

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings for Permit Applications LRN-2012-00349/LRN-2014-00120

Two applications have been submitted for Department of the Army (DA) permits and Tennessee Valley Authority (TVA) permits. Since the two applications are portions of a multi-phase single project, it has been determined to evaluate both applications together, giving deference to the responsibilities of the separate applicants and collectively referring to the projects as the "Port of Calvert City". The application for reconstruction of an existing barge terminal (LRN-2012-00349) requires a DA permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA) and TVA approval pursuant to Section 26a of the TVA Act. The application for construction of a rail spur (LRN-2014-00120) requires a DA permit pursuant to Section 404 of the CWA and TVA approval pursuant to Section 26a of the TVA Act. The U.S. Army Corps of Engineers (USACE) has lead federal agency role status for the coordination and conduct of environmental reviews under the National Environmental Policy Act. This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

1. Application as described in Public Notice PN 14-06, Appendix A.

APPLICANTS: First Marine Properties, LLC (**LRN-2012-00349, Barge Terminal/River Port**)
333 Broadway Street, Suite 924
Paducah, KY 42001

Marshall County-Calvert Riverport Authority (**LRN-2014-00120, Rail Spur**)
1101 Main Street
Benton, KY 42025

WATERWAY & LOCATION: Marshall County, Kentucky. USGS Quad: Little Cypress, KY-IL. Navigation Chart No. 2. Tennessee River HUC: 0604006. **Barge Terminal:** Tennessee River Mile (TRM) 11.0, Left Bank, and adjacent Wetlands (W-1, *Lat: 37.038750, Lon: -88.441510* and W-2, *Lat: 37.038964, Lon: -88.439375*). **Rail Spur:** Linear Crossing of Cypress Creek Mile 2.8 (W-7/S-1, a perennial tributary of TRM 10.0L, *Lat: 37.029200, Lon: -88.415171*), four tributary crossings (S-3/W-6 intermittent, *Lat: 37.02573, Lon: -88.4127*; S-4 intermittent, *Lat: 37.02587; Lon: -88.41238*; E2 ephemeral *Lat: 37.031599, Lon: -88.41873*; E1/W-1 ephemeral, *Lat: 37.03653, Lon: -88.42143*) and two lateral wetland crossings (W-2 *Lat: 37.039444, Lon: -88.428088* and W-4 *Lat: 37.025397, Lon: -88.433582*).

PROJECT PURPOSE:

Basic: Construction of a multi-modal port facility.

Overall: Develop a port facility in Marshall County, Kentucky, to distribute multi-modal containers, general goods, and bulk commodities by river, rail, and roadway.

Water Dependency Determination: The overall project is water dependent.

Background. In 1960, DA permit LRN-0-406400 authorized construction of a three mooring cell barge terminal along the riverfront at TRM 11.0L, along with two barge fleeting areas connected to the shoreline by 14 dolphins. Historically, the owner loaded and unloaded general commodities from barges at the terminal utilizing a commodity loading belt mounted atop one mooring cell. Three barges wide by five barges long (3x5) are authorized to fleet at the mooring cell configuration. Recent observed usage of the river front property is general barge fleeting with barge repair activities occurring on the upland. Most of the port development activities would occur within the areas scoured by barge repair activity and a remaining large agricultural field, all on low terraced topography. The river terminal property is owned by First Marine Properties, LLC, and is zoned as Industrial/Heavy. Recent observed usage of the rail spur property is agricultural. The rail spur right-of-way would encompass approximately 20 acres of a larger collective group (approximately 880 acres) of properties. Marshall County-Calvert Riverport Authority has options to buy all of the properties that would be affected by the rail spur. Before the rail spur is built all of the properties would be bought. These properties are also zoned as Industrial/Heavy.

DESCRIPTION OF PROPOSED WORK (Port of Calvert City: Major elements of the proposed construction are described as follows. Plans of the work are attached to PN 14-06. See Appendix A.

LRN-2012-00349, River Terminal: First Marine Properties, LLC proposes to construct a new inland terminal on the left descending bank of the Tennessee River at Mile 11.0. According to the applicant, recent renovations to the Panama Canal would enable larger ships to pass through the canal to sea ports within and along the Gulf of Mexico. Prior to moving the goods into the inland waterway system, the cargo is expected to be transferred into large specially designed vessels, 600' in length and about 100' wide with a 9 foot draft, that can carry more than 1,000 containers for transport into the U.S. The vessels would off-load cargo at the Port of Calvert City onto waiting barges, trains, and trucks about six times per month. According to the applicant, these facilities are crucial to the economy of the area through the jobs provided, the commerce conducted with local businesses, attracting new industry to the area, and the tax base generated. In addition to industry, the port lies within an area rich with bulk aggregates, agriculture products and minerals which are routinely exported out of the area to other areas within the US and beyond. A Master Plan Report for the Marshall County – Calvert City Riverport recommends a multi-modal port facility to be located within the area along the Tennessee River.

Waters of the US (WOUS) in the river terminal development consist of two wetlands, as shown on the PN 14-06 plans in Appendix A. W-1 is a one-acre forested/shrub wetland in the southwest corner of the project and W-2 is 29.9 acre forested shrub wetland that runs along the southeast boundary of the property next to Shar-Cal Road. The proposed terminal work area would result in the filling of 0.8 acres of W-1 and 2.8 acres of W-2. The borrow area would result in the excavation and fill of 0.3 acre of W-2. **Total wetland impacts associated with the proposed terminal and upland development would be 3.9 acres. Backfilling the bulkhead for the dock would result in a discharge of fill into 0.1 acre of the river.**

River Construction. Proposed re-construction of the existing terminal would result in a deposit of fill onto 0.40 acres of river bottom substrate (behind three mooring cells). Utilizing the cells as support, the applicant proposes to enclose an area 250' long by 150' wide by attaching sheet-piling around two of the existing mooring cells to form a new docking platform. The sheet pile breasting wall would encompass a land mass built approximately 75' extending out from the left bank of the river shoreline, measured at Elevation (EL) 302. The breasting wall would be backfilled with earth and quarry run stone. The applicant proposes to construct two pipe dolphins located on 150' centers downstream of the breasting wall and one pipe dolphin 150' upstream of the wall to facilitate mooring of barges/ships along the wall. According to a hydraulic study submitted with the application, dredging would not be required to accommodate the 9-foot draft vessels, as the mooring cells currently handle 9-foot draft barges.

Development Area. An upland land-mass would be constructed to accommodate all land-based activities for the port, truck traffic for the loading and unloading of barges, temporary storage and manipulation of containers as well as the loading/unloading/ storage of grain and other bulk goods, as well as a 250-ton heavy-lift crane for loading/ unloading special cargo. Most of the undertaking would occur on property that is occasionally inundated during Tennessee River flooding events. In addition, construction of the land-mass would require the removal of shoreline trees along 1,520 linear feet of river bank. The approximate 19-acre land mass would be connected to Shar-Cal road at the location of the existing entrance road to the barge maintenance facility (with final grade above the 500-year water surface elevation, at top Elevation 346). The fill material to create the land mass would be comprised of approximately 700,000 cubic yards of material obtained from within the limits of the project and within the limits of the 100-year floodplain for the Tennessee River. All fill slopes would be constructed at 3H:1V or flatter and suitably stabilized against erosion. Once constructed, the land mass would be covered with gravel for one to two years to allow for settlement, then paved with asphalt and/or concrete. Surface drainage from the site would be provided through shallow inlets and storm sewer piping along with rip-rap stabilized flumes that drain to the river. Current planning would have operations concentrated on the north side of Shal-Car Road but there would be a designated crossing to transport items by truck to the rail spur.

Borrow Area. The proposed borrow site for the development area fill would consist of the open field area upstream of the harbor, approximately 17 acres in size. Overburden would be excavated and placed in the fill area. The excavated area would be drained by way of an excavated entrance/exit channel that would be stabilized with rip rap and will connect the borrow area and the river. Once excavation is completed, the entire borrow area would be seeded and stabilized and would positively drain to the river.

