

# AD26 Removal System for Iron and Manganese removal in GA

## PROJECT

AdEdge Water Technologies was contacted in early 2015 to design, manufacture, and start up an iron and manganese removal system for the City of Louisville, Georgia. The town's water supply had a high level of iron at 1.6 mg/L and a manganese level that was quickly approaching the MCL set by the U.S. Environmental Protection Agency. AdEdge was contracted to supply a 1000-gallon per minute iron and manganese removal system for the City of Louisville.

## SOLUTION

An AdEdge AD26 oxidation/filtration system was selected as the best overall approach to simultaneously remove the iron and manganese from the community water supply. The packaged AD26 system utilizes a NSF 61 certified manganese dioxide media (AD26) that is excellent for co-contaminant removal. The technology was selected based on overall cost, the small footprint, and simplicity of operation.

The AdEdge AD26 iron and manganese treatment train consists of a completely integrated packaged treatment system with four 72-inch vessels (two duplexes) in parallel to treat up to 1000 gallons per minute (gpm). The AD26 automated system is equipped with a programmable logic controller (PLC), automated butterfly valves, and control panel that is integrated with chlorine addition and monitoring for process control and disinfection purposes. The system is pre-engineered, pre-piped, and skid-mounted for ease of installation and operation.

The AD26 technology has been deployed successfully by AdEdge on many high iron and manganese wells to date and also on three full-scale USEPA demonstration projects. Backwashing on the treatment system is performed every day depending on incoming levels of iron and manganese, total flow throughout the system, and differential pressure. Backwashing occurs to remove the suspended solids that are accumulated in the vessels and to prevent hydraulic channeling. The PLC automatically determines when the treatment system needs a backwashing event.

## RESULTS

The treatment system began operation in December 2015. Iron and manganese have been lowered from 1.6 mg/L Fe and 0.02 mg/L Mn to non-detectable levels.

## STATS

**Customer:** City of Louisville, GA

**Location:** Central Georgia

**Challenge:** Reduce iron and manganese

**Flow Rate:** 1,000 gpm (1.44 mgd)

### Products:

- Custom-designed AdEdge Packaged Unit (APU)
- AD26 Oxidation/Filtration media

**Results:** Since startup in December 2015, iron and manganese levels have been lowered to non-detectable levels.

*For more information on these solutions, visit [adedgetech.com](http://adedgetech.com).*



AdEdge Water Technologies, LLC provided four 72-inch carbon steel vessels with AD26 oxidation/filtration media.



**AdEdge Water Technologies, LLC.**

2055 Boggs Road  
Duluth, Georgia 30096

1.866.8AEDGE

1.678.835.0052 (toll-free)

[adedgetech.com](http://adedgetech.com)