

FINAL ENVIRONMENTAL ASSESSMENT
Section 408 Request to Alter the Big Run Local Protection Project
for State Route 2003 Bridge Replacement
in Jefferson County, PA
March 15, 2018

Prepared By: Environmental and Cultural Resources Section, Planning and Environmental Branch,
U.S. Army Corps of Engineers Pittsburgh District

- 1. Name of Requestor:** PennDOT Wallace Pancher Group, on behalf of PennDOT

- 2. Authority:** Proposed alterations to U.S. Army Corps of Engineers (USACE) federally-authorized civil works projects require USACE permission. USACE authority to grant permission for temporary or permanent alterations is contained in Section 14 of the Rivers and Harbors Act of 1899 (Taking possession of, use of, or injury to harbor or river improvements), which states: *“It shall not be lawful for any person or persons to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct by fastening vessels thereto or otherwise, or in any manner whatever impair the usefulness of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States, or any piece of plant, floating or otherwise, used in the construction of such work under the control of the United States, in whole or in part, for the preservation and improvement of any of its navigable waters or to prevent floods, or as boundary marks, tide gauges, surveying stations, buoys, or other established marks, nor remove for ballast or other purposes any stone or other material composing such works: Provided, That the Secretary of the Army may, on the recommendation of the Chief of Engineers, grant permission for the temporary occupation or use of any of the aforementioned public works when in his judgment such occupation or use will not be injurious to the public interest: Provided further, That the Secretary may, on the recommendation of the Chief of Engineers, grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work.”* 33USC 408.

- 3. Location of the Proposed Alteration:** State Route 2003 (SR-2003, aka Mill Road) Bridge crossing Mahoning Creek in Big Run, PA.

- 4. Federal Project Proposed to be Altered:** The Big Run Local Protection Project (LPP) was authorized by Section 205 of the Flood Control Act of 1948, as amended. It was constructed between 1963 and 1964 and consisted of widening, deepening, realigning, and stabilizing the channel of Mahoning Creek. Total project length was 13,460 ft.

- 5. Requested Alteration:** PennDOT, via its consultant the Wallace-Pancher Group and as a part of its P3 Rapid Bridge Replacement Project (RBRP), proposes to replace SR-2003, Section P50 (Mill Road) bridge over Mahoning Creek on the existing alignment. The existing bridge is a 127-foot two-span steel girder bridge. The bridge is classified by PennDOT as structurally deficient. The project entails replacement of the deteriorating structure, guiderail updates, drainage improvements, and the mill and overlay of the approaches. Minor profile adjustments along the roadway approaches are anticipated.

Alterations to the LPP that are temporary in nature include construction of the bank-to-bank crossing and cofferdam structures in the creek. Permanent alterations include a new pier that replaces the pier footer and upstream pier protection constructed as part of the LPP, additional scour protection placed downstream of the existing abutments that are to be removed, and a slight raising of the lower bridge chord. The new bridge pier and superstructure will increase the hydraulic open area (at bankfull water elevation) by about 20%. The requester estimates that the overall construction duration will be about 15 weeks and that the temporary structures will occupy the creek for 8-9 weeks.

Construction will be phased in two stages. During the first stage, a temporary crossing will be installed at the upstream face of the structure. Six 30" Corrugated Metal Pipes (CMPs) will be installed through the crossing. Additionally, temporary cofferdams will be installed at the left bank abutment and pier. In the second stage, the crossing and left bank and pier cofferdams will be removed. A cofferdam will be placed at the right bank abutment for the second phase. The cofferdam will be set to an approximate height of 3.6 feet above the channel thalweg at the bridge face. The temporary cofferdams at the left bank abutment and the pier will be placed at the limits of the rock being installed. The cofferdams would be set to a height of 5 feet above the channel thalweg at the upstream and downstream bridge faces. The normal stream flow does not overtop the temporary crossing or cofferdams. Permanent right-of-way will be acquired directly around the bridge to accommodate any bridge and roadway widening and the wing walls, in addition to temporary construction easements (TCE) needed to access the bridge location.

