

GENERAL DESCRIPTIONS OF THE AQUATIC ENVIRONMENT DIRECTLY AFFECTED

STREAMS

The proposed permit area is located in Richland, Union & Wheeling Township, Belmont County, Ohio and lies entirely within the Wheeling Creek watershed (HUC Code - 05030106-040-030). The surface water from permit area will eventually flow into Wheeling Creek via unnamed tributaries. The local surface water drainage patterns are the result of topography and the previous landuse changes that have occurred on, and adjacent to this permit area.

Of the streams identified within the permit boundary, a total of 11 streams will be impacted. All of those streams were considered to be jurisdictional according to the Jurisdictional Determination letter dated 9/2/2010.

General descriptions of the streams to be impacted are listed below.

Ephemeral Streams

Stream 4 - Ephemeral Stream 4 is a jurisdictional ephemeral stream upstream of the intermittent section of stream 4. The ephemeral reach of stream 4 is approximately 343 linear feet. This channel was dry during numerous visits throughout the field investigation for the area, and subsequently conveys runoff from storm events. This stream scored a 14 using the HHEI method as there was "no flow" present at the time of the delineation.

Stream 6 - Ephemeral Stream 6 is a jurisdictional ephemeral stream with surface connectivity to Stream 6. The stream length is approximately 14 linear feet. This channel was dry at the time of the delineation and conveys runoff from storm events. This stream scored a 47 using the HHEI method as there was "no flow" present at the time of the delineation.

Stream 7 - Ephemeral Stream 7 is a jurisdictional ephemeral stream approximately 22 linear feet. This channel was dry at the time of the delineation and conveys runoff from storm events. This stream scored a 37 using the HHEI method as there was "no flow" present at the time of the delineation.

Stream 7A - Stream 7A is a jurisdictional ephemeral stream that flows into an existing water impoundment and into stream 1. The channel is somewhat developed and the riparian is comprised of pasture and second growth forest. Total intermittent stream length 76 linear feet. This stream scored a 37 using the HHEI method.

Stream 15 - Ephemeral Stream 15 is a jurisdictional ephemeral stream approximately 15 linear feet. This channel was dry at the time of the delineation and conveys runoff from storm events. This stream scored a 26 using the HHEI method as there was "no flow" present at the time of the delineation.

**All Ephemeral Streams within the delineation area receive runoff from storm events and are classified as ephemeral due to lack of groundwater connectivity. The dominant substrate is silt and detritus, with no sinuosity and poor channel morphology.*

Total Delineated Jurisdictional Ephemeral Stream Length	1,035
Jurisdictional Ephemeral Stream Length Within Permit Area	500

Intermittent Streams

Stream 1 - Stream 1 is a jurisdictional perennial stream which originates offsite from an existing water impoundment. The channel is well developed throughout the observed reach of stream, however was flowing during numerous visits during the field investigation. The riparian vegetation is dense second growth woodland, including shrubs, saplings and small trees. Total perennial stream length delineated is 1,204 linear feet. This stream scored a 50 using the HHEI method.

Stream 2 - Stream 2 is a jurisdictional intermittent stream which originates below a spring north of the delineation area. The channel is well developed and located in wetland A. Total intermittent stream length is 35 linear feet. This stream scored a 38 using the HHEI method.

Stream 3 - Stream 3 is a jurisdictional intermittent stream which originates below a seep and flows to the west to discharge into Stream 1. The channel is somewhat developed and the riparian is comprised of WD-A and upland areas. Total intermittent stream length is 368 linear feet. This stream scored a 24 using the HHEI method.

Stream 6 - Stream 6 is a jurisdictional intermittent stream with a length of stream is 96 linear feet. The channel is somewhat developed throughout the entire reach of stream. The riparian vegetation is second growth woodland near the origin, but as the stream traverses downstream, the riparian vegetation is younger second growth woodlands, shrubs, and small trees. Stream 6 scored a 47 using the HHEI method.

Stream 7 - Stream 7 is a jurisdictional intermittent stream which originates below a spring and flows to the west to discharge into Stream 1. The channel is somewhat developed and the riparian is comprised of second growth woodland. Total intermittent stream length is 443 linear feet. This stream scored a 37 using the HHEI method.

Stream 8 - Stream 8 is a jurisdictional intermittent stream which originates below a spring and flows to the east to discharge into Stream 7A. The channel is somewhat developed and the riparian is comprised of WD-A and upland areas. Total intermittent stream length is 382 linear feet. This stream scored a 31 using the HHEI method.

Stream 9 - Stream 9 is a jurisdictional intermittent stream which originates below several springs and flows to the east out of the project area. The channel is somewhat developed and the riparian is comprised of pasture and second growth forest. Total intermittent stream length is 3,128 linear feet. This stream scored a 37 using the HHEI method.

Stream 14 - Stream 14 is a jurisdictional intermittent stream which flows south to stream 9. The channel is somewhat developed and the riparian is comprised of pasture and second growth forest. Total intermittent stream length is 346 linear feet. This stream scored a 25 using the HHEI method.

Stream 15 - Stream 15 is a jurisdictional intermittent stream which originates below a spring and flows to the north to stream 9. Total intermittent stream length is 280 linear feet. This stream scored a 26 using the HHEI method.

Total Delineated Jurisdictional Intermittent Stream Length	7,616
Jurisdictional Intermittent Stream Within Preferred Alternative Area	5,530

Refer to the Stream, Wetland and Open Waters/Impoundment Summary located in the Jurisdictional Determination Report for descriptions of impacted resources. Also refer to Table 2 for the descriptions and locations of stream impacts. All of the listed aquatic resources are shown on the Preliminary Jurisdictional Determination Map

WETLANDS

A total of 1.83 acres of jurisdictional wetlands were identified during the delineation of the site. Under preferred alternative, 0.63 acres of jurisdictional wetlands will be impacted as a result of the project.

Please refer to table 1 for details concerning the 4 wetlands proposed for impact under the preferred alternative.

Table 1 – Jurisdictional Wetlands proposed for impact.

Name	Jurisdictional / Isolated	Previously Mined	ORAM Score	Acreage Delineated	Proposed Impact
WD-A	Jurisdictional	Y	47	1.23	0.40
WD-C	Jurisdictional	Y	27	0.06	0.06
WD-D	Jurisdictional	N	25	0.11	0.11
WD-F	Jurisdictional	Y	37	0.06	0.06
Totals				1.83	0.63

IMPOUNDMENTS

Four jurisdictional impoundments totaling 2.52 acres were identified during the delineation of the site. All four of these impoundments will be eliminated as a result of the project.