



**US Army Corps
of Engineers**

Philadelphia District

Public Notice

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In Reply Refer to: Environmental Resources Branch

NORTH COVENTRY TOWNSHIP STREAMBANK STABILIZATION PROJECT SECTION 14 - EMERGENCY STREAMBANK STABILIZATION CHESTER COUNTY, PENNSYLVANIA

Pursuant to Section 404 of the Clean Water Act of 1977 and Section 10 of the Rivers and Harbors Act OF 1899, NOTICE IS HEREBY GIVEN that the Philadelphia District, U.S. Army Corps of Engineers (Corps) proposes the North Coventry Township Streambank Stabilization Project, Chester County, Pennsylvania (Figure 1).

The project site is located on River Road along the Schuylkill River in North Coventry Township, Chester County, Pennsylvania. The project begins in the existing ditch below the State Highway 100 overpass, and extends approximately 1900' downstream towards Hanover Street (Figure 2). The watershed of the Schuylkill River, a major tributary to the Delaware River, is located in southeastern Pennsylvania, and includes large parts of Schuylkill, Berks, Montgomery, Chester, and Philadelphia Counties.

The Corps was approached by North Coventry Township concerning an erosion problem along one of their local roads (Figures 3 and 4). The purpose of the project is to protect River Road, a township road threatened by streambank failure. The need for the project is the undermining of the road due to streambank erosion as result of high flow events occurring on the Schuylkill River. The erosion problem at this site was noted in 2006 and has been aggravated by flooding following Hurricane Irene in August 2011 and Tropical Storm Lee in September 2011.

The project was developed in partnership with North Coventry Township. A scoping letter soliciting input on the proposed project was sent to appropriate state and federal agencies, as well as, other potentially interested parties in April 2012. The owner of the property is North Coventry Township. The Corps will be responsible for the design and construction of the project; while the non-federal sponsor, North Coventry Township, will be responsible for any future operation and maintenance of the project.

The Draft Environmental Assessment (EA) for the project was forwarded to the U.S. Environmental Protection Agency (EPA), Region III, the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), Pennsylvania Department of Environmental Protection (PADEP), Pennsylvania Game Commission (PGC), Pennsylvania Fish and Boat Commission (PFBC), Chester County Conservation District (CCCD), and all other known interested parties.

