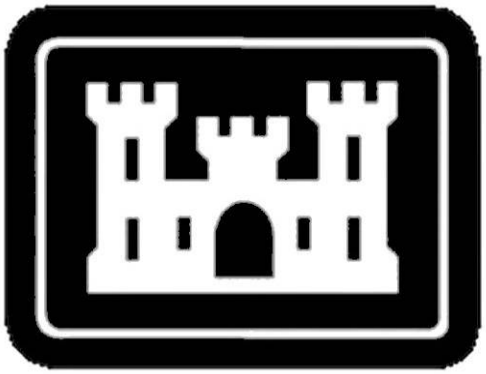
DRAFT ENVIRONMENTAL ASSESSMENT
SECTION 14 EMERGENCY STREAMBANK PROTECTION PROJECT
WALKER LANE, WOOD COUNTY, WEST VIRGINIA



District of the Army
Huntington District, Corps of Engineers
Huntington, West Virginia

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1 Executive Summary

This Draft Environmental Assessment and Planning Design Analysis report is being prepared to identify the most cost-effective alternative while minimizing environmental, economic, and social impacts that may result from the proposed streambank protection project located on the Ohio River in Wood County near Walker Lane in Washington, WV. Flood events have caused erosion and bank failures near a Ranney well field used for a municipal water intake. Additional flood related erosion would cause exposure and damage to the wells. The proposed project consists of protecting the well field from erosional encroachment and eventual failure.

2 Purpose and need

During recent Ohio River flood events, 2001 to present, a 1200 foot reach of river bank was exposed by flood related erosion, recessional failures, and piping. A series of 4 Ranny wells are used for municipal water intake near the site. The wells are between 20 and 70 feet from the eroding river bank. The purpose of this project is to find a cost-effective means to prevent additional erosion and failure in the project reach to prevent damage to the municipal water intake. The preferred alternative would also minimize impacts to the human and natural environment.

3 Background

The project as proposed is in accordance with Section 14 of the Flood Control Act of 1948 (PL 79-526) as amended, Emergency Streambank Protection. The project area contains four Ranney wells that are near an eroding river bank (Figure 1). A Ranney well is a high capacity well that utilizes horizontal screens running radially out from the bottom of the well to maximize the permeable surface area in the aquifer. Such wells are often used for municipal water intake where a standard well design would not have sufficient draw. These particular wells are located near the river bank because the aquifer becomes recharged rapidly from the nearby river and does not become depleted. In this manner, the Ranney well field effectively taps the natural bank material to filter water as a primary treatment for the municipal water supply. An optimal distance therefore exists at a location near the river bank that maximizes filtration and minimizes aquifer depletion. This well field, a key component of the public works water collection system, serves approximately 12,000 residents, industries, and commercial facilities. The well field is owned, operated and maintained by the Lubeck, WV Public Service District (PSD), a non-profit entity. As an essential public works facility, the well field is eligible for protection under the Section 14 program in accordance with Appendix F (paragraph F-23b) of ER1105-2-100. Protection of the at-risk well field is clearly within the defined Federal interest.

Groundwater seepage was observed at several locations during a site reconnaissance conducted during July 2006 and October 2007. Iron and manganese stained areas were observed within the lower bank soil berm and bench areas. If left unabated, additional flood related failure and erosion would cause bank retreat, well exposure, undermining, misalignment, and breaching. Seepage induced internal erosion and rapid recessional loading from rise and fall of flood waters has caused collapse of alluvial soils and fills within the riverbank. Flood flows have eroded alluvial deposits, failed soil, and fill material. Failures and erosion have extended landward to within 20 to 70 feet of the wells, pumps, and collection lines. This reach of extensive bank retreat and well endangerment extends upriver to Walkers Run and downriver to Sandy Creek.

Failure to protect this well field would undoubtedly result in bank failure and erosion and breaching of the well field and collection lines resulting in a serious shortage of water for approximately 12,000 residents, industries, and commercial facilities.

Figure 1. Ranney well near eroding bank of the Ohio River.

4 Alternatives Considered

4.1 Longitudinal Dike Toe protection with vegetative cover

The Preferred Alternative is construction of a 1200-foot longitudinal dike to protect the Ranney well field from further exposure and eventual failure. The proposed treatment would consist of placing 15-inch rock on a suitable geotextile filter within the lower bank

bench, extending from land-water contact line defined by the normal pool elevation. The dike would be 6 feet high and have a 2-foot top width and 17-foot bottom width. In total, the dike and tiebacks would contain 8000 tons of 15" stone. The interior dike area would then fill in with sediments carried by storms and high water events. Up and downriver transitions and dike tie-in features are necessary to prevent flood flows from eroding recently retained sediments and failed bank soils and to address the potential for outflanking and well failure. Fourteen internal groins or tie backs would be constructed within the dike system. The tiebacks that correspond with the four well locations would be 30 feet wide, and the remainder would be 20 feet wide. This alternative would require the clearing and grubbing of vegetation, removal of trees, drift, rubble, and debris; the excavation and placement of soils and suitable materials landward of the dike. Construction would be accomplished from the river using a barge and crane floating plant.

The design is similar to the bank stabilization project built near 24/25th Street in Huntington in 1999. That project implemented a longitudinal dike that successfully backfilled and revegetated naturally while stabilizing the eroding bank (Figure 3). The proposed project, as designed, would have minor, short-term impact on existing riparian vegetation. Existing vegetation would be removed along the dike alignment, where transition elements must be constructed at the upstream and downstream ends to prevent outflanking, and at the intermediate tieback locations. Minimal excavation may also be required to prepare a stable surface for placement. The estimated implementation cost for the construction of this project is $935,900.

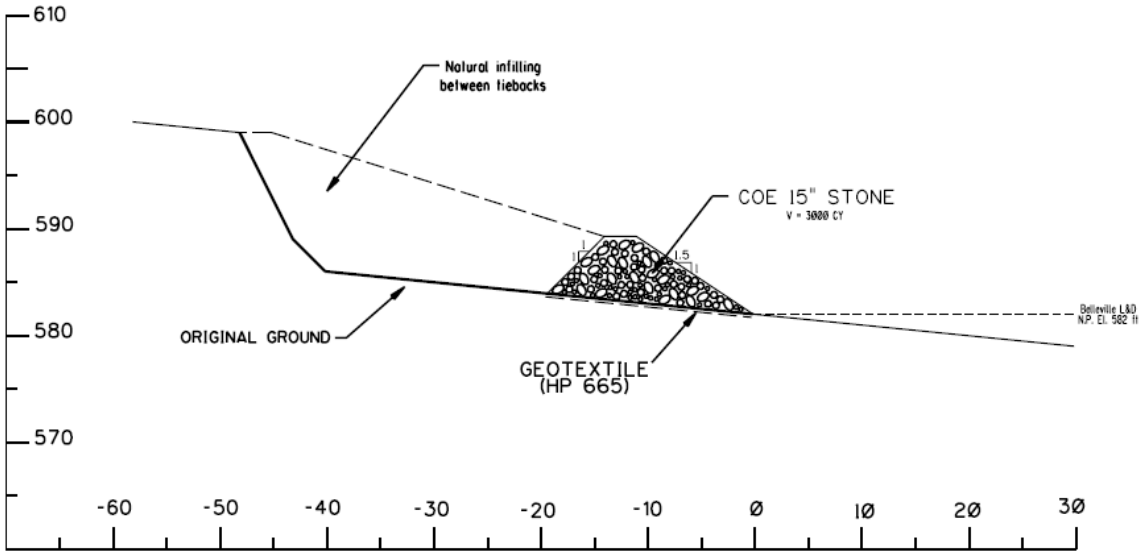

Figure 2. Typical cross section of longitudinal dike protection of failed bank. Area behind dike will fill in naturally. Scale is in feet.

Figure 3. Dike built in 1999 at 24/25th St. in Huntington similar to proposed alternative. Previously exposed tree roots have been re-buried and new vegetation has volunteered in.

