



## Monster Solutions

# Colorado Utility Perfects the Art of Septage Receiving

**Colorado Springs, CO** – Septage receiving can be extremely demanding on a wastewater treatment plant's operation with dozens of honey trucks rolling in each and every day and unloading thousands of gallons of highly concentrated waste. Pumps, pipes and valves get hammered with rags, rocks, clothing and lots of scum and grease. All stuff that somehow ended up in porta-potties and septic tanks. A large influx of septage can disrupt the treatment process or even destroy downstream equipment.

One Colorado utility developed an integrated receiving area with space age monitoring and pretreatment systems to get control over the 30,000 gallons of septage they receive daily. Integra Engineering of Colorado Springs provided design and construction management services for the new receiving building at the Las Vegas Street Wastewater Treatment Plant.

"The prior receiving area was pretty extreme, they were just dumping into an open pit," said Bob Bolton PE, a Principal at Integra. "It would go through a coarse bar screen but that was pretty much it."

Integra designed the new receiving building to store, condition and then transfer the septage at optimal times to avoid overloading the treatment plant. To do this the engineers added several unique systems into the building such as: quick connect hose couplers; Muffin Monster grinders; transfer and mixing pumps; PVC lined holding tanks and special storage tanks for contaminated waste. The entire operation is moni-



*A pair of Muffin Monsters® are positioned in front of the transfer pumps and grind rags, solids and trash into small particles so they flow harmlessly through pumps and pipes.*

**PROBLEM:** Septage full of rags, trash and debris

**SOLUTION:** Three Muffin Monster grinders

tored by several digital instruments that interface with the treatment plant's Allen Bradley control system for maximum efficiency.

### Powerful Protection...

In order to protect the transfer pumps and ensure the smooth flow of wastewater, Integra specified three powerful Muffin Monster® grinders to macerate the flow before the pumps move it to the headworks building. The dual-shafted grinders shred solids such as rags, clothing, blocks of wood and small rocks into tiny particles that flow harmlessly through the pumps and are removed by the fine screens at the headworks.

"Pretty much anything that goes into the grinders comes out in tiny bits," said Dan Hammer, Maintenance Supervisor. "The only items that ever stopped them were a screwdriver and hammer."

"We believe the Muffin Monster is one of the best products for this application," said Bolton. "Most of our clients have standardized on the Muffin Monster based on the empirical data we've seen. It is one of the best pieces of equipment in the industry."

Arriving trucks are controlled by a card access and billing system that records the trucking company, meters the flow and takes a pH reading. After sliding their access



*Considered one of the most reliable pieces of equipment in wastewater, more than 20,000 Muffin Monsters have been installed worldwide.*





*Honey trucks with residential and commercial septage unload at the treatment plant everyday.*

card, the driver connects his truck to the coupler and starts unloading. Flow enters the specially designed storage tanks with PVC lining where mixing pumps provide circulation in order to keep grit, scum and grease suspended.

Staff at the control center can transfer septage as they see fit or an automated program pumps material into the treatment plant during low flow periods. Digital instrumentation monitors pH, lower explosive limit (LEL) and liquid level. The septage receiving building also allows the operators flexibility in intercepting, holding and transferring contaminated waste in order to maintain proper organic levels.

"I think the client really likes it," said Bolton. "It is still performing the same as the day it started."

#### **About Integra Engineering...**

Integra provides planning, design, and construction services in the areas of water and wastewater treatment, pipelines, storage reservoirs, odor and corrosion control, and related services. Their qualifications include several technical specialties such as pipeline forensic investigations, hydraulic analysis, and wastewater treatment process research. Their professional staff has managed and designed engineering projects ranging from very small to over \$35 million in construction. On the web at: [www.integraeng.com](http://www.integraeng.com)

#### **About JWC Environmental...**

Advanced sewage treatment equipment is of vital and growing importance to the world. JWC Environmental is a leading manufacturer of equipment for wastewater treatment, solids reduction, solids removal and processing. The Monster family of products is legendary for quality and reliability – including the Muffin Monster® and Channel Monster® sewage grinders, Auger Monster® fine screen, Screenings Washer Monster® and Monster Separation System®, incorporating a finescreen or bandscreen with superior screenings conditioning. Our superior technology provides solutions for the most demanding applications including sludge grinders, shredders, screens, washer compactors and septage receiving stations. Founded in 1973, JWC Environmental and its worldwide family of employees are committed to providing customers with leading edge products, services and value. When it comes to the most demanding wastewater treatment challenges - you can trust Monster quality. For more information visit our website [www.jwce.com](http://www.jwce.com), e-mail [jwce@jwce.com](mailto:jwce@jwce.com) or call (800) 331-2277 or (949) 833-3888.

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**JWC**  
**Environmental**®

Trust Monster Quality™

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