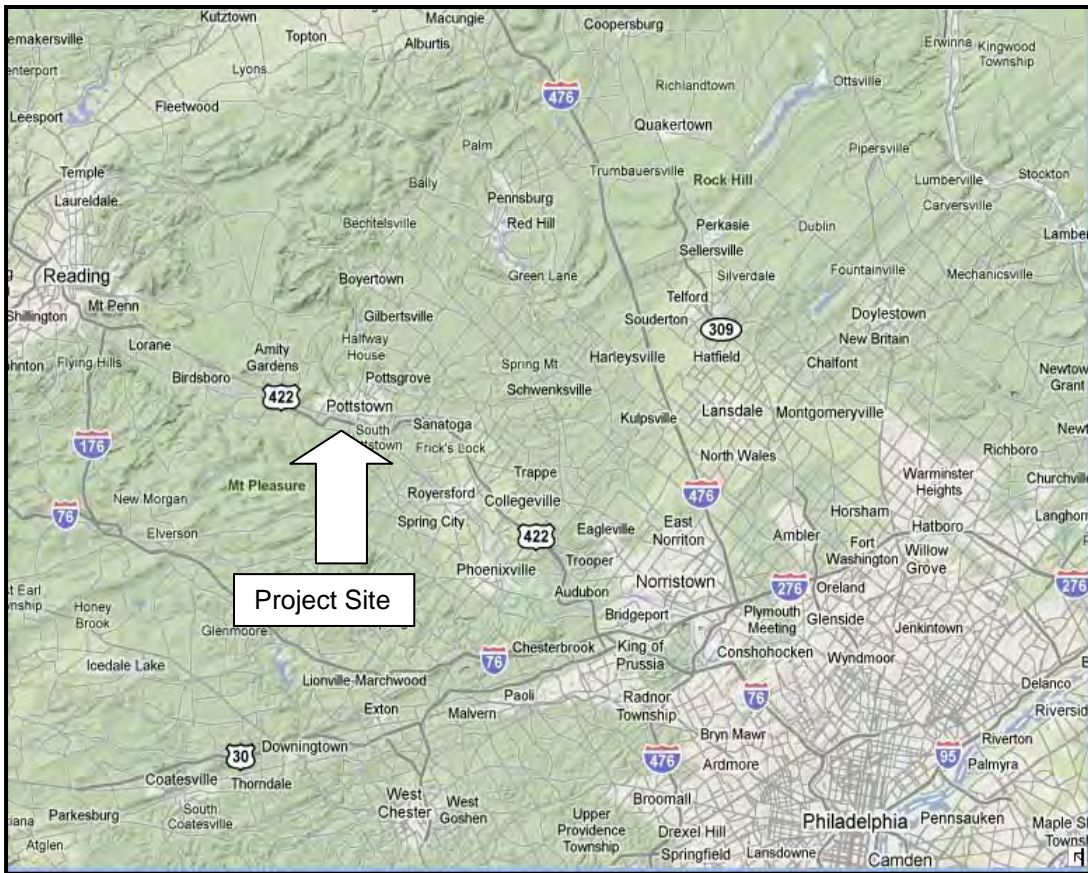


Figure 1. General Vicinity Map for Schuylkill River at North Coventry Township, PA.

