BlueInGreen
solutions for water quality

HyDOZ BEATS UV AND EMERGING CONTAMINANTS

WASTEWATER DISINFECTION PLANT

HyDOZ®

INTRODUCTION

In the summer of 2012, plant officials at a 12 MGD wastewater plant in Arkansas began evaluating disinfection alternatives to upgrade their current system as well as address the removal of emerging contaminants of concern (ECC). The facility, which included primary clarification, activated sludge, secondary clarification and sand filtration, elected to use dissolved ozone to replace its current UV system. After researching different ozone systems, plant officials chose to install BlueInGreen's HyDOZ® technology in order to more efficiently meet current permit requirements, as well as prepare for future legislation.

METHOD

When examined, the sand filter effluent contained 81 ECC, including pharmaceutically active compounds as well as a broad range of hormones. 31 ECC were identified in the ozone system influent sample. To combat these contaminants, BlueInGreen's HyDOZ system provided high ozone concentrations, using less energy to deliver the same level of disinfection as the existing UV technology. By delivering high ozone concentrations, the HyDOZ was able to precisely target microcontaminants and pathogens, while simultaneously providing COD reduction, color removal and elevated dissolved oxygen levels.

TECHNOLOGY
HyDOZ

APPLICATION
Wastewater Disinfection

LOCATION
Arkansas

GOALS
Reduce E.coli

Reduce Emerging Contaminants

Meet Fecal Coliform Permit Levels

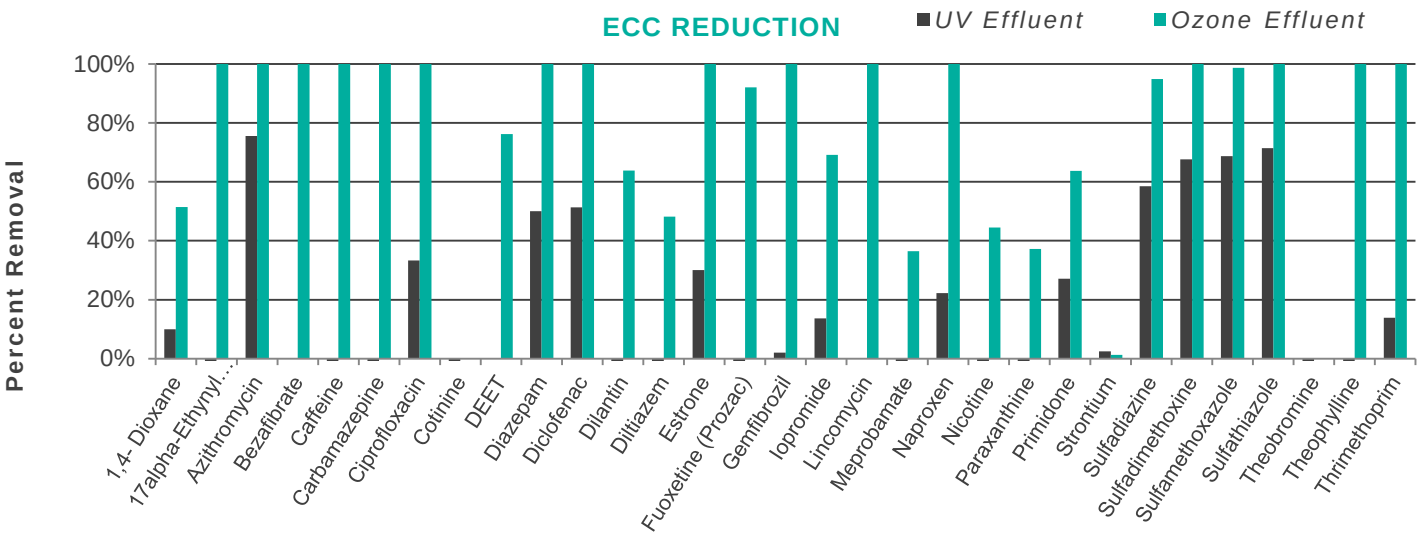
ON AVERAGE, THE HYDOZ REDUCED THE ECC BY 82 PERCENT AND REDUCED OVER HALF OF THE CONTAMINANTS TO BELOW DETECTION LEVELS.

Power Savings

Cleaner, Clearer

Safer Solution

Cost Savings



RESULTS

After pilot system installation and startup, the plant effluent improved significantly with the help of the HyDOZ. Plant officials recorded a Fecal Coliform reduction from 3,700 cfu/100 mL down to single-digit levels. The HyDOZ also reduced the COD by an average of 21 percent. Of the 31 emerging contaminants originally detected in the disinfection system influent, the HyDOZ reduced nearly twice as many contaminants as the previous UV system and removed over half of the contaminants to below detection limits

BECAUSE OF THE POSITIVE RESULTS, BLUEINGREEN WAS SOLE-SOURCED BY THE CITY TO PROVIDE A COMPLETE OZONE DISINFECTION SYSTEM IN 2015.

CONCLUSION

On average, BlueInGreen's HyDOZ successfully reduced fecal coliforms to well below plant effluent permit levels and demonstrated an average 82% removal of emerging contaminants. The positive results prompted the city and design engineers to select the HyDOZ for full-scale installation. BlueInGreen was sole-sourced to provide a complete ozone disinfection system including oxygen and ozone generators, as well and ozone dissolution and injection equipment. The system was recently installed and has already exceeded the plant management's expectations.

Contact a BlueInGreen representative to find out how you can benefit from our water treatment solutions.

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