



## Wastewater Treatment Operation & Maintenance

**APPLICATION:** Municipal Wastewater

**CAPACITY:** 7.75 MGD

**LOCATION:** North Gulfport, MS

**COMMENCED:** 2006

**TECHNOLOGY:**

Oxidation Ditch

**CONTACT DETAILS:**

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## BACKGROUND

The Gulfport North Wastewater Treatment Facility is designed to treat an average flow of 7.75 million gallons per day (MGD) with a peak design capacity of 22.8 MGD. The facility was completed in 1998 at a cost of \$17.3M. The plant consistently produces effluents with BOD, TSS and NH<sub>3</sub> concentrations of less than 1 mg/l. This plant was named Mississippi "Plant of the Year" in 2004 and was nominated for EPA region IV "Plant of the Year" in 2005.

## SCOPE OF WORK

Screening and grit removal are accomplished at the headworks which consists of two channels with mechanical bar screens and grit removal equipment. This activated sludge plant utilizes an oxidation ditch with mechanical aerators for extended aeration followed by secondary clarifiers.

Four gravity sand filters with automatic backwash systems are utilized to produce a polished high-quality effluent which enhances the operation of the UV disinfection system. A state of the art "high intensity, medium pressure" ultraviolet disinfection system is utilized at this plant to reduce the discharge of chlorine and sulfur dioxide into Gulfport Lake. Floating mechanical aerators in a post aeration system are utilized to ensure that this facility achieves its dissolved oxygen requirements of a minimum of 6 mg/l.

Waste sludge from the secondary clarifiers is thickened on belt thickeners and sent to the aerobic digesters for stabilization. Belt filter presses then de-water the sludge. De-watered sludge is transported by a sludge contractor to his permitted site for land application.

