

## **Guidance for Preparing a Preliminary Jurisdictional Determination Report for Mining Projects within the State of Ohio**

### **Introduction**

The United States Army Corps of Engineers (Corps), acting under Section 404 of the Clean Water Act and Section 10 of the River and Harbors Act of 1899, regulates certain activities occurring in waters of the United States (U.S.). Under Section 404 of the Clean Water Act, authorization must be obtained from the Corps for discharges of dredged and/or fill material into waters of the U.S., including jurisdictional wetlands. Under Section 10 of the Rivers and Harbors Act of 1899 the Corps regulates work in, or affecting, navigable waters of the U.S.

For the purposes of Section 404 of the Clean Water Act, waters of the U.S. are defined at 33 CFR 328.3 as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - a. which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - b. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the U.S. under the definition;
5. Tributaries of waters identified in paragraphs 1-4 above;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1-6 above.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the U.S.

Under Section 10 of the River and Harbors Act of 1899, the Corps regulates navigable waters of the U.S., a subset of waters of the U.S. Navigable waters of the U.S. are defined at 33 CFR 329 as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

The limit of Corps jurisdiction for non-tidal waters of the U.S. in the absence of adjacent wetlands is the ordinary high water mark. "Ordinary high water mark" is defined as that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands. Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Delineations of wetlands must be conducted using the "Corps of Engineers Wetland Delineation Manual", Corps Waterways Experiment Station Wetlands Research Program Technical Report Y-87-1, dated January 1987 (on-line edition available at <http://www.wes.army.mil/el/wetlands/wlpubs.html>), including all supplemental guidance (currently includes guidance dated October 7, 1991, and March 6, 1992). The supplemental guidance is included in the on-line version and may also be obtained from your Corps district office. Adjacent is defined as bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands." When the water of the U. S. consists only of wetlands the jurisdiction extends to the limit of the wetland.

### **Jurisdictional Determinations**

To determine whether a permit is required under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for a project, it is necessary to delineate the location and boundaries of waters of the U.S., including adjacent wetlands, and navigable waters of the U.S. within the project area. This involves:

1. the delineation of potential waters of the U.S., including water features that possess an ordinary high water mark and those that meet the definition of a wetland as described above; and

2. a determination of which water features meet the definition of waters of the U.S. and navigable waters of the U.S.

### **Jurisdictional Determination Reports**

Jurisdictional Determination (JD) reports are prepared to obtain Corps verification of limits of waters of the U.S. for projects. Verifications are valid for a period of up to five years unless site conditions warrant revisions. JD reports should be submitted to the Corps for verification prior to the submittal of applications to the Ohio Department of Natural Resources (ODNR), Ohio Environmental Protection Agency (OEPA), or the Corps.

1. Purpose;

2. Methods, including:

- a. delineation in accordance with the 1987 Wetland Delineation Manual is mandatory for delineating wetlands. The manual identifies different methods for conducting delineations, therefore the method used and rationale for choosing a specific method should be indicated;

- b. description of the conventions used to map the point to point limits of waters of the U.S. (i.e. point to point survey performed by a registered professional land surveyor, GPS mapping with a description of the limits of accuracy (typically sub-meter accuracy) or other acceptable methods pre-approved by the Corps. The survey data must specify the geographic coordinate system used in referencing the data, including projection and datum; and

- c. delineation of the limits of all waters of the U. S. present on-site marked in the field with sequentially numbered survey ribbons and/or stakes. Additionally to ensure field reviews are limited to the subject property or project site, property and/or project site boundaries should be clearly marked in the field.

3. Results, including:

- a. name, address, telephone number, and other appropriate contact information for the property owner and a statement granting the Corps permission to access the property;

- b. vicinity map or maps, (preferably USGS 7.5 minute or other smaller scale topographic maps) depicting the location of the site and showing the limits of the site investigated;

- c. latitude & longitude of the major impact area to waters of the U.S. within the project area;

d. a narrative addressing the size of the project site in square feet and/or acres; a description of any physical features (particularly those that correspond to property boundaries); and information on existing site conditions, including present and past land uses, site modifications, recent disturbances, topography, etc;

e. a characterization of hydrology addressing direction, source (surface or subsurface, including potential irrigation influence), frequency, and duration of on-site drainage, directional features such as gradients, identification of any named waterways on or in the vicinity of the site; discussion of the surface tributary system for each potential water (noting the surface tributary connection to other waters of the U.S.), discussion of the hydrologic flow back to the Section 10 navigable water (Muskingum, Hocking, Tuscarawas, Walhonding, Scioto, Olentangy, and Ohio Rivers), and other pertinent information on hydrology;

f. a characterization of vegetative communities and dominant species (listed by *Genus species*) occurring within each community type;

g. a characterization of soils present on the project site using information derived from county soil surveys, evaluation of soil samples, and other sources. Include soil survey maps for the area with the study area boundaries shown;

