

**U.S. Army Corps
of Engineers**
Pittsburgh District

Public Notice

In Reply Refer to
Notice No. below

US Army Corps of Engineers, Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Application No. LRP-2014-1129

Date: November 20, 2014

Notice No. 14-51

Closing Date: December 20, 2014

1. **TO ALL WHOM IT MAY CONCERN:** A prospectus has been submitted pursuant to 33 CFR 332 proposing the establishment of an In Lieu Fee Program (ILFP) to provide mitigation for impacts to waters of the United States under Section 404 of the Clean Water Act (Section 404) and/or Section 10 of the Rivers and Harbors Act of 1899 (Section 10) within four eight-digit hydrologic unit code (HUC) watersheds in the State of Ohio, within the boundaries of the U.S. Army Corps of Engineers (Corps) Pittsburgh District. The purpose of this public notice is to solicit comments from the public regarding the establishment of the proposed ILFP.

This is not an application for work in federally regulated waters; however, authorization under Sections 404/10 may be required for implementation of particular mitigation sites later proposed under the ILFP, if approved. Such sites would be advertised under separate public notices. No decision has been made as to whether this ILFP will be approved.

2. **SPONSOR:** Ohio Wetlands Foundation
1220 Stone Run Court
Lancaster, Ohio 43130
3. **PURPOSE:** Ohio Wetlands Foundation has submitted a prospectus to the Corps Pittsburgh District to initiate the development of a stream ILFP to meet compensatory mitigation requirements for future permits issued under and Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. The purpose of the prospectus is to establish guidelines, responsibilities, and standards for the establishment, use, operation, and maintenance of the program in a way that complies with the regulations governing compensatory mitigation for activities authorized by Department of Army permits granted by the Corps. If approved by the State of Ohio, the proposed ILFP could also be used as compensatory mitigation for activities authorized under Ohio Revised Code (ORC Chapter 6111) that authorizes the Ohio Environmental Protection Agency to regulate all waters of the State. In July 2014, an ILFP for wetlands was approved for the Ohio Wetlands Foundation.

4. IN-LIEU FEE PROGRAM DEFINITION: An ILFP is a program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for DA permits. Similar to a mitigation bank, an ILFP sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the ILFP sponsor.
5. DESCRIPTION OF PROPOSED ACTIVITY: Information required for a complete ILFP prospectus is outlined in 33 CFR 332.8(d)(2). A complete copy of the prospectus is posted at the end of this document.

Establishment/operation of the ILFP: Under Sections 404/10, applicants under DA permits authorized to discharge dredge or fill material into waters of the US are often required to mitigate for permitted aquatic losses by restoring, enhancing, or in exceptional circumstances, preserving streams. Authorized ILFPs provide the Corps and the regulated public with additional options for compensatory mitigation of aquatic resource losses. The establishment and implementation of an ILFP must be in accordance with an ILFP instrument approved by the Interagency Review Team (IRT). The IRT is presently comprised of the Corps, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U. S. Department of Agriculture-Natural Resources Conservation Service, the Ohio Department of Natural Resources and the Ohio Environmental Protection Agency.

If the prospectus is deemed sufficient, the ILFP will be established through the development of an ILFP instrument to be signed by the sponsor, the Corps, and other IRT members who choose to do so. The process will follow 33 CFR 332, Compensatory Mitigation for Losses of Aquatic Resources (“Mitigation Rule”). The Mitigation Rule was published in the Federal Register on April 10, 2008. The ILFP would provide an alternative to permittee-responsible mitigation if it is deemed appropriate during the review process for proposed unavoidable impacts to waters of the U.S. authorized under Sections 404/10. It may also provide an alternate type of mitigation for Civil Works projects requiring compensation for impacts to aquatic resources as well as providing a resource for use in resolving enforcement cases under Section 404/10.

Proposed Service Area: The ILFP is proposed to include the state of Ohio within the Corps Pittsburgh District boundaries as the geographic area for which mitigation can be provided. The Corps Pittsburgh district covers four 8-digit HUC watersheds: the Shenango (05030102), Mahoning (05030103), Upper Ohio (05030101), and the Upper Ohio-Wheeling (05030106). The service areas will be split into two halves of the District. The north service area will include the Shenango and the Mahoning 8-digit HUC watersheds while the south service area will include the Upper Ohio and the Upper Ohio-Wheeling 8-digit HUC watersheds.

6. PUBLIC INVOLVEMENT: The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Federally-recognized Tribes; and other interested parties in order to consider and evaluate the proposed ILFP. Any comments received will be considered by the Corps in determining whether to allow the sponsor to proceed to develop a draft ILFP instrument. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this prospectus. The requests for public hearing shall state, with particularity, the reasons for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

Comments submitted in response to this notice will be fully considered during the review for this prospectus. All written comments will be made part of the administrative record. Copies of comments received will be forwarded to the sponsor and to the members of the Interagency Review Team. This notice is promulgated in accordance with Title 33, Code of Federal Regulations, parts 320-332. Any interested party desiring to comment on the proposed prospectus described herein may do so by submitting their comments in writing so they are received no later than the closing date of this notice.

All responses to this notice should be directed to the Regulatory Branch, attention Nancy Mullen at the above address, by telephoning (412) 395-7170, or by e-mail at Nancy.J.Mullen@usace.army.mil. Please refer to CELRP-OP-F 2014-1129 in all responses.

FOR THE DISTRICT ENGINEER:

//SIGNED//

Scott A. Hans
Chief, Regulatory Branch



Stream In-Lieu Fee Program Prospectus

U.S. Army Corps of Engineers Pittsburgh District Ohio Watersheds

October 2014

Prepared for:

Ohio Wetlands Foundation
Vince Messerly, President
1220 Stone Run Court
Lancaster, Ohio 43130
740-654-4016

Prepared by:

Davey Resource Group
A Division of The Davey Tree Expert Company
1500 North Mantua Street
Kent, Ohio 44240
800-828-8312



OHIO WETLANDS
FOUNDATION

Table of Contents

Objectives	1
Establishment and Operation	1
Proposed Service Areas	6
Need and Technical Feasibility	7
Long-Term Management Strategy	8
Sponsor Qualifications.....	9

Tables

1. Stream Impact Data	7
-----------------------------	---

Appendices

- A. Location of Service Areas on Ohio Map
- B. Compensation Planning Framework
- C. References

Objectives

The Ohio Wetlands Foundation (OWF) Pittsburgh stream in-lieu fee program (ILFP) will operate in two service areas in east and southeast Ohio within the U.S. Army Corps of Engineers (USACE) Pittsburgh District. The proposed service areas will match the service areas for the existing OWF wetlands ILFP in the Pittsburgh District. The ILFP instrument for wetlands mitigation was approved by the Interagency Review Team (IRT) in July 2014.

The OWF stream ILFP will provide third-party compensatory mitigation for unavoidable impacts to streams identified as waters of the United States and waters of the State of Ohio. More particularly, the ILFP will be used to satisfy the compensatory stream mitigation requirements of permits issued under Section 404 and 401 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act. OWF reserves the right to request an amendment of the final instrument to include additional service areas/watersheds. Any amendment of the final instrument to include additional service areas/watersheds will be coordinated with USACE and the IRT, and will include a public comment period.

The goal of the proposed ILFP is to provide for no-net loss of stream length and aquatic functions for streams within Ohio watersheds in the Pittsburgh District. Temporal loss of functions and values will be offset by the use of mitigation ratios as determined by the appropriate regulatory agencies. This prospectus addresses the required elements consistent with federal and state requirements including those set forth in 33 CFR Part 332.

Establishment and Operation

The OWF stream ILFP will operate by providing restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to the OWF ILFP to develop resources to satisfy compensatory mitigation requirements for Department of the Army permits or Ohio Water Quality Certifications. This section details procedures and practices that will be established and followed during the operation of the OWF ILFP.

Roles and Responsibilities

USACE is the party responsible for approval of ILFP instruments and oversight of compliance and mitigation activities associated with Section 404 of the Clean Water Act, and/or Section 10 of the Rivers and Harbors Act. In addition, as chair of the IRT, USACE is responsible for consulting with the IRT in accordance with 33 CFR 332.8.

Ohio EPA is the party responsible for issuing 401 Water Quality Certifications in Ohio, and permitting and oversight of compliance and mitigation activities associated with Ohio's isolated wetland law (ORC 6111). Ohio EPA also participates as a representative on the IRT.

OWF is the sponsor for the ILFP and is responsible for oversight, implementation, and fiscal management of the ILFP as described in this instrument. OWF is a non-profit entity recognized under Section 501(c)3 of the Internal Revenue Code and its operations directly involve the restoration, enhancement, establishment, and/or preservation of wetland and stream resources. As a non-profit, natural resource based entity, OWF meets the requirements of 33 CFR 332.2 to be an In-Lieu-Fee program sponsor. OWF has authority under this instrument to enter into agreements with state agencies, non-profit organizations, for-profit organizations, and individuals to implement the ILFP. All activities conducted by third parties under this instrument are the responsibility of OWF.

Project Identification and Development

Project Site Selection. ILFP mitigation projects will target potential sites best suited to replace lost stream functions. The evaluation of mitigation sites will include requests for input from existing watershed coordinators, Soil and Water Conservation Districts, other watershed-based groups/NGOs, communities, counties, ecological consultants, and other state and federal resource agencies. Input will also be sought from permit applicants and industry groups in order to better understand the potential need for mitigation in the ILFP service areas in the near future.

