assessment (e.g. visual estimate of cover) of invasive species. If there is a continuous area exceeding 1/8 of an acre containing invasive species, the Long-Term steward should note this in a report to the agencies and conduct invasive species control to remove the noted species. Follow up monitoring should be conducted the following year, with follow up maintenance if needed.

Forestry Management Practices

Any practices to reduce diseased or dead vegetation will be allowed if the vegetation compromises the long-term viability of the PRM Site.

Trash and Trespass

If needed, trash should be removed and any necessary measures to prevent or repair damage from vandalism and trespass impacts should be taken.

Enforcement

The Long-term Steward will be responsible for the enforcement of the conservation easement. FPR will be the initial designated Long-term Steward charged with long-term management and maintenance responsibility once long-term success criteria as described in each site-specific PRM Report are attained. FPR may appoint a different Long-term Steward in accordance with 33 CFR 332.7(d)(1). The appointment of such an entity will be approved by the PADEP and/or the USACE.

12.0 Adaptive Management Plan

An adaptive management plan including contingency, and remedial responsibilities will be implemented in the event monitoring reveals that certain performance standards have not been met. In the event of a deficiency, FPR will provide notice to the PADEP and USACE. The notice will include an explanation for the deficiency, potential remedial actions that could be undertaken, an assessment of risks, and an assessment of any adjustments that must be made to the maintenance and monitoring regime.

Ecological restoration is in its essence the practice of adaptive management. Due to the multitude of factors that affect a restoration project in a given year, the practitioner needs to be constantly assessing the site, and reacting to changing conditions as the site develops and matures. Usually, yearly variations are relatively minor and within the parameters of a given project's performance standards. These normal variations are noted through regular site visits, yearly monitoring reports, and yearly maintenance activities. Occasionally, rare instances arise which bring a project far outside of the defined range of its performance standards and more intensive remedial action is required. This adaptive management plan forecasts a few potential situations that could cause the proposed PRM Site to be well outside the range of its defined performance standards and how those instances would be addressed.

Wetland Vegetation

As the PRM Site is currently designed as a wetland enhancement site, all wetland areas have been delineated in accordance with the *1987 USACE Wetlands Delineation Manual (Environmental Laboratory, 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont (Version 2.0) (USACE, 2012).* Restoration activities at the PRM Site are not anticipated to result in changes that will negatively affect the hydrology; therefore, risk of hydrology changing is not expected. As such, risk of the seeding or planting failing due to hydrology is not anticipated, unless there is an unexpected and extreme drought. In that instance, any failure would be noted in the monitoring report, and replanting or reseeding would be conducted based on the results of the monitoring report.

Also of risk to wetland areas is a large-scale aggressive break out of invasive species. This risk is usually highest if grading is conducted in a restoration, as the exposed soil and lack of vegetative competition allows for easy succession by fast growing and aggressive invasive species such as reed canarygrass. Since this PRM Project is using an enhancement approach, there is little to no risk of this happening. The existing native vegetation will be largely undisturbed and will be enhanced by supplemental plantings and seeding. Invasive species will be controlled on a yearly basis.

Invasive Species and Native Dominance

If at any point there was an intensive colonization of upland or wetland invasive species, which brought the total percent of invasive species well above the allowed performance standards, remedial action will be needed. The management technique used will be dependent on the type of invasive species colonizing the site (i.e. annual, or perennial, primary reproduction through vegetative spread or through seed). If the species are annual they can be managed via maintenance mowing and mechanical weed control methods to stop them from re-seeding into the site. After the seed bank is depleted, they drop out of the vegetative

matrix. If they are perennial in nature, chemical herbicides need to be used; mechanical weed control is still used to stop further spreading through seed if they are a species that has high germination rates.

Once the invasive species control has begun, additional seeding or planting will need to be conducted to re-introduce a native plant community into the area of concern. Depending on the type of invasive species (i.e. broad leaf or monocot), replanting and reseeding strategies can be used to allow for continued chemical control of the invasive species in the area while still allowing the native species to germinate and develop.

The likelihood of this scenario is low; once established, native plant communities are actually quite resilient to invasion by invasive species as long as they are not disturbed or impacted. Invasive species issues on a restoration site tend to be most problematic during the first 2 years, because there is bare soil immediately available for germination and colonization immediately following construction, and there may be invasive species in the existing seed bank to germinate and establish. As previously stated, the primary restoration technique being used on this site is enhancement and therefore, the risk of this happening is extremely low.