4.2 No Action.

If no federal action is taken to stop bank erosion, the Corps has determined that erosion would continue and the Ranney wells would become exposed to erosion and unfiltered river water. Eventually, the city would be forced to take remedial action. This could include repair of the failed banks and any resulting damage to the well system. If damages are extensive, relocation of some of the facilities may be necessary. The City has added additional Ranney wells landward of the original 4 wells on the other side of the railroad tracks, but relocation of additional wells would result in reduced per-well sustainable yields and would cost significantly more than the proposed bank stabilization. Furthermore, bank-retreat-induced exposure of the wells could cause introduction of pathogens into the drinking water supply. The seepage path between the river banks and the well system functions as a natural filter for small particulates and microorganisms. When the banks erode and the seepage path is shortened or the wells are exposed, the natural filter no longer functions, and the unprotected water intake could become a public health hazard. This is not considered to be a viable alternative and would not meet the purpose and need of the project.

4.3 Alternatives Dismissed from Further Consideration

Alternatives considered but dismissed from further consideration included sheet piling, gabion/mat/block treatment, vegetative cover and relocation. A description of each and discussion regarding reasons for dismissal follows:

5.1.1 Sheet Piling.

Installation of this alternative would require the excavation of failed soil, fill, debris, and vegetation to expose a suitable installation surface. Piling would then be driven, and anchored by tiebacks. Stone would be placed to construct transitions at up and downriver limits of treatment. Cost for construction of this treatment is estimated to be $1,750,160 for the sheet piling and stone, including installation, and anchorage. Design costs and supervision and administration, would result in a total cost of approximately $2,012,690. Because this alternative would result in a similar level of protection as the Preferred Alternative while costing significantly more, it does not meet the cost-effectiveness objectives of the project and was dismissed from further consideration.

5.1.3 Gabion/Mat/Block Treatment.

Requirements for the construction of this plan would be the excavation of failed soil, fill, debris, and vegetation and placement of free-draining granular fill and geotextile filter, and mat or block treatment on stable slopes to height of bank. This treatment would use a pre-manufactured interlocking concrete block mat anchored within in-place soils. Conventional transitions would be placed at up and downstream limits. Gabion Wall and key would be constructed. Cost for construction of this treatment is estimated to be $1,416,500. Because this alternative would result in a similar level of protection as the Preferred Alternative while costing significantly more, it does not meet the cost-effectiveness objectives of the project and was dismissed from further consideration.

5.2.1 Vegetative Cover.

Vegetative treatments cannot be implemented at this site due to continuing failures and erosion occurring immediately adjacent to the well field. As a reference, the existing vegetation at the site is becoming increasingly undermined without evidence of recovery (Figure 5). Preparing a stable slope to allow installation of vegetation would require well field relocation, described below, and would not be cost justifiable.

5.2.2 Relocation.

This alternative consists of the relocation of the well field for a distance of approximately 200 feet east (landward). This would include acquisition of real estate, and relocation of collection lines. Costs for the implementation of a relocation alternative at this site would be approximately $1,800,000. Because this alternative would result in a lower capacity well field at a significantly higher cost, it does not meet the cost-effectiveness objectives of the project and was dismissed from further consideration.

5 Existing Conditions and Impacts of Preferred Alternative

5.1 Location

The study area is located along the left descending bank of the Ohio River in Wood County near the city of Washington, WV. The project is located between Ohio River mile 193.6 and 193.9 at 39º 14' 08" N and 81º 41' 18" W in the Belleville Pool at elevation 582 feet above mean sea level (ft-msl) (Figure 4). The endangered public facility is a Ranney well field owned and operated by the Lubeck Public Service District (PSD) consisting of four water wells and associated collector lines along a 1200 linear foot reach of the river bank. The wells are located approximately 20 to 70 feet from the top of the riverbank. The adjacent river bank is actively eroding and failing in several places and is approximately 12 feet high, as referenced by Belleville normal pool at 582.0 ft-msl. A plan view drawing (Figure 4) shows the Contractor's Work Limits (CWL). The ordinary high water line, or OHWL, at the project location is about 584.3 ft-msl (Ohio River Navigation Chart 2003).

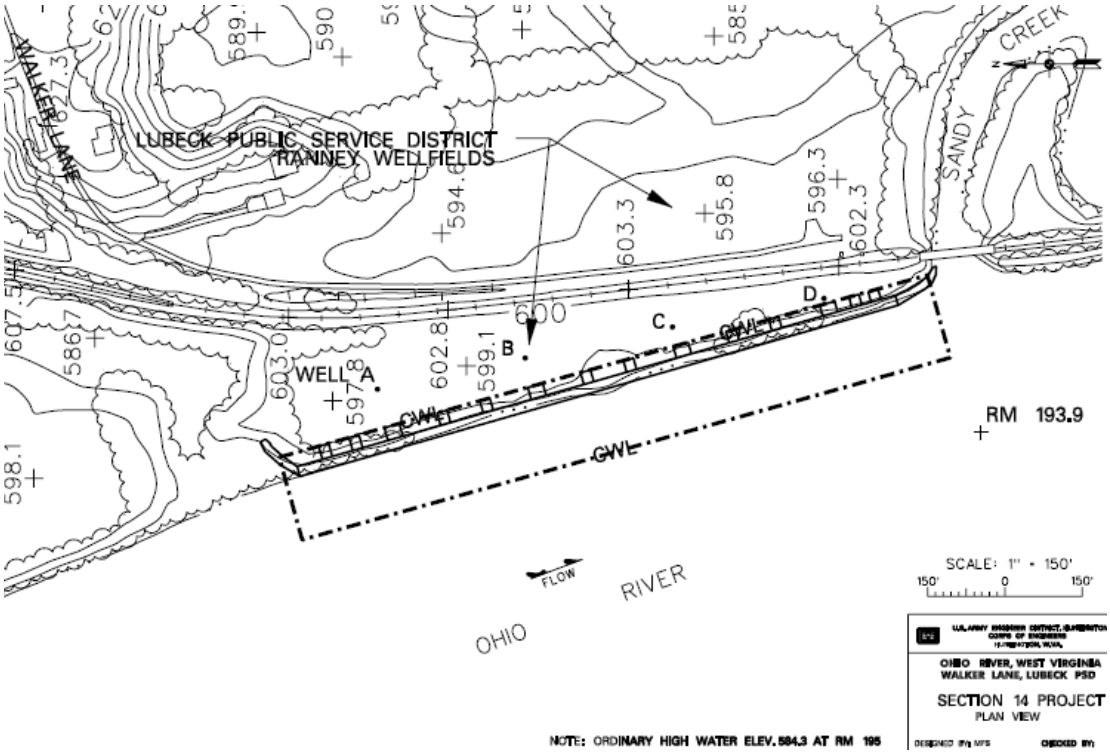

Figure 4. Location of the eroded bank along the Ranney well field.

5.2 Archeological and Historic Resources

Based on an archaeological site reconnaissance, no known archaeological sites or historic properties eligible for inclusion in the National Register of Historic Places are located within the project work limits. If project work limits are expanded or if unrecorded archaeological resources are discovered during project activities, all construction activities in the immediate area would cease until proper Section 106 consultation and documentation has taken place. Although stone placement, tree clearing, and minor excavation for proper stone foundation would cause minor surface disturbance, no action is anticipated that would potentially uncover or disturb buried resources. The Preferred Alternative would, in fact, stabilize the bank to prevent potential loss of possible buried resources due to natural erosion. Thus, implementation of the preferred alternative would have no adverse impact upon cultural resources. Although no cultural resources are known to be in the area, under the No Action alternative, further erosion and possible Ranney well relocation by the PSD could potentially uncover and disturb unknown subterranean resources.

