

**January 27, 2012 Addendum to Original Application for  
Ohio EPA Section 401 Water Quality Certification**

***Item 1: Response to Comment: “question 10 was not answered for the preferred design alternative.”***

**10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water. (OAC 3745-1-05(B)(2)(b))**

*Engineering Preferred Alternative* - The area within the ROW would be cleared, including the area adjacent to all three crossings of Bear Creek. After clearing, stream crossings would be added at 13 streams, including the three crossings of Bear Creek. Crossings would consist of a culvert and gravel fill to support the installation of the culvert. Each of the Bear Creek stream crossings would affect approximately 600 square feet of stream channel. There would be approximately 120 cubic yards of fill at each of the Bear Creek crossings. Each of the other stream crossings would affect a maximum of 400 square feet of stream channel. There would be up to 50 cubic yards of gravel fill at each culvert for these crossings. The stream crossings are shown on Figure 1, with a cross section of a typical Bear Creek crossing culvert shown on Figure 2. Typical crossings for the other crossings are the same as those presented for the minimal degradation alternative in the original Section 401 Certification application filed with Ohio EPA on October 28, 2011 (“original application”). The Ohio River would also be spanned and this crossing would not affect surface water.

The ROW would also include approximately 2,340 square feet (0.05 acres) of non-tidal wetland. This wetland is shown on Figure 1. This wetland area would be within the cleared and maintained portion of the ROW. No construction or fill would occur within this wetland.

**10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation.**

*Engineering Preferred Alternative* - Results of coordination with the Ohio Department of Natural Resources are provided as Attachment A. Coordination with the U.S. Fish and Wildlife Service was provided with the original application, in Attachment B.

There are a total of 13 stream crossings and one area of wetland within the ROW. These 13 streams would be crossed with culverts. The culvert stream crossings are expected to have a negligible impact on water quality. Bear Creek, which is crossed three times by the route, has been designated as warmwater habitat, acceptable for use as an agricultural water source,

acceptable for use as an industrial water source, and acceptable for use as a primary contact recreation. All of the other streams are tributaries to Bear Creek. HHEI forms were completed for three of the other crossings, which were also within the minimal degradation route: 300, 301, and 302. HHEI/QHEI forms were not completed for the remaining five stream crossings, because this is no longer the preferred route and the minimal degradation alternative is the route for which a permit has been requested from the U.S. Army Corps of Engineers and the Ohio Environmental Protection Agency (OEPA). The analysis for this route was a desktop review and did not include specific field effort, as agreed upon with OEPA at the December 20, 2011 meeting on the project.

The wetland report included with the original application includes the ORAM form for System 3, which is included within this route.

There would be a temporary disturbance to approximately 30 linear feet of stream during placement of the culvert and fill to support the culvert. There may be a temporary increase in turbidity in the construction area. This would subside shortly after construction is complete. No impacts to water quality are expected as a result of the new culverts. The proposed Project is not expected to affect aquatic habitat for most of the crossings, because they are thought to be ephemeral/intermittent channels that are dry for most of the year. At the Bear Creek crossings, the Project would not change flow patterns of surface water and would only be a temporary disturbance to the water column. There may be a temporary increase in turbidity during construction, but this would subside shortly after construction.

The ROW would be cleared along its length. This clearing of the 125 ft wide ROW is the only impact expected to plant species. No submerged aquatic vegetation would be affected by the proposed Project.

There are no rare, threatened, or endangered species present within the Project footprint. The results of coordination with the U.S. Fish and Wildlife Service and Ohio Department of Natural Resources are attached (Attachment B).

All work would be completed in accordance with an approved Stormwater Pollution Prevention Plan, and appropriate erosion and sediment control measures, such as silt fences and straw bales, would be employed, as appropriate, to minimize impacts to stream water quality.

**10c) Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.) (OAC 3745-1-05(C)(5)(h, j-k) and OAC 3745-1-54)**

See the table of estimate costs from the original application, which includes costs for the Engineering Preferred Alternative.

