

EXHIBIT "A"

Description of a conservation easement  
upon the property of  
Roy M. Clovis & Linda Clovis  
Washington County, Pennsylvania

Description of a permanent easement situated in Washington County, Pennsylvania and being upon, over, through, and across a portion of the tract of land described and conveyed to Roy M. Clovis & Linda Clovis, by instruments recorded by instrument number 198908784 of the official records of Washington County, Pennsylvania (referred to hereinafter as the "above referenced tract of land"), said permanent easement herein described, as shown on a plan prepared by McTish, Kunkel & Associates, entitled "Conservation Easement Plat", Sheet 1, Exhibit "A", dated January 17, 2013.

Said permanent easement being more particularly described as follows:

**COMMENCING** at a bolt along the southwestern line of the above referenced tract of land;

**THENCE** on a line bearing South 59° 06' 07" East, a distance of 826.43 feet, to the **POINT OF BEGINNING** of the herein described easement.

**THENCE** across a portion of the above referenced tract of land, on a line bearing North 51° 11' 59" West, a distance of 21.32 feet to a point,

**THENCE** on a line bearing North 43° 01' 09" West, a distance of 112.23 feet to a point;

**THENCE** on a line bearing North 35° 42' 53" West, a distance of 83.70 feet to a point;

**THENCE** on a line bearing North 43° 34' 21" West, a distance of 217.19 feet to a point;

**THENCE** on a line bearing North 31° 07' 59" West, a distance of 334.36 feet to a point;

**THENCE** on a line bearing North 22° 05' 49" West, a distance of 305.65 feet to a point;

**THENCE** on a line bearing North 32° 38' 41" West, a distance of 121.61 feet to a point;

**THENCE** on a line bearing North 29° 18' 05" West, a distance of 85.43 feet to a point;

**THENCE** on a line bearing North 41° 46' 02" West, a distance of 183.94 feet to a point;

**THENCE** on a line bearing North 50° 20' 11" West, a distance of 149.85 feet to a point;

**THENCE** on a line bearing North 70° 25' 36" West, a distance of 55.60 feet to a point;

**THENCE** on a line bearing North 82° 00' 10" West, a distance of 138.50 feet to a point;

**THENCE** on a line bearing North 90° 00' 00" West, a distance of 250.35 feet to a point;

**THENCE** on a line bearing South 80° 39' 33" West, a distance of 136.07 feet to a point,

**THENCE** on a line bearing North 41° 32' 49" West, a distance of 155.26 feet to a point,

**THENCE** on a line bearing North 47° 40' 17" East, a distance of 18.93 feet to a point,

**THENCE** on a line bearing North 67° 04' 47" East, a distance of 28.44 feet to a point,

**THENCE** on a line bearing North 25° 53' 04" West, a distance of 36.93 feet to a point,

**THENCE** on a line bearing North 37° 41' 01" West, a distance of 120.44 feet to a point,

**THENCE** on a line bearing North 09° 47' 12" East, a distance of 29.63 feet to a point,

**THENCE** on a line bearing North 35° 46' 39" East, a distance of 15.51 feet to a point,

**THENCE** on a line bearing North 90° 00' 00" East, a distance of 21.16 feet to a point,

**THENCE** on a line bearing South 73° 41' 38" East, a distance of 21.52 feet to a point,