5.3 Aesthetic Resources

The project area contains dense riparian shrubs and trees along the bank that are showing signs of root exposure and stress near the shoreline. The property at the top of the bank and the area surrounding the Ranney well field is mowed and maintained to the railroad tracks. The upstream end of the project reach abuts a confluence of a tributary drainage area unofficially known as Walkers Run, which is surrounded along the river by bottomland hardwood forests and inland by a wetland. The downstream end of the project contains a section of large concrete rubble used in a previous attempt to counteract erosion. The project area terminates downstream at the confluence of Sandy Creek, which is crossed by a railroad bridge. Due to the high bank and intervening railroad line, most of the project area is only visible from the river and the opposite shore. Access to the project area itself is private. Predominately boaters and other recreational users of the Ohio River would have a clear view of the project area, where they would see a combination of natural resources, maintained fields with utility infrastructure, concrete rubble, and a railroad bridge. This view is typical of this area of the Ohio River, which is typified by a mixture of natural landscapes interspersed with industrial and urban uses.

Under the Preferred Alternative, much vegetation would remain intact. The proposed dike would cover the exposed and eroding toe of bank along the project area. The tiebacks would reach up to the top of the bank. The appearance of a longitudinal stone dike would initially introduce an unnatural-appearing structure. Although this departs from some of the natural vegetation, especially at the upstream reach of the project area, it would not significantly contrast with the stone rubble and railroad bridge at the downstream side. Although the stone would initially contrast in color with the natural surroundings, it would darken and cover with vegetation over time, significantly reducing its long-term visual impact. Ultimately, volunteer vegetation will be able to establish and grow with fewer disturbances from erosion, leading to stronger and healthier vegetation along the project area. Under the No Action alternative, viewers would have little, if any, change in aesthetics until erosion would further compromise the site. Either in-place

repairs such as slope stabilization would occur, or some of the wells would be relocated. The relocated wells would be less visually intrusive from the river, but would be more visible from the adjacent residential areas. Erosion would continue to disturb and weaken vegetation along the bank. Both the No Action and Preferred Alternatives introduce visual changes to the project area shoreline over time. Compared to the No Action alternative, the Preferred Alternative would preserve more natural vegetation at the site, and would therefore have no significant, long-term adverse impacts on aesthetic resources.

5.4 Recreation Resources

The Ohio River is used for recreational boating, water skiing, jet skis, and fishing. The project area itself is fenced off and inaccessible to most recreational foot traffic. Construction equipment would be staged off shore near the river bank, but because the river is 1/4 mile wide, the equipment would not pose an obstacle to recreational or navigational boats. Noise levels would be normal for river frontage and would only be temporarily elevated near the construction site, posing a minor nuisance to recreational boaters. The preferred alternative would therefore have no significant effect on recreational resources. The No Action alternative would have no direct effect on recreation in the near term. However, if repairs or relocation were necessary in the future, there would be similar nuisance construction impacts to recreation.

5.5 Economic Resources

While the No Action and Preferred Alternatives would likely allow continued water service to residents and industry in the city, the No Action alternative would result in decreased net economic benefits associated with service interruption and higher maintenance and replacement costs should the bank erode or fail, compromising the wells. Interim repairs are expected, and possible relocation is expensive. These costs are higher than the Preferred Alternative, while delivering essentially the same services to the City. The Preferred Alternative would lessen the probability of water supply failure and therefore decrease costs of loss of function and maintenance.

5.6 Environmental Justice

Census tract 109.1 covers a population of 4,540 around the communities of Lubeck and Washington, WV. The residents in this area are 98.5% white/Caucasian with the remaining 1.5% of mixed or other race, and the median income in the area is $48,306. The local demographics contrast some with the 87,986 residents in the greater Wood County area, who are 98.1% white/Caucasian with a median income of $33,285. The median income of the population near the proposed project area is 45% greater than that of the surrounding county. The project area has no bearing on local demographics or income; rather, it has to do with the location of the municipal water intake and the hydraulic and geotechnical processes that threaten the facility. Furthermore, matching funds for the proposed project would come from the PSD, which charges customers according to use and would therefore not disproportionally single out any certain

community or demographic. The proposed project would have no adverse, disproportionate effects on minority and low-income populations and therefore is in compliance with Executive order 12898. The No Action alternative, similarly, would not selectively impact any one population demographic.

5.7 Floodplain Management

The project lands are located within the 100 year floodplain and do fall under the purview of Executive Order 11988. A hydraulic model (HEC RAS) was used to determine that the stone fill for the proposed project is insignificant compared to the entire channel cross sectional area and would have no adverse impact on the floodplain or river hydraulics (Correspondence with H&H).

5.8 Impacts to Navigation

Although the construction equipment would be moored within the navigable channel of the Ohio River, equipment would be located near the river bank and away from the main navigational route. The main navigational route lies near to the right descending bank of the Ohio River, the other side of the river from the project area. Therefore, impacts to navigation during construction would be insignificant. The Preferred alternative would be at and above normal pool and would not impact the navigational channel (Correspondence with USACE Dredge Team). A Notice to Navigation (NTN) would be filed 2 weeks ahead of construction to inform navigation industry of construction activity associated with the project. Impacts under the No action alternative would be minor and similar to the Preferred Alternative if repairs or relocation would be necessary in the future.

5.9 Environmental Resources

5.9.1 Aquatic resources

The project area contains riparian trees and shrubs amid severely eroding banks along a shallow aquatic bench. The surrounding area is locally rural but lies approximately 9 miles downstream of the urban Parkersburg riverfront. Barge tows carrying coal and chemicals navigate, fleet, and moor throughout the river channel. The Ohio River supports an aquatic community of invertebrates, mussels, fish, amphibians and reptiles, which thrive in spite of these human disturbances. Freshwater mussels are an important and very sensitive part of the Ohio River ecosystem. The nearest known mussel bed was surveyed by the Fish and Wildlife Service 0.4 miles upstream from the project area on the opposite bank (River Mile 192.9-193.3). Riparian vegetation, the strips of inundation-tolerant plants along rivers, is important for the aquatic health of a river system. Riparian vegetation captures and filters silt and pollution during flooding and provides an influx of plant and insect matter that serves as food for the aquatic ecosystem. Because the project area is prone to erosion and bank failure, the riparian vegetation is stressed and silt and sediment are transported away from the river bank, rather than being retained as would occur in a healthy riparian environment. Silt can harm sensitive mussel species, which are filter feeders and live in the benthic substrate. Fish, which breed, feed, and find shelter near riparian habitat are also impacted by excess sedimentation.

The Preferred Alternative would result in sediment deposition between the landward side of the dike and the existing riverbank, supplying nutrient-rich soil for riparian plant species and reducing excess silt and sediment release from the existing riverbank into the aquatic ecosystem, thus protecting aquatic species such as fish and mussels. During construction there would be aquatic substrate disturbance caused by construction equipment moored along the project area. These impacts would be temporary and similar in magnitude to background navigational and industrial disturbances and are therefore not considered significant. The Preferred Alternative would therefore have a net positive benefit in the long term to the aquatic ecosystem. Under the No Action alternative, aquatic degradation caused by bank erosion would continue, and construction impacts would be caused by eventual repair or relocation of the Ranney wells.

5.9.2 Terrestrial Resources

The project area contains a naturalized slope that terminates at the top of the river bank at a field that is mowed around the Ranney wells. The river bank supports common riparian shrubs, trees, and weeds including hackberry, pawpaw, boxelder, silver maple, black locust, cherry, alder, elm, sycamore, Japanese honeysuckle, and Japanaese knotweed. The latter two of these species are considered invasive exotics, but make up less than 10% of the vegetative cover. The woody assemblage is at a young successional stage as it is dominated by brushy shrubs and trees of less than 1 foot diameter at breast height (DBH). Near the normal pool water line of the Ohio River, a combination of erosion, recessional failures, and piping associated with periodic flood events have eroded soil away from the riverbank, exposing extensive networks of tree roots. Wave action along the bench formed at the water's edge causes a constant rework and transport of substrate, preventing permanent vegetation from establishing that would otherwise function to slow down the erosion process. Although this process can be observed along much of the Ohio River, it is exaggerated at certain locations, such as the project area, due to local soil, groundwater, and topographical conditions and their response to flooding. For the lack of a natural rehabilitation mechanism under the No Action alternative, the riparian forest is expected to become increasingly undermined over time. Figure 5 shows the effects of this undermining mechanism on the tree root systems in the project area. In addition, eventual remedial stabilization or relocation of the wells would cause further construction impacts to terrestrial resources similar to the Preferred Alternative.

