

*Paducah Waterfront Development Project (Phase I)*  
*KYTC Six Year Plan Project No. 01-122*

*ENVIRONMENTAL ASSESSMENT*

*Submitted pursuant to 42 U.S.C. 4332 (2) (c) by the*  
*U.S. Department of Transportation*  
*Federal Highway Administration*



*and*

*Kentucky Transportation Cabinet*

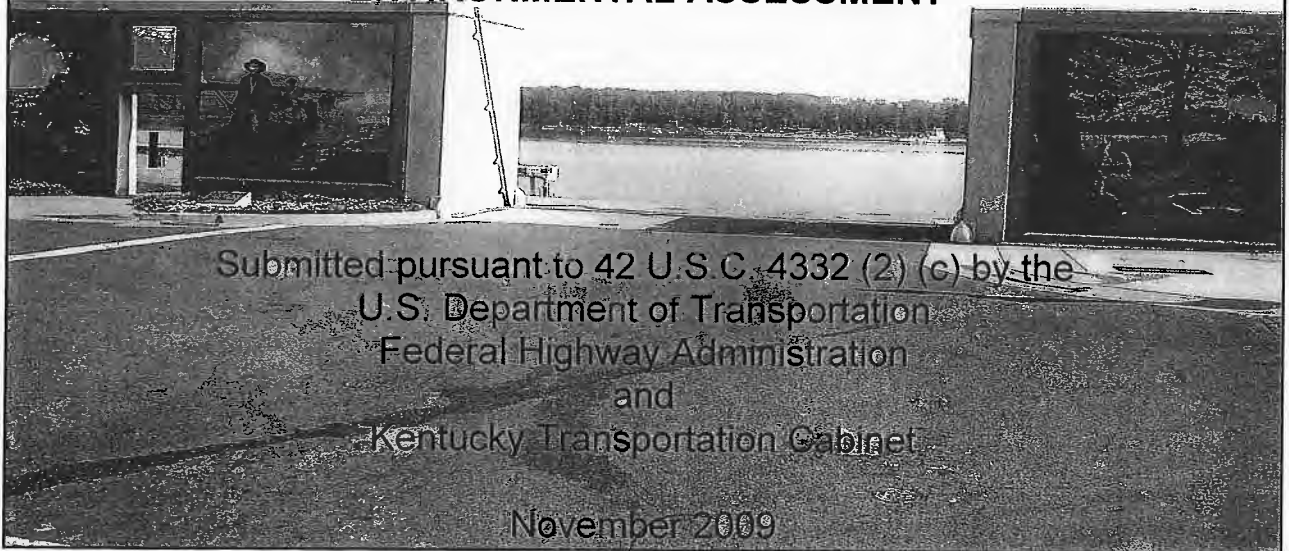


*November 2009*



Paducah Waterfront Development Project (Phase I)  
KYTC Six Year Plan Project No. 01-122

**ENVIRONMENTAL ASSESSMENT**



Submitted pursuant to 42 U.S.C. 4332 (2) (c) by the  
U.S. Department of Transportation  
Federal Highway Administration  
and  
Kentucky Transportation Cabinet

November 2009

11/24/09

Date of Approval

David M. Waldner

Kentucky Transportation Cabinet

12/1/09

Date of Approval

Anthony Goodman

Federal Highway Administration

The following individuals may be contacted for additional information concerning the projects:

Mr. Anthony Goodman  
Environmental Specialist  
Kentucky FHWA  
John C. Watts Federal Building  
330 West Broadway  
Frankfort, KY 40601  
(502) 223-6742

Mr. David Waldner, PE  
Director  
Division of Environmental Analysis  
Kentucky Transportation Cabinet  
200 Mero Street  
Frankfort, KY 40622  
(502) 564-7250





# ***Environmental Commitments***



## ENVIRONMENTAL COMMITMENTS

The proposed boat launch and marina/transient dock facilities will require commitments to minimize any potential impacts that may occur to the human and natural environments. The following is a list of the environmental commitments required for the construction of the two projects:

1. According to the U.S. Fish & Wildlife Service, an endangered Indiana bat (*Myotis sodalis*) record has been documented within five miles of the proposed boat launch project site. Based on this information, the Service believes that (1) forested areas in the vicinity of or on the project area may provide potentially suitable summer roosting and foraging habitat, and (2) caves, rock shelters, and abandoned underground mines in the vicinity of or on the project area may provide potentially suitable winter hibernation habitat for the endangered species. The removal of trees onsite will only occur between October 15 and March 31 to avoid impacting summer roosting Indiana bats. Redwing Ecological Services, Inc. indicated that there are no caves, rock shelters, or abandoned underground mines that could provide suitable winter hibernation habitat.
2. According to the U.S. Fish & Wildlife Service (USFWS), the proposed boat launch and marina/transient dock projects are in close proximity to several federally protected mussel records known to occur within the Ohio River. Mussel surveys were conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for both the boat launch and marina/transient dock facility areas from August 5-8, 2008. Mussel populations were found in both the boat launch and marina/transient dock project areas. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).
3. According to the Kentucky State Nature Preserves Commission (KSNPC), *Myotis austroriparius* (Southeastern myotis, federal species of management concern, KSNPC endangered) and *Myotis sodalis* (Indiana myotis, federally listed endangered, KSNPC endangered) are known to occur in the bottomland hardwood forest adjacent to the boat launch project area and near the marina/transient dock site. In order to avoid impacts to potentially suitable summer roosting and foraging habitat of these species, the removal of trees will occur between October 15 and March 31.
4. According to the Kentucky State Nature Preserves Commission (KSNPC), many of the fishes and mussels listed are believed to be extirpated or are known only from historic records; however, some are still extant in the area. These species are sensitive to increased turbidity, sediment, and other adverse influences on water quality. KSNPC data are not sufficient to guarantee absence of endangered, threatened or sensitive species from the sites of proposed construction disturbance. Mussel surveys were conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for both the boat launch and marina/transient dock facility areas from August 5-8, 2008. Mussel populations were found in both the boat launch and marina/transient dock project



areas. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

5. According to the Kentucky State Nature Preserves Commission (KSNPC), *Tyto alba* (Barn owl, KSNPC special concern) can be found in hollow trees, old buildings, barns, silos, and other abandoned structures. If Barn owl habitat will be disturbed, the KSNPC will be consulted prior to commencement.
6. The proposed boat launch project will result in impacts to 9.7 acres of jurisdictional wetlands, including 0.5 acres of the Ohio River, 8.3 acres of farmed wetland, 0.7 acres of wooded wetland, and 0.2 acres of open field wetland. Mitigation for these impacts will include: (1) preservation of approximately 34.4 acres of existing forested wetlands, (2) preservation of approximately 3.4 acres of upland forest, (3) restoration of approximately 7.3 acres of forested wetlands, and (4) restoration of approximately 765 linear feet of riparian buffer along the Ohio River.
7. Redwing Ecological Services, Inc. (Redwing) applied for and received the following permits for the proposed boat launch: Section 401 Water Quality Certification #2008-0029-1 (Kentucky Department for Environmental Protection, Division of Water), Stream Construction Permit #16689 (Kentucky Department for Environmental Protection, Division of Water), and Section 404 Permit #LRL-2007-811-GJD (U.S. Corps of Engineers). Redwing submitted a joint application package on September 30, 2008 to the U.S. Army Corps of Engineers and the Kentucky Department for Environmental Protection, Division of Water, for a Section 401 Water Quality Certification, Stream Construction Permit, Section 10 Navigable Waters Permit, and a Section 404 Permit for the proposed marina/transient dock. These permits will be obtained before construction commences on the marina/transient dock.
8. To minimize possible noise impacts, construction activities, to the extent possible, will be confined to normal working hours, and noise controlled equipment will be utilized.
9. To minimize possible impacts to water quality, the contractor/contractors will be required to implement erosion prevention and sediment control best management practices, reflecting policies contained in 40 CFR Part 122 and promulgated by the Kentucky Department of Environmental Protection, Division of Water.
10. The projects will be constructed utilizing reasonable precautions to prevent particulate matter from becoming airborne as directed under Kentucky Division for Air Quality Regulation 401 KAR 63:010 *Fugitive Emissions*. Such reasonable precautions will include but not be limited to (1) use, where possible, of water or chemicals for control of dust during demolition and/or construction operations, (2) the covering of open bodied trucks operating outside the work area transporting materials likely to become airborne, and (3) the prompt removal of earth or other material from a paved street which earth or other material has been transported by trucking or earth moving equipment or erosion by water.

11. The projects will be constructed without open burning as directed under Kentucky Division for Air Quality Regulation *401 KAR 63:005 Open Burning*, except for the purposes listed in Section 4, Allowable Open Burning and Section 5, Restrictions to Open Burning, of the regulation.
12. There are no relocations or displacements of residences or businesses expected as a result of the proposed boat launch and marina/transient dock projects. No neighborhood or community impacts are expected that would sever groups or access to and from communities. The projects are not expected to cause advantages/disadvantages to one or more communities over other communities. Since the boat launch and marina/transient dock will be city-owned, the facilities will be available to all. No commitments are made toward socioeconomic issues.
13. The boat launch and marina/transient dock facilities will not have a negative impact on future farming (agricultural) opportunities in McCracken County; therefore, no commitments are made regarding preservation of farmlands.



## **ENVIRONMENTAL STATEMENT**

Environmental commitments have been made that will eliminate significant environmental impacts associated with the proposed boat launch and marina/transient dock projects. Therefore, if the environmental commitments detailed above are complied with, the 6<sup>th</sup> Street & Burnett Street Boat Launch and the Marina/Transient Dock will not significantly affect any social, ecological, or cultural resources as defined under the National Environmental Policy Act (NEPA) of 1969.

# ***Table of Contents***





## TABLE OF CONTENTS

	<u>PAGE</u>
<b>I. INTRODUCTION</b>	1
<b>II. PURPOSE &amp; NEED</b>	1
Project Purpose & Need	1
Existing Facilities	4
Proposed Facilities	4
<b>III. ALTERNATIVES</b>	7
Alternatives Considered But Eliminated	7
No Build Alternative	8
Build Alternatives	9
Preferred Alternatives	11
<b>IV. ENVIRONMENTAL IMPACTS</b>	14
Air Quality	15
Noise	17
Water Quality & Stream Impacts	24
Floodplains	33
Wetlands	39
Wild & Scenic Rivers	45
Threatened & Endangered Species	46
Section 106	58
Historic Structures or Districts	60
Archaeological Sites	66
Surface Water/Land Use	67
Community Impacts	69
Displacements & Relocations	77
Farmland	78
Environmental Justice	82
Pedestrian & Bicycle Facilities	83
Underground Storage Tanks/Hazardous Materials/Wastes	85
Visual Impacts	86
Impacts of Construction Activities	87
Mitigation Commitments	88
Section 4(f) <i>de minimis</i> Impacts of a Recreational Resource & Section 6(f)	90
Indirect & Cumulative Impacts	92
<b>V. PLANNING &amp; PUBLIC INVOLVEMENT</b>	94

## TABLE OF CONTENTS

*Continued*

### FIGURES

1- Location Map	3
2- Site Map & Aerial Photograph	6
3- Boat Launch Preferred Alternative	12
4- Marina/Transient Dock Preferred Alternative	13
5- Zoning Map	21
6- Ohio River Navigation Chart 11	27
7- Topographic Map	32
8- FIRM (Boat Launch)	36
9- FIRM (Marina/Transient Dock)	37
10- FIRM Key	38
11- National Wetland Inventory Map	44
12- Aquatic/Terrestrial Habitats	57
13- Historical Zones	60
14- Area of Potential Effect (Boat Launch)	64
15- Area of Potential Effect (Marina/Transient Dock)	65
16- Nearest Community Resources	76
17- Farmland Conversion Impact Rating Form	80
18- Soils Map	81

### TABLES

1- Marina/Transient Dock Alternatives	10
2- Environmental Impacts Summary	14
3- Noise Receptor Distances	18
4- Sensitive Receptor Noise Estimates	20
5- Residences/Businesses Near Boat Launch	70
6- Businesses Near Marina/Transient Dock	72

### APPENDICES

A- Correspondence (Boat Launch)	
B- Correspondence (Marina/Transient Dock)	
C- FEMA "No-impact" Certification (Boat Launch)	
D- Section 401 Water Quality Certification (Boat Launch)	
E- Construction in Floodplain Permit (Boat Launch)	
F- Section 10 & Section 404 Permits (Boat Launch)	
G- Permit Application Package (Marina/Transient Dock)	
H- FEMA "No-impact" Certification (Marina/Transient Dock)	
I- Phase I Archaeological Survey Concurrence	
J- Architectural Survey Concurrence	
K- Section 4(f) <i>de minimis</i> Impacts Correspondence	



# ***Introduction & Purpose & Need***



## **I. INTRODUCTION**

The City of Paducah, Kentucky (the City) proposes to construct a boat launch facility and a marina/transient dock as part of their waterfront development effort. The City has completed a master plan for the development and revitalization of the Paducah riverfront which includes an analysis of existing conditions, and recommendations to enhance the cultural, historical, recreational, tourism and economic development plan. The projects, as proposed, would result in certain modifications to the human and natural environment. The significance of the environmental impacts as a result of the proposed actions are unknown; therefore, the projects meet the criteria under 23 CFR 771.115(c) for conducting an Environmental Assessment.



## **II. PURPOSE & NEED**

The City of Paducah, Kentucky is proposing (1) the construction of a boat launch facility on city-owned property which will encompass the corridor along Burnett Street from 8<sup>th</sup> Street to the Ohio River and approximately 500 feet along 6<sup>th</sup> Street on each side of Burnett Street. The site comprises approximately 30 acres± with the centroid located at 37°05'36"N, 88°36'44" W near mile marker 936 along the Ohio River, and (2) the construction of a marina/transient dock facility on city-owned property which will extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum (transient dock portion) into the Ohio River. The site comprises approximately 42 acres± of riverbank, including the existing Schultz Park, and water surface with the centroid located at 37°05'32"N, 88°35'47" W near mile marker 935. The limits affecting land for the marina/transient dock vary north of the existing floodwall then diverge to the river side of the Executive Inn located at the northeastern end of Park Avenue. The project areas are indicated on the location map shown as Figure 1. The proposed boat launch project involves construction within an area comprised of upland woods, one agricultural field, a narrow wooded strip of Ohio River bank, and an open field. The proposed marina/transient dock facility project involves construction within the undeveloped riverbank and Schultz Park as well as surface waters of the Ohio River.

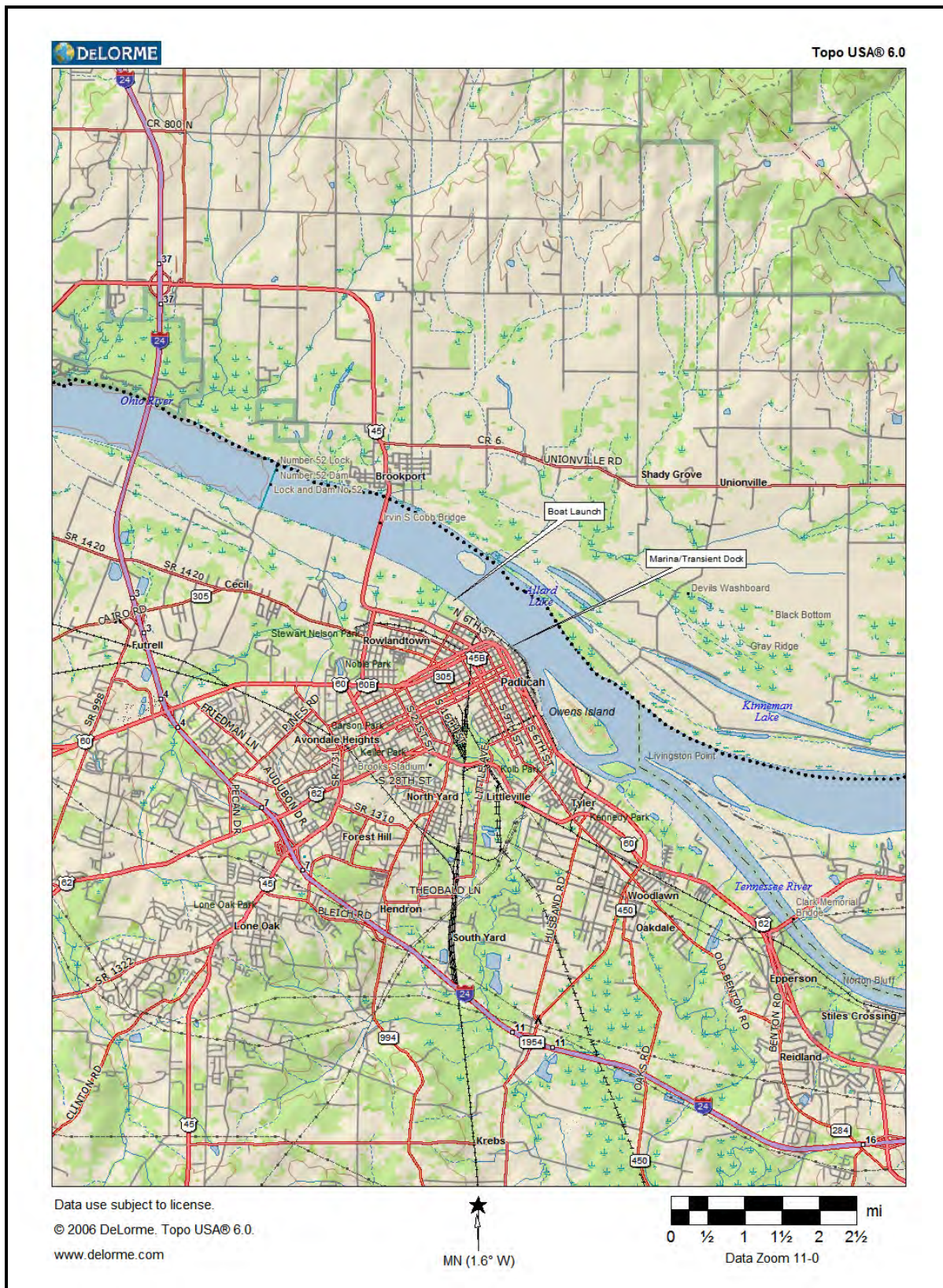
### **Project Purpose & Need**

The purpose of the boat launch project is to relocate the existing boat ramp facility located at the northeastern end of Broadway Street while at the same time allowing for the northeastern end of Broadway Street to be converted back to



its original use as a riverboat landing and community focal point along the Ohio River. The relocation of the boat launch facility will reduce congestion and vehicle parking associated with recreational fishing activities such as launching and the parking of fishing boats. The purpose of the marina/transient dock is to provide accommodations for transient boaters and local recreational boat owners. The need for the marina/transient dock is to provide loading/unloading facilities for transient boats and to provide a marina with associated facilities that will allow transient and local recreational boaters to dock in a protected marina near downtown Paducah allowing boaters to refuel, dine, purchase supplies, etc. Currently, recreational boaters are required to dock on the riverbank near downtown Paducah. The closest on-water refueling/marina facilities for recreational boaters are located 33 miles upstream at Golconda, IL (Mile Marker 902). The proposed boat launch and marina/transient dock sites have been selected to minimize cost and environmental impact, while maintaining close proximity to downtown Paducah.







## **Existing Facilities**

The City of Paducah, Kentucky is proposing two projects under this assessment. The projects include: (1) the construction of a boat launch facility on city-owned property which will encompass the corridor along Burnett Street from 8<sup>th</sup> Street to the Ohio River and approximately 500 feet along 6<sup>th</sup> Street on each side of Burnett Street. The site comprises approximately 30 acres± with the centroid located at 37°05'36"N, 88°36'44" W near mile marker 936 along the Ohio River, and (2) the construction of a marina/transient dock facility on city/county-owned property which will extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum (transient dock portion) into the Ohio River. The site comprises approximately 42 acres± of riverbank, including the existing Schultz Park, and water surface with the centroid located at 37°05'32"N, 88°35'47" W near mile marker 935. The limits affecting land for the marina/transient dock vary north of the existing floodwall then diverge to the riverside of the Executive Inn located at the northeastern

end of Park Avenue. The proposed boat launch project

involves construction within an area comprised of upland woods, one agricultural field, a narrow wooded strip of Ohio River bank, and an open field. The proposed marina/transient dock facility project involves construction within the undeveloped riverbank consisting of riprap and limited vegetation, the existing Schultz Park, and surface waters of the Ohio River.



## **Proposed Facilities**

The City of Paducah (the City) proposes to relocate the boat launch facility on the undeveloped, city-owned property described above with the facility being comprised of: (1) a boat ramp located on the bank of the Ohio River in the north-central portion of the site having five lanes and open 24 hours a day, (2) a paved parking area adjacent to the boat ramp with 100 parking spaces and adequate room for vehicle ingress/egress, and (3) an access road to the site as an extension of Burnett Street constructed in the location of an existing dirt/gravel road along the eastern boundary of the site. The City proposes to construct a marina/transient dock facility with the marina portion of the facility comprised of: (1) a floating dock system, (2) a projected 200 slips to be installed in phases with a portion to be reserved for transient boaters, (3) a fuel



dock with gasoline and diesel fuel, (4) two aboveground fuel storage tanks and an enclosure located at the foot of the floodwall, (5) a marina administration building with showers and stores, (6) utilities including fuel, potable water, electricity, and sanitary pump out, and (7) a gangway entrance shared with the transient boat dock with a secure entrance. The transient dock portion of the facility will be comprised of: (1) a floating dock system also designed as a wave attenuator, (2) dockage for transient vessels on both sides of the dock, (3) one gangway system made up of a combination of gangway sections, (4) a walking path and public access along the gangway and dock, (5) fishing opportunities without fish cleaning amenities, (6) fixed ladders, (7) potable water and electrical pedestals, and (8) lighting and handrail with benches along the center of the dock. As part of the marina/transient dock project, the existing Schultz Park will be enhanced and will include: a gangway/ramp system to the marina/transient dock, an overlook, bio-engineered slope protection, an interpretive levee trail, terraced lawn/seating, rock outcropping leading to water, terraced gardens, a grand lawn/sculpture park, a pedestrian link to downtown Paducah, and the utilization of existing structures/interpretive landmarks. The proposed project positions in association with downtown Paducah are depicted in Figure 2.









# ***Alternatives***





### **III. ALTERNATIVES**

The City of Paducah, Kentucky has evaluated alternatives for the proposed boat launch facility and the marina/transient dock through the consideration of alternative site locations as well as alternative project designs in the process of developing the currently proposed “build” alternatives. While the proposed location and design of the projects represent the best “build” alternative for meeting the associated needs, input received during future public meetings and the environmental document availability period will be evaluated in the future development of the projects.

#### **Alternatives Considered But Eliminated**

##### *Background*

Paducah, as a city founded at the confluence of the Ohio and Tennessee Rivers, has maintained strong ties with each river throughout its history. However, Paducah has not fully capitalized on its recreational, cultural, and historical ties with the river, and the economic opportunities that these present. This is in large part due to a lack of public waterfront access and facilities. In 1992, the city instituted a downtown redevelopment plan to combat the blight that was taking root along its riverfront and downtown areas. Today, the city enjoys a national reputation for its accomplishments in downtown renewal. Despite this accomplishment, Paducah still lacks a major public link with its riverfront. To address these concerns, the city has proactively taken measures to create a riverfront redevelopment plan that will provide for a long term physical renovation of the riverfront. The enhancement of Paducah's riverfront will attract new tourism, recreation, and economic development opportunities for the city. Most importantly, the riverfront's transformation will reconnect people with the river.

The Ohio River has had a profound influence on the city. The Flood of 1937 engulfed downtown Paducah and spread more than two miles inland. The flood wall presently standing was constructed in response to the disaster with the wall's height having been driven by the height of the 1937 flood. However, the wall has also had the effect of cutting off the river from the day-to-day activities of the city. The wall in Paducah also limits visual access resulting in the neglect of the riverfront. Many factors contribute to the decline of city riverfronts including major shifts in transportation from river boats to railroads and automobiles. The riverfront was left to marginal uses and least expensive efforts to make it attractive as a park and as a landing for occasional cruise vessels. With better flood control continuing to be instituted in the Tennessee Valley, and with the growing success in downtown revitalization, Paducah seeks to reclaim the riverfront. The city commissioned the creation of a riverfront plan in order to capture the growing opportunities that it offers. As a result of this effort, the boat launch and marina/transient dock projects were conceived.

##### *Boat Launch*

Alternatives for the location of the proposed boat launch were considered and eliminated utilizing a hierarchy of constraints based on the philosophy behind the riverfront redevelopment plan. The hierarchy used for locating suitable properties consisted of (1) distance from downtown Paducah, (2) city/county owned properties, (3) level of existing development on the properties in question, and (4) level of probable impact to cultural, social, and environmental resources. The purpose of the boat launch project is to relocate the existing boat ramp facility located at the northeastern end of Broadway Street while at the same time allowing for the

northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point along the Ohio River. This relocation of the boat launch facility will reduce congestion and vehicle parking associated with recreational fishing activities such as launching and the parking of fishing boats. The proposed boat launch site has been selected to minimize cost and environmental impact, while maintaining close proximity to downtown Paducah.

### *Marina/ Transient Dock*

Alternatives for the location of the proposed marina/transient dock facility were also considered and eliminated utilizing a hierarchy of constraints based on the philosophy behind the riverfront redevelopment plan. The hierarchy used for locating suitable properties consisted of (1) distance from downtown Paducah, (2) city/county owned properties, (3) level of existing development on the properties in question, and (4) level of probable impact to cultural, social, and environmental resources. The purpose of the marina/transient dock is to provide accommodations for transient boaters and local recreational boat owners. The need for the marina/transient dock is to provide loading/unloading facilities for transient boats and to provide a marina with associated facilities that will allow transient and local recreational boaters to dock in a protected marina near downtown Paducah allowing boaters to refuel, dine, purchase supplies, etc. Currently, recreational boaters are required to dock on the riverbank near downtown Paducah. The closest on-water refueling/marina facilities for recreational boaters are located 33 miles upstream at Golconda, IL (Mile Marker 902). The proposed marina/transient dock site has been selected to minimize cost and environmental impact, while maintaining close proximity to downtown Paducah.

### **No Build Alternative**

#### *Boat Launch*

The “no-build” alternative for the boat launch project was considered as a baseline for comparison, but because of the need to reduce congestion and vehicle parking associated with recreational fishing activities through the move of boat launching amenities from its present location, this alternative is not considered acceptable. In addition, the “no-build” alternative for the boat launch will not allow the northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point and will inhibit new tourism, recreation, and economic development opportunities for the city.

#### *Marina/ Transient Dock*

The “no-build” alternative for the marina/transient dock project was considered as a baseline for comparison, but because of the need to (1) provide loading/unloading facilities for transient boats, and (2) provide a marina with associated facilities that will allow transient and local recreational boaters to dock in a protected marina near downtown, this alternative is not considered acceptable. The “no-build” alternative for the marina/transient dock will not allow the city to fully capitalize on its recreational, cultural, and historical ties with the river, and the economic opportunities that these present. Not building the marina/transient dock facility will inhibit new tourism, recreation, and economic development opportunities for the city.

## **Build Alternatives**

### ***Boat Launch***

Two design alternatives were evaluated for the boat launch facility. Both alternatives would relocate the existing boat ramp facility located at the northeastern end of Broadway Street allowing for the northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point along the Ohio River. This relocation of the boat launch facility would reduce congestion and vehicle parking associated with recreational fishing activities such as launching and the parking of fishing boats. The design alternatives would both provide ingress/egress of off North 6<sup>th</sup> Street, parking, and a boat launch area on the banks of the Ohio River. Alternative 1 includes (1) one boat ramp located on the bank of the Ohio River in the north-central portion of the site having five lanes and open 24 hours a day, (2) one paved parking and trailering area adjacent to the boat ramp providing 100 parking places and adequate maneuvering area, and (3) an access road to the site as an extension of Burnett Street and constructed in the location of an existing gravel/dirt access road along the eastern boundary of the site. Alternative 2 includes the amenities provided in Alternative 1 with the addition of 4.3 acres of future parking area. Both design alternatives will require that fill be placed in the Ohio River in order to provide the boat launch amenities. The required elevation of the boat ramp was minimized in Alternative 2, resulting in a reduction in the construction footprint and associated impacts of 0.7 acres of the Ohio River to 0.5 acres.

Both of the design alternatives are positioned north of the Burnett Street and North 6<sup>th</sup> Street intersection. There are no other city-owned properties along the riverfront that will accommodate the development of the boat launch facility. A major thrust of the riverfront redevelopment plan is to enhance existing amenities in order to “recapture” the riverfront. In order to enhance the existing amenities immediately north of the floodwall at the end of Jefferson Street, the existing boat launch area needs to be relocated to the proposed site.

### ***Marina/Transient Dock***

Three design concepts (alternatives) were evaluated for the marina/transient dock facility. Each of the concepts would serve the purpose and need by: (1) providing loading/unloading facilities for transient boats, and (2) providing a marina with associated facilities that will allow transient and local recreational boaters to dock in a protected marina near downtown. Each of the three design concepts (alternatives) would enhance Schultz Park and would have landform and shore protection, roadways and paths, an overlook, a gangway/ramp system, a transient dock, a marina, and park amenities in common. Concept 1 includes an observation tower, bioengineered slope protection, a park overlook, a lawn & sculpture park, pedestrian link to downtown via Monroe Street, an interpretive levee trail, the marina, and the transient dock. Concept 2 includes the amenities provided in Concept 1 with the addition of terraced seating and terraced lawn & gardens. Concept 3 includes the amenities provided in Concept 2 with the addition of a marina/transient dock building, steps leading down to the Ohio River, a connection to the existing amenities to the immediate east, and the adaptive use of existing structures and interpretive landmarks. Concept 3 does not include an observation tower. Each of the three design concepts (alternatives) will require that fill be placed in the Ohio River in order to provide landform and shore protection. Concept 2 requires the most fill impact to the Ohio River while Concept 1 has the least.

The following table summarizes the amenities and features of the three concepts (alternatives) as well as the preferred alternative (Consensus). The Consensus is a combination of specific amenities/features taken from the three concept alternatives:

**TABLE 1- MARINA/TRANSIENT DOCK ALTERNATIVES**

Amenities and/or Features	Alternatives			
	Concept #1	Concept #2	Concept #3	Consensus
Observation Tower	X	X	-----	-----
Bioengineered Slope Protection	X	X	X	X
Park Overlook	X	X	X	X
Lawn/Sculpture Park	X	X	X	X
Interpretive Levee Trail	X	X	X	X
Marina	X	X	X	X
Transient Dock	X	X	X	X
Promenade/Pedestrian Link to Downtown	X	X	X	X
Terraced Seating		X	X	X
Terraced Lawn & Garden		X	X	X
Marina/Transient Dock Building			X	X
Steps to the Ohio River			X	-----
Connectivity to Existing Amenities			X	X
Adaptive Use of Existing Landmarks			X	X
Rock Outcropping to the River				X
Landform & Shore Protection Ranking*	1.00	1.34	1.25	1.19

\* Ranking is the ratio of the estimated cost to provide landform and shore protection for each of the alternatives with the estimated cost for Concept #1. This ranking is used to estimate shoreline disturbance and fill in the Ohio River.

Each of the three design concepts (alternatives) are positioned immediately northwest of the Jefferson Street and North Water Street intersection. There are no other city-owned properties along the riverfront that will accommodate the development of the marina/transient dock facility. A major thrust of the riverfront redevelopment plan is to enhance existing amenities in order to “recapture” the riverfront. Also, this location utilizes an existing, natural landform in the riverfront area which will provide a “foundation” on which to construct the park amenities, link the park with the marina/transient dock, and protect the proposed marina/transient dock facility from flows of the Ohio River.



## **Preferred Alternatives**

### ***Boat Launch***

The preferred design alternative is a result of the evaluation of the two design alternatives described above. The basic premise of this decision is the opportunity to relocate the existing boat launch away from the northeastern end of Broadway Street so that this area can be converted back to its original use as a riverboat landing and community focal point along the Ohio River. This relocation of the boat launch facility would reduce congestion and vehicle parking associated with recreational fishing activities such as launching and the parking of fishing boats. Alternative 2 was chosen as the preferred alternative based on the potential for future parking needs (an additional 4.3 acres) as well as the reduction of the construction footprint and associated impacts of the Ohio River from 0.7 acres to 0.5 acres. Alternative 2 will provide (1) one boat ramp located on the bank of the Ohio River in the north-central portion of the site having five lanes and open 24 hours a day, (2) one paved parking and trailering area adjacent to the boat ramp providing 100 parking places and adequate maneuvering area, and (3) an access road to the site as an extension of Burnett Street and constructed in the location of an existing gravel/dirt access road along the eastern boundary of the site. Paducah Power System will supply lighting in the boat launch area after construction of the project. The lighting system will be overhead electric with standard, basic fixtures.

Alternative 2 will be positioned north of the Burnett Street and North 6<sup>th</sup> Street intersection. There are no other city-owned properties along the riverfront that will accommodate the development of the boat launch facility. The Alternative 2 plan is included as Figure 3.

### ***Marina/Transient Dock***

The preferred design concept (alternative) referred to as the “Consensus” is a result of the evaluation of the three design concepts (alternatives) described above. The basic premise of the Consensus would provide loading/unloading facilities for transient boats and a marina with associated facilities that will allow transient and local recreational boaters to dock in a protected marina near downtown. The Consensus would also be required to enhance Schultz Park and include landform and shore protection, roadways and paths, an overlook, a gangway/ramp system, a transient dock, a marina, and park amenities. The Consensus is a composite of suggested amenities taken from Concepts 1-3. Specifically, the Consensus includes bioengineered slope protection, a park overlook, lawn & sculpture park, pedestrian link to downtown via Monroe Street, terraced seating, terraced lawn & gardens, an interpretive levee trail, a marina/transient dock building, rock outcropping leading down to the Ohio River, the adaptive use of existing structures and interpretive landmarks, a connection to the existing amenities to the immediate east, the marina, and the transient dock. Lighting within the marina/transient dock facility will consist of pole-mounted pedestrian lights, pathway lighting along the transient dock, mounted gangway lights, and submersible inset lights for the stairways.

The Consensus will require that fill be placed in the Ohio River in order to provide landform and shore protection. The Consensus requires 11% less fill than Concept 2 and 5% less fill than Concept 3. The Consensus will be positioned immediately northwest of the Jefferson Street and North Water Street intersection. There are no other city-owned properties along the riverfront that will accommodate the development of the marina/transient dock facility. The Consensus plan is included as Figure 4.



Figure 3





# ***Environmental Impacts***





#### IV. ENVIRONMENTAL IMPACTS

This section includes a discussion on the probable social, economic, archaeological, historic, and ecological impacts of the preferred alternatives under consideration and describes the measures proposed to mitigate any adverse impacts. The following table summarizes the impacts associated with the preferred alternative for each of the two projects:

**TABLE 2- ENVIRONMENTAL IMPACTS SUMMARY**

Impact Category	Impacts	
	Boat Launch	Marina/Transient Dock
Air Quality	None*	None*
Noise	None#	None#
Water Quality & Streams	0.5 acres^ (Mitigated)	9.5 acres^
Floodplains	Yes	Yes
Wetlands	9.2 acres (Mitigated)	None
Wild & Scenic Rivers	None	None
Federal Threatened/Endangered Species	Mitigated**	Mitigated**
State Threatened/Endangered Species	Mitigated**	Mitigated**
Historic Structures or Districts	None%	None%
Archaeological Sites	None%	None%
Surface Water/Land Use	Ohio River	Ohio River
Community Impacts	None	None
Displacements & Relocations	None	None
Farmland	Minimal	None
Environmental Justice	None	None
Pedestrian & Bicycle Facilities	None	None
UST/Hazardous Materials	None	None
Visual Impacts	None	None
Construction Activities	Minimal	Minimal
Section 4(f) and/or 6(f)	Ohio River	Ohio River, Schultz Park
Section 9 Bridge Permit	None	None
Federal Permits	Sections 404 & 10	Sections 404 & 10
State Permits	Section 401, Floodplain	Section 401, Floodplain

\* Project areas are in attainment for criteria pollutants. Emissions from combustion engines are considered trivial activities and are not regulated. Commitments have been made for construction activities to reduce emissions.

# Construction activities are exempted between 7 A.M. and 6 P.M. on weekdays.

^ Consists of 0.5 acres of the Ohio River at the boat launch and 8.0 acres of riverbank and 1.5 acres of open water at the marina/transient dock. Due to the relatively limited nature of the marina/transient dock impacts in relation to the overall Ohio River system, no mitigation is required for the project.

\*\* Commitments have been made to reduce impacts to Indiana bat summer habitat. Mussel surveys have been conducted at both project sites with Fat Pocketbook mussels identified at each location. A Biological Assessment (BA) document that estimates potential impacts to the Fat Pocketbook mussel has been submitted to USFWS.

% Architectural & archaeological surveys have been conducted with no impacts recorded.

The following paragraphs provide an overview of the environmental findings:

## **Air Quality**

### ***Current Conditions & Attainment Status***

The Kentucky State Ambient Air Quality Standards for six criteria pollutants as listed in 401 KAR 53:010, *Ambient Air Quality Standards* are the same as the National Ambient Air Quality Standards (NAAQS). The six criteria pollutants are: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>). In addition, the state has adopted standards for hydrogen sulfide (H<sub>2</sub>S), gaseous fluorides (expressed as HF), total fluorides, and odors. The proposed boat launch and marina/transient dock sites are located in the Paducah-Cairo Interstate Air Quality Control Region, which covers the westernmost parts of Kentucky. McCracken County currently is designated as being in attainment for all criteria pollutants (40 CFR 81.318). When the U.S. Environmental Protection Agency classifies an area as in attainment it means that the air quality in that area meets the NAAQS. The proposed projects will be consistent with the Kentucky State Implementation Plan regarding the attainment of the NAAQS.

### ***Air Quality Conformity Statement***

The proposed boat launch and marina/transient dock sites are located in the Paducah-Cairo Interstate Air Quality Control Region, which covers the westernmost parts of Kentucky. McCracken County is currently in attainment for all transportation-related pollutants as well as all criteria pollutants (40 CFR 81.318). The two projects are listed on Page 83 of the FY 2006-2010 Statewide Transportation Improvement Program.

### ***Regional Compliance with National Ambient Air Quality Standards (NAAQS)***

The Kentucky State Ambient Air Quality Standards for six criteria pollutants as listed in 401 KAR 53:010, *Ambient Air Quality Standards* are the same as the National Ambient Air Quality Standards. The proposed boat launch and marina/transient dock sites are located in the Paducah-Cairo Interstate Air Quality Control Region, which covers the westernmost parts of Kentucky. McCracken County currently is designated as being in attainment for all criteria pollutants (40 CFR 81.318).

### ***Mobile Source Air Toxics (MSATs) Impact***

The Paducah Riverfront Development Project involves the construction of a boat launch facility, associated parking, and a marina/transient dock. The location of the boat launch will encompass the corridor along Burnett Street from 8<sup>th</sup> Street to the Ohio River and approximately 500 feet along 6<sup>th</sup> Street on each side of Burnett Street. The location of the marina/transient will encompass an area which will extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum (transient dock portion) into the Ohio River. There are no traffic forecasts for the Paducah Riverfront Development Project, as it does not directly impact traffic volume. The project would therefore be considered Exempt for MSAT effects as defined by the February 3, 2006 FHWA Interim Guidance on Air Toxics Analysis in NEPA documents.

### *Cumulative & Indirect Impacts*

The purpose of the proposed boat launch project is to relocate the existing boat ramp facility located at the northeastern end of Broadway Street while at the same time allowing for the northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point along the Ohio River. An increase in fugitive emissions is not expected since it is a “relocated” facility. The purpose of the marina/transient dock is to provide accommodations for transient boaters and local recreational boat owners. Transient and local boat owners will add fugitive emissions to the area at an unknown rate and/or concentration but it is not expected to threaten the attainment status of the area. Construction for both the proposed boat launch and marina/transient dock will be conducted with environmental commitments as detailed below. No cumulative and/or indirect impacts to air quality are expected as a result of the proposed boat launch and marina/transient dock facilities.

### *Mitigation, Minimization, and/or Avoidance Options*

Environmental commitments have been made associated with the boat launch and marina/transient dock projects. Commitments in the area of air quality are as follows: (1) The projects will be constructed utilizing reasonable precautions to prevent particulate matter from becoming airborne as directed under Kentucky Division for Air Quality Regulation *401 KAR 63:010 Fugitive Emissions*. Such reasonable precautions will include but not be limited to (a) use, where possible, of water or chemicals for control of dust during demolition and/or construction operations, (b) the covering of open bodied trucks operating outside the work areas transporting materials likely to become airborne, and (c) the prompt removal of earth or other material from a paved street which earth or other material has been transported by trucking or earth moving equipment or erosion by water, and (2) The projects will be constructed without open burning as directed under Kentucky Division for Air Quality Regulation *401 KAR 63:005 Open Burning*, except for the purposes listed in Section 4, Allowable Open Burning and Section 5, Restrictions to Open Burning, of the regulation.



## **Noise**

### ***Current Conditions & Ambient Noise Levels***

In the past, the U.S. Environmental Protection Agency (EPA) coordinated all federal noise control activities through its Office of Noise Abatement Control. In 1981, EPA concluded that noise issues were best handled at the State or local government level and as a result, transferred the primary responsibility of regulating noise to state and local governments. However, the Noise Control Act of 1972 and the Quiet Communities Act of 1978 were not rescinded by Congress and remain in effect today. In 1974, the Kentucky Legislature adopted the Kentucky State Noise Control Act (KRS 224.30-100 to 224.30-190) (the Act) which declared that "it is the policy of the state to promote an environment for all people free from noise that jeopardizes their health or welfare or degrades the quality of life". The Act also allowed local governments to develop, adopt, and maintain a comprehensive program of noise regulation and enforce ordinances necessary to implement noise control plans at the local level. The City of Paducah adopted a noise control ordinance in 1994 (Ord. No. 94-2-5079). The noise control ordinance exempts construction operations from 7:00 a.m. to 6:00 p.m. on weekdays for which building permits have been issued or construction operations not requiring permits due to ownership of the project by an agency of government; providing all equipment is operated in accordance with all standard equipment, manufacturers' mufflers, and noise reducing equipment in use and in properly operating condition.