LRN-2014-00120, Municipal Rail Spur. Rail access to the new facility would require construction of a new wye connection and spur from the existing Paducah & Louisville Railway mainline. The 40-foot rail right-of-way would encompass approximately 20 acres of a larger collective group (approximately 880 acres) of properties.

WOUS within the rail development area consist of three wetlands and several streams. W-1 (25.3 acres in size) is located in the center of the project area and classified as palustrian, forested, broad-leaved deciduous, and semi-permanently flooded. W-2 and W-4 are both narrow, wooded linear wetlands intermittently flooded, and each less than 0.1 acre in size. **Total wetland fill of to W-1, W-2, and W-4 associated with the Municipal Rail Spur would total 0.49 acres. There would be no deposit fill into streams by the proposed project.** Impacted areas are shown on the plans in Appendix A.

The proposed rail spur would span Cypress Creek (S-1, a perennial tributary of TRM 10.0L) approximately 1000' southwest of McFarlin Road with a 240', 5-span bridge with battered piles. The rail spur would then span an intermittent tributary of Cypress Creek (S-3) with a 140', two-span Bridge with battered piles. The proposed structures have been sized such that there would be no rise in the 100-year base flood elevations and to maintain one foot of freeboard, minimum, between the low chord and the 100-year regulatory water surface elevation. In addition, the railway would span small tributaries and narrow wetlands (S-4, E-1/W-1, E-2, W-2, and W-4) with open-bottomed crossings sized based upon the hydraulic modeling for the area to maintain normal downstream flows and minimize flooding to the maximum extent practicable.

AVOIDANCE AND MINIMIZATION OF IMPACTS TO WATERS OF THE U.S.: In 2012, First Marine Properties submitted an application for a port design at this location with same purpose (though without a plan for rail spur) that was subsequently withdrawn. The application requested impact to 29.9 acres of wetlands and waters of the U.S., including a plan for shoreline excavation and construction of a recessed harbor. Based upon concerns of USACE regarding impacts to waters of the U.S. and comments received from agencies regarding sensitive biological and cultural resources, the project was withdrawn. After partnering with the County, the plans were redesigned to minimize impacts to streams and wetlands, as well as biological and cultural resources. The proposed plan avoids impacts to 26.8 acres of wetlands on the property.

COMPENSATORY MITIGATION, MITIGATION PLAN: A wetland and water delineation was submitted with the permit applications. After field investigations on June 22, 2012, August 14, 2013, and August 30, 2013, USACE refined and verified the findings of the delineation, on file, dated January 2014. See Appendix F. In accord with the delineation, it was determined the port proposal would result in direct impacts to 3.9 acres of mixed palustrine hardwood/shrub wetlands. The proposed rail spur would result in direct impacts to 0.49 acres mixed palustrine hardwood/shrub wetlands. Collectively, the applicants propose to mitigate for the total loss of 4.4 acres wetlands at a 2:1 ratio with a purchase of 8.8 credits from West Kentucky Wetwoods Mitigation Bank, Mayfield Kentucky. This mitigation bank is within the same watershed HUC Code as the proposed action, and mitigating through the bank is in accordance with the 2008 Mitigation Rule. The proposed terminal would have no stream impacts. Rail construction would be limited to bridge pilings at two crossings; morphology of stream channels would not be altered.

2. Authority:

- Section 10 of the Rivers and Harbors Act of 1899 (33 USC §403).
- Section 404 of the Clean Water Act (33 USC §1344).

3. Scope of Analysis: The projects together encompass several properties, as shown on the attached plans. The proposed port and its upland development encompass approximately 80 upland acres and extend into the river where the proposed action would have direct fills and vessel movement.

The proposed rail spur encompasses approximately 20 acres of a larger collective group of properties.

a. NEPA: (Write an explanation of rationale in each section, as appropriate)

(1) Factors:

- (i) Whether or not the regulated activity comprises merely a link in corridor type project. *The proposed port facility and associated rail expansion is not a corridor type project.*
- (ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity. *The location and configuration of the regulated activity is affected by its location along the river and proximity to the existing rail line and its location in Marshall County, since the government is a partner in the endeavor. The proposed port facility site and railway spur would impact approximately 100 acres of land in Marshall County, Kentucky. The port site is relatively flat and located adjacent a commercial navigation channel. The rail spur site is flat and adjacent to a main rail line.*
- (iii) The extent to which the entire project will be within the USACE jurisdiction. *Only waters of the U.S. described in Paragraph 1, "Description of Proposed Project" is with USACE jurisdiction. WOUS for the entire project totals approximately 4.4 acres of wetland fill and discharge of fill behind existing mooring cells to create a dock. This would represent about 5 percent of the entire site.*
- (iv) The extent of cumulative Federal control and responsibility. *Permits from USACE are required for impacts to WOUS. Section 26a of the TVA Act permits are also required from TVA.*

CELRN-OP-F (Applications LRN-2012-00349/ LRN-2014-00120 - Port of Calvert City)

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings

(2) Determined scope:

- Over entire property(s), approximately 100 acres of property between the two projects.
- Only within the footprint of the regulated activity.

b. NHPA "Permit Area":

(1) Tests: Activities outside the waters of the US are/are not included because all of the following tests are/are not satisfied: Such activity would/would not occur but for the authorization of the work or structures within the waters of the U.S.; Such activity is/is not integrally related to the work or structures to be authorized within waters of the U.S; and such activity is/is not directly associated with the work or structures to be authorized.

(2) Determined scope: The determined scope is the same as the NEPA scope.

c. ESA "Action Area":

(1) Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.

(2) Determined scope. The determined scope is defined as those waters and lands directly impacted by the proposed action (same as the NEPA scope), plus an additional barge traffic area that was addressed in the USFWS biological opinion (additional two acres for barge moving impacts).

d. Public notice comments: See Appendix B NA

(1) The public also provided comments at public hearing public meeting and/or explain.

(2) Comments and issues raised:

Name:	Issue:
USFWS	USFWS stated concerns both projects have potential to impact federally listed species. Species of concern for LRN-2012-00349 include the rabbitsfoot (<i>Quadrula cylindrica cylindrica</i>), sheepsnose (<i>Plethobasus cyphus</i>), orangefoot pimpleback (<i>Plethobasus cooperianus</i>), pink mucket (<i>Lampsilis abrupta</i>), and fat pocketbook (<i>Potamilus capax</i>). Species of concern for LRN-2014-00120 include the Indiana bat (<i>Myotis sodalis</i>), gray bat (<i>Myotis grisecens</i>), northern long-eared bat (<i>Myotis septentrionalis</i>), and interior least tern (<i>Sterna antillarum athalassos</i>). USFWS recommended preparation of separate Biological Assessment for each of the projects to determine potential impacts of these projects on federally listed species.
Kentucky Heritage Council (KHC)	KHC acknowledged language in PN that archaeological surveys are being conducted and coordination between the agencies (USACE and TVA) would commence once all information is received.
City of Calvert City	Submitted letter of support stating the project would provide significant economic impacts to the region and the project would utilize modes of transportation that would greatly reduce carbon footprint.
Marshall County Judge Executive	Submitted letter of support for the development that would have a great economic impact on the community.
Marshall County Economic and Community Development	Submitted letter of support for the development that would set in motion plans for a much needed river port development, done so through a public/private partnership.
Kentucky Department for Environmental Protection	Provided project specific comments regarding the need of state permits (NPDES, Water Quality, Floodplain). Air/Noise permits not required.
United Keetoowah Band of Cherokee Indians	No comments or objections to the proposed project.

(3) Site was/was not visited by the USACE. In July 2012, USACE, TVA, and KYDOW met with the applicant to discuss the project and alternatives to minimize impacts to waters of the US. In August 2013, USACE met onsite once again to discuss plans for the current plan and investigate current conditions of the properties in more detail. Also on November 13, 2013, and February 6, 2014, USACE met with the applicant's consultants to review the plans and determine what information would be required for a complete application. See Appendix F.