The proposed 146-foot double span concrete structure would be located along the same horizontal alignment as the existing structure and have a 139-foot normal clear span. The proposed structure would have an out-to-out width (in the direction of flow) of 36 feet 10 inches and a minimum underclearance to the low chord of 15 feet 2 inches. The proposed structure is oriented 0° to the flow direction and has a hydraulic open area of about 1,909 square feet.

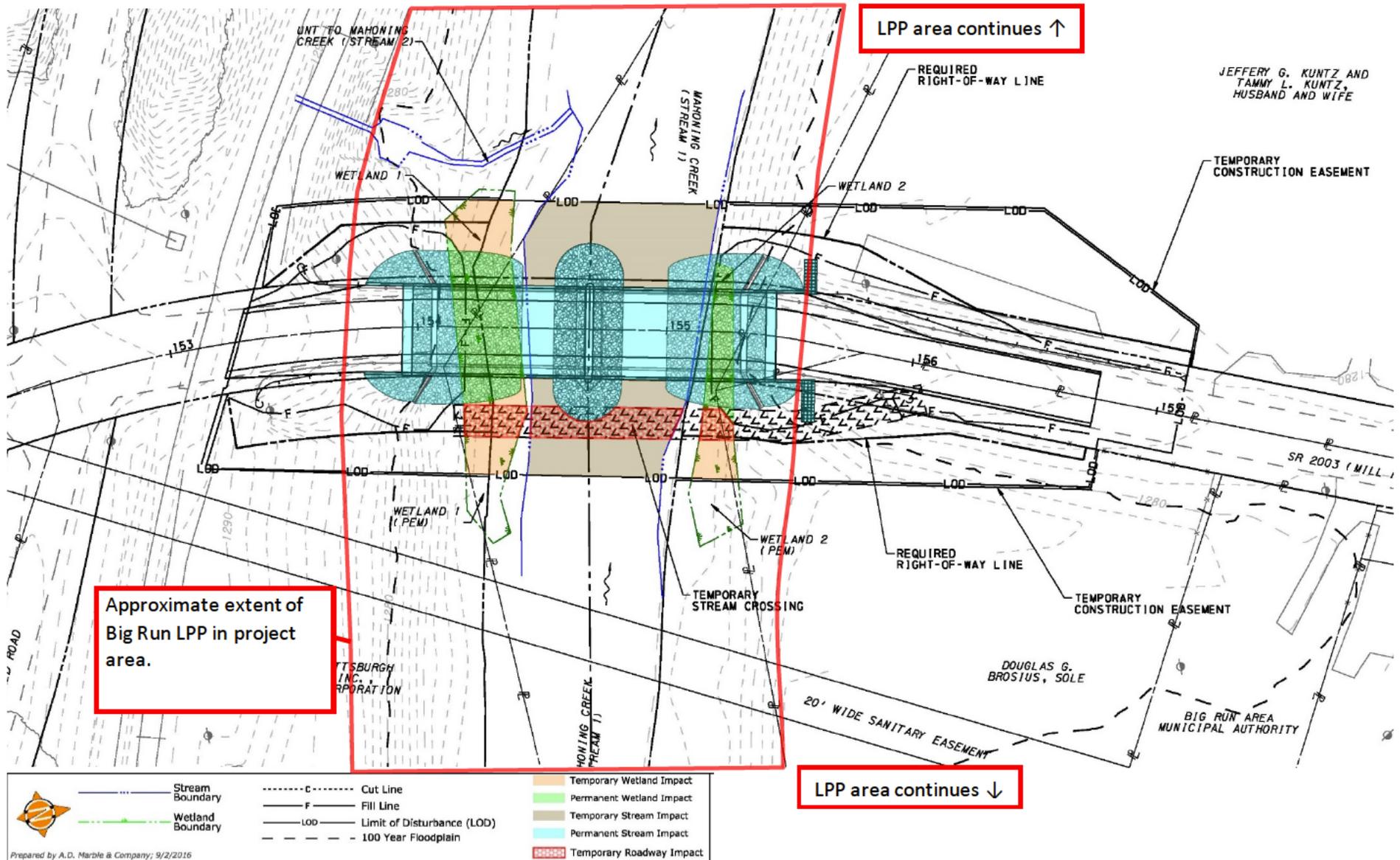


Figure 1. PennDOT water obstruction and encroachment graphic with the approximate LPP extent in the project area shown (based on as-built permanent easement extents).