Section 42-104 of the City Noise Ordinance (Ord. No. 94-2-5079) describes prohibited noises from premises and motor vehicles as well as other noise disturbances. For noises emanating from premises, it is unlawful for any person to emit a continuous noise which leaves the premise on which it originates, crosses a property line, and enters onto any other premise in excess of the following sound pressure levels:

Residential (R-1, R-2, R-3, R-4, H-2)	65 dB (A) for 7 A.M.-9 P.M. 65 dB (A) for 9 P.M.-7 A.M.
Commercial (A-1, B-1, B-2-T, B-2, B-3, H-1, HBD, POP, MU)	75 dB (A) for 7 A.M.-9 P.M. 65 dB (A) for 9 P.M.-7 A.M.
Manufacturing (M-1, M-2, M-3, C-1)	80 dB (A) for 7 A.M.-9 P.M. 75 dB (A) for 9 P.M.-7 A.M.

### *Sensitive Noise Receptors*

The closest general noise receptors to the proposed boat launch facility are the Conservancy Zone (C-1), Light Industry (M-1), and High Density Residential (R-4). The closest general noise receptors to the proposed marina/transient dock are Downtown Business (B-2), High Density Residential (R-4), and Downtown Business Townlift (B-2-T). Table 3 lists noise receptor distances. The Paducah Zoning Map is included as Figure 5.

**TABLE 3- NOISE RECEPTOR DISTANCES (ft.)**

City Zoning	Project		
	Zone Map Area	Boat Launch	Marina/Transient
Civic Center (A-1)		-----	1600
Convenience & Service (B-1)		-----	900
Downtown Business (B-2)		-----	250
Downtown Business Townlift (B-2-T)		-----	450
General Business (B-3)		2400	In or adjacent to
Conservancy Zone (C-1)		In or adjacent to	In or adjacent to
Historical Commercial (H-1)		-----	500
Historical Neighborhood (H-2)		2200	700
Light Industry (M-1)		In or adjacent to	1000
Heavy Industrial (M-2)		2800	1300
High Density Industrial (M-3)		3500	-----
Medium Density Residential (R-3)		3000	2800
High Density Residential (R-4)		1400	350

Specifically, within these zones there are “sensitive” noise receptors. Sensitive noise receptors are, in general, those areas of human habitation or substantial use where the intrusion of noise has the potential to adversely impact the occupancy, use, or enjoyment of the environment. These receptors typically include parks, churches, schools, hospitals, nursing homes, libraries, campgrounds, and residences.

There are over eighteen parks within the Paducah City Parks System. The nearest park to the boat launch site is Mini Park located 0.8 miles to the south. The closest park to the marina/transient dock facility is Schultz Park which will be directly affected by the proposed marina/transient dock facility since the project has been designed to redevelop and enhance the riverbank including the existing park. Riverfront Plaza and Wilson Stage will be indirectly affected by the proposed marina/transient dock facility since the project will visually change the riverfront amenities in the vicinity of the plaza and stage.

There are over ninety churches in the City of Paducah. These churches serve a variety of faiths and/or denominations including but not limited to: Apostolic, Bahai, Baptist, Buddhism, Catholic, Church of Christ, Church of God, Jehovah’s Witness, Jewish, Methodist, Nazarene, Pentecostal, Presbyterian, and Seventh Day Adventist. The closest church to the boat launch

site is Bethel Baptist Church located 0.4 miles to the south. The closest church to the marina/transient dock facility is St. Francis De Sales Church located 0.4 miles to the south.

There are a number of public and private schools in the City of Paducah. Of the seventeen public schools in Paducah, eleven serve elementary students, five serve middle school students, and five serve high school students. Of the six private schools in Paducah, five serve elementary students, three serve middle school students, and two serve high school students. The closest school to the boat launch site is McNabb Elementary located 1.6 miles to the southwest. The closest school to the marina/transient dock facility is Cooper Whiteside Elementary located 1.4 miles to the southeast.

There are two hospital facilities in Paducah, Kentucky. Lourdes Hospital is located immediately off of I-24 approximately 4.0 miles southwest of the proposed boat launch and marina/transient dock sites. The closest hospital to the boat launch site and the marina/transient dock facility is Western Baptist Hospital. Western Baptist is located 2.0 miles south-southwest of the boat launch site and 2.0 miles southwest of the marina/transient dock facility.

Paducah is served by a number of nursing homes/assisted living centers. The closest facility of this type to both the boat launch site and the marina/transient dock facility is the Paducah Centre for Health & Rehabilitation. This facility is located 0.7 miles southeast of the boat launch site and 0.2 miles south of the marina/transient dock facility.

McCracken County Public Library is located at 555 Washington Street in Paducah, Kentucky. This is the closest library to both the boat launch site and the marina/transient dock facility. The library is located 1.3 miles southeast of the boat launch site and 0.5 miles south of the marina/transient dock facility.

The closest campground to both the boat launch site and the marina/transient dock facility is the Fern Lake Campground. The campground is located 4.8 miles west of the boat launch site and 5.6 miles west of the marina/transient dock facility.

There are a number of residences in the vicinity of downtown Paducah. The closest residence to the boat launch site is at 1019 North 6<sup>th</sup> Street. This residence is located 0.3 miles south of the boat launch site. The closest residence to the marina/transient dock facility is at 303 Madison Street. This residence is located 0.2 miles south of the marina/transient dock facility.

### *Existing & Predicted Noise Levels with Noise Abatement Criteria (NAC)*

A 1995 study conducted by Noise Unlimited, Inc., for the New Jersey State Police, measured sound levels utilizing SAE J1970 for various types of boats as follows: classic inboard (72 dB A), single outboard engine (81 dB A), twin outboard engine (82 dB A), personal watercraft #1, 750 cm<sup>3</sup> engine (81 dB A), personal watercraft #2, 900 cm<sup>3</sup> engine (76 dB A), inboard/outboard with exhaust below water line (85 dB A), inboard/outboard with exhaust above water line (90 dB A), racing boat #1, 283 ci engine exhaust below water line (105 dB A), and racing boat #2, 305 ci engine (109 dB A). On average, boats that would typically utilize the boat ramp and marina/transient dock facilities will have a sound level of 84 dB(A) (classic inboard, personal watercrafts, and racing boats were excluded from this calculation). Distance, existing vegetation, and the flood wall will act to attenuate noise levels emanating from the boat launch and marina/transient dock projects. As a general rule, noise decreases by approximately 3 dB(A) with every doubling of the distance from the source. An attenuation of 5 dB(A) was used for the vegetation located at the boat launch site. The flood wall attenuates noise levels at a rate



of 5 dB(A) to line of sight then 1.5 dB(A) for every additional three feet of wall. Existing barriers such as elevated terrain or buildings would minimize noise impacts beyond these barriers.

Table 4 estimates outdoor noise levels at the closest sensitive noise receptors for both the boat launch site and the marina/transient dock facility. The attenuation contributed by distance, vegetation, and the flood wall will reduce the outdoor noise perceived at the sensitive receptors closest to the boat launch to a low of 45 dB(A) at Fern Lake Campground and a high of 57 dB(A) at the residence at 1019 N. 6<sup>th</sup> Street. The attenuation contributed by distance and the flood wall will reduce the outdoor noise perceived at the sensitive receptors closest to the marina/transient dock facility to a low of 50 dB(A) at Fern Lake Campground and a high of 64 dB(A) at the Paducah Centre for Health & Rehabilitation and the residence at 303 Madison Street, exclusive of Schultz Park which is part of the marina/transient dock project. These outdoor noise level estimates are well below the City Ordinance maximum noise level of 80 dB(A) for the period 7 A.M.-9 P.M. and 75 dB(A) for the period 9 P.M.-7 A.M. emanating from a “manufacturing” (Conservancy Zone,C-1) designation. The attenuations are subtracted from the average outdoor noise level of 84 dB(A) measured 50 linear feet from boating vessels that would typically utilize each proposed facility. The estimates do not reflect additional attenuating factors between the proposed facilities and the nearest sensitive receptors; therefore, it can be expected that the actual outdoor noise levels measured in the field will be even further reduced than those calculated.

**TABLE 4- SENSITIVE RECEPTOR OUTDOOR NOISE LEVEL ESTIMATES**

Closest Sensitive Noise Receptor (ft & direction)	Outdoor Noise Levels dB(A) after Attenuation			
	Distance	Vegetation	Flood Wall	Estimate
<b><i>Boat Launch</i></b>				
McNabb Elementary (8,448 to SW)	62	57	50	≤ 50
Bethel Baptist Church (2,112 to S)	68	63	55	≤ 55
Mini Park (4,224 to S)	65	60	53	≤ 53
Fern Lake Campground (25,344 to W)	57	52	45	≤ 45
McCracken Co. Public Library (6,864 to SE)	63	58	51	≤ 51
Western Baptist Hospital (10,560 to S-SW)	61	56	48	≤ 48
Paducah Centre for Health & Rehab (3,696 to SE)	66	61	54	≤ 54
Residence at 1019 N. 6 <sup>th</sup> Street (1,584 to S)	69	64	57	≤ 57
<b><i>Marina/Transient Dock</i></b>				
Cooper Whiteside Elementary (7,392 to SE)	63	-----	56	≤ 56
St. Francis De Sales Church (2,112 to S)	68	-----	61	≤ 61
Schultz Park (0)	84	-----	84	≤ 84
Fern Lake Campground (29,568 to W)	57	-----	50	≤ 50
McCracken Co. Public Library (2,640 to S)	67	-----	60	≤ 60
Western Baptist Hospital (10,560 to SW)	61	-----	54	≤ 54
Paducah Centre for Health & Rehab (1,056 to S)	71	-----	64	≤ 64
Residence at 303 Madison Street (1,056 to S)	71	-----	64	≤ 64

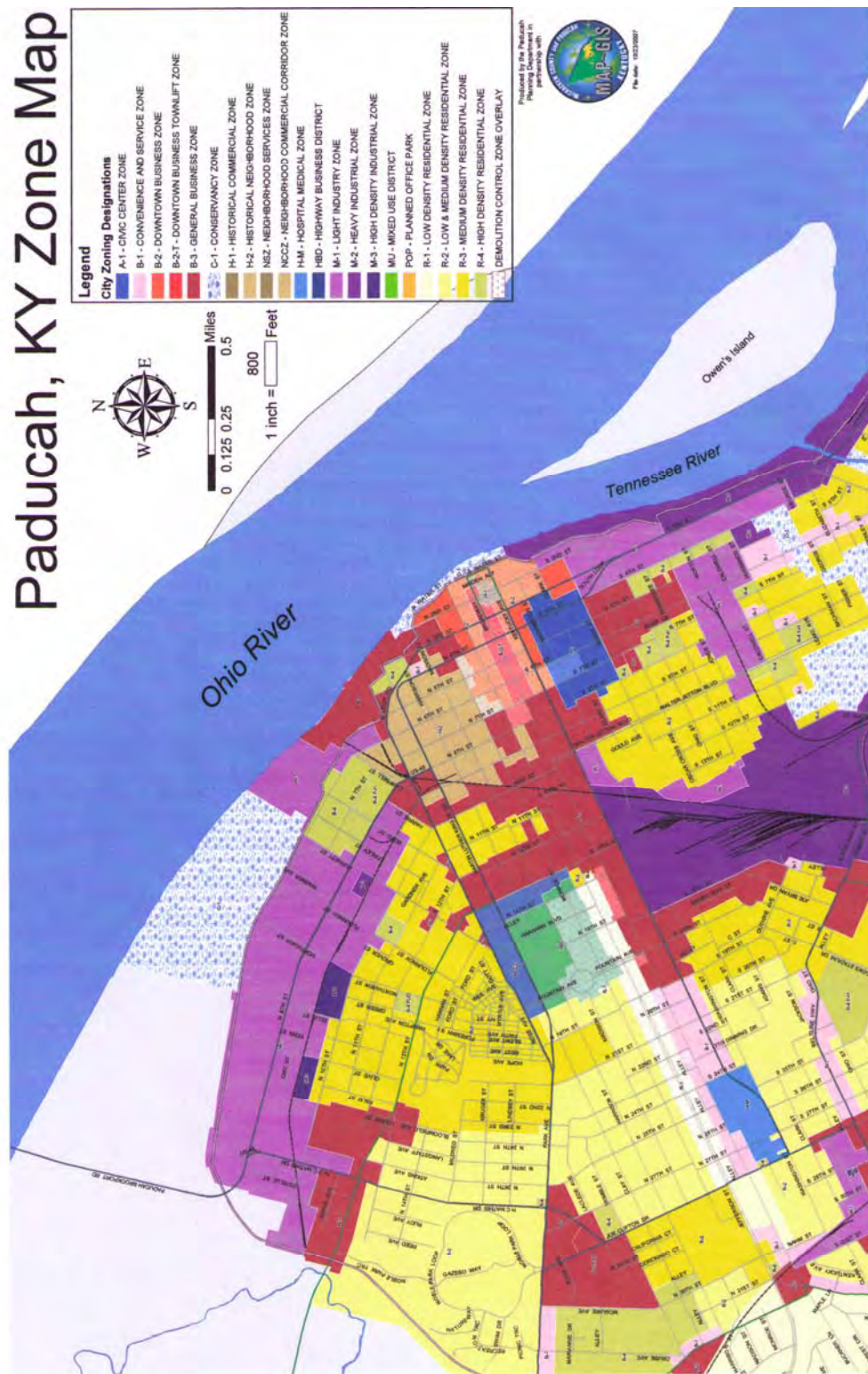


Figure 5

Noise Abatement Criteria are noise levels of highway construction activities that are required to be met for certain types of land uses (receptors) and are detailed in 23 CFR 772.19 Construction Noise. Since the proposed boat launch and marina/transient dock facilities are not highway projects, 23 CFR 772.19 does not apply.

### *Noise Impacts*

Noise impacts associated with the proposed boat launch and marina/transient dock will occur during construction of the facilities; however, construction is conditionally exempt from the City Noise Ordinance. Use of the boat launch and marina/transient dock facilities will create certain noise levels that have been estimated to be attenuated well below criteria required in the local noise ordinance. It is concluded that noise levels associated with construction as well as post-construction activities will not exceed the criteria detailed in the City Noise Ordinance.

### *Reasonable & Feasible Noise Abatement Measures*

It appears that no additional noise abatement measures are warranted for the proposed boat launch and marina/transient dock facilities. Any final decision on abatement measures will be made after the public involvement process.

### *Implementation of Abatement Measures*

It appears that no additional noise abatement measures are warranted for the proposed boat launch and marina/transient dock facilities. Any final decision on implementation of abatement measures will be made after the public involvement process.

### *Contractor Requirements to Restrict/Reduce Noise during Construction Activity*

Environmental commitments have been made associated with the construction of the boat launch and marina/transient dock projects. To minimize possible noise impacts, construction activities, to the extent possible, will be confined to normal working hours and noise controlled equipment will be utilized.

### *Cumulative & Indirect Impacts*

Due to the fact that the proposed boat launch facility is a relocation project, an overall increase in noise is not expected as a result of the relocation of the recreational fishing activities from the northeastern end of Broadway Street to the proposed location on the Ohio River north of Burnett Street. The proposed marina/transient dock facility will be located between the floodwall and the downtown area; therefore, any noise attributed to increased river traffic in the vicinity of the marina/transient dock will be minimized. Transient and local boat owners will increase noise to the area at an unknown level but it is not expected to threaten the City of Paducah noise control ordinance (Ord. No. 94-2-5079). Temporary noise impacts will occur within the vicinity of the construction activities for both projects. The exact noise levels cannot be predicted because the specific types of construction equipment, methods, and schedule are unknown at this time. Construction for both the proposed boat launch and marina/transient dock will be conducted with commitments to control noise levels. No cumulative and/or indirect impacts to noise levels are expected as a result of the proposed boat launch and marina/transient dock facilities.



### *Sensitive Noise Receptors & Monitoring Location*

No noise monitoring was performed at the nearest sensitive noise receptors to the boat launch and marina/transient dock projects. Estimated noise levels were calculated based on literature for the attenuating affects linked to distance from the emanating source, vegetation between the emanating source and the receptor, and noise walls (flood wall). The estimates do not reflect additional attenuating factors between the proposed facilities and the nearest sensitive receptors; therefore, it can be expected that the actual outdoor noise levels measured in the field will be even further reduced than those calculated.

## **Water Quality & Stream Impacts**

### *Baseline Conditions of Water Quality, Streams, Aquatic & Riparian Systems*

Redwing Ecological Services, Inc. (Redwing) conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the boat launch site on April 2-3, 2007 as part of a joint application for state and federal environmental permitting. The boat launch site consists predominantly of jurisdictional wetlands, which include wooded wetland habitat over the central portion of the site, farmed wetland in an active agricultural field area along the Ohio River in the northern portion of the site, and open field wetland along the eastern boundary of the site. The 16 acres of farmed wetland are considered low quality and offer minimal wetland functions, particularly in terms of wildlife/aquatic habitat, water quality, and outdoor education/recreation. The 37 acres of wooded wetlands are of moderate to high quality, providing important wetland functions and values in terms of floodwater attenuation, water quality, wildlife habitat, aquatic habitat, and potential outdoor recreation and education. Habitat diversity of the wooded wetlands is enhanced by two depressions. An approximately one-acre depression is located in the south-central portion of the site. A seven-acre depression is located in the central portion of the site on the northern edge of the wooded wetlands. Neither of these depressions is associated with flows from blue-line streams but receive runoff from adjacent slopes, wet weather conveyances (ditches), and/or flooding from the Ohio River. Based on available gauge data, all portions of the boat launch site below an elevation of 322 feet are considered to exhibit wetland hydrology. This includes the entire site with the exception of a narrow strip of land along the existing earthen flood wall to the south. The wooded wetland area contains man-made features associated with a pump station located immediately across the levee from the western portion of the site. A pond and ditch have been constructed at the base of the earthen flood wall in the southwest portion of the site to help control discharge from the pump station. Discharge flows are pumped into the pond, from where they flow approximately 200 feet along a constructed ditch to a culvert, which appears to conduct flows to the Ohio River. The blue-line stream feature shown on the USGS topographic map no longer exists and it is assumed that it was created to manage pump station discharges in the past.



Redwing conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the marina/transient dock site on May 14, 2008 as part of a joint application for state and federal environmental permitting. The marina/transient dock site consists of undeveloped riverbank with riprap and limited vegetation, the existing Schultz Park, and surface waters of the Ohio River. There are no wetlands or streams within the bounds of the project site with the exception of the river in which the project extends approximately 550 linear feet at its maximum (transient dock portion).

## *Studies Conducted*

Redwing Ecological Services, Inc. (Redwing) submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed boat launch project to the U.S. Army Corps of Engineers (USCOE) and the Kentucky Department for Environmental Protection, Division of Water (Kentucky Division of Water) on May 30, 2007. An Addendum was submitted in February 2008. A Section 9 Bridge Permit is not required for the boat launch project. Section 9 of the Rivers and Harbors Act of 1899 authorizes the U.S. Coast Guard to review projects that may impact “navigable capacity” through the construction of bridges, dams, dikes, or causeways over or in navigable waters. Section 10 of the Rivers and Harbors Act of 1899 authorizes the U.S. Corps of Engineers to review projects that may impact “navigable capacity” through the construction of wharfs, piers, dolphins, booms, weirs, breakwaters, bulkheads, jetties, as well as any other physical alteration/modification to navigable waters. A Section 10 Permit is required for the boat launch project since the structure and support system extends into “navigable waters”. In development of the supporting documents for the permit application, Redwing conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the boat launch site on April 2-3, 2007.

Redwing submitted a joint application package on September 30, 2008 to the USCOE and the Kentucky Division of Water, for a Section 401 Water Quality Certification, Stream Construction Permit, Section 10 Navigable Waters Permit, and a Section 404 Permit for the proposed marina/transient dock. These permits will be obtained before construction commences on the marina/transient dock. A Section 9 Bridge Permit issued by the U.S. Coast Guard is not required for the marina/transient dock project since no bridge, dam, dike, or causeway is being constructed and a 300-foot buffer between the project and the sail line shown on Ohio River Navigation Chart 11 will be maintained. Ohio River Navigation Chart 11 is detailed as Figure 6. In development of the supporting documents for the permit application, Redwing conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the marina/transient dock site on May 14, 2008.

According to the U.S. Fish & Wildlife Service (USFWS), the proposed boat launch and marina/transient dock projects are in close proximity to several federally protected mussel records known to occur within the Ohio River. A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

## *Potential Impacts*

According to the jurisdictional waters/wetlands survey conducted by Redwing Ecological Services, Inc. (Redwing) on April 2-3, 2007, the proposed boat launch development will result in unavoidable impacts to 9.7 acres of jurisdictional waters of the U.S., including: 0.5 acres of the

Ohio River, 8.3 acres of farmed wetlands, 0.7 acres of wooded wetlands, and 0.2 acres of open field wetlands. The development has minimized and avoided water/wetland impacts by focusing impacts on the low quality farmed wetlands and limiting impacts to the higher quality wooded wetlands. Less than 2% of wooded wetlands on site are proposed for impact. There are no blue-line streams within the project site with the exception of the Ohio River. The City of Paducah (the City) received a Stream Construction Permit (Permit #16689) and a Section 401 Water Quality Certification (Permit #2008-0029-1) from the Division of Water within the Kentucky Department for Environmental Protection (Kentucky Division of Water) on September 7, 2007, and April 8, 2008, respectively. The City received a Section 10/Section 404 Permit (Permit #LRL-2007-811-GJD) from the U.S. Corps of Engineers (USCOE) on May 23, 2008. An Engineering "No Impact" Certification which certifies that the boat launch facility will not impact the 100-year flood elevations, floodway elevations, and floodway widths on the Ohio River was acquired by the City on May 30, 2007.

According to the jurisdictional waters/wetlands survey conducted for the marina/transient dock by Redwing on May 14, 2008 the proposed development will result in unavoidable impacts to jurisdictional/navigable waters of the U.S. along 2,200 feet of the Ohio River. Impacts include 8.0 acres of riverbank and 1.5 acres of open water for expansion of Schultz Park, providing public access to the river, and anchoring of floating docks. Redwing submitted a joint application package on September 30, 2008 to the USCOE and the Kentucky Division of Water, for a Section 401 Water Quality Certification, Stream Construction Permit, Section 10 Navigable Waters Permit, and a Section 404 Permit for the proposed marina/transient dock. These permits will be obtained before construction commences on the marina/transient dock and will be included in the Finding of No Significant Impact (FONSI) document submitted to the Federal Highway Administration (FHWA) for approval. It is anticipated that no mitigation will be required due to the limited nature of the impacts in relation to the overall Ohio River system.

According to the U.S. Fish & Wildlife Service (USFWS), the proposed boat launch and marina/transient dock projects are in close proximity to several federally protected mussel records known to occur within the Ohio River. A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

### *Consultation with DOW, USACE & other agencies*

Redwing Ecological Services, Inc. (Redwing) submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed boat launch project to the U.S. Army Corps of Engineers (USCOE) and the Kentucky Department for Environmental Protection, Division of Water (Kentucky Division of Water) on May 30, 2007. An Addendum was submitted in February 2008. The applicable permits have been obtained from each of the regulatory agencies. Redwing also submitted a joint application package on September 30, 2008 to the USCOE and the Kentucky Division of Water, for a Section 401 Water Quality Certification, Stream Construction Permit,



Section 10 Navigable Waters Permit, and a Section 404 Permit for the proposed marina/transient dock. These permits will be obtained before construction commences on the marina/transient dock and will be included in the Finding of No Significant Impact (FONSI) document submitted to the Federal Highway Administration (FHWA) for approval.

As required under the Environmental Assessment (EA) for the projects, letters of intent requesting comments and describing the project backgrounds, purpose and needs, and funding mechanisms were sent to the following agencies: U.S. Army Corps of Engineers; Kentucky Department for Environmental Protection-Water Resources Branch, Division of Air Quality, Hazardous Waste Branch, Underground Storage Tank Branch; Kentucky Division of Emergency Management; U.S. Fish & Wildlife Service; Kentucky Department of Fish & Wildlife; U.S. Department of Agriculture; Kentucky State Nature Preserves Commission; Kentucky Heritage Council; Tennessee Valley Authority, U.S. Coast Guard, Federal Highway Administration, and the Kentucky Transportation Cabinet.

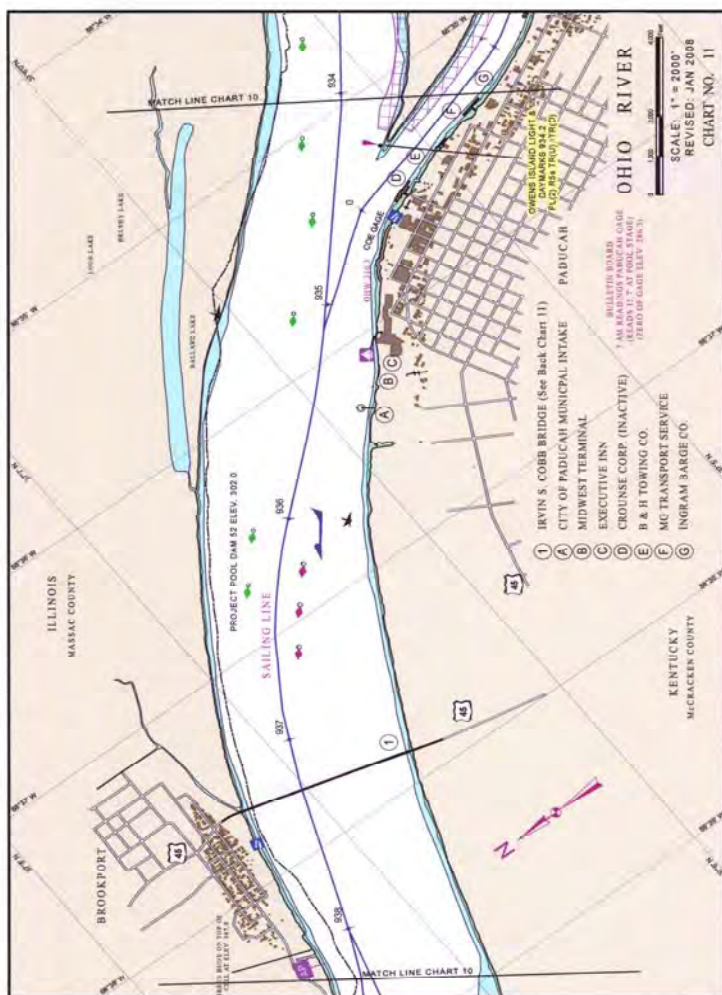


Figure 6

### *Identify Public Water Sources, Wells & Groundwater Runoff*

Paducah Water Works manages drinking water source intakes, treatment, and distribution. Two drinking water systems serve the Paducah area and are known as the Paducah system and the Reidland/Marshall County system.

The majority of the population is supplied water by the Paducah system through a surface water source, the Tennessee and Ohio Rivers. The intake area for this system is located in the northeastern corner (immediately upstream) of the proposed boat launch development at the Ohio River with the intake screen positioned 15 feet below the surface at normal pool stage (302 feet). The proposed marina/transient dock facility is located approximately 0.9 miles southeast (upstream) of the Paducah system intake. The 12 MGD treatment plant is located at 1800 N. 8<sup>th</sup> Street approximately 0.8 miles southwest of the boat launch site and approximately 1.6 miles west-northwest of the marina/transient dock site. The customers of the Reidland/Marshall County system are supplied water through a groundwater source consisting of seven wells. The 2 MGD Reidland treatment plant is located approximately 7 miles southeast of the proposed boat launch site and approximately 6 miles southeast of the proposed marina/transient dock site. Neither the boat launch or marina/transient dock poses a threat to the Reidland/Marshall County groundwater source.



During construction of the boat launch facility, erosion and sediment-laden storm water runoff may occur at a greater degree than presently occurring on existing terrain. Contractors will be required to design, install, and maintain best management practices (BMP) to prevent erosion and to control sediment-laden storm water runoff from leaving the construction site. As in all construction sites, efforts to control these phenomena are not 100% efficient and therefore, it is expected that temporary erosion impacts to the Ohio River will occur. The project is not expected to have any long-term impacts on the water quality of the Ohio River or the water treatment process for the Paducah system since the intake is positioned upstream of the site.

### *Efforts to Avoid/Minimize Impacts and Mitigation*

The boat launch site has been designed to reduce environmental impacts by utilizing an existing roadway corridor and existing agricultural field for the entrance roadway and parking area. Other designs for this site would result in significantly greater impacts to higher quality wooded wetlands. Although the proposed alternative site design results in the impacts to approximately 9.7 acres of wetlands, only about 0.7 acres of wooded wetlands will be impacted. These impacts are limited to fringe areas and will not fragment the existing forest. No viable alternative boat launch site exists within the immediate vicinity of downtown Paducah. The selected site minimizes ecological impacts while still meeting the river access needs of the community. A mitigation plan was developed by Redwing Ecological Services, Inc. (Redwing) for the boat launch project to provide compensation for unavoidable impacts to approximately

9.7 acres of waters/wetlands by construction. The impacts and committed mitigation for the boat launch project is as follows with measurements in acres unless stated:

Feature	Size	Impacted	Mitigation Ratio	Mitigation Required	Type	Size	Ratio	Credit
Wooded	37.0	0.7	3:1	2.1	Preservation	34.4	10:1	3.4
Wooded	37.0	0.7	3:1	2.1	Restoration	7.3	1:1	7.3
Farmed	16.0	8.3	1:1	8.3	-----	-----	-----	-----
Open Field	1.0	0.2	2:1	0.4	-----	-----	-----	-----
Up. Forest	-----	0.0	-----	-----	Preservation	3.4	10:1	0.3
Ohio River	-----	0.5 (250')	2:1	1.0 (500')	Restoration	765'	1:1	765'
<b>TOTAL</b>	<b>54.0</b>	<b>9.7 (250')</b>		<b>10.8 (500')</b>		<b>45.1</b>		<b>11.0*</b>

\* Includes 765' of riparian buffer restoration

These mitigation requirements will be met with on-site wetland preservation and restoration. The 11.0 acres of proposed mitigation more than compensates for impacts to wetlands (10.8 acres of required mitigation) by the proposed boat launch facility. The major components of the mitigation plan include wetland preservation, wetland restoration, and upland buffer preservation. Approximately 34.4 acres of existing high quality forested wetland will be permanently preserved under a conservation easement/deed restriction within a designated conservation area. Approximately 7.3 acres of existing farmed wetland will be restored to forested wetland through planting of native wetland tree species. Approximately 3.4 acres of existing forested upland buffer will be permanently preserved under a conservation easement/deed restriction. Approximately 765 linear feet of wooded riparian buffer will be restored along the Ohio River through planting of native trees.

The proposed marina/transient dock site represents the least environmentally damaging alternative for meeting the river access needs of the community. The proposed development will result in unavoidable impacts to jurisdictional/navigable waters of the U.S. along 2,200 feet of the Ohio River. Impacts include 8.0 acres of riverbank and 1.5 acres of open water for expansion of Schultz Park, providing public access to the river, and anchoring of floating docks. It is anticipated that no mitigation will be required due to the limited nature of the impacts in relation to the overall Ohio River system.

A mussel survey was conducted by Redwing Ecological Services, Inc. with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

During construction of the boat launch and marina/transient dock facilities, erosion and sediment-laden storm water runoff may occur at a greater degree than presently occurring on existing terrain. Contractors will be required to design, install, and maintain best management practices (BMP) to prevent erosion and to control sediment-laden storm water runoff from leaving the construction sites. As in all construction sites, efforts to control these phenomena are not 100% efficient and therefore, it is expected that temporary erosion impacts will occur. The proposed projects are not expected to have any long-term impacts on the water quality of jurisdictional waters/wetlands or the Ohio River.

### *Required Permits*

Redwing Ecological Services, Inc. (Redwing) submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed boat launch project to the U.S. Army Corps of Engineers (USCOE) and the Kentucky Department for Environmental Protection, Division of Water (Kentucky Division of Water) on May 30, 2007. An Addendum was submitted in February 2008. A Section 9 Bridge Permit is not required for the boat launch project since there will be no construction of bridges, dams, dikes, or causeways over or in navigable waters. The Kentucky Division of Water issued Water Quality Certification #2008-0029-1 for the boat launch project on April 8, 2008. Pursuant to Section 401 of the Clean Water Act, the Commonwealth of Kentucky certified it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the Clean Water Act, would not be violated by the boat launch project provided that the USCOE authorizes the activity under 33 CFR part 330, and certain conditions attached to the certification are met. The USCOE authorized the activity under Section 10/Section 404 on May 23, 2008 (Permit #LRL-2007-811-GJD). The Kentucky Division of Water also issued a Stream Construction Permit # 16689 for Construction in or along a Stream on September 7, 2007. In accordance with KRS 151.250 and KRS 151.260, the Kentucky Division of Water approved the boat launch project application for the construction in the left descending floodplain of the Ohio River at about stream mile 45.6 (935.8 miles below Pittsburgh). Redwing submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed marina/transient dock project to the USCOE and the Kentucky Division of Water on September 30, 2008. A Section 9 Bridge Permit issued by the U.S. Coast Guard is not required for the marina/transient dock project since no bridge, dam, dike, or causeway is being constructed and a 300-foot buffer between the project and the sail line will be maintained. Permits obtained will be included in the Finding of No Significant Impact (FONSI) document before being submitted to the Federal Highway Administration (FHWA) for approval.

In addition to the above requirements, permits must be obtained from state and local authorities in order to discharge storm water associated with the construction of the proposed boat launch and marina/transient dock facilities. The Kentucky Department for Environmental Protection issues Permit # KYR10, which is the General Kentucky Pollutant Discharge Elimination System (KPDES) Permit for Storm Water Point Source Discharges associated with Construction Activities, as promulgated under 401 KAR 5:055, Section 1, and KRS 224.16-050. The City of Paducah requires application for an Erosion Prevention & Sediment Control (EPSC) Permit under the authority of the U.S. Environmental Protection Agency Phase II of the National Pollutant Discharge Elimination System (NPDES) Stormwater Program as well as State of Kentucky regulations.

### *Cumulative & Indirect Impacts*

The proposed boat launch site will have impacts to jurisdictional wetlands; however, compensatory mitigation has been designed through preservation and restoration of the wooded, farmed, and open field wetlands found within the project site. The proposed marina/transient dock will result in unavoidable impacts to jurisdictional/navigable waters of the U.S. along 2,200 feet of the Ohio River including 8.0 acres of riverbank and 1.5 acres of open water. It is anticipated that no mitigation will be required for the marina/transient dock project due to the limited nature of the impacts in relation to the overall Ohio River system. No



cumulative or indirect negative impacts are expected for either the boat launch or marina/transient dock site.

### *Exhibit Blue-line Streams*

The boat launch project site has 16 acres of farmed wetland which are considered low quality and offer minimal wetland functions, particularly in terms of wildlife/aquatic habitat, water quality, and outdoor education/recreation. The site also has 37 acres of wooded wetlands. This acreage is of moderate to high quality, providing important wetland functions and values in terms of floodwater attenuation, water quality, wildlife habitat, aquatic habitat, and potential outdoor recreation and education. Habitat diversity of the wooded wetlands is enhanced by two depressions. An approximately one-acre depression is located in the south-central portion of the site. A seven-acre depression is located in the central portion of the site on the northern edge of the wooded wetlands. Neither of these depressions is associated with flows from blue-line streams but receive runoff from adjacent slopes, wet weather conveyances (ditches), and/or flooding from the Ohio River. The wooded wetland area contains man-made features associated with a pump station located immediately across the levee from the western portion of the site. A pond and ditch have been constructed at the base of the earthen flood wall in the southwest portion of the site to help control discharge from the pump station. Discharge flows are pumped into the pond, from where they flow approximately 200 feet along a constructed ditch to a culvert, which appears to conduct flows to the Ohio River. The blue-line stream feature shown on the USGS topographic map no longer exists and it is assumed that it was created to manage pump station discharges in the past. The marina/transient dock site consists of undeveloped riverbank consisting of riprap and limited vegetation, Schultz Park, and surface waters of the Ohio River. There are no wetlands or streams within the bounds of the project site with the exception of the river. There are no named streams within either of the project sites according to USGS topographic mapping, National Wetland Inventory, soils maps, and ecological study. The development of the proposed boat launch facility and marina/transient dock will not involve impacts to waters of the State/U.S. exclusive of the jurisdictional wetlands delineated in the ecological study and the Ohio River. A topographic map is included as Figure 7.



## **Floodplains**

### *Identify 100-Year Floodplains using National Flood Insurance Program Maps*

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRM) delineating both the special hazard areas and the risk premium zones applicable to a community. Specifically, the FIRM is used to (1) administer floodplain management regulations and to mitigate flood damage, (2) locate properties and buildings in flood insurance risk areas and mapped flood hazards, and (3) determine whether flood insurance is required when making loans or providing grants following a disaster for the purchase or construction of a building. Based on FIRM Community Panel Number 210152 0003E, October 8, 1982, the proposed boat launch and marina/transient dock projects would involve construction within the 100-year flood limits of the Ohio River floodplain. The projects are within Zone A14, Areas of 100-yr flood where base flood elevations and flood hazard factors have been determined. Flood Insurance Rate Maps for the proposed boat launch and marina/transient dock projects are included as Figures 8 and 9. Figure 10 details the mapping key used.



### *Identify Encroachments onto Floodplains*

Both the boat launch and marina/transient dock projects are to provide public access to the riverfront property in or near downtown Paducah as part of the overall redevelopment efforts. These projects will encroach onto the associated floodplain of the Ohio River by the nature of their individual purposes and needs.

### *Efforts to Avoid and Minimize Encroachment*

Efforts have been made to avoid and/or minimize encroachment impacts to the floodplain. The boat ramp located on the bank of the Ohio River in the north-central portion of the site will have an access road to the site as an extension of Burnett Street constructed in the location of an existing dirt/gravel road along the eastern boundary of the site; therefore, no new road alignment/footprint will be necessary. The marina portion of the marina/transient dock facility will be a floating dock system with the transient dock portion also being a floating dock system but also acting as a wave attenuator. Both projects will be inherent encroachments onto the floodplain.

### *Coordination with FEMA, DOW & other agencies*

Coordination has occurred with the Kentucky Department for Environmental Protection-Division of Water, U.S. Army Corps of Engineers, and the Kentucky Division of Emergency Management as required under the National Environmental Policy Act (NEPA) of 1969.

## *Required Permits*

Redwing Ecological Services, Inc. (Redwing) submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed boat launch project to the U.S. Army Corps of Engineers (USCOE) and the Kentucky Department for Environmental Protection, Division of Water (Kentucky Division of Water) on May 30, 2007 as well as an Addendum in February 2008. All applicable permits have been obtained. Redwing submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed marina/transient dock project to the USCOE and the Kentucky Division of Water on September 30, 2008. Permits obtained for the marina/transient dock facility will be included in the Finding of No Significant Impact (FONSI) document when submitted for approval by the Federal Highway Administration (FHWA). A Section 9 Bridge Permit issued by the U.S. Coast Guard is not required for either project since no construction of bridges, causeways, dams, or dikes are proposed.

Floodplain management on the state level is the responsibility of the Division of Water within the Kentucky Department for Environmental Protection. Chapter 151 of the Kentucky Revised Statutes (KRS) is the state statute that addresses the development of floodplain area. The most pertinent section of KRS 151 is KRS 151.250, which establishes the requirements for obtaining a floodplain development permit. Based on KRS 151, the Kentucky Division of Water has been designated as the state coordinating agency for the National Flood Insurance Program (NFIP). The Floodplain Management Section of the Water Resources Branch within the Kentucky Division of Water has the primary responsibility for the approval or denial of proposed construction and other activities in the 100-year floodplain of all streams in the commonwealth. In addition, activities which result in physical disturbances to wetlands or streams may also require a Water Quality Certification Permit or Permit to Construct Across or Along a Stream. The Kentucky Division of Water issued a Stream Construction Permit # 16689 for Construction in or along a Stream on September 7, 2007 for the boat launch project. In accordance with KRS 151.250 and KRS 151.260, the Cabinet approved the boat launch project application for the construction in the left descending floodplain of the Ohio River at about stream mile 45.6 (935.8 miles below Pittsburgh).

Floodplain management on the federal level is the responsibility of the U.S. Army Corps of Engineers (USCOE). As promulgated under 33 CFR 320.4-General policies for evaluating permit applications, cumulative impacts of construction within floodplains may result in "significant degradation of floodplain values and functions and in increased potential for harm upstream and downstream activities." In accordance with the regulations, the USCOE must ensure that the impacts of potential flooding on human health, safety, and welfare are minimized, the risks of flood losses are minimized, and whenever practicable, the natural and beneficial values served by floodplains are restored and preserved. The USCOE is directed to avoid authorizing floodplain developments whenever practicable alternatives exist outside the floodplain. If there are no such practicable alternatives, the USCOE will consider alternatives within the floodplain that will lessen any significant adverse impacts to the floodplain.

The Kentucky Division of Emergency Management (KDEM) defers to the USCOE for construction in floodplain issues. KDEM's purpose is to protect through an all hazards approach to mitigation, preparedness, response, and recovery from disasters and emergencies which a local emergency response agency determines is beyond its capabilities. The Federal Emergency Management Agency (FEMA) purpose is similar to the State of Kentucky only on a federal scale. FEMA encourages communities to establish floodplain management programs that



exceed the minimum requirements adopted by the National Flood Insurance Program (NFIP). The community's agreement to adopt and enforce floodplain management ordinances, particularly with respect to new construction is an important element in making flood insurance available to home and business owners. FEMA has defined flood zones according to varying levels of flood risk. Both the proposed boat launch and marina/transient dock are within the A14 flood zone. This area is defined by FEMA as "areas with 1% annual chance of flooding."

Section 60.3 (d) (3) of the NFIP regulations states that a community shall "prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base (100-year) flood discharge." Florence & Hutcheson, Inc. certifies that technical data supports that the proposed boat launch and marina/transient dock projects will not impact the 100-year flood elevations, floodway elevations, and floodway widths on the Ohio River at published sections in the Flood Insurance Study for McCracken County, Kentucky dated 1979 and will not impact the 100-year flood elevations, floodway elevations, and floodway widths at unpublished cross-sections in the vicinity of the proposed developments.

### *Cumulative & Indirect Impacts*

The proposed boat launch and marina/transient dock projects have been developed in accordance with Executive Order 11988 (Floodplain Management) and 23 CFR 650A (Location and Hydraulic Design of Encroachments on Flood Plains). Though both projects are within the 100-year floodplain, the projects are not expected to be a "significant encroachment" as defined in 23 CFR 650A nor are they expected to have an appreciable environmental impact on the base floodplain. The level of risk analogous with the probable areas of flooding and its consequences attributed to these encroachments is not expected to be any greater than that associated with the present conditions of each project area. The projects are not expected to have any increased cumulative or indirect impact potential for property loss and hazard to life.

