Public Abstract

First Name:Katherine

Middle Name:Elaine

Last Name:Dickherber

Adviser's First Name:Enos

Adviser's Last Name:Inniss

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:FS 2010

Department:Civil Engineering

Degree:MS

Title:Optimization of Aeration Schemes and Motor and Blower Usage for Wastewater Treatment

The majority of the energy used at a wastewater treatment plant is used in the operation of the motors and blowers for the aeration for biological treatment. The goal of this research was to model a sequencing batch reactor system in a lab, and then to modify the aeration scheme to determine which scheme of aeration was the most appropriate for maximum efficiency of the system. The lab scale system performed best, and used less energy, when an on/off/on operation was used. Visits to lab scale facilities were made to determine if this was a viable option for full scale facilities.