

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
FIRST MARINE TERMINAL, MARSHALL COUNTY, KENTUCKY

First Marine Properties, LLC of Paducah, Kentucky, proposes to modify an existing barge terminal on the left descending bank at Tennessee River Mile (TRM) 11.0 in Marshall County, Kentucky. The terminal would be named the Port of Calvert City. The proposed facility would serve as a regional hub for the distribution of multi-modal containers, general goods, and bulk commodities. This proposed action is subject to permits from the U.S. Army Corps of Engineers (USACE) under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Additionally, the proposed action is subject to approval by the Tennessee Valley Authority (TVA) pursuant to Section 26a of the TVA Act.

Additionally, the Marshall County-Calvert Riverport Authority of Benton, Kentucky, proposes to provide rail service to the proposed terminal by constructing a rail connection from the existing Paducah & Louisville Railway rail line located south of the proposed terminal site. This rail connection would cross Cypress Creek at mile 2.8 and an unnamed tributary to Cypress Creek. Cypress Creek is a tributary to the Tennessee River; thus, the proposed rail crossings are subject to TVA Section 26a approval and require a USACE Section 404 permit.

Because the actions of the two applicants are directly connected, the environmental review considered potential effects of the actions proposed by both applicants. These proposed actions were the subject of an environmental assessment (EA) prepared by USACE. TVA was a cooperating agency in the preparation of that document. The EA is incorporated by reference. TVA has independently reviewed the USACE EA. With the additional impact analysis described below, TVA has found it to be adequate. TVA is therefore adopting this EA.

In addition to the No Action Alternative, one practicable alternative (i.e., the applicants' preferred alternative) was considered. Under the No Action Alternative, the requested permits from USACE and approval from TVA would not be issued.

Under the Action Alternative, USACE would issue necessary permits, and TVA would issue Section 26a approval. The Action Alternative is TVA's preferred alternative. The following actions would be undertaken by the applicants under the Action Alternative.

- First Marine would modify an existing terminal on the left descending bank at TRM 11.0. The proposed terminal construction would result in the placement of fill on 0.40 acre of river bottom substrate landward of three existing circular filled mooring cells. These cells would be used as support to create an elevated area 250 feet long and 150 feet wide, enclosed by driven sheet piles. This breasting wall would extend approximately 75 feet from the shoreline (measured at low water, i.e., elevation 302 feet mean sea level). The area behind the breasting wall would be filled with earth and stone. Additionally, two pipe dolphins<sup>1</sup> located on 150-foot centers would be placed downstream of the site and another pipe dolphin would be placed 150 feet upstream. First Marine has indicated that no dredging would be required.

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<sup>1</sup> A dolphin is a fixed structure situated in the water but not connected to the shore. Dolphins are used as mooring structures for barges and other watercraft.

Development of the approximately 19-acre landward site between the river bank and Shar-Cal Road would require the removal of river bank vegetation along approximately 1,520 feet of the shoreline. Elevating this area above the 500-year flood elevation (i.e., 346 feet mean sea level) would be accomplished by using 700,000 cubic yards of fill material obtained from the within the limits of the project and within the 100-year flood elevation of the Tennessee River. The proposed borrow area consists of an approximately 17-acre field immediately upstream of the terminal site.

- The Marshall County-Calvert Riverport Authority would construct a rail spur from the Paducah & Louisville Railway onto the First Marine property located on the south side of Shar-Cal Road and adjacent to the proposed terminal site. The spur would utilize a 40-foot wide right-of-way that would occupy approximately 20 acres. The rail line would cross Cypress Creek over a 240-foot long, five-span bridge based on battered piles. The line would also cross a tributary of Cypress Creek over a proposed 140-foot long, two-span bridge situated on battered piles. These two bridges would be constructed such that at least one foot of freeboard would be maintained above the 100-year base flood elevation. Rail crossings of two smaller, intermittent tributaries and narrow wetlands would be accomplished by installing open-bottom culverts.

### **Impacts Assessment**

The USACE EA stated that the following resources and amenities would not be affected by the applicants' proposed actions or that any effects to them would be negligible: conservation; historic properties; floodplain values; navigation; shore erosion and accretion; recreation; water supply and conservation; energy needs; safety; food and fiber production; mineral needs; and consideration of property ownership. TVA concurs with these determinations.