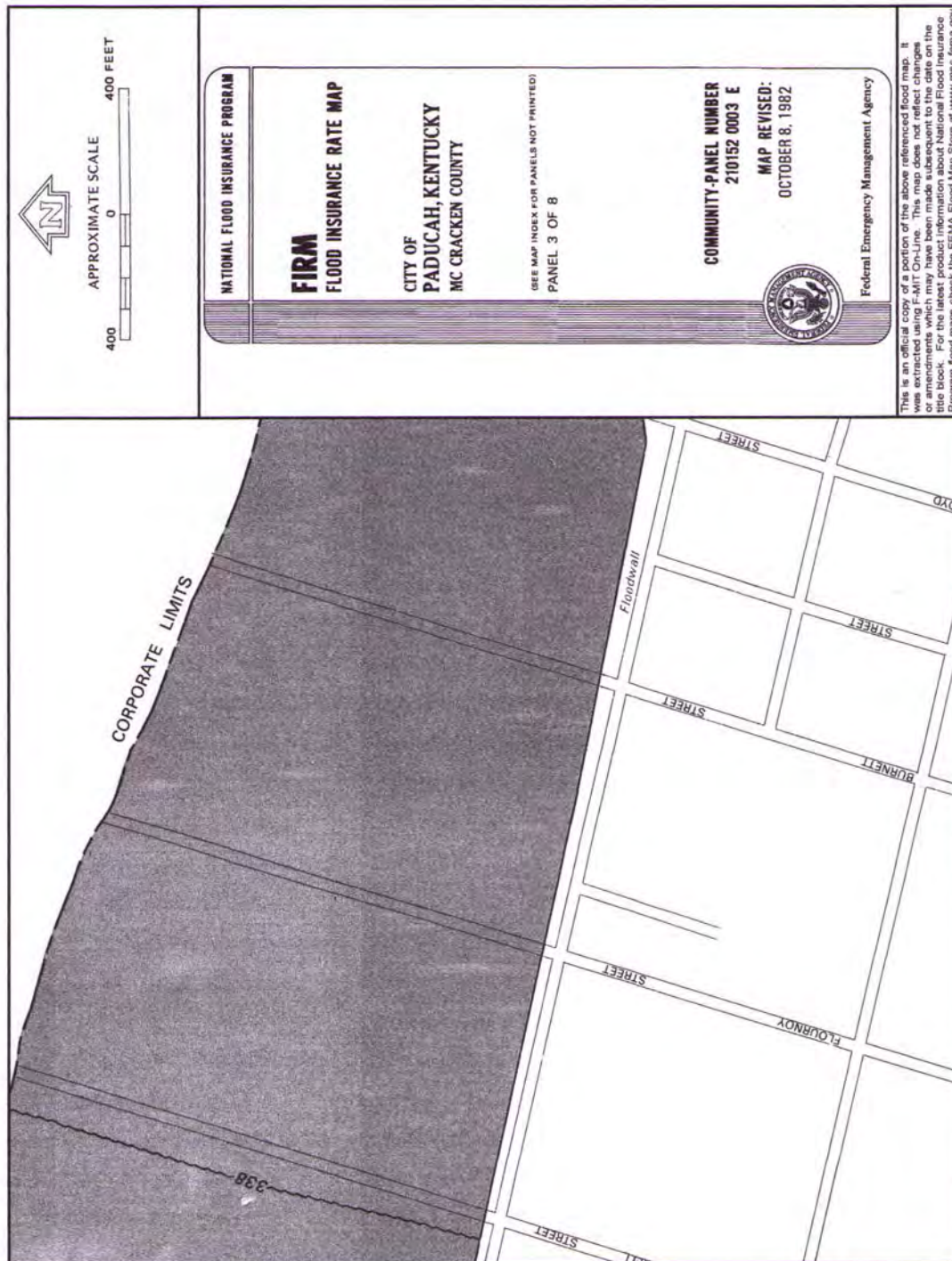
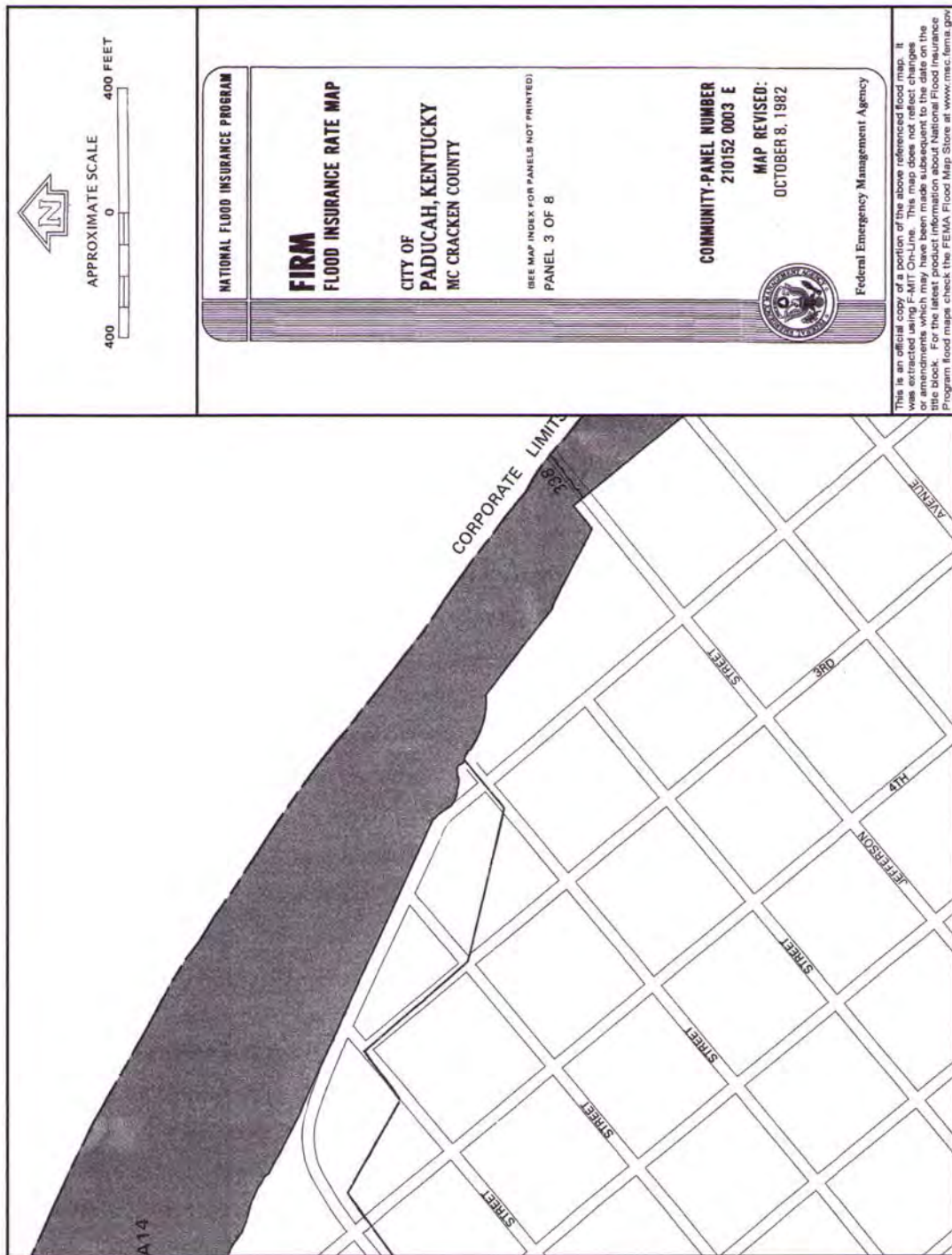


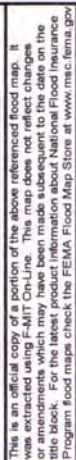
Figure 8



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at [www.fema.gov](http://www.fema.gov)

Figure 9





Paducah Boat Launch &amp; Marina/Transient Dock EA

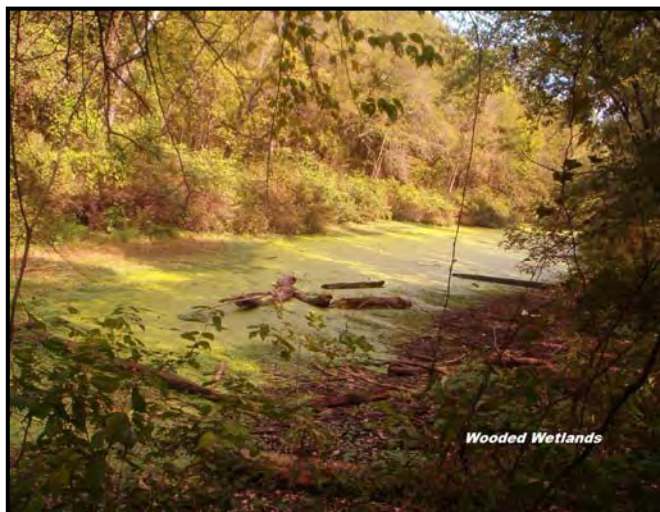


## **Wetlands**

### *Baseline Conditions of Jurisdictional Wetlands & Waters of the U.S.*

Wetland habitats are defined as those areas that are inundated by water with sufficient frequency and duration to support vegetation that is tolerant of saturated soil conditions. The U.S. Army Corps of Engineers utilizes specific hydrologic, soil, and vegetation criteria in establishing the boundary of wetlands under their jurisdiction.

Redwing Ecological Services, Inc. (Redwing) conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the boat launch site on April 2-3, 2007 as part of a joint application for state and federal environmental permitting. The boat launch site consists predominantly of jurisdictional wetlands, which include wooded wetland habitat over the central portion of the site, farmed wetland in an active agricultural field area along the Ohio River in the northern portion of the site, and open field wetland along the eastern boundary of the site. The 16 acres of farmed wetland are considered low quality and offer minimal wetland functions, particularly in terms of wildlife/aquatic habitat, water quality, and outdoor education/recreation. The 37 acres of wooded wetlands are of moderate to high quality, providing important wetland functions and values in terms of floodwater attenuation, water quality, wildlife habitat, aquatic habitat, and potential outdoor recreation and education. Habitat diversity of the wooded wetlands is enhanced by two depressions. An approximately one-acre depression is located in the south-central portion of the site. A seven-acre depression is located in the central portion of the site on the northern edge of the wooded wetlands. Neither of these depressions is associated with flows from blue-line streams but receive runoff from adjacent slopes, wet weather conveyances (ditches), and/or flooding from the Ohio River. Based on available gauge data, all portions of the boat launch site below an elevation of 322 feet are considered to exhibit wetland hydrology. This includes the entire site with the exception of a narrow strip of land along the existing earthen flood wall to the south. The wooded wetland area contains man-made features associated with a pump station located immediately across the levee from the western portion of the site. A pond and ditch have been constructed at the base of the earthen flood wall in the southwest portion of the site to help control discharge from the pump station. Discharge flows are pumped into the pond, from where they flow approximately 200 feet along a constructed ditch to a culvert, which appears to conduct flows to the Ohio River. The blue-line stream feature shown on the USGS topographic map no longer exists and it is assumed that it was created to manage pump station discharges in the past. Redwing conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the marina/transient dock site on May 14, 2008 as part of a joint application for state and federal environmental permitting. The marina/transient dock site consists of undeveloped riverbank with riprap, Schultz Park, limited vegetation, and surface waters of the Ohio River. There are no wetlands or streams within the bounds of the project site with the exception of the



river in which the project area extends approximately 550 linear feet at its maximum (transient dock portion).

### *Studies Conducted*

Redwing Ecological Services, Inc. (Redwing) submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed boat launch project to the U.S. Army Corps of Engineers (USCOE) and the Kentucky Department for Environmental Protection, Division of Water (Kentucky Division of Water) on May 30, 2007. An Addendum to the Joint Application was submitted in February 2008. All of the applicable permits have been obtained. In development of the supporting documents for the permit application, Redwing conducted a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the boat launch site on April 2-3, 2007. A Section 9 Bridge Permit issued by the U.S. Coast Guard is not required for the boat launch project.

Redwing submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed marina/transient dock project to the USCOE and the Kentucky Division of Water on September 30, 2008. In development of the supporting documents for the permit application, Redwing completed a jurisdictional waters/wetlands survey as well as a threatened/endangered species survey for the marina/transient dock site on May 14, 2008. No wetlands were found at the site. Permits obtained from the USCOE and Kentucky Division of Water will be included in the Finding of No Significant Impact (FONSI) document submitted to the Federal Highway Administration (FHWA) for approval. A Section 9 Bridge Permit issued by the U.S. Coast Guard is not required for the marina/transient dock project.

A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

### *National Wetland Inventory (NWI) Mapping*

The National Wetland Inventory (NWI) published by the Division of Habitat and Resource Conservation of the U.S. Fish & Wildlife Service was reviewed for the two proposed projects. The proposed boat launch site has a distinct wetland designation located in the southern centroid of the property surrounded by a designated wetland that makes up the southern half and northwest sections of the property. The designation in the southern centroid is palustrine (nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens), emergent, persistent, and semipermanently flooded (PEM1F). The surrounding and northwestern designation is palustrine, forested, broad-leaved deciduous, and seasonally flooded (PFO1C). According to the jurisdictional waters/wetlands survey conducted by Redwing Ecological Services, Inc. (Redwing) on April 2-3, 2007, the proposed boat launch

development consists predominantly of jurisdictional wetlands, which include wooded wetland habitat over the central portion of the site, farmed wetland in an active agricultural field area along the Ohio River in the northern portion of the site, and open field wetland along the eastern boundary of the site. Habitat diversity of the wooded wetlands is enhanced by two depressions. An approximate one-acre depression is located in the south-central portion of the site. A seven-acre depression is located in the central portion of the site on the northern edge of the wooded wetlands. Neither of these depressions is associated with flows from blue-line streams but receive runoff from adjacent slopes, wet weather conveyances (ditches), and/or flooding from the Ohio River. Based on available gauge data, all portions of the boat launch site below an elevation of 322 feet are considered to exhibit wetland hydrology. This includes the entire site with the exception of a narrow strip of land along the existing earthen flood wall to the south. According to the jurisdictional waters/wetlands survey conducted by Redwing on May 14, 2008, the proposed marina/transient dock site consists predominantly of riverbank and open water (Ohio River). There is no wetland designation within the bounds of the proposed marina/transient dock facility with the exception of the Ohio River. The Ohio River is designated lacustrine (topographic depression or damned river channel), limnetic (deepwater habitat), unconsolidated bottom, and permanently flooded (L1UBHH). The findings as a result of the jurisdictional waters/wetlands surveys for the two projects conducted by Redwing are consistent with the NWI data. The NWI Map is included as Figure 11.

### *Potential Wetland Impacts*

According to the jurisdictional waters/wetlands survey conducted by Redwing Ecological Services, Inc. (Redwing) on April 2-3, 2007, the proposed boat launch development will result in unavoidable impacts to 9.7 acres of jurisdictional waters of the U.S., including: 0.5 acres of the Ohio River, 8.3 acres of farmed wetlands, 0.7 acres of wooded wetlands, and 0.2 acres of open field wetlands. The development has minimized and avoided water/wetland impacts by focusing impacts on the low quality farmed wetlands and limiting impacts to the higher quality wooded wetlands. Less than 2% of wooded wetlands on site are proposed for impact.

According to the jurisdictional waters/wetlands survey conducted by Redwing on May 14, 2008, the proposed marina/transient dock will result in impacts to 8.0 acres of riverbank and 1.5 acres of open water. No wetlands were noted during the survey. National Wetland Inventory (NWI) mapping does not indicate any wetland designations within the bounds of the proposed marina/transient dock facility with the exception of the Ohio River.

### *Agency Coordination & Required Permits*

Redwing Ecological Services, Inc. (Redwing) submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed boat launch project to the U.S. Army Corps of Engineers (USCOE) and the Kentucky Department for Environmental Protection (Kentucky Division of Water) on May 30, 2007. An Addendum was submitted in February 2008 which revised the original plan for both the impacts and mitigation to the acreages as detailed in the "Potential Wetland Impact" section above. The Kentucky Division of Water issued Water Quality Certification #2008-0029-1 for the boat launch project on April 8, 2008. Pursuant to Section 401 of the Clean Water Act, the Commonwealth of Kentucky certified it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the Clean Water Act, would not be violated by the boat launch project provided that the USCOE authorizes the activity under 33

CFR part 330, and certain conditions attached to the certification are met. The USCOE issued a Section 10/Section 404 Permit (Permit #LRL-2007-811-GJD) on May 23, 2008. Redwing submitted a Joint Application for a Section 404 Individual Permit, a Section 10 Navigable Waters Permit, and Section 401 Water Quality Certification for the proposed marina/transient dock project to the USCOE and the Kentucky Division of Water on September 30, 2008. Any permits obtained will be included in the Finding of No Significant Impact (FONSI) document submitted for review to the Federal Highway Administration (FHWA). A Section 9 Bridge Permit issued by the U.S. Coast Guard is not required for either project since no construction of bridges, causeways, dams, or dikes are proposed.

In addition to the above requirements, permits must be obtained from state and local authorities in order to discharge storm water associated with the construction of the proposed boat launch and marina/transient dock facilities. The Kentucky Department for Environmental Protection issues Permit # KYR10, General KPDES Permit for Storm Water Point Source Discharges associated with Construction Activities, as promulgated under 401 KAR 5:055, Section 1, and KRS 224.16-050. The City of Paducah requires application for an Erosion Prevention & Sediment Control (EPSC) Permit under the authority of the U.S. Environmental Protection Agency Phase II of the NPDES Stormwater Program as well as State of Kentucky regulations.

### *Efforts to Avoid/Minimize Impacts and Mitigation*

The boat launch site has been designed to reduce environmental impacts by utilizing an existing roadway corridor and existing agricultural field for the entrance roadway and parking area. Other designs for this site would result in significantly greater impacts to higher quality wooded wetlands. Although the proposed alternative site design results in the impacts to approximately 9.7 acres of wetlands, only about 0.7 acres of wooded wetlands will be impacted. These impacts are limited to fringe areas and will not fragment the existing forest. No viable alternative boat launch site exists within the immediate vicinity of downtown Paducah. The selected site minimizes ecological impacts while still meeting the river access needs of the community. A mitigation plan was developed by Redwing Ecological Services, Inc. (Redwing) for the boat launch project to provide compensation for unavoidable impacts to approximately 9.7 acres of waters/wetlands by construction.

The impacts and committed mitigation for the boat launch project is as follows with measurements in acres unless stated:

Feature	Size	Impacted	Mitigation Ratio	Mitigation Required	Type	Size	Ratio	Credit
Wooded	37.0	0.7	3:1	2.1	Preservation	34.4	10:1	3.4
Wooded	37.0	0.7	3:1	2.1	Restoration	7.3	1:1	7.3
Farmed	16.0	8.3	1:1	8.3	-----	-----	-----	-----
Open Field	1.0	0.2	2:1	0.4	-----	-----	-----	-----
Up. Forest	-----	0.0	-----	-----	Preservation	3.4	10:1	0.3
Ohio River	-----	0.5 (250')	2:1	1.0 (500')	Restoration	765'	1:1	765'
<b>TOTAL</b>	<b>54.0</b>	<b>9.7 (250')</b>		<b>10.8 (500')</b>		<b>45.1</b>		<b>11.0*</b>

\* Includes 765' of riparian buffer restoration

These mitigation requirements will be met with on-site wetland preservation and restoration. The 11.0 acres of proposed mitigation more than compensates for impacts to wetlands (10.8 acres of required mitigation) by the proposed boat launch facility. The major components of the mitigation plan include wetland preservation, wetland restoration, and upland buffer preservation. Approximately 34.4 acres of existing high quality forested wetland will be



permanently preserved under a conservation easement/deed restriction within a designated conservation area. Approximately 7.3 acres of existing farmed wetland will be restored to forested wetland through planting of native wetland tree species. Approximately 3.4 acres of existing forested upland buffer will be permanently preserved under a conservation easement/deed restriction. Approximately 765 linear feet of wooded riparian buffer will be restored along the Ohio River through planting of native trees.

Alternate sites for the marina/transient dock facility are currently established with structures, not protective of impacts from the Ohio & Tennessee Rivers, heavily vegetated, and/or not owned by the City of Paducah. The use of the city-owned, underutilized riverfront property chosen will allow the facility to be constructed with minimal ecological impacts. The proposed marina/transient dock site represents the least environmentally damaging alternative for meeting the river access needs of the community. Since there are no wetlands within the marina/transient dock development site with the exception of the Ohio River, no compensatory mitigation will be required for wetland impacts.

A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

During construction of the boat launch and marina/transient dock facilities, erosion and sediment-laden storm water runoff may occur at a greater degree than presently occurring on existing terrain. Contractors will be required to design, install, and maintain best management practices (BMP) to prevent erosion and to control sediment-laden storm water runoff from leaving the construction sites. As in all construction sites, efforts to control these phenomena are not 100% efficient and therefore, it is expected that temporary erosion impacts will occur. The proposed projects are not expected to have any long-term impacts on the water quality of jurisdictional waters/wetlands or the Ohio River.

### *Cumulative & Indirect Impacts*

The proposed boat launch site will have impacts to jurisdictional wetlands; however, compensatory mitigation has been designed through preservation and restoration of the wooded, farmed, and open field wetlands found within the project site. The proposed marina/transient dock will be permitted through the U.S. Corps of Engineers and the Kentucky Department for Environmental Protection, Division of Water, for impacts to the Ohio River and the associated riverbank. It is anticipated that no compensatory mitigation will be required for these impacts due to the relatively limited nature of the impacts in relation to the Ohio River system. There are no cumulative or indirect impacts to wetlands, streams, etc. expected for the proposed projects.

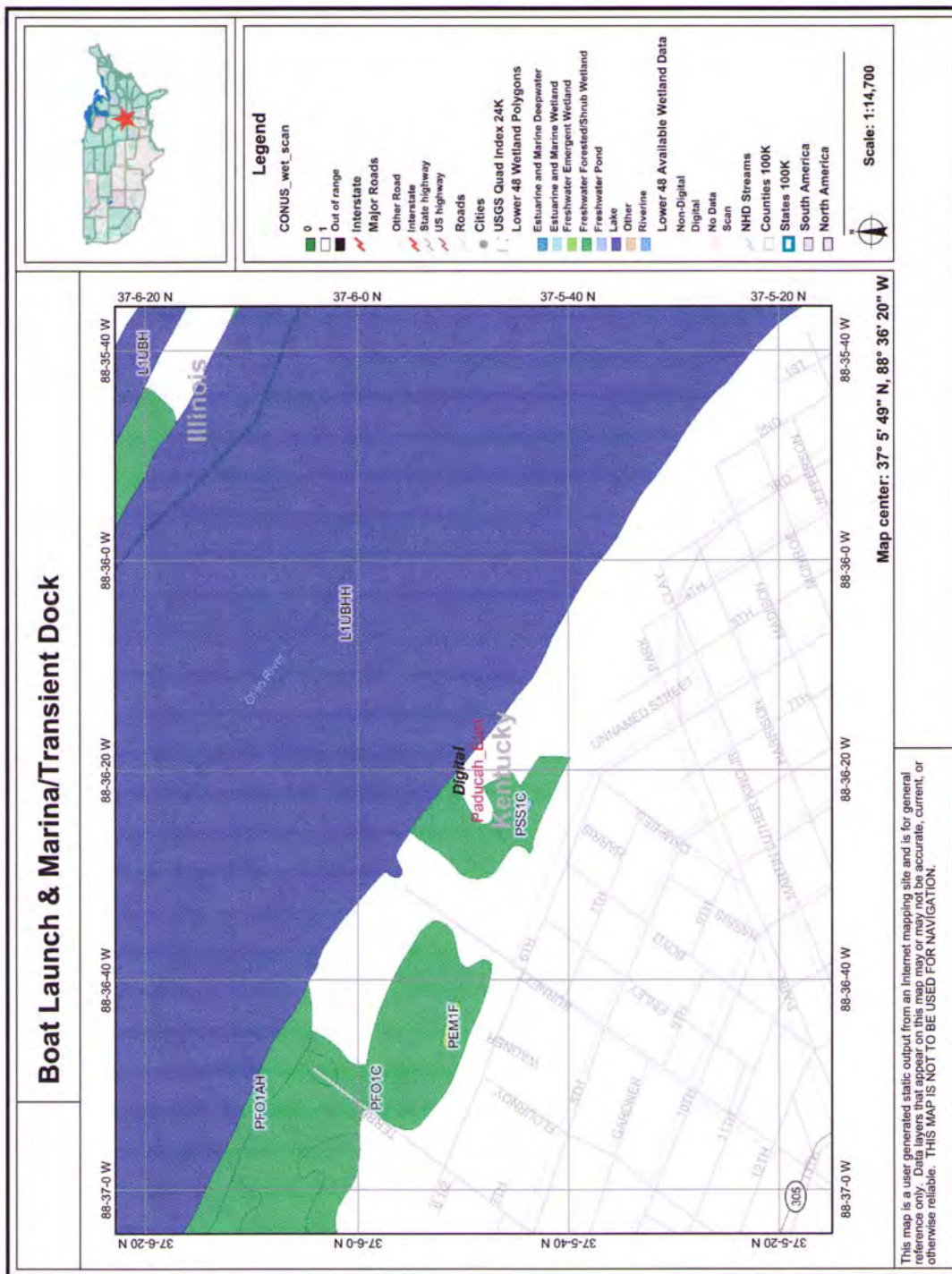


Figure 11

## **Wild & Scenic Rivers**

### *Baseline Conditions and Identification of Designated Wild & Scenic Rivers*

The Wild and Scenic Rivers Act (the Act) established a National Wild and Scenic Rivers System in 1968 for the protection of certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values. These rivers are to be preserved in free-flowing condition and their immediate environments are to be protected for the benefit and enjoyment of present and future generations. The Act also contains procedures and limitations for control of lands in federally administered components of the System and for disposition of lands and minerals under federal ownership. A portion of the Red River located in Menifee and Wolfe Counties is the only federally designated Wild and Scenic River in Kentucky. The Kentucky Wild Rivers Act of 1972 was established to preserve the state's most pristine rivers. Administered by the Division of Water under the Kentucky Department for Environmental Protection, the program protects portions of nine rivers from unwise use and development. Some activities are strictly prohibited within a Wild River corridor, such as surface mining, clear-cutting of timber and construction of dams or other in-stream disturbances. Existing residential and agricultural uses continue, but developments that might impair the river's water quality or natural condition are regulated through a permit system. The nine rivers with portions designated as state Wild Rivers and their counties are: Cumberland River (McCreary, Whitley), Rockcastle River (Pulaski, Laurel), Green River (Edmonson, Hart), Big South Fork of the Cumberland River (McCreary), Rock Creek (McCreary), Martins Fork of the Cumberland River (Harlan), Little South Fork of the Cumberland River (Wayne, McCreary), Red River (Menifee, Wolfe), and Bad Branch (Letcher). The proposed boat launch project will impact approximately 0.7 acres of the Ohio River near mile marker 936. The proposed marina/transient dock will impact approximately 8.0 acres of riverbank and 1.5 acres of open surface waters of the Ohio River near Mile Marker 935. The Ohio River is not designated as a federal Wild and Scenic River or a state Wild River under The Wild and Scenic Rivers Act or The Kentucky Wild Rivers Act of 1972, respectively; therefore, the regulations do not apply to these projects.



### *Cumulative & Indirect Impacts*

Not Applicable.

### *Location and Impact of Wild & Scenic Rivers, if applicable*

Not Applicable.

## **Threatened & Endangered Species**

### ***Baseline Conditions***

The boat launch project site has 16 acres of farmed wetlands which are considered low quality and offer minimal wetland functions, particularly in terms of wildlife/aquatic habitat, water quality, and outdoor education/recreation. The site also has 37 acres of wooded wetlands. This acreage is of moderate to high quality, providing important wetland functions and values in terms of floodwater attenuation, water quality, wildlife habitat, aquatic habitat, and potential outdoor recreation and education. Habitat diversity of the wooded wetlands is enhanced by two depressions. An approximate one-acre depression is located in the south-central portion of the site. A seven-acre depression is located in the central portion of the site on the northern edge of the wooded wetlands. Neither of these depressions is associated with flows from blue-line streams but receive runoff from adjacent slopes, wet weather conveyances (ditches), and/or flooding from the Ohio River. The wooded wetland area contains man-made features associated with a pump station located immediately across the levee from the western portion of the site. A pond and ditch have been constructed at the base of the earthen flood wall in the southwest portion of the site to help control discharge from the pump station. Discharge flows are pumped into the pond, from where they flow approximately 200 feet along a constructed ditch to a culvert, which appears to conduct flows to the Ohio River. The blue-line stream feature shown on the USGS topographic map no longer exists and it is assumed that it was created to manage pump station discharges in the past. The marina/transient dock site consists of undeveloped riverbank consisting of riprap and limited vegetation, Schultz Park, and surface waters of the Ohio River. There are no wetlands or streams within the bounds of this project site with the exception of the river. There are no named streams within either of the project sites according to USGS topographic mapping, National Wetland Inventory, soils maps, and the ecological study.

Redwing Ecological Services, Inc. (Redwing) conducted a threatened/endangered species survey of the boat launch area on April 2-3, 2007, as part of a joint application package for wetland and stream alteration permits. This survey concluded that the project site contains potential habitat for the federally endangered Indiana bat (*Myotis sodalis*). The wooded portion of the site contains scattered trees that represent potential summer roosting/maternity habitat for the Indiana bat. These include dead snags and live trees with loose, exfoliating bark and cracks. Redwing conducted a threatened/endangered species survey of the proposed marina/transient dock site on May 14, 2008. There were no indications of protected species or habitats. Literature reviewed indicates that protected mussel species have the potential to occur in the Ohio River.

According to the U.S. Fish & Wildlife Service (USFWS), the proposed boat launch and marina/transient dock projects are in close proximity to several federally protected mussel records known to occur within the Ohio River. A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch and marina/transient dock areas from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the



matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

### *Coordination with USFWS, KDFWR & KSNPC*

As required for the Environmental Assessment (EA) for the projects, coordination with the U.S. Fish and Wildlife Service (USFWS), Kentucky Department of Fish and Wildlife Resources (KDFWR), and the Kentucky State Nature Preserves Commission (KSNPC) has been conducted. The summary of the coordination is as follows:

- Letters of Intent for the boat launch project are forwarded to the USFWS, KDFWR, and KSNPC describing the project background, purpose and need, and funding mechanism (July 2007)
- The U.S. Corps of Engineers (USCOE) issues a public notice concerning the proposed boat launch project (July 2007)
- The USFWS concurs that the boat launch project will not likely affect Indiana Bats or federally protected mussel species based on commitments made in the public notice issued by the USCOE (September 2007)
- Amended Letters of Intent for the boat launch and marina/transient dock projects are forwarded to the USFWS, KDFWR, and KSNPC describing the project backgrounds, purposes and needs, and funding mechanisms (November 2007)
- Application made to the KSNPC for historical threatened/endangered species research (November 2007)
- KSNPC completes historical threatened/endangered species research (December 2007)
- KDFWR recommends environmental commitments to protect Indiana Bats and consultation with the USFWS concerning federally protected mussel species. (December 2007)
- USFWS requests a mussel survey for the marina/transient dock area (January 2008)
- Mussel survey conducted at the boat launch and marina/transient dock areas by Redwing Ecological Services, Inc. (Redwing) and others (August 2008)
- USFWS identifies dead mussel shells as Fat Pocketbook mussels, a state and federally listed endangered species (October 2008)
- USFWS requests a Biological Assessment (BA) of the boat launch and marina/transient dock projects based on the identification of the Fat Pocketbook mussels (October 2008)
- Redwing conducts a BA of the boat launch and marina/transient dock (October 2008)
- Redwing submits the BA report to the USFWS for concurrence (December 2008)

### *Impacts to Federally Threatened/Endangered Species and/or Habitat*

Redwing Ecological Services, Inc., (Redwing) conducted a threatened/endangered species survey of the boat launch area on April 2-3, 2007, as part of a joint application package for wetland and stream alteration permits. This survey concluded that the project site contains potential habitat for the federally endangered Indiana bat (*Myotis sodalis*). To ensure that no impacts to the Indiana bat will occur, tree clearing in the southeast corner and the western portion of the site will occur only between October 15 and March 31. If clearing must be done outside of this period, detailed surveys and consultation with the U.S. Fish and Wildlife Service (USFWS) will be completed prior to the initiation of any disturbance activities.



The USFWS reviewed the U.S. Army Corps of Engineers public notice issued on July 19, 2007, for the boat launch project. According to USFWS records, the Indiana bat (*Myotis sodalis*) has been documented within five miles of the site. Based on this information, the USFWS believes that (1) forested areas in the vicinity of or on the project area may provide potentially suitable summer roosting and foraging habitat, and (2) caves, rock shelters, and abandoned underground mines in the vicinity of and on the project area may provide potentially suitable winter hibernation habitat. The USFWS concurred with Redwing in that the proposed boat launch project will not likely adversely affect Indiana bats due to the absence of suitable winter habitat and the commitment that the removal of trees onsite will only occur between October 15 and March 31 to avoid summer roosting activities. The USFWS stated that the subject project is within close proximity to several federally protected mussel records known to occur within the Ohio River. A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at the boat launch location. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).



The Kentucky Department of Fish and Wildlife Resources (KDFWR) reviewed the boat launch project. The KDFWR Information System indicated that federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the area. The Indiana bat utilizes a wide array of habitats, including riparian forests, upland forest, and fencerows for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in cavities of dead and live trees, and in snags. Trees in excess of 16 inches diameter at breast height are considered optimal for maternity colony roosts, but trees in excess of nine inches appear to provide suitable maternity roosting habitat. Male Indiana bats have been observed roosting in trees as small as three inches in diameter. Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting activities.

However, if any winter hibernation habitat is identified on the project or within ten miles of the project area, the KDFWR recommends that tree removal occurs between November 15 and March 31 in order to avoid impacts to bat swarming behavior. KDFWR also stated that several federally listed mussel species are located within this portion of the Ohio River.

The Kentucky State Nature Preserves Commission (KSNPC) was contacted with the purpose of allowing them to review their database and comment on the boat launch project. They determined that no occurrences of the plants or animals and no occurrences of the exemplary natural communities that are monitored by the KSNPC are reported as occurring in the boat launch area. KSNPC further expounded on specific species and their relationship to the project. The Southeastern myotis (*Myotis austroriparius*) and Indiana bat (*Myotis sodalis*) are known to occur in the bottomland hardwood forest adjacent to the boat launch project area. In order to avoid impacts to bats, KSNPC recommends that bottomland forests and riparian corridors not be disturbed. The Evening bat (*Nycticeius humeralis*) is known to occur within 10 miles of the project site. Summer habitats include bottomland forests, swamps, and riparian corridors. Many of the fish and mussel species listed by the KSNPC are believed to be extirpated or are known only through historical records. Some species; however, are still in existence in the area. These species are sensitive to increased turbidity, sediment, and other adverse influences on water quality. KSNPC data is not sufficient to guarantee absence of these species from the project site and they recommend that impacted streams be thoroughly surveyed by a qualified biologist prior to any in-stream disturbance. A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at the boat launch location. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI). The interior least tern (*Sterna antillarum athalassos*) occurs near the project area and is typically found on bare or nearly bare alluvial islands and sand bars. Henslow's sparrow (*Ammodramus henslowii*) is associated with fallow hayfields, ungrazed pastures with scattered small trees and tall weeds, grassland, and brushland. The Sharp-shinned hawk (*Accipiter striatus*) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees. The Barn owl (*Tyto alba*) can be found in hollow trees, old buildings, barns, silos, and other abandoned structures. If Barn owl habitat will be disturbed, the USFWS will be consulted prior to commencement. According to KSNPC, the reports reviewed summarize the existing information known to the Kentucky Natural Heritage Program at the time of the review regarding the biological elements or locations in question. The summary is not to be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.



The U.S. Fish and Wildlife Service (USFWS) reviewed the marina/transient dock project. According to their records, several mussels which are endangered and one candidate for listing are known to occur in the Ohio River. These mussels include the following: Fanshell (*Cyprogenia stegaria*), Rough pigtoe (*Pleurobema plenum*), Pink mucket (*Lampsilis abrupta*), Fat pocketbook (*Potamilus capax*), Orangefoot pimpleback (*Plethobasus cooperianus*), Clubshell (*Pleurobema clava*), and Sheepnose (*Plethobasus cyphus*). The USFWS recommended a survey of the footprint of the project area and also a certain distance both upstream and downstream of the project site in order to determine the presence or absence of these mussel species in an effort to determine the potential impacts. A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the marina/transient dock area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at the marina/transient dock location. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).



The Kentucky Department of Fish and Wildlife Resources (KDFWR) reviewed the marina/transient dock project. The KDFWR Information System indicated that federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the area. Specifically, the Indiana bat (*Myotis sodalis*) and several federally listed mussel species are known to occur within the project area. Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting activities. However, if any winter hibernation habitat is identified on the project or within ten miles of the project area, KDFWR recommends that tree removal occurs between November 15 and March 31 in order to avoid impacts to bat swarming behavior.

The Kentucky State Nature Preserves Commission (KSNPC) was contacted with the purpose of allowing them to review their database and comment on the marina/transient dock project to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the KSNPC occur in area. The Southeastern myotis (*Myotis austroriparius*) and Indiana bat (*Myotis sodalis*) are known to occur near the proposed project. A thorough survey for these species should be conducted by a qualified biologist if suitable habitat will be disturbed. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat. Summer foraging habitats include upland forests, bottomland forests and riparian corridors. Suitable roost and winter sites include sandstone and limestone caves, rockhouses, clifflines, auger holes, and abandoned mines. In order to avoid impacts to bats, bottomland forests and riparian corridors, particularly near caves, should not be disturbed. The Evening bat (*Nycticeius humeralis*) occurs within the project area. Summer habitats include bottomland forests, swamps, and riparian corridors. In order to avoid impacts to these bats, a thorough survey should be conducted. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within



the proposed corridor, particularly in preferred summer habitat. Aquatic species and habitats in the area are sensitive to increased turbidity, sediment, and other adverse influences on water quality. KSNPC data is not sufficient to guarantee absence of these species from the project site and they recommend that impacted streams be thoroughly surveyed by a qualified biologist prior to any in-stream disturbance. A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the marina/transient dock area from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at the marina/transient dock location. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI). The interior least tern (*Sterna antillarum athalassos*) occurs near the project area and is typically found on bare or nearly bare alluvial islands and sand bars. The Bald eagle (*Haliaeetus leucocephalus*) can be found near seacoasts, rivers, and large lakes. The species prefers to roost in conifers in winter in some areas. In winter, the species may associate with waterfowl concentrations or congregate in areas with abundant dead fish. Henslow's sparrow (*Ammodramus henslowii*) is associated with fallow hayfields, ungrazed pastures with scattered small trees and tall weeds, grassland, and brushland. The Sharp-shinned hawk (*Accipiter striatus*) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees.



According to the Kentucky State Nature Preserves Commission (KSNPC), the reports reviewed summarize the existing information known to the Kentucky Natural Heritage Program at the time of the review regarding the biological elements or locations in question. The summary is not to be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The marina/transient dock facility area consists of undeveloped riverbank (rip rap), limited scrub vegetation, Schultz Park, and Ohio River surface waters; therefore, it is unlikely that any habitat is present with the exception of the listed mussel species as described above. It is unlikely that the proposed marina/transient dock facility will impact the terrestrial species described.

The following list of threatened species (T), endangered species (E, LE), candidate species (C), historic (H), special concern (S), and species of management concern (SOMC) for McCracken County was obtained from the document entitled *Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for McCracken County, Kentucky* published by the Kentucky State Nature Preserves Commission in June 2007 and a *Standard Occurrence Report* for the specific project areas conducted by the Commission.