6. Alternatives:

- a. No Action: Denial of the Section 408 request. Denial of the request would not permit modifications to the Big Run LPP, precluding the repair/replacement of the structurally deficient bridge.
- b. Action Alternative: Requester's Preferred Alternative Approval of the Section 408 request allowing the alteration of the Big Run LPP for bridge replacement.

7. Environmental Setting: The Big Run LPP is located along Mahoning Creek in the borough of Big Run within Jefferson County, Pennsylvania. The project area is an existing roadway and bridge on an arterial roadway into Big Run.

The existing SR-2003 bridge is a 127-foot long double span steel girder bridge on a 0° skew to the flow direction with a 119-foot normal clear span. The stream cross section beneath the bridge has a hydraulic open area of about 1,572 square feet with an underclearance of 14 feet 2 inches. The bridge has an out-to-out width of 32 feet (in the direction of flow). The existing pier is about 3 feet wide and the pier footing is about 10 feet wide. PennDOT's traffic volume maps show an estimate of 1,100 vehicles using this route daily

(http://www.dot7.state.pa.us/BPR_pdf_files/MAPS/Traffic/Traffic_Volume/County_Maps/Jefferson_TV.pdf).

The stream bed material is assumed to be sand. Two small Palustrine Emergent (PEM) wetlands are located within the project study area, one on each bank (Figure 1). Two waterways exist within the project area, Mahoning Creek and an unnamed tributary (UNT-1 to Mahoning Creek). Mahoning Creek is classified as Warm Water Fishes waterway. The unnamed tributary to Mahoning Creek is classified as Cold Water Fishes waterway.

The nearest alternate stream crossing is at Filtering Plant Road, about 1 mile from the north (town) side of the creek, and 2.4 miles on the south side of the creek.



Upstream Face of Structure



Downstream Channel from Deck

Figure 2. Photos of the site provided by PennDOT.

8. Environmental Effects of the Proposed Action: Per EC 1165-2-216, *Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects*, the U.S. Army Corps of Engineers (USACE) has jurisdiction under Section 408 only over the specific activities or portions of activities that have the potential to alter the USACE project. Therefore, if a proposed alteration is part of a larger project (and/or its associated features) that extends beyond the USACE project boundaries, only those portions or features of the larger project over which USACE has sufficient control and responsibility over are to be included in the USACE environmental review. The scope of analysis for the NEPA and environmental compliance evaluations for the subject request are limited to the area of the alteration and those adjacent areas that are directly or indirectly affected by the alteration.

PennDOT must acquire all other necessary permissions or authorizations required by federal, state, and local laws or regulations, including required permits from the USACE Regulatory Program (Section 10/404 permits). These permits will consider impacts beyond the LPP footprint commensurate with their scope. In addition, an approval under Section 408 does not grant any property rights or exclusive privileges.

Table 1. Anticipated impacts of the proposed Section 408 activity.

Environmental Parameter	No-Action Alternative	Action Alternative
Land Use & Socio-Economic Conditions	Minor Effect. Denial of the permit would result in the inability to replace the existing bridge. This may result in the loss of income to the local economy associated with the construction, as well as the cost of additional travel distance to each bridge user.	Minor Effect. The current land use patterns would not be significantly affected by this project. The local socio-economic conditions may even improve slightly during construction and possibly after construction.
Vegetation and Wildlife Habitat	No Effect. Denial of the request would maintain the status quo.	Minor Effect. The site is predominantly herbaceous vegetation which would recolonize quickly after construction. Temporary (0.036 acres) and permanent (0.047 acres) wetland impacts would occur.
Water Quality and Fisheries	No Effect. Denial of the request would maintain the status quo.	Minor Effect. Temporary (0.09 acres) and permanent (0.16 acres) of stream impacts will occur. Temporary and permanent erosion control measures will be used to protect water quality, including the use of cofferdams. Concrete will not be allowed to enter the stream.
Floodplains	No Effect. Denial of the request would maintain the status quo.	Minor Effect. The project is located within the floodplain. The new bridge will allow for more water passage, as it will have a larger hydraulic open area.
Noise	Minor Effect. Denial of the request, resulting in the inability to replace the existing bridge, would lead to eventual bridge closure, which would likely reduce traffic and its associated noise.	Minor Effect. Bridge replacement work would temporarily increase noise in the area during construction. The bridge replacement is not expected to significantly increase traffic or have a permanent impact on noise in the area.
Aesthetics	Minor Effect. Denial of the request, resulting in the inability to replace the existing bridge, would lead to continued deterioration of the structure.	Minor Effect. The presence of construction equipment and supplies during construction will have a temporary impact on aesthetics. The aesthetics of the new bridge are expected to be equivalent to or an improvement of the existing structure.