Figure 5. Trees becoming exposed at the root line due to bank retreat near Walker Lane. The well field to be protected lies near the riverward base of the trees.

The preferred alternative, in addition to protecting the Ranney well system, would also protect the riparian vegetation that is currently at risk. Although temporary construction impacts would damage some trees and necessitate the removal of others within the dike alignment and construction equipment path, these are trees that would eventually not survive on their own under the No Action alternative. The preferred alternative would therefore benefit the local habitat and have no significant long-term impacts on terrestrial environmental resources. The proposed design has been applied to other similar sites in Huntington WV, resulting in bank stabilization, protection of existing trees, and recruitment of dense volunteer vegetation that otherwise would not have been able to establish (Figure 6). Volunteer vegetation in past projects has consisted primarily of native species.

Figure 6. View between the dike and previous failure scarp at 24/25th St. in Huntington demonstrating burial of previously exposed roots (foreground) and recolonization by volunteer species (background).

5.9.3 Threatened and Endangered (T&E) Species

There are 23 TE species found within West Virginia as listed by the US Fish and Wildlife Service (USFWS). Of these, seven could potentially be found within and around the Belleville pool of the Ohio River. These include the Indiana Bat (*Myotis sodalist*) and the following mussel species: Clubshell Mussel (*Pleurobema clava*), the Fanshell Mussel (*Cypogenia stegaria*), the Pink Mucket Pearly Mussel (*Lampsilis abrupta*), the Northern Riffleshell Mussel (*Epioblasma torulosa rangiana*) and the Tubercled-blossum Pearly Mussel (*Epioblasma torulosa*).

Many freshwater mussel species are threatened or endangered due to their intolerance to pollution and human disturbance. The nearest known survey of a mussel bed 0.4 miles upstream from the project area on the opposite bank identified no federally listed mussels. Because the current project area was not surveyed, this nearby survey does not imply with certainty the absence of federally listed mussels within the channel adjacent to the project area. The aquatic bench along the project area receives periodic mantling of silt and sediment that is made worse by sediment discharged by the nearby eroding banks. Due to these adverse substrate conditions, the project area is poor habitat for sensitive filter feeders such as mussels. However, because locating T&E mussel species could require extensive underwater surveys, the Corps instead proposes to avoid all potential mussel habitats by constructing the dike above the normal pool elevation, 582 ft-msl. Some temporary construction impacts to the river substrate would be unavoidable, but impacts would be minimized by constructing from barge platforms, which are staged at a distance from the banks sufficient to minimize contact with and

disturbance of the banks. Construction impacts could occur from the construction and transport barges running aground, spuds (hydraulic-controlled posts used to anchor and stabilize the construction platform) impacting substrate, incidental spillage of construction material such as stone, and prop wash from the tow vessel. Of these impacts, prop wash from a careless tow vessel could be the most detrimental to mussels.

In the proposed action, the purpose of the spuds is to keep the barges from moving during construction, including keeping the barges from impacting the banks. Proper vessel operation requires the tow to maintain its prop nozzle or sternwheel a safe distance from the bank to minimize equipment damage, typically more than 10' from the bank. The required safe vessel operation would result in water velocities at the substrate that would be less than those caused during natural flooding. With these standard safety measures being followed, the probability of impacting mussel habitat and associated threatened and endangered species would be negligible, especially compared to the daily impacts of background navigation, industrial, and recreational impacts. Under the No Action alternative, long-term release of silt and eroding bank material could locally impact or even bury silt-intolerant mussel species, although the watershed impacts from either the No Action or the Preferred Action alternatives would not be predictable.

Building the dike on shore to avoid mussel habitat comes at the expense of necessary removal of trees within the dike alignment. The Federally endangered Indiana Bat can, in certain habitats, be harmed by tree removal. The Indiana Bat hibernates in caves in the wintertime, but during the summer, females occupy maternity roost colonies in loose bark or cavities of trees. Mature riparian forests along streams also provide important forage areas for the Indiana Bat. At the project area, where most trees are young and less than 12" diameter at breast height (DBH), no such candidate roost trees were observed. There are no known Indiana bat hibernacula within flying distance of the project area. It was therefore determined that selected removal of trees for the dike and tiebacks would have no direct impacts on Indiana Bat forage sites or maternity roosts. Under the No Action alternative, although riparian forest degradation would continue over time, the Indiana Bat would not be impacted because it is not present at the site.

The preceding analysis has been reviewed by the Fish and Wildlife service under Section 7 consultation. The Fish and Wildlife service agreed that if the proposed construction and design described would be employed, no adverse effects would be anticipated to federally listed species (correspondence with FWS).

5.9.4 Water quality

The entire length of the Ohio River is listed as impaired due to elevated PCB levels, an industrial pollutant (2002 ORVRSC). In general, industrial pollutants, municipal sewer, urban runoff, loss of riparian buffer, and water column impacts from navigational dams and towboats have resulted in long-term impacts on water quality in the Ohio River and its tributaries. The Preferred alternative would reduce siltation caused by active erosion on the river bank and protect important riparian vegetation in the project reach.

Temporary impacts of placing the proposed stone dike in waters of the US would be minimized by following best management practices described by the WVDEP. An application for 401 water quality certification is being pursued with the WVDEP. As a part of the 401 certification, a 404(B)(1) analysis (Appendix A) has been performed to determine whether the Preferred alternative would have significant impacts on water quality (Appendix A). The analysis determined that no significant impact would occur. Under the No Action alternative, siltation and loss of riparian vegetation would continue to contribute to water quality degradation in the Ohio River.

5.9.5 Hazardous, toxic, or radioactive waste (HTRW)

A Limited Phase I Hazardous, Toxic and Radioactive Waste (HTRW) assessment was conducted within the reaches to be protected. A site reconnaissance and records search determined that there are no known sources of HTRW within the project area.

The DuPont and GE Chemical Plants are located within the vicinity of the Ohio River in the Washington, WV area, although these plants are not in the immediate vicinity of the project area and should not impact the project.

The project area includes the area where the Lubeck Public Service District water wells are located. A CSX railroad and gravel pile adjacent to the railroad tracks are located near the project area, in a line parallel to the water wells. Concrete debris and rock were noted along the downstream reach of riverbank within the project area, which appear to have been placed there to help with bank stabilization. The concrete debris and rock should not impact the project area. The construction contract will recommend that construction workers avoid the right of way area for the CSX railroad and the gravel pile. No sampling of surface water or soil is recommended at this time. No further HTRW concerns were noted.

Construction associated with either the Preferred alternative or the No Action alternative would utilize clean material around a municipal water supply; therefore, neither the Preferred Alternative nor the No Action alternative are expected to disturb, create, or uncover HTRW material.

5.9.6 Air Quality

Wood County is in non-attainment of the criteria air pollutants of 2.5 micrometer particulates (PM2.5) and ozone. Wood County is currently subject to federally-approved air quality maintenance plans and to general and transportation conformity requirements under the 8-hour ozone National Ambient Air Quality Standards (NAAQS). Although vehicular emissions such as those from cars, trains, and tow boats contribute to air pollution, non-stationary sources of air pollution are not monitored by the EPA. In areas of nonattainment, the Clean Air Act requires that the Federal government make a conformity determination to assure that their actions would conform to the State Implementation Plan for that pollutant. The proposed construction would require a diesel towboat and crane for transporting and placing stone, as well as for site preparation. Assuming 80 hours of use per diesel engine, the USEPA NONROAD model

predicts release of 0.15 tons of ozone and 0.004 tons of PM2.5 for the entire construction activity. The recommended plan is exempt from making a conformity determination because the estimated emissions from construction equipment would be far below the *de minimis* standards of 100 tons/year each for ozone and PM2.5.

