

North Branch Pigeon Creek Mitigation Bank

Mitigation Site Plan

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I. INTRODUCTION

A. Bank Name and Organization

First Pennsylvania Resource, LLC (“Bank Sponsor” or “Sponsor”) proposes to establish the North Branch Pigeon Creek Mitigation Bank (“NBPCMB,” “Bank Site,” or “Project Site”) within the Pennsylvania Statewide Umbrella Mitigation Banking Instrument (“PSUMBI”). The purpose of the PSUMBI is to provide compensatory mitigation for unavoidable impacts to streams and wetlands as a result of activities authorized under Sections 401 and 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, Pennsylvania Department of Environmental Protection (“PADEP”) Chapters 102, 105, and 106 regulatory programs, and Department of the Army Permits provided such activities have met all applicable requirements and are authorized by the appropriate agencies.

B. Authorities

The establishment, use, operation and maintenance of the PSUMBI and the NBPCMB are carried out in accordance with the following authorities:

1. Clean Water Act (33 USC 1251 et seq.);
2. Rivers and Harbors Act (33 USC 403);
3. Fish and Wildlife Coordination Act (16 USC 661 et seq.);
4. Regulatory Programs of the Corps of Engineers, Final Rule (33 CFR Parts 320-332);
5. Guidelines for Specification of Disposal Sites for Dredged and Fill Material (40 CFR Part 230);
6. Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army concerning the Determination of Mitigation Under Clean Water Act, Section 404 (b)(1) Guidelines (February 6, 1990);
7. Regulatory Guidance Letter No. 05-01. U.S. Army Corp of Engineers, February 14, 2005;
8. Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. 33 CFR Parts 325 and 332, Department of the Army, Corps of Engineers and 40 CFR Part 230, Environmental Protection Agency, April 10, 2008;
9. Regulatory Guidance Letter No. 08-03. U.S. Army Corps of Engineers, October 10, 2008;
10. Pennsylvania Department of Environmental Protection, Chapters 102, 105, and 106 regulatory programs; and
11. Pennsylvania State Programmatic General Permits (PASPGP) 3 and 4 and the requirements of Title 25 PA Code 105 rules and regulations.

C. Location

The NBPCMB is located within the Lower Monongahela Watershed – State Water Plan Subbasin 19, in Washington County, approximately 2 miles East of Washington, Pennsylvania. A map showing the proposed Bank Site location is included as Figure 1: Vicinity Map. A locational map providing greater detail of the NBPCMB is included as Figure 2: Site Location Map.

The NBPCMB address is:

202 Brownlee Road

Eighty-Four, PA 15330

The NBPCMB latitude and longitude coordinates are:

40° 10' 28.65" North

80° 05' 43.89" West

Driving directions from the intersection of PA State Route 136 and PA State Route 519 in Eighty-Four are as follows:

- Travel east on PA State Route 136 for 2 miles;
- Turn right onto Brownlee Road (State Route 1055) traveling South;
- Continue on Brownlee Road for 0.5 miles;
- The NBPCMB will be on the right, immediately after the intersection of Brownlee and Young Roads.

Arrangements should be made with the Sponsor prior to visiting the NBPCMB.

II. PHASING

This Mitigation Site Plan (“MSP”) is being submitted for approval by the Interagency Review Team (“IRT”) as an addendum to the PSUMBI. Upon approval, the MSP for the NBPCMB will be attached to the PSUMBI, and the NBPCMB will be deemed a component of the PSUMBI. Credits will be released consistent with the schedule of credit availability in accordance with this MSP and the PSUMBI. Credits released for the NBPCMB will be accounted for in the overall bank ledger for the PSUMBI. Bank Sites will have separate ledgers and separate entries in RIBITS, but all ledgers will be governed by the PSUMBI.

III. BANK GOALS AND OBJECTIVES

The objective of the NBPCMB is to restore and preserve self-sustaining, functional stream, wetland, and riparian habitat to replace the functions and values lost from impacts to streams and wetlands due to various authorized development projects within the Lower Monongahela River Subbasin. The Bank Site development efforts will provide an in-kind replacement for the direct loss or functional degradation of stream, wetland, and riparian resources that result from unavoidable aquatic resource impacts. This will be accomplished through the restoration and conservation of 17.4 +/- acres of degraded wetland, stream, and associated upland/riparian corridor.

