# UPPER MISSISSIPPI RIVER RESTORATION
# FEASIBILITY REPORT
# WITH INTEGRATED ENVIRONMENTAL ASSESSMENT

## GILEAD SLOUGH
## HABITAT REHABILITATION AND ENHANCEMENT PROJECT

**POOL 25, UPPER MISSISSIPPI RIVER MILES 246-251**
**CALHOUN COUNTY, IL**

Appendix M: Mechanical Engineering

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Upper Mississippi River Restoration
Leading·Innovating·Partnering

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# 1 Existing Conditions

Currently, there are no existing mechanical features within the Gilead Slough study area.

# 2 Potential Measures

During the feasibility phase, only the maximum alternative included mechanical elements. The alternative proposed a pump station that would supply water to the North Area MSU along with a water control structure. The sponsor preferred a mobile pump. The pump would be able to supply 1,000 gallons per minute for a filling period of two weeks. The TSP is the intermediate alternative, which does not include the pump station, so no mechanical features will be included in Gilead Slough

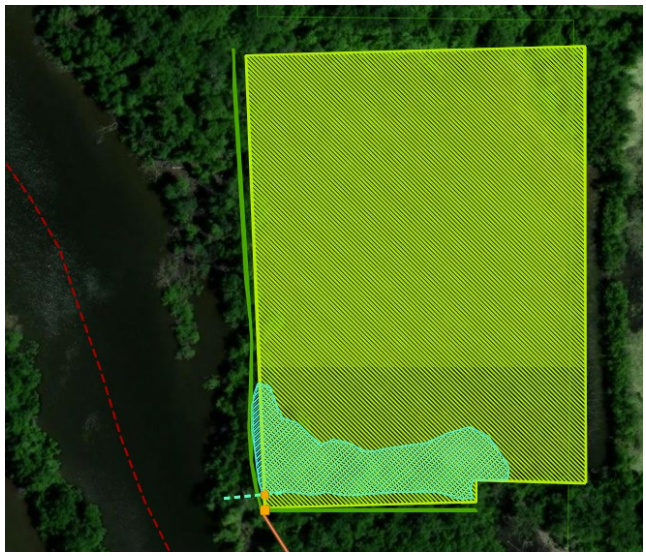

Figure 1 MSU North Area

## 2.1 Pump Station

The proposed pump station in the maximum alternative was a mobile line shaft type (Figure 2). The portable pump shown in Figure 2 contains a diesel motor engine, gearbox, and pump all mounted on a trailer. Portable pumps can be of the submersible and line shaft types.

*Figure 2 Portable Pump*