



INDUSTRIAL
FLOW
SOLUTIONS™



BJMPumps®

Case Study

Protecting worksites: Galveston seawall cofferdams rebuilt using LWA® series dewatering pumps

Overview

Galveston, Texas boasts a 17-foot seawall, built in the early 1900s, that protects the city from storms. The engineering feat that followed building the seawall was to raise the entire city up to the edge of the seawall, then slope the island down again to drain the water into the bay. The original engineers accomplished this by pumping sand and seawater slurry underneath buildings to raise the island. The seawater ran off – leaving the sand and building up the island.

After Hurricane Ike devastated southeast Texas in 2008, Galveston Island's seawall was damaged. Downtown was left with 6 feet of standing water and property damage was extensive. Boyer Construction of Houston, TX was chosen to rebuild in Galveston.

One of the toughest jobs in rebuilding the infrastructure of a city just a few feet above sea level is keeping the water out of the construction site. Cofferdams hold water away from a worksite, using dewatering pumps to protect the crew and equipment.

When Boyer started working on the cofferdams, the existing dewatering pumps failed frequently due to clogging and corrosion from silt, sand, and salt. Continuous operations also contributed to constant pump failures. The construction team needed to source submersible dewatering pumps to handle the heavy workload, and ones that could be moved frequently between sites.

PROBLEM

- Silt and sand clogs pumps
- Corrosion from salt and abrasive solids
- 24/7 production cycles wore out motors
- Pumps moved frequently between sites
- High cost of ownership





Solution

After much research, Boyer Construction replaced existing pumps with BJM Pumps® lightweight, hard metal dewatering agitator pumps. The LWA® series submersible pumps are specifically designed for dewatering sand, silt, coal fines and abrasive light slurries. They offer built-in agitators that mix settled solids with pump water to restore sump or basin volumes. This helps maintain steady solids concentration and discharge volume. LWA series pumps provide up to 10 HP, with flows of 475 GPM and heads of 117 ft.

The impeller and wear plate are made of abrasion resistant chrome iron, while the agitator and volute are made of hardened ductile iron. This helps minimize corrosion and abrasion, and makes them ideal for difficult construction environments. Despite their hard metal construction, LWA series pumps are lightweight and highly portable, which allowed Boyer Construction to rotate pumps throughout their many project sites.

Boyer Construction field tested several LWA series pumps on various jobsites. The pumps performed outstandingly well, leading the team to purchase 25 pumps in total.



Features

- Lightweight agitator, hard metal dewatering pump
- Designed for dewatering sand, silt, coal fines and abrasive light slurries
- Built-in agitator mixes settled solids with pump water to restore sump or basin volume
- Hardened ductile iron agitator and volute

Applications

- Construction/Rental
- Mining & Minerals

“We were delighted with their performance and service life.”

“LWA pumps are a proven performer on tough construction dewatering services.”

RESULTS

- Abrasion and corrosion resistant
- Agitator ensures steady solids concentration
- Motor cooling enables 24/7 production
- Lightweight and highly mobile
- Reliability and very low maintenance costs increase profits

