



DEPARTMENT OF THE ARMY  
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO  
ATTENTION OF

August 12, 2010

Planning, Programs, and  
Project Management  
Environmental Planning and  
Compliance Branch

To: James F. Boggs  
U.S. Fish & Wildlife Service  
Lafayette Field Office  
646 Cajundome Blvd., Ste 400  
Lafayette, LA 70506

From: Laura Lee Wilkinson, Hurricane Protection Office, U.S. Army Corps of Engineers

Subject: Endangered Species Concurrence Request for Proposed 100 Year Hurricane Protection Projects for Individual Environmental Report #27 (IER #27) for the proposed Outfall Canal Remediation on the 17<sup>th</sup> Street, Orleans Avenue and London Avenue Canals.

Dear Mr. Boggs:

Provided for your review are the project description, project location map, and determination by the U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN) of the effect that the proposed action would have on threatened and endangered (T&E) species under USFWS jurisdiction. The proposed action, referred to as, Outfall Canal Remediation on the 17<sup>th</sup> Street, Orleans Avenue and London Avenue Canals, is located in Jefferson and Orleans Parishes (Figure 1). This draft IER #27 will be completed in the next few months and will be forwarded to you upon completion.

**PROJECT DESCRIPTION**

Approximately 18 miles of floodwalls have been examined for stability, seepage, sheet pile penetration levels and maximum water levels on I-walls along the 17<sup>th</sup> Street, London Avenue and Orleans Avenue Canals in Orleans and Jefferson Parish, Louisiana. Portions of these canals are recommended for remediation to increase the Maximum Operating Water Level (MOWL) in the canals which provide interior drainage for the City of New Orleans by evacuating stormwater from the city into Lake Pontchartrain. The area varies in protection mechanisms with earthen levees, I-Walls, L-Walls, T-Walls and closure gate structures. Increasing the MOWL of the canals is necessary to ensure that the canal walls can support the requirements of the Sewerage and Water Board of New Orleans (S&WB) in removing rain water from the city. This project includes remediation of floodwalls along the three outfall canals (17<sup>th</sup> Street, Orleans Avenue and London Avenue) in Orleans and Jefferson Parish, Louisiana.

17<sup>th</sup> Street Outfall Canal is a man-made canal approximately 2.4 miles in length, and approximately 200 feet wide, paralleled by levees with floodwalls on both sides. The canal is oriented in a north/south direction between Lake Pontchartrain and Interstate 10.

Orleans Avenue Outfall Canal is a man-made canal approximately 2.6 miles in length, with average bottom and top widths of 100 to 160 feet, paralleled by levee on the entire east side, by floodwall on the west side between the pumping station # 7 and Robert E. Lee Boulevard, and by a levee on the west side near the lake. The canal is oriented in a north/south direction between Lake Pontchartrain and Interstate 10.

London Avenue Outfall Canal is a man-made canal approximately 4.0 miles in length, with an average bottom and top widths of 100 to 160 feet, respectively. Pumping Station No. 3 lies at the head of the canal near Broad Street. Pumping Station No. 4 is near Prentiss Avenue. The canal is paralleled by earthen levees topped with floodwalls or floodwalls alone from Pumping Station No. 3 to Leon C. Simon Boulevard on the east and to Robert E. Lee Boulevard on the west. From these two boulevards to Lakefront Drive there is an earthen levee on both sides of the canal.

### **Proposed Action**

The project as proposed includes remediation of floodwalls along the three outfall canals (17<sup>th</sup> Street, Orleans Avenue and London Avenue) in Orleans and Jefferson Parish, Louisiana to raise the MOWL of the canals. Increasing the MOWL of the canals is necessary to ensure that the canal walls can support the requirements of the Sewerage and Water Board of New Orleans (S&WB) in removing rain water from the city. The final MOWL at each of the outfall canals shall be a minimum of 8 feet, with the exception of a portion of Orleans Avenue Canal (minimum SWE of 7 feet). All elevations shall be NAVD88 (2004.65). Construction could occur along the entire reach of each canal. Staging areas would be adjacent to the canals.