(4) Issues identified by the USACE: Proposed action would likely impact protected threatened and endangered species, and biological assessments would be required. Additional archeological surveys would be required. Compensatory mitigation would be required for wetland impacts.

(5) Issues/comments forwarded to the applicant. NA/Yes.

(6) Applicant replied/provided views. NA/Yes. The applicant responded to the USFWS and KHC comments by submittal of sufficient additional information and surveys.

(7) The following comments are not discussed further in this document as they are outside the USACE purview. NA/ Yes *Explain.*

4. Alternatives Analysis:

e. Basic and Overall Project Purpose (as stated by applicant/independent definition by USACE):

- Same as Project Purpose in Section 1.
- Revised: *Insert revised project purpose here and explain why it was revised.*

f. Water Dependency Determination: Water dependent.

- Same as in Section 1.
- Revised: *Insert revised water dependency determination here if it has changed due to changing project purpose or new information.*

g. Applicant preferred alternative site and site configuration:

- Same as Project Description in Section 1.
- Revised: *Explain any difference from Section 1*

Issue:	Measurement and/or constraint:
Economic Impact	Impacts on the Local Economy, Local Development and Tax Base, Jobs for Local Contractors, Revenues to Local Building Supply Companies, Promotion of Regional Commerce, Changes to Nearby Land Values
Aesthetics	Compatibility to Surrounding Area, Alteration of Visual Character, Changes in Air Quality and Noise, Changes in Human Use of Area
Wetlands	Permanent impact/loss of Special Aquatic Sites, Compensatory Mitigation
Historic Properties	Satisfy Section 106 of the National Historic Preservation Act, Sites Eligible for National Register of Historic Places (avoidance) above and below ground
Fish and Wildlife Values	Satisfy Requirements of Section 7 of the Endangered Species Act. Alteration of habitat characteristics of the river bottom and impacts to protected species (Rabbitsfoot, Sheepsnose, Orangefoot Pimpleback, Pink Mucket, Fat Pocketbook), changes to forested habitats, nesting and breeding grounds (Indiana bat, Gray bat, Northern Long-eared bat, Interior Lest Tern, Price's potato-bean).
Flood hazards	Affects to the flood-holding capacity of the 100-year floodplain
Land Use	Change current land use from natural to developed
Navigation	Extent of Increased Usage, Safety Measures

Water Quality	Loss of wetlands and riparian vegetation effect on water quality (ability to trap sediments, pollutants, and nutrients and transform chemical compounds. Loss of habitat for microorganisms that remove nutrients and pollutants from water)
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d. Off-site locations and configuration(s) for each: USACE has determined there are no other sites along the river in the County with: 1) over a mile of deepwater channel on a major navigable waterway, 2) rail service nearby, 3) interstate access, and 4) reliable electrical service for major industrial development. This determination was based upon USACE's knowledge of the area and the applicants alternatives analysis (see Appendix I) showing their search for available properties within the area to develop such a project. USACE determined other sites are limited due to the fact the port and concomitant industrial development depend on waterborne activities and rail access, and must be within the County (a partially County funded project).

g. Alternatives not practicable or reasonable: *Describe/explain.* The applicants' current plan is a minimized alternative when compared to their previous plan (involved impacts to almost 30 acres of wetlands and greater impacts to sensitive biological and cultural resources). The alternatives analysis in Appendix I explains why further avoidance and minimization of impacts to waters of the U.S. is not practicable or feasible.

h. Least environmentally damaging practicable alternative: *Describe/explain.* The least environmentally damaging practicable alternative has been determined by the USACE to be the applicant's preferred alternative.

5. Evaluation of the 404(b)(1) Guidelines: NA

5.1 Potential impacts on physical and chemical characteristics of the aquatic ecosystem – (Subpart C)

a. Substrate (40 CFR Section 230.20): The proposed action involves the development of approximately 100 acres that would include the permanent fill of 4.4 acres of wetlands and a minor amount of fill in the river behind existing mooring cells to create a dock. The wetland fills would permanently impact the complex physical, chemical, and biological characteristics of the substrate of the wetlands, but would be offset by compensatory mitigation. The area behind the mooring cells has been previously impacted by fills and human activity over the past 40 years the cells has been at this site. USACE has determined the proposed project would have a long term minor effect on the wetland substrate and negligible effect on the river substrate.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

b. Suspended Particulates/Turbidity (40 CFR Section 230.21): Erosion control methods would be used in and around the proposed impacted wetland areas to stabilize and control the unconsolidated material. However, while the site is under construction there would likely be minor runoff and an increase in turbidity and suspended particulates in the area streams and wetlands, but these impacts would be minimized by measures taken to comply with the issued Section 402 permit. After construction is complete, the fill material would have had a chance to compact and runoff and turbidity levels should return to pre-construction levels. All work in and on the wetlands would be conducted in the dry or during low flow periods. USACE has determined the proposed project would have short term minor effect on suspended particulates/turbidity.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

c. Water (40 CFR Section 230.22): The discharge of fill material into wetlands would change the chemistry and the physical characteristics of the wetland being impacted through the introduction of chemical constituents in suspended or dissolved form. Although erosion control methods would be used in and around the construction area to stabilize and control the unconsolidated material, during the construction phase, there would likely be minor increases in runoff, turbidity and suspended particulates in the streams and wetlands. After construction, runoff and turbidity levels should return to pre-construction levels. KYDOW issued a water quality certification on July 15, 2014. USACE has determined the proposed project would have short term minor effect on water.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

d. Currents Patterns & Water Circulation (40 CFR Section 230.23): The discharge of fill material associated with the fill behind the mooring cells would modify the current patterns and water circulation by obstructing the flow, changing the direction of the water flow, velocity of water flow, and the water circulation. The applicant has designed the project to avoid and minimize impacts to the river and wetlands to the extent practicable. USACE has determined the proposed project would have a long term minor effect on the currents patterns and water circulation of the impacted river and wetland areas.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

e. Normal Water Fluctuations (40 CFR Section 230.24): The discharge of fill material associated with the fill would not alter the normal water-level fluctuation pattern of the area. The proposed bridge span structures for the rail spur have been sized such that there would be no rise in the 100-year base flood elevations and to maintain one foot of freeboard, minimum, between the low chord and the 100-year regulatory water surface elevation. USACE has determined the proposed project would have short term minor effect on the normal water fluctuations of the streams being spanned.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

f. Salinity Gradients (40 CFR Section 230.25): Salinity gradients would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on salinity gradients.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

5.2. Potential Effects on Biological Characteristics of the Aquatic Ecosystem (Part V Subpart D):

a. Threatened or Endangered Species (40 CFR Section 230.30): USACE has determined the project is likely to adversely affect the endangered sheepsnose (*Plethobasus cyphus*) and orangefoot pimpleback (*Plethobasus cooperianus*) and the threatened rabbitsfoot (*Quadrula cylindrica cylindrica*) and critical habitat proposed for the rabbitsfoot. USFWS expects one (1) orangefoot pimpleback, twenty-three (23) sheepsnose, and thirty-four (34) rabbitsfoot mussels would be taken an approximate 0.2 acre area. USFWS concurred with USACE the project would remove 4.0 acres of potential summer roosting and maternity habitat for the endangered Indiana bat (*Myotis sodalis*) and the rail project would remove 1.09 acres. Both applicants and USFWS entered in a Conservation Memorandum of Agreement (CMOA) executed on July 11, 2014 regarding the Indiana bat (also covers the Northern long-eared bat). Copy of CMOA in Appendix D. USFWS concurred with USACE the project is not likely to adversely affect the fat pocketbook (*Potamilus capax*) or pink mucket (*Lampsilis abrupta*). USFWS concurred other species that might occur in the area, Price's potato-bean (*Apios priceana*), gray bat (*Myotis grisescens*), and Interior least tern (*Sterna antillarum athalassos*) would not be affected by the proposed project.