Additionally, geographic spatial data resources will be reviewed (such as National Wetland Inventory Maps, Natural Resources Conservation Service Soil Surveys, U.S. Geological Service StreamStats, and aerial imagery) to help identify and review each potential mitigation site. OWF will request timely feedback from the IRT concerning potential mitigation sites prior to developing a conceptual mitigation plan.

Emphasis will be placed on identifying sites that have existing conditions (soils, hydrology, and/or native vegetation) that are conducive to stream and riparian zone restoration, enhancement, establishment, and/or preservation; are locally and regionally significant in terms of their contribution or potential contribution to reduce sediment and/or nutrient loading and are owned by entities willing to participate in the ILFP. Project sites will be selected and developed in accordance with the information detailed in the Compensation Planning Framework (Appendix C).

Site specific information regarding prospective ILFP project sites will be provided within conceptual mitigation plans once potential ILFP project sites have been identified. All conceptual mitigation plans and instrument amendments regarding the addition of ILFP mitigation sites will be coordinated with the District Engineer in consultation with the IRT.

Mitigation Plan. A mitigation plan will be developed for each ILFP project and is subject to approval by the IRT. Mitigation plans will be developed and implemented in accordance with 33 CFR 332.4 and will include the following required elements:

1. Project objectives
2. Site selection criteria
3. Site protection instrument
4. Baseline information
5. Credit determination
6. Work plan
7. Maintenance plan
8. Performance standards
9. Monitoring requirements
10. Long-term management plan
11. Adaptive management plan
12. Financial assurances

Ecological Performance Standards. OWF will propose performance standards for each ILFP site for IRT review and approval. These performance standards will be used to assess whether the project is developing into the desired resource type, providing the expected functions, and meeting any other applicable metrics according to the terms detailed in 33 CFR 332.5. Performance standards may be based upon variables or measures of functional capacity described in functional assessment methodologies, measurements of hydrology, or other aquatic resource characteristics such as diversity of flora and fauna, consistent with the Mitigation Rule (33 CFR 332.5).

Project Approval and Instrument Modifications. Approved projects or the expansion of a previously approved project site may be added as an amendment to the Instrument in accordance with 33 CFR 332.8(g).

For amendments or modifications of the Instrument, OWF will submit a written request for an instrument modification accompanied by appropriate documentation (e.g. mitigation plan) as detailed in 33 CFR 332.8(d). The process for review and approval of amendments will generally follow the process for instrument approval.

As ILFP project sites are identified and optioned or otherwise secured (e.g. written agreement to purchase or to protect in a manner consistent with the Mitigation Rule), OWF will submit mitigation plans to the District Engineer that include all applicable items listed in 33 CFR 332.4(c)(2-14). Within 30 days of receipt of OWF's formal request for an instrument modification, the District Engineer will notify OWF whether the instrument modification request is complete under 33 CFR 332.8(d)(2). Within 30 days of receipt of a complete instrument modification request and mitigation plan, the District Engineer will provide public notice of the request. The comment period will be 30 days, unless otherwise determined by the District Engineer. Copies of all comments will be provided to IRT members and OWF within 15 days of the close of the public comment period per 33 CFR 332.8(d)(4). OWF will review the comments and discuss concerns and issues with the IRT. Within 90 days of receipt of the complete amendment by the IRT members, the District Engineer will notify OWF of the status of the IRT review. Specifically, the District Engineer must indicate to OWF if the amendment is generally acceptable and what changes, if any, are needed. If there are significant unresolved concerns that may lead to a formal objection from one or more IRT members to the amendment, the District Engineer will indicate the nature of those concerns. A revised plan may be submitted to the District Engineer and the IRT for additional comments, if necessary.

At any point, OWF may declare that the mitigation plan is a final submission and request approval from the District Engineer. Within 30 days of receipt of the final plan, the District Engineer will notify the IRT members whether or not he or she intends to approve the Instrument amendment. Project approval will be based upon several factors, including: site suitability, long-term sustainability, benefits to rare and endangered natural resources, maximum ecological return on expended funds, and other factors. The District Engineer may add specific requirements and restrictions to each proposed mitigation project. These include conditions on authorizations through the Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act permit process that could be required for a mitigation project.

The District Engineer may use a streamlined modification review process for changes reflecting adaptive management of the ILFP, credit releases, changes in credit releases and credit release schedules, and changes that the District Engineer determines are not significant. OWF will work with the District Engineer to identify other non-significant modifications that would be suitable for review under the streamlined modification review process. In this event, the District Engineer will notify the IRT members of this determination and provide them with copies of the proposed modification. IRT members have 30 days to notify the District Engineer if they have concerns with the proposed modification. If IRT members notify the District Engineer of such concerns, the District Engineer will attempt to resolve those concerns. The District Engineer will notify the IRT members of his intent regarding the proposed modification within 60 days of providing the notice to the IRT members. If no IRT member objects, the District Engineer will notify OWF of his final decision, and if approved, arranged for it to be signed by the appropriate parties per 33 CFR 332.8(g)(2).

The IRT shall meet on a regular basis, as determined by the IRT chair, to review and approve ILF projects and discuss any program management issues.

The IRT shall be responsive to OWF in terms of providing feedback and guidance on proposed mitigation sites and mitigation plans. OWF shall be responsive to IRT questions and inquiries as the program sponsor.

Project Implementation. OWF or its authorized agents will provide the necessary personnel, equipment, and materials to implement ILFP stream mitigation projects. Within one year of the first advanced stream credit sale, OWF will submit a mitigation and monitoring plan to the District Engineer (using procedures outlined in Section III(B)(4) of this instrument). Land acquisition and initial physical and biological improvements will be completed by the third full growing season after the first advanced credit in that service area is sold, unless the District Engineer determines that OWF requires more time to plan and implement a project due to a lack of sufficient credit sales. It will not be considered a default of the terms set forth in the final Instrument if an insufficient number of credits are sold in a given service area to accrue enough funds to implement an environmentally sustainable project. If this occurs, the District Engineer may direct OWF to transfer funds to any project or proposal that it deems appropriate.

Monitoring. Monitoring of ILFP projects will be conducted to determine if the project is meeting its performance standards and trending towards success as described in 33 CFR 332.6. Each project-specific mitigation plan will include a monitoring plan that will describe the performance standards to be monitored, the methods for monitoring, the length of the monitoring period, the dates that the reports must be submitted, and the frequency for submitting monitoring reports. OWF will be responsible for submitting monitoring reports to the IRT based upon terms set forth in the approved mitigation plan. At the request of an authorized representative of USACE or the IRT, OWF shall allow access to ILF project sites to determine compliance with the terms in the instrument.

The content and level of detail of the monitoring reports will be commensurate with the scale and scope of the mitigation project, as well as the mitigation project type. Each report shall contain, at a minimum, the following information:

1. Monitoring results with comparisons to performance standards
2. Plans, maps, and photographs to illustrate site conditions
3. A narrative summarizing the condition of the project
4. Recommendations for adaptive management, if needed

Instrument Re-Evaluation. After a period of not more than 5 years from the date of approval, the OWF ILFP instrument will be re-examined to evaluate the objectives and results of the ILFP. The District Engineer, IRT, and OWF will work in good faith to identify strengths and weaknesses within the OWF ILFP, and suggest or recommend adaptive changes to the ILFP and/or the final ILFP Instrument.

Accounting Procedures and Account Reporting Protocols

The ILFP shall establish and maintain a ledger of advance credits, credit development and credit sales for each service area. Transactions will be tracked in terms of how the credits are generated, i.e., the cost of establishment, restoration, enhancement and/or preservation of streams. Information in the ledger shall also include fulfillment and replenishment of advance credits, the beginning and ending balance of available credits and permitted impacts for each resource type, all additions and subtractions of credits, and any other changes in credit availability (e.g., additional credits released, credit sales suspended by USACE, etc.).

Site specific ledgers shall track credits released by type, credits used to fulfill advance credits, and credits sold directly to permittees.

The ILFP shall annually provide USACE with a statement of account(s) holding ILFP funds. The account reports are to be submitted to USACE by March 31 of each year. The reports will include information related to all income, disbursements, and interest earned for each service area account, all permits for which fees were accepted for each service area (including USACE permit number and/or state permit number, the service area in which the authorized impacts are located, the amount of authorized impacts, the amount of required compensatory mitigation, the amount paid to the ILFP, and the dates the funds were received from the permittee), a description of program expenditures (e.g. land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration), the balance of advance credits and released credits at the end of the report period for each service area, and other information that may be reasonably required by USACE and the IRT.

Legal Responsibility for Mitigation

The permittee retains responsibility for providing compensatory mitigation until the appropriate number of credits have been secured from the OWF ILFP and USACE and/or Ohio EPA has received documentation that the OWF ILFP has accepted the responsibility for providing the compensatory mitigation. The written notification will be provided by OWF to USACE and/or Ohio EPA and will provide permit number, amount of mitigation required as per terms of the permit, and statement identifying the number of credits purchased by the applicant. This notification may be provided by OWF to USACE electronically (via email or facsimile), by overnight carrier, or by U.S. Mail. OWF, USACE, and Ohio EPA shall establish a point of contact for documentation of all transactions at the time of instrument approval. Revisions to the point of contact shall be made in writing to the USACE regulatory division chief, the Director of Ohio EPA, or to the President of OWF as appropriate.