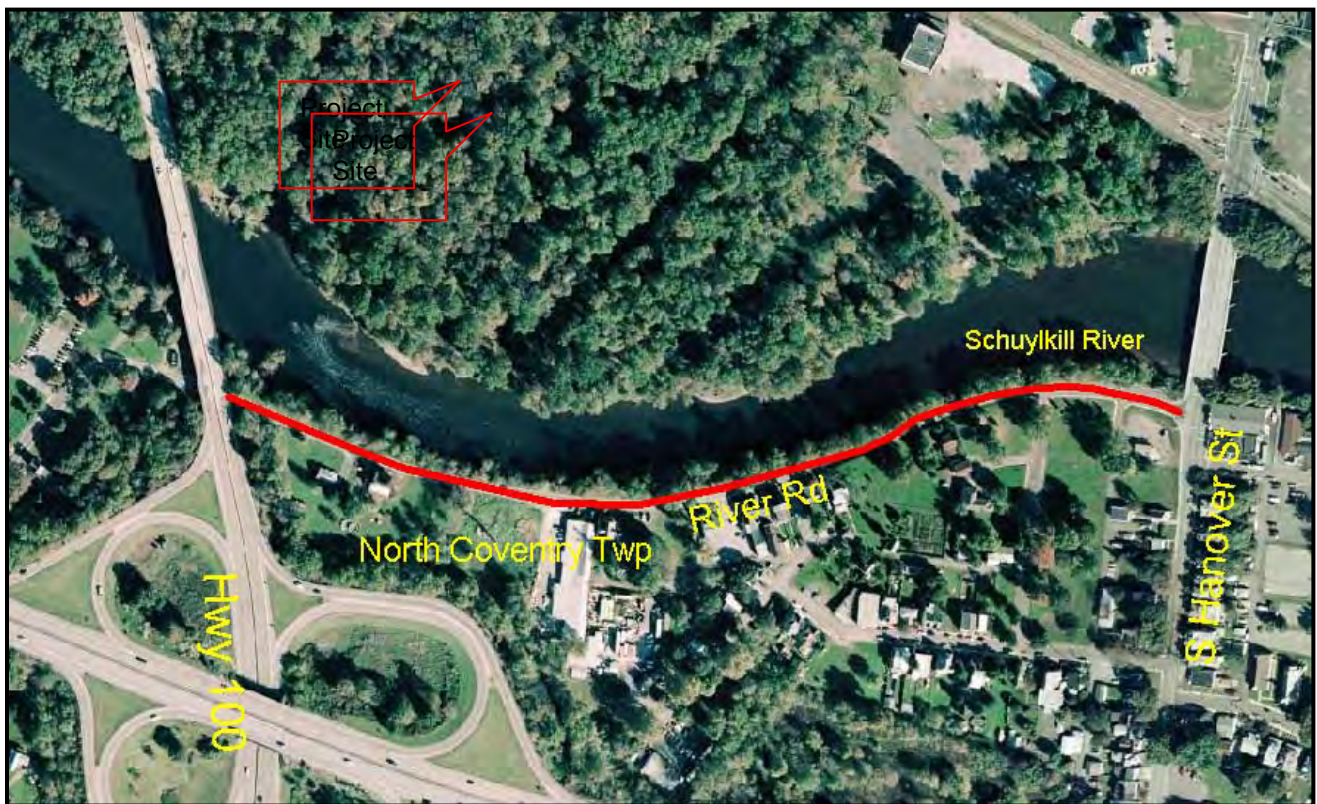


Figure 2: Location of streambank stabilization project on River Road in North Coventry Township, PA.



Figure 3. View of project area from the opposite streambank (Photo 2008).



Figure 4. View of project area with the failing streambank (Photo 2008).

Alternatives considered for this project included the following:

1. **No Action.**

The “no action” alternative would not provide any protection to the existing streambank and thus, River Road. This would lead to continual bank erosion and eventually River Road would be in danger of failure. It is likely that if nothing is done at this project location, the road embankment will continue to erode and the stability of the road will be threatened in the future. The Corps will keep the “no action” alternative in the analysis pursuant to National Environmental Policy Act regulations.

2. **Making the Existing Road One Way**

This alternative involves the redesigning of the existing road to make River Road in this section one way. This alternative to move traffic away from the eroding streambank and provide safer passage of vehicles along River Road was initially identified in a 2004 planning study by the Township. That study proposed either keeping the 33 feet right of way as two-10-foot wide traffic lanes with a 5 feet buffer and 8 feet wide trail or eliminating one lane of vehicular traffic and substituting a wider buffer and trail area in the right of way. This would have an impact on the local traffic patterns, as well as the residents of River Road. This alternative would provide some years of service until the road was compromised, but would still leave the area vulnerable to future streambank erosion and eventual road failure. The addition, of a pedestrian trail along the road would be an enhancement, but there are no current links that would access the trail segment, so it would be a stand-alone 1900 feet trail section. The Schuylkill River Trail (SRT) is already located across the river and provides the public ample access to a long distance trail. In addition, without addressing the streambank erosion now, this alternative would just delay the failure of the road.

3. **Relocate the Existing Road**

This alternative would involve purchasing up to 10 residential properties (median housing value: \$151, 800), 2 business properties, 18 other parcels, and relocating local utilities. Based on this information, the cost for this alternative would likely exceed \$2 million, which would be cost prohibitive to the non-federal sponsor. In addition, this alternative would disrupt the local traffic patterns for an extended period during construction of a re-aligned road. Furthermore, without addressing the streambank erosion now, this alternative would just delay the failure of the road; and without protection, the stream will continue to erode the streambank and eventually reach any nearby relocated road.

4. **Armoring the Streambank using Rip Rap**

This alternative involves the use of substantial amounts of rip rap and / or gabion baskets to cover approximately 8 feet of the streambank. This alternative would provide for immediate protection of the streambank of River Road, but the cost and environmental impact would be significant. However, the amount of rock needed to construct this alternative would be significant (approx. 5000 cubic yards). Gabion baskets require frequent maintenance, which would add to the cost of this alternative. In addition, rip rap or gabion baskets would provide very little habitat for fish and wildlife in the Schuylkill River that would utilize the streambank. Furthermore, the public would probably consider a 1900 feet segment of rip rap to be much less aesthetically pleasing than a planted river bank.