h. a comparison of the soils, vegetative, and hydrologic conditions between wetland and upland areas;

i. a description of riparian and other buffer features around water features;

j. photographs taken from several locations throughout the project site, particularly up slope and down slope of any drainage features (streams, ditches, swales, etc.) and at the location of any wetland or ordinary high water mark delineation sample locations, with the locations of data sheets and directional location of ground photos shown;

k. current and historic aerial photographs;

l. any other relevant descriptions or maps, such as county soil surveys, floodplain, or National Wetland Inventory (NWI) maps; and

m. a description and mapping of those aquatic features that exhibit wetland characteristics and are potentially isolated and/or lack an interstate or foreign commerce connection, including any information that may support the Corps's determination of jurisdiction over such areas.

n. 1987 Manual wetland determination data forms, preferably one set (including one upland and one wetland data form) of forms completed and accurately mapped for each feature, wetland, and/or vegetation type present within the project area. Data forms sufficient in number and location to provide a rationale for establishment of a wetland boundary should be included. Depending on the size, shape, and overall complexity of site conditions, additional data forms may be required;

o. references;

p. a statement indicating only the Corps has the authority to determine the jurisdictional status of waters identified.

#### 4. Conclusions, including:

a. a description of, and map depicting, potential waters of the U.S. (water features that have an ordinary high water mark or are wetlands) and navigable waters of the U.S. as defined at 33 CFR 328 and 329, the study area, including any reference to conventions used, e.g. the U. S. Fish and Wildlife Service's Classification of Wetlands and Deepwater Habitats of the United States for wetlands and 67 CFR 2020 for definitions of ephemeral, intermittent, and perennial streams.

b. the map should include the following items:

1. a title block including the names of the companies responsible for the delineation and mapping of waters of the U.S.; dates of delineation and mapping, including any revision dates;

2. a legend identifying any symbols, shading, or patterns depicted on the map;

3. appropriate scale, such as one inch equals 100 or 200 feet;

4. the boundaries of the entire project site or area of investigation;

5. standard mapping convention (i.e. north arrow), topography, and other site features that facilitate the correlation of map location with ground features (i.e. buildings, fence lines, roads, right-of-ways, trees, streams, and topographic features);

6. all Maps must include, at a minimum, a title block with the title, date, number scheme (i.e. Sheet \_\_\_ of \_\_\_), and source; a North indicator; a scale, the map author, the study area boundary, areas delineated to be waters of the U.S. or navigable waters of the U.S., and a legend that clearly identifies features presented. Whenever water features are depicted on a map it is preferable to distinguish between wetlands and other water features, such as streams and on-channel ponds. Maps should be developed so that information presented is clearly marked and shown in relation to the nearest roads, water features, and cities and towns. All maps should be

in black and white on 8.5 by 11 inch paper. Base map sources include: U.S. Geological Survey (USGS) maps, state, county, and city maps, soil survey maps, and floodplain maps.

7. data points sufficient in number to clearly define the limits of all waters of the U.S. with an indication of wetland type according to dominant vegetation (i.e. emergent, scrub shrub, and forested wetlands; lakes, ponds, rivers, and ephemeral, intermittent, and perennial streams), and locations of stream type transition points;

8. three copies of the JD report, including maps, data forms and other supporting documentation, including an optional electronic copy;

The Corps will review JD reports and either verify the conclusions provided in the report or request changes to the report based on our office or field review. Once the Corps agrees with the conclusions presented in the JD report, the Corps will typically send verification of the JD report in writing.

**Example of Delineation Investigation Results**

The following is an example of information typically included in the results section of routine JD report.

Table 1: Streams Identified on *Coal Company Name and Site Identification*

<b>Water</b>	<b>Designation</b>	<b>Length (l.f.)</b>	<b>Width (l.f.)</b>	<b>Area (acres)</b>	<b>QHEI Scores</b>	<b>Length Previously Impacted by Mining</b>
Stream 1	Ephemeral	890	2	0.02	26.5	--
Stream 2	Intermittent	1,678	3	0.07	59.5	--
Stream 3	Perennial	2,387	10	0.27	80.5	--
<b>Total</b>	--	<b>4,955</b>	--	<b>0.36</b>	--	--

Table 2: Wetlands and Open Waters identified on the ....