In-Lieu Fee Program Account

OWF shall be permitted to retain up to 15% of all ILFP payments to offset cost of operations and overhead and development of the ILFP instrument/amendments as well as ongoing cost to identify mitigation sites (including costs to work with agencies, watershed groups, etc. to assist with development of watershed plans and to assess potential mitigation sites). The remainder of payments received by the ILFP will be deposited into an interest bearing, FDIC-insured account or series of accounts to ensure account levels remain within FDIC insurance limits.

OWF shall account for the funds in accordance with generally accepted accounting principles, and the accounts shall be subject to audit by the District Engineer when deemed necessary after giving notice to OWF. Interest earned by the ILFP and proceeds from the sale of ILFP credits shall remain in the account until approved for use by the District Engineer. Funds in excess of the amount needed for mitigation projects within a designated service area shall be held in reserve in the ILFP and utilized for future expenses associated with new mitigation projects in that service area or for un-anticipated remedial work for projects previously completed by OWF within the service area. Disbursements of funds from those held in reserve in the ILFP account will require approval from the District Engineer, in consultation with the IRT. Appropriate supporting information to justify the disbursement will be provided to the District Engineer and IRT commensurate with the amount of funds to be released.

The District Engineer, in consultation with the IRT, will determine whether financial assurances are warranted for an ILFP project. If financial assurances are warranted, they may be provided in a form agreeable to OWF and the District Engineer and may include construction performance bonds, letters of credit or sufficient existing funds in the ILFP account. It is anticipated that financial assurances will not typically be required beyond documentation of payment by permit applicants for credits purchased from OWF and deposit of funds into FDIC insured banking accounts.

For an ILFP project, OWF shall obtain adequate site ownership or formalized access and site protection agreements and initiate biological and physical improvements within three full growing seasons of the date of the first advance credit in the service area being secured by a permittee. If more than three years pass from the date of permit issuance and a mitigation site has not been secured, USACE may direct that the funds be allocated to any project or proposal that it deems appropriate, and that mitigation liability to the ILFP shall be reduced accordingly and transferred to the party receiving such funds. If directed by the District Engineer, OWF will transfer funds to the separate party equal to the value paid for credits purchased from OWF. OWF may be permitted by the District Engineer to retain all or a portion of the administrative fee provided that it can demonstrate the portion of the administrative fee that has been expended to date in an effort to identify a suitable mitigation site to fulfill the mitigation credit requirements.

As per 33 CFR 332.8(n)(4), the District Engineer, at his discretion, may allow extensions of the three-year time limit. As an alternative to extending time allowed to implement a project, the District Engineer may direct OWF to disburse funds from the ILFP account to provide alternative compensatory mitigation. Funds paid to the OWF ILFP by applicants will be used to pay for site selection, planning, IRT coordination, design, ecological and cultural resource coordination, acquisition, implementation, monitoring, management and protection of ILFP projects as approved by the District Engineer. Long-term maintenance and management funding will be determined on a project basis and will include funds to support the long-term care and protection of the compensatory mitigation project.

The District Engineer may audit the records pertaining to the ILFP accounts. Complete budgets for ILFP projects will be approved as part of mitigation plans. An annual report will be presented by March 31 of each year and submitted to USACE for review. Reports will include detailed summaries of the ILFP, funds received, credits sold or transferred and expenses incurred, including administrative expenses. The District Engineer will require notification of all deviations in excess of the approved budget. Specific IRT approval will be required for deviations above 10% and at the discretion of the District Engineer. USACE may review ILFP records with 14 days advance written notice. When so requested, OWF shall provide all books, accounts, reports, files, and other records relating to the ILFP.

Proposed Service Areas

Using the watershed approach to compensatory mitigation of aquatic resources, the OWF ILFP will operate in two geographically distinct service areas in the Pittsburgh District. The ILFP will include a north service area (consisting of the Shenango (05030102) and Mahoning (05030103) 8-digit HUC watersheds) and a south service area (consisting of the Upper Ohio (05030101) and Upper Ohio-Wheeling (05030106) 8-digit HUC watersheds).

In accordance with 33 CFR 332.8(d)(6)(ii)(A), after a careful evaluation of historical permitting activity and consultation with USACE Pittsburgh District and the Interagency Review Team (IRT), OWF has determined that combined 8-digit HUC watershed service areas are necessary for the success of the OWF ILFP due to the rural nature of this portion of Ohio and the small amount of annual impacts within some of the individual 8-digit watersheds. OWF will attempt, over time, to site mitigation projects within the service areas so that compensatory mitigation is provided within each of the four 8-digit HUC watersheds in a manner relative to the amount of impact that occurs in each.

Authorized impacts to streams will be mitigated to the extent practicable within the service area of the impact. In cases where multiple ILFP sponsors operate ILFP mitigation projects within the service area, USACE in consultation with the IRT, may direct OWF to transfer funds to another program that has an active mitigation project within the 8-digit USGS HUC where advanced credits have been sold so that mitigation occurs within the same watershed as impacts to the extent practicable. This direction to transfer funds into other ILFPs to promote mitigating stream impacts within watershed is separate and distinct from the transfer of funds due to ILFP default or the inability to deliver a mitigation site within required timeframes.

Need and Technical Feasibility

There are currently no approved stream mitigation banks or ILFPs within the watersheds in the OWF ILFP service areas identified in this prospectus; project proponents are forced to provide compensatory stream mitigation through permittee-responsible mitigation projects. These projects are often expensive and hard to identify, leading to project delays and cost increases for permittees. Additionally, these projects are often of questionable ecological success. Establishment of a stream ILFP will provide regulatory agencies and the public a valuable mitigation option, leading to more consistent compensatory mitigation expectations for the regulated community.

the watersheds located in the OWF ILFP service areas in the Pittsburgh District have been impacted by past urban development, industrial activities, agriculture, timber harvesting, and mineral resource extraction. These threats are expected to continue or increase in the future as cities such as Youngstown, Ravenna and Alliance rebound from the economic recession of the late 2000s, and coal mining and natural gas retrieval expand in the region. Impacts to streams will continue to be needed as the extensive network of pipelines and appurtenant structures are constructed as development of the Utica and Marcellus shale field continues. This will necessitate the development of effective options for compensatory mitigation. Table 1 presents details regarding the average annual impacts to streams within the watersheds within each service area, providing additional documentation of the need for stream mitigation options in this portion of the State.

Table 1. Stream Impact Data

HUC Basin	HUC Sub-basin	Primary Stream Name	2004-13 SFY Average 401 Authorized Impacts to Streams (linear feet)	2010-2013 Average Nationwide Permit Authorized Impacts to Streams (linear feet)	Average Annual Impacts to Streams (linear feet)
050301	-01	Upper Ohio	2,440	433	2,873
	-06	Upper Ohio-Wheeling	14,281	4,859	19,140
	-02	Shenango River	6	200	206
	-03	Mahoning River	1,461	2,340	3,801

The use of mitigation banks and ILFPs for compensatory mitigation can help to reduce the risk and uncertainty associated with the replacement of lost water resources and associated functions and services. When compared to permittee-responsible mitigation, mitigation banks and ILFP mitigation sites generally provide larger, more ecologically valuable mitigation options. Additionally, these sites must go through rigorous scientific and technical analysis prior to their acceptance as an authorized mitigation site. The proposed OWF ILFP will provide a preferred method of compensatory mitigation for projects located within watersheds that currently lack an operating stream mitigation bank or ILFP.

A wealth of data related to water quality assessments and conservation opportunities is publically available from several resources (Division of Forestry FRAS Priority areas, Division of Wildlife Focus Areas, and Ohio EPA TMDL locations). These resources provide scientific based data from which mitigation priorities can be established and potential mitigation project sites can be identified. Mitigation projects can then establish specific, quantifiable targets for water quality improvement and aquatic resources restoration.

Long-Term Management Strategy

The ILFP projects completed by OWF will include an appropriate entity to assure long-term stewardship. Established, restored, enhanced, or preserved streams and their buffers shall be protected in perpetuity in a site protection instrument that shall run with the land and shall remain in place in the event of transfer of the land. Per 33 CFR 332.8(t)(2), real estate instruments, management plans, or other long-term protection mechanisms used for site protection must be finalized before advance credits can become released credits. If portions of acquired properties are not used for compensatory mitigation, those portions may be excluded from the long-term protection mechanisms. Owners and long-term stewardship providers will typically be units of government including: metropolitan park districts; Soil and Water Conservation Districts; Ohio Department of Natural Resources or other appropriate natural resource/educational entities. In some cases, non-governmental organizations or watershed-based organizations may be engaged to provide long-term stewardship and/or ownership of compensatory mitigation projects. Achieving an ecologically stable mitigation project that achieves the maximum level of aquatic ecosystem functions and services with the minimum amount of human involvement will be the goal of each ILFP mitigation project. The Long-Term Management and Maintenance Plan shall include, at a minimum, provisions for:

1. Periodic inspections to evaluate the site for signs of trespassing or vandalism. Maintenance will include reasonable actions to deter trespassers and repair any damaged features.
2. Monitoring the condition of structural elements and facilities of the site such as signage, water level control structures, fencing, roads, and trails and provisions to repair said structures, if necessary.