**THENCE** on a line bearing South 51° 46' 03" East, a distance of 60.52 feet to a point,  
**THENCE** on a line bearing South 68° 00' 08" East, a distance of 76.60 feet to a point,  
**THENCE** on a line bearing South 41° 17' 16" East, a distance of 131.31 feet to a point,  
**THENCE** on a line bearing South 20° 34' 18" East, a distance of 25.81 feet to a point,  
**THENCE** on a line bearing South 58° 24' 34" East, a distance of 38.44 feet to a point,  
**THENCE** on a line bearing North 84° 38' 55" East, a distance of 80.95 feet to a point,  
**THENCE** on a line bearing North 89° 34' 28" East, a distance of 141.75 feet to a point,  
**THENCE** on a line bearing North 85° 05' 50" East, a distance of 117.80 feet to a point,  
**THENCE** on a line bearing South 87° 45' 53" East, a distance of 79.82 feet to a point,  
**THENCE** on a line bearing North 03° 28' 57" West, a distance of 141.57 feet to a point,  
**THENCE** on a line bearing North 14° 18' 35" East, a distance of 52.99 feet to a point,  
**THENCE** on a line bearing North 02° 57' 51" East, a distance of 302.17 feet to a point,  
**THENCE** on a line bearing North 09° 21' 05" West, a distance of 182.90 feet to a point,  
**THENCE** on a line bearing North 03° 27' 21" East, a distance of 117.00 feet to a point,  
**THENCE** on a line bearing North 59° 54' 11" East, a distance of 29.11 feet to a point,  
**THENCE** on a line bearing South 55° 27' 07" East, a distance of 27.52 feet to a point,  
**THENCE** on a line bearing South 19° 48' 53" East, a distance of 26.75 feet to a point,  
**THENCE** on a line bearing South 08° 18' 23" East, a distance of 272.08 feet to a point,  
**THENCE** on a line bearing South 03° 48' 26" West, a distance of 326.17 feet to a point,  
**THENCE** on a line bearing South 12° 15' 24" East, a distance of 197.08 feet to a point,  
**THENCE** on a line bearing South 26° 21' 42" East, a distance of 58.99 feet to a point,  
**THENCE** on a line bearing South 39° 56' 52" East, a distance of 149.06 feet to a point,  
**THENCE** on a line bearing South 34° 33' 51" East, a distance of 304.69 feet to a point,  
**THENCE** on a line bearing South 26° 37' 26" East, a distance of 191.25 feet to a point,  
**THENCE** on a line bearing South 30° 41' 33" East, a distance of 177.75 feet to a point,  
**THENCE** on a line bearing South 27° 43' 27" East, a distance of 221.03 feet to a point,  
**THENCE** on a line bearing South 37° 01' 13" East, a distance of 261.02 feet to a point,  
**THENCE** on a line bearing South 45° 04' 47" East, a distance of 194.97 feet to a point,  
**THENCE** on a line bearing South 54° 42' 08" East, a distance of 32.33 feet to a point,  
**THENCE** on a line bearing South 38° 06' 31" West, a distance of 130.13 feet to the  
**POINT OF BEGINNING.**

Said permanent easement containing 7.777 acres of land, more or less.

All bearings herein being based upon the Pennsylvania State Plane Coordinate System, South Zone, U.S. Feet, NAD 83, as derived from Global Positioning System survey performed by McTish, Kunkel, & Associates in January 2013.



Scott R. Reeser  
Registered Professional Land Surveyor  
PA Registration No. SU075208

