

MARKLAND LOCK & DAM

Projected Value: **\$150,000**
Run Time: **9/15/24-10/26/24**



OVERVIEW

Project Name: Markland Lock & Dam
Unwatering

Project Location: Warsaw, KY -- Ohio River

Customer: Army Corps of Engineers

Responsible Branch: Mansfield/Lexington

SITUATION

The Markland Lock and Dam needed the main lock to be pumped down to allow the Army Corp of Engineers to perform repairs inside the lock. The lock had appx. 26 million gallons of water to be pumped out within a 24–30-hour time range.



THE MERSINO PLAN

To plan for this, there were multiple site visits to discuss equipment placements and review plans with project manager to determine the right pipe lengths and fittings. With a short lead time to get equipment together, 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 9 submersible pumps with their respective power packs, as well as 5 6GST pumps and 1 8GST.



CHALLENGES & RESOLUTIONS

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 anything else needed to be carried by hand. The pipe could not be fused on site, so it needed to be fused offsite and put into place.

Unexpected high water leakage into the lock added to the difficulty, but our system was able to overcome the extra volume. After the lock was pumped down, we needed to mobilize extra pumps in to keep up with the leakage.



WHY WERE WE SUCCESSFUL?

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