OWF will be responsible for developing a Long-Term Management and Maintenance Plan for each mitigation site. OWF will enter into an agreement with the long-term management entity/owner. This agreement will be provided to USACE and shall include the requirement that the long-term manager/owner shall manage the site consistent with the terms of the project mitigation plan. Once a mitigation site has met its performance goals and has been transferred to the site steward, the steward will be tasked with meeting any and all long-term management responsibilities outlined in that site's management and maintenance plan. OWF shall transfer the long-term management funds/account or otherwise arrange for disbursements from such funds/account to the land stewardship entity once the IRT has concurred that the project has met the established performance goals or IRT approved modified performance goals and monitoring can be stopped. Since the long-term financial needs vary by project, the amount of management funds transferred to the long-term stewardship/owner will be established in the mitigation plan for each mitigation project.

Per 33 CFR 332.7(a)(3), the real estate instrument, management plan, or other long-term protection mechanism must contain a provision requiring 60-day advance notification to the District Engineer before any action is taken to void or modify the instrument, management plan, or long-term protection mechanism, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site.

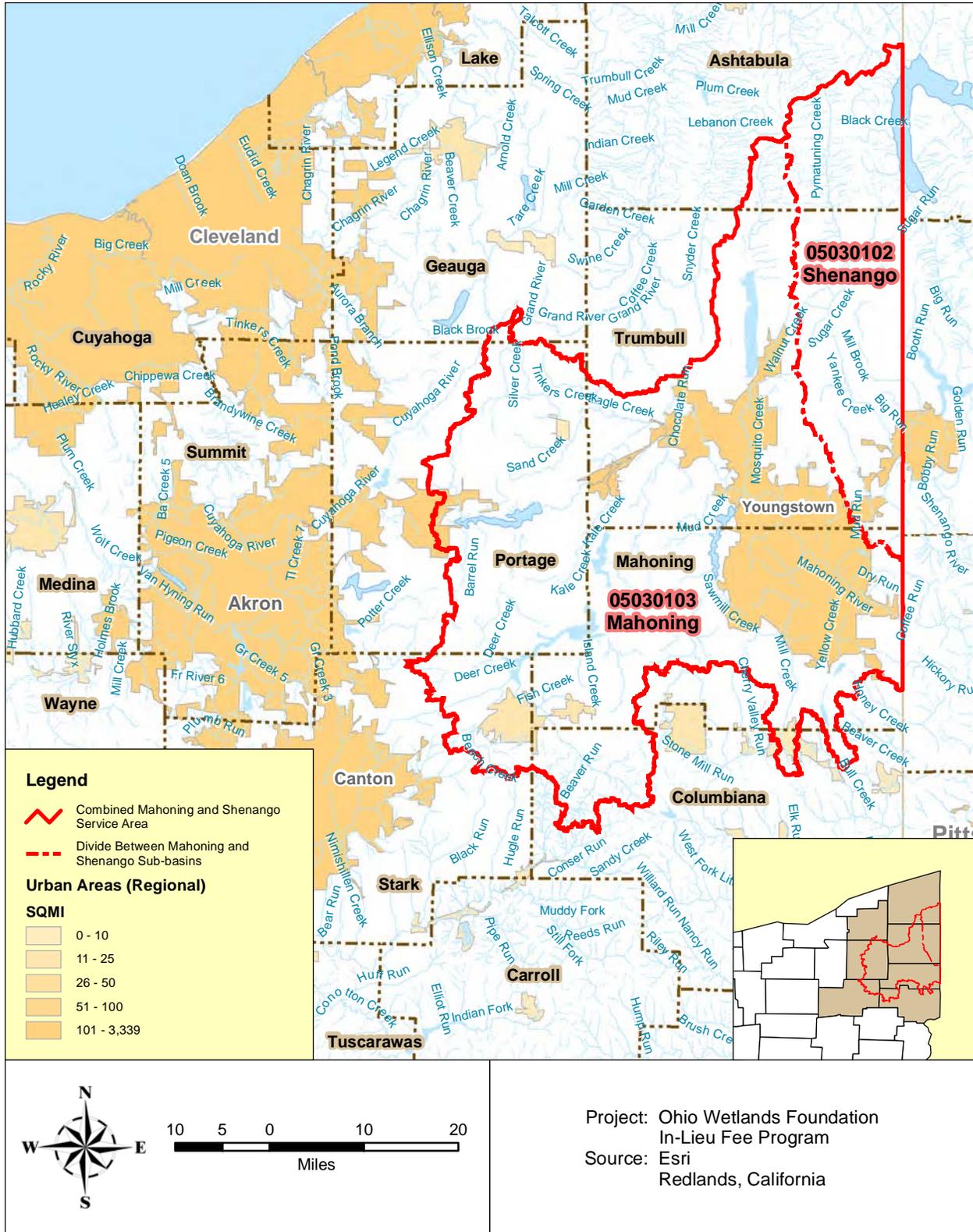
Sponsor Qualifications

In addition to being a recognized leader in wetland mitigation within the State of Ohio, OWF also constructs and secures high-quality compensatory stream mitigation projects for permittees. Mr. Messerly, President of OWF, has personally overseen the successful design and construction of over 30,000 linear feet of stream restoration and the permanent protection of over 45,000 linear feet of stream within the State. Additionally, OWF recently partnered with Wetland Resource Center to provide over 65,000 linear feet of stream mitigation, consisting of both restoration and preservation, for the Ohio Department of Transportation's Portsmouth Bypass project (PID 19415) in Scioto County, Ohio.

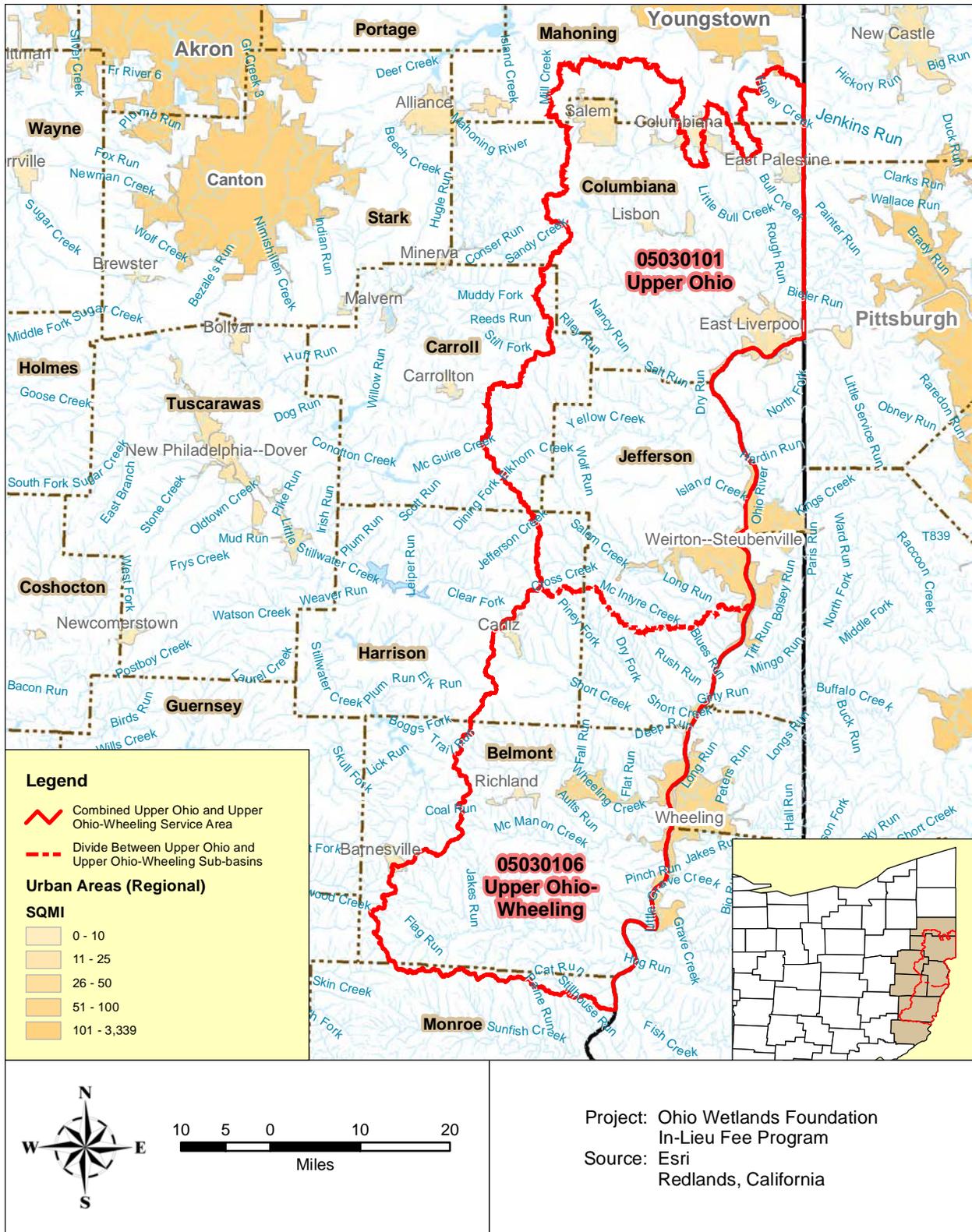
OWF is a non-profit entity recognized under Section 501(c)3 of the Internal Revenue Code and its operations directly involve the restoration and preservation of wetland and stream resources. As a non-profit, natural resource based entity, OWF meets the requirements of 33 CFR 332.2 to be an ILFP sponsor. OWF will continue to have the authority under the instrument to enter into agreements with state agencies, non-profit organizations, for-profit organizations, and individuals to implement the ILFP. All activities conducted by third parties under this instrument are the responsibility of OWF.