FINDINGS: No Effect May Affect Not Likely to Adversely Affect
 Adverse Effect Jeopardy

b. Fish, Crustaceans, Mollusks, and Other Aquatic Organisms in Food Web (40 CFR Section 230.31): During construction, some organisms would be covered by the discharge of fill material associated with the filling of wetlands and behind the mooring cells. Some organisms would not have a chance to relocate or recolonize the filled waters. Given the degraded conditions and limited habitat capacity of the aquatic resources to be impacted, the USACE has determined the proposed project would have a long term minor impact on fish, crustaceans, mollusks, and other aquatic organisms in food web.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

c. Other Wildlife (40 CFR Section 230.32): Direct effects to wildlife resources would be expected during construction activities within the project footprint. The mechanical equipment used to clear the land for the development could injure or kill individual wildlife species caught by the equipment. In addition, noise produced by mechanical equipment may have short-term impacts to wildlife species in and around the project area by forcing these species away from the immediate area. Once the work at the site has been completed, noise levels should decrease to normal levels for this location. Indirect effects to wildlife resources would be expected due to displacement of wildlife and habitat loss. The proposal would produce permanent habitat alterations and change the movement of wildlife at the site due to development. USACE has determined the project would have a long term minor impact on other wildlife.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

5. 3. Part V, Subpart E – Potential Effects on Special Aquatic Sites:

a. Sanctuaries and Refuges (40 CFR Section 230.40): Sanctuaries and refuges would not be impacted by the proposed activity. USACE has determined the proposed project would have no effect on sanctuaries and refuges.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

b. Wetlands (40 CFR Section 230.41): The proposed project would impact a total of 4.4 acres of wetlands. Mitigation for the wetland impacts would be handled by purchasing 8.8 credits from West Kentucky Wetwoods Mitigation Bank, Mayfield Kentucky. USACE has determined the proposed project would have short term minor effect on wetlands.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

c. Mud Flats (40 CFR Section 230.42): There are no mud flats that would not be impacted by the proposed activity. USACE has determined the proposed project would have no effect on mud flats.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

d. Vegetated Shallows (40 CFR Section 230.43): Vegetated shallows would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on vegetated shallows.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

e. Coral Reefs (40 CFR Section 230.44): Coral reefs would not be impacted by the proposed activity. Therefore, the USACE has determined the proposed project would have no effect on coral reefs.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

f. Riffle and Pool Complexes (40 CFR Section 230.45): **There will be no fill associated with the stream crossings or any deposit of fill into streams by the proposed project.** USACE has determined that the proposed project would have no effect on riffle and pool complexes.
FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

5.4. Part V, Subpart F – Potential Effects on Human Use Characteristics:

a. Municipal and Private Water Supplies (40 CFR Section 230.50): Municipal and private water supplies would not be impacted by the proposed activity. USACE has determined that the proposed project would have no effect on municipal and private water supplies.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

b. Recreational and Commercial Fisheries (40 CFR Section 230.51): Recreational and commercial fisheries would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on recreational and commercial fisheries.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

c. Water-related Recreation (40 CFR Section 230.52): Water-related recreation would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on water-related recreation.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

d. Aesthetics (40 CFR Section 230.53): Increased human use of the project areas would alter local aesthetic values. According to the applicant, air and noise permits would not be required. The road (Shar-Cal Road) that runs between the two projects would be impacted visually with development on both sides and the transport of goods and trucks between the terminal and rail spur. Traffic in general would be increased both by the terminal employees and from the transport of good for delivery and receipt. The projects would also alter the visual character of some waters of the U.S. Currently, there are not many residential properties in the area and the county has zoned the properties to industrial. USACE has determined the proposed project would have long term minor impact on aesthetics.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

e. Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites and Similar Preserves (40 CFR Section 230.54): Parks, national and historical monuments, national seashores, wilderness areas, research sites and similar preserves would not be impacted by the proposed activity. USACE has determined the proposed project would have no effect on parks, national and historical monuments, national seashores, wilderness areas, research sites and similar preserves.

FINDINGS: No Effect Negligible Major Short Term Minor Long Term Minor

f. Cultural Resources Subject to Section 106 of the National Historic Preservation Act: The Kentucky Historical Commission concurred with the USACE determination that no National Register of Historic Places (NRHP) listed or eligible properties would be affected by this undertaking. First Marine contracted with American Resources Group, Ltd (ARG) to complete cultural resource investigations and historic property identification efforts. Three archaeological sites were identified. USACE determined the three sites as not eligible for inclusion in the NRHP. ARG conducted an architectural survey for the both the terminal and rail spur properties and the project viewsheds. No previously recorded historic architectural properties were found located within one half mile of the proposed project area perimeter, except for the presence of three mooring cells, proposed to be altered. USACE permitting records indicate these mooring cells were constructed between 1960 and 1963. USACE determined the cells as not eligible for inclusion in the NRHP because they represent a standard design and construction technology. Given the project's design and results of the cultural resource investigations, USACE found no historic properties would be affected. The SHPO concurred with agencies no effect finding on September 9, 2014 and the agencies no effect architectural finding on October 28, 2014, see Appendix E.

FINDINGS: No Effect No Adverse Effect Adverse Effect

5.5. Evaluation and Testing (Subpart G): General Evaluation of the dredged or fill material: The discharge site is adjacent to the extraction site and subject to the same sources of potential contaminants. The material at the extraction and disposal sites is similar. The evaluation indicates the proposed discharge material meets the testing exclusion criteria for the reason cited below: Exclusion: The levels of potential contamination are similar at the extraction and disposal sites and the discharge is not likely to result in degradation of the disposal site. Dissolved materials and suspended particles would be controlled on the site under terms of a Section 402 KPDES permit, so no pollutants would be transported to less contaminated areas.

5.6. Actions to minimize adverse effects: (Subpart H): The applicant designed the project to avoid impacts to approximately 29 acres of wetlands. Also road crossings associated with the rail spur were designed to avoid the discharge of fill material into streams.

a. Factual determinations (Subpart B, Section 230.11): :

Physical Substrate: <input checked="" type="checkbox"/> See Existing Conditions, paragraph 1
Water circulation, fluctuation, and salinity: <input checked="" type="checkbox"/> Addressed in the Water Quality Certification (Appendix C).
Suspended particulate/turbidity: <input checked="" type="checkbox"/> Turbidity controls in Water Quality Certification (Appendix C).
Contaminant availability: <input checked="" type="checkbox"/> Addressed in the Water Quality Certification (Appendix C).
Aquatic ecosystem and organism: <input checked="" type="checkbox"/> Stream/aquatic/wildlife evaluations, paragraphs 6, 7 & 8.
Proposed disposal site: <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Public interest, paragraph 6 & 7.
Cumulative effects on the aquatic ecosystem: <input checked="" type="checkbox"/> See Paragraph 6.a.
Secondary effects on the aquatic ecosystem: <input checked="" type="checkbox"/> See Paragraph 6.a.

b. Restrictions on discharges (Subpart B - Section 230.10).

- (1) It has/has not been demonstrated in paragraph 4 that there are no practicable or less damaging alternatives which could satisfy the project's basic purpose. The activity is/is not located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity does/does not need to be located in a special aquatic site to fulfill its basic purpose.
- (2) The proposed activity does/does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards (based on information from the certifying agency that the USACE could precede with a provisional determination). The proposed activity does/does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity does/does not violate the requirements of a federally designate marine sanctuary.
- (3) The activity will/will not cause or contribute to significant degradation of waters of the US, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, aesthetic, and economic values.
- (4) Appropriate and practicable steps have/have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Paragraph 8 for description of mitigative actions).

6. Public Interest Review: All public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered. Public interest factors relevant to the decision are discussed in number 6.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Aesthetics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	General environmental concerns
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wetlands.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Historic properties.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fish and wildlife values
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Flood hazards.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain values.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Land use.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Navigation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shore erosion and accretion.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recreation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water supply and conservation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water quality.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Food and fiber production.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considerations of property ownership.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Needs and welfare of the people.