Implementation of the applicants' proposed actions would result in direct economic benefits to First Marine as well as direct and indirect long-term benefits to the county and residents of the local area. Establishment of the terminal could possibly attract new industries to the area and induce new support businesses to locate nearby. Undertaking the proposed actions would not cause disproportionately high and adverse human health or environmental effects on any minority or low-income populations, and is consistent with the requirement of Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations).

The visual character in the immediate area of the proposed terminal and back lying property would change from a predominantly rural and agricultural setting to a dispersed industrial setting similar to other industrial operations in and near Calvert City. Over time, either as an indirect result of the terminal or from industrial expansion of Calvert City, the local area is likely to assume a more industrial character. Likewise, local traffic is expected to increase somewhat. However, few residences are located in the vicinity, and the site is in an isolated location. Thus, the proposed project would have long-term but minor aesthetic impacts.

Activities associated with the construction of the proposed terminal would directly affect 3.9 acres of mixed palustrine hardwood/shrub wetlands. The proposed barge terminal facilities are water dependent. There are essentially no other waterfront properties in the area that provide a deep-water channel, nearby rail and interstate highway access, and a nearby reliable electrical service. First Marine has modified site plans to avoid onsite wetlands to the extent practicable. Thus, there is no practicable alternative to affecting 3.9 acres of wetlands at the terminal site. Construction of the rail spur would directly impact 0.49 acre of mixed palustrine hardwood/shrub wetlands. The Marshall County-Calvert Riverport Authority has modified its plans for the rail

spur to minimize potential effects to wetlands to the extent practicable. Collectively, the applicants propose to compensate for the loss of 4.4 acres of wetlands at a 2:1 ratio with the purchase of 8.8 credits from the West Kentucky Wetwoods Mitigation Bank in Mayfield, Kentucky. Thus, net effects to wetlands and their functions would be minor and insignificant.

A 2012 mussel survey conducted between TRM 11.1 and 12.0 (left descending bank) indicated the presence of the sheepsnose mussel (*Plethobasus cyphus*) and the rabbitsfoot mussel (*Quadrula cylindrica cylindrica*), both federally listed species. A later survey was conducted on the left descending bank between TRM 10.8 and 11.1. Six additional federally listed mussels, i.e., the fat pocketbook (*Potamilus capax*), pink mucket (*Lampsilis abrupta*), ring pink (*Obovaria retusa*), fanshell (*Cyprogenia stegaria*), spectaclecase (*Cumberlandia monodonta*), and orangefoot pimpleback (*Plethobasus cooperianus*), possibly inhabit the vicinity. Based on these surveys, USACE and TVA determined that the proposed project would adversely affect the sheepsnose, rabbitsfoot, and orangefoot pimpleback mussels.

In accordance with Section 7 of the Endangered Species Act, USACE and TVA entered formal consultation with the U.S. Fish and Wildlife Service (USFWS). In its Biological Opinion, USFWS determined that the project is not likely to adversely affect the fat pocketbook or the pink mucket. USFWS also stated that it did not anticipate that the proposed project would result in adverse effects to the ring pink, fanshell or spectaclecase mussels. However, USFWS determined that the proposed action is likely to adversely affect the endangered sheepsnose and orangefoot pimpleback mussels and the threatened rabbitsfoot mussel.

As stipulated in the Biological Opinion, on October 1, 2014, First Marine contributed \$67,000 to the Kentucky Waterways Alliance's Kentucky Aquatic Resources Fund to compensate for the incidental take of one orangefoot pimpleback, 23 sheepsnose, and 34 rabbitsfoot mussels.

In the Biological Opinion, USFWS stated that the proposed action is not likely to jeopardize the continued existence of the orangefoot pimpleback, sheepsnose or rabbitsfoot, and it is not likely to destroy or adversely modify designated or proposed critical habitat.

Federally listed terrestrial species that potentially inhabit the general project area include Price's potato bean (*Apios priceana*), Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), and interior least tern (*Sterna antillarum athalassos*). The Biological Assessment submitted by USACE and TVA indicated that suitable habitat for Price's potato bean is not present on the site. Suitable roosting habitat for gray bats is not present, and adverse effects to gray bat foraging habitat are not anticipated. Suitable nesting habitat for the interior least tern is not present on the project site, and the project would not affect this bird's foraging ability. In the Biological Opinion, USFWS determined that there would be no effects to the gray bat, interior least tern or Price's potato bean.