Appendix A
Location of Service Areas on Ohio Map

Mahoning and Shenango Service Area



Upper Ohio and Upper Ohio-Wheeling Service Area



Appendix B

Compensation Planning Framework

Element I

Geographic service areas including a watershed-based rationale for the delineation of each service area.

The OWF ILFP will operate in two distinct service areas based upon grouped 8-digit HUC watersheds.

- Shenango River watershed within Ohio (HUC 05030102) and Mahoning River watershed within Ohio (HUC 05030103).
- Little Beaver and Yellow Creeks (Upper Ohio 05030101) and Short, Wheeling and Captina Creeks (Upper Ohio-Wheeling 05030106) within Ohio.

In accordance with 33 CFR 332.8(d)(6)(ii)(A), after a careful evaluation of historical permitting activity, and in consultation with USACE Pittsburgh and the IRT, OWF has determined that combined 8-digit HUC watershed service areas are necessary for the success of the OWF ILFP due to the rural nature of this portion of Ohio and the small amount of annual impacts within some of the individual 8-digit watersheds. OWF will attempt, over time, to site mitigation projects within the service areas so that compensatory mitigation is provided within each of the four 8-digit HUC watersheds in a manner relative to the amount of impact that occurs in each (e.g. a watershed approach). The type of impacts and watershed priorities will guide ILFP project selection, development, and implementation.

Element II

Description of threats to aquatic resources in the service areas, including how the in-lieu fee program will help offset impacts resulting from those threats

The OWF ILFP will help to offset impacts resulting from the threats described below by providing replacement stream length, functions, and values through restoration, establishment, or enhancement, and/or by preserving the highest quality water resources, as appropriate.

Shenango and Mahoning Service Area

Water quality threats in these watersheds result from several different sources, including municipal and individual residential waste water treatment systems, removal of riparian corridor, dams/impoundments, channelization, agricultural runoff, urban runoff, invasive species, and oil and gas extraction operations (Figure 1). The history of heavy industry in this region of the state has left numerous relic brown fields in the area, which also contribute to the degradation of water quality in these watersheds. Significant continuing future threats to water quality in this area include increasing urbanization (and associated storm water runoff, riparian habitat removal, and nutrient loading) related to the growth of cities and municipalities, oil and gas production, conversion of forested land to other uses, and intensification of agriculture and livestock farming.

Upper Ohio and Upper Ohio-Wheeling Service Area

Water quality threats in these watersheds result from several different sources, including municipal and individual residential waste water treatment systems, removal of riparian corridor, dams/impoundments, oil and gas production (Figure 1 and 2), channelization, agricultural runoff, sedimentation, invasive species, and acid mine drainage (AMD).

AMD is of particular importance to water quality, as this portion of Ohio accounts for a large percentage of the coal production of the state; Belmont County alone produces 55% of the coal within Ohio (Belmont County SWCD 2011). Accidental slurry releases from coal mines have also impacted the chemical and biological integrity of several creeks and streams within these watersheds. In addition to the direct effects on water quality, slurry release cleanup activities also impact the integrity of the affected water bodies, as remediation activities often disturb riparian corridors and the stream channels themselves.

Unlike several other portions of Ohio, this region has not experienced large population growth over the past several decades. As such, environmental impacts associated with increasing urbanization (storm water runoff, nutrient loading, conversion of forested land to other uses) have not had a large effect on these watersheds. However, utilization of abundant natural resources such as timber, coal, and natural gas will continue to have an impact on the streams and creeks in this part of the State.

Element III

An analysis of historic aquatic resource loss in the service areas

Shenango and Mahoning Service Area

The Shenango and Mahoning Service Area has a legacy of agriculture, heavy industry, and urbanization that has resulted in extensive impacts to aquatic resources in the watersheds, both in terms of outright loss and water quality degradation.

Agriculture has been a primary commercial focus of the region dating back to the initial settlement of this portion of the state in the early 1800s. In addition to the conversion and draining of wetlands to cropland, agricultural activities resulted in sedimentation of the watersheds' creeks and rivers, and was often coupled with direct manipulation (ditching, channelization, installation of dams) to control the flow of water through the landscape.

Industrial activity in areas such as Youngstown, Warren, and Lordstown resulted in the construction of large factories and other facilities. Many of these industries utilized toxic chemicals and heavy metals in their day to day operations. Accidents, intentional dumping, and other releases of toxic waste into waterbodies have been persistent problems in the region.

Expansion of urban areas associated with large cities and villages, including Youngstown, Warren, Ravenna and Alliance, among others, have resulted in direct impacts to streams and wetlands, and conversion of open space to more intensive land uses. Failing septic systems, combined sewer overflows, and storm water runoff have all contributed to the degradation of water quality in this service area. Growth of these communities also resulted in increased development of roads and other modes of transportation, resulting in fragmentation of wetland and natural areas.

Upper Ohio and Upper Ohio-Wheeling Service Area

The Upper Ohio and Upper Ohio-Wheeling Service area encompasses a large portion of the coal producing region of Ohio. Ohio is located in the northern portion of the Appalachian Coal Basin, one of the largest coal fields in the United States. According to Ohio Department of Natural Resources (<http://ohiodnr.com/mineral/history/tabid/17883/Default.aspx>), coal mining began in Ohio around 1800 and operated as an unregulated industry for approximately 150 years.

Much of the early coal mining occurred below ground, but surface mining became more widespread in the 1930s. Stricter coal mining standards began to be implemented in the mid 1900's, culminating with the passage of the Surface Mining Control and Reclamation Act of 1977. Historic coal mining in the region has left a pervasive environmental legacy in many areas, with acid mine drainage a widespread issue in many locales. Coal mining resulted in the degradation of surface water quality and outright loss of streams and wetlands due to mining activities.

Although not as widespread as in the Mahoning and Shenango service area, heavy industry in the service area centered on the larger streams and along the Ohio River has left a similar environmental legacy. Of particular note within the Little Beaver Creek watershed is the Nease Chemical Superfund site, which resulted in large amounts of the chemical mirex contaminating ground water and soil within the Middle Fork of Little Beaver Creek.

Element IV

An analysis of current aquatic resource conditions in the service areas

Shenango and Mahoning Service Area

During the 2008 Ohio Environmental Protection Agency (EPA) biological and water quality study of the Shenango River watershed in Ohio, only 38% of the sites sampled within the Pymatuning Creek and Pymatuning Reservoir tributaries subwatersheds met full aquatic life use attainment, while 60% of the sites sampled in the Yankee and Little Yankee Creeks subwatersheds met full aquatic life use attainment (Ohio EPA 2011). In the upper Mahoning study conducted by Ohio EPA in 2006, only 38.4% of the sites sampled met full aquatic life use attainment. In the lower Mahoning study of 1994 that evaluated sites along the mainstem of the Mahoning River, a mere 7.6% of the sites sampled met full aquatic life use attainment (Ohio EPA 1996). These studies reflect current and past anthropogenic impacts to the water bodies within these watersheds.

Upper Ohio and Upper Ohio-Wheeling Service Area

Extensive sediment and acid mine drainage has greatly affected the water quality and biological integrity of numerous streams in this service area. Conversely, several unimpacted, high-gradient creeks in this region boast some of the highest water quality levels in the state. A portion of Little Beaver Creek 36 miles in length is designated as both a State Wild and Scenic and National Scenic River. Little Beaver Creek and Captina Creek support the largest populations of endangered hellbender salamanders (*Cryptobranchus alleganiensis*) in the State of Ohio. Ohio EPA recently added several water bodies within this service area to the state list of outstanding State waters and superior high quality waters.

The 1999 Ohio EPA biological and water quality study (results obtained from the Beaver Creek TMDL report) determined that only 58% of the sites sampled met full attainment of the designated aquatic life use, while 23% of the sites were in non-attainment. A variety of non-point sources contribute pollutant loadings to the Little Beaver Creek watershed, including agricultural activities, storm water runoff, failing septic systems, and coal mining operations.

Conversely, the 2010 Ohio EPA biological and water quality study of the Captina Creek watershed documented that the majority (94%) of the streams in this watershed are currently fully meeting the designated or recommended aquatic life use.

Despite historic and active coal mining in this area, water quality in the watershed has been consistently good. All of the Captina Creek mainstem sites sampled in 2008 and 2009 attained Exceptional Warmwater Habitat fish and macroinvertebrate biocriterion. Captina Creek is comparable to several of the best streams in Ohio including Big Darby Creek and the Kokosing River.