Recreation	No Effect. Denial of the request would maintain the status quo.	No Effect. No impact to recreation would occur.
Endangered Species	No Effect. Denial of the request would maintain the status quo.	No Effect. A PNDI search showed that there are no effects to threatened or endangered species.
Historic and Archaeological Resources	No Effect. Denial of the request would maintain the status quo.	No Effect. The area has been previously disturbed by the construction of the LPP. The bridge is not on the National Registry of Historic Places and was determined to not be eligible by PennDOT cultural resources staff in 2016. The nearby railway would not be impacted by the project. No effects to cultural resources is expected.
Traffic	Moderate Effect. Denial of the request would result in the inability to replace the existing bridge. The bridge is classified as structurally deficient, which will result in eventual closure. The nearest alternate stream crossing is about 1 mi additional travel from the north (town) side of the creek, and an additional 2.4 mi travel from the south side of the creek.	Minor Effect. The bridge reconstruction may require temporary road closure and detours. No permanent impacts to traffic are expected.
Public Safety	No Effect. Denial of the request would not be expected to impact public safety, if appropriate actions (road closures, signage) are locally employed.	No Effect. The Section 408 engineering review will ensure the continued stability of the LPP; no change to the level of protection of the LPP is anticipated.
Hazardous Wastes	No Effect. Denial of the request would maintain the status quo.	No Effect. Clean fill will be used and proper waste disposal will occur.
Air Quality	No Effect. Denial of the request would maintain the status quo.	Minor Effect. During construction activities, minor effects to air quality could occur due to temporary increases in emissions from diesel construction equipment.

9. Cumulative Effects: No significant cumulative effects of the proposed alteration within the Section 408 authority are anticipated. Temporary impacts, including noise and traffic pattern changes, would not be significant. The bridge replacement is largely similar to the existing structure and is not anticipated to change overall traffic use of the area.

10. Coordination: USACE provided a copy of this report to the appropriate agencies during the public comment period. A 15-day public comment period occurred from 31 January 2018 to 14 February 2018. One comment letter was received. The United States Environmental Protection Agency (EPA)

responded to the public notice via email dated 9 February 2018 with two comments. EPA comments and USACE responses are located in Appendix A.

11. Principal Environmental Laws and Executive Orders considered, where applicable, in conjunction with NEPA.

Public Laws:

American Indian Religious Freedom Act, 42 U.S.C. 1996 et seq.
Archeological and Historic Preservation Act, 16 U.S.C. 469 et seq.
Archeological Resources Protection Act, 16 U.S.C. 470aa-11, et seq.
Bald and Golden Eagle Protection Act, 16 U.S.C. 668, et seq.
Clean Air Act, as amended, 42 U.S.C. 1857h-7, et seq.
Clean Water Act, 33 U.S.C. 1251 et seq.
Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601 – 9675.
Endangered Species Act, 16 U.S.C. 1531 et seq.
Farmland Protection Policy Act, 7 U.S.C. 4201, et seq.
Fish and Wildlife Conservation Act, 16 U.S.C. 2901-2911, et seq.
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.
Historic Sites Act, 16 U.S.C. 461-467, et seq.
Land and Water Conservation Fund Act, 16 U.S.C. 460/-460/-11, et seq.
National Environmental Policy Act, 42 U.S.C. 4321, et seq.
National Historic Preservation Act, 16 U.S.C. 470a, et seq.
Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 et seq.
Noise Control Act of 1972, 42 U.S.C. 4901-4918.
Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.
Rivers and Harbors Act 33, U.S.C. 401 et seq.
Safe Drinking Water Act 42 U.S.C. 300 et seq.
Toxic Substances Control Act, 15 U.S.C. 2601 – 2671.
Wild and Scenic Rivers Act, 16 U.S.C. 1271, et seq.