JAN. 18, 2013  
Date

**EXHIBIT 8B2 MITIGATION  
WORK PLAN**

**REFER TO EXHIBIT 6**

**EXHIBIT 9**  
**PERFORMANCE BOND**

## Mitigation Bank Performance Bond

Bond No. \_\_\_\_\_

Penal Sum: \$ 652,035.00

### Know All Men By These Presents,

That we, **First Pennsylvania Resource, LLC of 380 Southpointe Blvd., Suite 405 Canonsburg, PA 15317** (hereinafter called the Principal), as Principal, and **RLI Insurance Company** with an office at **8 Greenway Plaza, Suite 400 Houston, TX 77046**, a corporation duly organized under the laws of the State of Illinois (hereinafter called the "Surety"), as Surety, are held and firmly bound unto either, as evidenced by the signature below, the **Pennsylvania Department of Environmental Protection (PADEP) of 400 Market Street Harrisburg, PA 17101** or the **US Army Corps of Engineers (USACE) of 1000 Liberty Avenue Pittsburgh, PA 15222-4186** (hereinafter called the "Obligee"), as Obligee, up to the maximum penal sum of six hundred and fifty two thousand and thirty five and 00/100 Dollars (\$652,035.00) (hereinafter called the "Maximum Penal Sum"), for the payment of which we, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into the PSUMBI with the Obligee, dated the \_\_\_\_ day of \_\_\_\_, 2013, which includes the Mitigation Site Plan for Enlow Fork Mitigation Bank (the "Mitigation Bank Site") to ensure that aquatic resources will be restored or established on the Mitigation Bank Site, which PSUMBI and Mitigation Site Plan are hereby referred to and made a part hereof as if fully set forth herein.

WHEREAS, the Principal has applied for Permits for such activities from the U.S. Army Corps of Engineers (USACE) and/or the Pennsylvania Department of Environmental Protection (PADEP) to insure full compliance with all the terms and conditions of US Department of Army Permit \_\_\_\_\_ and/or PADEP Permit \_\_\_\_\_ (Permits).

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that this bond will not be released in whole or in part until the Principal receives written verification from the IRT that the conditions for release in PSUMBI and Mitigation Site Plan and Permits have been met. If the above bounden Principal shall complete construction of the Mitigation Bank Site and meet the final Performance Standards as defined in PSUMBI and Mitigation Site Plan, including any amendments, and received acknowledgment of such from the IRT, then this obligation shall be null and void; otherwise shall remain in full force and effect, subject, however, to the following conditions:

- 1) Upon successful completion of construction and approval of an as-built report, the Penal Sum shall be reduced by thirty percent (30%).
- 2) Obligee will issue a full and final release of this Bond when i) the final Performance Standards, as defined in PSUMBI, are met, or ii) other security, in the amount of and

covering the same obligations stated herein, is posted with the Obligee. This bond will not be released in whole or in part until the Principal receives written verification from the IRT that the conditions for release in the Instrument and Mitigation Site Plan and Permits have been met.

- 3) The Surety's obligation under this bond shall arise after the Obligee has notified the Principal in their failure to abide by the terms and conditions of PSUMBI. Upon notice of the Principal's Default under PSUMBI, the Surety may take one of the following actions:
  - a) Remedy the Default of the Principal to the full satisfaction of the Obligee by a date certain determined by the Obligee, or
  - b) Immediately tender to a party or parties identified by the Obligee the portion of the penal sum that the Obligee determines is due and owing and necessary to remedy the Default. In no circumstances shall such a sum be tendered to the Obligee. Any new party or parties identified by the Obligee under this section shall immediately become a Surety or Sureties to this bond. If the Obligee determines that it is unable to identify such a party or parties, the Surety(ies) shall remedy the Default of the Principal under a) of this section.
  - c) In the event that the Surety(ies) fail(s) to respond within thirty (30) business days to the Obligee's notice of Default, or to honor commitments to the full satisfaction of the Obligee under a) or b) above of this section, the remaining portion of the full penal sum may, at the election of the Obligee, immediately become due and owing and paid to a party or parties identified by the Obligee. In no circumstances shall such a sum be tendered to the Obligee. Any new party or parties identified by the Obligee under this paragraph shall immediately become a Surety or Sureties to this bond.
- 4) Surety shall have no obligation to the Principal, the Obligee or any other person or entity for any loss suffered by the Principal, the Obligee or any other person or entity by reason of acts or omission which are or could be covered by the Principal's general liability insurance, products liability insurance, completed operations insurance or any other insurance.