5. **Armoring / Bioengineering Combination on the Streambank**

This alternative consists of stabilizing the west streambank of the Schuylkill River along River Road with a combination of riprap and vegetative cover. The proposed project recommends the use of Longitudinal Peak Stone Toe Protection (LPSTP). The project begins in the existing ditch below the State Highway 100 overpass, and extends approximately 1900 feet downstream towards Hanover Street. The first 960 feet of the project is referenced as Range 1, and then there is a break (with no construction)

for approximately 800 feet. Then the final 200 feet of the project is referenced as Range 2 (Figures 4-6). The LPSTP is a continuous stone dike that is comprised of well sorted stone that is placed at the toe of the eroding bank, or slightly streamward of this area. The cross-section of the LPSTP is triangular in shape, and does not follow the toe exactly, but can be placed in a way that a “smooth” alignment can be created through bend locations. The amount of stone to be used in this design is based on 2-3 ton per linear foot, resulting in approximately 5 feet of toe protection. The LPSTP keys, which tie the LPSTP into the existing bank, must be keyed into the bank at both the upstream and downstream ends at 20 to 30° to the flow of the river, and at 150 foot intervals along the entire length of the protected area. These keys will be placed a minimum of 15 feet into the existing bank to prevent river migration from flanking the key and the LPSTP.

Range One has a minimum bottom width of 10 feet, and a minimum height of 5 feet. Range Two has a minimum bottom width of 6 feet, and a minimum height of 3 feet. The side slopes of both ranges should be 1 horizontal to 1.5 vertical. Range One will have approximately five keys tied back into the existing bank, and Range Two will have one. These key totals do not include the tie in keys at the upstream and downstream ends of the range.

Bendway weirs, structures built into the river that are perpendicular to the flow, will be constructed to redirect the erosive power of the river away from the protected bank. In addition, bendway weirs will be used to control the thalweg (the section of the river that is the deepest and has the highest velocities) and help realign the thalweg with the downstream bridge. The bendway weirs will only be placed in Range 1 and will be spaced between 130 -140 feet apart. They will protrude into the river approximately 30 feet from the streamward toe of the LPSTP. They will have a crest width of 10 feet and will be constructed out of well graded R7 riprap.

For both ranges there should be minimum excavation along the toe prior to the placement of stone. The bank side of the riprap will be backfilled with a gravel-cobble-sand mix to a certain height and then backfilled with soil. Prior to backfilling with the gravel-cobble-sand mix and soil, there will be an assortment of willow and dogwood planting poles placed along the back slope of the LPSTP and along the existing bank. The soil will then be backfilled to cover the poles, leaving the recommended length of the poles exposed. Sycamore, red maple and other native species of trees and shrubs will be planted in this soil after backfilling is completed. All areas disturbed during the construction process will be hydroseeded using a bonded fiber matrix.

The proposed construction would be completed in the dry using a cofferdam constructed of poles and fabric (e.g., portadam) during the low flow period of June through November. Since water levels in the Schuylkill River can approach up to 10 foot depths the cofferdam type will be further investigated as the project designs are finalized. In addition, a turbidity curtain would be used to supplement the cofferdam, as needed. The total amount of stone for this alternative would be approximately 1800 cubic yards and the total amount of soil fill would be approximately 2600 cubic yards. This amount of stone is substantially less than the previously discussed rip rap alternative. This is our proposed selected plan (Figures 5 and 6).

