

**PROJECT:**

# South Slough Wetland Evaluation Hammond, Louisiana

**NEED**

The City of Hammond, Louisiana discharges up to 30,000 m<sup>3</sup>/d (8 MGD) of treated wastewater effluent into the Joyce Wildlife Management Area, which contains over 4,000 ha (10,000 acres) of forested cypress swamp. An emergent freshwater marsh, locally known as Four Mile Marsh, began to undergo large changes in the plant community within one year of effluent discharge.

NWC was retained by the Louisiana Department of Environmental Quality (LDEQ) to conduct an independent evaluation of the South Slough Wetland system to assess the functionality of the wetland and provide recommendations for permitting of future wetland assimilation projects in the State of Louisiana.

**SOLUTION**

NWC conducted field studies of the impacted areas to determine rates of tree growth and biomass productivity. Mathematical modeling was completed to determine the size of the active assimilation zones associated with nitrogen and phosphorus uptake. The final 130-page report was made available to the public via LDEQ's website to answer ongoing questions regarding the South Slough Wetland project.

**BENEFIT**

Location of monitoring stations for future wetland assimilation projects can now be pinpointed with a much higher degree of accuracy by being located in the context of the active assimilation zones for nitrogen and phosphorus. Ongoing disputes on the role of wetland assimilation projects in restoring coastal Louisiana wetlands have been greatly reduced.



**LOCATION**

Hammond, Louisiana

**PROJECT TYPE**

Wastewater

**COMPLETION DATE**

2019

**DESIGN FLOW**

8,000,000 gpd  
30,000 m<sup>3</sup>/d

**TREATMENT**

Natural Wetlands

**REFERENCE**

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