NOTWITHSTANDING ANYTHING CONTAINED IN THE AGREEMENT TO THE CONTRARY, THE LIABILITY OF THE PRINCIPAL AND SURETY UNDER THIS BOND IS LIMITED TO THE TERM BEGINNING THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_, AND ENDING THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_, AND ANY EXTENSIONS OR RENEWALS OF THE REFERENCED AGREEMENT SHALL BE COVERED UNDER THIS BOND ONLY WHEN CONSENTED TO IN WRITING BY THE SURETY. IT IS FURTHER AGREED THAT REFUSAL BY THE SURETY TO EXTEND THE TERM OF THIS BOND SHALL NOT CONSTITUTE A DEFAULT BY THE PRINCIPAL, AND SHALL NOT GIVE RISE TO A CLAIM OR DEMAND AGAINST THE SURETY UNDER THIS BOND

In accordance with regulations at 33 C.F.R. § 332.3(n)(5), the Surety shall provide the Obligee notification at least 120 days in advance of termination, revocation, or modification of this bond.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Obligee named herein, or their heirs, executors, administrators or successors.

Sealed with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

**Principal: First Pennsylvania Resource, LLC**

By: \_\_\_\_\_  
Name/Title

**Surety: RLI Insurance Company**

By: \_\_\_\_\_  
Greg E. Chilson, Attorney-in-Fact

**Obligee: US Army Corps of Engineers**

By: \_\_\_\_\_  
Name/Title



380 SOUTHPOINTE BLVD., SUITE 405  
CANONSBURG, PA 15317

**ENLOW FORK RESTORATION SITE**  
**PRELIMINARY JURISDICTIONAL WATERS OF THE U.S.**  
**DELINEATION PACKAGE**

**AUGUST 2013**



*PREPARED IN CONSULTATION WITH:*  
**TIMMONS GROUP**   
YOUR VISION ACHIEVED THROUGH OURS.

1001 BOULDERS PARKWAY, SUITE 300  
RICHMOND, VIRGINIA 23225  
PHONE: 804.200.6500  
TIMMONS GROUP PROJECT No. 33362

## EXECUTIVE SUMMARY

On behalf of “First Pennsylvania Resource, LLC” (“FPR”), a wholly owned subsidiary of “Resource Environmental Solutions, LLC” (“RES”), Timmons Group environmental scientist Jason Bohdan conducted a jurisdictional waters of the U.S. delineation during November 2012 to identify both wetlands and streams within the proposed boundaries of the “Enlow Fork Restoration Site” (“EFRS”).

The 44.9 acre site is located 0.2 miles east of West Finley, PA and is generally bound by Burnsville Ridge Road to the west, Red Barn Lane to the north, mid-successional forest to the east, and agricultural land to the south. EFRS consists of active pasture, agricultural impoundments, and mid-successional hardwood forest which have recently undergone selective silviculture harvests. The project area drains to Enlow Fork and is located within the Upper Ohio-Wheeling River Subbasin - HUC 05030106 (State Water Plan Watershed Subbasin 20).

EFRS was delineated based upon the methodology outlined in the 1987 “U.S. Army Corps of Engineers” (“COE”) Wetland Delineation Manual, the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region and subsequently issued COE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high water mark within drainage features. Using these methodologies, preliminary wetland delineation mapping was produced and is included along with the attached project area description and discussion for your review.

The jurisdictional waters of the U.S. delineation identified approximately 2.21 acres of “palustrine emergent” (“PEM”) wetlands, 0.51 acres of “palustrine open water” (“POW”) wetlands, 0.33 acres of “palustrine forested” (“PFO”) wetlands. The delineation also identified 6,433 linear feet (LF) of cumulative stream onsite including perennial (5,363 LF), intermittent (716 LF), and ephemeral (354 LF) channel systems. The majority of the wetlands onsite were found within the floodplain of the main second order tributary. Hydrology within the floodplain is derived from a high groundwater table and inundation during high water events. Seeps along the hillslopes also provide additional hydrology to adjacent wetlands and stream channels. Additionally, an agricultural impoundment is located in-line with the main tributary in the southeastern portion of the property.

