Stream and Wetland Mitigation

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Location:
Trenton, Ohio

Client:
Kinder Morgan

Dates:
2011

Present Status:
Complete

Project Type:
Wetland Mitigation

Major Project Elements:
Stormwater Hydrology
Topographic Survey
Wetland Design
Regulatory Approval

Kinder Morgan Wetland Mitigation

Jackson Group along with Palmer Engineering provided land surveying, ecological services, and civil/environmental engineering services for wetland mitigation for a gas pipeline project for Kinder Morgan's Rockies Express Pipeline near the MillerCoors LLC facility in Trenton, Ohio. The project was developed as mitigation for off-site impacts from the gas pipeline installation and required the creation of a 2.5 acre wetland with a 1.0 acre buffer area/riparian zone. The project was designed to be constructed in an existing agricultural field adjacent to Jackson Ditch, a perennial stream onsite. The site presented challenges to the project team due to the high infiltration rates of the existing soils and existing regional flooding issues. The project team coordinated with the Ohio Environmental Project Agency (OEPA), Butler County Engineer's Office and StormWater District, Kinder Morgan, and MillerCoors to provide a successful design.

Services provided for this project include field survey of existing stream and a topographic survey of the area for the new wetland and riparian zone to be created. After site reconnaissance, staff analyzed survey information and other existing data to provide a design for the new wetland that would create additional habitat for native species. Additional benefits of the wetland creation were potential improvements to flooding of downstream properties and potential improvement to water quality. The design included diverting water from Jackson Ditch into the proposed wetland area and designing a berm around the area and a compacted layer layer to retain water. Using existing modeling from Butler County StormWater District, the proposed wetland and diversion channel was modeled to determine the hydrology budget. Native species were selected based on expected water levels and time of saturation and the delineated into three zones to allow for variable habitats for species to thrive.