### **Taxonomic Group**

### **State, Federal Status**

#### **Vascular Plants<sup>^</sup>**

Red Buckeye ( <i>Aesculus pavia</i> )	T, NA
Lakecress ( <i>Armoracia lacustris</i> )	T, NA
Water Hickory ( <i>Carya aquatica</i> )	T, NA
Common Silverbell ( <i>Halesia tetraptera</i> )	E, NA
Broad-leaf Golden-aster ( <i>Heterotheca subaxillaris</i> )	T, NA
Ovate Fiddleleaf ( <i>Hydrolea ovata</i> )	E, NA
One-flower Fiddleleaf ( <i>Hydrolea uniflora</i> )	E, NA
Rough Rattlesnake-root ( <i>Prenanthes aspera</i> )	E, NA
Sweet Coneflower ( <i>Rudbeckia subtomentosa</i> )	E, NA
Nine Species	S, NA
Four Species	H, NA

#### **Aquatic Snails**

Onyx Rocksnail ( <i>Leptoxis praerosa</i> ) <sup>^</sup>	S, SOMC
Armored Rocksnail ( <i>Lithasia armigera</i> ) <sup>**</sup>	S, SOMC
Ornate Rocksnail ( <i>Lithasia geniculata</i> ) <sup>*</sup>	S, SOMC
Varicose Rocksnail ( <i>Lithasia verrucosa</i> ) <sup>*</sup>	S, SOMC

#### **Freshwater Mussels**

Pink Mucket ( <i>Lampsilis abrupta</i> ) <sup>*</sup>	E, LE
Pocketbook ( <i>Lampsilis ovata</i> ) <sup>*</sup>	E, NA
Ring Pink ( <i>Obovaria retusa</i> ) <sup>*</sup>	E, LE
Orangefoot Pimpleback ( <i>Plethobasus cooperianus</i> ) <sup>*</sup>	E, LE
Fat Pocketbook ( <i>Potamilus capax</i> ) <sup>*</sup>	E, LE
Sheepnose ( <i>Plethobasus cyphyus</i> ) <sup>*</sup>	E, C
Pyramid Pigtoe ( <i>Pleurobema rubrum</i> ) <sup>*</sup>	E, SOMC
Rabbitsfoot ( <i>Quadrula cylindrica cylindrica</i> ) <sup>*</sup>	T, SOMC
Bleufer ( <i>Potamilus purpuratus</i> ) <sup>^</sup>	E, NA
Purple Lilliput ( <i>Toxolasma lividus</i> ) <sup>^</sup>	E, SOMC
Longsolid ( <i>Fusconaia subrotunda</i> ) <sup>*</sup>	S, NA

#### **Crustaceans<sup>^</sup>**

Swamp Dwarf Crayfish ( <i>Cambarellus puer</i> )	E, NA
Shrimp Crayfish ( <i>Orconectes lancifer</i> )	E, NA
Gray-speckled Crayfish ( <i>Orconectes palmeri palmeri</i> )	E, NA

#### **Insects<sup>^</sup>**

Rare Cane Borer Moth ( <i>Papaipema</i> sp. 5)	T, NA
Duke's Skipper ( <i>Euphyes dukesi</i> )	S, NA
Northern Hairstreak ( <i>Satyrion favonius ontario</i> )	S, NA

### Fishes

Lake Sturgeon ( <i>Acipenser fulvescens</i> )*	E, SOMC
Alligator Gar ( <i>Atractosteus spatula</i> )^	E, SOMC
Lake Chubsucker ( <i>Erimyzon sucetta</i> )^	T, NA
Cypress Darter ( <i>Etheostoma proeliare</i> )^	T, NA
Cypress Minnow ( <i>Hybognathus hayi</i> )^	E, NA
Dollar Sunfish ( <i>Lepomis marginatus</i> )^	E, NA
Redspotted Sunfish ( <i>Lepomis miniatus</i> )^	T, NA
Inland Silverside ( <i>Menidia beryllina</i> )*	T, NA
Taillight Shiner ( <i>Notropis maculatus</i> )^	T, NA
Central Mudminnow ( <i>Umbra limi</i> )^	T, NA
Northern Madtom ( <i>Noturus stigmosus</i> )^	S, SOMC
Chestnut Lamprey ( <i>Ichthyomyzon castaneus</i> )*	S, NA
Burbot ( <i>Lota lota</i> )*	S, NA
Blacktail Shiner ( <i>Cyprinella venusta</i> )^	S, NA
Chain Pickerel ( <i>Esox niger</i> )^	S, NA
Black Buffalo ( <i>Ictiobus niger</i> )^	S, NA

### Amphibians

Green Treefrog ( <i>Hyla cinerea</i> )*	S, NA
Northern Crawfish Frog ( <i>Rana areolata circulosus</i> )^	S, NA

### Reptiles

Alligator Snapping Turtle ( <i>Macrochelys temminckii</i> )*	T, SOMC
Midland Smooth Softshell ( <i>Apalone mutica mutica</i> )^	S, NA
Western Mud Snake ( <i>Farancia abacura reinwardtii</i> )^	S, NA
Eastern Ribbon Snake ( <i>Thamnophis sauritus sauritus</i> )^	S, NA

### Breeding Birds

Bachman's Sparrow ( <i>Aimophila aestivalis</i> )*	E, SOMC
Hooded Merganser ( <i>Lophodytes cucullatus</i> )^	T, NA
Osprey ( <i>Pandion haliaetus</i> )*	T, NA
Interior Least Tern ( <i>Sterna antillarum athalassos</i> )**	E, LE
Bank Swallow ( <i>Riparia riparia</i> )*	S, NA
Sharp-shinned Hawk ( <i>Accipiter striatus</i> )*	S, NA
Henslow's Sparrow ( <i>Ammodramus henslowii</i> )*	S, SOMC
Barn Owl ( <i>Tyto alba</i> )*	S, NA
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )**	T, Delisted
Fish Crow ( <i>Corvus ossifragus</i> )^	S, NA
Mississippi Kite ( <i>Ictinia mississippiensis</i> )^	S, NA
Bell's Vireo ( <i>Vireo bellii</i> )*	S, SOMC

### Mammals

Southeastern Myotis ( <i>Myotis austroriparius</i> )*	E, SOMC
Indiana Bat ( <i>Myotis sodalis</i> )*	E, LE
Evening Bat ( <i>Nycticeius humeralis</i> )*	S, NA

\* Listed in both documents

\*\* Listed in *Standard Occurrence Report*

^ Listed in *Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for McCracken County, Kentucky*

NA- No status listed

## Affected Wildlife Migration Patterns

Western Kentucky hosts a variety of migratory birds, from wintering bald eagles, gulls, ducks, and geese, to neotropical migratory birds such as hummingbirds, warblers, and tanagers. Western Kentucky is also within two non-principal routes of the North American Migration Flyways; the Atlantic Flyway and the Mississippi Flyway. Both are migratory paths from Canada that cross the United States. Due to the minimum boat launch footprint in the Ohio River, minimized and designed tree removal, and commitment to compensatory mitigation of wetland impacts in the form of conservation and restoration of wetlands, the boat launch project will not impact the migratory pattern of birds traveling within the two migration flyways. The marina/transient dock area is currently made up of undeveloped riverbank, Schultz Park, and water surface of the Ohio River. Due to the minimized marina and transient dock footprints and the absence of woodland vegetation on the riverbank, the marina/transient dock facility will not impact the migratory pattern of birds traveling within the two migration flyways.

Of the fifteen bat species known in the State of Kentucky, the Silver-haired bat (*Lasionycteris noctivagans*), Red bat (*Lasiurus borealis*), Hoary bat (*Lasiurus cinereus*), and the Evening bat (*Nycticeius humeralis*) are migratory. The Evening bat is a state species of concern and has been recorded in McCracken County, Kentucky. Ten species hibernate which includes the Indiana bat (*Myotis sodalis*) and the Southeastern myotis (*Myotis austroriparius*), with both having also been recorded in McCracken County, Kentucky. The Indiana bat is both a state and federally listed endangered species. The Southeastern myotis is a state endangered species and a federal species of management concern. One additional bat species, the Brazilian Free-Tailed bat (*Tadarida brasiliensis*) is an accidental, autumn wanderer from the south. A survey of the boat launch project site concluded that the site contains potential habitat for the Indiana bat. To ensure that no impacts to the Indiana bat will occur, tree clearing in the southeast corner and the western portion of the site will occur only between October 15 and March 31. If clearing must be done outside of this period, detailed surveys and consultation with the U.S. Fish and Wildlife Service will be completed prior to the initiation of any disturbance activities. There is no potential habitat for bat species within the marina/transient dock project area. Based on the minimized tree removal in the boat launch area as well as the lack of habitat in the marina/transient dock facility area, there should be no impacts to the migratory activities of bat species.



## Location of Habitat, if present, and Avoidance Alternatives

Redwing Ecological Services, Inc., (Redwing) conducted a threatened/endangered species survey of the boat launch area on April 2-3, 2007, as part of a joint application package for wetland and stream alteration permits. This survey concluded that the project site contains potential habitat for the federally endangered Indiana bat (*Myotis sodalis*). The wooded portion of the site contains scattered trees that represent potential summer roosting/maternity habitat for the Indiana bat. These include dead snags and live trees with loose, exfoliating bark and cracks. To ensure that no impacts to the Indiana bat will occur, tree clearing in the southeast corner and the western portion of the site will occur only between October 15 and March 31. If clearing must be done outside of this period, detailed surveys and consultation with the U.S. Fish and Wildlife Service (USFWS) will be completed prior to the initiation of any disturbance



activities. Redwing conducted a threatened/endangered species survey of the marina/transient dock area on May 14, 2008 as part of a joint application package for stream alteration permits. The marina/transient dock facility area consists of undeveloped riverbank (rip rap), limited scrub vegetation, the existing Schultz Park, and Ohio River surface waters; therefore, it is unlikely that any habitat is present with the exception of the listed mussel species.

Both the boat launch and marina/transient dock projects involve the Ohio River. A mussel survey was conducted by Redwing with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch and marina/transient dock areas from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

### *Biological Assessment Requirements and Section 7 Consultation Requirements*

To comply with Section 7 of the Endangered Species Act of 1973, as amended, biological assessments are required to determine the potential for and/or presence of endangered and threatened species. Redwing Ecological Services, Inc. (Redwing) conducted a threatened/endangered species survey of the boat launch and marina/transient dock areas on April 2-3, 2007, and May 14, 2008, respectively, as part of joint application packages for wetland and stream alteration permits. Redwing also conducted mussel surveys at the boat launch site and marina/transient dock site from August 5-8, 2008. Letters of intent requesting comments and describing the project backgrounds, purpose and needs, and funding mechanisms were sent to the U.S. Fish and Wildlife Service, Kentucky Department of Fish and Wildlife Resources, and the Kentucky State Nature Preserves Commission. Each responded with discussion of the protection of one or more species known to occur in the areas of concern.

### *Mitigation of Impacts to Threatened/Endangered Species or Habitat*

To ensure that no impacts to the Indiana bat will occur, tree clearing in the southeast corner and the western portion of the boat launch project site will occur only between October 15 and March 31. If clearing must be done outside of this period, detailed surveys and consultation with the U.S. Fish and Wildlife Service (USFWS) will be completed prior to the initiation of any disturbance activities. Both the boat launch and marina/transient dock projects involve the Ohio River. A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch and marina/transient dock areas from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed

prior to approval of a Finding of No Significant Impact (FONSI). Aquatic and/or terrestrial habitat for both the boat launch and marina/transient dock projects is detailed in Figure 12.

### *Cumulative & Indirect Impacts*

Endangered and threatened species research concluded that the boat launch project site contains potential habitat for the federally endangered Indiana bat (*Myotis sodalis*). To ensure that no impacts to the Indiana bat will occur, tree clearing in the southeast corner and the western portion of the site will occur only between October 15 and March 31. If clearing must be done outside of this period, detailed surveys and consultation with the U.S. Fish and Wildlife Service (USFWS) will be completed prior to the initiation of any disturbance activities. A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch and marina/transient dock areas from August 5-8, 2008. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at both the boat launch and marina/transient dock locations. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI). Cumulative and indirect impacts are not expected since commitments have been made to reduce stress on bat and mussel species that have the potential to be within the construction areas of the proposed boat launch and marina/transient dock facilities.



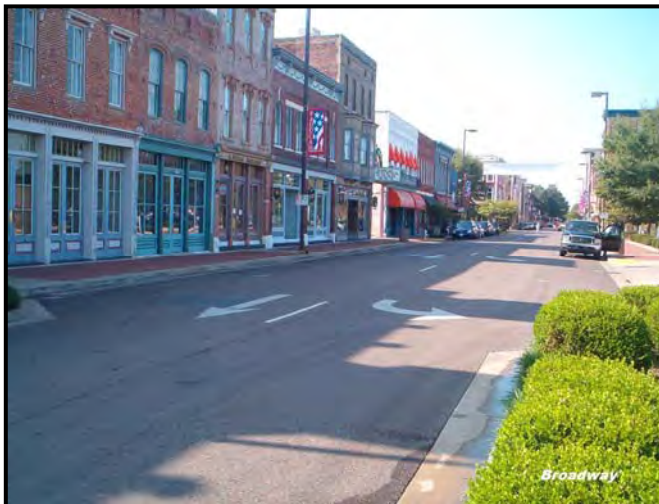
Figure 12

## **Section 106**

### *State Historic Preservation Office*

Section 106 of the National Historic Preservation Act of 1966 as amended requires federal agencies to consider the effects of their actions on historic properties. Coordination with the Kentucky Heritage Council/State Historic Preservation Office (the Council) was conducted to identify and help predict the locations of significant archaeological and architectural resources in the vicinity of the proposed boat launch and marina/transient dock projects.

The mandate of the Council is to identify, preserve, and protect the cultural resources of Kentucky. The Council also maintains continually updated inventories of historic structures and archaeological sites and nominates properties to the National Register of Historic Places. Within the Council are the Native American Heritage Commission and the Kentucky African-American Heritage Commission. The Council reviewed the boat launch and marina/transient dock projects. This review indicated that (1) the northwest portion of the boat launch project area and the marina/transient dock project area have the potential to contain archaeological sites that are eligible for listing in the National Register of Historic Places, and (2) there are numerous historic structures located within and adjacent to both project areas. The Council recommended that the boat launch and marina/transient dock project areas be surveyed to determine if the projects will impact archaeological sites as described. The Council also recommended that an architectural survey be conducted of the Area of Potential Effect (APE) for each project to determine if it will affect historic structures that are eligible for or listed in the National Register of Historic Places.



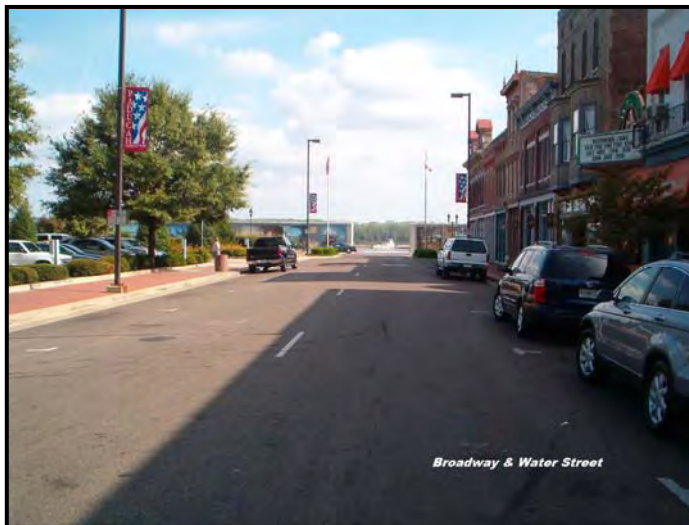
Native American Consultation (NAC) is held at a sovereign government to government level; therefore, the lead federal agency, Federal Highway Administration (FHWA), initiates consultations and discussions with interested tribes. FHWA has established specific NAC protocols with a number of federally-recognized tribes who have expressed interest in portions of Kentucky. When necessary, FHWA consults with the Chickasaw Nation, the Shawnee Tribe, the Absentee Shawnee Tribe of Oklahoma, the Eastern Shawnee Tribe of Oklahoma, and the Peoria Indian Tribe of Oklahoma for projects located in McCracken County. After review of archaeological survey reports, the Kentucky Transportation Cabinet submits the results to FHWA who then consults with the interested tribes if either prehistoric human remains and/or prehistoric artifacts are found. Results of the archaeological surveys are forwarded to the interested tribes for comment. After a period of 45 days has elapsed, FHWA collects all comments and submits the comments for inclusion in the Finding of No Significant Impact (FONSI). If one or more tribes express concern, additional consultation is conducted. Consultation is closed once the concerns are addressed or the tribes are invited to be signatories to a Memorandum of Agreement. If no prehistoric remains or artifacts are found in the surveys, no consultation with the tribes is required. A Phase I Archaeological Survey was



conducted for the proposed boat launch and marina/transient dock sites by American Resources Group, Ltd. on May 10, 2008. The survey was achieved through a site file search by the Kentucky Heritage Council, a literature review, and an archaeological field survey. No archaeological sites were found within the proposed boat launch and marina/transient dock sites; therefore, no consultation with tribal representatives is required.

### *Additional Agency & Local Involvement*

The City of Paducah's Historic & Architectural Review Commission (1) provides exclusive jurisdiction as a Board of Adjustment over historic zones and the Neighborhood Service Zone within the city, (2) reviews applications for a Certificate of Appropriateness or a Certificate of Zoning Compliance, and (3) reviews all nominations for the National Register of Historic Places at the local level. Local historic designations were also reviewed as part of the assessment. According to the City of Paducah Zoning Map, there are two historic zonings within the city limits. The two historic zonings are: Historic Commercial (H-1) and Historical Neighborhood (H-2).



The Historic Commercial (H-1) area is approximately 390 linear feet southeast of the proposed marina/transient dock facility and is also separated from the project area by the existing concrete flood wall. The Historic Commercial (H-1) area is approximately 5,500 linear feet southeast of the proposed boat launch site and is also separated from the project area by the existing flood wall. The Historical Neighborhood (H-2) area is approximately 390 linear feet southwest of the proposed marina/transient dock facility. The Historical Neighborhood (H-2) area is approximately 2,100 linear feet southeast of the proposed boat launch project. Both projects are separated from the historic areas by the existing flood wall. The approximate elevations of the proposed boat launch and the boat launch parking area are 310 and 320 feet above Mean Sea Level (MSL), respectively. The earthen floodwall elevation near the intersection of Burnett Street and North 6<sup>th</sup> Street is approximately 350 feet above MSL; therefore, the proposed boat launch facility will not have any significant visual impacts on the historic areas in downtown Paducah. The most elevated structure of the proposed marina/transient dock facility will be the overlook at 336 feet above MSL. The elevation at the top of the flood wall from Harrison Street to Broadway Street is approximately 349 feet above MSL; therefore, the proposed overlook and balance of the marina/transient dock will not have any significant visual impacts on the historic areas in downtown Paducah.

The National Register of Historic Places (the Register) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archaeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The Register is administered by the National Park Service, which is part of the U.S. Department of the Interior. The City of Paducah/McCracken County has twenty five historic properties listed on the Register.

## **Historic Structures or Districts**

### *Studies Conducted in Determining Historic Characteristics of the Area*

Section 106 of the National Historic Preservation Act of 1966 as amended requires federal agencies to consider the effects of their actions on historic properties. According to the City of Paducah Zoning Map, there are two historic zonings within the city limits. The two historic zonings are: Historic Commercial (H-1) and Historical Neighborhood (H-2). The Historic Commercial (H-1) area is approximately 390 linear feet southeast of the proposed marina/transient dock facility and is also separated from the project area by the existing concrete flood wall. The Historic Commercial (H-1) area is approximately 5,500 linear feet southeast of the proposed boat launch site and is also separated from the project area by the existing flood wall. The Historical Neighborhood (H-2) area is approximately 390 linear feet southwest of the proposed marina/transient dock facility. The Historical Neighborhood (H-2) area is approximately 2,100 linear feet southeast of the proposed boat launch project. Both project areas are separated from this historic zoning by the existing flood wall. The historical zones are detailed in Figure 13.



Figure 13

The National Register of Historic Places (the Register) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archaeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The Register is administered by the National Park Service, which is part of the U.S. Department of the Interior. The City of Paducah/McCracken County has twenty five historic properties listed on the Register. An architectural survey within an approved Area of Potential Effect (APE) was conducted for the proposed boat launch site on May 5, 2008 to determine if the proposed project will affect historic structures that are eligible for or listed in the Register. The Council recommended that the appropriate APE for the proposed marina/transient dock facility was the project site itself and that it should not extend beyond the project limits. The Council was requested by letter dated April 15, 2009 for formal confirmation of the APE limits for the marina/transient dock. The Council did not respond to the request and the Kentucky Transportation Cabinet considered the matter closed by letter to the Council on July 17, 2009. Since there are no standing buildings located within the APE, no architectural survey for the marina/transient dock was conducted.

### *Areas of Potential Effect (APE)*

An architectural survey of the Area of Potential Effect (APE) for the proposed boat launch was conducted on May 5, 2008 by American Resources Group, Ltd. The APE for the boat launch site was defined as the area of Paducah between 6<sup>th</sup> and 8<sup>th</sup> Streets north to south and the area between the end of the proposed boat launch project area east to Boyd Street. This area covers approximately 25 acres. The Kentucky Heritage Council (the Council) reviewed the architectural survey report for the proposed boat launch site and concurred by letter dated July 3, 2008 that none of the sixteen historic properties will be impacted by the project. The Council recommended that the appropriate APE for the proposed marina/transient dock facility was the project site itself. The project area extends from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum into the Ohio River. Since there are no standing buildings located within the APE, no architectural survey for the marina/transient dock was conducted.

### *Properties Eligible or Determined to be Eligible for the National Register*

Sixteen historic properties were identified during the architectural survey of the Area of Potential Effect (APE) for the proposed boat launch. One property may meet the criteria for inclusion in the National Register of Historic Places and has been evaluated as eligible for listing. However, based on the findings of the architectural survey for the boat launch site, the proposed project will have no effect on the eligible site. There are no standing buildings within the APE for the marina/transient dock site; therefore, the proposed project will not have any effect on eligible sites.

### *Potential Effects on each Historic Property*

Sixteen historic properties were identified during the architectural survey of the Area of Potential Effect for the proposed boat launch. One property may meet the criteria for inclusion in the National Register of Historic Places (the Register) and has been evaluated as eligible for listing. However, the proposed project will have no effect on the eligible site. The remaining fifteen properties do not appear to meet the Register criteria of significance; consequently, these are evaluated as ineligible for the Register. Based on the findings of the architectural survey for



the boat launch site, the proposed project will have no effect on any of the sixteen historic properties described. There are no standing buildings within the APE for the marina/transient dock site; therefore, the proposed project will not have any effect on historic properties.

### *Coordination with SHPO Regarding Eligibility and Effects*

The Kentucky Heritage Council (the Council) reviewed the architectural survey report for the proposed boat launch site and concurred by letter dated July 3, 2008 that none of the sixteen historic properties will be impacted by the project. The Council recommended that the appropriate APE for the proposed marina/transient dock facility was the project site itself. Since there are no standing buildings located within the APE, no architectural survey for the marina/transient dock was conducted.

### *Adverse Effects and Avoidance Alternatives*

Based on the findings of the architectural survey conducted within a prescribed Area of Potential Effect (APE) for the boat launch site, the proposed project will have no effect on any of the sixteen historic properties within the APE. There are no standing buildings within the APE of the proposed marina/transient dock facility; therefore, the project will not have any effect on historic properties.

### *Cumulative & Indirect Impacts*

There are no known cumulative and/or indirect impacts to cultural historic resources that would result from the proposed boat launch and marina/transient dock projects.

### *Identify APE and Historic Structures and/or Districts within the Project Areas*

An architectural survey of the Area of Potential Effect (APE) for the proposed boat launch was conducted on May 5, 2008 by American Resources Group, Ltd. The APE for the boat launch site was defined as the area of Paducah between 6<sup>th</sup> and 8<sup>th</sup> Streets north to south and the area between the end of the proposed boat launch project area east to Boyd Street. This area covers approximately 25 acres. The Kentucky Heritage Council (the Council) reviewed the architectural survey report for the proposed boat launch site and concurred by letter dated July 3, 2008 that none of the sixteen historic properties will be impacted by the project. The Council recommended that the appropriate APE for the proposed marina/transient dock facility was the project site itself and that it should not extend beyond the project limits. The Council was requested by letter dated April 15, 2009 for formal confirmation of the APE limits for the marina/transient dock. The Council did not respond to the request and the Kentucky Transportation Cabinet considered the matter closed by letter to the Council on July 17, 2009. This project area extends from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum into the Ohio River. Since there are no standing buildings located within the APE, no architectural survey for the marina/transient dock was conducted. According to the City of Paducah Zoning Map, there are two historic zonings within the city limits. The two historic zonings are: Historic Commercial (H-1) and Historical Neighborhood (H-2). The Historic Commercial (H-1) area is approximately 390 linear feet southeast of the proposed marina/transient dock facility and is also separated from the project area by the existing concrete flood wall. The Historic Commercial (H-1) area is approximately 5,500 linear feet southeast of the proposed boat launch site and is also separated from the project area by the



existing flood wall. The Historical Neighborhood (H-2) area is approximately 390 linear feet southwest of the proposed marina/transient dock facility. The Historical Neighborhood (H-2) area is approximately 2,100 linear feet southeast of the proposed boat launch project. Both project areas are separated from this historic zoning by the existing flood wall. The approximate elevations of the proposed boat launch and the boat launch parking area are 310 and 320 feet above Mean Sea Level (MSL), respectively. The earthen floodwall elevation near the intersection of Burnett Street and North 6<sup>th</sup> Street is approximately 350 feet above MSL; therefore, the proposed boat launch facility will not have any significant visual impacts on the historic areas in downtown Paducah. The most elevated structure of the proposed marina/transient dock facility will be the overlook at 336 feet above MSL. The elevation at the top of the flood wall from Harrison Street to Broadway Street is approximately 349 feet above MSL; therefore, the proposed overlook and balance of the marina/transient dock will not have any significant visual impacts on the historic areas in downtown Paducah. The APE for the boat launch project is detailed in Figure 14. The APE for the marina/transient dock as submitted to the Kentucky Heritage Council is the project site itself labeled "Schultz Park & Transient Boat Dock Project Area" as detailed in Figure 15.

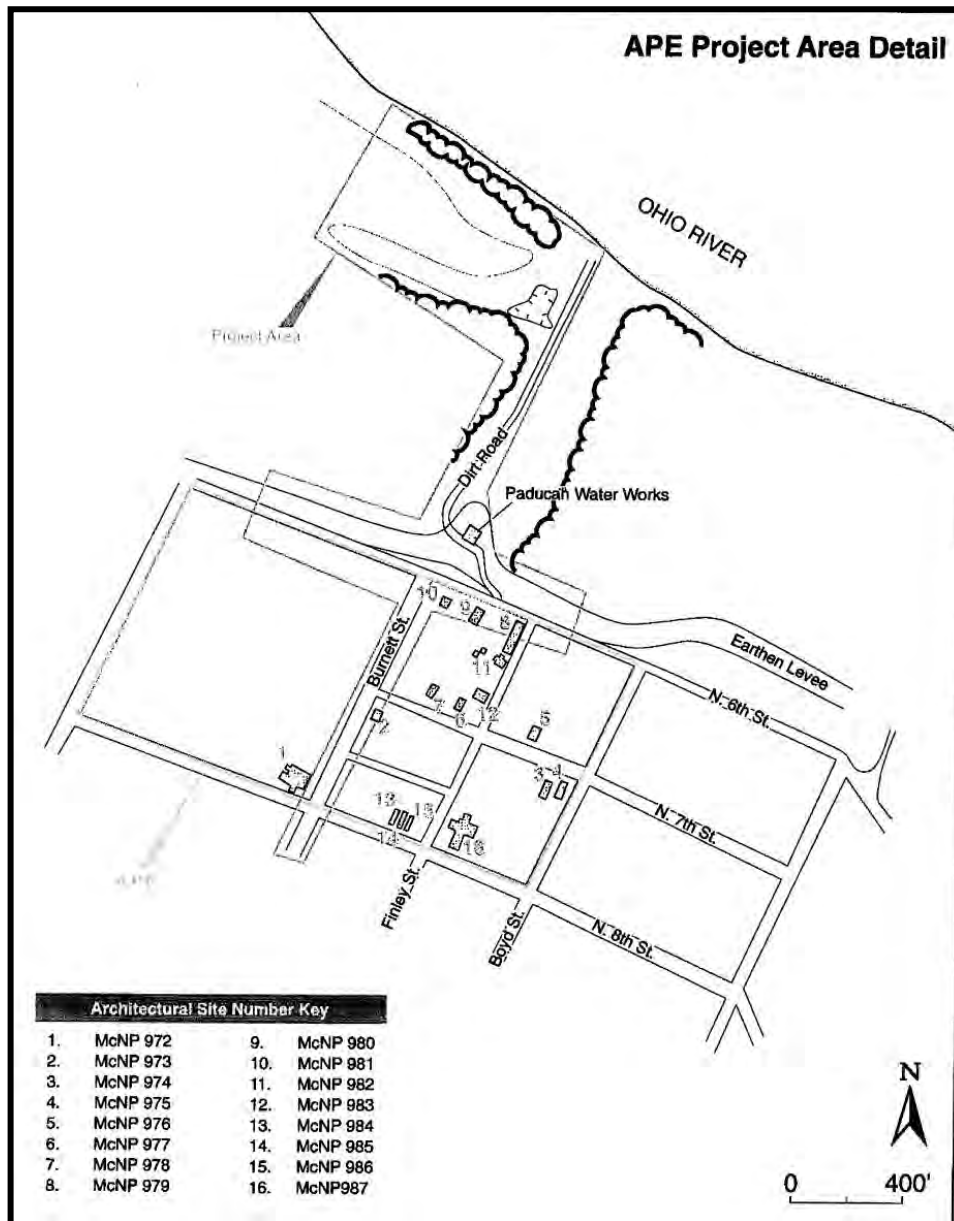


Figure 14

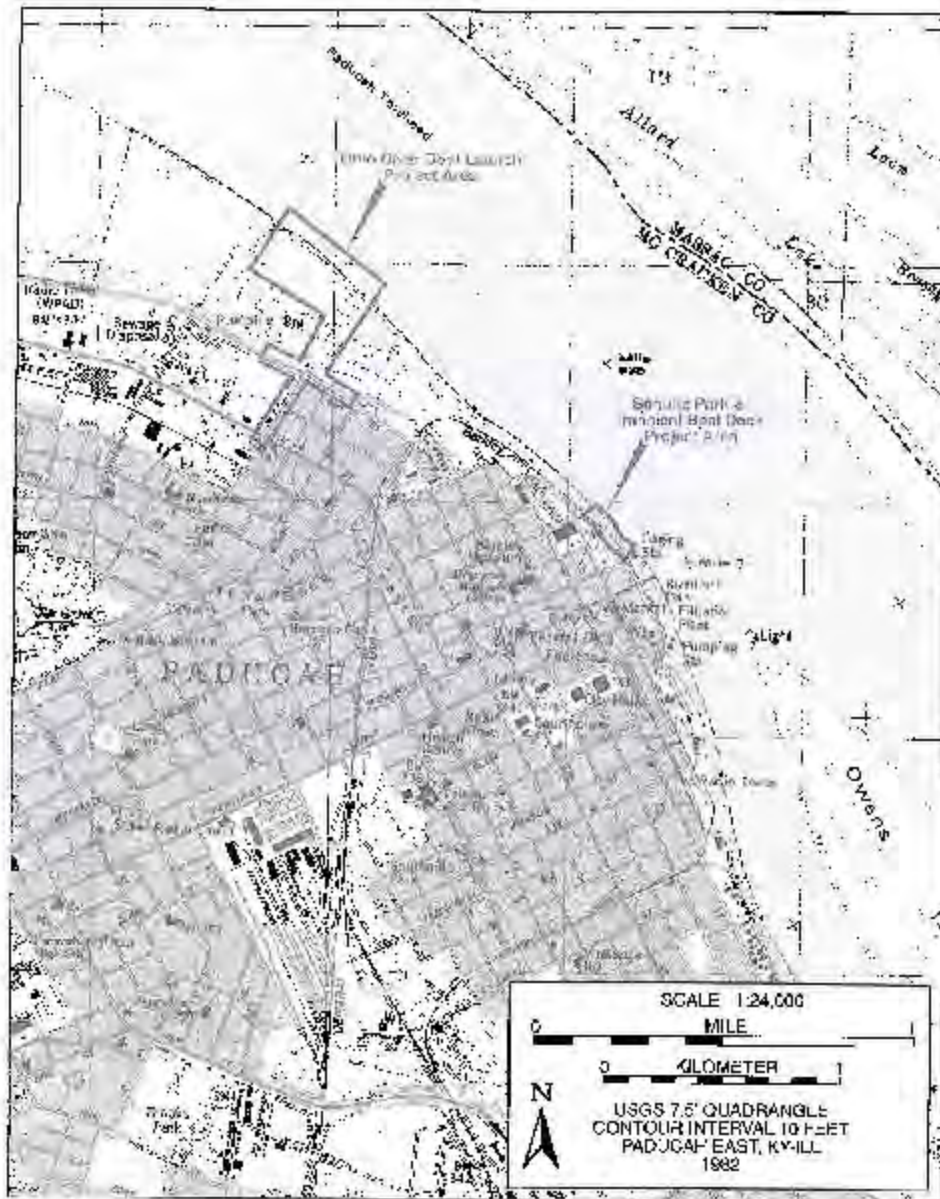


Figure 15.

000

Figure 15

## **Archaeological Sites**

### ***Areas of Potential Effect (APE)***

Phase I Archaeological Surveys were conducted within the proposed boat launch and marina/transient dock sites. The Area of Potential Effect (APE) for the boat launch site encompasses a 26-acre area within a corridor along Burnett Street from 8<sup>th</sup> Street to the Ohio River and approximately 500 feet along 6<sup>th</sup> Street on each side of Burnett Street. The APE for the marina/transient dock site encompasses a 17-acre area within the project boundary which extends from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum (transient dock portion) into the Ohio River.



### ***Archaeological Investigations***

According to the Kentucky Heritage Council (the Council), the northwest portion of the boat launch project area and the marina/transient dock have the potential to contain archaeological sites that are eligible for listing in the National Register of Historic Places. A Phase I Archaeological Survey was conducted at both sites by American Resources Group, Ltd. on May 10, 2008. The surveys were conducted through site file searches, literature review, and archaeological field surveys. No archaeological sites were identified within the proposed project areas. The Phase I Archaeological Survey report was submitted to the Council on June 19, 2008. The Council concurred with the report findings by letter on September 30, 2008.

### ***Archaeological Sites Identified***

A Phase I Archaeological Survey was conducted at both the boat launch and marina/transient dock sites by American Resources Group, Ltd. on May 10, 2008. No archaeological sites were identified within the two project areas.

### ***Sites Eligible or Determined to be Eligible for the National Register***

There were no archaeological sites found during the surveys conducted at the boat launch and marina/transient dock sites; therefore, no sites are eligible or determined to be eligible for the National Register of Historic Places.

### ***Cumulative & Indirect Impacts***

There were no archaeological sites found during the surveys conducted at the boat launch and marina/transient dock sites; therefore, there are no known cumulative and/or indirect impacts to archaeological sites that would result from the proposed boat launch and marina/transient dock projects.



## **Surface Water/Land Use**

### ***Existing Surface Water/Land Use and Anticipated Changes in Use***

The proposed boat launch facility project area consists of undeveloped upland woods, one agricultural field, a narrow wooded strip of Ohio River bank, and open field. There are no private, commercial, or industrial activities occurring on the property with the exception of City of Paducah water intakes in the extreme northeastern corner of the proposed site. There is also currently a gravel/dirt road paralleling the site eastern boundary leading to a single concrete boat ramp. The proposed marina/transient dock facility project area consists of undeveloped riverbank, Schultz Park, and surface waters of the Ohio River. There are no private, commercial, or industrial activities occurring on the property. The properties are owned by the City of Paducah and/or Paducah/McCracken County; therefore, the acquisition of additional right-of-way will not be required.



The boat launch facility will impact 9.2 acres of land through the proposed access road, parking, and boat ramp approach and 0.5 acres of the Ohio River through the placement of the boat ramp. This 9.7 acre impact is out of the overall 54 acres available of which 30 of the 54 total acres is considered the boat launch site. Therefore, 68% of the project site will maintain the current land use with a commitment to preserve 45 acres of wooded and upland forest wetlands as well as to restore 765 linear feet of riparian buffer along the Ohio River. The marina/transient dock project consists of approximately 42 acres of riverbank (12 acres), including the existing Schultz Park, and water surface (30 acres) of the Ohio River. The marina/transient dock facility will impact approximately 8.0 acres of riverbank through the development of Schultz Park and 1.5 acres of surface waters through the placement of the marina/transient dock facilities. Therefore, 77% of the project site will maintain the current land/waters use.

### ***Project Compatibility with Existing Water/Land Use Plans***

The current zoning for both project areas is Conservancy Zone (C-1). According to the City of Paducah Zoning Ordinance, the Conservancy Zone is intended to establish a zone to meet the needs of the Ohio and Tennessee Rivers and their tributaries in times of flood and to prevent the undue loss of life and property by not allowing encroachment into the zone of uses which will either be damaged by flood or will increase floodwater heights. The principal permitted uses include: (1) open type uses such as loading and unloading areas, parking lots and gardens auxiliary to uses permitted in any adjoining district, (2) storage yards for equipment and material not subject to major flood damage, (3) water-port facilities, and (4) open-type public and private recreation facilities such as public parks. Conditionally permitted uses are special exceptions and require written approval of the Board of Adjustment as long as the requested use is determined to be of the same general character as the principal permitted

uses. Both the boat launch and marina/transient dock projects are compatible with current water and land uses and will conform to the current zoning, specifically principal permitted uses (1), (3), and (4).

### *Growth Inducement*

Since the proposed project areas will remain zoned as Conservancy Zone (C-1), development within the zoning is restricted to principal and conditional permitted uses neither of which allow low-density or high-density residential development. The boat launch and marina/transient dock developments will not have any effects on the population growth rate of the City of Paducah.

### *Cumulative & Indirect Impacts*

Since the proposed projects are exclusive to the City of Paducah (the City) riverfront, portions of the Ohio River will be impacted through their subsequent development. The proposed boat launch facility will be a transfer of this amenity from the northern end of Broadway Street downstream to north of Burnett Street; therefore, no cumulative impact to the Ohio River will occur due to this project. The proposed marina/transient dock facility will be constructed in an area presently utilized as a riverfront amenity for the City; therefore, no cumulative impact to the Ohio River will result. No additional impacts to the Ohio River system will occur due to the similar utilization of the subject areas. No indirect impacts to the Ohio River system are expected as a result of the proposed projects.

## **Community Impacts**

### *Baseline Conditions*

Paducah is the largest city in the Jackson Purchase Region of Western Kentucky and the county seat of McCracken County. It is located at the confluence of the Tennessee and Ohio Rivers. Twenty blocks of Downtown Paducah have been placed on the National Register of Historic Places. It is the hub for the Paducah Micropolitan Area, which includes Ballard and Livingston Counties in Kentucky and Massac County in Illinois. According to the United States Census Bureau, Paducah is made up of 19.5 square miles of land and 0.04 square miles of water. Paducah was incorporated as a town in 1830.

### *Population*

According to the Kentucky Cabinet for Economic Development and the Greater Paducah Economic Development Council, the population for Paducah, Kentucky was 25,661 in 2006. The population for McCracken County, Kentucky was 64,251 in 2006; therefore, Paducah made up 40% of the county population in 2006.

### *Age Distribution*

According to the U.S. Census Bureau, the age distribution in Paducah, Kentucky for the year 2000 was as follows: under 20 (24.9%), 20-34 (18.4%), 35-54 (27.1%), 55-64 (9.2%), and 65 and older (20.2%). The median age was 39.9.

### *Community Cohesion*

Community cohesion is “the magnitude or degree to which people reside and share activities.” The relationship between proposed actions and community life must be examined as part of the investigation of impacts that may cause personal, sociological, and/or psychological hardships. Proposed actions can not have significant impacts on the typical interaction among persons and groups nor can it cause significant change of the social relationships and patterns of a community. Community cohesion impacts include but are not limited to: increased traffic volumes, decreased safety for pedestrians and/or school children, neighborhood congestion, decreased property values, business relocations, residential relocations, increased noise levels, employment effects, and isolation. Since the proposed boat launch and marina/transient dock projects will be riverfront amenities and will be separated from the public by the existing floodwall, the projects will not produce any of the community cohesion impacts listed.

Another method to determine the impacts to community cohesion is the disruption of interdependency of persons or groups within a community. In this case, the businesses and residences in the immediate vicinity of the proposed boat launch (along N. 6<sup>th</sup> Street from Northview Street to Campbell Street) were identified and noted as to whether or not they are dependent upon one another. The businesses in the immediate vicinity of the marina/transient dock were also noted as to their interdependency. These residences and businesses and the property owners are listed in Tables 5 and 6.

**TABLE 5- RESIDENCES/BUSINESSES NEAR BOAT LAUNCH**





Address	Description	
	Property Use	Photograph
1201 N. 6 <sup>th</sup> Street	Ceiling & Wall Supply	
1251 N. 6 <sup>th</sup> Street	Premier Fire Protection, Inc.	
1019 N. 6 <sup>th</sup> Street	Bell Residence	
1011 N. 6 <sup>th</sup> Street	Parrott Estate Residence	
Finley Street & N. 6 <sup>th</sup> Street	Abandoned Business	
927 N. 6 <sup>th</sup> Street	Bell Residence	
824 & 826 N. 6 <sup>th</sup> Street	Sosa Residences	



**TABLE 5- RESIDENCES/BUSINESSES NEAR BOAT LAUNCH**

812 & 816 N. 6 <sup>th</sup> Street	Bledsoe & Sweatt Residences	
Campbell Street & N. 6 <sup>th</sup> Street	Barn Structure (Harper)	
Campbell Street & N. 6 <sup>th</sup> Street	Bass Abandoned Residence	
719 & 801 N. 6 <sup>th</sup> Street	Bass & Riggins Residences	
829 N. 6 <sup>th</sup> Street	Payne, Joyce Residence	
Boyd Street & N. 6 <sup>th</sup> Street	Bell Trailer Residence	
Burnett Street & 7 <sup>th</sup> Street	Abandoned Residence	
N. 6 <sup>th</sup> Street	Auto Salvage	-----
N. 6 <sup>th</sup> Street	Fire Training Area	-----
N. 6 <sup>th</sup> Street	City Pump Station	-----
616 Northview Street	Harper Construction, Inc.	-----

**TABLE 6- BUSINESSES NEAR MARINA/TRANSIENT DOCK**

Address	Description	
	Property Use	Photograph
1 Executive Boulevard	Executive Inn	
215 Jefferson Street	Museum of the American Quilter's Society	
123 N. 2 <sup>nd</sup> Street, N. 2 <sup>nd</sup> Street, 201 Broadway Street	Whaler's Catch Restaurant, Office Space (renovation), Paducah Harbor Plaza Bed & Breakfast	
100-136 Broadway Street	Doe's Eat Place, Crash Comics, Visitor's Bureau, Paducah Area Painters Alliance, Paducah Tent & Awning, The Ice Cream Factory, Gift Shoppe, d. Starnes Restaurant, Maiden Alley, Office Space, Office Space	
100 Broadway Street, 117 S. Water Street, 111 Kentucky Avenue	Fox Briar Inn, River Heritage Museum, Center for Maritime Education/Attorney Office	
200 N. Riverfront	Schultz Park & Ohio River	
322 N. 3 <sup>rd</sup> Street	AmerisourceBergen (Pharmaceutical Distribution)	-----
N. 2 <sup>nd</sup> Street & Broadway Street	Parking	-----
N. 2 <sup>nd</sup> Street & Jefferson Street	Parking & Public Restrooms	-----
N. 2 <sup>nd</sup> Street & Monroe Street	Farmer's Market & Parking	-----

According to Table 5, there are ten inhabited single-family residences, two abandoned single-family residences, seven in-use business properties, and one abandoned business structure within the immediate area of the proposed boat launch project. All of the properties are separated from the proposed boat launch by the earthen floodwall. The seven active businesses are not dependent upon one another to sustain existence. There are no community centers, daycares, parks, or common areas within these property uses; therefore, no communal activities will be impacted. There are no apparent family groups or socially interdependent clusters within the area of the subject residences. There are no barriers associated with the proposed boat launch project that may cause isolation along N. 6<sup>th</sup> Street. None of the ten inhabited single-family residences and seven businesses will be required to be relocated. The only impacts to the residences and businesses may be re-arranged traffic patterns and noise caused by construction. Both of these impacts are temporary and will not cause cumulative affects to the neighboring properties. The purpose of the boat launch project is to relocate the existing boat ramp facility located at the northeastern end of Broadway Street allowing for the northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point along the Ohio River.