**PRELIMINARY JURISDICTIONAL WATERS OF THE U.S. DELINEATION PACKAGE  
ENLOW FORK RESTORATION SITE**

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**APPENDICES**

Appendix A Field Data Sheets

Appendix B Representative Site Photographs

Appendix C COE JD Request Form

## 1.0 PROJECT INFORMATION SHEET

### General

Project Name: Enlow Fork Restoration Site  
State: Pennsylvania  
County: Washington  
  
Latitude: 39° 59' 21.98" North  
Longitude: 80° 27' 15.89" West  
  
Subject Property Size: 44.9 acres  
  
HUC Code: 05030106 (Upper Ohio-Wheeling River Subbasin)  
  
State Water Plan: Watershed Subbasin 20  
  
Waterbodies: Unnamed tributaries of Enlow Fork

### Corresponding Information

USGS Quad and NWI: Wind Ridge

### Owner/Applicant

Name: First Pennsylvania Resource, LLC  
Address: 380 Southpointe Blvd., Suite 405  
Canonsburg, PA 15317  
  
Contact: Will Donaldson

### Consultant

Name: Timmons Group  
Address: 1001 Boulders Parkway, Suite 300  
Richmond, VA 23225  
  
Telephone: (804) 200-6500  
  
Contacts: Jason Bohdan: (804) 200-6386  
Ben Virts: (804) 200-6442

## **2.0 INTRODUCTION**

On behalf of “First Pennsylvania Resource, LLC” (“FPR”), a wholly owned subsidiary of “Resource Environmental Solutions, LLC” (“RES”), Timmons Group environmental scientist Jason Bohdan delineated the boundaries of jurisdictional “waters of the U.S.” (WUS), including streams and wetlands, within the Enlow Fork Restoration Site (“EFRS”). This work was performed on November 28, 2012.

## **3.0 SITE INFORMATION**

### **3.1 Site Location**

The 44.9 acre site is located 0.2 miles east of West Finley, Pennsylvania in Washington County, Pennsylvania (see [Figure 1: Vicinity Map](#)). EFRS is generally bound by Burnsville Ridge Road to the west, Red Barn Lane to the north, mid-successional forest to the east, and agricultural land to the south.

### **3.2 Site Description**

EFRS consists of active pasture, agricultural impoundments, and mid-successional hardwood forest which have recently undergone selective silviculture harvests. The project area drains to Enlow Fork and is located within the Upper Ohio-Wheeling River Subbasin - HUC 05030106 (State Water Plan Watershed Subbasin 20).

## **4.0 METHODS OF DELINEATION**

### **4.1 Field Investigation**

EFRS was delineated based upon the methodology outlined in the [1987 “U.S. Army Corps of Engineers” \(“COE”\) Wetland Delineation Manual](#), the [Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region](#) and subsequently issued COE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high water mark within drainage features. Field data stations were established within close proximity to the wetland boundary, usually within 10 to 20 feet, in order to document upland and wetland conditions existing along the jurisdictional boundary. Photographs were taken of the field data stations to depict existing site conditions along the boundary. Field data sheets are included in [Appendix A: Field Data Stations](#). Representative site photographs are included in [Appendix B: Representative Site Photographs](#).

### **4.2 Preliminary Offsite Investigation/Data Review**

A review of publicly available resources was performed prior to the onsite field investigation in order to determine if there is the potential for jurisdictional areas, and if present, the extent of these areas located within the project area. These mapping resources included “United States Geographical Survey” (“USGS”) maps, the “U.S. Department of Agriculture Natural Resource

Conservation Service” (“NRCS”) soils database, the “U.S. Fish & Wildlife Service National Wetlands Inventory” (“NWI”) database, and Aerial Imagery from Bing Maps-2011 and 2012.

## 5.0 DELINEATION FINDINGS

### 5.1 Preliminary Offsite Investigation/Data Review Findings

Review of the USGS map shows topographic relief sloping towards an unnamed tributary of Enlow Fork. There are three smaller draws located perpendicular to the main channel, and two draws located at the northern limits of the subject property that converge to form the main stream channel that runs the length of the site. The USGS map did not depict a stream channel through these draws; however, these features are typically indicative of potential stream locations. The USGS map is attached for your review (see [Figure 1: Vicinity Map](#)).

