Streambank Stabilization
Little Blue River, Washington County, Kansas

PROJECT

"To provide a wide variety of natural resource related services to individuals, municipalities, State and federal agencies."

Field Office
1200 SW Executive Dr.
Topeka, KS 66615
785/228-3146 Phone
785/272-2252 Fax

Corporate Office
Windmill Village, Bldg 4
7211 W. 98th Terrace
Suite 140
Overland Park, KS 66212
913/685-4600 Phone
913/341-1130 Fax

WatershedInstitute.biz

The Watershed Institute, Inc. (TWI) personnel have surveyed, designed, and provided construction oversight for streambank stabilization of 2,100 feet along the Little Blue River in Washington County, Kansas. The landowner requested assistance to reduce the high streambank erosion rates and loss of valuable farmland.

Based on information from a detailed land survey and geomorphic assessment, TWI recommended installing bendway weirs to reduce streambank erosion. Bendway weirs reduce streambank erosion by re-directing flows away from the near bank region. These structures reduce the stream's width / depth ratio and move the thalweg (deepest part of channel) from the near bank region to the ends of the structures. When properly placed, theses structures reduce velocities in the near- bank region and induce deposition along the bank toe. Watershed Institute personnel have the knowledge to properly size and space these structures for effective streambank stabilization. They also have the construction experience to properly install these structures as well as design riparian plantings.

Using information from the detailed field survey, our stream design team lays out the number of weirs and required, along with spacing and angles for each.

Once the structure sequence is determined, their heights and widths are selected based on water depth and channel materials. Our stream design team has developed efficient methods for estimating rock quantities and the amount of soil to be moved in order to reshape the vertical stream banks as well as accurately estimate construction equipment time.

Once reshaped, the stream banks were planted with a variety of native grasses, trees, and shrubs. The goal of this project is to use rock structures to reduce the streambank erosion in order to establish a native riparian corridor.

THE WATERSHED INSTITUTE