The NBPCMB consists of pasture, previously used for cattle production, and mid-successional hardwood forest. The Bank Site is located within the Lower Monongahela Watershed, State Water Plan Subbasin 19, and drains to Pigeon Creek. The two onsite streams, North Branch Pigeon Creek and an unnamed tributary to North Branch Pigeon Creek, are both designated as Warm Water Fisheries (“WWF”) under Chapter 93 of the Pennsylvania Clean Streams Law. North Branch Pigeon Creek is a tributary of Pigeon Creek, which ultimately flows into the Monongahela River and is a part of the greater Monongahela River Watershed. This watershed is composed primarily of forest and agricultural lands, and common industrial practices include coal mining, natural gas production, tile manufacturing, recreational development, and agricultural

activities. Furthermore, counties in the watershed contain active surface and deep mining operations and many of the coalfields in the watershed contain abandoned coalmines.

The Monongahela River Watershed has a total area of 7,340 square miles, equating to approximately 4,736,000 acres of drainage area. Land use within the watershed is limited by rough terrain and nutrient-poor soils. According to the Monongahela River Initial Watershed Assessment, sponsored by the Pittsburgh District U.S. Army Corps of Engineers (“CELRP”), the main problems identified in this region include:

- Cumulative impacts associated with increasing basin-wide unregulated surface and groundwater withdrawals (water budget) on water quality and quantity (water supply, aquatic life);
- Interstate water quality regulation/control (differences in state regulations/ permitting/enforcement); and
- Lack of comprehensive water resource regulation (such as the Susquehanna River Basin Commission).

The majority of the Bank Site’s hydrology originates as headwaters offsite and is supplemented by groundwater discharges within the NBPCMB limits. Streams, wetlands, and riparian zones within the NBPCMB have been impacted by the historical conversion from a forested to herbaceous dominated land cover, the grazing and direct channel access of livestock, and direct channel impacts which support property access.

Functional gains foreseen from the restoration efforts of the NBPCMB include the reduction of bank erosion/sediment, establishment of effective sediment transport, increased flood conveyance and storage, improved nutrient cycling, improved water quality, water temperature regulation, and increased stable aquatic habitat.

The NBPCMB protection areas including proposed stream channel, 100-year floodplain, Riparian Zone of Influence (RZOI), and Conservation Areas are shown on Figure 6: Mitigation Development Projection Map – Streams. The NBPCMB proposes to restore these resource types in the amounts described below using the indicated proposed methods:

Forested Wetlands

Total Area: 4.8 acres composed of:
Wetland (PFO) Re-establishment: 4.8 acres

Stream Mitigation

Total Linear Footage: 2,519 L.F. composed of:
Perennial Stream Restoration: 2,519 L.F.

Upland Forest

Total Area: 11.8 acres composed of:
Upland Forest Re-establishment: 9.5 acres
Upland Forest Conservation: 2.3 acres

Potential threats to the onsite resources that exist if the proposed mitigation development measures are not implemented at the site include: continued direct and secondary impacts to the stream channel, wetlands, and riparian areas by unrestricted livestock access; continued establishment and propagation of non-native, livestock forage grass species within portions of the floodplain and wetlands; continued and expanded colonization of the site by invasive plant species; and potential land use changes which would support more intensive agricultural practices such as higher density livestock production, row crop production, and other common features of an agricultural site.

IV. SUITABILITY OF THE BANK SITE

A. Site Selection

The Sponsor considered multiple alternative sites within the Monongahela River Subbasin before selecting the current bank location. Many sites were excluded as a result of unwillingness on the part of the landowners to permanently restrict use of their property. The remaining alternatives were rejected due to an insufficient amount of degraded resources within the project area to yield a significant restoration project. The NBPCMB was ultimately chosen because of the Bank Sponsor's ability to restore, re-establish, and conserve ecologically self-sustaining aquatic resources on the site. The Sponsor explored the Bank Site with personnel from CELRP. Following the site visit, the IRT provided commentary and encouraged next steps in the filing process.

