

402-Tons of Material Removed from Oxidation Ditch While in Operation

Florida Sand and Grit Grant Program Aides in Restoration Costs

LAKE WALES, FLORIDA

PROBLEM

An oxidation ditch at the Lake Wales Wastewater Treatment Plant had accumulated over the course of a few years a large amount of sand and grit material. This accrued material was causing a loss of capacity, a decrease in flow, and the plant was not functioning efficiently.

The facility's treatment process is comprised of a Type 1 Oxidation Ditch operating as a conventional activated sludge treatment facility measuring 320-feet by 70-feet. U.S. Submergent Technologies' (USST) knowledgeable and experienced crew was called in to clean this large structure while it remained online.

SOLUTION

USST's powerful and versatile Combination³® Truck can clean in wet or dry conditions with no need to drain down or alter treatment flow. Using our 49-foot extendable boom, downhole pump, and outriggers to compensate for a slope against the wall of this structure, crews were able to reach and safely remove the material using the GritGone® Process. This process involves separating sand and grit from the slurry for disposal while the water is returned to the oxidation ditch for treatment.



USST can dispose of more material at a higher production rate without the added weight of water, resulting in a paint-filter dry material. Our crews cycle roll-off vehicles while on the job, steadily removing the material with no need to stop work, which increases the rate of production.

RESULTS

In total, approximately 402-tons of material was removed from the oxidation ditch, the equivalent of 141 fully loaded F-150 trucks. By restoring capacity USST estimates the City saved over \$1 million in capital expense to rebuild the treatment capacity. Meaning, the cost of maintaining or restoring capacity of existing treatment volume is much less than re-building the oxidation ditch treatment volume.

In addition, USST worked with the City of Lake Wales to take advantage of Florida's Sand and Grit Grant Program, which makes it possible for publicly owned facilities averaging 3MGD or less to address the issues of sand and grit accumulation by reimbursing 50-100% of restoration costs. To learn more about this program call (941) 404-3405 or email mroberts@usubmergent.com.



U.S. SUBMERGENT
TECHNOLOGIES

2153 Rayburn Street
Orlando, FL 32824
844-765-7866
info@usubmergent.com

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