

CASE STUDY / LYNN R. MORGAN WTP EXPANSION

RISING DEMAND LEADS TO WATER TREATMENT PLANT EXPANSION

Population growth meant Erie, Colorado, needed the ability to treat more water. The solution: expanding the pretreatment and treatment systems, and adding a transmission main to meet the higher demands.



DESIGN AND COLLABORATIVE APPROACH METHODS LEAD TO PROJECT SUCCESS

With the use of a collaborative project delivery method, water capacity at the facility will be increased.

CHALLENGE

With a rapidly growing customer base, the Town of Erie faced the need to expand its water treatment facility.

The goal of the expansion was to increase the treatment plant's capacity from 9.9 millions of gallons per day (MGD) to 16.6 MGD. The facility was last expanded in 2005.

SOLUTION

As the designer for the last major expansion to the Lynn R. Morgan Water Treatment Plant, our team was selected to provide design services for the current expansion and to work in close coordination with Garney Construction using an alternative delivery method.

The expansion included yard piping modifications to eliminate hydraulic bottlenecks, a new pretreatment train, three new submerged membrane trains, a new high-service pump and a new finished water transmission main.

Our team also conducted a feasibility study for the addition of hydroelectric power generation on the existing raw water supply pipeline from the Northern Colorado Water Conservancy District. The study included engineering and economic analysis of the potential upgrade. Based on the findings from the study, the town decided to move forward with the hydroelectric facility, which will power approximately 20% of the WTP's overall energy needs.

RESULTS

Our team is working with the town to complete the expansion, as well as the hydroelectric facility, addressing a variety of facility needs. Our familiarity with the WTP and relationship with the operations team contributed to a detailed plan for how to complete the construction without disrupting operations and improved collaboration throughout the entire project.

PROJECT STATS

CLIENT

Town of Erie, Colorado

LOCATION

Erie, Colorado

COMPLETION DATE

2020

16.6
MGD CAPACITY