According to Table 6, there are twenty two business entities, three parking lots, one public restroom facility, and one public park within the immediate area of the proposed marina/transient dock project. All of the properties are located on the opposite side of the concrete flood wall from the proposed marina/transient dock with the exception of the Executive Inn and Schultz Park. The businesses are not dependent upon one another to sustain existence but work together to provide riverfront/downtown amenities and/or employment to the public. The three parking areas are common to the immediate area of the proposed marina/transient dock project and serve the neighboring businesses; however, there are no reductions in parking spaces expected. None of the properties will be converted into different uses. The only impacts to the properties may be re-arranged traffic patterns and noise caused by construction. Both of these impacts are temporary and will not cause cumulative affects to the neighboring properties. The one permanent impact due to the proposed marina/transient dock is the enhancement of Schultz Park located on the opposite side of the concrete floodwall from the downtown merchants; however, the enhancement of Schultz Park complies with the purpose & need of the proposed marina/transient dock project. The purpose of the marina/transient dock is to provide accommodations for transient boaters and local recreational boat owners. This will provide a positive economic stimulus to the downtown area. It is a major goal of the Paducah Waterfront Plan that the business entities listed will be positively affected by the proposed marina/transient dock project.

### *Employment and Labor Force*

According to the 2000 Census compiled by the U.S. Census Bureau, 53.4% of the city population that were 16 years of age and over were in the work force. The top three occupation categories in the work force were as follows: management, professional, and related occupations (31.1%), sales and office occupations (27.9%), and service occupations (18.8%). The top three industries of the work force were: retail trade (14.6%), manufacturing (11.8%), and transportation and warehousing, utilities (6.0%). Classes of worker were: private wage and salary workers (78.7%), government workers (14.0%), and self-employed workers (7.2%). The median household income was \$26,137. The median family income was \$34,092. The per capita income was \$18,417. Families below the poverty level were 18.0% of the population. Individuals below the poverty level were at 22.4%. The boat launch and marina/transient dock projects will not negatively impact employment in the downtown business district. It is the overall

goal of the marina/transient dock project to enhance the riverfront amenities and therefore, increase opportunities for the public to use the resource. It is expected that the project will increase the available employment opportunities of the immediate area.

### *Community Resources*

There are over eighteen parks within the Paducah City Parks System. Schultz Park will be directly affected by the proposed marina/transient dock facility since the project has been designed to redevelop and enhance the riverbank including the existing park. Riverfront Plaza and Wilson Stage will be indirectly affected by the proposed marina/transient dock facility since the project will visually change the riverfront amenities in the vicinity of the plaza and stage. The closest park to the boat launch site is Mini Park. The park is 0.8 miles south of the proposed boat launch.



There are over ninety churches listed in the City of Paducah. These churches serve a variety of faiths and/or denomination including but not limited to: Apostolic, Bahai, Baptist, Buddhism, Catholic, Church of Christ, Church of God, Jehovah's Witness, Jewish, Methodist, Nazarene, Pentecostal, Presbyterian, and Seventh Day Adventist. The closest church to the boat launch site is Bethel Baptist located 0.4 miles to the south. The closest church to the marina/transient dock facility is St. Francis De Sales located 0.4 miles to the south. Neither the proposed boat launch nor the proposed marina/transient dock facility will impact any religious groups of the local population.

There are a number of public and private schools in the City of Paducah. Of the seventeen public schools in Paducah, eleven serve elementary students, five serve middle school students, and 5 serve high school students. Of the six private schools in Paducah, five serve elementary students, three serve middle school students, and two serve high school students. The closest schools to the subject projects are McNabb Elementary which is approximately 1.6 miles southwest of the proposed boat launch and Cooper-Whiteside Elementary which is approximately 1.4 miles southeast of the proposed marina/transient dock facility. Neither of these schools will be impacted by the two subject projects. Paducah also serves college/technical school students through the Murray State University Paducah Regional Campus, Paducah Technical College, and the West Kentucky Community & Technical College. None of these higher education institutions will be impacted by the boat launch or marina/transient dock facilities due to the fact that the closest of these three entities is over 2 miles in distance.

There are two hospital facilities in Paducah, Kentucky. Lourdes Hospital is located immediately off of I-24 approximately 4.0 miles southwest of the proposed boat launch and marina/transient dock sites. Western Baptist Hospital is located approximately 2.0 miles southwest of the two proposed project sites. Neither of the hospitals will be impacted by the boat launch or marina/transient dock facilities.



Paducah is served by a number of nursing homes/assisted living facilities. The closest facility of this type to both the boat launch and the marina/transient dock is the Paducah Centre for Health & Rehabilitation. This facility is located 0.7 miles southeast of the boat launch site and 0.2 miles south of the marina/transient dock facility. The Paducah Centre for Health & Rehabilitation facility will not be affected by the two projects.

McCracken County Public Library is located at 555 Washington Street in Paducah, Kentucky. The library is positioned approximately 1.3 miles southeast of the proposed boat launch facility and 0.5 miles south of the proposed marina/transient dock. Neither project will impact library services.

The closest campground to both the boat launch and marina/transient dock projects is the Fern Lake Campground located 4.8 miles west of the boat launch and 5.6 miles west of the marina/transient dock facility. The campground will not be affected by the two projects.

Paducah, Kentucky has various shopping and restaurant locations within the downtown area as well as on the perimeter of the city. The downtown shopping opportunities include: antiques, collectibles, art galleries, books, clothing & accessories, coffee & sweets, fabric & quilt shops, florists & special event accessories, food & beverage markets, general services, gifts, home décor, jewelry, lawn & garden, nature & health food, outdoor, photography, hobby, and music. The Kentucky Oaks Mall as well as other “big box retailers” is located immediately off of I-24 approximately 5.0 miles west of the downtown Paducah area. Neither of the proposed projects will negatively impact the shopping and restaurant opportunities in the downtown area or on the perimeter of the city. Increased use of the riverfront amenities will most likely have a positive effect on the economic viability of downtown Paducah with this effect being one of the driving forces behind the redevelopment of the riverfront area. The community resources closest to the boat launch and marina/transient dock are shown spatially in Figure 16.

### *Impacts on Travel Patterns, Accessibility, Community Facilities, Economic Vitality, Established Business Districts, and Public Safety.*

Since the proposed boat launch and marina/transient dock facilities are to be located as riverfront amenities, there will be no significant impacts to travel patterns, accessibility, community facilities, economic vitality, established business districts, or public safety. Traffic may be re-routed temporarily due to construction along the existing right-of-way on both North 6<sup>th</sup> Street and Burnett Street. Traffic may be altered temporarily due to the movement of construction vehicles in and out of the boat launch and marina/transient dock sites.

### *Social and Cultural Loss to the Community by Displacements*

There are no social and/or cultural losses expected due to there being no displacements resulting from the proposed projects. The proposed boat launch and marina/transient dock facilities are to be located as riverfront amenities.

### *Impacts on Economic Vitality in Project Area and Established Business Districts*

Paducah, Kentucky has various shopping and restaurants within the downtown area. The downtown shopping opportunities include: antiques, collectibles, art galleries, books, clothing & accessories, coffee & sweets, fabric & quilt shops, florists & special event

accessories, food & beverage markets, general services, gifts, home décor, jewelry, lawn & garden, nature & health food, outdoor, photography, hobby, and music. Neither of the proposed projects will negatively impact shopping, restaurant opportunities, or other businesses in the downtown area of the city. Increased use of the riverfront amenities will most likely have a positive effect on the economic viability of downtown Paducah with this effect being one of the driving forces behind the redevelopment of the riverfront area.

### *Cumulative & Indirect Impacts*

The boat launch and marina/transient dock projects will have positive impacts on the downtown Paducah community. In the process, the existing boat ramp facility located at the northeastern end of Broadway Street will be relocated which will allow the northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point along the Ohio River. The marina/transient dock facility will bring an economic stimulus to the downtown area through visitors that are traversing up and down the Ohio. Overall, the proposed projects will increase the economic vitality of downtown Paducah.



Figure 16

## **Displacements & Relocations**

### *Number & Types of Relocations/ Displacements*

There are no relocations or displacements of businesses or residences expected as a result of the proposed projects since the boat launch and marina/transient dock facilities are exclusive to the riverfront and north of the existing floodwall. Currently, there are no businesses or residential structures within either the boat launch site or the marina/transient dock facility site.

### *Cumulative & Indirect Impacts*

No negative cumulative or indirect impacts are expected as a result of the proposed boat launch and marina/transient dock projects. The marina/transient dock facility will bring an economic stimulus to the downtown area without the need to acquire residential or commercial property. No displacements and/or relocations are expected.

## **Farmland**

### ***Baseline Conditions in Project Areas***

The Farmland Protection Policy Act (FPPA) of 1981 is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. For the purpose of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land. "Prime farmland", as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency. The proposed boat launch project involves construction within an area comprised of upland woods, one agricultural field, a narrow wooded strip of Ohio River bank, and an open field. The proposed marina/transient dock facility project involves construction within the undeveloped riverbank which currently consists of riprap and limited vegetation, Schultz Park, and surface waters of the Ohio River. There are no agricultural opportunities within the marina/transient dock facility area.



### ***Impacts to Farmland***

Through the review of soils data from the National Resource Conservation Service under the direction of the U.S. Department of Agriculture (USDA) in McCracken County, it has been determined that the proposed boat launch project area would involve lands protected under the Farmland Protection Policy Act (FPPA). The project area contains six soil types of which four are designated as prime farmland soils. The prime farmland soils are Huntington-Combs complex (Hm), Huntington-nolin silty clay loams (Hn), Newark-Lindside complex (Ne), and Okaw silt loam (OhA). The entire project is located within these four soils with the exception of the riverbank (Water-W), the tree line paralleling the northern property boundary (Yeager fine sandy loam-Ye), the levee (Levee), and Burnett Street south of the earthen levee (Urban land-Udorthents complex-UtA). These soils are not designated as prime farmland, unique farmland, or statewide soils. The marina/transient dock facility contains three soil type designations (Udorthents-urban land complex-UdC, Urban land-Udorthents complex-UrA, and Water-W) of which none are designated as prime farmland, unique farmland, or statewide soils. A USDA Farmland Conversion Impact Rating (Form AD-1006) has been completed for the boat launch project. The form provides an evaluation and scoring system with criteria for evaluating adverse effects of projects on the protection of farmland. Sites receiving the highest combined scores up to a maximum of 260 are considered most suitable for protection while those with lowest scores are considered least suitable. According to the FPPA, sites receiving total scores of less than 160 need not be given further consideration for protection and no additional sites need to be



evaluated. The total score computed for the proposed boat launch area was 158, assuming a “relative value of farmland” score of 99 and a “site assessment score” of 59. The USDA Farmland Conversion Impact Rating (Form AD-1006) for the boat launch project is included as Figure 17.

### *Feasible Alternative to Avoid Farmland Impacts if Impact Rating > 160 points*

According to the Farmland Protection Policy Act (FPPA), sites receiving total scores of less than 160 need not be given further consideration for protection and no additional sites need to be evaluated. The total score computed for the proposed boat launch area was 158, assuming a “relative value of farmland” score of 99 and a “site assessment score” of 59.

### *Cumulative & Indirect Impacts*

Since the farmland impact rating for the proposed boat launch area is less than 160, no alternatives need to be investigated and no protection of the area is warranted. This is based on the premise that no cumulative impact is expected from the conversion of farmed wetlands to non-farmed acreage within the development, i.e. the overall impact to the available agricultural property in McCracken County will not be significant. The loss of the farmed wetlands as a result of the boat launch project will have no impact on future farming opportunities in the county.

### *Prime Farmland within the Project Areas*

The boat launch project area contains six soil types of which four are designated as prime farmland soils. The prime farmland soils are Huntington-Combs complex (Hm), Huntington-nolin silty clay loams (Hn), Newark-Lindside complex (Ne), and Okaw silt loam (OhA). A soils map for the subject project is detailed in Figure 18. There are no prime farmland soils within the proposed marina/transient dock project area.

U.S. Department of Agriculture					
FARMLAND CONVERSION IMPACT RATING					
<b>PART I (To be completed by Federal Agency)</b>			Date Of Land Evaluation Request <u>11-15-07</u>		
Name Of Project <u>JOHN + BURKETT BOAT LAUNCH</u>			Federal Agency Involved <u>FHWA</u>		
Proposed Land Use <u>BOAT RAMP, PARKING, ACCESS RD</u>			County And State <u>MCCRACKEN CO., KY</u>		
<b>PART II (To be completed by NRCS)</b>			Date Request Received By NRCS		
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply - do not complete additional parts of this form).			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated <u>0</u>
					Average Farm Size <u>126</u>
Major Crop(s) <u>Corn / Soybeans</u>	Farmable Land In Govt. Jurisdiction Acres: <u>149.545</u> % <u>90.5</u>		Amount Of Farmland As Defined In FPPA Acres: <u>102.390</u> % <u>64</u>		
Name Of Land Evaluation System Used	Name Of Local Site Assessment System		Date Land Evaluation Returned By NRCS <u>11-26-07</u>		
<b>PART III (To be completed by Federal Agency)</b>			Alternative Site Rating		
			Site A	Site B	Site C
A. Total Acres To Be Converted Directly			<u>7.0</u>		
B. Total Acres To Be Converted Indirectly			<u>48.7</u>		
C. Total Acres In Site			<u>55.7</u>	0.0	0.0
<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>					
A. Total Acres Prime And Unique Farmland			<u>22.2</u>		
B. Total Acres Statewide And Local Important Farmland			<u>0</u>		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted			<u>106</u>		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value			<u>14</u>		
<b>PART V (To be completed by NRCS) Land Evaluation Criterion</b>					
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)			<u>99</u>	0	0
<b>PART VI (To be completed by Federal Agency)</b>					
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))			Maximum Points		
1. Area In Nonurban Use			<u>15</u>	<u>11</u>	
2. Perimeter In Nonurban Use			<u>10</u>	<u>7</u>	
3. Percent Of Site Being Farmed			<u>20</u>	<u>4</u>	
4. Protection Provided By State And Local Government			<u>20</u>	<u>20</u>	
5. Distance From Urban Builtup Area			<u>15</u>	<u>5</u>	
6. Distance To Urban Support Services			<u>15</u>	<u>0</u>	
7. Size Of Present Farm Unit Compared To Average			<u>10</u>	<u>0</u>	
8. Creation Of Nonfarmable Farmland			<u>10</u>	<u>10</u>	
9. Availability Of Farm Support Services			<u>5</u>	<u>2</u>	
10. On-Farm Investments			<u>20</u>	<u>0</u>	
11. Effects Of Conversion On Farm Support Services			<u>10</u>	<u>0</u>	
12. Compatibility With Existing Agricultural Use			<u>10</u>	<u>0</u>	
TOTAL SITE ASSESSMENT POINTS			<u>160</u>	<u>59</u>	0
<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)			100	<u>99</u>	0
Total Site Assessment (From Part VI above or a local site assessment)			160	<u>59</u>	0
TOTAL POINTS (Total of above 2 lines)			<u>260</u>	<u>158</u>	0
Site Selected:		Date Of Selection		Was A Local Site Assessment Used?	
				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Reason For Selection:					

(See Instructions on reverse side)

This form was electronically produced by National Production Services Staff

Form AD-1006 (10-83)

Figure 17

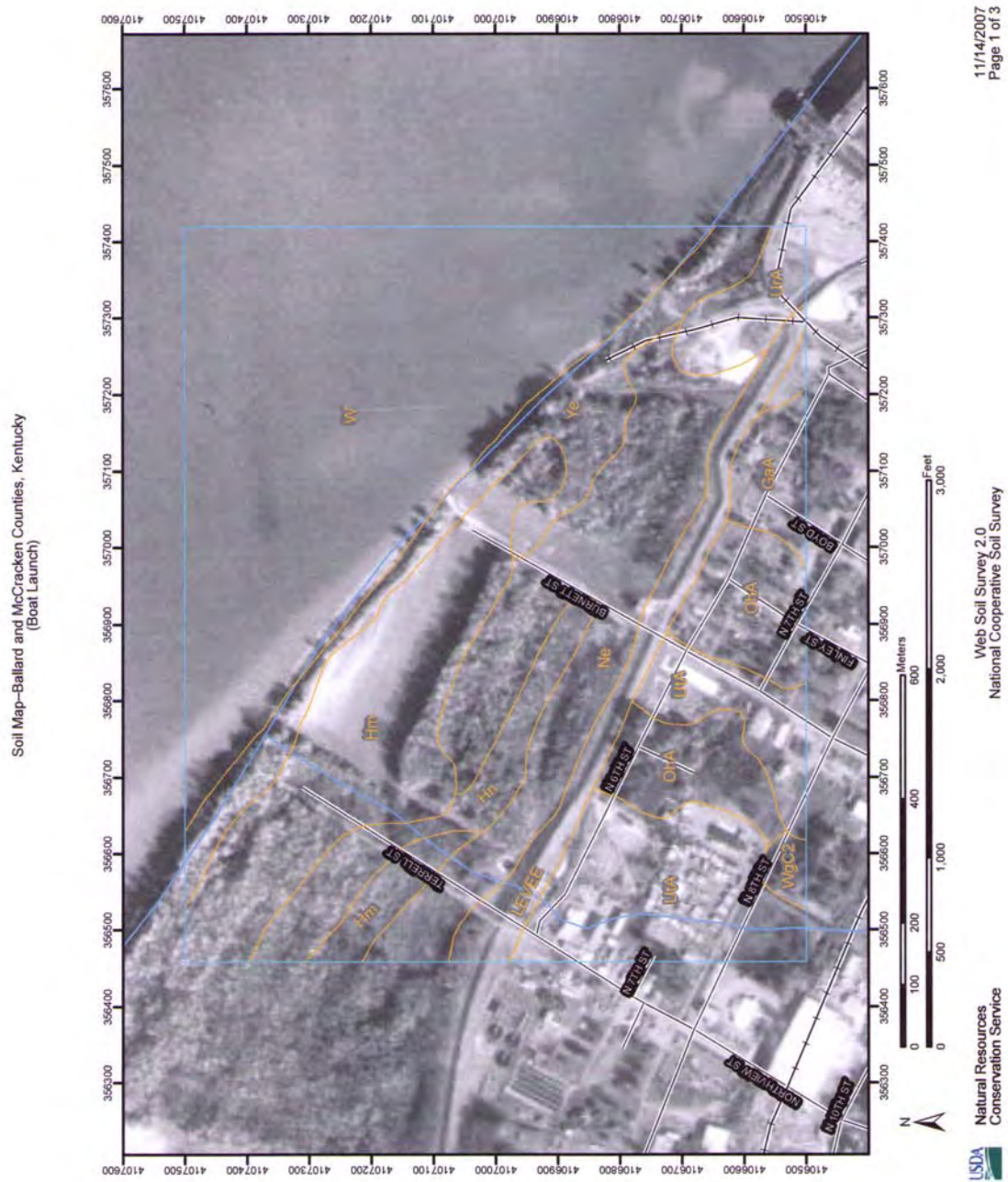


Figure 18



## **Environmental Justice**

### ***Baseline Conditions***

A 1994 Presidential Executive Order (EO 12898) directed every Federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on minority populations and low-income populations. Effective transportation decision making depends upon understanding and properly addressing the unique needs of different socioeconomic groups. The three fundamental environmental justice principles are (1) to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations, (2) to ensure the full and fair participation by all potentially affected communities in the transportation decision-making process, and (3) to prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.



The Housing Authority of Paducah manages six main housing opportunities for low-income individuals and families. The housing complexes include: Elmwood Court, Blackburn Apartments, Ella Munal Community, Dr. D.H. Anderson Court, Pierce Lackey Village, and Dolly McNutt Apartments. These housing complexes are not in the vicinity of either the boat launch or marina/transient dock projects. The closest private residences to the proposed boat launch project are along North 6<sup>th</sup> Street and this area is zoned High Density Residential (R-4). The closest private residence to the proposed boat launch is 1,400 linear feet to the south (corner of Burnett Street and North 6<sup>th</sup> Street). The closest private residences to the proposed marina/transient dock facility are at the intersection of North 3<sup>rd</sup> Street and Madison Street. This area is currently zoned Historical Neighborhood (H-2) and is approximately 800 linear feet southwest of the marina/transient dock project.

### ***Compliance with Executive Order 12898***

Executive Order 12898 of February 11, 1994, requires federal agencies to achieve environmental justice by identifying and addressing disproportionately high and adverse human health and environmental effects, including the interrelated social and economic effects of their programs, policies, and activities on minority populations and low-income populations in the U.S. The boat launch and marina/transient dock projects will comply with Executive Order 12898 since there will be no anticipated effects on low-income and minority populations.



### *Impacts to Minority and/or Low Income Population*

Neither the proposed boat launch nor the marina/transient dock facility should have any adverse human and environmental effects on minority populations or low-income populations due to the fact that the projects are separated from the nearest residences by 800-1,500 linear feet of space which will be comprised of wooded acreage, open field, earthen flood wall, existing roadways, existing urban development, and/or a concrete foodwall. Also, the benefits expected from the proposed boat launch facility and marina/transient dock facility are available to all. The temporary re-routing of traffic may occur along the right-of-way of both North 6<sup>th</sup> Street and Burnett Street during construction on the roadways; however, significant impacts to the residential areas is not expected.

### *Avoidance, Minimization and Mitigation*

Impacts to traffic may occur during the movement of equipment and/or trucks in and out of the work sites; however, since the two projects are exclusive to the riverfront, traffic flows are not expected to be re-routed and/or adjusted over extended periods of time. Both the boat launch and marina/transient dock projects were located and designed to minimize impacts to the ecological, social, and cultural environments. Through this effort of avoidance and minimization of impacts, mitigation of impacts to minority and/or low income populations is not warranted.

### *Cumulative & Indirect Impacts*

The proposed boat launch and marina/transient dock projects will not cause any disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations. The planning stage of the riverfront redevelopment plan has requested input from the local citizens to ensure the full and fair participation by all potentially affected communities in the transportation decision-making process. The amenities afforded by the proposed projects will be available to all.

## **Pedestrian & Bicycle Facilities**

### *Baseline Conditions*

On August 10, 2005, President Bush signed into law the Safe Accountable, Flexible, Efficient Transportation Equity Act; a Legacy for Users (SAFETEA-LU). The new legislation built upon the significant changes made to Federal transportation policy and programs by the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) and the 1998 Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). The legislation had a number of provisions that related to improving conditions for bicycling and walking and increasing the safety of the two modes. The legislation stated that (1) bicyclists and pedestrians should be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State, (2) bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction and transportation facilities, except where bicycle and pedestrian use are not permitted, and (3) transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians.

The opportunities for pedestrians and bicyclists at present consist of sidewalks and open space areas in the associated vicinity of the existing Schultz Park at the northern end of Jefferson Street. There are limited opportunities for pedestrians and bicyclists at the proposed boat launch site.

### *Opportunities for Providing Pedestrian and Bicycle Facilities*

The proposed marina/transient dock facility has incorporated the consideration of bicyclists and pedestrians in the design process. As part of the marina/transient dock facility, Schultz Park will be redeveloped to establish it as the gateway to the Paducah riverfront. The redevelopment of the park is to include:

- the use of Monroe Street as a pedestrian link between town and the waterfront
- an interpretive waterfront experience including a levee trail/garden/open space
- reconfiguration of roadway alignment to provide landscape buffer for pedestrians
- the creation of a pedestrian promenade
- clear delineation of all paths and trails with appropriate signs/markers
- established spatial & visual separation of vehicles, pedestrians, and bicyclists
- multiple destinations along paths and trails
- provide ADA accessibility
- include amenities such as benches, trash/recycling receptacles, & bike racks
- provide pedestrian lighting where applicable

The transient boat dock will provide a gangway system connecting the park with the dock. Also proposed is a walking path and public access along the gangway and dock facility. The marina portion of the site will share a gangway entrance with the transient boat dock with a secure entrance. The proposed boat launch site has been designed to serve private boat owners and will be limited in the opportunity for pedestrians and bicyclists due to the commitment to preserve surrounding acreage as part of the compensatory mitigation plan for impacts to wetlands on the site; however, bicyclists and pedestrians will be allowed to utilize the premises.

### *Cumulative & Indirect Impacts*

The marina/transient dock will provide new opportunities for both bicyclists and pedestrians through the design of specific park amenities. The boat launch does not have specific amenities designed for these opportunities; however, the development will allow bicyclists and pedestrians to utilize the site within the local regulations. There are no negative cumulative or indirect impacts expected with either of the two proposed projects.

## **Underground Storage Tanks/Hazardous Materials/Wastes**

### ***Baseline Conditions***

Underground storage tanks are regulated on the federal level by the Resource Conservation and Recovery Act (RCRA) and on the state level by Title 401 of the Kentucky Administrative Regulations, Chapter 42 (401 KAR 42). Chapter 42 regulates the design, construction, installation, registration, testing, and closure of underground storage tanks in the State of Kentucky. Hazardous material/waste sites are regulated on the federal level by the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Hazardous material/waste sites are regulated on the state level by Title 401 of the Kentucky Administrative Regulations, Chapters 30-38, 43 and 44. (401 KAR 30-38, 43, 44)

According to the Hazardous Waste Branch and the Underground Storage Tank Branch of the Kentucky Department for Environmental Protection, Division of Waste Management, there are no files and/or records for any former or present hazardous material/waste sites and underground storage tanks within the proposed boat launch and marina/transient dock facility project areas.

### ***Sites Recommended for Phase II Site Assessments/Remediation***

There are no files and/or records for any former or present hazardous material/waste sites and underground storage tanks within the proposed boat launch and marina/transient dock facilities project areas; therefore, no further environmental site assessments are warranted.

### ***KYTC Process for Remediation, if necessary***

Remediation design is not required at the boat launch and marina/transient dock facilities since there are no files and/or records for any former or present hazardous material/waste sites on the properties.

### ***Cumulative & Indirect Impacts***

According to the Hazardous Waste Branch and the Underground Storage Tank Branch of the Kentucky Department for Environmental Protection, Division of Waste Management, there are no files and/or records for any former or present hazardous material/waste sites and underground storage tanks within the proposed boat launch and marina/transient dock facility project areas. There are no negative cumulative or indirect impacts expected from underground storage tanks or hazardous materials/wastes with either of the two proposed projects.

## **Visual Impacts**

### ***Baseline Conditions***

Visual perception is an important component of environmental quality that can be affected by transportation projects. The location, design, and/or maintenance of transportation facilities may adversely affect visual features of the landscape. In reviewing the visual impacts of transportation projects, two views are considered: the view from the facility and the view of the facility.

### ***Description of Visual Impacts of and from the Facilities***

The boat launch facility will be located on the Ohio River. The facility will be accessed by a roadway extending from North 6<sup>th</sup> Street. Sight lines of the boat launch facility will be obscured by the wooded acreage and the earthen flood wall between the Ohio River and 6<sup>th</sup> Street. The approximate elevations of the proposed boat launch and the boat launch parking area are 310 and 320 feet above Mean Sea Level (MSL), respectively. The earthen floodwall elevation near the intersection of Burnett Street and North 6<sup>th</sup> Street is approximately 350 feet above MSL. Based on the elevations and the wooded area, no negative visual impact of the facility is expected. Views from the boat launch facility will be of the Ohio River to the immediate north, east, and west and wooded acreage to the south as it exists presently. No negative visual impact from the facility is expected. The marina/transient dock facility will extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum (transient dock portion) into the Ohio River. The sight lines of the marina/transient dock facility will be obscured by the concrete floodwall paralleling the river. The most elevated structure of the proposed marina/transient dock facility will be the overlook at 336 feet above MSL. The elevation at the top of the flood wall from Harrison Street to Broadway Street is approximately 349 feet above MSL. Based on the elevations, no negative visual impact of the facility is expected. Views from the marina/transient dock facility will be of the Ohio River to the north, east, and west and Schultz Park and the concrete flood wall to the immediate south as it exists presently. No negative visual impact is expected from the facility.



### ***Cumulative & Indirect Impacts***

There are no negative cumulative or indirect visual impacts expected as a result of the boat launch and marina/transient dock projects.



## **Impacts of Construction Activities**

### ***Potential Adverse Impacts***

Noise impacts associated with the proposed boat launch and marina/transient dock will occur during construction of the facilities; however, construction is conditionally exempt from the City Noise Ordinance. It is concluded that noise levels associated with construction will not exceed the criteria detailed in the City Noise Ordinance. The noise control ordinance exempts construction operations from 7:00 a.m. to 6:00 p.m. on weekdays for which building permits have been issued or construction operations not requiring permits due to ownership of the project by an agency of government; providing all equipment is operated in accordance with all standard equipment, manufacturers' mufflers, and noise reducing equipment in use and in properly operating condition. Construction of the proposed boat launch and marina/transient dock facilities is not expected to cause traffic congestion due to the fact that main construction will be on the riverfront and not within the existing vehicle traffic patterns of downtown Paducah. It is expected that occasional traffic re-routing will be necessary for precautionary measures when construction equipment is entering and/or exiting the project sites and during the enhancement along 6<sup>th</sup> and Burnett Streets.

### ***Waste and Borrow Sites***

Waste and/or borrow sites are not expected to be utilized during the construction of the boat launch and marina/transient dock facilities. Fill material for both sites will be obtained from off-site.

## **Mitigation Commitments**

### ***Boat Launch***

The boat launch site has been designed to reduce environmental impacts by utilizing an existing roadway corridor and existing agricultural field for the entrance roadway and parking area. Other designs for this site would result in significantly greater impacts to higher quality wooded wetlands. Although the proposed site design results in the impacts to approximately 9.7 acres of wetlands, only about 0.7 acres of wooded wetlands will be impacted. These impacts are limited to fringe areas and will not fragment the existing forest. No viable alternative boat launch site exists within the immediate vicinity of downtown Paducah. The selected site minimizes ecological impacts while still meeting the river access needs of the community. A mitigation plan was developed by Redwing Ecological Services, Inc. (Redwing) for the boat launch project to provide compensation for unavoidable impacts to approximately 9.7 acres of waters/wetlands by construction. The impacts and committed mitigation for the boat launch project is as follows with measurements in acres unless otherwise stated:

Feature	Size	Impacted	Mitigation Ratio	Mitigation Required	Type	Size	Ratio	Credit
Wooded	37.0	0.7	3:1	2.1	Preservation	34.4	10:1	3.4
Wooded	37.0	0.7	3:1	2.1	Restoration	7.3	1:1	7.3
Farmed	16.0	8.3	1:1	8.3	-----	-----	-----	-----
Open Field	1.0	0.2	2:1	0.4	-----	-----	-----	-----
Up. Forest	-----	0.0	-----	-----	Preservation	3.4	10:1	0.3
Ohio River	-----	0.5 (250')	2:1	1.0 (500')	Restoration	765'	1:1	765'
<b>TOTAL</b>	<b>54.0</b>	<b>9.7 (250')</b>		<b>10.8 (500')</b>		<b>45.1</b>		<b>11.0*</b>

\* Includes 765' of riparian buffer restoration

These mitigation requirements will be met with on-site wetland preservation and restoration. The 11.0 acres of proposed mitigation more than compensates for impacts to wetlands (10.8 acres of required mitigation) by the proposed boat launch facility. The major components of the mitigation plan include wetland preservation, wetland restoration, and upland buffer preservation. Approximately 34.4 acres of existing high quality forested wetland will be permanently preserved under a conservation easement/deed restriction within a designated conservation area. Approximately 7.3 acres of existing farmed wetland will be restored to forested wetland through planting of native wetland tree species. Approximately 3.4 acres of existing forested upland buffer will be permanently preserved under a conservation easement/deed restriction. Approximately 765 linear feet of wooded riparian buffer will be restored along the Ohio River through planting of native trees.

According to the U.S. Fish & Wildlife Service (USFWS), an endangered Indiana bat (*Myotis sodalis*) record has been documented within five miles of the proposed boat launch project site. Based on this information, USFWS believes that (1) forested areas in the vicinity of or on the project area may provide potentially suitable summer roosting and foraging habitat, and (2) caves, rock shelters, and abandoned underground mines in the vicinity of or on the project area may provide potentially suitable winter hibernation habitat for the endangered species. The removal of trees onsite will only occur between October 15 and March 31 to avoid impacting summer roosting Indiana bats.

A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the boat launch area from August 5-8, 2008. Mussel populations were found in the boat launch project area. The Mussel Survey Report was submitted to the USFWS on

September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at the boat launch location. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

### *Marina/Transient Dock*

The proposed marina/transient dock facility project involves construction within the undeveloped riverbank which currently consists of riprap and limited vegetation, the existing Schultz Park, and surface waters of the Ohio River. There are no jurisdictional waters within the project area with the exception of the river. It is anticipated that there will be no mitigation requirements for the marina/transient dock due to the relatively limited nature of the marina/transient dock impacts in relation to the overall Ohio River system.

A mussel survey was conducted by Redwing Ecological Services, Inc., with the assistance of Copperhead Environmental Consulting, Inc. and Gannett Fleming Engineers & Architects, P.C., for the marina/transient dock facility area from August 5-8, 2008. Mussel populations were found in the marina/transient dock project area. The Mussel Survey Report was submitted to the USFWS on September 25, 2008. After review of the Mussel Survey Report, the USFWS identified a state and federally listed endangered mussel species, *Potamilus capax* (Fat Pocketbook), at the marina/transient dock location. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

## **Section 4(f) *de minimis* Impacts of a Recreational Resource & Section 6(f)**

### ***Background***

Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, Section 6009, requires federal-aid projects to include special efforts to preserve the natural beauty of the countryside, public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Approval of projects that have the potential to impact any of these resources can be made only if the following conditions are met:

- I. There is no feasible or prudent alternative to the use of land from the property; and
- II. The action includes all possible planning to minimize harm to the property resulting from use.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended the existing Transportation Act legislation with Section 6009(a) in order to simplify the Section 4(f) process and approval of projects having a *de minimis* impact on a historic or recreational resource. With respect to parks, recreation areas, or wildlife or waterfowl refuges, the USDOT Secretary may make a finding of *de minimis* impact only if the following conditions are met:

- I. The Secretary has determined after public notice and opportunity for public review and comment, that the transportation program or project will not adversely affect the activities, features, and attributes of the park, recreation area, or wildlife or waterfowl refuge eligible for protection under this section; and
- II. The finding of the Secretary has received concurrence from the officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge.

### ***Section 4(f) Resources***

The property in which the proposed boat launch facility will be constructed is owned by the City of Paducah; therefore, the property is designated as “publicly owned.” The subject property does not fall under the three basic resource categories of parks & recreation areas, refuges, or cultural resources.

Existing Raymond Schultz Riverfront Park (Schultz Park) will be utilized for the proposed marina/transient dock facility. The marina/transient dock will extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 550 linear feet at its maximum (transient dock portion) into the Ohio River. Schultz Park is owned by the City of Paducah and is considered a “publicly owned park”. According to the City of Paducah’s *Parks and Recreation Facilities Inventory*, Schultz Park is located on the Ohio River between Harrison Street and Route 45 and is 7.8 acres in size. The park has an outdoor theater (Wilson Stage), two boat launch ramps, an asphalt parking lot, benches, sidewalks, and a moveable floating dock. Schultz Park is home to the annual Paducah Summer Festival in July and the annual Bar-B-Que on the River celebration in September. Since the park will be impacted as part of this proposed project, the area is protected as a Section 4(f) property. The park is publicly owned, open to the public, and serves as a recreation area. The existing area is considered significant by the local authorities when compared to the other similar areas included in the community. However, since (1) the proposed marina/transient dock project will not



adversely affect the activities, features, and attributes of the park/recreation area but will add amenities to the area and (2) the mayor of the City of Paducah concurs with the fact that no adverse affect to the existing Schultz Park will occur as a result of the proposed project, requirements under Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, Section 6009, can be satisfied utilizing the *de minimis* impact classification.

The boat launch and marina/transient dock facility will be located in the Ohio River which does not fall under any of the categories of Section 4(f). Because portions of the two projects will impact the Ohio River and associated riverbank, coordination with the U.S. Corps of Engineers and the Kentucky Department for Environmental Protection will be required.

### *Identify and Discuss any 6(f) Impacts*

Section 6 (f) of the Land and Water Conservation Fund Act (the Act) concerns transportation projects that propose impacts, or the permanent conversion, of outdoor recreation property that was acquired or developed with grant assistance from the Land and Water Conservation Fund. Passed by Congress in 1965, the Act established a matching assistance program that provides grants which pay half the acquisition and development cost of outdoor recreation sites and facilities. Section 6 (f) of the Act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior's National Park Service. The boat launch property was acquired by the City of Paducah (the City) in September of 1991. The marina/transient dock property was acquired by the City in October of 1985. Since neither property will be converted to a "non-recreational purpose", Section 6 (f) regulations do not apply to these proposed projects.

Furthermore, a literature search was conducted of the Land and Water Conservation Fund listings for McCracken County, Kentucky compiled by the National Park Service. Neither Schultz Park nor the proposed boat launch properties is listed; therefore, Section 6(f) is not applicable.

## **Indirect & Cumulative Impacts**

### ***Indirect Impacts***

Indirect impacts, or indirect effects, are reasonably foreseeable impacts to the environment that are caused by an action, but occur later in time, or are further removed in distance from the project area. Indirect impacts are generally associated with impacts from induced growth, and other impacts that result from the induced changes in the existing land use patterns, population density, or growth rate of an area.

The indirect impact analysis for the proposed boat launch and marina/transient dock projects concluded that there are no reasonably foreseeable indirect impacts associated with the redevelopment of the riverfront in the two separate areas. There is low potential for future development within the project areas due to both being situated in the Conservancy Zone (C-1). According to the City of Paducah Zoning Ordinance, the Conservancy Zone is intended to establish a zone to meet the needs of the Ohio and Tennessee Rivers and their tributaries in times of flood and to prevent the undue loss of life and property by not allowing encroachment into the zone of uses which will either be damaged by flood or will increase floodwater heights. The principal permitted uses include: (1) open type uses such as loading and unloading areas, parking lots and gardens auxiliary to uses permitted in any adjoining district, (2) storage yards for equipment and material not subject to major flood damage, (3) water-port facilities, and (4) open-type public and private recreation facilities such as public parks. Conditionally permitted uses are special exceptions and require written approval of the Board of Adjustment as long as the requested use is determined to be of the same general character as the principal permitted uses. Therefore, it is not reasonably foreseeable that the boat launch and marina/transient dock projects will induce growth to the existing area. There are no reasonably foreseeable indirect impacts associated with the two projects.

### ***Cumulative Impacts***

Cumulative impacts are the total impacts on a specific natural resource, ecosystem, or human community, which results from all other past, present, or reasonably foreseeable future actions. Cumulative impacts analysis is generally conducted on the resource(s) directly impacted from the project.

The proposed boat launch project will directly impact jurisdictional wetlands, prime farmland, floodplains, and the Ohio River. Without environmental commitments, the proposed boat launch may directly impact endangered/threatened bat species. The direct impact of jurisdictional wetlands will be compensated through preservation and restoration of the balance of the surrounding wetlands available on the project site; therefore, the overall impacts to jurisdictional wetlands will not show a net loss of wetlands. The direct impact to prime farmland acreage has been evaluated utilizing a scoring system developed by the U.S. Department of Agriculture. Since the farmland impact rating for the proposed boat launch area is less than 160, no alternatives need to be investigated and no protection of the area is warranted. This is based on the premise that no cumulative impact is expected from the conversion of farmed wetlands to non-farmed acreage within the development, i.e. the overall impact to the available agricultural property in McCracken County will not be significant. The loss of the farmed wetlands as a result of the boat launch project will have no impact on future farming opportunities in the County. The proposed boat launch project has been developed in accordance with Executive Order 11988 (Floodplain Management) and 23 CFR 650A (Location and Hydraulic Design of

Encroachments on Flood Plains). Though the project is within the 100-year floodplain, the project is not expected to be a “significant encroachment” as defined in 23 CFR 650A nor is it expected to have an appreciable environmental impact on the base floodplain. The level of risk analogous with the probable areas of flooding and its consequences attributed to this encroachment is not expected to be any greater than that associated with the present conditions of the project area. The project is not expected to have any increased cumulative potential for property loss and hazard to life. Mitigation commitments have been established to reduce impacts to the Indiana bat. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook (*Potamilus capax*) mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

The proposed marina/transient dock project will directly impact floodplains, the Ohio River, and a Section 4 (f) site, Schultz Park. The proposed project has been developed in accordance with Executive Order 11988 (Floodplain Management) and 23 CFR 650A (Location and Hydraulic Design of Encroachments on Flood Plains). Though the project is within the 100-year floodplain, the project is not expected to be a “significant encroachment” as defined in 23 CFR 650A nor is it expected to have an appreciable environmental impact on the base floodplain. The level of risk analogous with the probable areas of flooding and its consequences attributed to this encroachment is not expected to be any greater than that associated with the present conditions of the project area. The project is not expected to have any increased cumulative potential for property loss and hazard to life. The existing Schultz Park area in which the marina/transient dock facility will be constructed is a Section 4 (f) resource. Impacts to the resource will consist of redevelopment of the park, construction of a marina, and construction of the transient dock. Though the resource will be impacted, alterations to the area will not change its use. Schultz Park will remain as a park and recreation area. The riverfront redevelopment plan is to increase the opportunity for access to the river through boating opportunities, pedestrian and bicyclist amenities, as well as enhanced picnic areas. Without environmental commitments, the proposed marina/transient dock project may directly impact endangered/threatened mussel species. A Biological Assessment (BA) document that estimates potential impacts to Ohio River mussels, specifically the Fat Pocketbook (*Potamilus capax*) mussel, was completed and submitted to USFWS on December 19, 2008 for concurrence. Formal consultation on the matter will be initiated by the Federal Highway Administration (FHWA) and will be completed prior to approval of a Finding of No Significant Impact (FONSI).

In conclusion, since the proposed boat launch and marina/transient dock projects are not likely to induce growth to the area, there are no reasonably foreseeable indirect impacts to the surrounding environment. In addition, the cumulative impacts associated with the proposed projects have been minimized or negated when assuming all other past, present, and reasonably foreseeable impacts to jurisdictional wetlands, prime farmland acreage, floodplains, the Ohio River, Section 4 (f) resources, and threatened/endangered species.

# ***Planning & Public Involvement***





## V. PLANNING & PUBLIC INVOLVEMENT

### *Background*

The riverfront redevelopment plan has relied on an interactive process involving a wide range of participants including the Riverfront Plan Executive Committee, Riverfront Plan Stakeholders, City of Paducah, and the general public. Each group offered unique insight into the needs and desires of the community and allowed ideas and concepts to be tested to determine the best match for the community. The recommendations within the plan represent the collaborative effort of each group to assure a high level of community commitment to the proposed enhancements.

