Markland Lock & Dam Unwatering

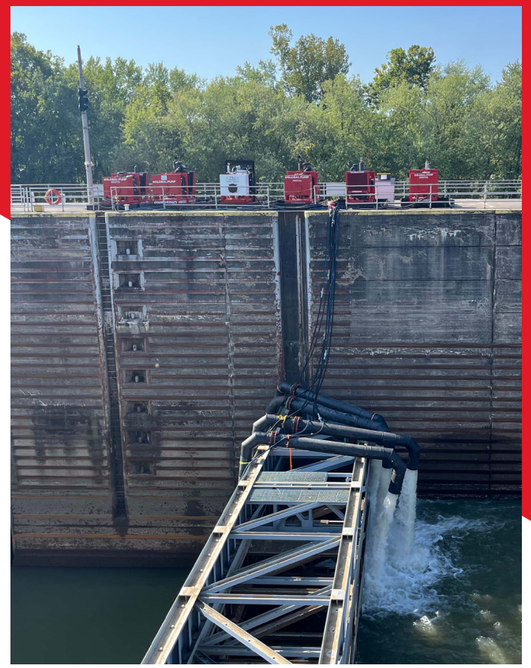
Case Study

Client
C.J. Mahan

Run Time
9/24-10/24

Location
Warsaw, KY

Projected Value
$160,000



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Project Overview

When C.J. Mahan needed to make critical repairs inside the main lock at the Markland Lock and Dam, they ran into a major roadblock – 26 million gallons of water needed to be pumped out within a 24–30-hour time span. This meant there were no room for setbacks, given the significant volume of the Ohio River's traffic. They needed a fast, efficient, and flawlessly executed pumping solution. That's when we stepped in.

Actions

To plan for this, our team conducted multiple site visits to review plans with project manager and determine proper equipment placements, pipe lengths, and fittings. With a short lead time, we needed to move fast – our equipment needed to be onsite before the project began so it could be transferred via barge to the outer lock.

There were multiple timelines that needed to be met to keep up with their allotted slot to shut the lock down, since it would shut down river traffic on the Ohio River. To ensure that we met the project demands, we utilized nine submersible pumps with their respective power packs, as well as five 6GST pumps and one 8GST.

Overcoming Challenges

The biggest challenge we faced was placing equipment on the lock walls only accessible by foot. All equipment had to be moved into place by barge and crane and smaller components needed to be carried by hand. Additionally, since the pipe couldn't be fused on-site, we had to fuse it offsite and move it into position.

Adding to the complexity, unexpected high-water leakage into the lock increased the amount needed to be managed. Our system, however, was up for the challenge and was able to overcome the extra volume. Once the lock was pumped down, we needed to mobilize extra pumps in to keep up with the continued leakage.

Final Results

- In just 28 hours, the lock had been successfully pumped down, which allowed the customer to access the areas that needed repairs.
- From the proposal to execution, they were very satisfied with the efficiency of our pumping system and our communication.
- Their satisfaction led to them verbally awarding us a similar project for the near future.