

Case Study

Crestline Sanitation District - Huston Creek Treatment Plant

Overview

Crestline is a community of approximately 12,000 people and is located on a small lake in the San Bernardino mountains. Sitting at an elevation of 4600 feet, provides the community with a wide variety of weather conditions from snow to hot summer days.

The Crestline collection systems spans 80 miles of sewer lines which can be challenging with many of the easements located on extreme inclines.

The original Huston Creek treatment plant was a gravity flow facility built in 1953. The design consisted of a manual bar screen at the headworks followed by a grit channel that flowed into two Imhoff tanks run in parallel. Following grit removal, polymer was added prior to secondary treatment. Secondary treatment consisted of a T-filter composed of 15 feet of rock media, a secondary clarifier and finally two large sand filters. The solids were pumped to an anaerobic digester with a sand bed below.

By 1973 the plant design flow had increased to .700 MGD and a major overhaul took place. A barminuter and grit removal were installed at the headworks and the Imhoff tanks became primary clarifiers. A gravity thickener was installed to thicken solids prior to disposal and chlorine disinfection was added.

The plant added a belt press in 1984 and a new grit washing system and trickling filter recirculation pumps in 1987. Additional storage was added in 1994 as well as a channel grinder to replace the barminuter. In 2011, the chlorine disinfection system was replaced with a sodium hypochlorite disinfection system.

Problem

With the addition of each new piece of equipment or process, maintenance needs increased, but this was basic plant maintenance. What the plant could not accept were the massive maintenance problems being caused by solids. Rags and other solid material were accumulating in the plant's piping, plugging thickener inlets, clogging pumps and wrapping around the sludge holding tank mixer blades which had to be cleaned weekly.



New Savaco Flo-MultiRake 600 Fine Bar Screen

The ragging problems were being caused by the process of grinding. Influent solids were being ground into smaller pieces which continued on into the plant. Once in the plant, the pieces reformed and formed even larger clumps of material. These "ropes" of material clogged and wrapped around anything that got in their way.

In addition to the cost of maintenance and reduced process efficiency, the periodic rebuilding of the grinder was another significant expense to the plant.

Solution

The staff realized that removing the screenings before they got into the plant was the solution to the problem. After researching various types of headworks equipment, Crestline purchased an Saveco Flo-MultiRake Fine Bar Screen. Both the price and the quality fit their evaluation criteria. The Flo-MultiRake screen arrived fully assembled with controls and ready to be installed in the channel. The installation was handled by Crestline's highly skilled staff. Start-up and training were performed by an Saveco service technician who answered all questions and ensured that the equipment was working correctly.

Results

Since being put online, the screen has been working perfectly. By removing screenings at the headworks of the plant, the bar screen has extended the service life of many pieces of downstream equipment and significantly reduced Crestline's maintenance costs. Initially, the screen had an issue with power fluctuations and power loss that was causing the system to go into fault and need a manual reset. Crestline staff placed a call to Saveco's Service Department and they immediately got to work to resolve the issue. Within days plant staff had a solution to the problem and the screen has been working since then.

For More Information Contact:

Rick Dever
Waste-Water Operations Manager
Crestline Sanitation District
909-338-3245



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and trustworthy product”*

Ron Scriven
Crestline Sanitation District



Screenings Removed by the Flo-MultiRake Fine Bar Screen



1570 St. Paul Avenue
Gurnee, IL 60031 U.S.A.
P. 815.636.8306 • F: 847.672.7968

ecsales@savecowaterna.com
www.savecowaterna.com