7. Other effects, policies and other laws:

a. Public Interest Factors: NA

Factor	Discussion
Conservation	The proposed activities would modify the natural resource characteristics within the project area; however, the proposed plans minimize impacts to wetlands and more than 30 acres of remaining wetlands on the properties would not be impacted. Compensatory mitigation would result in the restoration, enhancement, establishment, or preservation of aquatic habitats to offset losses to conservation values.
Economics	The projects would have positive impacts on the local economy. During construction, these activities would generate jobs and revenue for local contractors as well as revenue to building supply companies that sell construction materials. The projects would promote commerce with local businesses and provide an efficient local port for export of goods and services. According to the application, the proposed area is rich with bulk aggregates, agriculture products and minerals. These projects could change land values, attracting new industry to the area, and induce new support business to develop nearby. A Master Plan Report for the Marshall County – Calvert City

CELRN-OP-F (Applications LRN-2012-00349/ LRN-2014-00120 - Port of Calvert City)

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings

	Riverport included recommendations for a multi-modal port facility to be located along the river. Economic benefits would also flow to First Marine.
Aesthetics	Increased human use of the project areas would alter local aesthetic values. According to the applicant, air and noise permits would not be required. The road (Shar-Cal Road) that runs between the two projects would be impacted visually with development on both sides and the transport of goods and trucks between the terminal and rail spur. Traffic in general would be increased both by the terminal employees and from the transport of good for delivery and receipt. The projects would also alter the visual character of some waters of the U.S. Currently, there are not many residential properties in the area and the county has zoned the properties to industrial.
General Environmental Concerns	The proposed actions would have a neutral affect general environmental concerns, such as water, air, noise, and land pollution. The projects would also affect the physical, chemical, and biological characteristics of the environment; however the adverse effects of the activities on general environmental concerns would be minor due to proposed compensatory mitigation proposed in the HUC-8 watershed and compliance with local and state permits.
Wetlands	Affected wetlands would be permanently filled resulting in the permanent loss of aquatic resource functions, services, and values (4.4 acres of mixed palustrine hardwood/shrub wetlands). USACE would require compensatory mitigation (at a 2:1 ratio with a purchase of 8.8 credits from West Kentucky Wetwoods Mitigation Bank, bank located within the same watershed (Lower Tennessee River HUC-8) to offset the loss of wetlands and ensure the adverse effects to aquatic environment are minimal.
Historic Properties	Requirements of Section 106 of the National Historic Preservation Act have been satisfied. Applicants conducted both above ground and below ground Phase I surveys covering the entire project area. Sites of archaeological significance were found during the surveys; however the projects would avoid these sites. In addition, the applicant submitted an architectural report documenting the history of the three 1960 era mooring cells. USACE determined no historic properties would be affected by the proposed action, and SHPO-KY concurred with USACE determinations.
Fish and Wildlife Values	Consultation pursuant to Section 7 of the ESA has been satisfied. Applicant conducted mussel, bat, and plant surveys for the project. USFWS determined the proposed action would incidentally take orangefoot pimpleback, sheepsnose, and rabbitsfoot mussels species. USFWS issued a BO with required terms and conditions, concurring with USACE determinations in BA, and determined the project would not likely to jeopardize the continued existence of any species. USFWS also entered into a separate CMOA with the applicants for the Indiana Bat (and northern long-eared bat).
Flood Hazards	Fill material would be placed in the uplands adjacent to the loading facility to create a 19-acre land mass (with final grade above the 500-year water surface elevation); however, the fill would be offset by excavation of a borrow area 17-acres in size. The applicant provided a Floodway "No-Rise/No-Impact" Certification for the plan dated January 24, 2014, along with a Hydraulic Analysis Report providing technical data and floodway calculations showing the proposed work would not impact pre-project base flood elevations, floodway elevations, or floodway data widths. The proposed project would be constructed in accordance with applicable FEMA approved state and local floodplain management requirements. The rail spur would be constructed using bridge spans to maintain the pre-construction course, condition, capacity, and location of waters of the U.S. The structures have been sized such that there would be no rise in the 100-year base flood elevations and to maintain one foot of freeboard, minimum, between the low chord and the 100-year regulatory water surface elevation.

CELRN-OP-F (Applications LRN-2012-00349/ LRN-2014-00120 - Port of Calvert City)

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings

Floodplain values	The proposed actions would cause a loss of wetlands which may have an effect on the floodplains abilities to trap sediments, pollutants, and nutrients and transform chemical compounds. The application contained a plan for control of storm water runoff and discharges regulated under Section 402 of the CWA (outside of USACE scope of analysis). Local construction permits have been applied for. An NPDES permit has been issued for the proposed project.
Land Use	The proposed projects would change current land use from natural mostly undeveloped lands to developed lands, and may induce development on nearby parcels of land. The primary responsibility for land use decisions is held by local governments, and the properties are zoned for commercial/industrial development.
Navigation	The ingress/egress between the river and uplands has been established since the 1960's at this location. The proposed action would increase usage of the terminal; however, use of the terminal would not interfere with the public's right to free navigation on the river. Mooring dolphins are proposed for l safety; moorage at the terminal would not increase over existing permitted widths and length limits. USACE Navigation Branch had no comments on the proposed action. During construction of the terminal, the permittee would be required to submit a Navigation Data Sheet to USACE at least ten days prior to commencement of any construction activity in the river.
Shore erosion and accretion	Increase usage of the terminal could have minor direct effects on shore erosion and accretion processes, however, the mooring cell breasting wall, sitting over 20 feet from the shoreline, would tend to minimize the effects.
Recreation	Recreational uses (hunting) of the area and adjacent lands may indirectly change through induced development; however, these changes would be negligible.
Water supply and conservation	The proposed activities may increase the amount of impervious surface in the area, which may decrease replenishment of groundwater supplies. The proposed actions may also affect the quality of water supplies by adding pollutants to surface waters and groundwater, but many causes of water pollution, such as discharges regulated under Section 402 of the CWA, are outside of USACE scope of analysis. An NPDES permit has been issued for the proposed actions. There are no municipal or private intakes on the lower Tennessee River. The nearest intake is on the lake side of Kentucky Dam.
Water Quality	A Section 401 water quality certification has been issued and is required since the proposals require discharges of fill material into waters of the U.S. The loss of wetland vegetation would adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds and also provides habitat for microorganisms that remove nutrients and pollutants from water. Compensatory mitigation for the lost wetlands would provide local water quality benefits.
Energy Needs	The proposed projects would increase energy consumption in the area during construction. Increases in energy consumption are outside of USACE scope of review.
Safety	During construction and through operation, the proposed projects would be subject to Federal, state, and local safety laws and regulations. During construction of the terminal, the permittee would be required to submit a Navigation Data Sheet to USACE at least ten days prior to commencement of any construction activity in the river. The terminal would be required to install and maintain safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on the authorized facilities.
Food and fiber production	The proposed projects lie within an area rich with agriculture products which are routinely exported out of the area to other areas within the US and beyond. The proposed projects would enable increase exports from the area. Though zoned for commercial/industrial development, the proposed actions may affect food and fiber

	production, since construction would reduce the amount of farmland. The loss of farmland is more appropriately addressed through the land use planning and zoning authority held by the local government.
Mineral Needs	Likewise, the proposed projects lie within an area rich with minerals which are routinely exported out of the area to other areas within the US and beyond. The proposed projects would enable increase exports from the area. In addition, the construction of the projects would increase the demand for building materials, such as steel, aluminum, and copper, aggregates, stone.
Consideration of Property Ownership	Inherent aspect of property ownership is a right to reasonable private use. USACE and TVA permit do not convey any property rights and would not obviate the need for permittees to obtain other Federal, state, or local authorizations required by law.
Needs and welfare of the People	Project would satisfy public and private needs for distribution of general goods and bulk commodities across river, rail, and roadway and these facilities are crucial to the economy of the area through the jobs provided, the commerce conducted with local businesses, attracting new industry to the area, and tax base generated. A Master Plan Report for the county recommended a multi-modal port facility to be located along the Tennessee River. The project is a public/private venture between Marshall County-Calvert City Riverport Authority and First Marine.

b. Endangered Species Act: On May 19, 2014, USACE and TVA submitted Biological Assessments (BAs) for the two projects. A request to USFWS to commence formal consultation was made along with the following determinations:

The proposed project would adversely affect:

- Rabbitsfoot (*Quadrula cylindrica*) - threatened
- Sheepnose (*Plethobasus cyphus*) - endangered
- Orangefoot Pimpleback (*Plethobasus cooperianus*) - endangered

The proposed project may affect but not adversely affect:

- Pink Mucket (*Lampsilis abrupta*) - endangered
- Fat Pocketbook (*Potamilus capax*) - endangered
- Habitat for Indiana bat - endangered

The proposed project would have no effect on:

- Price's potato-bean - threatened
- Habitat for Gray bat - endangered
- Habitat for Northern Long-eared bat - endangered
- Nesting habitat for Interior Lest Tern (*Sterna antillarum athalassos*) - endangered

Is Is not likely to jeopardize the continued existence of any listed species above.

