Public Notice

U S Army Corps of Engineers
Huntington District
Regulatory Division

In reply refer to Public Notice No. Issuance Date: JAN 0 3 2014

LRH-2013-374-GUY, LRH-2013-1071-GUY, LRH-2013-1072-TUG

Stream: Closing Date:

Various Tributaries to the Tug Fork and Guyandotte Rivers FEB 0 3 2014

Please address all comments and inquiries to:
U.S. Army Corps of Engineers, Huntington District
ATTN: CELRH-RD-E Public Notice No. (***reference above***)
502 Eighth Street
Huntington, West Virginia 25701-2070 Phone: (304)399-5610

PUBLIC NOTICE: The District Engineer has received a mitigation plan to establish a wetland and/or stream compensatory mitigation bank for Federal and State permits as described in this Public Notice. Issuance of a public notice regarding proposed mitigation banks is required pursuant to the "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule," (Rule) as published in the April 10, 2008, Federal Register, Vol. 73, No. 70, Pages 19594-19705 (33 CFR Parts 332). The purpose of this public notice is to inform you of the proposed mitigation bank and to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

INTERAGENCY REVIEW TEAM: As indicated in the U.S. Army Corps of Engineers (Corps) regulations [33 CFR 332.8(b)], the District Engineer has established an Interagency Review Team (IRT) to review documentation for the establishment and management of mitigation banks and in-lieu fee programs. The primary role of the IRT is to facilitate the establishment of mitigation banks and/or in-lieu fee programs through the development of mitigation banking or in-lieu fee program instruments. The Corps Huntington District (Regulatory Division) is the lead district for the state of West Virginia (WV) and chairs (or leads) the WV IRT. The WV IRT consists of the following federal and state resource agencies: Corps Huntington and Pittsburgh Districts, U.S. Environmental Protection Agency (USEPA), U.S. Fish and Wildlife Service (USFWS), U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS), West Virginia Department of Environmental Protection (WVDEP) and West Virginia Division of Natural Resources (WVDNR).

REGULATORY PROGRAM: Since its early history, the Corps has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

SECTION 10: The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the U.S. The intent of this law is to protect the navigable

capacity of waters important to interstate commerce.

SECTION 404: The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the U.S., including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

TO WHOM IT MAY CONCERN: The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate these proposed mitigation banks.

BANK SPONSOR: Ecosystem Investment Partners Credit Co., LLC
2002 Clipper Park Road, Suite 201
Baltimore, Maryland 21211

LOCATION: The Bank Sponsor is proposing three different mitigation bank sites in association with this proposal. The proposed Lower Dempsey Stream Mitigation Bank (LRH-2013-374-GUY) site is located on an approximately 702-acre tract on Lower Dempsey Branch and unnamed tributaries north of Thompson Town in Logan County, West Virginia. This mitigation bank site includes Lower Dempsey Branch, unnamed tributaries to Lower Dempsey Branch, adjacent floodplains and upland corridors. Lower Dempsey Branch is an indirect tributary to the Guyandotte River.

The proposed Copperas Fork Stream Mitigation Bank (LRH-2013-1071-GUY) site is located on an approximately 4,588-acre tract on Copperas Mine Fork and unnamed tributaries, unnamed tributaries to Cabin Branch and unnamed tributaries to Trace Fork west of Holden in Logan County, West Virginia. This mitigation bank site includes Copperas Mine Fork, unnamed tributaries to Copperas Mine Fork, unnamed tributaries to Cabin Branch, unnamed tributaries to Trace Fork, adjacent floodplains and upland corridors. Trace Fork and Cabin Branch are tributaries to Copperas Mine Fork, which is an indirect tributary to the Guyandotte River.

The proposed Marytown Stream Mitigation Bank (LRH-2013-1072-TUG) site is located on an approximately 4,508-acre tract on unnamed tributaries to the Tug Fork River, Shabbyroom Branch and unnamed tributaries, unnamed tributaries to Spice Creek, Little Daycamp Branch and unnamed tributaries, Long Branch and unnamed tributaries and Huntington Branch and unnamed tributaries south of Davy, McDowell County, West Virginia. This mitigation bank site includes unnamed tributaries to the Tug Fork River, Shabbyroom Branch and unnamed tributaries, unnamed tributaries to Spice Creek, Little Daycamp Branch and unnamed tributaries, Long Branch and unnamed tributaries and Huntington Branch and unnamed tributaries. Shabbyroom Branch and Little Daycamp Branch are tributaries to Spice Creek. Long Branch, Huntington Branch and Spice Creek are tributaries to the Tug Fork River.

DESCRIPTION OF THE PROPOSED WORK: The Sponsor, Ecosystem Investment Partners Credit Co., LLC (EIP), has submitted a prospectus to the Huntington District Corps of Engineers to develop and operate a stream mitigation banks under an Umbrella Mitigation Banking

Instrument (UMBI) to be known as the Lower Dempsey Branch Stream Mitigation Bank, the Copperas Fork Stream Mitigation Bank and the Marytown Stream Mitigation Bank. The submitted prospectus proposes three mitigation banks composed of multiple phases (or site specific mitigation site plans), which involves the establishment, design, construction, and operation of compensatory stream mitigation banks. The purpose of the mitigation banks is to provide compensatory mitigation for projects resulting in unavoidable impacts to jurisdictional streams within the specified service areas (maps enclosed). The primary service area for the Lower Dempsey Stream Mitigation Bank and Copperas Fork Stream Mitigation Bank is the Upper Guyandotte River watershed. The primary service area for the Marytown Stream Mitigation Bank is the Tug Fork River watershed. Many of the streams within these watersheds have been degraded due to historic silvicultural and mining activities. Impacts to these resources identified within this watershed include stream channelization, isolation, sedimentation and habitat degradation. The proposed banks will involve the enhancement, restoration, and preservation of stream channels and their associated buffers as those terms are defined in the Mitigation Rule, mentioned above. Enhancement and restoration techniques will incorporate natural stream channel design techniques as described in more detail below. These activities are anticipated to provide multiple benefits to its contributing watershed including improvements to water quality by reducing sediment loads, increased fish and wildlife habitat, and additional flood conveyance and storage.

Mitigation banks are defined as a site, or suite of sites, where resources (e.g. wetlands, streams, riparian area) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by DA permits pursuant to Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. In general, units of restored, established, enhanced, or preserved streams (or wetlands) are expressed as "credits" which may be subsequently withdrawn to offset "debits" incurred at a project development site. The Corps is responsible for authorizing the use of a particular mitigation bank on a project-specific basis and determining the number and availability of credits required to compensate for proposed impacts. Decisions rendered by the Corps will fully consider all comments submitted as part of the permit evaluation process. In areas where a functional or condition assessment or other suitable metric is not available, a minimum one-to-one acreage (for wetlands) or linear foot (for streams) compensation ratio must be applied in order to achieve a federally mandated "no net loss of aquatic resources." Wetland credits would correlate with wetland acreage and classification (i.e. emergent, scrub-shrub and forested). Stream credits would correlate with linear feet or acceptable forms of assessments and classification of streams. Acceptable forms of assessments would include those based upon best available science that can be measured or assessed in a practicable manner.

The proposed primary Geographic Service Area (GSA) for the proposed Lower Dempsey Stream Mitigation Bank and the Copperas Fork Stream Mitigation Bank is the Upper Guyandotte River Watershed as defined by Hydrologic Unit Code (HUC) 05070101. The proposed primary GSA for the proposed Marytown Stream Mitigation Bank is the Tug Fork River Watershed as defined by HUC 05070201. The proposed secondary GSA's for all three mitigation banks include the Lower Guyandotte River Watershed (05070102), the Twelvepole Creek Watershed (05090102), the Big Sandy River Watershed (05070204) and the Lower Ohio River Watershed (05090101). These secondary service areas would service projects on a case-by-case basis as determined by

the Corps and the WV IRT.

The goal of the proposed mitigation banks is to establish, restore, enhance and/or preserve self-sustaining, functional stream corridors, and to replace the functions and values lost due to unavoidable adverse impacts to streams from current and historic silvicultural and mining activities which include timber production and mining impacts. The Banks are anticipated to include Lower Dempsey Branch and unnamed tributaries, Copperas Mine Fork and unnamed tributaries, unnamed tributaries to Cabin Branch, unnamed tributaries to Trace Fork, unnamed tributaries to the Tug Fork River, Shabbyroom Branch and unnamed tributaries, unnamed tributaries to Spice Creek, Little Daycamp Branch and unnamed tributaries, Long Branch and unnamed tributaries and Huntington Branch and unnamed tributaries, and riparian buffers. Some of the targeted functions include improvements to wildlife habitat, water quality, flood conveyance and storage, and erosion control through the implementation of natural channel design and the re-establishment of riparian buffers.

