



The Black River Restoration Project City of Lorain, Ohio

Ohio Environmental Protection Agency Funding provided by the Ohio EPA under the American Recovery and Reinvestment Act (ARRA)



**Floodplain Restoration Pre-Construction
(March 2010)**



**Floodplain Excavation
(April 2010)**

Coldwater has partnered with the City of Lorain and ARCADIS U.S. to complete construction administration and oversight, grant administration, biological monitoring, and permit compliance for this large river and floodplain restoration project. Over \$6,000,000 of ARRA funds were secured to complete ecological restoration along a 1.5-mile long reach of the Black River in Lorain, Ohio. The long-term operation of steel mills and other industry in the area has resulted in the loss of active floodplain, riparian corridor, and fish habitat along the Black River. The primary component of this project was the removal of over 1,000,000 cubic yards of recyclable steel processing byproducts (e.g., slag) from an area that was historically active floodplain. This area has been returned to its natural elevation and re-vegetated, resulting in the restoration of over 20 acres of active floodplain habitat and alleviating down-stream flooding. The majority of the restored floodplain is developing into seasonally flooded wetlands with shallow pools.



**Topsoil Placement After *Phragmites* Removal
(September 2010)**



**Floodplain Restoration Post-Construction
(September 2011)**





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The Black River Restoration Project restored and preserved over 52 acres of floodplain and riparian corridor, including an existing heron rookery. Additionally, over 600 linear feet of fish habitat shelves were installed, providing structure and diversity in an otherwise habitat-poor stretch of the river. *Phragmites australis*, an invasive plant species, is being controlled in the project area in accordance with a long-term management plan that was developed specifically for this project. Over 1,800 trees, 5,500 shrubs, and 7,300 willow and dogwood live stakes have been installed, along with native seed mixes and erosion control blankets.



**Fish Habitat Shelves at Low Water
(Prior to Planting: October 2011)**



**Upland and Wetland Riparian Restoration
(October 2011)**

LEGEND

- River Miles
- Fish Habitat Shelf
- Project Work Area



PROJECT MAP