The NRCS soils map identifies three distinct soil series/complexes within the project study area. Of the three soil types identified, none are categorized as being hydric in Washington County. The identified soils and summary attributes are included below. The mapped locations of the soils are shown on [Figure 2: Environmental Inventory Map](#).

- Culleoka silt loam (CaB, CaC, and CaD): well drained, 3-8% slopes (CaB), 8-15% slopes (CaC), and 15-25% slopes (CaD), located on hill slopes along the side slope.
- Dormont silt loam (DoD): moderately well drained, 15-25% slopes, located on hill slopes along the side slope.
- Dormont-Culleoka silt loam (DtD and DtF): moderately well drained, 15-25% slopes (DtD), and 25-50% slopes (DtF), located on hill slopes along the back slope.
- Weikert-Culleoka complex (WeB and WeC): somewhat excessively drained, 3-8% slopes (WeB), and 8-15% slopes (WeC), located on hill slopes along the side slope.

Review of the NWI mapping within the project boundary did not identify streams or wetlands onsite.

Review of the Washington County GIS mapping identified the presence of a stream channel bisecting the majority of the site. Evidence of an agricultural impound in-line with the main tributary is also apparent on the aerial imagery near the southern limits of the study area. An aerial image and the GIS shape files are attached for your review as [Figure 2: Environmental Inventory Map](#).

### 5.2 Onsite Determination/Findings

#### 5.2.1 Jurisdictional Area Summary

The jurisdictional waters of the U.S. delineation identified approximately 2.21 acres of “palustrine emergent” (“PEM”) wetlands, 0.51 acres of “palustrine open water” (“POW”) wetlands, 0.33 acres of “palustrine forested” (“PFO”) wetlands. The delineation also identified 6,433 “linear feet” (“LF”) of cumulative stream onsite including perennial (5,363 LF), intermittent (716 LF), and ephemeral (354 LF) channel systems. The majority of the wetlands onsite were found within the floodplain of the main second order tributary. Hydrology within the floodplain is derived from a high groundwater table and inundation during high water events. Seeps along

the hillslopes also provide additional hydrology to adjacent wetlands and stream channels. Additionally, an agricultural impoundment is located in-line with the main tributary in the southeastern portion of the property.

The boundaries of the jurisdictional areas delineated onsite have been GPS located and are shown on the Preliminary Jurisdictional Waters of the U.S. Delineation Map included as [Figure 3: Preliminary Jurisdictional Waters of the U.S. Delineation Map - Topo](#) and [Figure 4: Jurisdictional Waters of the U.S. Delineation Map - Aerial](#). A summary of the jurisdictional areas identified onsite is provided in the following table.

Area Size (acres)	PFO (acres)	PSS (acres)	PEM (acres)	POW (acres)	Perennial Streams (L.F)	Intermittent Streams (L.F.)	Ephemeral Streams (L.F.)
44.9	0.33	0	2.21	0.51	5,363	716	354
<p>Notes:</p> <p>1) PFO = palustrine forested wetlands, PSS = palustrine scrub-shrub wetlands, PEM = palustrine emergent wetlands, POW = palustrine open water.</p> <p>2) Jurisdictional area acreages are preliminary based on field delineation with field GPS location and have not been confirmed.</p>							

#### 5.2.1.1. Jurisdictional Area Vegetation

The wetlands onsite are predominately PEM systems and are dominated by tall fescue (*Festuca pratensis*), shallow sedge (*Carex lurida*), soft rush (*Juncus effuses*) and smart weed (*Polygonum hydropiper*). Many of the PEM wetlands onsite are located within actively grazed and maintained pastures dominated by pasture grasses including tall fescue. It appears that the presence of this allelopathic grass and stress from grazing and mowing have altered the plant community by outcompeting native hydrophytic vegetation. Field data sheets that provide additional detail regarding the representative vegetative communities present within PEM wetlands throughout EFRS are included as [Appendix A: Field Data Sheets](#).