According to the 2005-2006 Ohio EPA biological and water quality study of the Yellow Creek and selected tributaries, much of the streams sampled (65%) reached levels of performance associated with Exceptional Warmwater Habitat, potential Coldwater Habitat, or both. Only 8 of the sites sampled (12%) failed to meet Warmwater Habitat criteria. Like Captina Creek, the level of biological performance in the Yellow Creek basin ranks among the highest in the state.

Element V

Aquatic resource goals and objectives

OWF will provide enhancement, establishment, restoration and/or preservation of streams within the service areas of the ILFP as compensatory mitigation for permitted impacts to these water resources. In addition to this general goal, OWF will strive to align its activities with the objectives of existing watershed action plans and the operations of conservation organizations functioning within the service areas. Information regarding these plans and groups are provided below.

Shenango and Mahoning Service Area

A Shenango River Watershed Conservation Plan, funded in part by the Pennsylvania Department of Conservation and Natural Resources, was published in 2005 by the Western Pennsylvania Conservancy. Similarly, the Mahoning River has been the focus of a watershed action plan (primarily focusing on Mosquito Creek and the lower Mahoning watershed area), published in 2004 by the Mahoning River Consortium. These documents outline goals and procedures to protect, restore and enhance the Shenango River and Mahoning River watersheds' natural resources and regional assets. These plans utilized input from watershed community stakeholders to identify important issues and pinpoint resources needing restoration, protection, conservation, and/or preservation so that a long-term vision for the watershed could be developed and attained.

Watershed Management Goals

The Shenango River Watershed Conservation Plan and the Mahoning River Watershed Action Plan developed a list of management recommendations to help improve the quality of life and water quality within the watersheds. The following management strategies are approaches that OWF ILF projects may specifically address. Implementation priorities taken from the Shenango River Watershed Conservation Plan are included in brackets after each of its associated management strategies.

- Protect critical and environmentally sensitive areas with land-use regulations (High).
- Utilize best management practices to control erosion and sedimentation in agriculture, forestry, development, and mining industries (High).
- Protect natural areas by converting them into parks, purchasing conservation easements, or utilizing other conservation methods (Medium).
- Protect wetland habitats for their many uses and benefits (High).
- Expand outreach to municipal and county officials for planning and implementation of future wetland mitigation and the establishment of new wetlands (Medium).
- Inventory and monitor wetland plants and animals; take action when and where necessary to eradicate any invasive species (Low).
- Protect and enhance existing riparian buffers to achieve maximum protection of water resources (High).
- Identify and protect additional environmentally sensitive areas and areas of high biodiversity (High).
- Protect habitats that support threatened and endangered species and species of concern through acquisition, easements, and/or landowner education (High).
- Acquire property or easements on land in the 500 year floodplain, wetlands, and critical wildlife habitat.
- Identify and implement projects to enhance the aesthetic quality, wildlife habitat, and sustainability of the river corridor.

Upper Ohio and Upper Ohio-Wheeling Service Area

A Little Beaver Creek Watershed Conservation Plan was published in 2006 by the Little Beaver Creek Land Foundation. Captina Creek has also been the focus of a watershed action plan, a draft version of which is currently in development by the Belmont County Soil and Water Conservation District. The Yellow Creek Watershed Restoration Coalition is also active in watershed management in conjunction with the Jefferson County Soil and Water Conservation District. These documents and resources outline goals and procedures to protect, restore and enhance the Little Beaver Creek, Captina Creek, and Yellow Creek watersheds' natural resources and regional assets. These plans utilized input from watershed community stakeholders to identify important issues and pinpoint resources needing restoration, protection, conservation, and/or preservation so that a long-term vision for the watershed could be developed and attained.

Watershed Management Goals

The Little Beaver Creek and the Captina Creek Watershed Action Plans developed a list of management recommendations to help improve the water quality and biological integrity of the watersheds. The following management strategies are approaches that OWF ILF projects may specifically address.

- Source water (springs, seeps) protection.
- Construction of AMD wetland treatment systems.
- Acquisition of conservation easements to protect areas of high natural integrity, and areas that provide critical habitat for flora and fauna.
- Gob (spoil) pile reclamation and remediation.

Element VI

Prioritization strategy for selecting and implementing mitigation activities

Potential sites for ILF mitigation projects will target priority conservation habitats best suited to replace lost stream functions. The search for mitigation sites will seek input from existing watershed coordinators, Soil and Water Conservation Districts, other watershed-based groups/NGO's, permit applicants, communities, counties, ecological consultants, and other state and federal resource agencies. Additionally, geographic spatial data resources will be reviewed (such as National Wetland Inventory Maps, National Resource Conservation Service Web Soil Surveys, U.S. Geological Service StreamStats, and aerial imagery) to help identify and review each potential mitigation site.

Emphasis will be placed on identifying sites that are locally and regionally significant in terms of their contribution or potential contribution to provide key wildlife habitat; reduce sediment and/or nutrient loading, provide public access for recreation and education; and are owned by entities willing to participate in the ILFP.

Element VII

Preservation objectives

33 CFR 332.3(h) states that preservation must protect resources that provide important physical, chemical or biological functions. These resources must be under threat of destruction or adverse modification. Preserved sites must be permanently protected through an appropriate real estate or legal instrument.

Under the OWF ILFP, preservation projects will incorporate objectives identified within the watershed approach to protecting aquatic habitat and functions. These projects may include preservation of high quality streams, protecting areas of critical habitat for threatened or endangered species, or conserving important natural areas. These areas may include sites identified in regional watershed action plans, or conservation plans developed by U.S. Fish and Wildlife Service, or Ohio Department of Natural Resources, Division of Wildlife.

In accordance with the federal mitigation rule, preservation-only projects may be used to provide compensatory mitigation when the following criteria are met:

- The resources to be preserved provide important physical, chemical, or biological functions for the watershed;
- The resources to be preserved contribute significantly to the ecological sustainability of the watershed;
- Preservation is determined by the District Engineer to be appropriate and practicable;
- The resources are under threat of destruction or adverse modification;
- The preserved site will be permanently protected through an appropriate real estate or other legal instrument.

Element VIII

Description of stakeholder's involvement

As the ILFP sponsor, OWF will work closely with federal and state agencies, other conservation partners, and private landowners to identify projects that take into account local knowledge and planning efforts.

OWF has worked extensively with a wide variety of government agencies, NGOs, and county and local administrators in the past. OWF will work collaboratively with partners in Ohio to evaluate stream mitigation opportunities, and to develop mitigation plans and assessment strategies. Projects will be evaluated using standard quantitative assessment methodologies pre- and post-project implementation to help determine the effect of the restoration activities on the aquatic ecosystem. Use of standard assessment methodologies will allow for the performance of OWF ILF projects to be compared against other restoration activities.

In addition to the expertise and experience of the program sponsor, OWF regularly collaborates with environmental consultants that provide additional knowledge and technical proficiency to help identify, implement, and evaluate the performance of a restoration project. OWF will work closely with volunteers and local partners to create projects that maximize conservation potential and target water quality improvements.

OWF will strive to create strong relationships and partnerships with conservation groups and private landowners that share common restoration and preservation goals and strategies. These bonds will allow OWF to further target and prioritize projects with the maximum potential for improving the aquatic ecosystem, protecting important wildlife habitat, and enhancing existing conservation strategies and goals. OWF will continue to foster relationships with partners from federal, state, local, academic, industry, and private entities to ensure that successful conservation and restoration projects are completed.

Potential partners and stakeholders include:

- **Federal Government Agencies**
 - U.S. Army Corps of Engineers
 - U.S. Fish and Wildlife Service
 - Natural Resource Conservation Service
 - U.S. Environmental Protection Agency
 - National Park Service
 - National Oceanic and Atmospheric Administration
- **State Agencies**
 - Ohio Environmental Protection Agency
 - Ohio Department of Natural Resources
 - Ohio Historic Preservation Office
- **Other**
 - Conservation organizations
 - Watershed action groups (including but not limited to the Mahoning River Consortium, and Little Beaver Creek Land Foundation)
 - Soil and Water Conservation Districts
 - Land trusts
 - Private landowners
 - Industry groups
 - Environmental consultants

These partners can assist with a variety of tasks related to the ILFP, including identifying potential mitigation projects, holding easements or environmental covenants, assisting with the development and implementation of monitoring programs, and providing long-term management and resource protection.

Element IX

Description of long-term protection and management

OWF will be responsible for developing and implementing a long-term protection and management plan for each OWF ILF project. On privately-owned property, including property held by OWF or other conservation organizations, real estate instruments will be developed and recorded to provide legal mechanisms to protect aquatic resources in perpetuity. Draft conservation easements or equivalent protection mechanisms will be submitted to the IRT as part of each project mitigation plan for review and approval.

In the event that projects are implemented on publicly-owned property, long-term protection and management may be provided through facility management plans or integrated natural resource plans.

To the maximum extent practicable, OWF ILF projects will be designed to require little or no long-term management efforts once performance standards have been achieved. OWF will be responsible for maintaining OWF ILF program projects consistent with the mitigation plan to ensure long-term viability as functional aquatic resources. OWF shall retain responsibility unless the long-term management responsibility is formally transferred to a USACE approved long-term manager. The long-term management plan developed for each OWF ILF project will include a description of anticipated management needs with annual cost estimates and an identified funding mechanism (such as non-wasting endowments, trusts, contractual arrangements with future responsible parties, or other appropriate financial instruments).

