



***Montana Fish,
Wildlife & Parks***

Missouri River Bank Restoration
Kaste / Dearborn Ramp Location

Status Report for Northwestern Energy
FERC Project 2188

Project # 2018-11

Prepared by

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At the December 2017 Missouri River Technical Advisory Committee (MoTAC) meeting, Montana Fish, Wildlife & Parks (MFWP) was awarded \$2,175 from Northwestern Energy to stabilize and restore an eroding bank on the Missouri River located just upstream of the Dearborn ramp on the Kathy Kaste property. The cause of the erosion was the result of rock placed to protect the boat ramp and managed by MFWP. The plan was to add large rock in the Missouri River at an upstream angle to provide protection to the boat ramp, while eliminating the current upstream eddy that occurs at high flows, resulting in erosion. This work was completed in April 2018. Dormant willow was sprigged into the bank during spring and fall 2018 to provide additional diversity of bank vegetation and protection from erosion. The placement of the rock has removed the upstream eddy and decreased the flow upstream of the rocks along the bank, resulting in the establishment of additional vegetation in 2018. Figure 1 depicts the location of the project. Photos 1 through 7 depict the streambank before and after completion of the work.

Submitted by: Jason Mullen December 2019

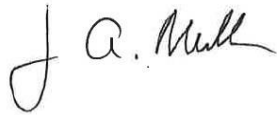




Figure 1. Map of project site. Red line denotes area of bank that will be sprigged with willows. Boat ramp is just downstream of red line.



Photo 1: Looking upstream. Before bank work. November 2014.



Photo 2. Looking upstream. After bank work. Photo taken during high water. Most of the added rocks are submerged. April 2018.



Photo 3. Looking upstream. After bank work. August 2018.



Photo 4. Growth of willow established from sprigs. After bank work. August 2018.



Photo 5. Looking upstream. After bank work. Additional willow sprigging in October 2018.



Photo 6. Looking upstream. After bank work. June 2019.



Photo 7. Close-up of established vegetation. After bank work. June 2019.