The Bank Sponsor proposes to meet the Banks' goals through establishment, restoration, enhancement, and preservation of contributing perennial, intermittent and ephemeral stream channels as summarized below for each proposed mitigation bank:

Lower Dempsey Stream Mitigation Bank:

Establishment: The Bank Sponsor proposes to establish 4,587 linear feet (lf) of stream channel within areas impacted by the creation of highwalls during historic mining activities. Establishment activities may include but are not limited to natural channel design techniques, channel cross section and pattern establishment, bank stabilization and bioengineering techniques, grade control and in-stream structures, connection of contributing streams to the main channel, establishment of forested riparian buffers, and removal of detrimental land use activities (i.e. timbering) in appropriate riparian corridors. The establishment of dimension, pattern, and profile of these reaches is proposed to establish the overall channel condition, stabilize channel banks, and establish hydraulic connectivity to flood prone areas. The removal of highwall benches to establish these new stream channels is demonstrated conceptually on Figure 10 of 11.

Restoration: Restoration is proposed for 11,058 lf of stream channel. Restoration modifications may include but are not limited to natural channel design techniques, channel cross section and pattern alterations, bank stabilization and bioengineering techniques, grade control and in-stream structures, reconnection of contributing streams to the main channel, establishment of forested riparian buffers, and removal of detrimental land use activities (i.e. timbering) in appropriate riparian corridors. The restoration of dimension, pattern, and profile of these reaches is proposed to improve the overall channel condition, stabilize channel banks, and re-establish hydraulic connectivity to flood prone areas.

Preservation: Preservation is proposed for 13,058 lf of stream channel. A 20- to 100-foot riparian buffer is proposed along the banks (10 to 50 feet from each bank) of all preserved, restored and established streams onsite.

Copperas Fork Stream Mitigation Bank:

Establishment: The Bank Sponsor proposes to establish 453 lf of stream channel within areas impacted by the creation of highwalls during historic mining activities. Establishment activities may include but are not limited to natural channel design techniques, channel cross section and pattern establishment, bank stabilization and bioengineering techniques, grade control and in-stream structures, connection of contributing streams to the main channel, establishment of forested riparian buffers, and removal of detrimental land use activities (i.e. timbering) in appropriate riparian corridors. The establishment of dimension, pattern, and profile of these reaches is proposed to establish the overall channel condition, stabilize channel banks, and establish hydraulic connectivity to flood prone areas. The removal of highwall benches to establish these new stream channels is demonstrated conceptually on Figure 10 of 11.

Restoration: Restoration is proposed for 10,676 lf of stream channel. Restoration modifications may include but are not limited to natural channel design techniques, channel cross section and pattern alterations, bank stabilization and bioengineering techniques, grade control and in-stream structures, reconnection of contributing streams to the main channel, establishment of forested riparian buffers, and removal of detrimental land use activities (i.e. timbering) in appropriate riparian corridors. The restoration of dimension, pattern, and profile of these reaches is proposed to improve the overall channel condition, stabilize channel banks, and re-establish hydraulic connectivity to flood prone areas. Restoration would also include moving an existing road out of the main stem of a stream as indicated on Figures 8 and 9 of 11.

Preservation: Preservation is proposed for 60,565 lf of stream channel. A 20- to 100-foot riparian buffer is proposed along the banks (10 to 50 feet from each bank) of all preserved, restored and established streams onsite.

Marytown Stream Mitigation Bank:

Establishment: The Bank Sponsor proposes to establish 4,714 lf of stream channel within areas impacted by the creation of highwalls during historic mining activities. Establishment activities may include but are not limited to natural channel design techniques, channel cross section and pattern establishment, bank stabilization and bioengineering techniques, grade control and in-stream structures, connection of contributing streams to the main channel, establishment of forested riparian buffers, and removal of detrimental land use activities (i.e. timbering) in appropriate riparian corridors. The establishment of dimension, pattern, and profile of these reaches is proposed to establish the overall channel condition, stabilize channel banks, and establish hydraulic connectivity to flood prone areas. The removal of highwall benches to establish these new stream channels is demonstrated conceptually on Figure 10 of 11.

Restoration: Restoration is proposed for 37,168 lf of stream channel. Restoration modifications may include but are not limited to natural channel design techniques,

channel cross section and pattern alterations, bank stabilization and bioengineering techniques, grade control and in-stream structures, reconnection of contributing streams to the main channel, establishment of forested riparian buffers, and removal of detrimental land use activities (i.e. timbering) in appropriate riparian corridors. The restoration of dimension, pattern, and profile of these reaches is proposed to improve the overall channel condition, stabilize channel banks, and re-establish hydraulic connectivity to flood prone areas.

Preservation: Preservation is proposed for 201,552 lf of stream channel. A 20- to 100-foot riparian buffer is proposed along the banks (10 to 50 feet from each bank) of all preserved, restored and established streams onsite.

The Bank Sponsor proposes to use the West Virginia Stream and Wetland Valuation Metric (SWVM) to determine the amount of proposed credits to be generated at each bank. Although the Bank Sponsor is still evaluating the anticipated amount of proposed credits at each bank, they have indicated they are proposing a modified scoring system using the SWVM to calculate credits for stream reaches currently located above the benches of previous mine highwalls (these streams currently do not flow into the tributary system of waters of the United States). Although the Bank Sponsor is not proposing any work in these stream reaches, they are proposing to establish new streams in the areas of the highwall benches which would reconnect these upstream areas to the tributary system. The following is an example of how credits may be calculated for reconnecting streams both above and below mine benches and other disturbances.

The example uses drainage areas, channel lengths and SWVM index scores for stream 006A at the Lower Dempsey tract. Credit yields assume that the streams are protected in perpetuity with a 150 foot riparian buffer. To calculate credits generated below the disturbance, the additional drainage area reconnected at the top of the reach (39.7 acres) is divided by the final (existing plus additional) drainage area at the top of the reach (39.7 acres) to calculate the relative contribution of the upstream reconnection to the top of the reach below the disturbance (always 1). The additional drainage area at the bottom of the reach below the disturbance (39.7 acres) is divided by the final (existing plus additional) drainage area at the bottom of the reach below the disturbance (44.9 acres) to calculate the relative contribution of the upstream reconnection to the bottom of the reach below the disturbance (0.884). The average of the relative contributions of the drainage area above the disturbance to the top and bottom of the reach below the disturbance (0.942) is then multiplied by the channel length below the disturbance (830 ft) and the SWVM index score for that channel (0.787) to yield 615.4 credits.

Similar steps are used to calculate credits generated by reconnecting the stream above the disturbance. The additional drainage area reconnected at the top of the reach (always 0 acres) is divided by the final (existing plus additional) drainage area at the top of the reach (always 0 acres). The additional drainage area at the bottom of the reach above the disturbance is divided by the final (existing plus additional) drainage area at the bottom of the reach to calculate the relative contribution of the bottom of the reach to the downstream connection (always 1). The average of the contribution of the top and bottom of the reach above the disturbance to the downstream channel (always 0.5) is then multiplied by the channel length above the disturbance (528 ft) and the SWVM index score for that channel (0.787) to yield 207.8 credits.

Crediting hydrologic reconnection restoration below the disturbance

This box calculates the relative contribution of the additional acreage at the top of the reach.

AAT =	Additional surface drainage area at the top of the reach
FAT =	Final surface drainage area at the top of the reach
AAT/FAT = 1 (always)	39.7/39.7 = 1

This box calculates the relative contribution of the additional acreage at the bottom of the reach.

AAB =	Additional surface drainage area at the bottom of the reach (acres)
FAB =	Final (existing + additional) surface drainage area at the bottom of the reach (acres)
AAB/FAB < 1 (always)	39.7/44.9 = 0.884

This box averages the relative contributions at the bottom and the top of the reach.

Averaging the top and the bottom, (1 + 0.884)/2 = 0.942

Crediting hydrologic reconnection restoration above the disturbance

This box calculates the relative contribution of the additional acreage at the top of the reach.

AAT^ =	Additional surface drainage area at the top of the reach (acres)
FAT^ =	Final surface drainage area at the top of the reach (acres)
AAT^/FAT^ = 0 (always)	0/0 = 0

This box calculates the relative contribution of the additional acreage at the bottom of the reach.

AAB^ =	Existing surface drainage area at the bottom of the reach
FAB^ =	Final (existing + additional) surface drainage area at the bottom of the reach (always the same as existing).
AAB^/FAB^ = 1 (always)	1/1 = 1

This box averages the relative contributions at the bottom and the top of the reach.

Averaging the top and the bottom, (0 + 1) / 2 = 0.5 (always)

Restoration through Reconnection Credit Calculation

Reach	AAT	FAT	AAT/FAT	AAB	FAB	AAB/FAB	Relative Contribution	Length (ft)	SWVM index	credit
Below disturbance	39.7	39.7	1	39.7	44.9	0.88	0.94	830	0.787	615.4
Above disturbance	0	0	0	33.2	33.2	1	0.5	528	0.787	207.8

Figure 1 of 11 shows the location of each of the proposed mitigation banks. Figures 2 through 4 of 11 show the topographic maps of the Lower Dempsey Stream Mitigation Bank, Copperas Fork Stream Mitigation Bank and Marytown Stream Mitigation Bank, respectively. Figures 5 through 7 of 11 show the plan views of the Lower Dempsey Stream Mitigation Bank, Copperas Fork Stream Mitigation Bank and Marytown Stream Mitigation Bank, respectively. Figure 11 of

11 shows the proposed service area map for all three banks.