In the event that the site is not meeting its performance standards for native herbaceous cover, additional seeding will be conducted. Again, the most important factor for establishing a healthy stand of upland herbaceous species is proper maintenance during the first 2 to 3 years of establishment, specifically mowing in upland areas. This ensures enough light is reaching the developing seedlings, while also eliminating competition from annual weedy species that may be trying to colonize the site. In the wetland areas, mowing cannot be conducted, but mechanical weed control with weed whips can be used.

13.0 References

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APPENDIX A

FIGURES

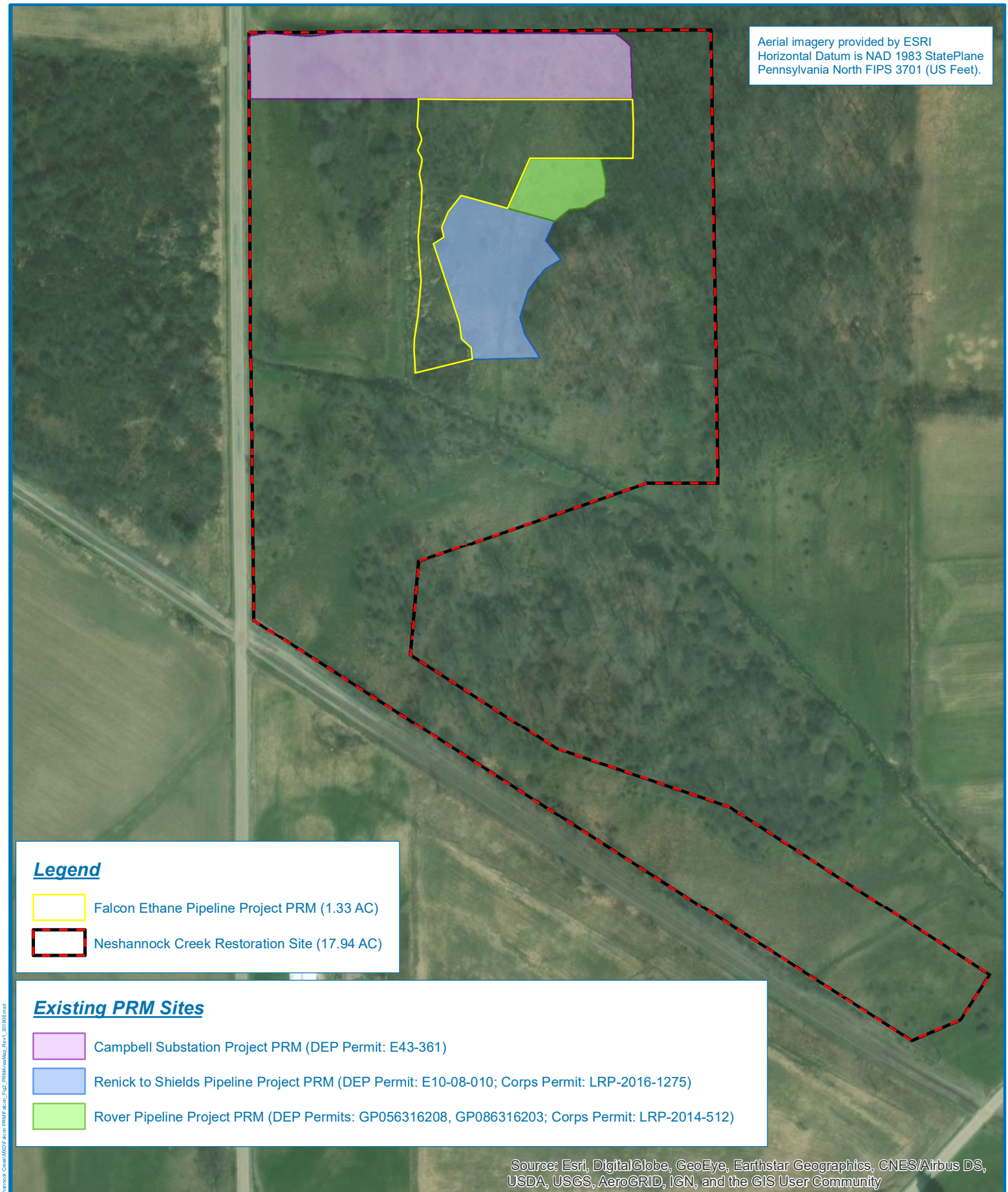

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FIGURE 2

NESHANNOCK CREEK RESTORATION SITE
PERMITTEE-RESPONSIBLE MITIGATION FOR THE FALCON ETHANE PIPELINE PROJECT
PRM AREA MAP

MERCER COUNTY, PENNSYLVANIA

Date:	6/28/2018
Drawn by:	NGD
Checked by:	AS
Revision No.	1

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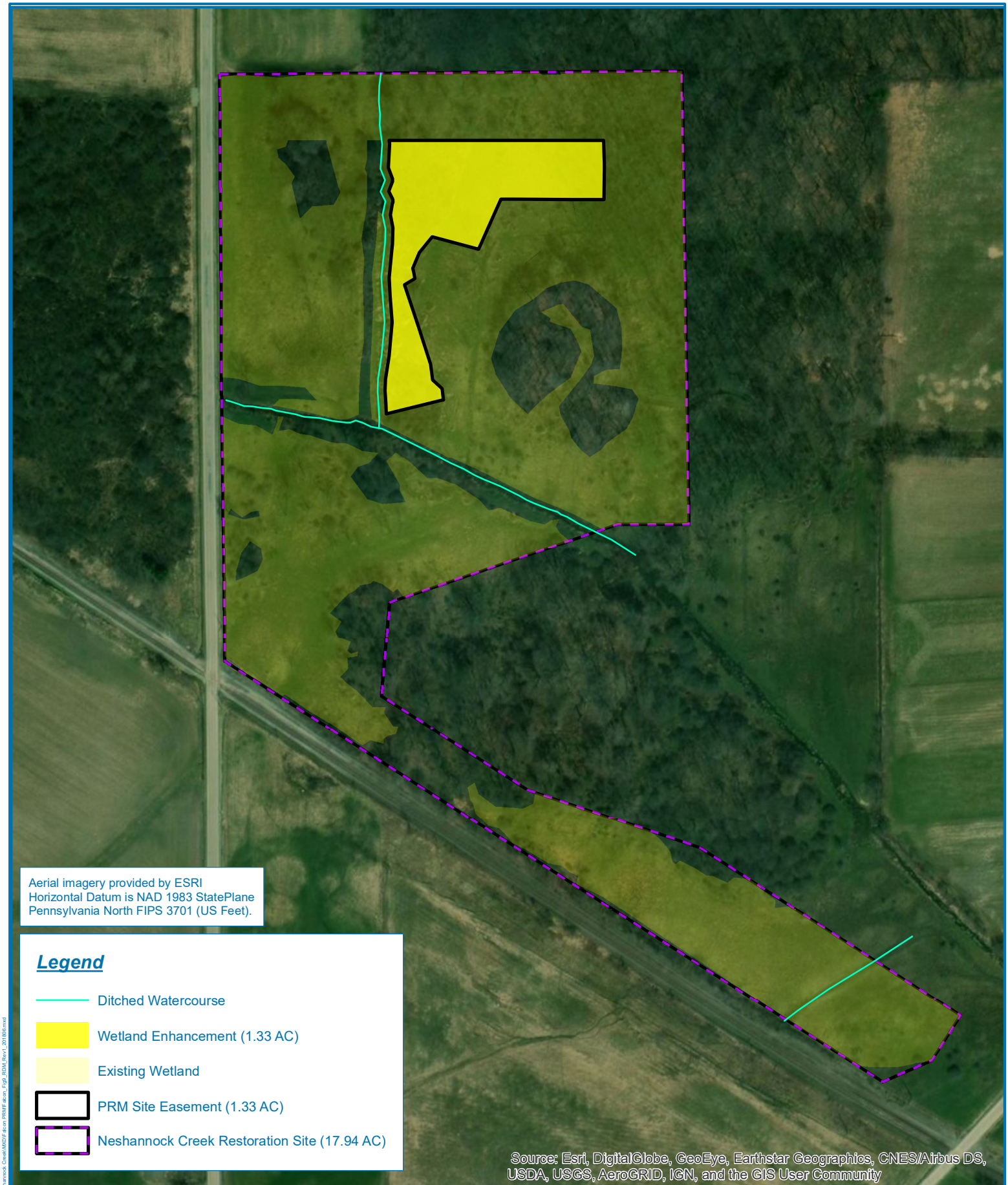

Aerial imagery provided by ESRI
Horizontal Datum is NAD 1983 StatePlane Pennsylvania North FIPS 3701 (US Feet).