Executive Orders (EO):

11514 Protection and Enhancement of Environmental Quality
11593 Protection and Enhancement of the Cultural Environment
11988 Floodplain Management
11990 Protection of Wetlands
12088 Federal Compliance with Pollution Control Standards
12114, Environmental Effects Abroad of Major Federal Actions
12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Regulations:

Advisory Council on Historic Properties, Protection of Historic and Cultural Properties (36 CFR Part 800 et seq.).
Council on Environmental Quality, Regulation for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508).
U.S. Department of Agriculture, Regulations for Implementing the Farmland Protection Policy Act (7 CFR 658).
U.S. Army Corps of Engineers, Procedures for Implementing NEPA (33 CFR 230).
U.S. Army Corps of Engineers, EC 1165-2-216, Water Resources Policies and Authorities, Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects, Pursuant to 33 USC 408.

- U.S Environmental Protection Agency, Clean Air Act Implementing Regulations (40 CFR Part 50 et seq.).
- U.S. Environmental Protection Agency, Criteria and Standards for the National Pollutant Discharge Elimination System (40 CFR Part 125).
- U.S. Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).
- U.S. Environmental Protection Agency, National Interim Primary Drinking Water Regulations (Safe Drinking Water Act) (40 CFR Part 141).
- U.S. Environmental Protection Agency, National Secondary Drinking Water Regulations (Safe Drinking Water Act) (40 CFR Part 143).
- U.S. Environmental Protection Agency, Prevention of Significant Deterioration for Particulate Matter (40 CFR Parts 51 and 52).

12. Summary/Conclusion: Based on the above analysis, USACE permission for PennDOT to alter the Big Run LPP, in the manner described above, is not a major Federal action significantly affecting the quality of the human or natural environment, and therefore does not require preparation of an environmental impact statement.

Appendix A. Public Comments

EPA Comments and USACE responses:

EPA Comment 1: "In Table 1, EPA suggests the inclusion of "Air Quality" as an environmental parameter. There could be a temporary, minor effect to air quality from the action alternative due to diesel emissions from the use of construction equipment for the bridge work. EPA recommends that to moderate effects to air quality the project proponent incorporate the use of BMPs for the reduction of diesel emissions."

USACE Response to Comment 1: Thank you for your comment. The Corps has added air quality as an environmental parameter. The Corps agrees that any effects to air quality that may occur during construction activities from the use of construction equipment will be minor and temporary in nature. Additionally, as it is expected that the applicant will obtain all required federal, state and local permits to perform its work, it is presumed that any air emissions associated with that work will be in compliance with the applicable air permits and regulations. While the Corps cannot require the use of BMPs to reduce diesel emissions, it will make the applicant aware of EPA's suggestions.

EPA Comment 2: "The Environmental Assessment indicates that clearance for historic and archaeological resources was conducted in 2007. EPA recommends updating this review to ensure that the review is current."

USACE Response to Comment 2: PennDOT has provided updated information. PennDOT cultural resources staff (archaeologist and architectural historian) conducted a Section 106 review 4 March 2016 and determined that the project will have no effect to cultural resources. The bridge has been determined to be not eligible for the National Register. No effects to cultural resources is expected. PennDOT Section 106 reviews are completed via a programmatic agreement between PennDOT and the Pennsylvania State Historic Preservation Office. The Corps concurs with the determination.