In accordance with the Rule, performance standards and success criteria established by application of conditional assessments and/or suitable metrics would be outlined and implemented as requirements. ***Preliminary design plans of the proposed establishment, restoration and enhancement work are attached to this notice. The full prospectus is available for review upon request.***

WATER QUALITY CERTIFICATION: In accordance with Nationwide Permit No. 27 [under the February 21, 2012 Federal Register, Reissuance of Nationwide Permits (77 FR 10184)], a general Section 401 Water Quality Certification with special conditions applies. Prior written approval is required from the WVDEP Division of Water and Waste Management in concurrence with the WVDNR.

HISTORIC AND CULTURAL RESOURCES: These projects must be reviewed to determine any potential effects to properties that may be eligible for or listed in the National Register of Historic Places (NRHP), in accordance with Section 106 of the National Historic Preservation Act. The National Register of Historic Places has been consulted and it has been determined there are no historic properties currently listed on the National Register within the areas to be affected by the projects. Based on the limited amount of ground disturbance proposed along with the previous disturbances in the areas of the proposed work, the Corps has determined the proposed projects would have no effect on properties listed on or eligible for listing on the National Register.

The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the potential effects on historic properties. If you wish to provide comments or objections regarding the effect of the proposed project on historic properties, please provide this information to our office prior to the close of the comment period.

THREATENED & ENDANGERED SPECIES: This public notice will serve as coordination with the USFWS concerning threatened or endangered species, pursuant to Section 7 of the Endangered Species Act of 1972 (as amended). Two (2) federally listed endangered species, the Indiana bat (*Myotis sodalis*) and eastern cougar (*Felis concolor cougar*) and one proposed listed endangered species, the northern long-eared bat (*Myotis septentrionalis*), may occur within the proposed project areas.

The projects would involve stream establishment, restoration and preservation work performed within forested areas as well as the restoration and protection of stream-side riparian corridors. No known Indiana bat or northern long-eared bat hibernacula exists and no adverse impacts, like timber removal, would be conducted upon the proposed bank site. The proposed activities would be expected to result in stream and riparian corridor improvements. Based on the nature of the project, this office has determined the proposed projects may affect (in a positive aspect), but would not likely adversely affect the Indiana bat and northern long-eared bat. No critical habitat for the eastern cougar has been identified within the state of West Virginia. Any stream establishment or restoration activities would not be expected to disrupt or alter the habitat or mobility of the eastern cougar. Therefore, this office has determined the proposed projects

would have no effect on the eastern cougar. This public notice serves as a request to the USFWS for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the areas which would be affected by the activities, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

PUBLIC INTEREST REVIEW AND COMMENT: Any person who has an interest that may be adversely affected by the approval of these mitigation banks may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activities. This application will be reviewed in accordance with 33 CFR 320-332, the Regulatory Program of the Corps, and other pertinent laws, regulations, and executive orders. Interested parties are invited to state any objections they may have to the proposed work. The decision whether to approve these mitigation banks will be based on an evaluation of the probable impact including cumulative impacts of the proposed activities on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposals must be balanced against their reasonably foreseeable detriments. All factors that may be relevant to the proposals will be considered including the cumulative effects thereof; of those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. Any person may submit cumulative impact information, which is substantive and specifically associated with the proposed actions. In addition, the evaluation of the impact of the activities on the public interest will include application of the guidelines promulgated by the Administrator, USEPA, under the authority of Section 404(b) of the Clean Water Act. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination.

SOLICITATION OF COMMENTS: The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate these proposed mitigation banks. For accuracy and completeness of the administrative record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. Any comments received will be considered by the Corps to determine whether to approve, modify, condition or deny these proposals. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activities.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach

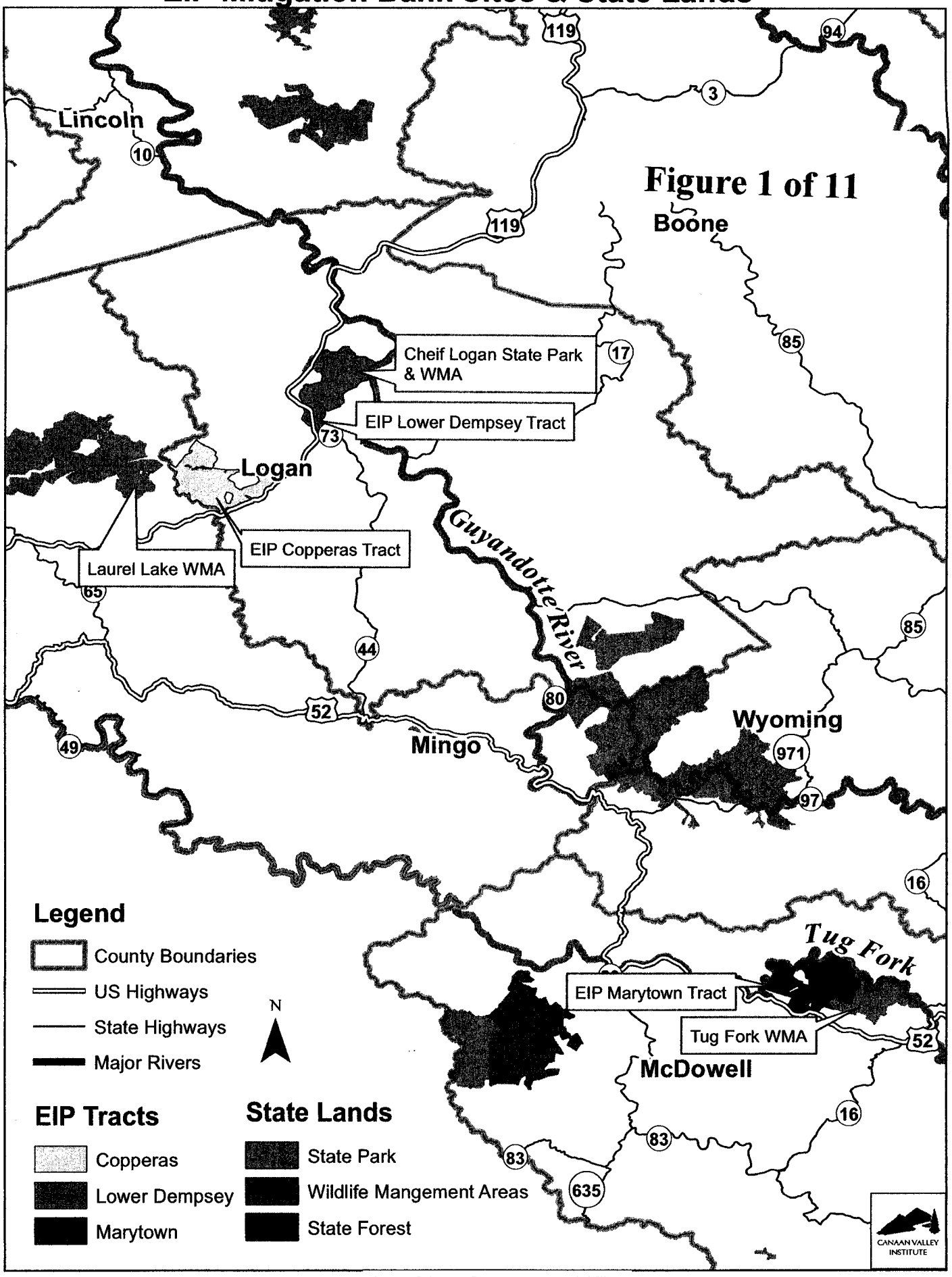
this office on or before the close of the comment period listed on page one of this Public Notice. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to:

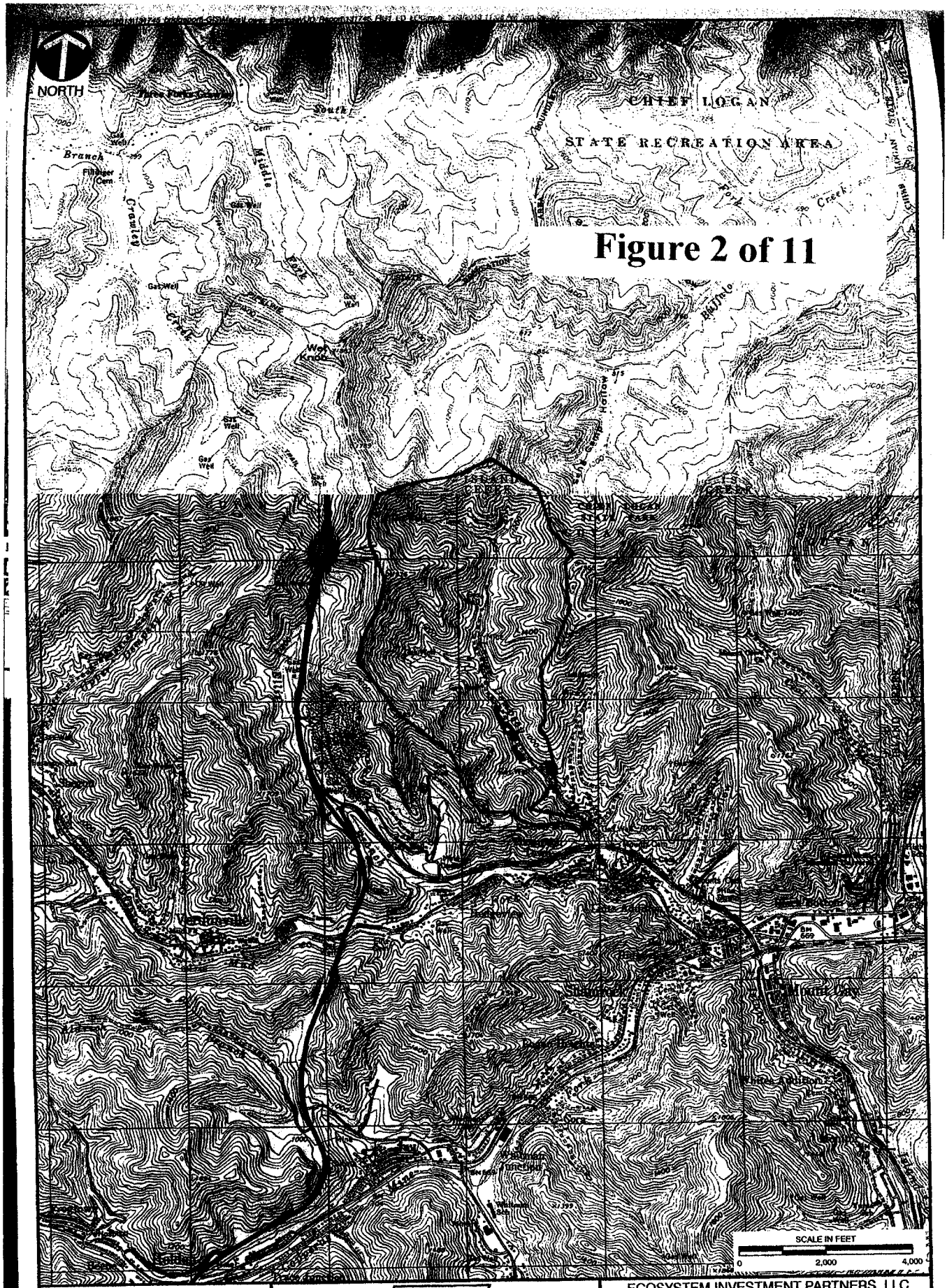
U.S. Army Corps of Engineers
ATTN: CELRH-RD-E Public Notice No. LRH-2013-374-GUY, LRH-2013-1071-GUY, LRH-2013-1072-TUG
502 Eighth Street
Huntington, West Virginia 25701-2070.

Please note names and addresses of those who submit comments in response to this public notice become part of our administrative record and, as such, are available to the public under provisions of the Freedom of Information Act. Thank you for your interest in our Nation's water resources. If you have any questions concerning this public notice, please call Mr. James Spence at (304) 399-5610.

(WV)

EIP Mitigation Bank Sites & State Lands





LEGEND

SITE LOCATION

OUT PARCEL

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/
USA_TOPO_MAPS, ACCESSED 12/4/2013
CHAPMANVILLE (1983) AND HOLDEN (1983)
WEST VIRGINIA QUADS

CEC
Civil & Environmental Consultants, Inc.
333 Baldwin Road - Pittsburgh, PA 15205-9072
412-429-2324 - 800 365-2324
www.cecinc.com

ECOSYSTEM INVESTMENT PARTNERS, LLC
SOUTHERN WEST VIRGINIA MITIGATION BANKS
LOWER DEMPSEY PROPERTY
LOGAN COUNTY, WEST VIRGINIA

SITE LOCATION MAP

DRAWN BY:	TLG	CHECKED BY:	NSO	APPROVED BY: * Hand signature on file MRH*	FIGURE NO: LD1
DATE:	11/15/2013	SCALE:	1 " = 2,000 '	PROJECT NO:	131-745

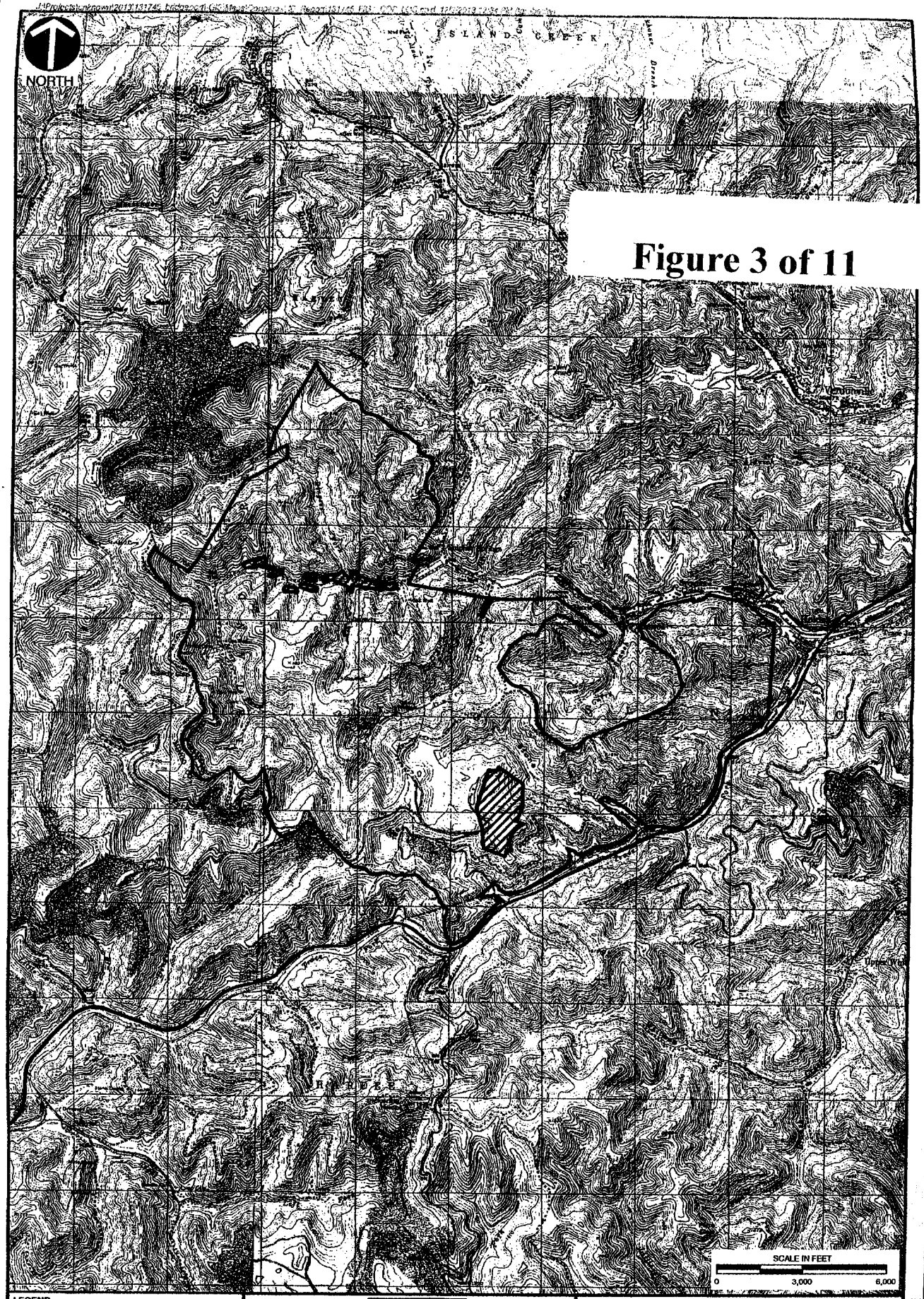


Figure 3 of 11

LEGEND

- SITE LOCATION
- OUT PARCEL

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/
USA_TOPO_MAPS, ACCESSED 12/4/2013
MYRTLE (1966) AND HOLDEN (1983)
WEST VIRGINIA QUADS

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ECOSYSTEM INVESTMENT PARTNERS, LLC
SOUTHERN WEST VIRGINIA MITIGATION BANKS
COPPERAS PROPERTY
LOGAN COUNTY, WEST VIRGINIA

SITE LOCATION MAP

DRAWN BY:	TLG	CHECKED BY:	NSO	APPROVED BY: * Hand signature on file MRH*	FIGURE NO: COP1
DATE:	11/15/2013	SCALE:	1 " = 3,000 '	PROJECT NO:	131-745