The Bank Site includes portions of North Branch Pigeon Creek and an unnamed tributary, which flows into North Branch Pigeon Creek from the northwestern portion of the site. The onsite streams are typical of those native to the region and embody characteristics common to upper watershed tributaries within Subbasin 19. The high resource value of the primary onsite stream and the degraded condition of the wetlands and streams make this an attractive site from a mitigation perspective, as there is significant potential for functional improvements. The wetlands and streams onsite have been degraded through historic and current agricultural activities (i.e. direct livestock access and grazing). The Bank Sponsor proposes to restore re-establish, and conserve these degraded resources in an effort to reduce erosion, improve water quality, and increase wildlife habitat.

The development of the NBPCMB represents an opportunity to provide both direct and indirect improvements to support habitat requirements for Warm Water Fisheries, protect the area's biological diversity, and improve sediment transport and water quality in the Monongahela River Subbasin. The biological functions that will be restored at the NBPCMB compensate for impacts to aquatic systems that are characteristic and typical of the region. The opportunity to provide an area of continuous aquatic corridor restoration strongly supports the validity of the site as a suitable ecological restoration opportunity.

B. Baseline Information

The NBPCMB site includes portions of North Branch Pigeon Creek and an unnamed tributary, severely degraded and scrub-shrub wetlands, and upland grass pastures. All jurisdictional streams and wetlands identified onsite have been degraded primarily through historical and current agricultural

activities including unrestricted livestock access to streams, wetlands and upland areas. Typical site photographs are included as Exhibit 1: Representative Site Photographs. Additional site conditions are as follows:

1. Soils

Most of the soils present onsite are moderately well drained as classified by the Natural Resource Conservation Service (“NRCS”). The mapped locations of the soils are shown on Figure 10: Environmental Inventory Map. The identified soils and brief summary of their attributes are included below.

- Dormont-Culleoka silt loam (DtD, DtF): Well drained, 15-25% slopes (DtD) and 25-50% slopes (DtF), located on side of slopes of hills.
- Dormont Silt Loam (DoC): Moderately well drained, 8-15% slopes, located on side slopes of hills.
- Fluvaquents (Fa): Somewhat poorly drained, 0-3% slopes, located in floodplains and toe slopes
- Newark silt loam (Nw): Somewhat poorly drained, 0-2% slopes, located in flood plains and bases of slopes.
- Guernsey Silt Loam (GeC): Moderately well drained, 8-15% slopes, located on side slopes of hills.
- Weikert-Culleoka complex (WeC, WeB, WeD): 15-25% slopes (WeC), 3-8% slopes (WeB), and 15-25% slopes (WeD), located on side slopes of hills.

2. Wetlands

A wetland delineation performed on January 15, 2013 identified the presence of approximately 1.46 acres of severely degraded wetlands and 2,893 linear feet of stream channel. Severely degraded wetlands onsite are within the floodplain of the main tributary and along hillside slopes throughout the Site. The property currently resides in pasture, previously used for cattle production, and is surrounded primarily by forested and agricultural land. The approximate size and location of the wetlands identified within the project area are shown on Figure 6: Mitigation Development Projection Map - Wetlands.

The majority of the wetlands identified onsite consist of previously grazed severely degraded wetlands. Dominant vegetation found within the severely degraded wetland areas include foxtail sedge (*Carex alopecoidea*), poverty rush (*Juncus tenuis*), and purple-stemmed aster (*Aster puniceus*).

Indicators of wetland hydrology within the wetlands identified onsite included soil saturation within the upper 12 inches of the soil surface, a high water table, surface water, and the presence of oxidized rhizospheres living on roots.

3. Streams

The NBPCMB contains two perennial streams onsite: North Branch Pigeon Creek and an unnamed tributary to North Branch Pigeon Creek. The unnamed tributary flows west to east along the northern portion of the site and discharges into North Branch Pigeon Creek in the central area of the site. North Branch Pigeon Creek flows North to South along the eastern half of the project

area before discharging to Pigeon Creek, which lies south of the site.

C. Threatened and Endangered Species

The NBPCMB was screened for potential impacts to species of special concern using the Pennsylvania Natural Diversity Inventory (“PNDI”) Project Planning Review tool. The PNDI Review verified that within the Bank Site, no impacts are anticipated to federal or state-listed threatened, endangered, or special concern species or resources. The receipt generated from the screening exercise is included in Exhibit 3: PDNI Receipt. Additionally, the proposed restoration of the onsite channels and the reestablishment of forested wetlands and riparian buffers are both expected to positively support Pennsylvania flora and fauna habitat rather than have a negative impact.

