

CASE STUDY

VOLGA RIVER

Fayette, Iowa

Submar Project 18474

SUBMAR®



BEFORE



AFTER

EXISTING CONDITIONS

The 50-foot-wide pipeline right-of-way has one (1) 10-inch diameter refined products pipeline that crosses the Volga River in Fayette, IA. The pipeline is exposed for the entire width of the Volga River. A channel has formed beneath the pipeline causing the pipeline to span about 12-inches off the riverbed in the middle of the river. The right descending high bank is tall and steep with grassy vegetation. The left descending high bank is lower with a more moderate slope and is covered with grassy vegetation. Large rip rap has been placed on the banks within the right of way.

SOLUTION

A divert, dewater, and construction plan was implemented in two phases due to the width of the river. For phase 1, 6-foot tall by 100-foot long water dams were filled extending from the banks to the pipeline and sandbags were installed over the pipeline. The area inside the water dams was dewatered with pumps for a partial block type pump around.

The channel bank and streambed were graded and anchor trenches were dug in preparation to install erosion control materials. A Submar articulating concrete mattress system was installed over geotextile fabric and the mats were banded together. A riprap subgrade and grade control were installed over geotextile fabric.

After phase 1 of the project was completed, the dams were removed and installed in the same manner on the opposite side for phase 2 of the project, which was completed in a similar fashion. After phase 2 was complete, final grading was performed, and seed and straw were placed over the disturbed areas to aid in a rapid return to preconstruction vegetative conditions.

THE Exposed Pipeline Remediation Experts

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