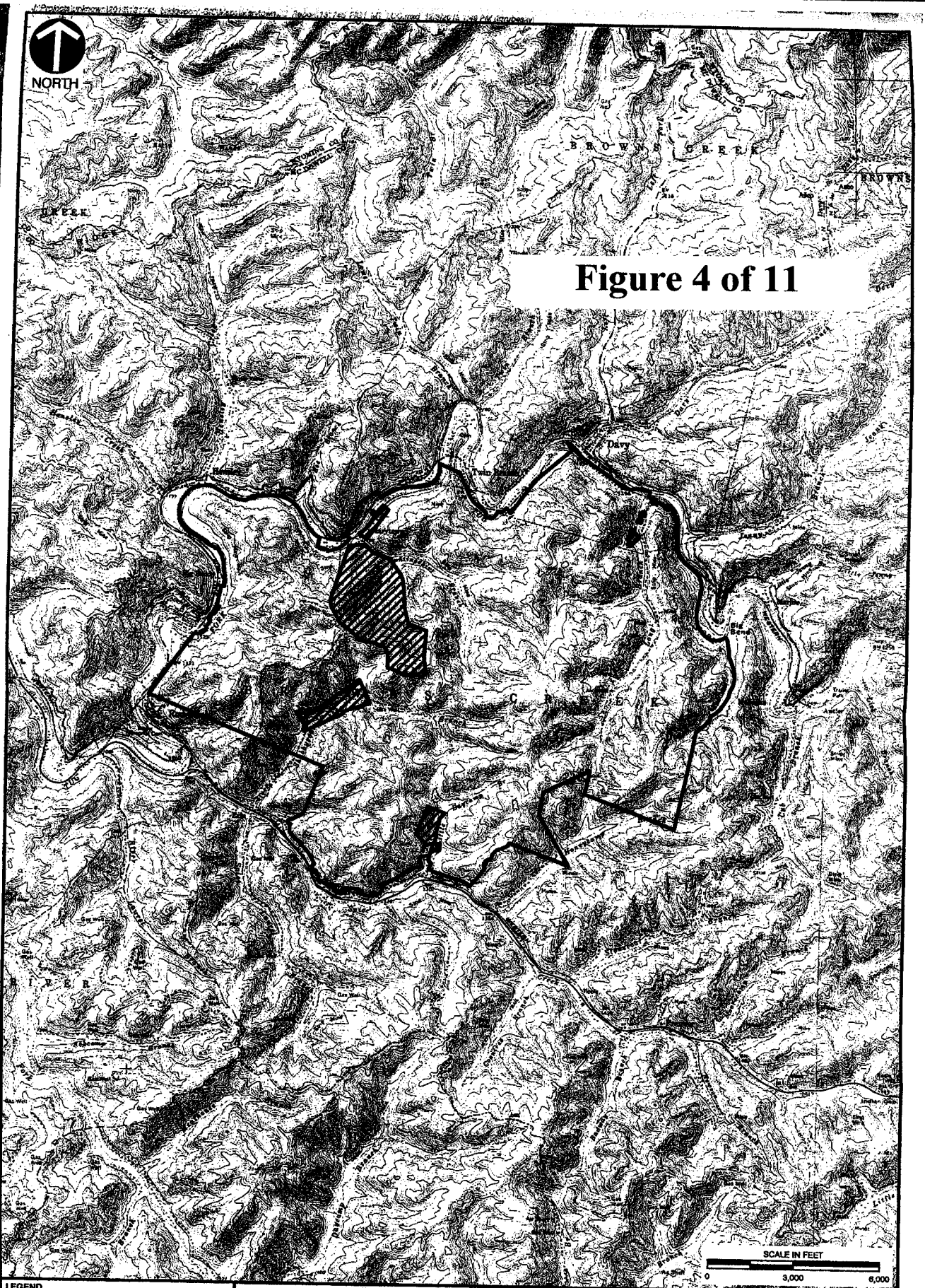

Figure 4 of 11

LEGEND

- SITE LOCATION
- OUT PARCEL

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
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USA_TOPO_MAPS, ACCESSED 12/4/2013
DAVY (1983) WEST VIRGINIA QUAD

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ECOSYSTEM INVESTMENT PARTNERS, LLC
SOUTHERN WEST VIRGINIA MITIGATION BANKS
MARYTOWN PROPERTY
MCDOWELL COUNTY, WEST VIRGINIA

SITE LOCATION MAP

DRAWN BY:	TLG	CHECKED BY:	NSO	APPROVED BY:	*Hand signature on file MRH*	FIGURE NO:	MT1
DATE:	11/15/2013	SCALE:	1 " = 3,000 '	PROJECT NO:	131-745		

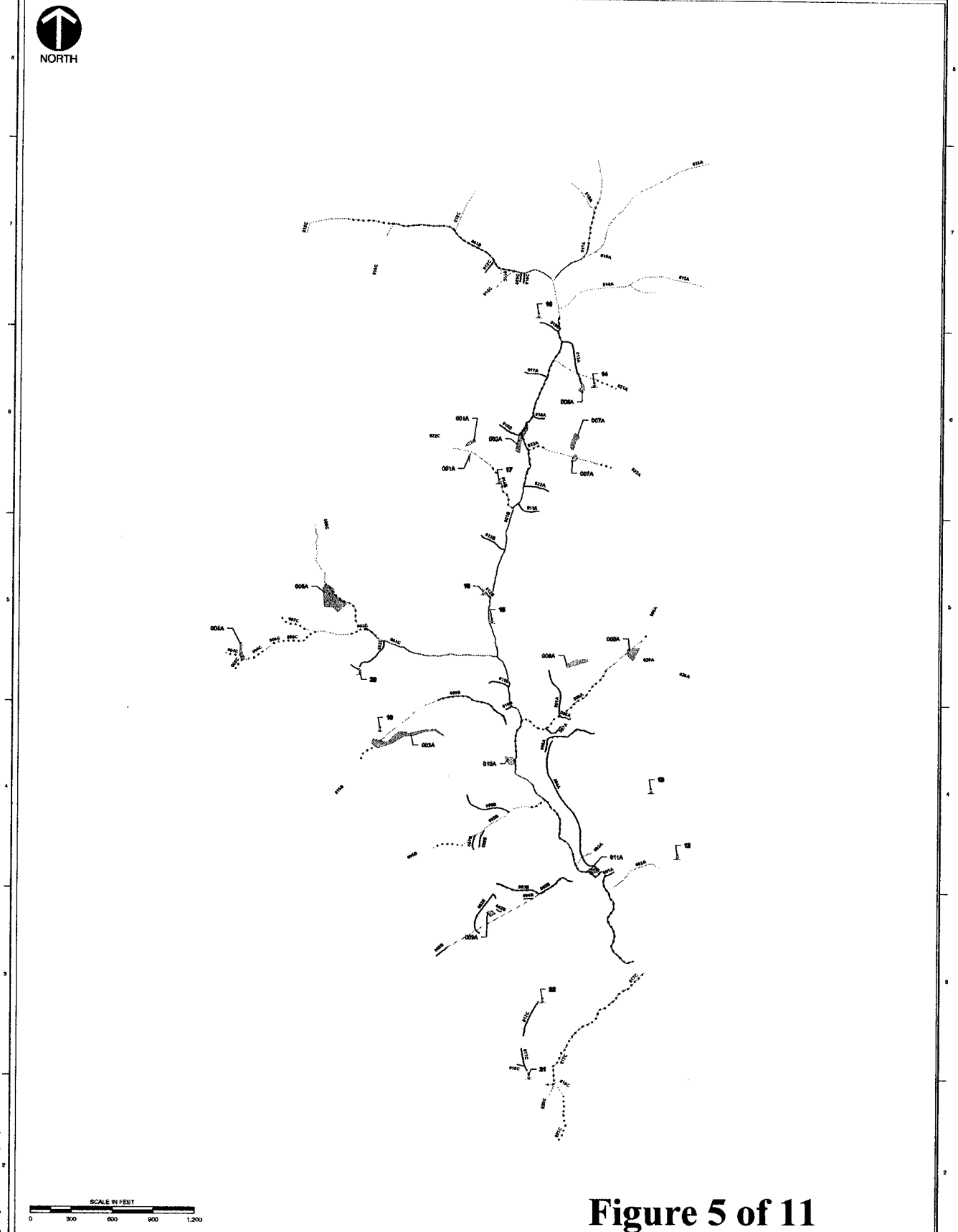

Figure 5 of 11

LEGEND

- IDENTIFIED WETLAND
- LOWER DEMPSEY PROPERTY
- PROPOSED RESTORATION / ENHANCEMENT
- PROPOSED STREAM CREATION
- NO FLOW
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- ISOLATED EPHEMERAL STREAM
- ISOLATED INTERMITTENT STREAM
- PERENNIAL STREAM
- ANTHROPOGENIC STREAM
- ROAD IN STREAM
- WETLAND - PEM
- WETLAND - PFO
- WETLAND - PSS
- OPEN WATER - PUB

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY.
ACCESSED 12/4/2013, IMAGERY DATE: 2009.

