

# Wedeco UV Lamps in Summerville, Georgia

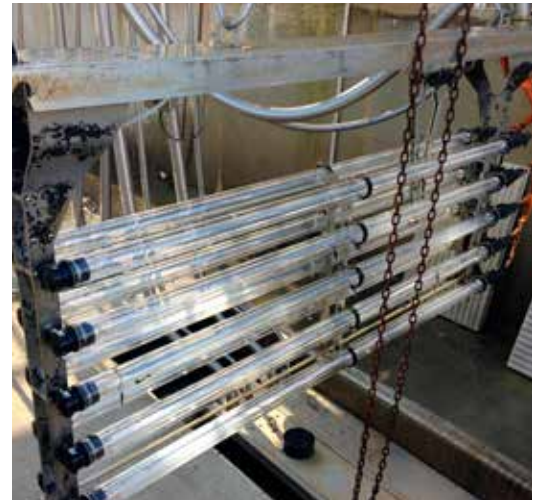
Summerville Plant is Proof That All UV Lamps Are Not Created Equal

Summerville, a small city in the northwestern part of the state of Georgia and the county seat of Chattanooga County, built their two million gallon per day (MGD) wastewater treatment plant in 1967. It was designed to handle the flow from a developing municipal collection system that now serves 1,860 connections.

## Project Background

During an upgrade in 2008, the city's consulting engineers recommended abandoning chemical disinfection in favor of replacing it with a Wedeco UV system. The system consisted of 60 lamps configured as two banks of three modules each, set in a single open channel. Other elements of the plant upgrade that year included air diffusers, a blower motor, an additional pump and improved lighting.

Two of the original lamps needed to be replaced, so the plant operator, Scott Millican, urged his superintendent to proactively replace all of the lamps in the system to ensure that the system was operating at its highest level of efficiency.



**END USER:** Summerville, Georgia, USA  
**CLIENT:** Summerville, Georgia, USA  
**ORDER DATE:** 2013  
**COMPLETION:** 2013

“Our former superintendent mistakenly presumed that all UV lamps were essentially the same. He went with the lowest price which set the stage for trouble.”

## Solution

Lower priced, aftermarket lamps were purchased through an alternate lamp manufacturer and installed in the UV system. They failed to meet expectations within eight months.

"We ran [the new lamps] only one year but even at 100 percent power, our fecal counts were close to exceeding our permit," Millican said. "We sought quotes for several lines of replacement lamps but were committed up front to the originals. Both the city manager and new superintendent agreed the higher cost was logical because the lamps were matched to the system."

This led the superintendent to earn approval for emergency procurement of Wedeco's Ecoray® UV lamps as replacements.

Beyond the eco-friendly benefits of the Wedeco Ecoray UV solution, it is more efficient and longer-lasting than any previous Wedeco UV lamp technology.

## Result

The new Ecoray UV lamps and companion electronic ballast cards were installed and were an immediate improvement. At the Summerville plant, the energy use has been significantly reduced and experience has shown that total operating costs have been typically reduced by 20 percent at many installations because the lamps normally operate more efficiently in dimmed mode but still achieve the required disinfection.

The Ecoray line of UV lamps also incorporates environmentally friendly engineering features. The lamps contain 80 percent less mercury than previous lamp generations and can reduce the carbon footprint by 1,100 pounds of CO<sub>2</sub> in each lamp. The manufacturer, Wedeco meets the highest environmental standards for certification to DIN EN ISO 9001 and 14001.

Following the initial weeks after installation, the system was reverted back to an automatic dosage setting of 36 mJ/cm<sup>2</sup> which best serves the plant's limited workforce. The experience proved one point to the Summerville operators when it comes to purchasing replacement lamps, and in general, other aftermarket parts. Chris Tuggle, the current plant superintendent said, "the lowest price doesn't always guarantee the best results."



Installed Wedeco UV solution.



Changing a lamp in a Wedeco UV module.

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