In general, construction activities described by the Preferred alternative would have the potential to cause localized temporary, nuisance air quality impacts, including particulate emissions. Emission sources include diesel exhaust and fuel odors associated with operation of heavy equipment, engine emissions from personal vessel use associated with construction and construction activities. The residences and establishments located near the project site (>500 feet) would be susceptible to minute and temporary air emission impacts associated with the construction of the stone dike structure. These emissions would be similar in location and magnitude to normal emissions released by other towboats and trains transporting goods on and along the Ohio River. Once the dike structure is completed, equipment will be transited off-site and no emission generating sources will be present. All construction would be performed in accordance with the State Implementation Plan, and in compliance with applicable West Virginia Environmental Protection Agency Division of Air Quality requirements. The construction period is expected to be brief and impacts would not exceed *de minimis* levels of direct emissions of a criteria pollutant. No short-term effect on air quality would be expected under the No Action alternative, but if construction for repairs or relocation is necessary in the future, temporary air pollution impacts would be similar to the Preferred Action.

5.9.7 Wetlands

The physiography and drainage patterns at the project are not conducive to the formation or occurrence of wetlands along the banks of the Ohio River. However, the project area is flanked by two tributary streams to the Ohio River. The embayments or estuaries of these streams are identified as wetlands in the National Wetland Inventory (Figure 7). Based on the nearby wetlands, a site reconnaissance was conducted and included the closest embayment, which is directly upstream of the project area. The embayment covers approximately 2 acres containing a meandering channel surrounded by palustrine emergent marsh (PEM) with obligate herbaceous wetland species. It is surrounded by high banks vegetated with inundation-tolerant bottomland hardwood tree species. Its connection to the Ohio River is a narrow opening between the riverbanks, which creates a backwater effect in the embayment. The project area begins on the Ohio River side of the downstream bank adjacent to the embayment. No other wetlands were identified in the project area.

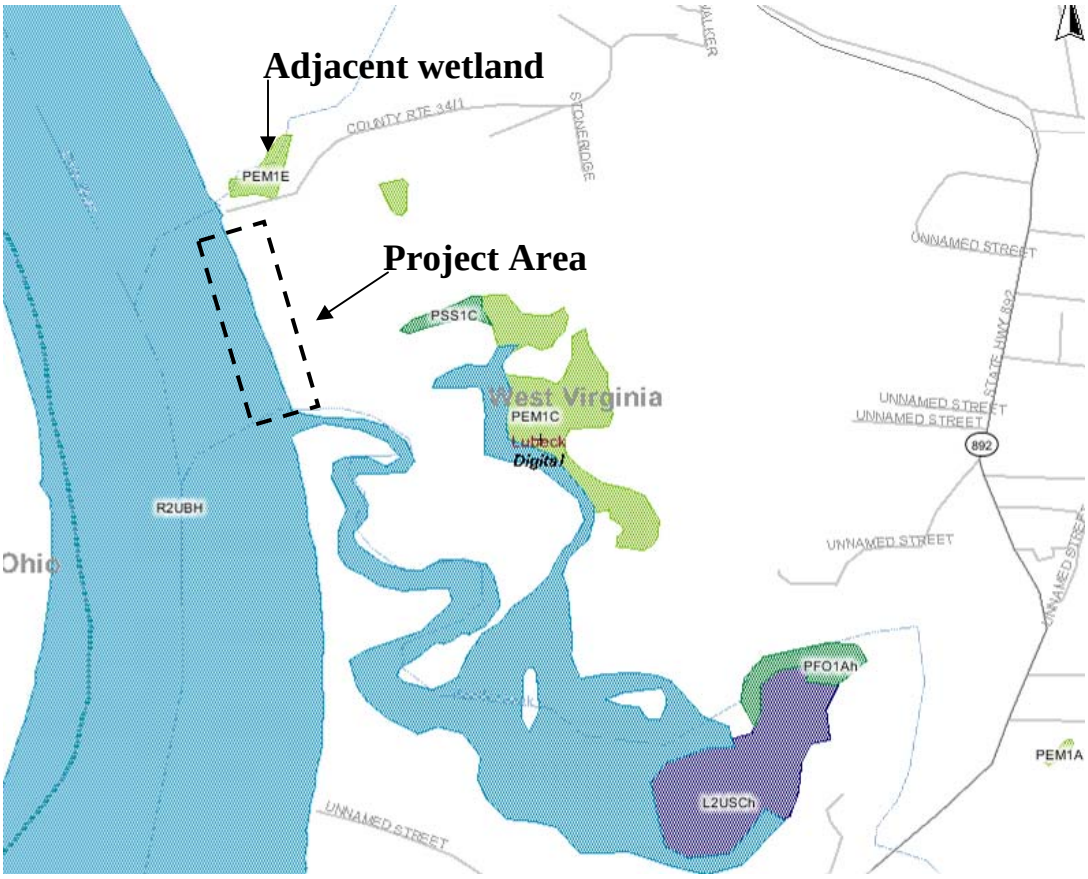

Figure 7. National Wetlands Inventory (NWI) mapping of the project area showing adjacent wetland.

Neither the No Action alternative nor the Preferred Alternative would cause any changes to the adjacent wetlands. Actions that could affect the wetland include upstream changes to the watershed, changes to the groundwater table, backwater effects of the Ohio River, and direct encroachment upon the wetland area. As the local wetlands are in embayments, they are predominantly controlled by surface water hydrology. Bank stabilization under the Preferred Alternative would prevent erosional shortening of the groundwater seepage path to the Ranney well system but this would not significantly affect the groundwater table elevation or the wetlands. The proposed dike system would not have a significant effect on surface water hydraulics of the Ohio River and therefore would have no measurable backwater effect. The proposed action would neither physically encroach upon the wetlands nor affect the watershed upstream of the wetlands. The No Action alternative would not measurably change surface water hydrology and would only locally affect groundwater hydrology and would therefore not have a significant effect on the nearby wetlands.

5.9.8 Noise Level

The project area is located at least 500 feet and on the other side of the railroad tracks from the nearest residence. The noise from a crane can be up to 96 decibels at a 10 foot distance, which would reduce to at most 60 decibels at the distance of the neighborhood,

but this would be much further (though not predictably) reduced by the intervening trees and railroad tracks. Trains and cars, and barges on the river are currently the predominant sources of noise for the nearest residences. Of these, freight trains, although intermittent, would currently pose the greatest contribution to ambient noise. For reference, the freight trains that run approximately 250' from the same residences would be approximately 67 decibels, which would be noticeably louder, though shorter in duration, than the more distant proposed construction The construction around 60 decibels would be similar in magnitude to a quiet conversation and would pose a minor nuisance to nearby residents during daylight hours during which the construction would take place. The construction activity would last approximately 2 weeks, after which there would be no residual changes in noise compared to the present conditions. Under the No Action alternative in the short term, road, navigation, and railroad noise would constitute the predominant form of noise pollution. If construction would be necessary to relocate the wells, construction would be closer to the residents and therefore louder than the Preferred Alternative.

6 Public involvement and coordination

6.1 Required coordination

Coordination with Federal and state resource agencies was conducted in conjunction with the preparation of the Section 14 Emergency Streambank Protection, Draft Environmental Assessment, Walker Lane, Wood County, West Virginia. The US Fish and Wildlife Service in Elkins, West Virginia and the West Virginia Department of Natural Resources have been consulted to comply with the Endangered Species Act and the Fish and Wildlife Coordination Act. Section 401 water quality certification under the Clean Water Act is being pursued with the WV Department of Environmental Protection.

6.2 Public involvement

The Draft Environmental Assessment will be made available to the natural resource agencies, both Federal and state, the general public and other interested agencies and groups for a thirty (30) day review period as required by the Corps' National Environmental Policy Act (NEPA) regulations.

A Notice of Availability (NOA) has been prepared and will be published in the Parkersburg News and Sentinel regarding this document. All comments received during the thirty (30) day review period will be considered in the Final Environmental Assessment.

7 References

Dredge Team leader, Kent Browning, 18 March 2008. Personal communication by email, subject: "Walker Lane Section 14 project." Message states that project construction will

not interfere with navigation. United States Army Corps of Engineers, Huntington District.

