

## RO O&M

## Reverse Osmosis Operation & Maintenance

**APPLICATION:** Potable Water

**CAPACITY:** ~19,000 m<sup>3</sup>/day

**LOCATION:** Mississippi, USA

**TECHNOLOGY:** Reverse Osmosis

**COMMISSIONED:** 2009



## BACKGROUND

In 2009, the City of Moss Point, MS completed construction of a reverse osmosis water treatment facility. At the time, this facility was one of the few RO water treatment systems in the region. The City quickly realized they did not have the proper staffing or expertise to operate this facility and executed an operations agreement with H2O Innovation.

## CHALLENGES

In 2018, The City was facing a budget crisis with depleting general fund revenue and a thinly stretched utility fund. The City desired for their reverse osmosis plant to remain a flagship facility and a source of pride for its residents, but also recognized that the plant was becoming aged and repairs and upgrades would soon be necessary.

The City did not have the financial means or expertise to determine/prioritize this work and pursued an amendment with H2O Innovation to include repairs and consumables that would essentially turn the decision authority over to H2OI to make upgrades and efficiency improvements, and stay within the confines of the budget.

## SOLUTION

A large portion of the monthly cost for the facility is electricity, averaging about \$17,000 per month. Immediately upon assuming liability for this cost, H2OI initiated a study with our engineering team to evaluate and determine if there was potential optimize costs. Upon review of this study, it was predicted that an energy savings of 10-15% could be achieved by installing Variable Frequency Drives on each of the motors that pumped into the RO system. In the first few months following the upgrade, we began seeing 15-20% in energy savings, equating to roughly \$3,500 per month with approximate payback of less than 3 years.

## RESULTS



Since the successful implementation of energy savings measure, H2OI has assisted with SCADA upgrades that have modernized the system as well as make it more user friendly and remotely accessible.

H2OI's operations experience, paired with the design-build expertise of H2OI, as well as the direct support from our sister companies, Piedmont and PWT, resulted in very rapid modernization and efficiency upgrades to the City of Moss Point's facility and reduced costs in consumables.

We remain in constant contact with the Mayor and members of the board and they are very pleased to have a partnership with a company that takes as much pride in their facility as its citizens and consistently searches for ways to improve the facility while remaining within the City's budget.