USFWS determined that clearing for the proposed project would result in the incidental take of Indiana bats in the form of habitat loss of 5.09 acres of potential summer habitat. Consequently, an Indiana Bat Conservation Memorandum of Agreement (CMOA) was established between USFWS and First Marine. In accordance with the stipulations of the CMOA, First Marine has contributed \$16,797.00 to the Indiana Bat Conservation Fund administered by the Kentucky Natural Lands Trust. Thus, net effects to Indiana bats would be minor and insignificant.

The northern long-eared bat (*Myotis septentrionalis*) is currently proposed for federal listing under the Endangered Species Act. The entire state of Kentucky is considered potential habitat for this bat. TVA determined that the proposed project is not likely to jeopardize the continued

existence of the northern long-eared bat. Although the bald eagle (*Haliaeetus leucocephalus*) is no longer federally listed, it remains protected under the Bald and Golden Eagle Protection Act. Because no nest sites or individuals were observed on the project site and no eagle nests have been recorded in the vicinity, no effects to bald eagles are anticipated.

USACE served as the lead federal agency to fulfill USACE and TVA's collective responsibilities under Section 106 of the National Historic Preservation Act. Based on a 2012 archaeological survey, USACE determined that First Marine's proposed actions could affect four onsite archaeological resources (sites 15ML479, 15ML480, 15ML481, and 15ML482). The applicant modified plans to avoid effects to these resources. Subsequent archaeological surveys were conducted and identified three sites (15ML488, 15ML491, and 15ML492). Because these sites exhibit low density of material, they have little research potential and were not considered eligible for inclusion in the National Register of Historic Places. The only historic structures within a half mile of the project are the three mooring cells, which were constructed between 1960 and 1963 and a series of coke silos located immediately south of Shar-Cal Road. Because of their standard design and construction technology, the cells were not considered eligible for inclusion in the National Register of Historic Places. Consequently, USACE found that no historic properties would be affected and consulted with the Kentucky State Historic Preservation Office (SHPO). In a letter dated October 28, 2014, the SHPO noted discrepancies in the site identification of the coke silos and conditionally concurred with the present findings of eligibility and effect to the silos and mooring cells, contingent upon the applicant supplying a survey form for site ML-19 (the silos). That form was submitted to the SHPO in December 2014.

The 100- and 500-year flood elevations at TRM 11.0 are 340.9 and 345 feet, respectively. The proposed municipal rail spur would include one bridge that would cross Cypress Creek at mile 2.8, one bridge that would cross a tributary of Cypress Creek at about mile 0.7, and four culverts crossing two additional tributaries. The 100- and 500-year flood elevations at this location on Cypress Creek are 341.0 and 345.0 feet, respectively. At the terminal site, cut and fill is proposed to elevate back lying property to accommodate truck traffic and storage of bulk goods, and about 700,000 cubic yards of material from the Tennessee River 100-year floodplain would be used. The barge terminal, rail spur and stream crossings, and cut and fill would be located within the 100-year floodplain of the Tennessee River, Cypress Creek, or both. Consistent with Executive Order (EO) 11988 (Floodplain Management), barge terminals, bridges, and culverts are considered to be repetitive actions in the 100-year floodplain.

The cut and fill to elevate the back lying terminal property would not be a repetitive action under EO 11988; however, First Marine has provided documentation, and TVA has determined that there is no practicable alternative to locating the cut and fill within the floodplain of the Tennessee River. To minimize adverse impacts, the final grade of the filled area would be elevation 346, which is one foot above the 500-year flood elevation.

There are published floodways on the Tennessee River and Cypress Creek within the project areas. A No Rise Certification and the supporting hydraulic analysis were provided for the barge terminal. Design of the rail spur is incomplete; however, the Marshall County Riverport Authority indicates that the bridge pilings and abutments would be designed such that 100-year base flood and floodway elevations would not be increased. Calvert City participates in the National Flood Insurance Program, and any development within the 100-year floodplain is subject to local floodplain regulations. In addition, the Commonwealth of Kentucky Division of Water (DOW) issues separate state floodplain permits. The DOW has issued a Stream Construction Permit for the barge terminal, and the City of Calvert City issued a local Floodplain

Development Permit on April 20, 2014. TVA will require the Marshall County-Calvert Riverport Authority to obtain the appropriate DOW Stream Construction Permit and local Floodplain Development Permit prior to commencing work on the rail spur.