*Engineering Preferred Alternative* - The estimated Project cost for the Engineering Preferred Alternative is \$21,685,000. This option is technically feasible and was developed by engineers as the most direct, feasible route. All of the technology used in the design is currently available and is based on current best available technologies. The Project is licensed for 50 years by the Federal Energy Regulatory Commission (FERC). However, the Engineered Preferred Alternative was modified by input from the Ohio Power Siting Board, Ohio EPA and others. The route modified as a result of those discussions is the Minimal Degradation Alternative discussed in the original application, and is the current proposed alternative.

The Engineering Preferred option would be the most cost-effective option. It would save approximately \$497,000 over the minimal degradation alternative. Potential impacts to surface water would be minimal and related to construction and maintenance of thirteen stream crossings. Culverts would be constructed at each crossing affected. There would be no further impact to surface waters.

**10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents. (OAC 3745-1-05(C)(5)(i))**

*Engineering Preferred Alternative* - This alternative would not include sewage collection and treatment facilities.

**10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource. (OAC 3745-1-05(B)(3)(h))**

*Engineering Preferred Alternative* - There are no known government or privately sponsored conservation projects to target improvement of water quality or enhancement of recreational opportunities to target Bear Creek or the area of the Ohio River within the aerial transmission line crossing.

**10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project. (OAC 3745-01-05(C)(5)(g))**

*Engineering Preferred Alternative* - It is estimated that approximately \$320,000 would be spent during construction of the transmission line Project on measures related to water pollution controls. This includes costs for the construction and maintenance of temporary haul roads and stabilized construction entrances as well as the installation of culverts at stream crossings. It also includes costs for the removal, stockpiling and replacement of topsoil as well as seeding operations.

**10g) Describe any impacts on human health and the overall quality and value of the water resource. (OAC 3745-1-05(C)(5)(c) and OAC 3745-1-54)**

*Engineering Preferred Alternative* - There would be no lowering of water quality as a result of this alternative and, therefore, no resulting effects to human health. Potential impacts to surface water are related to construction and maintenance of thirteen stream crossings and clearing of one wetland within the transmission line ROW. Culverts would be constructed at each crossing affected. All work would be completed in accordance with an approved Stormwater Pollution Prevention Plan, and appropriate erosion and sediment control measures, such as silt fences and straw bales, would be employed, as appropriate, to minimize impacts to stream water quality. There would be no further impact to surface waters. All impacts to surface water during culvert installation would be temporary. No permanent impacts to surface water are expected.

**10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy. (OAC 3745-1-5(B)(3)(e), (f), and OAC 3745-1-05(C)(5)(1))**

*Engineering Preferred Alternative* - The proposed project passes through Washington and Franklin Townships in Clermont County, Ohio. Clermont County has a labor force size of 106,100 with 8.9% unemployment as of August 2011. (Source: ODJFS, Labor Market Information, Civilian Labor Force Estimates August 2011). As of 2008, the county poverty rate was 8.8% for all ages and 11.4% for persons under the age of 18 years. The average per capita income in 2008 was \$35,844 (Source: ODJFS, Labor Market Information, 2009 Clermont County Profile). Table 1 contains summary information regarding population estimates for the Project area. Table 2 summarizes the county-level census information. Table 3 summarizes population information for Franklin and Washington Townships.

**Table 1: Study Area Demographics of Preferred and Alternate Routes**

Government Unit	1990 Census	2000 Census	2010 Census
Clermont County, Ohio	150,187	177,977	197,363
Washington Township	2,441	2,351	Not Available
Franklin Township	3,803	4,348	Not Available

Source: Office of Strategic Research, Ohio Department of Development Ohio County Profiles. 2010. U.S. Census Bureau. [www.factfinder.census.gov](http://www.factfinder.census.gov).