PFO wetlands onsite are located at or near the headwaters of first order streams. Vegetation within the PFO wetlands consisted of various herbaceous species including rushes (*Carex spp.*) and sedges (*Juncus spp.*). Hardwood trees including oak (*Quercus spp.*), hickory (*Carya spp.*), and maple (*Acer spp.*) are growing along the side slopes in adjacent uplands areas and provide the necessary canopy cover to designate these wetlands as PFO.

#### 5.2.1.2. Jurisdictional Area Soils

The hydric soils observed within jurisdictional areas varied throughout the project area. The soils found within the jurisdictional areas onsite exhibited low chroma matrix colors, low chroma depletions, and bright concentrations that are characteristics of reducing anaerobic conditions

associated with the formation of hydric soils. Soils within the wetlands onsite commonly exhibited a depleted matrix (F3) and hydrogen sulfide odor (A4) hydric soil indicators. Soil textures included silt and silty clay loam. Field data sheets are included in Appendix A: Field Data Sheets and provide additional detail regarding the representative soils present within the wetlands.

#### 5.2.1.3. Jurisdictional Area Hydrology

Indicators of wetland hydrology within the wetlands identified along the floodplain of the main unnamed tributary consisted of soil saturation within the upper 12 inches of the soil surface, oxidized rhizospheres on living roots, hydrogen sulfide odor, passing of the FAC neutral test, and geomorphic position. These wetlands obtain the majority of their hydrology from a high groundwater table near the soil surface. Wetlands not located within the active floodplain generally obtain their hydrology from seeps/springs or a perched water table. Indicators of wetland hydrology within these features consisted of surface water, high water table, saturation, oxidized rhizospheres on living roots, and the presence of reduced iron. Field data sheets that provide additional detail regarding the representative hydrologic indicators present within wetlands are included in Appendix A: Field Data Sheets.

#### 5.2.2 Upland Area Summary

During the field investigation of the subject property approximately 41.84 acres of upland or non-jurisdictional areas were identified onsite. The majority of the uplands were located along the hillside slopes which provide sufficient drainage. The dominant vegetation found in the upland areas included tall fescue, white clover (*Trifolium repens*), serrate-leaf blackberry (*Rubus argutus*) and bull thistle (*Cirsium vulgare*). Indicators of wetland hydrology were not observed within the upland areas onsite. Soils within the upland areas did not show hydric soil characteristics and generally consisted of a matrix with a dark grayish brown to a dark yellowish brown color (10YR 4/2, 10YR 4/3, and 10YR 4/4). Soil textures found included sandy loam and loam which are consistent with the NRCS mapped soils for EFRS.

## 6.0 REFERENCES

United States Department of Agriculture. Natural Resources Conservation Service  
<http://websoilsurvey.nrcs.usda.gov/app/>

United States Fish and Wildlife Service. National Wetlands Inventory  
<http://www.fws.gov/nwi/>

