

Date of Verification: March 26, 2019
Test Designation: Grease Mat Emulsification
Location: 301 Leydecker Road, West Seneca, New York
Site: Municipal Pump Station
Structure Description: 6.0' Ø x 20.17' deep (grade to floor)
Weather Conditions: Sunny **Temperature:** 40°F



Product Verification Purpose:

The Town of West Seneca's conveyance sewer system experiences heavy grease matting in certain pump stations causing on-going maintenance challenges. Degreasing agents previously applied have had little to no effect on alleviating the situation. The Twister® Mixing Aerator was inserted into the Leydecker Road Pump Station after maintenance was intentionally delayed to allow for a representative grease mat to develop. The graph below displays dissolved oxygen levels for 60 minutes and at 10 minute intervals.

Sampling Methods:

Dissolved Oxygen: DO content was measured with a calibrated YSI model "Po 20" membrane unit

Site Pictures:

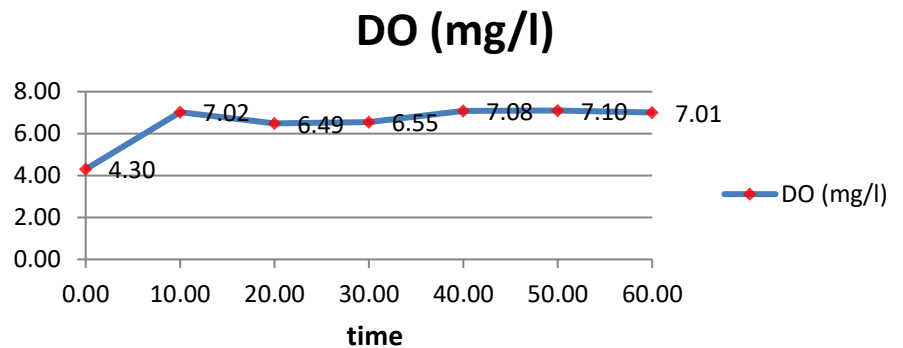


Empirical Data / Graph

Sample start time: 11:02am EDT

<u>time (min)</u>	<u>DO (mg/l)</u>
0.00	4.30
10.00	7.02
20.00	6.49
30.00	6.55
40.00	7.08
50.00	7.10
60.00	7.01

Avg. sample temp.: 10.0°C



Field Verification Summary:

The Twister®'s thorough mixing and increased dissolved oxygen levels proved effective in emulsifying the animal and vegetable organic. By alleviating grease matting, decrease in use of surfactant degreaser and associated maintenance, the estimated return on investment (R.O.I.) could be less than 12 months. Implementing the TITUS® Twister® Mixing Aerator, a hybrid mixing aeration technology, also improves wastewater quality pumped downstream. Long term results can be associated with reversing common bio-film buildup in forcemains.

Sampling: John Stark, TITUS Senior Project Engineer

Attested by: Mark Hummell, Senior Engineering Assistant, Town of West Seneca, NY

