



FROM GRIT TO GREEN GAINS, DOVER'S NEW HUBER ROSF5 GRIT TREATMENT SYSTEM IS TURNING STORMWATER WASTE INTO REUSABLE MATERIAL WHILE PROTECTING LOCAL WATERWAYS AND CUTTING COSTS. INNOVATION AND SUSTAINABILITY WORKING HAND IN HAND..

BACKGROUND AND CHALLENGES

Dover's stormwater management program was seeing an increased volume of grit-laden street waste from hundreds of miles of streets, drainage systems, and 3,200 catch basins.

Under the Clean Water Act, the EPA requires that all Municipal Separate Stormwater Sewer Systems (MS4s) obtain a NPDES permit. Stormwater collection systems employ the often-seen curbs, gutters, ditches and pipes, but also utilize unseen catch basins that drop out and store trash, grit and other debris before ultimately discharging the stormwater to a local waterway (creeks, streams, river and lakes).

The city wanted to explore alternative means for handling and disposing of this waste to reduce current costs of handling but also to be better stewards of the environment.

PROJECT DATA

Client: Dover Stormwater and Wastewater Treatment Facility

Location: Dover, NH

Project Type: Stormwater Collection-Grit Waste Treatment

HUBER Technology, Inc.
Solution: HUBER RoSF5 Grit Waste Treatment System

Completion Date: Summer 2022

SOLUTIONS PROVIDED BY HUBER TECHNOLOGY, INC.



The city uses the Wastewater Treatment Facility to centralize and collect the deposited grit, trash and other debris which collects in the storm drainage systems. At the heart of the Catch Basin Treatment System is a Huber RoSF5 Grit Waste Treatment System.

Based on the city's desire to produce a cleaner, potentially reusable grit, HUBER supplied the RoSF5 system that included an RoSF7, 21 cubic-wide catch basin with 6" grating and solids material dosing screw; an RoSF9 wash drum to wash and clean the received material; an RoSFXXL conveyor to deliver the coarse material and remaining grit to an RoSF4 Grit Washer for final cleaning. Material from the pre-treatment area, or directly from a vactor truck, is fed into a large, grated hopper at the head end of the system.

The inlet hopper includes a grit dosing screw to convey material to a wash drum. The wash drum uses plant water to rinse the materials as they pass through the rotating drum. The wash drum also separates fine and coarse materials via a 10mm perforated screen.

Coarse material is removed via a screw conveyor to a roll-off cart. Finer grit drains from the wash drum as a grit slurry into a sump containing a grit pump, which transfers the slurry to a grit washer that further rinses the material and conveys the clean grit to a separate dumpster.

IMPLEMENTATION & EXECUTION

Start-up Summer 2022

RESULTS & BENEFITS

Performance Improvements:

- ✓ Efficient disposal of stormwater collection material.
- ✓ Removal and washing of coarse debris.
- ✓ Separation of grit and washing to less than 3% organics and less than 10% water.

Operational & Environmental Gains:

- ✓ An efficient and automated solution for the disposal of debris collected via storm water collection systems.
- ✓ Vital part of a comprehensive stormwater management plan to prevent trash for entering natural waterways.
- ✓ Reduces disposal manpower and costs.

CLIENT TESTIMONIAL

Ray Vermette, Wastewater Treatment Facility Supervisor

This is the first catch basin cleaning facility in the U.S. although they are big in Europe and there are a couple in Canada. We wash the street sweepings, or catch basin material, and make a reusable product instead of sending it to a landfill. We use it to reapply as street sand or clean fill.”

“If we didn’t clean the catch basins and the streets, it would end up in rivers and streams. By taking it out, we are protecting the environment.”

“It’s fascinating how effect this process is. Seeing the material go in, then come out looking like beach sand your kids play in.:

ABOUT HUBER TECHNOLOGY, INC.

Headquartered in Denver, North Carolina, HUBER Technology, Inc. operates a 206,000-square-foot state-of-the-art facility that houses offices, training centers, and advanced manufacturing capabilities. This enables us to design, produce, and deliver a wide range of wastewater treatment equipment, from dewatering screw press systems, headworks screens, grit handling, septage receiving, tertiary filtration and equipment and drying of biosolids equipment for use in the water and wastewater industry.

