

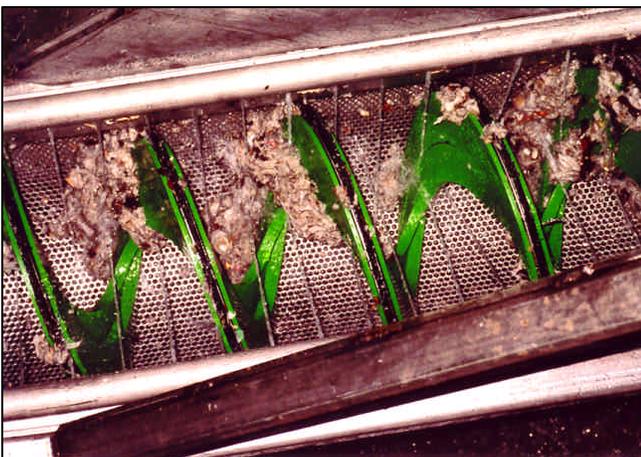
Muffy Takes On Hurricane Hugo

Muffin Monster equipment is designed and built to be tough, but JWC never intended to have one take on a hurricane. On Sept. 21, 1989, Hurricane Hugo hit the South Carolina coastline and drenched the region with heavy rains, winds and storm surge. The Plum Island wastewater treatment plant lay right in its flood path.

At the time five Muffin Monsters were in operation and all but one held up through the storm and its aftermath. Grinding large sticks, chunks of wood, wires, metal and even rocks the Muffin Monsters held up and continued to protect downstream equipment from the debris blown into the wastewater system.

“One of these units finally quit because it tried to digest a light pole,” said Ronald K. Sanders, the assistant plant superintendent at the time. “We had to shut that one down while the others kept us from losing downstream pumps and other de-gritting equipment.”

JWC’s relationship with Plum Island, which started in the late-1980s with their first Muffin Monster, is special and remains strong to this day. Management at the plant agreed to install one of the first Auger Monster prototypes



Spiral conveying technology allows for easy removal and cleaning of organic solids.

Problem: Old bar screens allowed material to pass, problems with ragging, and continuous clean up.

Solution: Installation of 3 Auger Monsters allowed finer screening and kept downstream equipment safe.



in the mid-1990s. Today they have 3 Auger Monsters.

“We looked at the Auger Monster and thought it might work, it was an innovative idea,” said Andy Fairey, the Director of Water Resources. “The old bar screens it replaced allowed a lot of material to pass. Problems with ragging were occurring daily and cleaning out the pumps was a dirty, dangerous job. (With the Auger Monster) it’s a rare occasion, only once in the last three years have we had to clear a pump.”

Managers also enjoy the convenience and reliability of JWC’s Free Labor Rebuild Program. Plum Island Muffin Monsters and Channel Monsters come back to the JWC Georgia facility for rebuilding, reconditioning and new technology upgrades. Labor is free, they only pay for parts. “The advantage is we get back essentially a new unit,” said Fairey.

“Charleston CPW has always taken the time to thoroughly evaluate old and new technologies and places great value on the reputation of the manufacturer,” said Doug Wilson of Heyward Inc, JWC’s local representative. “They put a lot of value on local support. The support we’ve been



able to give them with Mike Cooper, Morris Tarlton, and Tom Lawson, plus Rick LeShane and Warren Brown from JWC Georgia, was something they placed a high value on.”

The Plum Island facility handles 23 million gallons per day from residential and business customers and is located across the harbor from Charleston, South Carolina. JWC designed and built Plum Island’s Auger Monsters with special corrosion resistant stainless steel parts to deal with the corrosive environment the plant faces due to salt water infiltration, high chlorides and high hydrogen-sulfide levels caused by anaerobic conditions in the transfer tunnels.

“I like the idea of macerating the organics to get them back into the plant flow,” said John K. (Jake) Earle P.E., the Plum Island Facility’s Plant Engineer. “You’ve got products here that are pretty phenomenal; you have real solid equipment.”

Earle believes in the value of grinding material before screening because it leads to cleaner and easier-to-handle collected material. The Auger Monster’s integrated grinder breaks up large clumps of rags so that with a little spray water the fecal material and other organic matter is able to pass through the fine screen and back into the influent flow, continuing into the plant for downstream treatment.

“The Auger Monster produces neater, cleaner, and easier to handle material,” said Earle. “Drier and with minimal organic material means you have less decay and the associated odors and vector attraction.”

Sadly, Ronald K. Sanders, highly regarded by his peers in the wastewater industry, passed away July 5, 2000 after a battle with cancer. The Hurricane Hugo story and his quote originally appeared in Public Works in 1991.

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