



New Approach Eliminates Lift Station Pump Clogs At 400-Unit Apartment Complex

Problem:

Frequent pump malfunctions and clogs causing high maintenance costs

Solution:

3-HYDRO Open Channel Sewage Grinder

Approaching something the same way repeatedly rarely yields different results. Often times, it's the consideration of a different perspective that enables ideal solutions. Such is the case at Villa Mountain Vista North Las Vegas – a 400-unit apartment complex with an on-site lift station equipped with stainless steel-bladed pumps to transport influent. While the pumping of sewage out to the municipal collections system should be fairly standard, the frequent pump malfunctions were cause for concern. Typically, the solution involved replacing broken down pumps – at a cost of \$3,000 to \$3,500 each time – or installing larger pumps. These solutions didn't solve the problem. Plumbing Enterprises representative Colin Pirrie understands why.

Pirrie is the on-site treatment manager of Villa Mountain Vista, and is hired by the property management company to deal with all of the sewage and plumbing issues. Pirrie acknowledges he knows more than most about what goes for a swim after getting flushed – most of which doesn't belong there. When asked to reveal more details, he candidly acknowledges that it's the unexpected items that create the biggest headaches.

Although he has yet to find something as valuable as a diamond ring, he's quick to note that when objects such as wipes, clothing, toothbrushes and super hero toys (to name a few) reach the pumps they are not broken down and, inevitably, clog or damage the system. Unclogging pumps is labor intensive, time consuming and expensive. Adding to the complexity, anyone who performs the task is required to be trained and certified in confined space entry according to OSHA Confined Space standard 29 CFR 1910.146.

Determined to find the best solution for his customer and put an end to the process of removing broken pumps, repairing and reinstalling them, Pirrie combed the internet for guidance. JWC Environmental's 3-HYDRO grinder caught his attention. Diving in to further understand the benefits of the 3-HYDRO led him to the realization that the tight design of the Villa Mountain Vista wet well would limit options. He approached JWC with this concern and it wasn't long before JWC offered a customized 3-HYDRO configuration for Pirrie's specific application. By utilizing a right-angled gear reducer the overall height of the grinder was brought down to be a perfect fit in the pump station.

JWC Environmental was no stranger to these types of challenges. They have been working with both private facilities and municipal customers protecting sewage pumps in waste systems for over 40 years. More recently, with the introduction and widespread use of disposable wipes, JWC has had to adapt its grinders to keep up with the changes. They introduced their Wipes Ready™ technologies in 2014, which are designed to specifically target rags and disposable wipes. The new cutters will shred baby wipes and diapers along with tough solids into pieces that are small enough to stay in suspension and remain pumpable.

CASE STUDY

Villa Mountain Vista Apartment - Las Vegas, NV

The benefit of the tailor-made approach runs deep; it's more cost effective than installing new pumps and the grinders provide waste preconditioning to protect the current lift station pumps and extend their working life. The result is a reduction in maintenance for system operators.

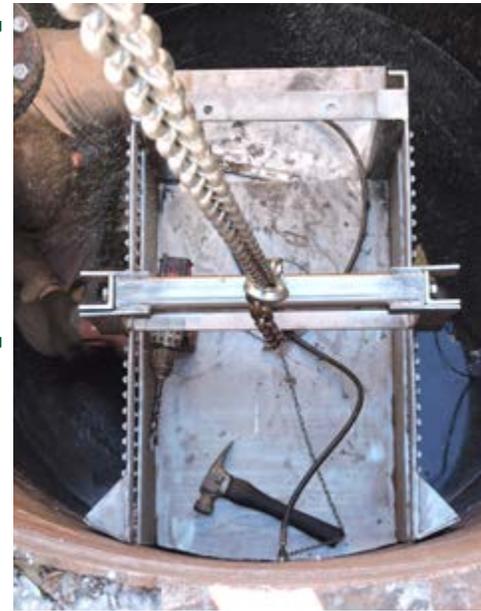
Pirrie also commented on the ease and simplicity of ordering and installing the Muffin Monster system.

The system comes with a stainless steel mounting frame and attaches to the existing sump. The grinder slides into the frame that's already attached. Once the frame is mounted, the rest is easy. Three men joined Pirrie for the one-day installation. It was their first experience with this type of product so the team worked slowly and methodically to ensure everything was done correctly.

In the months since the installation, there's been no need for service. The pump, which was clogging on a weekly basis, hasn't seen a failure. The cost savings for his customer speaks for itself: In a 90-day period, approximately \$20,000 was saved – resources typically spent on removing, repairing and reinstalling new pumps. The success at Villa Mountain Vista has led Pirrie to order a second system for another customer of his facing similar challenges.



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Since its founding in 1973, JWC Environmental has become a world leader in solids reduction and removal for the wastewater industry with its Muffin Monster grinders and Monster Separation Systems for screening, compaction and washing. JWC also solves challenging size reduction and processing problems in commercial and industrial applications through its Monster Industrial division. JWC Environmental is headquartered in Santa Ana, California, and has a global network of representatives, distributors and regional service centers to provide customer support. For more information, visit JWC Environmental at www.jwce.com.

