

Drinking Water Residuals Management

Currently, the existing water treatment plant at Old Oaken Bucket Pond discharges an average of 30,000 gallons of residuals per day to the Town's sewer system. The quantity of residuals that are produced each day are a function of the quantity and quality of water treated and the level of treatment provided. The new plant will have the ability to treat more water than the existing plant during times of critical water demand and will provide a greater degree of treatment. With the more effective treatment and additional capacity provided by the new plant the estimated residuals production will average 100,000 gallons per day.

There is no excess capacity at the Town's Wastewater Treatment Plant to accept additional residuals from a new treatment facility. The limitations on sewer capacity resulted in a design decision to manage the residuals stream via an on-site in a lagoon system. The design is based on a "zero liquid discharge" concept that is environmentally friendly, more efficient, and will eliminate nearly 16 to 20 million gallons of water per year that is discharged to the sewer by the existing facility.

The video that can be accessed at the link below describes the design and function of the residuals handling lagoons. If these lagoons are not included in the design of the new water treatment plant, a large storage tank would be required at the project site to temporarily store residuals volume while it is evenly pumped into the sewer collection system. In addition, the local sewer infrastructure would need to be extended and the wastewater treatment plant would need to be expanded and rehabilitated prior to bringing the new water treatment plant online. Thus, the Town of Scituate has adopted the "zero liquid discharge" criteria as a fundamental design feature and has incorporated the necessary lagoons into all evaluations of project siting.

["What is Drinking Water Residuals Management" Video](#)