### *Planning & Public Involvement Activities*

The following is a timeline of activities and events conducted for stakeholder involvement:

- The City of Paducah and JJR meet with the U.S. Corps of Engineers to coordinate and discuss Paducah's general intent for riverfront improvements (January 2006)
- Separate project meetings involving City Staff, Executive Committee, Stakeholders, and the public are conducted over a two day period to review the overall project scope, planning boundaries, and schedule (March 8-9, 2006)
- A group bus tour to the riverfront cities of Chattanooga, Tennessee, and Evansville, Indiana, is conducted to allow key members of the Paducah Riverfront Redevelopment Plan to observe two communities possessing successful redeveloped riverfronts (March 23-24, 2006)
- A City staff meeting followed by a public hearing is held to present riverfront conditions analysis and perceived riverfront opportunities/alternatives (May 17-18, 2006)
- A preliminary consensus Riverfront Redevelopment Plan is developed and submitted to the City of Paducah (June 23, 2006)
- The City holds a series of meetings with riverfront property owners with land influencing the Riverfront Redevelopment Plan (June and July 2006)
- Based on new information, meetings, and input, a new Riverfront Redevelopment Plan is created shifting the proposed activities downstream (August and September 2006)
- U.S. Army Corps of Engineers, U.S. Coast Guard, Crounse Corporation, James Marine, City of Paducah, and the consultant team meet and discuss the new Plan (August 2006)
- Prominent display of informational boards in and around Schultz Park depicting a brief narrative, conceptual plan, and artistic renderings of a number of aspects associated with the proposed marina/transient dock facility (May 2008)

During the planning process, input has been provided at public meetings, stakeholder meetings, and at presentations to museum boards. An understanding of current efforts as well as future plans of these entities was important in order to coordinate the interface with the cultural institutions and their efforts to link to the river. Some of these meetings included input from representatives from the Mural Walls, River Heritage Museum, Carson Four Rivers Center, and the historic railroad group.

### *Future Stakeholder Involvement*

The Environmental Assessment for the proposed boat launch and marina/transient dock facilities will be available for public review after approval by the Division of Environmental Analysis of the Kentucky Transportation Cabinet, and the Federal Highway Administration (FHWA). A public meeting will be conducted to allow interested parties to comment on the projects and the associated impacts. Comments will be addressed, if relative to the purpose and need of the projects, and will be incorporated into the Finding of No Significant Impact (FONSI) document.

# ***Appendices***



## ***APPENDIX A***



RECEIVED



ENGINEERING  
DEPARTMENT

## ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Ernie Fletcher  
Governor

DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
300 FAIR OAKS LANE  
FRANKFORT, KENTUCKY 40601  
PHONE (502) 564-2150  
FAX (502) 564-4245  
www.dep.ky.gov

Teresa J. Hill  
Secretary

Cheryl Taylor  
Commissioner

July 26, 2007

U.S. Army Corps of Engineers  
Louisville District  
Attn: Mr. George DeLancey, CELRL-OP-FW  
P.O. Box 489  
Newburgh, Indiana 47629

RE: Coordinated State Response  
Public Notice No. LRL-2007-0811-GJD  
Applicant: City of Paducah  
Proposed Activity: To construct a boat launch and attendant features to provide public access to the Ohio River for water related recreational activities located in McCracken County, Kentucky.

Dear Mr. DeLancey:

The Environmental and Public Protection Cabinet's Department for Environmental Protection has coordinated the above referenced public notice with concerned state agencies in order to prepare a statement of the Commonwealth's concerns on the proposed activity. We have the following comments concerning this project.

1 The Kentucky Division for Air Quality provided the following comments concerning Kentucky Administrative Regulations that may apply to this project. Questions should be directed to Leslie Eggen, at (502) 573-3382. The Division also suggests an investigation into compliance with applicable local government regulations.

Kentucky Division for Air Quality Regulation 401 KAR 63:010 Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at [http://www.air.ky.gov/homepage\\_repository/e-Clearinghouse.htm](http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm).

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the purposes listed on the Open Burning Fact Sheet located at [http://www.air.ky.gov/homepage\\_repository/e-Clearinghouse.htm](http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm). The Division also suggests an investigation into compliance with applicable local government regulations.

*Kentucky*  
UNBURNED

Equal Opportunity Employer M/F/H/V

- 2 The Division of Water offered the following comments.

An individual CWA Section 401 Water Quality Certification from the Division of Water is required for this project. Questions should be directed to Joyce Fry at (502) 564-3410.

There are no Outstanding State Resource Waters, Wild Rivers, or known Exceptional Waters within the project area. Care should be taken to minimize in-stream disturbances. Questions should be directed to John Brumley at (502) 564-3410.

A Kentucky Pollutant Discharge Elimination System (KPDES) Permit is not required for this project. Questions should be directed to Larry Sowder at (502) 564-3410.

A Stream Construction Permit is required per KRS 151.250. Questions should be directed to Ron Dutta, Floodplain Management Section, Water Resources Branch, Division of Water at (502) 564-3410.

- 3 The Kentucky Heritage Council offered the following comments.

No known historical, cultural, or archaeological sites are located in the project area. However, our review indicated that the proposed project has the potential to impact sites eligible for listing in the National Register of Historic Places. Therefore, I recommend that the entire project area be surveyed by a professional archaeologist. A report documenting the results of this investigation must be submitted for review, comment and approval. Where a given project area or portions thereof have been disturbed by prior construction, the applicant may file documentation of that disturbance with the State Historic Preservation Officer and may request an opinion concerning the need of an archaeological survey. Questions should be directed to Lori Stahlgren at (502) 564-7005.

- 4 The Kentucky Housing Buildings and Construction Office offered the following comments.

The City of Paducah should consult with their building department to see if a building permit is required for structure to be moored to land. Questions should be directed to Terry Slade at (502) 573-0373.

If you have any additional questions, please contact me at (502) 564-2150.

Sincerely,



Valerie A. Hudson  
Deputy Commissioner

cc: Joyce Fry, Division of Water  
City of Paducah

Department of the Army  
U. S. Army Engineer District, Louisville  
Corps of Engineers  
P. O. Box 59  
Louisville, Kentucky 40201-0059

FIRST-CLASS MAIL  
U. S. POSTAGE  
PAID  
Louisville, KY  
Permit No. 43

CITY OF PADUCAH  
300 S 5TH ST  
PADUCAH, KY 42002

RECEIVED

JUL 30 2007

ENGINEERING  
DEPARTMENT





# Public Notice

**US Army Corps  
of Engineers**  
Louisville District

Public Notice No.  
LRL-2007-0811-GJD

Date:  
19 Jul 07

Closing Date:  
7 Aug 07

Please address all comments and inquiries to:  
U.S. Army Corps of Engineers, Louisville District  
ATTN: Mr. George Delancey, CELRL-OP-FW  
P.O. Box 489  
Newburgh, Indiana 47629

Phone: (812) 842-2807

This notice announces an application submitted for a Department of the Army (DA) Permit, subject to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA)

**APPLICANT:** City of Paducah  
300 South 5<sup>th</sup> Street  
Paducah, Kentucky 42002

**LOCATION:** On the left bank of the Ohio River, Mile 935.8,  
Paducah, McCracken County, Kentucky.  
Latitude: 37-05-59  
Longitude: 88-36-39  
7.5 Minute Quad: Paducah East, KY

**PURPOSE:** To construct a boat launch and attendant features to  
provide public access to the Ohio River for water  
related recreational activities.

**DESCRIPTION OF WORK:** The applicant is proposing to construct a public boat launch facility. The project would result in the construction of a boat ramp, approximately 260' x 100', a paved parking/trailing area, and an access road extension from Burnett Street. There would also be a gang way and courtesy dock constructed at the ramp. The gangway/ramp structure would be approximately 200' x 8'. The boat ramp would be constructed of a compacted sub grade, 12" minimum of compacted aggregate, and a 6" minimum concrete grooved cap. The boat ramp would extend approximately 105' riverward at normal pool. The gangway/courtesy dock would extend 35' riverward at normal pool. The Ordinary Highwater Mark is 310.3' Ohio River Datum (ORD) and the Normal Pool elevation is 302' ORD.

The project would result in the permanent loss of 5 acres Farmed Wetlands (FW), 1.7 of Palustrine Forested Wetlands (PFO), and 0.3 acres of Palustrine Emergent Wetlands (PEM).

**Mitigation:** The applicant proposed on site mitigation. The mitigation would include the preservation of 34.4 acres of PFO, the preservation of 3.4 acres of upland buffer, and the restoration of 10.9 acres of FW to PFO. The restoration would be primarily managed for hard mast species.



Operations Division  
Regulatory Branch (West)  
ID No. LRL-2007-811

REVIEW PROCEDURES: A DA Permit cannot be issued if any legally required Federal, State, or local authorization or certification is denied. A DA permit, if otherwise warranted, will not be issued until a State of Kentucky Water Quality Certification or waiver is on file at this office. In order to comply with Section 401 of the Clean Water Act, the applicant, by this notice, hereby applies for State certification from the Kentucky Natural Resources and Environmental Protection Cabinet Division of Water (KDOW).

Copies of this notice are sent to the appropriate Federal and State Fish and Wildlife Agencies. Their views and comments are solicited in accordance with the Fish and Wildlife Coordination Act of 1956. Based on available information, the proposed activity will not destroy or endanger any Federally-listed threatened or endangered species or their critical habitats, as identified under the Endangered Species Act, and therefore, initiation of formal consultation procedures with the U.S. Fish and Wildlife Service is not planned at this time.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. A request for a public hearing must state the specific interest which might be damaged by issuance of the DA Permit.

The National Register of Historic Places has been examined, and it has been determined that there are no properties currently listed on the Register which would be directly affected by the proposed work. The site has been surveyed for cultural resources and coordination with the Kentucky State Historic Preservation Office is on-going. If we are made aware, as a result of comments received in response to this notice, or by other means, of specific archaeological, scientific, pre historical, or historical sites or structures which might be affected by the proposed work, the District Engineer will immediately take the appropriate action necessary pursuant to the National Historic Preservation Act of 1966 - Public Law 89-665 as amended (including Public Law 96-515).

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among those are conservation, economics, aesthetic values, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, navigation, recreation, water supply, water quality, energy needs, safety, food production, and in general, the needs and welfare of the public. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines (40 CFR Part 230) promulgated by the Administrator, United States Environmental Protection Agency, under authority of Section 404(b) of the CWA.



Operations Division  
Regulatory Branch (West)  
ID No. LRL-2007-811

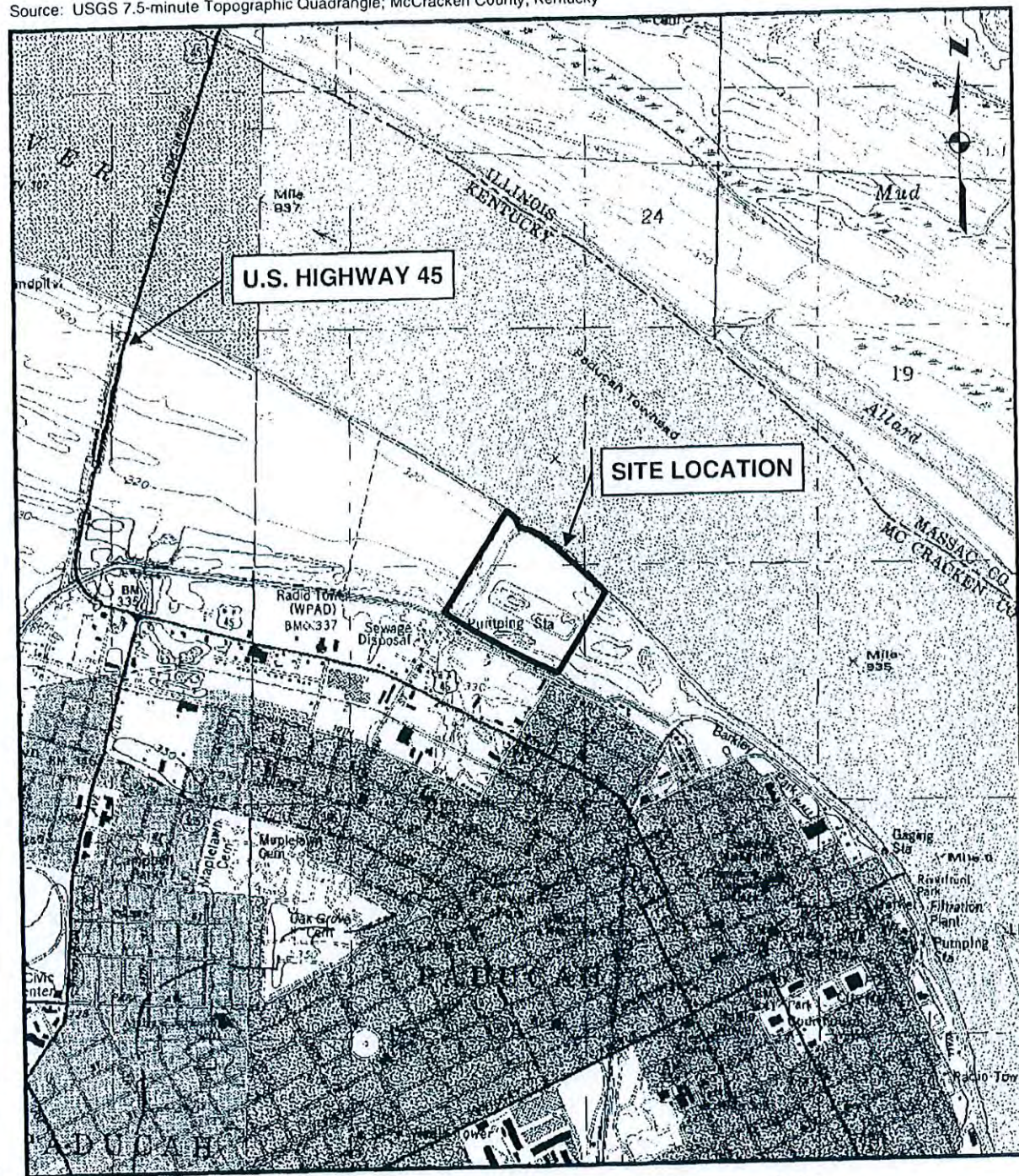
The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written statements received in this office on or before the closing date will become a part of the official record and will be considered in the determination on this permit request. Any objections which are received during this period will be forwarded to the applicant for possible resolution before the determination is made whether to issue or deny the requested DA Permit. A permit will be granted unless its issuance is found to be contrary to the public interest.

Information pertaining to this application is available for public examination during normal business hours upon prior request. Drawings are available on Louisville District's Internet site at <http://www.lrl.usace.army.mil/> under "Obtain a Permit". All comments regarding this proposal should be addressed to George DeLancey; CELRL-OP-FW at the address noted above and should refer to the Public Notice Number LRL-2007-0811-GJD.



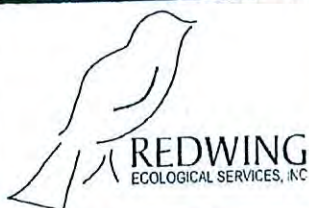
Source: USGS 7.5-minute Topographic Quadrangle; McCracken County, Kentucky



PADUCAH RIVERFRONT BOAT LAUNCH  
McCRACKEN COUNTY, KENTUCKY

FILE: Redwing/06-090/Figures/Assessment/Site  
REDWING PROJECT 06-090  
PRINT DATE 5/30/07

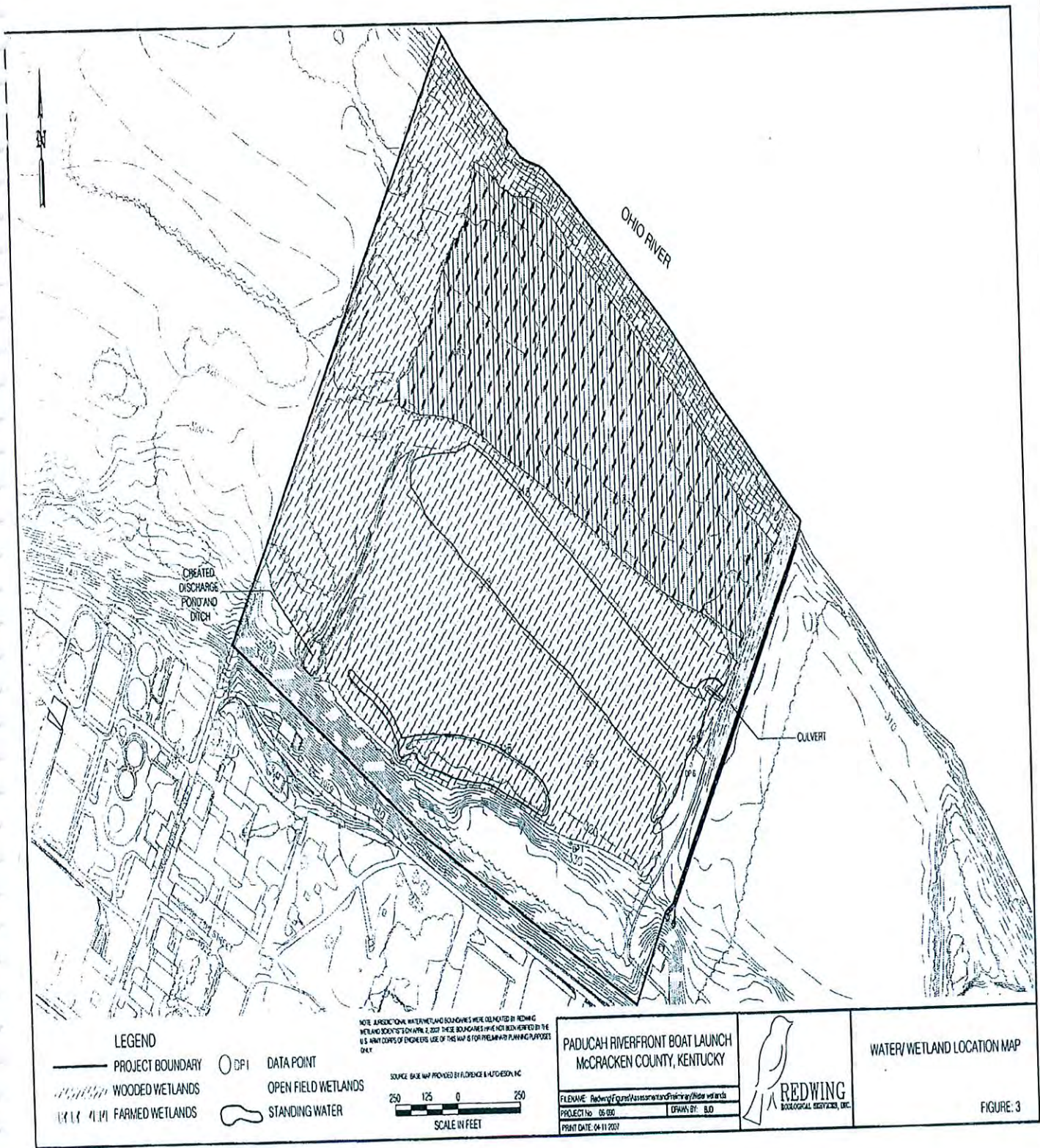
DRAWN BY BMA



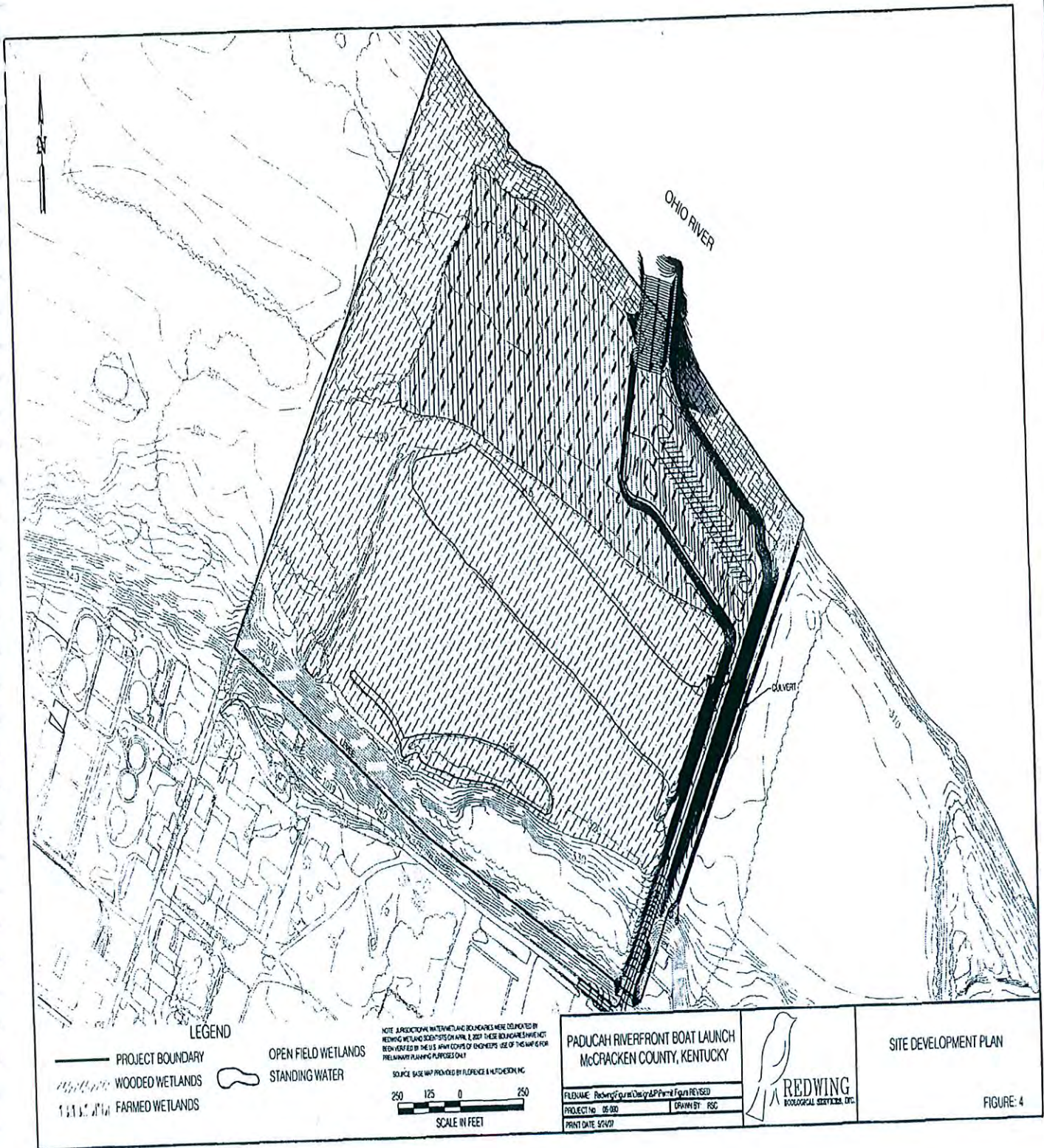
SITE LOCATION MAP

FIGURE 1

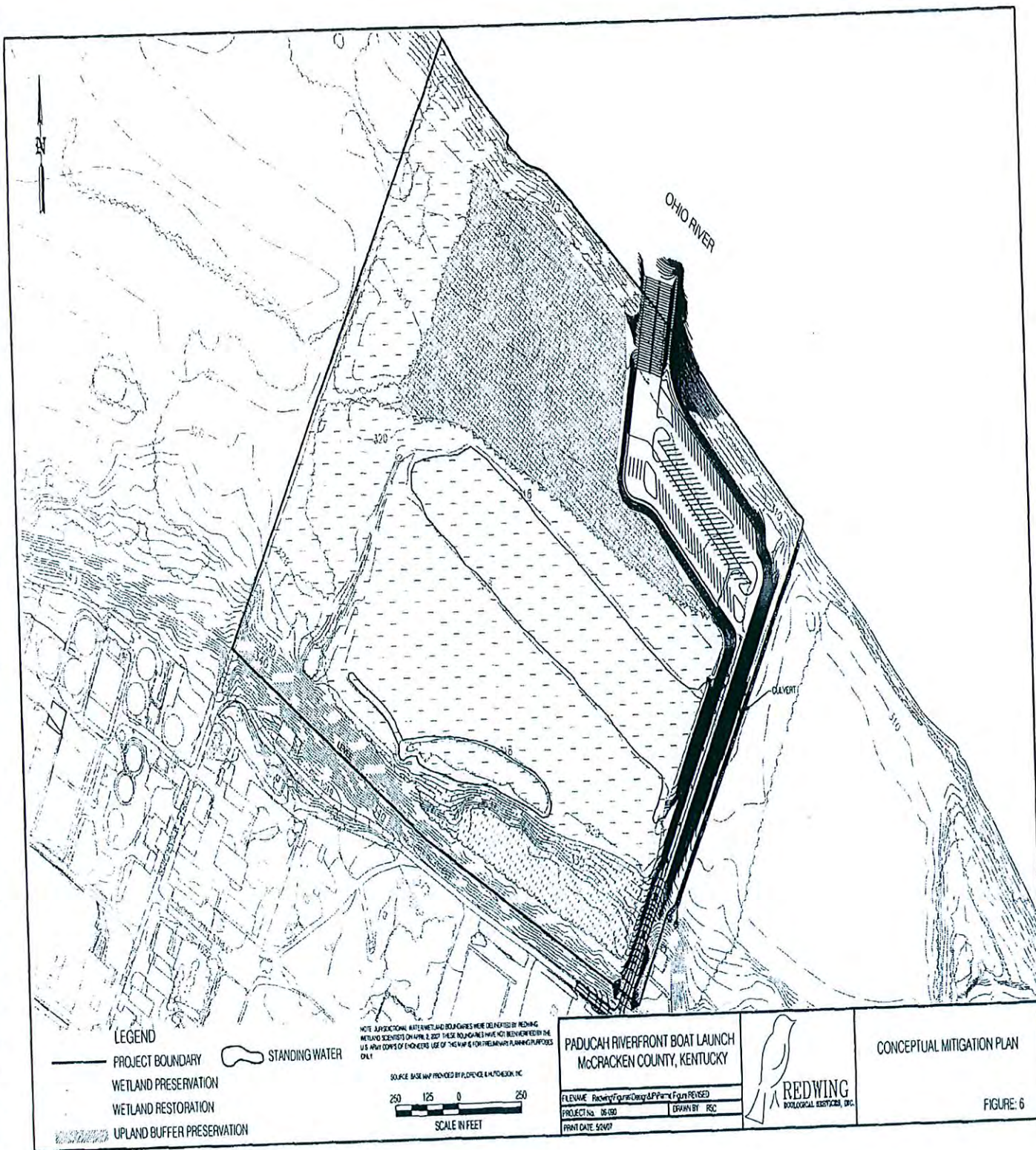












CITY OF PADUCAH,  
KENTUCKY

118

AR 110  
635 WILLIAMSON STREET  
WACONIA, MINNESOTA 55391  
504 251-1177  
504 251-6127  
RMA 5-55-0078

6027 6111

ENCLOSURE

NOT FOR CONSTRUCTION



Page 7.

## LAUNCH LAYOUT



• 911

2457.5

0-96867

١٤٠٠ هـ

C4.2





## ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Ernie Fletcher  
Governor

Department for Environmental Protection  
Division of Waste Management  
14 Reilly Road  
Frankfort, Kentucky 40601-1190  
www.kentucky.gov  
August 6, 2007

Teresa J. Hill  
Secretary

Mr. John L. Farmer  
Florence & Hutcheson  
410 New Salem Hwy  
Suite 109  
Murfreesboro, Tennessee 37129  
RE: Open Records Request

Dear Mr. Farmer

On August 2, 2007 the Division of Waste Management's Central File Room received your request to look for any records for 6<sup>th</sup> & Burnett Boat Launch, looking for any former or present hazardous waste sites within the EA study area. County Kentucky. Please be advised that I have done a search and did not locate any files on the surrounding property that you have inquired in your FOI Request. The Underground Storage Tank Branch (502) 564-5981, our Division of Water (502) 564-3410, and our Division of Air Quality (502) 573-3382 may maintain files on these sites, so you may wish to contact the records custodians to review their files.

In addition, please note that the following records will be exempt from an information request under KRS 61.878:

1. Records of law enforcement agencies or agencies involved in administrative adjudication that were compiled in the process of detecting and investigating statutory or regulatory violations, if the disclosure of the information would harm the agency (KRS 61.878(1)(g)).
2. Preliminary drafts, notes and correspondence with private individuals other than correspondence which is intended to give notice of final action of a public agency (KRS 61.878 (1)(h)).
3. Preliminary recommendations and preliminary memoranda in which opinions are expressed or policies are formulated or recommended (KRS 61.878 (1)(j)).
4. All public records or information the disclosure of which is otherwise prohibited by federal law or regulation, and public records or information the disclosure of which is prohibited or restricted or otherwise made confidential by an enactment of the General Assembly (KRS 61.878 (1)(j&k)).

If you have any questions or need any additional information, please call (502) 564-6716, extension 287.

Sincerely,

A handwritten signature in cursive script that reads "Tina Fisher".

Tina Fisher  
DWM Central Records



PREVENTION PARK  
81 C MICHAEL DAVENPORT BLVD.  
FRANKFORT, KY 40601  
PHONE (502)-564-5981  
FAX (502)-564-0094  
E-MAIL: UST.KORA@ky.gov

**UNDERGROUND  
STORAGE TANK  
BRANCH**

# Fax

**To:** John L. Farmer, PE, CPESC **From:** Darlene Murphy, Admin. Spec. III  
**Fax:** 615-904-2004 **Pages:** 1  
**Phone:** 615-867-9400 **Date:** 7/18/07  
**Re:** UST Open Records Request **CC:**

**Urgent For Review Please Comment Please Reply Please Recycle**

• **Comments:** The Division of Waste Management, Underground Storage Tank Branch, has conducted a UST file search as a result of your request for information.

Please be advised that based on the information you provided, **specifically:**

6<sup>th</sup> and Burnett Boat Launch  
City of Paducah, KY Waterfront Development  
8<sup>th</sup> and Burnett

No UST records were found in UST file room for the address above. This fax is in response to the UST open records request dated 7/16/07 received via mail by UST 7/18/07.

United States Department of Agriculture



NRCS

Natural  
Resources  
Conservation  
Service

2715 Olivet Church Road  
Paducah, Ky. 42001  
(270) 554-5242 Ext. 3

July 24, 2007

John L Farmer  
Environmental Division Manager  
Florence & Hutcheson, Inc.  
410 New Salem Hwy  
Suite 109  
Murfreesboro, Tennessee 37129

As requested I have reviewed the site at Paducah, Ky. for the boat launch ramp at 6<sup>th</sup> and Burnett. Enclosed is a copy of the soils map of the area and a copy of prime farmland soils for McCracken County. Prime farmland soils in this site include Nolin-Robinsonville(Nr) and Newark-Lindsay(Nd). Alluvial (Av), Okaw (Oc), and Loring (LoD3) are not classified as prime or statewide soils.

Most of the Nd soil appears to be already converted as the presence of the road indicates. If you have any questions or need more assistance let me know and I will be happy to help.

Sincerely,

John A Shely  
District Conservationist

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communications of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET CENTER at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer

---

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment. AN EQUAL OPPORTUNITY EMPLOYER



**John Farmer**

**From:** Clay, Art (EPPC DEP DOW) [Art.Clay@ky.gov]  
**Sent:** Tuesday, September 25, 2007 9:54 AM  
**To:** John Farmer  
**Subject:** RE: Paducah, KY Boat Launch EA

A stream Construction permit will be required per KRS 151.250. That is the comment from this branch.

**Art Clay**, Manager  
Water Resources Branch  
502 564-3410 ext 583  
art.clay@ky.gov

**From:** John Farmer [mailto:jfarmer@flohut.com]  
**Sent:** Tuesday, September 25, 2007 10:45 AM  
**To:** Clay, Art (EPPC DEP DOW)  
**Subject:** Paducah, KY Boat Launch EA

Mr. Clay:

We submitted a letter to your attention dated July 16, 2007, describing a proposed boat launch development on the banks of the Ohio River in Paducah, Kentucky. This letter was intended to allow your office to comment as part of the NEPA requirements. Though we did not receive comments from your office addressed to us, we are in receipt of your comments to the U.S. Corps of Engineers Public Notice No. LRL-2007-0811-GJD in a "coordinated state response" to Mr. George DeLancey in the Louisville District.

In your response to the public notice, you offered the following comments:

- (1) An individual CWA Section 401 Water Quality Certification from the Division of Water is required for the project.
- (2) There are no Outstanding State Resource Waters, Wild Rivers, or known Exceptional Waters within the project area.
- (3) A KPDES permit is **not** required for the project.
- (4) A Stream Construction Permit is required per KRS 151.250.

If there are no comments addressed directly to our letter of July 16, 2007, we will assume that your response to the U.S. Corps of Engineer public notice will suffice.

Thanks for your time!

*JOHN L. FARMER, PE, CPESC*  
**FLORENCE & HUTCHESON, INC.**  
410 New Salem Highway, Suite 109  
Murfreesboro, Tennessee 37129  
Phone: (615) 867-9400  
Fax: (615) 904-2004  
jfarmer@flohut.com



## John Farmer

**From:** King, Lori M MS NGKY-KYEM [lori.mechelle.king@us.army.mil]  
**Sent:** Monday, October 01, 2007 10:47 AM  
**To:** John Farmer  
**Subject:** RE:

Mr. Farmer

I am assuming that this letter was also copied to the Corp of Engineers. Floodplain issues fall under their realm of responsibility. They would be more appropriate to handle comments in regard to this. I have no comments.

Thank you

Lori King  
Area 1 Manager  
State Earthquake Program Manager  
Kentucky Division of Emergency Management Office Phone: 270-247-9712  
Cell: 270-792-1230  
Duty Officer: 1-800-255-2587  
Fax: 270-247-4072  
P.O. Box 583  
Mayfield, KY 42066  
Lori.King@ky.ngb.army.mil  
Web Site: <http://kyem.ky.gov/>

-----Original Message-----

**From:** John Farmer [mailto:Jfarmer@flohut.com]  
**Sent:** Friday, September 28, 2007 2:19 PM  
**To:** King, Lori M MS NGKY-KYEM  
**Subject:**

Ms. King:

We submitted a letter to your attention dated July 16, 2007, describing a proposed boat launch development on the banks of the Ohio River in Paducah, Kentucky. This letter was intended to allow your office to comment as part of the NEPA requirements. We specifically requested that you provide us with floodplain permitting issues along the Ohio River in McCracken County, KY.

If there are no comments addressed directly to our letter of July 16, 2007 from your office, we will assume that there are no floodplain permitting issues.

Thanks for your time!

JOHN L. FARMER, PE, CPESC

FLORENCE & HUTCHESON, INC.

410 New Salem Highway, Suite 109



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

3761 Georgetown Road  
Frankfort, Kentucky 40601

September 12, 2007

U.S. Army Corps of Engineers  
Louisville District  
Attn: Mr. George Delancey, CELRL-OP-FW  
P.O. Box 489  
Newburgh, IN 47629

Subject: FWS Project #2007-B-1117; Public Notice No. LRL-2007-0811-GJD,  
McCracken County, Kentucky

Dear Mr. Delancey:

The Fish and Wildlife Service (Service) has reviewed the public notice issued on July 19, 2007 for the above-referenced project. According to the public notice, the project will consist of constructing a public boat launch facility that will result in the permanent loss of 5 acres of farmed wetland, 1.7 acres of palustrine forested wetland, and 0.3 acre of palustrine emergent wetland.

We requested and received a copy of the Joint Application for 404 Individual Permit, Section 10 Navigable Waters Permit, and the Section 401 Water Quality Certification on August 22, 2007 from Redwing Ecological Services, Inc (Redwing). After reviewing both documents, we offer the following comments:

#### Threatened and Endangered Species

According to Service records, an endangered Indiana bat (*Myotis sodalis*) record has been documented within five miles of the proposed project site. Based on this information, the Service believes that: (1) forested areas in the vicinity of or on the project area may provide potentially suitable summer roosting and foraging habitat for the Indiana bat, and (2) caves, rockshelters, and abandoned underground mines in the vicinity of and on the project area may provide potentially suitable winter hibernacula habitat for the Indiana bat.

Redwing Ecological Services, Inc. addressed the presence of Indiana bat summer habitat onsite in their Joint Application. In the application, they have agreed that the removal of trees onsite will only occur between October 15 and March 31 to avoid impacting summer roosting Indiana bats. Also, if Indiana bat hibernacula are identified onsite or are known to occur within 10 miles of the project area, the applicant will only remove trees between November 15 and March 31 to avoid impacting Indiana bat "swarming" behavior. According to Redwing, no caves, rockshelters, or abandoned underground

TAKE PRIDE  
IN AMERICA 



mines that could provide suitable winter hibernacula habitat for the Indiana bat exist within the project boundary. Therefore, the Service agrees with Redwing that the proposed project will "not likely adversely affect" Indiana bats.

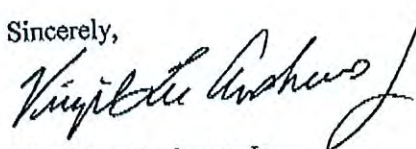
The proposed project is also in close proximity to several federally protected mussel records known to occur within the Ohio River. Redwing has agreed to consult with the Service regarding the specific location and design of the proposed boat launch. Therefore the Service agrees with Redwing that the proposed project will "not likely adversely affect" and federally protected mussel species.

Mitigation

The Service has also reviewed the proposed mitigation plan for this project. We find that 34.4 acres of preserved forested wetland, 3.4 acres of preserved upland buffer, and 10.9 acres of farmed to forested wetland is acceptable mitigation for the proposed impacts.

If you have any questions regarding the information that we have provided, please contact Carrie Lona at (502) 695-0468.

Sincerely,



Virgil Lee Andrews, Jr.  
Field Supervisor



Ernie Fletcher  
Governor



Teresa J. Hill  
Secretary  
Environmental and Public  
Protection Cabinet

Commonwealth of Kentucky  
Kentucky State Nature Preserves Commission  
801 Schenkel Lane  
Frankfort, Kentucky 40601-1403  
502-573-2886 Voice  
502-573-2355 Fax

Donald S. Dott, Jr.  
Director

August 7, 2007

John L. Farmer  
Florence & Hutcheson, Inc.  
410 New Salem Hwy, Suite 109  
Murfreesboro, TN 37129

Data Request 08-011

Dear Mr. Farmer:

This letter is in response to your data request of July 18, 2007 for the City of Paducah 6th and Burnett Boat Launch project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur near the project area on the Paducah East USGS Quadrangle, as shown on the map provided. Based on our most current information, we have determined that no occurrences of the plants or animals and no occurrences of the exemplary natural communities that are monitored by KSNPC are reported as occurring in the specified area. Please see the attached report for more information.

*Myotis austroriparius* (Southeastern myotis, federal species of management concern, KSNPC endangered KSNPC endangered) and *Myotis sodalis* (Indiana myotis, federally listed endangered, KSNPC endangered) are known to occur in the bottomland hardwood forest adjacent to the project area. In order to avoid impacts to bats, bottomland forests and riparian corridors should not be disturbed.

In addition, *Nycticeius humeralis* (Evening Bat, KSNPC special concern) is known to occur within 10 miles of the project. Summer habitats include bottomland forests, swamps, and riparian corridors.

Although many of the fishes and mussels listed on the report are believed to be extirpated or are known only from historic records, some are still extant in the area (please see the aquatic elements report for more details). These species are sensitive to increased turbidity, sediment, and other adverse influences on water quality. Our data are not sufficient to guarantee absence of endangered, threatened or sensitive species from the sites of proposed construction disturbance.



We recommend that impacted streams be thoroughly surveyed by a qualified biologist prior to any in-stream disturbance.

*Sterna antillarum athalassos* (Interior Least Tern, federally endangered, KSNPC endangered) occurs near the area. This species is found on bare or nearly bare alluvial islands or sand bars.

*Ammodramus henslowii* (Henslow's Sparrow, KSNPC special concern, federal species of management concern) is associated with fallow hayfields, ungrazed pastures with scattered small trees and tall weeds, grassland, and brushland.

*Accipiter striatus* (Sharp-shinned Hawk, KSNPC special concern) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees.

*Tyto alba* (Barn Owl, KSNPC special concern) can be found in hollow trees, old buildings, barns, silos and other abandoned structures. Before demolition of existing structures, it should be determined that these birds are not present.

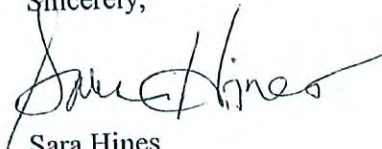
I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

Data Request 08-011  
August 7, 2007  
Page 3

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Sara Hines", with a stylized flourish at the end.

Sara Hines  
Data Manager

SLD/SGH

Enclosures: Data Report and Interpretation Key





**COMMERCE CABINET  
KENTUCKY HERITAGE COUNCIL**

**Ernie Fletcher**  
Governor

The State Historic Preservation Office  
300 Washington Street  
Frankfort, Kentucky 40601  
Phone (502) 564-7005  
Fax (502) 564-5820  
[www.kentucky.gov](http://www.kentucky.gov)

**George Ward**  
Secretary

August 16, 2007

Mr. John Farmer  
Florence & Hutcheson, Inc  
410 New Salem Hwy  
Suite 109  
Murfreesboro, TN 37129

**Re: EA 6<sup>th</sup> & Burnett Boat Launch, Paducah, McCracken County, Kentucky**

Dear Mr. Farmer:

We have reviewed the information provided for the above mentioned project. Our review indicated that while there are no known archaeological sites in the immediate vicinity of the project area, the project has the potential to impact sites eligible for listing in the National Register of Historic Places. Therefore, I recommend that the entire project area be surveyed by a professional archaeologist. A report documenting the results of this investigation must be submitted for review, comment and approval.

Should you have any questions, feel free to contact Lori Stahlgren of my staff at (502) 564-7005, extension 118.

Sincerely,

A handwritten signature in cursive script, reading "Donna M. Neary".