Fish and Wildlife Service (FWS), 2007. Personal communication by email, subject: USACE Section 14 projects. Message summarizes phone conversation confirming No Indiana Bat hibernacula in project area and no impacts to T&E species if proposed methods employed.

Hydraulics and Hydrology (H&H) representative Matt Gibson, 17 March 2008. Personal communication by email, subject: "Walker Lane H&H." Message states that backwater and velocity effect from proposed action is negligible, United States Army Corps of Engineers, Huntington District.

Ohio River Navigation Charts, Rev. 2003. U.S. Army Corps of Engineers, Huntington District.

8 List of Preparers

Sean Carter	CELRH-EC-GS	Project Management
Jeffrey F. Zylland	CELRH-PM-PD-R	Principal Author
Janet K. Wolfe	CELRH-EC-ER	HTRW Review
Terry L. Clarke, Esq.	CELRH-OC	Legal Compliance Review
Richard G. Drum	CELRH-PM-PD-F	Internal Technical Review

APPENDIX A

404(B)(1) ANALYSIS

SECTION 404 (b) (1) EVALUATION
WALKER LANE SECTION 14 EMERGENCY STREAMBANK PROTECTION PROJECT,
WOOD COUNTY, WEST VIRGINIA

I. INTRODUCTION

This report concerning bank stabilization between Ohio River mile 193.6 and 193.9 in Wood County near the City of Washington, WV. The purpose of the action evaluated herein is to identify an alternative for bank stabilization that would maximize economic benefits. The proposed project consists of protecting a water intake for the Lubeck PSD. The 404(b)(1) guidelines in 40 CFR 230 contain the substantive criteria for evaluation of proposed discharges of dredged or fill material under Section 404. The principle behind the criteria is that no discharge of dredged or fill material is permitted that would result in unacceptable adverse effects to the aquatic ecosystem. Compliance with the guidelines is evaluated by reviewing the proposed discharge with respect to the four restrictions in 40 CFR 230.10. These restrictions state that:

a) No discharge shall be permitted if there is a practicable alternative which would have less adverse impacts on the aquatic ecosystem;
b) No discharge shall be permitted if it violates state water quality standards, violates toxic effluent standards or prohibitions under Section 307 of Act, or jeopardizes the continued existence of threatened or endangered species as identified under the Endangered Species Act of 1973.
c) No discharge shall be permitted which will cause or contribute to the significant degradation of waters of the United States.
d) No discharge shall be permitted unless appropriate and practicable steps have been taken to minimize potential adverse impacts to the aquatic ecosystem.

II. PROJECT DESCRIPTION

A. Location.

The project is located on the left descending bank of the Ohio River and is situated near the City of Washington, in Wood County WV. The project is located between Ohio River mile 193.6 and 193.9 at 39º 14’ 08” N and 81º 41’ 18” W. At this location in the Belleville pool, the Ordinary High Water Line (OHWL) is at elevation 584.3 and the normal pool defined by the navigational dam is at elevation 582.0. The proposed site lies near Walker Lane alongside a Ranney well field owned and operated by the Lubeck PSD.

B. Description of Proposed Work.

A 1200-foot reach of longitudinal dike would be constructed to protect the Ranney well field water intake from further exposure and eventual failure. A Ranney well is a high-efficiency well that in this case uses the natural filtration of the river bank to recharge the well aquifer. If the bank fails around the well, it will receive unfiltered water directly from the river. Due to difficult landward access, construction would take place using barges on the river. The recommended treatment would include the construction of a graded stone longitudinal dike with

transitions and tiebacks. The longitudinal dike would be composed of approximately 8000 tons of COE 15" stone. The dike would be approximately 5 ft. high and would be built on the edge of the shallow water bench at and above the normal pool elevation. Stone tiebacks at 60-80 foot intervals would be included to prevent scour behind the protection during flood stages. Moreover, the tiebacks would act to reduce velocities during flood flows at high river stages and would result in sediment deposition behind the dike. The accumulated sediment would then provide additional soil for riparian vegetation to volunteer in and establish. Existing vegetation would be removed along the dike alignment, where transition elements must be constructed at the upstream and downstream ends to prevent outflanking, and at the intermediate tieback locations. Minimal excavation may also be required to prepare a stable surface for placement. The equipment necessary to perform the construction includes but is not limited to a work platform, crane, and towboat. Best management practices set by the WVDEP would be implemented to minimize sediment mobilization during construction. The constructed dike would function as a sediment retention filter, minimizing discharge, both short- and long-term of silt and sediment from the eroding bank into the channel.

C. Authority and Purpose.

The project as proposed is in accordance with Section 14 of the Flood Control Act of 1948 (PL 79-526), as amended; Emergency Streambank Protection. During recent Ohio River flood events, 2001 to present, a 1200 foot reach of river bank was exposed by flood related erosion, recessional failures, and piping. A series of 4 Ranney wells are used for municipal water intake near the site. The wells are between 20 and 70 feet from the eroding river bank. The purpose of this project is to prevent additional erosion and failure in the project reach to prevent damage to the municipal water intake.

D. Description of Material.

1. General Characteristics of Proposed Fill Material

The fill will be comprised of clean, graded 15" COE type stone.

2. Quantities of Fill Material

Approximately 8000 tons of stone will be used at the project site.

3. Source of Material.

Purchased from a commercial quarry or other approved stone supply.

E. Description of Proposed Discharge.

1. Location. Please refer to Section I.A.

2. Size of Wetland Sites.

There are no wetlands within the project site, although the site is near a 2 acre wetland, which would not be affected by the project.

3. Type of Aquatic Resources.

The Ohio River fosters an aquatic community of invertebrates, mussels, fish, amphibians and reptiles that thrive in spite of nearby navigational and industrial disturbances. The project area comprises a riparian riverbank with woody shrubs and trees that terminate at a mowed field at

the top of the bank. Woody species include hackberry, pawpaw, boxelder, silver maple, black locust, cherry, alder, elm, sycamore, honeysuckle, and Japanaese knotweed. Riparian vegetation is important for the aquatic health of a river system. Riparian plants capture and filter silt and pollution during flooding and provide an influx of plant and insect matter that serves as food for the aquatic ecosystem. Because the project area is prone to erosion, the riparian vegetation is stressed and silt and sediment are transported from the river bank, rather than being retained as would occur in a healthy riparian environment. Silt can harm sensitive mussel species, which are filter feeders and live in the benthic substrate. Fish, which breed, feed, and find shelter near riparian habitat are also impacted by excess sedimentation. The Preferred alternative will concentrate sediment deposition in the landward side of the dike, supplying new soil for riparian plant species and reducing excess silt and sediment release into the aquatic ecosystem, protecting fish and mussels.

4. Timing and Duration of Discharge.
Construction of the facility would take approximately 2 weeks from initiation of construction and would occur as soon as the summer of 2008 or whenever construction funds become available.

F. Description of Disposal Method.
No dredging is involved with the proposed action. Clean, commercial stone will be used during construction. Preparing the foundation for the dike requires some clearing and grubbing of vegetation, partial removal of trees, drift, rubble, and debris; Removed mineral and organic debris would be disposed of off-site at an upland disposal facility.

III. FACTUAL DETERMINATIONS.

A. Physical Substrate Determination.
1. Substrate Elevation and Slope.
The proposed site possesses high, steep river banks which include areas of erosional oversteepening and recessional failures that have resulted in extensive bank retreat.

2. Sediment Type.
The substrate of the site is composed of sand, silt, and some concrete boulders and rubble that were used in a previous attempt to control erosion.

3. Dredged/Fill Material Movement.
No dredging will be involved with the proposed action. Fill material will consist of clean, commercial-grade stone.

4. Physical Effects on Benthos.
Because of lack of information on existing mussel beds, all construction will take place above the normal water line and the benthos will not be altered. No impact is expected to the benthic community that is beyond the random disturbances commensurate with an industrial and navigational channel.