The final conservation easement or equivalent mechanism for long-term protection will be submitted to the IRT for review upon acquisition of the site and will be the first milestone for which credit release can occur. Upon achieving its performance standards and approved transfer of the project for long-term management and protection OWF will request that USACE issue written “closure certification” in coordination with the IRT.

Element X

Program monitoring and reporting

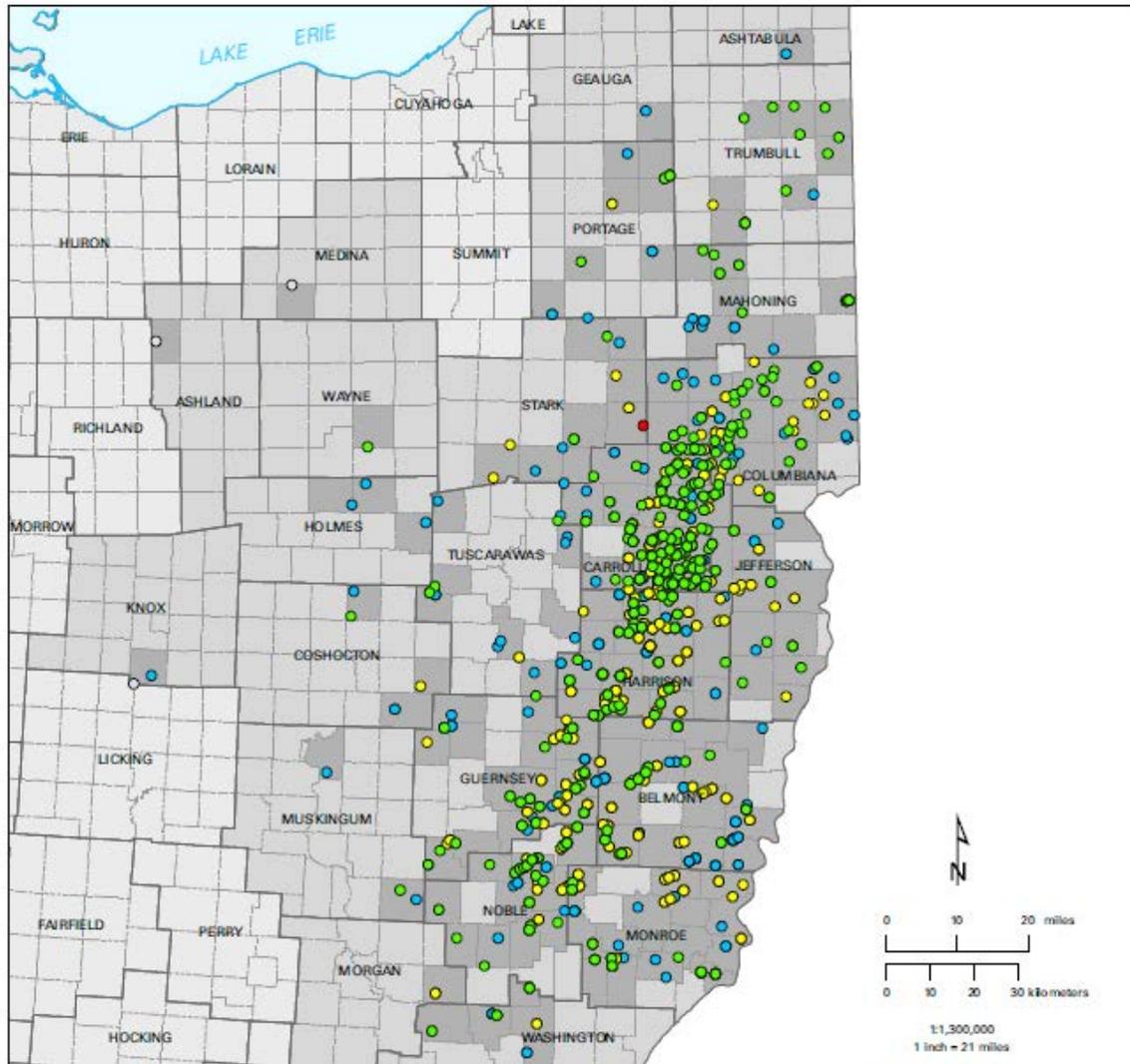
OWF will submit an Annual Program Report to the IRT no later than March 31 of each year and will include program data from the previous calendar year (January 1 – December 31).

OWF will periodically provide an evaluation report documenting performance and success of the OWF ILFP as established in the final Instrument and Compensation Planning Framework. This evaluation report will identify programs strengths, and any perceived weaknesses in implementation of the program’s projects. Finally, these reports will provide documentation of any proposed changes to the Compensation Planning Framework.

Annual mitigation monitoring reports will be submitted to USACE for each OWF ILF project.

These reports will document the current status of the water resources on the mitigation sites, and will provide details regarding the trajectory of the site to meet established performance standards.

Appendix B, Figure 1 Horizontal Utica-Point Pleasant Well Activity



EXPLANATION

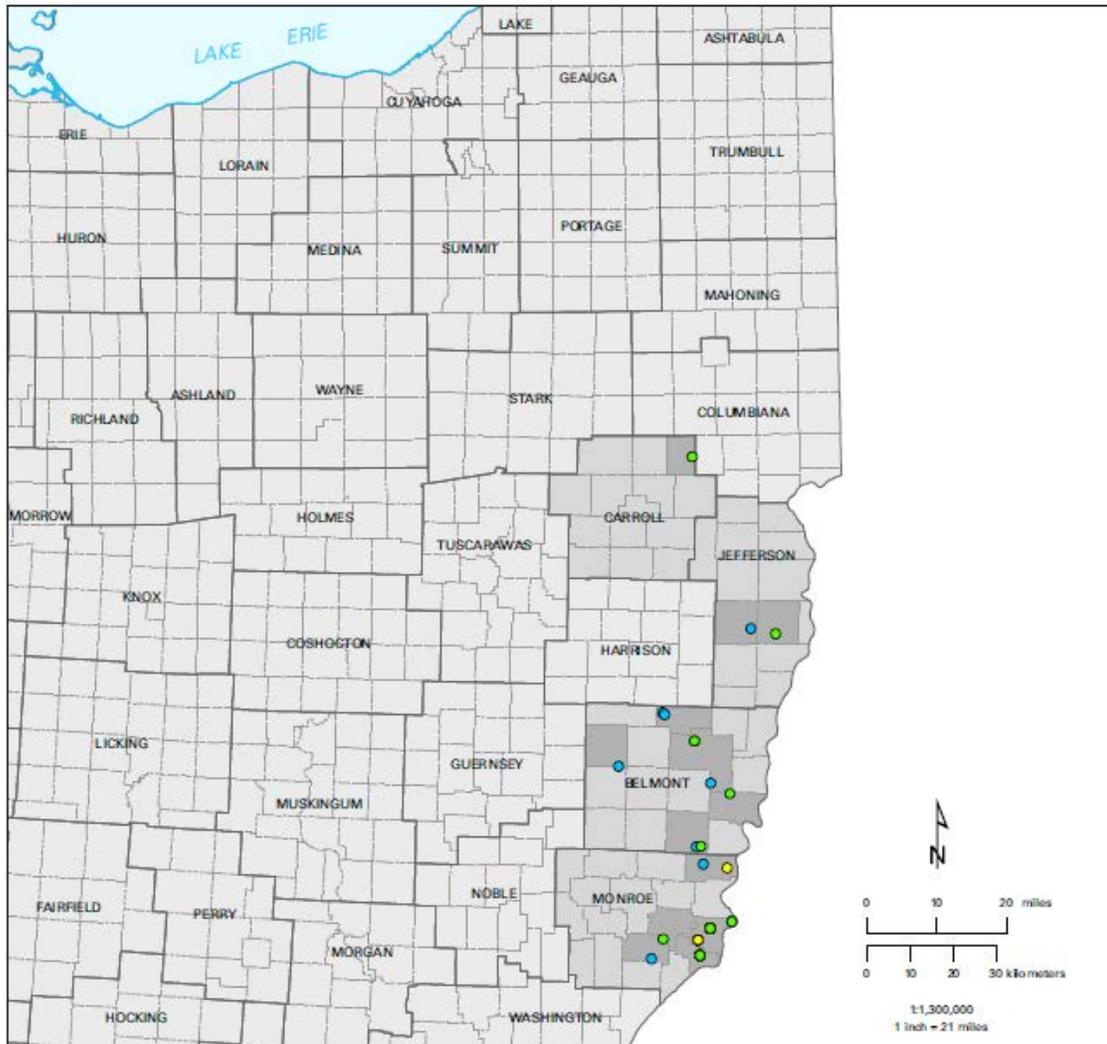
Horizontal well status as of 10/4/2014

- PERMITTED - Permitted, Not Drilled, or Canceled (432)
- DRILLED - Drilled or Drilling (498)
- PRODUCING - Producing or Plugged Back (584)
- INACTIVE - Drilled Inactive or Shut in (1)
- PLUGGED - Final Restoration or Lost Hole (16)
- Dry and Abandoned (3)

Well permit information from the ODNR Division of Oil and Gas Resources Management
Recommended citation:
 Ohio Department of Natural Resources, 2014, Horizontal Utica-Point Pleasant Well Activity in Ohio: Columbus, scale 1:1,300,000, revised 10/7/2014.