**Table 2: Clermont County Census Information**

Increase in Population 2000-2010 (%)	2010 Population	Average Household (persons)	Median Household Income (\$'s)	Female-to-Male Ratio	Median Age	Population Ages 18 - 67 (%)
10.9	197,363	2.67	49,386	1.03:1	34.8	64

Source: Office of Strategic Research, Ohio Department of Development Ohio County Profiles. 2010. U.S. Census Bureau. [www.factfinder.census.gov](http://www.factfinder.census.gov).

**Table 3: Franklin and Washington Township Population Information**

<b>Location</b>	<b>Population</b>	<b>Unincorporated Portion</b>	<b>Population Density (person per mi<sup>2</sup>)</b>	<b>Increase in Population Since 1990 (%)</b>
Franklin Township	4,300	3,300	110.5	14
Washington Township	2,400	2,000	65.4	-3.7

Source: Office of Strategic Research, Ohio Department of Development Ohio County Profiles. 2010. U.S. Census Bureau. [www.factfinder.census.gov](http://www.factfinder.census.gov).

Construction, operation, and maintenance of the transmission line and substation would not adversely affect the socioeconomic characteristics of the Project area. Work would last approximately 8 months and would require approximately 50 construction workers. It is possible that some temporary positive effect on the construction sector would result as some local workers may be employed to install the proposed transmission line and substation. Additionally, much of the consumables (lumber, fuel, etc.) for the general construction would come from local suppliers. Exact state and local tax revenues associated with the Project have not yet been determined; however, initial estimates of several hundred thousand dollars annually in State and local tax revenue for the first five years of operation of the transmission line and substation.

**10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans. (OAC 3745-1-05(B)(3)(f), (g), and OAC 3745-1-05(C)(5)(e))**

*Engineering Preferred Alternative* - No residences would be destroyed, acquired, or removed as a result of the proposed transmission line route construction. Based on the absence of identified sensitive land uses, the proposed transmission line would not affect commercial land, industrial facilities, identified archaeology sites, tourism, or recreational land use as a result of construction activities. The Project would span a portion of Corps' property, but would not affect the Corps' use of that property or disturb any area of the property. The long-term impacts for the Project would be limited to the small sections of land lost to the footprint of the pole structures.

During the construction of the transmission line, some agricultural lands within the ROW may not be planted. Any livestock in the project vicinity would need to be kept outside the construction area. Following construction, the area beneath the ROW would be available for agricultural use by the property owner. Construction of the substation would permanently convert an area of agricultural field to a substation.

**10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species. (OAC 3745-1-05 (B)(3)(f), (g), OAC 3745-1-05 (C)(5)(b) and OAC 3745-1-54)**

*Engineering Preferred Alternative* - There would be no change to each stream's natural sediment-moving capabilities. The only effects to water quality would be associated with a temporary increase in turbidity during installation of the culvert in any stream channel that contains water at the time of installation. To the extent possible, culverts would be installed when the stream channels are dry; however, this would not be possible for Bear Creek. There are no rare, threatened, or endangered species within the Project area (Attachment A; original application at Attachment B). Several of the stream channels affected by the Project are ephemeral/intermittent and would not affect aquatic life. The perennial stream channels would only experience temporary effects to water quality and a change in substrate within the culvert. The total stream length affected would be approximately 30 feet at each crossing. This is a small area of habitat when considered with the total area of habitat available within the perennial streams, particularly Bear Creek.

Existing vegetation within the wetland would be cleared as part of the clearing of the ROW for the transmission line. However, because this wetland consists primarily of mudflats, with some area of emergent vegetation, very little change is expected to occur to vegetation within the wetland (see ORAM form included in the original application). Emergent vegetation within the ROW may periodically be mowed, but would otherwise be undisturbed. No substantial changes to water quality within the wetland are expected.