5. Erosion and Accretion Patterns.

The placement of rock will stabilize the river bank, which would limit the extent of bank failure, failed soil mantling, further silt accumulation and the further release of materials from the eroding bank.

6. Actions Taken to Minimize Impacts.
All stone placement and disturbance would be limited to above the normal pool elevation to minimize impacts to the benthic substrate.

B. <u>Water Circulation, Fluctuation, and Salinity Determinations.</u>

1. Water.

a. Salinity. Not Applicable

b. Water Chemistry. The construction of the project may result in minor, short-term changes to water quality. Although the material that will be used to build the feature is considered "Clean", a certain amount of dust will be associated with the stone. Stray dust, dropped stones and placement in water that may be above the normal water line may temporarily increase local turbidity levels. This project will reduce the amount of failing soils and sediment entering the river system.

c. Clarity. Only short term increases in turbidity are expected. Standard best management practices described by the WVDEP are planned to prevent run-off erosion.

d. Color. No effect.

e. Odor. No effect.

f. Taste. No effect.

g. Dissolved Gas Levels. No effect.

h. Nutrients. No effect.

i. Eutrophication. No effect

2. Current Patterns and Circulation.

a. Current Patterns and Flow. A HEC-RAS model was used to predict impacts to the floodplain during a 100-year flood event if a longitudinal toe-of-slope dike were placed along 1200 linear feet of shoreline. The model showed no appreciable rise in water surface during the 100-year flood event, so under normal pool conditions there should be no effect on current flow conditions.

b. Velocity. The water velocity will not be significantly affected by the proposed project under normal pool or flood conditions.

c. Stratification. Not applicable.

d. Hydrologic Regime. No significant changes.

3. Normal Water Level Fluctuations.

No effect

4. Salinity Gradients.
Not applicable.

5. Actions that will be taken to minimize impacts.
No major impacts are expected. Best management practices described by the WVDEP will be used. Type of material to be placed will not be mixed with soils and will have relatively little associated dust. Water quality should be unaffected by placement of material.

C. Suspended Particulate/Turbidity Determinations.

1. Suspended particulates and turbidity levels.
Expected changes in suspended particulates and turbidity levels in the vicinity of the disposal site will be limited to the construction phase of the project. These effects will be temporary and localized. Once construction has been completed, water turbidity and sedimentation should improve in the immediate area as the river bank is stabilized and re-vegetated, reducing the amount of failed soils that will enter the system.

2. Effects on chemical and physical properties of the water column.

a. Light Penetration. Turbidity might increase during the construction phase of this project, but the effects will be temporary and localized. Once construction has been completed, light penetration should improve in the immediate area as the river bank is stabilized and re-vegetated, reducing the amount of failed soils that will enter the system.

b. Dissolved Oxygen. No impact

c. Toxic Metals and Organics. Granular materials and natural stone fill are not likely to contain harmful contaminants. The slag present on site may contain aluminum silicate and ferrous compounds, all of which are not considered toxic or harmful to the environment in the amounts present.

d. Pathogens. No significant effects.

e. Aesthetics. The project would involve placing stone at the toe of the slope of the river bank. The structure will be visible from the river at normal pool. The feature will not be perceived as a natural feature of the river. Most of the project area is only visible from the river. The proposed dike will cover the exposed roots and protect the existing vegetation and its natural appearance. Because the project is in a low-visibility area to the general public and because the proposed action will preserve the natural vegetation at the site, there would be no significant impact on aesthetic resources. Eventually, more vegetation may become established on the structure, softening its appearance.

3. Effects on Biota.

a. Primary Production, Photosynthesis. No significant effects.

b. Suspension/Filter Feeders. No significant effects.

c. Sight Feeders. No significant effects.

4. Action to Minimize Impacts.

No major impacts are expected. Best management practices described by the WVDEP will be used. Type of material to be placed will not be mixed with soils and will have relatively little associated dust. Water quality should be unaffected by placement of material.

D. Contaminant Determination.

A Limited Phase I Hazardous, Toxic and Radioactive Waste (HTRW) assessment was conducted within the reaches to be protected. A site reconnaissance and records search determined that there are no known sources of HTRW within the project area. The DuPont and GE Chemical Plants are located within the vicinity of the Ohio River in the Washington, WV area, although these plants are not in the immediate vicinity of the project area and should not impact the project. Based on the investigative findings and the planned activities, the conclusion drawn from the HTRW survey was that project site required no further investigation.

E. Aquatic Ecosystem and Organism Determinations.

1. Effects on Plankton.

No significant effect.

2. Effects on Benthos.

See Section III.A.4.

3. Effects on Nekton.

No significant effects.

4. Effects on Aquatic Food Web.

No measurable effect.

5. Effects on Special Aquatic Sites.

   a. Wetlands. There are no wetlands in the proposed project area.

6. Effects on Threatened and Endangered Species.

No listed mussel species are known within the project area, although the following threatened and endangered (T&E) mussel species could potentially be found in any Ohio River benthic habitat: Clubshell Mussel (*Pleurobema clava*), the Fanshell Mussel (*Cypogenia stegaria*), the Pink Mucket Pearly Mussel (*Lampsilis abrupta*), the Northern Riffleshell Mussel (*Epioblasma torulosa rangiana*) and the Tubercled-blossum Pearly Mussel (*Epioblasma torulosa*). Because an extensive underwater survey would be required to determine if any of these species are present, the proposed project would, instead, limit all stone placement and construction activities to above the normal water line, 582 ft-MSL. There are no hibernacula for federally listed Indiana Bat within flight distance of the project area and no potential maternity roost trees were found on the site. Therefore it was determined that the proposed action would have no impact on T&E species.

7. Other wildlife. The project will have temporary impacts on terrestrial and riparian habitats associated with trees and river banks. Bird and mammal species that utilize these resources are mobile and would likely be scared away during construction. After the project is completed, the river bank and associated vegetation would be stabilized, allowing for re-

colonization by terrestrial species. The project would have a net positive impact on wildlife in the long term.

8. Actions to Minimize Impacts.
Actions will be taken to ensure that stone will not be placed below the normal water line in potential mussel habitat. Tree removal would be minimized to those only necessary for construction access and dike alignment.

F. **Proposed Disposal Site Determinations.**

1. Mixing Zone Determination. No discharge of liquid material would be involved with project construction.

2. Determination of Compliance with Applicable Water Quality Standards. Fill activities would be in conformance with the State of West Virginia standards.

3. Potential Effects on Human Use Characteristics.
   a. Municipal and Private Water Supply. See II.I.
   b. Recreational and Commercial Fisheries. See II.J.3.b., II.J.3.c., and II.L.3.
   c. Water Related Recreation. No impact.
   d. Aesthetics. See II.J.2.e.
   e. Parks, National and Historical Monuments, National Seashores Wilderness Areas Research Sites, and similar Preserves. Not applicable.

G. Determination of Cumulative Effects of the Aquatic Ecosystem.

Cumulative effects would be temporary and minor. Long term impacts to the aquatic ecosystem would be positive be reducing sediment load from eroding banks. See the Draft Environmental Assessment.

H. Determination of Secondary Effects on Aquatic Ecosystems.

See Section II.E.

IV. FINDINGS OF COMPLIANCE OR NONCOMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE.

A. **Adoption of the Section 404(b)(1) Guildlines to this Evaluation**

No significant adaptations of the guidelines were made relative to this evaluation.

B. Evaluation of the Availability of Practicable Alternatives to the Proposed Discharge Sites Which Would Have Less Adverse Impacts on the Aquatic Environment

A series of alternative bank stabilization measures were developed and evaluated for feasibility. Two were carried forward for full evaluation of alternatives plans, the No Federal Action Alternative and longitudinal dike to with vegetation cover (Preferred alternative) Plan.

C. **Compliance with Applicable State Water Quality Standards**.

Fill activities have been coordinated with and are in conformance with the State of West Virginia standards. A 401 Water Quality Certification will be obtained from the Division of Water prior to construction.

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D. Compliance with Applicable Toxic Effluent Standards or Prohibitions under 307 of the Clean Water Act.