Currently, the waterfront property north of Shar-Cal Road is used for terminal operations. However, some of the site is arable and is mowed. South of Shar-Cal Road, virtually all areas of the property that are not wetlands or low areas are currently used for row crops or for hay production. Development of the property north of Shar-Cal Road would likely eliminate any future use of that area for agriculture. However, placement of the rail spur on the southern portion of the property would not necessarily preclude agricultural uses of the remaining property, including the production of food and fiber. Nevertheless, over time, site development and onsite operations would likely interfere with agricultural uses on portions of the site. Because of the abundance of agricultural land available in the area, this potential loss of agricultural production would be minor and insignificant. The property is located within the city limits of Calvert City and is zoned for industrial use. As such, agricultural land on the property does not qualify as prime farmland. Thus, the proposed federal actions would not facilitate the conversion of prime farmlands to non-agricultural uses.

First Marine has acquired a National Pollutant Discharge Elimination System permit that would regulate point-source discharges. A water quality certification under Section 401 of the Clean Water Act was issued to First Marine for the discharge of fill material into waters of the United States. Additionally, First Marine has committed to several conservation measures described in the Final Biological Opinion issued by the USFWS on August 7, 2014. These measures include use of a floating turbidity curtain during construction of the terminal, reseeding and stabilizing the borrow area, not dredging the area riverward of the breasting wall of the terminal, and diverting stormwater runoff from the terminal site into the borrow area basin. With these measures in place, potential effects to local water quality from the construction and operation of the proposed terminal are expected to be short-term and minor. Installation of the terminal would have long-term minor effects on current patterns and local water circulation in the Tennessee River. Construction of the proposed rail crossings is also subject to a Section 401 water quality certification. Provided the Riverport Authority secures all necessary permits and administrative approvals, potential effects to local water quality from the construction and operation of the proposed rail crossings are expected to be localized and insignificant. Potential effects to normal water fluctuation in the spanned streams would be short-term and minor.

USACE issued Public Notice No. 12-45 on November 14, 2012 to announce First Marine's proposal to construct a recessed barge terminal at TRM 11.5 (left bank). First Marine subsequently withdrew that request and developed other plans for upgrading the existing terminal immediately downstream at TRM 11.0. USACE issued Public Notice 14-06 to announce that proposal on March 31, 2014. Comments received on the Public Notice are summarized in the USACE EA.

### **Mitigation and Special Permit Conditions**

TVA will require the applicants to implement routine environmental measures such as standard best management practices during the construction and operation of the proposed facilities.

TVA will condition issuance of its Section 26a approval on the implementation of the following measures:

- Marshall County Riverport Authority shall obtain a Kentucky Stream Construction Permit for the bridges across Cypress Creek and its tributaries.

- Marshall County Riverport Authority shall obtain documentation from Calvert City, Kentucky, stating that the barge terminal and rail spur projects comply with local floodplain regulations.
- First Marine shall complete and supply a survey form for site ML-19 to the Kentucky SHPO prior to beginning work at the site. The survey form shall include information on all documentation on the site to date and correct any discrepancies between previous evaluations.

The following non-discretionary terms and conditions are imposed on USACE and TVA in the USFWS Biological Opinion.

1. USACE and TVA will condition their permits to require First Marine to implement the proposed action as described in the Biological Assessment (BA), including the conservation measures listed in the Biological Opinion and conference opinion, and that are referred to in the BA and the BA's supporting documentation. First Marine will supply written confirmation (including appropriate monitoring reports and photographic documentation) to illustrate to the Corps, TVA, and Service that 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. First Marine must supply documentation that these payments have been made as a condition of USACE or TVA permits. This requirement has been met.
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 the Service, prior to establishment of the fleeting area. 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 then a post-establishment effort that will be sufficient to determine impacts, if any, to mussels and habitat.

### Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that granting Section 26a approval for the proposed establishment of a barge terminal at TRM 11.0 would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding of no significant impact is contingent upon adherence to the permit conditions and mitigation measures described above.



December 15, 2014

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Date Signed