From: [Almeter, Katelyn](#)
To: [Stuart, Erin E CIV USARMY CELRP \(US\)](#)
Cc: [Rudnick, Barbara](#)
Subject: [Non-DoD Source] Environmental Assessment - Big Run Local Protection Project
Date: Friday, February 9, 2018 11:23:59 AM

Good morning Erin,

Thanks for talking with me this morning. EPA has completed its review of the draft Environmental Assessment for the Section 408 Request to Alter the Big Run Local Protection Project for State Route 2003 Bridge Replacement in Jefferson County, Pennsylvania and is providing the following suggestions:

* In Table 1, EPA suggests the inclusion of “Air Quality” as an environmental parameter. There could be a temporary, minor effect to air quality from the action alternative due to diesel emissions from the use of construction equipment for the bridge work. EPA recommends that to moderate effects to air quality the project proponent incorporate the use of BMPs for the reduction of diesel emissions.

* The Environmental Assessment indicates that clearance for historic and archaeological resources was conducted in 2007. EPA recommends updating this review to ensure that the review is current.

Thank you for the opportunity to review. Please feel free to contact me at 215-814-2797, if you have any questions.

Take care,

Katelyn

Katelyn Almeter
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Office of Environmental Programs

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215-814-2797

FINDING OF NO SIGNIFICANT IMPACT

Section 408 Request to Alter the Big Run Local Protection Project for State Route 2003 Bridge Replacement Jefferson County, Pennsylvania

In accordance with the National Environmental Policy Act (NEPA) and its implementing regulations, an Environmental Assessment (EA) was developed to evaluate potential impacts associated with issuing permission to alter the federal Big Run Local Protection Project (LPP) along Mahoning Creek in Big Run, Pennsylvania (Proposed Action). The Big Run LPP was authorized by Section 205 of the Flood Control Act of 1948, as amended. It was constructed by the U.S. Army Corps of Engineers (Corps) between 1963 and 1964, and consisted of widening, deepening, realigning, and stabilizing the channel of Mahoning Creek to reduce the risk of flood damage to the local community.

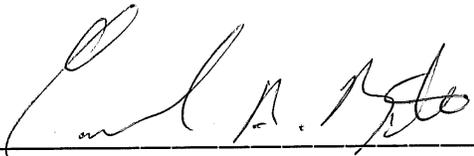
PennDOT, via its consultant the Wallace-Pancher Group and as a part of its P3 Rapid Bridge Replacement Project (RBRP), proposes to replace the State Route 2003 (SR-2003, aka Mill Road) bridge over Mahoning Creek on the existing alignment. The bridge is currently classified by PennDOT as structurally deficient. Replacement of the bridge requires an alteration of the Big Run LPP as the bridge touches both banks and has a mid-channel pier. The authority to grant permission for temporary or permanent alterations to a federal project is set forth at Section 14 of the Rivers & Harbors Act of 1899 and codified in 33 USC 408 (Section 408). Corps review ensures that proposed alterations are neither injurious to the public interest nor would they affect the federal project's ability to meet its authorized purpose.

Per Corps guidance, the agency analyzed two alternatives including a "No Action" alternative (denial of the Section 408 request) and Alternative 1, the Requester's Preferred Alternative (granting of the Section 408 request). Outside of the 408 process, PennDOT must acquire all other necessary permissions or authorizations required by federal, state, and local laws or regulations, including any required permits from the Corps' Regulatory Program.

This EA has determined that the Proposed Action (granting of the Section 408 request) will not result in significant impacts to the natural or human environment, and does not require the preparation of an Environmental Impact Statement (EIS). All environmental, social, and economic factors that are relevant to the proposal were considered in this assessment. These include, but are not limited to, water quality, noise, wetlands, wildlife, threatened and endangered species, and cultural resources. Anticipated impacts include temporary and permanent impacts to the stream and wetlands, temporary construction-related increases in noise and emissions, and temporary impacts to local traffic. Best management practices would be used to minimize effects, including temporary and permanent erosion control measures. No effects to either public safety or to threatened or endangered species are expected. Overall, effects are expected to be non-significant.

A 15-day public comment period occurred from 31 January 2018 to 14 February 2018. Comments were received from the U.S. Environmental Protection Agency and were addressed. The comments and responses are included as an appendix to the final EA.

After having carefully evaluated all aspects of the Proposed Action and based on the EA, I have reasonably concluded that the Proposed Action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not required and will not be prepared.



for

John P. Lloyd
Colonel, Corps of Engineers
Pittsburgh District Commander

APRIL 19 2018

Date