

APPLICATION: Grinders

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'Monsters' Prevent Trash from Escaping Correctional Facility

Grinders help keep the sewer system flowing at this 1,000-acre correctional campus

Serving 62 years at the Bridgewater Correctional Complex in rural Massachusetts might seem like a long sentence, but not to Leo DuBois. As manager of the onsite wastewater treatment plant, DuBois loves what he does—keeping Bridgewater State Hospital, Old Colony Correctional Center, the Treatment Center for the Sexually Dangerous and the Massachusetts Alcohol and Substance Abuse Center, as well as the surrounding environment, clean and healthy.

Dealing with prison wastewater is not easy—the flow tends to be filled with trash. To combat this onslaught of solids, Leo depends on seven Muffin Monster grinders and one Auger Monster screen to handle unwanted solids and prevent sewer lines from clogging on the 1,800-acre campus. The systems are manufactured by JWC Environmental in Costa Mesa, Calif.



Additional grinders installed

The first time the prison used a Muffin Monster was in 1985 when the problem was cigarette butts. The Muffin Monster uses dozens of inter-meshing, razor-sharp steel cutter teeth to pull in and shred objects that might cause sewer pipes or pumps to clog—such as towels, jumpsuits, trash, shoes and baggies. The grinder shredded the cigarettes and there were no more problems.

After the first Muffin Monster success, DuBois convinced the prison bosses to install more grinders inside the prisons, the state hospital and the treatment plant.

The plant currently treats 0.2 million gal per day using multichannel oxidation ditches for primary treatment. DuBois placed an Auger Monster unit at the front of the plant in order to capture, clean and compact the trash before it has a chance to disrupt the treatment process.

Compact system

The Auger Monster combines two important technologies in one compact system. First, a grinder breaks up clumps, allowing the spray wash to clean and remove soft organics. Second, the spiral screw lifts the trash out of the channel and deposits it in the operator-installed trash bag—cleaned, contained and ready for the landfill. The system is almost completely automated and requires very little labor to operate.

The Auger Monster is a crucial tool in fighting the rising tide of trash inside Bridgewater's sewers, according to Christopher Yacino, environmental analyst for the Division of Resource Management. Prior to installation of the Auger Monster, the treatment plant staff had to clear blocked pumps on a daily basis—a dangerous and dirty job. Since installation, the staff rarely has to clean pumps.

"The inmates don't like to empty their trash can, so they throw everything into the toilets," Yacino said. "It gets worse when there is a shakedown; people start flushing everything illegal down the drain—we'll see a flood of material come in here."

The treatment plant has a strong performance record, and in 2006 DuBois was selected as state employee of the year by then-Governor Mitt Romney. He had already been named Employee of the Year from the Department of Corrections. **WWD**

Since 1990, JWC has installed more than 80 Muffin Monsters in prisons, jails and correctional facilities throughout Massachusetts and nearly 3,000 grinders across the country.

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