Donna M. Neary, Executive Director  
Kentucky Heritage Council and  
State Historic Preservation Officer



COMMERCE CABINET  
KENTUCKY HERITAGE COUNCIL

Steven L. Beshear  
Governor

The State Historic Preservation Office  
300 Washington Street  
Frankfort, Kentucky 40601  
Phone (502) 564-7005  
Fax (502) 564-5820  
www.kentucky.gov

Marcheta Sparrow  
Secretary

Donna M. Neary  
Executive Director and  
State Historic Preservation Officer

February 11, 2008

Mr. John L. Farmer  
Florence & Hutcheson, Inc.  
410 New Salem Hwy  
Suite 109  
Murfreesboro, TN 37129

Re: **Environmental Assessment – Amendment No. 1,6<sup>th</sup> & Burnett Boat Launch and Marina/Transient Dock, City of Paducah, Kentucky Waterfront Development**

Dear Mr. Farmer:

Thank you for your letter concerning the above referenced project. In our August 16, 2007 letter, we requested that the location of the proposed 6<sup>th</sup> & Burnett Boat Launch be surveyed for archaeological sites that are eligible for listing on the National Register of Historic Places (NRHP). Though a small portion of the proposed project area has been previously surveyed, the northwest portion of the Boat Launch project area has the potential to contain archaeological sites that are eligible for listing in the NRHP. Our review of the proposed Marina/Transient Dock project area indicates that it also has the potential to impact archaeological sites that are eligible for listing in the NRHP. Both areas should be surveyed by a professional archaeologist and a report documenting the results of these studies should be submitted for my review and approval.

There are many historic structures located within and adjacent to both project areas; a cultural historic survey should be conducted of the Area of Potential Effect for each project to determine if the proposed undertakings will affect historic structures that are eligible for or listed in the NRHP. A report documenting the results of this study should be submitted to this office for review and approval. We understand that this undertaking is part of the city of Paducah's long term development plan to modify and change the city waterfront, and given the funding sources, the effects of this undertaking on cultural resources must be assessed.

Should you have any questions, feel free to contact Lori Stahlgren of my staff at (502) 564-7005, extension 118.

Sincerely,

Donna M. Neary, Executive Director  
and State Historic Preservation Officer

Cc: Janie-Rice Brother  
LCS:lcs



An Equal Opportunity Employer M/F/D

## ***APPENDIX B***



**John Farmer**

**From:** Tan, Wilson (EPPC DEP DWM) [wilson.tan@ky.gov]  
**Sent:** Thursday, January 17, 2008 2:45 PM  
**To:** Jfarmer@flohut.com  
**Subject:** Environmental Assessment

John,

I like to let you know that there is no hazardous waste site within the additional EA study area that we are aware of. If you have any questions, please feel free to ask. Thanks.

***Wilson Tan***

*Division of Waste Management  
Hazardous Waste Branch  
Phone: (502) 564-6716 ext. 674  
Fax: (502) 564-2705*

1/17/2008



ERNIE FLETCHER  
GOVERNOR

**ENVIRONMENTAL AND PUBLIC PROTECTION CABINET**

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

UNDERGROUND STORAGE TANK BRANCH

81 C. MICHAEL DAVENPORT BLVD

FRANKFORT, KENTUCKY 40601-1190

[www.kentucky.gov](http://www.kentucky.gov)

TERESA J. HILL  
SECRETARY

December 5, 2007

ATTN JOHN L FARMER  
FLORENCE & HUTCHESON INC  
410 NEW SALEM HWY SUITE 109  
MURFREESBORO TN 37129

RE: Environmental Assessment – Amendment No. 1  
6<sup>th</sup> & Burnett Boat Launch and Marina/Transient Dock  
City of Paducah, KY Waterfront Development  
Paducah, McCracken County

Dear Mr. Farmer:

The UST Branch is in receipt of your inquiry submitted on December 3, 2007, regarding the Environmental Assessment – Amendment No. 1 for the City of Paducah. Per your request, the UST Branch has completed a search of our records to identify any registered underground storage tank(s) within the Environmental Assessment study area outlined on your location maps. Our records indicate no registered underground storage tanks have been located within the areas depicted on the location map for both the Boat Launch and Marina/Transient Dock.

We trust that this information is sufficient for your Environmental Assessment requirements. If you have any questions regarding this information, please contact me at 502-564-5981 or 800-928-7782.

Sincerely,

E-Signed by Rok Dani(?)  
FY authenticity with Appr

Underground Storage Tank Branch  
Division of Waste Management

Cc: File

**John Farmer**

**From:** Clay, Art (EPPC DEP DOW) [Art.Clay@ky.gov]  
**Sent:** Tuesday, December 04, 2007 9:45 AM  
**To:** jfarmer@flohut.com  
**Subject:** Paducah Waterfront development

Mr.. Farmer:

I have reviewed your letter dated 11/29/07. You will need to complete an application for a permit to construction in or along a stream for any work completed in the 100 year floodplain. You may also need permits from the Water Quality Branch and the KPDES Branch.

*Art Clay*, Manager  
Water Resources Branch  
502 564-3410 ext 583  
art.clay@ky.gov

12/4/2007





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Kentucky Ecological Services Field Office  
330 West Broadway, Suite 265  
Frankfort, Kentucky 40601  
(502) 695-0468

January 18, 2008

Mr. John Farmer  
Florence & Hutcheson, Inc.  
410 New Salem Hwy, Suite 109  
Murfreesboro, Tennessee 37129

Subject: FWS #2008-B-0224; EA Amendment #1 6<sup>th</sup> & Burnett Boat Launch and Marina/Transient Dock, City of Paducah Waterfront Development, McCracken County, Kentucky

Dear Mr. Farmer:

Thank you for your correspondence of November 29, 2007, regarding the proposed marina/transient dock facility located approximately 1 mile upstream from the 6<sup>th</sup> Burnett Boat Launch facility. According to your letter, the City of Paducah is proposing to construct the marina/transient dock facility on City-owned property which would extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 800 linear feet into the Ohio River. The site would comprise approximately 42 acres of riverbank and water surface. Fish and Wildlife Service (Service) personnel have reviewed the information submitted, and we offer the following comments.

According to our records, several mussels which are endangered and one candidate for listing are known to occur in the Ohio River. These mussels are listed below:

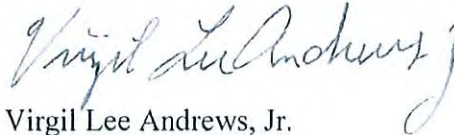
<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal Status</u>
Fanshell	<i>Cyprogenia stegaria</i>	endangered
Rough pigtoe	<i>Pleurobema plemum</i>	endangered
Pink mucket	<i>Lampsilis abrupta</i>	endangered
Fat Pocketbook	<i>Potamilus capax</i>	endangered
Orangefoot pimpleback	<i>Plethobasus cooperianus</i>	endangered
Clubshell	<i>Pleurobema clava</i>	endangered
Sheepnose	<i>Plethobasus cyphus</i>	candidate

You should survey the footprint of the project area and also a certain distance both upstream and downstream of the project site in order to determine the presence or absence of these species in an effort to determine if potential impacts to these species are likely. A qualified biologist, and preferably one who holds the appropriate collection permits for these species, must undertake

such surveys, and we would appreciate the opportunity to approve the biologist's survey plan prior to the survey being undertaken and to review all survey results, both positive and negative. If these species are identified, we request written notification of such occurrence(s) and further coordination and consultation with you.

Thank you for the opportunity to comment on this proposed action. If you have any questions regarding the information we provided, please contact Mindi Lawson at (502)/695-0468 (ext.229).

Sincerely,

A handwritten signature in blue ink, reading "Virgil Lee Andrews, Jr.", with a stylized flourish at the end.

Virgil Lee Andrews, Jr.  
Field Supervisor



Ernie Fletcher  
Governor



Teresa J. Hill  
Secretary  
Environmental and Public  
Protection Cabinet

Commonwealth of Kentucky  
Kentucky State Nature Preserves Commission  
801 Schenkel Lane  
Frankfort, Kentucky 40601-1403  
502-573-2886 Voice  
502-573-2355 Fax

Donald S. Dott, Jr.  
Director

December 21, 2007

John L. Farmer  
Florence & Hutcheson, Inc.  
410 New Salem Highway, Suite 109  
Murfreesboro, TN 37129

Data Request 08-084

Dear Mr. Farmer:

This letter is in response to your data request of November 28, 2007 for the Marina/Transient Dock in Paducah project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur near the project area on the Paducah East USGS Quadrangle, as shown on the map provided. Please see the attached reports for more information, which reflect analysis of the project area with three buffers applied:

- 1-mile for all records – 19 records
- 5-mile for aquatic records – 26 records
- 5-mile for federally listed species – 14 records
- 10-mile for mammals and birds – 19 records

Aquatic species and habitats in the area are sensitive to increased turbidity, sediment, and other adverse influences on water quality. A written erosion control plan should be developed that includes stringent erosion control methods (i.e., straw bales, silt fences and erosion mats, immediate seeding and mulching of disturbed areas), which are placed in a staggered manner to provide several stages of control. All erosion control measures should be monitored periodically to ensure that they are functioning as planned. Our data are not sufficient to guarantee absence of endangered, threatened or sensitive species from the sites of proposed construction disturbance. We recommend that impacted streams be thoroughly surveyed by a qualified biologist prior to any in-stream disturbance.

*Nycticeius humeralis* (Evening Bat, KSNPC special concern) occurs within your search area. Summer habitats include bottomland forests, swamps, and riparian corridors. In order to avoid impacts to bats, a thorough survey should be conducted. The survey should include a search for



potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat.

*Myotis austroriparius* (Southeastern myotis, federal species of management concern, KSNPC endangered) and *Myotis sodalis* (Indiana myotis, federally listed endangered, KSNPC endangered) are known to occur near the proposed project. A thorough survey for these species should be conducted by a qualified biologist if suitable habitat will be disturbed. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat. Summer foraging habitats include upland forests, bottomland forests and riparian corridors. Suitable roost and winter sites include sandstone and limestone caves, rockhouses, cliffhines, auger holes, and abandoned mines. In order to avoid impacts to bats, bottomland forests and riparian corridors, particularly near caves, should not be disturbed.

*Sterna antillarum athalassos* (Interior Least Tern, federally endangered, KSNPC endangered) occurs near the area. This species is found on bare or nearly bare alluvial islands or sand bars.

*Haliaeetus leucocephalus* (Bald eagle, federally delisted, KSNPC threatened) can be found near seacoasts, rivers and large lakes. Preferentially roosts in conifers in winter in some areas. In winter, may associate with waterfowl concentrations or congregate in areas with abundant dead fish.

*Accipiter striatus* (Sharp-shinned Hawk, KSNPC special concern) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees.

*Ammodramus henslowii* (Henslow's Sparrow, KSNPC special concern, federal species of management concern) is associated with fallow hayfields, ungrazed pastures with scattered small trees and tall weeds, grassland, and brushland.

I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a

Data Request 08-084

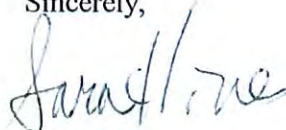
December 21, 2007

Page 3

definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,



Sara Hines

Data Manager

SLD/SGH

Enclosures: Data Report and Interpretation Key





**KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES  
COMMERCE CABINET**

**Ernie Fletcher**  
Governor

#1 Sportsman's Lane  
Frankfort, Kentucky 40601  
Phone (502) 564-3400  
1-800-858-1549  
Fax (502) 564-0506  
fw.ky.gov

**George Ward**  
Secretary

**Dr. Jonathan W. Gassett**  
Commissioner

December 12, 2007

John L. Farmer, PE, CPESC  
Environmental Division Manager  
Florence & Hutcheson, Inc.  
410 New Salem HWY  
Suite 109  
Murfreesboro, TN 37129

RE: Environmental Assessment – Amendment No. 1  
6<sup>th</sup> & Burnett Boat Launch and Marina/Transient Dock  
City of Paducah, KY Waterfront Development

Dear Mr. Farmer:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the project area (see attached list). Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

- The Indiana bat utilizes a wide array of habitats, including riparian forests, upland forest, and fencerows for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in cavities of dead and live trees, and in snags (i.e., dead trees or dead portions of live trees). Trees in excess of 16 inches diameter at breast height (DBH) are considered optimal for maternity colony roosts, but trees in excess of 9 inches DBH appear to provide suitable maternity roosting habitat. Male Indiana bats have been observed roosting in trees as small as 3 inches DBH. Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting Indiana bats. However, if any Indiana bat hibernacula are identified on the project area or are known to occur within 10 miles of the project area, we recommend the applicant only remove trees between November 15 and March 31 in order to avoid impacting Indiana bat "swarming" behavior.
- Several federal listed mussel species are located within this portion of the Ohio River. We recommend that you contact the U. S. Fish and Wildlife Service Kentucky Field Office at (502) 695-0468 concerning the federally listed endangered species that could be impacted by the proposed project.

It appears that the proposed project has the potential to impact wetland habitats. KDFWR recommends that you look at the appropriate US Department of Interior National Wetland Inventory Map (NWI) and the appropriate county soil surveys to determine where the proposed project may impact wetlands. Additionally, field verification may be needed to determine the extent and quality of wetland habitats within the project area. Any planning should include measures designed to eliminate and/or reduce impacts to



wetland habitats. KDFWR recommends that you contact the appropriate US Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetland habitats of Kentucky.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (800) 852-0942 Extension 366.

Sincerely,



Doug Dawson  
Wildlife Biologist III

Cc: Environmental Section File

**Federal/State Listed Species that may occur near the project area according to the KFWIS.**

<b><u>Scientific Name</u></b>	<b><u>Common Name</u></b>	<b><u>Federal Status</u></b>	<b><u>KSNPC Status</u></b>
<i>Cyprogenia stegaria</i>	Fanshell	LE	E
<i>Lampsilis abrupta</i>	Pink Mucket	LE	E
<i>Myotis grisescens</i>	Gray Myotis	LE	T
<i>Myotis sodalis</i>	Indiana Bat	LE	E
<i>Obovaria retusa</i>	Ring Pink	LE	E
<i>Plethobasus cooperianus</i>	Orangefoot Pimpleback	LE	E
<i>Potamilus capax</i>	Fat Pocketbook	LE	E
<i>Sternula antillarum athalassos</i>	Interior Least Tern	LE	E

**US Fish & Wildlife Service Status:**    **KY State Nature Preserves Commission Status**

N = None	N = None
C = Candidate	E = Endangered
LT = Listed as Threatened	T = Threatened
LE = Listed as Endangered	S = Special Concern
	H = Historic
	X = Extirpated

## ***APPENDIX C***



## ENGINEERING "NO IMPACT" CERTIFICATION

This is to certify that I am a duly qualified engineer licensed to practice in the Commonwealth of Kentucky.

It is to further certify that the attached technical data supports the fact that the proposed

6<sup>th</sup> and Burnett Boat Launch Facility

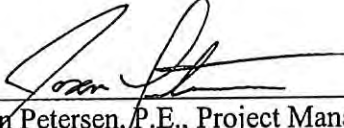
will not impact the 100-year flood elevations, floodway elevations and floodway widths on  
the Ohio River

at published sections in the Flood Insurance Study (FIS) for

McCracken County, Kentucky      dated 1979

and will not impact the 100-year flood elevations, floodway elevations, and floodway widths  
at unpublished cross-sections in the vicinity of the proposed development.

5/30/07  
(Date)

  
\_\_\_\_\_  
Jason Petersen, P.E., Project Manager  
Florence & Hutcheson, Inc.  
2250 Irvin Cobb Drive  
Paducah, Kentucky 42003  
Tel: (270) 444-9691

**FEMA**  
**3003 Chamblee Tucker Road**  
**Atlanta, GA 30341**  
**ATTN: F I & Mitigation Division**

## ***APPENDIX D***



STEVEN L. BESHEAR  
GOVERNOR

ROBERT D. VANCE  
SECRETARY

**ENVIRONMENTAL AND PUBLIC PROTECTION CABINET**

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

DIVISION OF WATER

14 REILLY ROAD

FRANKFORT, KENTUCKY 40601

[www.kentucky.gov](http://www.kentucky.gov)

April 8, 2008

Mr. Rick Murphy  
City of Paducah  
300 South 5th St  
Paducah, KY 42002

Re: Water Quality Certification #2008-0029-1  
Paducah Riverfront Development Project  
USACE Public Notice No.: 2007-0811-GJD  
AI No.: 96535  
Activity ID: APE20070002  
Ohio River and adjacent wetlands  
McCracken County, Kentucky

Dear Mr. Murphy:

Pursuant to Section 401 of the Clean Water Act (CWA), the Commonwealth of Kentucky certifies it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated by the above referenced project provided that the U.S. Army Corps of Engineers authorizes the activity under 33 CFR part 330, and the attached conditions are met.

All future correspondence on this project must reference **AI No. 96535**. **The attached document is your official Water Quality Certification; please read it carefully.** If you should have any questions concerning the conditions of this water quality certification, please contact Ms. Joyce Fry of my staff by calling (502) 564-3410.

Sincerely,

E-Signed by Alan Grant  
VERIFY authenticity with Approval

**Alan Grant, Supervisor**  
Water Quality Certification Section  
Kentucky Division of Water

AG:JF:kp  
Attachment



COPIES SENT TO:

George DeLancey, USACE: Newburgh Field Office

Matt Blake (agent), Redwing Ecological Services, Inc., 1139 S Fourth St, Louisville, KY 40203

Jason Petersen, Florence & Hutcheson, Inc., 2550 Irvin Cobb Drive, Paducah, KY 42003

Jason Nally, Four Rivers Basin Coordinator: Paducah

Sharon Vriesenga, KDOW: Frankfort

**Water Quality Certification**  
Paducah Riverfront Redevelopment Project  
Facility Requirements  
Permit Number: 2008-0029-1  
Activity ID No.: APE20070002

Page 1 of 2

**ACTV1 (boat dock) 7.7 acres of jurisdictional waters:**

**Submittal/Action Requirements:**

Condition No.	Condition
S-1	The City of Paducah shall submit a progress/monitoring report on the wetland restoration project: Due annually, by the 31st of December for a period of at least five years. The Kentucky Division of Water reserves the right to extend the monitoring period until such time as the stated success criteria have been obtained. Any deficiencies noted within the monitoring period shall be addressed in the annual monitoring report for that year and, after approval from the USACE and KDOW, corrective action shall be taken within the next year of monitoring. If the project is deemed unsuccessful after a monitoring period of eight years, the City of Paducah shall pay a fee-in-lieu of mitigation to the Kentucky Department for Fish and Wildlife Resources Stream Restoration Fund, the amount of which will be determined by the Corps of Engineers. [Clean Water Act]
S-2	The City of Paducah shall submit written notification: Due prior to any construction activity. The draft Kentucky Division of Water conservation easement model with applicant's suggested changes shall be submitted to the Water Quality Certification Section before construction may begin. [Clean Water Act]
S-3	The City of Paducah shall submit written notification: Due within 60 days. The conservation easement shall be recorded and a copy of the recorded easement submitted to the KDOW within 60 days of written approval by KDOW and USACE. [Clean Water Act]

**Narrative Requirements:**

Condition No.	Condition
T-1	The work approved by this certification shall be limited to: <ul style="list-style-type: none"> <li>- Impacts to 0.7 acre wooded wetland, 8.3 acres farmed wetlands, and 0.2 acre open field wetland resulting in total impacts of 9.2 acres of wetland.</li> <li>- The construction of a boat ramp resulting in impacts to 250 feet of Ohio River riparian area.</li> <li>- Mitigation shall consist of 7.3 acres wooded wetland restoration, 34.4 acres wooded wetland preservation, 3.4 acres upland forest preservation and 765 feet riparian buffer restoration. [Clean Water Act]</li> </ul>
T-2	All work performed under this certification shall adhere to the design and specifications set forth in the USACE Public Notice 2007-0811-GJD, the Joint Application for Section 404 Individual Permit, Section 10 Navigable Waters Permit and Section 401 Water Quality Certification dated May 30, 2007, and subsequent addendums to the 404/401 Permit Application dated February 25, 2008, and March 28, 2008. [Clean Water Act]
T-3	The applicant is responsible for preventing degradation of waters of the Commonwealth from soil erosion. An erosion and sedimentation control plan must be designed, implemented, and maintained in effective operating condition at all times during construction. [Clean Water Act]

**Water Quality Certification**  
Paducah Riverfront Redevelopment Project  
Facility Requirements  
Permit Number: 2008-0029-1  
Activity ID No.: APE20070002

Page 2 of 2

**ACTV1 (continued):**

**Narrative Requirements:**

Condition No.	Condition
T-4	The Division of Water reserves the right to modify or revoke this certification should it be determined that the activity is in noncompliance with any condition set forth in this certification. [Clean Water Act]
T-5	If construction does not commence within one year of the date of this letter, this certification will become void. A letter requesting a renewal should be submitted. [Clean Water Act]
T-6	Other permits may be required from the Division of Water for this project. If this project takes place within the floodplain, a permit may be required from the Water Resources Branch. The contact person is Ron Dutta. If this project will disturb one acre or more of land, or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land, a KPDES stormwater permit shall be required from the KPDES Branch. The contact person is Ronnie Thompson. Both can be reached at 502/564-3410. [Clean Water Act]



## **GENERAL CONDITIONS FOR WATER QUALITY CERTIFICATION**

1. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
2. All dredged material shall be removed to an upland location and/or graded on adjacent areas (so long as such areas are not regulated wetlands), to obtain original streamside elevations, i.e. overbank flooding shall not be artificially obstructed.
3. In areas not riprapped or other wise stabilized, revegetation of stream banks and riparian zones shall occur concurrently with project progression. At a minimum, revegetation will approximate pre-disturbance conditions.
4. To the maximum extent practicable, all instream work under this certification shall be performed during low flow.
5. Heavy equipment, e.g. bulldozers, backhoes, draglines, etc., if required for this project, should not be used or operated within the stream channel. In those instances where such instream work is unavoidable, then it shall be performed in such a manner and duration as to minimize resuspension of sediments and disturbance to substrates and bank or riparian vegetation.
6. Any fill or riprap including refuse fill, shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If riprap is utilized, it is to be of such weight and size that bank stress or slump conditions will not be created because of its placement.
7. If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when work will be done.
8. Removal of existing riparian vegetation should be restricted to the minimum necessary for project construction.
9. Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/564-2380.



STEPHEN L. BESHEAR  
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
DIVISION OF WATER  
14 REILLY ROAD  
FRANKFORT, KENTUCKY 40601  
www.kentucky.gov

ROBERT D. VANCE  
SECRETARY

## **ATTENTION APPLICANT**

If your project involves one or more of the following activities, you may need more than one permit from the Kentucky Division of Water.

**\*building in a floodplain**      **\*road culvert in a stream**

**\*streambank stabilization**      **\*stream cleanout**

**\*utility line crossing a stream**

**\*construction sites greater than 1 acre**

- Construction sites greater than 1 acre will require the filing of a Notice of Intent to be covered under the KPDES General Stormwater Permit. This permit requires the creation of an erosion control plan.

Contact: Ronnie Thompson

- Projects that involve filling in the floodplain will require a floodplain construction permit from the Water Resources Branch.

Contact: Ron Dutta

- Projects that involve work IN a stream, such as bank stabilization, road culverts, utility line crossings, and stream alteration will require a floodplain permit and a Water Quality Certification from the Division of Water.

Contact: Alan Grant

All three contacts listed above can be reached at (502) 564-3410. A complete listing of environmental programs administered by the Kentucky Department for Environmental Protection is available from Pete Goodmann by calling (502) 564-3410.

## ***APPENDIX E***





*Fax To JJR  
F: H  
KY, Fish & Wildlife*

ERNIE FLETCHER  
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

DIVISION OF WATER

14 REILLY ROAD

FRANKFORT, KENTUCKY 40601

www.water.ky.gov

TERESA J. HILL  
SECRETARY

RECEIVED

SEP 13 2007

ENGINEERING  
DEPARTMENT

STREAM CONSTRUCTION PERMIT

For Construction In Or Along A Stream

Issued to: City of Paducah  
Address: 300 South 5th St  
Paducah, KY 42002

Permit expires on  
September 7, 2008

Permit No. 16689

In accordance with KRS 151.250 and KRS 151.260, the Environmental and Public Protection Cabinet approves the application dated May 31, 2007 for construction of a multi-lane boat launch facility, parking area, and access road in the left descending floodplain of Ohio River at about stream mile 45.6 (935.8 miles below Pittsburgh), with coordinates 37.098611, -88.611667, in McCracken County.

There shall be no deviation from the plans and specifications submitted and hereby approved unless the proposed change shall first have been submitted to and approved in writing by the Cabinet. This approval is subject to the attached limitations.

This permit is nontransferable and is not valid unless actual construction of this authorized work is begun prior to the expiration date noted above. Any violation of the Water Resources Act of 1966 as amended is subject to penalties as set forth in KRS 151.990.

If you have any questions regarding this permit, please call Mr. Jim Oerther at (502) 564-3410.

Issued September 7, 2007.

By:

Art Clay, P.E., Manager  
Water Resources Branch

AC/JO/kl

pc: - Paducah Regional Office  
- Rick Murphy - Paducah  
- File

JJR

F: H

*KY Fish & Wildlife*

**Stream Construction Permit**  
Paducah Riverfront Redevelopment Project  
Facility Requirements  
Permit Number: 16689  
Activity ID No.: APE20070001

Page 1 of 2

**STRC1 (boat dock ) construction of a multi-lane boat launch facility, parking area, and access road:**

**Submittal/Action Requirements:**

Condition No.	Condition
S-1	City of Paducah must submit final construction report: Due within 90 days after completion of construction City of Paducah must notify in writing that the project has been completed in accordance with the approved plans and specifications. A Final Construction Report Form is enclosed. [401 KAR 4:060 Section 3(2)]

**Narrative Requirements:**

Condition No.	Condition
T-1	This permit is issued from the standpoint of stream obstruction only and does not constitute certification of any other aspect of the proposed construction. The applicant is liable for any damage resulting from the construction, operation, or maintenance of this project. This permit has been issued under the provisions of KRS Chapter 151.250 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal and local agencies. [KRS 151.250]
T-2	A copy of this permit must be available at the construction site. [KRS 151.250]
T-3	This permit holder must obtain a permit from the U.S. Army Corps of Engineers, Louisville District, pursuant to Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act, as may be required. [Clean Water Act Section 404 and River & Harbor Act of 1899]
T-4	Any work performed by or for City of Paducah that does not fully conform to the submitted application or drawings and the limitations set forth in this permit, is subject to partial or total removal and enforcement actions pursuant to KRS 151.280 as directed by the Kentucky Department for Environmental Protection. [KRS 151.280]
T-5	Any design changes or amendments to the approved plans must be submitted to the Division of Water and approved in writing prior to implementation. [KRS 151.250]
T-6	Since City of Paducah participates in the National Flood Insurance Program, a local floodplain permit must be obtained prior to beginning of construction. Upon completion of construction City of Paducah must contact the local permitting agency for final approval of the construction for compliance with the requirements of the local floodplain ordinance. [401 KAR 4:060 Section 1(16)]
T-7	The permittee must obtain a Water Quality Certification through the Division of Water, Water Quality Branch before beginning construction. Contact the Water Quality Certification Supervisor at (502) 564-3410. [KRS 224.16-050 & Clean Water Act Section 401]



**Stream Construction Permit**  
 Paducah Riverfront Redevelopment Project  
 Facility Requirements  
 Permit Number: 16689  
 Activity ID No.: APE20070001

**STRC1 (continued):**

Page 2 of 2

**Narrative Requirements:**

Condition No.	Condition
T-8	Fill slopes shall be no steeper than 2:1 (horizontal: vertical). Steeper slopes shall require a stability analysis. [401 KAR 4:060 Section 3(1)]
T-9	City of Paducah must use standard silt control practices in such quantity to prevent siltation of the Ohio River. Silt fences, rock check dams and/or straw-bales are acceptable. [KRS 224.70-110]
T-10	To avoid secondary adverse impacts, all materials used shall be stable and inert, free from pollutants and floatable objects, and shall meet all appropriate engineering standards. (Inert here means materials that are not chemically reactive and that will not rot or decompose, such as soil, rock, broken concrete or similar materials.). [401 KAR 4:060 Section 7]
T-11	All debris and excess material shall be removed for disposal outside of the base floodplain. [401 KAR 4:060]
T-12	Upon completion of construction all disturbed areas shall be seeded and mulched or otherwise stabilized to prevent erosion. [401 KAR 4:060]
T-13	The entry of mobile equipment into the stream channel shall be limited as much as reasonably possible to minimize degradation of the waters of the Commonwealth. [401 KAR 4:060]
T-14	Measures shall be taken to prevent possible spills of fuels and lubricants from entering the stream. [KRS 224.70-110]
T-15	Construction other than as authorized by this permit shall require written approval from the Division of Water. [401 KAR 4:060]
T-16	This permit is not valid until the City of Paducah obtains ownership or easement rights for all property on which the project will be located. [401 KAR 4:060]



## ***APPENDIX F***



DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE  
CORPS OF ENGINEERS  
REGULATORY BRANCH, WEST SECTION  
P.O. Box 489  
NEWBURGH, INDIANA 47629-0489  
FAX: (812) 858-2678  
<http://www.lrl.usace.army.mil>  
May 23, 2008

Operations Division  
Regulatory Branch (West)  
ID No. LRL-2007-811-GJD

City of Paducah  
Mr. Rick Murphy, City Engineer  
300 South 5<sup>th</sup> Street  
Paducah, Kentucky 42002

Dear Mr. Murphy:

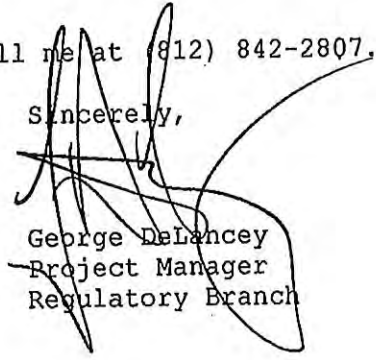
Enclosed is a signed Department of the Army permit relating to your proposal to construct a public boat launch facility. The project would result in the construction of a boat ramp, approximately 260' x 100', a paved parking/trailering area, and an access road extension from Burnett Street. There would also be a gang way and courtesy dock constructed at the ramp. The gangway/ramp structure would be approximately 200' x 8'. The boat ramp would be constructed of a compacted sub grade, 12" minimum of compacted aggregate, and a 6" minimum concrete grooved cap. The boat ramp would extend approximately 105' riverward at normal pool. The gangway/courtesy dock would extend 35' riverward at normal pool. The Ordinary Highwater Mark is 310.3' Ohio River Datum (ORD) and the Normal Pool elevation is 302' ORD. The project would result in the permanent loss of 8.3 acres Farmed Wetlands (FW), 0.7 of Palustrine Forested Wetlands (PFO), and 0.2 acres of Palustrine Emergent Wetlands (PEM). The project is located in Paducah, McCracken County, Kentucky, as described in your application. The proposal has been reviewed and authorized under Section 10 of the Rivers and Harbors Act of 1899. **This permit is valid until December 31, 2011.**

In order to inform all necessary interests (Notice to Navigation Interests) in a timely manner, you must furnish the Corps of Engineers, P.O. Box 59, Louisville, KY 40201-0059, ATTN: CEORL-OP-WN, (Mr. Rick Lewis, 502-315-6100) a written notice two weeks prior to commencement of any work. This written notice should include the following information: name, type and number of equipment, duration of project, hours of operation, location of equipment during non-work hours, any marine radios available, contact person and phone number, and any other pertinent data.

Also enclosed is a notice of authorization card that should be conspicuously displayed at the site of work during construction. If you have any questions concerning this matter, please contact this office at

the above address, ATTN: CELRL-OP-FW or call me at (812) 842-2807.

Sincerely,



George DeLancey  
Project Manager  
Regulatory Branch

Enclosures

DeLancey/OP-FW  
KDOW





US Army Corps  
of Engineers  
Louisville District

This notice of authorization must be  
conspicuously displayed at the site  
of work.

5/23/08

Date

A permit to CONSTRUCT RAMP + PARKING

at ORM 935.8, Paducah KY

has been issued to CITY OF Paducah

5/23/08

Date

Address of Permittee 300 S. 5TH ST

Paducah KY 47002

Permit Number

**LRL-2007-811**

*[Signature]*

District Commander



## DEPARTMENT OF THE ARMY PERMIT

**Permittee:** City of Paducah – Mr. Rick Murphy, City Engineer

**Permit Number:** LRL-2007-811-GJD

**Issuing Office:** U.S. Army Engineer District, Louisville

**NOTE:** The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** The project would result in the construction of a boat ramp, approximately 260' x 100', a paved parking/trailer area, approximately 750' x 325', and an access road extension from Burnett Street. There would also be a gang way and courtesy dock constructed at the ramp. The gangway/ramp structure would be approximately 200' x 8'. The boat ramp would be constructed of a compacted sub grade, 12" minimum of compacted aggregate, and a 6" minimum concrete grooved cap. The boat ramp would extend approximately 105' riverward at normal pool. The gangway/courtesy dock would extend 35' riverward at normal pool. The Ordinary Highwater Mark is 310.3' Ohio River Datum (ORD) and the Normal Pool elevation is 302' ORD.

The project would result in the permanent loss of 8.3 acres Farmed Wetlands (FW), 0.7 of Palustrine Forested Wetlands (PFO), and 0.2 acres of Palustrine Emergent Wetlands (PEM).

**Project Location:** On the left bank of the Ohio River, Mile 935.8, and adjacent wetlands, located in Paducah, McCracken County, Kentucky.

Latitude: 37-05-59

Longitude: 88-36-39

7.5 Minute Quad: Paducah East, KY

### **Permit Conditions:**

#### **General Conditions:**

1. The time limit for completing the authorized activity ends on December 31, 2011. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

**Special Conditions:**

- a. The permittee shall adhere to the wetland mitigation plans as outlined in "Addendum to 404/401 Permit Application Paducah Riverfront Boat Launch" revised February 25, 2008, and supplemental amendments dated March 28, 2008 and April 28, 2008, of the DA application package. Upon completion of the mitigation construction, as-built plans documenting the final post-mining conditions of the streams and wetlands shall be submitted to this office for review and approval. Any modification to these conditions would be required to be demonstrated on amended plans and submitted to this office for prior approval.
- b. Prior to but no later than 60 days after the mitigation site has been determined to be successful, the applicant shall place a perpetual conservation easement or a deed restriction on the site guarding it from future development. A proposed copy of the protective easement shall be submitted to the Corps for review and approval prior to recording with the deed.
- c. During monitoring, and until Corps release of the proposed mitigation, the applicant shall maintain the site to remove all volunteer and invasive tree species.
- d. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- e. The permittee shall abide by all nine special conditions and nine general conditions in the Kentucky Division of Water's 401 Water Quality Certification, issued on April 8, 2008.
- f. In order to inform all necessary interests (Notice to Navigation Interests) in a timely manner, you must furnish the Corps of Engineers, P.O. Box 59, Louisville, KY 40201-0059, ATTN: CEORL-OP-WN, (Rick Lewis, 502-315-6699) a written notice two weeks prior to commencement of any work. This written notice should include the following information: name, type and number of equipment, duration of project, hours of operation, location of equipment during non-work hours, any marine radios available, contact person and phone number, and any other pertinent data.
- g. The permittee's responsibility to complete the required compensatory mitigation proposal in Special Conditions a - c shall not be considered fulfilled until mitigation success has been demonstrated and written verification is received from the U. S. Army Corps of Engineers.

**Further Information:**

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:



( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

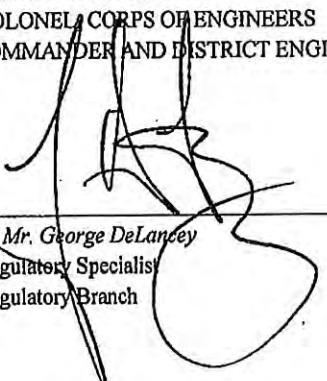
  
(PERMITTEE)

5/21/08  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

\_\_\_\_\_  
RAYMOND G. MIDKIFF  
COLONEL, CORPS OF ENGINEERS  
(COMMANDER AND DISTRICT ENGINEER)

5/23/08  
(DATE)

  
BY: Mr. George DeLancey  
Regulatory Specialist  
Regulatory Branch

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFEE)

\_\_\_\_\_  
(DATE)

## ***APPENDIX G***



COMMONWEALTH OF KENTUCKY  
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
DIVISION OF WATER

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM  
AND / OR WATER QUALITY CERTIFICATION

Chapter 151 of the Kentucky Revised Statutes requires approval from the Division of Water prior to any construction or other activity in or along a stream that could in any way obstruct flood flows or adversely impact water quality. *If the project involves work in a stream, such as bank stabilization, dredging or relocation, you will also need to obtain a 401 Water Quality Certification (WQC) from the Division of Water.* This completed form will be forwarded to the Water Quality Branch for WQC processing. The project may not start until all necessary approvals are received from the KDOW.

If the project will disturb more than 1 acre of soil, you will also need to complete the attached Notice of Intent for Storm Water Discharges, and return both forms to the Floodplain Management Section of the KDOW. This general permit will require you to create and implement an erosion control plan for the project.

1. OWNER: City of Paducah: c/o Rick Murphy, P.E., City Engineer  
Give name of person(s), company, governmental unit, or other owner of proposed project.  
MAILING ADDRESS: P.O. Box 2267  
Paducah, Kentucky 42002  
  
TELEPHONE #: (270) 444-8511 EMAIL: rmurphy@ci.paducah.ky.us
2. AGENT: Redwing Ecological Services, Inc. - Ron Thomas  
Give name of person(s) submitting application, if other than owner.  
ADDRESS: 1139 South Fourth Street, Louisville, KY 40203  
  
TELEPHONE #: (270) 444-9691 EMAIL: jpetersen@flohut.com
3. ENGINEER: Jason Petersen, P.E. P. E. NUMBER: \_\_\_\_\_  
Contact Division of Water if waiver can be granted.  
TELEPHONE #: (270) 444-9691 EMAIL: jpetersen@flohut.com
4. DESCRIPTION OF CONSTRUCTION: \_\_\_\_\_  
Describe the type and purpose of construction and describe stream impact.  
The proposed project is part of the master plan for the entire Ohio River waterfront at Paducah and includes the construction of a new marina and transient dock facility adjacent to downtown Paducah. The proposed development will include: a floating dock with 200 boat slips and gangway system; amenities including electricity, potable water, fuel and retail shopping; and public access through trails and enhancement of Shultz Park. The proposed construction is located along the Ohio River bank between Jefferson Street and U.S. 60 (projected) in Paducah, Kentucky. The proposed development will impact jurisdictional waters along 2200 feet of the Ohio River, including 8.0 acres of riverbank and 1.5 acres of open water, and the installation of approximately 240,000 c.y. of clean fill material below the 100-yr flood elevation.
5. COUNTY: McCracken NEAREST COMMUNITY: Paducah
6. USGS QUAD NAME: Paducah East LATITUDE/LONGITUDE: N 37° 5' 32" W 88° 35' 47"
7. STREAM NAME: Ohio River Mile Point 934.76  
WATERSHED SIZE (in acres): NA
8. LINEAR FEET OF STREAM IMPACTED: portions of 2200 feet
9. DIRECTIONS TO SITE:  
From I-24 Exit 4, take U.S. 60 (Hinkleville Road) east to downtown Paducah. Turn left onto Madison Street and drive to the river.

10. IS ANY PORTION OF THE REQUESTED PROJECT NOW COMPLETE? NO If yes, identify the completed portion on the drawings you submit and indicate the date activity was completed. DATE: \_\_\_\_\_
11. ESTIMATED BEGIN CONSTRUCTION DATE: June 2009
12. ESTIMATED END CONSTRUCTION DATE: December 2012
13. HAS A PERMIT BEEN RECEIVED FROM THE US ARMY, CORPS OF ENGINEERS? Yes ☐ No ☒ If yes, attach a copy of that permit. Section 404 and Section 401 Permit application submittals are pending.
14. THE APPLICANT *MUST* ADDRESS PUBLIC NOTICE:  
(a) PUBLIC NOTICE HAS BEEN GIVEN FOR THIS PROPOSAL BY THE FOLLOWING MEANS:  
\_\_\_\_\_ Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)  
\_\_\_\_\_ Adjacent property owner(s) affidavits (Contact Division of Water for requirements)  
(b) X I REQUEST WAIVER OF PUBLIC NOTICE BECAUSE:  
\_\_\_\_\_ Public notice will be provided through the USACE Individual Permit process as well as through the the public review portion of the Environmental Assessment (EA) process currently underway.  
\_\_\_\_\_
15. I HAVE CONTACTED THE FOLLOWING CITY OR COUNTY OFFICIALS CONCERNING THIS PROJECT:  
Rick Murphy, P.E., City Engineer, Paducah, Kentucky  
(Give name and title of person(s) contacted and provide copy of any approval city or county may have issued):  
\_\_\_\_\_  
\_\_\_\_\_
16. LIST OF ATTACHMENTS: See application package for site drawings.  
List plans, profiles, or other drawings and data submitted. Attach a copy of a 7.5 minute USGS topographic map clearly showing the project location.
17. I, RG (owner) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION WILL OCCUR (including, for dams, the area that would be impounded during the design flood).
18. REMARKS: \_\_\_\_\_

I hereby request approval for construction across or along a stream as described in this application and any accompanying documents. To the best of my knowledge, all of the information provided is true and correct.

SIGNATURE \_\_\_\_\_

Owner or Agent sign here. (If signed by an Agent, a Power of Attorney should be attached.)

DATE: \_\_\_\_\_

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR: \_\_\_\_\_

Permit application will be returned to applicant if not properly endorsed by the local floodplain coordinator.

DATE: 9/25/08

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section  
Division of Water  
14 Reilly Road  
Frankfort, Kentucky 40601



Floodplain

COMMONWEALTH OF KENTUCKY  
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
DIVISION OF WATER

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM  
AND / OR WATER QUALITY CERTIFICATION

Chapter 151 of the Kentucky Revised Statutes requires approval from the Division of Water prior to any construction or other activity in or along a stream that could in any way obstruct flood flows or adversely impact water quality. If the project involves work in a stream, such as bank stabilization, dredging or relocation, you will also need to obtain a 401 Water Quality Certification (WQC) from the Division of Water. This completed form will be forwarded to the Water Quality Branch for WQC processing. The project may not start until all necessary approvals are received from the KDOW.

If the project will disturb more than 1 acre of soil, you will also need to complete the attached Notice of Intent for Storm Water Discharges, and return both forms to the Floodplain Management Section of the KDOW. This general permit will require you to create and implement an erosion control plan for the project.

