

**Appendix D**

**Eight-Step Planning Process for  
Floodplains**

**Eight-Step Planning Process for Floodplains and Wetlands  
Highway 90 Section  
Restore Biloxi Program**

<p><b>Step 1:</b> Determine whether the Proposed Action is located in a wetland and/or the 100-year floodplain (500-year floodplain for critical actions) and whether it has the potential to affect or be affected by a floodplain or wetland.</p>	<p><b>Project Analysis:</b> The City of Biloxi is a participant in good standing with the National Flood Insurance Program (NFIP). According to FEMA mapping, the proposed project is located within the 100-year floodplain, in Zone AE (elevation 18, 19, and 20) and Zone VE (Coastal Flood Zone with velocity hazard [wave action], with Base Flood Elevations (BFE) determined (elevation 19, 20, 21, and 22), according to the June 2009 FEMA FIRM numbers 28047C0288G, 28047C0289G, 28047C0293G, 28047C0294G, and 28047C0313G.</p> <p>According to National Wetlands Inventory maps and a site visit conducted by Neel-Schaffer representatives and a USACE representative on July 31, 2012, there are no wetlands located on the project site.</p>
<p><b>Step 2:</b> Notify public at earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making process.</p>	<p><b>Project Analysis:</b> The City of Biloxi will notify the public of the availability of the draft EA through publication of a public notice in a newspaper of general circulation when the EA is made available for public review.</p>

<p><b>Step 3:</b> Identify and evaluate practicable alternatives to locating the Proposed Action in a floodplain or wetland.</p>	<p><b>Project Analysis:</b> The Proposed Action is located within the 100-year floodplain.</p> <p>Other than the No Action Alternative, there are no practicable alternatives for repair/replacement of sanitary sewer lines, water lines, storm drainage and lift stations that would not involve impacts to the 100- year floodplain.</p> <p>The following alternatives were evaluated in the EA:</p> <p><i>No Action Alternative:</i> Under the No Action Alternative, no sanitary sewer lines, water lines, storm drainage or lift stations would be repaired or replaced in the project area and Biloxi would continue to rely on deteriorated and damaged infrastructure.</p> <p><i>Repair/Replacement of Water, Sanitary Sewer, and Storm Drains (Proposed Action):</i></p> <ul style="list-style-type: none"> <li>• Easements will be acquired parallel to the existing Highway 90 right-of-way to construct the new water main(s), sanitary sewer(s) and storm drain(s) in areas where the existing lines are located beneath the travel lanes of Highway 90.</li> <li>• Repair/replace approximately 49,000 linear feet of sanitary sewer lines.</li> <li>• Repair/replace approximately 43,000 feet of water main lines.</li> <li>• Repair/replace approximately 6,500 feet of storm drainage lines.</li> <li>• Remove 13 of the 18 existing lift stations, and rehabilitate the other five existing lift stations.</li> </ul>
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<p><b>Step 4:</b> Identify the full range of potential direct or indirect impacts associated with the occupancy or modification of floodplains and wetlands, and the potential direct and indirect support of floodplain and wetland development that could result from the Proposed Action.</p>	<p><b>Project Analysis:</b> The Proposed Action would not increase the direct impacts to the floodplain above those that existed prior to Hurricane Katrina. Although the proposed project would occur entirely in the 100-year floodplain, the majority of the infrastructure improvements (sanitary sewer lines, water main lines, and storm drainage) would occur below ground and would have no direct impact on the floodplain. The decommissioning and removal of 13 of the existing 18 pump stations in the project area would serve to reduce floodplain impacts. Five existing pump stations would be rehabilitated; however, this would not create any additional direct impacts to the floodplain. Direct impacts would include the placement of minimal fill material in the floodplain in limited areas (pump station access areas) as needed to provide positive drainage. Indirect impacts include supporting the ongoing occupancy of the floodplain that occurs within the Biloxi area.</p> <p>The project has no direct wetland impacts. Indirect impacts to wetlands would be inadvertent sediment runoff to nearby wetlands. Wetlands have been identified in an unnamed ditch on the Beauvoir property, west of Brady Drive, approximately 18 feet north of the project.</p>
<p><b>Step 5:</b> Minimize the potential adverse impacts from work within floodplains and wetlands (identified under Step 4); restore and preserve the natural and beneficial values served by wetlands.</p>	<p><b>Project Analysis:</b> To minimize impacts to the floodplain, all controls, platforms and other necessary equipment associated with the five remaining pump stations intended for rehabilitation would be constructed at elevations at or above the BFE in compliance with FEMA FIRM BFEs and local ordinances. The placement of above-ground fill material in the floodplain would be minimal in limited areas.</p> <p>Best management practices (including silt fences) would be employed to minimize the risk of sediment runoff to nearby wetlands.</p>
<p><b>Step 6:</b> Reevaluate the Proposed Action to determine: 1) if it is still practicable in light of its exposure to flood hazards; 2) the extent to which it will aggravate the hazards to others; 3) its potential to disrupt floodplain and wetland values.</p>	<p><b>Project Analysis:</b> The Proposed Action remains practicable because the majority of the infrastructure improvements (sanitary sewer lines, water main lines, and storm drainage) would occur below ground and would have no direct impact on the floodplain, and therefore would not aggravate the hazards to others. The placement of fill material in the floodplain will be minimal; therefore, the Proposed Action has minimal potential to disrupt floodplain and wetland values.</p>
<p><b>Step 7:</b> If the agency decides to take an action in a floodplain or wetland, prepare and provide the public with a finding and explanation of any final decision that the floodplain or wetland is the only practicable alternative. The explanation should include any relevant factors considered in the decision-making process.</p>	<p><b>Project Analysis:</b> A public notice will be published informing the public of FEMA's decision to proceed with the project. This notice will include rationale for floodplain impacts; a description of all significant facts considered in making the determination; a list of the alternatives considered; a statement indicating whether the action conforms to State and local floodplain protection standards; a statement indicating how the action affects the floodplain; and a statement of how mitigation will be achieved.</p>

**Step 8:** Review the implementation and post-implementation phases of the Proposed Action to ensure that the requirements of the EOs are fully implemented. Oversight responsibility shall be integrated into existing processes.

**Project Analysis:** This step is integrated into the NEPA process and FEMA project management and oversight functions.