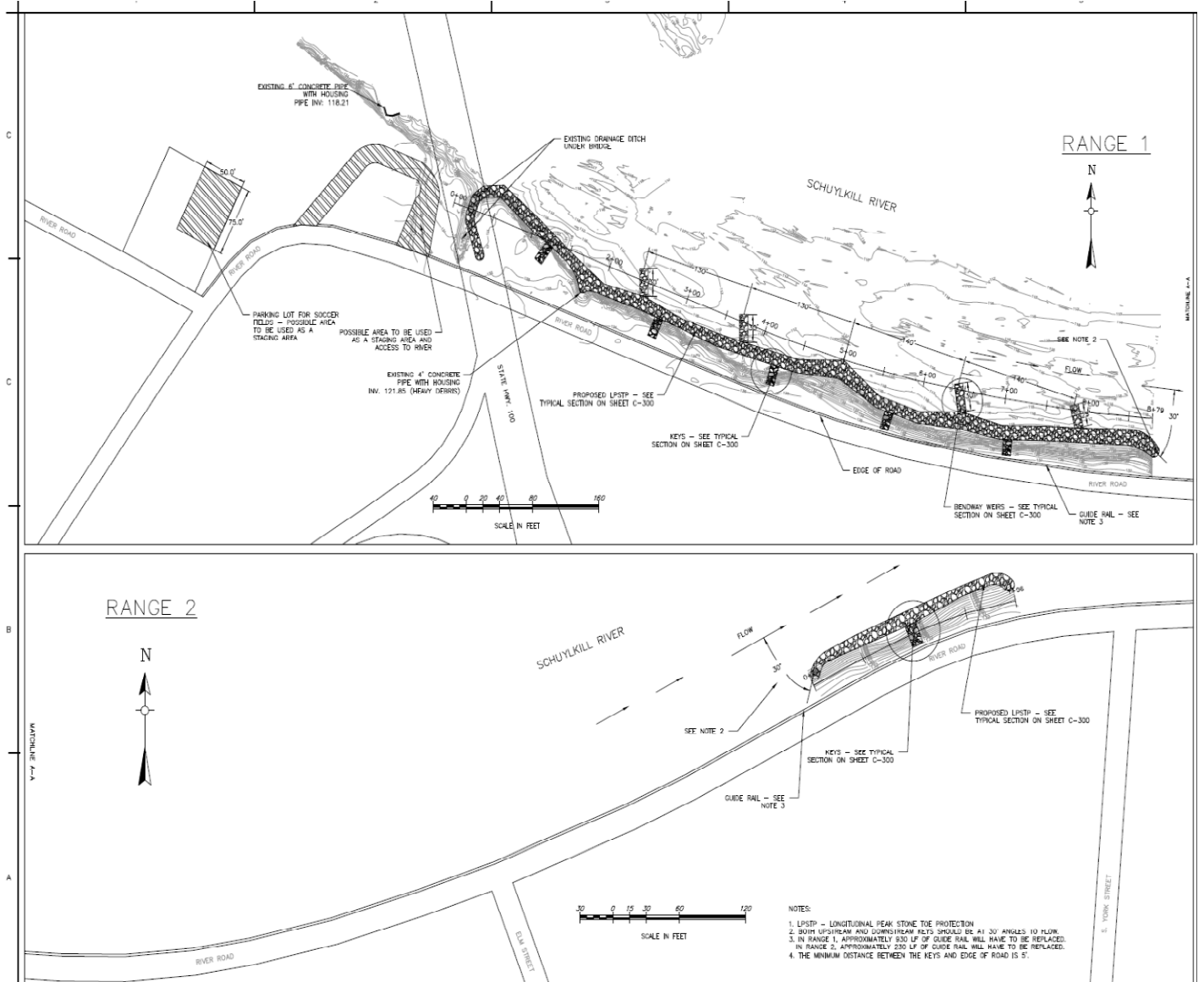


Figure 5. Proposed conceptual project design.