1. OWNER: City of Paducah; c/o Rick Murphy, P.E., City Engineer  
Give name of person(s), company, governmental unit, or other owner of proposed project.  
MAILING ADDRESS: P.O. Box 2267  
Paducah, Kentucky 42002  
  
TELEPHONE #: (270) 444-8511 EMAIL: rmurphy@ci.paducah.ky.us
2. AGENT: Florence & Hutcheson, Inc.  
Give name of person(s) submitting application, if other than owner.  
ADDRESS: 2550 Irvin Cobb Drive, Paducah, KY 42003  
  
TELEPHONE #: (270) 444-9691 EMAIL: jpetersen@flohut.com
3. ENGINEER: Jason Petersen, P.E. P. E. NUMBER: 22623 (Hydraulic Analysis Only)  
Contact Division of Water if waiver can be granted.  
TELEPHONE #: (270) 444-9691 EMAIL: jpetersen@flohut.com
4. DESCRIPTION OF CONSTRUCTION: \_\_\_\_\_  
Describe the type and purpose of construction and describe stream impact.  
The proposed project is part of the master plan for the entire Ohio River waterfront at Paducah and includes the construction of a new marina and transient dock facility adjacent to downtown Paducah. The proposed development will include: a floating dock with 200 boat slips and gangway system; amenities including electricity, potable water, fuel and retail shopping; and public access through trails and enhancement of Shultz Park. The proposed construction is located along the Ohio River bank between Jefferson Street and U.S. 60 (projected) in Paducah, Kentucky. The proposed development will impact jurisdictional waters along 2200 feet of the Ohio River, including 8.0 acres of riverbank and 1.5 acres of open water, and the installation of approximately 240,000 c.y. of clean fill material below the 100-yr flood elevation.
5. COUNTY: McCracken NEAREST COMMUNITY: Paducah
6. USGS QUAD NAME: Paducah East LATITUDE/LONGITUDE: N 37° 5' 32" W 88° 35' 47"
7. STREAM NAME: Ohio River Mile Point 934.76  
WATERSHED SIZE (in acres): NA
8. LINEAR FEET OF STREAM IMPACTED: 2200 feet
9. DIRECTIONS TO SITE:  
From I-24 Exit 4, take U.S. 60 (Hinkleville Road) east to downtown Paducah. Turn left onto Madison Street and drive to the river.



10. IS ANY PORTION OF THE REQUESTED PROJECT NOW COMPLETE? NO If yes, identify the completed portion on the drawings you submit and indicate the date activity was completed. DATE: \_\_\_\_\_
11. ESTIMATED BEGIN CONSTRUCTION DATE: June 2009
12. ESTIMATED END CONSTRUCTION DATE: December 2012
13. HAS A PERMIT BEEN RECEIVED FROM THE US ARMY, CORPS OF ENGINEERS? Yes ☐ No ☒ If yes, attach a copy of that permit. Section 404 and Section 401 Permit application submittals are pending.
14. THE APPLICANT *MUST* ADDRESS PUBLIC NOTICE:  
(a) PUBLIC NOTICE HAS BEEN GIVEN FOR THIS PROPOSAL BY THE FOLLOWING MEANS:  
\_\_\_\_ Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)  
\_\_\_\_ Adjacent property owner(s) affidavits (Contact Division of Water for requirements)  
(b) X I REQUEST WAIVER OF PUBLIC NOTICE BECAUSE:  
\_\_\_\_ Public notice will be provided through the USACE Individual Permit process as well as through the  
\_\_\_\_ the public review portion of the Environmental Assessment (EA) process currently underway.  
\_\_\_\_
15. I HAVE CONTACTED THE FOLLOWING CITY OR COUNTY OFFICIALS CONCERNING THIS PROJECT:  
Rick Murphy, P.E., City Engineer, Paducah, Kentucky  
(Give name and title of person(s) contacted and provide copy of any approval city or county may have issued):  
\_\_\_\_\_  
\_\_\_\_\_
16. LIST OF ATTACHMENTS: See application package for site drawings.  
List plans, profiles, or other drawings and data submitted. Attach a copy of a 7.5 minute USGS  
topographic map clearly showing the project location.
17. I, R.P.P. (owner) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION WILL OCCUR (including, for dams, the area that would be impounded during the design flood).
18. REMARKS: \_\_\_\_\_

I hereby request approval for construction across or along a stream as described in this application and any accompanying documents. To the best of my knowledge, all of the information provided is true and correct.

SIGNATURE

Owner or Agent sign here. (If signed by an Agent, a Power of Attorney should be attached.)

DATE: \_\_\_\_\_

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR:

Permit application will be returned to applicant if not properly endorsed by the local floodplain coordinator.

DATE: 7/25/03

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section  
Division of Water  
14 Reilly Road  
Frankfort, Kentucky 40601

**APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT**  
**(33 CFR 325)**

**OMB APPROVAL NO. 0710-003**

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT**

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require authorizing activities in, or affecting, navigable waters of the United States, the discharge or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

**(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)**

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
--------------------	----------------------	------------------	-------------------------------

**BELOW TO BE FILLED BY APPLICANT)**

5. APPLICANT'S NAME City of Paducah - Rick Murphy, P.E., City Engineer	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) Redwing Ecological Services, Inc. - Ron Thomas
6. APPLICANT'S ADDRESS P.O. Box 2267, Paducah, KY 42002	9. AGENT'S ADDRESS 1139 South Fourth Street, Louisville, KY 40203
7. APPLICANT'S PHONE NOs. W/AREA CODE a. Residence b. Business 270-444-8511	10. AGENT'S PHONE NOs. W/AREA CODE a. Residence b. Business 502-625-3009

**11. STATEMENT OF AUTHORIZATION**

I hereby authorize, Redwing Ecological Services, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

  
APPLICANT'S SIGNATURE

9/25/08  
DATE

**NAME, LOCATION, AND DESCRIPTION OR PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see Instructions) Paducah Riverfront Development Phase I/Transient Boat Dock	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Ohio River - Mile Point 934.76	14. PROJECT STREET ADDRESS (if applicable)  n/a
15. LOCATION OF PROJECT McCracken KY COUNTY STATE	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see Instructions) Section, Township, Range, Lat/Lon, and/or Accessors's Parcel Number, for example.

Downtown Paducah on the river-side of the floodwall between Jefferson Street and the Executive Inn.

**17. DIRECTIONS TO THE SITE**

From I-24 Exit 4, take U.S. 60 east to downtown Paducah. Turn left onto Madison Street and drive to the river.

18. Nature of Activity (Description of project, include all features)



The proposed project will include construction of a floating dock with 200 boat slips and gangway system, amenities including electricity, potable water, fuel, retail shopping and public access through trails and enhancement of Shultz Park.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The proposed project is part of the overall Paducah Riverfront Redevelopment Plan, a master plan for the entire waterfront at Paducah. The purpose of the project is to provide docking for transient and recreational boaters along with needed marina facilities in the vicinity of downtown Paducah and to provide for boat docking and marina needs, while helping reconnect the community to the riverfront.

**USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. Reason(s) for Discharge

Create a land-mass deflector associated with the proposed marina and docking facilities and enhance the accessible area.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

Approximately 240,000 c.y. of total fill. Approximately 165,000 c.y. of clean granular fill will be placed below OHW Elev = 310.3.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Approximately 2,200 l.f. of jurisdictional waters along the Ohio River, including 8.0 acres of riverbank and 1.5 acres of open water.

23. Is Any Portion of the Work Already Complete? Yes \_\_\_ No x IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

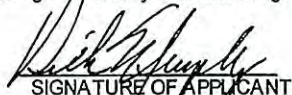
See Appendix C of the 404/401 Permit Application Package

25. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
Kentucky DOW	WQC-Floodplain	n/a	September 30, 2008		

\* Would include but is not restricted to zoning, building, and flood plain permits

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

  
SIGNATURE OF APPLICANT

9/25/08  
DATE

\_\_\_\_\_  
SIGNATURE OF AGENT

\_\_\_\_\_  
DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.



## ***APPENDIX H***

## ENGINEERING "NO IMPACT" CERTIFICATION

This is to certify that I am a duly qualified engineer licensed to practice in the Commonwealth of Kentucky.

It is to further certify that the attached technical data supports the fact that the proposed

Paducah Riverfront Development Phase 1/Transient Dock project

will not impact the 100-year flood elevations, floodway elevations and floodway widths on

the Ohio River

at published sections in the Flood Insurance Study (FIS) for

McCracken County, Kentucky dated 1979

and will not impact the 100-year flood elevations, floodway elevations, and floodway widths at unpublished cross-sections in the vicinity of the proposed development.

September 26, 2008

(Date)



A handwritten signature in black ink, appearing to read "Jason Petersen", written over a horizontal line.

Jason Petersen, P.E., Project Manager  
Florence & Hutcheson, Inc.  
2250 Irvin Cobb Drive  
Paducah, Kentucky 42003  
Tel: (270) 444-9691

FEMA  
3003 Chamblee Tucker Road  
Atlanta, GA 30341

ATTN: F I & Mitigation Division

# ***APPENDIX I***





COMMERCE CABINET  
KENTUCKY HERITAGE COUNCIL

Steven L. Beshear  
Governor

The State Historic Preservation Office  
300 Washington Street  
Frankfort, Kentucky 40601  
Phone (502) 564-7005  
Fax (502) 564-5820  
www.kentucky.gov

Marcheta Sparrow  
Secretary

September 30, 2008

Jason Peterson  
Florence and Hutcheson, Inc  
PO Box 7267  
Paducah, Kentucky 42002



**Re: Phase I Archaeological Survey for the Proposed Development of the Paducah Riverfront Boat Launch and Improvements to Schultz Park, McCracken County, Kentucky by Kevin Lomas and Michael McNerney**

Dear Mr. Peterson:

This office has received the above mentioned report for review. The survey found no new evidence of prehistoric or early historic occupation in the project area. I concur with the author's findings. In accordance with 36CFR Part 800.4(d) of the Advisory Council's revised regulations our finding is that there are No Historic Properties Present within the undertaking's area of potential impact. Therefore, we have no further comments and responsibility to consult with the Kentucky State Historic Preservation Officer under the Section 106 review process for archaeology on this portion of the project is fulfilled.

If you have any questions, please do not hesitate to contact Lori Stahlgren of my staff at (502) 564-7005 ext 151.

Sincerely,

Mark Dennen, Acting Executive Director  
Kentucky Heritage Council and  
State Historic Preservation Officer

Cc. George Crothers  
Steve Titus

## ***APPENDIX J***



COMMERCE CABINET  
KENTUCKY HERITAGE COUNCIL

Steven L. Beshear  
Governor

The State Historic Preservation Office  
300 Washington Street  
Frankfort, Kentucky 40601  
Phone (502) 564-7005  
Fax (502) 564-5820  
[www.kentucky.gov](http://www.kentucky.gov)

Marcheta Sparrow  
Secretary

Donna M. Neary  
Executive Director and  
State Historic Preservation Officer

July 3, 2008

Mr. Jason Petersen  
Florence & Hutcheson, Inc.  
P.O. Box 7267  
Paducah, KY 42002

**Re: Architectural Survey of the Area of Potential Effect for the Proposed Development of the Paducah Riverfront Boat Launch, Paducah, McCracken County, Kentucky**

Dear Mr. Petersen:

The State Historic Preservation Office has received the above-referenced report, completed by Kevin Lomas and Steve Titus of American Resource Group, for review and comment. In the future, all 106 submissions to the Kentucky Heritage Council must complete project registration with this office and with the Office of State Archaeology, (OSA) located in Lexington. Contact Lynn Webb at [lynn.webb@ky.gov](mailto:lynn.webb@ky.gov) to register a project and set up a site visit (Wednesday through Friday) at this office. To obtain the archaeology data and registration, contact Chris Pappas at [Christina.Pappas@uky.edu](mailto:Christina.Pappas@uky.edu). The project registration form should be placed behind the cover sheet in both the cultural historic and archaeology reports.

The authors identified 16 previously unrecorded historic resources within the Area of Potential Effect. We concur with the authors that McN-P-972, McN-P-973, McN-P-974, McN-P-975, McN-P-977, McN-P-978, McN-P-979, McN-P-980, McN-P-981, McN-P-982, McN-P-983, McN-P-984, McN-P-985, McN-P-986 and McN-P-987 do not appear to be eligible for listing in the National Register of Historic Places (NRHP) either individually or as part of a district. We also agree that McN-P-976 appears eligible for listing in the NRHP under Criterion C, but that it will not be impacted by this undertaking as proposed.

It should be noted, however, that this project is not completely cleared by this office until the archaeological report is reviewed and commented upon. Should you have any questions, feel free to contact Janie-Rice Brother of my staff at (502) 564-7005, extension 121.

Sincerely,

Donna M. Neary, Executive Director  
and State Historic Preservation Officer

RECEIVED  
JUL 2008

Cc: Steve Titus, American Resources Group  
JRB: jrb



**TRANSPORTATION CABINET**

Frankfort, Kentucky 40622  
www.transportation.ky.gov/

**Steven L. Beshear**  
Governor

**Joseph W. Prather**  
Secretary

July 17, 2009

Mr. Mark Dennen  
State Historic Preservation Officer  
Kentucky Heritage Council  
300 Washington Street  
Frankfort, KY 40601

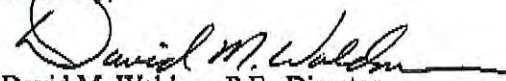
**SUBJECT:**     Expiration of comment period  
                 Area of Potential Effect  
                 Marina/Transient Dock  
                 City of Paducah, KY Waterfront Project  
                 KYTC SYP Item No. 1-122

Dear Mr. Dennen:

This letter is to inform you that the comment period for your office to comment or respond to the request for formal correspondence with subject project's APE has expired. A letter dated April 15, 2009 (attached) asked for KHC's review and formal correspondence of opinion. With the absence of correspondence, it is assumed that the email correspondence referenced in the letter will suffice for project documentation, and that the APE studied for the riverfront project is appropriate as identified and will be studied accordingly.

If you have questions regarding this notice, please contact Derek Adams or me at (502) 564-7250.

Sincerely,

  
David M. Waldner, P.E., Director  
Division of Environmental Analysis

DMW/dra  
Enclosure

cc:     Anthony Goodman, FHWA (w/a)  
         John Farmer, Florence and Hutcheson  
         Jason Peterson, Florence and Hutcheson, Inc.  
         Central File w/a  
         Reading File



An Equal Opportunity Employer M/F/D



**Florence & Hutcheson, Inc. • CONSULTING ENGINEERS**

---

April 15, 2009

Ms. Janie-Rice Brother  
Environmental Review Coordinator  
Kentucky Heritage Council  
300 Washington Street  
Frankfort, KY 40601

Re: Area of Potential Effect (APE)  
Marina/Transient Dock  
City of Paducah, KY Waterfront Development

Ms. Brother:

American Resources Group (ARG) submitted an architectural survey of the Area of Potential Effect (APE) for a proposed riverfront boat launch in Paducah, McCracken County, Kentucky on June 6, 2008. Your office concurred with the author's identification of 16 previously unrecorded historic resources and the fact that they do not appear to be eligible for listing in the National Register of Historic Places (NRHP) either individually or as part of a district. Your office also agreed that one additional site appears eligible for listing in the NRHP under criterion C but that it will not be impacted by the boat launch project as proposed. (Reference enclosed letter, July 3, 2008).

As part of the Paducah Riverfront Development, the City of Paducah is also proposing to construct a marina/transient dock facility on City-owned property which will extend from the floodwall at the end of Jefferson Street westward for approximately 2,200 linear feet while extending approximately 800 linear feet into the Ohio River. The site comprises approximately 42 acres± of riverbank and water surface with the centroid located at 37°05'32"N, 88°35'47" W near Mile Marker 935. The limits affecting land for the marina/transient dock vary north of the existing floodwall then diverge to the riverside of the Executive Inn located at the northeastern end of Park Avenue. (Reference Consensus Plan)

ARG contacted you via e-mail to verify the extent of APE for the marina/transient dock facility. In the correspondence, you indicated that the APE for the project should be limited to the actual project area itself as depicted on the map provided at that time. (Reference enclosed e-mail, March 10-17, 2008). Based on this response, it is our understanding that an APE survey is not required beyond the project limits for the marina/transient dock facility. With this correspondence, we are requesting that the Kentucky Heritage Council issue formal correspondence by letter summarizing your opinion expressed in the e-mail indicating that no further coordination is required regarding this project. If you have any questions, or wish to discuss this request in greater detail, please don't hesitate to call. I can be reached at (615) 867-9400.

Sincerely,

FLORENCE & HUTCHESON, INC.

John L. Farmer, PE, CPESC  
Environmental Division Manager

Enclosures  
CC: Mr. Steve Titus





COMMERCE CABINET  
KENTUCKY HERITAGE COUNCIL

Steven L. Beshear  
Governor

The State Historic Preservation Office  
300 Washington Street  
Frankfort, Kentucky 40601  
Phone (502) 564-7005  
Fax (502) 564-5820  
[www.kentucky.gov](http://www.kentucky.gov)

Marcheta Sparrow  
Secretary

Donna M. Neary  
Executive Director and  
State Historic Preservation Officer

July 3, 2008

Mr. Jason Petersen  
Florence & Hutcheson, Inc.  
P.O. Box 7267  
Paducah, KY 42002

**Re: Architectural Survey of the Area of Potential Effect for the Proposed Development of the Paducah Riverfront Boat Launch, Paducah, McCracken County, Kentucky**

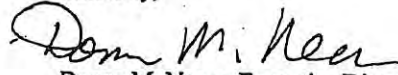
Dear Mr. Petersen:

The State Historic Preservation Office has received the above-referenced report, completed by Kevin Lomas and Steve Titus of American Resource Group, for review and comment. In the future, all 106 submissions to the Kentucky Heritage Council must complete project registration with this office and with the Office of State Archaeology, (OSA) located in Lexington. Contact Lynn Webb at [lynn.webb@ky.gov](mailto:lynn.webb@ky.gov) to register a project and set up a site visit (Wednesday through Friday) at this office. To obtain the archaeology data and registration, contact Chris Pappas at [Christina.Pappas@uky.edu](mailto:Christina.Pappas@uky.edu). The project registration form should be placed behind the cover sheet in both the cultural historic and archaeology reports.

The authors identified 16 previously unrecorded historic resources within the Area of Potential Effect. We concur with the authors that McN-P-972, McN-P-973, McN-P-974, McN-P-975, McN-P-977, McN-P-978, McN-P-979, McN-P-980, McN-P-981, McN-P-982, McN-P-983, McN-P-984, McN-P-985, McN-P-986 and McN-P-987 do not appear to be eligible for listing in the National Register of Historic Places (NRHP) either individually or as part of a district. We also agree that McN-P-976 appears eligible for listing in the NRHP under Criterion C, but that it will not be impacted by this undertaking as proposed.

It should be noted, however, that this project is not completely cleared by this office until the archaeological report is reviewed and commented upon. Should you have any questions, feel free to contact Janie-Rice Brother of my staff at (502) 564-7005, extension 121.

Sincerely,

  
Donna M. Neary, Executive Director  
and State Historic Preservation Officer

RECEIVED  
JUL 2008

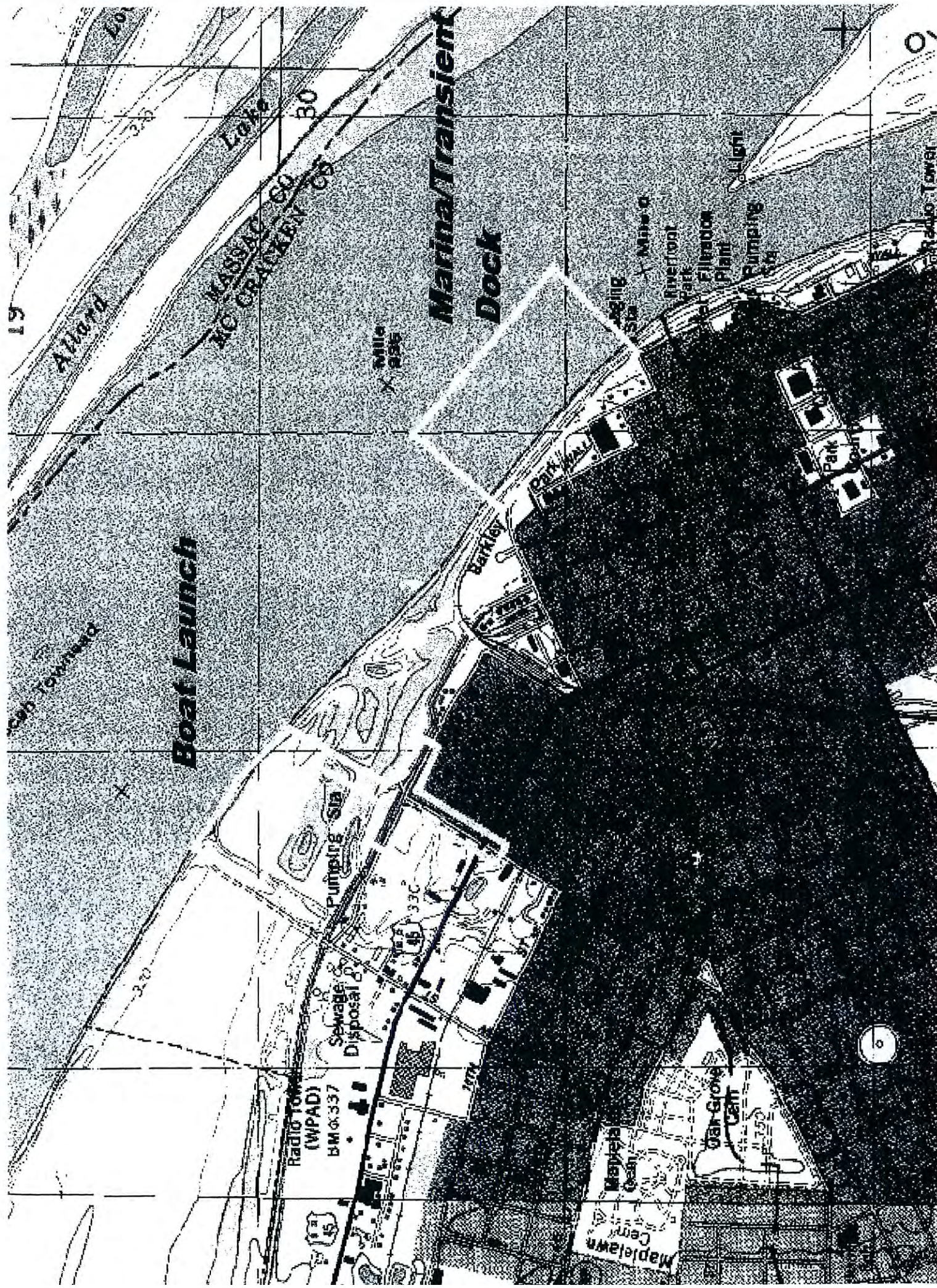
Cc: Steve Titus, American Resources Group  
JRB: jrb

[KentuckyUnbridledSpirit.com](http://KentuckyUnbridledSpirit.com)

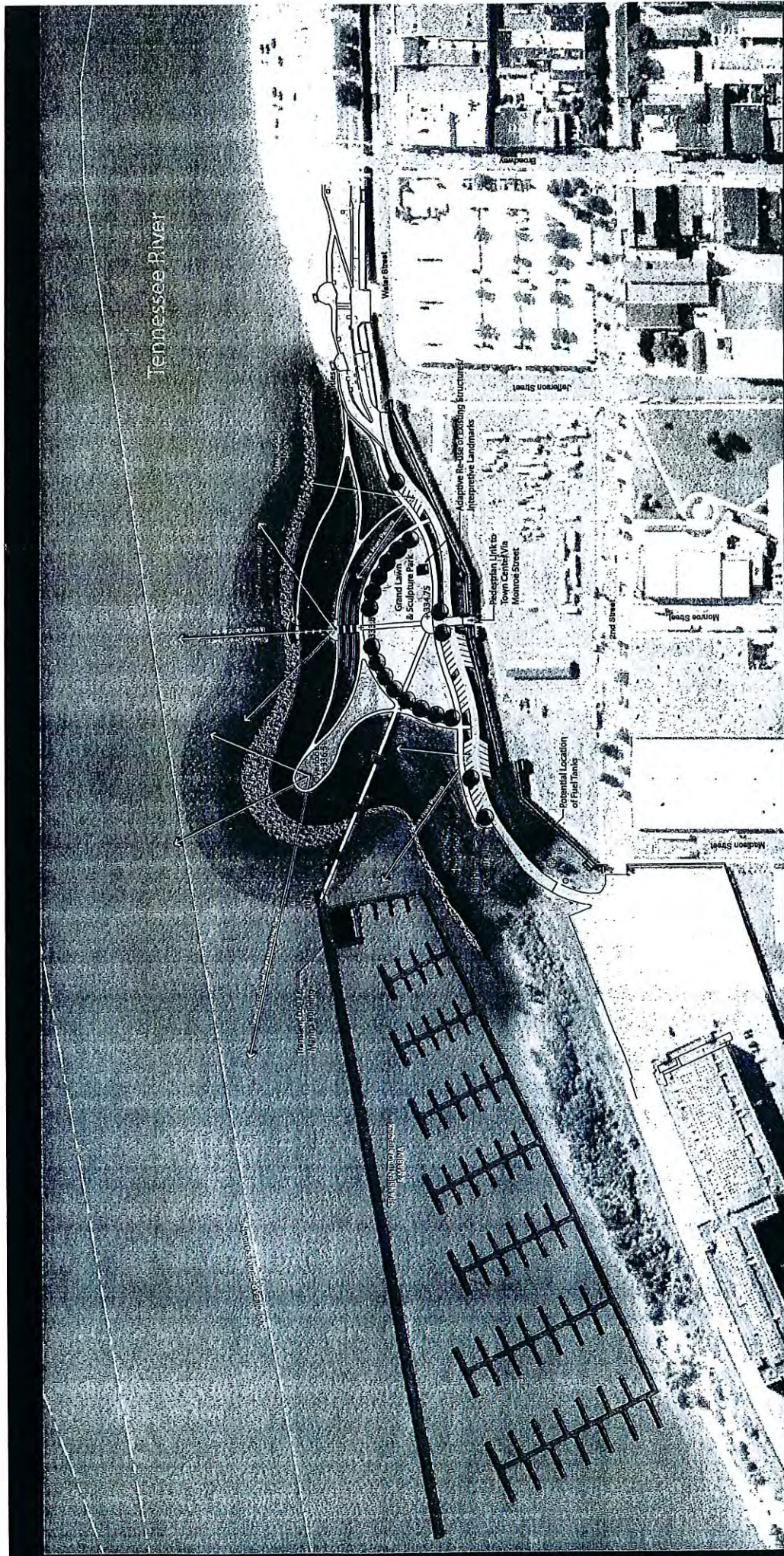


An Equal Opportunity Employer M/F/D









## CONSENSUS PLAN

Historical Foundation and Cultural Interpretive  
 Foundation Building



© 1998, 2000  
 Tennessee Historical Foundation



X-Modus-ReverseDNS: OK  
X-Modus-BlackList: 162.114.80.64=OK;Janie-Rice.Brother@ky.gov=OK  
X-Modus-RBL: 162.114.80.64=OK  
X-Modus-Trusted: 162.114.80.64=NO  
X-Modus-Audit: FALSE;0;0;0  
Subject: RE: Paducah Riverfront Project  
Date: Mon, 17 Mar 2008 13:35:55 -0400  
X-MS-Has-Attach:  
X-MS-TNEF-Correlator:  
Thread-Topic: Paducah Riverfront Project  
Thread-Index: AciDt/qfMZ6MzyUrQa+adg7HVtCVOAEnTejA  
From: "Brother, Janie-Rice (Heritage Council)" <Janie-Rice.Brother@ky.gov>  
To: "American Resources Group, Steve Titus" <steve@argltd.com>  
Cc: "Pollack, David (Heritage Council)" <David.Pollack@ky.gov>  
X-OriginalArrivalTime: 17 Mar 2008 17:35:55.0693 (UTC) FILETIME=[5ACB4DD0:01C88855]

I think the actual project area is fine for an APE - essentially the area depicted on your map.

Thanks,  
Janie-Rice

-----Original Message-----

From: American Resources Group, Steve Titus [mailto:steve@argltd.com]  
Sent: Tuesday, March 11, 2008 4:41 PM  
To: Brother, Janie-Rice (Heritage Council)  
Subject: RE: Paducah Riverfront Project

Existing roads will be used to access the boat dock, and an existing parking lot located within the project area boundaries will be slightly modified.

At 12:49 PM 3/11/2008, you wrote:

>Will there be an access road to the boat dock, or will it use existing  
>roads? Also, will there be a parking area?

>

>-----Original Message-----

>From: American Resources Group, Steve Titus [mailto:steve@argltd.com]  
>Sent: Monday, March 10, 2008 4:50 PM  
>To: Brother, Janie-Rice (Heritage Council)  
>Subject: Paducah Riverfront Project

>

>Janie-Rice,

>

>Thank you for your feedback on the APE for the Boat Launch portion of  
>the Paducah Riverfront Project. As the attached map shows, the second  
>portion of the Riverfront Project consists of the proposed Transient  
>Boat Dock. Would you help us delineate the APE for the Boat Dock area?  
>The proposed boat dock will be a low-lying construction on the river  
>that has no aerial projection. Thank you, Janie-Rice.

>



>Steve Titus  
>President  
>American Resources Group, Ltd.  
>127 N. Washington  
>Carbondale, IL 62901  
>office: (618) 529-2741  
>fax: (618) 457-5070  
>cell: (618) 527-1122  
>e-mail: [steve@argltd.com](mailto:steve@argltd.com)  
>

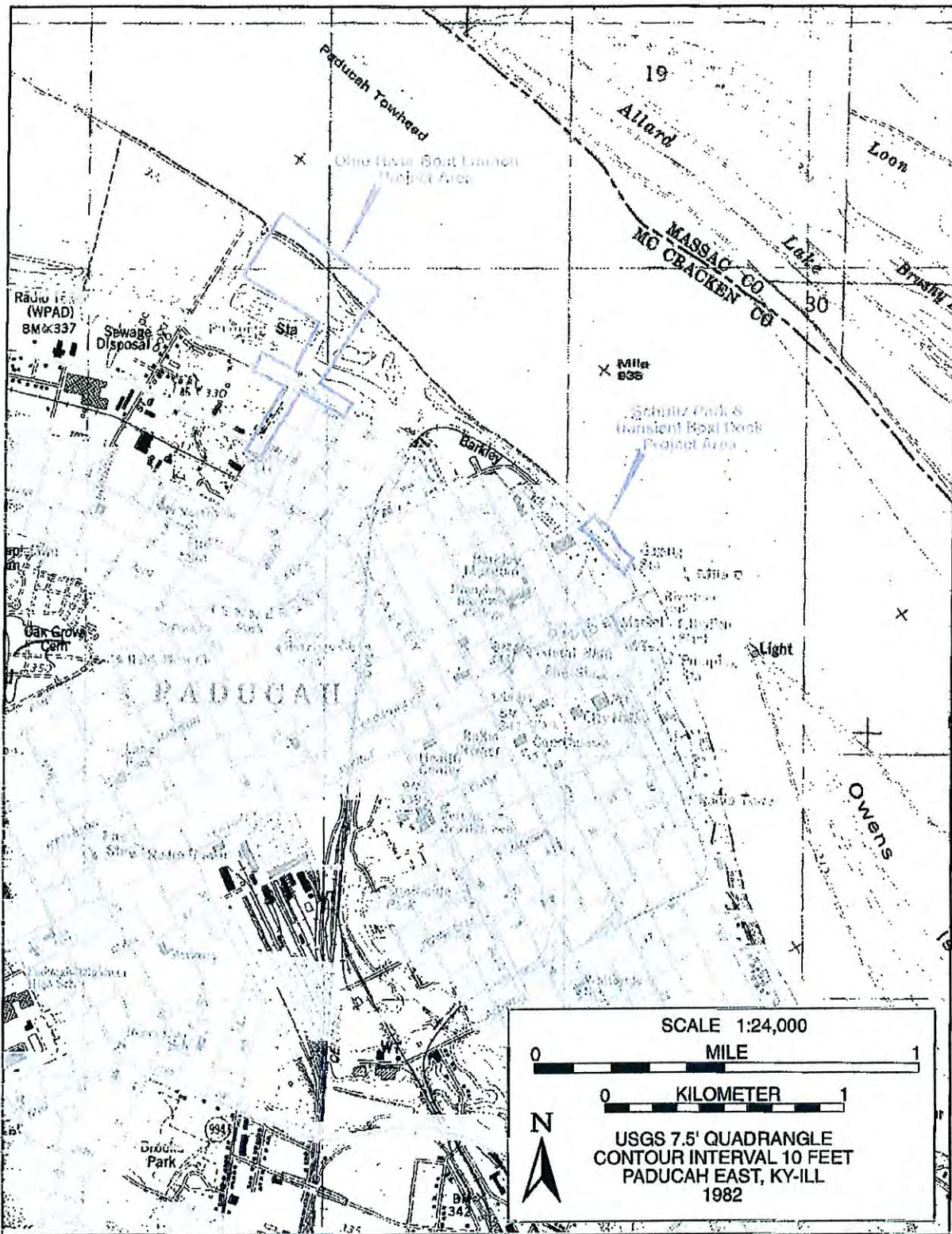


Figure xx.

## ***APPENDIX K***





CITY OF PADUCAH

300 South 5th Street  
P. O. Box 2267  
Paducah, KY 42002-2267  
Phone: (270) 444-8530  
Fax: (270) 443-5058

William F. Paxton III  
Mayor

City Commissioners  
Robert A. Coleman  
Gayle Kaler  
Gerald Watkins  
Buz Smith

December 10, 2008

Mr. David Waldner, P.E.  
Kentucky Transportation Cabinet  
Division of Environmental Analysis  
200 Mero St.  
Frankfort, KY 40602

RE: Request to use *de minimis* rule for the  
Paducah Riverfront Development Project  
McCracken County, Kentucky  
KYTC Item No. 1-122

Dear Mr. Waldner:

Please find enclosed the purpose and need statement for the proposed development of the Paducah Riverfront including Schultz Park. The City of Paducah Board of Commissioners is sure the project will enhance the area of the riverfront and increase the ability for tourist and residents to utilize the facility, otherwise we would not be making this monumental investment in our community's future.

The City of Paducah further believes that the construction of our Phase I Riverfront Development Project consisting of a Transient Boat Dock, Shultz Park Enhancements, preparation a future marina and the immediate construction of a boat launch facility located down stream of Schultz Park and Ohio River will have no effect on the park's operation, will not take any of the facilities developed with Land and Water Conservation Funds, and in general will significantly improve the quality of the park.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended the existing Transportation Act legislation with Section 6009(a) in order to simplify the approval of projects having a *de minimis* impact on a historic or recreational resource. With respect to parks, recreation areas, or wildlife or waterfowl refuges, the US DOT Secretary may make a finding of *de minimis* impact only if the following conditions are met:

- I. The Secretary has determined after public notice and opportunity for public review and comment, that the transportation program or project will not adversely affect the activities, features, and attributes of the park, recreation area, or wildlife or waterfowl refuge eligible for protection under this section; and
- II. The finding of the Secretary has received concurrence from the officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge.

December 10, 2008  
Mr. David Waldner, P.E.  
Page 2 of 2

As the official with jurisdiction over Shultz Park, it is determined that the proposed Riverfront development and Marina construction will not adversely affect the use of Shultz Park and that, a *de minimis* finding for the project is appropriate.

Thank you for your time in reviewing this valuable project and increasing the enhancement to the downtown riverfront area of our city.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. F. Paxton, III', with a stylized flourish extending to the right.

William F. Paxton, III  
Mayor, City of Paducah

WFP/rbm

Enclosure

C: Jim Zumwalt, City Manager  
Rick Murphy, P.E., City Engineer  
Steve Doolittle, Exc. Director Paducah Renaissance Alliance  
Steve Ervin, Director of Planning  
Mark Thompson, Director of Parks Services  
Jason Petersen, P.E., Florence & Hutcheson, Inc.  
Project File



**Steven L. Beshear**  
Governor

**TRANSPORTATION CABINET**

Frankfort, Kentucky 40622  
[www.transportation.ky.gov/](http://www.transportation.ky.gov/)

**Joseph W. Prather**  
Secretary

January 6, 2009

Mr. Jose Sepulveda  
Federal Highway Administration  
330 West Broadway  
Frankfort, Kentucky 40601

Dear Mr. Sepulveda:

RE: Request to use *de minimis* rule  
Paducah Riverfront Development Plan  
McCracken County, Kentucky  
KYTC Item No. 1-122

The Kentucky Transportation Cabinet (KYTC) is proposing the use of the *de minimis* rule for the subject project. The proposed project involves construction within the undeveloped riverbank and surface waters of the Ohio River and the existing Shultz Park in downtown Paducah, Kentucky.

The purpose and need of the project is to relocate the existing boat ramp facility located at the northeastern end of Broadway Street while at the same time allowing for the northeastern end of Broadway Street to be converted back to the original use as a riverboat landing and community focal point along the Ohio River. The relocation of the boat launch facility will reduce congestion and vehicle parking associated with recreational fishing activities. The purpose of the marina/transient dock is to provide accommodations for transient and local recreational boat owners.

Three design alternatives, including the No Build, were studied to determine the impacts to the area. Both build design alternatives are positioned north of the Burnett Street and North 6<sup>th</sup> Street intersection. There are no other city-owned properties along the riverfront that will accommodate the development of the boat launch facility. A major thrust of the Riverfront Development Plan is to enhance existing amenities in order to "recapture" the riverfront. In order to fulfill this need, the existing facility must be relocated. The proposed marina/transient dock and boat dock sites have been selected to minimize cost and environmental impact, while maintaining close proximity to downtown Paducah. All measures to minimize harm have been taken in the development of this plan.



An Equal Opportunity Employer M/F/D





## CITY OF PADUCAH

300 South 5th Street  
P. O. Box 2267  
Paducah, KY 42002-2267  
Phone: (270) 444-8530  
Fax: (270) 443-5058

William F. Paxton III  
Mayor

City Commissioners  
Robert A. Coleman  
Gayle Kaler  
Gerald Watkins  
Buz Smith

December 10, 2008

Mr. David Waldner, P.E.  
Kentucky Transportation Cabinet  
Division of Environmental Analysis  
200 Mero St.  
Frankfort, KY 40602

RE: Request to use *de minimis* rule for the  
Paducah Riverfront Development Project  
McCracken County, Kentucky  
KYTC Item No. 1-122

Dear Mr. Waldner:

Please find enclosed the purpose and need statement for the proposed development of the Paducah Riverfront including Schultz Park. The City of Paducah Board of Commissioners is sure the project will enhance the area of the riverfront and increase the ability for tourist and residents to utilize the facility, otherwise we would not be making this monumental investment in our community's future.

The City of Paducah further believes that the construction of our Phase I Riverfront Development Project consisting of a Transient Boat Dock, Shultz Park Enhancements, preparation a future marina and the immediate construction of a boat launch facility located down stream of Schultz Park and Ohio River will have no effect on the park's operation, will not take any of the facilities developed with Land and Water Conservation Funds, and in general will significantly improve the quality of the park.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended the existing Transportation Act legislation with Section 6009(a) in order to simplify the approval of projects having a *de minimis* impact on a historic or recreational resource. With respect to parks, recreation areas, or wildlife or waterfowl refuges, the US DOT Secretary may make a finding of *de minimis* impact only if the following conditions are met:

- I. The Secretary has determined after public notice and opportunity for public review and comment, that the transportation program or project will not adversely affect the activities, features, and attributes of the park, recreation area, or wildlife or waterfowl refuge eligible for protection under this section; and
- II. The finding of the Secretary has received concurrence from the officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge.

December 10, 2008  
Mr. David Waldner, P.E.  
Page 2 of 2

As the official with jurisdiction over Shultz Park, it is determined that the proposed Riverfront development and Marina construction will not adversely affect the use of Shultz Park and that, a *de minimis* finding for the project is appropriate.

Thank you for your time in reviewing this valuable project and increasing the enhancement to the downtown riverfront area of our city.

Sincerely,



William F. Paxton, III  
Mayor, City of Paducah

WFP/rbm

Enclosure

C: Jim Zumwalt, City Manager  
Rick Murphy, P.E., City Engineer  
Steve Doolittle, Exc. Director Paducah Renaissance Alliance  
Steve Ervin, Director of Planning  
Mark Thompson, Director of Parks Services  
Jason Petersen, P.E., Florence & Hutcheson, Inc.  
Project File

Paducah Riverfront Development Project  
City of Paducah, Kentucky  
KYTC Item No. 1-122

**Project Purpose and Need:**

The Purpose of the boat launch project is to relocate the existing boat ramp facility at the northeastern end of Broadway Street while at the same time allowing for the northeastern end of Broadway Street to be converted back to its original use as a riverboat landing and community focal point along the Ohio River. The relocation of the boat launch facility will reduce congestion and vehicle parking associated with recreational fishing activities such as launching and the parking of fishing boats. The purpose of the marina/transient dock is to provide accommodations for transient boaters and local recreational boat owners. The need for the marina/transient dock is to provide loading/unloading facilities for transient boats and to provide a marina with associated facilities that will allow transient and local recreational boaters to dock in a protected marina near downtown Paducah allowing boaters to refuel, dine, purchase supplies, etc. Currently, recreational boaters are required to dock on the riverbank near downtown Paducah. The closest on-water refueling/marina facilities for recreational boaters are located 33 miles upstream at Golconda, IL (Mile Marker 902). The proposed boat launch and marina/transient dock sites have been selected to minimize cost and environmental impact, while maintaining close proximity to the original downtown Paducah.





U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Kentucky Division Office  
Jose Sepulveda, Division Administrator

330 West Broadway  
Frankfort, KY 40601  
PH. (502) 223-6720  
FAX (502) 223-6735

February 3, 2009

William F. Paxton, III  
Mayor, City of Paducah  
300 South 5<sup>th</sup> Street  
P.O. Box 2267  
Paducah, KY 42002

Dear Mr. William F. Paxton, III

After review of the information provided to us by Kentucky Transportation Cabinet (KYTC), the Federal Highway Administration (FHWA) has determined that the Paducah Riverfront Development Project will have a No Adverse Effect to the Shultz Park. FHWA has concluded that the Shultz Park would benefit from the proposed enhancements therefore, we are in agreement this project meets the requirements set forth under the Safe, Accountable, Flexible, Efficient, Transportation Equity Act (SAFETEA-LU) and the de minimis rule be applied.

We are requesting that you sign this letter and return it to our office, so it may be entered into the administrative record.

If you have any questions, please contact me at your convenience at (502) 223-6742.

2/3/2009

Anthony Goodman  
Environmental Specialist

William F. Paxton, III  
Mayor, City of Paducah

**MOVING THE**  
**AMERICAN**  
**ECONOMY**