PREPARED FOR: Ecosystem Investment Partners

PARTNER: Canaan Valley Institute

Civil & Environmental Consultants, Inc.
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ECOSYSTEM INVESTMENT PARTNERS, LLC
SOUTHERN WEST VIRGINIA MITIGATION BANKS
LOWER DEMPSEY PROPERTY
LOGAN COUNTY, WEST VIRGINIA

DRAWN BY	TLG	CHECKED BY	NSO	APPROVED BY	MRH
DATE	12/04/2013	SCALE	1" = 300'	PROJECT NO.	131-745

CONCEPTUAL RESTORATION PLAN — EXHIBIT NO. **3B**

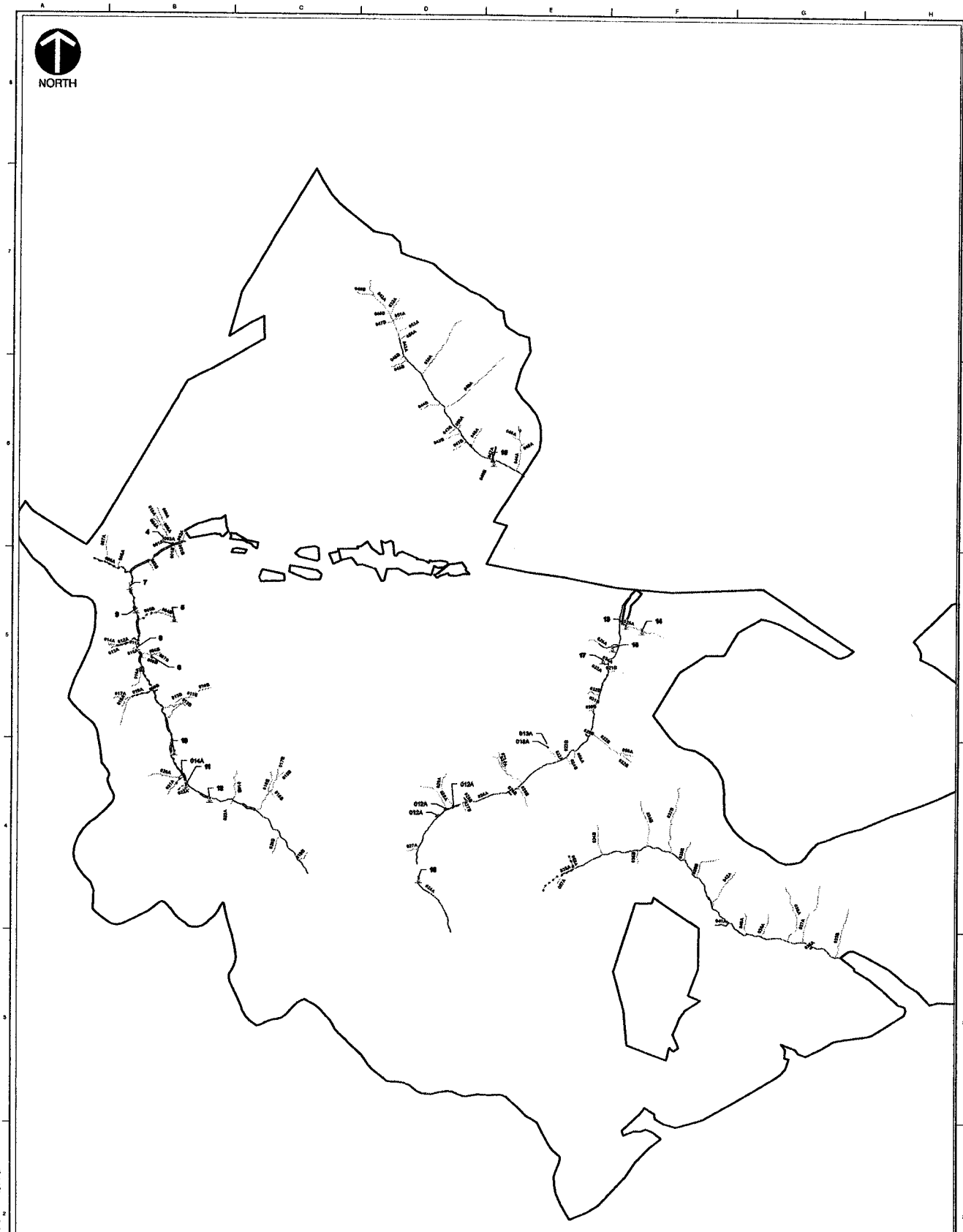

Figure 6 of 11

LEGEND

- IDENTIFIED WETLAND
- PROPERTY BOUNDARY
- PROPOSED RESTORATION / ENHANCEMENT
- PROPOSED STREAM CREATION
- MINE PERMIT BOUNDARY
- NO FLOW
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- ISOLATED EPHEMERAL STREAM
- ISOLATED INTERMITTENT STREAM
- PERENNIAL STREAM
- ANTHROPOGENIC STREAM
- ROAD IN STREAM
- WETLAND - PEM
- WETLAND - PFO
- WETLAND - PSS
- OPEN WATER - PUB

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY,
ACCESSED 12/4/2013, IMAGERY DATE: 2009.

SCALE IN FEET

0 800 1,600 2,400 3,200

PREPARED FOR: Ecosystem Investment Partners

PARTNER: Cardinal Valley Partners

Civil & Environmental Consultants, Inc.
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ECOSYSTEM INVESTMENT PARTNERS, LLC
SOUTHERN WEST VIRGINIA MITIGATION BANKS
COPPERAS PROPERTY
LOGAN COUNTY, WEST VIRGINIA

DRAWN BY	TLG	CHECKED BY	NSO	APPROVED BY	MRH
DATE	12/04/2013	SCALE	1" = 800'	PROJECT NO	131-749

CONCEPTUAL RESTORATION PLAN — EXHIBIT NO **3A**

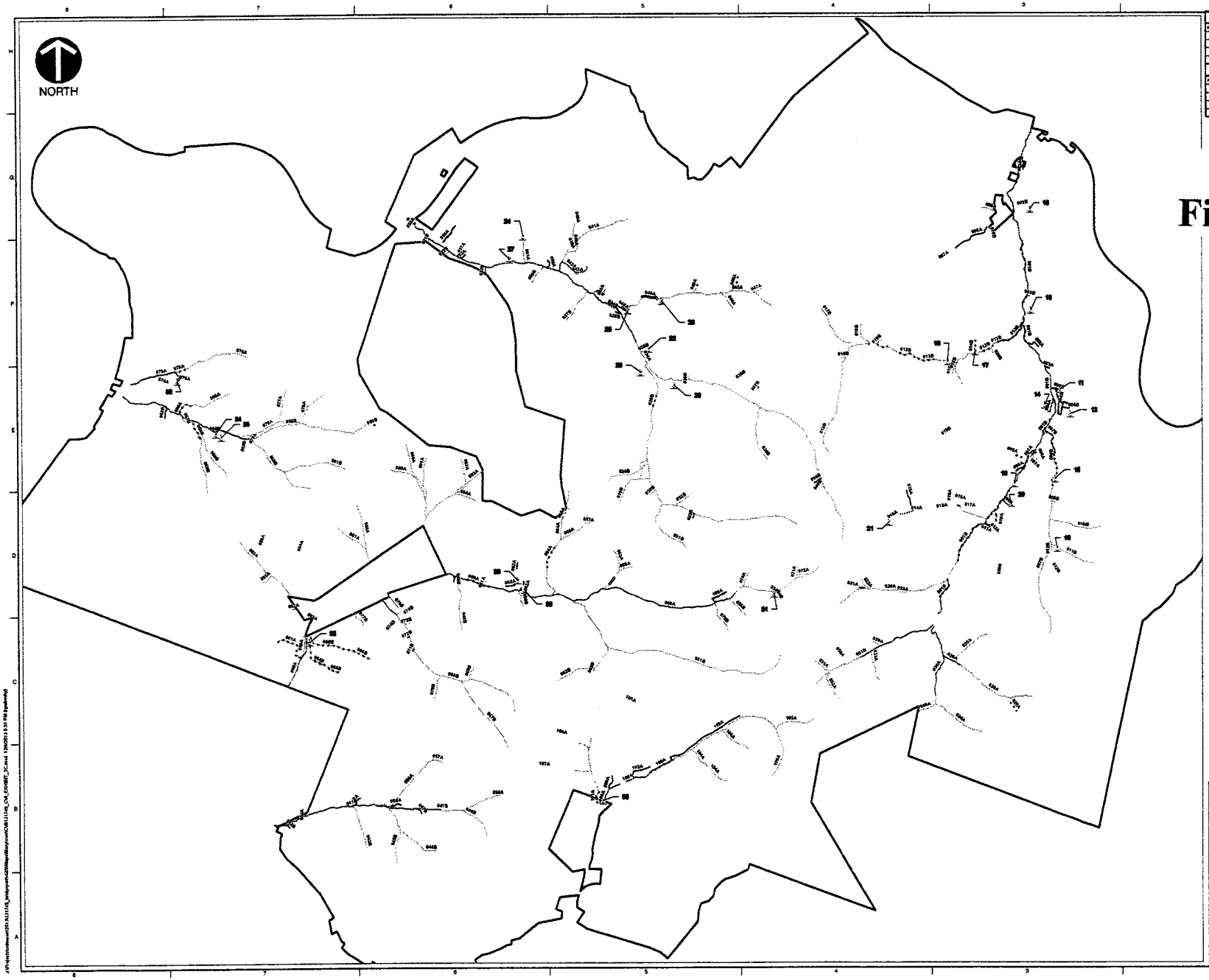

Figure 7 of 11

REVISION RECORD		
NO	DATE	DESCRIPTION

SUBMITTAL RECORD		
NO	DATE	DESCRIPTION

LEGEND

- IDENTIFIED WETLAND
- PROPOSED RESTORATION / ENHANCEMENT
- NO FLOW
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- ISOLATED EPHEMERAL STREAM
- ISOLATED INTERMITTENT STREAM
- PERENNIAL STREAM
- ANTHROPOGENIC STREAM
- ROAD IN STREAM
- PROPOSED STREAM CREATION
- MARYTOWN PROPERTY

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY.
ACCESSED 12/4/2013. IMAGERY DATE: 2009.