Four types of remedial measures could be used along the three canals. These measures include:

Deep Soil Mixing: Using an auger, a mixture of Portland cement and bentonite would be mixed with subsurface soils to create an impermeable wall to cut-off subsurface flow through the subsurface sand layer. Maneuverability would be simpler if the construction took place from the protected side of the existing floodwall. However, equipment could be located on a barge on the floodside and extended over the wall to construct the cutoff wall on the protected side.

Net Embankment Increase/Concrete Slab: The net embankment increase requires adding fill on the protected side of the I-Wall so that SWE is not more than 4 feet above the protected side embankment. A concrete slab tying the cut-off wall to the I-wall may be used to increase the embankment if the 4 foot stick-up requirement cannot be met by adding fill alone. It also may require adding fill to the flood side of the wall. Construction of this alternative would require access on the protected side for equipment and material delivery. The increased embankment height is not expected to exceed 2 feet above the existing embankment.

Sheet pile cut-off: The sheet pile cut-off method requires sheet pile to be installed on the protected side of the I-Wall through the Beach Sand Deposits and into the Bay Sound formation. The sheet piles can be driven from work barges assembled from modular sections placed within the canal on the flood side of the canal I-walls. This will avoid the need for construction access



on the protected side of the flood wall. It is anticipated that the sheet pile would be driven in relatively close proximity to the existing I-wall.

Stability Berm: Placement of fill at the toe of the levee to provide additional weight that will increase the factor of safety against a rotational or translational failure during construction or storm loading. Berms are generally used to concentrate the additional fill where it is needed most and by forcing a substantial increase in the failure path. The berm thickness and width are determined from stability analyses. The toe of the berm will remain within existing right-of-way.

### **CEMVN DETERMINATION OF IMPACTS TO T&E SPECIES**

In conjunction with IER #5 (Permanent Protection System for the Outfall Canals Project on 17<sup>th</sup> Street, London Avenue and Orleans Avenue Canals) and IER #4 (Orleans East Bank, New Orleans Lakefront Levee, West of Inner Harbor Navigation Canal to Eastbank of 17<sup>th</sup> St. Canal), we believe that these projects, as planned, would not adversely affect any threatened or endangered species, and any impacts to the designated Gulf Sturgeon critical habitat would be temporary and will have been minimized to the maximum extent practicable. Please review this information and inform us whether or not you agree with our determination.

### **CONTACT INFORMATION**

Please review the enclosed information and provide comments within 30 days of the date of this letter. The IER will not be signed until all environmental review and compliance requirements have been completed. A copy of the signed IER will be provided upon request.

Comments should be mailed to the attention of Ms. Laura Lee Wilkinson; U.S. Army Corps of Engineers; CEMVN-HPO; P.O. Box 60267; New Orleans, Louisiana 70160-0267. Comments may also be provided by E-Mail to [Laura.L.Wilkinson@usace.army.mil](mailto:Laura.L.Wilkinson@usace.army.mil). Ms. Wilkinson may be contacted at (504) 862-1212, if questions arise.

Sincerely,



Laura Lee Wilkinson  
Environmental Coordinator  
Hurricane Protection Office  
U.S. Army Corps of Engineers,  
New Orleans District



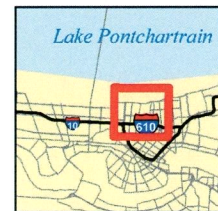
Figure 1 - IER #27 Project Area



Source: 2009 DOQQ

**Legend**

- Interstate
- Outfall Canal
- City Park
- Pump Stations





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This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed, (X) will have no effect on those resources. ( ) is not likely to adversely affect those resources. This finding fulfills the requirements under Section 7(a)(2) of the Act.

To: James F. Boggs  
U.S. Fish & Wildlife Service  
Lafayette Field Office  
646 Cajundome Blvd., Ste 400  
Lafayette, LA 70506

*Debra A. Fuller* *Aug 13 2010*  
Acting Supervisor  
Louisiana Field Office  
U.S. Fish and Wildlife Service  
Date

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OPTIONAL FORM 99 (7-90)

**FAX TRANSMITTAL**

# of pages ►

To <i>Laura Lee</i>	From
Dept/Agency	Phone #
Fax #	Fax #