OPERATOR	COUNT
AMERICAN ENERGY UTICA, LLC	89
ANAGAR RD & P ONSHORE LLC	12
ANTERO RESOURCES CORPORATION	107
ATLAS NOBLE LLC	12
BELTA ENERGY LLC	1
BP AMERICA PRODUCTION COMPANY	2
B RAMMER ENGINEERING INC	2
CARRIHO UTICA, LLC	12
CHESSAPAKE EXPLORATION LLC	703
CHEVRON APPALACHIA LLC	9
CMR GAS COMPANY LLC	43
CONY ENERGY PRODUCTION CO	13
ECLIPSE RESOURCES I LP	72
EM ENERGY O&G LLC	8
ENERVEST OPERATING L	22
DOT PRODUCTION COMPANY	8
GULFSOUTH ENERGY CORPORATION	154
HALLCOON OPERATING COMPANY INC	11
HALL DRILLING LLC (OIL & GAS)	8
HESD O&G DEVELOPMENTS LLC	64
HIG ENERGY LLC	22
HILCORP ENERGY COMPANY	16
MOUNTAINEER WESTONE LLC	8
POC ENERGY INC	28
R E GAS DEVELOPMENT LLC	24
REE DRILLING LLC	8
SERRA RESOURCES LLC	3
STATOIL LEA ONSHORE PROP INC	2
SUNBELT	1
TRAKO HUNTER LLC	16
XTO ENERGY INC	24
TOTAL	1,924

Appendix B, Figure 2 Horizontal Marcellus Shale Activity



EXPLANATION

Horizontal well status as of 10/4/2014

- PERMITTED - Permitted, Not Drilled, or Canceled (17)
- DRILLED - Drilled or Drilling (15)
- PRODUCING - Producing or Plugged Back (11)
- INACTIVE - Drilled Inactive or Shut in (1)
- PLUGGED - Final Restoration or Lost Hole (0)
- Dry and Abandoned (0)



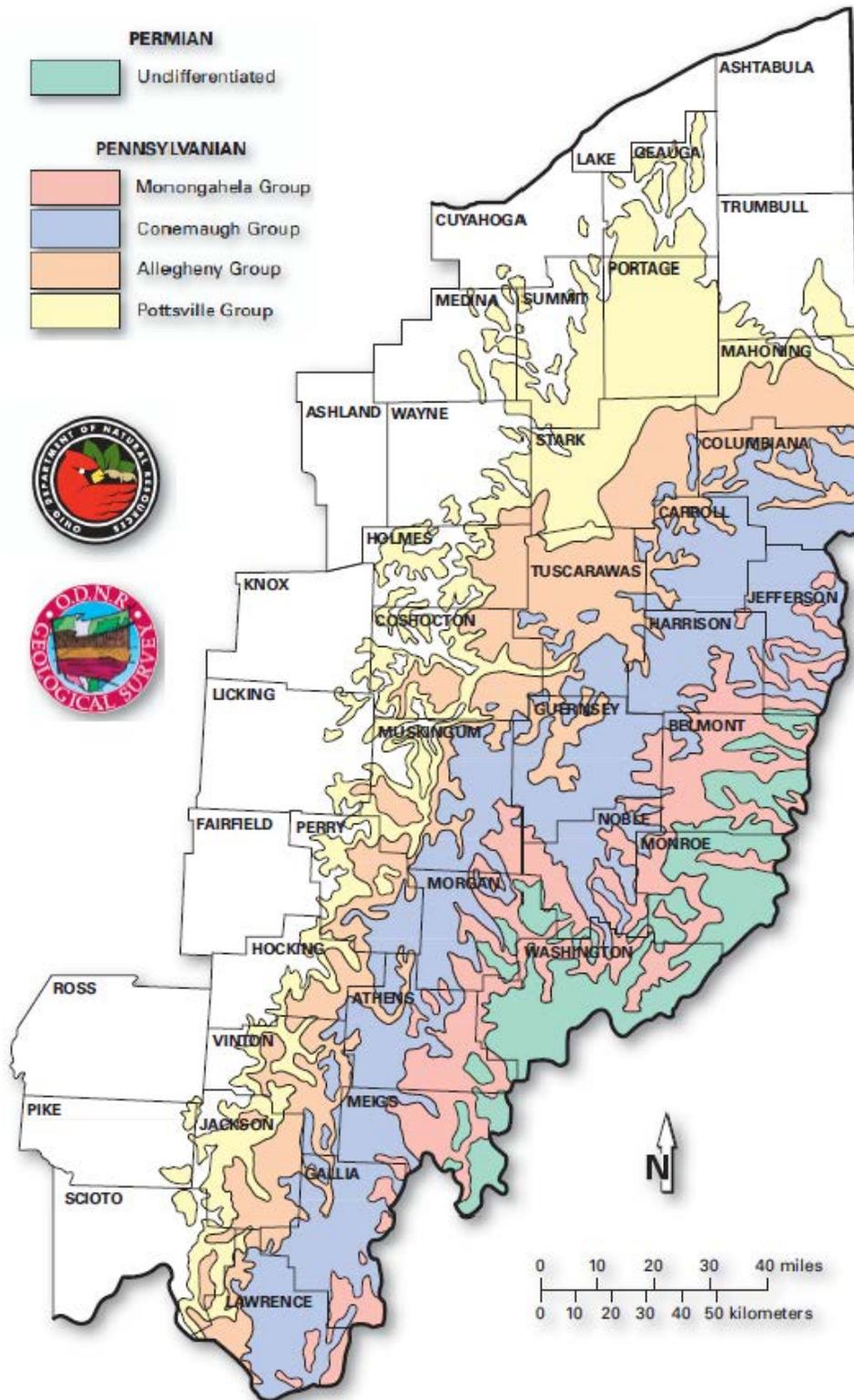
Well permit information from the ODNR Division of Oil and Gas Resources Management

Recommended citation:

Ohio Department of Natural Resources, 2014, Horizontal Utica-Point Pleasant Well Activity in Ohio: Columbus, scale 1:1,300,000, revised 10/7/2014.

OPERATOR	COUNT
AMERICAN ENERGY UTICA LLC	3
CHESAPEAKE EXPLORATION LLC	1
CNX GAS COMPANY LLC	1
ECLIPSE RESOURCES I LP	1
EM ENERGY OHIO LLC	1
GULFPORT ENERGY CORPORATION	1
HESS OHIO RESOURCES LLC	3
PHILLIPS EXPLORATION INC.	1
PROTEGE ENERGY I LLC	1
STATOIL USA ONSHORE PROP INC.	14
TRIAD HUNTER LLC	13
XTO ENERGY INC.	4
TOTAL	44

Appendix B, Figure 3 Map of Coal-Bearing Rocks of Ohio



Appendix B, Figure 4
New Outstanding and Superior High Quality Waters of Ohio



Appendix C

References

- Belmont County Soil and Water Conservation District. 2012. *Draft Captina Creek Watershed Action Plan*. St. Clairsville, Ohio.
- Little Beaver Creek Land Foundation. 2006. *Draft Management Plan for the Little Beaver Creek Watershed*. Lisbon, Ohio.
- Mahoning River Consortium. 2004. *Mahoning River Watershed Action Plan*. Youngstown State University. Youngstown, Ohio.
- Ohio Department of Natural Resources. 2008. *Coal*. Division of Geological Survey, Educational Leaflet No. 8. Columbus, Ohio.
- Ohio Department of Natural Resources. 2014. *Horizontal Marcellus Shale Well Activity in Ohio*. Division of Geological Survey. Columbus, Ohio.
- Ohio Department of Natural Resources. 2014. *Horizontal Utica-Point Pleasant Well Activity in Ohio*. Division of Geological Survey. Columbus, Ohio.
- Ohio Environmental Protection Agency. 1994. *Biological and Water Quality Study of the Mahoning River Basin*. Division of Surface Water, OEPA Technical Report MAS/1995-12-14. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2005. *Total Maximum Daily Loads for the Little Beaver Creek Watershed*. Division of Surface Water. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2006. *Biological and Water Quality Study of the Mahoning River and Yellow Creek*. Division of Surface Water, OEPA Report EAS/2006-11-5. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2008. *Biological and Water Quality Study of Yellow Creek and Selected Tributaries, 2005-2006*. Division of Surface Water, OEPA Technical Report EAS/2008-7-7. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2009. *Biological and Water Quality Study of the Captina Creek Watershed*. Division of Surface Water, OEPA Report DSW/EAS 2010-4-1. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2009. *Total Maximum Daily Loads for the Yellow Creek Watershed*. Division of Surface Water. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2011. *2008 Biological and Water Quality Study of the Ohio Tributaries to the Shenango River*. Division of Surface Water, Ohio EPA Technical Report EAS/2011-1-2. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2011. *Map of New Outstanding and Superior High Quality Waters of Ohio*. Division of Surface Water. Columbus, Ohio.
- Ohio Environmental Protection Agency. 2011. *Total Maximum Daily Loads for the Upper Mahoning River Watershed*. Division of Surface Water. Columbus, Ohio.
- Western Pennsylvania Conservancy. 2005. *Shenango River Watershed Conservation Plan*. Blairsville, Pennsylvania.