Section 307 of the Clean Water Act establishes limitation or prohibitions on the discharge of materials containing certain toxic pollutants. The discharges associated with the proposed work would not contain these toxins, and therefore the project complies with Section 307.

E. Compliance with the Endangered Species Act of 1973.

No threatened or endangered species or their critical habitat would be affected by the proposed project. This project complies with the stipulations of the Endangered Species Act.

F. Compliance with Specific Measures for Marine Sanctuaries Designated by the Marine Protection, Research and Sanctuaries Act of 1972.

Not applicable.

G. Evaluation of the Extent of Degradation of Waters of the United States

a. Municipal and Private Water Supplies – The project would not adversely affect municipal or private water supplies. Because the purpose of the project is to protect a municipal water supply, not undertaking the project could harm public water supplies.

b. Recreational or Commercial Fisheries - Impacts to recreation will be minimal. No commercial fisheries are located in the project area.

c. Plankton – Adverse impacts will be minor and limited to the construction period.

d. Fish – Adverse impacts will be minor and limited to the construction period.

e. Shellfish – Adverse impacts will be minor and limited to the construction period.

f. Wildlife - Adverse impacts will be minor. After vegetation re-establishes, wildlife habitat will be improved upon present conditions.

g. Special Aquatic Sites –No special aquatic sites have been identified in the vicinity of the project site.

1. Significant Adverse effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystem.

Direct and indirect impact to aquatic ecosystems would not be significant.

2. Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity, and Stability.

The project area sustains a quality riparian forest that is unstable under existing conditions. A positive effect on aquatic ecosystems is expected from implementation of the proposed project.

3. Significant Adverse Effect on Recreational, Aesthetic and Economic Values

No adverse significant effects to the aesthetic, recreational, and economic values would occur.

H. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

Appropriate steps to minimize potential adverse impacts from any discharges on aquatic systems have been incorporated.

I. Findings

The proposed discharges of fill material are specified as complying with the requirements of the 404(b)(1) Guidelines, with the inclusion of appropriate and practicable conditions as identified herein to minimize pollution or adverse effects on the aquatic ecosystem.

APPENDIX B
DRAFT FINDING OF NO SIGNFICANT IMPACT

DRAFT FINDING OF NO SIGNFICANT IMPACT
SECTION 14 EMERGENCY STREAMBANK PROTECTION PROJECT
WALKER LANE, WOOD COUNTY, WEST VIRGINIA

1. Members of my staff have conducted an environmental assessment, in the overall public interest, concerning implementation of the Walker Lane Section 14 Emergency Streambank Protection Project. The purpose of this project is to protect an existing municipal water intake well field from erosional encroachment and eventual failure. The proposed project is authorized under Section 14 of the Flood Control Act of 1948 (PL 79-526) as amended; Emergency Streambank Protection.

2. The possible consequences of the project have been studied for environmental, cultural and social well-being effects. Another factor bearing on the assessment was the capability of the project to meet the public needs for which it was proposed.

3. The Proposed Project Action Alternative and the No Federal Action Alternative were carried forward for detailed evaluation. The Proposed Alternative is the most cost effective of all protective measures and is both environmentally and socially acceptable. The "No Action" alternative would not be in the public's best interest and would eventually impact economic and social resources of the area.

4. An evaluation of the Proposed Alternative and the No Action Alternative produced the following pertinent conclusions:

a. Environmental Considerations. The Huntington District has taken reasonable measures to assemble and present the known or foreseeable environmental impacts of the project in the Draft Environmental Assessment (DEA). These impacts involve biological and human resources. The proposed project will stabilize an eroding Ranney well field on the Ohio River, preserving a municipal water intake that is currently threatened by bank erosion. All adverse effects of project implementation are considered insignificant and should last only a few months longer than the construction period. The bank stabilization would have the ancillary environmental benefit of stabilizing riparian vegetation that is currently threatened by erosion.

b. Social Well-Being Considerations. The proposed project will stabilize an eroding bank on the Ohio River, preserving a municipal water intake well field. No significant adverse economic or social well-being impacts are foreseen as a result of the proposed project. The project will not have any impact on sites of known significant archeological or historical importance.

c. Coordination with Resource Agencies. Pursuant to the Fish and Wildlife Coordination Act (FWCA) of 1958, coordination with the U.S. Fish and Wildlife Service (FWS) was undertaken. Coordination with the Natural Resource Conservation Service (NRCS), West Virginia State Historic Preservation Office (WVSHPO), West Virginia Department

of Environmental Protection (WVDEP) and West Virginia Department of Natural Resources (WVDNR) was also maintained through the National Environmental Policy Act (NEPA) process. Appropriate measures and best management practices, as described by the WVDEP, have been identified and incorporated into the proposed action alternative. Also, in accordance with the Endangered Species Act, as amended, the recommended plan should not impact listed species.

d. Other Pertinent Compliance. No prime or unique farmland under the Farmland Protection Policy Act will be involved. The proposed action is also in compliance with the National Historic Preservation Act (Section 10632 CFR 300), Executive Order (EO) 11988 (Floodplain Management), and EO 11990 (Protection of Wetlands).

e. Other Public Interest Considerations. There has been no significant opposition to the proposed action. Comments received during the public review period will be included in the Final Environmental Assessment (FEA). There are no unresolved issues regarding the implementation of the project.

f. Section 176(c) Clean Air Act. The proposed action has been analyzed for conformity and applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. Based on West Virginia Department of Environmental Protection (WVDEP) emission standards will not exceed *de minimis* levels or direct emissions of a criteria pollutant or its precursors and is exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Districts' continuing program responsibility and generally cannot be practicably controlled by the District. For these reasons a conformity determination is not required for this action.

5. I find the Walker Lane Section 14 Emergency Streambank Protection Project has been planned in accordance with current authorities as described in the DEA. The project is consonant with national policy, statutes and administrative directives. This determination is based on thorough analysis and evaluation of the project and alternative courses of action. In conclusion, I find the proposed Walker Lane Section 14 Emergency Streambank Protection Project will have No Significant Adverse Impacts on the quality of the human and/or natural environment.

_____ _____

Date

Dana R. Hurst
Colonel, Corps of Engineers
District Engineer

APPENDIX C
NOTICE OF AVAILABILITY

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT
WALKER LANE SECTION 14 EMERGENCY STREAMBANK PROTECTION PROJECT, WOOD COUNTY, WV

The U.S. Army Corps of Engineers, Huntington District, by this Notice of Availability (NOA), advises the public that the Draft Environmental Assessment (DEA) for the Walker Lane Section 14 Emergency Streambank Protection Project is complete and available for public review. The project is located in Wood County, WV. A Finding of No Significant Impact (FONSI) is anticipated for the proposed project. A Draft FONSI is included with the DEA for public review.

In compliance with the National Environmental Policy Act (NEPA) and 40 CFR 1501.4, the DEA and draft FONSI will be available to the public in the affected area for thirty (30) days for review and comment. Final determination regarding the need for additional NEPA documentation will be made after the public review period, which begins on or about May 16, 2008. Copies of the documents may be viewed at the following location:

Parkersburg and Wood County Public Library
3100 Emerson Ave
Parkersburg, WV26104-2414
304-420-4587

The documents may also be viewed at the following website: http://www.lrh.usace.army.mil/projects/review/. Copies of the Feasibility Study, DEA and draft FONSI may be obtained by contacting Huntington District Office of the Corps of Engineers at 304-399-5872. Comments pertaining to the documents should be directed by letter to:

Mr. Jonathan J. Aya-ay, Chief
Environmental Analysis Section, Planning Branch
Huntington District Corps of Engineers
502 Eighth Street
Huntington, West Virginia 25701-2070

APPENDIX D
DISTRIBUTION LIST

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Division of Water & Waste Management
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Frank Jezioro, Director
WV Department of Natural Resources
State Capitol
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Charleston, WV 25305

Susan Pierce
Deputy State Historic Preservation Officer
State Historic Preservation Office
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Charleston, WV 25305-0300

Library

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Public Utilities

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