USFWS concurred provided (a) Biological Opinion(s), dated July 31, 2014, as follows:

USFWS agrees with USACE determination the proposed river port project is likely to adversely affect the endangered sheepnose (*Plethobasus cyphus*) and orangefoot pimpleback (*Plethobasus cooperianus*) and the threatened rabbitsfoot (*Quadrula cylindrica cylindrica*). Additionally, the proposed project lies within an area where critical habitat has been proposed for the rabbitsfoot; therefore, USFWS prepared a conference opinion. USFWS expects that one (1) orangefoot pimpleback, twenty-three (23) sheepnose, and thirty-four (34) rabbitsfoot mussels would be taken within the approximate 0.2 acre area estimated to most likely be impacted by barge and towboat activity. Take for sheepnose is provided for a 2.32 acre project footprint area, because the sheepnose primarily occurs in deeper water further riverward from the shore. Take for the orangefoot pimpleback mussel is provided as one (1) individual, because this species was not recorded during the mussel survey but could be present but is not likely where most impacts are expected to occur. USFWS concurred with USACE that the river port project would remove 4.0 acres of

potential summer roosting and maternity habitat for the endangered Indiana bat (*Myotis sodalis*) and the rail spur project would remove 1.09 acres. To address these potential impacts, both applicants and USFWS entered in a Conservation Memorandum of Agreement (CMOA) executed on July 11, 2014 regarding the Indiana bat (also covers the Northern long-eared bat). Copy of CMOA in Appendix D. USFWS concurred with USACE that the river port project is not likely to adversely affect the fat pocketbook (*Potamilus capax*) or pink mucket (*Lampsilis abrupta*). USFWS concurred that other federally listed species that might occur in the area, specifically the Price's potato-bean (*Apios priceana*), gray bat (*Myotis grisescens*), and Interior least tern (*Sterna antillarum athalassos*) would not be affected by the proposed project.

TERMS AND CONDITIONS of BO. In order to be exempt from the prohibitions of Section 9 of the Act, USACE, TVA, and First Marine must comply with the following terms and conditions, which implement the reasonable and prudent measures described in the BO.

1. USACE and TVA will condition their permits to require applicant to implement the proposed action as described in the BA, including the conservation measures listed in the BO and conference opinion. Applicants will supply written confirmation (including appropriate monitoring reports and photographic documentation) to illustrate to USACE, TVA, and USFWS these actions have been taken.

2. USACE and TVA will include in their respective authorizations for the project a requirement that First Marine shall contribute \$67,000.00 to the Kentucky Waterways Alliance (KWA) Kentucky Aquatic Resources Fund (KARF) prior to initiating construction of the project. These funds will be used in recovery and mussel propagation and culture efforts for the federally listed mussels (i.e., orangefoot pimpleback, sheepsnose and rabbitsfoot) addressed in this biological/conference opinion, thereby minimizing the take expected to occur on this project. Orangefoot pimpleback: For the one (1) orangefoot pimpleback taken, \$4,000.00. Sheepsnose: For the 23 sheepsnose taken, \$46,000.00 (i.e., \$2,000 per individual). Rabbitsfoot: For the 34 rabbitsfoot taken, \$17,000.00 (i.e., \$500.00 per individual). *Details on how to contribute the required funds are provided in the BO. First Marine must supply documentation that these payments have been made as a condition of USACE or TVA permits.*

3. As a condition of USACE and TVA permits, First Marine will develop a plan to monitor orangefoot pimpleback, sheepsnose, and rabbitsfoot mussels and habitat likely to be impacted by the proposed action. This plan must be approved by USFWS, prior to establishment of the fleeing area. This plan will involve the use of side-scan sonar along with the use of divers to monitor the impacts of the fleeing activity to the mussels and habitat at the fleeing areas. It is anticipated the monitoring effort will have a pre-fleeing establishment effort (i.e., baseline) and then a post-establishment effort that will be sufficient to determine impacts, if any, to mussels and habitat.

c. Essential Fish Habitat: Adverse impacts to Essential Fish Habitat will/will not result from the proposed project.

d. Historical/Archaeological Properties: The proposed project will/will not have any effect on any sites listed, or eligible for listing, in the National Register of Historic Places, or other national, state, or local significance based on letter from SHPO and surveys, summarized as follows: First Marine contracted with ARG to complete cultural resource investigations and historic property identification efforts. *Phase I Archaeological Survey for the First Marine Properties, Port of Calvert City, Project Area, Marshall County Kentucky (KyOSA 13-7404)* was initially conducted for the terminal site and USACE determination the proposed project would not impact archaeological sites. ARG conducted additional cultural resource investigations for the both the terminal and rail spur properties, presented in *Phase I Archaeological Survey of the Proposed First Marine Properties, Borrow Area and Adjacent Construction Area, Marshall County, KY (KyOSA FY14-7894), Addendum to Phase I*

Archaeological Survey of the Proposed First Marine Properties, Borrow Area and Adjacent Construction Area Marshall County, KY (KyOSA FY14-8086) and the Phase I, Architectural Assessment of the Proposed, First Marine Properties, Borrow Area and Adjacent Construction Area Marshall County, KY (KyOSA FY14-8086). Three archaeological sites were identified. USACE determined the three sites as not eligible for inclusion in the National Register of Historic Places. ARG conducted an architectural survey for the both the terminal and rail spur properties and the project viewsheds. No previously recorded historic architectural properties were found located within one half mile of the proposed project area perimeter, except for the presence of three mooring cells, proposed to be altered. USACE permitting records indicate these mooring cells were constructed between 1960 and 1963. However, given the standard design and simple technology of mooring cells, USACE determined the cells as not eligible for inclusion in the National Register of Historic Places because they represent a standard design and construction technology. Given the proposed project's design and results of the cultural resource investigations, USACE and TVA found that no historic properties would be affected. The SHPO concurred with agencies archaeological finding on September 9, 2014 and agencies architectural finding on October 28, 2014, concurrence letters in Appendix E. KHC did request a few minor changes to the document, and the applicant's agreed to submit the revised architectural report (see Special Condition to DA requiring this information submitted prior to construction and no later than December 1, 2014).

e. Cumulative & Secondary Impacts: The geographic area for this assessment is the lower Tennessee River between Mile 2.5 (LRN/LRL Division) and Mile 22.5 (Kentucky Lock and Dam). Commercial River traffic along this segment of the lower Tennessee has been an active presence since the mid 1800's. Between Miles 1 and 20, there are several private barge terminals, i.e., McGinnis, Inc. at TRM 2.4, Walker Boatyard/Jimar Paving Company at TRM 3.0L, ADM/Growmark at TRM 4.4, Paducah River Service at TRM 5.1, Marathon-Ashland Petroleum at TRM 6.0, Trinity Marine Products at TRM 7.8, Paducah River Painting at TRM 9.2, Bailey Port at TRM 14.1, Southern Coal Handling/ Calvert City Terminal at TRM 14.1, Arkema Chemicals at TRM 16.1, CC Metals and Alloys at TRM 16.7, Air Products and Chemicals at TRM 17.6, Westlake Chemical Corporation at TRM 18.0, Florida Rock Industries at TRM 18.3, CALX Terminal at TRM 19.5, and many fleeting areas located along both river banks. There are no public/private river ports within the river between Miles 1 and 20.