SCALE IN FEET

0 700 1,400 2,100 2,800

PREPARED FOR:

Ecosystem Investment Partners

PARTNER:

CANAAN VALLEY INSTITUTE

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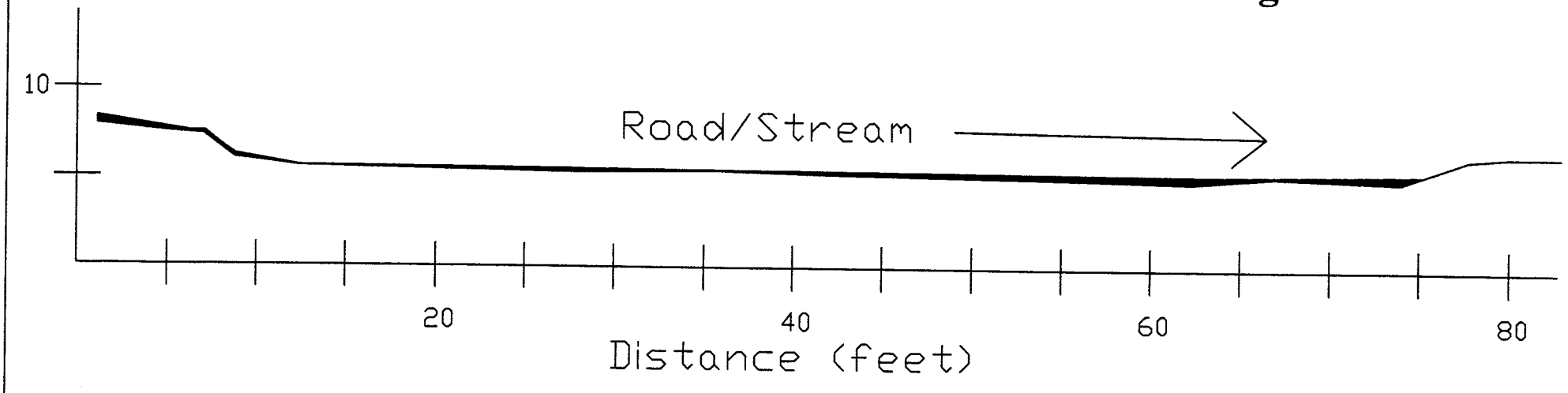
ECOSYSTEM INVESTMENT PARTNERS, LLC
SOUTHERN WEST VIRGINIA MITIGATION BANKS
MARY TOWN PROPERTY
MCDOWELL COUNTY, WEST VIRGINIA

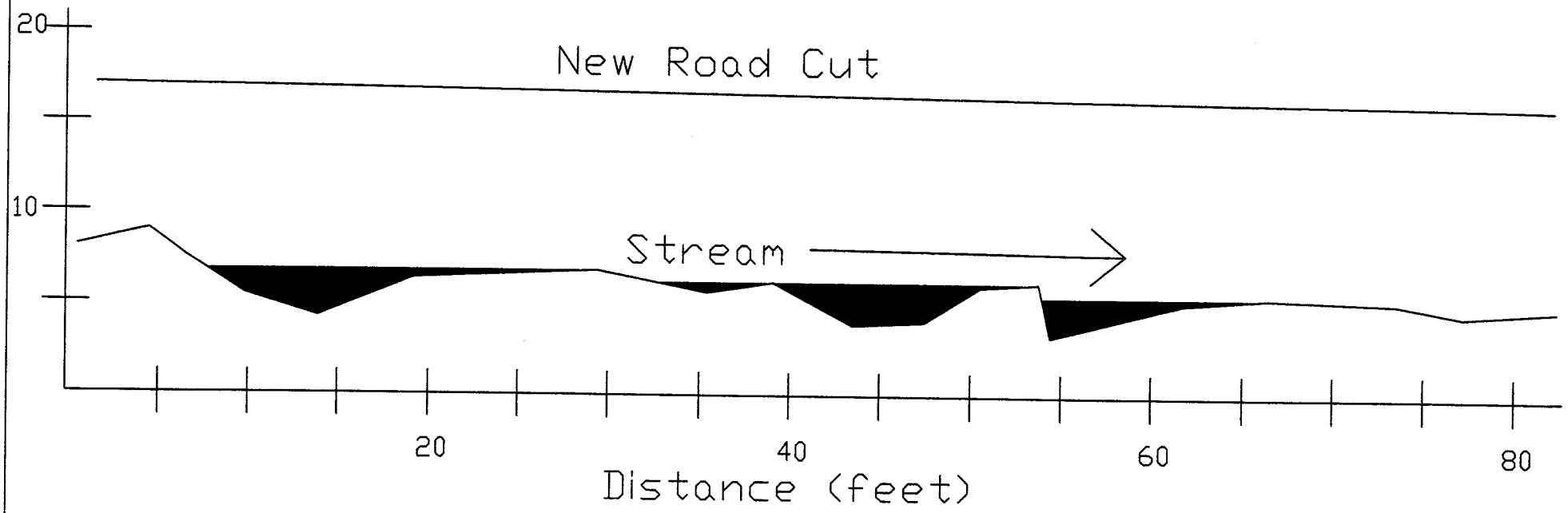
DRAWN BY:	TLG	CHECKED BY	NBG	APPROVED BY	MBW
DATE	12/04/2013	SCALE	1" = 700'	PROJECT NO	131-745