In adherence with the guidance of the CELRP, bat boxes will be erected to support Pennsylvania’s bat populations. The construction and installation of bat boxes on the NBPCMB will comply with the Bat Box Plans published by the Pennsylvania Game Commission (Butchkoski, 1998).

D. Cultural Resources

In order to gain information regarding the presence of historical and cultural resources within the project study limits, a Cultural Resource Notice Form was sent to the Pennsylvania Historical and Museum Commission (“PHMC”) for review on April 25, 2013. The application is attached as Exhibit 4: Cultural Resource Clearance Application.

V. BANK ESTABLISHMENT

A. Determination of Credits

Tables showing the projected stream and wetland functional credit gain using the USACE-sponsored functional model within PSUMBI are included in Exhibit 2: USACE Functional Ratio Method Calculation. Upon approval of the Compensation Protocol, either model, or both, may be used to provide compensatory mitigation given that no parcel of the Bank Site may be utilized to generate and sell credit types of both models. The Bank ledger is attached as Exhibit 6: Bank Ledger.

A description of the physical work delivering functional gain is described below:

1. Stream Restoration

Restoration is proposed for 2,893 +/- linear feet of stream channel resulting in a projected 2,519 +/- linear feet of post-construction stream channel. Stream improvements will be undertaken as a combined approach of restoration and re-establishment of the stream dimension, pattern and profile. Natural Channel Design (“NCD”) techniques will improve the channel condition, stabilize channel banks, and re-establish hydraulic connectivity to flood prone areas.

913 +/- linear feet of in-channel restoration is proposed for the unnamed tributary to North Branch Pigeon Creek resulting in a projected 891 +/- linear feet of post-construction stream channel. This unnamed tributary currently enters the NBPCMB through a corrugated metal pipe and flows easterly through grazed pasture fields prior to joining the North Branch Pigeon Creek. Along

its flow path the unnamed tributary is conveyed through a corrugated plastic pipe underneath a small enclosed structure used primarily as a livestock crossing. The unnamed tributary lacks a forested riparian buffer, has eroding and unstable banks, and is heavily incised over the majority of the onsite reach.

The Sponsor proposes to restore the unnamed tributary to its historic channel using a Priority 1 Channel Restoration Approach aimed at increasing bank stabilization, establishing a forested riparian zone, and increasing stream connectivity to the floodplain. These restoration actions will allow for increased stream functions through improved sediment transport, water conveyance and flood storage, and aquatic species habitat. In addition, the enclosed stream crossing structure and associated pipe will be removed to prevent hydraulic impacts such as backwater effects during events of heavy precipitation.

2,124 +/- linear feet of in-channel restoration is proposed on the North Branch Pigeon Creek resulting in 1,628 +/- linear feet of projected post-construction stream channel. The North Branch Pigeon Creek enters the NBPCMB from the north through a culvert beneath Young Road. It flows south along the east portion of the NBPCMB through a grazed pasture field. The upper portions of the stream lack a forested riparian buffer and are experiencing lateral and vertical instability. The middle and lower portions of the stream are disconnected from their floodplain, lack a forested riparian buffer, and are experiencing vertical and lateral instability as indicated by eroding banks and an overly sinuous pattern (which includes localized areas of up-valley meander migration). Similar to the unnamed tributary, the Sponsor proposes to restore North Branch Pigeon Creek through a Priority 1 Channel Restoration Approach utilizing similar methods and functional improvements as described above.

2. Riparian Zone Restoration and Conservation

Restoration is proposed for the supporting upland buffer and riparian zone along both sides of the North Branch Pigeon Creek, returning the area to its native ecological setting. Congruent with this action, the conservation of supporting upland/riparian buffer area along the southwestern portion of the unnamed tributary is also proposed. Currently, the riparian zone in most areas onsite consists of actively grazed pasture lacking both tree and shrub coverage. Existing upland forest areas will be conserved as a supplement to the riparian restoration areas within the NBPCMB. Invasive species will be eradicated or managed to establish control and allow for restoration to native coverage species. The controlling development strategy is to establish a broad and extended riparian corridor that yields high aquatic and terrestrial habitat function.