The ecological condition of rivers and streams are dependent on the state of their watersheds (NRC 1992), because they are affected by activities that occur in those watersheds, including agriculture, urban development, deforestation, mining, water removal, flow alteration, and invasive species. Land use changes, such as the proposed project, affect rivers and streams through increased sedimentation, larger inputs of nutrients and pollutants, altered stream and wetland hydrology, the alteration or removal of riparian vegetation, and the reduction or elimination of inputs of large woody debris (Allen 2004). Leopold (1968) found that land use changes affect the hydrology of an area by altering stream flow patterns, total runoff, water quality, and stream structure. Wetland quality is adversely affected by increased inputs of sediments, nutrients, and pollutants, many of which come from non-point sources. Activities that affect wetland quantity and quality include: land use changes that alter local hydrology (including water withdrawal), clearing and draining wetlands, constructing levees that sever hydrologic connections between rivers and floodplain wetlands, constructing other obstructions to water flow (e.g., dams, locks), constructing water diversions, inputs of nutrients and contaminants, and fire suppression (Brinson and Malvarez 2002). Upland development adversely affects wetlands and reduces wetland functionality because those activities change surface water flows and alter wetland hydrology, contribute stormwater and associated sediments, nutrients, and pollutants, cause increases in invasive plant species abundance, and decrease the diversity of native plants and animals (Wright et al. 2006). Wetland degradation and losses are caused by changes in water movement and volume within a watershed or contributing drainage area, altered sediment transport, drainage, inputs of nutrients from non-point

sources, water diversions, fill activities, excavation activities, invasion by non-native species, land subsidence, and pollutants (Zedler and Kercher 2005). Compensatory mitigation required by USACE will help reduce the contribution of those activities to the cumulative effects on the Nation's wetlands, streams, and other aquatic resources, by providing ecological functions to partially or fully replace some or all of the aquatic resource functions lost as a result of those activities.

(1) Context: The proposed project is typical of / a precedent / very large compared to / other activities in the watershed.

(2) The magnitude of the proposed effect is relatively minor within the watershed. This port would continue to load and unload commodities as has been done since 1960. The uplands would convert some agricultural lands to commercial uses; however, the lands are zoned for this purpose. Remaining wetland areas (30 acres) on the terminal property and more on the rail property would continue to be hydrated by the existing streams on adjacent properties. Approved compensatory mitigation would result in no net loss of wetland functions within the Lower Tennessee River HUC-8 Watershed.

f. NA USACE Wetland Policy: Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.

g. NA Water Quality Certification #2014-037-7M under Section 401 of the Clean Water Act was / has not yet been issued by the Commonwealth of Kentucky Division of Water on July 15, 2014. See Appendix C.

h. NA Coastal Zone Management (CZM) consistency/permit: Issuance of a State permit certifies that the project is consistent with the CZM plan. There is no evidence or indication from that the project is inconsistent with their CZM plan.

i. Other authorizations: A no rise flood certification was issued for the project in January 2014.

j. NA Significant Issues of Overriding National Importance: *Explain.*

8. Compensation and other mitigation actions:

a. Compensatory Mitigation: Is compensatory mitigation required? yes no [If "no," do not complete the rest of this section]. The proposed port would result in direct impacts to 3.9 acres of mixed palustrine hardwood/ shrub wetlands. The proposed rail spur would result in direct impacts to 0.49 acres mixed palustrine hardwood/shrub wetlands. Collectively, the applicants would mitigate for the total loss of 4.4 acres wetlands at a 2:1 ratio with a purchase of 8.8 credits from West Kentucky Wetwoods Mitigation Bank, Mayfield Kentucky.

Is the impact in the service area of an approved mitigation bank? yes no NA

Does mitigation bank have appropriate number/resource type of credits available? yes no

Is the impact in the service area of approved in-lieu fee program? yes no NA

Does program have appropriate number/resource type of credits available? yes no NA

Check the selected compensatory mitigation option(s):

- mitigation bank credits
- in-lieu fee program credits
- permittee-responsible mitigation under a watershed approach
- permittee-responsible mitigation, on-site and in-kind
- permittee-responsible mitigation, off-site and out-of-kind

If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project).

b. Other Mitigative Actions: NA

9. General evaluation criteria under the public interest review. We considered the following:

a. The relative extent of the public and private need for the proposed structure or work.

Explain. This project would satisfy public and private needs for distribution of general goods and bulk commodities (including bulk aggregates, agriculture products and minerals) across river, rail, and roadway. According to the applicant, these facilities are crucial to the economy of the area through the jobs provided, the commerce conducted with local businesses, attracting new industry to the area, and the tax base generated. A Master Plan Report for the Marshall County – Calvert City Riverport included recommendations for a multi-modal port facility to be located within the area along the Tennessee River.

b. There are no unresolved conflicts as to resource use. (There are unresolved conflicts as to resource use. One or more of the alternative locations and methods described above are reasonable or practicable to accomplish the objectives of the proposed structure or work but are not being accepted by the applicant.) (There are unresolved conflicts as to resource use however there are no practicable reasonable alternative locations and methods to accomplish the objective of the proposed work.) *Check the appropriate box, delete the statements that do not apply and explain.* The permittees have shown due diligence in avoiding and minimizing adverse effects to waters of the U.S., protected species, and cultural resources to the maximum extent practicable across the project sites. The proposed projects would have minimal individual and cumulative adverse effects on the aquatic environment and overall public interest. The applicants have shown that their preferred alternative is the least environmentally damaging practicable alternative. See paragraph 4.

c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited. Detrimental impacts are expected to be minimal although they would be permanent in the construction area. The beneficial effects associated with utilization of the property would be permanent. *Explain.* USACE and TVA permits do not grant any property rights or exclusive privileges. Inherent aspect of property ownership is a right to reasonable private use. In addition, USACE and TVA permits would not obviate the need for the permittee to obtain other Federal, state, or local authorizations required by law. The permittees would be required to adhere to the conditions of the USFWS BO, state water quality certification (and NPDES, etc.), as well as local zoning and building ordinances.

d. Special Conditions (*include rationale for each required condition*): yes no

Special Conditions for both LRN-2012-00349 and LRN-2014-00120.

- The work must be in accordance with the plans and information submitted in support of the work authorized herein. *Justification: Permit compliance [33 CFR 326.4(d)].*
- You must have a copy of this permit available on-site and insure all contractors are aware of its conditions and abide by them. *Justification: Permit compliance [33 CFR 326.4(d)].*

- The information requested by the Kentucky Heritage Council (in letter to USACE dated October 28, 2014, copy attached on pages 10 and 11 of the permit) shall be submitted prior to construction and no later than December 1, 2014. *Justification: 106 compliance.*
- Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. Erosion control measures shall remain in place and be maintained until all authorized work has been completed and the site has been stabilized. *Justification: Erosion control.*
- Should any other regulatory agency require changes to the work authorized or obligated by this permit, you are advised that a modification to this permit instrument is required prior to initiation of those changes. It is your responsibility to request a modification of this permit from the Nashville District Regulatory Office. *Justification: Regulatory Agency Changes.*
- Fill Material: You shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts. *Justification: In accordance with Section 307 of the Clean Water Act.*
- Within 60 days of completion of the authorized work or at the expiration of the construction authorization of this permit, whichever occurs first, you shall complete the attached "Compliance Certification" form (page 13 of this permit) and submit to USACE. In the event that the completed work deviates, in any manner, from the authorized work, you shall describe, on the Self-Certification Form, the deviations between the work authorized by the permit and the work as constructed. Please note that the description of any deviations on the Self-Certification Form does not constitute approval of any deviations by USACE. *Justification: Compliance Certification.*

Additional Special Conditions for LRN-2012-00349.

