

Vermillion River Stream Re-meander Project

July 2011

Empire Township, Minnesota



The Vermillion River is one of the few remaining trophy trout streams located in a rapidly developing metropolitan area. Below, a 1937 aerial photo showing the straightened channel and (left side, circled) indications of where the stream meandered originally.

Improving Vermillion River Habitat

The Vermillion River is known as a destination for anglers to pursue trophy-sized brown trout. However, the river reach that flowed through state-owned land east of Farmington in Empire Township had poor habitat conditions for trout. In the past, prior property owners had straightened the stream to improve farming, in the process eliminating the pools and riffles that trout prefer.

With the help of funding from the Minnesota Department of Natural Resources (DNR), Trout Unlimited, the Vermillion River Watershed Joint Powers Organization, the Environment and Natural Resources Trust Fund, and the Clean Water, Land and Legacy Amendment, the DNR completed a project to restore the stream and enhance trout habitat.



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Steps to Restore a Winding River

Trout thrive in cold water streams with natural features, such as pools, riffles (rapids), undercut banks, and woody debris that falls into the stream. The improved habitat will make the stream more attractive to trout and other fish, plants and insects and restore the natural hydrology.

New meandering stream channels totaling 4,555 feet were constructed during the winter of 2010-2011 to replace the straightened channel. Logs, tree rootwads, and brush were incorporated into the outside bends to enhance cover for fish and invertebrates and prevent streambank erosion. The new channels were connected to the river's flow in June 2011 and the old straightened channel has been filled in with material stockpiled during the meander construction.

Disturbed areas were planted with native prairie vegetation. Volunteers from Friends of the Mississippi River and Vermillion Stewards assisted in planting trees that will eventually provide shade for the stream to help maintain cold water temperatures.



The current estimated project costs are \$310,000 shared among many partners. As the river habitat is gradually restored, the DNR expects this Aquatic Management Area to become a destination for anglers seeking sport-fishing opportunities.



Winter construction of stream meanders



Tree rootwads installed to provide cover and prevent erosion



Coarse wood toe prevents bank erosion

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