**10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative): Describe proposed Wetland Mitigation (see OAC 3745-1-54 and Primer); Describe proposed Stream, Lake, Pond Mitigation (see Primer)**

*Engineering Preferred Alternative* - We would propose pay into the Surface Water Improvement Fund (SWIF) at a rate of \$300 per linear foot of stream and \$40,000 per acre. Approximately 30 linear feet of stream would be affected at each crossing. This would be a total of 390 linear feet of stream impact. Total payment for stream impacts would be \$117,000. Total affected wetland area is 2,340 square feet, which would be 0.05 acres. Total payment for wetland impacts would be \$2,000. This would be a total of \$119,000 for the Engineering Preferred Alternative.

However, please see the answer to "Item No. 4" herein concerning the Minimal Degradation Alternative.

***Item 2: "Corps public notice was provided and identified streams that will be impacted; however, the application contains wetland delineation data sheets and completed ORAM forms. Also, there appears to be streams within the project area that are not identified in the***

***public notice. A jurisdictional determination letter must be provided that identifies all waters on-site.”***

Attached is a map showing the location of all streams and wetlands for which data forms were provided in the original application (Attachment B). Note that not all streams and wetlands assessed are within the minimal degradation (current proposed) alternative, but may have been included within preliminary study areas prior to finalizing the routes shown. One wetland is within the engineering preferred route, as described for Item 1.

The U.S. Army Corps of Engineers has stated that they do not intend to complete a jurisdictional determination for the Project because no wetlands are affected. The Corps permit application was for the minimal degradation alternative (current proposed alternative), which does not include any wetlands.

***Item 3: “HHEI forms are not filled out completely and lack vital information, such as drainage area, for proper review. One QHEI form (HW2) was incomplete (only the first page was provided). All habitat assessment forms must be filled out completely and in accordance with the respective manual. Portions of the forms that are not applicable should be marked as such with an explanation as to why that section is not applicable.”***

A complete set of HHEI and QHEI forms are provided as Attachment C.

***Item 4: “A mitigation proposal including a proposal for the legal mechanism for protecting the mitigation area in perpetuity must be provided for both the preferred design and minimal degradation alternatives.”***

See Item 1, response to application question 10(k), for the proposed mitigation for the Engineering Preferred Alternative. However, as noted in 10 (c) above, the Engineered Preferred Alternative was modified by input from the Ohio Power Siting Board, Ohio EPA and others. The route modified as a result of those discussions is the Minimal Degradation Alternative discussed in the original Application, and is the current proposed alternative.

For the minimal degradation alternative, the Applicants propose to pay into the SWIF at a rate of \$300 per linear foot of stream affected. The minimal degradation alternative would permanently affect approximately 30 linear feet of stream for the two access road widenings and 20 linear feet of stream for the eight stream crossings. This is a total impact of 220 linear feet of stream. At \$300 per linear foot, the Applicants proposed mitigation is \$66,000.

***Item 5: “Fees were provided based on the minimal degradation alternative and it was not clear in the application what the impacts associated with the preferred design would be.”***

The Engineering Preferred Alternative would affect 390 linear feet of streams and 0.05 acres of wetlands. The type of impact and application fee required is shown in the table below. This does not include the general \$200 application fee for all applications.

<b>Type of Impact</b>	<b>Impact</b>	<b>Fee Required for Impact</b>
Ephemeral Stream	240 linear feet	\$1,200
Intermittent Stream	0 feet	\$0
Perennial Stream	150 linear feet	\$2,250
Wetland	0.05 acres	\$25
<b>Total</b>	--	<b>\$3,475</b>

***Item 6: “Please provide documentation that demonstrates that comments regarding threatened and endangered species were requested from the Ohio Department of Natural Resources.”***

Correspondence with Ohio Department of Natural Resources is provided in Attachment A.

***Item 7: “This information was not provided for the preferred design alternative.” (Comment references descriptions, schematics, and appropriate economic information)***

The response to Item 1 on the anti-degradation rule includes a description of the Engineering Preferred Alternative, a schematic of a typical cross sections and a figure of the Engineering Preferred Alternative, and economic information. The original application also includes a description of the Engineering Preferred Alternative with the anti-degradation rule text.