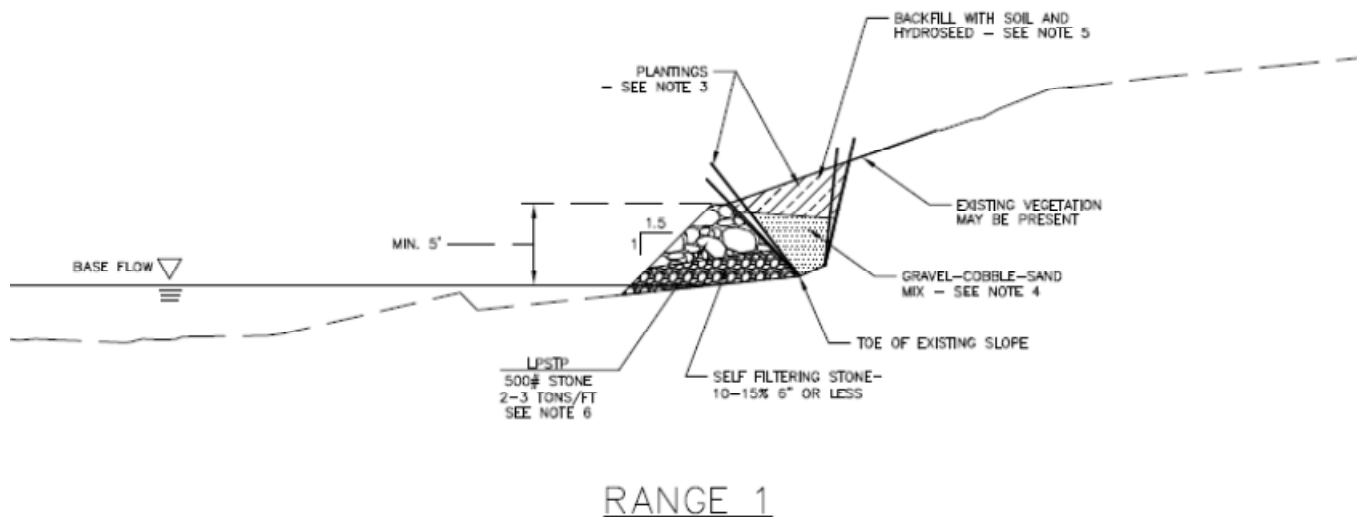


Figure 6. Proposed conceptual project design.

In accordance with the National Environmental Policy Act, a draft EA has been developed for this project. The EA concludes that the proposed action would not have a significant adverse impact on the environment. Therefore, a draft Finding of No Significant Impact has been prepared for this project.

In accordance with Section 401 of the Clean Water Act, a Water Quality certification will be obtained from PADEP prior to construction of the North Coventry Township Streambank Stabilization Project. Based on the information gathered during the preparation of the EA, the project does not fall under the jurisdiction of Section 307(C) of the Coastal Zone Management Act of 1972 and thus a coastal zone consistency determination from the PADEP will not be necessary for the project.

Information gathered for the project indicates that the proposed activity is not likely to affect any species or the critical habitat of any fish, wildlife or plant, which is designated as endangered or threatened pursuant to Section 7 of the Endangered Species Act, as amended. Section 7 consultation has been completed for this project. In accordance with Section 404 of the Clean Water Act, a Section 404(b)(1) analysis was prepared for the proposed action. Approximately 1800 cubic (cu) yards (yds) of rock and 2600 cu yds of soil will be placed within the Schuylkill River as a result of this project. Cumulative impacts associated with this project would eventually be beneficial in nature, as the bank is stabilized using bioengineering and native plants. This will result in an improved riparian buffer and water quality in the Schuylkill River.


Although there are recorded cultural resources in the vicinity of the project area, none have been recorded in the project Area of Potential Effect (APE), and none will be impacted by the proposed project. Although the APE is located in an area considered high probability for the presence of Native American archaeological sites, the proposed project has little likelihood of impacting a site since the alternatives discussed will add fill to the area and not remove intact soils. If unrecorded cultural resources are within the APE, the proposed project will serve to bury and protect any resources from further erosion. Consultation with the Pennsylvania Historic Museum Commission and the Tribes under Section 106 of the National Historic Preservation Act is ongoing for this project and will be completed prior to project construction.

The decision whether to accomplish the work proposed in this public notice will be based on an evaluation of the probable impact of the proposed work on the public interest. The decision will reflect the national concern for the protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonable foreseeable detriments. All factors, which may be relevant to the proposal, will be considered. Among those are conservation, fish and wildlife, general environmental concerns, economics, historic values, recreation, safety, water quality, aesthetics, and in general, the needs and welfare of the people.

The public and all agencies are invited to comment on this proposal. Copies of the draft Environmental Assessment are available upon request by calling Mr. Mark Eberle of the Environmental Resources Branch at (215) 656-6562. This public notice and EA are also available for review on the Philadelphia District web page at <http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>.

Any person may request, in writing, to the District Engineer, within the comment period specified in this notice (**February 7, 2014 through March 7, 2014**) that a public hearing / meeting be held to consider this proposal. Requests for a public hearing shall state, in detail, the reasons for holding a public hearing.

All comments on the work described in this public notice should be directed to Mr. Peter R. Blum, ATTN: Planning Division, U.S. Army Corps of Engineers, Wanamaker Building, 100 Penn Square East, Philadelphia, Pennsylvania 19107-3390 by **March 7, 2014**.

for 
Peter R. Blum, P.E.
Chief, Planning Division
Philadelphia District
U.S. Army Corps of Engineers