

PROJECT BRIEF: TAYLORSVILLE, NC

Energy Savings through Diffuser Modification

CUSTOMER PROFILE

The Town of Taylorsville, NC, Department of Public Works operates an activated sludge wastewater treatment facility serving a population of approximately 2,100 persons.



PROJECT SUMMARY

When the Town of Taylorsville (Town) recognized the need to replace the diffusers in their aeration basins, they were open to either a replacement in kind or an upgrade. Satisfied with service they had received from the existing EDI system, they called EDI and asked us to bid on the performance-based specification. The resulting upgrade saved energy while providing flexibility and potential increased capacity.

AERATION REQUIREMENT REDUCED BY 25 PERCENT WHILE MAINTAINING TREATMENT

EDI's team of aeration experts evaluated the Town's system and needs, determining that the Town could achieve significant energy savings simply by upgrading their aeration diffusers. The existing configuration required using two basins to meet treatment objectives. Adding additional diffusers to the array increased the operating efficiency and capacity of the system and allowed the Town to operate one tank to treat the current load. The total aeration requirement for the plant was reduced by twenty five percent (25%). The resulting energy savings quickly paid for the capital cost of the additional diffusers and provided the Town with an excellent return on investment.

STANDBY BASIN FOR MAINTENANCE OR INCREASED CAPACITY WITH NO CONSTRUCTION

The Town now has a standby basin capable of treating the total flow, making maintenance easier and much less stressful. Having a standby basin provides operational flexibility and greater stability to the treatment. In the future, the standby basin could also be used for increased treatment capacity, an important consideration for a Town that realized a 14.7 percent growth rate in the latest census.

"The entire operation from EDI was first rate, professional from start to finish. Not only did they provide an aeration system that saves us energy, it also provides flexibility and expansion potential. The EDI crew was easy to work with and clearly cared about the Town and our overall needs. Their professionalism and attention to detail resulted in a smoothly executed project, which is quite an achievement when making modifications to existing equipment. To be honest, if I could have persuaded their site foreman to come work for the Town, I would have."

-David Odom, Plant Manager



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