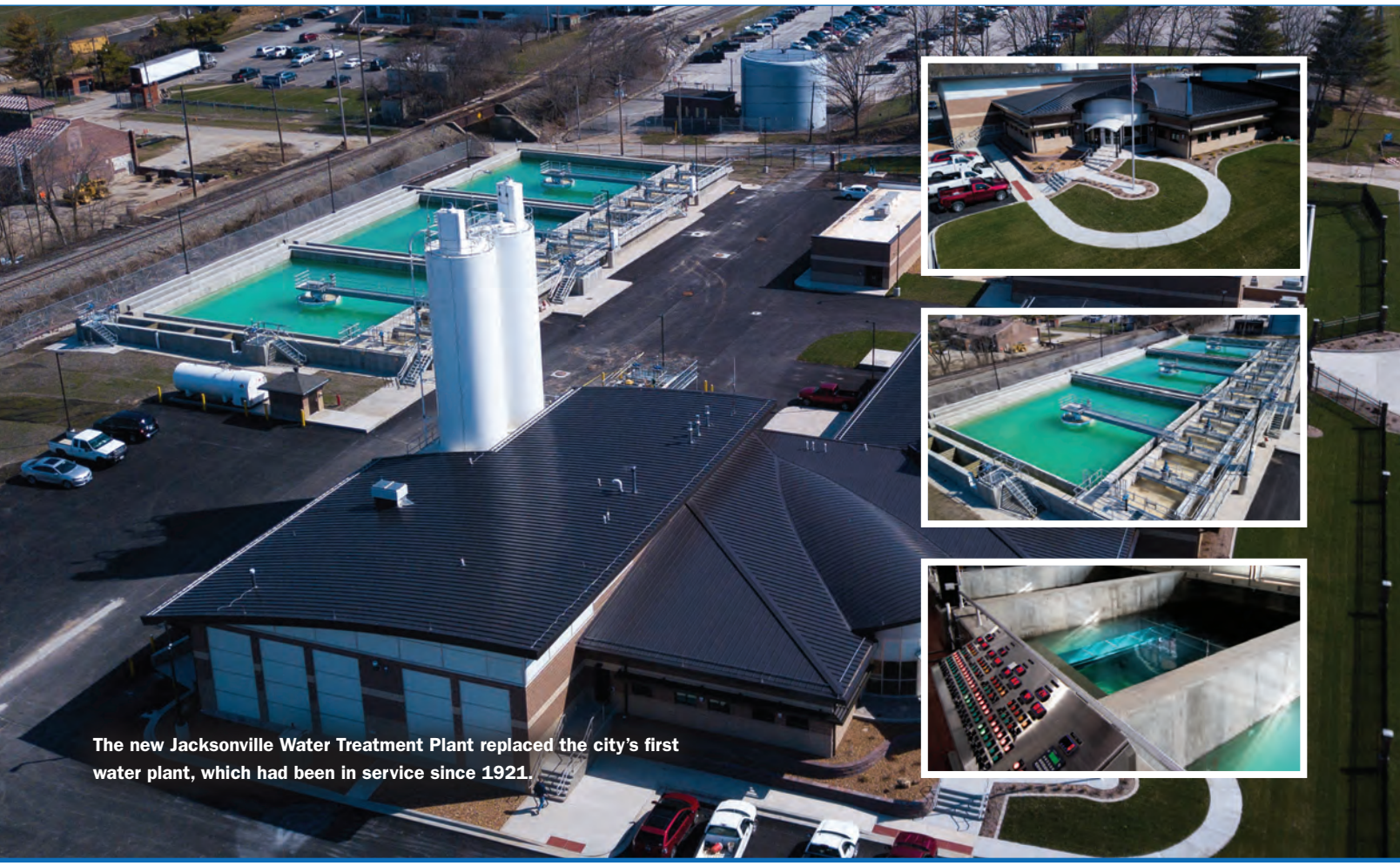
Finished Water

A PHOTOGRAPHIC PROFILE

https://doi.org/10.1002/opfl.1043



The new Jacksonville Water Treatment Plant replaced the city's first water plant, which had been in service since 1921.

NEW WATER TREATMENT PLANT BOOSTS EFFICIENCY, RECYCLES PROCESS WATER

When the city of Jacksonville, Ill., outgrew its 1921 water treatment plant, city officials were determined to improve the municipality's water supply when they planned for a replacement facility. Part of the concern they wished to address was to avoid flooding, particularly after the June 2011 flooding of Lake Mauvaise Terre, which inundated the water treatment plant and resulted in a boil water advisory for all customers.

The city secured an adjacent site out of the floodplain for the new water treatment facility. The former plant site is now used to support the new facility with a process water recycling system as well as lime storage and backwash water collection. These components use new infrastructure that allowed a smooth transition to the new plant.

The new facility uses conventional technology supplemented by advanced process control systems. Passive solar lighting enhances the new facility's indoor ambient light and reduces power consumption. In line with the city's water conservation plan, the plant's water recycling system returns used process water back to the head of the treatment train for reuse.

PROJECT SPECIFICS

Project Name: Jacksonville Water Treatment Plant
Operator: City of Jacksonville, Ill.
Contractor: Williams Brothers Construction
Engineers: Benton & Associates
Architect/Mechanical, Electrical, and Plumbing: Oates Associates, Clark Dietz
Completion Date: Feb. 13, 2018
Water Source: Illinois River wells and two lakes
Technology: Conventional iron removal and lime softening treatment
Service: 9 mgd treatment capacity
Physical Size: Three treatment basins, eight filters
Project Cost: $37 million, including transmission, intake, and design
Staff Size: 15 full-time employees
Number of Operators: 5

PHOTOGRAPHS: CITY OF JACKSONVILLE, ILL.