The Conservation Easement Area includes 17.4 +/- acres containing 9.5 +/- acres of riparian uplands of proposed restoration from existing grazed, herbaceous-dominated conditions to a diverse forested community. Heavy native wood stem plantings are proposed to improve the onsite stream and wetland health by filtering runoff, absorbing nutrients, and providing habitat for both aquatic and terrestrial wildlife species. An additional 2.3 +/- acres of onsite riparian uplands currently exist as maturing forest and will be conserved.

3. Wetland Restoration

Wetland re-establishment is proposed for 4.8 +/- acres of severely degraded wetlands and historical wetland areas within the NBPCMB. Wetland re-establishment actions will include grading alterations within the floodplain in close association with the stream restoration activities to re-establish shallow groundwater hydrology and to increase stream access to the floodplain. A combination of actions within the stream channel that eliminate channel incision and establish greater floodplain interaction is proposed to re-establish wetlands onsite. Wetland re-establishment areas have been assessed and projected based on planned grading characteristics, site soils properties, identified anthropogenic hydrologic modifications (which will be eliminated), and anticipated water table elevation rise within the floodplain due to stream channel profile adjustments achieved by the stream channel restoration actions. Restoration activities will also include the removal of invasive and non-native vegetation, including tall fescue (*Lolium arundenacium*) and reed canary grass (*Phalaris arundinacea*), and the planting of native wetland forest species following construction.

B. Mitigation Work Plan

In accordance with the PSUMBI, the Mitigation Work Plan for the NBPCMB is attached as Exhibit 5: Mitigation Work Plan. This plan includes:

- Hydrology and Channel Design Parameters
- Erosion and Sediment Control Plan
- Construction Details
- Grading Plan and Profile
- Planting Specifications
- Planting Details
- Planting and Seeding Schedules

Per the request of the CELRP, additional figures have been included within the Mitigation Work Plan elucidating the planting plan and in-stream structures proposed for the EFMB.

C. Performance Standards

The NBPCMB requires no special deviation from the performance standards set forth within Exhibit A of PSUMBI.

VI. OPERATIONS

A. Site Protection Instrument

The Bank Sponsor has attached the proposed Site Protection Instrument for the NBPCMB as Exhibit 7: Revised Site Protection Instrument. The responsibilities set forth within the Revised Site Protection Instrument may be transferable to an acceptable conservation organization upon fulfillment of project objectives with Bank Site ownership remaining with the titled owner. The Bank Sponsor will provide for the perpetual protection and preservation of the Bank Site through maintenance agreements or restrictive covenants. These provisions will conform to the current CELRP and PADEP guidance. The restrictions

of the attached Site Protection Instrument have been reviewed by the IRT.

B. Maintenance Plan

The Bank Sponsor agrees to perform all necessary maintenance to ensure the continued viability of the NBPCMB once initial construction is complete. The need to perform maintenance will be assessed in the monitoring reports and during monitoring site visits, and if deemed necessary by the Bank Sponsor or the IRT, the appropriate required maintenance will be conducted.

Following Bank Closure, all of the terms and conditions set forth in the Long-Term Management and Maintenance Plan, described in Section D of this document, will take effect.

C. Monitoring Requirements

The Bank Sponsor will perform at least one monitoring report annually between Tiers 1-3 for a minimum of five years until all credits are sold or final success criteria are met, whichever is later. In any event where the Bank Sponsor can demonstrate the meeting of performance criteria culminating in a request for release of credits, a Tier 2 monitoring event shall occur. In any event of Default, a Tier 3 monitoring event will be required to demonstrate a renewal of compliance. If this MSP is amended to alter crediting, a Tier 3 monitoring report will be required. In all other cases, a Tier 1 monitoring event will be the minimum allowed, unless the IRT requests otherwise, in which case the wishes of the IRT shall prevail.

D. Long-term Management and Maintenance Plan

A Long-Term Management and Maintenance Plan (“LTMM Plan”) ensures that the NBPCMB is managed, monitored, and maintained in perpetuity. The Bank Sponsor has set aside \$25,625 for the Long-Term Steward fee to fund the LTMM Plan. This plan, described below, establishes objectives, priorities and tasks to monitor, manage, maintain, and report on the jurisdictional waters of the U.S. within this Bank Site. An annual report will be submitted to the IRT by November 30 containing photographic information and a brief discussion of any maintenance needed to keep the property in a mature non-threatened state.