- The USFWS Biological Opinion (BO) dated August 7, 2014, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" of no more than 1 orangefoot pimpleback, 23 sheepnose, and 34 rabbitsfoot mussels. Your authorization under this permit is conditional upon your compliance with the mandatory terms and conditions associated with incidental take of the BO, which are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, will constitute an unauthorized take, and it will also constitute non-compliance with this permit. USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. You will notify this office and USFWS and immediately provide an explanation of the causes of the taking and review with USFWS the need for possible modification of the reasonable and prudent measures.

Terms and Conditions of the BO for this action:

- a. You are required to implement the action as described in the Biological Assessment (BA) including the conservation measures listed in the BO and the conference opinion, and those referred to in the BA and the BA's supporting documentation. You will supply written confirmation (including

appropriate monitoring reports and photographic documentation) to illustrate to this office and USFWS these actions have been taken.

b. You shall contribute \$67,000.00 to the Kentucky Waterways Alliance Kentucky Aquatic Resources Fund **prior to initiating any work in the waterway**. You shall provide documentation to this office and USFWS these payments have been made.

c. You will develop a plan to monitor orangefoot pimpleback, sheepsnose, and rabbitsfoot mussels and habitat likely to be impacted by the proposed action. This plan must be approved by the USFWS **prior to initiating any work in the waterway**. You will provide a copy of the plan to this office once approved. This plan will involve the use of side-scan sonar along with the use of divers to monitor the impacts of the fleeting activity to the mussels and habitat at the fleeting areas. The monitoring effort will have a pre-fleeting establishment effort (i.e., baseline) and a post-establishment effort that will be sufficient to determine impacts, if any, to mussels and habitat.

d. You shall perform the work in accordance with the USFWS Indiana Bat Conservation MOA for the project dated July 7, 2014. This includes your contribution of \$16,797.00 to the Indiana Bat Conservation Fund administered by the Kentucky Natural Lands Trust amount based upon 5.09 acres of potential Indiana bat summer habitat using the process identified in the Indiana Bat Mitigation Guidance. *Justification: Compliance with Section 7 of the ESA. The BO also describes the requirements of the Conservation Memorandum of Agreement regarding the Indiana bat (and Northern Long-eared bat), between the two applicants and USFWS executed on July 11, 2014.*

- Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the U.S. *Justification: Recommended at 33 CFR 325, Appendix A.*
- You are required to notify this office, in writing, by completion of a Navigation Data Sheet (attached on page 12 of this permit) **at least ten working days in advance of any work in the waterway** related to the construction of the activity herein approved. Failure to comply with this requirement may result in revisions or delays of work schedules to allow adequate time for notification of navigation interests utilizing the waterway. *Justification: Notification of commencement of work for posting on the USACE Navigation website.*
- A maximum of three barges wide by five barges long (3x5) are authorized to fleet at the breasting wall/ loading dock. *Justification: This would be consistent and not an increase over the current 3X5 barges permitted to moor at the mooring cell configuration.*
- You shall install and maintain, at your expense, safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on the authorized facilities. For Inland Navigation Rules information, please contact: Eighth Coast Guard District, Hale Boggs Federal Building, 501 Magazine Street, New Orleans, LA 70130-3396, telephone (504) 589-6277 or (504) 589-6236. *Justification: Minimize impacts to commercial navigation.*
- Prior to commencing construction on wetlands within this property, you will purchase compensatory mitigation for 3.9 acres of wetland impacts at 2:1 ratio or 7.8 credits from West Kentucky Wetwoods Mitigation Bank, Mayfield Kentucky. You shall notify this office in writing with copy of receipt of payment and certification. *Justification: Compensatory mitigation for wetland impacts.*
- You shall avoid the remaining 26.8 acre(s) of onsite wetlands (Labeled W-2 on the drawing, page 8 of this permit). These natural wetland areas were avoided as part of the permit application review process and therefore will not be disturbed by any dredging, filling, mechanized land clearing, or other construction work whatsoever. USACE reserves the right to deny review of any requests for future impacts to these natural wetland areas. *Justification: Wetland Avoidance/Minimization Areas:*

Additional Special Conditions for LRN-2014-00120.

- Prior to commencing construction on wetlands within this property, you will purchase compensatory mitigation for 0.5 acres of wetland impacts at 2:1 ratio or one (1) credit from West Kentucky Wetwoods Mitigation Bank, Mayfield Kentucky. You shall notify this office in writing with copy of receipt of payment and certification. *Justification: Compensatory mitigation for wetland impacts.*
- Temporary structures associated with the construction of the bridges and approaches shall be removed from the waterway and the channel shall be restored to preconstruction contours. *Justification: Allows for temporary unmitigated fills necessary to perform work.*
- You shall perform the work in accordance with the USFWS Indiana Bat Conservation MOA for the project dated July 7, 2014. This includes your contribution of \$16,797.00 to the Indiana Bat Conservation Fund administered by the Kentucky Natural Lands Trust amount based upon 5.09 acres of potential Indiana bat summer habitat using the process identified in the Indiana Bat Mitigation Guidance. *Justification: Compliance with Section 7 of the ESA. The BO also describes the requirements of the Conservation Memorandum of Agreement regarding the Indiana bat (and Northern Long-eared bat), between the two applicants and USFWS executed on July 11, 2014.*

10. Determinations:

- a. Public Hearing Request: NA I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project; therefore, the requests for a public hearing are denied.
- b. Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit would not exceed *de minimis* levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the USACE' continuing program responsibility and generally cannot be practicably controlled by the USACE. For these reasons a conformity determination is not required for this permit action.
- c. Relevant Presidential Executive Orders:
- EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial direct effect on one or more Indian tribes.
 - EO 11988, Floodplain Management: Not in a floodplain. Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above. The applicant provided a Floodway "No-Rise/No-Impact" Certification dated January 24, 2014, along with a Hydraulic Analysis Report providing technical data and floodway calculations that the proposed work would not impact pre-project base flood elevations, floodway elevations, or floodway data widths.
 - EO 12898, Environmental Justice: In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

CELRN-OP-F (Applications LRN-2012-00349/ LRN-2014-00120 - Port of Calvert City)
SUBJECT: Department of the Army Environmental Assessment and Statement of Findings

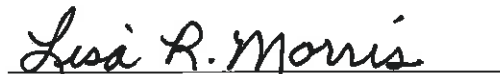
- EO 13112, Invasive Species:
 - There were no invasive species issues involved.
 - The evaluation above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.
 - Through special conditions, the permittee will be required to control the introduction and spread of exotic species.
- EO 13212 and 13302, Energy Supply and Availability:
 - The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.
 - The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy-related (including pipeline safety) project while maintaining safety, public health, and environmental protections.)

d. Finding of No Significant Impact: Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

e. (NA) Compliance with 404(b)(1) guidelines: Having completed the evaluation in paragraph 5, I have determined that the proposed discharge: complies/does not comply with the 404(b)(1) guidelines.

f. Public Interest Determination: I find that issuance of a DA permit: is not/is contrary to the public interest.


PREPARED BY:



Lisa R. Morris
Project Manager/Environmental Engineer
Regulatory Branch

Date: 19 November 2014

APPROVED BY:



Timothy C. Wilder
Chief, Western Regulatory Section
Operations Division

Date: 19 Nov 2014

CELRN-OP-F (Applications LRN-2012-00349/ LRN-2014-00120 - Port of Calvert City)
SUBJECT: Department of the Army Environmental Assessment and Statement of Findings

Appendices Attached:

- Appendix A - Public Notice 14-06 dated March 31, 2014
- Appendix B - Seven Comments Received to PN 14-06
- Appendix C - Water Quality Certification dated July 15, 2014
- Appendix D - Biological Assessment and Opinion -August 7, 2014/Bat Conservation MOA - July 7, 2014
- Appendix E - Archaeological and Historical Architectural Surveys, SHPO-KY Concurrence Letters
- Appendix F - Jurisdictional Determination dated January 2014
- Appendix G - Previous USACE and TVA permits at Terminal
- Appendix H - Hydraulic Analysis and No Rise/No Flood Certification dated January 24, 2014