<b>ID</b>	<b>Type</b>	<b>Jurisdictional</b>			<b>Non-Jurisdictional</b>	
		<b>Wetland (acres)</b>	<b>Open Water (acres)</b>	<b>ORAM Scores</b>	<b>Wetland (acres)</b>	<b>Open Water(acres)</b>
WL-A	Herbaceous	0.7	--	54.5	--	--
Pit Imp 1	Isolated highwall imp.	--	--	--	--	0.4
Pit Imp 2	Open Water	0.1	0.5	--	--	--
Total acreage	--	0.8	0.5	--	--	0.4

## **SAMPLE DESCRIPTIONS OF IDENTIFIED WATERS**

### **Wetland A**

Wetland A, shown in Exhibit 1, consists of a herbaceous wetland dominated by *Phalaris arundinacea* (reed canary grass) and *Carex* sp. (sedge). The soils were identified as hydric, very poorly drained Pewamo silty clay loam. Saturation and drainage patterns were observed as the primary indicators of wetland hydrologic conditions. Wetland A received an ORAM score of 54.5, and is therefore designated a Category II wetland. The surrounding forested upland was dominated by *Acer saccharum* (sugar maple) in the tree layer and *Rosa multiflora* (multiflora rose) in the shrub layer. The herbaceous layer was dominated by *Claytonia virginica* (narrow-leaf spring beauty). Soils were identified as somewhat poorly drained Shoals silt loam. No indicators of wetland hydrologic conditions were observed in the surrounding upland areas.

- *Wetland A discharges into Stream 3.*

### **Pit Impoundment 1**

Pit impoundment 1, shown in Exhibit 2, consists of approximately 0.4-acre of open water, approximately 6' in depth.

- *This pit impoundment retains surface water. It is surrounded to the north and east by a highwall and bound by the south and west by a spoil pile resulting from previous surface mining activities. It does not appear to discharge into a water of the U.S.*

### **Pit impoundment 2**

Open water area 2, shown in Exhibit 3, consists of 0.5-acre of open water with 0.1-acre of herbaceous wetland fringe dominated by cattail.

- *This pit impoundment is bound by a highwall to the north and east. This pit impoundment discharges into Stream 3 on the south side.*

### **Perennial Streams**

Stream 3, shown in Exhibit 6, flows south through the northern portion of the property. Stream 3 discharges into Wills Creek approximately 1 mile south of the project site. Wills Creek discharges into the Muskingum River, a navigable water of the U.S.

The stream channel is moderately sinuous surrounded on the north bank by a narrow to moderate forested riparian zone and the south bank by a narrow forested riparian/agricultural zone. The streambed consists of shale fines, silt and gravel to cobble sized stones. Instream cover consists of overhanging vegetation, rootmats, pools and rootwads. The total length of the drainageway is 2,387 linear feet, with an average channel width of approximately 10'. The channel was mapped as perennial on the USGS Topographic map and was flowing at the time of the site assessment.

*Perennial Streams have flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.*

### **Intermittent Streams**

#### **Stream 2**

Stream 2, shown in Exhibit 5, flows west along the southern property boundary and empties into Stream 3. The total length of the drainageway is 1,678 linear feet, with an average channel width of approximately 3'. This stream originates from springs and surface flow from upland areas. The stream was nearly dry at the time of assessment with a small amount of flow originating from groundwater resources. The stream would likely be considered intermittent, due to its connection to groundwater from the spring.

*Intermittent streams have flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.*

### **Ephemeral Streams**

#### **Stream 1**

Stream 1, shown in Exhibit 4, flows east along the northern property boundary and empties into Stream 8. The total length of the stream is 890 linear feet, with an average channel width of approximately 2'. This stream was dry at the time of the assessment and conveys storm water for a short time following rain events. The dominant substrate type is silt and detritus. Instream cover was nearly absent. This stream is of low quality and appears to be recovering from past modifications to channel morphology. The stream would likely be considered ephemeral due to its apparent lack of connection to groundwater. There were no springs or seeps located above the stream.

*Ephemeral streams have flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.*

## **OHIO WETLAND WATER QUALITY STANDARDS**

- Ohio Environmental Protection Agency (OEPA) has published the Ohio Rapid Assessment Method (ORAM), which can be used to evaluate wetland quality based on functions and values of a wetland. The two primary components of the ORAM are the Narrative Rating and the Quantitative Rating. Completed ORAM (version 5.0) Quantitative Rating forms found at [http://www.epa.state.oh.us/dsw/401/oram50fsf\\_s.pdf](http://www.epa.state.oh.us/dsw/401/oram50fsf_s.pdf) should be completed during the wetland delineation and submitted with the each required copy of the JD report.

## **QUALITATIVE HABITAT EVALUATION INDEX (QHEI)**

- The OEPA developed the QHEI as numeric habitat evaluation index that is used to define structural and functional characteristics capable of supporting aquatic life. OEPA uses the QHEI as a gauge in measuring the physical quality of stream habitat and can be used to determine the applicable use designation for a stream. Completed QHEI forms found at [http://www.epa.state.oh.us/dsw/documents/BioCrit88\\_QHEIIntro.pdf](http://www.epa.state.oh.us/dsw/documents/BioCrit88_QHEIIntro.pdf), should be completed during the wetland delineation and submitted with each required copy of the JD report.