Clearwater River
WATERSHED DISTRICT
Promote | Protect | Preserve

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KINGSTON WETLAND RESTORATION LEADS TO HEALTHIER ENVIRONMENT

Kimball, MN – If you gaze west of the state highway 15 crossing of the Clearwater River (about 3 miles south of Kimball), you'll see the Kingston Wetland Complex, a large wetland and river ecosystem. This seemingly unremarkable wetland provides important habitat for a variety of creatures, as well as water quality benefits for the Clearwater River and downstream lakes. However, historical ditching as well as legacy pollutant loading from upstream had resulted in the degrading of this important wetland's ecological and water quality functions.

Over the past five years, the Clearwater River Watershed District (CRWD) undertook a large restoration effort to improve the ecological health of the wetland while addressing these legacy impacts. Previous studies showed the decay of organic matter in the wetland was causing a dissolved oxygen (DO) impairment in the river, and the wetland was exporting soluble phosphorus to downstream lakes (several of which are listed as impaired). The wetland was still somewhat protective of downstream water quality by trapping particulate phosphorus.

With a $404,000 grant from the MN Pollution Control Agency through a grant from the US EPA, Section 319 Nonpoint Source Management Fund, the CRWD devised and executed a plan to solve the problems of phosphorus exportation and oxygen demand while maintaining existing wetland benefits. This is the first project in the state to tackle DO impairments without removal of a wastewater treatment plant or a dam.

The restored wetland and river channel comes close to pre-agrarian hydrology by re-meandering the low flow channel through the wetland. This addressed the DO impairment while lowering the frequency of times the wetland was exporting soluble phosphorus downstream. It also preserved access to the floodplain during high flows, which maintains the particulate phosphorus trapping capabilities of the wetland. In addition, a limestone filter berm was installed across the outlet of the wetland as it reenters the river to provide soluble phosphorus removal during low flow conditions.

By restoring the main channel and meander, the river goes from being a ditch through a wetland to a more significant recreational resource. Data collected post-construction shows the project meets its goals of addressing water quality issues and improving wetland and riverine habitat to support a broader range of species. For more information on this project, check out the CRWD's website at http://www.crwd.org. Also be sure to check out an informational sign on this project at Willow Creek Park in Kimball, MN, next to the playground.

(PICTURE ON NEXT PAGE)

Figure 1: Aerial of restored low flow river channel