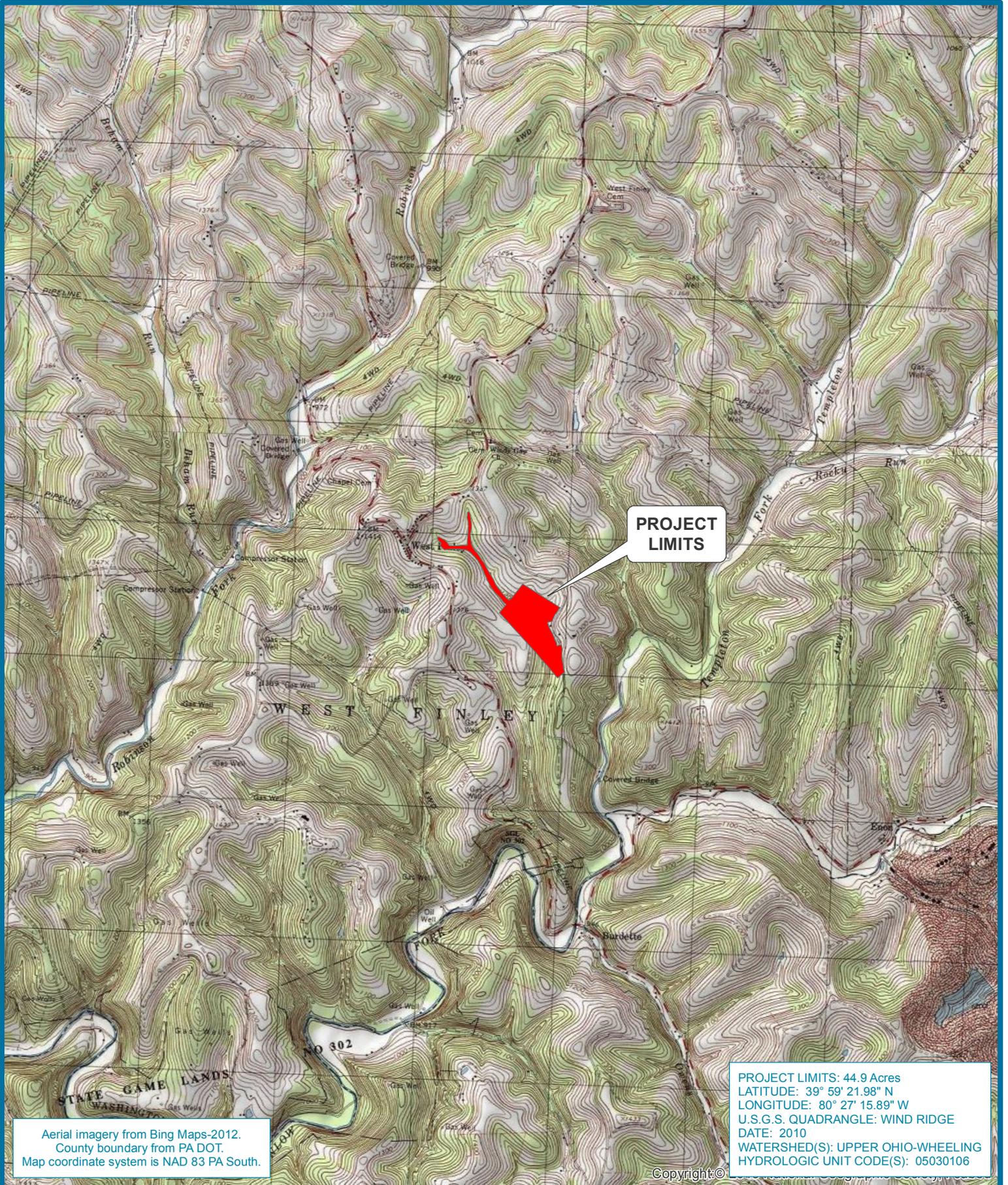
Wetland Training Institute. 1995. Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual, Wetland Training Institute, Glenwood, NM, USA.

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

National List of Hydric Soils 2009, United States Department of Agriculture Natural Resource Conservation Service, <http://soils.usda.gov/use/hydric/>

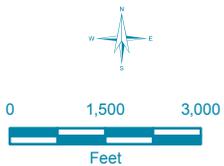
United States Army Corps of Engineers. 2008. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-30. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

## FIGURES



Aerial imagery from Bing Maps-2012.  
 County boundary from PA DOT.  
 Map coordinate system is NAD 83 PA South.

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J/N: 33362  
 Date: 08/06/13

**ENLOW FORK RESTORATION SITE**  
**VICINITY MAP**  
**WASHINGTON COUNTY, PENNSYLVANIA**

