



CASE STUDY

World Leader
in Mixing and
Contacting
Technologies

Contact us today.

Mazzei Injector Company, LLC

500 Rooster Drive

Bakersfield, California 93307-9555

TEL 661-363-6500

FAX 661-363-7500

www.mazzei.net

Mazzei Implements A Reliable And Efficient Back-Up Effluent Oxygenation System For The Butler County Ohio LeSourdsville WWTP

Post-treatment Aeration Maintains Dissolved Oxygen in Effluent High-Solids Wastewater Prior to River Discharge

Butler County, OH

The Problem: The LeSourdsville WWTP in Butler County, Ohio, was required to meet their NPDES permit requirement of 6 mg/l dissolved oxygen at the plants Miami River outfall. During normal operation the dissolved oxygen increase is accomplished in a cascade basin. However, during storm events, the river can rise to levels that completely flood the cascade basin rendering it useless.

The Solution: Mazzei AirJection® system was chosen as the Best Available Technology. Due to the confined space in the cascade basin, and limited access to the site, a modular drop-in design incorporating a vertical turbine pump, Mazzei Model 12050 venturi injector and Mazzei MTM nozzle manifold were adopted.

The aeration system was designed to provide sufficient oxygen transfer to raise the dissolved oxygen of the plant outfall from 3.5 mg/l to 5.6 mg/l under storm event plant flow conditions up to 26 MGD.

The Results: A quiet, efficient, reliable back-up emergency aeration system that allows the plant to meet NPDES outfall D.O. requirements. During a storm event in 2004, the river rose and flooded the cascade basin. The Mazzei post-aeration system maintained the plant outfall D.O. at compliance levels of 5.6 mg/l at flows up to 31 MGD, 20% higher than the aeration system's peak design flow.



Copyright Mazzei Injector Corporation.
Manufactured and sold under U.S. Patents No. 5,863,128 – 5,894,995 – 5,951,922. International Patents Pending.