CONCEPTUAL RESTORATION PLAN — SHEET NO. **3C**

Conceptual
Copperas Road/Stream Separation
Longitudinal Profile

Figure 8 of 11





Conceptual
Copperas Road/Stream Separation
Cross Section

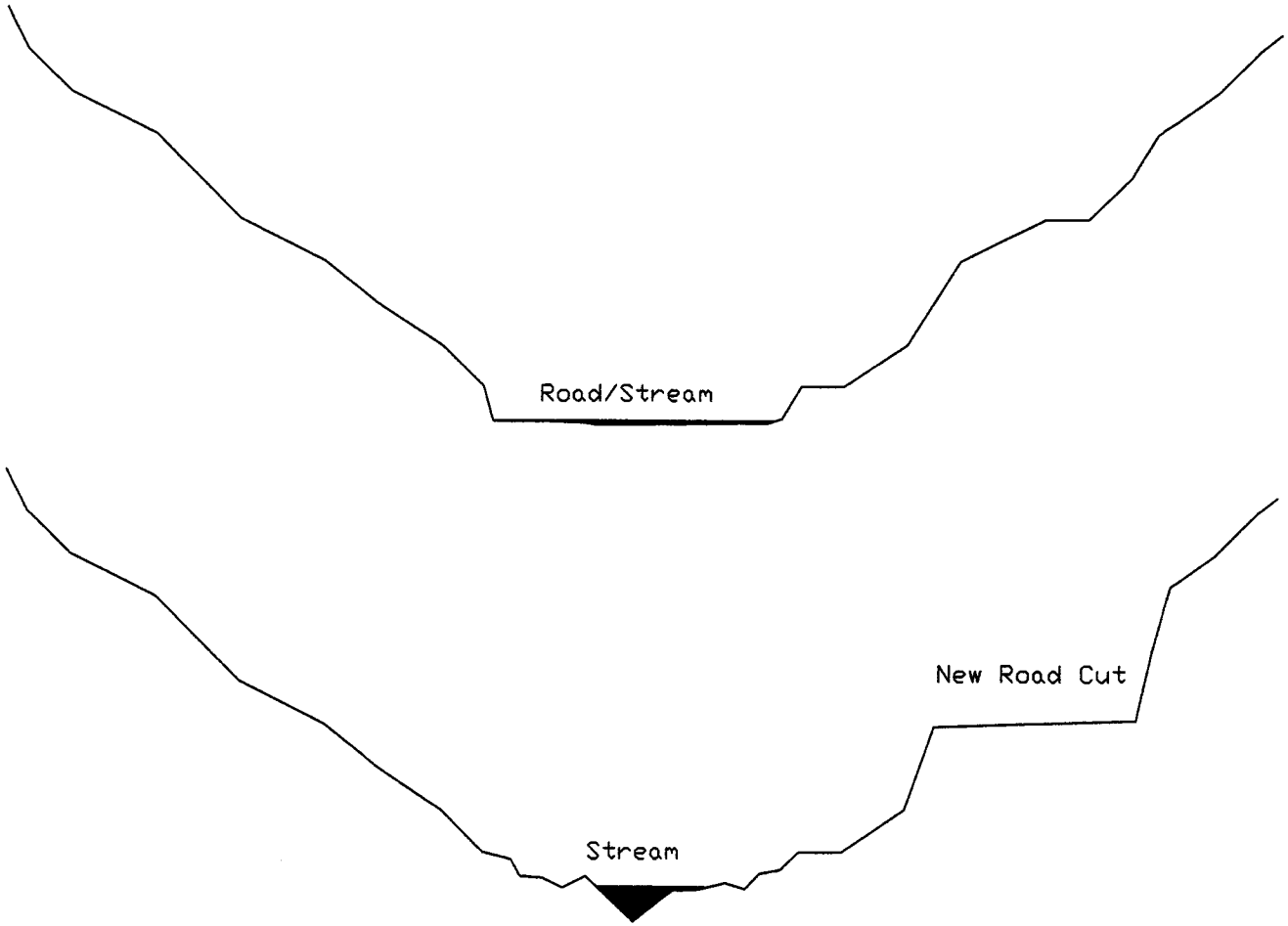
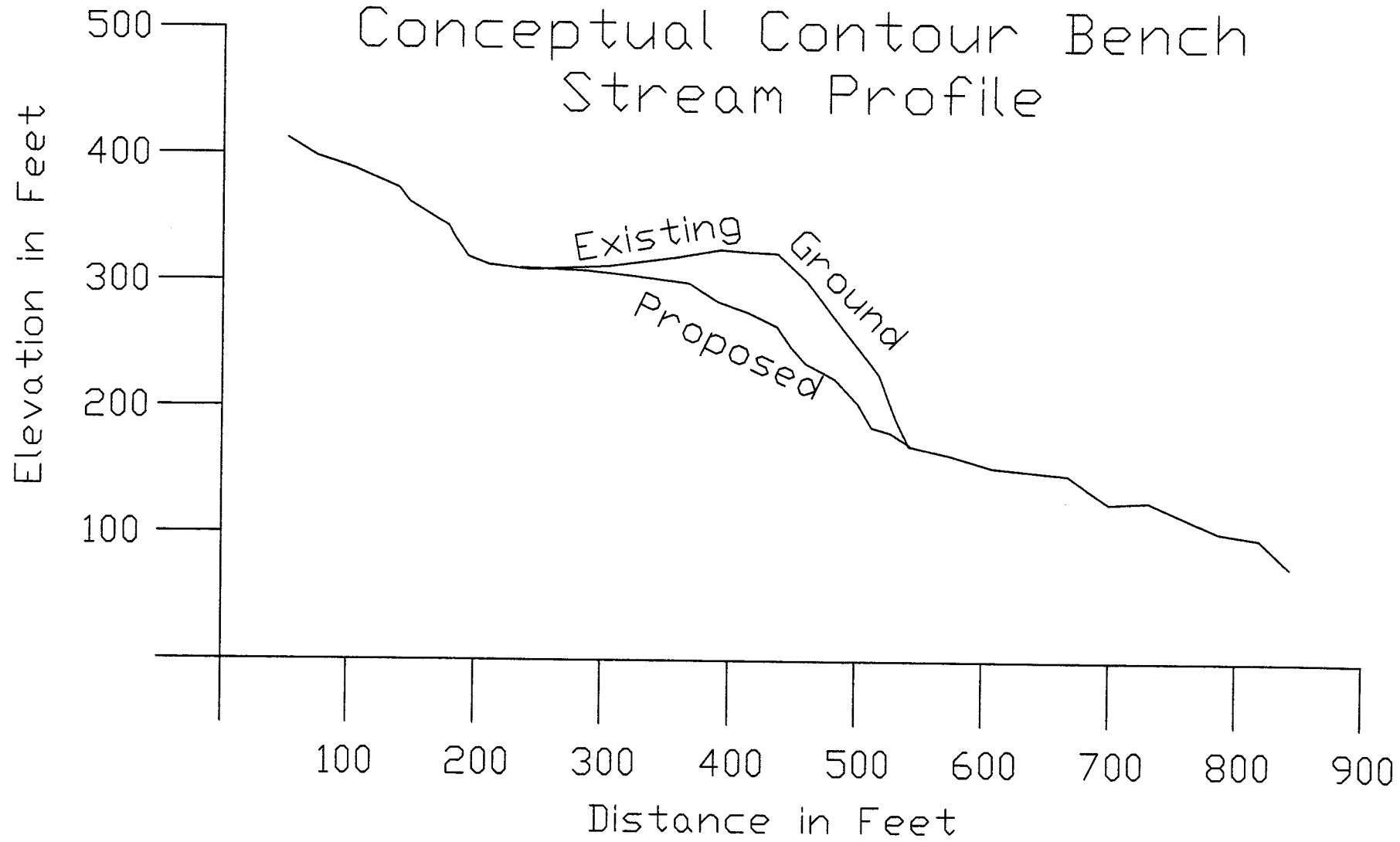


Figure 9 of 11

Figure 10 of 11



EIP Proposed Mitigation Bank Service Areas

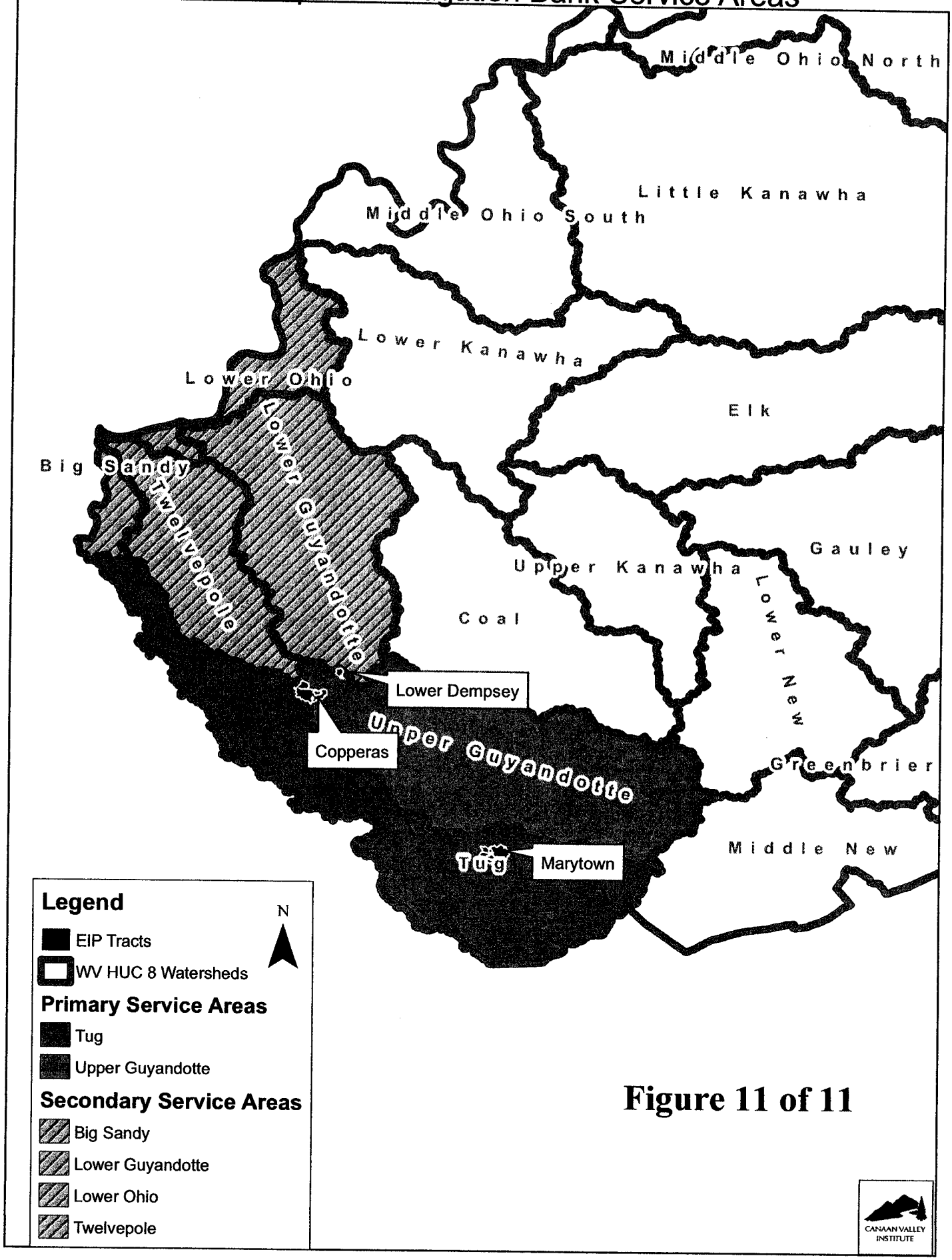


Figure 11 of 11

Table 1

Mitigation Bank	Mitigation Work	Perennial Linear Feet	Intermittent Linear Feet	Ephemeral Linear Feet	Total
Lower Dempsey Stream Mitigation Bank	Establishment*	825	1,584	2,178	4,587
	Restoration*	4,565	3,557	2,936	11,058
	Preservation	3,742	1,177	8,139	13,058
Copperas Fork Stream Mitigation Bank	Establishment*	310	46	97	453
	Restoration*	9,117	220	1,339	10,676
	Preservation	21,807	7,241	31,517	60,565
Marytown Stream Mitigation Bank	Establishment*	2,302	1,608	804	4,714
	Restoration*	6,195	3,587	5,652	15,434
	Preservation	28,171	35,701	64,057	127,929

*All mitigation work areas would be preserved in perpetuity with an appropriate real estate instrument. Preservation as contained in the Table only refers to those areas proposed only for preservation