Legend

- Ditched Watercourse
- Wetland Enhancement (1.33 AC)
- Existing Wetland
- PRM Site Easement (1.33 AC)
- Neshannock Creek Restoration Site (17.94 AC)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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FIGURE 9

NESHANNOCK CREEK RESTORATION SITE
PERMITTEE-RESPONSIBLE MITIGATION FOR THE FALCON ETHANE PIPELINE PROJECT
PRM SITE RESOURCE DEVELOPMENT MAP

MERCER COUNTY, PENNSYLVANIA

Date: 6/28/2018
Drawn by: NGD
Checked by: AS

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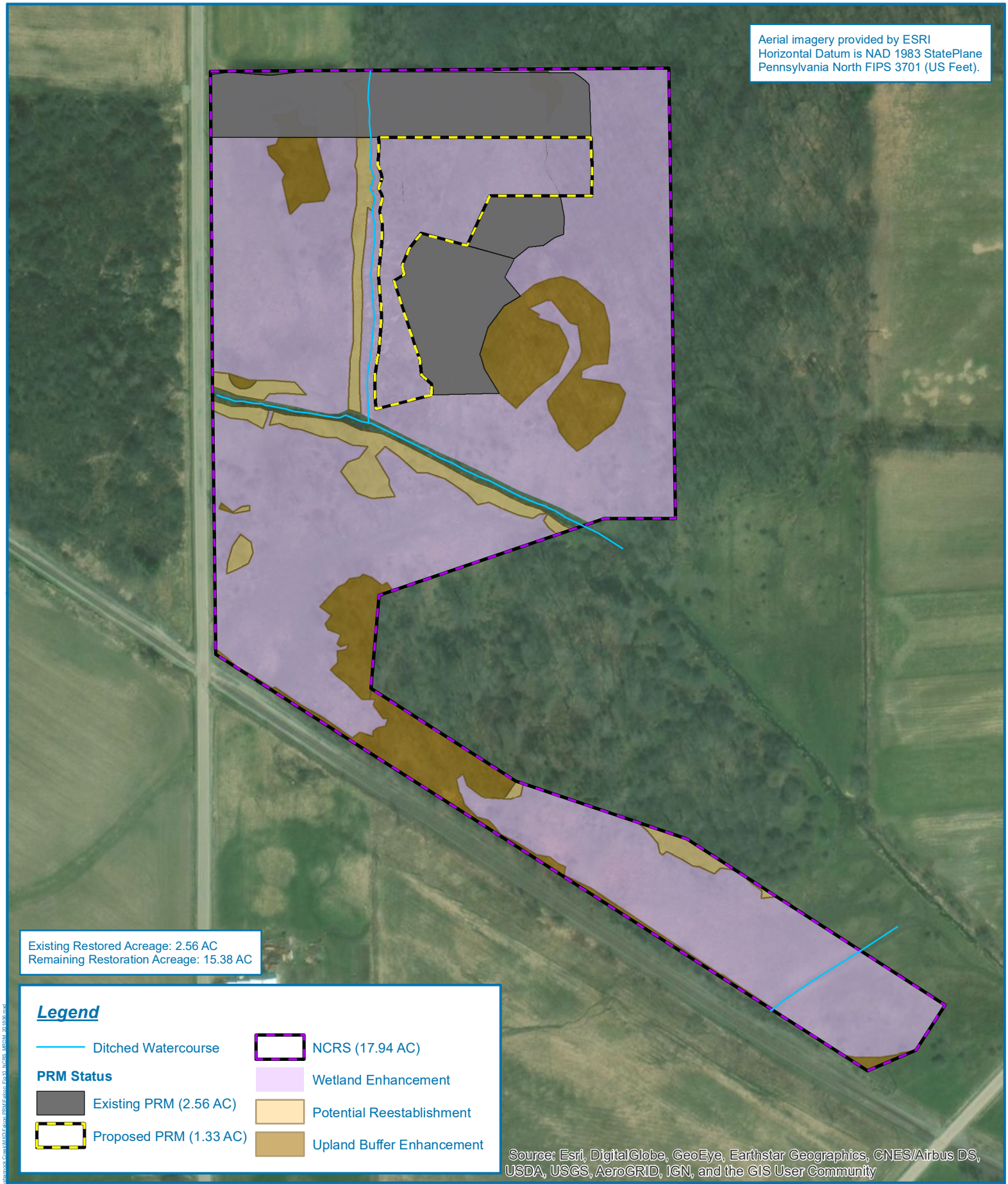

FIGURE 10

NESHANNOCK CREEK RESTORATION SITE
MASTER RESOURCE DEVELOPMENT PLAN

MERCER COUNTY, PENNSYLVANIA

Date:	6/28/2018
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Checked by:	AS