- a) Periodic Patrols. At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats in perpetuity. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, and erosion will be noted, evaluated and mapped during a site examination. Notes to be made will include observations of species encountered, water quality, general extent of wetlands and streams, and any occurrences of erosion, structure failure, or invasive or non-native species establishment. The report should provide a discussion of any recent changes in the watershed.
- b) Invasive Species Monitoring. Each year’s annual walk-through survey (or a supplemental survey) will include a qualitative assessment (e.g. visual estimate of cover) of invasive species. Additional actions to control invasive species will be evaluated and prioritized in coordination with the IRT.
- c) Signage. Per the request of the CELRP, signage identifying the site as a “Wetland Conservation Area” will be installed every 50 feet around the perimeter of the conservation area to prevent casual trespass while allowing necessary access. During each site visit, notes will be made as to the

condition of signs, crossings, and property boundaries. Recommendations to implement repair or replacement to signage, crossings, or property boundary markers will be made, if applicable.

- d) Fencing. Fencing will be erected and maintained during the Initial Monitoring Period in order to prevent trespassing and allow maturation of the project. After this time the Long-Term Steward will determine the need to keep this fencing in consultation with the IRT. If there is no need, the fencing will be allowed to deteriorate naturally.
- e) Crossings and Structures. There are no crossings or other structures to maintain within the Bank Site.
- f) Forestry Management Practices. Vegetation will be reduced in any areas recommended by authorities, and as approved by the IRT, for fire control. Any practices to reduce diseased or dead vegetation will be allowed if the vegetation compromises the long-term viability of the project or any installed structure on the Bank Site.
- g) Trash and Trespass. At least once yearly trash will be removed and any necessary measures to prevent or repair damage from vandalism and trespass impacts will be taken.
- h) Right to Inspection. The IRT and its authorized agents shall have the right to inspect the NBPCMB and take actions necessary to verify compliance with this Long-Term Management Plan. The Long-Term Management Plan herein shall be enforceable by any proceeding at law or in equity or administrative proceeding by the IRT, including the Corps or PADEP. Failure by any agency (or owner) to enforce the Long-Term Management Plan contained herein shall in no event be deemed a waiver of the right to do so thereafter. If the Long-Term Steward fails to succeed to adhere to the requirements of the Long-Term Maintenance and Monitoring Plan, the IRT Chairs may locate a new Long-Term Steward or request that the Sponsor assist in the process if occurring after Bank Closure.

E. Financial Assurances

The Bank Sponsor evaluated multiple options for Financial Assurances. The Bank Sponsor chose to use utilize a Performance Bond to fund aspects associated with the expenses identified below. The Bank Sponsor is seeking to use a performance bonding entity with a rating of A+ (Fitch Ratings). The Bank Site will be constructed to the specification of its associated NPDES and PASPGP-4 permits. A model document conforming to PSUMBI's sample document with minor alterations is attached per the bonding company's request as Exhibit 8. A complete line item budget shall be provided separately to the IRT for detailed review upon request.

Financial Assurances will include the following items:

- Construction/Development
 - Land Acquisition
 - Planning
 - Engineering
 - Legal Fees
 - Mobilization
 - Construction
- Initial Monitoring Period

- Year 1-10 Maintenance, Monitoring, Reporting, Contingency for Long-Term Steward
- Catastrophic Event Fund
- Costs Associated with Locating a Replacement Site

VII. REFERENCES

Butchkoski, Cal. 1998. "Bat Box Plans." Pennsylvania Game Commission Bureau of Wildlife Management Wildlife Diversity Section. Available at:
http://www.dnr.state.md.us/wildlife/Plants_Wildlife/bats/pdfs/pabatboxplan.pdf/. Accessed July 2013.

U.S. Army Corps of Engineers, Pittsburg District. 2012. "Monongahela River Watershed Initial Watershed Assessment." Available at:
http://www.lrp.usace.army.mil/Portals/72/docs/HotProjects/signed%20IWA_final_revised%20FEB12%20public%20comments%20incorporated.pdf. Accessed June 2013.